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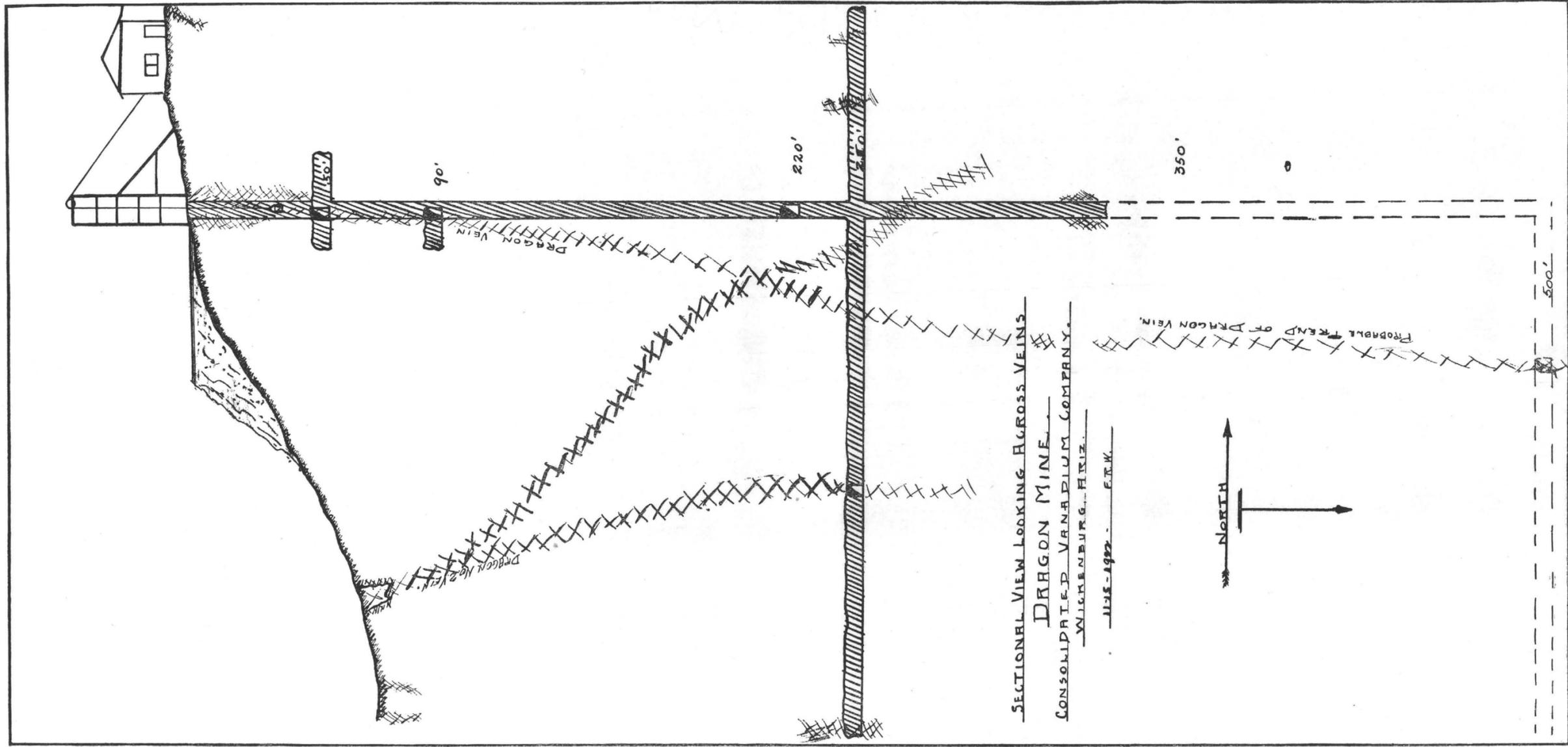
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# ENGINEER'S REPORT OF THE PROPERTIES OF CONSOLIDATED VANADIUM COMPANY

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## COMPANY ORGANIZATION

The Consolidated Vanadium Company was organized and incorporated in 1920 to take over the properties and assets of the Dragon Mining and Development Company, and to acquire additional property adjoining. The Company has an authorized capital of \$3,000,000, divided into 3,000,000 shares, having a par value of \$1.00 each. There is no preferred stock.

## LOCATION OF PROPERTIES

The holdings of the Company are in the San Domingo Mining District, in the Western portion of Maricopa County, Arizona. The mines are about eight miles Easterly from Wickenburg, but only about four miles from the nearest railroad siding at Allah; in a direct line, the properties are about three miles Northeasterly from the Hassayampa River.

## TRANSPORTATION

The properties are reached by a fair automobile road from Wickenburg and Allah. These roads have been a source of considerable trouble and expense, but the situation will be much improved within the next month on account of the extensive work now under way by the State Highway Department. A new main State highway has been established between Wickenburg and Phoenix, which passes about three miles from the property and on the same side of the river. Construction crews are now engaged on the work and should have it completed by the end of the present year, 1922. When this work is finished the road distance between the mines and Phoenix, the capital of Arizona, will be less than fifty miles, and about three-fourths of this distance will be paved. Twenty-five miles of pavement West of Phoenix are already finished.

Allah and Wickenburg are stations on the Santa Fe Railroad on the line leading into Phoenix. Passenger and freight service is excellent.

## PROPERTIES

The mineral lands of the Company are made up of two main groups, known as the Dragon, and the Dominguez or Manty Group.

The Dragon Group, which was acquired from the old Dragon Company, consists of twelve full sized claims, having a total area of about 240 acres. The Dominguez Group, which adjoins the Dragon and which was acquired by purchase, originally comprised seven claims. An additional claim has since been added by location, so that the area of this group is now a little over 160 acres, thus making the total holdings of the Consolidated Vanadium Company about 400 acres.

The Dominguez or Manty Group forms an important addition to the holdings of the Company, as the same general mineral and geological conditions are found on the two groups.

The mining claims comprising the Dragon Group are designated as the Dragon Claim, and Dragon Nos. 1 to 11, inclusive. Those of the Dominguez Group are numbered 1 to 8, inclusive.

Title to all these claims is by location and assessment work under the United States Mineral Laws. All requirements of the United States Government and the State of Arizona have been complied with.

The Dragon Group has been surveyed for patent by a deputy mineral surveyor and permanent title could be obtained on this group at any time. The Dominguez Group has not yet been surveyed, but such arrangement could be made at any time. Sufficient work has been done on both groups to satisfy patent requirements, and while there is no special advantage in having the patents issued, it might be best to do so within the next few months.

### TOPOGRAPHY

This section of Arizona is characteristic of the desert regions of the State. The claims of the Company lie across rolling hills on the Westerly side of the San Domingo Mountain and West of a tremendous sand wash of the same name. These hills are cut by deep washes draining generally South and Southwesterly. The washes become small torrents during the short severe rains, but are dry during the greater part of the time. Toward the river many of the hills are made up entirely of re-cemented wash gravel, but at the properties, and above, the hills are made up almost entirely of eruptive rocks, vari-colored and altered, evidencing the huge disturbances and eruptions of the early geologic periods—a remarkable combination of eruptives of many descriptions and many kinds, presenting an interesting and puzzling problem to the geologist.

The hills are sparsely covered with bunch grass after the short rainy season, and with palo verde, mesquite, greasewood and giant cactus. Much of this growth can be used for camp fuel, but no timber is available for mine use.

### GEOLOGY

In the main, the San Domingo Mining District is characterized by a banded, broken hornblende-schist as the predominating country rock. At numerous places the original diorite, from which this schist probably resulted, can be seen, but on the properties under discussion very little of the diorite remains. The claims of the Company overlie a huge area of intense alteration and disturbance, which adds to its attractiveness as a probable focus of extensive deep-seated mineralization.

Here and there on the properties are large knobs of highly silicified limestone, having no apparent regularity in size or location, but the presence of this lime has no doubt been one of the important factors in the mineralization of the country, as is also believed to be the case in the older mines of the District.

On the claims held by your Company the schist has assumed a pronounced lamination vertically and in a general east-west direction. Paralleling this structure and occurring at frequent, irregular intervals, are bands of brown and red-

## ORES AND MINERAL SHOWINGS

The ores found on the properties under discussion may be divided into three distinct classes, and for the present should be considered separately, even though they probably belong wholly to the same general vein system and will eventually lead to one kind of primary ore at depth.

These three ores may be generally divided as follows:

1. Those in which vanadium predominates.
2. Ore having gold as the only important mineral.
3. Ore carrying silver as the predominating value, with a little gold and some other minerals.

The vanadium-bearing ore is essentially a surface ore, or one which lies almost wholly within the highly oxidized zones of mineralization. Vanadium is rarely, if ever, found associated with primary ores of the base minerals, and on this property the vanadium ore seems to be more especially important in the upper levels of the Dragon mine, and in the parallel veins in the immediate proximity of the Dragon. Vanadium has been definitely identified in each of the following forms on the property:

*Vanadanite*, a vanadate of lead-chloride, having the following approximate chemical formula,  $Pb_5Cl(VO_4)_3$ , and containing about 20%  $V_2O_5$ .

*Descloisite*, a lead-zinc vanadate,  $(PbZn)(PbOH)VO_4$ , containing 14.8%  $V_2O_5$ .

*Volborthite*, a vanadate of copper and calcium with the formula  $(CuCa)(CuOH)VO_4$ , and containing 30.4%  $V_2O_5$ .

*Endlichite*, Ca, Pb, V, As, Cl, O, approximately 12%  $V_2O_5$ .

Other vanadium minerals probably could be noted, but it is believed that those above named are of principal importance.

These minerals assume many colors, but mostly ranging from a brownish-yellow to a deep ruby red, with sometimes a nearly black color, but in almost every instance show a yellow color when marked with a knife. Tantalum and uranium are probably also present in these ores in small quantity, but have not yet been definitely identified.

These vanadium minerals are found in the broken, brecciated veins running through the schist and also in the brilliantly red-stained quartz veins adjacent to the broken zones. The principal deposit definitely known at this time is that portion of the Dragon Vein extending between the 90 ft. level and the surface and within a distance of about 150 ft. from the Dragon shaft each way. Extension of the vanadium ores beyond these lateral dimensions cannot be questioned, but cannot be said to be developed. It is probable that workable vanadium ores will be found down as far as 150 ft. below the surface, but below that point it is likely to be found only in small amounts here and there.

The No. 2 Dragon Vein has in the past produced some very good vanadium ores, and is but little more than opened at the surface. The extent of this vein is not fully known, although it has been encountered at the 250 ft. level, and at that point shows small amounts of vanadium.

There are numerous parallel veins showing vanadium minerals at the surface, particularly to the north of the Dragon Vein on the same claim, and on Claims No. 4 and No. 9 of that group.

stained quartz, extending for distances of several hundred feet along the surface and forming a huge vein system.

This quartz contains small segregations of calcite fairly evenly distributed through the silica, and it also contains much residual iron mineral, and almost invariably carries small amounts of gold and silver, leading to the conclusion that the primary mineralization of the country took place in conjunction with the quartz-calcite formation.

Cutting across and through these formations are huge dikes of pegmatite, composed mostly of quartz and feldspar, with considerable hornblende and some mica. This pegmatite is in itself barren of important minerals, but its intrusion through the schist resulted in intense alteration and shattering of the schist to the extent that the country rock became broken and blocky, with the result that along certain east-west lines the veins became broken masses of mixed schist and quartz, which have offered favorable places for the deposition of vanadium minerals. In and adjacent to these broken zones myriads of small quartzite seams, stringers and small veins have formed through the schist, some of them being quite high grade, both as to gold and vanadium.

There is every good reason to believe that these main zones of broken formation form the upper sections of fissure veins, and the true size of the veins is not visible at the present depths reached by the mine workings.

Lying above, or to the North and East of the Company's properties, extends an extensive cropping of porphyry having a traceable length of perhaps two miles. It has been assumed by some that this porphyry underlies the greater part of the area covered by the claims of the Company and that the most important mineralization of a primary or permanent character will be disclosed at the contact zone between 700 and 800 feet below the surface. Personally, I am of the opinion that very good workable veins having principal values in gold and silver will be found entirely within the schist and on the schist-limestone contacts and at much shallower depths than 800 feet, but that there is every good indication that the exploring of the porphyry-schist contact zones will develop good copper-bearing ores. The known workable veins so far opened and mined upon seem to bear out this conclusion. This is taken up again later in this report.

## UNDERGROUND WORKINGS

Upon one of the huge shear zones previously described is situated the Dragon shaft, which is not far from the center of the Dragon Claim, also near the center of the whole Dragon Group. This shaft is vertical, two compartment, and has just been retimbered from the 50 ft. level down to the present bottom. It now has a total depth of 320 feet and is in process of sinking at the present time.

There are at present four levels in the Dragon Mine: The first level is 50 ft. below the surface and extends along the main Dragon vein 105 ft. with about 25 ft. of cross-cutting, making a total of 130 ft. of workings on this level.

The second level is at 90 ft. It has 201 ft. of drift work and 15 ft. of cross-cutting, making a total of 216 ft.

The present third level is known as the 220 ft. level. This was driven to explore a huge mass of pegmatite encountered in the shaft at that point, and was later used as a sump for mine waters. This level has only 18 ft. of work done.

The fourth level, designated as the 250 ft. level, is more extensive and consists mostly of cross-cutting. The workings here extend 75 ft. northerly from the shaft and 189 ft. southerly, plus 27 ft. of drifting on a vein. Thus, this 250 ft. level has a total of 291 ft. of workings.

About 60 ft. west of the Dragon Shaft is an auxiliary single-compartment shaft connecting the first and second levels with the surface. This is an old shaft from which ore was mined at one time, but it is now used for ventilation and as an emergency exit.

Including all vertical and horizontal work in the Dragon Mine, the total up to date amounts to 1,055 ft. of workings, exclusive of work done in stopes during the mining and removal of ore. From now on this total will be added to by about 75 lineal feet per month as the sinking of the Dragon shaft progresses and other work is put under way in this mine.

In addition to the above described workings, there are several other openings on the Dragon Claim, amounting to a total of something over 100 ft. of work. These miscellaneous surface openings are practically all in ore.

As has been stated, the Dragon shaft was originally started down through broken vein material, which has been designated as the Dragon Vein. At the surface this vein is a completely shattered mass of mixed schist and quartz, rather poorly re-cemented. The vein is brilliant red with hematite and with vanadium minerals. The shaft followed the vein to a depth of nearly 100 ft., as the vein was practically vertical. At that depth the vein disappeared, apparently going off to the south with a dip of about 80° (south). The shaft was continued vertical to the fourth, or 250 ft. level, before attempting to cross-cut to the vein, but at that level the vein was so altered in appearance and in value that the operators at that time did not recognize it. With increasing depth the vein had gradually lost its brecciated appearance and the surrounding country rock had become somewhat less shattered so that at that level the vein became a series of tiny stringers and narrow veins surrounding and scattered through the schist. All of these carry gold with some silver and a little vanadium.

This condition is by no means surprising or unusual. It appears to me certain that the main zone of mineralization passes down through the 250 ft. level within forty feet of the shaft, which is about where it should be, but at that level the formation is not yet sufficiently in place or sufficiently free from the broken conditions described to clearly indicate the character of the veins. Only by deeper development can this be disclosed, but by such development we should find that the numerous stringers and small leads will gradually become fewer and wider until at the depth of permanent ores, or somewhere about 500 ft. below the surface, the veins should be wide and strong, and probably well mineralized. By permanent ores I mean those lying within the sulphide or unaltered section, sufficient in depth to be away from the oxidizing influences of surface waters.

You will note on the attached maps that the south cross-cut of the 250 ft. level has a short drift 99 ft. from the shaft. At this point the cross-cut intercepted the downward extension of the Dragon No. 2 Vein. At this level the No. 2 vein was more easily distinguished than the No. 1, as the actual depth

below the surface at the point of the drift is less than 200 ft. This vein carries good average values at the surface and at the 250 ft. level as well.

A third vein appears to be at or near the present south face of the 250 ft. cross-cut, 189 ft. south of the shaft. This should be developed later, as it may be the source of considerable vanadium ore.

On the Dragon No. 7 Claim there is an old shaft said to be about 50 ft. deep, and on the Dragon No. 9 Claim another shaft 35 ft. deep. A large number of surface cuts and shallow pits are dotted all over these and the remaining claims of the group, which if taken collectively would amount to at least 200 lineal feet of additional development. These have been useful in determining the general trend and character of the vein system.

Totaling up all work done on the Dragon Group I find a total of 1,440 lineal feet of which 540 lineal feet are represented by shafts and raises, or vertical work, and about 900 feet is horizontal work. Approximately one-half of this total footage may conservatively be estimated as being in ore. All of the workings of the group are in good shape and accessible with the exception of the two old shafts just described.

On the Dominguez Group there are six shafts and a large amount of horizontal work, the exact amount of which is not fully known, as some of the old shafts have not been placed in condition for exploration as yet. From the best obtainable figures I would estimate that there are about 800 lineal feet of work in the six shafts, and that the horizontal workings approximate something in excess of 1,000 feet. About one-third of the workings of this group are now accessible, but the major part could be put into shape with but little delay, so that these workings can justly be considered effective and useful development.

The Dominguez No. 2 Claim has two shafts near the Manty mill, one of which is recorded as being 165 ft. deep, but is now not accessible below the 100 ft. level. This shaft inclines slightly north following down on a strong quartz vein, but a short distance below the 50 ft. level this vein becomes scattered and broken, and a little below the 100 ft. level it again becomes well defined and workable.

On Dominguez Claims No. 5 and No. 7, and the northeast half of No. 2, there are large limestone areas and in the vicinity of this limestone the quartz veins, largely unbroken but considerably leached, have extended to the present surface with fair to good mineral values. The showing on No. 5 of this group has been considered sufficiently good to justify development work independent of the work now being done in and through the Dragon shaft. This work has reached a depth of only about 35 ft. up to date, but is on a rich, strong quartz vein banded on either side by typical ore of the broken, red sort.

On development work such as has been done on these two big groups of mining claims, it is customary to estimate the cost of shaft work at \$50.00 per vertical foot, and the other work at \$25.00 per lineal foot. On this basis the underground workings on these two groups of claims would have an approximate replacement value of \$115,000, exclusive of the cost of the equipment necessary to do the work. As a matter of fact, it is probable that the actual cost has been far in excess of that figure.

This vanadium ore is exceedingly difficult to sample accurately, and especially that which has already been broken in the old stopes just above the 90 ft. level, but in order to arrive at the most accurate average possible, the average of all assays known to apply to ores from these veins—including those I have taken personally, and those of record from prior work—was taken, disregarding those which were so high as to indicate that they were selected samples. The average figure thus obtained, as applied to the widths and areas developed, indicates approximately 6,000 tons of vanadium ores, which at the present price at which vanadium is saleable, represents \$18.60 per ton, plus an average gold and silver content of \$4.80 per ton, or \$23.40 total, giving a gross value to these ores of \$140,400.

Separate from the above described vanadium ores are the gold ores which carry only small amounts of vanadium but workable values in gold and silver. These ores occur in quartz veins or ledges paralleling and running through or alongside of the big brecciated red veins. At Dominguez No. 5, and in the shafts on No. 2 Claim on that group, the quartz veins are most in evidence and perhaps best developed. There are a large number of these quartz veins extending along the surface, which sample and assay from five to fifteen dollars per ton in gold, and which I would suggest could be worked by surface cuts or trenches to a depth of perhaps 15 ft. below the present surface. This should be a considerable source of mill ores and an entirely feasible plan of handling the material. I am therefore estimating a total of 5,000 tons of ore of this character having an average value of \$12.00 per ton gross, or approximately \$60,000.00 gross value.

Approximately due north from the Dragon Mine, on Dragon Claims No. 9 and No. 4, and extending intermittently in an easterly direction to the eastern portion of Claim No. 7 of the same group, there is a parallel vein system which may ultimately prove of great importance on account of the silver content of the ores found. The two old shafts and the numerous openings along this vein system give ample evidence of having produced ores in the past, and the samples more recently taken indicate good ore in spots all along for a distance of over 4,000 feet. I have made some careful calculations of the ore which seems to be available and sufficiently developed on this system to be workable, and can conservatively estimate one thousand tons of ore, having a gross value of \$40.00 per ton, or \$40,000.00 gross value, mostly in silver.

Combining all the ores above estimated, the total is given as 12,000 tons, having an average gross value of a little more than \$20.00 per ton.

As to the total tonnage of ore which this group of mines may ultimately produce, no one can estimate, or even approximately guess, but with the present state of the development work one can conservatively state that the probable ore is not less than one hundred thousand (100,000) tons, having an average value of probably ten or fifteen dollars per ton. The ultimate production to be made possible by deep development, will no doubt exceed this figure, both as to quantity and as to average grade of the ore.

### **DEVELOPMENT PROGRAM**

At the present time the Dragon shaft is being sunk as rapidly as possible and the intention is to go on down to a depth of 500 ft. before doing much horizontal work of any kind. This work has been unavoidably slow during the past two months, but better progress seems assured in future.

At a point only 9 ft. below the 250 ft. level, or 255 in the shaft, a very strong quartz vein was encountered. This vein strikes parallel to the main vein system, but dipped at a sharp angle so was followed in the shaft for only a short distance. Shortly below that point the shaft passed through a thirty or forty foot band of very hard schist, such as we expect to find at greater depths. In this hard formation were several water courses, which in this country is usually indicative of vein material. Numerous stringers of ore were found as the work progressed. Below the hard band or rib of material a zone of softer schist was entered which was completely permeated with little bands of quartzite and calcite. These indications are about what were to be expected and are about in line with the theories expressed in my previous reports. While it is, of course, possible that a good vein might be encountered in the sinking operations, it is not to be expected, and the main mineralized area lies south of the shaft and dips away from it slightly, so that it will be necessary to cross-cut to it when the sulphide zone is reached.

Some work is being done at Dominguez No. 5 Claim for development, and for placing this claim in shape for ore production when required, and just as soon as possible it is planned to get at some systematic development of the silver-bearing veins preparatory to the mining and treatment of certain portions of this ore within the next few months.

### **SURFACE IMPROVEMENTS AND EQUIPMENT**

In addition to the mill buildings the property is provided with the following:

- Hoist house and compressor room.

- Main engine house.

- Office and laboratory building.

- Cook house and dining room.

- Refrigerator plant.

- Mine change room.

- Blacksmith shop.

- Seven cabins.

- One large bunk-house.

- Warehouse.

The accommodations are sufficient for all present needs, and are reasonably complete and comfortable. All are electric lighted.

The main power unit is a 150 H. P. Fairbanks-Morse Type Y fuel oil engine. This engine was purchased new only a short time ago and is the most modern and economical power unit for such purposes as is here required that money can buy. This engine is of sufficient size to furnish power for the mining operations and to drive the present mill equipment. This big engine is belt-connected to the generators and the compressor, etc.

For reserve power there are three older type oil-burning engines, two being in the main engine building, and the third one in the mill building.

The mining equipment comprises two belt-driven air compressors, large air receiver, several air drills and auxiliary equipment, and electric-motor-driven mine station-pump, a sinking pump, motor-driven hoist having suitable capacity for depths down to 1,000 ft., an exhaust fan and blower, and much miscellaneous equipment and tools.

The mill at the Dragon Mine has been operated in the past, but requires some alteration to change from engine-driven arrangement to electric-driven, and also some improvements and changes for obtaining easier and cheaper operations and improved recoveries. These changes can be effected within the next six weeks or two months and plans, etc., are now about completed for the work.

The mill equipment comprises a crusher, two sets of rolls, a ball mill, two sets of amalgamating plates, two tables, and much auxiliary equipment.

The mill building and the ore bins, etc., are in good shape, and are of sufficient size to admit of a capacity of nearly 100 tons per day with but little addition.

Separate from the mill building is the plant for the treatment of vanadium ores, consisting of roasters, leaching plants, tanks, etc., etc., and at this plant is also provided most of the equipment required for the cyanide treatment of gold ores should such be required.

A large amount of research work has been done in the past on the treatment of most of the kinds of ores which can be expected from any portion of the property, and the records of such test work have been kept in such shape as to be available for the guidance of future operations, so that but little metallurgical difficulty should be encountered in metallurgical work when mill operations are resumed.

Over on the Dominguez No. 2 Claim is a substantial mill building with some equipment, including a new crusher and a stand of five new stamps, etc. At such time as operations on this end of the property can be begun this building and the equipment will be of considerable value.

Some new equipment will no doubt be required for both the mine and the mill, particularly a new station pump for the mine when the depth becomes too great for the capacity of the present pump, but taken as a whole, the property is much better equipped than is usual.

The company owns and operates for the work a five-ton Fageol truck, dump body type, which is also equipped with a demountable oil tank for hauling fuel oil. For lighter work a Dodge truck is provided, and both of these have given excellent service.

At the Allah Station alongside of the railroad a tank has been erected for receiving tank-car shipment of fuel oil, and from this tank a pipe line has been installed to a point across the river about 1,000 feet away. This avoids haulage of oil over the river, which at times would be dangerous, if not quite impossible.

### **OTHER PROPERTIES**

The San Domingo Mining District is said to be the oldest mining district in the State, but at any rate is recorded as a steady producer since about 1875. The old Vulture Mine, which history and legend credit with huge production in gold, began its career about that date and after many difficulties finally became one of the famous mines of the State. This old mine has been largely inactive for some years, but at the present time is again being opened with every good reason to expect excellent results. The Vulture Mine is almost in sight of the properties under discussion and approximately in the direction of the strike of the Consolidated Vanadium vein systems. The striking similarity in surface appearances and surface geology is noteworthy.

Directly in line with the strike of the country to the east of the Company's

property and across the large San Domingo Wash, lies the property of the Triangle Company, which organization holds about forty claims. This property was recently examined by me. On account of the general contour of the ground and the difference in the drainage on that side of the big wash, erosion appears to have been more rapid and the elevation is perhaps 200 ft. lower, even though the upheaval originally was apparently considerably higher. On this property shipping grade copper ores, containing gold and silver, have been found but a few feet below the surface, and the property is now producing. The ores here found contain some vanadium minerals and are also said to carry attractive amounts of tantalum. This property is now believed to have the support of one of the large smelting companies.

Also in the San Domingo Mining District is the old Congress Mine, Monte Cristo Mines, and many other past producers.

### **WATER SUPPLY**

There are no permanent running streams or springs on the property. The Dragon Mine now produces about 30 to 35 gallons of water per minute, which is sufficient for camp needs and for the present mill capacity. The flow will no doubt be increased as the sinking of the Dragon shaft progresses. If additional water is needed it can be obtained from one of the shafts on the Dominguez Group and pumped over to the Dragon Mill, a distance of about one-half mile. These two sources of supply will probably be sufficient, but if not, almost any additional amount desired can be had by pumping from wells along the San Domingo Wash, as was originally planned and shown on the old records for the operation of the Manty mill on the Dominguez claim. Water can be had for any size operations, but if the mine water proves sufficient it will be the cheapest and easiest to obtain. Ample tankage for water is already on hand and in use.

### **CLIMATIC CONDITIONS**

The property is situated at an elevation of about 2,500 feet above sea-level, which tends to moderate the intense heat of the summers somewhat. Except for two hot months in summer the weather conditions are fine and all-year operations are easily maintained. The temperature in winter seldom reaches freezing.

### **FUTURE OUTLOOK**

Taken as a whole, the property is attractive and desirable, and it fully merits extensive development.

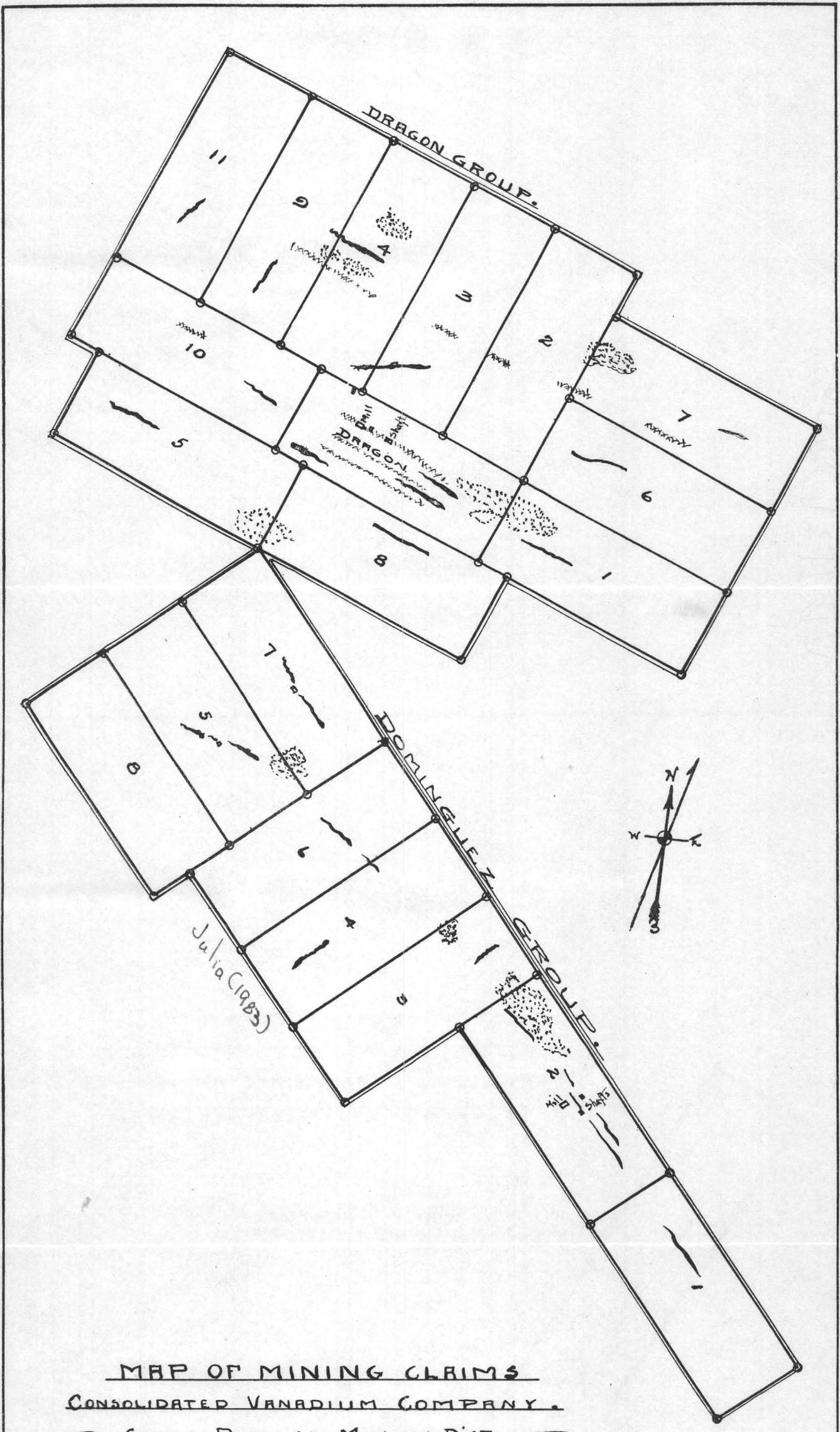
It is anticipated that the Dragon mill can be placed in operation within a few weeks, and from this plant will be derived considerable revenue by the treatment of ores already developed and in sight, but it is of great importance that development be carried on rapidly and consistently until the property is thoroughly explored at sufficient depth to be within the primary or sulphide zone. This I believe to be of primary importance, for the reason that all the really successful mines of that section of Arizona have been deep mines, and I have been unable to learn of a single deep mine in the whole San Domingo Mining District which has not been successful.

Respectfully submitted,  
FRANK R. WICKS,  
Consulting Engineer.

November 15, 1922.

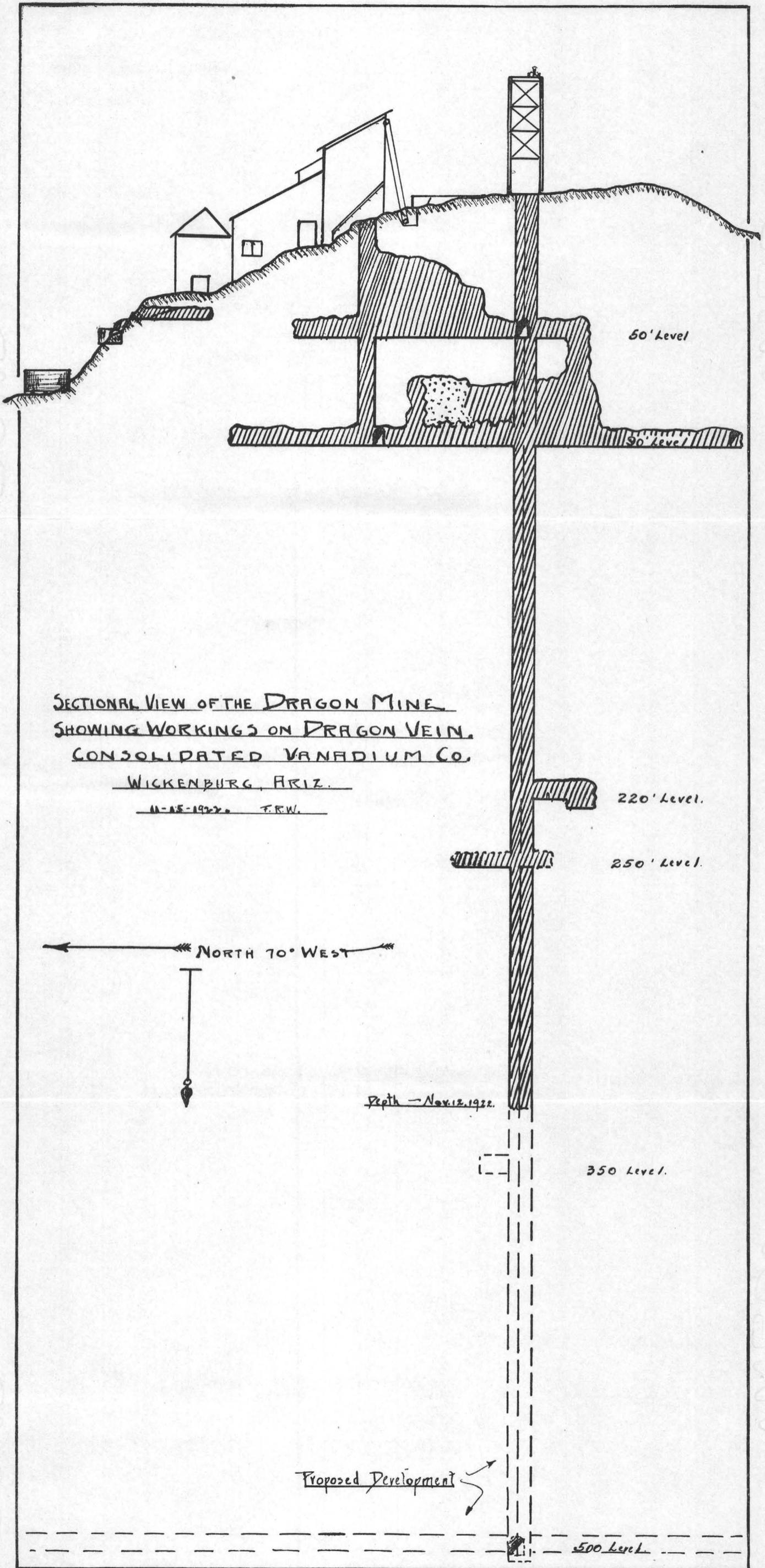
Down on main floor

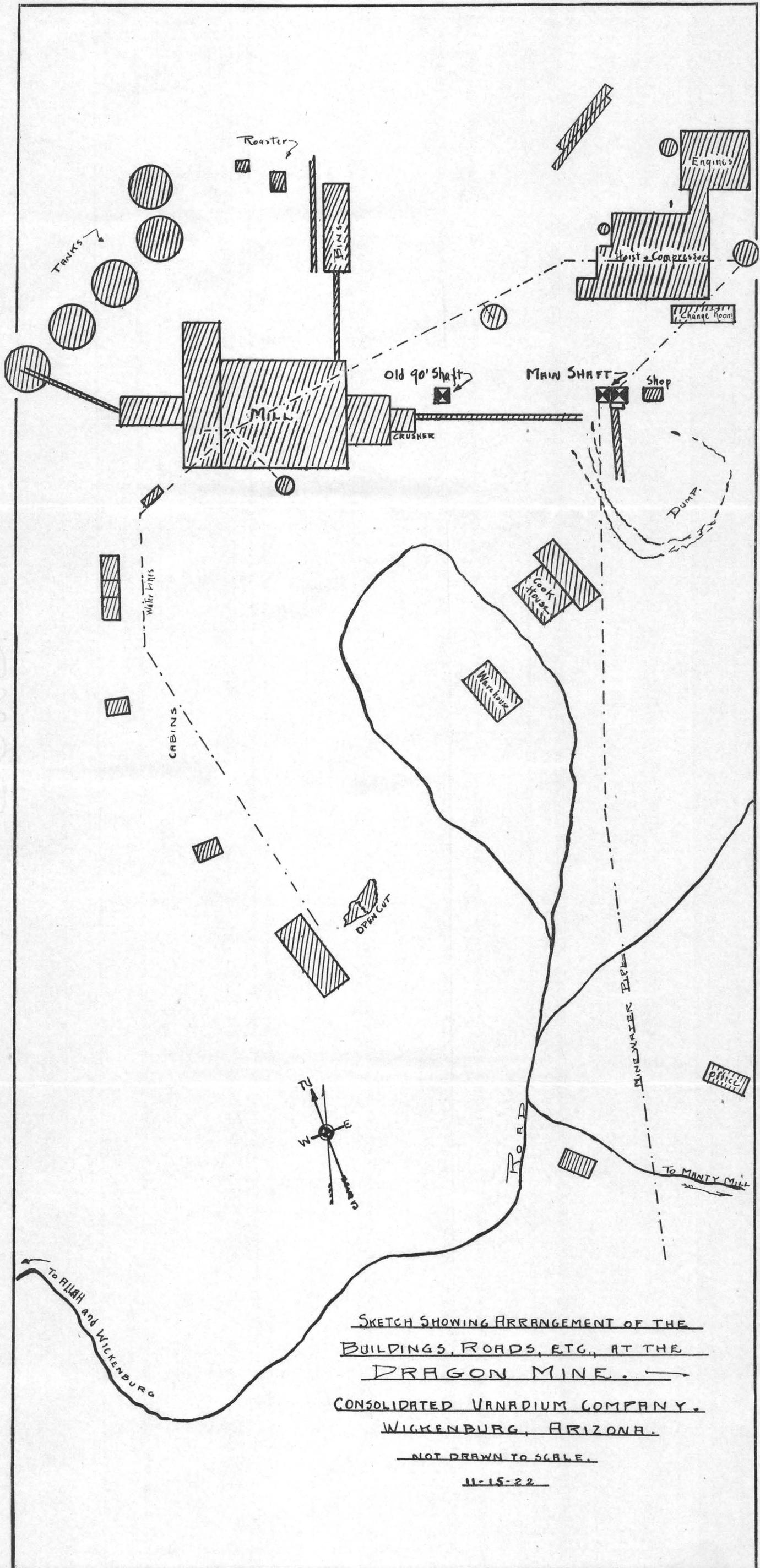
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MAP OF MINING CLAIMS  
CONSOLIDATED VANADIUM COMPANY.  
 — SANTO DOMINGO MINING DIST. —  
 — WICKENBURG, ARIZONA. —

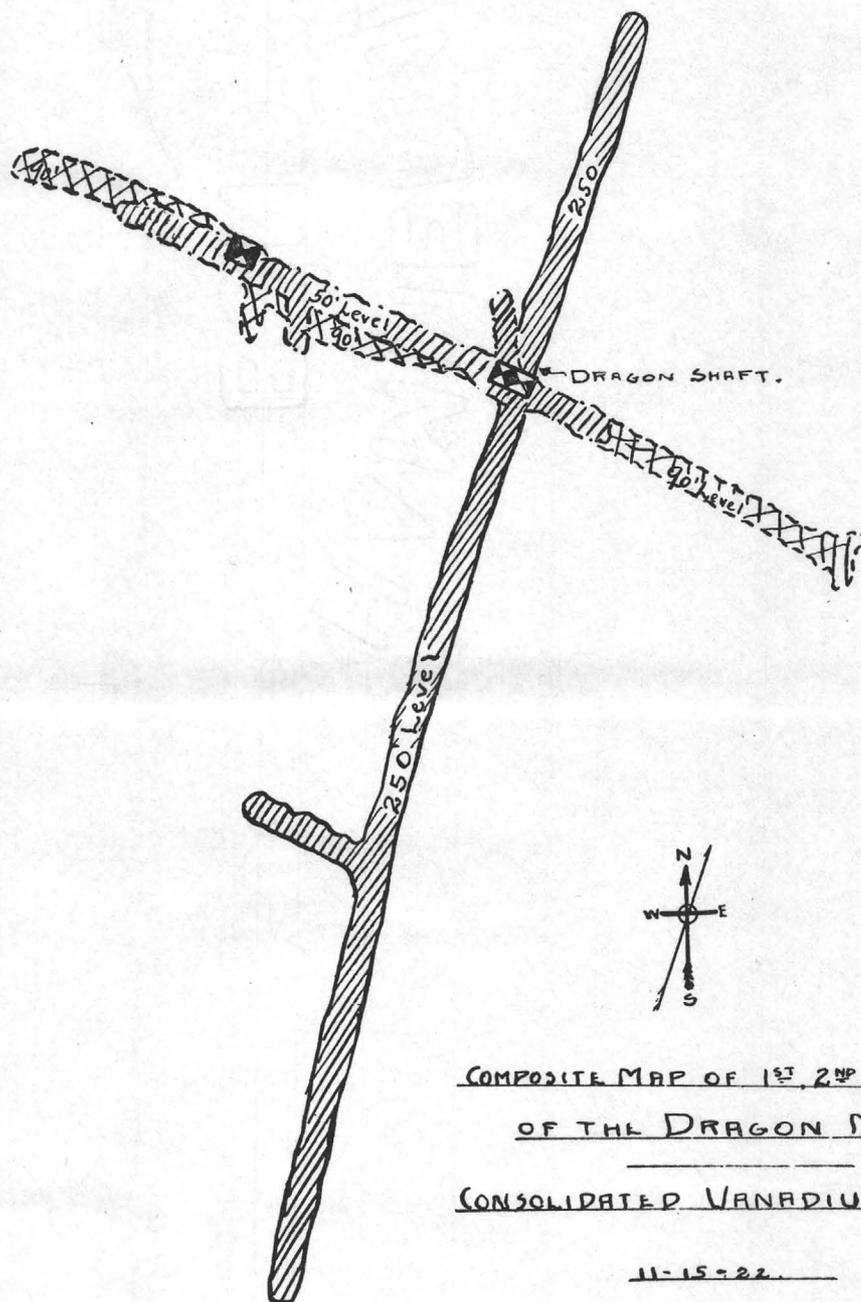






SKETCH SHOWING ARRANGEMENT OF THE  
 BUILDINGS, ROADS, ETC., AT THE  
 DRAGON MINE. →  
 CONSOLIDATED VANADIUM COMPANY.  
 WICKENBURG, ARIZONA.

NOT DRAWN TO SCALE.  
 11-15-22



COMPOSITE MAP OF 1<sup>ST</sup>, 2<sup>ND</sup> & 4<sup>TH</sup> LEVELS  
OF THE DRAGON MINE.

CONSOLIDATED VANADIUM COMPANY.

11-15-22.

J. W. RICE

SAN FRANCISCO

2707 West 9th Street.

Los Angeles, Feb. 24th 23.

*J. W. Rice*

Southwest Metals Company.  
Humboldt,  
Arizona.

Gentlemen,-

Attention Mr. G. M. Colvocoresses.

I received your letter of Feb. 15th and am enclosing reports on the property of the Consolidated Vanadium Company, by Frank R. Wicks, together with Certificate of Assay from Atkin & McRae, Los Angeles, and copy of analysis made by Ledoux & Co. New York City.

The Consolidated Vanadium Company is incorporated under the Laws of the State of Arizona. Authorized Capital \$3,000,000. Divided into 3,000,000 Common shares of par value \$1.00 per share. Stock issued and outstanding -2,450,000 shares. Treasury Stock- 550,000 shares. This Company has been financed for some time and there is at present sufficient working capital in the treasury to allow for continuance of development work and operation of mill.

The stock of this Company is scattered and the only way control can be had is for us at this end to go out in the market and buy up stock from individuals, which added to stock already held by the Writer under option will constitute 51% of issued stock. The affairs of the Company are in better shape than ever and none of the Officers, Directors or Stockholders know anything regarding offering of controlling interest, I will therefore request you to treat the matter in confidence, as, if the information leaked out it would make it impossible for me or anyone else to obtain control at anywhere near a reasonable price. I am getting further options and in my next letter will be able to advise you exact price at which I can deliver the 51% of stock.

We have here all correspondence between the Consolidated Vanadium Co. and the Metal & Thermit Co. New York, who are purchasing the V. 2 O.5, and analysis as required by them is met by Certificate as enclosed.

*Company letter below up a  
time is probably in 9*

J. W. RICE

SAN FRANCISCO

S.M.C. -2-

(Copy)

Ledoux & Co.  
99 John Street, New York City.

CERTIFICATE OF ANALYSIS

July 19th 1921

<u>Marked.</u>	<u>After Drying.</u>	<u>Equivalent to Vanadium Pentoxide V<sub>2</sub>O<sub>5</sub></u>
Concentrates	8.56%	15.27%
Ore	0.83%	1.48%

Note

Vanadium determined by Compagne method as modified by us.

(Sgd )

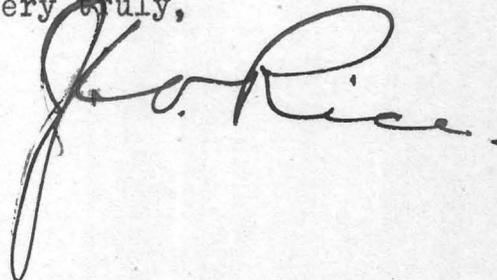
Ledoux & Company.

It will be alright for you to send one of your Engineers to inspect our property. Have him see Mr. Wicks, and mention my name.

There is no question but what I can deliver controlling interest and after you see the property, I will be glad to go into the matter further.

Mr. Wicks, has made a very conservative report and you will find property is considerably better than represented.

Yours very truly,



J. W. RICE

SAN FRANCISCO

(Copy)

Assay for Concentrates.  
Consolidated Vanadium Company.

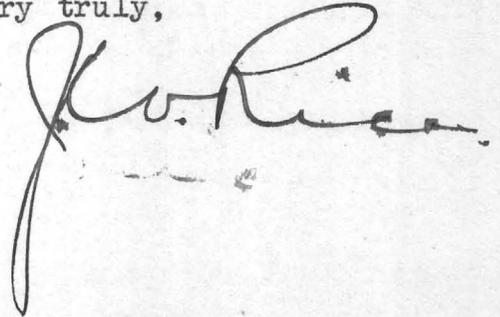
1st. 3-day run of mill, results-

<u>V<sub>2</sub>O<sub>5</sub></u>		<u>Gold</u>	<u>Silver.</u>
5.4%	Table #1.	59.20	8.50
7.2	" 2.	53.60	8.20
6.4	" 3.	52.40	7.20

Note Above did not include gold on amalgam plates which was not assayed.

This Certificate was made from ore containing greater percentage of Vanadium than Gold.

Yours very truly,



J. W. RIGE

SAN FRANCISCO

2707 West 9th Street.

Los Angeles, Feb. 13th 26.

*Handwritten:* A 7/15-23

Mr. Geo. M. Colvocoresses, Gen. Mgr.  
Consolidated Arizona Smelting Co.  
Humboldt, Arizona.

Dear Sir,-

I was talking with Frank B. Chapin, a few days ago and he suggested I write you in connection with a mining property. I am in a position to deliver controlling interest in a valuable Gold-Silver-Vanadium Mine now being developed in Arizona. Property consists of 400 acres of mining claims located 3 miles from the Santa Fe Railroad. Estimated 12,000 tons of ore broken down and 200,000 tons in sight, developed. \$350,000 worth of machinery and equipment. 17 shafts 40' to 400' in depth. Over 3000 ft of underground workings. 75 ton mill capacity. 150 H. P. Fairbanks Morse Diesel Engine for generating electricity for air and ice plants. Good wagon road connects mine with Railroad Station. Trucks. Warehouses. Car Tank with pipe line connections. Abundance of water for all purposes. Electric Pumps. Water raised by relay system.

Average Analysis of Concentrates (13 to 1)

V. 2 05	10%	200# @ \$150 per 11b	-	\$300.00
Gold	- - - - -	value per ton	-	15.50
Silver	- - - - -	" " "	-	4.80
				<u>\$320.30</u>

Gold and Silver recovery sufficient to carry overhead leaving Vanadium and Lead content as profit. Mill is built on unit plan and capacity can be increased without effecting present operations. Mill has been in operation about 30 days, running two 8-hour shifts. Daily production 36 tons of ore. Three 8-hour shift to commence next week.

Engineer and Millman in charge was formerly with Chino Copper Co. 3 years, Butte Superior Copper Co. 3 years and Utah Copper Co. 4 years.

Contract for sale of from 5000 to 20,000 11bs of V. 2. 05. per month has been closed with Alloy people in New York City.

J. W. RICE

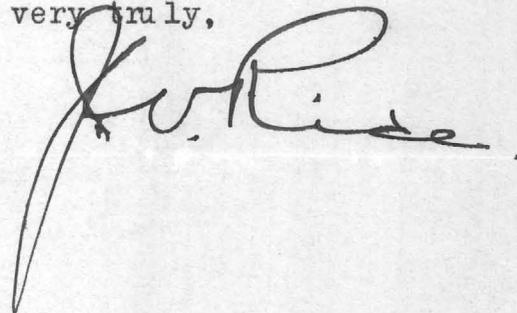
SAN FRANCISCO

G.M.C. -2-

Offers have been received from the largest Alloy Corporation in Germany and Sweden whose Engineers have examined mine, to contract for entire mine output and to purchase controlling interest, but it was only recently we were able to obtain stock control.

If you would be interested in the purchase of this mine, I will be glad to meet you anytime and go into the matter further. I have extensive reports and complete data pertaining to the property.

Yours very truly,

A handwritten signature in black ink, appearing to read "J. W. Rice". The signature is written in a cursive style with a long, sweeping underline that extends to the left and then curves back under the name.