

82-F.6

REPORT

ON

PACTOLUS GROUP

NELSON

MINING DIVISION

Alexander Smith,
Mining Geologist.

A. St. Clair Brindle
MINING ENGINEER

626 WEST PENDER STREET
VANCOUVER, B. C.

(Sent from Moyie)

December 13th, 1947

A. J. Anderson, President,
St. Eugene Mining Corporation Limited, N.P.L.,
2710 - 25 King Street West,
Toronto 1, Ont.

Dear Allan:

Attached is a short report on the
Pactolus Group, Nelson, B. C. The geological map
is that submitted for assessment work on this
group.

Also attached is a copy of an ear-
lier report by Mr. A. St. Clair Brindle, together
with his maps.

I believe that with a couple of
days sampling and detailed work in the vicinity of
the long cut, we could determine whether there was
much residual enrichment where the interesting val-
ues were obtained. The results of our own sampling
on other parts of the group were disappointing.

Yours sincerely,

AS/EPG.

PACTOLUS GROUP

NELSON, B. C.

The Pactolus Group of 4 claims are on the northeast slope of Toad Mountain, about four miles southeast of Nelson, B. C. The claims are the Pactolus 1 and 3 staked by A. St. Clair Brindle on behalf of the St. Eugene Mining Corporation, N.P.L., and the Nelson 2 and 3 held in the name of the Company. They cover the old Golden Wreath and Gold King claims staked about 1887.

The property may be reached by truck road from Nelson via the Silver King Mine Road and the road to A. Stasyn's sawmill. In Cottonwood Lake Valley 2000 feet to the northeast are the Nelson-Salmo highway, the Great Northern Railway and the West Kootenay Power Line. The claims are then well situated for economical operation.

The slope from the claims to Cottonwood Lake is very steep. The principal showing, at about 5000' elevation, is near the "breakover" from a rolling wooded upland to this steep slope.

GEOLOGY:

The Pactolus Group is underlain by Rossland volcanics. The general strike of the formations is northwesterly with dips of 40 to 90° southwest. A cross sec-

tion of the rocks is exposed along Gold Creek. North of the shingle mill there is a chlorite hornblende greenstone schist derived from an andesitic tuff. At the mill is a 250 foot width of fresh felspar porphyry (andesite, greenstone). Proceeding southwest this is followed by 1500 feet of fresh andesitic greenstone, and this in turn by 1800 feet of alternating andesitic and basaltic rocks, sometimes massive and sometimes schisted or sheared parallel to the general trend of the formations.

This 1800 foot band is covered by the claims. In it are bands of pyrite mineralization. The pyrite occurs in three principal types of rock. The first is in a light bleached altered schist; the second in harder silicified brownish and purplish altered schist; the third in a more massive basaltic rock showing epidote and having a nodular weathered surface. The mineralized bands parallel the formations.

In 1887 good gold values were obtained from the gossan of one of the pyritized belts. A small mill was installed but was unable to treat the sulphides. Values were much lower in the unoxidized ore.

To the southwest of the Pactolus there is a rock resembling a diorite or diorite porphyry. In places this is schisted similar to the rocks of the Rossland series. This may be either a member of the series or a later intrusive.

SHOWINGS:

The property was developed in the early days by several short tunnels and a long open cut. In 1941, Mr. Brindle sampled a 55' width in this partially caved cut and obtained an average of 0.093 Gold for that width, with the high section of 44' - 0.21 oz. In 1944 when the cut had been cleaned out he obtained an average of 0.046 oz. for the same 55 foot width, while C. M. Campbell obtained an average of 0.065 oz. gold for a 117 foot width in the same trench. This trench is not down to fresh unoxidized bed-rock. Much of the material that has been sampled is highly rusted and decomposed.

The writer took 10 representative samples of pyritized rock from other parts of the claims and obtained only "nils" and "traces."

OUTLOOK:

The showing at the long cut may be more silicified than those sampled elsewhere, but the writer is inclined to think that the higher values are due to secondary enrichment in the oxidized rock. Judging from the topography the long cut may lie on an old land surface where there was a good chance for residual concentration of gold in the gossan. One or two short drill holes or blasting the cut down into fresh rock would show whether the values in the sulphide rock were encouraging enough to warrant further attention.

There was six inches of snow on the ground when we did the mapping. We should spend a day or two next summer examining the long cut and vicinity in detail prior to deciding whether to do some drilling or abandon the claims. The writer knows of no other pyritized zone in the Nelson area that carries commercial gold values. Such values in all known cases in the area are found in quartz veins.

Alexander Smith.

December 13th, 1947.

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p
y

P R E L I M I N A R Y R E P O R T

on the

"NORTH STAR" - "IRENE" - "GREAT EASTERN" - "GREAT WESTERN"
et al

MINERAL CLAIMS

situate on

GIVEOUT CREEK - TOAD MOUNTAIN

NELSON DISTRICT

BRITISH COLUMBIA

A. St. Clair Brindle,
Mining Engineer

Vancouver, B. C.

November 6th, 1944.

HISTORICAL:

In 1886 the Silver King Mine was accidentally discovered by the half breed Hall Brothers and partners, placer miners from the U. S. A. Owing to the extreme richness of the ore at surface a rush ensued in 1887, and at this time the Golden Wreath and Gold King (now the Pactolus Group) were found and staked. Quite an excitement occurred by reason of the surface values on this wide zone of sheared silicified schists and values were quoted from \$7.00 to \$25.00 gold at that time. The following year a small crude mill was sent for from San Francisco and erected just below the zone ridge, which is a prominent feature of the property. It was soon made apparent, however, that the body of deep subsoil, mostly a red mass of oxidized material carried on "accumulation" of free gold from the decomposing big pyritized zone - and that the hard silicified bedrock was entirely unsuited for such crude milling methods as then obtained. The claims were then Crown Granted and nothing further ever done. Finally of recent years the surveys were cancelled by the Government and the ground thrown open, and recently staked on behalf of the St. Eugene Mining Corporation Ltd. of Vancouver, B. C.

GENERAL DATA AND SITUATION:

This group of five claims is situated on the North East slope of Toad Mountain Range, southeast of Nelson

about four miles and occupying practically whole hillside slope from Cottonwood Lake in the main valley to the high ridge above same at Elevation 5000 feet. Through this main valley runs the West Kootenay Power & Light Company's Pole Line - The Great Northern Railway Line to the U.S.A., and the Motor Highway from Nelson to Spokane, U.S.A. etc. Gold Creek, a small creek - so far never dry, borders the northwest boundary of the group from a high point on the mountain - and empties into Cottonwood Creek just below the Lake.

PROPERTY:

Now consists at date of five practically full sized mineral claims comprising over 200 acres of ground, staked in a North West - South East direction. The claims are not surveyed, but as no other property immediately adjoins it, there are no conflicting interests. Claims are now recorded in the Government Office at Nelson, B. C., as the "Pactolus Nos. 1-3-5-6 and 7."

GEOLOGY:

The whole of the range of Mountains south west of Cottonwood Lake Valley for twenty-five miles at least is comprised of Rocks classified by Dr. G. Dawson and R. G. McConnel as the "Rossland Volcanics" of an ancient volcanic period - intruded at three different periods of time by granitic intrusions, but chiefly by an early one, classified as the "Nelson Slocan batholith" coupled with

GEOLOGY: contd.

following intrusions of basic dykes of Lamprophyre which occur very frequently through this extensive area. A feature of further interest in the matter is the great amount of so-called "birdseye porphyry" around most of the upper area in the north westerly portion of the section referred to and it is noticeable that mineral veins are more frequent and stronger around the vicinity of this extensive porphyry. (some preliminary notes by Dr. Dawson are attached to this memo).

MINERAL ZONE:

At a number of points on the Northern end of the range above mentioned, wide pyritized shear zones exist that are a notable feature here. The shearing and alteration has been intense, and they outcrop as great zones of red and yellow oxidized bands of a total of two hundred or more feet in width. The shearing seems directly connected with the contacts of the intrusive granite or its outliers. In particular reference to the Pactolus shear, it is a banded pyritized zone, at points or bands carrying quite an appreciable amount of pyrite, even heavy at times, but numerous bands are only lightly pyritized. The zones or bands in places are highly silicified and quartzose, but gold values on the whole are low and seem to be connected chiefly with the pyrite. The same has apparent continuity on strike throughout a number of claims and has been cut at

MINERAL ZONE: contd.

considerable depth at the "Gold Creek" Basin at the North West end of the property. The South West border of the group and shear zone is in contact with the granite batholith, which has probably been the mineralizing agent. On the whole the strike lies about north west and south east with almost vertical dip, but sometimes 70° to the south west.

DEVELOPMENT:

No development of any amount has been done on the zone. Two short tunnels about 135 feet apart driven near the footwall area of the zone and combining about 70 feet in length - one long 200 foot cross cut trench to bed-rock cutting the greater portion of the mineral area, and one shorter trench now all caved in, constitute such work as has been done. Owing to the very heavily timbered and brush-covered area and deep wash (gravel) cover on the zone and so little done, this memo can only be considered as a brief outline of conditions. It will require considerable surface work by further trenching and prospecting to obtain any real idea of what the economic potentialities will be.

SAMPLING AND VALUES:

So far we simply applied ourselves to clearing out the long old trench to bed rock and moil sampled

SAMPLING AND VALUES: contd.

the one available point, without having to open up a more or less heavy programme of work. This was done to find out as a preliminary if sufficient values could be demonstrated there, to later arrange for a more complete survey of the possibilities. A sketch plan of sampling of the above trench is submitted herewith in this report. The trench was deepened and carefully uncovered to bedrock, and as carefully sampled along this cross section of the zone as per the widths shown. As can be seen the values are low; however, on this long zone, it is hardly fair to it to assume that because it only outcropped at this point, and values low, at no other point would they be better, and so condemn it. Because of its very fine situation in all the essential factors for economic mining, and the higher price of gold now obtaining, it should have some further investigation and prospecting.

TIMBER:

Most of the area of the claims is covered with fine fir mine timber, also considerable heavy cedar trees. An ample supply for years.

WATER:

Gold Creek runs through the upper portion of the claims and carries sufficient water for milling purposes, but main power would probably be taken from the West Kootenay

Power and Light Companies line passing along the valley just below the property.

The ore would be milled at the foot of the hill and transportation is adjacent either by rail Great Northern Railway or highway for concentrates if necessary. However, the ore would probably be cyanided at the Mill.

The character of the ore is silicified Schist impregnated with pyrites, but occasionally carries very small quantities of galena and copper. Nothing to interfere with cyaniding.

Further data will have to be secured when some development is proceeded with and more information gained.

As insufficient labor was available to complete the assessment work on all the four original claims, the two lower ones were allowed to lapse, but can be picked up again next year if advisable - They were located to secure ground for low elevation cross cuts to intersect the ore bodies, if Ore went to depth.

A plan of the present claims, and one showing the sampling points accompany this report.

A. St. Clair Brindle,
Mining Engineer.

Vancouver, B. C.

November, 1944.

File No. 52893, 52896, 52904.

CERTIFICATE OF ASSAY

G. S. ELDRIDGE & COMPANY LIMITED

Provincial Assayers, Analytical and Consulting Chemists,
Metallurgical and Cement
Inspectors.

VANCOUVER, B. C.

WE HEREBY CERTIFY that the following are the results of
Ore herein described and received from Messrs. St. Eugene Mining
Corp. Ltd. August 4th and 5th, 1944.

<u>MARKED</u>	<u>Gold</u>		<u>Silver</u>	
	<u>ounces</u> <u>per ton</u>	<u>Value</u> <u>Per ton</u>	<u>Ounces</u> <u>per ton</u>	<u>Value</u> <u>Per ton</u>
# 2994	0.07	2.69	0.14	
2995	0.01	0.38		
2996	0.02	0.77	0.30	
2997	0.03	1.15		
2998	0.10	3.85		
2993	0.02	0.77	0.32	
2999	0.08	3.08		
3000	0.02	0.77		
3001	0.04	1.54		
3002	0.09	3.46		
3003	0.02	0.77		

G. S. Eldridge,
Provincial Assayer.

LEGEND

DIORITE & DIORITE PORPHYRY
SCHISTED IN PLACES

D. 744

ROSSLAND VOLCANICS

BASALTIC, MASSIVE, FRESH

MB 742

" PYRITIZED, EPIDOTIZED

PEM 737

ANDESITIC, MASSIVE, FRESH

MGS 738 1/2

" PYRITIZED, ALTERED, SCHISTOSE

PAS 735

CHLORITIC SCHIST

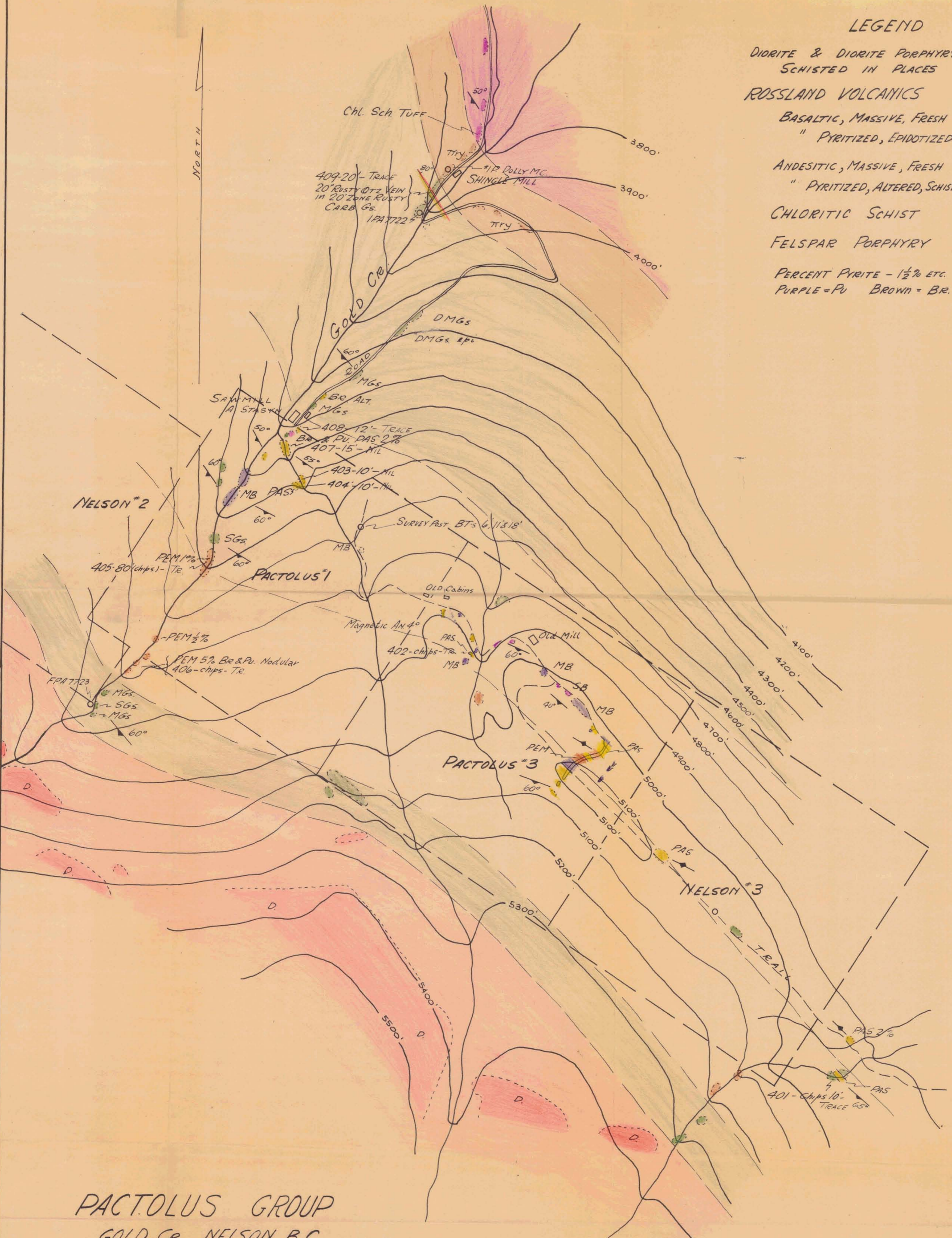
CS 742 1/2

FELSPAR PORPHYRY

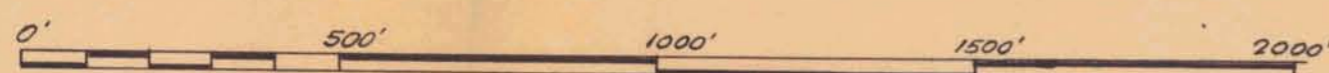
TFY 746

PERCENT PYRITE - 1 1/2% ETC.

PURPLE = PU BROWN = BR.



PACTOLUS GROUP
GOLD Cr. NELSON, B.C.



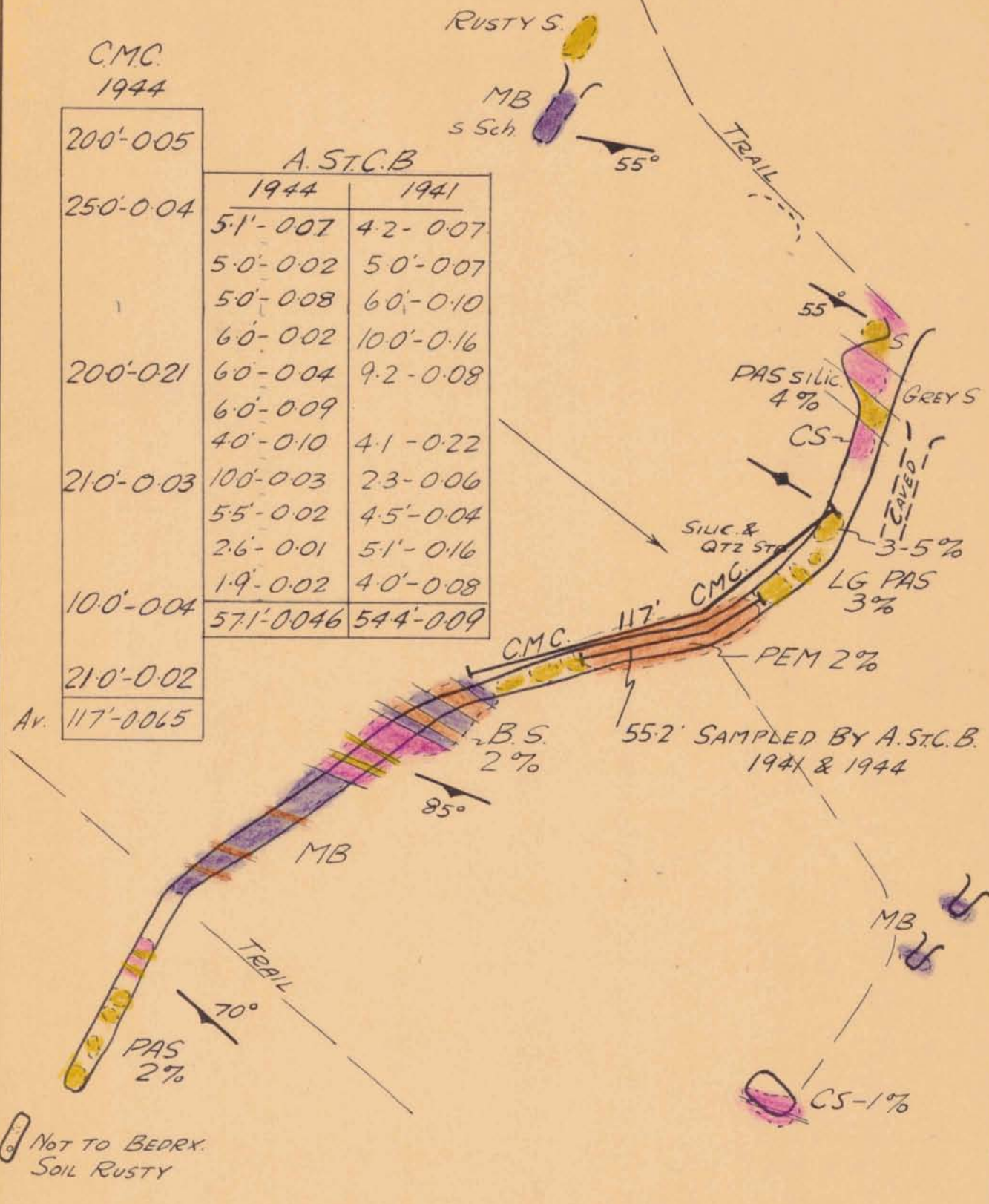
SCALE 1"=300'

CMC
1944

200'-0.05
250'-0.04
200'-0.21
210'-0.03
10.0'-0.04
21.0'-0.02
Av. 117'-0.065

A.S.T.C.B

	1944	1941
5.1'-0.07	4.2'-0.07	
5.0'-0.02	5.0'-0.07	
5.0'-0.08	6.0'-0.10	
6.0'-0.02	10.0'-0.16	
6.0'-0.04	9.2'-0.08	
6.0'-0.09		
4.0'-0.10	4.1'-0.22	
10.0'-0.03	2.3'-0.06	
5.5'-0.02	4.5'-0.04	
2.6'-0.01	5.1'-0.16	
1.9'-0.02	4.0'-0.08	
57.1'-0.046	54.4'-0.09	



FOR LEGEND SEE 300 SCALE MAP

LONG CUT, PACTOLUS
SCALE 1" = 40'

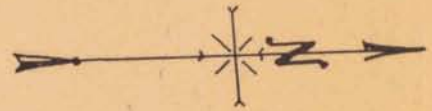
**Sketch Plan of
PACTOLUS GROUP
MAIN TRENCH & SAMPLING**

*Nelson, B.C.
Scale 1" = 20' Approx*

A. St. Clair Brindley

MINING ENGINEER

July-August 1944



To Granite Contact

LONG TRENCH 200' +

DIP 60°-70°

Rosland
Volcanics

Silicified Shear Zone

WIDTH		SAMPLE NO	ASSAY	VALUE
22 INCHES		3003	0.02	.77
32 "		2995	0.01	.38
66 "		2993	0.02	.77
120 "		2997	0.03	1.15
48 "		2998	0.10	3.85
72 "		3002	0.09	3.46
72 "		3001	0.04	1.54
72 "		3000	0.02	.77
60 "		2999	0.08	3.08
60 "		2996	0.02	.77
61 "		2994	0.07	2.69

Sampled Width 55'-3"

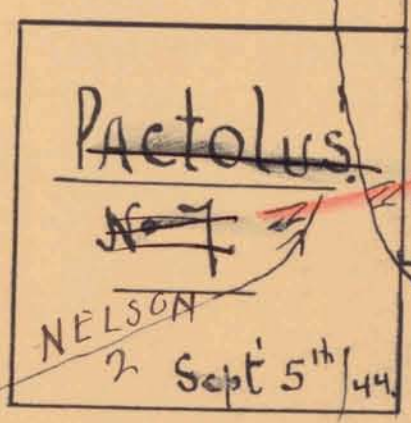
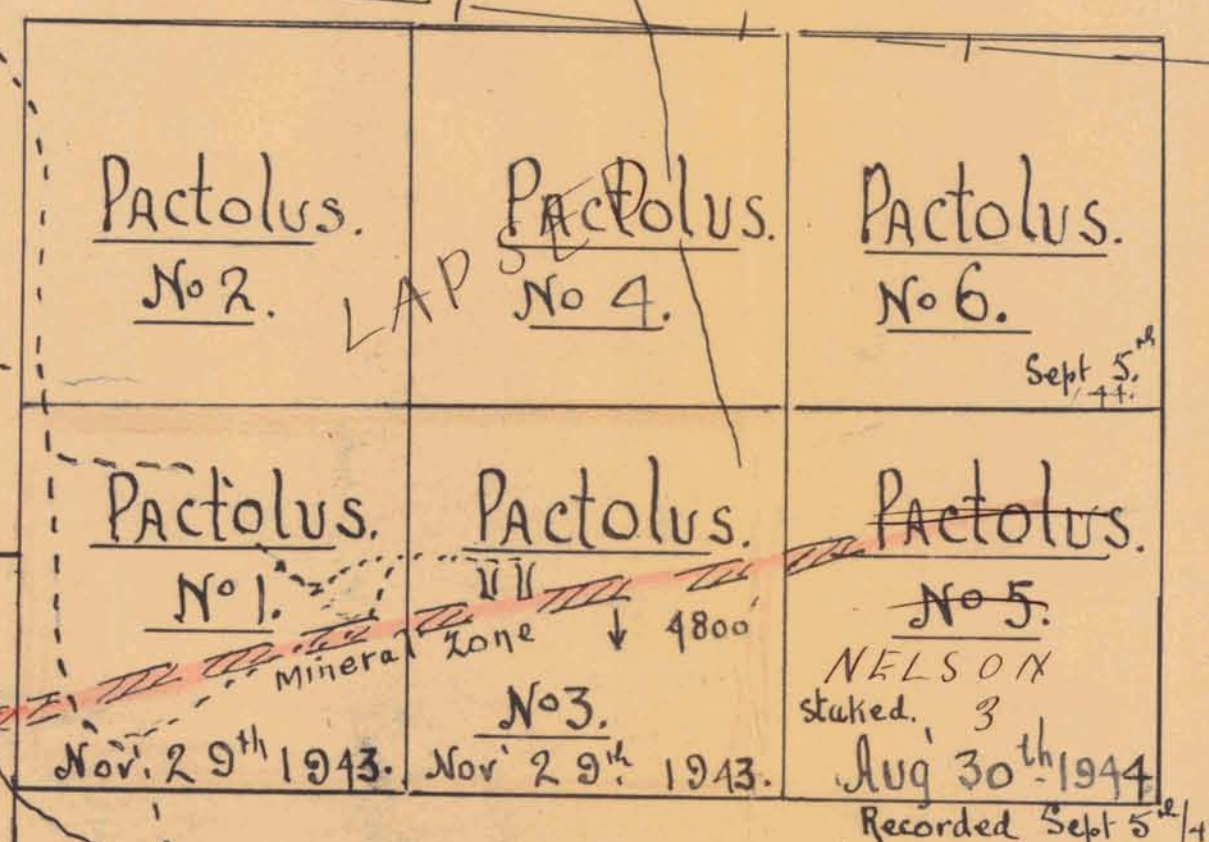
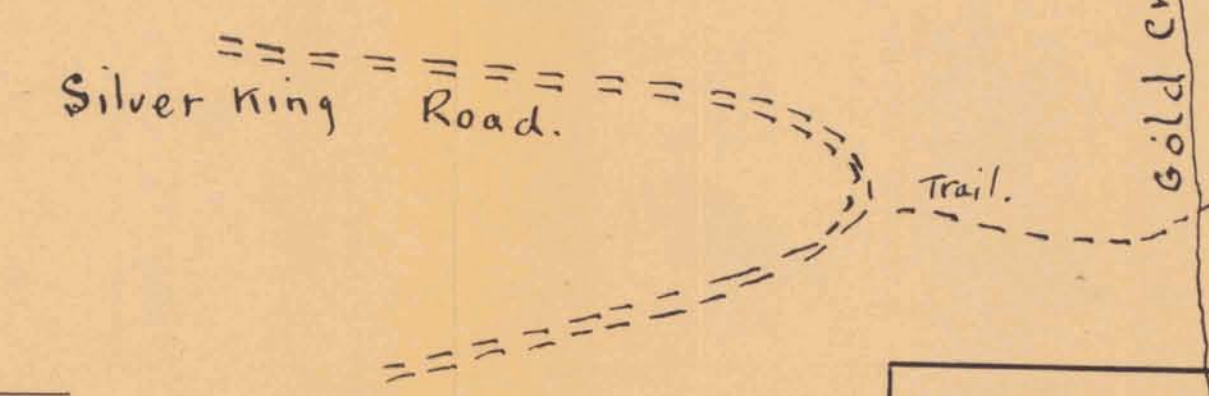
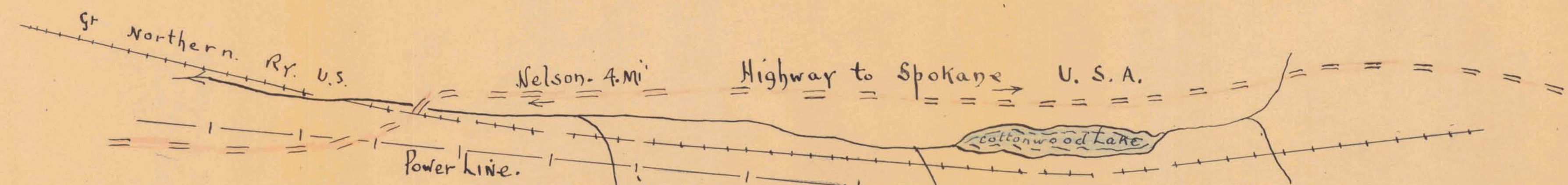
Total width 55'-3"

31'

Molled Sampling

CAVED TUNNEL

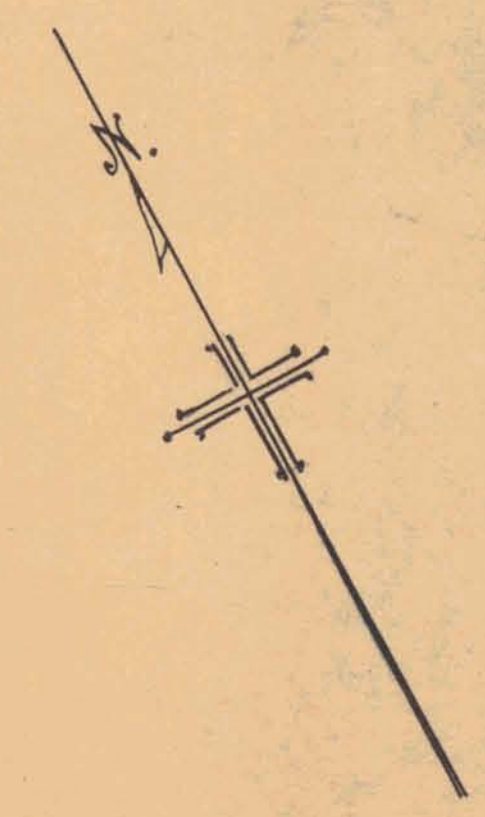
Trail



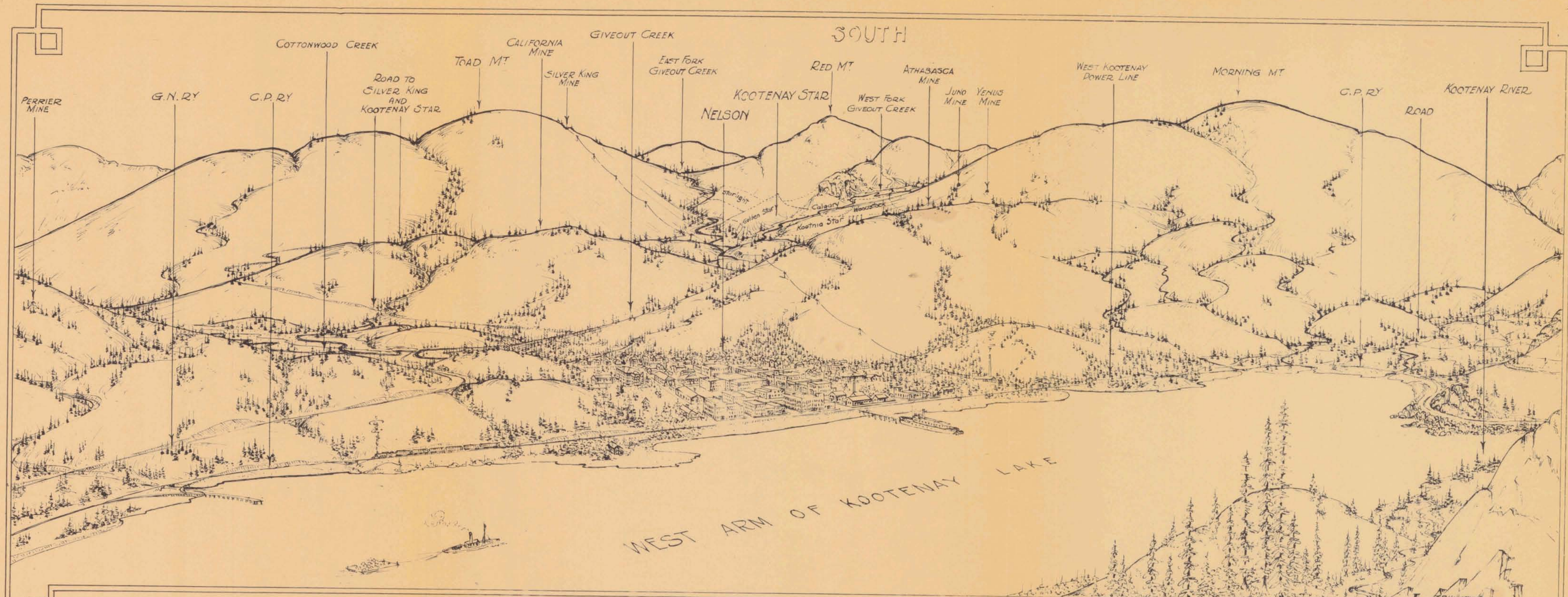
Sketch Plan
 of the
 "Pactolus" Group
 of
 Mineral Claims

NE Boundary of
 Montic
 No 5
 Approx
 Nelson. District
 B. C.

A.C. Brandle
 Sept 1944



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- KOOTENAY STAR GOLD MINES - NELSON - BRITISH COLUMBIA -