

# 4652

BRANDYWINE PROJECT

Pass Claims 1 - 98; 201 to 206; 208 to 221

Situated 32 miles north of Squamish, British Columbia  
at latitude 50°10', longitude 123°07' - Map Sheet 92J/3

Vancouver Mining Division

for

CALTON SYNDICATE

by

J. R. Woodcock

J. R. Woodcock Consultants Ltd.

1521 Pemberton Avenue

North Vancouver, B. C.

Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT

NO. 4652 MAP \_\_\_\_\_

October 4, 1973

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## BRANDYWINE PROJECT

### INTRODUCTION

A preliminary appraisal of the Fass mineral claims was done by reconnaissance geochemical sampling along all drainage features crossing the claims. Silt samples were taken along the major drainages and from every small incoming stream or gully. Where there were large spaces without incoming side streams, widely spaced soil samples were taken.

Between June 25 and July 3, 1973, a two-man crew (Marvin Currey and Roy Beaton) sampled all the drainages below the snowline. A two-man crew (Marvin Currey and Howard Hong) returned to the area in August (August 7 to 17, 1973) to complete the sampling of the higher areas.

After appraisal of the geochemical survey by J. R. Woodcock, a two-man crew consisting of a geologist (A. J. Audist) and a prospector (N. Wyhopen) went to the area to prospect, map and soil sample a small area on the western side of the claim group. This last phase of the work was done between August 29 and September 1, 1973.

### LOCATION AND ACCESS

The Fass claim group is 32 miles north of Squamish at latitude 50°10', longitude 123°07' on Map Sheet 92J/3.

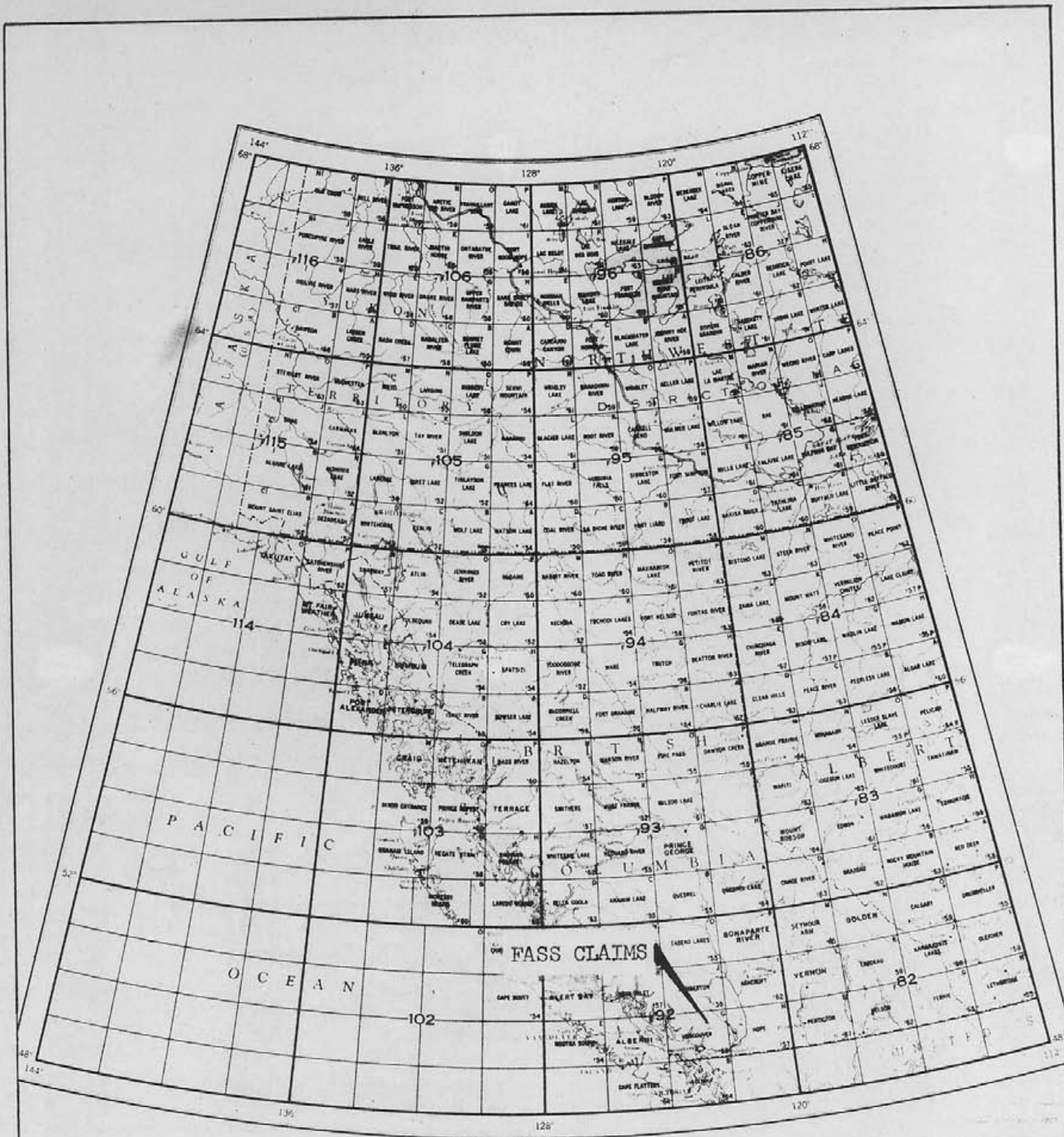
The claims are within two miles of an all-weather logging road, and 10 miles from a paved highway. Access to the southern part of the claims can be from this logging road; however access to the central parts of the claim group must be by helicopter. A Jetranger helicopter is based at Mt. Whistler, six miles to the east of the claim group.

Elevations on the claim group vary between 3000 and 6000 feet. The terrain is very steep with considerable areas of rock exposure on the higher portions. Soil is either very shallow or absent over most of the area, although a thick blanket of organic material covers much of the rock outcrop. The southern part of the area and also the valleys in the northern part of the claim group are forested with large yellow cedar, balsam and hemlock. Even in the areas of widespread vegetation, there are many cliffs of dioritic, sedimentary or volcanic rock.

### CLAIMS AND OWNERSHIP

In September of 1972, Marvin Currey staked 96 Fass mineral claims in his own name for J. R. Woodcock, and in July and August, 1973, he staked an additional 20 Fass mineral claims.

In September, 1973, assessment work was applied to 29 of the original



BRANDYWINE PROJECT  
 Index Map  
 CALLAGHAN CREEK AREA  
 J. R. Woodcock Consultants Ltd.

Department of  
 Mines and Petroleum Resources  
 ASSESSMENT REPORT  
 NO. **4652** MAP **#1**  
 Figure No. 1

Pass mineral claims on the south central, west, and southeast parts of the large claim group. The remainder of the original Pass mineral claims were allowed to lapse. The claim data and the claim status are shown in Appendix I.

### GENERAL GEOLOGY

The Pass mineral claims are in the centre of the Coast Crystalline Complex in an area of very sparse published geological data. The geological map of British Columbia shows that the region is underlain by Paleozoic or Mesozoic sedimentary and volcanic rocks intruded by acid and intermediate rocks of the Coast Crystalline Complex.

The Pass mineral claims have not been completely mapped; however some observations were made by Audet and Wychopen. A dark dicritic rock, containing erratic pyrite, occurs over much of the west soil grid area, with some outcrops of intermediate volcanic rock on the southern part of the grid. To the east of the grid, north-trending cliffs are composed of fine-grained cross-bedded sedimentary rocks. In the southern part of the claim group (Pass 1, 2, 51) the rocks are largely intermediate volcanics containing abundant pyrite and epidote.

A gold - silver vein occurs in intermediate volcanic rocks on the Warman claim group about one mile south of the Pass claims. This property, presently held by Northair Mines Ltd., is being explored by surface and underground methods, with encouraging results.

### GEOCHEMISTRY

#### Geochemical Techniques

Drainages in the area of the Pass claims were sampled in detail. Streams were traversed and sampled at intervals, and silts were taken from all incoming small drainages. Where there were extensive stretches of valley lacking incoming streams or gullies, soil samples were taken.

The type of sample is indicated on the sample number map by a letter at the end of the sample number. The letter "L" indicates silt taken from sorted material of a stream bed. The letter "G" indicates a soil sample taken in the bottom of a gully which is intermittently permeated by surface waters draining down the gully. The letter "S" indicates a soil sample, generally taken from the "B" horizon.

The soil samples from the western grid were collected at 100-foot intervals along flagged lines. The soil is a podsol and the samples were taken from the B horizon. Notes on the drainage characteristics and the vegetation, etc. were made on field sample sheets.

All samples were placed in wet-proof manilla envelopes and shipped to Vangeochem Lab Ltd. where they were dried and sifted to -80 mesh. The -80 mesh portion was analysed for copper, lead, zinc, and silver. Summaries of the analytical techniques are included in Appendix II.

The analytical results were plotted on a base map prepared by enlarging an air photo overlay by a factor of two, to give a scale of approximately 1" = 1600'. Separate maps have been made for each of the metals and for the sample numbers.

Frequency distribution graphs or histograms for each of the metals were constructed in order to aid in selecting threshold values, and also in selecting divisions for the colour code on the maps. Instead of using means and standard deviations to select anomalous values, the values are divided into enough classes (denoted by colours) so that variations throughout the map area can be detected as well as the outstanding anomalous values. In general, the blue and the green represent background values, the yellow represents threshold values, the orange represents anomalous values and the red represents outstanding anomalous values.

### Stream Geochemistry

A histogram for copper indicates that the threshold value is about 160 ppm. The threshold value for zinc is about 300 ppm; but values between 240 and 300 ppm are within a somewhat erratic threshold range. The threshold value for lead is 70 ppm; those values between 55 and 70 ppm are within a threshold range and could be significant if associated with other anomalous values.

#### Anomaly 1.

Sample M73-555L from a very small tributary on the northwest side of the main northeasterly valley (Pass 75 mineral claim) contains 223 ppm copper and is therefore anomalous. However it is not anomalous in zinc, lead, or silver. It is bounded by non-anomalous small drainages immediately to the north and to the south, and therefore the source is not of great extent. Follow-up work is not warranted.

#### Anomaly 2.

Along the west part of the Pass claim group is a very small lake in which the outgoing stream has threshold values in zinc (sample M73-485L) and in lead (sample M73-488L). The drainage pattern indicates that these samples could be from the drainage basin of the little lake. This factor would enhance the anomalies as generally such small lakes extract most of the metals.

#### Anomaly 3.

The highest lead value (400 ppm) was obtained in a soil sample (M73-608S) near the southeast end of the main lake within the Pass mineral claims (Pass 40 claim). This sample also has above average zinc content. One suspects that the anomalous values could be concentrations in black soil. A field examination and possibly a short line of soil samples could give a definite answer.

## Soil Geochemistry

The soil geochemistry on the west side of the Fass mineral claim group was confined to Fass claims 88 to 94 inclusive. It also extended around the southeast side of a small lake. Sampling was done on lines spaced 400 feet apart at 100-foot intervals along the lines.

Histograms of the results indicate that the threshold values are approximately as follows: lead 50 ppm, zinc 150 ppm, and silver 3 ppm.

Only three anomalous lead values were obtained and two of these (52 ppm and 55 ppm) are only slightly above threshold value. The other sample (140 ppm) west of the little lake is from a highly organic sample and therefore may be of little significance.

Only two anomalous zinc values were obtained (188 ppm on the north end of L 18+00E and 180 ppm southeast of the little lake). These are not significant zinc anomalies.

Three above background values for silver were obtained (3, 4, 4 ppm). These are barely anomalous values and do not correspond with the lead or the zinc values and therefore are of little significance.

One would conclude that the soil sampling on this small grid has failed to detect any significant anomalies.

## CONCLUSIONS AND RECOMMENDATIONS

1. The Fass claim group ties on to the north side of the claim block being explored by Northair Mines Ltd. Northair Mines Ltd. is investigating, by surface drilling and underground drifting, a high grade silver - gold - lead - zinc vein which cuts the intermediate or andesitic volcanic rocks and trends in a northwesterly direction.
2. Rock types on the Fass claim group include the intermediate and acidic volcanic rocks, sedimentary rocks, and intrusive rocks of the Coast Crystalline Complex.
3. Reconnaissance geochemistry of the drainage system yielded a few small anomalies. Most of these are single sample anomalies and merit no more than a cursory examination.
4. Soil sampling in a small area along the west part of the claims failed to detect any significant anomalies.
5. Assessment work (1 to 3 years) has been applied to 29 Fass mineral claims staked in 1972 and the remainder have been allowed to lapse. Fourteen of these mineral claims are in the south central part of the claim group adjacent to the Northair claims.

In addition, 20 Fass mineral claims were staked in 1973.



*J. R. Woodcock*  
J. R. Woodcock

October 4, 1973

A P P E N D I X

- I. Claim Data
- II. Laboratory Procedures
- III. Statement of Costs







LOCATION 8 miles N of Brandywine Falls

CLAIM	NAME	RECORD No	TAG No	STAKING DATE	RECORD DATE	STAKER & OWNER	COMMENTS	ASSESSMENT	APPLIED
Fass #73		21106	295368M	Sept. 4, 1972	Sept. 7, 1972	M. Currey		Sept 7/73	
"	74	21107	295369M	" "	" "	"		lapsed	
"	75	21108	295370M	" "	" "	"		"	
Fass #76		21109	361587M	" "	" "	"		"	
"	77	21110	361588M	" "	" "	"		"	
"	78	21111	361589M	" "	" "	"		"	
"	79	21112	361590M	" "	" "	"		"	
Fass #80		21113	361599M	" "	" "	"		"	
"	81	21114	361600M	" "	" "	"		"	
Fass #82		21115	786745	" "	" "	"		"	
"	83	21116	786746	" "	" "	"		"	
"	84	21117	786747	" "	" "	"		"	
"	85	21118	786748	" "	" "	"		"	
"	86	21119	786749	" "	" "	"		"	
Fass #87		21120	786750	Sept. 5, 1972	" "	"		1	
Fass #88		21121	209997M	Sept. 5, 1972	" "	"		1	
"	89	21122	209998M	" "	" "	"		2	
"	90	21123	274471M	" "	" "	"		2	
Fass #90		21123	274471M	" "	" "	"		2	
"	91	21124	274472M	" "	" "	"		2	
"	92	21125	274473M	" "	" "	"		2	
"	93	21126	274474M	" "	" "	"		lapsed	
"	94	21127	274475M	" "	" "	"		2	
"	95	21128	274476M	" "	" "	"		lapsed	
"	96	21129	274477M	" "	" "	"		"	
"	97	21130	274478M	" "	" "	"		"	
Fass #98		21131	786537	Sept. 5, 1972	Sept. 7, 1972	M. Currey		lapsed	
Fass #201		22694	449201M	July 1, 1973	July 3, 1973	M. Currey			
"	202	22695	449202M	" "	" "	" "			
"	203	22696	449203M	" "	" "	" "			
"	204	22697	449204M	" "	" "	" "			
"	205	22698	449205M	" "	" "	" "			
"	206	22699	449206M	" "	" "	" "			
"	207	22700	449207M	" "	" "	" "			
Fass 208		22877	449208M	Aug. 11/73	Aug. 20/73	" "			
Fass 209		22878	449209M	Aug. 11/73	Aug. 20/73	M. Currey			





October 4, 1973

TO: J. R. Woodcock Consultants Ltd.  
1521 Pemberton Avenue  
North Vancouver, B. C.

FROM: Mrs. Ena Agarwal, Chemist  
Vangeochem Lab Ltd.  
1521 Pemberton Avenue  
North Vancouver, B. C.

SUBJECT: Analytical procedure used to determine acid soluble copper, lead, zinc and silver in geochemical samples.

1. Method of Sample Preparation

- (a) Geochemical rock, soil, or silt samples were received in the laboratory in 8" x 13" plastic sample bags, or in 4½" x 9" cotton mailing bags, or in wet-strength 3' x 6' Kraft paper bags.
- (b) The wet samples were dried in a ventilated oven.
- (c) The dried soil and silt samples were sifted by using a shaking machine using an 80-mesh stainless steel sieve. The plus 80-mesh fraction was rejected and the minus 80-mesh fraction was transferred into a new bag for analysis later.
- (d) The dried rock samples were crushed and pulverized into minus 80-mesh. The pulverized sample was then put in a new bag for later analysis.

2. Methods of Digestion

- (a) 0.50 gram of the minus 80-mesh samples was used. Samples were weighed out by using a top-loading balance.
- (b) Samples were heated in a sand bath with nitric and perchloric acids (15% to 85% by volume of the concentrated acids respectively).

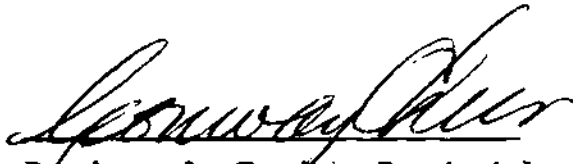
.....2

- (c) The digested samples were diluted with de-mineralized water to a fixed volume and shaken.

3. Method of Analysis

Copper, lead, zinc and silver analyses were determined by using a Techtron Atomic Absorption Spectrophotometer Model AA4 or Model AA5 with their respective hollow cathode lamp. The digested samples were aspirated directly into an air and acetylene flame. The results, in parts per million, were calculated by comparing a set of standards to calibrate the atomic absorption unit.

4. The analyses were supervised or determined by Mrs. Ena Agarwal or Mr. Laurie Nicol and their laboratory staff.

  
Ena Agarwal, Chemist, Provincial  
Assayer

VANGEOCHEM LAB LTD.

EA:mb

**STATEMENT OF COSTS**

Brandywine Project

<u>Personnel Costs</u>	<u>Dates Worked</u>	<u>Total Time</u>	<u>Rate</u>	<u>Cost</u>
A. J. Audet	Aug. 29 - 31	2-1/2 days	\$100/day	\$ 250.00
A. J. Audet	Sept. 1 - 3	3 days	\$100/day	300.00
A. J. Audet	Sept. 6 - 12	21 1/2 hours	\$12/hr.	258.00
A. J. Audet	Sept. 24	1/2 hr.	\$12/hr.	6.00
Roy Beaton	June 25 - 30	5 1/2 days	\$45/day	247.50
M. Brooks	Sept. 26-Oct. 4	9 1/2 hours	\$ 6/hr.	57.00
C. M. Currey	June 25 - 30	5 1/2 days	\$55/day	302.50
C. M. Currey	Aug. 7 - 20	10 1/2 days	\$55/day	577.50
T. Drews	Aug. 29-Sept. 7	25 hours	\$ 6.50/hr.	162.50
T. Drews	Sept. 11 - 14	8 1/2 hours	\$ 6.50/hr.	55.25
T. Drews	Sept. 24-Oct. 2	18 hours	\$ 6.50/hr.	117.00
H. Hong	Aug. 8 - 17	8 1/2 days	\$50/day	425.00
N. Wychopen	Aug. 29 - 31	3 days	\$60/day	180.00
N. Wychopen	Sept. 1 - 3	3 days	\$60/day	180.00
J. R. Woodcock	July 31-Aug. 10	1/2 day	\$175/day	87.50
J. R. Woodcock	Aug. 28 - 29	2 days	\$175/day	350.00
J. R. Woodcock	Sept. 4 - Oct. 4	1 1/2 days	\$175/day	262.50
		<b>Total Personnel Costs:</b>		<b>\$3,818.25</b>

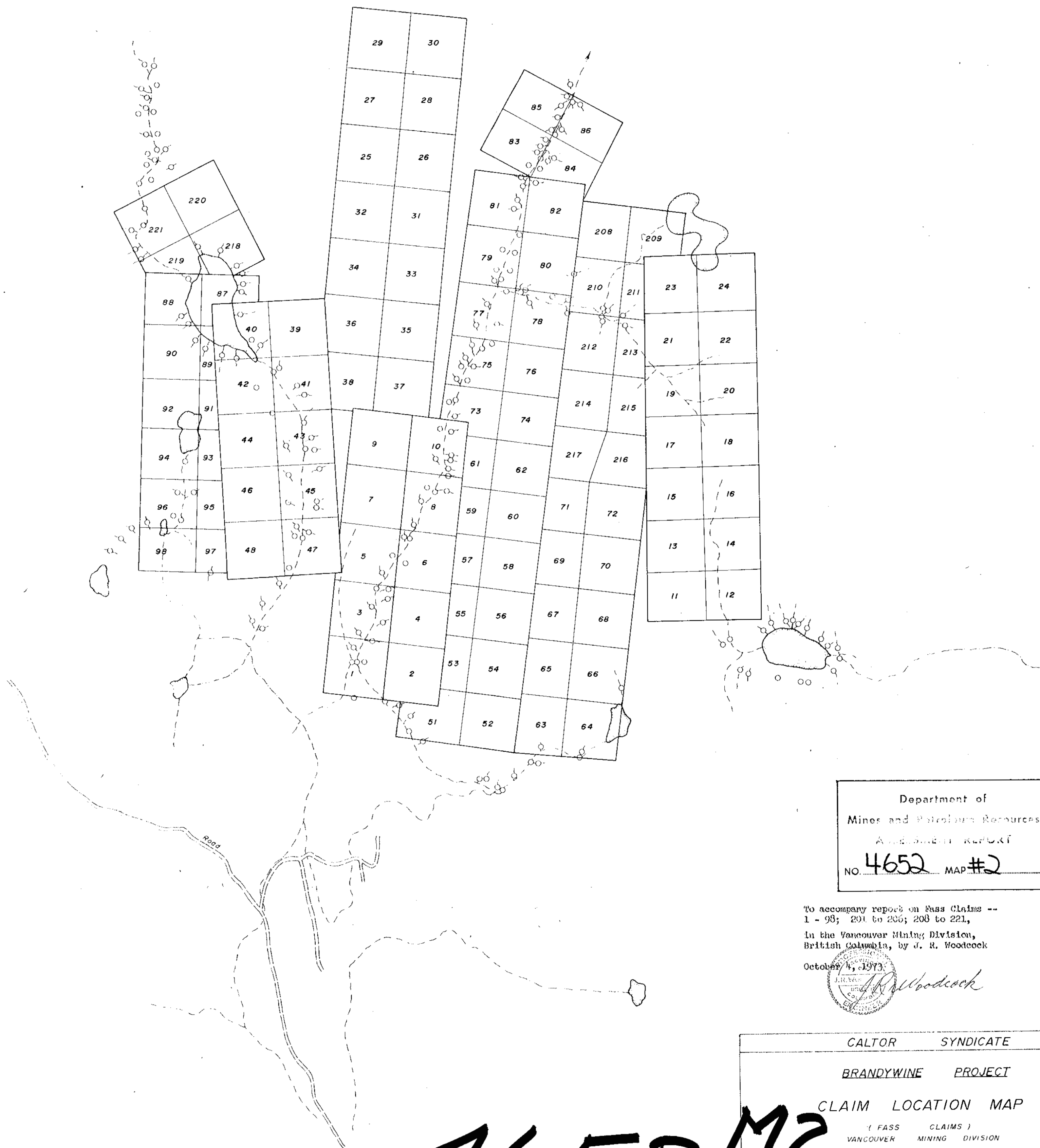
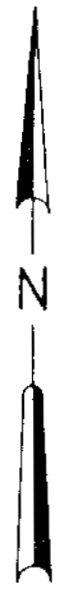
DISBURSEMENTS

Food and Accommodation	\$ 503.94	
Geochem Costs	1,134.60	
Helicopter Costs	628.80	
Equipment Rentals	413.52	
Miscellaneous Supplies	132.64	
Vehicle Rentals and Gas	44.06	
<b>Total Disbursements</b>		<b>\$2,857.56</b>

**TOTAL COSTS** \$6,675.81

**NOTE:** Costs incurred after September 7, 1973 included in the above costs:-

Personnel	\$596.75
Disbursements	43.07
	<u>\$639.82</u>



Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT  
NO. 4652 MAP #2

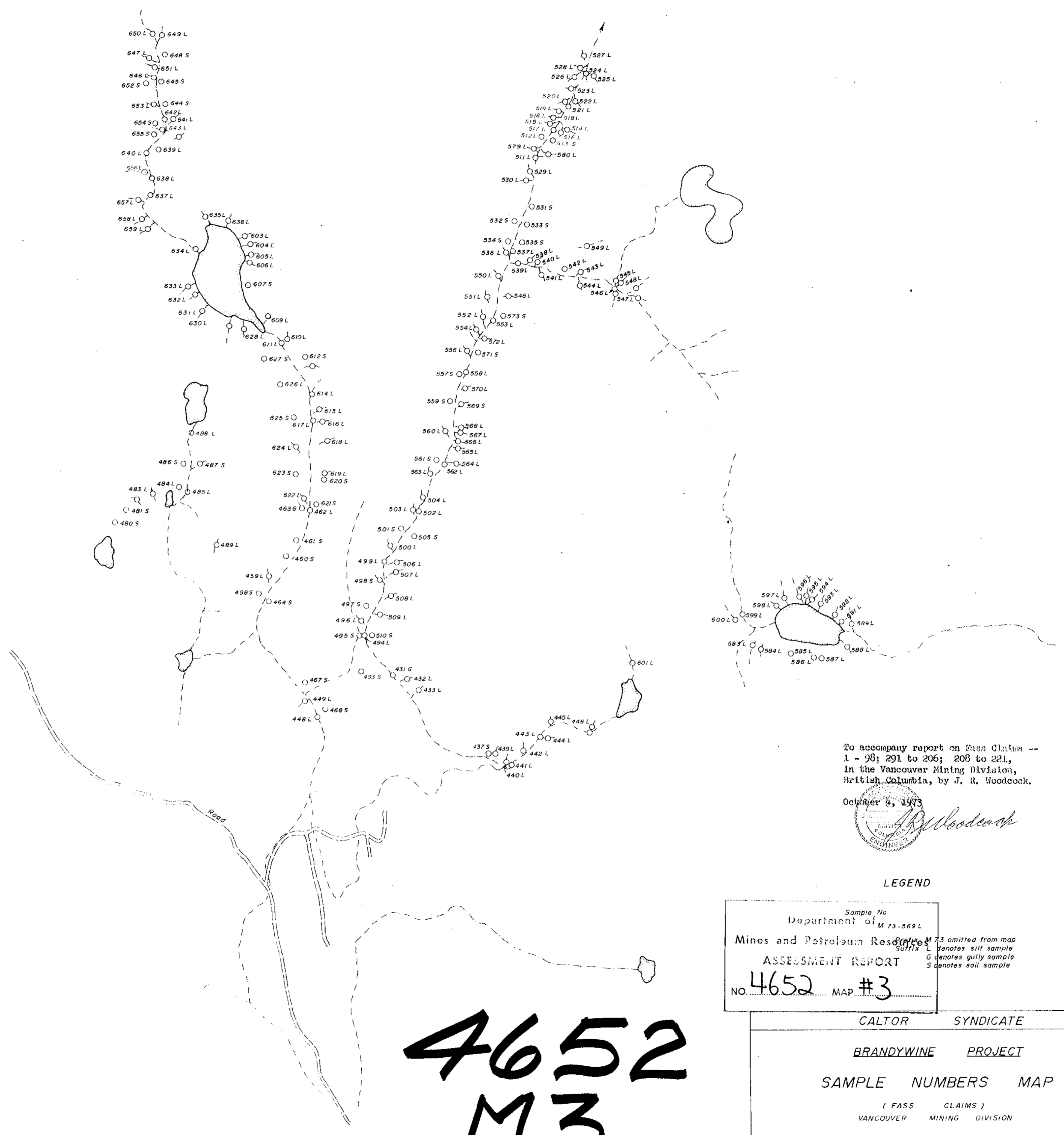
To accompany report on Foss Claims --  
1 - 98; 201 to 206; 208 to 221,  
in the Vancouver Mining Division,  
British Columbia, by J. R. Woodcock

October 1, 1973  
*J.R. Woodcock*

CALTOR SYNDICATE  
BRANDYWINE PROJECT  
CLAIM LOCATION MAP  
( FASS CLAIMS )  
VANCOUVER MINING DIVISION  
Scale -- 1 inch = 1/4 mile  
J.R. WOODCOCK CONSULTANTS LIMITED

4652 M2





To accompany report on Pass Claims --  
1 - 98; 291 to 206; 208 to 221,  
in the Vancouver Mining Division,  
British Columbia, by J. R. Woodcock.

October 8, 1973  
  
J.R. Woodcock

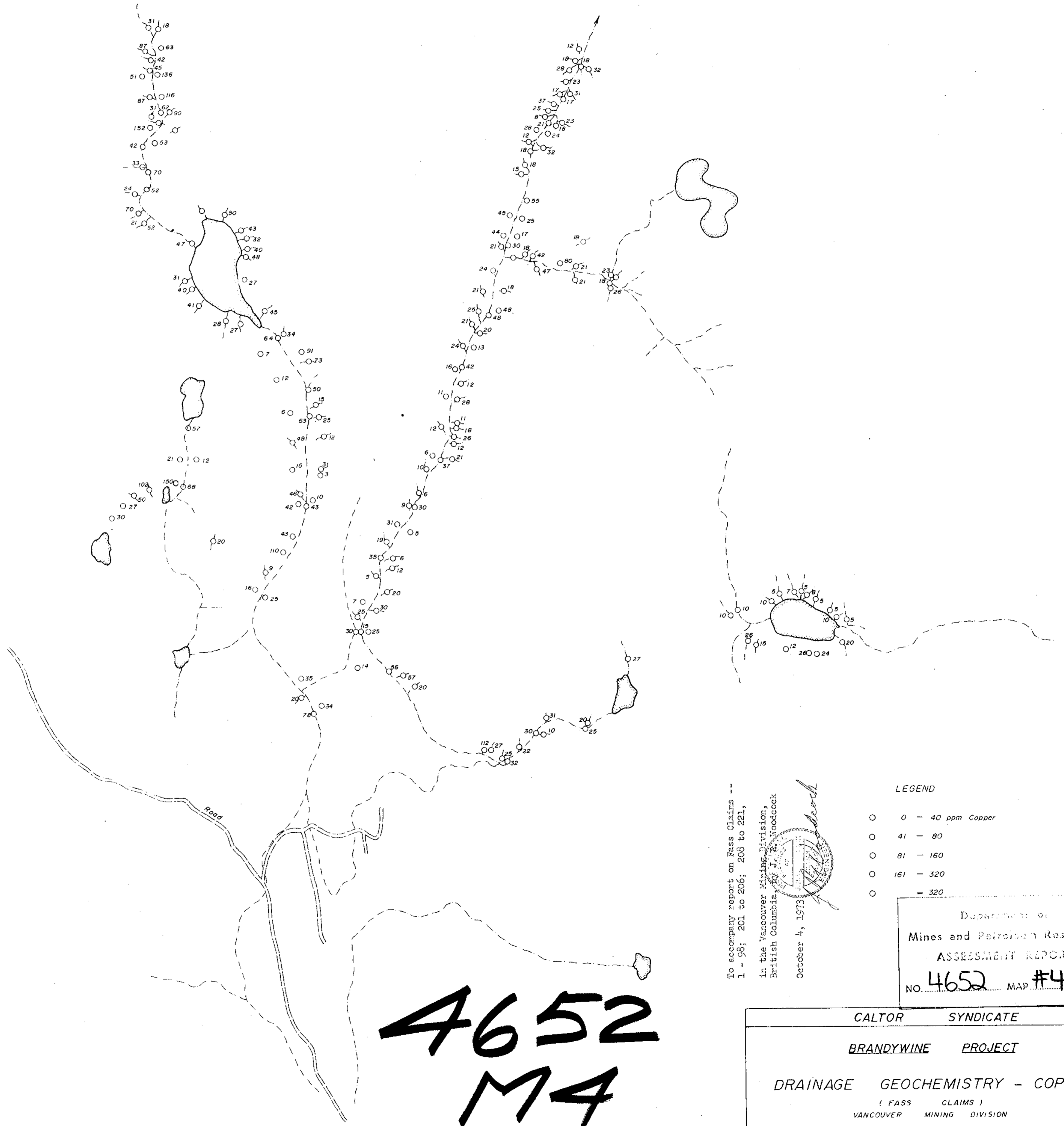
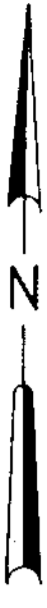
LEGEND

Sample No	M 73-569 L
Department of	Mines and Petroleum Resources
ASSESSMENT REPORT	
No. 4652	MAP #3

73 omitted from map  
Suffix L denotes silt sample  
G denotes gully sample  
S denotes soil sample

**4652  
M3**

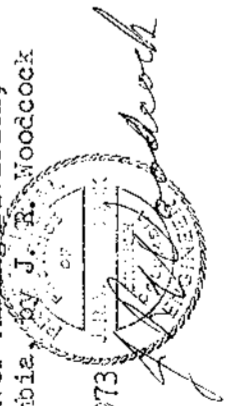
CALTOR	SYNDICATE
BRANDYWINE	PROJECT
SAMPLE NUMBERS MAP	
( FASS CLAIMS )	
VANCOUVER MINING DIVISION	
Scale - 1 inch = 1/4 mile	
J.R. WOODCOCK CONSULTANTS LIMITED	
September 1973	Figure No - 3



To accompany report on Pass Claims  
1 - 98; 201 to 206; 208 to 221,

in the Vancouver Mining Division,  
British Columbia, by J. R. Woodcock

October 4, 1973



LEGEND

- 0 - 40 ppm Copper
- 41 - 80
- 81 - 160
- 161 - 320
- - 320

Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT  
NO. 4652 MAP #4

CALTOR SYNDICATE

BRANDYWINE PROJECT

DRAINAGE GEOCHEMISTRY - COPPER

( PASS CLAIMS )  
VANCOUVER MINING DIVISION

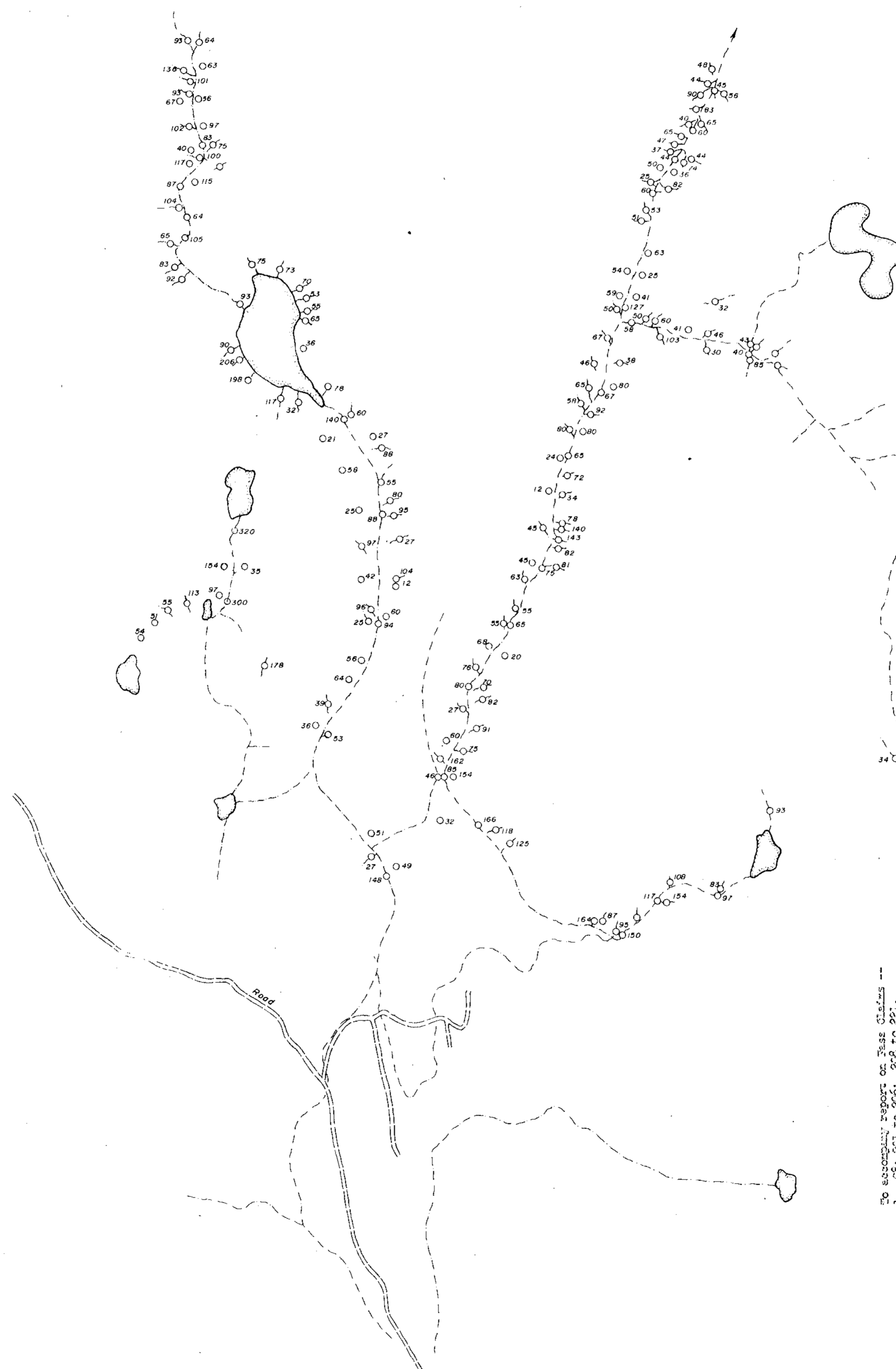
Scale - 1 inch = 1/4 mile

J.R. WOODCOCK CONSULTANTS LIMITED

September 1973

Figure No-4

4652  
M4



4652  
M5

To secondary report on Test Claims --  
1 - 96; 201 to 206; 248 to 251.  
in the Vancouver Mining Division,  
British Columbia, by J. R. Woodcock  
October 4, 1973  
*J.R. Woodcock*

- LEGEND
- 0 - 100 ppm Zinc
  - 101 - 200
  - 201 - 300
  - 301 - 400
  - 400

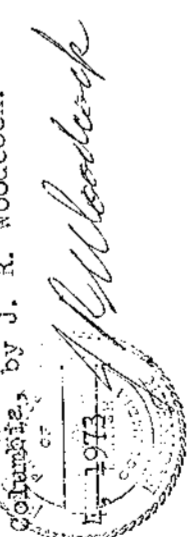
Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT  
NO. 4652 MAP #5

CALTOR	SYNDICATE
BRANDYWINE	PROJECT
DRAINAGE GEOCHEMISTRY - ZINC	
( FASS CLAIMS )	
VANCOUVER MINING DIVISION	
Scale - 1 inch = 1/4 mile	
J.R. WOODCOCK CONSULTANTS LIMITED	
September 1973	Figure No - 5



**4652  
M6**

To accompany report on Foss Claims --  
1 - 98; 201 to 206; 208 to 221,  
in the Vancouver Mining Division,  
British Columbia, by J. R. Woodcock.  
October 1973

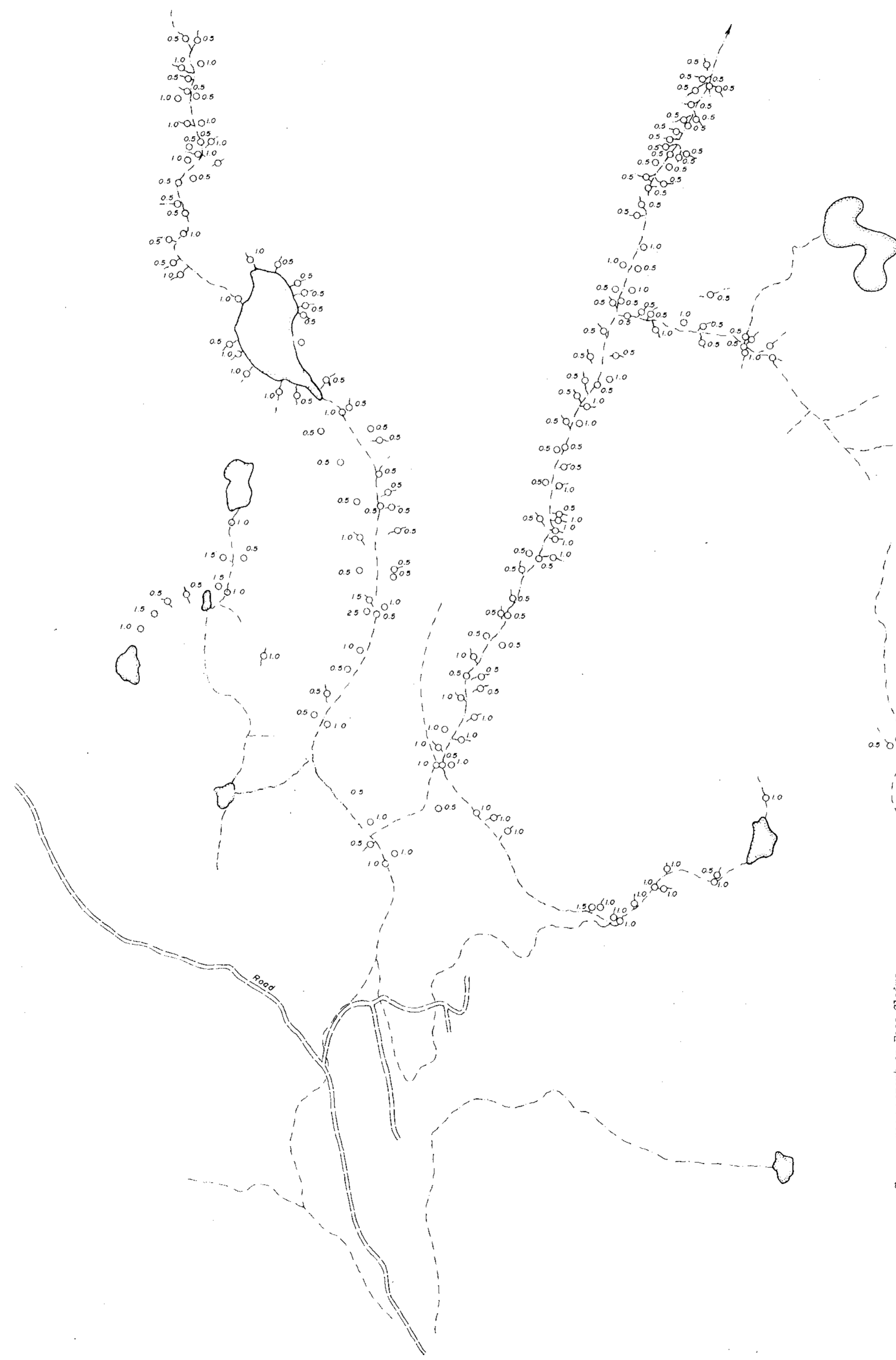
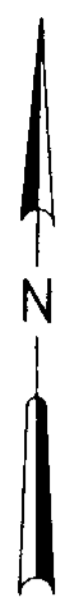


**LEGEND**

- 0 - 25 ppm Lead
- 26 - 50
- 51 - 75
- 76 - 100
- > 100

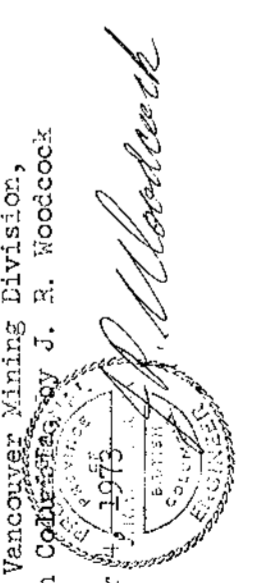
Department of  
Mines and Technical Resources  
**ASSESSMENT REPORT**  
NO. **4652** MAP #**6**

CALTOR	SYNDICATE
BRANDYWINE	PROJECT
<b>DRAINAGE GEOCHEMISTRY - LEAD</b>	
( FASS CLAIMS )	
VANCOUVER MINING DIVISION	
Scale - 1 inch = 1/4 mile	
J.R. WOODCOCK CONSULTANTS LIMITED	
September 1973	Figure No - 6



**4652  
M7**

To accompany report on Pass Claims --  
1 - 96; 201 to 206; 208 to 221,  
in the Vancouver Mining Division,  
British Columbia by J. R. Woodcock  
October 1973

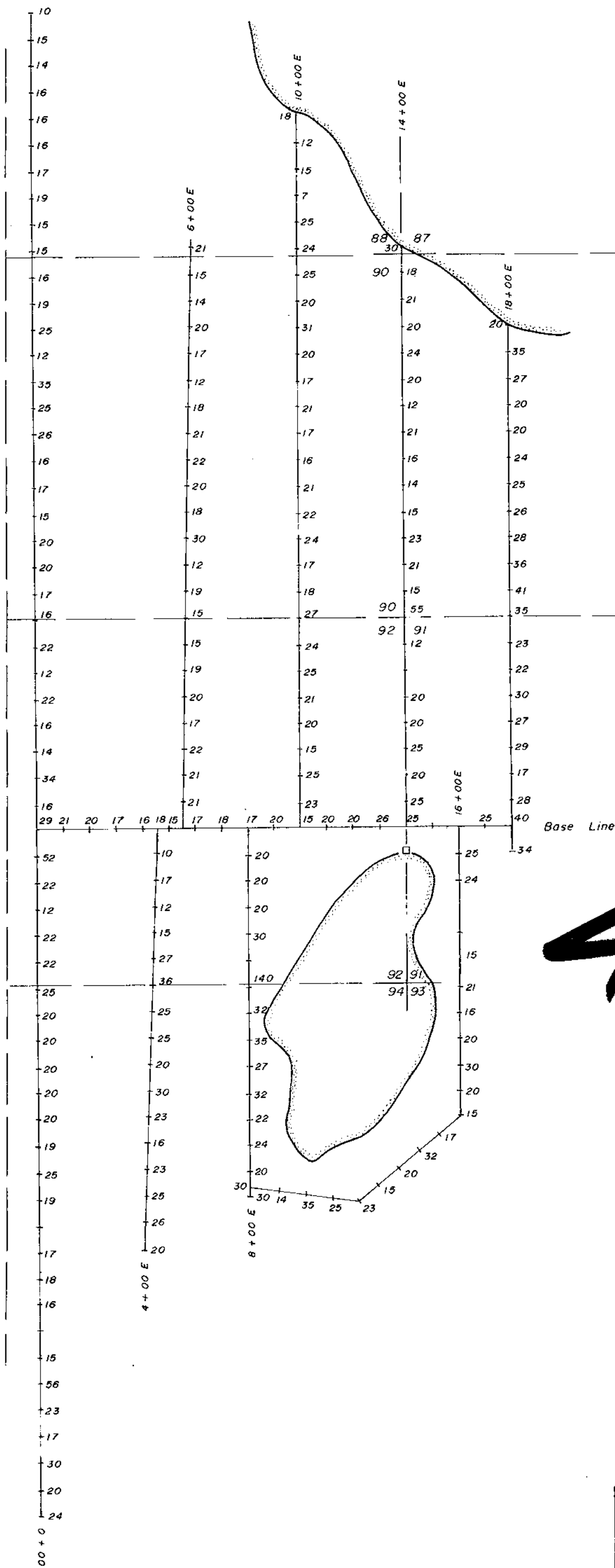


LEGEND

- 0 - 1 ppm Silver
- 1.1 - 2
- 2.1 - 4
- 4.1 - 8
- 8 - 15

Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT  
NO. 4652 MAP #7

CALTOR SYNDICATE
BRANDYWINE PROJECT
DRAINAGE GEOCHEMISTRY - SILVER
(PASS CLAIMS)
VANCOUVER MINING DIVISION
Scale - 1 inch = 1/4 mile
J.R. WOODCOCK CONSULTANTS LIMITED
September 1973



**4652  
M8**

Department of  
Mines and Technical Resources  
ASSESSMENT REPORT  
NO. 4652 MP #8

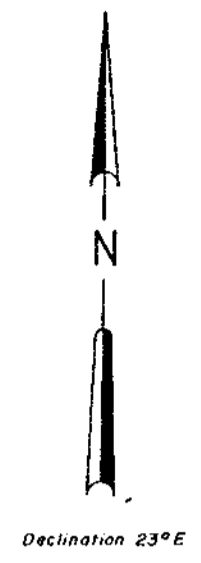
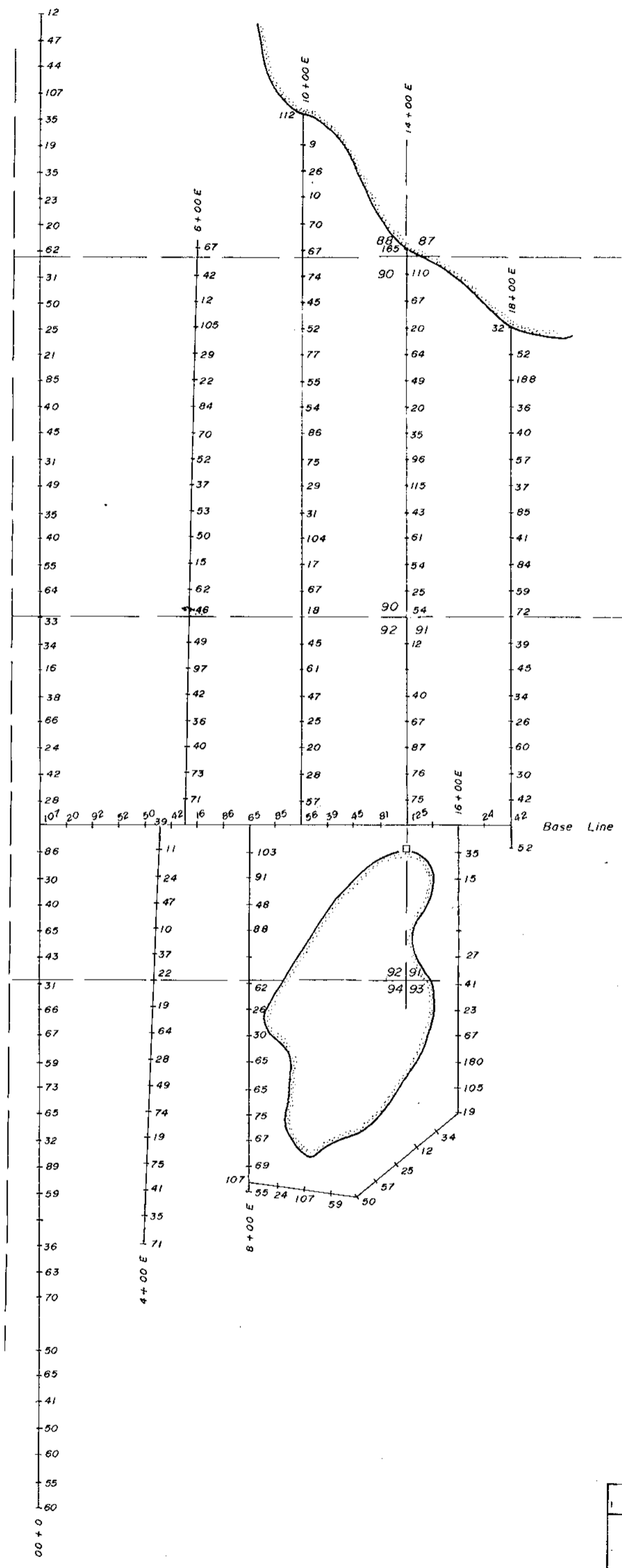
To accompany report on Pass Claims --  
1 - 98; 201 - 206; 208 - 221,

in the Vancouver Mining Division,  
British Columbia, by J. R. Woodcock.

October 15, 1973

*J. R. Woodcock*

CALTOR	SYNDICATE
BRANDYWINE PROJECT ( FASS CLAIMS )	
<b>LEAD IN SOIL</b>	
VANCOUVER MINING DIVISION	
Scale — 1 inch = 400 feet	
J.R. WOODCOCK CONSULTANTS LIMITED	



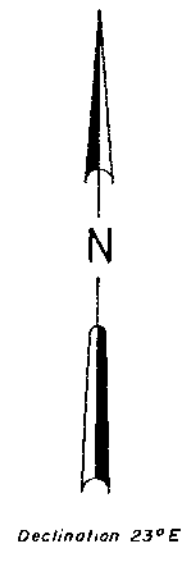
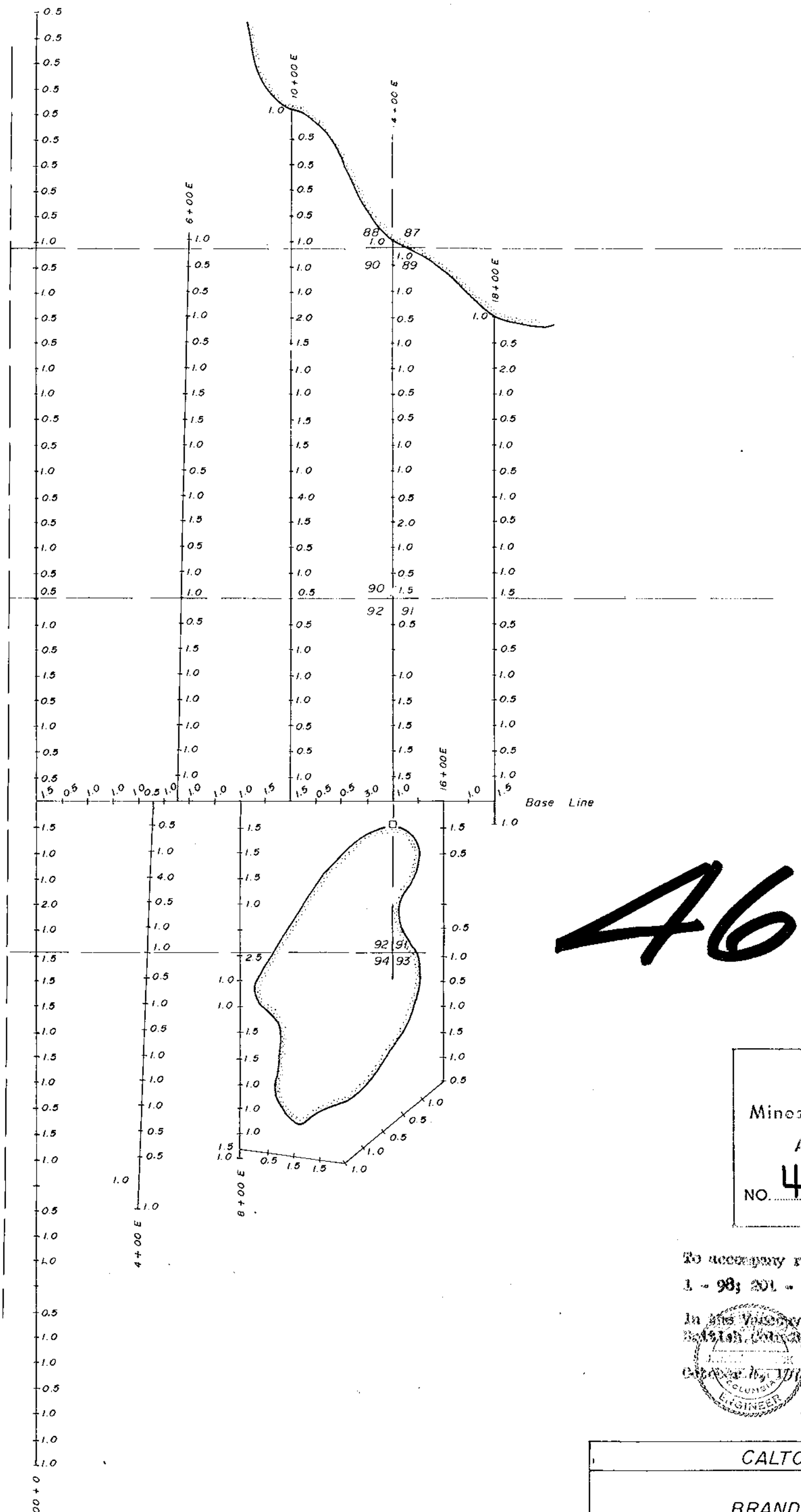
**4652  
M9**

Department of  
 Mines and Technical Surveys  
 ASSESSMENT REPORT  
 NO. **4652** MAP #9

To accompany report on Pass Claims --  
 1 - 98; 201 - 206; 208 - 221,

in the Vancouver Mining Division,  
 British Columbia, by J. R. Woodcock.  
 October 4, 1973 *J.R. Woodcock*

CALTOR SYNDICATE	
BRANDYWINE PROJECT ( FASS CLAIMS )	
ZINC IN SOIL	
VANCOUVER MINING DIVISION	
Scale — 1 inch = 400 feet	
J.R. WOODCOCK CONSULTANTS LIMITED	
Sept 1973	Figure No - 9



**4652  
M10**

Department of  
Mines and Technical Resources  
ASSESSMENT REPORT  
NO. 4652 M10 #10

To accompany report on Foss Claims --  
1 - 98; 201 - 206; 208 - 221,

In the Vancouver Mining Division,  
British Columbia, by J. R. Woodcock.

Sept 16, 1973 *J.R. Woodcock*



CALTOR SYNDICATE

BRANDYWINE PROJECT  
( FASS CLAIMS )

**SILVER IN SOIL**

VANCOUVER MINING DIVISION

Scale — 1 inch = 400 feet

J.R. WOODCOCK CONSULTANTS LIMITED