

103P03W

GEOCHEMICAL REPORT

KAY CLAIM GROUP

KAY CLAIM GROUP - SKEENA M.D., B.C.

CLAIMS: Kay Group Claims consisting of
Mineral Claim Numbers:
Kay #1 to Kay #35 inclusive.
Kay #1 to Kay #16 - Expires on
September 28, 1969.
Kay #17 to Kay #35 - Expires on
August 5, 1969.

LOCATION: 16 miles S.W. of Aiyansh Post
Office, B.C.
Latitude 55°08' North.
Longitude 129°20' West.
Skeena M.D., British Columbia

AUTHOR: R. N. Singh, B.Sc., M.Sc.,
(Lucknow), M.Sc. (Alberta)

ENDORSED BY: J. M. Brander, B.Sc.,
P. Eng. No. 4691.

OWNED BY: Phelps Dodge Corporation
of Canada, Limited.

DATES OF WORK: May 1st - May 31, 1969.

1980

KAY CLAIM GROUP

CLAIMS KAY #1 to KAY #35 (INCLUSIVE)

GEOCHEMICAL REPORT

AUTHOR: R. N. Singh, B.Sc., M.Sc. (Lucknow)
M.Sc. (Alberta)

ENDORSED BY: J. M. Brander, B.Sc. (Honours)
P. Eng. No. 4691.

Vancouver, B.C.

July 14, 1969

SUMMARY

A four man crew including a Project Geologist worked on the Kay Claim Group for a period from May 1st to May 31st (inclusive), 1969. Also, two professional line cutters were hired from a contracting firm to complete the line cutting job on the Kay Claim Group. Both the line cutters worked on the Kay Claim Group for a period of two weeks from May 1st to May 15th (inclusive), 1969.

Nearly 40 line miles of grid was established on the property by blazing and flagging the lines from approximately a 12,000 foot long baseline. Soil samples were taken every 200 feet along taped lines spaced 200' apart over the most interesting portion of the claim group. Wider-spaced lines over a 400' grid and 200' sampling interval were used over the remaining area of the property.

Three old trenches on the property with the sampling width of 460 feet were surveyed, mapped and sampled. Rock samples were collected at 10' regular intervals and were analysed for total Mo content.

This report includes the work accomplished and results obtained on the property and is submitted to be considered as assessment on the "Kay Claim Group".

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MAPS (IN FOLDER)

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Map No. 2 - Geochemical Assay Plan

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Map No. 4 - Isograde Map (Mo., p.p.m.)

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT

NO. **1980** MAP.....

LOCATION: Skeena Mining Division

Latitude - 55°08' North Longitude - 129°20' West

The claim group is located nearly 16 miles S.W. of Aiyansh, B.C. Access to the property is by car or truck from Terrace, B.C. along the Celgar-Nass Road. The property is located at an elevation of between 70' to 730' above sea level.

CLAIMS:

The 12 contiguous claims and 4 fractions (Kay #1 to Kay #16 inclusive) were staked on the 28th September, 1965. On July the 21st/22nd, 1968, mineral claims Kay #17 to Kay #35 (inclusive), were staked to the south and southwest of the claim group. Therefore, the block referred hereto consists of 35 mineral claims known as Kay #1 to Kay #35 (inclusive). All the above-mentioned claims were optioned by Phelps Dodge Corporation of Canada, Limited from Mr. Peter Hughan of Aiyansh, B.C.

GEOLOGY:

The property is located at an elevation of between 70' to 730' above mean sea level. The following geological units were observed on the property:

	Alluvium	Recent
Coast Batholith	Quartz Monzonite Porphyry	Cretaceous or later.
	Contact = Intrusive/Phyllite =	
Bowser Group	{ Phyllite Graphitic Argillite }	Upper Jurassic and Cretaceous(?)

It appears from the geological investigation of the area that a quartz monzonite porphyry plug measuring 5000'x2000' intruded the shales of the Bowser Formation. The plug trends northwesterly and appears to plunge towards the west. The axis of the plug is more or less parallel to the Nass River.

The porphyry stock is cut by what appears to be dykes of later phases with variable composition of hornblende diorite to aplite. Many quartz veins having a nearly northeasterly trend cut across the plug and carry visible molybdenum mineralization. Two sets of joints are present on the plug and cut each other approximately at a right angle. The northeasterly trending joints appear to have control on the mineralization. The mineralization as observed to date appears to be restricted to quartz veins and to the porphyry immediately in contact with these veins. The mode of mineralization is chiefly of

fracture filling type. Occasional disseminated mineralization was observed in a few places.

The metamorphism is of lower grade and shales of the Bowser Formation were metamorphosed to phyllite around the quartz-monzonite plug. To a lesser extent, graphitic argillites are also metamorphosed. Alteration products such as muscovite, chlorite and epidote were observed as being present around the contact and indicate the grade of metamorphism probably in order of Greenschist Facies. Within the plug itself, the porphyry seems to have been altered to sericite and albite to a certain extent.

From a genetic viewpoint, mineralization took place at later phases of crystallization. Metasomatism may have played a significant role during the process of mineralization, however, this could be confirmed only after the detailed study of the plug.

Beside molybdenum mineralization on the property, the association of minor pyrite, arsenopyrite and powellite was observed. Powellite is the oxidation product of molybdenite and is frequently present on the exposed surface of the plug.

GEOCHEMICAL SURVEY:

A soil survey program was carried out over a grid consisting of 200,000 feet of taped compass lines,

all of which were tied to a 12,000 foot base line running in a true E-W direction. The cross lines were run at a right angle to the base line (Map No. 1); or at a nearly right angle to the strike of the quartz-monzonite plug. The aerial extent of the survey area thus consisted of approximately 75,500,000 square feet of ground.

A total of 930 samples were collected to determine the Mo content of the soils and rocks (Map No. 2). Out of these, 47 rock samples were collected from the trenches and were assayed for total Mo content (Map No. 3). All samples lie within the confines of the property boundaries.

Methods and Procedures:

Soil samples of organic free material were taken from along the taped compass lines at intervals of 200 feet as shown on the accompanying map (Map No. 1).

A mattock was used to dig into the overburden and in all cases it was attempted to sample the "B" horizon of the soils. Wherever overburden was deep and disturbed a soil auger was used to get the desired samples. At places where soil samples were not available due to exposed bedrock, rock samples were collected. All such samples were analyzed for total Mo content. The material thus obtained was placed in numbered Kraft sample bags

and was shipped to the Company's laboratory at Smithers, B.C. for assay purposes.

At the laboratory, soil samples were carefully dried overnight at relatively low temperatures and subsequently sieved to #80 mesh, collecting approximately 2-5 grams for analysis. Total extraction for molybdenum were determined. The samples were fused with a standard fusion mixture followed by water leach. Determinations were made by using an atomic absorption unit - Perkin Elmer 303 model. The analytical accuracy was controlled by standard and periodic re-checks.

Results and Interpretations:

All assay results were plotted on the Geochemical Assay Plan (Map No. 2). From the available assay data, an isograde map for Mo, ppm was prepared to define the extent and magnitude of anomalous zones (Map No. 4). The statistical computations were carried out to determine and establish the background and anomalous values for the area. The following is the general statistical breakdown of the figures:

	<u>Mo (ppm)</u>	<u>Remarks</u>
Background	0-5	Very consistent
Threshold	6-9	-

	<u>Mo (ppm)</u>	<u>Remarks</u>
3rd Order Anomalies	10-21	Consistent
2nd Order Anomalies	22-46	"
1st Order Anomalies	46+	Reasonably consistent

The values obtained and represented as above show reasonable consistency and it is my opinion that the 1st and 2nd order anomalies could be of great significance. Since the property lies at considerably low elevation and is practically devoid of a complex drainage system, soil movement is least suspected. Therefore, the anomalies appear to reflect the nature of underlying bedrock and in all probability should not be far from the place of origin.

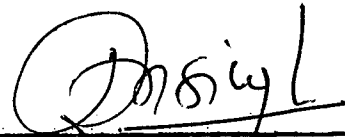
CONCLUSIONS AND RECOMMENDATIONS:

The observations made and results available to date confirm the presence of molybdenum mineralization within the confines of the porphyry plug. However, a detailed investigation is required to establish the economic potential of the property. Based on personal observation and available data, the following program is further recommended for the property.

1. General geological and topographical mapping of the area.

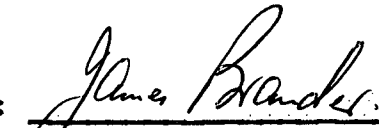
2. Detailed geological and structural mapping of the porphyry plug.
3. Bulldozer trenching of the geochemical anomalies.
4. Diamond drilling of the suitable targets.

Report by:



R. N. Singh, B.Sc., M.Sc.
(Lucknow), M.Sc. (Alberta)

Endorsed by:



J. M. Brander, B.Sc. (Honours)
P. Eng. No. 4691.

Vancouver, B.C.

July 14, 1969

DOMINION OF CANADA:
PROVINCE OF BRITISH COLUMBIA:
To Wit:

In the Matter of

I, Ram Narain Singh
of Vancouver

in the Province of British Columbia, do solemnly declare that
Expenditures - Kay Claim Group - 1969

Project Geologist	-	R.N. Singh	-	May 1 to May 31, 1969	\$	865.00
Mining Engineer	-	B. Hoygaard	-	May 1 to May 31, 1969		700.00
Assistant	-	B.D. Jolliffe	-	May 1 to May 31, 1969		500.00
Assistant	-	R.M. MacRae	-	May 1 to May 31, 1969		500.00
Linecutter	-	G. Graham	-	May 1 to May 15, 1969		525.00
Linecutter	-	L.B. Warren	-	May 1 to May 15, 1969		525.00
Total Wages 1969:						<u>3,615.00</u>

Camps and Cookery:

4 men for 30 days or 120 man days at \$7.00/day	\$	840.00
2 men for 15 days or 30 man days at \$7.00/day		<u>210.00</u>
Total		<u>1,050.00</u>

Assay Cost:

Assay cost for 930 samples at \$3.00/sample -	Total	<u>2,790.00</u>
TOTAL		<u>\$ 7,455.00</u>

And I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath and by virtue of the "Canada Evidence Act."

Declared before me at the District
of Seneca, in the
Province of British Columbia, this 24th
day of July, 1969, A.D.

R.N. Singh
R. N. SINGH
PHELPS DODGE CORPORATION of CANADA LIMITED
404 - 1112 W. PENDER ST.
VANCOUVER 1, B. C.

O. Elliott
A Commissioner for taking Affidavits within British Columbia or
a Notary Public in and for the Province of British Columbia.
COMMISSIONER FOR TAKING AFFIDAVITS
WITHIN BRITISH COLUMBIA

In the Matter of

Statutory Declaration
(CANADA EVIDENCE ACT)

Produced Pursuant to a Court Order

MINERAL ACT

FORM I



NOTICE TO GROUP

Mining Division Skeena Location of Nass River - 16 Miles S.W. Aiyansh, B.C.

Name of group Kay

We, the undersigned owners* of the following adjoining mineral claims, desire to group them according to the provisions of the *Mineral Act*:—

NAME OF CLAIM	Record No. or Lot No.	SIGNATURE OF OWNER*	Free Miner's Certificate No.
Kay No. 1	27825	Held under option by	78640
Kay No. 2	27826	Phelps Dodge	
Kay No. 3	27877	Corporation	
Kay No. 4	27878	of Canada,	
Kay No. 5	27879	Limited	
Kay No. 6	27880		
Kay No. 7	27881		
Kay No. 8	27882		
Kay No. 9	27883		
Kay No. 10	27884		
Kay No. 11	27919		
Kay No. 12	27920		
K 13 Fr.	31800		
K 14 Fr.	31801		
K 15 Fr.	31802		
K 16 Fr.	31803		
Kay 17	32999		
Kay 18	33000		
Kay 19	33001		
Kay 20	33002		
Kay 21	33003		
Kay 22	33004		
Kay 23	33005		
Kay 24	33006		
Kay 25	33007		
Kay 26	33008		
Kay 27	33009		
Kay 28	33010		
Kay 29	33011		
Kay 30	33012		
Kay 31	33013		
Kay 32	33014		
Kay 33	33015		
Kay 34	33016		
Kay 35 Fraction	33017		
		<i>R. C. Cunningham</i>	
		R. C. Cunningham,	
		Resident Geologist.	
		F.M.C. No. 78651	

12+00E

To accompany Geochemical Report
on the Kay Claim Group (Claims
Kay 1 to Kay 35 Inclusive)
Skeena M.D. of B.C.

20+00N

- TRENCH-A
- RS 4320 \ 12
 - RS 4321 \ 80
 - RS 4322 \ 20
 - RS 4323 \ 20
 - RS 4324 \ 25
 - RS 4325 \ 40
 - RS 4326 \ 60
 - RS 4327 \ 25
 - RS 4328 \ 35
 - RS 4329 \ 25
 - RS 4330 \ 80
 - RS 4331 \ 120
 - RS 4332 \ 40
 - RS 4333 \ 25
 - RS 4334 \ 45
 - RS 4335 \ 40
 - RS 4336 \ 35
 - RS 4337 \ 40
 - RS 4338 \ 50
 - RS 4339 \ 200
 - RS 4340 \ 200
 - RS 4341 \ 100
 - RS 4342 \ 30
 - RS 4343 \ 160

- TRENCH-B
- RS 4344 \ 60
 - RS 4345 \ 65
 - RS 4346 \ 80
 - RS 4347 \ 25
 - RS 4348 \ 120
 - RS 4349 \ 40
 - RS 4350 \ 45
 - RS 4351 \ 40
 - RS 4352 \ 140
 - RS 4353 \ 85
 - RS 4354 \ 60

- TRENCH-C
- RS 4355 \ 200
 - RS 4356 \ 40
 - RS 4357 \ 160
 - RS 4358 \ 55
 - RS 4359 \ 85
 - RS 4360 \ 100
 - RS 4361 \ 320
 - RS 4362 \ 100
 - RS 4363 \ 45
 - RS 4364 \ 60
 - RS 4365 \ 65
 - RS 4366 \ 320

14+00E

1980 map #4

PHELPS DODGE CORPORATION/LIMITED
VANCOUVER OFFICE

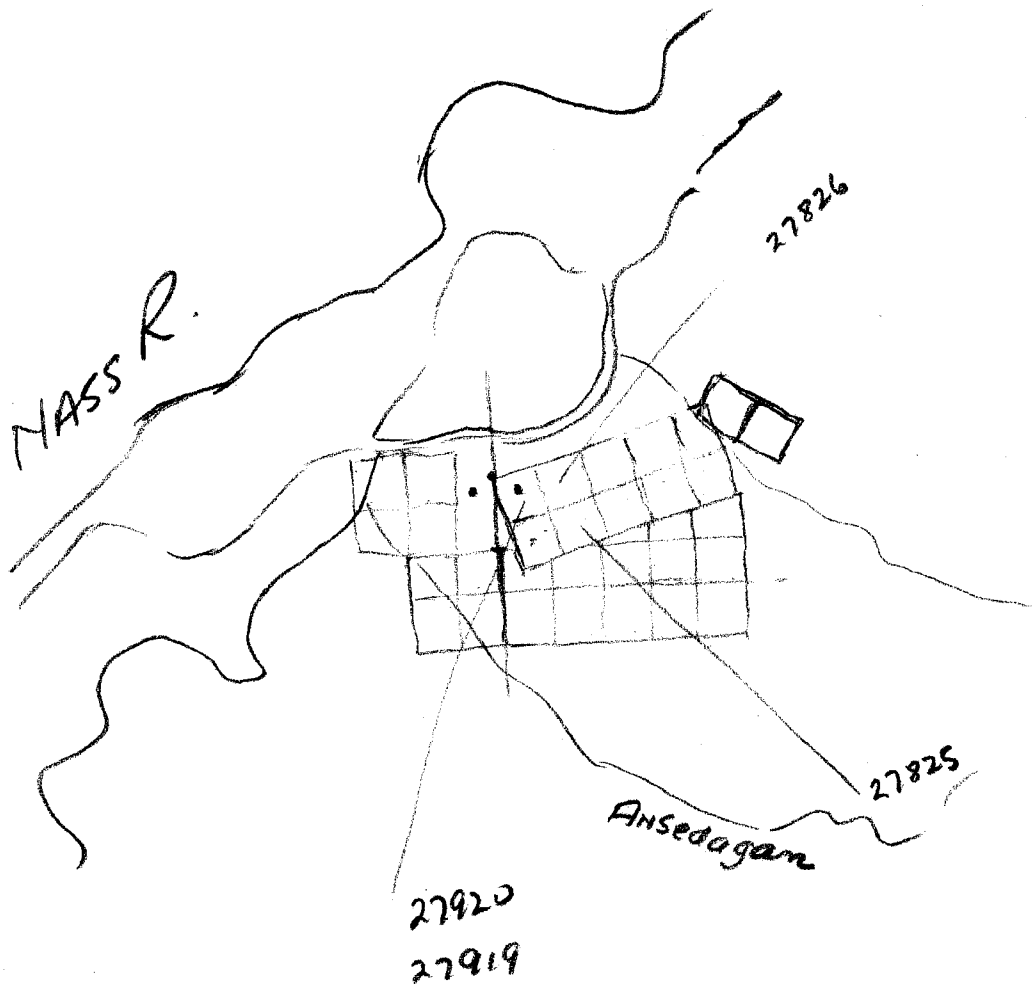
TRENCHES-A, B, C.
SAMPLING AND ASSAY PLAN

RS 4320 / 235—Sample NO/MO.ppm

Scale: 1 inch = 20 feet
Date: MAY 69
Drawn by: RNS & PART RNS.

James Brandt, P.E. #4691
0861

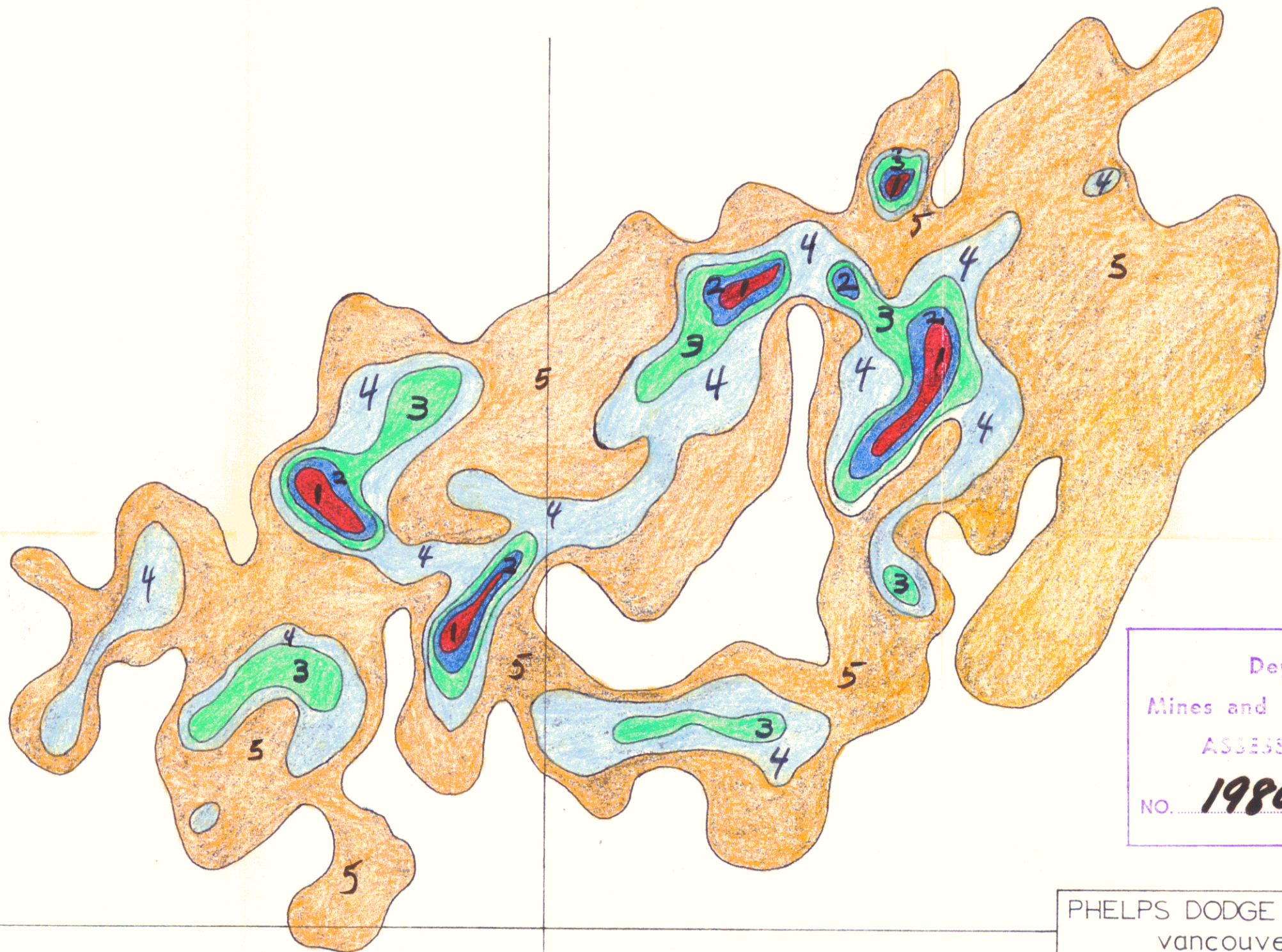
MAP No. 3



KAY GROUP.

LEGEND

- 0-5 ppm Mo.
- 5 5-25 ppm Mo
- 4 25-50 ppm Mo
- 3 50-75 ppm Mo
- 2 75-100 ppm Mo
- 1 >100 ppm Mo



Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. **1980** MAP **#3**

PHELPS DODGE CORP. OF CAN. LTD. vancouver office			
PROJECT 75 MO (PPM) ISOGRADE MAP. GEOCHEMICAL ANOMALIES			
SCALE:	DATE:	SURVEYED BY:	DRAWN BY:
1 in. = 500'	june, 69	rns & party	rns

BASE LINE _____

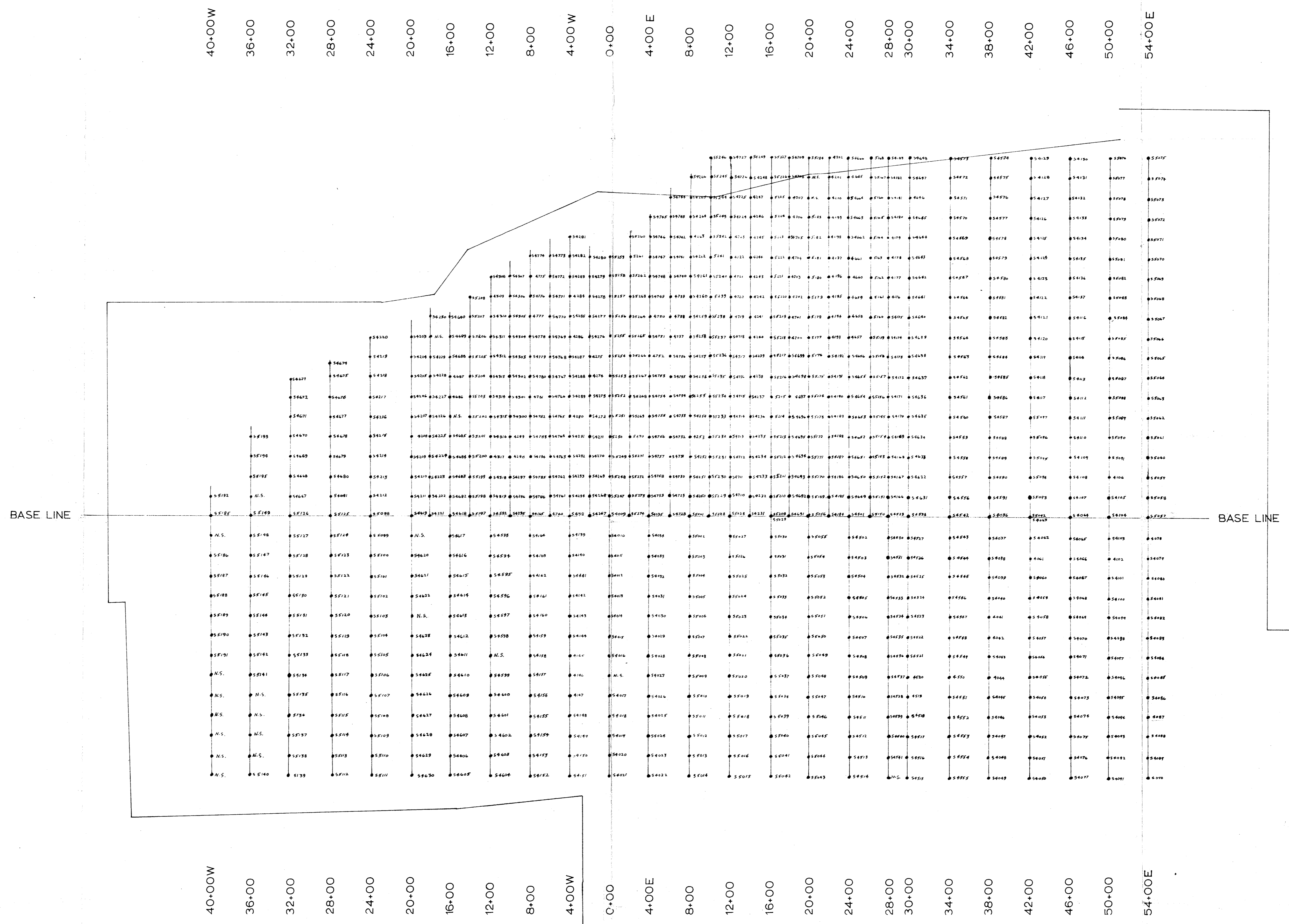
To accompany Geochemical Report on
the Kay Claim Group (Claims Kay 1
to Kay 35 inclusive) Skeena M.D.
of B.C.

00+

1980

James Blamir, P. Eng. #4691

MAP NO. 4.

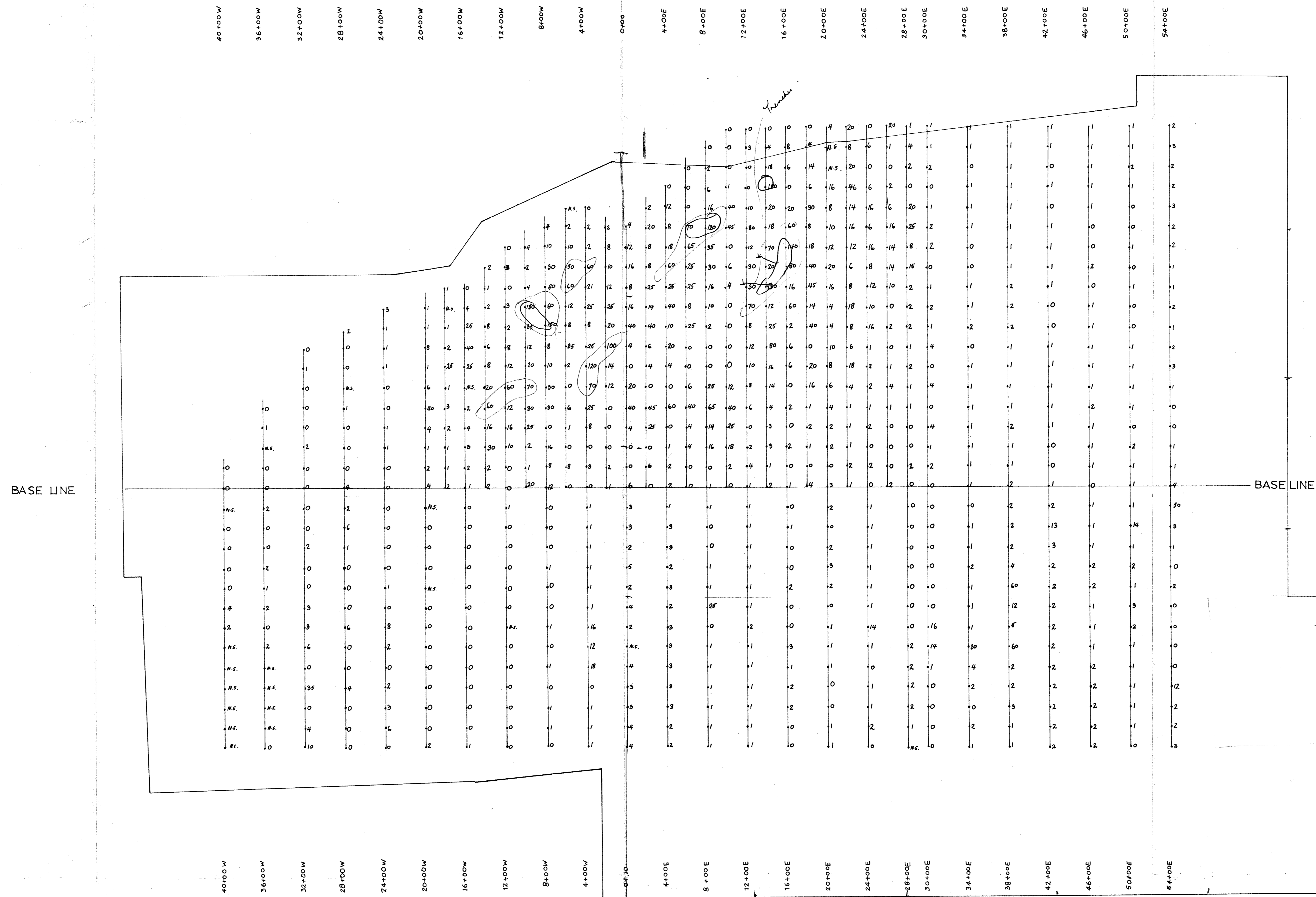


Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 1980 MAP #1

1980

PHELPS DODGE CORPORATION OF CANADA, LIMITED
VANCOUVER OFFICE
PROJECT 75 KAY GROUP
SOIL SAMPLING PLAN
SAMPLE NO. 0080
SCALE 1 inch = 500' DATE MAY 69 DRAWN BY RNS & PARM RNS & BDJ
CHECKED BY J. Brander, P. Coy. #4691 MAP No. 1.

To accompany Geochemical
Report on the Kay Claim Group
(Claims Kay 1 to Kay 39 incl.)
Skeena M.D. of B.C.



1980

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 1980 MAP #2

Anomaly of traces
outlined in

To accompany Geochemical Report
on the Kay Claim Group (Claims
Kay 1 to Kay 35 inclusive)
Skeena N.D. of B.C.

PHELPS DODGE CORPORATION OF CANADA, LIMITED
VANCOUVER OFFICE

PROJECT 75 KAY GROUP
GEOCHEM ASSAY PLAN
• 30.Mo. PPM.

SCALE: 1 Inch = 500' DATE: MAY, 68 SURVEYED BY: R.N.S. / PARTY DRAWN BY: R.N.S.

John P. ... # 4691 MAP No. 2