

2002

MERCURY EXPLORATIONS LIMITED (N.P.L.)
700 - 1281 West Georgia Street,
Vancouver 5, B.C.

GEOPHYSICAL ASSESSMENT REPORT

CHESS MINERAL CLAIMS

OMINECA MINING DIVISION

BRITISH COLUMBIA

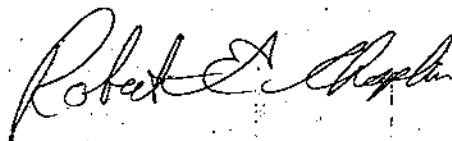
N.T.S. 93-K

Longitude 125° 10'W.

Latitude 54° 07'N.

Dates of Work: June 8th - 17th, 1969

by



ROBERT E. CHAPLIN, P.ENG.,
September 8th, 1969

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Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 2002 MAP

GEOPHYSICAL ASSESSMENT REPORTCHESS MINERAL CLAIMS
OMINECA M.D., BRITISH COLUMBIAINTRODUCTION

The Chess mineral claims were staked in 1969 to further examine data collected in 1968 regional reconnaissance surveys. Rock alteration indicates that the property be prospected in covered areas by means of the induced polarization method.

SUMMARY

A very weak 6,000 x 2,500 feet induced polarization zone was outlined by 4¹/₂ miles of reconnaissance survey. Alternating zones of slightly fractured and sericitized quartz-monzonitic rocks trend in a westerly direction. The area of the I.P. anomaly is flat and covered by a moderate depth of glacial overburden. More detailed I.P. and drilling are recommended on a \$10,500.00 program.

LOCATION

One-half to two miles north of the Endako River, and southeasterly from the west side of Cheskwa Lake, and six miles west of the village of Endako.

ACCESS

Access is by 4-wheel drive vehicle from the Savory Road leading north from Highway 16, or from a dirt road leading west from Highway 16 where the highway crosses the C.N.R. tracks and Endako River, 1¹/₂ miles west of the village of Endako.

Chess Claims (continued)....OWNERSHIP

<u>Claim Name & No.</u>	<u>Record No.</u>	<u>Recording Date</u>	<u>Recorded Owner</u>
CHESS 1-48 incl.	71964-71996 ⁷ 67859-67870	March 13, 1969	Mercury Explorations

Application has been made for 26 Certificates of Work on the following 24 Chess claims, along with one Notice to Group:

One year on each Chess 5, 7, 9, 11, 13, 15, 17, 19,
30, 32, 34, 40, 42, 44,
29, 31, 33, 35, 37, 39, 41 and 43.

Two years on each Chess 36 and 38.

HISTORY

Amax Explorations Inc. worked in the vicinity of the Chess claims on a geochemical soil and silt survey. Their claims subsequently lapsed. No other work is known to the writer.

Mercury Explorations Limited staked the Chess claims to do induced polarizatin surveys in and near an area of known hydrothermal rock alteration. The following personnel were employed during June 8th to 17th, 1969, conducting the I.P. Survey: Messrs. Quettier, Olson, Pulfer, Alexander and Berretta.

PROCEDURE FOR INDUCED POLARIZATION RECONNAISSANCE SURVEY

A Geoscience Inc., frequency-domain, Induced Polarization Unit performed 100 line miles of pole-dipole, 400 foot traverses at widely spaced reconnaissance intervals. Dipole-dipole surveys checked central portions of the pole-dipole features.

Stainless steel current electrodes were used and field voltages were measured through supersaturated copper sulphate solutions in porous pots. All self potentials were easily bucked. Applied currents commonly ranged between 0.2 and 0.75 amperes.

The percent frequency effect (P.F.E.) was calculated by subtracting both transmitter deviations and a daily receiver-transmitter calibration constant, from the obtained receiver deviation ($PFE = Rx - Tx - Rcal$). Transmitter deviations commonly ranged between 0.1 and 0.6 percent. Ground currents were adjusted to maintain transmitter deviations at one percent, or less.

Bedrock and overburden resistivities permitted the use of a 10.0 - 0.1 cycles per second frequency spread in a pole-dipole array, with no inductive coupling effects.

Apparent resistivities were calculated and plotted in ohm-meters,

i.e.,

$$\rho = 2\pi(K) \frac{V}{I}$$

Generally, Topley rock resistivities range upward from 400 ohm-meters. Overburden resistivities are variable, but mostly of 100 ohm-meters, or less. Dry gravel eskers, etc., have higher resistivities. Generally, expanding arrays indicate that apparent resistivities of 100, or less, are commonly due to overburden effects. The spread of the I.P. survey was varied to maintain resistivities above 100 ohm-meters. Similarly, resistivities higher than 300 - 400 were indicative of bedrock under a very thin overburden (from zero to 20 feet).

Procedure for Induced Polarization Reconnaissance Survey (continued),...

The survey was carried out maintaining an optimum spread to adequately explore for bedrock percent frequency effects (P.F.E.), using, where practical, a resistivity range between 100 and 300 ohm-meters. The pole-dipole array was commonly used with a 400-foot spread on a 10.0 - 0.1 cycles per second frequency range between 100 and 300 ohm-meters apparent resistivity range.

Studies were made to attempt a correlation between high bedrock percent frequency effects, caused by outcropping pyritic rocks and similar buried rocks. No exact relationship was determined, but the 'bedrock' P.F.E.'s commonly attenuate (where measured through non-conductive overburden) in proportion to the change in resistivity within the 200 to 100 ohm-meter range only :

The above resistivity range probably represents a critical overburden to bedrock proportion of volumes between 'typical' Topley intrusive rocks and 'typical non-conducting overburden. A metal conduction factor (M.C.F.) calculation may provide significant information for P.F.E. analysis in the critical resistivity range(?).

CHESS CLAIMS (125° 10'W; 54° 07'N.)I.P. Survey Results

Reconnaissance I.P. traverses over the Chess claims outlined a weakly anomalous zone, 6,000 x 2,000 feet, elongated in a westerly direction. Four and one-half miles of I.P. work was completed.

The area of the anomaly is one of no outcrop and is in part covered by glacial lacustrine silts and clays near the Endako River. Northward the area is covered by a thinning veneer of gravels.

The northernmost claim location line is along a natural gas pipeline right-of-way, constructed in 1968. The construction exposed bedrock in numerous places. Bedrock in the vicinity of the I.P. effect is a coarse-grained, slightly altered to fresh quartz monzonite. The rock, where altered, is slightly sericitized along weak shears. The altered zones appear to trend in a westerly direction.

Conclusions

The weak P.F.E. zone is probably due to a bedrock cause. Overburden is shallow but widespread. The anomaly should be further examined, because hydrothermally altered rocks occur nearby.

Recommendations

More detailed I.P. and test drilling is recommended.

Estimated Cost of Further Work

Induced Polarization	\$1,000.00
Diamond Drilling	8,000.00
Supervision	500.00
Contingencies	1,000.00
Total	<u>\$10,500.00</u>

Chess Claims (continued)....

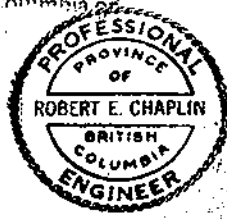
COSTS OF I.P. SURVEY

Payroll			
Quettier, Olson, Alexander, Pulfer, Berretta)			\$1,200.00
Consulting			
R.E. Chaplin <i>R.E.C.</i>			150.00
Camp Support			360.00
Equipment Rental			280.00
Transportation			60.00
Field Supplies			
I.P. Wire	\$240.00		
Radios	30.00		
Electronic Access	<u>110.00</u>		<u>380.00</u>
		Sub-Total	\$2,430.00
Expediting, Communications & Admin. @ 10%			243.00
		GRAND TOTAL	<u><u>\$2,673.00</u></u>

Declared before me at the City
of Vancouver, in the
Province of British Columbia, this 12
day of September 1969 A.D.

Respectfully submitted,
Robert E. Chaplin
Robert E. Chaplin, P.Eng.,
September 8th, 1969,
Vancouver, B.C.

Jill [Signature]
Sub-mining Recorder



QUALIFICATIONS OF SUPERVISORY PERSONNEL

1965
M.G. BERRETTA, M.Sc., ~~P.E.~~:

- 1965 - M.Sc., University of Windsor.
- 1967 - Ph.D. Candidate at University of British Columbia, Department of Geophysics.
- 1968 - 2 months with Seigel & Associates (I.P.)
- 1968-9 Taught Geophysics Exploration, Lab. U.B.C.,
- 1969 3 months of I.P. with Mercury Explorations in Endako Area.
- 1969-70 Lecturer in Elementary Exploration Geophysics at U.B.C.

ROBERT E. CHAPLIN, P.Eng.:

Registered Professional Engineer of the Province of British Columbia,
Graduate in Geological Engineering from the University of
British Columbia, 1959.

Seventeen years' experience in mineral exploration.

Five years' experience owning and operating I.P. Unit, (used in Survey)

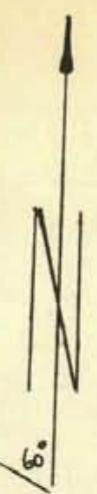
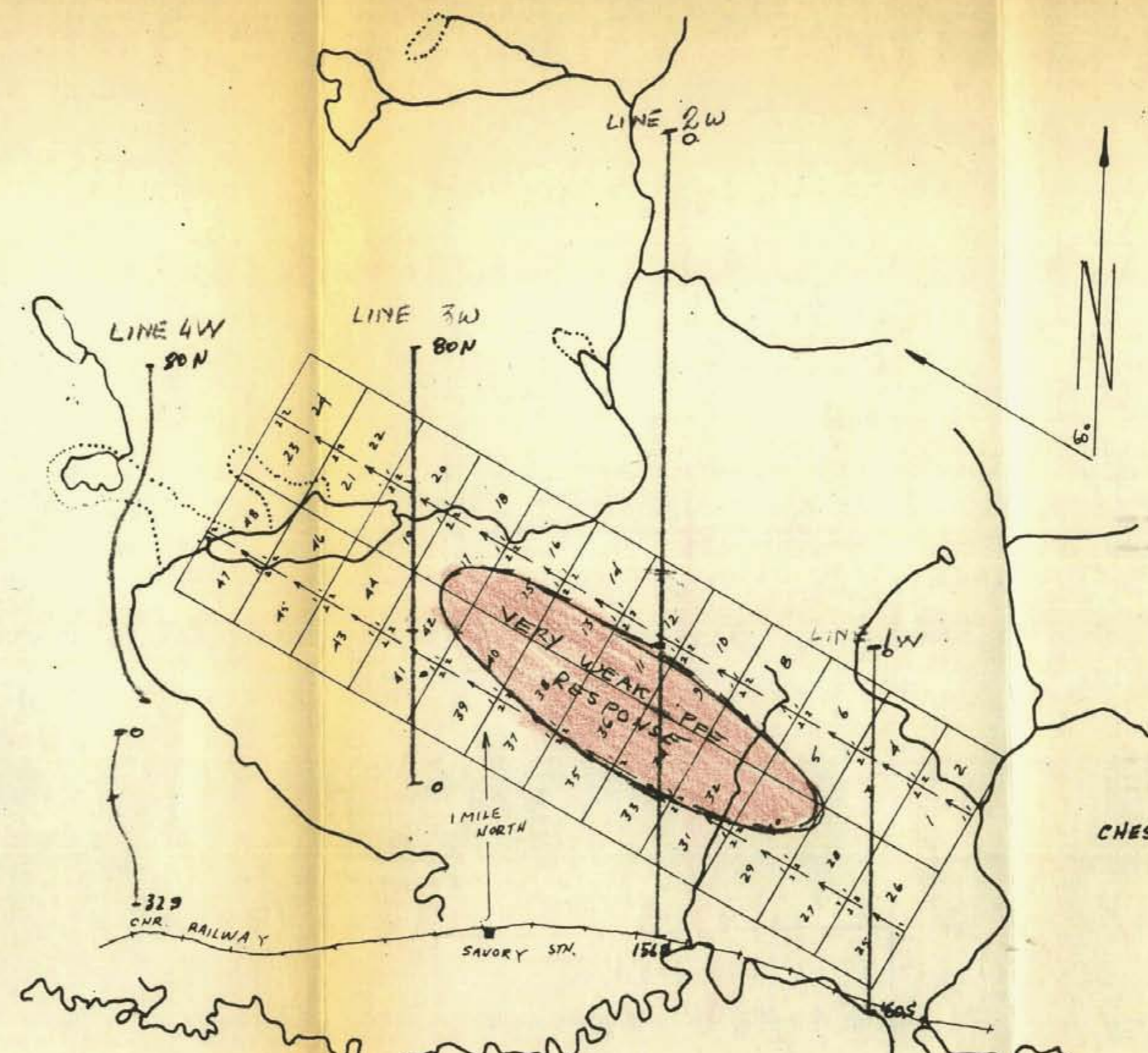
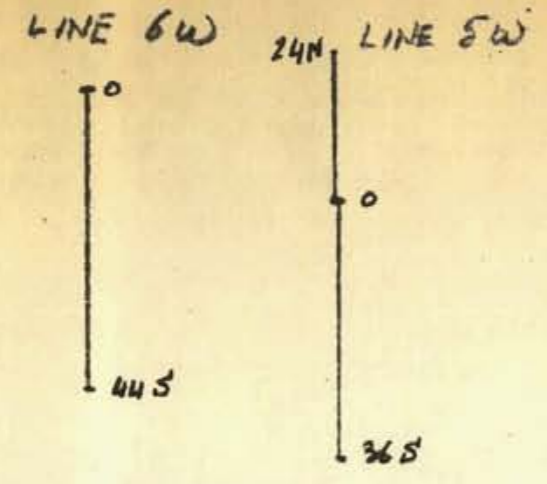
Robert E. Chaplin

Robert E. Chaplin, P.Eng.,
September 8th, 1969,
Vancouver, B.C.



REFERENCES

- Lode Metals in British Columbia, 1965, p. 114, Dr. J.M. Carr,
Lode Metals in British Columbia, 1967, p. 114, Dr. J.M. Carr,
Minister of Mines & Petroleum Resources, 1966, p. 117.
Minister of Mines & Petroleum Resources, 1964, p. 58.
Bache & Co. - Placer Development Ltd, January, 1969, pp. 7-14,
(an Institutional Report).
Dept. of Energy, Mines & Resources, Geophysical Airborne Magnetic
Series, Sheet 93-F & 93-K.
Geology of the Endako Molybdenum Deposit, by E. Kimura & A.D. Drummond,
72nd Annual Northwest Mining Association, Spokane, Washington, 1966.



CHES GROUP
1-48

1" = 2640'

329
CHR. RAILWAY

SAVORY STN.



2002

MERCURY EXPLORATIONS LIMITED (N.P.L.)
#700 - 1281 WEST GEORGIA STREET
VANCOUVER 5, B.C.

RECORDED MARCH 13/69
Robert E. Chaplin

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NO. *2002* MAP *#1*

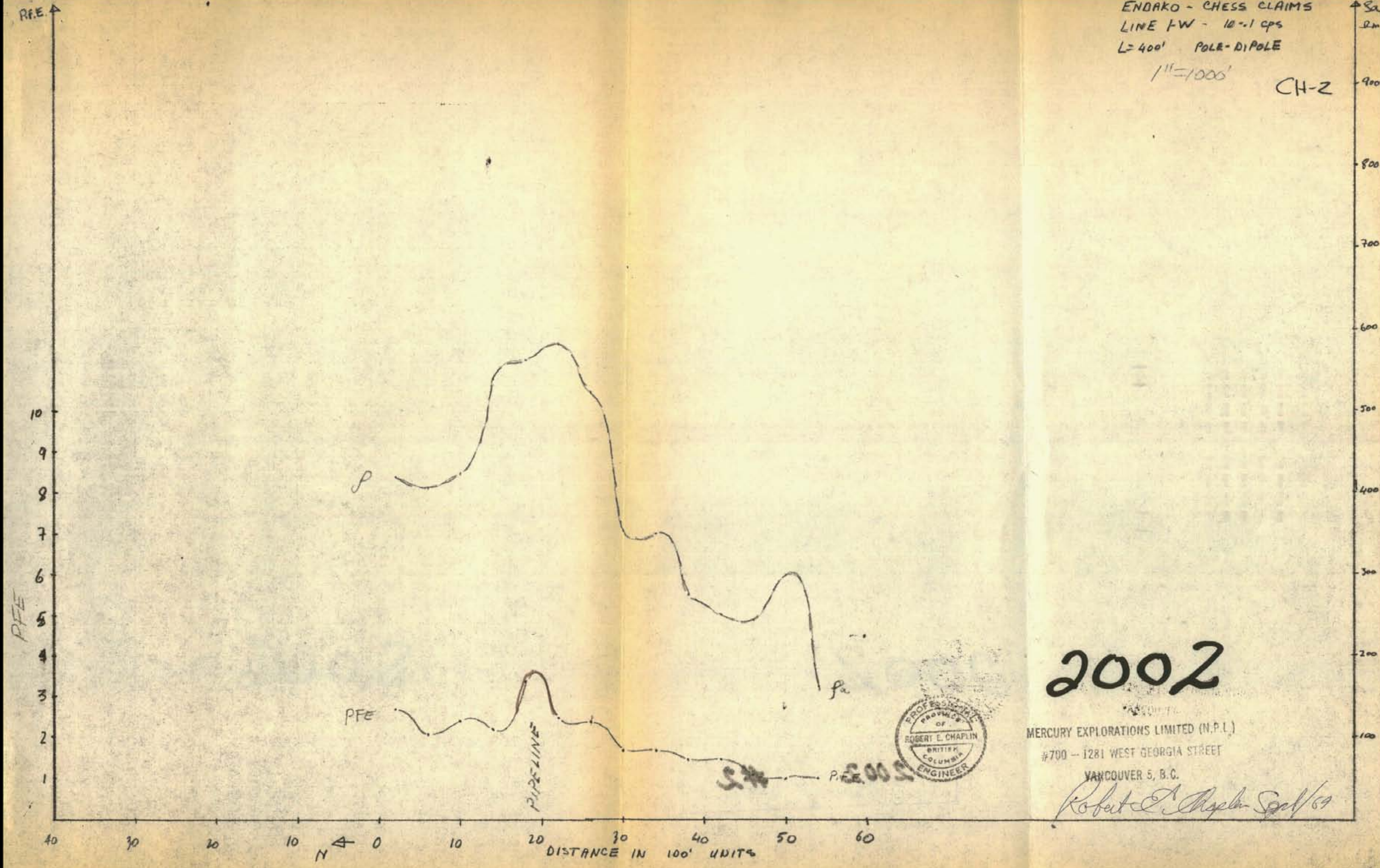
2002

R.F.E.

ENDAKO - CHESS CLAIMS
LINE FW - 10-1 cps
L=400' POLAR-DIPOLE

1"=1000'

CH-2



2002

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VANCOUVER 5, B.C.

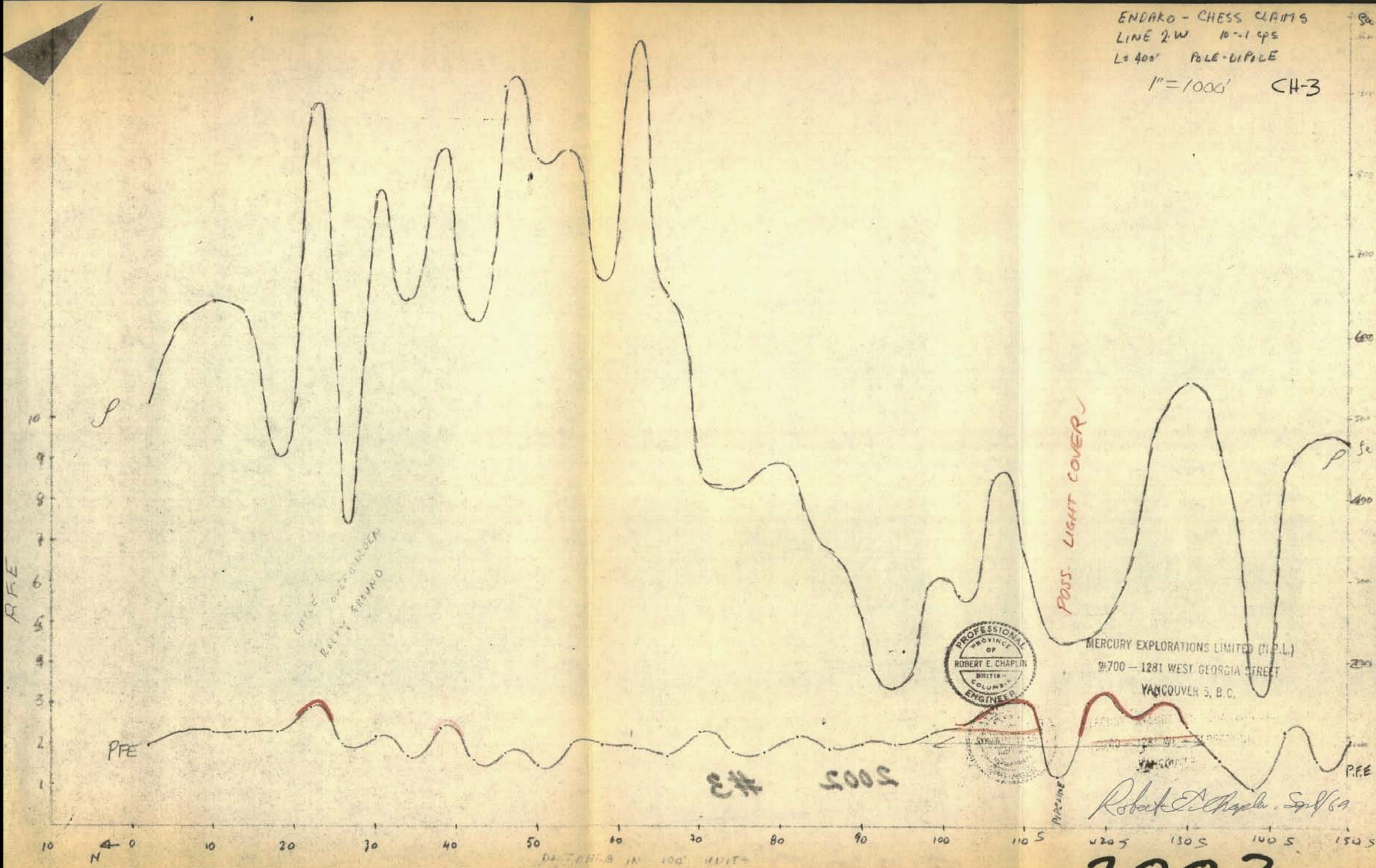
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2002

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NO. 2002 MAP #2

ENDAKO - CHESS CLAIMS
 LINE 2W 10-1 CPS
 L=400' POLE-DIPOLE
 1"=1000' CH-3



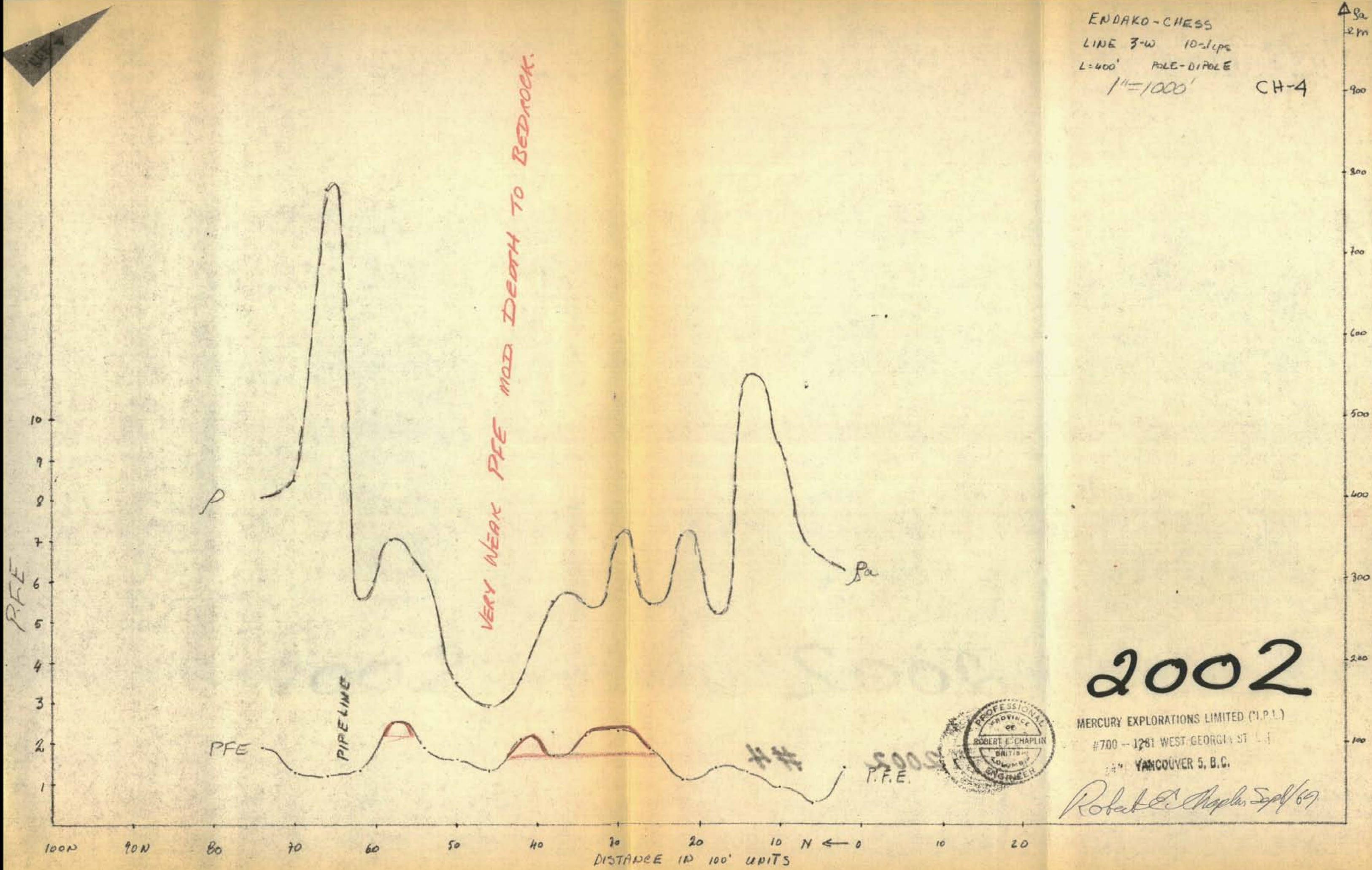
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 VANCOUVER 5, B.C.

Robert E. Chaplin, Sp. 69

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2002



ENDAKO-CHESS
 LINE 3-W 10-slips
 L=400' POLE-DIPOLE
 1"=1000'

CH-4

2002

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 #700 - 1281 WEST GEORGIA ST. L.I.
 VANCOUVER 5, B.C.

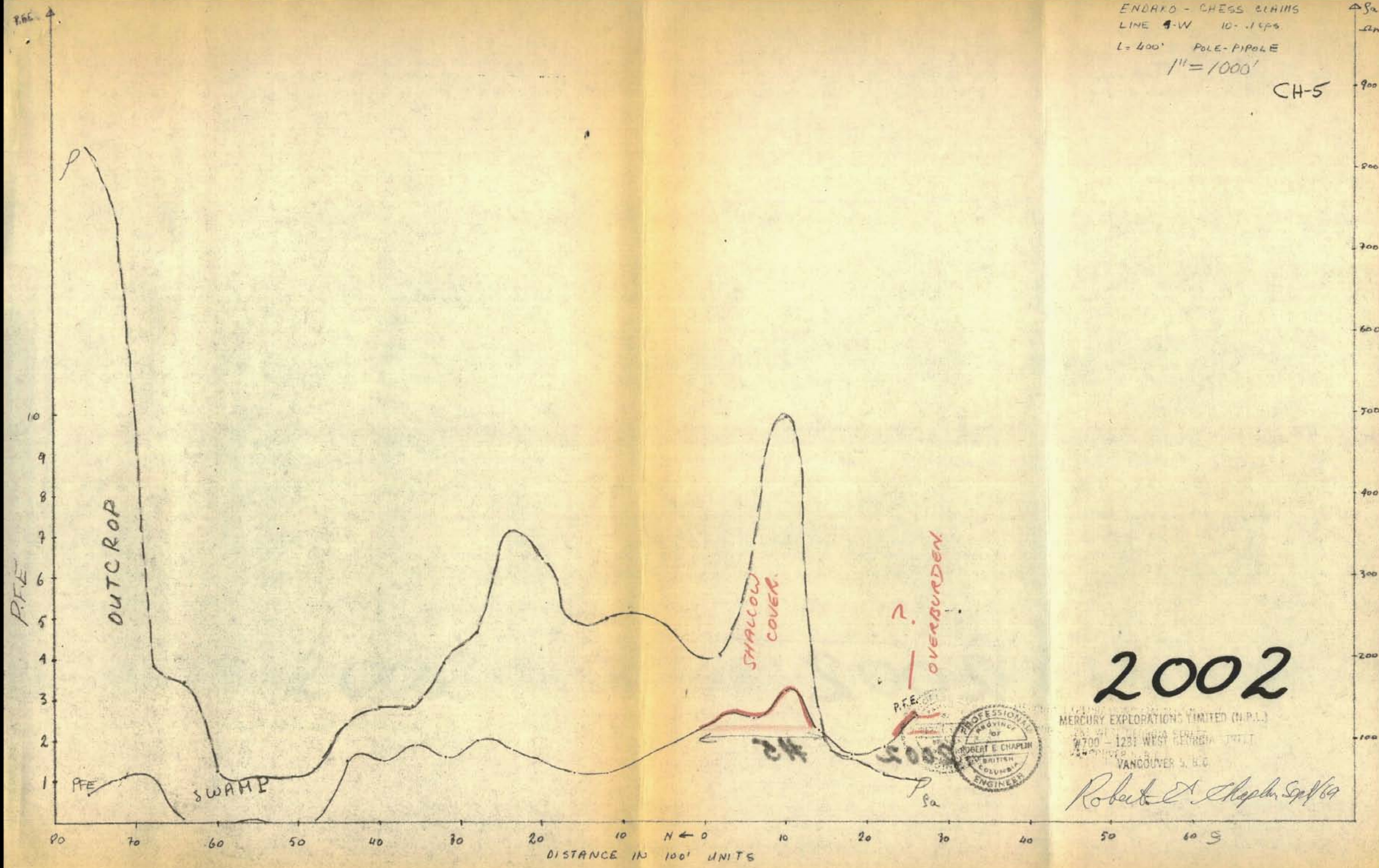
Robert E. Chaplin Sept/69



5009
 P.F.E.

2002

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ENDARO - CHESS CHAINS
 LINE 9-W 10-14PS
 L=400' POLE-TO-POLE
 1"=1000'

CH-5

2002

MERCURY EXPLORATIONS LIMITED (N.P.L.)
 2700 - 1281 WEST GEARDA TRAIL
 VANCOUVER, B.C.

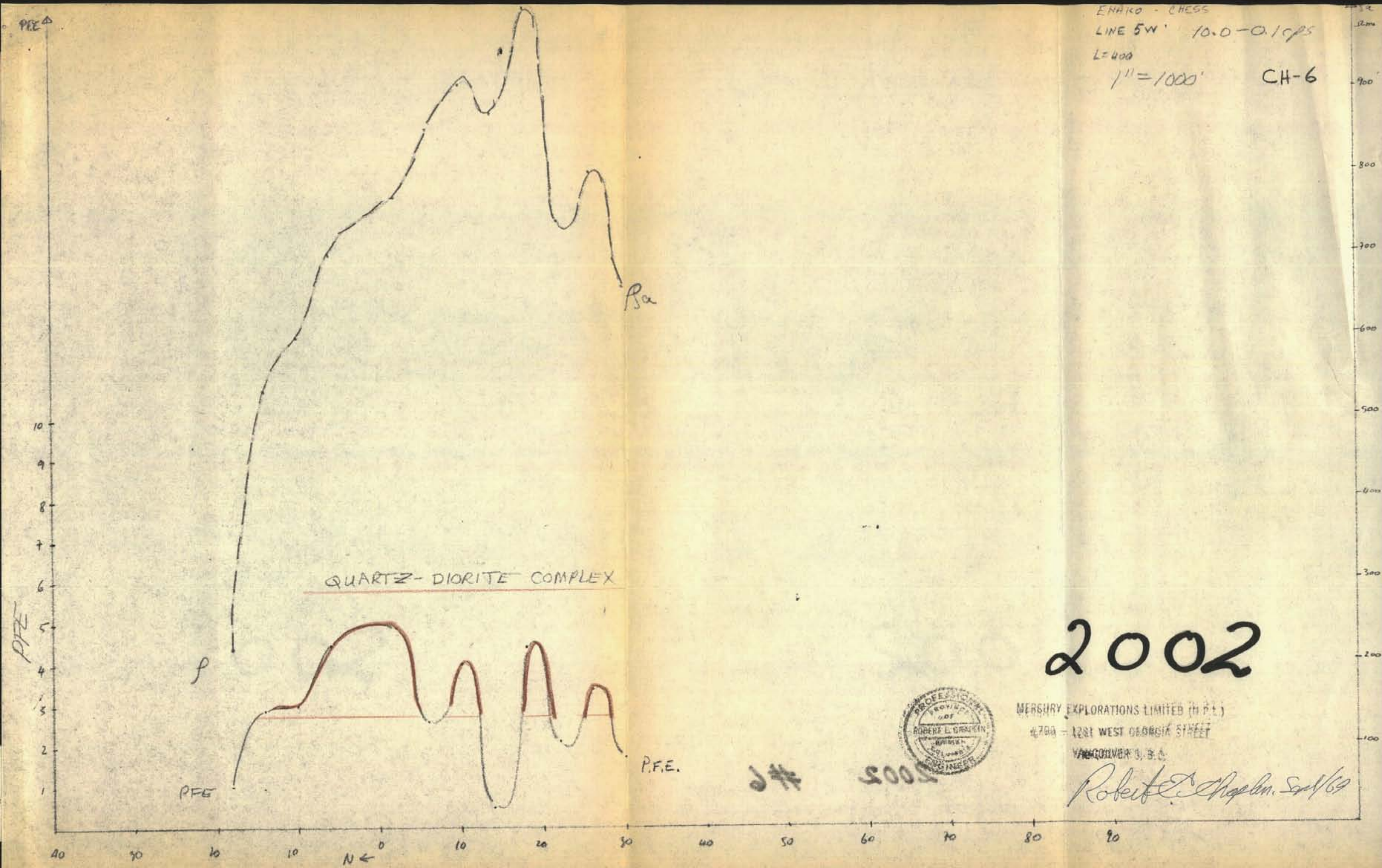
Robert E. Chaplin, Sept 69



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ENAKO - CHESSE
 LINE 5W' 10.0-0.1 CPS
 L=400
 1"=1000' CH-6



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MERCURY EXPLORATIONS LIMITED (INCORPORATED)
 4700 - 1281 WEST GEORGIA STREET
 VANCOUVER, B.C.

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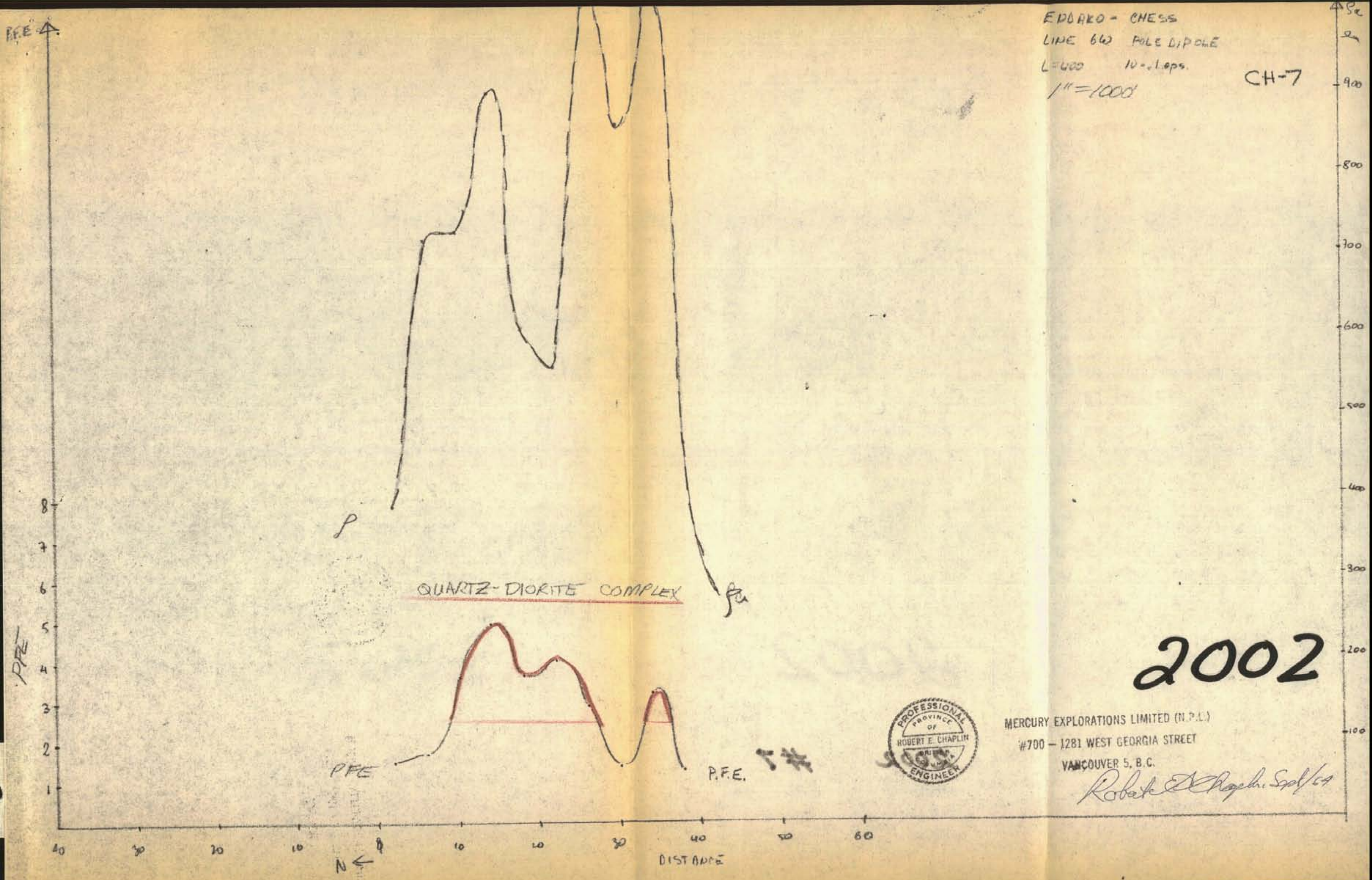
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EDDARCO - CHESSE
LINE 6W POLE DIPOLE
L=400 10-1.0ps.
1"=1000'

CH-7



2002



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VANCOUVER 5, B.C.

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