

PROPOSAL FOR FURTHER EXPLORATION
KAM-KOTIA - BURKAM JOINT VENTURE
NEW DENVER, B.C.

801463

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FOREWORD

Most of the mineral-bearing lodes in the Slocan District strike easterly to northeasterly and dip southward. They are strong tear faults or shear zones cutting highly folded and faulted sediments; mostly argillite with minor quartzite and limestone. Known collectively as the Slocan series, these sediments tend to be thin bedded and have a north-westerly strike. They are intruded by a network of pale porphyry sills, dikes and a few small irregular stocks. A few miles southward, the Slocan rocks are in contact with porphyritic granite of the Nelson batholith.

Orebodies appear to lie at random along the lodes but are usually found at locations where the maximum number of controlling factors were operative during mineralization. Some of these factors are rock competence, folding of the beds, relative lode movement and lode dip. Individual orebodies range from a few to 20 feet thick, several hundred feet long and seldom greater than 800 feet in vertical extent. Although their mineable tonnage varies from 10,000 to 400,000, the economics of production forces the smaller ones to produce at higher grades than the larger ones. Depending on size, one might expect production grades of the following order:

silver - 10 - 40 oz/ton
lead - 5 - 12 %
zinc - 5 - 15 %

*generally
lattice*

Of the numerous lodes in the district, the largest and most productive is the main Slocan lode. Over a distance of six miles it has yielded the Standard, Mammoth, Hope, Silversmith, Slocan Star and Richmond-Eureka orebodies. In the two mile interval from Mammoth to Hope, this lode crosses the high crest of Silver Ridge, where the favorable ore horizon is deeply buried. The current exploration program of the joint venture is located in this interval and is testing the main lode at a depth of 700 feet below the valley of the east fork of Tributary Creek.

CURRENT EXPLORATION PROJECT AND GEOLOGICAL SETTING

A crosscut adit at elevation 4625 feet was started just east of and below the old Minnehaha mine and driven almost due south, intersecting the main lode at a distance of 2910 feet. The lode has subsequently been explored for 80 feet to the west, 340 feet to the east and 200 feet above the crosscut by diamond drill holes, raises, main level and sub level drifts and box holes. This work has yielded the greatest concentration of mineralization yet found on the main lode in the Mammoth-Hope interval. By the writer's calculations there is 7000 to 10,000 tons of silver - lead - zinc ore indicated, from 40 to 100 feet immediately above the main crosscut. Its physical attitude and geological setting are anomalous, quite unlike anything known to the writer in the Slocan district (see accompanying plan).

- analogous to upper productive section of the Jackson Basin mine.

The lode overlying the main crosscut has a width of 40 feet, with an 8 ft. band of ore on the footwall in 4690 sub level and a 3 ft. band on the hangingwall in 4720 sub level. With a northwesterly strike it runs almost at right angles to the normal direction of a Slocan lode. A strong (?)

O.K. Introductory function

break, the Douglass fault, is associated with the lode in this area, having a similar strike and a steep southwesterly dip. It is not clear whether the fault is the cause of the anomalous ore trend or the result of a sharp flexure in the lode at this point.

- note influence is restricted to a rather limited dip range (flat lode, steep fault)

The second anomalous feature is the gentle to practically flat dip of the lode. The writer feels this attitude is caused by the deflection of the lode on the ^{generally flattish upper} dome-like surface of the porphyry ^{complex penetrated} body that under-

by the 3996 west drive and the 4625 X cut and laterals
lies it in this area and is exposed in the main crosscut below. Its upper surface is broadly pillow shaped, rising barely 100 feet above the cross-

cut level, while it probably roots at depth and southwest of the present workings. It is not hard to visualize how a lode, developing in sedimentary rock, could be thrown out of its normal direction and attitude, upon encountering a large nodule of foreign rock, such as this porphyry. (see cross sections 1 and 2). *however, upper portions of lode distant from dome, ^{evidently} persist with same flat dip.*

Composite long section A suggests the presence of an overturned fold in the sediments, about halfway between the 4625 and 3996 levels, at approximately 4350 feet elevation. It also suggests a link between such a fold and the peculiar pillow-shape of the upper part of the porphyry body. Knowing the association of overturned folds with Slocan orebodies, the writer is tempted to speculate on the ore possibilities where the lode cuts through such a structure. (Should this be the true picture, we might expect the present ore showings above 4625 level to be the upper part of an orebody, with its centre of gravity about 300 feet below.) *or rather effect ore to occur in west dip panel underlying the flat porphyry spread*

The lode has been traced a further 250 feet eastward on the main level and on 4690 sub level by diamond drilling and drifting. Although its strike has swung more to the east, it is still abnormal and should

eventually swing into the northeast quadrant. It has a 20 to 35 degree dip in this area, with mineralization being confined to short lenses on the footwall, with sparse disseminations elsewhere. On 4690 sub level, the sharp kink in the lode above N^o 6 main raise, contains a good lens of ore, with a suggestion that it rakes southwesterly, like the larger mass of ore overlying the crosscut.

As developed westward on 4690 and 4720 sub levels, the lode has been traced for 70 feet. It continues to have the anomalous northwest trend and very flat dip. It is uncertain how much farther this direction will hold but it must eventually swing around to the southwest quadrant.

Strong alteration, either pale silicification or brown biotitization permeates much of the rock in this area and even out the crosscut for 1700 feet to the north. To the writer's knowledge, this alteration is more intense than elsewhere in the district and does not seem to rise to the surface above. While its full significance is not clear, it is believed ~~to have some association with the lode.~~ *due to the general proximity*

EXPLORATION PROPOSALS

Short Range

1. Advance the main N^o 6 raise up to the vicinity of DDH SS-4, to investigate the lode in this area and possibly clarify the problem of the rake of the present ore shoots.
2. Drift west on the footwall ore horizon on 4690 level to determine the boundary of the ore mass and the trend of the lode. If the lode rises above the drift, the face should be advanced a

further 50 feet in the same general westerly direction to provide a base for short diamond drill holes upward to penetrate the lode from beneath.

3. From the face of the west lateral, diamond drill three up holes to the west, southwest and south at angles not above 45 degrees. These will give further penetrations of the lode to the southwest of and beyond the present known limits.

Long Range

Drive a crosscut S 60 W from a point in the main crosscut, 80 feet north of station 46 - 13. This heading should reach the foot-wall of the lode from 100 to 125 feet ahead and should be advanced a further 200 to 300 feet into the hangingwall. It will serve the double purpose of yielding information on the trend and nature of the lode west of the present drive and provide a base for diamond drilling the lode well below the present level. As mentioned earlier, present information indicates the possibility of an ore-body about 300 feet below, where the lode appears to cross the nose of an overturned fold. The theory behind this proposal is that the presently developed ore represents the upper limits of the main orebody in this area.

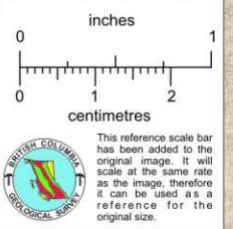
*This would be
away out on
the "S. W."*

*no -
lode too
flat - ore
"cross-
pitching"*

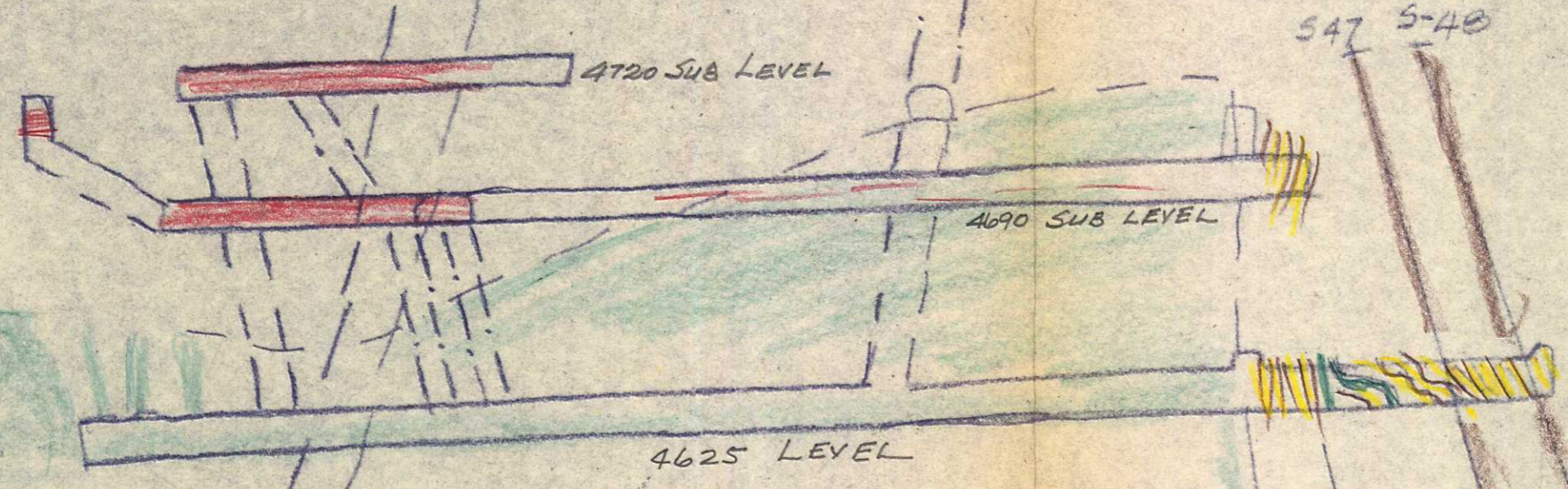
Respectfully submitted,

John Lamb

John Lamb, P. Eng.
Mining Geologist.



SS-5
-75°



DOUGLASS
FAULT

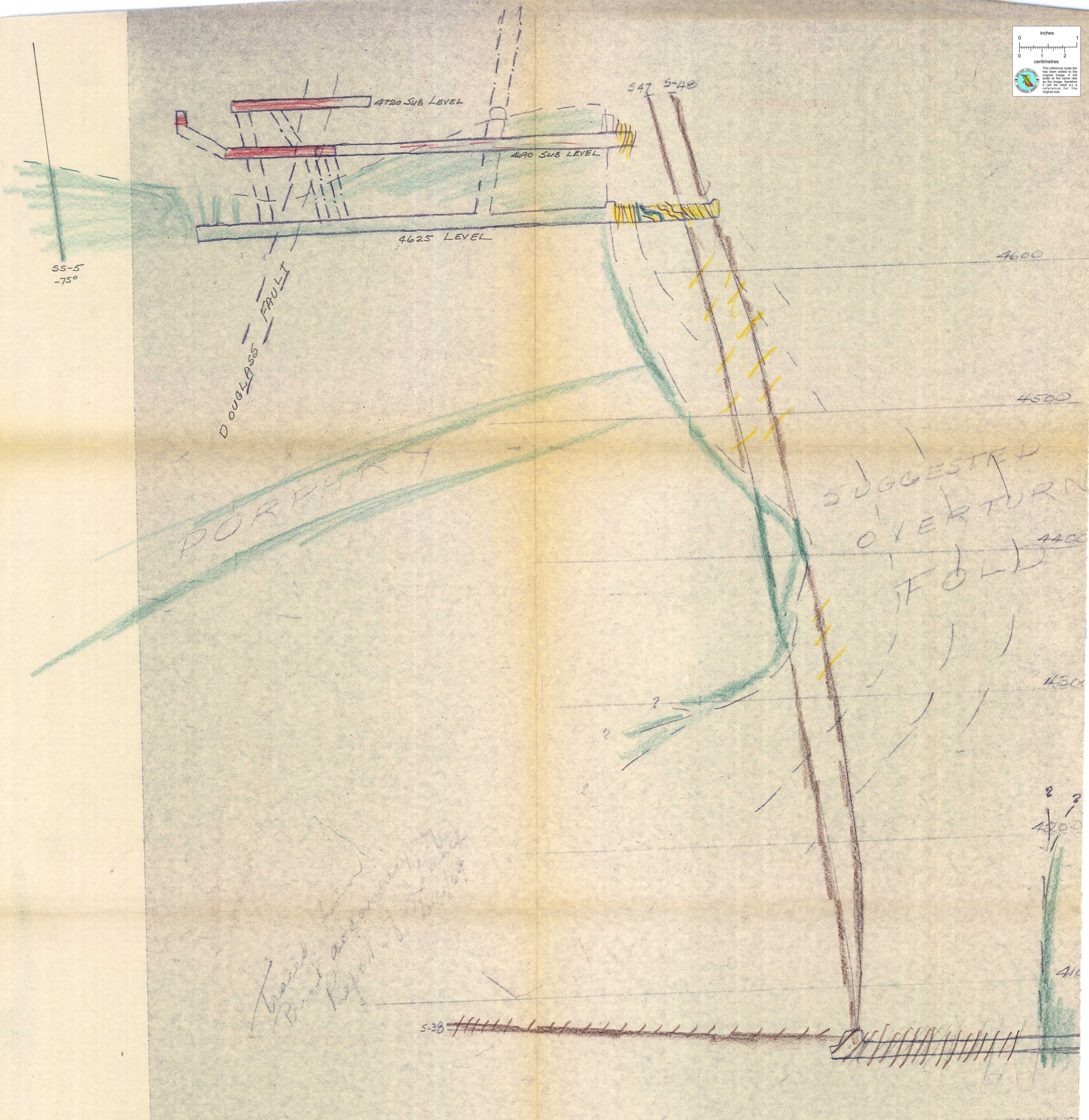
S47 S-48

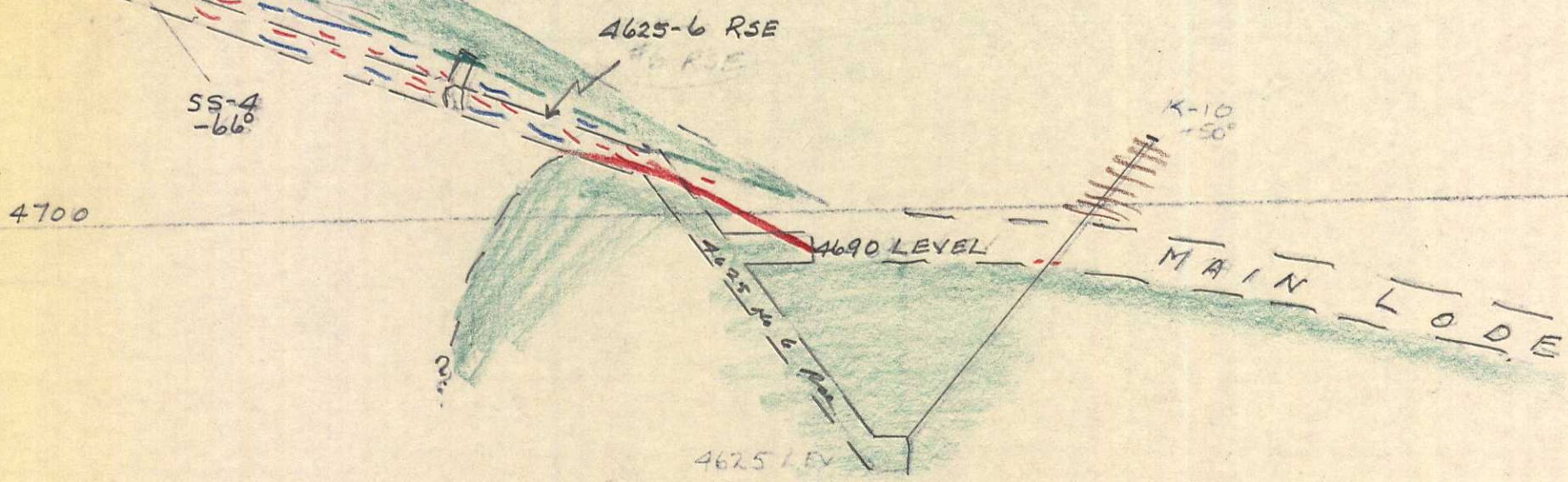
PORPHYRY

SUGGESTED
OVERTURN
FOLD

Trace from
Bunt account
Report of 1919

S-38



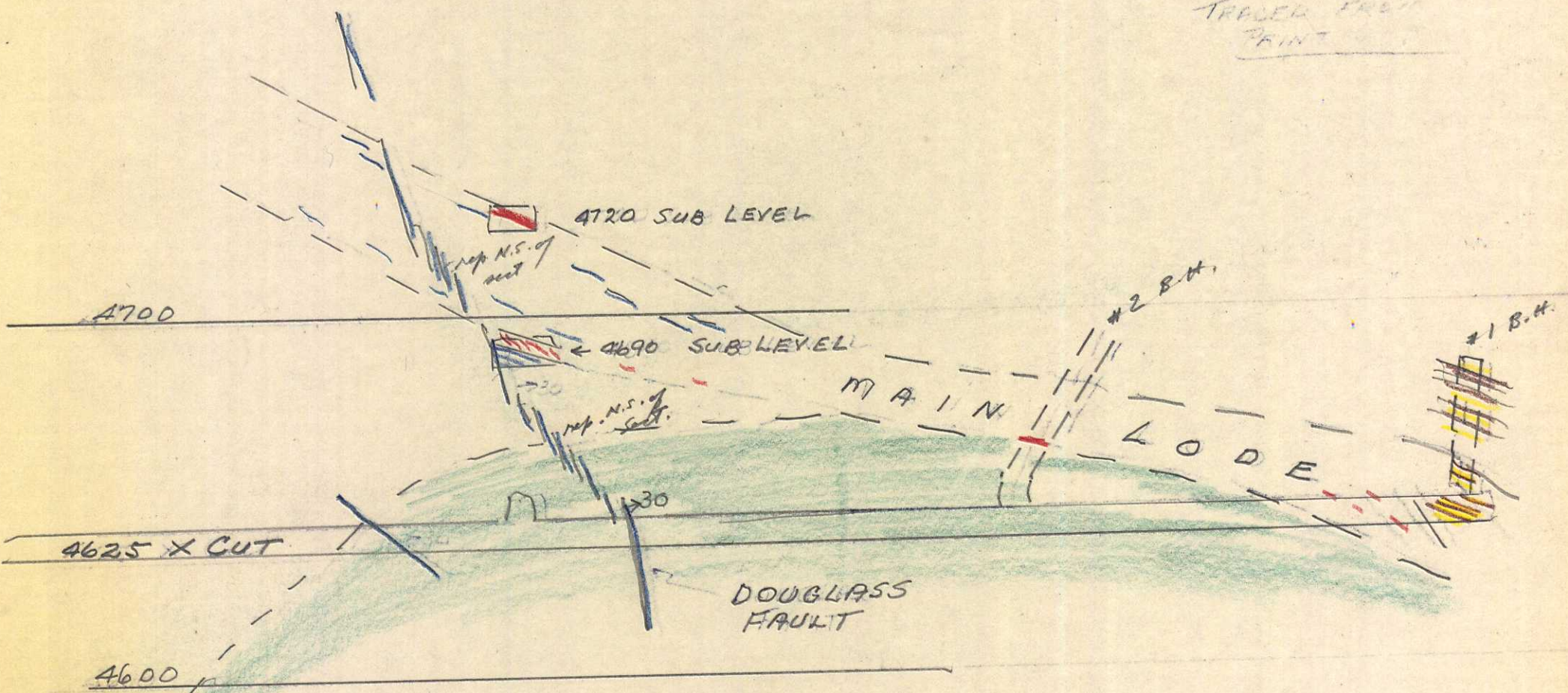


CROSS SECTION 2
 LOOK E
 1" = 40'

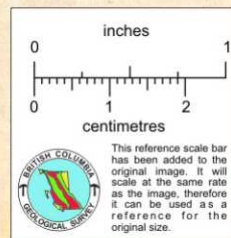
CROSS SECTIONS
 ON
 MAIN LODE
 SCALE 1" = 40'

DEC 1909 J LAMB

TRACED FROM
 PRINT



CROSS SECTION 1
 LOOK E
 scale 1" = 40'



4200N