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BARYMIN COMPANY

RADIOACTIVE DEPOSITS, ATLIN AREA.
B. C. 1955.

C. J. Brown.

A REPORT ON THE BARYMIN COMPANY RADIOACTIVE DEPOSITS
ATLIN, B. C.

INTRODUCTION.

The following is a report of the work accomplished and the results obtained by your field parties investigating the radioactive mineral deposits at Ruby, Boulder and Cracker Creeks in the Atlin area of British Columbia. The area investigated covered some thirty-five square miles including sixty-eight mineral claims staked by your representatives in July, August and September, 1954. The purpose of the undertaking this year was to determine the nature and economic significance of the radioactive material in these deposits.

Surveying was done by chain, compass, altimeter and hand level. Stripping, opencutting and trenching was aided by a Ponjar Gasoline drill. Camps were established at three localities and serviced by pack-horse trails. Ground traverses were conducted with a C.A.E. 135S Scintillation Counter and at the end of the season the summer work was checked by a rough airborne scintillation count survey using a Super Cub aircraft and a P.R.I. 111B instrument.

SUMMARY AND CONCLUSIONS.

An organized program of active prospecting and development work lasting ten weeks was conducted on the various claim groups situated at Ruby, Boulder and Cracker Creeks, Atlin, B. C. The area covered by these claims was mapped in detail and each of the known radioactive zones, along with newly discovered areas, were examined. Trenches and pits were excavated to and beneath bedrock on the more promising showings.

This program indicates that a large body of intrusive granite (Alaskite) was responsible for the generally widespread radioactivity noted last year by your field parties. This radioactivity was found to be related to the finer-grained and siliceous marginal phases of the granite, which are more predominant

adjacent to its contact. The radioactive minerals, zeunerite and meta-zeunerite were found to be present in discontinuous cracks, joints and fractures in and adjacent to the above-mentioned phases of the granite. These two minerals are always associated with feldspar (kaolin) and quartz. These gangue minerals are related directly to the minerals of the intrusive. This fact suggests that the radioactive minerals are not of hydrothermal (vein) origin.

Surface pits and trenches on the Ruby Rose Claims exposed a system of discontinuous joints and fractures which had in places undergone kaolinization. The areas of kaolinization were not extensive. Associated with this kaolinization were small amounts of zeunerite, metazeunerite, arsenopyrite, pyrite and chalcopyrite. The pits and trenches on the Fisher and Yellow Rose Groups disclosed two small discontinuous "igneous quartz" stringers in a siliceous marginal phase of the granite. These stringers carried a very minor amount of zeunerite in small fractures.

The areas of highest radioactivity were sampled and all samples taken returned very low values in uranium, the highest of which was a picked specimen and assayed 0.05% U_2O_8 . No primary radioactive mineral was found and no indications that suggest one of commercial value would be found in the zones examined.

The type of mineralization and structural conditions found in the radioactive zones exposed and examined and the assay values indicate that these zones are not of commercial value.

There are large areas of the granite (Alaskite) yet to be prospected. This rock is believed to be the most favourable rock in the area for the occurrence of economical deposits.

LOCATION AND TRANSPORTATION.

The property is located in the basins at the headwaters of Ruby, Cracker and Boulder Creeks. Access from Atlin is by way of the Pine Creek road to Boulder Creek. A road leads from Boulder Creek to Ruby Creek, thence follows up this creek to Eastman's Camp at an elevation of 4,000 feet. A good horse trail leads from this camp to the cirque basin on the Ruby Rose No. 2 mineral claim where a campsite exists at 4,850 foot level. The claims at the head of Boulder and Ruby Creeks are also served from Eastman's Camp by a horse trail which leads to a campsite on the west fork of Ruby Creek at an elevation of 4,800 feet. Foot trails lead from both these campsites to the showings which are situated around the 6,000 foot level. The Bruce Group is situated on the east side of Boulder Creek and is reached by road up Boulder Creek to an old damsite thence by foot trail to the 5,200 foot elevation.

GEOGRAPHY.

The area is typical of the Yukon Plateau. This plateau surface is thought to represent a plain of erosion and has been produced largely by natural erosional agencies rather than by glaciation as glacier features are found only in the lower reaches of the valleys. This plateau surface and uniform summit level bears no relation to the structural features. Into this peneplain consequent drainage has incised channels varying up to 4,000 feet deep. The slopes of the hills are moderate, except on the North-eastern sides where cirque basins have been formed, the sides of which are precipitous. Elevations range from 2,000 feet to 7,000 feet. The summits are rounded and average in elevation about 6,200 feet and the valleys 3,000 feet. Tree line is around 4,000 feet below which dwarf varieties of spruce and pine exist. There is ample timber in the bottom of the creek valleys. Rock outcrops are scarce. Below the tree line the whole of the area is covered by a thick soil mantle. Above the 4,000 foot level frost action and solifluction has caused

the formation of felsenmeer which varies in thickness up to 50 feet. Severe frost conditions are experienced a few feet beneath the surface at the higher elevations.

CLAIMS AND TITLES.

There are 56 claims in all which are held by location. These claims are recorded in the name of George Radisics and are held in trust by him for Barymin Company Limited. Twelve claims were dropped this season. The claims held are as follows:

<u>Name of Claims:</u>	<u>Recorded Date:</u>
<u>RUBY GROUP</u>	
Ruby Rose 2	August 26, 1954
" 4	August 26, 1954
Ruby Rose 11	Sept. 13, 1954
" 12	Sept. 13, 1954
" 13	Sept. 13, 1954
Ruby Rose 17	Sept. 22, 1954
" 19	Sept. 22, 1954
" 21	Sept. 22, 1954
<u>ROSE GROUP</u>	
Ruby Rose 6	August 26, 1954
" 8	August 26, 1954
" 14	Sept. 13, 1954
" 15	Sept. 13, 1954
" 16	Sept. 13, 1954
" 23	Sept. 22, 1954
Duke 2	Sept. 22, 1954
" 4	August 26, 1954
<u>DUKE GROUP</u>	
Ruby Rose 1	August 26, 1954
" 3	August 26, 1954
" 5	August 26, 1954
" 7	August 26, 1954
" 9	Sept. 13, 1954
" 10	Sept. 13, 1954
Duke 1	August 26, 1954
" 3	August 26, 1954

<u>Name of Claim:</u>		<u>Recorded Date:</u>
<u>CRACKER GROUP</u>		
Ruby Rose	13	Sept. 22, 1954
"	20	Sept. 22, 1954
"	22	Sept. 22, 1954
"	24	Sept. 22, 1954
<u>BELL GROUP</u>		
Bell	1	Aug. 26, 1954
"	2	Aug. 26, 1954
"	3	Aug. 26, 1954
"	4	Aug. 26, 1954
<u>YELLOW ROSE GROUP</u>		
Fisher	1	July 30, 1954
"	3	July 30, 1954
"	5	July 30, 1954
"	7	July 30, 1954
Yellow Rose	1	July 29, 1954
"	3	July 29, 1954
"	5	Aug. 17, 1954
"	7	Aug. 17, 1954
<u>FISHER GROUP</u>		
Fisher	2	July 30, 1954
"	4	July 30, 1954
"	6	July 30, 1954
"	8	July 30, 1954
Yellow Rose	2	July 29, 1954
"	4	July 29, 1954
"	6	Aug. 17, 1954
"	8	Aug. 17, 1954
<u>BRUCE GROUP</u>		
Bruce	1	July 30, 1954
"	2	July 30, 1954
"	3	July 30, 1954
"	4	July 30, 1954
"	5	July 30, 1954
"	6	July 30, 1954
"	7	July 30, 1954
"	8	July 30, 1954

REGIONAL GEOLOGY:

Reference is made to Map No. 1 appended to this report. The oldest known rocks in the area belong to the Cache Creek Group. This

group was formerly known in this locality as the "Gold Series" and later the "Mount Stephens" group. It is Upper Paleozoic in age. There have been two different periods of intrusion in the map area, namely the Atlin Intrusives and the Coast Range Intrusives. The Cach Creek group is elongated in a north to northeasterly direction and is flanked on both the east and west contacts by the Coast Range intrusives. In at least two localities the Ruby Creek volcanics have been extruded in Tertiary and Pleistocene times and cover the older rocks with Flows and Scoria. Some dyke activity accompanied this extrusion.

Cache Creek Group:

In the map area this group is represented by three formations. It derived its original name the "Gold Series" from early placer operations as the richer placer gravels were found where this group constituted the bedrock.

Greenstone:

The greenstone is \bar{a} basic and andesitic in composition. It is pale-greenish to gray-greenish in colour and is generally aphanitic although in places it has a distinct holocrystalline structure. It has an intimate association with the quartzites of the group.

Quartzite:

This quartzite is represented by at least three different facies. On the slopes of Mount Barham a skarn zone was found in these quartzites which consisted of actinolite and small amounts of garnet closely associated with the quartzite indicating an original calcareous nature. The quartzite at various localities resembles chert. Adjacent to the Bruce mineral claims this formation is represented by a thick band of pure quartzite.

Limestone:

The occasional pod or lense of limestone which has been completely altered to marble is found close to the contacts of the Atlin intrusives and the quartzite-greenstone formations. The Atlin intrusives have been intruded into the Cache Creek group and have, in some cases, completely isolated limestone masses.

Atlin Intrusives:

These rocks are intrusive into the "Cache Creek group and are found in contact with all the members of that group. These intrusives consist of peridotite which in places is fine-grained and resemble a limburgite. They are in some cases highly altered to serpentine in which thin veinlets of crysotile asbestos have been formed. Their structure suggests a sheet and sill-like intrusion into the "Cache Creek" group. They are cut by all other intrusives in the area.

Coast Range Intrusives:

Hornblende-quartz-diorite. This is the oldest granitic rock in the area. Its contacts are well exposed on the Lake, Fisher and Yellow Rose groups of mineral claims. It is mainly a coarse-grained rock with large phenocrysts of hornblende. Along its contact it shows evidences of marginal assimilation as large and small cognate inclusions are abundant. This intrusive lies between large bodies of granitic rock and it appears as if it may be an earlier differentiate of these granitic rocks. Outside the map area and adjacent to the Ruffner granodiorite, brecciation of this rock and later healing with magmatic differentiates occurred. For these reasons coupled with the fact that there are no known mineral deposits associated with this intrusive suggest that the area covered by the hornblende-quartz-diorite is not favourable for economic mineral deposition.

Ruffner-Granodiorite:

This rock occurs in the vicinity of the Atlin-Ruffner Mine. It is coarse-grained, porphyritic, and contains feldspar phenocrysts up to an inch long. This intrusive is riddled with dark-green basic dykes. Most of the ore deposits at the Ruffner Mine are associated with these dykes.

Smoky Quartz Granite: (Alaskite)

It is in this granite that most of the mineral deposits of the area are found. This is an acidic rock which consists almost wholly of alkali-feldspars and anhedral quartz. It is totally deficient in the mafic minerals except at its contacts where a small amount of fine-grained biotite is developed. This rock grades from a coarse-grained porphyritic granite to a fine-grained almost aphanitic aplite-like rock. The fine-grained phases occur as dykes, veins, irregular masses and contact-facies, and are thought to be acidic differentiates of the present granite. It is in these fine-grained phases that the radioactivity seemed to be the strongest.

Ruby Creek Volcanics:

These volcanics outcrop on the north and east side of Ruby Mountain and at two other locations as small cinder cones. They are represented by olivine basalt flows and related to scoria. These flow rocks rest on Tertiary gravels in the bed of Ruby Creek. Glacial striae exist at the top of a cinder cone east of Ruby Creek. These rocks must have been extruded during late Tertiary and Early Pleistocene times. A dyke of olivine basalt is found on the Ruby Rose No. 2 mineral claim and may be related to these volcanics.

ECONOMIC GEOLOGY.Occurrences and Structure of the Radioactive Deposits.

Most of the radioactive showings examined and sampled are within a short distance of a contact. In every case they occur within the finer-grained phases of the earlier mentioned "Alaskite." The gangue minerals of the deposits, namely quartz and feldspars (kaolin) are related directly to the minerals of the intrusive.

The whole of the granitic mass displays varying amounts of radioactivity. Scintillation count readings up to ten times of those taken in the "Cache Creek" Series and of other rocks of the area can be obtained with little effort. As earlier stated, the higher readings were obtained within five hundred feet of the contacts. At one locality in the coarse-grained granite a high reading was obtained, and on examination was found to be caused by an apple-green coating of a mineral which may have been Zeunerite, in a small joint. Exposures were abundant in the vicinity and the radioactivity was found to be confined to a small area.

Cracker Creek (Ruby Rose Group)

Reference is made to Map No. 2 appended to this report. These deposits are found in a group of joints, fractures and shears. This fracture pattern seems to be related to horizontal acting forces, in the nature of a couple, which may have occurred during the cooling of the intrusive. There has also been a small amount of recent movement along these fracture planes. Small sections of these structures have been kaolonized. The kaolin and accompanying fluorite is believed to be of pneumatolytic (gaseous) origin and possibly brought about by the combined effect of heat and magmatic emanations which consisted mostly of superheated steam aided by a little fluorine. This effect may be described as autometamorphism (self alteration). The actual shearing

between these joints and fractures has little indicated movement along them. These fractures are of short strike length. Small sections of them have been kaolinized with the subsequent deposition of zeunerite and related secondary radioactive minerals. These kaolinized sections are plainly seen to occur in small shoots, 200 feet to 500 feet apart, and usually average 5-10 feet in length. This condition exists at both the C-1 and C-2 zones which were opened up and at other localities on the Ruby Rose Group.

Ruby and Boulder Creek Groups:

Structural conditions at these zones are different and are believed to be related to a siliceous contact phase of the Alaskite. Both zones on the Fisher mineral claim No. 2 (B-1 and B-2) were found to be small siliceous stringers and veins which paralleled the contact. This contact is only a few feet to the north and west. These veins may be called "igneous quartz veins" and from surface indications their strike length is limited.

DESCRIPTION OF INDIVIDUAL OCCURRENCES.

Ruby Rose Groups:

C-1 Zone. Reference is made to Map No. 3 appended to this report. This occurrence is related to a prominent set of joints and fractures which trend in a N.E. direction and have close to a vertical dip. Areas between some of these structures have been kaolinized and slightly mineralized with arsenopyrite, pyrite and chalcopyrite. These minerals are extremely scarce in the zone and have been extensively altered to their related secondary products, namely scorodite and limonite. Radioactivity over an area 30 feet by 40 feet was recorded as three times background with

individual readings up to five times background. Picked specimens removed from the area would give readings of up to ten times background. There is a small outcrop of purple fluorite fifty feet to the east of the showings which occurs as small stringers in a siliceous phase of the granite and was found to be faintly radioactive. This showing lies in the intrusive and within 100 feet of a greenstone contact.

Trench C 1-1: This pit, as near as could be ascertained, was the one from which assays were obtained last year and gave a weighted average of 0.06% U_3O_8 over 10.5 feet. The pit was cleaned out and further excavated. After considerable effort it was decided bedrock could not be reached in this location. Radioactive float was plentiful, however individual specimens removed from the location gave low readings. As bedrock was not reached, no samples were taken.

Trench C 1-2: This pit occurs further up slope from Trench C 1-1 and close to a ridge. Radioactivity was the highest of all showings in the area. The pit opened up a N. E. trending fracture for a length of 30 feet. Heavy kaolinization was present on both sides of the fracture. Depth obtained on this structure was around 14 feet. The width of kaolinized material varied and in its widest part was 15 feet. This fracture traced northward for 20 feet to the top of the ridge and was found to be represented by a joint along which there had been no visible movement and no kaolinization. Radioactivity along this joint was normal background only. Five samples were taken from the pit, and assayed as follows:

<u>Sample No.</u>	<u>Location:</u>	<u>Width:</u>	<u>Au:</u>	<u>Ag:</u>	<u>Cu:</u>	<u>U₃O₈</u>
1126	C-1-2	Picked	0.01	2.00	0.07	0.038
1127	C-1-2	11 ft.	N.A.	N.A.	N.A.	0.007
1128	C-1-2	2 ft.	Tr.	0.90	Tr.	Tr.
1129	C-1-2	6 ft.	N.A.	N.A.	N.A.	0.018
1130	C-1-2	2 ft.	N.A.	N.A.	N.A.	0.05

Sample No. 1126 was picked from a 2 by 3 ft.

The other four samples were taken at various locations across the structure. These samples would represent the type of values that could be expected in actual mining. A number of other smaller pits were excavated in order to obtain an idea of the structure present. These pits showed no abnormal radioactivity although parallel fractures were found in them.

The radioactive occurrence at this zone is controlled by minor fractures which from all indications are discontinuous and carry sub-commercial values. From all evidence this C-1 zone does not indicate the possibility of containing commercial ore.

C-2 Zone: Reference is made to Map No. 4 appended to this report. A pit, 65 feet by 20 feet by 14 feet was excavated in approximately the same location as the work done on this zone last year. A strong fracture appeared at the north end of this pit and this fracture was followed along strike and into the slope of the mountain so that the maximum depth on the structure could be obtained. This work disclosed a system of parallel fractures a foot or more apart. Two areas of kaolinitization were found which averaged in width about 8 feet. At the south

end this alteration was 9 feet wide, and at the north end 4 feet wide with it pinching in the middle. This alteration grades into a fine-grained felsic phase of the granite at both ends of the pit. This fracture can be traced for 250 feet along strike. Southward it curves and joins a group of S. W. trending joints. At no other place along its strike was radioactivity or kaolonization noted. Radioactivity in the pit and along the strike of the kaolonized material was twice that of the background. Six samples were taken at ten foot intervals across the structure which returned low uranium content. This zone is similar both in structure and mineralization to the C-1 zone and therefore does not indicate commercial possibilities. This zone assayed as follows:

<u>Sample No:</u>	<u>Location:</u>	<u>Width:</u>	<u>U₃O₈</u>
1131	South end	9 ft.	0.013
1132	" " + 10'	9 ft.	0.012
1133	" " + 20'	8 ft.	Tr.
1134	" " + 30'	8 ft.	Tr.
1135	" " + 40'	6 ft.	Tr.
1136	" " + 50'	4 ft.	Tr.

C-3 Zone: This zone is represented by an olivine basalt dyke which has been intruded along joint planes in the granite and therefore roughly parallels the C-1 zone. Radioactivity in the area is low and individual specimens removed from the area show no radioactivity. No work was done at this location as the radioactivity present did not indicate ore possibilities.

C-4 Zone: This zone consists of an "igneous quartz vein" containing in places massive arsenopyrite. No radioactivity of any consequence was noted along its strike and as previous samples indicated low values in gold and silver, no serious attempt was made to open it up. It is well exposed over a distance of 300 ft. and averages in width up to 4 feet. There are minor amounts of kaolin associated with this vein.

C-5 and C-6 Zones: These two zones occur on the slope of the mountain facing Cracker Creek. They are well exposed on the surface as discontinuous fractures and joints. The structure is similar to that of the C-1 and C-2 zones. Fair radioactivity was noted at two localities in small areas of kaolin material. These zones are a repetition of conditions met with on the two zones opened up.

C-7 Zone: This zone occurs within a few feet of a greenstone-quartzite contact. The granite in this locality is very siliceous adjacent to the contact and carries higher than normal radioactivity. The locality was prospected in detail and small areas were found which exhibited twice background readings. Exposures are plentiful at this location and on close examination nothing was found that would indicate a possible ore occurrence. Jointing in the area was abundant with a prevailing N. W. strike. Small amounts of radioactivity were found in and along a few of these joints.

Fisher and Yellow Rose Groups.

It is on this group that large exposures of the hornblende quartz-diorite are in contact with the Alaskite (granite). The granite adjacent to the contact is fine-grained and siliceous. Two isolated masses of the quartz-diorite were found. The Fisher showings are located in the

fine-grained siliceous granite which separates one of these isolated masses from the main body of the quartz-diorite. The distance between the two bodies of quartz-diorite is 1,000 feet. The Fisher showings occur less than 100 feet from the granite and quartz-diorite contact. Radioactivity present in the granite and between the two diorite masses is slightly higher than normal, but rarely twice background.

B-1 Zone: Reference is made to Map No. 5. This zone was opened up by four pits which exposed vein type quartz over a distance of 80 feet. The wall rocks are very siliceous and contain small amounts of a fine-grained biotite. This vein type structure is thought to represent an early cooling fracture which has been healed by later magmatic differentiates. Its width is not more than two feet at its widest part, and averages where exposed, six inches. It was weakly radioactive and assayed as follows:

<u>Sample No:</u>	<u>Location:</u>	<u>Width:</u>	<u>U₃O₈</u>
1144	B-1-1 H.W.	7 inches	0.044
1145	B-1-1 F.W.	2 feet	0.01
1143	B-1-2	2 feet	Tr.
1142	B-1-3	3 inches	0.003
1141	B-1-4 F.W.	2.5 ft.	Tr.
1140	B-1-4	6 inches	Tr.

These samples contained small amounts of arsenopyrite, wolframite, and pyrite in a siliceous gangue. There was a small amount of kaolin present. A number of other smaller pits were started, but did not reach bedrock as heavy felsenmeer and frost conditions prevented further excavation. This zone is not of commercial value.

B-2 Zone: Reference is made to Map No. 6. This zone is similar to the B-1 Zone. A large trench, 60 ft. by 6 ft. by 12 ft. deep and a number of smaller pits were excavated in felsenmeer. The large pit, B-2-1 reached bedrock and a section 40 feet long was exposed. A siliceous vein similar to that of the B-1 Zone was found which exhibited higher than normal radioactivity. This vein is three feet from the north end of the pit and is $2\frac{1}{2}$ feet wide. It assayed as follows:

<u>Sample No:</u>	<u>Location:</u>	<u>Width:</u>	<u>U₃O₈</u>
1138	B-2-1	$2\frac{1}{2}$ ft.	0.013

The mineralogy is similar to the B-1 Zone. This zone does not indicate commercial ore.

Red Rose and Silver Groups.

These two groups of claims lie wholly within the hornblende quartz-diorite. Background count was much lower than on the Fisher and Yellow Rose group of claims. No radioactive showings were found and no work was done on these groups. The claims were allowed to lapse.

Yellow Rose Group.

One area on these claims gave higher than background readings. This area is on the divide between Boulder and Vulcan Creeks. Detailed prospecting in the vicinity was undertaken and the results showed that a condition similar to that of the Fisher Group existed. An area of highly siliceous granitic rock (Alaskite) was found adjacent to the contact of the hornblende quartz-diorite contact. No concentrations of radioactivity were noted although an area 200 feet by 50 feet gave twice background readings. No other work was undertaken in this area.

Bruce Group.

The showings on the Bruce Group were examined in detail. The old pits were cleaned and examined. This showing is adjacent to a quartzite contact and is represented by a siliceous finer-grained phase of the granite. Readings were rarely twice background. The pits were not in bedrock, however, the material present indicated that the feldspars had been altered to kaolin and yellowish-brown coating had been deposited in and around the fractures present. This yellowish-brown coating was noted at all other locations in the area and is believed to be a product of the decomposition of the feldspars. As the radioactivity was low no samples were taken for assay.

Bell Group.

This group lies well within the boundaries of the granite. A small siliceous dyke-like structure was noted in the bed of Ruby Creek. One pit was excavated on this structure which did not reach bedrock. No radioactivity was noted, and no samples were taken.

ORIGIN OF THE RADIOACTIVITY.

Radioactive mineralization has been found only in the structure related to, and in various phases of the Alaskite granite. It is important to consider the possible origin of this radioactivity, particularly in respect to its economic significance. In this consideration the following facts should be taken into account:

- (1) Radioactivity is present only in the Alaskite granite;
- (2) It is most predominant in the finer-grained and marginal phases of the granite;
- (3) The only radioactive minerals identified to date have been zeunerite and meta-zeunerite which are secondary products;

- (4) These two mineral are found only in fracture planes, joints and areas of kaolinization as coatings and minor fillings;
- (5) These minerals are present only in some of the kaolinized material, not in all. They are also present in a siliceous phase of the granite which has little or no kaolin present;
- (6) The granitic mass as a whole exhibits a far greater amount of radioactivity than normal granite;
- (7) The deposits are in a northern latitude and at a high elevation. This position is not favourable for chemical alteration, e.g. kaolinization;
- (8) The only evidence of hydrothermal activity found on the claims, namely the C-4 Zone, shows little, if any, radioactivity.

A hydrothermal or pegmatitic origin could be postulated for the origin of a primary radioactive mineral which was subsequently altered to its secondary products at the surface. The evidence present does not confirm this theory and is hardly compatible with facts numbered 5 and 8 stated above.

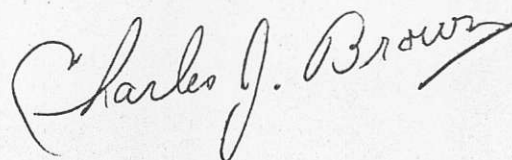
A theory consistent with the facts outlined would be that a primary radioactive mineral, such as uraninite, was concentrated in the later magmatic differentiates of the intrusive. This mother fluid was injected along pre-existing fracture planes, joints and zones of weaknesses in the granite. Subsequent weathering released the disseminated radioactive mineral and it was carried in solution by circulating ground waters and deposited in nearby fractures and open spaces. This leaching effect could

have taken place in pre-glacial times.

AIRBORNE SCINTILLATION COUNT SURVEY.

Reference is made to Map number 7 appended to this report. This work was accomplished by using a Super Cub aircraft and a P.R.I. 111B Scintillation counter. Flight lines were flown at random over the Ruby Rose claims. These readings are an indication of the relative amount of radioactivity only. This survey demonstrates that the mass effect of the granite is large. Flight line No. 1 illustrates difference in radioactivity on each side of the contact between the "Alaskite" granite and the older sediments and intrusives. Readings in the granite amount to five times those recorded in the sediments. Radioactivity as shown by this map is higher adjacent to the contacts and in the finer-grained phases of the granite. On Flight line No. 2 the readings fall off as the interior of the granite is approached. These results confirm the work accomplished on the ground.

All of which is respectfully submitted.



Charles J. Brown.

Vancouver, B. C.
October 25, 1955

SHEET No. _____

FILE No. _____

J. R. WILLIAMS & SON LTD.

PHONE MARINE 5821

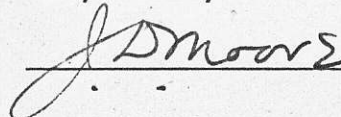
PROVINCIAL ASSAYERS

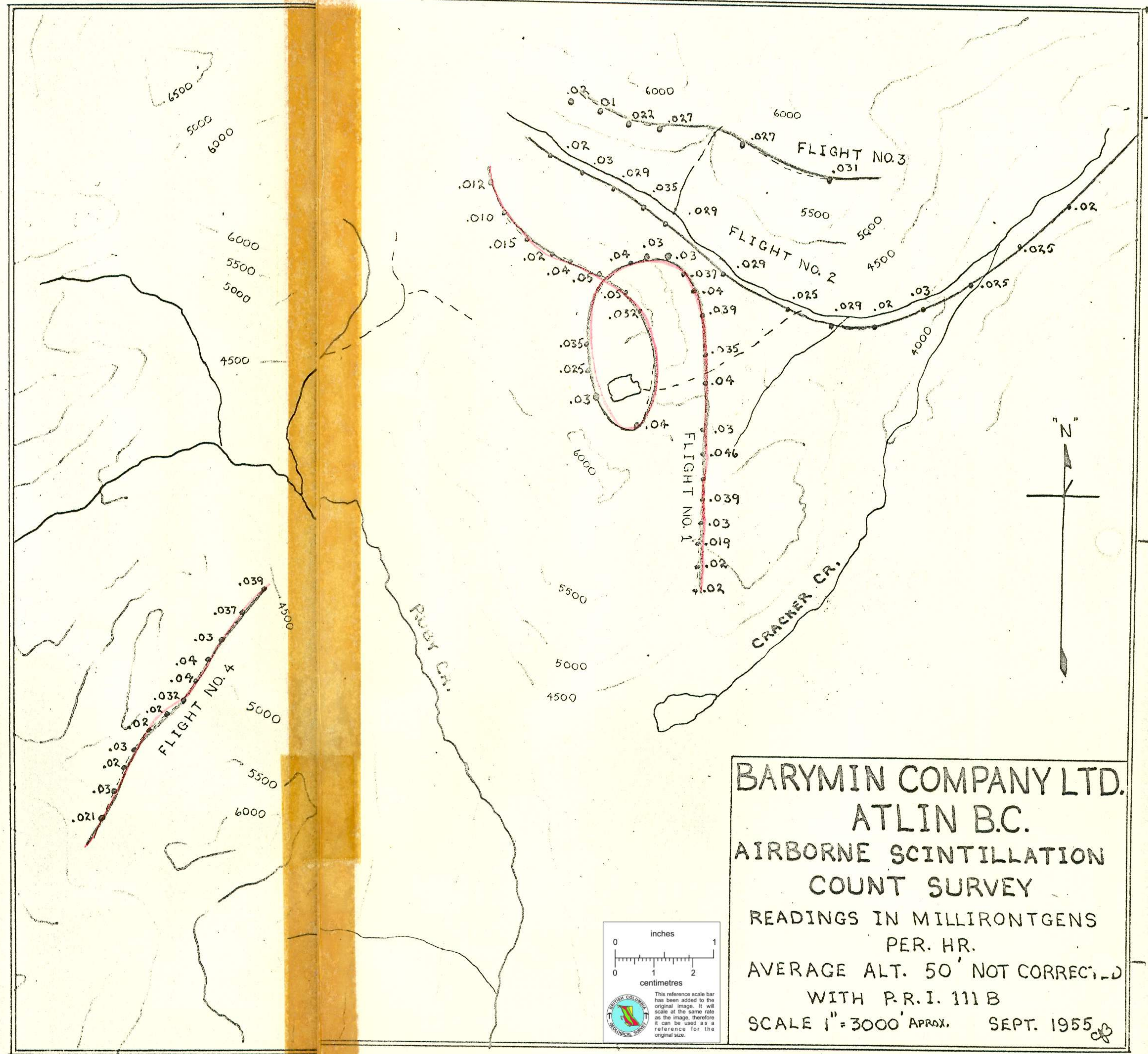
580 NELSON STREET

VANCOUVER 2, B.C., Sept. 6, 1955RESULTS of Assays made on samples of ore submitted by: Messrs. Pacific Mining Services Ltd.

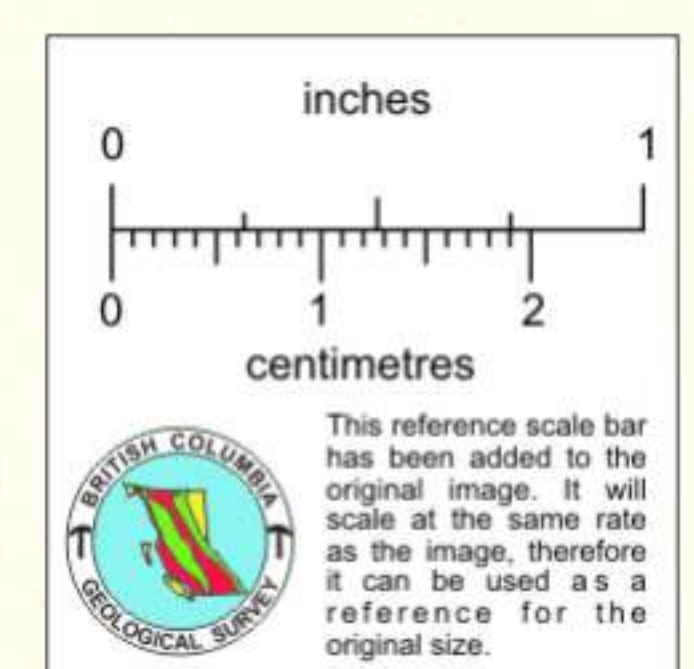
MARK	Gold Ozs. p/t	Silver Ozs. p/t	Copper %	U ₃ O ₈ %	Tin %	
(<u>BARVNIH</u> <u>1126-1145</u> Samples)	Samples sent in by C.J. Brown from Atlin, B.C.					
# 1126	0.01	2.00	0.07	0.038		C 1 Zone - Picked sample of best material - over 2' x 3' area.
1127				0.007		C 1 Zone - across 11' broken siliceous material.
1128	Trace	0.90	Trace	Trace		C 1 Zone - 2' across main shear - 3' x background.
1129				0.318		C 1 Zone - 6' across flat shear (specimen)
1130				0.05		C 1 Zone - 3' H.W. side of shear.
1131				0.018		C 2 Zone - S. end pit across 9'.
1132				0.012		C 2 Zone - S. end plus 10' across 9' shear.
1133				Trace		C 2 Zone - S. end plus 20' across 8'.
1134				Trace		C 2 Zone - S. end pit plus 30' across 8' shear zone.
1135				Trace		C 2 Zone - S. end plus 40' - 6' shear.
1136				Trace		C 2 Zone - S. end plus 50' across 4'
1138				0.013		Across 2 1/2' B-2-1 zone 3' from "A" end of pit.
1140				Trace		B-1-4 - Picked spec. from 6" qtz. stringer.
1141				Trace		B-1-4 - Chip sample P.W. of qtz. stringer 2 1/2'.
1142				0.003		B-1-3 - Picked sample from 3" qtz. stringer.
1143				Trace		B-1-2 - Across 2' qtz. and sand.
1144			0.35	0.044		Picker B-1-1 7" qtz. stringer trace
1145				0.01		B-1-1 across 2' on P.W. (S) of qtz. stringer.

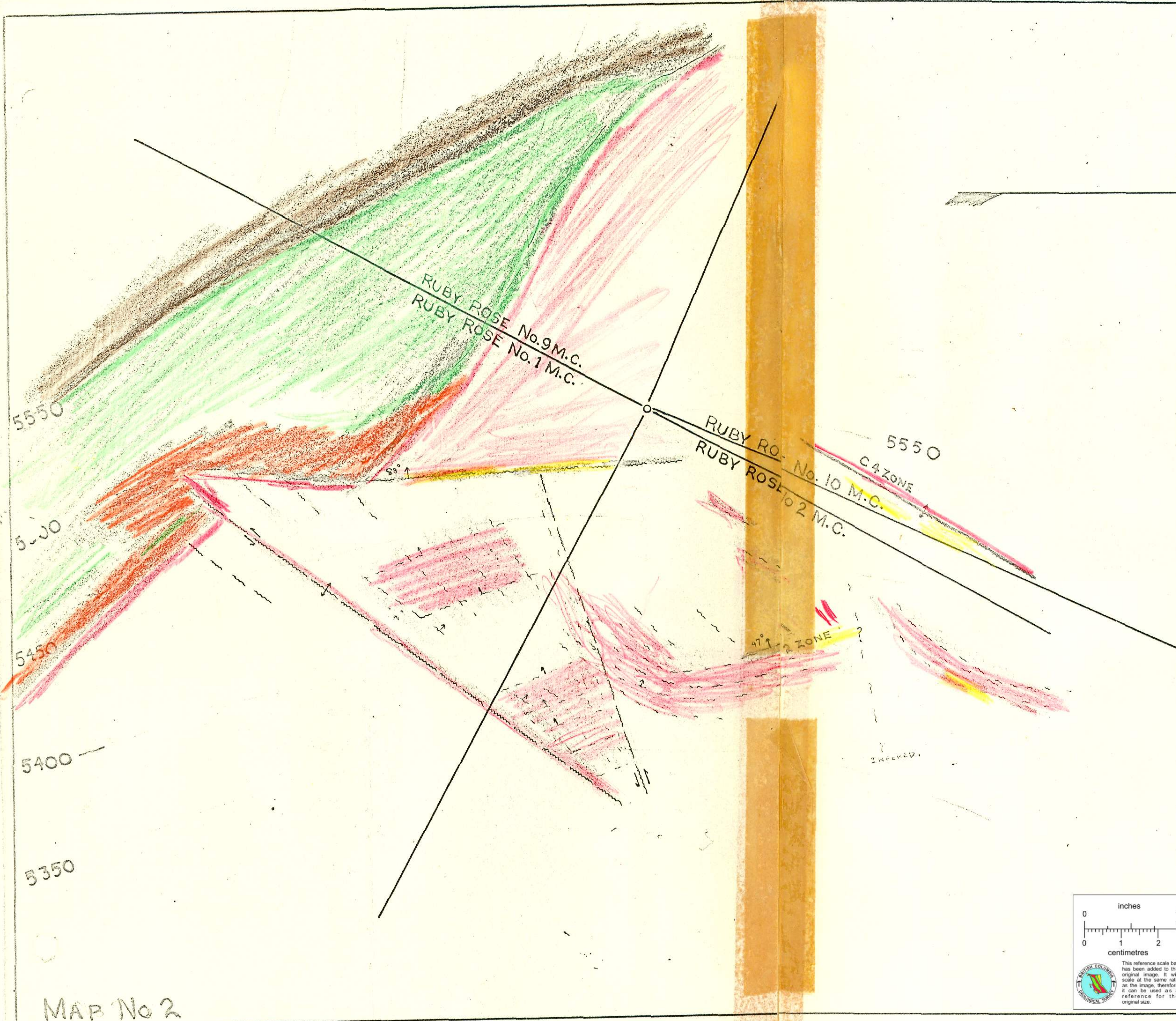
Assays made by





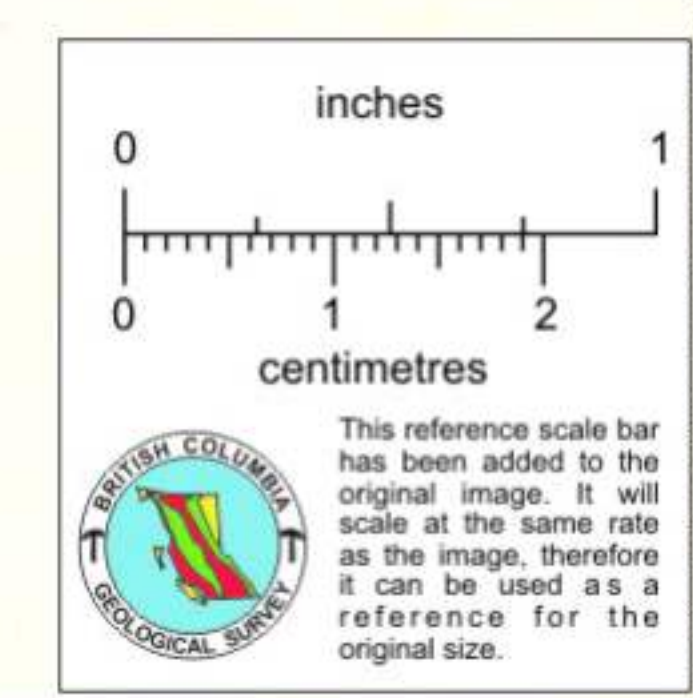
BARYMIN COMPANY LTD.
ATLIN B.C.
AIRBORNE SCINTILLATION
COUNT SURVEY
 READINGS IN MILLIRONTGENS
 PER. HR.
 AVERAGE ALT. 50' NOT CORRECTED
 WITH P.R.I. 111 B
 SCALE 1" = 3000' APPROX. SEPT. 1955





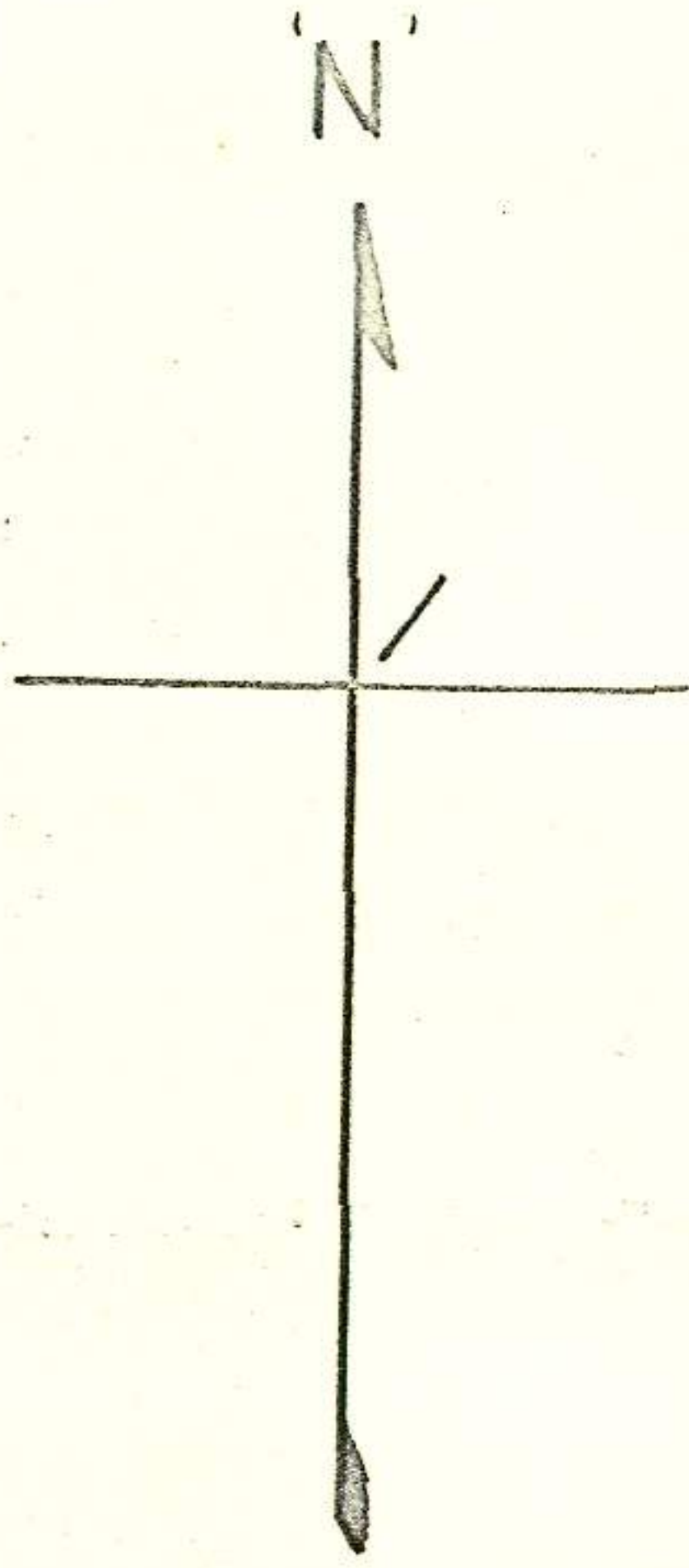
**BARYMIN COMPANY
ATLIN B.C.
PLAN OF STRUCTURE IN
VICINITY OF C2-C4
ZONES**

- LEGEND**
- GRANITE (ALASKITE)
 - GREENSTONE
 - QUARTZITE
 - PERIODITE
 - FRACTURES, FAULTS & JOINTS
 - VEIN MATERIAL
 - KAOLINIZED GRANITE



MAP No 2

SURVEYS BY CHAIN, COMPASS & ALT.
SCALE 1" = 100'
AUG 1955



TR. C-1-1 NOT TO BEDROCK

5700

HEAVY TALUS

5725

5750

TR. C-1-5

5775

TR. C-1-3

TR. C-1-2




5800

SAMPLE No.	WIDTH IN FEET	U ₃ O ₈ %
1126	PICKED	0.038
1127	11	0.007
1129	6	0.018
1130	3	0.05


TR. C-1-4

BARYMIN COMPANY LTD.
 ATLIN B.C.
 SAMPLING PLAN C-1 ZONE
 RUBY ROSE No.3 M.C.

LEGEND

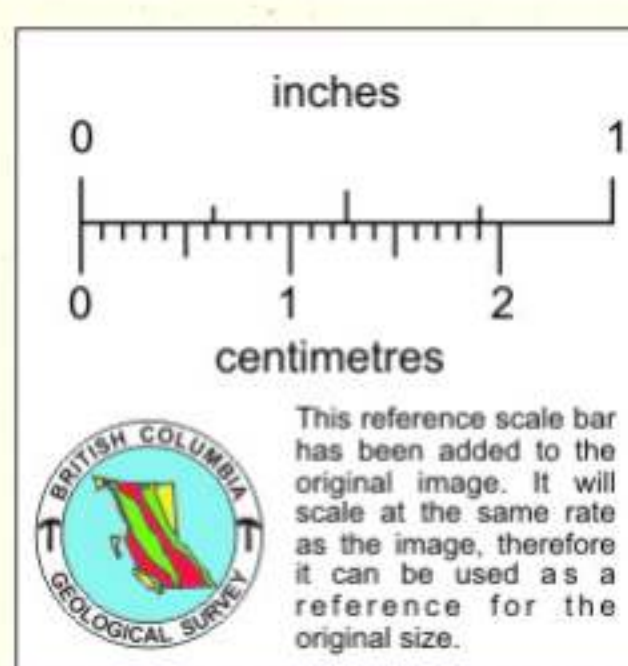
 PORPHYRITIC
 FINE GRAINED
 KAOLINIZED

GRANITE
(ALASKITE)

 JOINTS AND FRACTURES

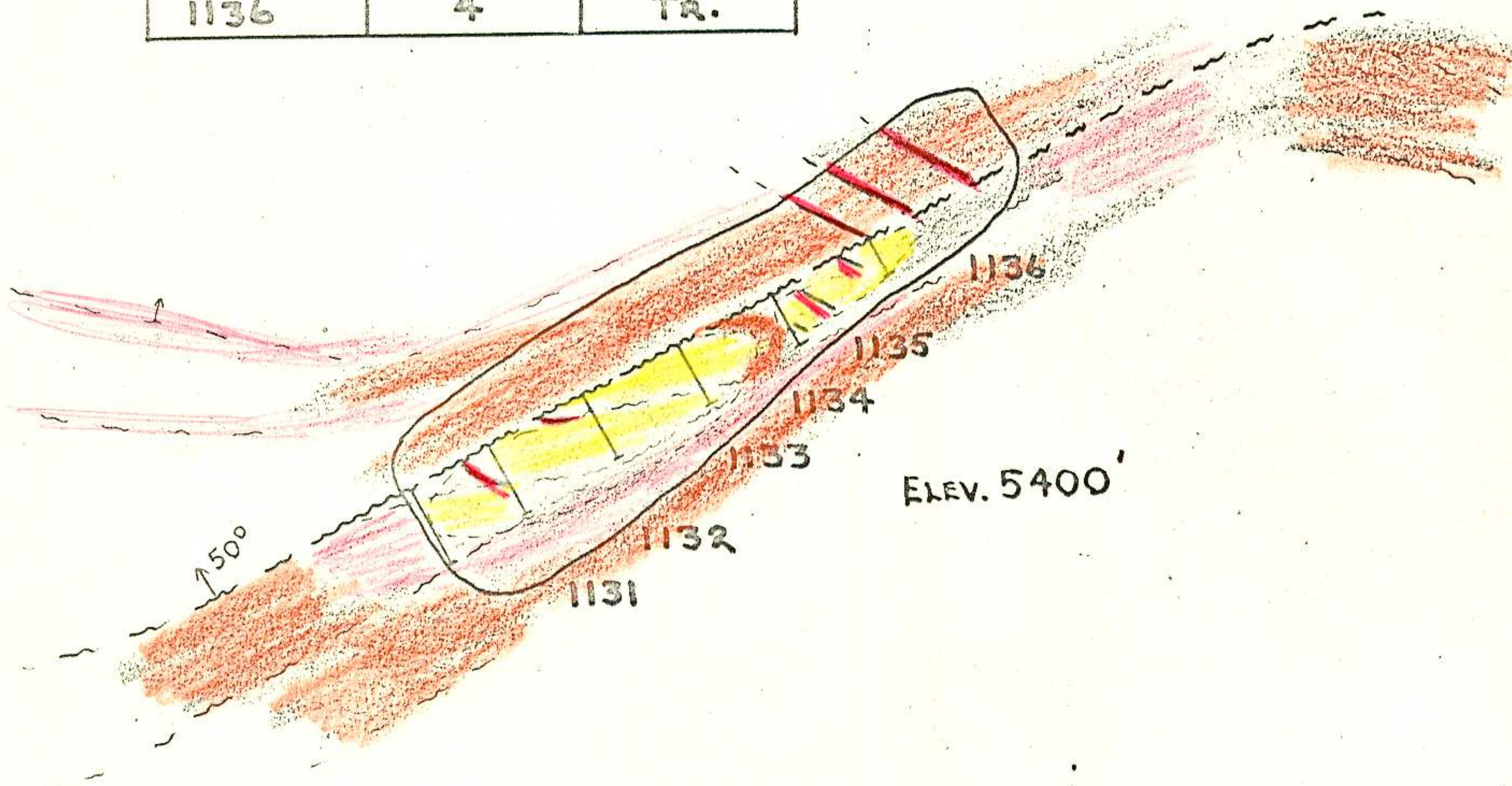
SCALE 1" = 20'

SEPT/55








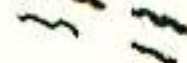
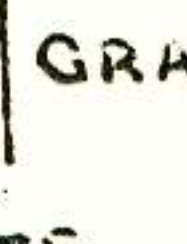


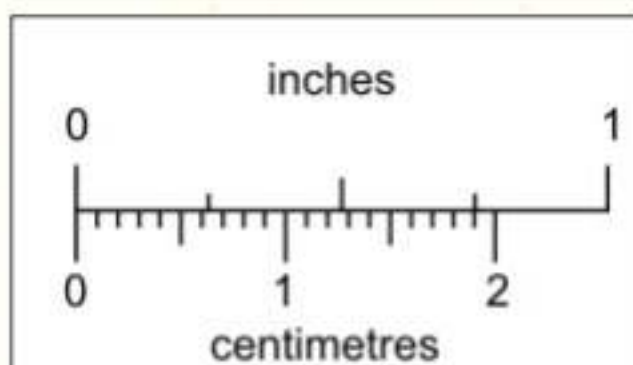
SAMPLE No	WIDTH IN FEET	U ₃ O ₈ %
1131	9	0.018
1132	9	0.012
1133	8	TR.
1134	8	TR.
1135	6	TR.
1136	4	TR.



**BARYMIN COMPANY LTD.
ATLIN B.C.
SAMPLING PLAN C-2 ZONE
RUBY ROSE NO.2 M.C.**

LEGEND

-  PORPHYRITIC
-  FINE GRAINED
-  KAOLINIZED
-  BLACK FLOURITE
-  ARSENOPYRITE PYRITE ETC.
-  JOINTS AND FRACTURES
-  GRANITE (ALASKITE)

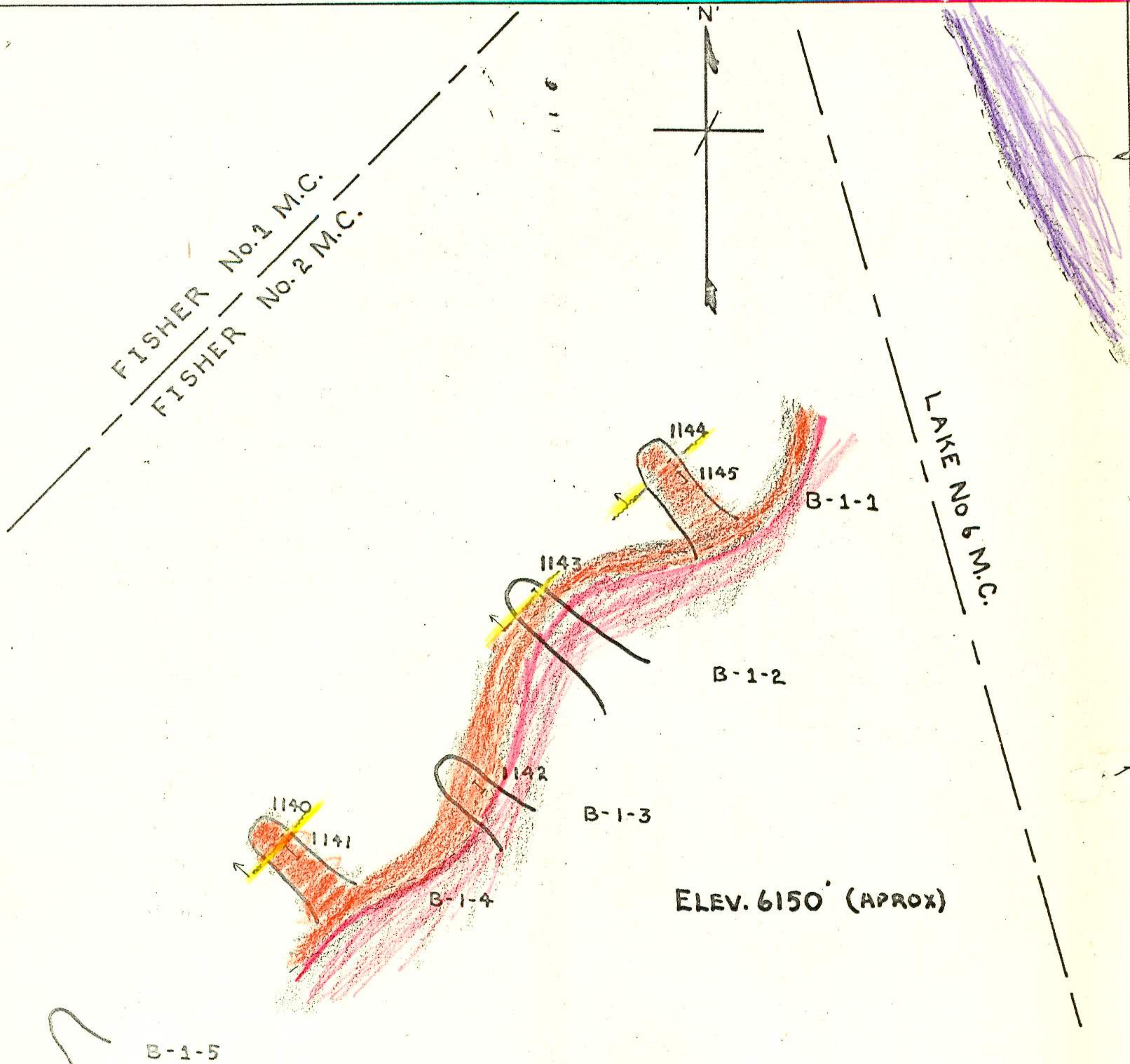


This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.

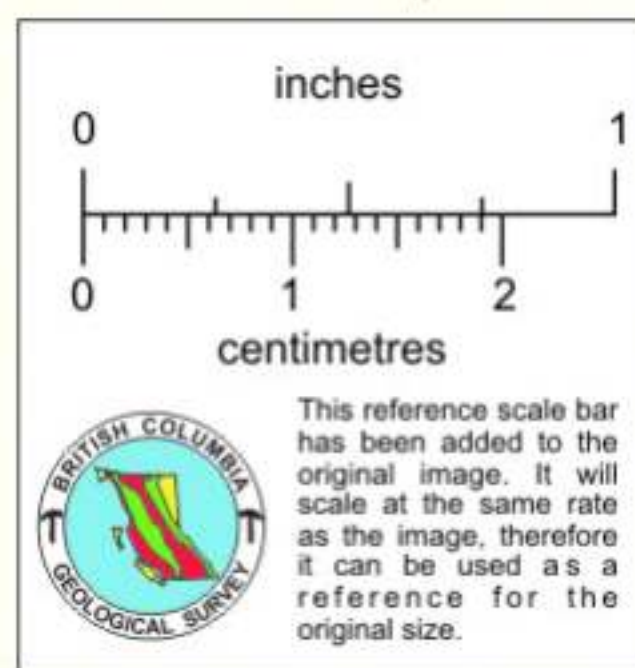
SCALE 1" = 20'

SEPT/55 *CP*

MAP No. 4



SAMPLE No.	WIDTH IN FEET	U ₃ O ₈ %
1141	2' 6"	TR.
1142	0' 3"	0.003
1143	2'	TR
1144	0' 7"	0.044
1145	2'	0.01
1140	0' 6"	TR.



**BARYMIN COMPANY LTD.
ATLIN B.C.
SAMPLING PLAN B-1 ZONE
FISHER No 2 M.C.**

LEGEND

- FINE GRAINED GRANITE
- BIOTITE MARGINAL PHASE
- HORNBLENDE QTZ-DIORITE
- QTZ STRINGER WITH M. R. FRACTURE

MAP No. 5

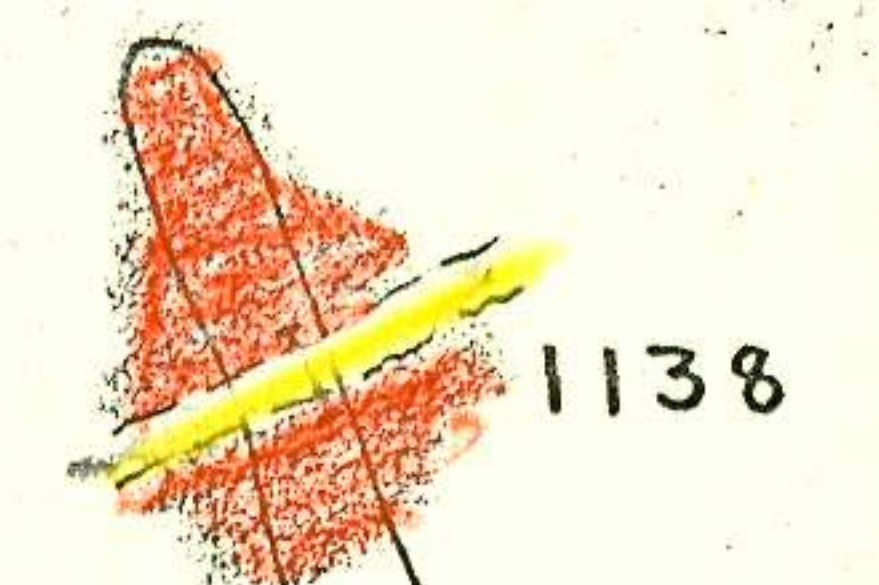
SCALE 1" = 20'

SEPT/55

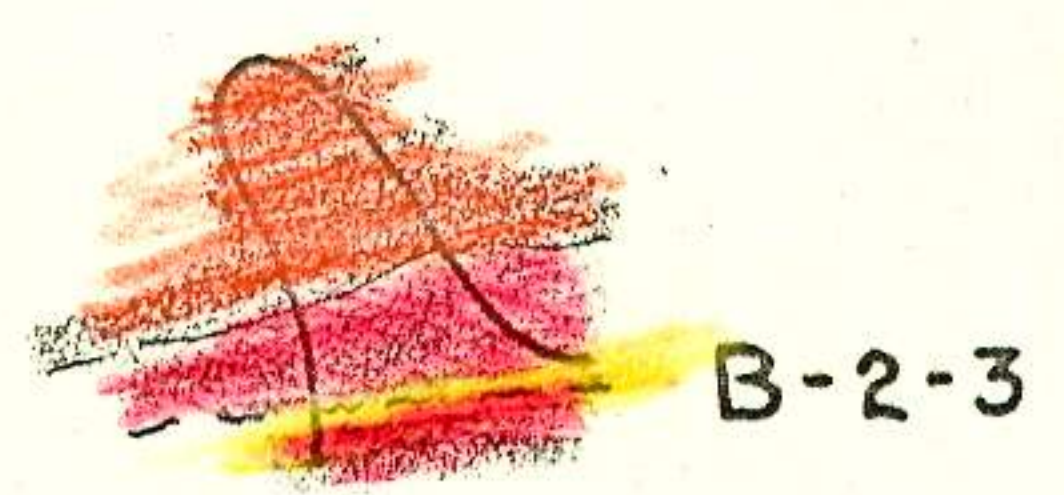
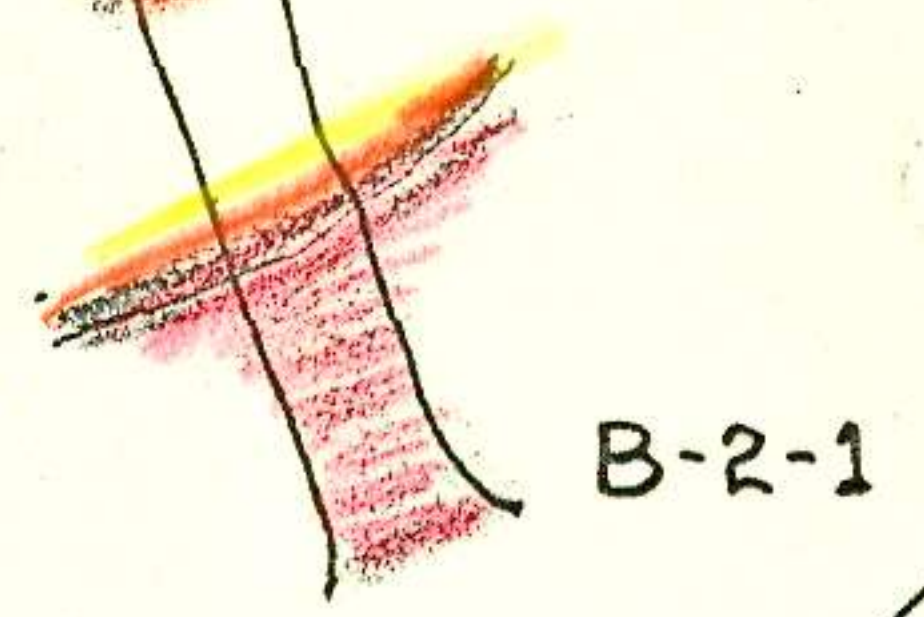


HEAVY TALUS

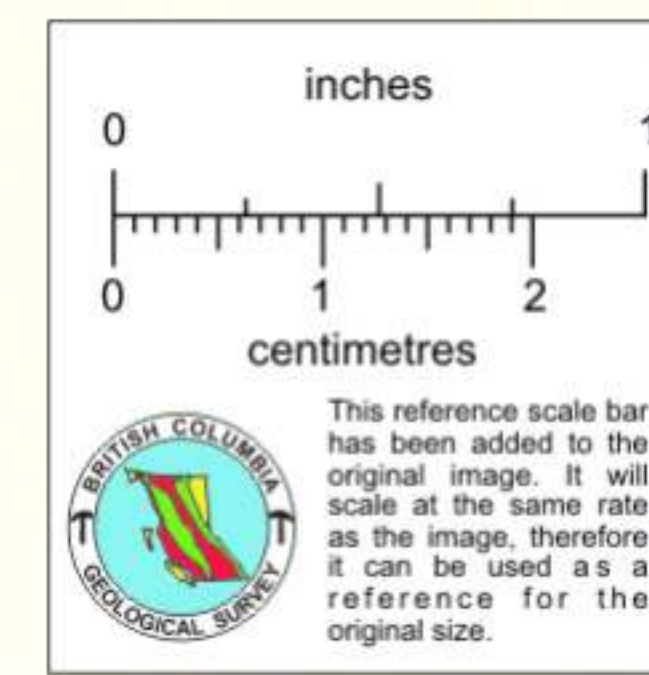
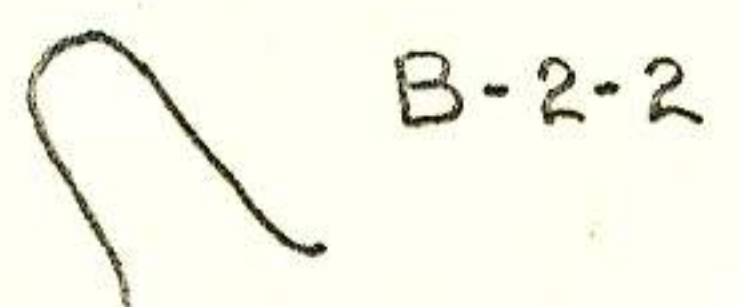
SAMPLE NO	WIDTH IN FEET	U ₃₀₈ 90
1138	3	0.013



ELEV 6175' (APPROX)



BED ROCK NOT REACHED YET 5' DEEP



BARYMIN COMPANY LTD.
ATLIN B.C.
SAMPLING PLAN B-2 ZONE
FISHER No. 1 M.C.

- LEGEND
- █ FINE GRAINED GRANITE
 - █ BIOTITE MARGINAL PHASE
 - █ HORNBLENDE QTZ-DIORITE
 - █ QTZ STRINGER AND SILICEOUS PHASE

FISHER No 1 M.C.
FISHER No 2 M.C.

SCALE 1" = 20' SEPT/55