Gordon would like an average of the gold & silver samples (of all 14 samples)

002342

GEOLOGICAL REPORT

ON THE

BARNETT SILVER PROPECT

KOKANEE GLACIER PART

SLOCAN MINING DIVISION

BRITISH COLUMBIA

FOR

RIVIERA MINES LTD.

W. G. STEPHENSON

VANCOUVER, B.C.

July 24, 1967

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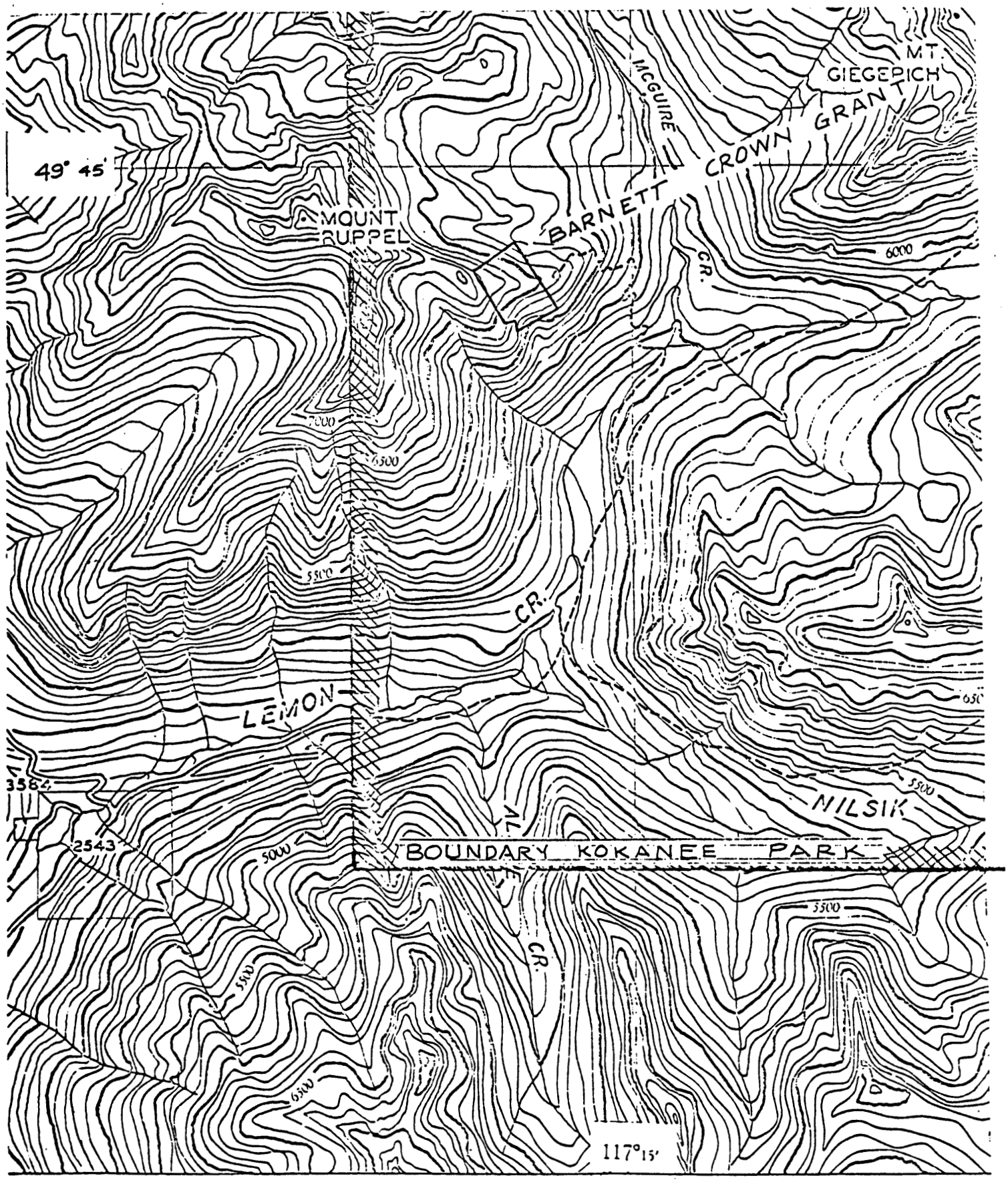
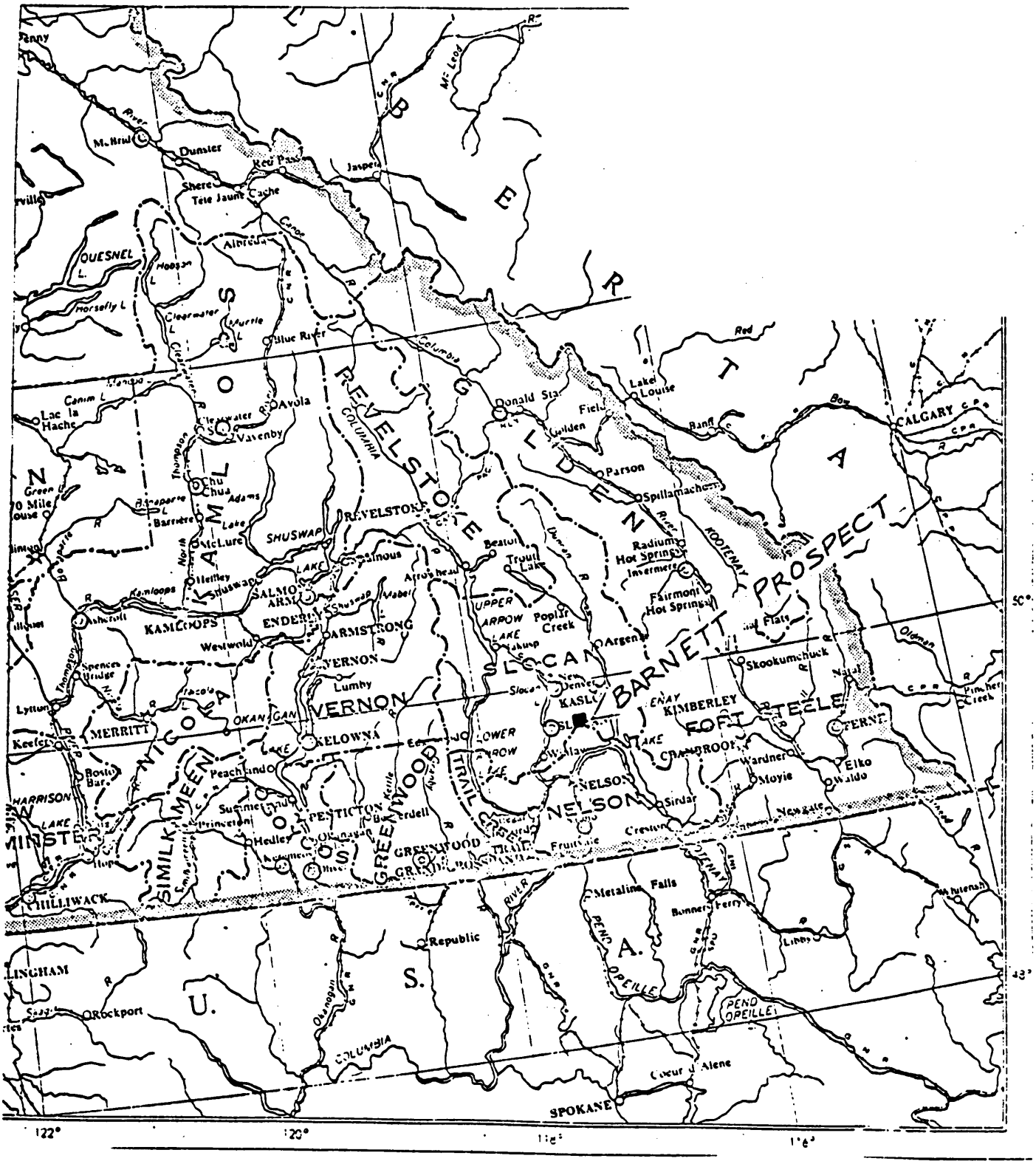
ATTACHMENTS



TOPOGRAPHIC MAP
Showing location of Barnett Silver Prospect
Slocan Mining Division
British Columbia

Scale 1" = ½ mile



INDEX MAP

Showing Location of Barnett Silver Prospect
Slocan Mining Division
British Columbia

Scale 1" = 55 miles

INTRODUCTION

On July 15th and 16th I made an examination of the mineralization exposed on the Barnett Crown Granted mineral claim which is located seventeen miles north of Nelson. Mr. Gordon Blaney, Prospector who holds title to this claim, and Mr. Adam Derry accompanied me on this examination.

During the course of this examination seventeen samples were collected for assay. I prepared a map to a scale of 1" = 40' which will show geology, topography and the sample locations. Prints of this map reduced to a scale of 1" = 100' along with a certificate of these assay results accompany this report.

LOCATIONS AND ACCESS

The Barnett Crown Granted mineral Claim is located within Kokanee Glacier Park near the southwestern corner. It is positioned on the slopes of Mount Ruppel between 6000 to 7000 feet in elevation on a drainage divide between Lemon and McGuire Creeks, tributaries of Slocan River.

An improved road extends from Nelson to Duhamet Creek on the west arm of Kootenay Lake thence northerly to Lemon Creek and along Lemon Creek to the Park boundary. A trail

continues along this creek for a distance of 1½ miles and then along McGuire Creek for a distance of ½ mile. This trail leaves the valley of McGuire Creek at an elevation of 4300 feet and extends northwesterly to the claim.

PROPERTY AND TITLE

The records in the Mining Recorders Office in Nelson in folio number 14-2051:020 of the Taxation Rolls show that Mr. Hugh Gordon Blaney, 1101 - 1765 Pendrell Street, Vancouver 5, B.C. holds title to Lot number 2888. These records show this mineral claim, which encompasses 39.33 acres, is named the Barnett and was Crown Granted December 17th, 1952 and that the taxes were due July 2nd, 1967. I saw posts which the owner reported to be within the limits of the Barnett Crown Grant.

Mr. Derry reported that he obtained authorization to stake mineral claims in Kokanee Park, and during the time I was on the property located four mineral claims; the Calico 1-4, Tag numbers 820374-820377. These claims were positioned to adjoin the Barnett Crown grant on the west. I saw the claim posts for the Calico 1 and 2 and for the Calico 3-4 mineral claims, and believe these claims have been staked in accordance with the provisions of the mineral act of British Columbia.

HISTORY

Mineralization was discovered in the vicinity of Lemon and McGuire Creeks about the turn of the century. Trenching, pitting and underground work was accomplished and ten Crown Granted mineral claims were established. Title to nine of these claims has reverted to the Crown and only one, the Barnett Lot number 2888, remains in good standing.

Two tunnels separated horizontally by 100 feet have been driven on this claim. The first is 60 feet in length, the second 120 feet. An inclined winze has been put down to a depth estimated at 30-40 feet. Mr. Blaney has stated that shipments of high grade gold silver ore were made to C.M.&S.

The eastern most tunnel has a stope that suggests production of possibly 100 tons. However, I have found no records showing any past production.

Earlier this year Mr. Derry received authorization from the Department of Mines and technical Surveys to stake claims in this part of Kokanee Glacier Park. On July 16th, 1967 he staked four mineral claims. There has been no other activity on this prospect since 1960.

GEOLOGY

The geology of the Nelson-Kokanee Park area has been mapped by the Geological Survey of Canada and published as Map 1090A. This map is drawn to a scale of 1" = 4 miles.

This map shows extensive areas of intrusive rocks which are part of the Nelson Batholith. This batholith extends from the United States border on the south, to Slocan Lake on the north, westerly to Lower Arrow Lake and easterly to Kootenay Lake.

The area within Kokanee Glacier Park and more specifically within the claim block, is underlain by rocks of the Nelson batholith. These rocks where I observed them are coarse to medium grained, intrusive quartz diorite and granite. They have been bisected by quartz feldspar porphyry dikes, pegmatites and quartz veins.

A part of the area is above timberline and outcrops are abundant. However, at the time of my visit snow covered a small part of the property and masked three of the open cuts that had been put down.

As shown on the attached geological map, a quartz vein can be traced intermittently over a distance of 1000 feet across the Crown Granted mineral claim. Quartz veins were also observed 600 feet southwesterly beyond limits of the Crown Granted mineral claim. Quartz float was found at infrequent intervals over this 600 feet interval.

The vein strikes east west to northeast southwest

and dips gently toward the north. The thickness varies from a few inches up to three feet. The vein will average less than one foot in width.

The vein has been displaced by northerly trending steeply dipping faults. In each instance the apparent displacement is toward the north, on the east side of these faults.

The quarts vein material is white to cloudy white with a variable reddish brown cast. Minor amounts of fine grained black and brown minerals can be found scattered through parts of the vein quarts.

The assay results of the samples that I collected as shown on the attached assay certificate vary between 0.015 and 0.72 ounces gold and .05 and 85.00 ounces silver per ton. The samples from the underground workings in every instance provided the highest assays.

My work has suggested that the mineralization is most intense in those parts of the vein where the strike is east west. as in Sheep Creek

The hanging wall is generally fresh, unaltered quarts diorite with a pronounced and distinct border against the vein.

The underlying foot wall is associated with iron stained and altered quartz diorite or more often, quartz feldspar porphyry dikes. I collected two samples of the footwall porphyry which assayed 0.015 ounces gold and 1.20 ounces silver and 0.055 ounces gold and 9.95 ounces silver.

CONCLUSIONS

1. Quartz veins can be traced intermittently across the Barnett Mineral Claim for a distance of 900 feet.

2. The veins and dikes observed on the Barnett mineral claim are narrow and irregular, and are gently dipping toward the north.

3. Cross faulting has offset the quartz veins in a complex pattern that suggests displacement from a few inches up to ten feet and more.

4. Three of the samples from the quartz vein have yielded high silver gold assays.

5. The foot wall porphyry where sampled contains modest amounts of silver.

6. Any operation visualized on this quartz vein because of dimensions of the vein and topography would of necessity

require underground mining.

7. While the grade, as indicated from the samples, that have been collected would probably not support a profitable underground operation. The existance of high grade silver gold in this area suggest the possibility that exploration might reveal concentrations in commercial amounts.

8. Rock exposures can be found over a very substantial part of the area, as topography is severe and the higher elevations are above timberline.

9. During a reconnaissance flight over the property I observed an area a few hundred feet south of the Barnett working where discoloration resembled the mineralization exposed on the Barnett claim.

10. With the preponderance of outcrop, conventional prospecting will be effective, and should be accomplished before detailed geochemical and geophysical surveys are initiated.

RECOMMENDATIONS

This area was prospected in the past and numerous Crown granted mineral claims were acquired. Their claims

have reverted to the Crown and any records and maps are no longer available. I recommend a reassessment of the area encompassing the old Crown Granted mineral claims.

This would include detailed prospecting, geological mapping and sampling and possibly a test of geochemical and geophysical methods. An experienced prospector and geologist could accomplish this in two to three months. I estimate the cost of this work will be $5000.00.

Respectfully submitted,

W.G. STEVENSON, P. Eng.

C E R T I F I C A T E

I, William G. Stevenson, do hereby certify:

1. That I am a Consulting Geological Engineer with offices at Suite 509 Stock Exchange Bldg., 475 Howe Street, Vancouver, B.C.

2. That I am a graduate of the University of Utah, 1946, with a Bachelor of Science Degree.

3. That I am a registered Professional Engineer in the Association of British Columbia.

4. That I have practised my profession for twenty years.

5. That I have no direct, indirect or contingent interest in the Barnett Crown Granted mineral claim or in the adjoining Calico mineral claims 1-4 or in the securities of Riviera Mines Ltd. nor do I intend to receive any interest.

6. That this report, dated July 24th, 1967 is based on a study of the Geological Literature that has been published on this area and as a result of an examination of this property that I made during July, 1967.

Dated at Vancouver, British Columbia, this Twenty-fourth day of July, 1967.

W.G. STEVENSON, P. Eng.

SHEET NO. 1

FILE NO. 293165/178

J. R. WILLIAMS & SON LTD.

PROVINCIAL ASSAYERS

580 NELSON STREET

MUTUAL 5-5821

VANCOUVER 2, B.C. July 19 1967

RESULTS of Assays made on samples of ore submitted by: RIVIERA MINES LTD.

MARK			Gold oz/ton			Silver oz/ton	
42489 [illegible]			0.015	✓		0.05	
42490 18"			Trace	✓	18	0.25	
42491 12"			0.02	✓	12	2.60	
42492 [illegible]			0.015	✓		1.20	
42493 5"			0.72	✓	5	85.00	
42494 4"			0.10	✓	4	29.15	
42495 8"			0.055	✓	8	9.95	
42496 8			0.015	✓	8	2.70	
42497 8			0.03	✓	8	5.55	
42498 4			0.015	✓	4	2.00	
42499 [illegible]			0.11	✓		6.05	
42500 6"			0.78	✓	[illegible]	61.95	
5726 12"			0.12		[illegible]	7.10	
5727 8"			-0.025		[illegible]	1.90	
93"			~~[illegible]~~ ~~0.1375~~ 0.1247			12.935	

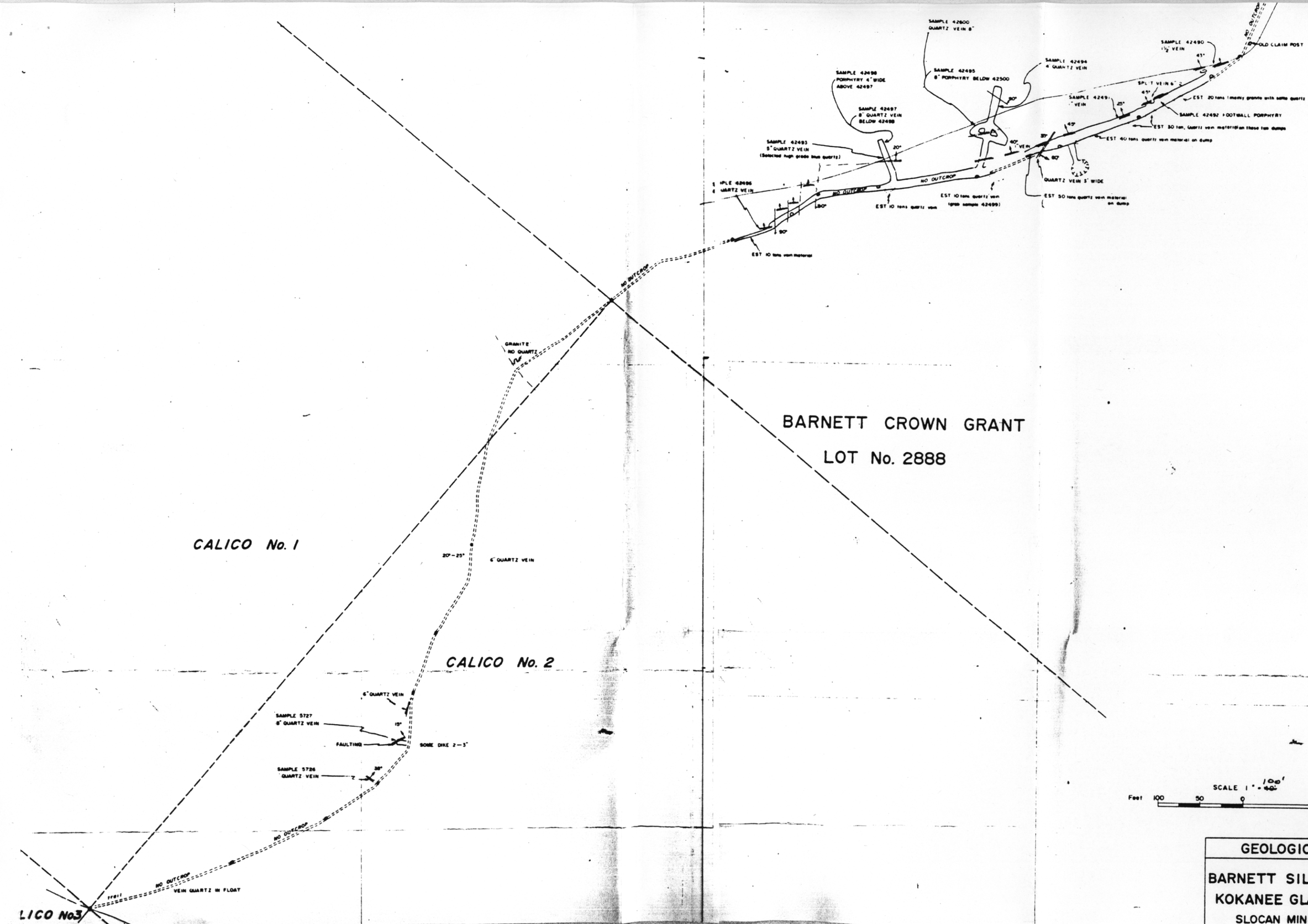
11 samples av. width 8.45" or 0.70 ft

[illegible] grades over 11 samples are 0.125 Au & 12.935 Ag over 0.7' over 3' min mining width these are .029 Au & 3.018 Ag

Assays made by: J. Moore

Barnett
July, 1967

SAMPLE NO.	WIDTH	LOCATION FROM CLAIM POSTS CALICO NO. 1 & 2
42489	Muck Pile Sample	Surface - 900 Feet N.E.
42490	1½ Feet Quartz Vein	Surface - 770 Feet N.E.
42491	1 Foot Quartz Vein	Surface - 630 Feet N.E.
42492	Specimen Footwall Porphyry	Surface - 700 Feet N.E.
42493	5 Inches Quartz Vein	Underground - 370 Feet N.E.
42494	4 Inches Quartz Vein	Underground - 480 Feet N.E.
42495	8 Inches Footwall Porphyry	Underground - 480 Feet N.E.
42496	8 Inches Quartz Vein	Surface - 200 Feet N.E.
42497	8 Inches Quartz Vein	Underground - 370 Feet N.E.
42498	4 Inches Hanging Wall Porphyry	Underground - 370 Feet N.E.
42499	Muck Pile Sample	Surface - 480 Feet N.E.
42500	6 Inches Quartz Vein	Underground - 480 Feet N.E.
5726	1 Foot Quartz Vein	Surface - 640 Feet S.W.
5727	8 Inches Quartz Vein	Surface - 580 Feet S.W.

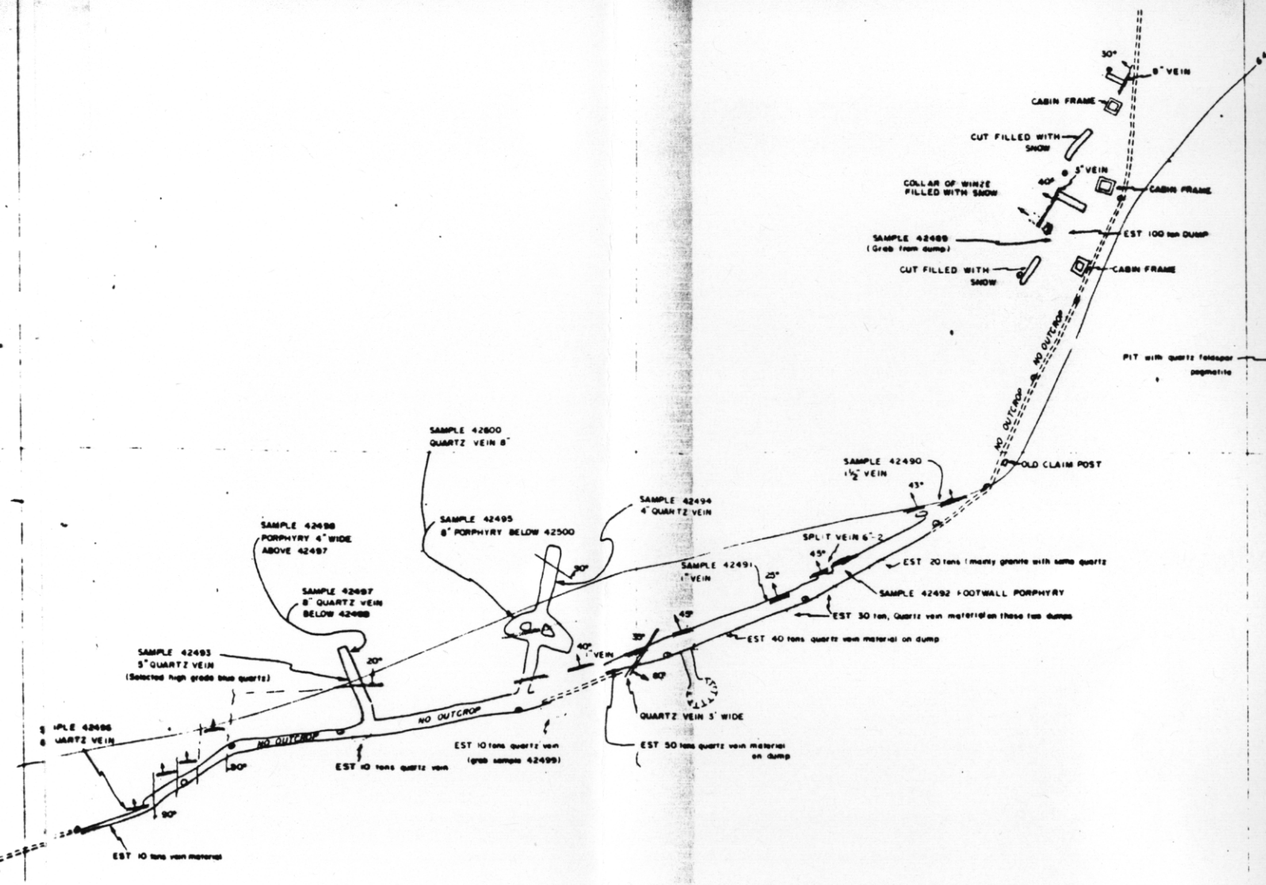


BARNETT CROWN GRANT

LOT No. 2888

GEOLOGICAL MAP

BARNETT SILVER PROSPECT
KOKANEE GLACIER PARK
SLOCAN MINING DIVISION


30°
8" VEIN
CABIN FRAME
CUT FILLED WITH SNOW
5" VEIN
40°
COLLAR OF WINZE FILLED WITH SNOW
CABIN FRAME
SAMPLE 42489 (Grab from dump)
EST 100 ton DUMP
CUT FILLED WITH SNOW
CABIN FRAME
NO OUTCROP
PIT with quartz feldspar pegmatite
NO OUTCROP
OLD CLAIM POST
SAMPLE 42490 1½' VEIN
43°
SAMPLE 42800 QUARTZ VEIN 8"
SAMPLE 42488 PORPHYRY 4" WIDE ABOVE 42487
SAMPLE 42495 8" PORPHYRY BELOW 42500
SAMPLE 42494 4" QUARTZ VEIN
SAMPLE 42491 1" VEIN
25°
SPLIT VEIN 6"-2"
45°
EST 20 tons mostly granite with some quartz
SAMPLE 42492 FOOTWALL PORPHYRY
EST 30 ton, Quartz vein material on these two dumps
SAMPLE 42487 8" QUARTZ VEIN BELOW 42488
SAMPLE 42493 5" QUARTZ VEIN (Selected high grade blue quartz)
20°
40°
1" VEIN
35°
45°
EST 40 tons quartz vein material on dump
80°
QUARTZ VEIN 5' WIDE
NO OUTCROP
EST 10 tons quartz vein (grab sample 42499)
EST 50 tons quartz vein material on dump
SAMPLE 42496 QUARTZ VEIN
NO OUTCROP
30°
90°
EST 10 tons quartz vein
EST 10 tons vein material
NO OUTCROP
GRANITE NO QUARTZ
20°-25°
6" QUARTZ VEIN
CALICO No. 1
BARNETT CROWN GRANT
LOT No. 2888
CALICO No. 2