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Hedley Yuniman

GOLD FIELDS LTD. N.P.L.

417 METROPOLITAN BLDG.

VANCOUVER, B.C.

— REPORT BY —

DR. VICTOR DOLMAGE

OCTOBER 1946

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VICTOR DOLMAGE  
CONSULTING GEOLOGIST

October 28, 1946.

HEDLEY YUNIMAN GOLD FIELDS LTD.

Hedley Yuniman Gold Fields Ltd. own the old Yuniman group of eight crown granted mineral claims and eight adjoining claims held by location, all of which are situated in the famous Hedley gold mining district of southwestern British Columbia. This district has been since 1898 and still is an important gold producer. It is situated about 150 miles east of Vancouver and 20 to 40 miles north of the International boundary.

The Yuniman property, one of the oldest locations of this district, is situated near the summit of Bradshaw mountain at an elevation of 6000 feet and about 6 miles southeast of the town of Hedley. It is reached by a trail which branches from the Hedley-Keremeos highway five miles southeast of Hedley and ascends the steep valley of Bradshaw creek. It is a good trail passable by pack horses which at present are the only means of conveyance. The situation of the property with respect to the geographic as well as the geological features of the surrounding district are shown on the accompanying geological maps prepared by the Canadian Geological Survey.

The property is fully described in a report by M.S. Hedley and published in part "D" of the Annual Report of the Minister of Mines of British Columbia for the year 1937. It is briefly mentioned in several of the early Annual Reports of the Minister

of Mines, but these contain little information of value.

The first attempt to develop the property was made many years ago and consisted of the driving of the Number 1, 2 and 3 adits with their accompanying small shafts as shown on figure I. A small amount of very rich ore was found near the surface but in the tunnels, although there is strong arsenopyrite mineralization, the gold values were found to be low.

The next attempt was made prior to 1939 when an area lying west of the adits was systematically trenched as also shown on figure I. This discovered a number of rich but narrow veins carrying gold and telluride minerals.

The third stage of development has just been completed and consisted in exploring these veins at an average depth of about 100 feet below the surface by driving the adit indicated on figure I as the "new adit". An attempt to drive this adit with hand tools proved to be impractical so it was decided to try to install a compressor on the property. Under the direction of Mr. Gallagher and by the exercise of much ingenuity and persistence and the help of one horse and a block and tackle, a full sized gasoline driven compressor was hauled on skids up the steep and winding trail to the site of the new adit. This was an important achievement since it not only facilitated the driving of the new adit but will be available for any amount of further tunneling and underground diamond drilling without which this promising but somewhat isolated property could not be adequately explored.

A large number of veins were found, some of which carry good gold values. All the veins are well mineralized with arsenopyrite and appear to be persistent in length and depth but they are all too narrow to permit of economical mining. The general results are shown on figure II.

### G E O L O G Y

As shown on the accompanying geological map the Yuniman gold bearing veins occur in the Shoemaker formation near to where it is intruded by several dykes and small stocks of diorite. The Shoemaker formation consists mainly of cherts but contains also small amounts of tuffs, greenstone, limestone and a very small amount of argillite.

The quartzites vary in grain from dense cherts to medium fine conglomerates with silicious pebbles ranging in size up to one inch.

The Shoemaker and its adjacent formation are folded into a large northeasterly striking anticline on the southeasterly limb of which the Yuniman veins are situated.

Besides the above mentioned dykes and small stocks the Shoemaker formation is intruded by many large bodies of granodiorite as shown on the geological maps.

In the immediate vicinity of the Yuniman property the rocks consist of conglomerate, chert, argillite and greenstone. The conglomerate-greenstone contact passes through the new adit in a north south direction with the greenstone on the west. The

west crosscut of the new adit is in greenstone and argillite while the main drive and the east crosscut are in conglomerate and chert with a little argillite. The formations dip steeply to the east.

The formations in the vicinity of the Yuniman are faulted but only to a small degree. One fault, shown on all the accompanying plans, strikes north easterly and extends through all the workings. Although the length of the fault is considerable, the displacement on it is small. There appears to be a tendency for the various veins to be richer in the near vicinity of this fault.

Also near the deposits there are several diorite dykes as shown on the maps but these appear to have no economic significance.

Between 25 and 30 veins have been found on the property and further exploration would undoubtedly discover others. All the veins strike in a direction just a little west of north and dip to the east at angles varying from 62 to 88 degrees. They vary in width from 1 to 10 inches, but the average is less than 4 inches.

In composition they are all closely similar except in respect to the amount of gold which varies from zero up to 6 ounces per ton. The gangue minerals are quartz, calcite and ankerite and the metallic minerals, pyrite, pyrrhotite, chalcopryrite, arsenopyrite, tetradymite and gold. Beautiful specimens of free gold associated with tetradymite can be found in several of the veins. Strong arsenopyrite mineralization is present in

all the veins, even the smallest, and in some instances this mineral heavily impregnates the wall rocks of the veins. This condition may be regarded in this district as highly favourable to the formation of gold deposits.

The amount and distribution of gold found in the veins are shown in the accompanying assay plan. All the samples shown were taken by the writer. Some of the gold values may be regarded as high but considered in relation to the smallness of the veins they are on the whole sub-commercial. Nevertheless they indicate the action in this locality of exceedingly rich gold bearing solutions and the finding of commercial gold deposits in the locality depends on the discovery of one or more larger structures.

Structures of such size might be formed by the expansion of one or more of the small veins. They might be formed by the coalescence (either horizontally or at depth) of several of the smaller veins into a single large one. A structure of mineable width might be formed by the close spacing of several small rich veins so that they could be mined as one ore shoot. The veins from which samples 33, 34 and 35 were taken closely approach such a condition. Still another possibility is that a new structure of commercial size might be found. It is a common experience to find many small veins in the vicinity of major ore structures. It is also a common experience to find large veins splitting up at their terminals into swarms of smaller ones similar to the group of veins now exposed in the new tunnel.

It is the opinion of the writer that the chances of finding larger structures of commercial importance in this richly mineralized area are good enough to warrant a further search by tunneling or drilling or both methods. In view of this and also the important fact that the property is now equipped with an efficient air compressor, it is recommended that the following explorations be carried out:

(1) Driving the main crosscut further north along the rich vein which it has followed for the last 50 feet of its length. By driving in this direction the depth of the tunnel below the surface will increase rapidly and the tunnel will penetrate unexplored ground. Further the tunnel will be about the centre of the group of veins now showing in the crosscuts and these can be explored by crosscutting or cross drilling at suitable intervals.

(2) Test for the possible coalescence or expansion of the veins at depth below the adit of 100 to 200 feet by diamond drilling. This can be conveniently done with the present equipment by drilling down holes from a station cut near the face of the east crosscut as indicated in figure I.

(3) From the same station test the country east of the new tunnel and beneath the old adits by drilling holes in that direction. This ground is considered to be specially favorable because of the large fault passing through it and because of a sample taken from a vein below number 2 adit which assayed 6.32 ounces of gold per ton. The first hole in this direction could

be horizontal as the elevation of the drill station is from 75 to 120 feet below the old adits. If such a horizontal hole showed sufficiently encouraging results, the east crosscut could be extended into this area beyond the fault and further drilling done from there.

Owing to the difficulty of obtaining a water supply in the winter the drilling cannot be done till spring. It is therefore recommended that the above tunneling projects be executed this coming winter.

Respectfully submitted,

(Signed) V. Dolmage



## Certificate of Assay

## G. S. ELDRIDGE &amp; CO. LTD.

PROVINCIAL ASSAYERS, ANALYTICAL AND CONSULTING CHEMISTS, CEMENT  
AND METALLURGICAL INSPECTORS

WE HEREBY CERTIFY that the following are the results of assays made by us upon samples of ore herein described  
and received from Dr. V. Dolmage

October 3rd, 1946

M A R K E D	Gold		Silver							
	Ounces Per Ton	Value Per Ton	Ounces Per Ton	Value Per Ton	Per Cent	Value Per Ton	Per Cent	Value Per Ton	Value Per Ton	Total Value Per Ton (2000 lbs)
No 1	0.08	\$ 2.80								
2	0.43	15.05								
3	0.01	.35								
4	1.90	66.50								
5	0.20	7.00								
6	0.01	0.35								
7	0.11	3.85								
8	0.005	0.18								
9	0.02	0.70								
10	0.80	28.00								
11	0.02	0.70								
12	0.76	26.60								
13	0.40	14.00								
14	0.12	4.20								
16	0.02	0.70								
17	Trace									
18	0.04	1.40								
19	0.92	32.20								
20	0.06	2.10								
21	1.36	47.60								

Gold Calculated at \$35.00 per oz.

Signed G.S. ELDRIDGE, Provincial Assayer

# Certificate of Assay

## G. S. ELDRIDGE & CO. LTD.

PROVINCIAL ASSAYERS, ANALYTICAL AND CONSULTING CHEMISTS, CEMENT  
AND METALLURGICAL INSPECTORS

WE HEREBY CERTIFY that the following are the results of assays made by us upon samples of ore herein described  
and received from Dr. V. Dolmage October 3rd, 1946

M A R K E D No.	Gold		Silver		Per Cent	Value Per Ton	Per Cent	Value Per Ton		Value Per Ton	Total Value Per Ton (2000 lb)
	Ounces Per Ton	Value Per Ton	Ounces Per Ton	Value Per Ton							
22	0.08	\$ 2.80									
23	0.92	32.20									
24	0.04	1.40									
25	0.08	2.80									
26	0.005	.18									
27	0.09	3.15									
28	0.005	0.18									
29	0.005	0.18									
30	0.02	0.70									
31	Trace										
32	0.005	0.18									
33	0.37	12.95									
34	0.30	10.50									
35	0.20	7.00									
36	0.02	0.70									
37	0.41	14.35									
38	0.13	4.55									
39	0.36	12.60									
40	0.16	5.60									
41	0.01	0.35									

Gold Calculated at \$35.00 per oz.

Signed G.S. ELDRIDGE, Provincial Assayer

# WORKINGS YUNIMAN GROUP HEDLEY, B.C.

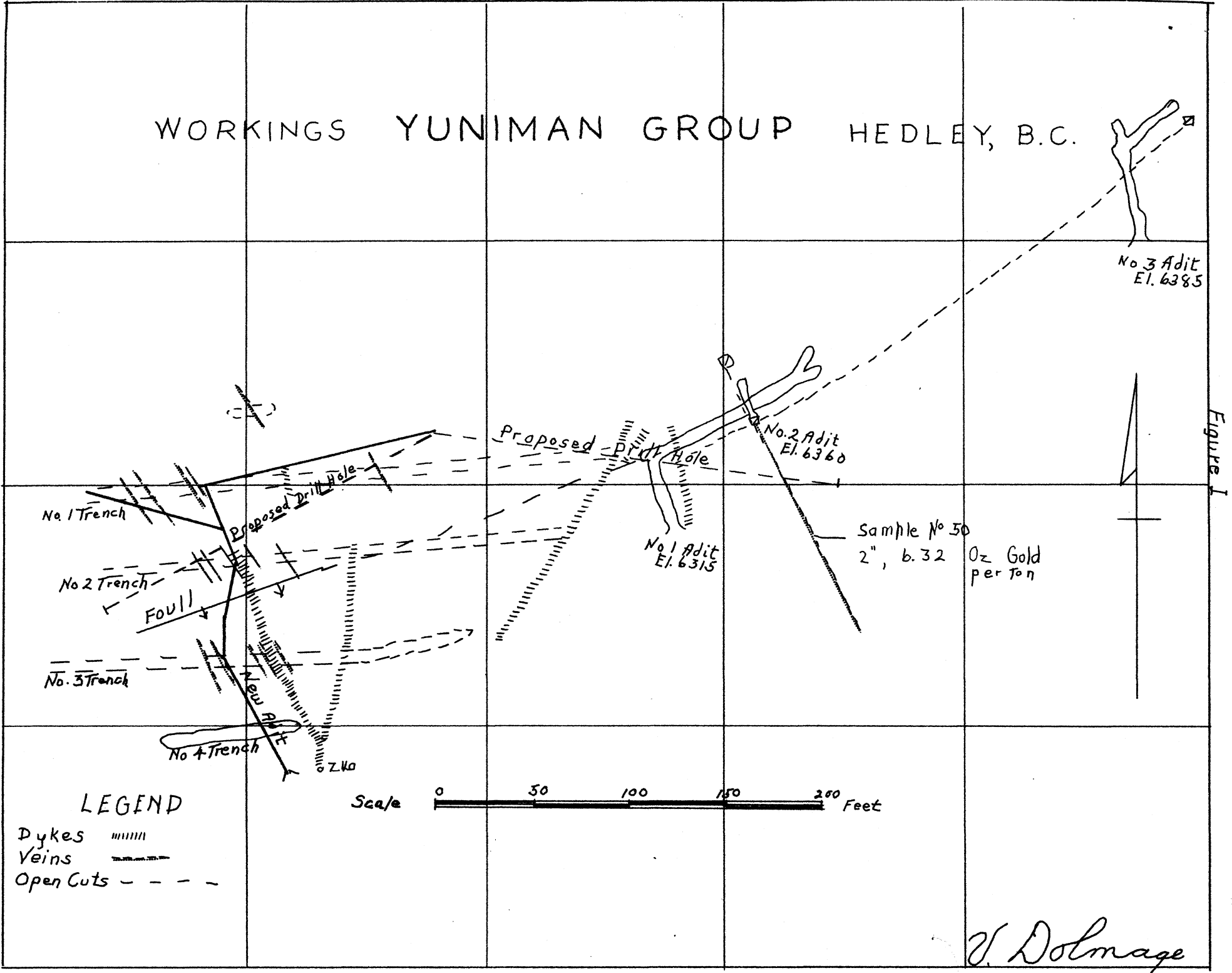
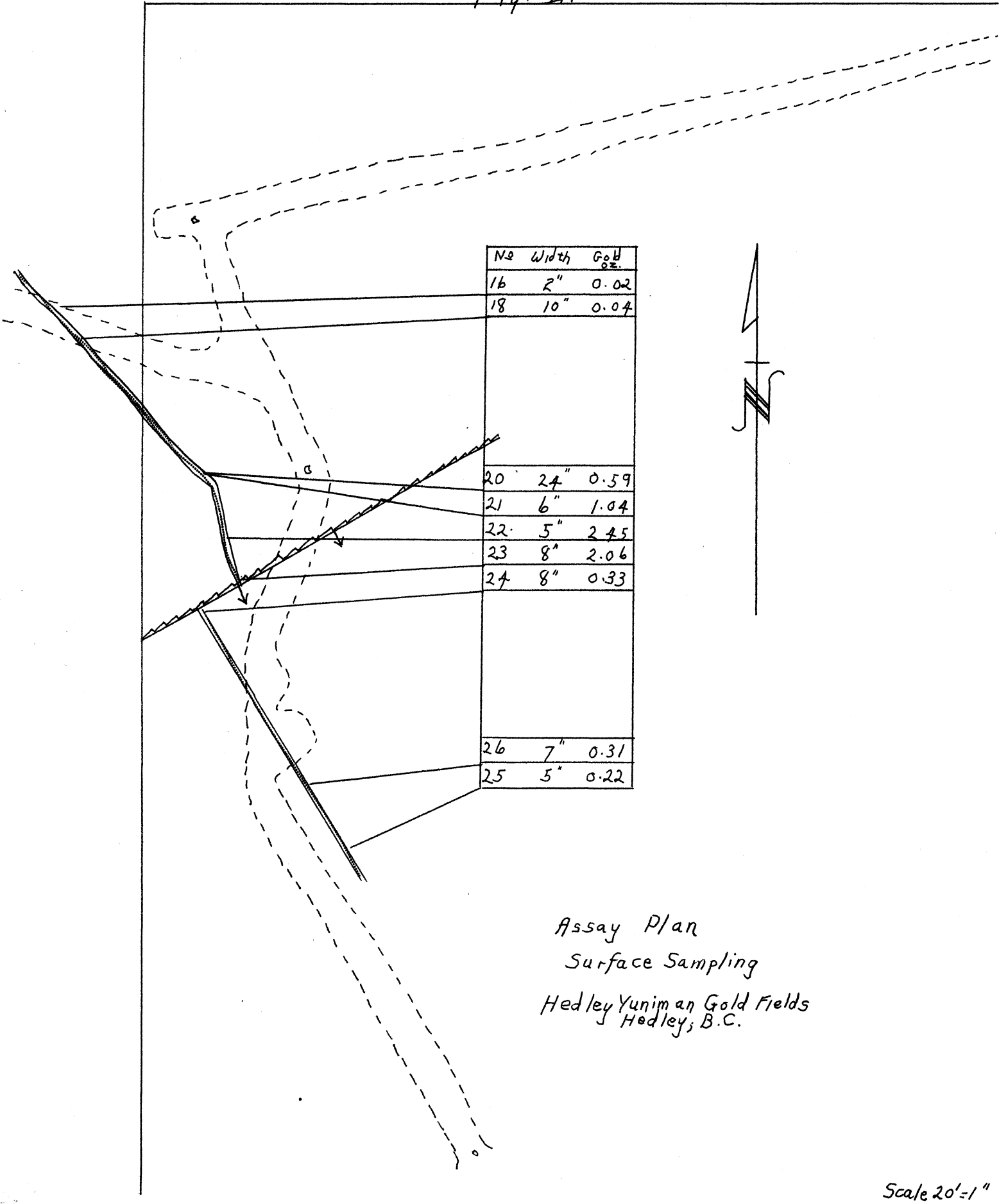


Figure 1

V. Dolmage



Fig. III



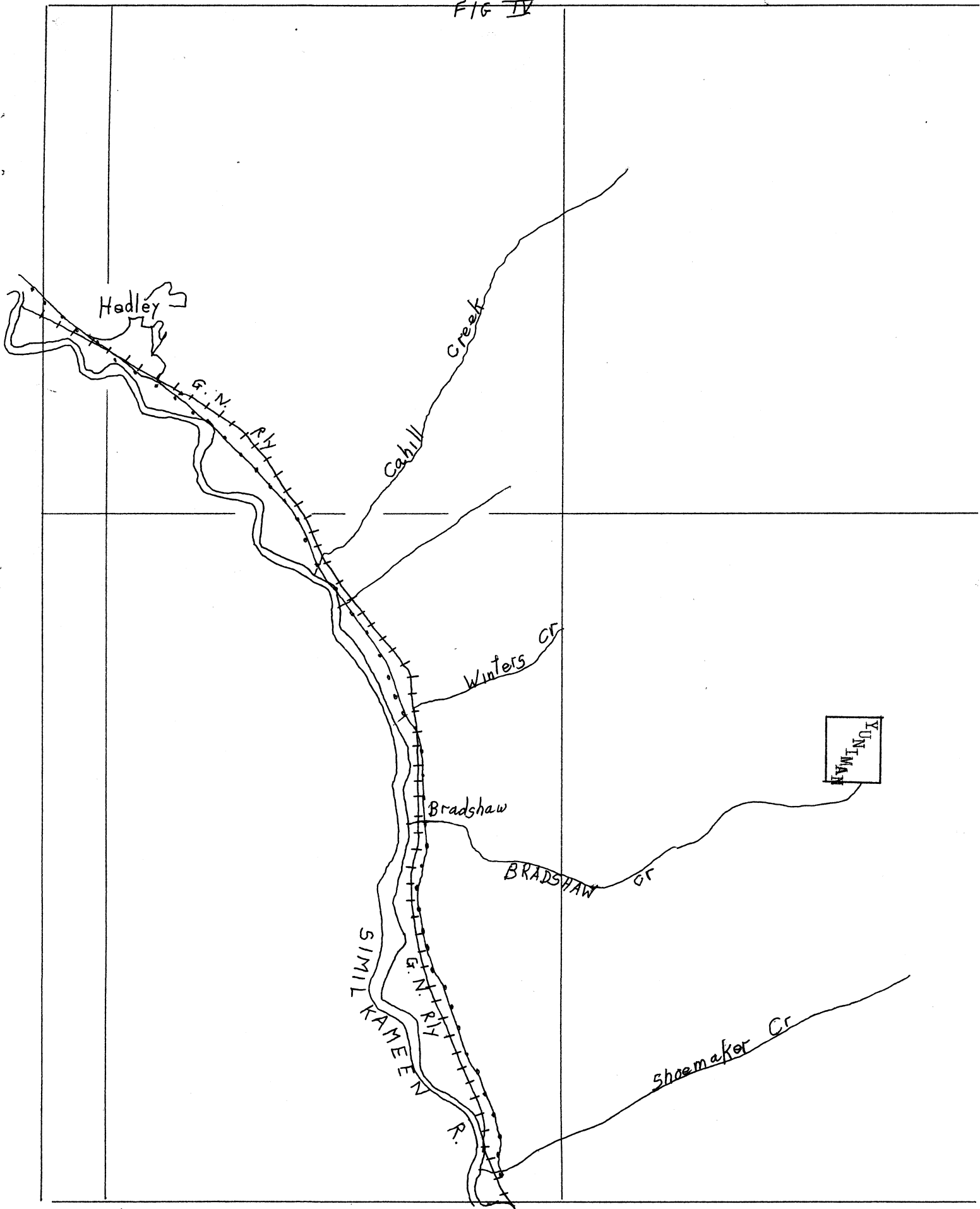
No	Width	Gold oz.
16	2"	0.02
18	10"	0.04
20	24"	0.59
21	6"	1.04
22	5"	2.45
23	8"	2.06
24	8"	0.33
26	7"	0.31
25	5"	0.22

Assay Plan  
 Surface Sampling  
 Hedley Yuniman Gold Fields  
 Hedley, B.C.

Scale 20' = 1"



FIG IV



05' HEDLEY

1941

120°00'

DEPT MINES  
MAP 628A