No. 157 Howard Street
Spokane 4, Washington
May 10, 1962

Memorandum

To: Chief, Division of Field Operations

From: Acting Field Officer, Region I

Subject: Application examination, OME-6200 (Lead-Zinc-Gold-Silver)
The East Pacific Company
John L. et al. Claims
Broadwater County, Montana

The East Pacific Company, P. O. Box 655, Helena, Montana, applied for OME aid to explore lead-zinc-gold-silver ore along the John L. and South veins and at the projected intersection of the two by a 12-point program estimated to cost $343,979.50. The existence of the John L. vein is based on its exposure in one new trench, occasional quartz float more or less along its strike, and two old surface cuts now filled with debris; the latter are also more or less along the general strike of the vein exposed in the new trench. The South vein is exposed in a drift about 250 feet long driven from a crosscut south from the East Pacific No. 4 level.

The information presented in the application in no way justified the large amount of work proposed. The East Pacific vein has been a good producer, but essentially all the ore was in the oxidized zone above the No. 3 tunnel level. Three hundred-fifty feet of crosscutting and 200 feet of raising are proposed on and from the No. 4 tunnel level, with no evidence that the John L. vein continues to that depth or that the South vein extends upward to its projected intersection with the John L. vein.

The reply of the applicant's geologist to a letter pointing out the small amount of evidence presented to justify the extensive program indicated than an on-site examination should be made. Accordingly, accompanied by Willard D. Tompson, the applicant's geologist, the property was examined April 23, 1962. About 3½ hours was spent on the property.

The applicant's plate V is a modified compilation of maps by three authors; contours were superimposed by the applicant after blowing up a U. S. Geological Survey map. Its accuracy is therefore open to some question. Plate I with this report was prepared by direct tracing of claim boundaries, roads, portal locations, and part of tunnel No. 4. On this base the South vein was projected to the surface and the John L. vein was projected along strike on the basis of the topography as shown on the applicant's plate V. Therefore,

although the relationship between various features may not be entirely correct, plate I is sufficiently accurate to illustrate in general terms the discussion that follows.

Rocks in the vicinity of the East Pacific workings are mostly fresh, hard, blocky andesite; fine-grained thin-bedded pyroclastic rocks and welded tuffs(?) are mentioned in the application, but the andesite was the only rock in place seen by the examiner.

The No. 4 level was closed by ice accumulated near the portal, so the examination was limited to trying to find some evidence of the John L. and South veins in the road cut between the No. 3 level portal and the turn about 1,200 feet to the south, in a cut extending south of No. 2 level portal, and on the slopes below the John L. trench (C, plate I). The road is old and the cut for the most part is deeply weathered and covered by debris. Where solid rock cropped out, it was hard blocky andesite with a few irregular quartz stringers up to one-eighth of an inch wide. Nothing that would suggest a strong vein structure was found. On the slopes above the road in the area of A on plate I, we found one piece of sulfide-bearing quartz vein material, definitely float; its source could not be determined.

An old trench, essentially parallel to the contours, extends about 500 feet southerly from the No. 2 level portal. At about 320 feet, a slight embayment into the hill contained many loose pieces of sulfide-bearing quartz (B on plate I). This material was probably nearly in place and could represent the South vein.

At C (plate I) the road cut was widened, exposing a vein which the applicant designates as the John L. Runoff from snow melt and spring rains has covered the bottom of the cut with a foot or more of debris, but in the wall of the cut is what appears to be the footwall of a vein which strikes N. 88° W. and dips 70° to 75° south. The footwall rock is shattered black andesite interlaced with barren quartz stringers up to one-eighth of an inch thick. Next is a band of clay up to one inch thick, followed by a sheared zone that gradually tightens toward the hanging wall. The shear planes and the rock between them are full of yellow iron oxide and some quartz, more or less vuggy. No sulfides were seen, but Tompson said that after much picking around he found some galena in a narrow shear. We did some picking and shoveling but could find no more. As there was no reason to expect better assays than those of two samples taken by the applicant, which were, respectively, 0.06 ounce gold and 0.1 ounce silver per ton, 0.4 percent lead and 0.1 percent zinc; and trace gold and 0.1 ounce silver, 0.4 percent lead and 0.1 percent zinc, each over a width of 6 feet, no sample was taken.

On the slopes below C, two old pits were so filled by debris as to be barely recognizable. Some quartz float was found at each, as were occasional pieces on the slope between C and the pits, but no sulfides were found. Returning to C and looking along the strike of the vein and down the line of dip set by Brunton, the projection of the John L. vein passed between the two lower trenches and appeared to pass south of the bend in the road south of the No. 3 level portal.

On the basis of these observations and the recorded production from the East Pacific vein, it is possible that the John L. and the South veins might be worth further exploration, but before any underground work, including diamond drilling from the surface, could be justified trenching should be done to open up more of both veins. The embayment in the trench south of the No. 2 level portal should be enlarged until the possible vein therein is well exposed. If it is there, two more trenches about 150 feet on each side should be bulldozed to trace the vein further. A long trench near the old ones below the John L. cut on the road should be bulldozed to expose that vein and if it is found two more trenches, one halfway up the slope to the road trench and another about 150 feet further downhill, should be bulldozed to expose this vein more fully. At present, this trenching would be enough of a long shot to constitute prospecting for the veins rather than exploration of them. To Tompson's credit, he has tried to get the company to do this work, but so far they have refused. If OME were to participate in this trenching with so little to go on, a difficult precedent might be set. I therefore leave it to you whether a two-stage program involving the trenching in Stage I and drifting in Stage II should be offered or whether the applicant should be told that if he does the trenching and is successful in showing the possible veins have some lateral extent and contain evidence of containing encouraging mineralization a program of drifting from a new adit will be considered.

Should you decide on the former, about 50 hours of bulldozing at $15.00 per hour, plus assaying and one day supervision to locate the trenches should take care of Stage I. Stage II is a bit more difficult to estimate, as the drifting should be on the better looking vein and should follow that vein to the intersection with the other one. Based on projections, the line of intersection plunges about 33°. Therefore, the amount of drifting would depend upon the location of the tunnel portal, which should be at an altitude that would cut the intersection between 250 and 300 feet below the surface. This problem is further complicated by the questionable accuracy of the applicant's plate V. Stage II drifting could be defined as starting at a point to be designated after trenching is completed and to end 50 feet beyond the intersection of the John L. and the South veins, the drift not to exceed 1,100 feet.

D. R. MacLaren

Enclosures

Distribution:
OME(3)
USGS(SRO)
Docket
MacLaren

in the oxidized zone. The shaft would provide information as to the degree of mineralization above the vein intersection. If ore were discovered in the shaft it would certainly be developed by drifting.

On the basis of what I can derive from an old longitudinal map and a very brief "geologic" map and on the basis of what I can learn from a few men who have mined in the East Pacific mine, I have developed a hypothesis for the control of the East Pacific ore which may be worth examining in regard to the John L. and South veins. The best ore shoot in the East Pacific vein was known as the "Bell" shoot. It apparently was in part controlled by at least two parallel N.60° W., 60° N. faults. It appears from some projections which I have made, that an intersection between the "Bell" faults, the East Pacific vein, the John L. vein and a horizon equal to about the level of the No. 3 level of the East Pacific mine, all played a part in controlling the ore of the East Pacific vein. Projecting the "Bell" faults, the John L. vein and the South vein, provides andinteresting structural interpretation in that there may exist a three-way intersection of these structures at about the No. 4 level of the East Pacific mine, and on-strike of the South vein, approximately 500-600 feet from the face of the South drift.

Enclosed are copies of assays taken in the South vein and from the bulldozer pit of the John L. vein. Please note that the samples from the John L. vein are channel samples from the footwall clays only and are not channel samples of the vein as a whole. These are the only assays we have to date.

I look forward to seeing you when you are able to stop in Helena.

Very truly yours,

Will Tompson

Willard D. Tompson
Geologist

WDT:eb
Enc.

RECEIVED
MAR 21 1962

EAST PACIFIC CO.

P. O. BOX 655
HELENA, MONTANA

Sample taken at site of original discovery NOT

A. V. TRENT,
Owner-Manager

GOODALL BROTHERS

ASSAYERS AND METALLURGICAL CHEMISTS
46 South Main Street, Helena, Montana

TEL. 443-3770
P. O. BOX 537

SEP 21 1961

File

UNITED TRUST

ASSAYED FOR: Mountain West Co. Box 2014

MARKS

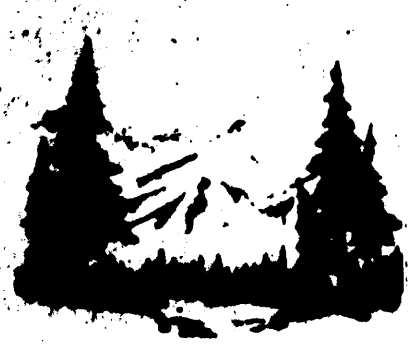
Sample No.	DESCRIPTION	GOLD Oz. Per Ton	SILVER Oz. Per Ton	WET LEAD Per Cent	DRY LEAD Per Cent	ZINC Per Cent	IRON Per Cent	COPPER Per Cent	Per Cent	Total Value Per Ton
11		0.04	0.1	0.4		0.1				2.19
12		Trace	0.1	0.4		0.1				0.9
	(Base metal values not figured)									

Gold not deducted

Charges $ 10

GOODALL BROS.
By A. V. Trent

Assays from John L. vein at point of discovery. Assays taken from footwall clays only. East Pacific mine area, Winston mining district, Broadwater County, Montana.



EAST PACIFIC CO.

P. O. BOX 655
HELENA MONTANA

[redacted]

GOODALL BROTHERS

ASSAYERS AND METALLURGICAL CHEMISTS

46 South Main Street, Helena, Montana

HORACE HAND
Owner-Manager

TEL. 442-3770
P. O. BOX 537

Date [redacted] 4 - 1960

UMPIRE ASSAY _____ CONTROL ASSAY _____ HAND SAMPLE _____

ASSAYED FOR: East Pacific Co Box 655 City

MARKS: Hill Thompson Co

Sample No	DESCRIPTION	GOLD Oz. Per Ton	SILVER Oz. Per Ton	WET LEAD Per Cent	COPPER Per Cent	ZINC Per Cent	IRON Per Cent	INSOL. Per Cent	Per Cent	Total Va Per To
8		0.01	0.2							0.53
9		0.04	0.3							1.67
10		0.03	0.2							1.33
11		Trace	0.1							0.04
12		0.09	0.3							1.32
13		0.04	0.4							1.76
14		0.05	1.8							3.37

Gold not deducted _____

Charges $ 14.00 Paid (Copy)

GOODALL BROS.

By Horace Hand

Assays of South vein, East Pacific mine, Winston mining district, Broadwater County, Montana.

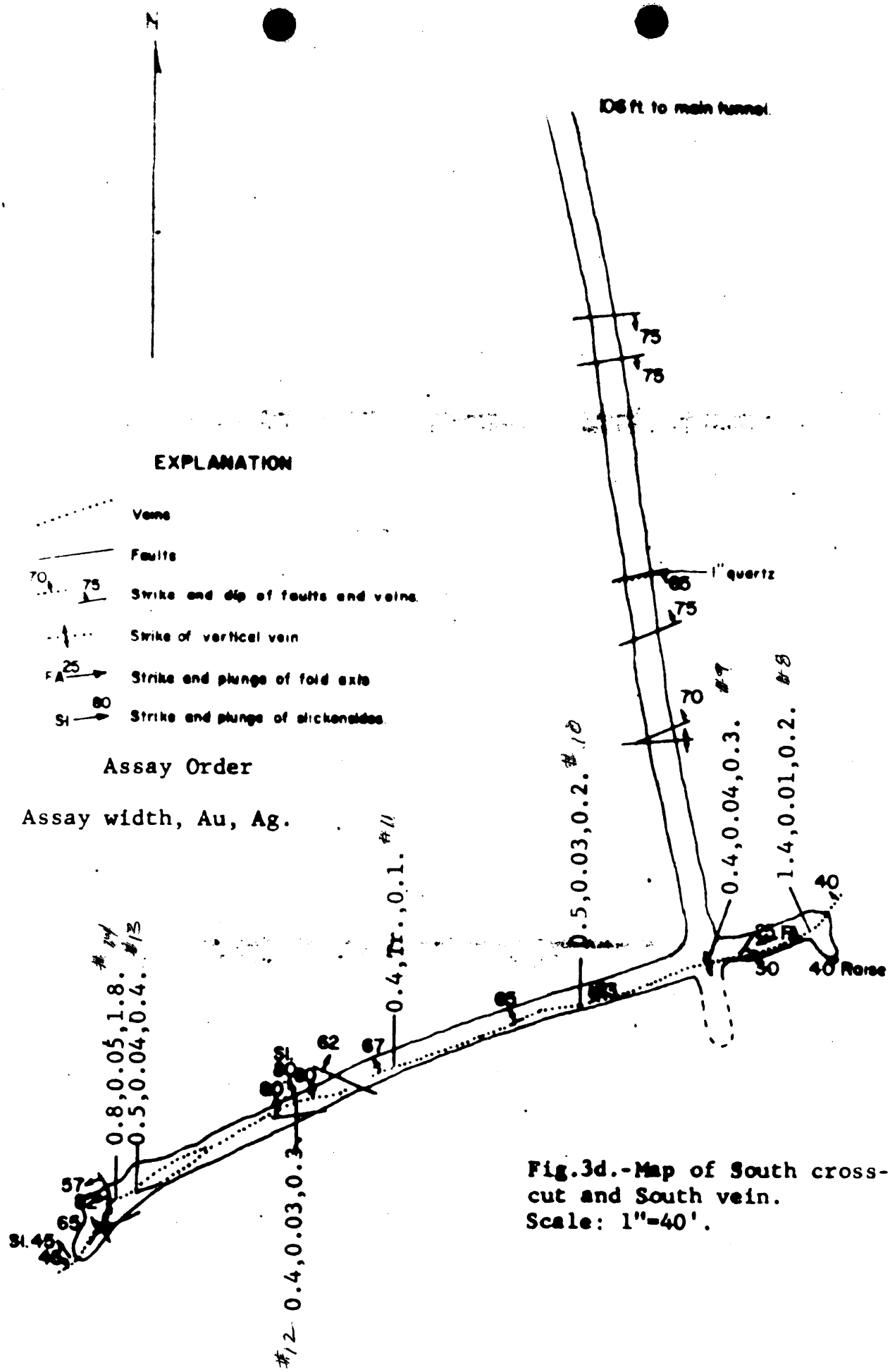


Fig.3d.-Map of South cross-cut and South vein.
Scale: 1"=40'.

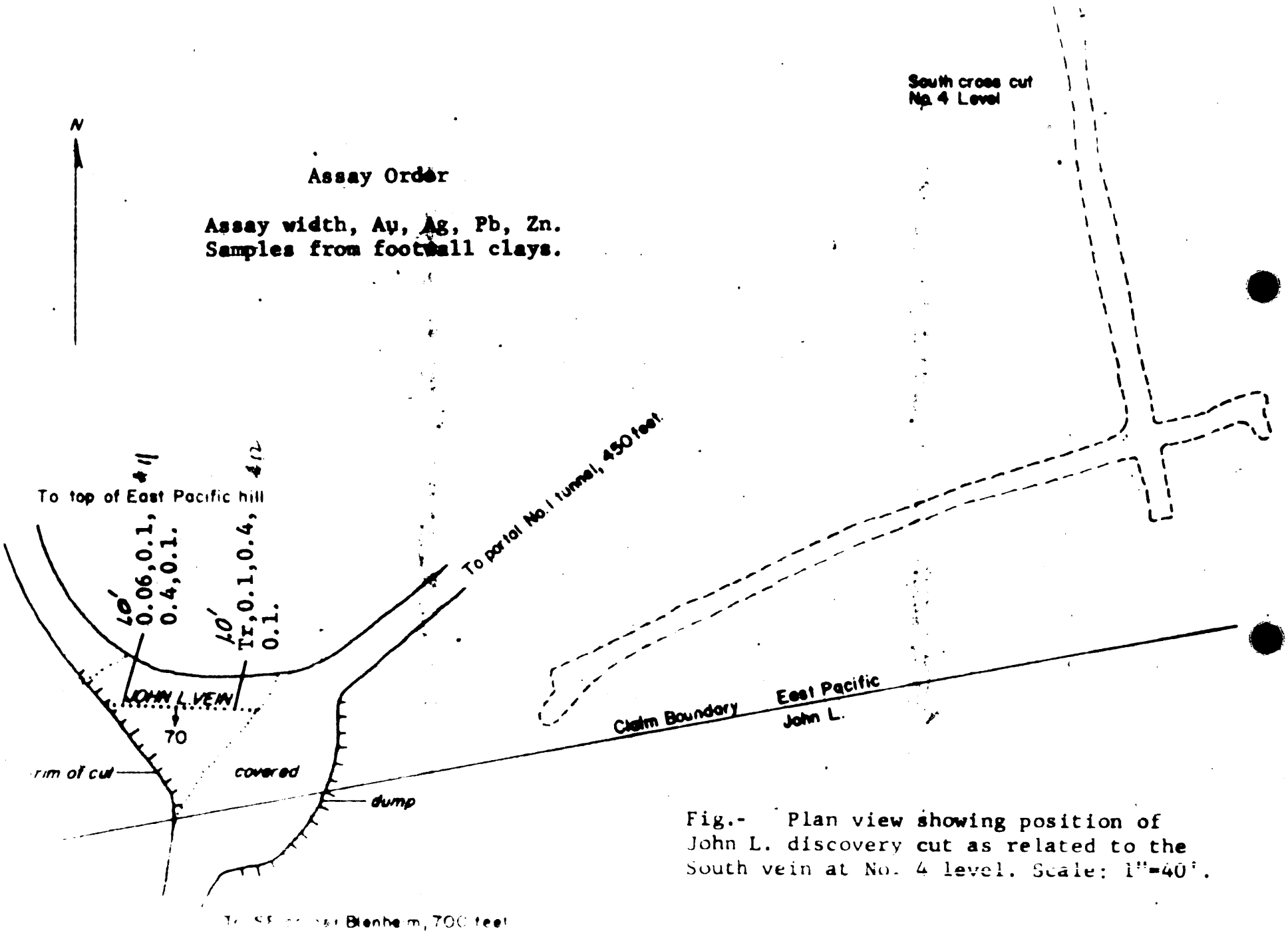


Fig.- Plan view showing position of John L. discovery cut as related to the South vein at No. 4 level. Scale: 1"=40'.

PHYSICAL DESCRIPTION

Previous Mining and Exploration

A vein, heretofore unexplored, was discovered on the surface 490 feet S. 42° W. from the portal of Tunnel No. 1 of the East Pacific mine. The vein will herein be called the John L. vein as it occurs on the John L. patent claim, Sur. No. 3136, and is probably the original John L. vein (See Plates I, II, and III).

The East Pacific vein was mined successfully from the 1880's to the 1940's and produced about 1 3/4 million dollars (Pardee & Schrader, 1933, p. 216). There has been no production from the East Pacific mine for several years and apparently the bottom of the ore was reached as was noted by Pardee & Schrader (1933, p. 220).

Tunnels Nos. 1, 2, and 3 of the East Pacific mine are no longer accessable, but Tunnel No. 4 is in good condition from the tunnel portal to the main winze (See Plates IV and V), as are the south crosscut and the drift on the South vein. The workings below the No. 4 tunnel are flooded.

A small mill on the property is inoperable and was suited only to screening and washing.

Company's Interest in Previous Work

The East Pacific Co. had no part in the operations described above.

Production Record

There has been no production and only limited exploration (2 prospect holes, 6 ft. x 6 ft. x 3 ft.) on the John L. vein. Production records of the East Pacific mine are noted above.

Ore Reserves

The John L. Vein. - The John L. vein is exposed in one bulldozer cut, thus information is inadequate for determining ore reserves (See Plate V and Figure 3a).

The East Pacific Vein. - No ore reserves are known in the East Pacific vein of the existing mine workings.

The South Vein. - The South vein has been explored at the No. 4 level by a drift on the vein for a length of 240 feet, but it has not been explored by raising or winzing or by discovery at other levels. Hence, on the basis of values of assays taken from the vein in its present exposure in the south drift, no ore reserves are known. However, the mineralogical association of quartz - pyrite - sphalerite, which is noted in the vein, may indicate that the present exposure of the South vein is near the lower limit of an ore zone. Ore in the East Pacific

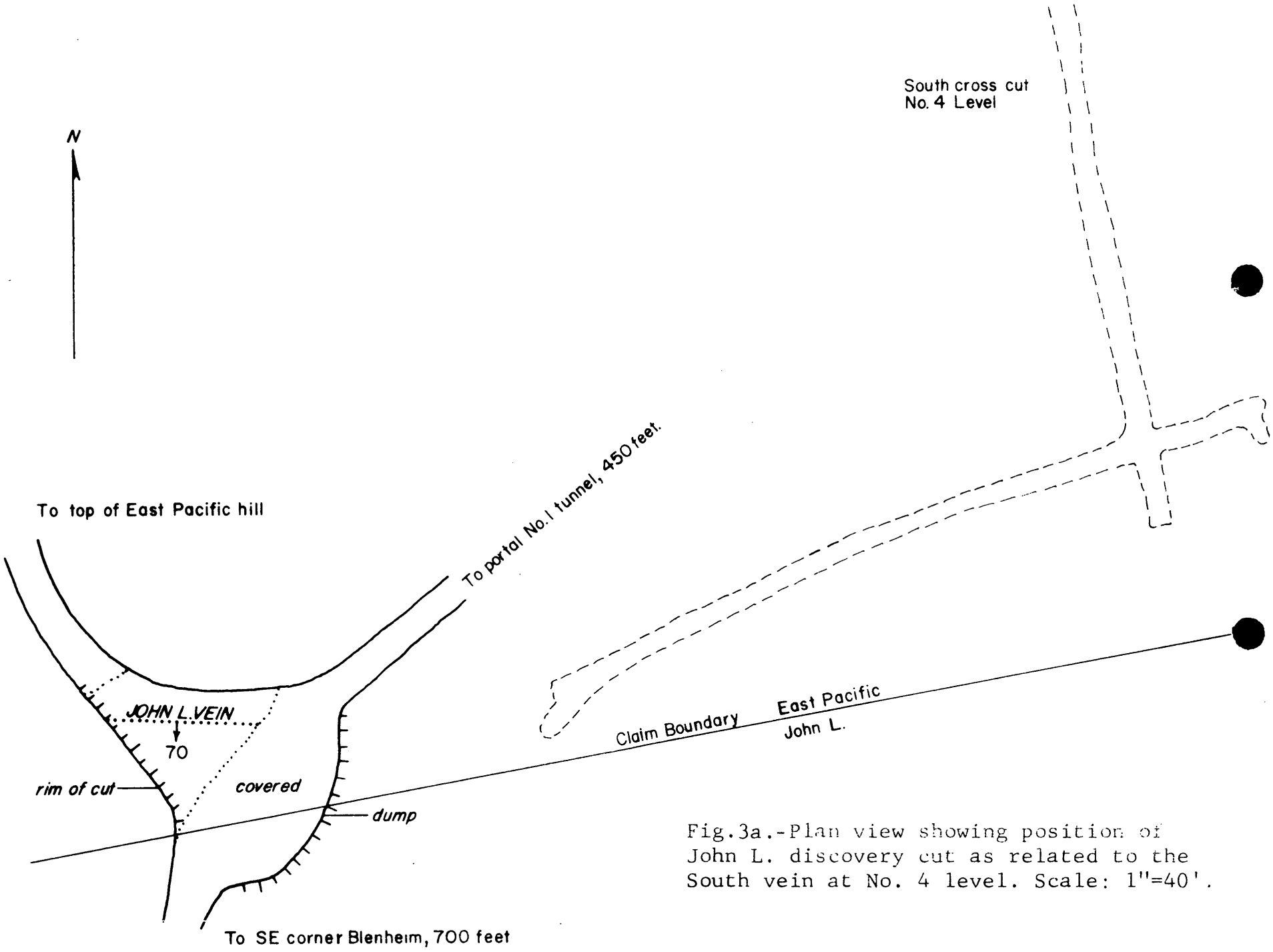


Fig.3a.-Plan view showing position of John L. discovery cut as related to the South vein at No. 4 level. Scale: 1"=40'.

vein was also lean at the No. 4 level as is noted by the small stoped area above No. 4 level (See longitudinal section of Plate V).

Geology

The area in which the veins occur is underlain by andesite and fine-grained, thin-bedded, pyroclastic rocks and welded tuffs(?).

The John L. Vein. - The John L. vein occupies a N.88 W., 70° S. fissure. It is in sharp contact with the rocks in the footwall. The hanging wall cannot be seen in the present exposure although the vein is exposed over a width (normal to the strike of the vein) of about 30 feet.

Oxidation of primary vein minerals is nearly complete in the present exposure of the vein, and primary ore minerals, for the most part, are absent. However, some fresh galena and pyrite are present in the vein. Pardee & Schrader (1933) noted that the oxidized zone in the East Pacific vein extends to a depth of 300 feet.

The vein consists of broken angular fragments of andesite recemented by vuggy quartz and vein minerals. The vein materials are thoroughly coated and stained by manganese oxides and iron oxides. The footwall has 4 inches to 12 inches of gouge which

is composed principally of clay and some vein material. Gossan is prominent throughout the exposure and is present in float along the strike of the vein, both uphill and downhill from the bulldozer cut.

The John L. vein occurs in an area in which metallic mineralization is known to occur in quantities amenable to economic production. The source of vein materials and the controls of mineralization of the many veins in the area have not been determined. Thus, any strong structure which shows positive evidences of vein mineralization, may be considered a prospect and worthy of exploration and evaluation.

The vein possesses the general appearance of a strong structure. Its' N. 88 W., 70° S. attitude has not been previously identified as a vein in the immediate area. It can be traced by float uphill from its' exposure in the bulldozer cut for a distance of about 300 feet, and downhill for at least 400 feet. It is present in a prospect pit, downhill 400 feet from the cut.

The vein was discovered prior to 1890. The original discovery cut on the John L. vein apparently was near the location of a new bulldozer cut. However, there is no "shipping ore" in this exposure of the vein, so it received no attention sub-

sequent to the issue of the John L. patent, M.S. No. 3136.

The South Vein. - The South vein of the East Pacific mine was discovered in a crosscut 345 feet south of the East Pacific vein in about 1928 (See Figure 3d). It is 2 inches to 12 inches wide and contains quartz, euhedral to anhedral and massive pyrite, and some sphalerite. Values range from a few cents to about $4.00 per ton. After its' discovery, it was assumed to be the same vein as the John L. vein. However, the veins have no similar characteristics. The most striking differences are in their attitudes and in their general physical characteristics (Their mineralogical compositions cannot be compared due to the extreme differences in elevations of their exposures and their relative degrees of oxidation). The South vein is parallel with the East Pacific vein, i.e., N. 75° E., 75° N. The John L. vein strikes N. 88° W. and dips 70° S. This measured attitude conforms favorably with the distribution of vein material in the float when the vein is projected N. 88° W., 70° S. uphill and downhill from the cut and is plotted on the existing topography (See Plate V). The South vein, like the East Pacific vein,

> "...is well defined, contains little or no gouge, and for the most part, is frozen or welded to the walls, or at most, separated from them by only a seam of iron stain..."

(Pardee & Schrader, 1933, p. 218-219). Both veins appear to be

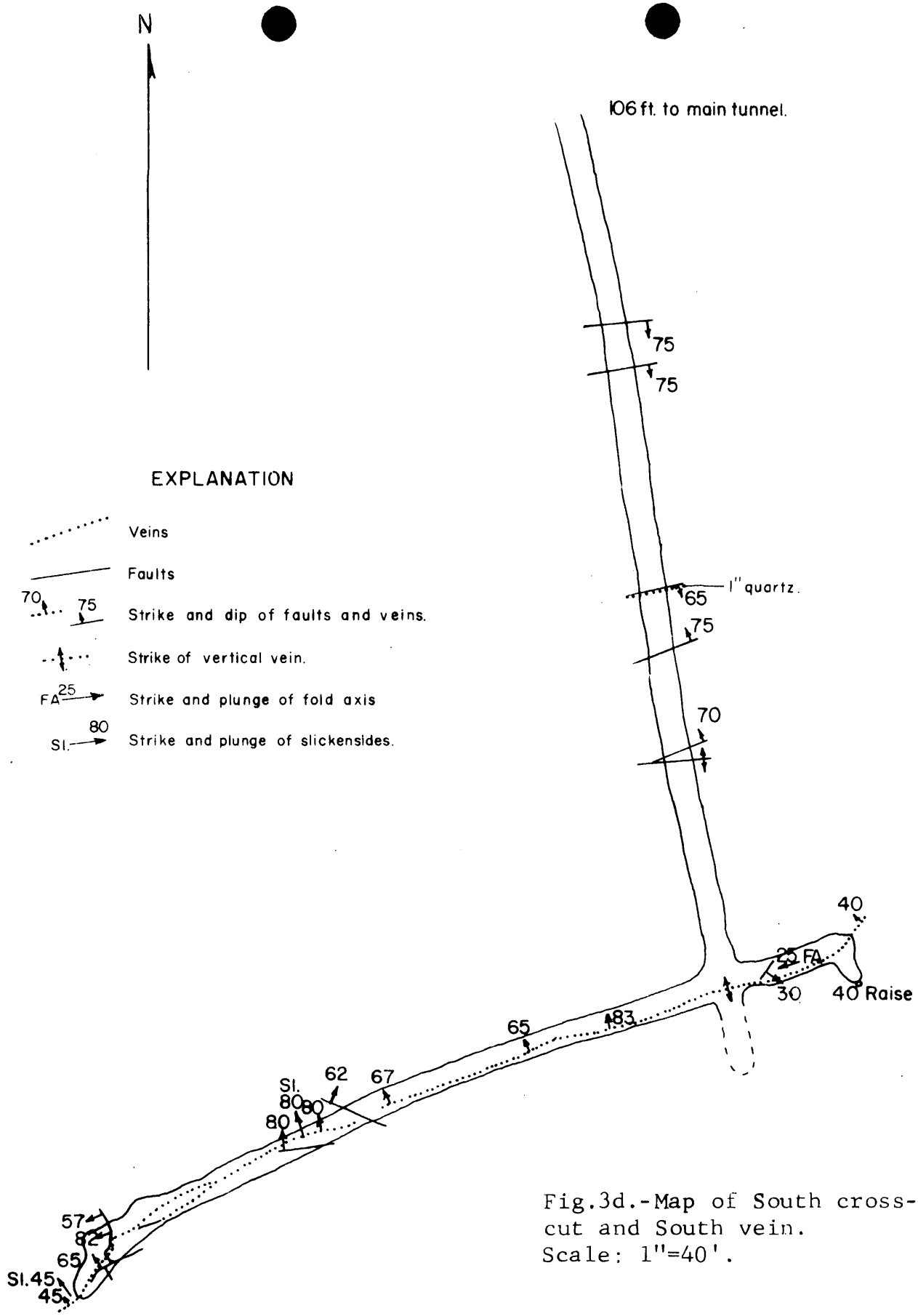


Fig.3d.-Map of South cross-cut and South vein.
Scale: 1"=40'.

sheeted. As noted above, the John L. vein has a well defined footwall which contains up to 12 inches of clayey gouge and is otherwise composed of fault breccia cemented by vein-forming minerals. It is up to 30 feet wide, where exposed. Thus, the John L. vein and the South vein probably are different veins.

The East Pacific Vein. - The East Pacific vein was continuous for a length of 1500 feet, and was continuous down the dip to a depth of 1000 feet. Thus, other nearby veins may also possess good continuity in length and depth. Post ore faulting proved to be of minor to negligible importance in the East Pacific vein and may be of no consequence in other veins in the near proximity.

Geologic Interpretation

The East Pacific vein and the South vein may represent parallel sheeted veins of a shear zone. (Pardee & Schrader also noted sheeting in the East Pacific vein). In such case, the John L. vein may occupy a tensional fissure of the same system. Thus, mineralization of the entire system may have occurred at the same time(s), and the juncture (if it exists) of the South vein and the John L. vein, may be the locus of extensive replacement mineralization (See Figure 3f).

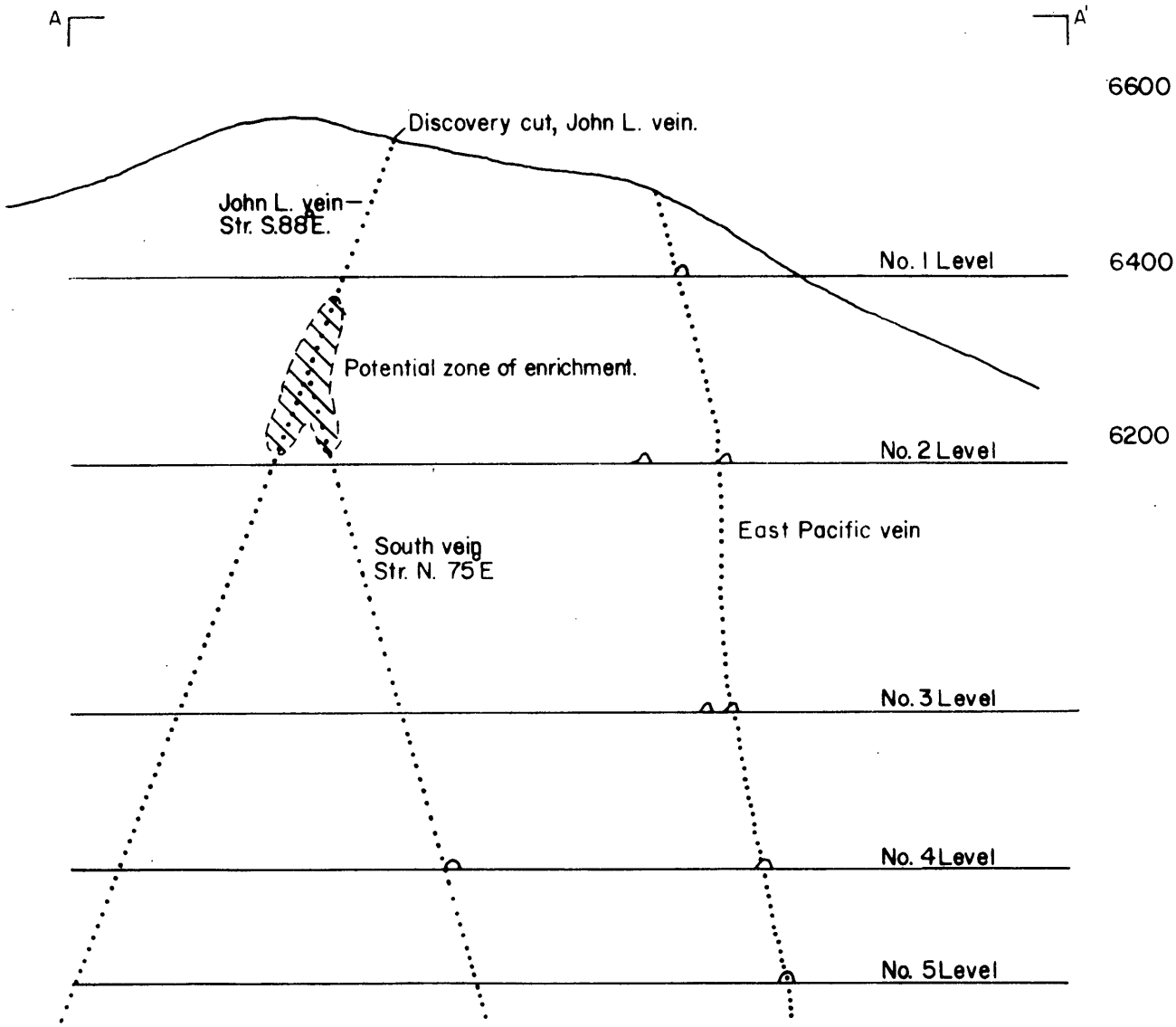


Fig.3f.-Vertical cross section showing five levels of the East Pacific mine, South vein, and John L. vein. Plane of vertical section strikes N. 12°W. Veins are plotted on their apparent dip as they intersect the plane of the section. Scale: 1"=200'.

The character of the John L. vein has not been determined at depth and thus should be ascertained well below the zone of oxidation. This may be conveniently achieved by extending the south crosscut southward to its intersection with the John L. vein, a distance of approximately 305 feet.

ACCESSIBILITY OF PROPERTY

Arrangements for Meeting OME Representative

The OME representative who visits the property will be met by Walter A. Tschirgi, 210 South Cooke Ave., Helena, Montana, home residence; #9 LaLonde Building, Helena, Montana, office. Home phone - 442-2376; Office phone - 442-9770.

The mine property is 6 miles southwest of Winston, Montana, and is situated on a gravelled road. The property is accessible in winter months. The mine workings of the No. 4 tunnel are accessible as noted on page 3.

Shipping and Supply Points

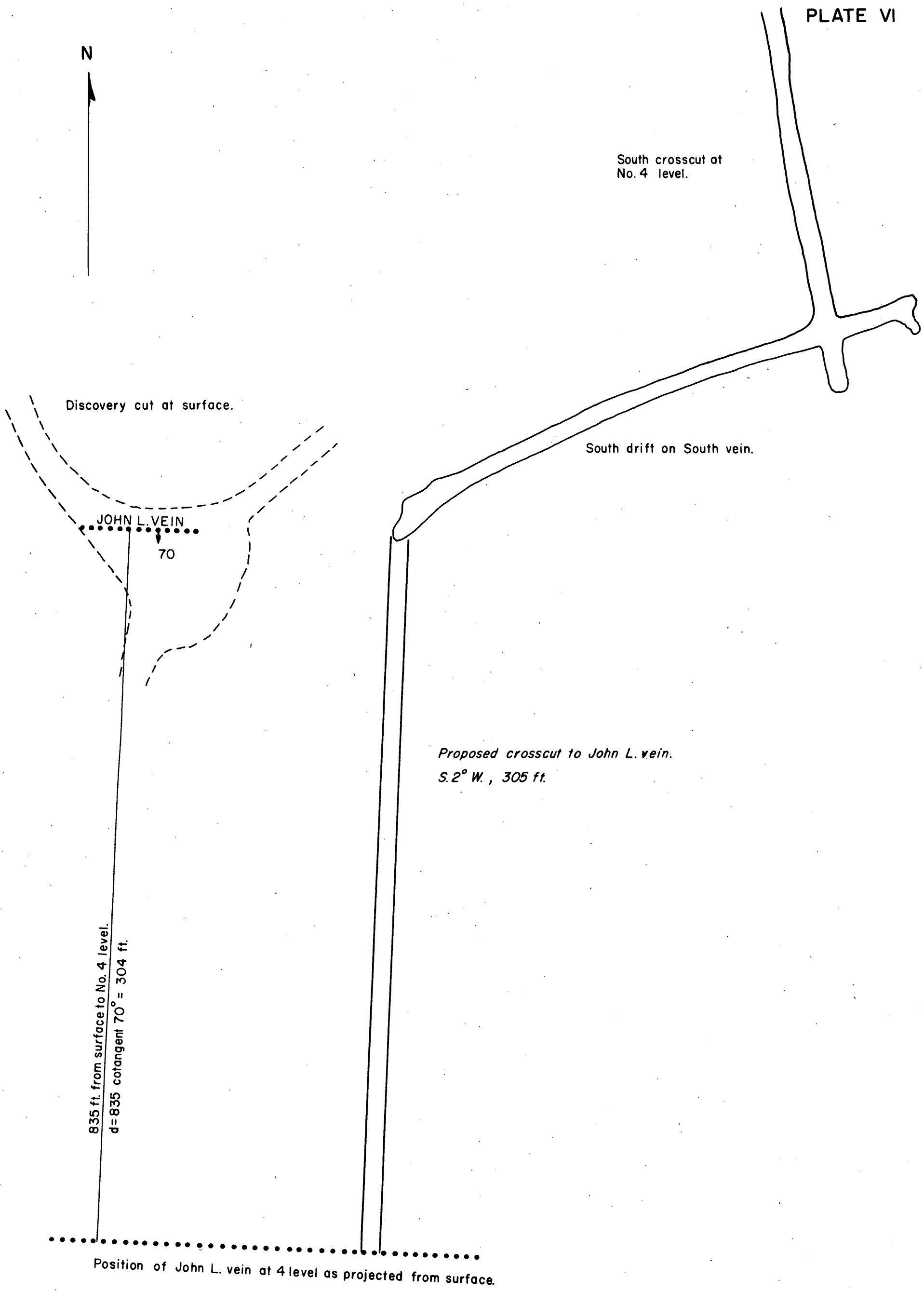
The nearest shipping and supply points are East Helena and Helena, Montana. East Helena is 20 miles from the property; Helena is 25 miles.

EXPLORATION WORK

Description and Types of Work

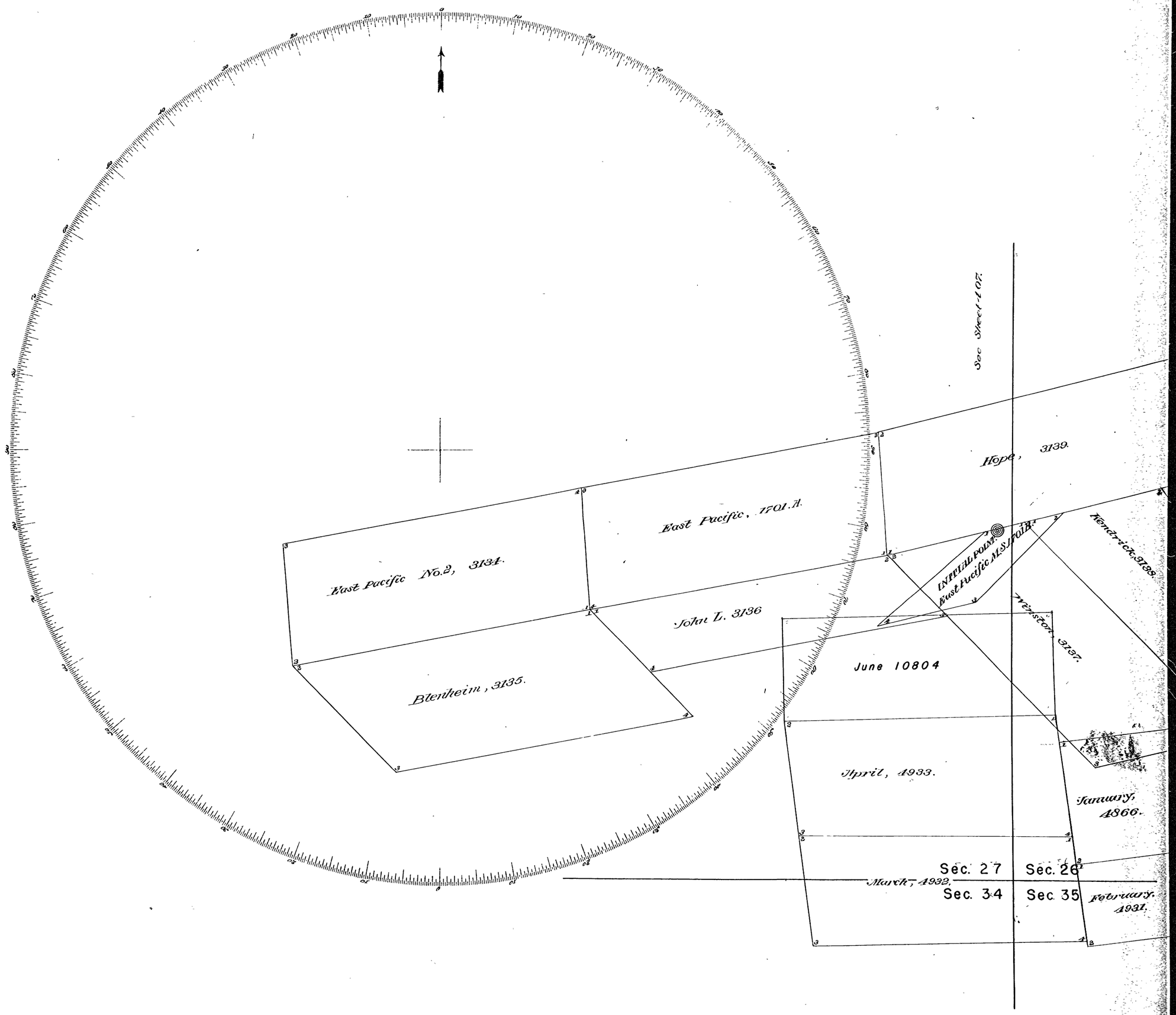
There are three known prospective loci for ore deposits in

PLATE VI



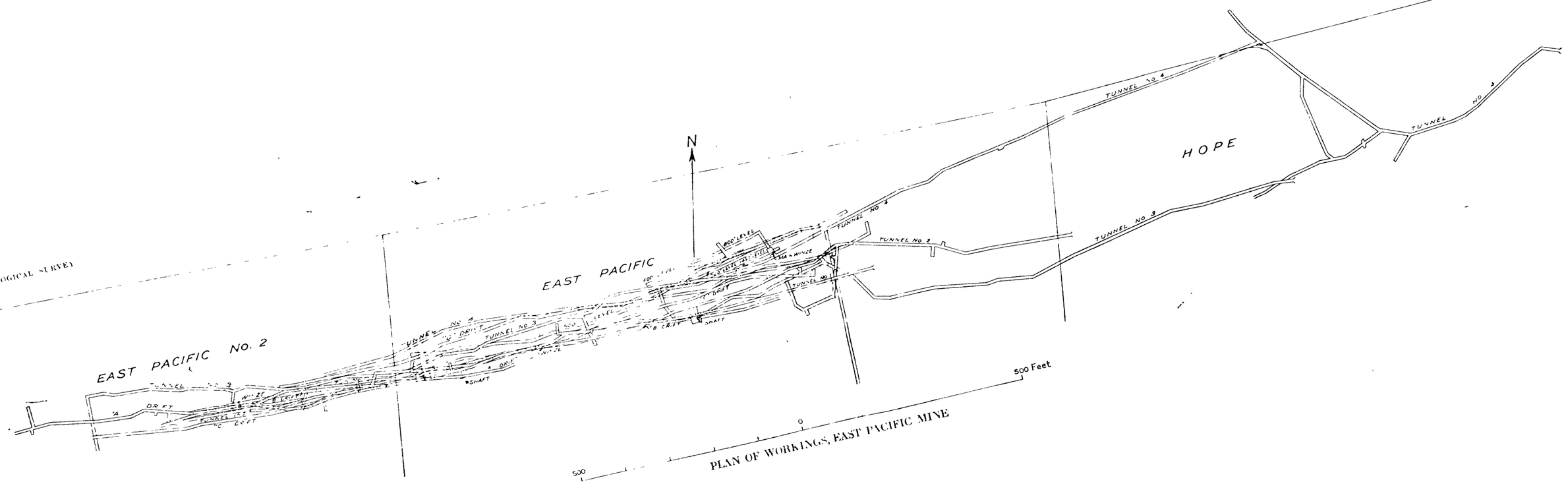
Map Showing John L. Crosscut in Relation to
John L. Discovery Cut and South Vein.
Scale: 1" = 40'. Nov. 2, 1961
by W. D. Tompson

PLATE II

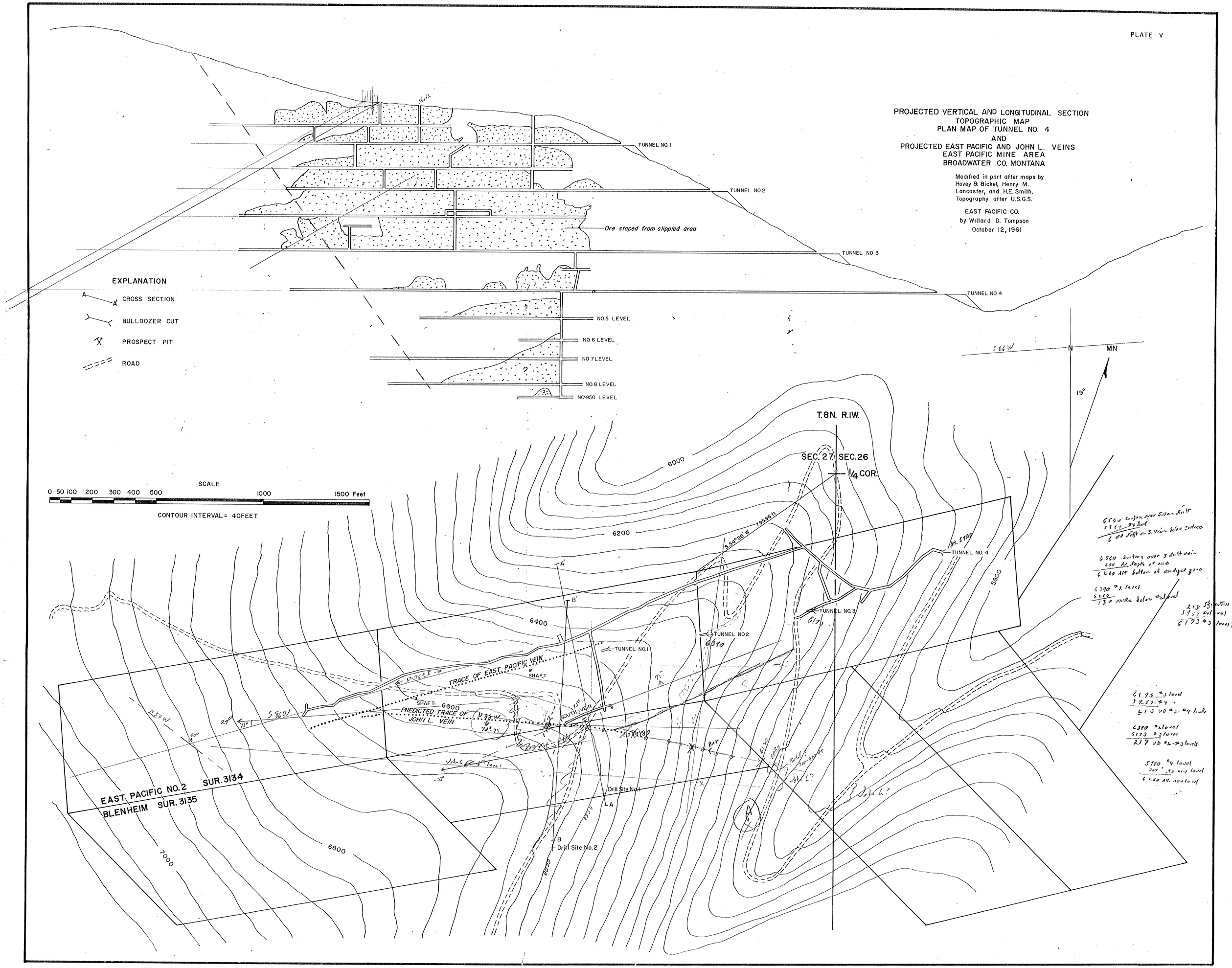


T.8N.-R.1W.
Fractional
Section 27
Scale 300 ft. to 1 inch

1582



PLAN OF WORKINGS, EAST PACIFIC MINE

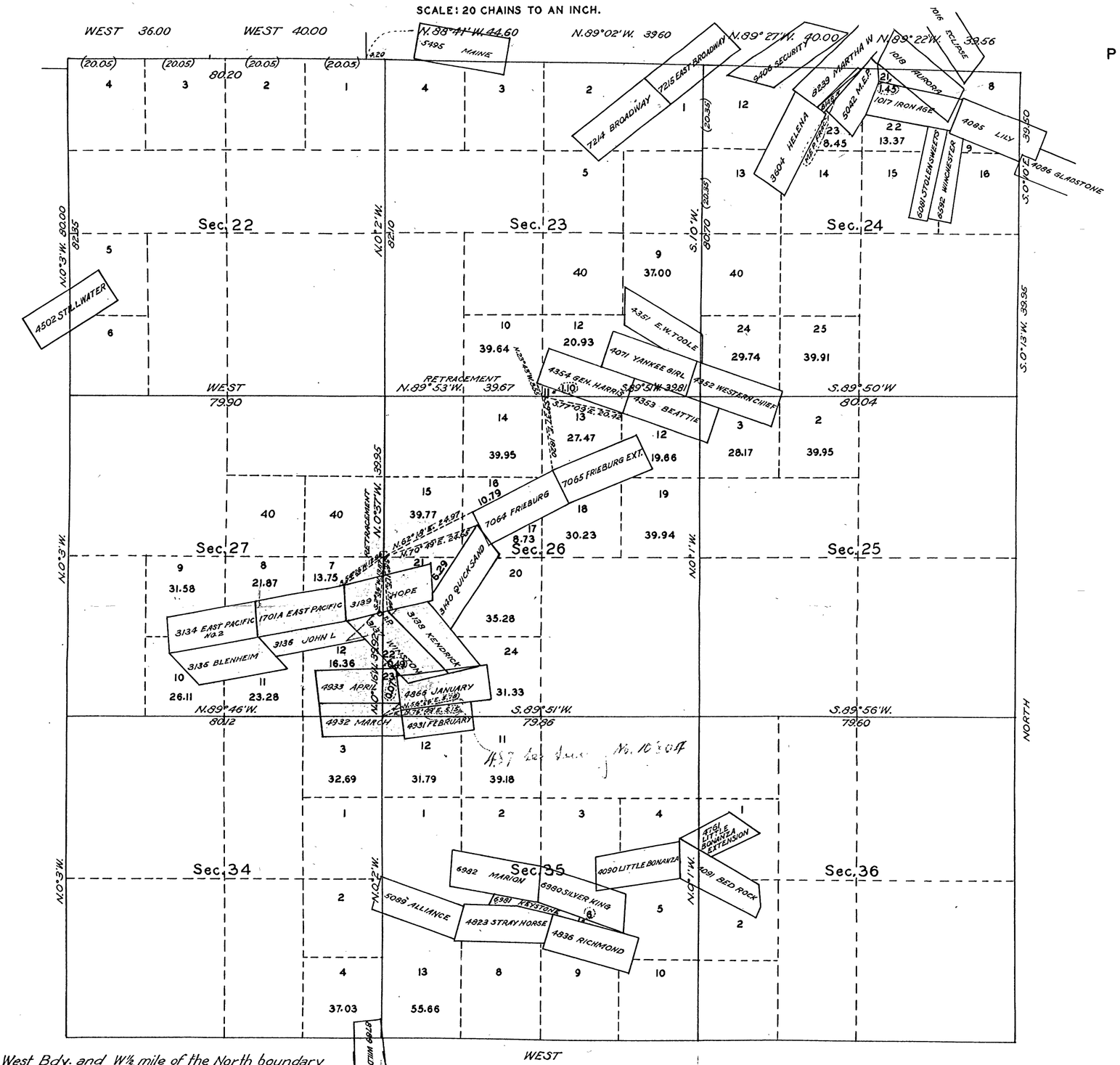

PROJECTED VERTICAL AND LONGITUDINAL SECTION
TOPOGRAPHIC MAP
PLAN MAP OF TUNNEL NO. 4
AND
PROJECTED EAST PACIFIC AND JOHN L. VEINS
EAST PACIFIC MINE AREA
BROADWATER CO. MONTANA
Modified in part after maps by Hovey & Bickel, Henry M. Lancaster, and H.E. Smith. Topography after U.S.G.S.
EAST PACIFIC CO.
by Willard D. Tompson
October 12, 1961
TUNNEL NO. 1
TUNNEL NO 2
Ore stoped from stippled area
TUNNEL NO 3
TUNNEL NO 4
NO.5 LEVEL
NO.6 LEVEL
NO 7 LEVEL
NO.8 LEVEL
NO.950 LEVEL
EXPLANATION
CROSS SECTION
BULLDOZER CUT
PROSPECT PIT
ROAD
SCALE
0 50 100 200 300 400 500 1000 1500 Feet
CONTOUR INTERVAL = 40 FEET
T.8N. R.1W.
SEC. 27 SEC. 26
1/4 COR.
MN
19°
6000
6200
6400
6600
6800
7000
5800
S.64°26'W. 7959.6 ft.
TUNNEL NO. 4
TUNNEL NO. 3
TUNNEL NO 2
TUNNEL NO.1
TRACE OF EAST PACIFIC VEIN
SHAFT
PREDICTED TRACE OF JOHN L. VEIN
SOUTH VEIN
Drill Site No.1
Drill Site No.2
EAST PACIFIC NO.2 SUR. 3134
BLENHEIM SUR. 3135

TOWNSHIP NO. 8 NORTH RANGE NO. 1 WEST OF THE PRINCIPAL MERIDIAN MONTANA.

SUPPLEMENTAL PLAT OF SECTIONS 23, 24, 25, 26, 27, 34, AND 35.

PLATE III

SCALE: 20 CHAINS TO AN INCH.



Retracement of the West Bdy. and W½ mile of the North boundary of Sec. 26 and survey of the connecting lines to mineral surveys in certain sections in order to show their true positions with reference to the public land surveys, executed by Ranney Y. Lyman, U.S.C.E., May 18 to 20 Incl. 1932 under special instructions dated Feb. 10, 1932 for Group No. 320, authorized by the Commissioner's letter E dated Jan. 7, 1932.

A portion of section 24 was surveyed by T. C. Bailey, D.S. in 1872, as shown on plat approved May 23, 1872, the balance of section 24 and sections 22, 23, 25, 26, 27, 34, 35 and 36 were surveyed by Edwin R. McLain, D.S. in 1910 as shown on plat approved Jan. 5, 1912.

Office of U.S. Supervisor of Surveys
Denver, Colorado, Sept. 19, 1932.

The above supplemental plat of Sections 23, 24, 25, 26, 27, 34 and 35 Township No. 8 North, Range No. 1 West of the Principal Meridian, Montana is strictly conformable to the field notes of the survey thereof which have been examined and approved.

U.S. Supervisor of Surveys.

Department of the Interior
General Land Office
Washington, D.C., November 9, 1932

The survey represented by this plat having been correctly executed in accordance with the requirements of law and the regulations of this office, is hereby accepted.

Acting Assistant Commissioner.

H.J.G.

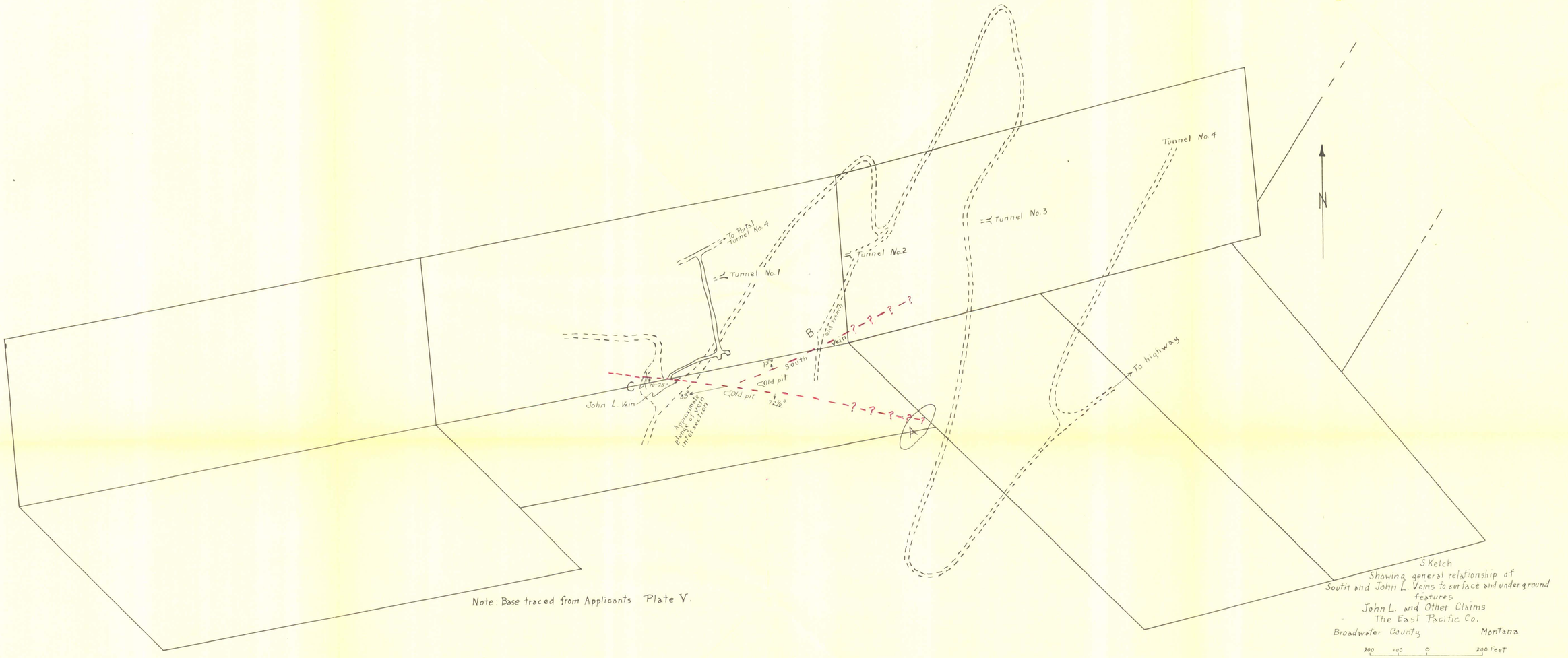
4462-B

T8N R1W

U. S. Department of the Interior

Office of Minerals Exploration
Application Examination

Docket OME-6200



Note: Base traced from Applicants Plate V.

Sketch
Showing general relationship of
South and John L. Veins to surface and underground features
John L. and Other Claims
The East Pacific Co.
Broadwater County Montana

200 100 0 200 Feet

April 1962