INDUCED POLARIZATION AND RESISTIVITY SURVEY REPORT
BRISTOL TOWNSHIP (M-264)
PORCUPINE MINING DIVISION
DISTRICT OF COCHRANE

PROPERTY

60 claims P 363445-448 incl.; P 363811-814 incl.; P 371423; P 379994; P 380411; P 382720-721; P 413232; P 413423-425 incl.; P 414512; P 414516-517; P 444487-489 incl.; P 444492; P 444494-496 incl.; P 451030; P 451531-533 incl.; P 451541-548 incl.; P 453694-697 incl.; P 453734-737 incl.; P 453999; P 454000; P 479501-506 incl.; P 480304-305; P 480315; P 480317-318.

LOCATION

The claim group is located in north-central Bristol Township at 48°25'N latitude and 81°32'W longitude. Access is via logging roads which run north from highway 101, approximately 10 miles west of Timmins.

PREVIOUS WORK

a) Historical

Bristol Township saw a considerable amount of exploration for gold during the 1920's with some of this work covering the present claim group. The block has previously been explored in part as the Kindree, Hendrickson, McKinley - Molesky, Continental Kirkland and Toner McCormick properties.

This early exploration consisted predominantly of surface work with a minor amount of diamond drilling on the McKinley - Molesky and Kindree claims. Since this time, work within the claim block has been limited to that carried out by Mr. R. Allerston.

b) Current

An inducted polarization survey was completed between June 18 and August 21, 1977 on 60 of Allerston's 94 claims that make up his claim block. The grid used was previously submitted for assessment with a magnetometer survey.

The induced polarization survey did not completely cover the entire claim block but was limited to an area bounded by grid co-ordinates (30000S - 30000N) / (72W - 88E) which contained the most economically favourable geology. Lines 4E and 4W were read to approximately 48N.

OBJECT OF SURVEY

The induced polarization surveys purpose was to outline zones of disseminated sulphides which may be auriferous. The resistivity surveys purpose was to outline areas of similar resistance for geological compilation and to aid in the interpretation of induced polarization data.

Induced Polarization and Resistivity Survey Instrumentation

The instrument used was a Huntec Model 2.5 KW I.P. system with a M-3 receiver. The parameters used were tc : total transmitter cycle time or period (8 seconds)
t off: duration in seconds of the off period of the transmitter (2 seconds)
ton: duration in seconds of the on period of the transmitter (2 seconds)
td : receiver delay time in seconds (480 milliseconds). Zero time reference is at instant of switch off of transmitter.
tp : basic integrating time (50 milliseconds)

The receiver induced polarization readings are apparent chargeabilities M1, M2, M3, M4. Only M1 was plotted.

$$M1 = \sum_{1}^{N} \frac{\int_{(td+tp)} Vs\ dt}{Vp\ tp}$$

Resistivity data was calculated from Vp as read by the receiver and Ig as read from the transmitter.

Induced Polarization and Resistivity Survey Procedure

A gradient electrode array was used for the main survey one anomaly was detailed with three array.

(i) Gradient array : The two current electrodes were placed 6000 ft. apart and were fixed. The potential electrodes were separated by 50 ft. west of line 20E and 100 ft. east of line 20E. Lines were read parallel to the line joining C1 and C2 400 feet and 1200 feet east and west of the current line. The receiver stopped its traverse when it came within 2000 feet of a current electrode. In order to avoid traversing north-south striking magnetic diabase dykes lines 800 ft. and 1600 ft. from the current lines were sometimes read. Generally it was attempted to read every second line to obtain lines read at 800 intervals across the most geologically favourable areas.

Current stakes were moved when the lines from one set up were read until the desired north-south coverage was achieved. The current lines were then moved eastward and a new north-south series of set-ups were made.

ii) Three Array: A check of an indicated gradient anomaly was made with a three array electrode configuration. A receiver potential separation of 100 ft. was used.

Resistivity calculations were made from primary voltage read at the receiver. Apparent resistivity formulae for gradient and three array were obtained from N. Pattersons' outline in a 1968 Huntec Technical Memoranda (See attachment)

Induced Polarization and Resistivity Results

1. Induced Polarization: No chargeability anomalies of note were detected. The high values at 30-35N on lines 00-2E were proved to be false when checked with three array. Only occasional, scattered, very weak increases exist elsewhere on the property, including in the vicinity of trenches and foreign drilling about 5S on lines 20W-20E.

2. Resistivity: Alternate trends of high and low resistivity strike east-west. The high resistivity correlates to rocks of high resistance (rhyolyte-dacite) and to areas of shallow overburden.

CONCLUSIONS

The I.P. surveys objective of attempting to avoid crossing diabase dykes was achieved. Chargeability data indicates there is little possibility of an auriferous pyrite body being in the area surveyed.

Geological interpretation of the property will be aided with the resistivity data.

Blaine Webster

B. Webster
Geophysicist.
September 22, 1977

* Qualifications

2.2328

Ontario

Ministry of Natural Resources

Fred W. Matthews,
Supervisor, Projects Unit,
Mining Lands Section,
Ministry of Natural Resources,
Whitney Block, Toronto.

NOTIFICATION OF RECORDING OF ASSESSMENT WORK CREDITS

Date of Recording of Work: October 24th, 1977.

Recorded Holder: Mr. Ralph E. Allerston,
322 Elm Street, North, Timmins, Ontario.
(address)

Township or Area: Bristol Township.

Type of Survey and number of Assessment Days Credits per claim	
GEOPHYSICAL	
Electromagnetic	....days
Magnetometer	....days
Radiometric	....days
Induced Polarization	21.5 days
SECTION 86 (18)	....days
GEOLOGICAL	....days
GEOCHEMICAL	....days

Man days ☐ Airborne ☐

Special Provision ☐ Ground ☒

Mining Claims

P.363445 - 363448 inclusive
363811 - 363814 inclusive
371423 ; 379994; 380411
382720 - 382721
413232
413423 - 413425 inclusive
414512
414516 - 414517
444487 - 444489 inclusive
444492
444494 - 444496 inclusive
451030
451531 - 451533 inclusive
451541 - 451548 inclusive
453694 - 453697 inclusive
453734 - 453737 inclusive
453999-454000
479501 - 479506 inclusive
480304 - 480305
480315
480317 - 480318

NOTICE TO RECORDED HOLDER

☐ Survey reports and maps in duplicate must be submitted to the Projects Unit, Toronto within 60 days from the date of recording of this work.

☒ Reports and maps are being forwarded to the Projects Unit with this letter.

Godfrey Twp. - M. 284

Carscallen Twp. - M. 267

Ogden Twp. - M. 305

Thorneloe Twp. - M. 313

23M. BASE LINE 22M. surveyed 21M. in 1899 by O.L.S. 20M. A. NIVEN 19M.

5M. 4M. 3M. 2M. 1M.

Waterhen Lake

McDonell Lake

Thunder

Bristol

Bristol Lake

Tatachikopika Cr.

Creek

Thunder

Neelands, December 1916

Sutcliffe and Land Surveyors Ontario Line surveyed by

River

Montgomery

No open ground

P-7178-1

101

144

THE TOWNSHIP OF 2.2517 BRISTOL

DISTRICT OF COCHRANE

PORCUPINE MINING DIVISION

SCALE: 1-INCH = 40 CHAINS

LEGEND

PATENTED LAND	(P)
CROWN LAND SALE	C.S.
LEASES	(L)
LOCATED LAND	Loc.
LICENSE OF OCCUPATION	L.O.
MINING RIGHTS ONLY	M.R.O.
SURFACE RIGHTS ONLY	S.R.O.
ROADS	
IMPROVED ROADS	
KING'S HIGHWAYS	
RAILWAYS	
POWER LINES	
MARSH OR MUSKEG	
MINES	
CANCELLED	C.

NOTES

400' Surface Rights Reservation along the shores of all lakes & rivers

Areas withdrawn from staking under Section 43 of the Mining Act.

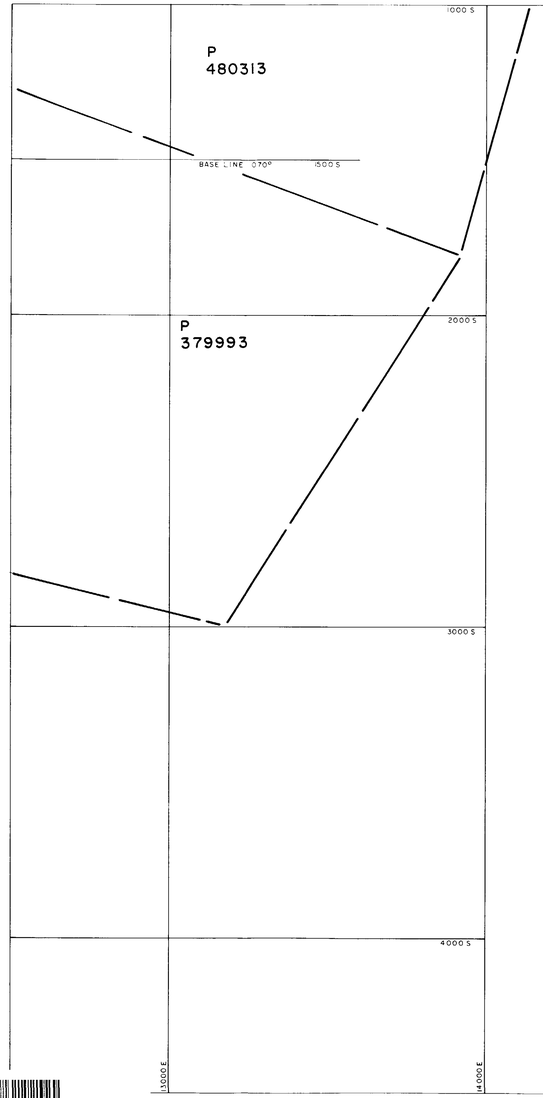
File	Date	Disposition
164584		S.R.O.

DATE OF ISSUE
OCT 28 1977
SURVEYS AND MAPPING BRANCH

This township lies within the Municipality of CITY of TIMMINS.

PLAN NO. M-264

ONTARIO
MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH



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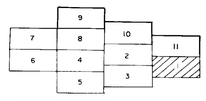
ALLERSTON PROPERTY
BRISTOL TOWNSHIP (M·264)
PORCUPINE MINING DIVISION
DISTRICT of COCHRANE
SCALE 1 INCH = 200 FEET

Blaine Webb



NO SURVEY

42A 5E, 6W

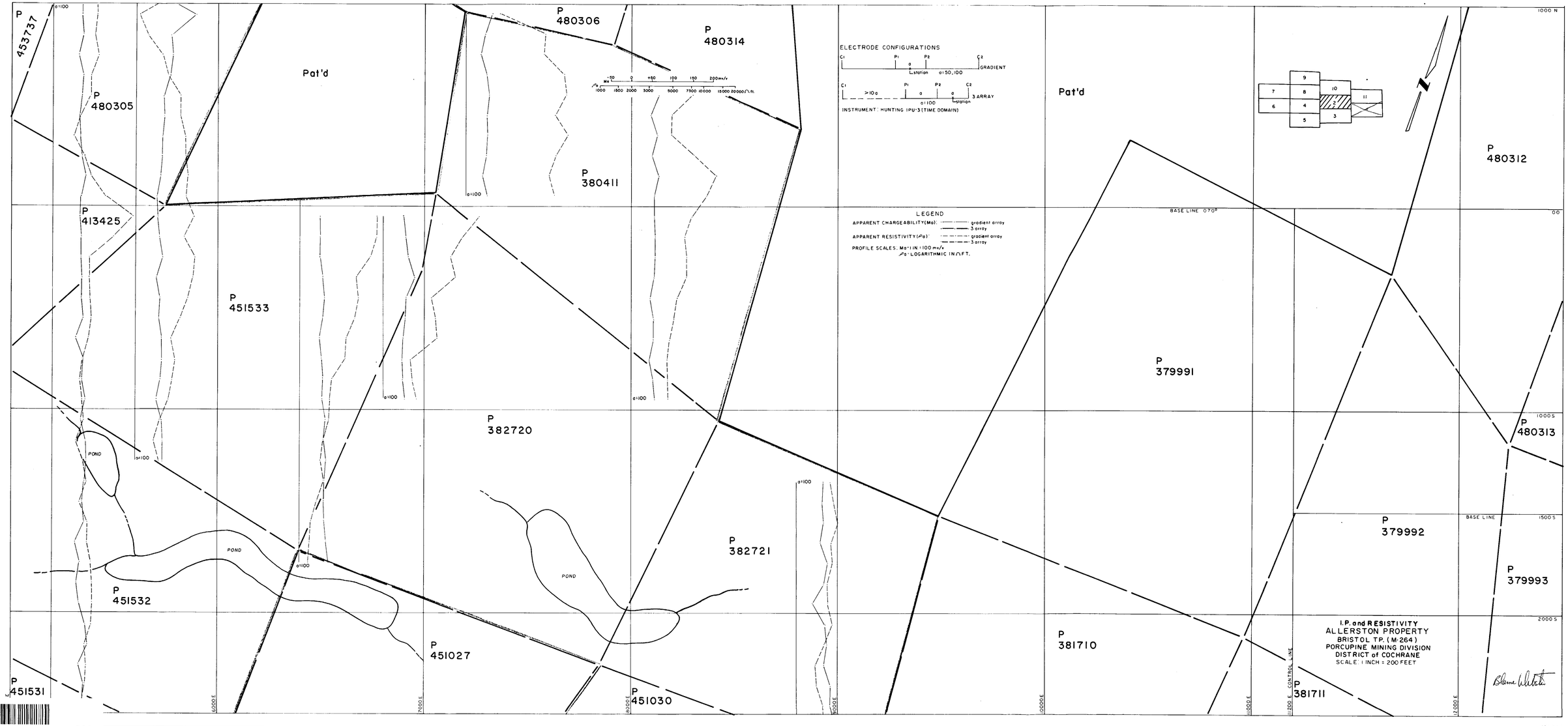
6/77
12/76

ADMINMART 2 2517 BRISTOL

210

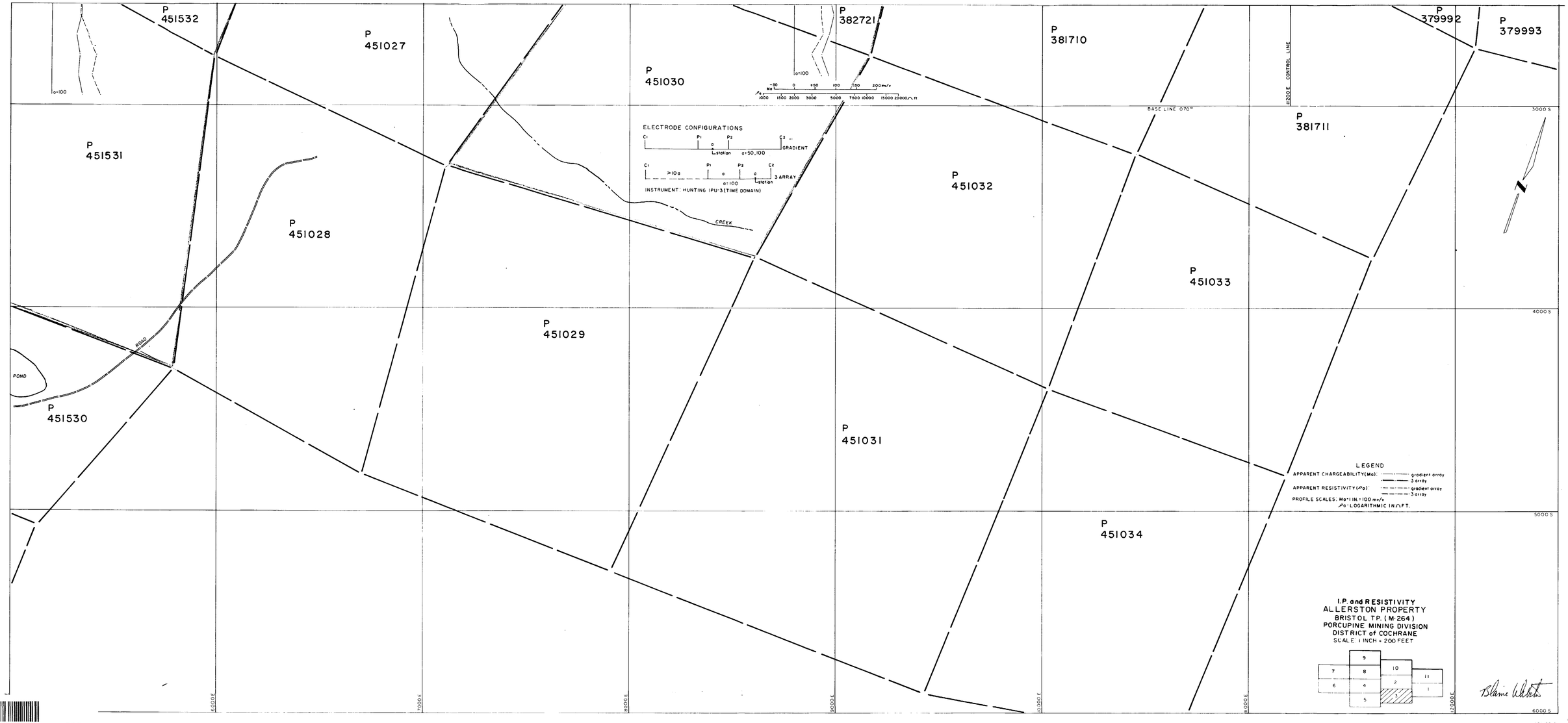
ALLERSTON OPTION-

1



6/77
42A.SE,6W.12/76

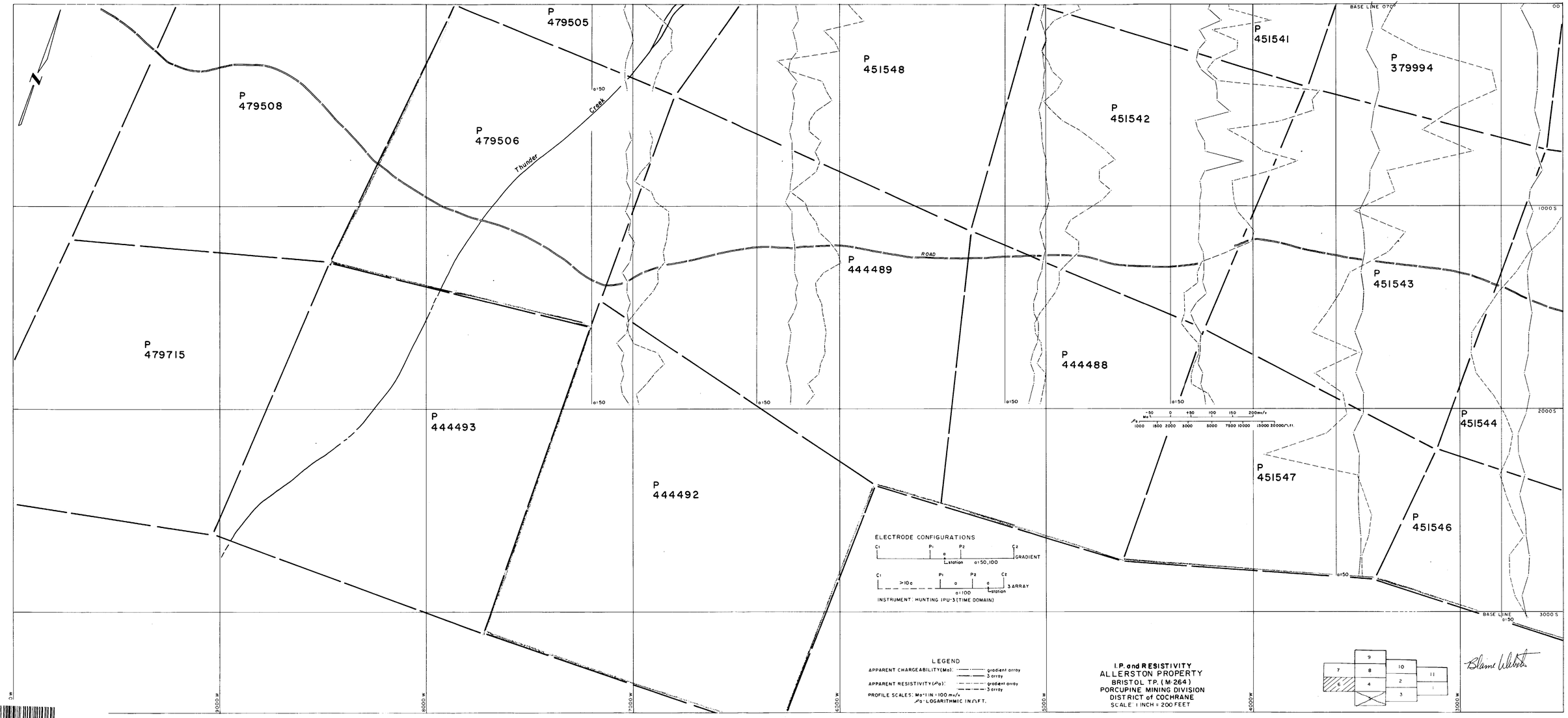
ALLERSTON OPTION - I.P. and RESISTIVITY 2



ALLERSTON OPTION-I.P. and RESISTIVITY-3


I.P. and RESISTIVITY
ALLERSTON PROPERTY
BRISTOL TP. (M-264)
PORCUPINE MINING DIVISION
DISTRICT of COCHRANE
SCALE: 1 INCH = 200 FEET
LEGEND
APPARENT CHARGEABILITY (Ma): gradient array, 3 array
APPARENT RESISTIVITY (ρa): gradient array, 3 array
PROFILE SCALES: Ma: 1 IN. = 100 mv/v
ρa: LOGARITHMIC IN Ω FT.
ELECTRODE CONFIGURATIONS
GRADIENT
a=50,100
3 ARRAY
a=100
INSTRUMENT: HUNTING IPU-3 (TIME DOMAIN)
BASE LINE 070°
BASE LINE
ROAD
WINTER TRAIL
P 371423
P 363448
P 363445
P 363812
P 363813
P 413424
P 413425
P 451544
P 363447
P 363446
P 414517
P 451532
P 363811
P 363814
P 414516
P 451546
P 451545
P 451531
P 414512
P 414513
P 414515
P 414514
2000 W
1000 W
00
1000 E
2000 E
3000 E
4000 E
5000 E
1000 S
2000 S
3000 S
240
42A 5E, 6W 12/76
6/77
ALLERSTON OPTION-I.P. and RESISTIVITY-4

250
ALLERSTON OPTION- 5



260

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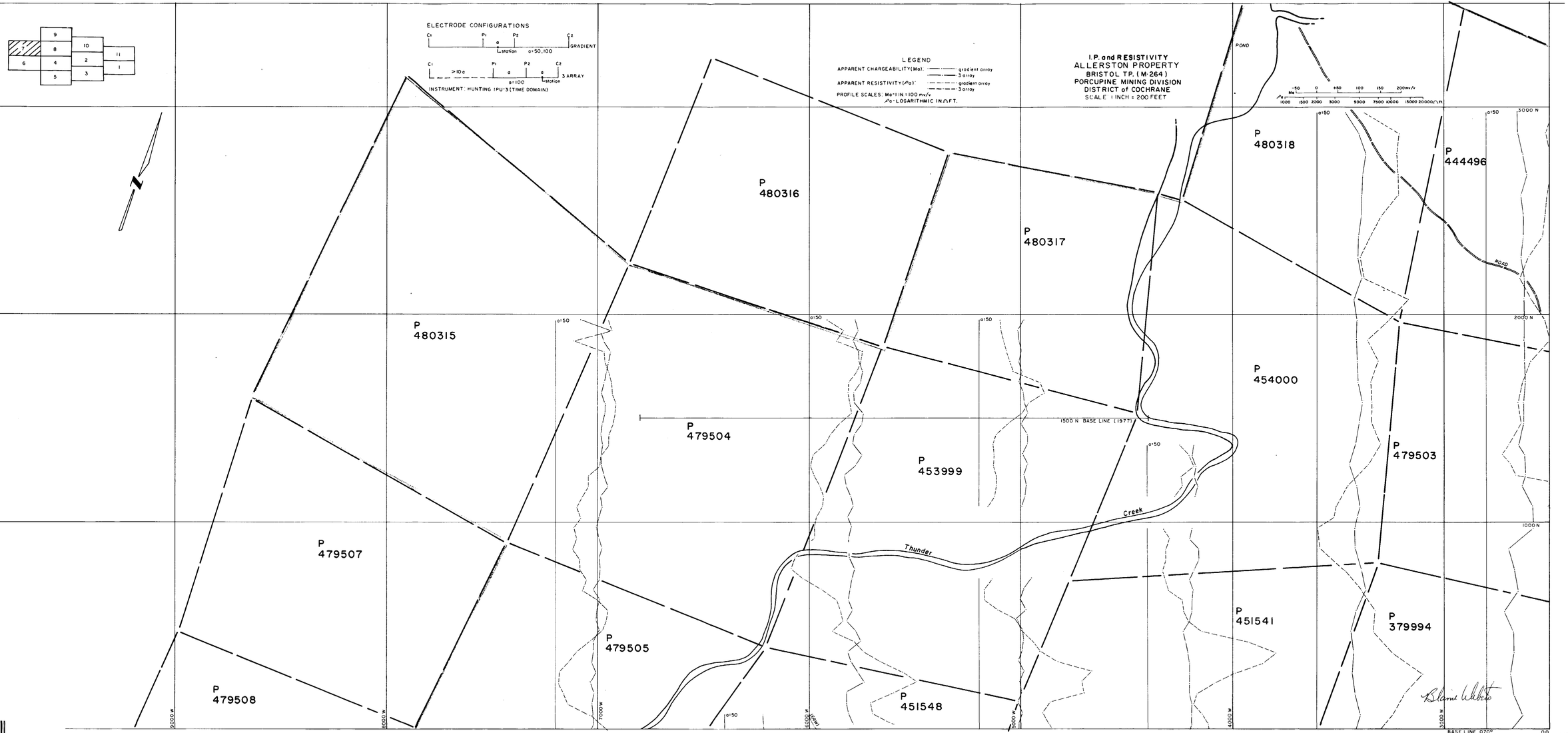

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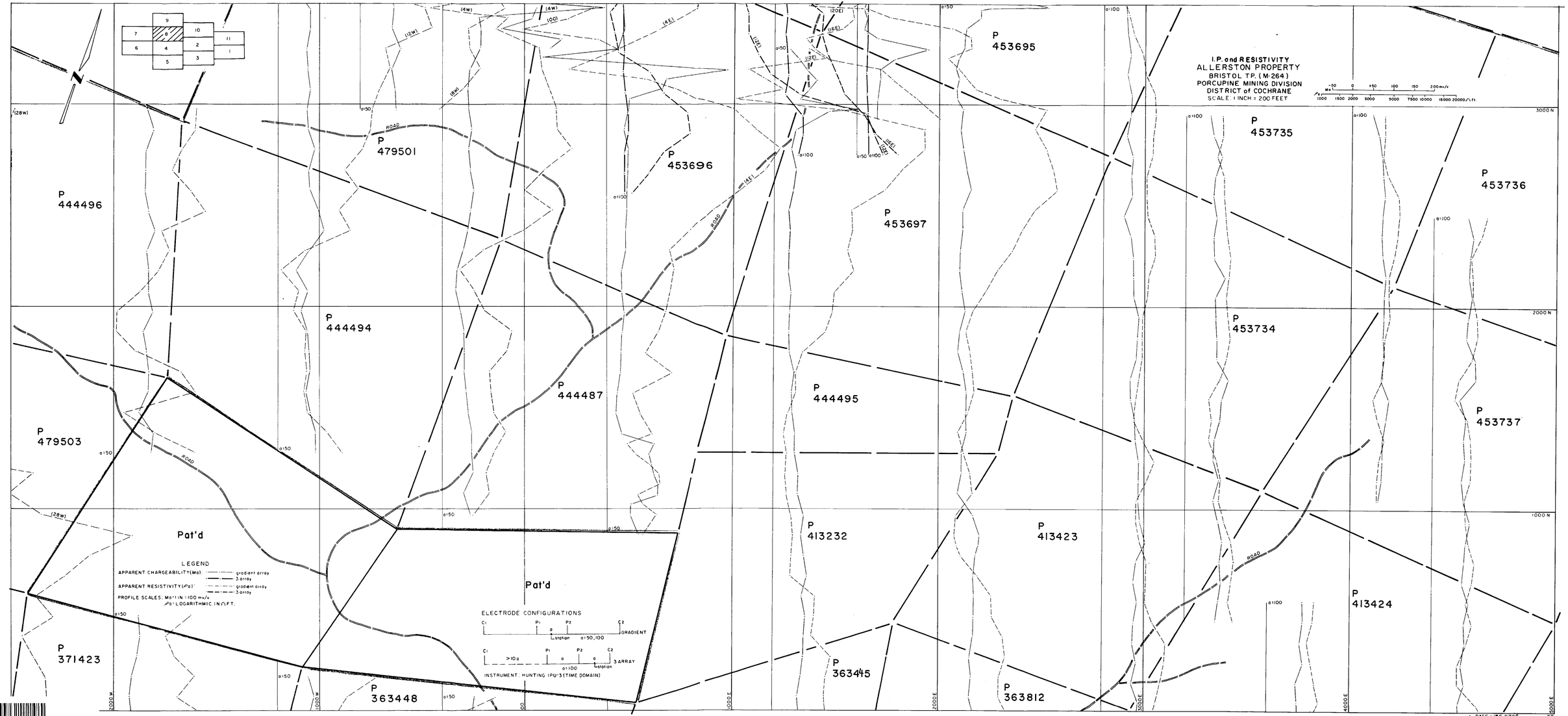
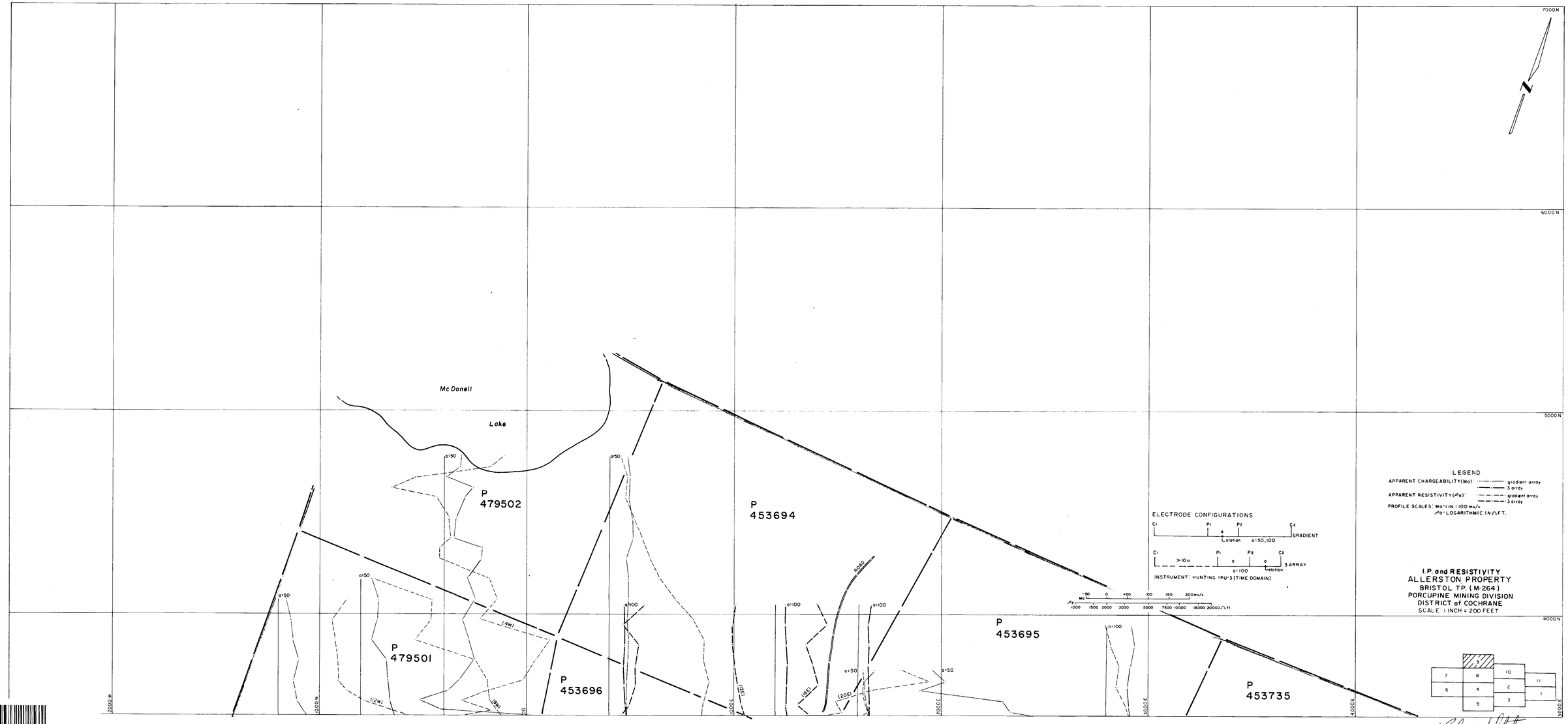
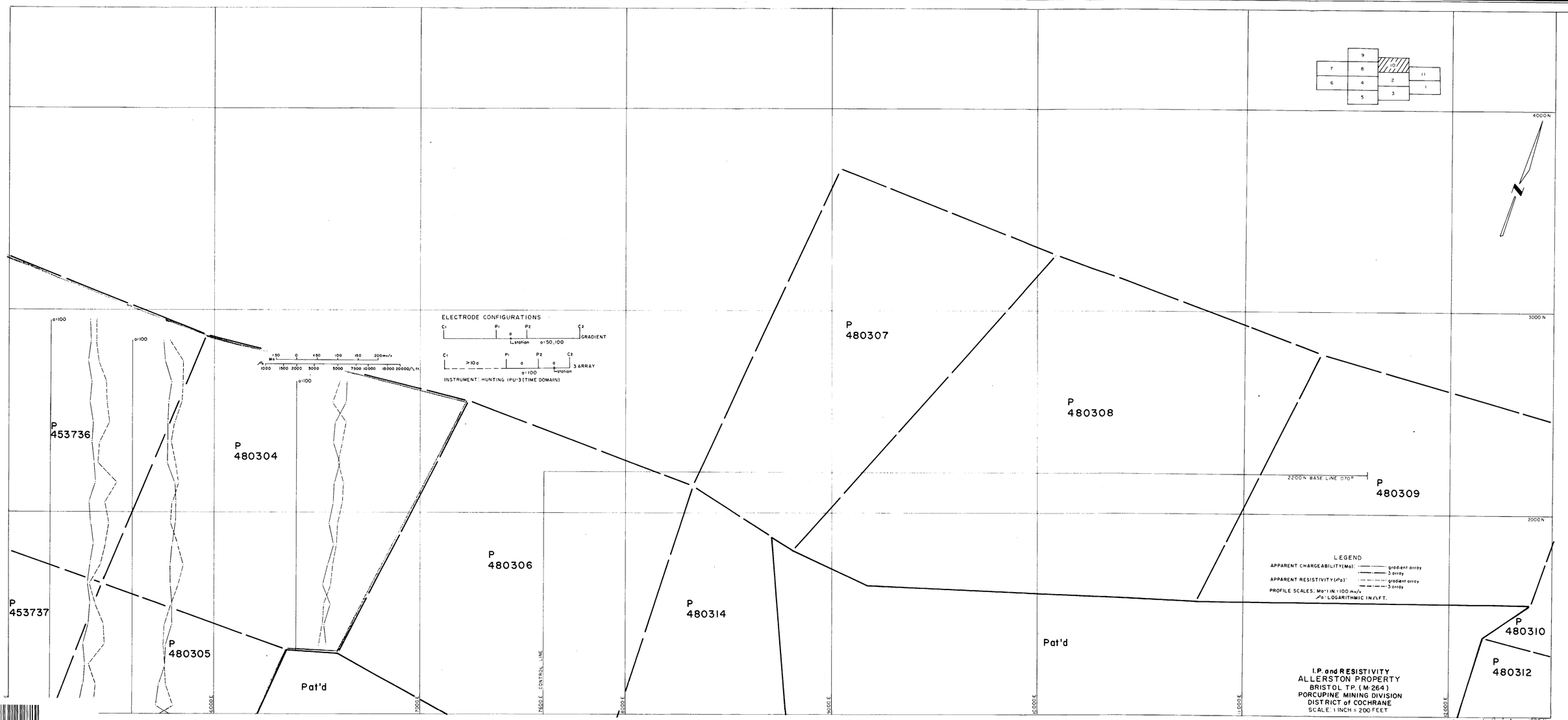
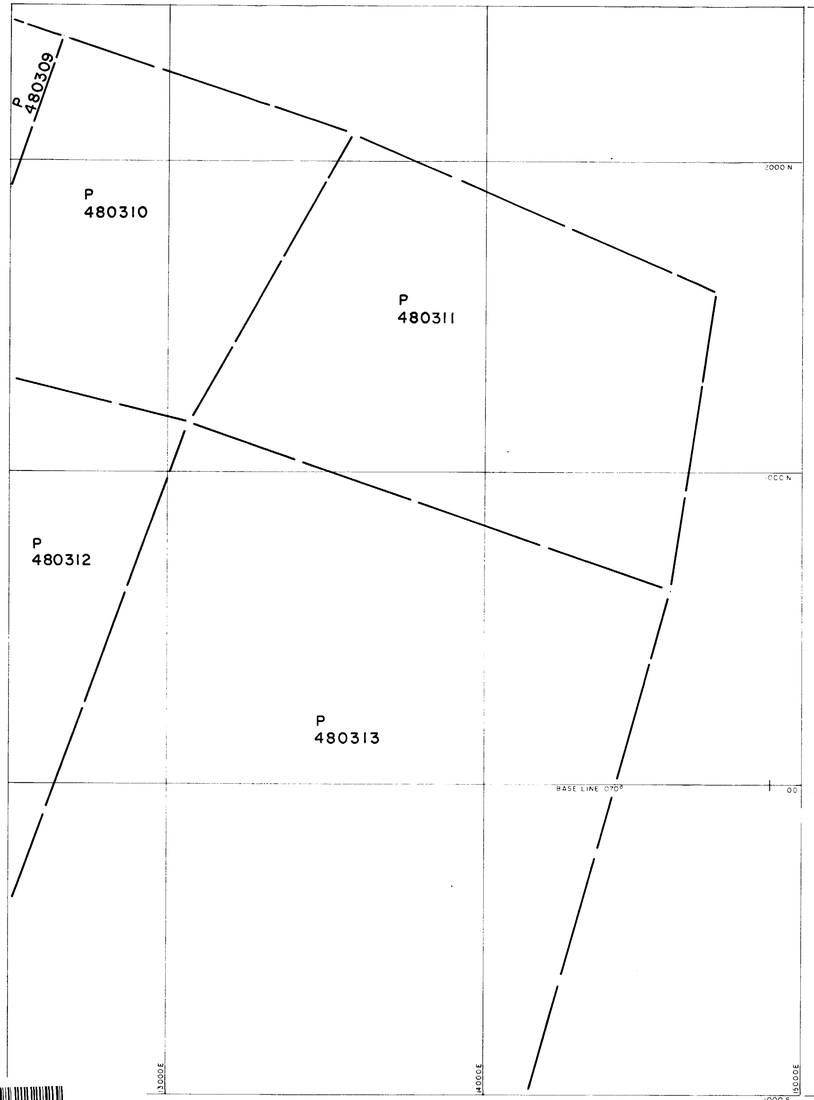


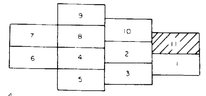

7000N
6000N
5000N
4000N
2000W
1000W
0
1000E
2000E
3000E
4000E
5000E
Mc Donell
Lake
P 479502
P 479501
P 453694
P 453696
P 453695
P 453735
a=50
a=100
(4w)
(12w)
(8w)
(12E)
(16E)
(20E)
ELECTRODE CONFIGURATIONS
C1 P1 P2 C2 GRADIENT
a=50,100
>10a
a=100
3 ARRAY
INSTRUMENT: HUNTING IPU-3 (TIME DOMAIN)
LEGEND
APPARENT CHARGEABILITY (Ma): gradient array, 3 array
APPARENT RESISTIVITY (ρa): gradient array, 3 array
PROFILE SCALES: Ma=1 IN.=100 m/v
ρa=LOGARITHMIC IN./CYCLE
I.P. and RESISTIVITY
ALLERSTON PROPERTY
BRISTOL TP. (M-264)
PORCUPINE MINING DIVISION
DISTRICT of COCHRANE
SCALE 1 INCH = 200 FEET
42A 5E,6W 6/77



ALLERSTON OPTION-I.P. and RESISTIVITY-10



ALLERSTON PROPERTY
BRISTOL TP. (M·264)
PORCUPINE MINING DIVISION
DISTRICT of COCHRANE
SCALE: 1 INCH = 200 FEET



Blaine Allerston

NO SURVEY

424 SE. 6W 6/77

42A06NW0471 2.2517 BRISTOL

310