COMINCO LTD.

EXPLORATION

WESTERN DISTRICT

28 AUGUST 1975

$2200

This report has been examined by the Geological Evaluation Unit and is recommended to the Commissioner to be considered as representation work in the amount of $ 2200.00

D.D. Craig
Resident Geologist or
~~Resident Mining Engineer~~

Considered as representation work under Section 53 (4) Yukon Quartz Mining Act.

J.R. BAXTER
Supervising Mining Recorder

Commissioner of Yukon Terri'

GEOLOGICAL ASSESSMENT REPORT

ON THE

PING GROUP OF MINERAL CLAIMS

BONNET PLUME RIVER AREA

YUKON TERRITORY

NTS 106 C/11

64° 38' North Latitude
133° 16' West Longitude

PERIOD OF WORK

JULY 31, 1975 to AUGUST 11, 1975

Vancouver, British Columbia

M. S. TRAVIS

TABLE OF CONTENTS

	PAGE
SUMMARY	1
INTRODUCTION	1
A. Property Description	1
B. History	2
C. Location and Access	3
GEOLOGY	3
A. Regional	3
B. Local	3
C. Structural Geology	4
MINERALIZATION	4
CONCLUSIONS	5

****

LIST OF ATTACHMENTS

AFFIDAVIT

EXHIBIT "A": Statement of Expenditures

STATEMENT OF QUALIFICATIONS

Plate 1 - Location Map	Scale: 1 in. = 80 miles
Plate 2 - Location Map	Scale: 1 in. = 4 miles
Plate 3 - Claim Map	Scale: 1 in. = ½ mile
Plate 4 - Geology Map	Scale: 1 in. = 100 feet

COMINCO LTD.

EXPLORATION WESTERN DISTRICT

SUMMARY

The Ping group, consisting of 26 mineral claims; lies in the Mayo Mining District of the Yukon Territory. The claims were staked in January of 1974 following the zinc discoveries by Barrier Reef Resources on Goz Creek in the Bonnet Plume River area. Additional staking was done in September of 1974. Cominco obtained the rights to work on the Ping group through an option agreement with Bow River Resources Ltd. and Highhawk Mines Ltd. Work was performed on the property by Cominco personnel from July 31,1975 to August 11, 1975. A topographic survey was made of the showing areas using chain, compass and altimeter as well as detailed (1 in.=100 ft.) geological mapping and prospecting.

The property is underlain by rocks of Upper Proterozoic to Ordovician-Silurian in age. The oldest strata are Upper Rapitan Group clastic sediments and carbonates. These range from slate and argillite to sandstone and quartzite. Most units are ferruginous and are frequently interbedded with platy orange weathering dolomite.

The Keele Formation overlies the Rapitan Group and is mostly dolomite with minor clastic intercalations. These rocks represent shelf carbonates and shallow basin environments. Most of these sediments have been altered by later diagenesis.

The Sheepbed Formation overlies the Keele Formation and is largely comprised of dark grey to black recessive weathering shale and argillite with minor limestone and quartzite. The unit is poorly exposed on the property and may be partially removed by an overlying unconformity.

Ordovician-Silurian carbonates containing pods of black argillite and locally, reefal fossils, unconformably overlie the older sediments. These strata are exposed on the southwest edge of the property.

All rock units on the property are cut by normal faults striking primarily southeast. The property appears to be on the north limb of a southeast trending syncline.

Showings of galena and sphalerite mineralization have been found on the property as well as some mineralized float areas.

INTRODUCTION

A. Property Description

The Ping group consists of 26 mineral claims, the particulars of which are as follows:

CLAIM	CLAIM NO.	DATE RECORDED	RECORDED HOLDER
PING 1	Y86146	January 18/74	Bow River Resources & Highhawk Mines Ltd.
PING 2	Y86147	January 18/74	"
PING 3	Y86148	January 18/74	"

CLAIM	CLAIM NO.	DATE RECORDED	RECORDED HOLDER
PING 4	Y86149	January 18/74	Bow River Resources & Highhawk Mines Ltd.
PING 5	Y86150	January 18/74	"
PING 6	Y86151	January 18/74	"
PING 7	Y86152	January 18/74	"
PING 8	Y86153	January 18/74	"
PING 9	Y86154	January 18/74	"
PING 10	Y86155	January 18/74	Bow River Resources & Highhawk Mines Ltd.
PING 11	Y86156	January 18/74	"
PING 12	Y86157	January 18/74	"
PING 13	Y86158	January 18/74	"
PING 14	Y86159	January 18/74	"
PING 15	Y86160	January 18/74	"
PING 16	Y86161	January 18/74	"
PING 17	Y86162	January 18/74	"
PING 18	Y86163	January 18/74	Bow River Resources & Highhawk Mines Ltd.
PING 19	Y86164	January 18/74	"
PING 20	Y86165	January 18/74	"
PING 21	Y86166	January 18/74	"
PING 22	Y86167	January 18/74	"
PING 23	Y86168	January 18/74	"
PING 24	Y86169	January 18/74	"
PING 25	Y97027	September 24/74	Bow River Resources & Highhawk Mines Ltd.
PING 26	Y97028	September 24/74	"

B. History

Interest in the Bonnet Plume River area was initiated as a result of zinc discoveries by Cordilleran Engineering working for Barrier Reef Resources near the confluence of Goz Creek and the Bonnet Plume River in the summer of 1973. The Ping claims were staked in January following the Barrier Reef discoveries along the south side of Black Canyon Creek. The property was subsequently geologically mapped and prospected by Harman Management and by Bow River Resources - Highhawk Mines Ltd.

Cominco obtained rights to work on the Ping group through an option agreement with Bow River Resources and Highhawk Mines Ltd. This report is based upon field studies made by Cominco personnel during the period from July 31,1975 to August 11,1975. This initial work by Cominco on the property was aimed at detailed mapping and prospecting of the property.

C. Location and Access

Physiographically the Ping group lies within the Selwyn Mountains of the Yukon Territory approximately 110 air miles northeast of the town of Mayo. It lies 5 miles southeast of Pinguicula Lake and 7 miles east of the Bonnet Plume River.

The property lies within the Mayo Mining District, with coordinates of 64° 38' north latitude and 133° 16' west longitude and is located on N.T.S. claim sheet 106C/11.

The area is topographically one of high relief, the higher peaks reaching over 6500 feet A.S.L. and the valleys between 3000 and 3800 feet A.S.L. The Ping group is located between 3800 and 5300 feet A.S.L. Access to the Ping is by ski or float equipped fixed-wing aircraft to Pinguicula Lake and then by helicopter to the property.

GEOLOGY

A. Regional

The Ping group occupies a part of an area which is underlain predominantly by Upper Proterozoic stratigraphy. There is an increasing predominance of Cambrian to Devonian rock to the south and east of the property.

The Proterozoic rocks consist of a wide variety of clastic sediments ranging from very coarse boulder conglomerate to siltite, siltstone, and shale. Compositionally, the clastic sequences are argillaceous and occasionally calcareous and dolomitic and frequently have a high iron content. Quartzite is commonly interbedded with the clastic units in this sequence.

Large stratigraphic thicknesses of dolomite and, less frequently, limestone are found in Upper Proterozoic strata in the Corn Creek area. These units generally weather white to dark grey and are readily distinguished from the frequently rusty weathering clastic units.

The Cambrian and younger rocks in the area are composed of black shale and argillite as well as light grey to black limestone. The Ordovician and Devonian limestone units are locally fossiliferous indicating an minor biohermal environment at that time.

B. Local

The oldest rocks on the Ping property are Upper Proterozoic (Hadrynian) in age and belong to the Upper Rapitan Group. This unit is comprised of ferruginous and argillaceous slates, sandstone, quartzite and argillite with frequent interbedded orange and grey weathering platy dolomite. This unit underlies the northern edge of the property and it is repeatedly upfaulted along the length of the property. The unit is well exposed in outcrop on the western half of the property, becoming less exposed to the east.

The contact of this unit with the overlying Keele Formation appears to be gradational and arbitrary. No clear unconformable surface could be found and lithology changes gradually. The arbitrary contact chosen for the top of the Rapitan Group is a platy maroon-coloured dolomite bed. This bed is very conspicuous in outcrop and can vary in thickness from 10 to 65 feet. Bedded chert is common in this unit.

The Keele Formation is an 800-foot sequence of relatively clean dolarenites and dololutites with intercalations of shale of calcalcareous, dolomitic or argillaceous composition. There is very minor bedded chert and quartz arenite beds near the lower boundary and a "grit" unit near the upper boundary of the Keele Formation. The composition of the grit can be quartzose, dolomitic, calcareous or argillaceous and textures range from clayey to fine pebble conglomerate. Argillite and slate members within the formation occur frequently ranging in thickness from 6 inches to approximately 60 feet. These clastic units are commonly interbedded with finely laminated or sandy black dolomite. Also occurring in the middle of the formation is a light brownish-grey orange weathering silty dolomite. This member is characterized by blocky massive beds 6 inches to 1 foot in thickness separated by 2 inch to 6 inch beds of very fissile, possibly argillaceous slate.

The dolomite members of the Keele Formation vary in texture from a microcrystalline dololutite, white to buff weathering, the uppermost member of the formation, to coarse grained, stromatactoid black and white "zebra" dolomite. There is little lateral continuity in the finer textures of most dolomite as these textures are largely dependent on the extent of recrystallization and diagenesis that the rock has undergone.

Conformably overlying the Keele Formation is the Sheepbed Formation. This formation is poorly exposed on the western end of the property, being covered by talus from the Ordovician-Silurian carbonate strata overlying the Sheepbed. The formation is exposed off the property to the south and southwest and varies from about 10 to 200 feet in thickness. The Sheepbed is comprised of mostly dark grey to black calcareous shale, argillite, quartzite and minor limestone and is everywhere recessive weathering.

Unconformably overlying the Sheepbed Formation and, in places, Keele Formation is dark grey limestone and minor dolomite of Ordovician-Silurian age. The carbonates contain many irregular nodules of cherty black argillite and are locally fossiliferous. This unit is cliff-forming and talus from the cliffs generally obscures the Sheepbed Formation but in places the unconformity at the base of the Ordovician has probably removed the Sheepbed Formation entirely.

C. Structural Geology

Structurally the Ping group is situated on the north limb, near the nose, of a large open syncline that plunges roughly 15 degrees east southeastward. The bedding dips between 30 and 35 degrees to the southeast. The general area is cut by one major fault set striking southeast. These faults are normal and generally have a near-vertical dip. In addition to the major faults there are numerous smaller normal faults of widely varying orientations. All of the faults are younger than Ordovician-Silurian.

MINERALIZATION

Two main showings of galena and sphalerite have been located on the Ping group. In addition minor galena-sphalerite mineralized outcrops have been found but these are very small in size. Mineralized float has been located in areas of no outcrop.

The mineralization is found in different stratigraphic horizons of the Keele Formation dolomite, frequently in the vicinity faults.

Pyrite is randomly disseminated in most of the Keele Formation dolomite in minor amounts. Some members of the Keele Formation, particularly the argillite horizons contain bedded finely disseminated pyrite.

CONCLUSIONS

There are economically interesting mineral showings on the Ping group. The favourable dolomite stratigraphy of the Keele Formation extends along the length of the property. This stratigraphy warrants further investigation to locate potential mineral showings.

Report by: _____
M. S. Travis
Geologist

Endorsed by: D. W. Heddle
D. W. Heddle, P.Eng.
Chief Geologist

Approved for
Release by: W. T. Irvine
W. T. Irvine, P.Eng.
Manager, Exploration

IN THE MATTER OF THE

YUKON QUARTZ MINING ACT

AND

IN THE MATTER OF A GEOLOGICAL SURVEY

CARRIED OUT ON MINERAL CLAIMS PING 1-26

Located in the Mayo Mining District of the

Yukon Territory

More Particularly, NTS 106C/11

A F F I D A V I T

I, STEVEN TRAVIS OF THE DISTRICT OF NORTH VANCOUVER IN THE PROVINCE OF BRITISH COLUMBIA, GEOLOGIST, MAKE OATH AND SAY:

1. THAT I AM EMPLOYED AS A GEOLOGIST BY COMINCO LTD. AND, AS SUCH HAVE A PERSONAL KNOWLEDGE OF THE FACTS TO WHICH I HEREINAFTER DEPOSE:

2. THAT ANNEXED HERETO AND MARKED AS EXHIBIT "A" TO THIS MY AFFIDAVIT IS A TRUE COPY OF EXPENDITURES ON A GEOLOGICAL SURVEY CARRIED OUT ON MINERAL CLAIMS PING 1-26.

3. THAT THE SAID EXPENDITURES WERE INCURRED BETWEEN THE 31st DAY OF JULY,1975 AND THE 11TH DAY OF AUGUST, 1975 FOR THE PURPOSE OF MINERAL EXPLORATION ON THE ABOVE NOTED CLAIM GROUP.

Sworn Before Me at the City of Vancouver in the Province of British Columbia this 26th day of September, 1975.

M B Brown

A NOTARY PUBLIC IN AND FOR THE PROVINCE OF BRITISH COLUMBIA

Steve Travis

M. S. TRAVIS

EXHIBIT "A"

GEOLOGICAL REPORT

ON THE

PING GROUP OF MINERAL CLAIMS

Situate at

64° 38' North Latitude
133° 16' West Longitude

N.T.S. 106 C/11

Salaries:

M.S. Travis	(12 days)	$1,003.00
R.D. Deobald	(12 days)	708.00
Transportation: Fixed Wing		341.00
Camp Costs: Expediting		225.00
	TOTAL:	$2,277.00

Signed: Steve Travis
M.S. TRAVIS

THIS IS EXHIBIT "A" TO THE STATUTORY DECLARATION OF EXPENDITURES RELATING TO THE GEOLOGICAL AND GEOCHEMICAL SURVEY DECLARED BEFORE ME ON THE 26th DAY OF September 1975, A.D.

M.K. Brown
A NOTARY PUBLIC IN AND FOR THE
PROVINCE OF BRITISH COLUMBIA

COMINCO LTD.

EXPLORATION WESTERN DISTRICT

STATEMENT OF QUALIFICATIONS

I, Steven Travis with business address at 2200-200 Granville Square, Vancouver 2, British Columbia, do hereby certify that I have supervised the field work and have assessed and interpreted the data resulting from this geological survey on the PING mineral claims.

I also certify that:

1. I am a graduate of the University of British Columbia, B.Sc. Majors Geology,

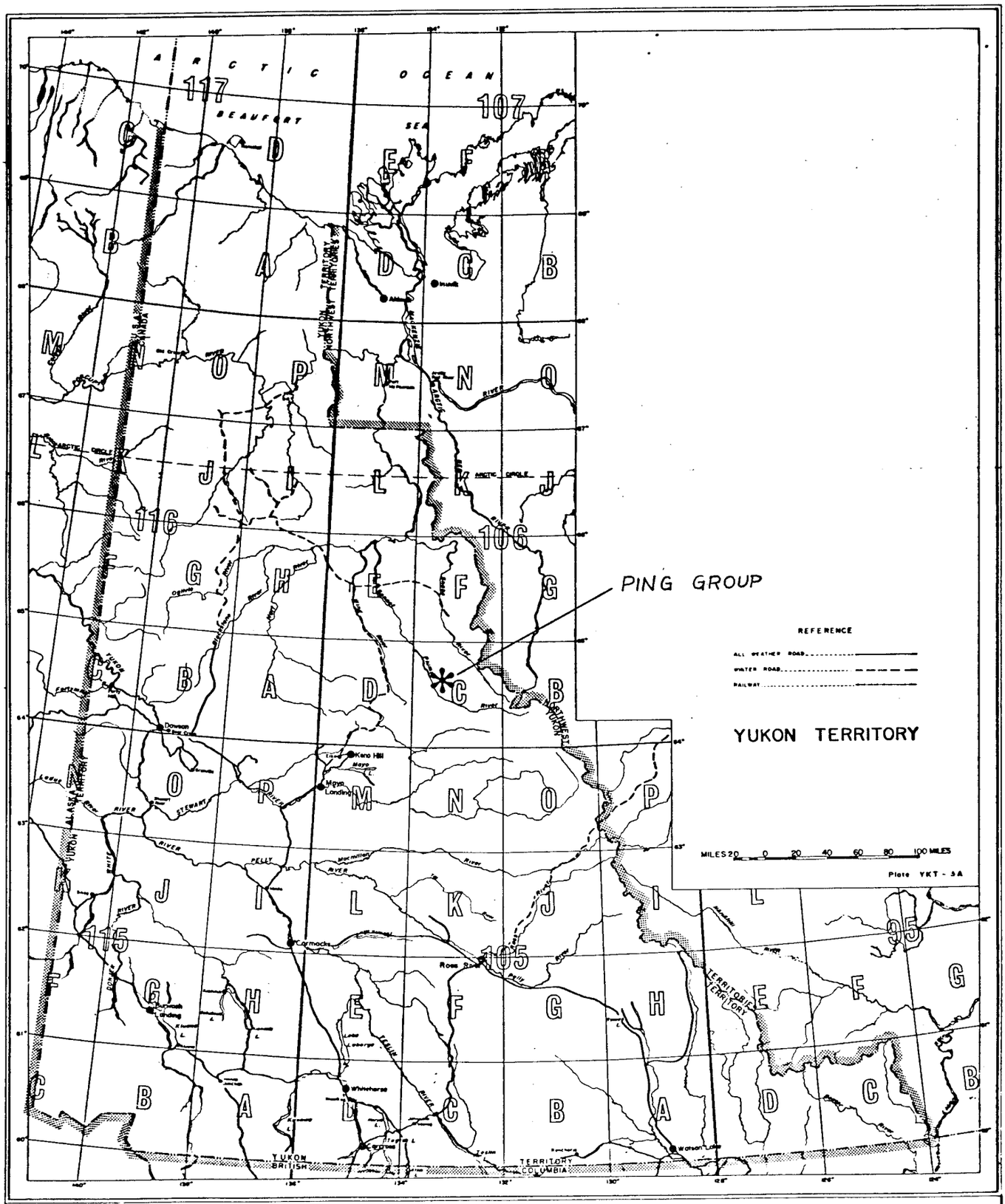
2. I have engaged in mineral exploration since graduation.

Respectfully submitted: Steve Travis
M. Steven Travis

Vancouver, B.C.

Steve Travis was responsible for supervising the geological and geochemical survey described herein. Mr. Travis received his B.Sc. degree in Majors Geology from the University of British Columbia in 1974. He worked for Cominco Ltd. for three summer field seasons and was permanently employed by Cominco Ltd. in December, 1974. I consider him a competent geologist.

Signed by: W.T. Irvine
W.T. Irvine, P.Eng.,
Manager
Western District Exploration

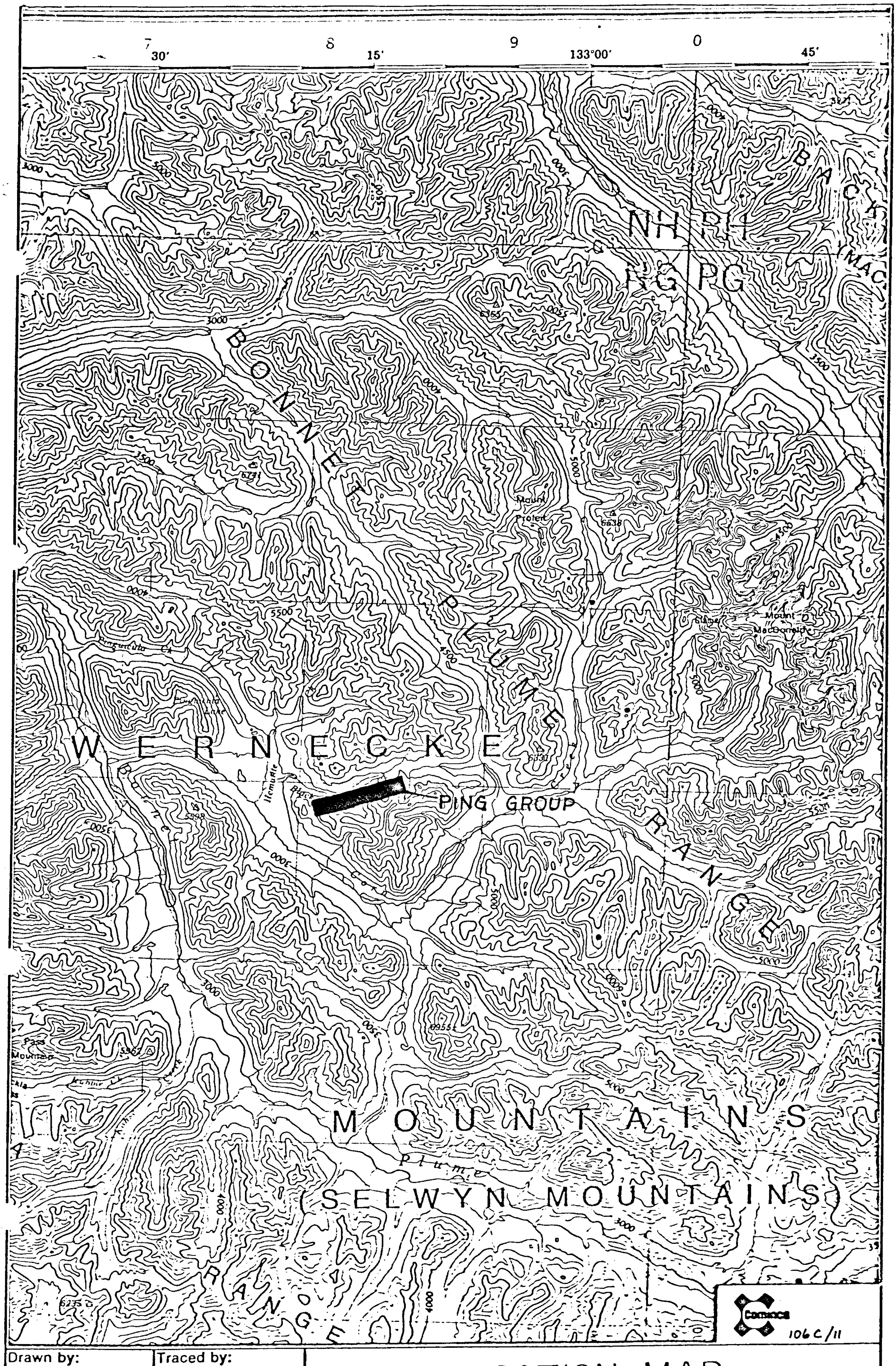


106 C/11

Drawn by:		Traced by:	
Revised by	Date	Revised by	Date

LOCATION MAP
PING GROUP

Scale: 1" = 80 miles | Date: | Plate: 1

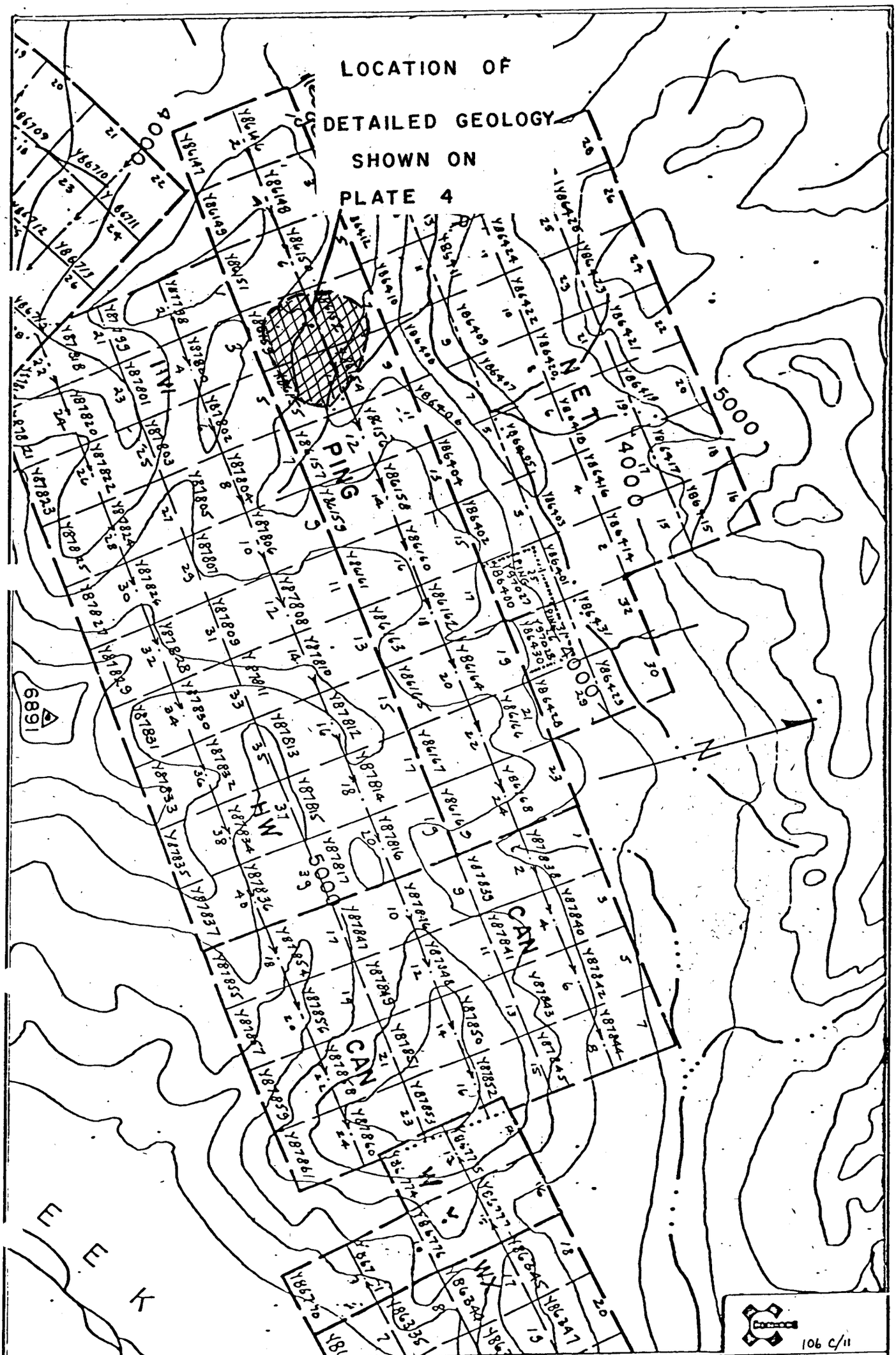


Drawn by:		Traced by:	
Revised by	Date	Revised by	Date

LOCATION MAP
PING GROUP

Scale: 1" = 4 miles	Date:	Plate: 2

210 0610

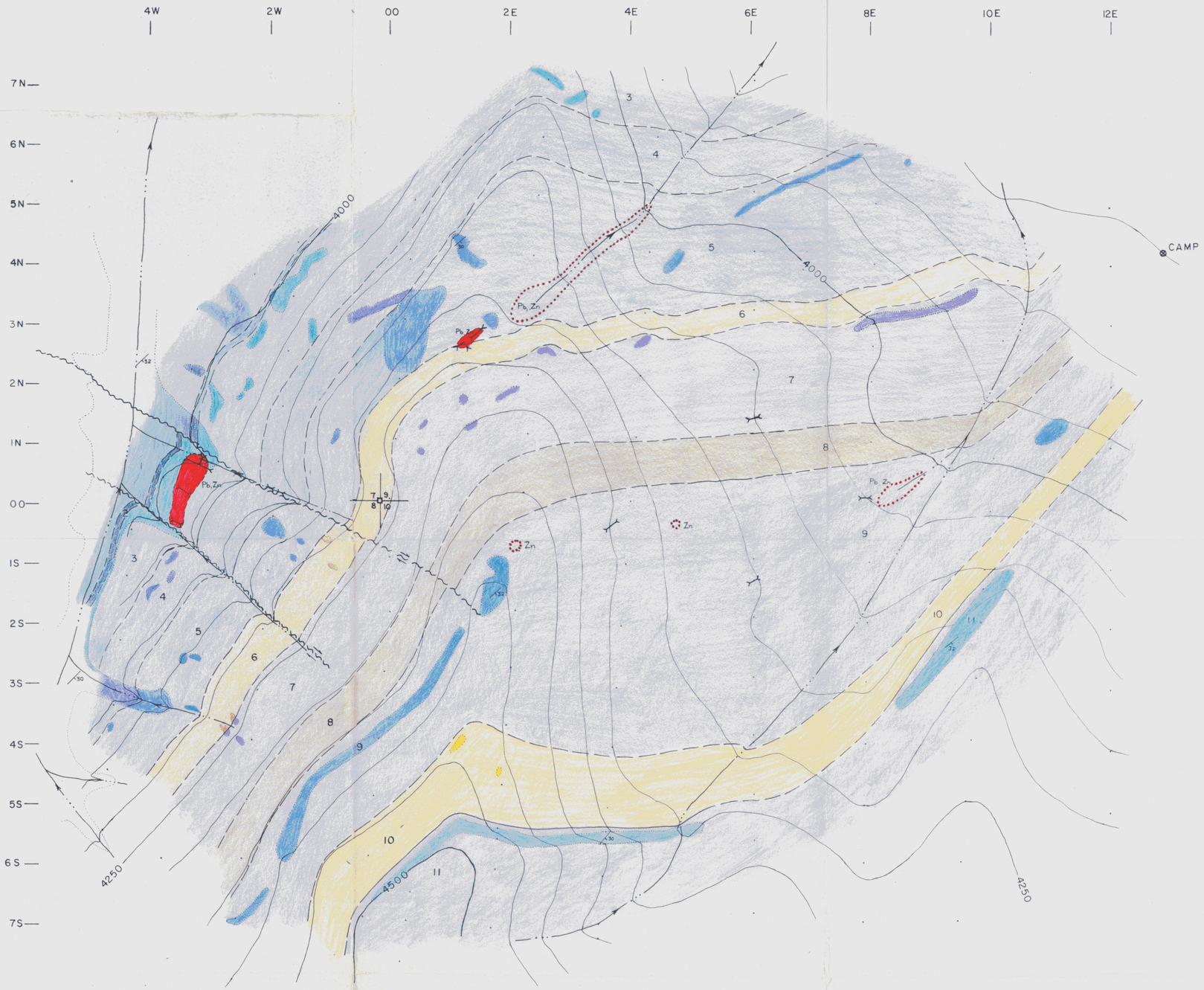


Drawn by:		Traced by:	
Revised by	Date	Revised by	Date

LOCATION MAP
PING GROUP

Scale: 1" = 1/2 mile | Date: | Plate: 3

210-0610



LEGEND

KEELE FORMATION

11	Dolomite, microcrystalline, white to buff weathering.
10	'Grit Unit'* Fine grained quartz pebble conglomerate; brown siltite and shale, frequently dolomitic.
9	Dolomite, stromatactoid, yellow-grey and black interbanded, medium to coarsely crystalline, sandy near base.
8	Shaly dolomite, orange weathering, platy, colour varies from light grey to black, pyritic.
7	Dolomite, finely crystalline, algal and stromatolite laminations, light grey colour.
6	Interbedded argillite and dolomite, dark grey to black, very pyritic.
5	Dolomite, dark and light grey laminations, possibly algal. Stromatactoid in places with frequent vugs. Minor pisolite beds.
4	Dolomite, medium grained with many sandy sections, carbonaceous.
3	Dolomite, microcrystalline, light grey, intensely recrystallized to coarsely crystalline white dolospar in places; minor dark shale beds.
2	Dolomite, medium crystalline, black, finely laminated with minor argillite laminae.
1	Dolomite, black and white, interbanded, coarsely crystalline.

* This is not the same 'grit unit' referred to in the G.S.C. Open File #206

SYMBOLS

- Outcrop
- Mineralized outcrop
- Mineralized float
- Fault (observed, inferred)
- Geological contact (observed, inferred)
- Bedding, dipping
- Trench

PING GROUP 090024

Cominco 106 C/11

Drawn by: MST | Traced by:

Revised by: | Date: | Revised by: | Date:

DETAILED GEOLOGY

Scale: 1" = 100 ft. | Date: September 1974 | Plate 4

VANCAL G