

*Fr. 2e - Grant Co.*

REPORTS

NM Mine File No. 178

ON

PEEPLISS WOODLAWN GROUP

OF MINING CLAIMS

GRANT COUNTY, NEW MEXICO,

by

HARRISON SCHMITT

H.S. WORCESTER

J.S. VHAY

1934-1935

## Peerless-Woodlawn Mining Claims.

The following data not contained in the formal reports of Harrison Schmitt, John S. Vhay and H. W. Worcester is compiled from early issues of the Silver City Enterprise, conversations with miners who worked in the Peerless, with J. C. Woodward who was the company assayer and from personal explorations.

The Peerless mine was discovered in 1885, worked until 1889.

J. C. Woodward stated that at the point of discovery the ore was from four to six feet wide, carrying values of \$600.00 a ton in gold and silver, approximately one sixth of that value being in gold and that this relationship of value was pretty consistent throughout the mine. He further stated that all shipments averaged \$600.00 a ton and that he had made assays of rich specimens that ran as high as \$18,000.00 a ton.

The various miners I talked to agreed that though the vein pinched or swelled they were never out of ore in any of the mine workings.

The Peerless shaft is a vertical shaft 175 feet deep. On the 100 ft level and on the 175 ft level there are cross-cuts to the vein and drifts on both levels.

In 1920 I cleaned and unwatered the Peerless shaft and entered the 100 ft level. The workings in the East drift, apparently extensive in length and stoped to the surface were badly caved and too dangerous to be entered. The West drift I retimbered and I broke some fresh ground finding a small ore shoot a sample of which assayed 3.0 in gold and 520.1 in silver.

The shaft was cleaned to the top of the cross-cut on the 175 ft level but that level was not cleaned or entered. There is said to be a 50 ft winze on that level, and the following item appears in the Silver City Enterprise of April 26th, 1889 - "E. G. Shields reports that the bottom of the 225 ft shaft (?) of the Peerless shows ore 22 inches wide, native and sulphide, carrying 310 oz silver,  $1\frac{1}{2}$  oz gold."

There was, I believe, never any work done at greater depth and it is highly improbable that with the then limited knowledge of regional geology the miners of the Peerless even suspected the existence of a major ore body below. We now believe that it is extremely probable that such an ore body will be found as a lime replacement under the Percha shale.

The Woodlawn shaft is now 165 ft deep, retimbered in 1934, all bad ground having been caught up and the shaft in good shape for future operations.

This shaft was begun in 1907 by Huston, Venable and Hawkins who ran a 50 ft drift to the East depth of 30 ft, sinking two small winzes and mining a couple of tons of rich ore. A specimen that I took at the time and had assayed when I bought the mine in 1920 ran 41.71 oz gold, 2871.2 oz silver.

No other ore of any importance was found until the 150 ft level was reached and it appeared that we were on top of an ore body. The quality of that ore is indicated by the assays given on pages 24 and 25 of the Worcester report. In addition to the gold and silver shown this ore carried from 20% to 40% lead.

This level now caved is timbered off and could best be reached from below.

There was no ore in the bottom of the shaft at 150 feet but a little fresh ground was broken when the shaft was retimbered in 1934. Manuel Montes, foreman, reported 3 ft of ore in the bottom of the shaft at 165 ft, bringing up a large sample that was sent to H. S. Worcester who wrote from Beatty, Nevada, October 22, 1934.

"I have taken time to read over your letter and to examine the rock you sent me."

"From reading your letter and from what I can see in the specimen I am lead to believe that you are on top of a replacement similar to one which I mined in the Pico Argentine mine. In this case we learned that quite often in the mine along one of the big faults a zone of intensely altered and silicified lime would occur varying in thickness from a few inches up to three feet. At some places behind this we would find a very rich lead zinc replacement - from one such ore body I was able to ship about 50 tons a day for several months. The only difference I can see is the lack of pyrite in your silicification. I interpret the rock covering the bottom of the shaft, similar to the specimen you sent me, as limestone somewhat brecciated and partly silicified with streaks carrying zinc, galena and silver sulphide in among the brecciation."

While no prospecting has been done in search of mill ore it is possible that such a body could be found and developed. As an indication there is quite a lot of altered porphyry near the Peerless that will run a couple of dollars in gold, and on the 100 ft level of the Woodlawn I once ran a cross cut 25 or 30 feet into the phytitized porphyry north of the vein. My memory is that it ran better than \$5.00 in gold at the old price. In August 1934 John S. Vhay took a chip sample on the surface, in an old pit and on both sides, from a 25 ft width that assayed \$5.95 in gold and \$0.50 in silver. The length of this ore body and its actual value would have to be determined by crosscutting on lower levels but it is something that should be kept in mind in future development.

Jack Gage Sterk.



HARRISON SCHMITT  
Consulting Mining Geologist

Hanover, New Mexico  
March 15, 1935

To: Mr. Jack Gage Stark  
15 E. Delaguerra St.  
Santa Barbara  
California

Subject: Report of examination of Walnut Creek property

In accordance with our correspondence I made an examination of your Walnut Creek property. The reports and maps by Worcester and Vhay were very useful and seem above the average in execution. I entered the tunnels on the Peerless and viewed the surface up and down Walnut Creek, particularly the outcrops and material on the dumps. Whenever I had occasion to check the geology (rocks and structure) by observations were in accord with those of Worcester and Vhay. My conclusions are necessarily sketchy and handicapped by lack of information, particularly on width, length and grade of the ore below the water level in both mines. A few generalizations, however, can be made with reasonable assurance.

- 1) The ore is definitely localized by the strong east-west Walnut Creek fault and in detail by branchings from this fault.
- 2) The mineralization is a "low temperature", "low intensity" type common to southwestern New Mexico and characterized by the presence of manganese bearing carbonates, jasperoid, the "rosin jack" variety of zinc sulphide, barite, high silver values and minor coarse quartz. Other camps of more or less the same type of mineralization include Pinos Altos, Chloride Flats, Georgetown and a number of others. The ore at Pinos Altos is in veins and contains gold, but at the other camps is low in gold and has a tendency to form under shale beds, particularly the Percha shale. In general the ore of these camps has been secondarily enriched by oxidation and accompanying near surface sulphide enrichment. The primary un-oxidized massive lead-zinc sulphide ore bodies below the enrichment have been low in precious metals and heretofore non-commercial largely because of their small size and

and wide separation. In line with this, probable near surface enrichment at Walnut creek must be considered, but is not necessarily of predominant importance for, among other considerations, we do not know how deep the enrichment extends, assuming it does exist. It may extend much deeper than the present workings. Should further development be done accompanying study would probably give and answer to these questions.

3) This type of "low temperature", "low intensity" mineralization requires better than average structural preparation (brecciation) for the formation of ore bodies. The impressive faults fulfil such a condition at Walnut Creek and it is interesting to note the association of the ore with fault junctions. Such loci generally have better than average brecciation and indeed, at Walnut Creek they are associated with strong brecciation.

4) The factor of "strength of associated rock alteration" which we rely upon nowadays to a predominating extent in judging prospects tells an important part of the story here. This alteration is largely jasperoidization of limestone and like the ore is concentrated at the fault branchings. It is doubtless and "indication of ore", but if read correctly means small ore bodies because it represents a relatively smaller amount of silica than in the nearby worked out camps.

The presence of the Percha shale in depth, and because the local type of mineralization favors the horizon just below this shale, makes the structural conditions in depth attractive. The presence of ore above the shale does not mitigate the possibility of a "damming" effect below the shale in my opinion. Such "damming" is never wholly effective because, of course, the mineralizing solutions pass for a long period of time and must outlet above.

Summing up my final conclusion is that the Walnut Creek camp, though small, has enough points of interest to justify further small expenditures. There seems to be little chance for any but small, although rich, ore bodies and the risk of decreasing values in depth through the decreasing influence of superficial enrichment must be considered.

Your property should be attractive to many who habitually take risks of this kind. A modest testing of the country around below the Woodlawn shaft seems justifiable with an approach similar to that recommended by Messrs, Worcester and Vhay. A compressor and minor smaller equipment would be needed.

Yours very truly,

HARRISON SCHMITT

HAS:EHS

PETTERLESS WOODLAWN GROUP

Grant County, N. M.

REPORT

of

EXAMINATION.

August 1934

Beatty, Nevada.  
September 24, 1934.

H. S. Worcester  
Engineer.



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HAROLD S. WORCESTER

Beatty, Nevada  
September 24, 1934

Oakleigh Thorne, Esq.,  
Millbrook, New York.

Dear Sir:

A report on the examination of the Fearless-Woodlawn group of claims in Grant County, New Mexico made at your request during August, 1934, is respectfully submitted.

#### SUMMARY

The examination of this property showed no ore but did show quite favorable geological features. These consist of the following:- (1) A strong fault in good replaceable lime, (2) The presence of two well defined mineralizations along this fault which have produced considerable rich ore, (3) The presence of a shale which is shown to have acted as a definite dam for mineralizing solutions. Considerable data as to previous grades of ore was found entered in the various assay sheets appended to this report. The lack of any present ore makes it impossible to evaluate the mine.

#### CONCLUSIONS

The mine will necessarily be small unless ore bodies different in character from those previously mined, are found. Such an ore body would be supplied by a replacement ore body under a dam such as the Percha shale might provide. The fact that the small ore bodies came up along the fault through this dam makes us wary of expecting the existence of replacement ore bodies. At the same time it would be possible for them to occur if the mineralizing medium should have been sufficiently stronger than the small leak through ore bodies to provide for a large ore body under the shale. From the data at hand it is believed that the ore bodies which would be found in sinking the next 100 feet or so required to get to the base of the Percha shale would probably pay for such work in the Woodlawn shaft. Such work should not be undertaken until the shaft has been sunk a short distance below the caved level and a drift run out to intercept the ore reported on this 150 foot level. Under the possibility that ore bodies such as have been found in the neighboring camps may be found here similarly, it is recommended that the Woodlawn shaft be sunk 25 feet and a drift run 40 feet easterly on the ore bodies. If sufficient ore is shown by this it is recommended that the Woodlawn shaft be sunk in lifts of 50 feet and drifts run on the ore at each horizon until the base of the Percha shale is found.



### LOCATION

The Peerless-Woodlawn group of gold, silver, lead claims is located on the Walnut Creek about twelve miles northwest of Silver City, in Grant County, New Mexico. The group which is held by the possessory title under the ownership of J. G. Stark of Silver City, New Mexico, consists of five claims; - The Woodlawn and the Woodlawn Nos. 2, 3, and 4 and 5. All present work of the mine is on ground covered by the Woodlawn, Woodlawn No. 3 and Woodlawn No. 4. These claims are all six hundred by fifteen hundred feet. There is a road to the property from Silver City which town is the post office, telegraph, express and freight station for the mine. This road is good for the first eight miles from town and the last four miles are very poor but passable. The claims are all located in the Juniper hill Mining District and form a solid block along the Walnut Creek fault, which is the controlling feature. An arrangement with which you are conversant has been made for handling the property in case of favorable result of this examination.

### HISTORY

The Peerless Shaft which is located on the Woodlawn claim was operated in the 80's as a high grade silver mine. Reference to "Extracts from unsigned paper on Peerless Mine" and "Copy of a letter from old miner on the Peerless" both of which will be found in additional data at the end of this report, will give further details of past history of the mine. Several years ago J. G. Stark came into possession of the property and has kept up the necessary assessment work since. No very careful examinations have been made of the property, at least no definite reports are available at this date except a report of a geological surface examination by John S. Whay of Princeton, New Jersey. This with my personal additions has been made use of in this report and thanks are extended to Mr. Whay for it and his collaboration with me during the present examination. A copy of a letter by Ira L. Wright to J. G. Stark may be seen at the end of this report. A letter relative to the mine written by R. R. Demanter giving some recommendations relative to the property was seen and the contents checked, but is not included in the report. Very little money has been spent in recent years on the property. Quite a few years ago a shaft known as the Woodlawn Shaft was sunk about sixteen hundred feet west of the Peerless Shaft on the Walnut Creek fault. From this shaft some good ore was taken. Present operations are confined to this Woodlawn Shaft.

### ADJOINING PROPERTIES

No other properties directly adjoin this group and no ground which at present appears valuable was noted near by. The nearest camp of importance is the Pinos Altos district about eight miles easterly from the Group. This area was and is very productive in complex ores carrying gold, silver, lead, copper and zinc. The entire region however, has been a heavy producer of valuable ores. Evidence of this is seen in the camps of Silver City, Tyrone, Fierro, Hanover, Pinos Altos and Santa Rita, which are all located near by.

### TRANSPORTATION

Transportation will be by truck over the road to Silver City. This road may be rather easily put in shape for a truck haul. A cost of 80¢ per ton in quantity for Hauling the ore from the Mine to Silver City has been estimated by a Mexican contractor. During the winter, hauling will be somewhat more difficult due to snow in Walnut Creek, which is close to the summit of the Continental Divide, but there is not sufficient snow to cause any great hardship. From Silver City to the smelter at El Paso, Texas, the ore will be shipped over the Santa Fe Railroad. A flat rate of \$1.15 a ton from Silver City to El Paso, regardless of grade of ore, has been quoted by the Santa Fe agent.

### POWER

At present the power is steam, generated in a boiler burning wood cut on the property and delivered for \$2.00 per cord at the boiler. However, if more power were required internal combustion engines would probably be the most reasonable source. Gasoline at present costs 19¢ per gallon in Silver City and Diesel Fuel Oil may be had at 5¢ per gallon. It is possible that the city of Silver City would permit the use of a small amount of electric power from their line about three miles westerly from the mine.

### WATER

A spring of good water sufficient for a small camp has been developed at the present camp. More water could be gained by developing a spring about a quarter mile above camp, up Walnut Creek. The mine shafts might yield thirty gallons per minute but this has not been checked and the flow of the springs might be stopped by pumping from the shafts.

### TIMBER

Timber for the shaft sinking and other mine timber at present is being cut on the property and delivered framed for a probable total cost of about \$7.00 to \$8.00 a set. In the same region the figure of \$25.00 per set for sawed timber with skilled workmen has been given. The timber used is a variety of western pine of pretty good grade. If the supply is used up on the claims further stumpage may be had from the National Forest on which the Group is located.

### LABOR

Ample labor supply of the American-Mexican type is available in this region. The wages paid for ordinary labor have been from \$1.50 to \$2.00 per day. Skilled labor would have to be paid somewhat more, running as high as \$4.00 per day. However, contracts may be based on rates set on the lower figures. Labor Unions are not affecting this labor.

## CLIMATE

The region is semi-arid and the altitude is about sixty five hundred feet above sea level. It is mountainous being very close to the Continental Divide which is about four miles east of the mine. Due to the altitude the winters are fairly cold and the temperature goes to zero. They are not as severe as those more northerly from this point and no great trouble may be experienced in operating. There are snow-falls, but these snows have not seriously blocked traffic. During the summer months there is considerable rain which is often of the cloudburst type and severe lightning storms are experienced. In operating thought would have to be taken for these two items.

## TOPOGRAPHY

A topographical map of the immediate region is appended. From this it will be seen that both shafts are above the creek bottom and that the creek although running in a rather narrow gulch is not really in a canyon. Topography in the neighborhood of the mines is however, quite rocky. Building of a good road along the sides of this gulch would be rather costly. But little interference to transportation is found on the present road which follows the bottom of the gulch. Buildings, tunnels, and shafts would naturally have to be placed well above the stream bed because of the run-off during cloudbursts.

## GEOLOGY

Reference for the description of the following material may be made to geological map and to geological sections which are appended. The formation comprised in the area are sedimentary with considerable intrusion by dikes and sills of porphyry mostly monzonitic in type. Reference to a copy of report by John S. Vhay which is appended will give a more detailed account of the rocks present at the mine. The main fault in the region is the normal east-west striking and steeply southerly dipping Walnut Creek fault having a considerable displacement, the exact amount of which is not determined. In the neighborhood of the mine this brings Pennsylvanian Magdalena limestone on the downthrow side of the fault in contact with the El Paso lime on the other side. The thickness of the El Paso lime will not check with its thickness at other points, because of the great thickness of porphyry sills which have been intruded into it. Where the ore has been found small branch faults and fractures have left the main fault at acute angles to the northeast. The intense fracturing near the junction of these faults has acted as a channel for the ore bearing solutions. At the Woodlawn Shaft the Percha shale has been dragged along this fault and evidence of actual bedding of the shale was seen in a cross cut about fifty feet down the shaft extending into the hanging wall of the shaft. It is thought from this that this shale which has had at other points thicknesses of from 200 to 260 feet may be of no great thickness below.



This shale would act as a very good dam to solutions and might cause such solutions to make a replacement deposit in limes found below them. Evidence for such a conclusion is seen in an ore body which has been stoped in the upper tunnel level of the Peerless workings. This ore body occurred in a porphyry envelope forming along a fault and following up under a drag of Percha shale on this fault. No ore occurred in the Percha shale. At other mines in the Silver City Quadrangle the Percha shale has caused ore bodies to form under it in the Fusselman Limestone.

#### ORE

Some small pieces of ore from the Peerless workings were seen. These showed considerable silver sulphides in a gangue consisting largely of calcite with some quartz. In specimens examined from the Woodlawn Shaft two types of ore were seen. From the thirty foot level where a small margin of ore had been left, a piece was taken which was completely oxidized showing cerussite and silver chlorides with a small amount of azurite. In specimens from lower horizons no oxidized minerals were present, all being sulphides and various silver sulphides, chalcopyrite, galena, and sphalerite were all noted, again occurring in a gangue largely composed of calcite but with some quartz present. The ore from all reports available was very high grade in gold and silver values with a preponderance of gold value at the Woodlawn Shaft and much heavier silver values at the Peerless. It was reported that the entire production from the Peerless workings averaged about six hundred dollars per ton. This is based on the word of the old assayer for the operation. Reference to appended copies of assay certificates will give an idea of the type of ore which was found in the Woodlawn workings. In both operations the ore occurrence was confined to small lenses occurring along the fault. This fault has post mineral movement which make it somewhat difficult to find new lenses after one is exhausted. However, a trend of ore was noted in the Woodlawn workings as extending almost vertically downward somewhat to the east of the shaft. If this trend continues it would be relatively easy to follow the ore to depth. In the Peerless workings the only ore shoot which could be checked was one extending from above the upper tunnel downward and westerly into caved ground at the lower tunnel. The rake of this shoot was definitely westerly downward. We do not know what the shoots in the lower mine were like, but they did occur considerably to the east of the shaft as a reported length of the 175 foot level was 400 feet to the east and said to be all in ore. The lenses are reported to have the characteristics of being richer in value as they get larger in thickness and size. The geology and ore trends of the levels below the collar of the shaft at the Peerless could not be examined because these levels were under water. In the Woodlawn as mentioned under geology there is a possibility that replacement deposits might be found under the Percha shale, if sufficient fracturing has occurred in the limestone near the fault. The fact that ore bodies

were formed on the fault above the bottom of the Percha shale may however, indicate a complete relief for the solutions which were rising, or there may not have been sufficient relief of pressure and freedom for escape of solutions but that replacement ore bodies did form. The gamble of the operation is on this.

#### EQUIPMENT

There is practically no equipment on the property belonging to it. For reopening the shaft at the Woodlawn and unwatering it equipment was borrowed and would have to be returned in case regular operations were carried on.

#### DEVELOPMENT

The Peerless workings consist of the upper tunnel, the air cross-cut level, the lower tunnel, which is at the elevation of the collar of the Peerless shaft, the one hundred level and the one hundred and seventy five level in the Peerless shaft. The Peerless shaft is a vertical shaft at present full of water to within thirty feet of the collar. It was sunk in limestone and is probably in good shape below the water level. Several years ago it was pumped out and Mr. Stark has seen the mouth of the 175 foot level, but no one has been in it since the early days. At this same time some work was done westerly on the 100 foot level. The exact position or lengths of the 100 level or the 175 are not known except that they were both reached by cross-cuts southerly from the shaft. The inner end of the lower tunnel is not known as it is caved in where stoping commenced.

The Woodlawn incline shaft is 150 feet deep, it has a drift easterly at 30 feet and another by cross-cut southerly from the shaft at 50 feet, and one at about 150 feet. The 30 foot level was caved where stoping occurred, but was accessible. The winzes below the 30 foot which connected with a level reported to be a 100 feet were both caved, so that the position and lengths of the 100 level are not known. This level did not connect directly with the shaft. The 150 foot level was caved completely, the muck running out through the cross-cut to the shaft when the water was pumped out.

#### PUMPING

In case of reopening the Peerless workings about thirty gallons per minute of water will probably have to be pumped provided a cross-cut south of the main ore drifts on the 100 level is not blocked off. In the latter case water flow should be very much lessened. At the Woodlawn shaft a flow was said to be about 20 gallons per minute, but this seemed to be excessive for the flow seen.

#### MINING

Mining the ore, when ore is located, is comparatively cheap, considering the value of the ore. As long as the mine is kept dry mining can be pushed rapidly, the waste being soft is stripped from the ore and

the ore broken in large pieces by small pop shots. Timbering will be necessary throughout but in stoping the timbers would be short and not required to be very heavy because the stopes could be filled with waste right behind the mining. It is quite necessary that the water be not allowed to come up in workings if they are to be entered afterwards, because after opening the ground the altered rocks at the side of the fault which are in most places porphyry tend to dissolve and cannot be held without very costly timbering. In mining as soon as a definite trend of ore has been found it would be well to push development considerably ahead so that a regular production may be maintained. As no ore body sufficient to warrant milling was seen, milling is not considered in this report.

#### PRODUCTION

No definite figures are available relative to past production of the operations and no production at present is being made. No ore reserves can be considered for the mine because no ore was in sight.

#### FUTURE EQUIPMENT AND DEVELOPMENT

Any work undertaken at this property would of necessity be small as the tonnages handled, unless a large replacement ore body were found, would never be very great. Consequently small equipment is recommended. If much sinking is to be done a small compressor and jack hammer drills would be needed. A pump jack and column and rods and pump cylinder will also be required. A small hoist is needed. If the power used is steam the pump will have to be driven by a separate engine, but if gasoline power or a distillate engine were used for the hoist the pump jack might be driven from the hoist engine. In any case if much work were done the firewood supply close at hand would be used up. The compressor would require so much wood if driven by steam that the wood would not last long. The ideal power would be electricity but the cost of getting to the property, unless much larger ore bodies are located, make it prohibitive. A small camp will be required at the property and shaft house and hoist house will be necessary at the shaft which is operation. When the Peerless shaft is started a new head frame will be needed and the upper part of the shaft will have to be retimbered.

Respectfully yours,

H. S. WORCESTER