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HORSE VALLEY PLACER MINE

CAMPTONVILLE, YUBA CO., CALIF.

The following report is based on a visit to the property made July 21-22nd, 1923, and on information furnished by the California State Mining Bureau and by Mr. F. Joubert, E. M., and Mr. W. E. Turner, residents of Camptonville. No sampling of the mine was attempted due to the shortness of the time available, the impracticability of sampling such deposits, and the small amount of gravel remaining in the mine. Information was not at hand concerning the condition of the title to the property or the extent and location of the claims, except that the latter fully cover the remaining gravel. This information will be submitted in the form of an appendix as soon as it is forthcoming from the County Clerk of Yuba County.

LOCATION.

The property of the Horse Valley Mining Company, generally known as the Weed's Point Mine, is situated in Section 34, Township 19 North, Range 18 East, Mt. Diablo Base and Meridian, about 2 miles north of Camptonville, a small town on the Nevada City-Downieville highway and 25 miles north of Nevada City. A highway also connects Camptonville with Marysville, the county seat of Yuba County; distance 47 miles.

TOPOGRAPHY.

The general topography is typical of the western slope of the Sierras at this elevation (about 3000'), consisting of long, flat-topped ridges separated by deep gulches. Heavy pine forests cover the ridges; brush is not abundant. The drainage of the region is into the North Fork of the Yuba River,

one of the principal tributaries of the Sacramento.

DESCRIPTION OF THE PROPERTY.

The Horse Valley Mine consists of a section of the famous Tertiary river channel which roughly parallels the present north fork of the Yuba River several miles to the north of the latter. While the general course of this ancient stream is north-east--south-west, in the immediate vicinity of the mine it has very nearly a south--north direction, indicating an abrupt bend in the old river. Time was not available to connect the section of channel at the mine with near-by sections laid bare by mining, but this section is unquestionably part of the main channel, and is so shown by Lindgren in the Smartsville Folio.

The principal topographic feature at the mine is a large ridge, here running nearly east and west, but in general having a north-east--south-west direction, which separates Horse Valley, on the north-west, from Willow Creek, on the south-east; both being tributaries of the North Fork of the Yuba. The ancient river channel forming the auriferous gravel cuts this ridge very nearly at right angles; it has been preserved from erosion at this point by the height of the ridge. It has been completely removed by hydraulicking south of a point near the apex of the ridge; for about 300' across the top of the ridge the gravel remains untouched; north of this virgin gravel a layer of gravel about 15' thick remains, the upper portion of the bank having been removed by hydraulicking. (See map and sections)

A tunnel was driven from a branch of Horse Valley about 500' south-east toward the gravel, connecting thru a 6' raise to a long, deep cut in the bed-rock, which in turn gave access to the gravel, but at too high a grade to sluice any but the top 50 feet or so of gravel. This accounts for the 15' of gravel remaining in the North Cut. (See map) The deep cut mentioned, about 200'

in length, has caved badly, and a large amount of boulders and fragments of bed-rock, piled to the east of it, keep continuously sloughing in. The tunnel is caved at the lower entrance, but elsewhere is standing well without timber.

Tailings, which under the California Debris Law must be impounded where they may silt up agricultural land, are taken care of by a concrete tailings dam across Horse Valley, about 1 mile south of the mine; this dam is 100' long, 10' thick at the top, and 26' high at the highest point. It is in excellent shape. A water tunnel has been driven in the canyon rim-rock, just west of the dam, from a point just below the dam 200' up the canyon, where the stream flows into it down a short shaft, so that no water is at present backing up behind the dam. While the dam is a good one, the situation is remarkably poor: the average depth of the tailings compound is only 8' (some tailings are in the compound and the original average depth was probably about 12') and the basin will not hold more than about 25 000 cubic yards of tailings additional.

THE EQUIPMENT OF THE PROPERTY.

As is inevitable with a plant which has lain idle and unprotected for 7 years, equipment is scattered, incomplete and in poor shape. However, two giants remain, of 11" and 8" intake respectively; the nozzles could not be found, but the giants can be re-fitted and used at slight expense; hydraulic pipe, mostly 11", about 400', in fair shape; two locomotive boilers, poor condition; an old single cylinder horizontal steam engine, and a compressor of antique design, single stage, one cylinder, but which was used recently by the Brandy Creek Mine, comprise the greater part of the equipment remaining. All fittings are missing. In addition, there are two steam engines with boilers, of about 5 by 7 stroke, near where the road crosses Willow Creek en route to Weed's Point; these are locally supposed to belong to the company.

VALUATION.

The accompanying photographs, maps, sections and computations indicate the very small amount of gravel remaining. In arriving at a value per yard, the estimate of Mr. Chas. Haley, E.M., 619 Crocker Bldg., San Francisco, the leading authority on California placer mining, and that of Mr. F. Joubert, E.M., Camptonville, Calif., who formerly operated the property for a short time, and who is now operating the same channel 2 miles to the north, agreed to a cent, and this value of 12 cents per cubic yard (recovered) was therefore used. They maintain that the gold is fairly well distributed from top to bottom of the bank, all of the gravel with the exception of a few barren layers, being minable at a profit. On the other hand, Mr. E. E. Turner, living at Weed's Point, together with his son, have had more actual experience with the property than has Mr. Joubert, and they both insist that the upper, or fine gravel, is very nearly barren, and point to the fact that they cleaned up only \$60.00 from 2 months hydraulicking of this upper gravel alone. They claim all the values are concentrated in the coarser, bluish lower gravels (see photograph No. 5). I have therefore estimated roughly the value of the property First, on the assumption that conditions are as stated by Mr. Joubert, and Second, that they are as claimed by Mr. Turner, and have indicated on the map and sections the relative importance of the two gravels. In the second possibility, the further assumption has been made that the total gold contained in any block of the lower gravel is the same as that which would have been contained in the whole block of gravel from bed-rock to surface had the values been distributed evenly thruout at 12 cents per cubic yard; this is a common assumption made with river placers and is born out by experience. This leads to a value per yard of the bottom gravel of 98 cents, assuming that the average value per yard of the whole block (I have used block "A&B") from top to bottom is 12 cents; but that all values are concentrated in the lower 20".

The estimated operating cost is based on statements by Mr. Joubert, who has operated all of his life in the immediate vicinity, and is a graduate engineer. He gave 5 cents a yard to mine the gravel as a whole, based on costs at his mine, but as conditions with him are more favorable, I have taken 5 cents as the cost per yard to mine the upper fine gravel, and 10 cents as the cost to mine the lower, as the latter is cemented in many places, contains many large boulders, and is quite narrow, and the bed-rock is highly fissured and hard to clean. This gives an average cost to mine the whole deposit of 5.7 cents, not radically different from Mr. Joubert's estimate.

One factor in the cost which I have neglected is that the tailings compound can hold only about 23 999 yards; however, this difficulty could be met by placing a brush and timber dam across of the South Cut (see map) and sluicing the upper gravel of block A-B from the south instead of the north; in which case the tailings compound could hold all of the lower gravel.

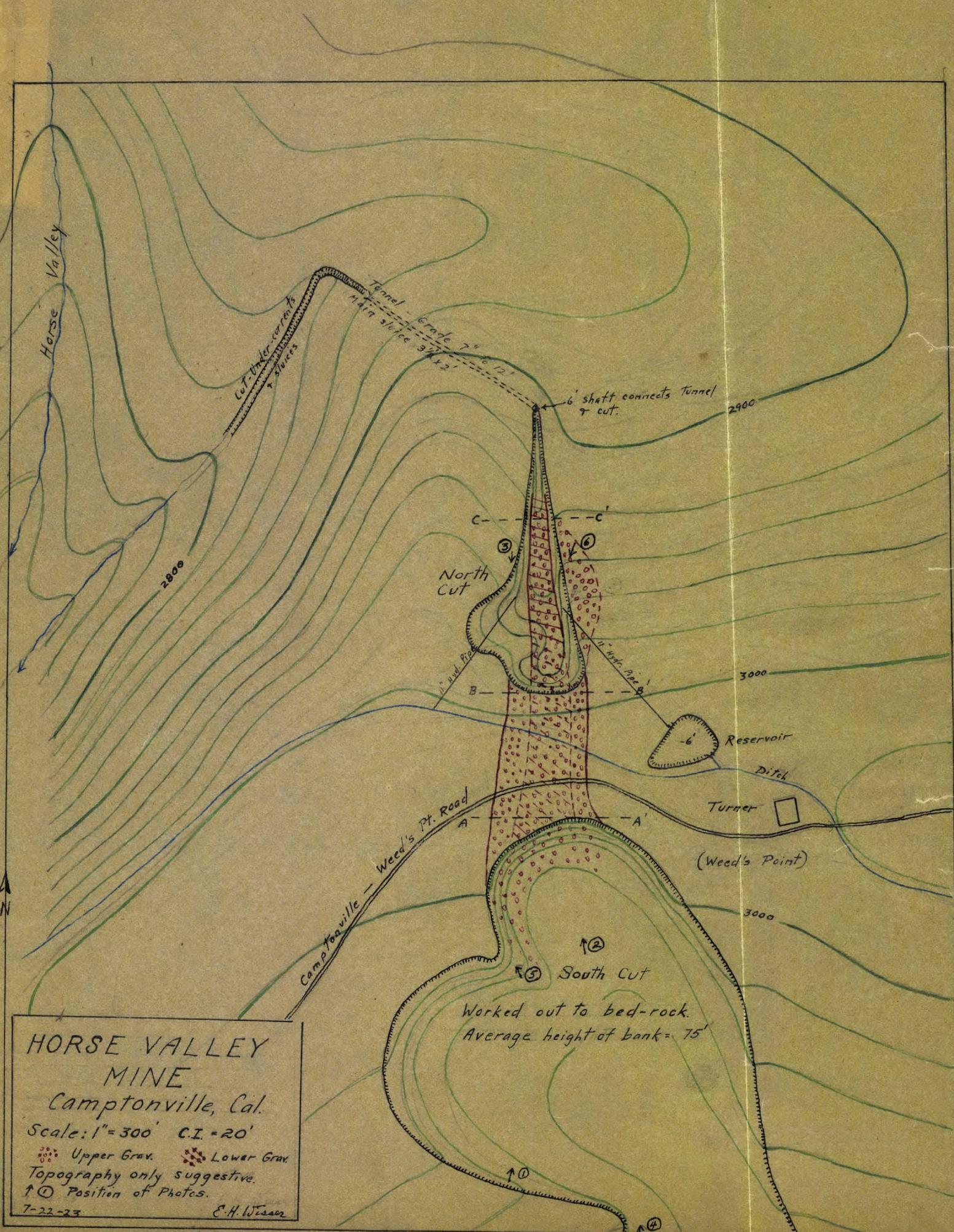
A more serious consideration is the condition of the bed-rock cut and tunnel in the North Cut. The grade here would have to be rectified in order to mine the lower gravel; the cut is 30 to 40 feet deep and half full of debris, which is continually sloughing in; either this cut would have to be deepened, entailing the removal of a large tonnage of boulders and rim-rock bank, and then well timbered, or an extension of the tunnel on a proper grade would have to be driven, eliminating the troublesome cut. At any rate, a considerable expenditure would be required here before any mining could be done at all; I have roughly guessed this at a minimum of \$2500.00.

Further expenditures preparatory to operating would be the repair of the ditch and flume, about $1\frac{1}{2}$ miles in length; this system is carrying some water for irrigation at the present time, but is badly out of repair; however, I think it could be put in shape to carry enough water to operate 2 giants and a pelton wheel;

the bulkheading of the water tunnel at the dam; repair of pipe; re-equipment of giants, etc. I have estimated the sum of these expenditures at \$4000.00, a rather optimistic estimate.

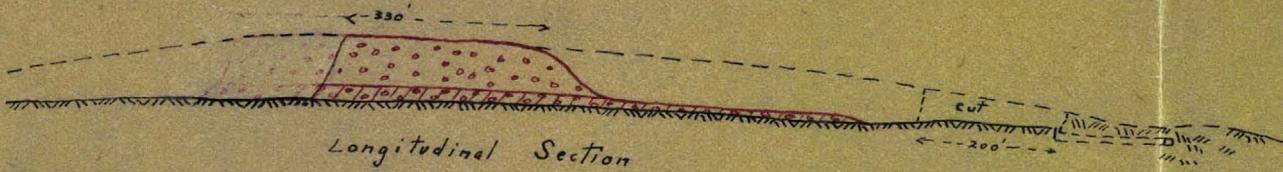
The results obtained for the net value contained in the remaining gravel, \$4300.00 on assumption #1, and \$11000.00 on assumption #2, indicate that the property is of practically no cash value, so far as its contained gold is concerned, to any organization except a group of placer miners working on shares, who might make wages out of it for a couple of years, if they leased it and did all their own work. According to the best obtainable information, the duty of water against a bank such as this is such that even the finer upper gravel could only be mined out in two seasons, and the lower, coarse gravel could not be mined inside of two or three seasons more, so that even with a group of leaser-miners as suggested above, success in obtaining a living wage out of the property would be contingent on finding some rich concentration on the bed-rock, such as do occasionally occur in these placers.

Berkeley, Calif., July 25th, 1923

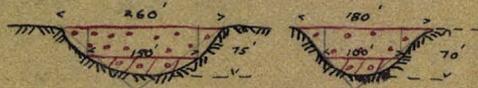


HORSE VALLEY MINE
 Camptonville, Cal.
 Scale: 1" = 300' C.I. = 20'
 Upper Grav. Lower Grav.
 Topography only suggestive.
 ↑ ① Position of Photos.
 7-22-23 E.H. Wasson

Worked out to bed-rock.
 Average height of bank = 75'



Longitudinal Section



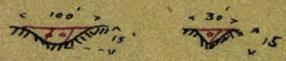
A-A'
Area in \square yds
 $87 \times 17 = 1480$

B-B'
Area in \square yds
 $60 \times 15 = 900$

Ave. Area, Block A-B
1190 sq. yds.

Length of block = 110 yds.

Volume " " = 1190×110
= 131000 cu. yds.



B-B'
(Lower Grav.)
Area in \square yds.
 $33 \times 25 = 82$

C-C'
Area in \square yds.
 $10 \times 25 = 25$

Ave. Area, Block B-C
53 sq. yds.

Length of Block = 140 yds.

Volume " " = 53×140
= 7400 cu. yds.

Grand Total = $\frac{131000}{7400}$ A-B
138400 sq. yds. B-C

Recovered Content of Gravel = 12 ϕ a yd.
Est. cost of mining bank as whole = $\frac{64}{6}$ a yd.
Net profit per yd.

$138400 \text{ yds.} @ 6\phi = \8304 Gross
 $\frac{4000}{4304}$ Net profit in gravel
To start up
Net profit in sight.

On Supposition
whole bank carries
values @ 12 ϕ a yd.

On Supposition
bottom gravel only carries
values

Bottom Gravel

Block A-B

A-A' Area $50 \times 3.5 = 175 \square$ yds.
B-B' Area $33 \times 3.5 = 116 \square$ yds.

Ave. Area, Block A-B
146 \square yds.

Length of Block = 110 yds.

Volume " " = $146 \times 110 = 16100$ cu. yds.

Total $\frac{16100}{7400}$ A-B
23500 Cu. Yds. B-C

Barren Gravel to be removed.

A-A' Area $18 \times 60 = 1080$
B-B' Area $33 \times 17 = 561$
A $13 \times 18 = 234$
B $13 \times 17 = 221$

1314 782

Ave. Area, A-B = 1048 \square yds.

Length, A-B = 110 yds.

Volume, A-B = $\frac{115100}{23500}$ cu. yds.
Total Lower Grav. 23500

Grand Total = 138,600 check

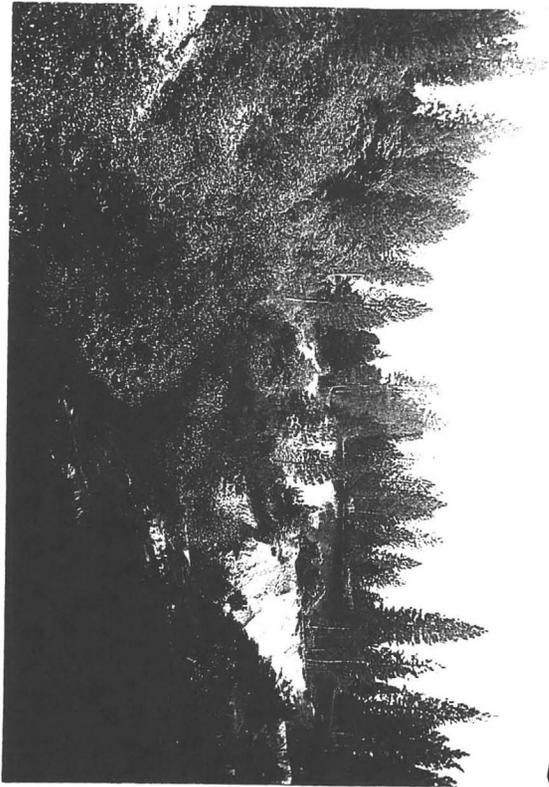
Assuming stream channel to have contained same total amount of gold as near-by sections which run 12 ϕ a yd. top to bottom (ave), & that this amount of gold is concentrated in lower gravel (20' thick under barren gravel)

Val. per yd., bottom gravel = $\frac{131000}{16100} \times 12 = \98ϕ . Cost to mine bottom gravel = 10 ϕ per yd.
Total Value in Bottom Gravel = $23500 \times 98\phi = \$23075$ barren " = 5 ϕ " "
To mine barren & bottom gravel $\frac{3100}{4000}$ = $\frac{23075}{12100}$ Net Profit in sight
To start up $\frac{4000}{12100}$

PHOTOGRAPHS

NO.

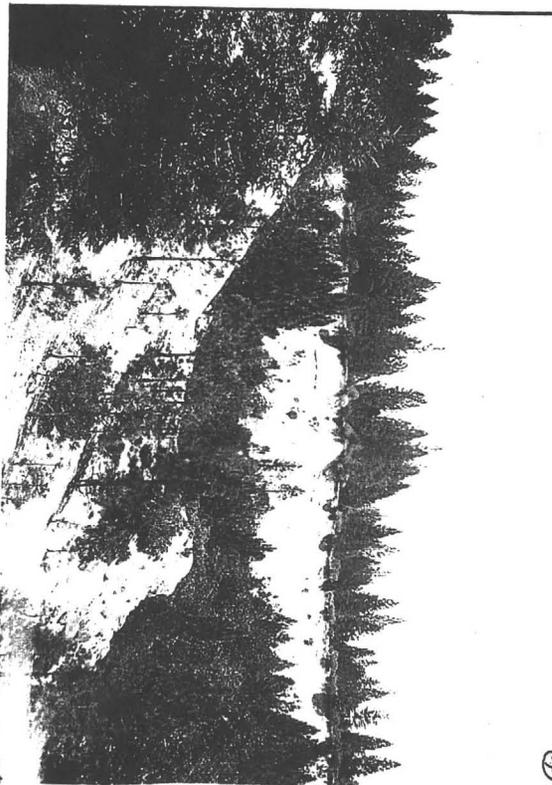
- 1Virgin Gravel Bank,from South Cut;rim-rock in right middle fore-ground and left fore-ground.
- 2 Nearer View of same Bank. "Lower Gravel" shown by brush at base of Bank.
- 3Virgin Gravel Bank,from North Cut.
- 4 " " " from South Cut.
- 5 Close view of " Lower Gravel" as exposed in South Cut.
- 6..... Virgin Gravel,from North Cut;rim-rock,right half of picture.
- 7Tailings Dam,from Upstream side,showing temporary timber Dam in foreground.



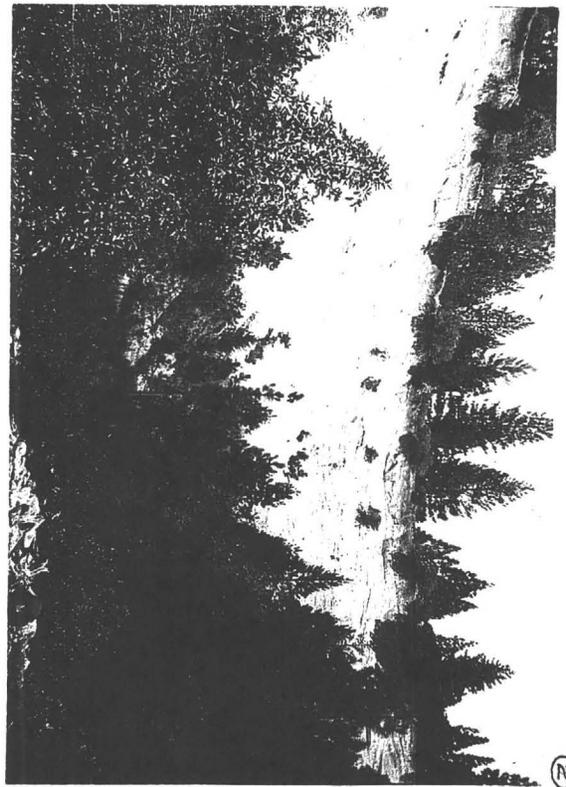
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7



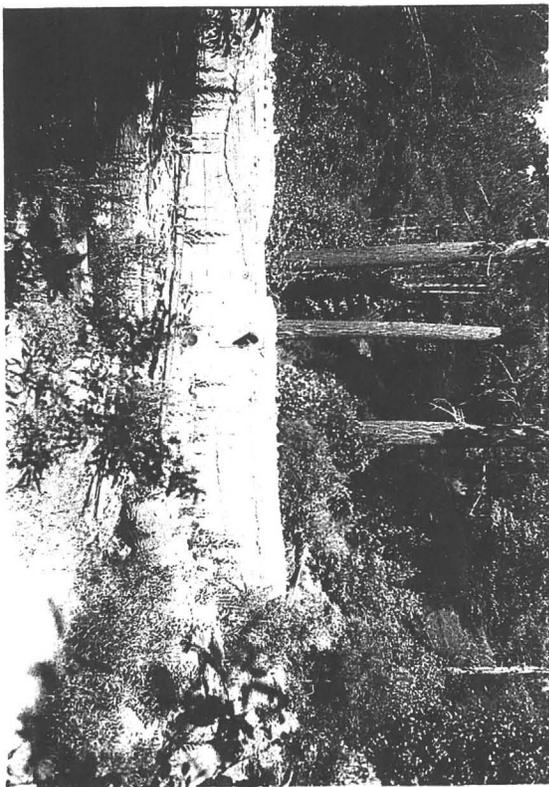
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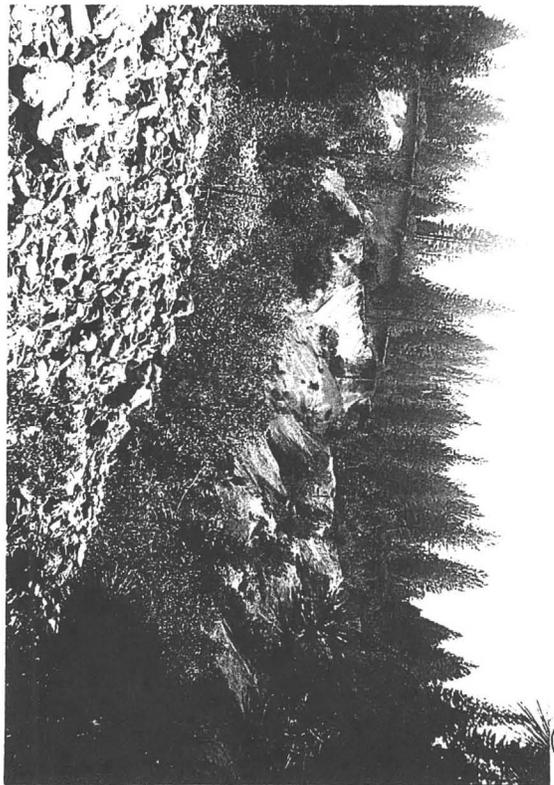
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COPY OF REPORT OF STATE MINING BUREAU, 1915

NAME - Horse Valley Mining Company.

OWNER- Lescher, Penn.

LOCATION- 2 1/2 miles NW of Camptonville.

ELEVATION-2900'; WATER 1500" from Willow Creek.

CLAIMS - None patented; 6500' by 600'; 250 acres (sic) Figures up 90 acres approx.)

CAPPING-5' (None) DEPTH of GRAVEL 15' (LOWER GRAVEL only was counted, apparently)

DISPOSAL OF TAILINGS- Drains in territory of North Yuba.

EQUIPMENT- 300' of 11" pipe, under 60' head; 4 giants.

REMARKS- Works in winter; to put in cement dam on Brandy Creek (Horse Valley)

Tunnel run to get grade for sluice.

SOURCE OF INFORMATION- W.E. Turner and personal visit.

Sept. 11, 1915

C.A. Waring,
Field Assistant.