

NAME 07 Geol Reports

MINISTRY OF ENERGY, MINES AND  
PETROLEUM RESOURCES  
VICTORIA, BRITISH COLUMBIA

SUBJECT

~~82ESC045~~ ~~BOUNDARY FALLS~~  
082ESE171 SKOMASC

SUB  
FILE NO. 07

001367

PROPERTY FILE

Boundary Falls (L.889)  
Tunnel (L.888)

Multiple horizontal dashed lines for notes or additional information.

TO WEST S

Greenwood  
Camp

Providence

Deadwood  
Camp

Buckhorn

SHANTER

1176(7)

AMIGO  
SILVER  
MINES

ARROWHEAD  
748 (5)

MAY MAC  
1270(8)

Boundary Falls

ARROWHEAD  
1363(10)

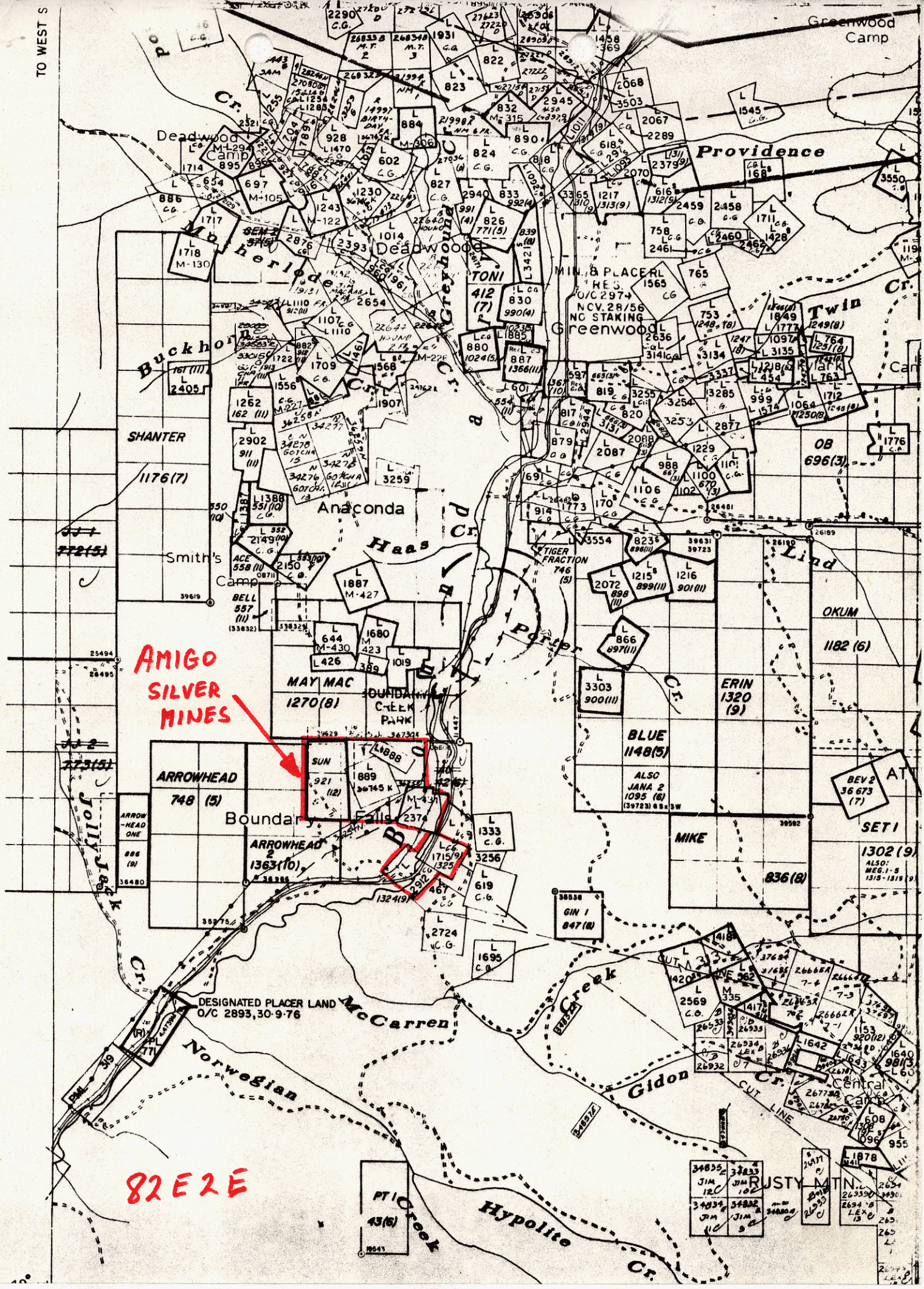
DESIGNATED PLACER LAND  
O/C 2893,30-9-76

82 E 2 E

PTI Creek  
43(6)

Hypolite  
Cr.

JUSTY  
M  
TIN



TUNNEL, 82E/2E  
BOUNDARY FALLS  
82E/SE-45,171

HISTORY - PREVIOUS DEVELOPMENT - REFERENCES

The history of the Tunnel claim [Lot 888] dates back to 1894. The Boundary Falls claim [Lot 889] is mentioned in 1896 and again in 1897 as part of the property of the Boundary Falls Gold Mining Company, a former gold-producer.

Numerous test-pits and shafts, some with lateral underground workings, are in evidence on the property. Gold and silver with associated galena and tetrahedrite was found in quartz veins on the rock dumps attending these former diggings.

The property area has been of long standing

interest by mining companies. In 1962 R.H. Seraphim recorded geological, geophysical and geochemical assessment credit for Moneta Porcupine Mines, Limited on part of this ground.

In early 1975 a tunnel was driven some 45 metres in a northwesterly direction on the No. 1 Vein Zone [Figure 4]. The same year Strato Geological Ltd did a VLF electromagnetic survey in May and a self-potential survey over the claim group in September. A limited amount of diamond drilling was done in October 1975 to test the downward extension of the "Glory Hole" zone and three self-potential anomaly areas [Figure 4].

Glen E. White Geophysical Consulting & Services Ltd. did a program of Pulse Electromagnetometer surveying over the claim group during May 1978. The No. 1 Vein Zone was extended a further 18 metres during August and September of this year. This work showed a northwest-northward extension of the VLF apparent conductor outlined in the May 1975 survey on to the Robert Mines property.

References pertinent to this study of the Boundary Falls claim group area are as follows:

1. B.C. Report of the Minister of Mines 1894: 1896 - p. 582; 1897 - p. 582, 587; 1898 - p. 306, 1125, 1195; 1901 - p. 1057; 1902 - p. 180; 1910 - p. 120; 1921 - p. 185; 1936 - p. D55; 1939 - p. 77; 1940 - p. 63; 1941 - p. 72; 1960 - p. 130.
2. Geological Survey of Canada Publications:
  - Maps 834, 6-1957, 10-1967 and 30A;
  - Aeromagnetic Map 8497G;
  - Papers 45-20, 67-42.

3. This Boundary Falls property was reported on by J.A. Millican, P.Eng., January 1974.
4. Report on a VLF Electromagnetic Survey on the Boundary Falls claim group dated May 29, 1975, by Donald W. Tully, P.Eng.
5. Report on a Self-Potential Geophysical Survey and a Diamond Drilling program on the Boundary Falls Claim Group by Donald W. Tully, P. Eng., dated February 18, 1976.
6. Geophysical Report - Robert Mines Ltd. and Amigo Silver Mines Ltd. [NPL] by Glen E. White, P.Eng. dated June 9, 1978.
7. B.C. Ministry of Mines and Petroleum Resources Geological Fieldwork 1976, Geological Investigations in the Greenwood Area by B.N. Church.

#### GEOLOGY AND MINERALIZATION

Dr. B.N. Church of the British Columbia Ministry of Mines and Petroleum Resources did geological fieldwork in the area of the Boundary Falls claim group in 1976.

The claims are underlain by Jurassic to late Cretaceous limestones, phyllites and volcanic rocks. These rocks have been metamorphosed, sheared in a northwesterly direction and intruded by late granitic and andesitic intrusives, probably Eocene in age. Attendant intrusive rocks are fine-grained felsitic and dioritic phases.

A table of formation is probably as follows:

1. Gold, silver, galena, tetrahedrite and pyrite mineralization.
2. Post Eocene shearing with quartz vein emplacement.

### EOCENE

3. Granite, granodiorite, felsite, dioritic intrusives.
4. Folding and shearing.

### JURASSIC or PALEOZOIC

5. Limestone, chert, phylites, greenschists, volcanics, tuffs.

Faults and associated quartz veins trend northwest and also northeast in some instances.

Mineralization occurs in fractures in quartz in fissure-type veins and associated silicified zones. It is mostly limonite, pyrite, galena, a fine dark mineral that may be tetrahedrite and gold and silver.

The "Glory Hole" vein is porcelaneous in aspect, varies up to four feet in width, is highly shattered and separated along strike by sub-parallel strike-faulting. Pyrite, galena, and tetrahedrite with minor grains of chalcopyrite were noted on surface outcrop. The vein strikes southeast and dips steeply west. The silica content in this vein zone across a 4-foot width is probably 80%. Values in gold up to 0.41 ozs and 0.93 ozs in silver were obtained across a 4-foot sample width by the writer.

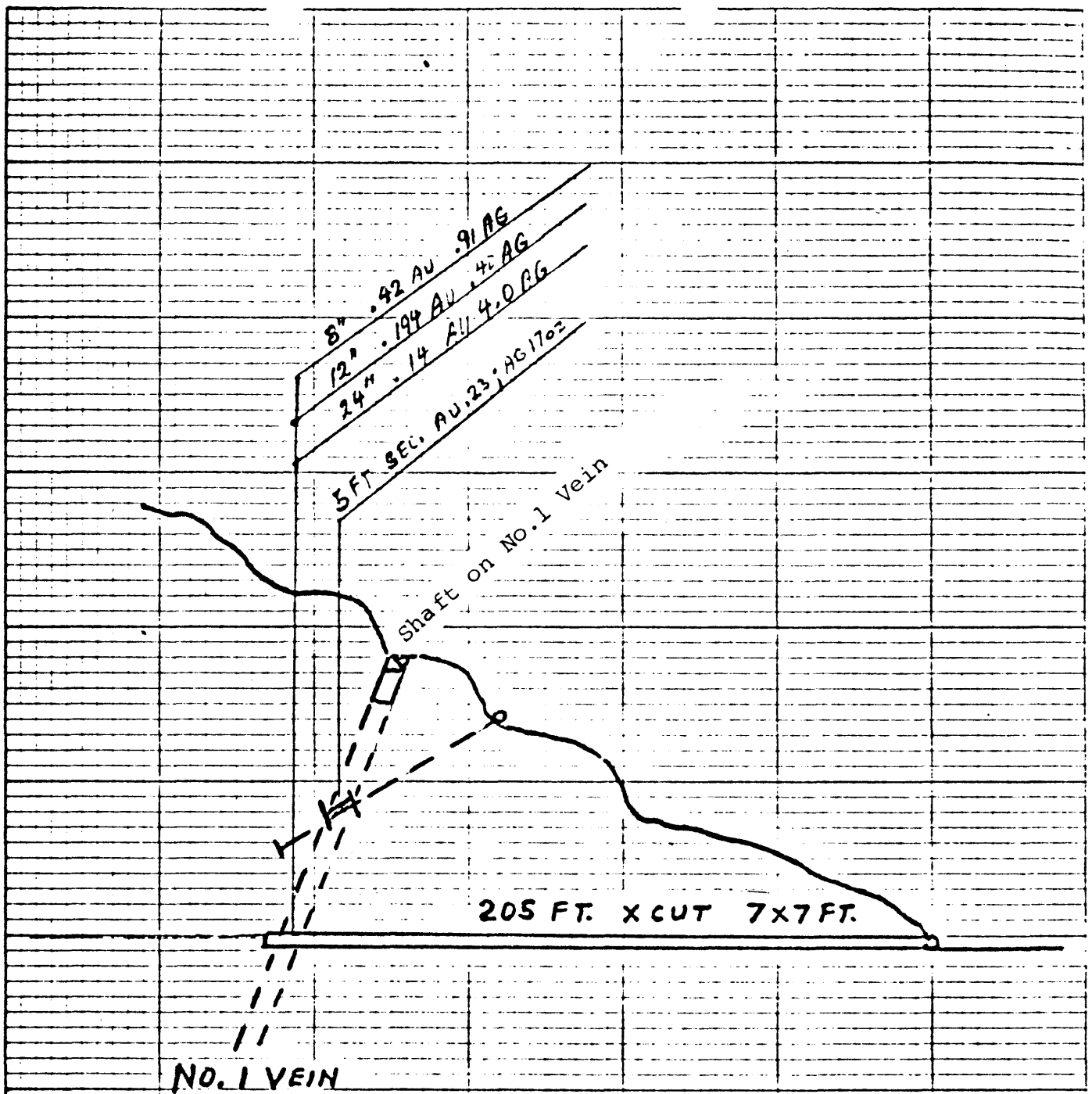
Fault zones encountered in the two drill holes, on the downward projection of the "Glory Hole" vein, suggest this zone has been displaced as the vein zone was not intersected in the core test.

In the area of the No. 1 Vein Zone [Figures 4 and 5] a tunnel was driven towards the vein in a north-westerly direction - a distance of about 45 metres. Grab samples taken by the writer in 1975 near the face of the tunnel at that time gave good values in gold and silver and suggested the presence of several mineralized veins in this area. In 1978 this tunnel was advanced an additional 18 metres for a total of 63 metres [205 feet] northwesterly towards the downward projection of the surface position of the No. 1 Vein Zone according to Mr. Karl Schindler. Assay results of samples taken by Mr. Schindler on vein structures near the present face of the tunnel are reported by him as follows:

<u>Sample Width</u>	<u>Gold ozs.</u>	<u>Silver ozs.</u>
8 in.	0.420	0.91
12 in.	0.194	0.40
24 in.	0.140	4.00

Drifting along this indicated zone of gold and silver values is proposed in both the northward and southward strike as indicated from the surface workings some 30 metres above the back of the tunnel. A raise through to surface would also explore this zone.

The writer examined the surface exposure of the



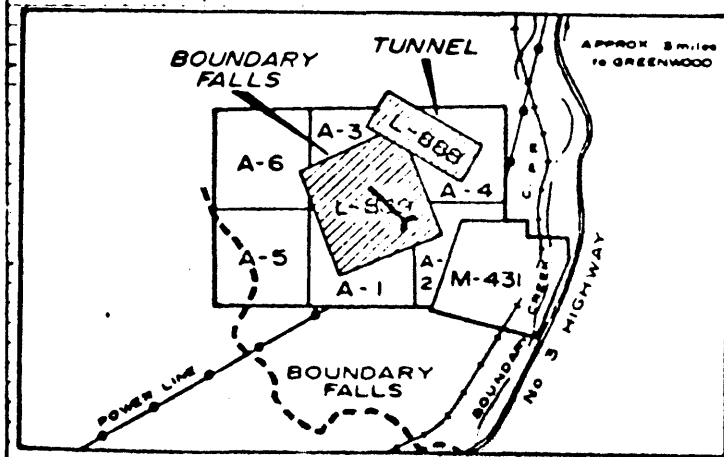
AMIGO SILVER MINES LTD.

1" = 50'

BOUNDARY FALLS L. 889

SEPTEMBER 1978

FIGURE 5



LONGITUDINAL & X-SECTION SKETCH OF  
 No. 1 VEIN ZONE & TUNNEL WITH ASSAY RESULTS  
 ( Information from K. Schindler )

To accompany a report by  
 Donald W. Tully, P. Eng.  
 dated September 26, 1978

*Donald W. Tully*



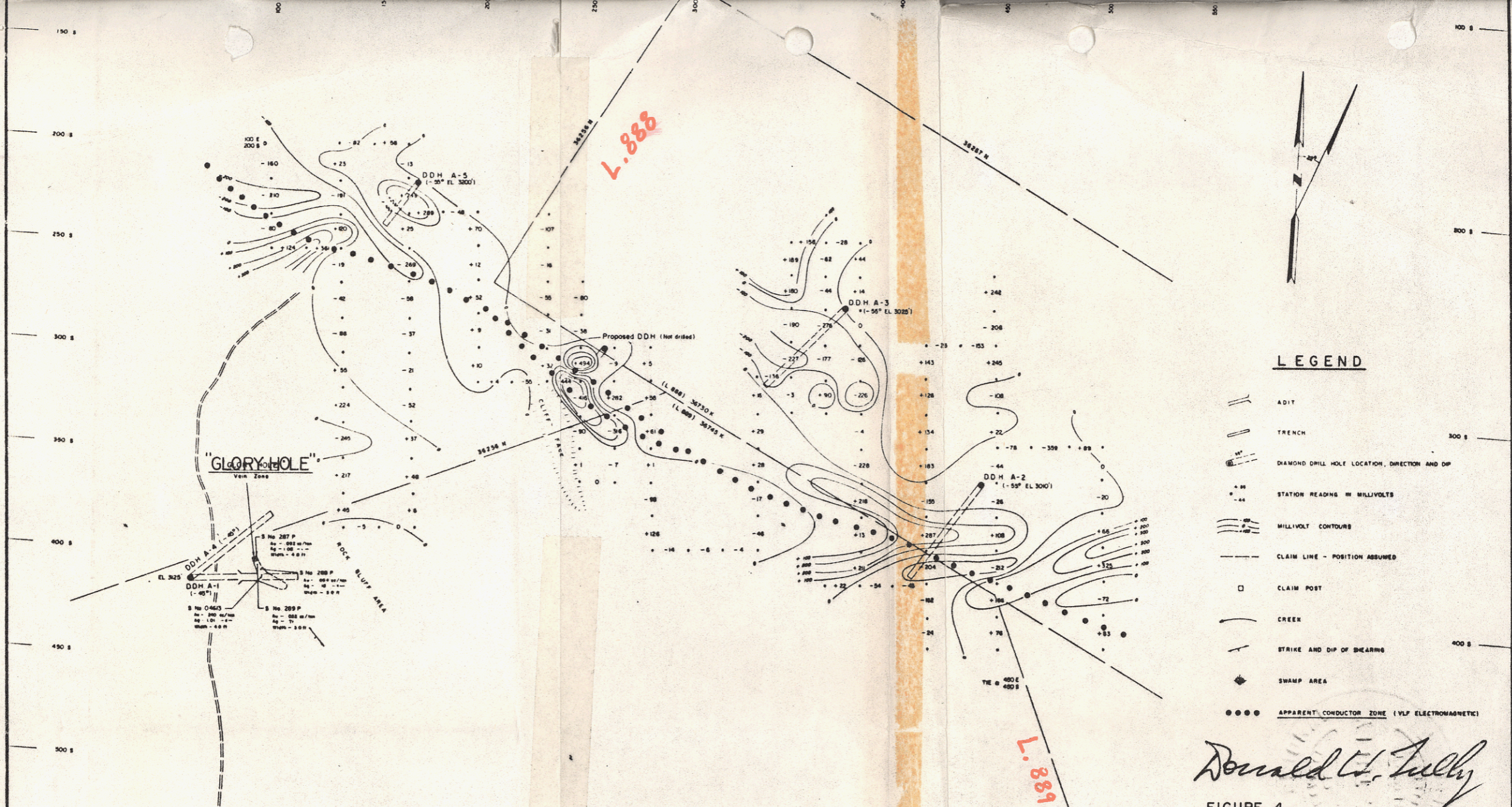
No. 1 Vein Zone in 1975 and obtained 0.114 ozs gold and 0.64 ozs silver across a two-foot width [Figure 4].

### RECOMMENDATIONS

- 1] A program of BX size wireline diamond drilling is recommended for the Amigo property as follows:

Drill six holes each 350 feet in length at angles not exceeding 50 degrees to the horizontal across the VLF apparent conductor zone [Figure 4] at fifty metre [164-foot] intervals along the strike and beginning at the northwest end.

- 2] It is also proposed that the zone of gold-silver values, intersected at the present face of the cross-cut tunnel on the No. 1 Vein zone [Figure 5] be drifted along strike both northward and southward for at least 15 metres each way, for a total length of 30 metres [100 feet] and that a raise be driven through to the surface on this zone of values to both explore the zone and also give ventilation and provide additional access as specified under the MINING REGULATIONS.

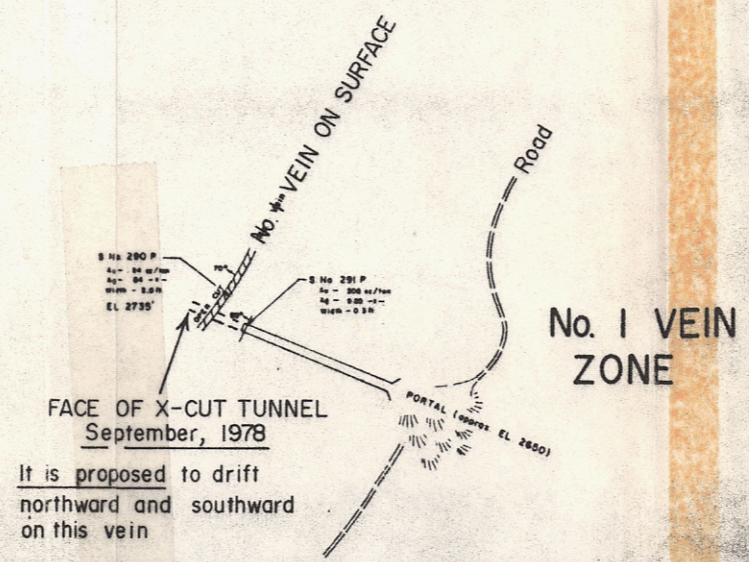
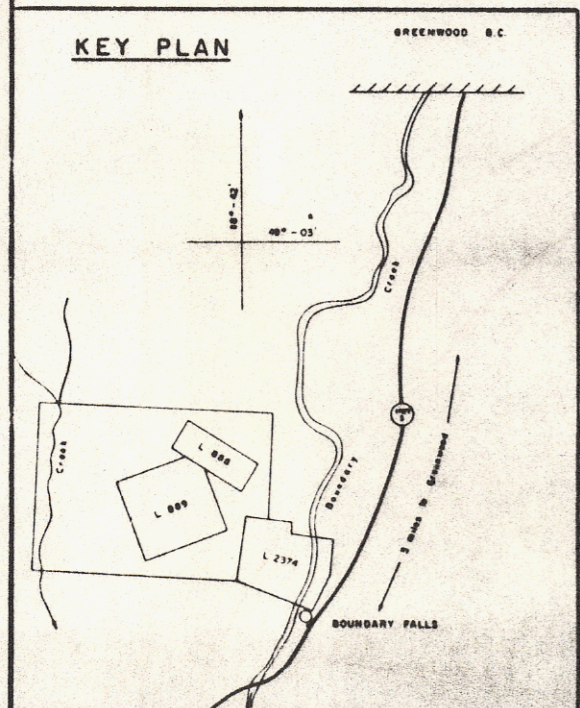


- LEGEND**
- ADIT
  - TRENCH
  - DIAMOND DRILL HOLE LOCATION, DIRECTION AND DIP
  - STATION READING IN MILLIVOLTS
  - MILLIVOLT CONTOURS
  - CLAIM LINE - POSITION ASSUMED
  - CLAIM POST
  - CREEK
  - STRIKE AND DIP OF SHEARING
  - SWAMP AREA
  - APPARENT CONDUCTOR ZONE (VLF ELECTROMAGNETIC)

*Donald W. Tully*  
 FIGURE 4

TO ACCOMPANY A REPORT BY  
 DONALD W. TULLY, P. Eng. DATED  
 SEPTEMBER, 1978.

ALL LOCATIONS ARE BY CHAIN AND COMPASS - EXACT POSITIONS ARE NOT GUARANTEED



**AMIGO SILVER MINES LTD. (N.P.L.)**

**PLAN OF SELF-POTENTIAL SURVEY  
 SHOWING  
 READINGS AND DIAMOND DRILL HOLE LOCATION**

**BOUNDARY CLAIM GROUP  
 GREENWOOD MINING DIVISION  
 BRITISH COLUMBIA**

SELF-POTENTIAL SURVEY BY STRATO GEOLOGICAL LTD  
 SHARPE INSTRUMENT No VP6 USED

February 1976 Scale: 1 cm = 10 metres

TO ACCOMPANY A REPORT DATED FEBRUARY 16, 1976 BY D.W. TULLY, P. Eng.

SCALE 0 10 20 30 40 50 METRES  
 0 30 60 90 FEET