

4686

GEOLOGICAL REPORT

On the
PAC GROUP
and
CAN GROUP

Omineca Mining Division
British Columbia

October 25, 1973
Vancouver, B.C.

E. Percy Sheppard, P.Eng.
Consulting Geologist

Mines and Petroleum Resources	
ASSESSMENT REPORT	
NO. 4686	MAP

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GEOLOGICAL REPORT

PAC and CAN GROUPS

Omineca Mining Division, B. C.

SUMMARY & CONCLUSIONS

Keywest Resources Ltd. (N.P.L.) is the owner of two contiguous groups of staked mineral claims: the PAC GROUP consisting of 26 claims, and the CAN GROUP of 28 claims. The groups are located in the Omineca Mining Division, Motase Lake area, northern British Columbia. (Lat. 56° 03'N, Long. 127° 00W.)

The claims lie approximately 100 miles north of Smithers, and are at present accessible by helicopter. The B. C. Railway to Dease Lake passes 8 miles east of the property. The area was prospected for gold as early as 1899, and for base metals in 1946. There has not been any production from these claims.

The area is underlain by rocks ranging in age from Late to Recent Paleozoic. The most widespread sedimentary and volcanic formations are of Permian, Triassic, Jurassic, Cretaceous, Paleozoic, and intrusive rocks of the Omineca batholith emplaced in Upper Jurassic or Lower Cretaceous time.

The claims are mostly underlain by the Takla group, a folded, faulted assemblage of volcanics and sedimentaries, intruded by the Kastberg intrusions ranging from granodiorite to quartz diorite in the form of stock, sills and steep dikes which crosscut the strata. A fairly large intrusion runs N-S through the center of the groups.

The past season's work program consisted of 10 miles of grid-line cut N-S along the center of the PAC and CAN groups. A geochemical survey was run over this grid and anomalous zones were outlined in Can 5, 7, 6, 8, and a minor area in the south part of Can 21. An anomaly was also outlined on Line 0 in Pac 18 and 20.

A magnetometer survey was carried out over part of the same grid pattern. Very small differences in magnetic intensity were obtained and it was discontinued.

Geological mapping was carried out along the grid lines and on traverses between location lines.

A significant result of the prospecting and mapping was the discovery of a hornfels bed which outcrops at the initial post of Can 7 and 8. This formation is fine-grained,

PAC and CAN Groups

SUMMARY - cont.

thin-bedded, with $\frac{1}{4}$ " bands of chert. The bands adjacent to the chert bands were found to carry fine-grained chalcoppyrite and pyrite. Chalcoppyrite was identified in several places. The formation was traced for over 2700 feet in a northerly direction and found to have a dip of 40° E and a thickness of 600 feet. 12 samples were taken from this bed and all returned low values in copper; however, this indicates that the formation may contain a large low-grade deposit.

CONCLUSIONS

It is concluded that the results of the geochemical survey carried out this season justify a continuation of the survey.

The discovery of the hornfels bed containing the disseminated copper constitutes a significant find. This part of the claims group should be thoroughly prospected in the coming season.

RECOMMENDATIONS

It is recommended that the exploration program outlined in this report be carried out as soon as weather conditions permit.

It is further recommended that Keywest Resources Ltd. (N.P.L.) allocate the sum of \$55,000 to implement the exploration program.

E. P. Sheppard

E. Percy Sheppard, P.Eng.
Consulting Geologist

October 25, 1973



GEOLOGICAL REPORT

PAC and CAN GROUPS

Omineca Mining Division, B. C.

INTRODUCTION

The following report was prepared at the request of Mr. A. G. Cooke, President of Keywest Resources Ltd. (N.P.L.). Data for the report were obtained by the writer during a visit to the property on September 13 to 20, 1973, and a review of pertinent Government reports and maps.

PROPERTY

The Pac Group consists of 26 staked mineral claims, as follows:

<u>Name</u>	<u>Record Nos.</u>	<u>Expiry Date</u>
PAC 1-26	116700-116725	October 2, 1973

The Can Group consists of 28 staked mineral claims, as follows:

CAN 1-28	116672-116699	October 2, 1973
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OWNERSHIP

The claims are owned by Keywest Resources Ltd. (N.P.L.), by right of purchase.

LOCATION & ACCESS (Lat. 56° 03'N, Long. 127° 00W)

The claims group is located 2 miles east of Motase Lake and approximately 8 miles west of Bear Lake, and the location of the B. C. Railway (formerly PGE) line to Dease Lake, Cassiar District, Omineca Mining Division. The distance from Smithers is approximately 100 air-miles.

At present access to the property is by fixed-wing aircraft to Motase Lake and a 2-mile foot trail, or by helicopter to the northeast corner of the group. In the near future access will be by a jeep road from the B. C. Railway at the southern end of Bear Lake, a distance of approximately 8 miles. This road would follow level ground at about the 3000 ft. contour and no difficulty is anticipated in constructing it.

HISTORY

The mountainous region near the center of the northern half of British Columbia is relatively inaccessible and in the past fur trading has been the main activity. Interest in mining was sparked in 1899 by a placer gold discovery on McConnell Creek. Subsequent discoveries resulted in widespread prospecting in the area during 1907-1908. However, no commercial deposits were located at that time.

Geological mapping of the area by the Geological Survey of Canada was begun in 1941 and completed in 1948. During the mapping program many occurrences of gold, silver, copper, coal and other minerals were tabulated. However, prospecting did not flourish in the area, due mainly to its inaccessibility. At present the B. C. Railway is building a new line northward along Bear Lake and the Skeena River to Dease Lake. This line changes the picture greatly and opens up a vast area to the prospector.

The huge porphyry copper mines at Grand Isle on Babine Lake, and Endako Mines at Huston, are no more than 90 miles south of the area under consideration. Along the Skeena River valley, to the north, mineralized properties are already being investigated for commercial deposits. This region is a potential hunting ground for valuable commercial mineral deposits.

There has been no mineral production from the group of claims covered by this report.

PHYSICAL FEATURES

Part of the map-area is drained into the Pacific Ocean by way of the Sustut River which flows westerly into the Skeena River. The remainder of the area is drained by the Driftwood River, Lion and Kastberg Creeks, whose waters eventually enter the Fraser River. The northern and eastern parts are drained by the Finlay and its tributaries easterly into the Peace River and thence to the Mackenzie River to the Arctic Ocean.

The area is mountainous. Elevations range from 2600 to 8100 feet, but local relief rarely exceeds 4000 feet. The only valleys with important areas lying below 3000 feet are those of Bear Lake and lower Sustut River, where only occasional peaks exceed an elevation of 7000 feet.

Glaciation. Glacial striae and erratics were observed at maximum elevations of 7250 feet, which indicates that the ice-sheet did not reach above that elevation. Indications are that the ice-sheet moved easterly from the vicinity of Thutade Lake and southeasterly across Forrest Mountain, McConnell Range and the outlet of Fredrikson Lake. All valleys have been strongly eroded by glaciers flowing along them. Transverse valleys owe much of their glacial carving to a valley glacier stage that followed the gradual wasting of the ice-sheet.

Climate. There is abundant rainfall in the area. Winter snows lie to a depth of 6 to 20 feet. Summer temperatures attain a maximum of 95°, and minimum winter temperatures of -60° are recorded.

Water is available from creeks which flow along the valleys at the 3000 ft. elevation, and from occasional streams which flow into the valleys from small mountain reservoirs.

The area is forested with an abundant growth of alpine fir, black spruce and lodgepole pine which grows between elevations of 3000 to 5000 feet. Willow, alder, juniper, ground birch and devil's club are widespread.

GENERAL GEOLOGY

The area is underlain by rocks ranging in age from late Paleozoic to Recent. The most widespread sedimentary and volcanic formations are of Permian, Triassic, Jurassic, Cretaceous and Paleocene ages; the intrusive rocks are those of the Omineca batholith, emplaced in Upper Jurassic or Lower Cretaceous time. A more complete list of formations is shown in the accompanying tables.

In the part of the map-area under consideration, the major formations encountered are the Takla group and Kastberg intrusions.

The Takla group comprises a conformable assemblage of over 33,000 feet of volcanic and sedimentary strata. It is divided into two groups; the lower division (Upper Triassic and Jurassic) and the upper division (Jurassic). The lower division contains about 10,000 feet of mainly greenish pyroclastic rocks and lavas characterized by numerous blocky, black pyroxene grains and phenocrysts, or their pseudomorphs. The upper division contains about 23,000 feet of volcanic and sedimentary rocks. The oldest part includes more than 18,000 feet of reddish lavas and pyroclastic rocks characterized by numerous white feldspar phenocrysts and

grains. These are overlain by more than 5,000 feet of shallow water, marine, fossiliferous sediments interlayered with minor volcanic rocks, carbonaceous strata and coal. Fossils indicate a range in age from early Lower Jurassic to middle Upper Jurassic. The upper and lower divisions both carry deposits of copper, silver, gold and other metals.

The Takla strata occupy a broad, northwesterly trending synclinerium complicated by faults and subsidiary folds. The axial part of this synclinerium lies close to the southwest edge of a parallel belt 12 miles wide which contains most of the major faults of the area. The folds are thought to plunge northwesterly.

The oldest Takla rocks are found on the northeast limb of the synclinerium. Strata of the lower division occupy a belt 14 miles wide and trend northwesterly with consistent southwestern dips.

Kastberg intrusions occupy the south and southwestern parts of the map-area in Bear Lake Valley. They are grey, buff, or pale pink in color; generally porphyritic in texture, and weathered to a depth of half an inch. They vary in composition from granodiorite to quartz diorite. Phenocrysts are mainly plagioclase feldspar.

The intrusions form one principal stock about four miles in length and lie to the east of Bear Lake. In other parts of the district they form tabular bodies ranging to more than 300 feet in thickness. They appear to be gently dipping sills parallel with the layering of the enclosing strata; others appear as steeply dipping dikes cutting across the enclosing formations. Faults strike northwesterly or parallel to the axis of folding, and dip steeply. The fault zones are characterized by various combinations of schistose, fractured, crumpled, carbonatized and otherwise altered rock. Directions and magnitudes of the latest movements have not been determined.

ECONOMIC GEOLOGY

The area was prospected for gold as far back as 1899 but failed to produce large amounts. Geological mapping carried out in 1941 renewed interest in the area and in 1946 a number of gold prospects were opened up by a few prospectors.

The most widespread economic minerals of the area are those containing copper. Chalcopyrite is the predominant sulphide, with bornite, chalcocite and native copper in lesser amounts. These are most abundant in lavas, tuffs, and similar rocks of the Takla group where they generally occupy

TABLE OF FORMATIONS—*Conc.*

Era	Period or epoch	Formation and thickness in feet	Character
Intrusive contact			
	Jurassic (?)		Olivine gabbro, mainly well banded; peridotite, pyroxenite, dunite, and serpentine.
Relations to upper Takla rocks uncertain; probable intrusive contact with lower Takla rocks.			
Mesozoic	Jurassic	Takla group (Upper division) 23,000 +	Greywackes, conglomerates (with chert pebbles), shales, and argillites; minor limestone and coal. Marine fossils numerous. Andesitic, basaltic, and dacitic, commonly red, purple, or grey, tuffs, agglomerates, and lavas; in part interbedded with Jurassic sedimentary rocks. Contains deposits of copper, silver, and other metals.
	Mainly conformable, locally disconformable		
	Upper Triassic and (?) Jurassic	Takla group (Lower division) 10,000 ±	Dark green, andesitic and basaltic tuffs, agglomerates, and lavas with prominent black, blocky grains and phenocrysts; minor tuffaceous argillite; probably equivalent meta-andesite and meta-basalt, greenstone, basalt, and hornblende schist and gneiss, with a little intercalated limestone, tuff, and argillite. May include some undifferentiated older rocks. Contains deposits of gold, copper, and other metals.
Disconformable contact with Asitka group; contact with Cache Creek group not observed			
Palaeozoic	Middle Permian (?)	Cache Creek group	Slate, argillite, phyllite, argillaceous quartzite, and ribbon chert; schist and gneiss derived from andesitic lavas and tuffs; minor limestone.
	Contact not observed		
	Lower Permian and (?) earlier	Asitka group 8,500 + (base not exposed)	Massive, streaked, and spherulitic rhyolitic lavas; andesitic lavas and interlayered tuffs and breccias (also, derived greenstones, slaty tuffs, phyllites, and schists); argillite, slate, and phyllite; bedded, grey, green, and red chert; massive to bedded limestone, minor dolomite. Foraminifera numerous.

TABLE OF FORMATIONS

Era	Period or epoch	Formation and thickness in feet	Character
Cenozoic	Recent		Stream alluvium and delta deposits, talus, soil, calcareous tufa.
	Pleistocene		Glacio-fluvial and glacio-lacustrine deposits; erratic boulders, morainal deposits; other glacial drift.
	Tertiary to Recent		Basalt necks, dykes, lavas; minor cone-like (Recent) pyroclastic deposits.
Intrusive contact			
	Tertiary (early Tertiary (?))	Kastberg intrusions	Feldspar and feldspar-quartz porphyries, with dense, chalky weathering groundmass; medium-grained, porphyritic granodiorite and quartz diorite. Dykes, sills, and a stock.
Intrusive contact			
Mesozoic and Cenozoic	Upper Cretaceous and Paleocene	Sustut group 3,000+	Buff to grey impure sandstones, conglomerates (with granitic pebbles), red, green, and grey shales; minor dacitic tuff (Paleocene) and coal. Well-bedded continental deposits characterized by crossbedding and fossil plant remains.
Unconformity			
	Upper Jurassic or Lower Cretaceous	Omineca intrusions	Chiefly grey to pink, equigranular to porphyritic, massive granodiorite and quartz diorite. Omineca batholith and related stocks and dykes.

parts of sheared, narrow quartz veins or have partly replaced favourable tuff beds.

Silver values are usually high in the copper deposits, but gold occurs in negligible amounts.

DETAILED GEOLOGY - PAC GROUP

The Pac group of claims is underlain by red, green, grey and buff andesitic lavas, tuffs and agglomerates of the Takla group. Near the mineral occurrences these rocks dip 15° to 25° SW, and are cut by steep, light grey feldspar porphyry and quartz porphyry dikes - phases of the Kastberg intrusions.

Porphyritic granodiorite outcrops were observed on Pac 17 and 18. A dike of similar composition outcrops on Pac 16 which strikes west and dips vertically. This area appears to be greenstone with many epidote stringers. No mineralization was observed here.

On Pac 18 there is considerable pyrite and pyrrhotite mineralization. Two samples taken here assayed .12% and .04% Cu.

On Pac 20 there is a hornfels bed outcropping which strikes 20°W and dips 55° SE, well mineralized with pyrite, pyrrhotite and chalcopyrite. Sample assayed 0.15% Cu. On Pac 2 and 4 there is a gossan area containing pyrite, pyrrhotite and a small amount of copper mineralization. No samples were taken. On Pac 1, 2, 13 and 14 there is an area of the Takla group composed of andesitic lavas. Pac 3, 4, 5, 6, 7, 8, 15, 19 and 20 are underlain by volcanics.

A hand specimen was taken from Pac 20 and sent to the Department of Geology, U.B.C., for thin section determination. It was found to be, "A porphyritic granodiorite with biotite as its main mafic mineral...." A hand specimen taken from the border of Pac 18 and 20 was found to be, "An orange-brown coloured granodiorite. The plagioclase is in well developed grains and the potassium feldspar is mostly interstitial."

DETAILED GEOLOGY - CAN GROUP

An intrusive body similar to that on the Pac group outcrops right across the Can group. The quartz porphyry intrusion appears to run southerly across Can 5, 6, 19 and 20. A small quartz porphyry intrusion was observed 100' east of the final post of Can 17 and 18. A 20' wide dike cuts the purple and green volcanics of the Takla group on Can 2 and 3, striking N 60°E and dipping vertically. There is very little copper mineralization along the border of the dike. No samples were taken here.

There are three quartz veins on Can 5, striking N 60°E and dipping vertically. Samples from the south vein assayed 2.38% Cu, 10oz silver, 0.27 oz gold. The vein was observed for 350 feet, varying in width from 4" to 6". Another vein outcrops 150' north from the above, exposed for approximately 150' with widths from 6" to 8". It carries some chalcopyrite and bornite. Mineralization ended abruptly along strike and did not continue into the wall rock. Samples were taken but assays have not been received. No samples were taken from the third vein.

Diamond drilling had been carried out on Can 5, 7 and 8. It is believed that mineralization was encountered during this work but the results are not available. There was evidence that some geological mapping had also been carried out.

Samples were taken from a showing 50'E and 50'W from the final post of Can 5 and 6. The assays were very low, .02% and .07% Cu. Other samples were taken along the location line 600 feet from the initial post of Can 3 and 4; results were low. A volcanic outcrop at this point, which appeared to be well mineralized, gave a low assay of .08% Cu. A sample taken from an intrusive at the diamond drill site in Can 8 gave .01% Cu.

A hornfels bed which appears to be well mineralized outcrops at the initial post of Can 7 and 8 and the final post of Can 9 and 10. This bed was traced by outcrops for 2700 feet along strike. Its downdip thickness, measured down the slope and at right angles to the dip, was 600 feet. The bed seems to strike uniformly N 20°W and dips approximately 40°E. It appears to be a contact metamorphic rock, as shown by the thin section determination: "The rock is a very fine grained banded hornfels probably of the amphibolite facies of the contact metamorphic series. The rock was probably formed by the contact metamorphosis of a thin bedded series of cherts and pelitic sediments. The light bands contain a high percentage

..cont.

DETAILED GEOLOGY - cont.

of quartz grains along the carbonate and muscovite as well as the sulphides as seen in the polished section. The dark bands are primarily muscovite and pyrite with lesser amounts of quartz and carbonate. The creamy and brown bands also contain some potassium feldspar. The sulphides are associated with the carbonate which often forms a thin border around the grains..."

Twelve samples were taken from this bed and the results are shown on the accompanying map and the Appended Certificate of Assays. This hornfels member requires much more investigation to determine its extent and economic value.

There is one intrusive crossing this bed on Can 7 which appears to be at least 60 feet in width. A thin section was made on this dike and reported as follows: "The rock is a diorite composed of about 70% highly sericitized plagioclase (An37), 20% unidentified, highly altered mafics (possibly hornblende), about 6% quartz and about 4% sulphides... The sulphides seen in the polished section were pyrrhotite with the exception of two small grains of chalcopyrite. The pyrrhotite grains are ragged and irregular with some alteration to iron oxides in their mineral composition."

In the GSC Memoir 251, reference is made to the possibility that Driftwood Valley contains faults, and it is known that mineralization occurs in or near major faults in the McConnell Creek map-area. A careful examination should be made of any exposed geology in the valley together with the results of a geochemical survey. In the event that faulting and mineralization is located, this area becomes a highly potential exploration target.

WORK DONE

Line cutting and geochemical surveying were conducted across the entire length of the Pac and Can claims. A magnetometer survey was carried out in conjunction with the geochemical. Geological mapping and sampling, trenching and prospecting were done at the same time. True N-S lines were cut at 500 ft. separations and chained at 100 ft. intervals. A local field base was used to check the instrument (MF2 Fluxgate), and the readings converted into gamma.

The work was performed by Pavan Explorations Ltd., under the supervision of the writer, and completed the field program for this season.

MAGNETOMETER SURVEY - PAC GROUP

The survey showed no large variations in the magnetic content of the rock. One small anomalous area was outlined, on Pac 19.

MAGNETOMETER SURVEY - CAN GROUP

A small, indefinite anomalous area was outlined, centered on Can 5. The survey showed no variation in the magnetic content of the rock.

GEOCHEMICAL SURVEY - PAC GROUP

Soil samples were taken from the "B" horizon, varying from 4" to 6" in depth, and analyzed for ppm in copper. Pac 19 showed two narrow, finite anomalous zones with a maximum ppm Cu of 200. On Line 0, on Pac 18 and 20, another finite anomaly was outlined.

The assaying was carried out by Core Laboratories Ltd. of Vancouver, using the following method: Samples were dried, crushed and pulverized at 200 mesh. An aliquot of $\frac{1}{2}$ gram was weighed and digested for three hours with nitric acid. Sample was then cooled and diluted in volume with distilled water, mixed, and settled for four hours. The clear solution was then analyzed by atomic adsorption. Every tenth sample was analyzed in duplicate for repeatability.

GEOCHEMICAL SURVEY - CAN GROUP

Strong anomalous conditions were found in Can 5, 7, 6 and 8. These appear to be open on the east and west and further work is required to complete the picture.

EXPLORATION PROGRAM - PAC AND CAN GROUPS

An exploration program is proposed for the two groups as follows:

- 1) Bulldoze a road from the B. C. Railway to the property;
- 2) Extend the geochemical survey over the eastern part of the group for approximately 20 line-miles;
- 3) An I. P. Survey should be considered;
- 4) Contingent upon the results of the above work, a diamond drill program should be considered.

ESTIMATED COST OF EXPLORATION PROGRAM

	<u>PAC</u>	<u>CAN</u>	<u>TOTAL</u>
Road construction	\$15,000*	-	\$15,000
Geochemical survey, 800 samples @ \$3.50	1,450	1,450	2,900
I.P.Survey, 23 mi. @ \$300	4,600	2,300	6,900
Line cutting, 20 mi. @ \$150	1,500	1,500	3,000
Geological mapping, sampling ...	2,250	2,250	4,500
Assaying	600	600	1,200
Engineering & Supervision	1,800	1,800	3,600
Travel	2,000	2,200	4,200
Camp Supplies	2,750	2,750	5,500
Consulting	1,525	1,525	3,050
Contingencies	3,000	2,150	5,150
	\$36,675	\$18,325	\$55,000

*A more detailed study of the terrain during this summer's work made us realize that the original road estimate was too low.

- - -

It is estimated that the above work can be completed in one field season.

E. P. Sheppard

E. Percy Sheppard, P.Eng.
Consulting Geologist

October 25, 1973



C E R T I F I C A T E

I, E. PERCY SHEPPARD, of the City of Vancouver, in the Province of British Columbia, hereby certify THAT:

I am a Consulting Geologist, with offices at 314-402 West Pender Street, Vancouver 3, B.C.;

I am a graduate of Dalhousie University, with a B.Sc. in Geology, and have been active in mining exploration and geophysics for over thirty years;

This report is compiled from data obtained during my visit to the property on September 13-20, 1973, and a study of pertinent Government reports;

I have no direct or indirect interest in the properties or securities of Keywest Resources Ltd. (N.P.L.), and do not expect to receive any such interest as a result of writing this report;

I am a member of the Professional Engineers Association of British Columbia, the American Institute of Mining Engineers, and a Fellow in the Geological Association of Canada.

DATED AT VANCOUVER, B.C. this 25th day of October, 1973.

E. P. Sheppard

E. Percy Sheppard, P.Eng.



REFERENCES

- Lord, C. S.
McConnell Creek Map-Area, Cassiar District,
British Columbia; Geol. Surv. Can.,
Memoir 251. 1948.
- B. C. Railway: Maps and Location of Railway, 1972.
- G.S.C. Map 962-A



ASSAYERS
CHEMISTS
GEOCHEMISTS

CORE LABORATORIES LTD.

325 Howe Street Vancouver 1, B.C. Phone 688-3504

Certificate of Analysis

REPORT NO.
1076-30-7031

SAMPLE(S) FROM: PAVAN EXPLORATION

SAMPLE NO.	Au (oz/t)	Ag (oz/t)	Cu (%)
No. 2-P	.045	.19	.12 ✓
No. 3-P	.003	.05	.04 ✓
No. 6	.027	.77	1.26 ✓
No. 7	<.003	.15	.25 ✓
No. 8	.005	.31	.25 ✓
No. 9	<.003	.10	.17 ✓
No. 10	.028	.30	.40
No. 11	<.003	.39	.26
No. 12	<.003	.09	.15 ✓
No. 13	<.003	.18	.17
No. 14	<.003	.06	.02 ✓
No. 4	.005	1.53	1.36



DATE 15 October 1973 SIGNED _____



Mines and Petroleum Resources
ASSESSMENT REPORT
 No **4686** MAP **#1**

E.P. SHEPPARD & ASSOC. LTD.
 VANCOUVER, B. C.

INDEX MAP
PAC, CAN CLAIMS

OMINECA MD BC
 SCALE: 1" = 136 Miles DATE: 10/25/1973

E. P. SHEPPARD & ASSOCIATES LTD.

CONSULTING GEOLOGISTS

314-402 WEST PENDER STREET,
VANCOUVER 3, B.C.

OFFICE: 685-2301
RESIDENCE: 681-9903

WORK PERFORMED ON PAC & CAN GROUPS

1973 Field Season

	<u>PAC</u>	<u>CAN</u>
Geological Mapping	\$ 300.00	\$ 300.00
Geological Report	500.00	500.00
Drafting	50.00	50.00
Magnetometer & Geochemical Surveys	2,839.00	2,839.00
Prospecting	4,480.00	4,480.00
Assaying	300.00	300.00
Camp Supplies	1,287.00	1,287.00
Travel	1,666.00	1,666.00
Engineering & Supervision	<u>500.00</u>	<u>500.00</u>
	\$11,922.00	\$11,922.00

TOTAL: \$23,844.00

E. P. Sheppard
E. P. Sheppard, P.Eng.
Consulting Geologist



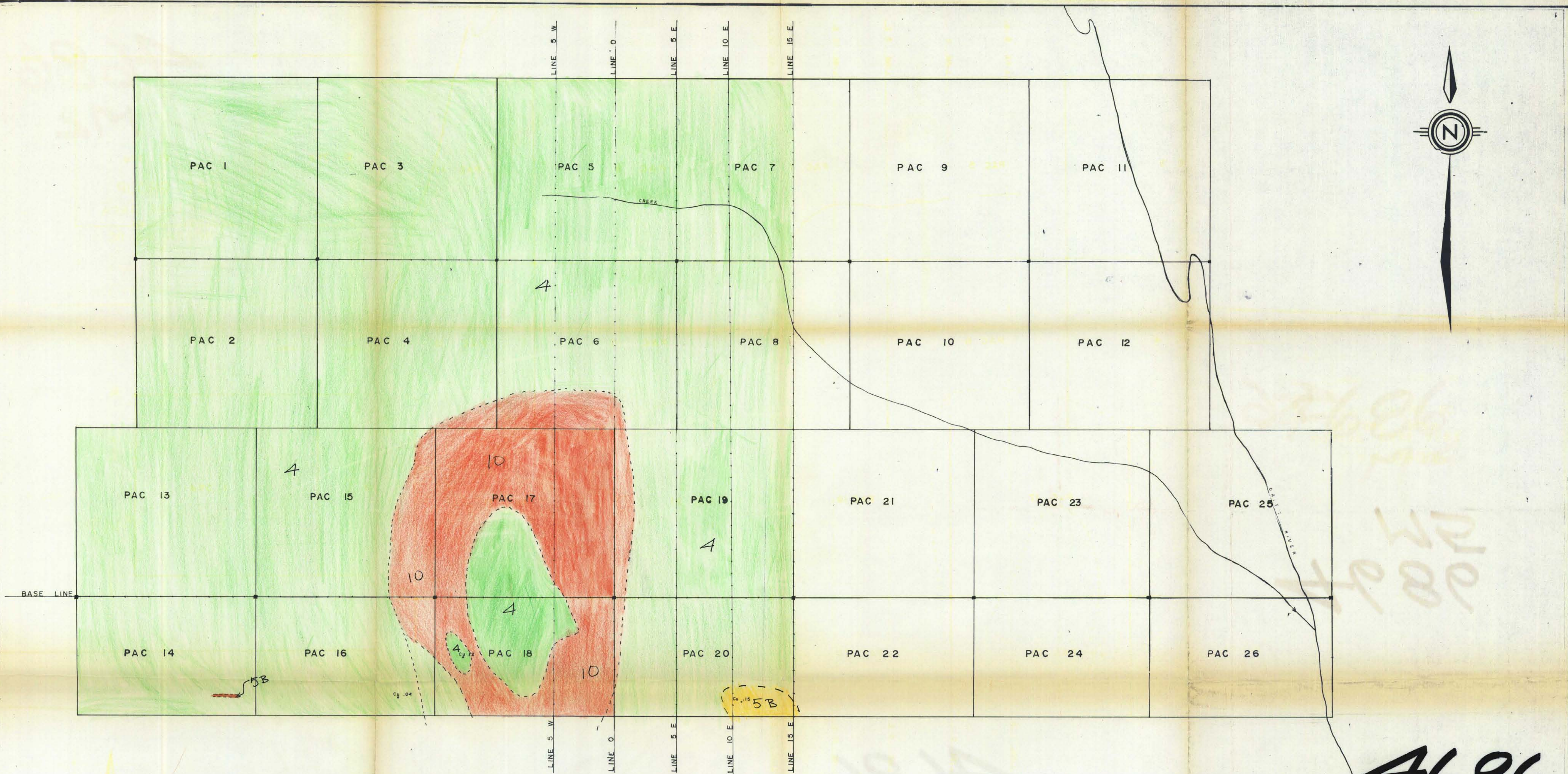
Declared before me at the City
of Vancouver, in the
Province of British Columbia, this
day of September 1973.

Jim Szobacs

G. Phillips

A Commissioner for taking Affidavits within British Columbia or
A Notary Public in and for the Province of British Columbia

Sub-mining Recorder



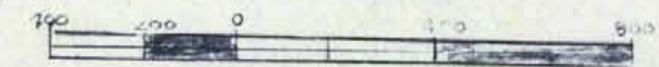
- LEGEND
- KASTBERG INTRUSION
Feldspar & feldspar - quartz porphyries, porphyritic granodiorite & quartz diorite
 - JURASSIC
TAKLA GROUP
Greywacke, pebble conglomerate, shale & argillite
 - AS ABOVE 5A May include undifferentiated volcanics
 - Andesitic basaltic & dacitic tuffs, agglomerates and lavas in part interbedded with 5
 -

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M2

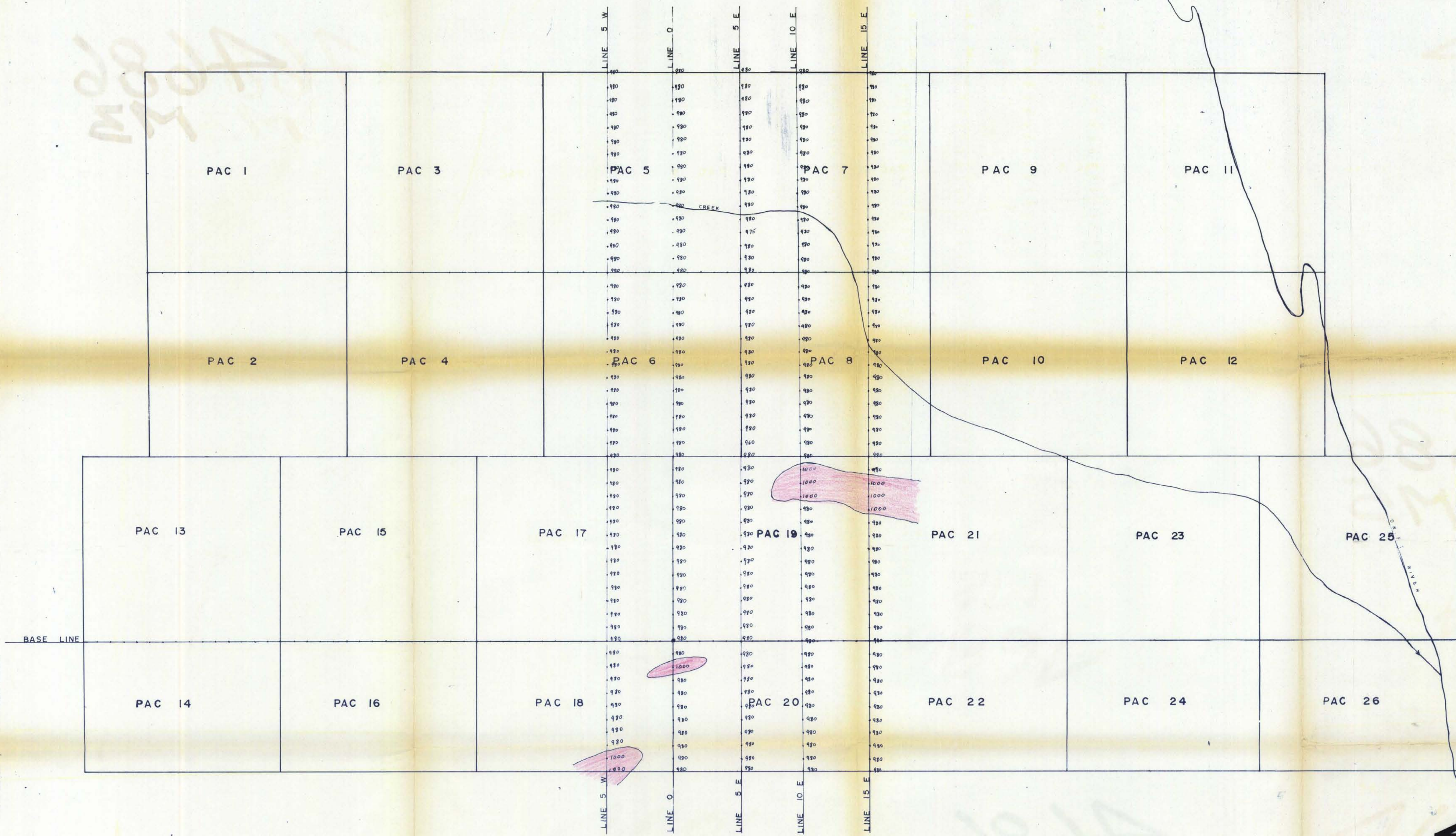
Mines and Technical Services
ASSESSMENT REPORT
NO. 4686 MAP #2

PAC GROUP
MOTASE LAKE AREA
GEOLOGY PLAN
OMINECA MD BC
SCALE 1" = 400'



M28
M30

4686



M28
M30

LEGEND

1000 MAGNETIC READING - GAMMA

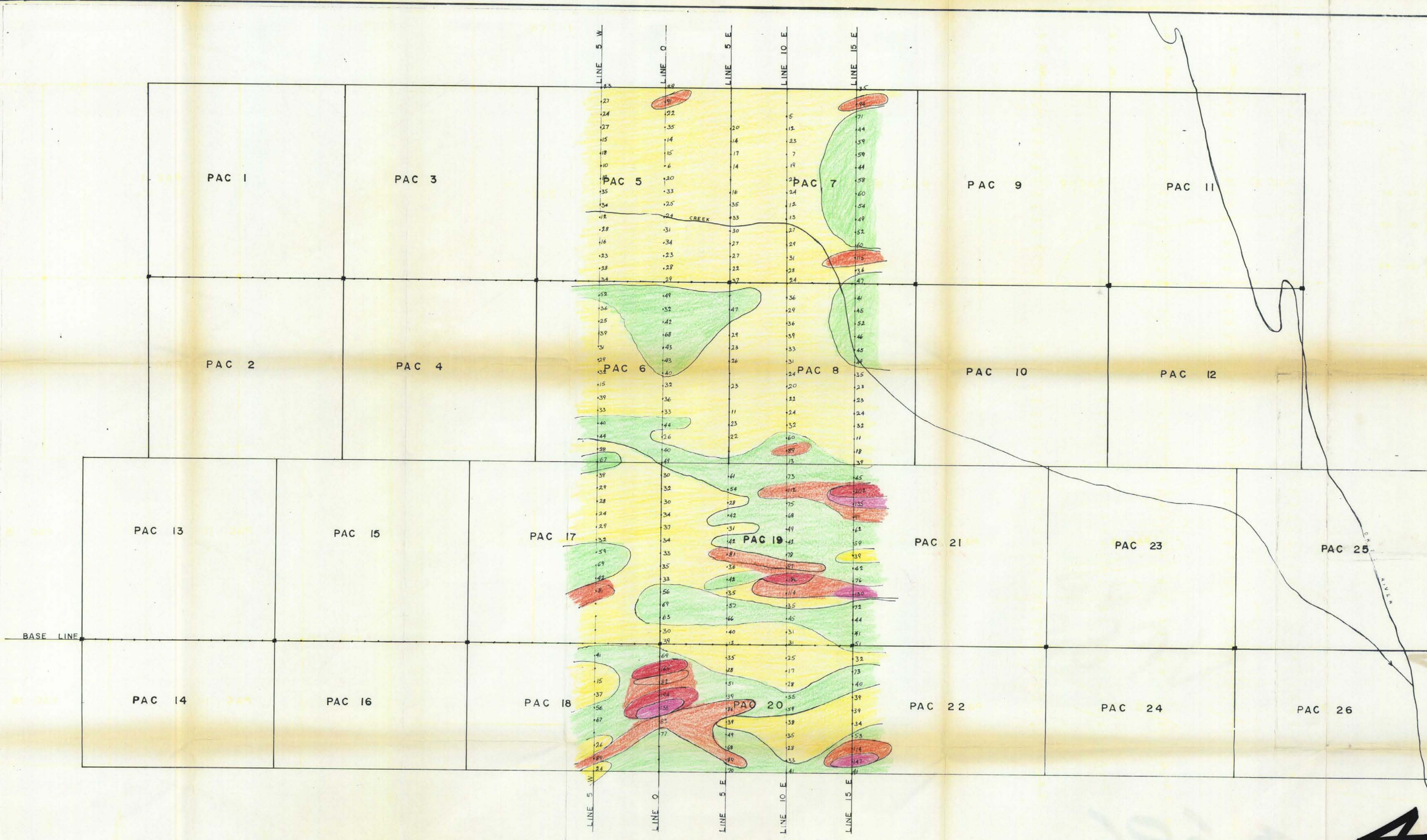


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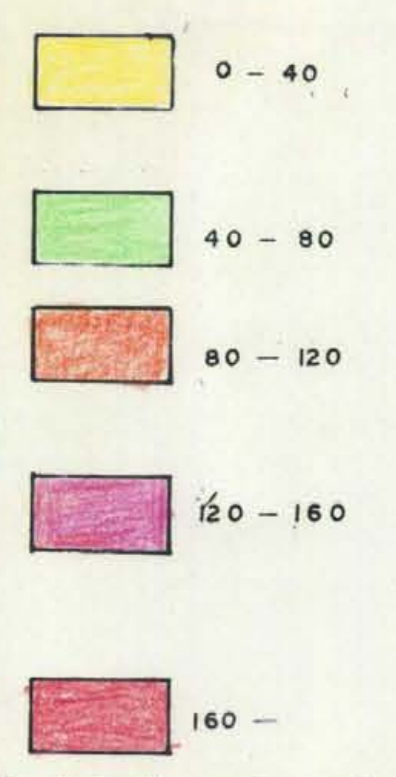
M3
NO. 4686 MRP #3

PAC GROUP
MOTASE LAKE AREA
MAGNETOMETER SURVEY
OMINECA MD BC
SCALE 1" = 400'





LEGEND

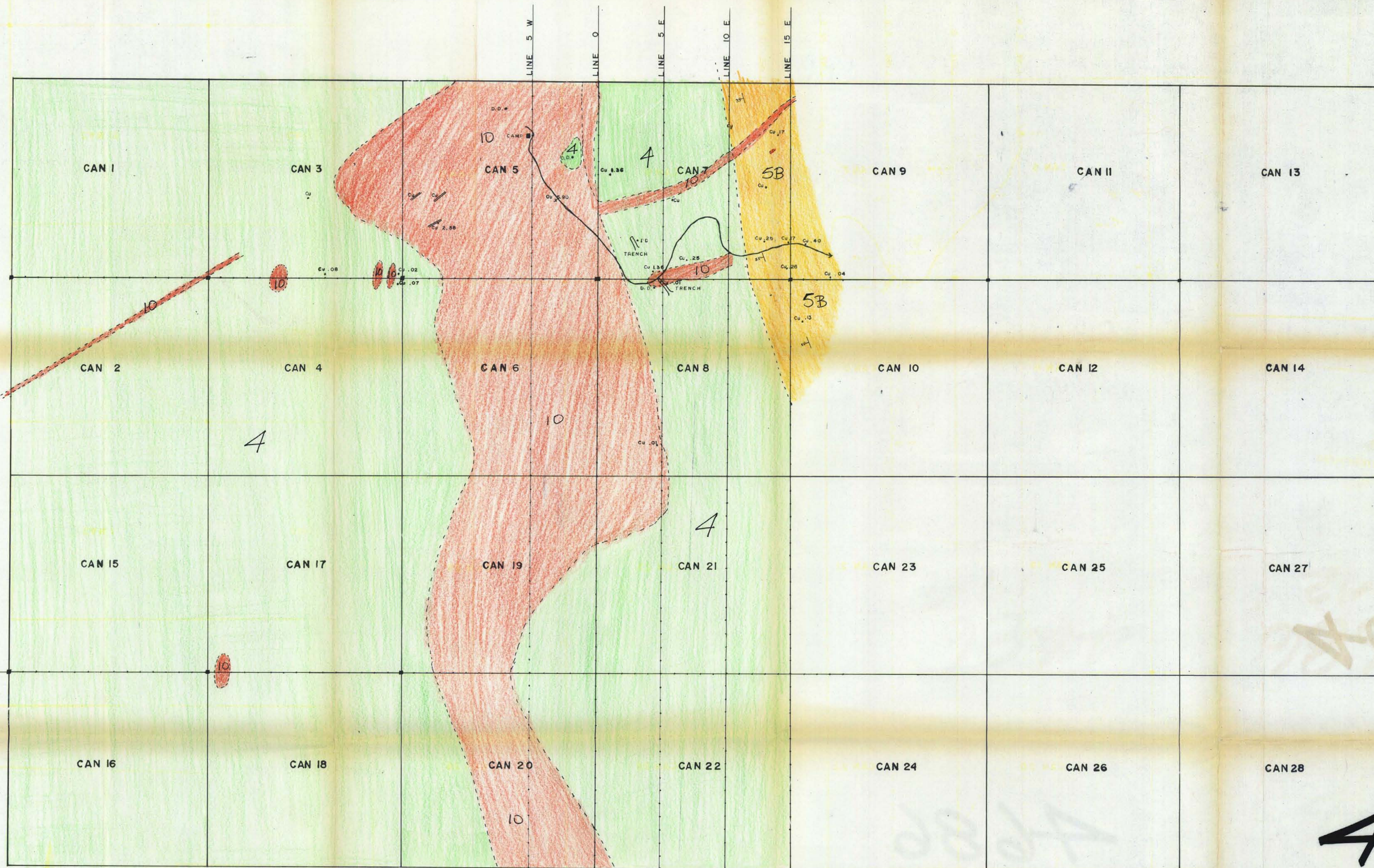


4686

M.A.
 Mines and Petroleum Research
 ASSESSMENT REPORT
 NO. 4686 MAP #4

PAC GROUP
 MOTASE LAKE AREA
 GEOCHEMICAL SURVEY ppm Cu
 OMINECA MD BC
 SCALE 1" = 400'





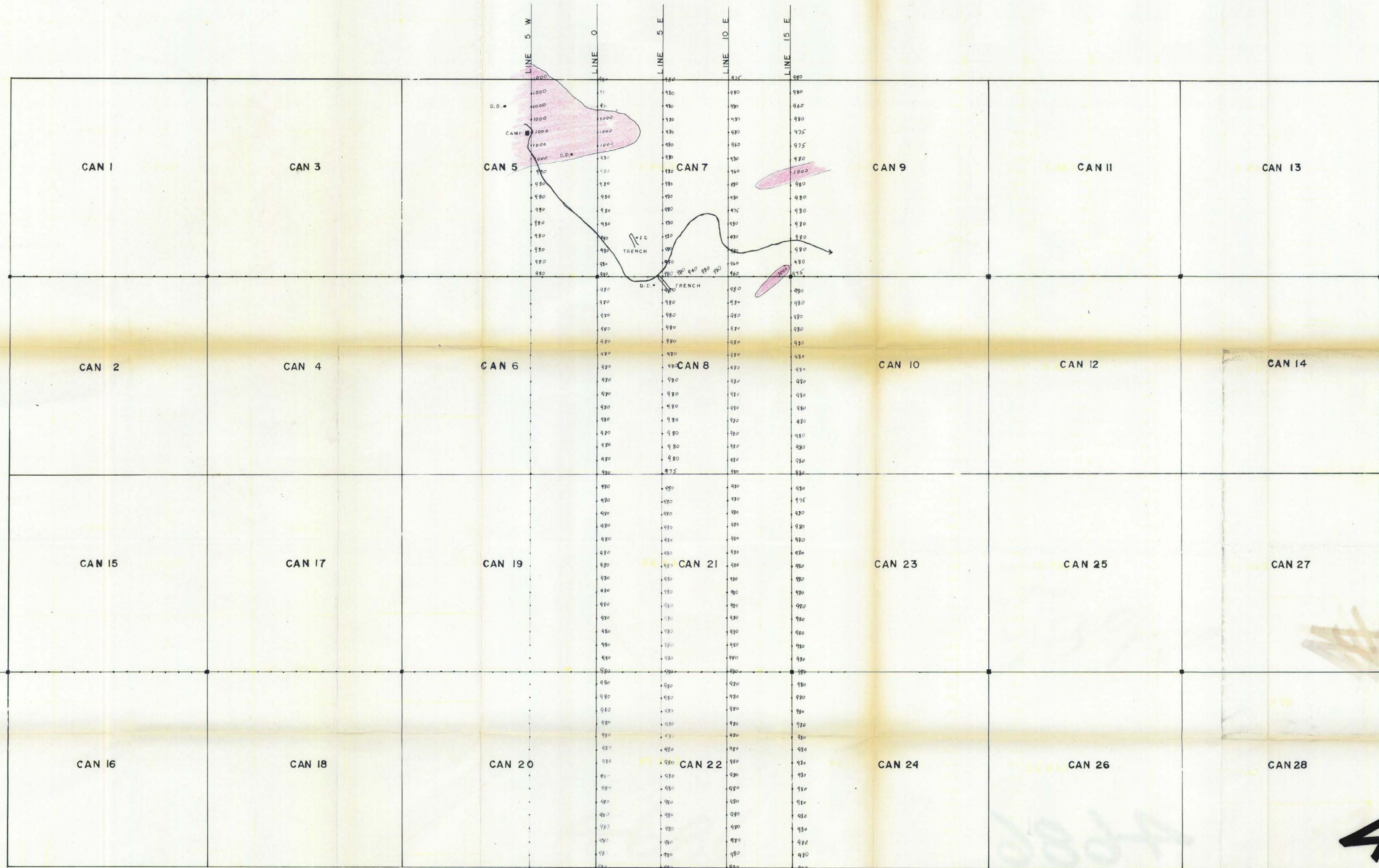
4686
M5
4004

- LEGEND**
- 10** KASTBERG INTRUSION
Feispar & Knappe quartz porphyries,
porphyritic granodiorite & diorite
 - 4** JURASSIC
TAKLA GROUP
Greywacke, pebble conglomerate, shale & argillite
 - 5B** AS ABOVE 5A May include un differentiated volcanics
 - 4** Andesitic, basaltic & dacitic tuffs, agglomerates & lavas
in part interbedded with 5
 -

Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 4686 MAP #5

CAN GROUP
MOTASE LAKE AREA
GEOLOGY PLAN
OMINECA MD BC
SCALE: 1" = 400'





LEGEND

- 1000 MAGNETIC READING - GAMMA
-
-
-
-

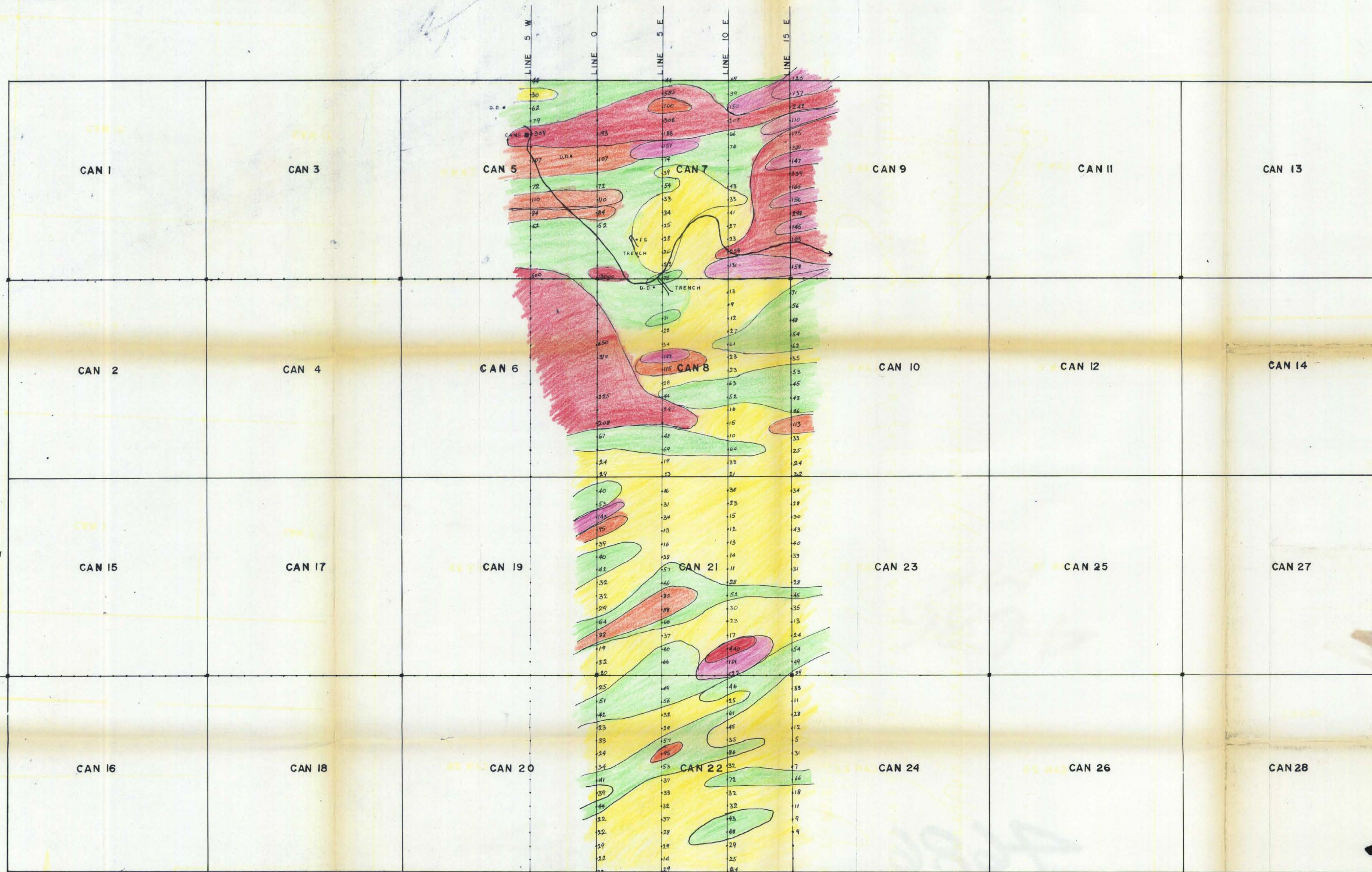
4686

M6

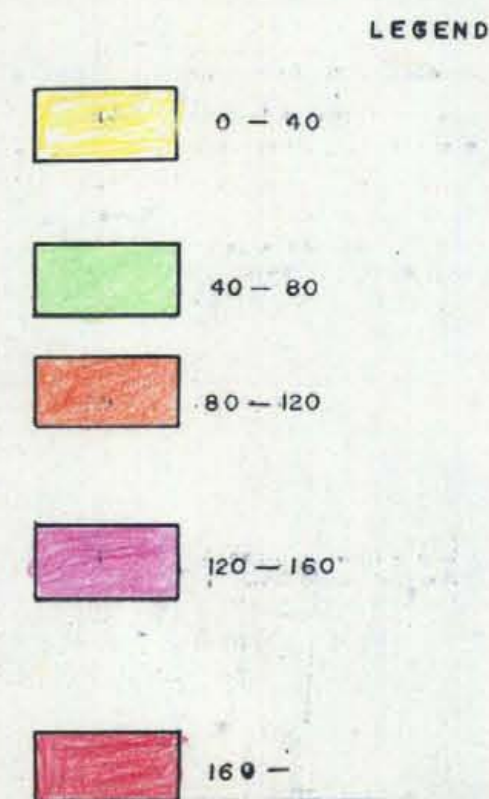
Department of
Mines and Geotechnical Resources
ASSESSMENT REPORT
NO. 4686 MAP #6

CAN GROUP
MOTASE LAKE AREA
MAGNETOMETER SURVEY
OMINECA MD BC
SCALE 1" = 400'





4686
M7



Department of
Mines and Resources
ASBESTOS REPORT
NO. 4686 MAP #7

CAN GROUP
MOTASE LAKE AREA
GEOCHEMICAL SURVEY ppm Cu
OMINECA MD BC
SCALE: 1" = 400'

