

GREAT PLAINS DEVELOPMENT  
COMPANY OF CANADA, LTD.,

GEOCHEMICAL AND PRELIMINARY  
GEOLOGICAL REPORT ON THE AS 1-12 CLAIMS

SPLIT CREEK AREA, BRITISH COLUMBIA

N.T.S. 104-G-4  
September, 1975

Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT

NO. 5615 MAP

Liard Mining Division,  
57°06'N, 131°32'W



G.L. Garratt  
M.D. McInnis



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Preface

The AS claims are comprised of the following:

<u>Claim</u>	<u>Record Nos.</u>	<u>Recorded Owner</u>	<u>Recording Date</u>
AS 1-12	72157-72168	Great Plains Development Company of Canada, Ltd.	August 15/74

Work for which assessment credit is requested was carried out during the period August 15th, 1974 to August 15th, 1975.

This report details the geochemical surveying and preliminary geological mapping carried out on the AS 1-12 claim block during the period August 8th, 1975 to August 12th, 1975. As a result of the work performed, assessment credit is requested on the claims as follows:

<u>Claim</u>	<u>Record Nos.</u>	<u>Assessment Credit Requested</u>	<u>Total</u>
AS 1-4	72157-60	2 years each claim	8 years
AS 7, 9.	72163, 65	2 years each claim	4 years
AS 5, 6, 8, 10, 11, 12.	72161, 62, 64, 66, 67, 68	1 year each claim	6 years
			<u>18 years</u> =====

The total value of the requested assessment credit and the total cost of the performed work is as follows:

<u>Claim</u>	<u>Requested Assessment Credit</u>	<u>Cost of Performed Work</u>
AS 1-12	18 years	\$3,653.00

This report with accompanying maps and statement of expenditures is hereby submitted to record the above assessment credit.

## A. Summary

The AS claims were staked in 1974 by Great Plains Development Company of Canada Ltd., to cover a weakly mineralized intrusive in the Stikine-Porcupine Rivers area of Northwestern British Columbia. The AS group was formerly owned by Julian Mining Company in the mid 1960's. Work conducted by Julian included surface trenching and diamond drilling. The results of their program were considered to be of limited economic significance. The overall copper grade was generally low even though sections of high sulphide mineralization were encountered.

In August 1975, the author and an assistant spent five days on the property between August 8th and 12th, 1975 inclusive. Soil geochemical sampling and prospecting were carried out and the available core was inspected. Heavy vegetation and overburden cover severely hampered working operations on the property.

## B. Introduction

### 1. Ownership

The property consists of twelve contiguous mineral claims. The following is a schedule of the land holdings and pertinent data:

<u>Claims</u>	<u>Record Nos</u>	<u>Acreage</u>	<u>Recording Date</u>
AS 1-12	72157-68	600	August 15th, 1974.

### 2. Location and Access

The AS claims are located in the Coast Range, 6.5 miles southwest of the junction of the Anuk and Stikine Rivers. The coordinates of the claims are: 131 degrees 32 minutes west longitude and 57 degrees 04 minutes north latitude. Elevation on the group ranges from 2,000 feet along Split Creek to over 4,500 feet on the valley walls. Split Creek flows into the Porcupine River near the foot of the Porcupine Glacier. The Porcupine, in turn, flows into the Stikine River.

Access by air is available from either Edmonton or Vancouver to Watson Lake on commercial airlines. From Watson Lake a charter aircraft is taken to Eddontenajon where a charter helicopter may be taken to the property. An alternative method for getting supplies to the property exists by use of a barge. Supplies can be brought up the river from Wrangell, Alaska to the mouth of the Anuk River from which point, an eight mile helicopter trip gains access to the property.

### 3. Economic Considerations

The AS claims are set in a remote and rugged part of northwestern British Columbia. Road access is at present 45 air miles distance. However, with future development in the Galore Creek Camp, seven miles to the north, road access to the area seems inevitable.

### 4 Previous Exploration

The property was first staked in the early 1960's by Julian Mining Company in response to the discovery of numerous copper showings on the property. It was then known as the Ann and Su claims. During the next few years Julian conducted a combination of geological mapping, induced polarization surveys, trenching and diamond drilling in the area which is presently covered by the AS claims. Over 5,000 feet of trenching and 7,000 feet of diamond drilling were completed. The results of this work were considered at that time to be too limited in economic significance to warrant further exploration and the property was allowed to lapse.

In 1969, Silver Standard staked the area and held the claim group for two years. Details of their work is not known.

In 1974 Great Plains staked the AS group over the property. In 1975, the author and an assistant spent five days on the property doing geochemical sampling and prospecting.

## C. Exploration and Development

### 1. Research and Preparation

Information in this report has been drawn from a report by W.G. Jeffrey in the Mineral and Petroleum Resources Report, 1965. Also used as a reference for pertinent information was the Yearend Report on the AS claim for 1974 by H.M. Visagie.

## D. Geology

### 1. General Geology

Jeffery states that "the regional rocks are moderate to steeply dipping beds of volcanic breccias, tuffs and flows with thin interbeds of unfossiliferous shales and argillites. In the lower gorge section of Split Creek toward the Porcupine River there is a fresh coarse-grained monzonite intrusive similar to the Coast Intrusions. Upstream, ... there are outcrops of igneous-appearing rocks of monzonite to syenite composition".

Between First and Second Splits to the north of Split Creek, "trenching has revealed that the slope is underlain by a body of fine-grained rock of andesitic to granodioritic composition. The rock is porphyritic with highly altered feldspar phenocrysts, masses of epidote, and dots of green biotite in a fine feldspathic matrix. This granodiorite is enclosed by fine to medium-grained greenstone rocks of andesitic composition. The superficial weathering and alteration, together with the similarity of the two types of rock, make field identification difficult and in places arbitrary."

The outcrops visited in First and Second Splits appeared to be predominantly of a dioritic composition, however they may in some cases be granodiorites. A felsite unit, composed chiefly of feldspar and quartz and evenly disseminated pyrite, was noted in First Split and at the top of hillside between the Splits. The relationship between the Felsite and the diorite-granodiorite intrusion is uncertain. The diorite is generally fine grained and weakly porphyritic with hornblende being the major mafic component. Magnetite is locally concentrated as fine grained disseminations. In areas of intense shearing, an alignment of the feldspar and mafics was noted. Diamond drill core seemed to show much fresher and coarser grained dioritic rock than was observed in outcrop in the creeks or on the hillside. This is probably due to the intensity of shearing noted in the creeks. Calcite-epidote alteration is pervasive and widespread throughout the diorite-granodiorite units. Quartz and quartz-calcite veining were most intense in the areas of greatest shear activity which was in First and Second Splits with First split being the more tectonically disturbed area.

Jeffrey stated that the rocks in First and Second Split were predominantly volcanic. The author believes that this is not the case and has classified the rocks as diorite and quartz-diorite.

As the vegetation growth and slumping have covered most of the trenches, these sites were not open for examination. Therefore, the possibility that a good deal of the volcanic units shown on the accompanying map (after Jeffrey) are actually intrusives, is quite high. The only volcanics seen by the author were fresh unaltered tuffs and flows visible as float in Second Split. It is apparent that these are from the cliffs above the head of Second Split which have a bedded, volcanic appearance.

The diorite (or quartz diorite) at the head of Second Split is a medium to coarse grained rock with moderate epidotization as the only alteration. This unit was also observable in drill core (see DDH des-

criptions). However, in the areas of best mineralization, First and Second Splits, the diorite unit is characterized by a much finer grain size. This is thought to be due to the intensity of shearing and quartz veining which would have allowed recrystallization of the units as well as the minor alignment of the minerals. The alteration, however, shows no preferential pattern and is generally a pervasive epidotization throughout the unit. No potassic or sericitic alteration was noted.

## 2. Mineralization

Chalcopyrite was observed as disseminations and coatings on fracture surfaces and in minor amounts in outcrops in both First and Second Splits. This mineralization appeared to be generally continuous in the diorite in First Split for about 300 feet and in Second Split was noted over a length of approximately 500 feet, although it is sporadic in places. This mineralization seemed to be closely associated with zones of wide and intense shearing and locally with quartz-vein systems within these shear zones. Areas of heavy malachite and azurite staining are visible in both First and Second Splits although they are much more spectacular in Second Split. This mineralization appears to be due to local copper disseminations in First Split and to ground water activity in Second Split. The malachite coated rocks of Second Split contained very little actual sulphide mineralization and the upper boundary of the staining appeared sharp and in line with a seepage horizon. Thus the extent of malachite staining in Second Split is a poor indicator of the extent of mineralization whereas in First Split it appears to correlate directly. Pyrite is widespread in its occurrence and reaches its greatest concentration in the felsite unit. Heavy pyrite concentrations were also noted in some split drill core and were probably the source of I.P. anomalies for which it is assumed, the drilling was done. The author was unable to discern the hole numbers for these heavily pyritized holes.

Magnetite was noted most commonly in areas of shears and formed a matrix in banded or brecciated rock. Minor galena and specular hematite were noted in quartz float in Second Split. The galena was accompanied by chalcopyrite.

// Diamond drill hole number 2 was reported to have given the longest section of mineralization. Values between 0.10 and 0.20 were recovered from almost the whole length of the hole. The mineralization noted by the author in this hole was associated directly with quartz veining and moderate accumulations of magnetite.

### E. Discussion

The idea was proposed that if the drill holes had been spotted by Julian on the premise of drilling IP high anomalies, and this seems to be substantiated by their results, and that therefore they would have missed the areas of best mineralization which would be, according to porphyry copper deposit theory, on the flanks of these anomalies. However, field examination failed to reveal any potassic or sericitic alteration outside the area drilled or within it. The best mineralization noted in the field was associated with quartz veining and shear zones in areas where porphyritic alteration prevailed. These areas are not of significant size and are separated by large areas of sub-economic mineralization, thus reducing their potential as explorable ore zones.

The area of most apparent potential is at the head of First Split. The best mineralization encountered in drill holes was in Hole 2, 4 and 6, all of which are angled towards, but come short of, First Split. Copper mineralization was noted in heavily sheared and quartz-veined diorite at the head of First Split and was estimated at having a continuous length of 300 feet. Alteration in this area and in the core of hole #2 was propylitic. If further exploration were to be done, then perhaps it should follow to the west of First Split as well as to the north of this area. Heavy overburden and vegetation cover make any work costly and difficult.

### F. Conclusions

1. The best mineralization observed in outcrop appeared to be localized in shear zones and in quartz veining within these zones.
2. Only two major shear zones were observed - those in First and Second Splits.
3. The area between these zones has been explored by at least five drill holes, three of which are reported to contain continuous but sub-economic copper grades.
4. Alteration in all rocks observed did not exceed propylitic. No potassic or sericitic alteration typical of porphyry copper mineralization was seen.
5. Diamond drill holes 2, 4 and 6 appear to have been drilled in a geochemical anomaly.



6. A geochemical anomaly, 1,500 ft. by 600 ft. was located near the top of the hillside between First and Second Split and is open along strike to the southwest.
7. Areas of greatest felsitization were seen to occur along First Split Creek.
8. It seems apparent that previous exploration may have been directed at a peripheral zone of porphyry copper mineralization if it is assumed that a porphyry system does exist.

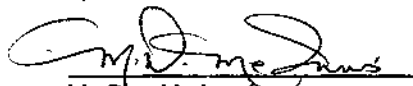
G. Recommendations

1. From the above discussion and conclusions, the author feels that there is not enough geological information available to discount the possibility of finding economic mineralization on the AS claims.
2. It is recommended that a program be executed that would further trace the extent of the known geochemical anomaly, preferentially to the northwest, west and southwest. This would include:
  - (a) gathering whatever information is available from the files of the Julian Mining Company as to their exploration work on the property.
  - (b) cutting lines to facilitate a geochemical survey.
3. Depending upon the results of the geochemical survey, it would be recommended that a geophysical program consisting of induced polarization and magnetometer surveys be conducted.

Report by: \_\_\_\_\_

  
G. L. Garratt

Under the Supervision of:

  
M. D. McInnis

APPENDIX I

ROCK AND GEOCHEMICAL SAMPLE ASSAYS

**CERTIFICATE OF ANALYSIS**



**CHEMEX LABS (ALBERTA) LTD.**

ANALYTICAL CHEMISTS

4638 - 11th ST. N.E.  
 Calgary, Alberta T2E 2W7  
 TELEPHONE: 403-276-9627  
 TELEX: 038-25541  
 TWX: 610-821-7390

- MINERAL    • GAS    • WATER    • OIL    • SOILS    • VEGETATION    • ENVIRONMENTAL ANALYSIS

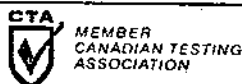
Great Plains Development Co. of Canada Ltd.  
 736 - 8th Avenue S.W.  
 Calgary Alta.

Certificate No. 46-03-04  
 Date Received  
 Date Analysed

**Geochem Analyses**

Attn: Mike McInnis

Location	Cu (PPM)	MO (PPM)	Ag (PPM)	Au (PPb)
AS-1	848		1.0	280
AS-2	125		0.5	235
AS-3	650		0.4	175
AS-4	180		0.4	190
AS-5	130		0.2	368
AS-6	250		0.5	280
AS-7	205		0.3	270
AS-8	583		1.0	270
AS-9	1150		1.5	305
AS-10	730		1.0	385
AS-11	600		0.4	245
AS-13	430		1.0	270
AS-14	540		0.2	305
AS-15	295		0.4	400
AS-16	980		0.5	1000
AS-17	690		1.5	260
AS-18	250		1.5	690
AS-19	408		1.5	325
AS-20	105		1.0	260
AS-21	510		0.5	305
AS-22	470		0.5	385
AS-23	570		1.0	475
AS-24	240		0.4	440
AS-25	635		0.3	385
AS-26	1600		1.0	440
AS-27	363		1.0	520
AS-28	372		5.0	580
AS-29	3080		2.5	440
AS-30	205		1.0	325
AS-31	65		2.0	1100
AS-32	85		0.5	220
AS-33	145		0.2	505
AS-34	190		0.4	270
AS-35	100		0.4	345
AS-36	320		0.3	365
AS-37	240		0.3	345
AS-38	175		0.5	280
AS-39	65		0.2	260
AS-40	153		0.4	220
AS-41	168		1.0	280
AS-42	460		1.0	325



Certified by: *A.W. Swales*

**CERTIFICATE OF ANALYSIS**



**CHEMEX LABS (ALBERTA) LTD.**

ANALYTICAL CHEMISTS

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Great Plains Development Co. of Canada Ltd.  
 Con't.

Certificate No. 46-03-04  
 Date Received  
 Date Analysed

Attn" Mike McInnis

Location	Cu (PPM)	Mo (PPM)	Ag (PPM)	Au (PPb)		
AS-43	125		0.5	160		
AS-44	275		0.5	215		
AS-45	430		0.3	550		
AS-46	50		0.5	815		
AS-47	85		0.2	385		
AS-48	180		1.0	440		
AS-49	55		0.2	520		
AS-50	200		0.5	325		
AS-51	260		0.3	400		
AS-52	105		0.5	215		
		Ag oz/ton	Au oz/ton	Cu (PPM)	Mo (PPM)	
SP1A		0.01	0.016	3,600	5	
SP100		0.10	0.019	5,000	20	
SP101		0.07	0.006	3,600	180	
SP103		0.04	0.005	12,600	12	
SP107		0.01	<0.003	9,400	8	



Certified by *A.W. Swaby*

APPENDIX II

HAND SPECIMEN AND DIAMOND DRILL CORE DESCRIPTIONS

## HAND SPECIMEN DESCRIPTIONS

### SPLIT 100:

Very fine grained, black almost textureless rock. Rare anhedral feldspar phenocrysts are vaguely visible. The rock has a higher than average specific gravity and is very strongly magnetic with magnetite being finely disseminated throughout. Chalcopyrite is randomly disseminated throughout and composes less than 1% of the rock. This rock may be an altered diorite but has been re-crystallized to such a fine grain size as to give it a volcanic appearance of intermediate to basic composition.

### SPLIT 101:

Quartz feldspathic rock with enough disseminations of magnetite to locally give the rock a mafic appearance. This is probably the same rock type as SPLIT 100 and differs only in the magnetite content. The rock is generally too fine grained to determine textures. In outcrop the rock is highly and randomly fractured with quartz filling and hematite on fracture surfaces. Minor amounts of chalcopyrite occur as disseminations randomly dispersed throughout the rock. Locally, a weak porphyritic texture was noted in the field, with feldspar forming phenocrysts.

### SPLIT 102:

Quartz, magnetite filled shear zone with a width of approximately two feet. The rock is weakly banded with the quartz and magnetite forming segregate bands. Minor calcite occurs and minor disseminations of chalcopyrites sometimes occur as showy blebs,  $\frac{1}{4}$  inch in diameter.

### SPLIT 103:

Very fine grained greenish-black rock similar in appearance to SPLIT 100. A very weak banding is apparent with magnetite forming bands around grains of quartz and feldspar. Epidote occurs in narrow veinlets and as weak replacements of phenocrysts. Minor amounts of pyrite are disseminated throughout. The rock is intensely fractured and all fracture surfaces are coated with malachite and azurite. This coating appears to be due to seepage from a ground water table lying directly above the outcrop. Only trace amounts of chalcopyrite were noted in this outcrop.

### SPLIT 104:

Similar to SPLIT 100 and 103 but with more epidote and quartz-calcite veining to  $\frac{1}{2}$  inch widths. The rock is strongly magnetic but

the magnetite is not distinguishable under hand lens. The rock is very fine grained and appears basic in composition, although, as before, this may be deceiving and only a result of the magnetite content. Minor amounts of pyrite are disseminated throughout and trace disseminations of chalcopyrite were noted.

SPLIT 105:

Weakly porphyritic, epidotized diorite. Weakly magnetic, minor disseminations of magnetite are seen in areas of greater epidotization. Similar in appearance to SPLIT 100, 103, 104. Mafics are very fine grained and indistinguishable.

SPLIT 106:

Weakly porphyritic, epidotized quartz diorite. Hornblende crystals are faintly visible under the hand lens. Feldspar phenocrysts are subhedral to anhedral and are relatively fresh. Minor magnetite was noted and pyrite is disseminated throughout.

SPLIT 108:

These samples are vein quartz and were found as float in Second Split Creek. The quartz is massive and carried coarse disseminations of chalcopyrite, galena and specular hematite. Total sulphides are estimated at about 1%.

SP-1-2:

Felsite, composed chiefly of quartz and feldspar, carried 1-3% disseminated pyrite. Highly fractured with hematite on fractures. Minute greenish specs occur which may be chlorite. It is possible that the pyrite has replaced any original mafic minerals.

SP-1-5:

Pyritized quartz-feldspar rich rock. Textures are very weak. The pyrite tends to occur as disseminations around grains of quartz and feldspar. Minor amounts of chalcopyrite and malachite are visible. Chlorite appears to outline the pyrite locations and may indicate remnant mafic sites. If this were so, the rock could be an altered quartz-diorite. Appears to be the same unit as SP-1-2.

## SP-1-6:

Weakly porphyritic rock has a weak schistosity probably due to shearing. The mafics are undistinguishable and the feldspar phenocrysts are indistinct. Quartz veins to 2 and 3 inches wide were noted. Minor amounts of disseminated chalcopyrite and pyrite are visible.

## SP-1-7:

Sheared and altered diorite (quartz?) porphyry. Feldspar grains are roughly aligned with a mafic matrix of unidentifiable composition. The rock is weakly magnetic and it is assumed that magnetite occurs as fine disseminations. Traces of chalcopyrite can be seen as either disseminations or in cross-cutting quartz veins. One quarter inch quartz veins cut the rock at random orientations.

## SP-1-8:

Similar to SP-1-7. Sheared, weakly porphyritic diorite. Magnetite disseminated throughout. Minor chalcopyrite and pyrite also disseminated throughout. Malachite occurs on fractures.

## SP-1:

Quartz-Hornblende Diorite, medium grained. Subhedral to anhedral hornblende crystals with anhedral quartz and plagioclase phenocrysts. Closely packed, almost granular texture. Feldspars moderately altered to kaolinite. Most of the hornblende appears fresh, however some show chloritic alteration. Minor pyrite and magnetite are disseminated evenly throughout.

## SP-1(a):

Sheared and altered quartz filled diorite. 1-3% disseminated pyrite. Textures and phenocrysts are largely destroyed.

## SP-2:

Altered quartz diorite similar to SP-1-2 and SP-1-5. Feldspathic rock with medium grained quartz and feldspar phenocrysts with interstitial pyrite. Chlorite appears to be associated with the pyrite and it is believed that these were originally hornblende sites.

## SP-3

Fine grained, black colored, strongly magnetic rock. Phenocrysts of feldspar and quartz(?) are barely visible. Very similar to SPLIT 100.



## DIAMOND DRILL CORE DESCRIPTIONS

### DDH #2:

- 0-150' Altered, highly fractured diorite (?) Mafics altered to chlorite appear to be hornblende. Feldspars kaolinized. Hematite on fractures. Sample @ 41'.
- 350'-400' Hornblende, quartz biotite - fine to medium grained. Few euhedral crystals of feldspar or hornblende. More mafic towards 400'. Quartz-calcite veins cut core at random angles. 1% disseminated pyrite. Minor chloritic around mafic sites. Relatively fresh rock. Samples @ 362' and 383'.
- 475'-500' Siliceous feldspar porphyry. Diorite? Mafics too fine grained to be distinguished. Many siliceous veins cut the core at various angles. Euhedral feldspars rare. Feldspars quite fresh and unaltered. Sample @ 497'.
- 620'-661' Same rock type cut by high angle (to core) siliceous 1/8"-1/4" veins of pyrite carrying 1% chalcopyrite and minor covellite. Trace bornite was noted. More chlorite was noted. Minor epidote in veinlets. Samples @ 622', 630', 634', 660'. Minor finely disseminated magnetite locally.
- 662'-664' Quartz vein - blotchy appearance resulting from fracture intensity and disseminations of pyrite and mafic material. Minor disseminated chalcopyrite. Sample @ 662'.
- 670'-725' Quartz-biotite diorite - anhedral to euhedral feldspar phenocrysts. Rare "books" of biotite left. Mafics generally gone but greenish-brown alteration along mafic sites seems to indicate biotite. Quartz veining with pyrite and minor chalcopyrite. Feldspars generally fresh but some kaolinization noted. Samples @ 681' and 720'.

### DDH #3:

- 0-190' Medium grained quartz-diorite: epidotized locally. Cut by veins consisting of calcite, quartz, pyrite, epidote and minor chalcopyrite. Feldspars and quartz anhedral. Mafics-hornblende rarely any euhedral crystals visible. Samples @ 61' and 188'.
- 190'-195' Feldspar porphyry dyke of intermediate composition (andesite?) Phenocrysts are dots of subhedral feldspars with minor epidote. The rock is green-black in color. Sample @ 193'. Strongly magnetic.

270'-293' Quartz-hornblende diorite, hornblende is the only distinctive crystal form. Feldspars anhedral to subhedral 1/8" grains. Minor chlorite and epidote alteration. 1/8" quartz veins as 1 per foot. Sample @ 284'. Medium grained.

350'-740' Same hornblende-quartz diorite as beginning of hole. Epidotization decreases towards the end of the hole - seems consistent. Epidote still in veinlets however. Minor disseminated pyrite and chalcopyrite along quartz calcite-epidote veinlets. Locally strongly magnetic. Samples at 559', 369', 447', 735' and 739'.

#### DDH #4

230'-250' Fine grained diorite (Quartz?) No euhedral crystals visible. Minor disseminated pyrite is pervasive. Minor quartz veining carrying pyrite. Sample @ 245'.

390'-420' Green andesite: fine grained, cut by 1/8" quartz and quartz epidote veins. Very chloritic and strongly magnetic. Sample @ 400'.

450'-465' Fine to medium grained hornblende quartz diorite. 1-3 mm hornblende crystals. Feldspars and quartz are anhedral. Minor disseminated py. Relatively fresh, unaltered rock. Sample @ 459'.

500'-520' Hornblende diorite - euhedral crystals of hornblende are barely visible. Clots of mafics give the rock a porphyritic appearance. Chloritic and strongly magnetic. Fine to medium grained. Sample @ 515'.

600'-625' Medium grained hornblende diorite. Feldspars anhedral to subhedral 1-3 mm grains. Weakly porphyritic. Mafics indistinct and moderately chloritic. Feldspars weakly kaolinized. Pervasive disseminated pyrite.

#### DDH #5

0-790' Hornblende, quartz diorite - pervasive, moderate epidotization to 550'. Hornblende occurs as subhedral to anhedral 1-3 mm grains. Feldspars are also subhedral to anhedral rarely forming crystals. The rock is fine to medium grained and is cut by quartz and quartz-epidote veinlets. At 542', 1/2" quartz veins carry minor chalcopyrite and py. From 680' to 700' the mafics are aligned. This may be due to shearing. This section is strongly magnetic

and very chloritic. Feldspars are generally fresh with some kaolinization. Some feldspars have a slight greenish tinge. Samples @ 65.5', 161', 215', 372', 377', 503', 542', 681', 696', 785'.

## DDH #7

100'-245' Highly epidotized and pyritized altered diorite - very fine grained to fine grained, fractured and veined rock. Very poorly developed and hard to distinguish hornblende. Pyrite occurs with quartz as coarse subhedral crystals or with epidote in the centre of epidote accumulations. Locally strongly magnetic. End of hole appears to be around 245'. Samples at 110', 174' and 245'.

## DDH #11

100'-690' Quartz diorite - pervasive epidote alteration as well as in veins of quartz. Some silicification along quartz veins. Medium grained, some euhedral crystals of plagioclase and hornblende. 1-3% disseminated and vein controlled pyrite. Samples @ 114', 163', 349', 689'.

## DDH #13

250'-490' Silicified and pyritized altered quartz diorite. Hornblende has completely gone to chlorite and occasionally pyrite. The rock appears very siliceous and is cut by numerous quartz and quartz-calcite veins to  $\frac{1}{4}$ " in width. Minor epidote: alteration. Approximately 1% py. Veins cut core at approximately 45 degrees. Samples @ 253', 327', 400'(?), 485'.

APPENDIX III  
STATEMENT OF EXPENDITURES

AS CLAIMS

EXPENDITURES

SALARIES

Geologist	*9 days @ \$45/day	\$ 405.00
Geological Assistant	5 days @ \$40/day	\$ 200.00
Supervision	1 day @ \$90/day	\$ 90.00

TRANSPORTATION

Mob. and Demob.		\$ 600.00
Helicopter	3.7 hours @ \$360/hr	\$1,332.00

ASSAYING

52 Soil samples		\$ 156.00
6 Chip samples		\$ 40.00

RADIO RENTAL

$\frac{1}{2}$ month @ \$250/month		\$ 125.00
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Domicile

15 man <del>d</del> days @ \$25/man/day		\$ 375.00
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10% OVERHEAD

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\$3,323.00

\$ 330.00

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\$3,653.00

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\* includes preparation work and report writing time.

APPENDIX IV  
STATEMENT OF QUALIFICATIONS

STATEMENT OF QUALIFICATIONS

I, Glen L. Garratt, am a qualified Geologist having graduated from the University of British Columbia in 1972 with a Bachelor of Science degree majoring in Geology. I have worked in the mineral exploration industry in British Columbia since 1969 and am presently employed by Great Plains Development Company of Canada, Ltd., as a geologist.

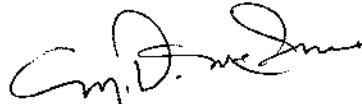


G.L. Garratt  
September, 1975.

STATEMENT OF QUALIFICATIONS

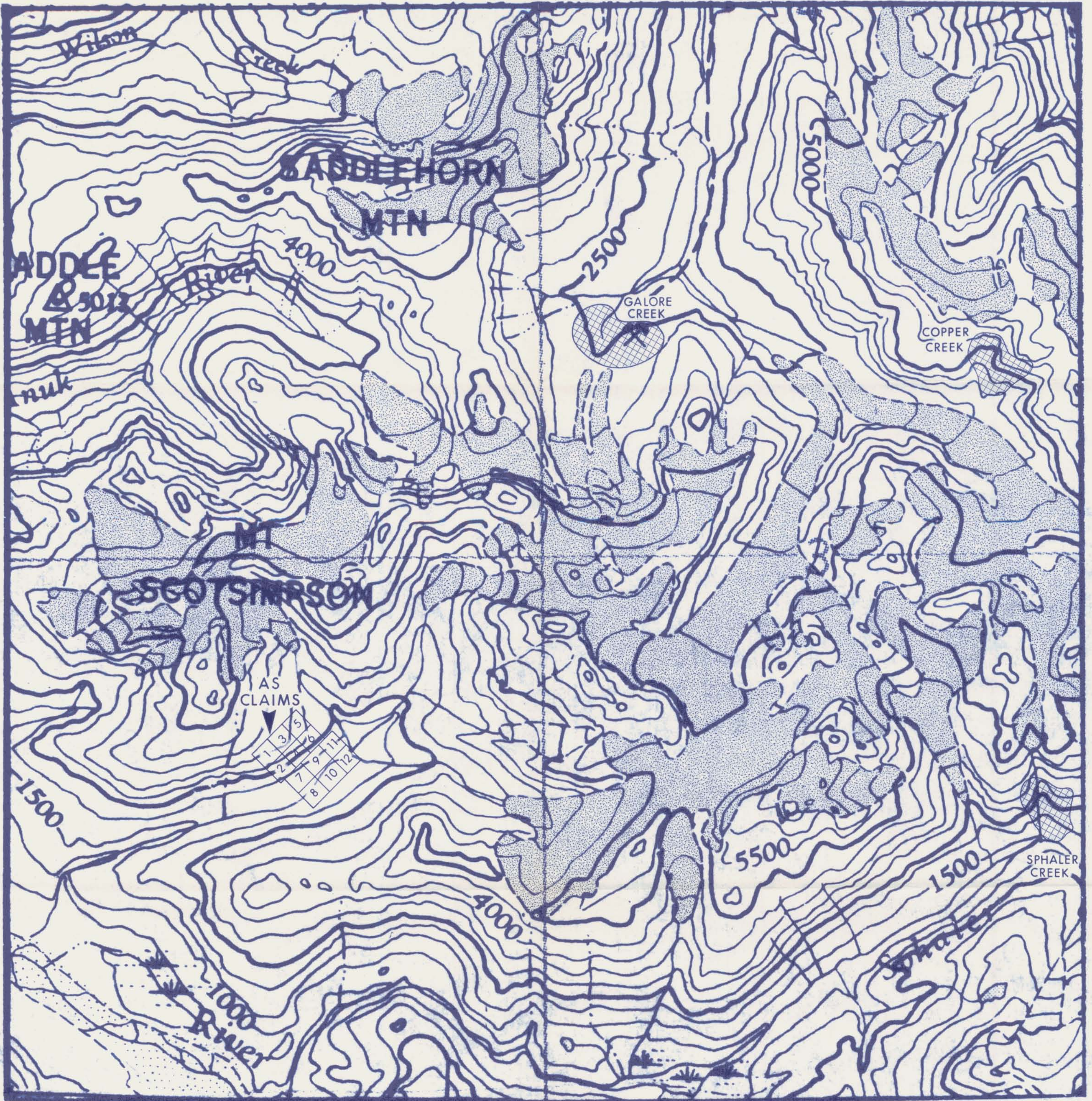
I, Michael D. McInnis, with residence at 6550 Silver Springs Way, N.W. in the city of Calgary, Alberta, declare

1. that I graduated from the University of British Columbia in 1969 with an Honours B.Sc., in geology.
2. that since graduation I have been employed as an exploration geologist in British Columbia, Yukon and the Arctic Islands,
3. that I am presently Regional Geologist for Great Plains Development Company of Canada, Ltd.,
4. that I have successfully passed the exams necessary for entrance into the Professional Engineers Society of B.C. and have applied for membership in that society.



Michael D. McInnis  
September, 1975.






Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT  
NO. 5615 MAP 4

LEGEND

-  GLACIER
-  OTHER PROPERTIES

*C. D. ...*  
*W. ...*

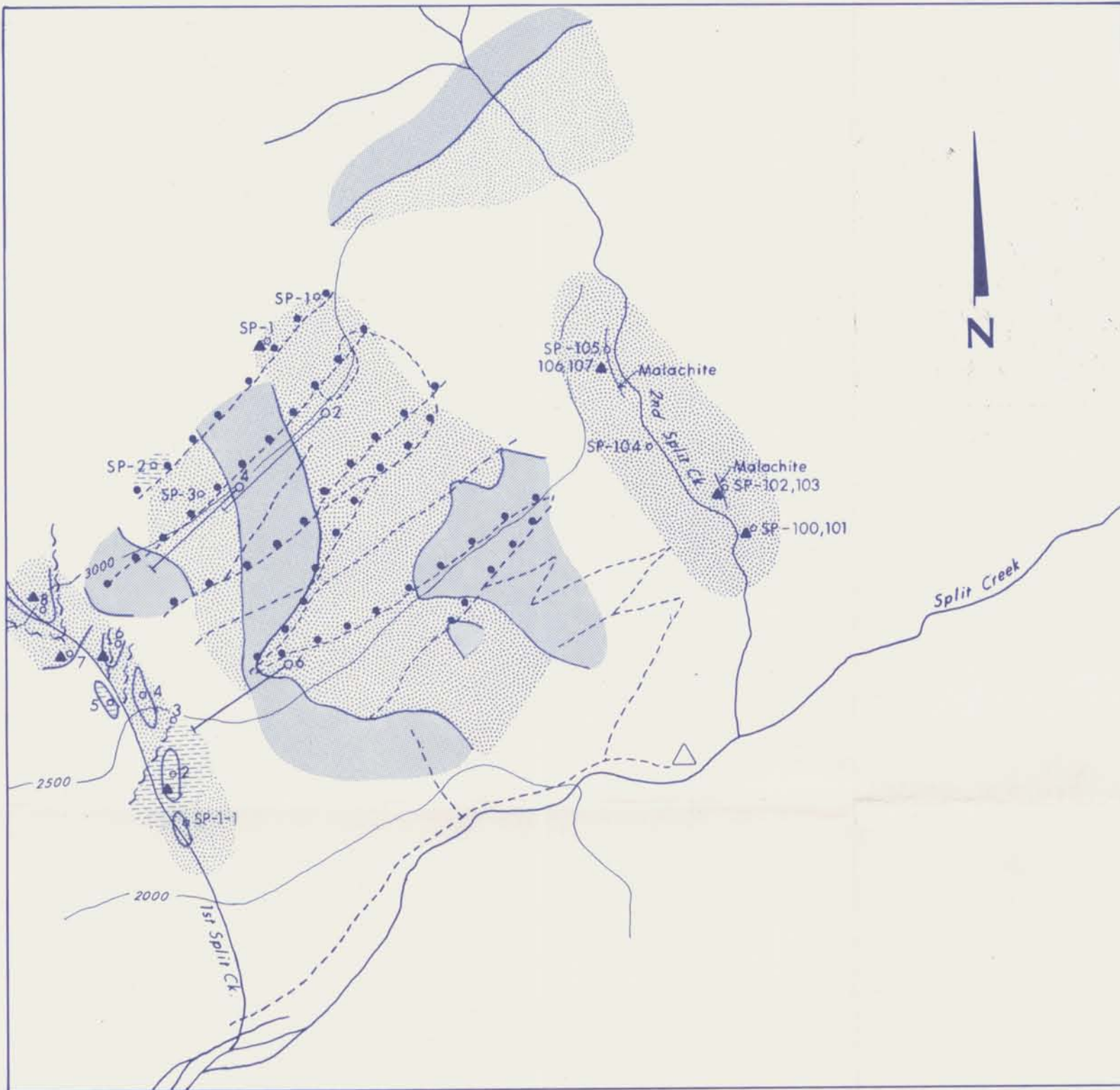


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BRITISH COLUMBIA

**A S CLAIM GROUP**

SCALE - 1:50,000

R. VISAGIE SEPT., 1974



### LEGEND

- Diorite to Granodiorite
- Andesite
- Felsitized Porphyry
- Inferred Geological Contact
- Fault and Shear Zone
- Diamond Drill Hole

### SYMBOLS

- Soil Sample Site
- Rock Chip Sample Site
- Contours - Topographical
- Roads -(overgrown)
- Camp
- Hand Specimen Site



DEVELOPMENT COMPANY  
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Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT  
NO. 5615 MAP 1

**BRITISH COLUMBIA**

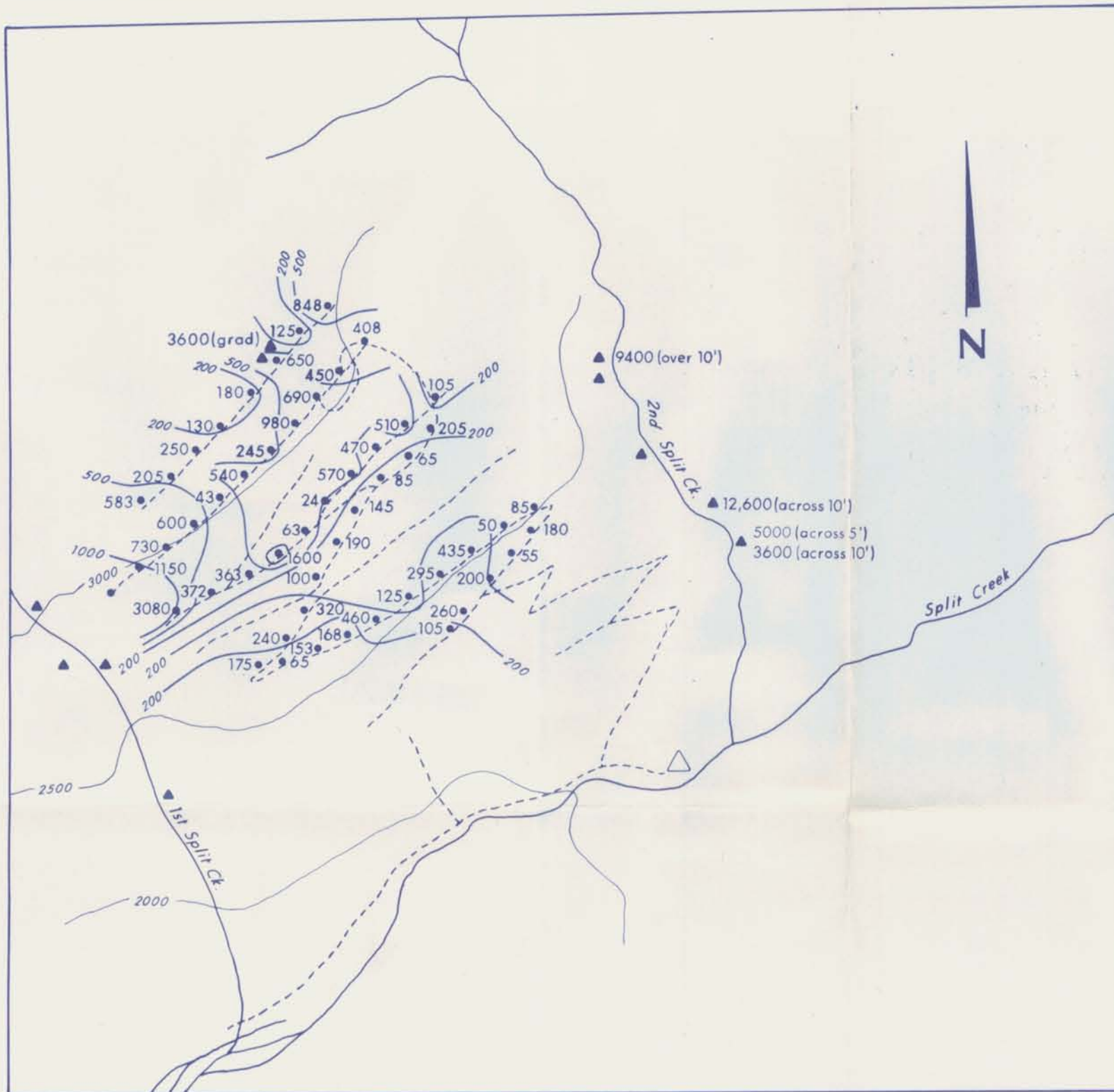
AS CLAIMS - GEOLOGY



*G. L. Garratt*

LIARD M.D.  
G.L. GARRATT

N.T.S.: 104G-4  
SEPTEMBER 1975



### SYMBOLS

- Soil Sample Site
- ▲ Rock Chip Sample Site
- Contours - Topographical
- - - Roads - (overgrown)
- △ Camp
- 123 Cu Value in ppm.
- Geochem. Contour



DEVELOPMENT COMPANY  
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Department of  
~~Mines~~ and Petroleum Resources  
ASSESSMENT REPORT  
NO. 5615 MAP 2

## BRITISH COLUMBIA

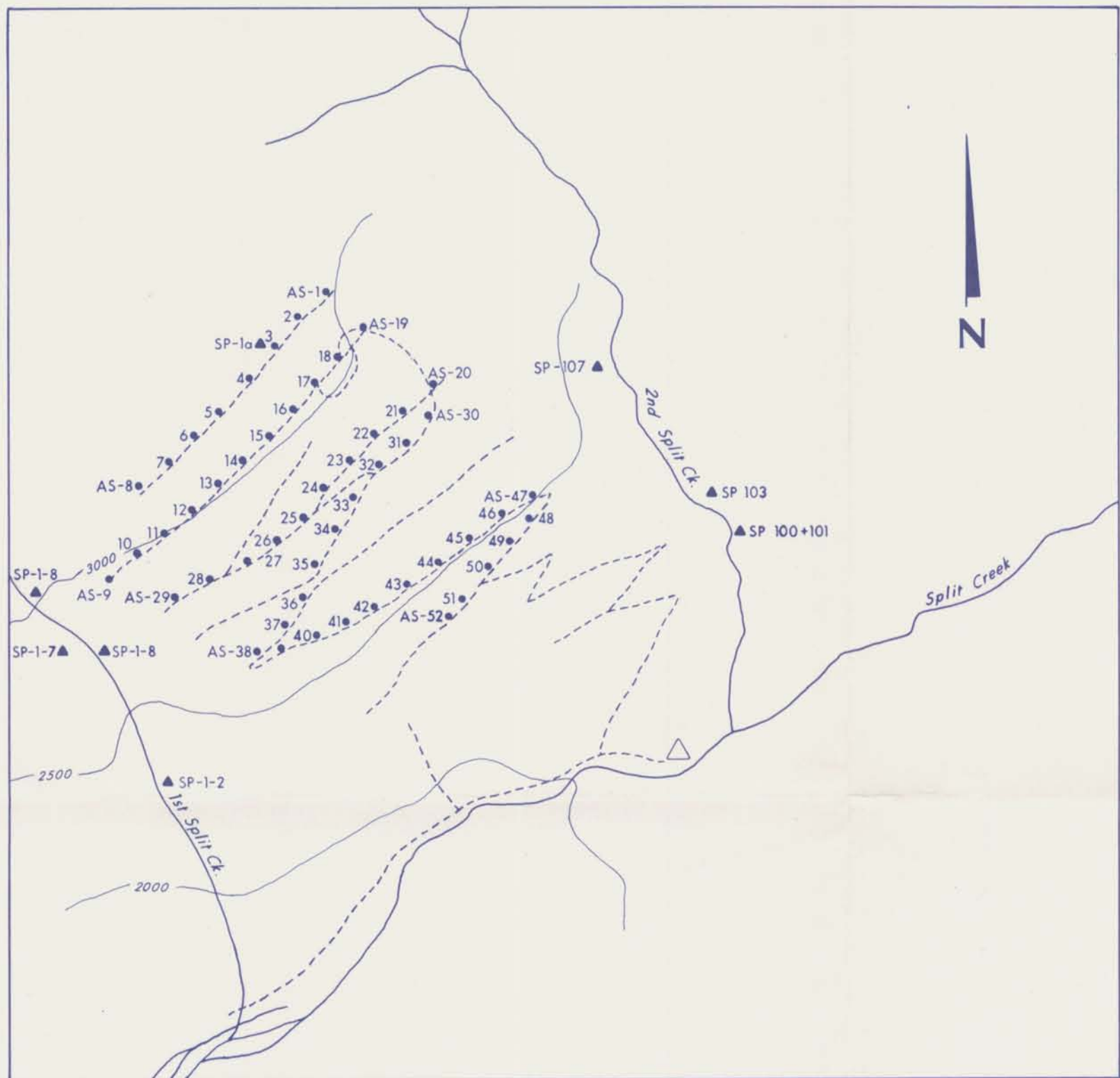
### AS CLAIMS - GEOCHEMISTRY



*G. D. ...*  
*G. L. Garratt*

LIARD M.D.  
G.L. GARRATT

N.T.S. : 104G-4  
SEPTEMBER 1975



**LEGEND**


**SYMBOLS**

- Soil Sample Site
- ▲ Rock Chip Sample Site
- Contours - Topographical
- - - Roads - (overgrown)
- △ Camp

Department of  
Mines and Petroleum Resources

ASSESSMENT REPORT


NO. 5615 MAP 3



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**BRITISH COLUMBIA**

AS CLAIMS - SAMPLE LOCATION



LIARD M.D.  
G.L. GARRATT

N.T.S. : 104G -4  
SEPTEMBER 1975