

I N D E X



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	Line 2W
	Line 14W
	Line 25W
	Line 41W
	Baseline
MAGNETIC PROFILES	Line 9E
	Line 2W
	Line 14W
	Line 25W
	Line 41W
	Baseline

GEOLOGICAL SURVEY

[Signature]
NOV 17 1967

Resident Geologist
Whitehorse, Y. T.

This report has been examined by
the Geological Evaluation Unit.
Approved as to technical worth by:

[Signature]
RESIDENT GEOLOGIST

Approved as to cost in the amount
of: \$ 2400.00

[Signature]
RESIDENT MINING ENGINEER

Accepted as for registration work
under Section 22(4) of the
Mining Act.

[Signature]
COMMISSIONER OF MINES

2100

61° 23' N Lat.
139° 25' W Long.
115 G-6

INTRODUCTION

The Cork group of claims is jointly owned by Alcon Petroleum Ltd., Canadian Industrial Oil and Gas Ltd. and Imperial Oil Enterprises Ltd. and are currently held in trust for the owners by Geophoto Services Ltd. of 706 6th St. S.W., Calgary, Alberta.

Work on the claims was done by Geophoto Services Ltd. under the direction of G. J. McGinn, B.Sc., Prof. Eng., of 2615 11 Ave. N.W., Calgary and assisted by the following party members:

- G. Raham, M.Sc., 2621 Canmore Rd. N.W., Calgary.
- A. T. Foley, Prospector, Cork, Co. Cork, Ireland.
- R. Nasen, Geology Student, Calgary University.
- P. Paulsen, Geophysics Student, Calgary University.
- C. W. Armstrong, Helicopter Pilot, Bullock Aircraft, Calgary.

The Cork claims were staked as a result of the discovery of copper showings during a reconnaissance geochemical program carried out during 1965. Published geologic information was obtained from G.S.C. Paper 58-9.

Prior to starting field work, a detailed topographic map was drawn at a scale of 1" = 400' with 50 foot contour intervals. The map was prepared by photogrammic methods using a Nistri three dimensional plotter and government aerial photograph diapositives. This map was used as the main control for mapping, together with the use of an aneroid barometer, pace and compass surveys and triangulation shots. 28,600 feet of line were cut and chained where more exact control was necessary for geophysical surveys.

The representation work was fully supported by a Bell G3-B1 helicopter under charter from Bullock Aircraft of Calgary, Alberta.

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GEOPHYSICAL SURVEYS

All lines were surveyed at 50 foot intervals using an M700 McPhar electronic magnetometer. A standard base station was read before and after each line. Diurnal variation was so small that it was ignored in calculations and since the instrument reads the vertical magnetic component directly in gammas, the only calculations were correcting the day-to-day variation from line to line using the base station as a standard. The survey was useful in delineating igneous-sedimentary contacts in mantled areas. It was of particular value in assisting to trace the mineralized porphyritic intrusive.

Trial lines were run over the mineralized zone with a generator-powered 1000-5000 cycle vertical loop McPhar electro-magnetic unit. There were no conductors.

GEOCHEMISTRY

Soil samples were taken at 100 foot intervals on all lines where suitable soils were present. 22,800 feet of lines were sampled and tested for heavy metals using cold extractable methods. Anomalous samples were also tested for copper using the Holman method.

Three of the lines, 2+00W, 14+00W and 25+00W were found to have anomalous soils which coincided roughly with the magnetic anomalies. They also formed a line roughly on strike with the outcrop mineralization.

ENGINEERING

The author has no knowledge of any previous work done within the claim groups other than by Geophoto during 1968 when geochemical reconnaissance surveys indicated anomalous amounts of copper in stream sediments from a tributary flowing into Burwash Creek. The tributary was traced and found to have copper showings in several branches. Following staking a grab sample was taken and sent to Toronto for spectrographic analysis. It was subsequently assayed by chemical means and returned the following results:

Copper 0.75%
Silver 0.22 oz./ton.

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GEOLOGY

Table of Units

Diorite - medium grained to pegmatitic; probably of cretaceous age.

Feldspar Porphyry - fine grained to medium grained, white; orange weathering, feldspar phenocrysts to 1/8 inch, accessory pyrite and chalcopyrite.

Basic Dykes - fine grained, dark green; andesitic composition.

Volcanics - Vesicular and amygdaloidal basalt and andesite, porphyritic hornblende andesite, agglomerate, volcanic breccia, tuff; includes some small intrusive areas. Probable age - Triassic to Jurassic.

Quartzite - fine grained, green to white, generally green to gray weathering.

Limestone - fine grained to medium grained, brown weathering, (Marble) conglomeratic in part, mainly recrystallized, fossiliferous in places.

Shale - very fine grained; grey, black and red weathering.

Sediments (undivided) - includes quartzite, limestone and minor conglomerate; but mainly composed of variously coloured shales.

Photogeologic studies carried out by Geophoto Services Ltd. indicate the Cork group lies on the south limb of a large east trending syncline. The youngest non-intrusive rocks exposed in the vicinity of the property are Triassic/Jurassic volcanics in the northern part of the claim group. Underlying these is a thick sequence of Permian sediments. Both volcanics and sediments are intruded by an oblong mass of feldspar porphyry whose major axis trends east-west. Medium grained to pegmatitic diorite of probable Cretaceous age is exposed south of the property. All rocks outcropping on the claim group are highly fractured in at least two and often three directions.

The Mesozoic volcanics in the northern portion of the property

are composed mainly of fine grained red vesicular and a mygdaloidal basalt; fine grained vesicular andesite, minor medium grained to fine grained porphyritic hornblende andesite; massive beds of agglomerate and volcanic breccia; and some interbeds of fine grained, black tuffaceous material. Some medium grained basic intrusive rocks are also included in this division. Basalt is found only high in the section, near the northern limit of the property, with andesite predominating elsewhere. Where the andesite comes in contact with the feldspar porphyry, malachite is locally abundant.


Underlying the volcanics is a succession of Permian strata. Usually the first sedimentary rock encountered beneath the volcanics is a distinctive quartzite unit. Beneath this is marble, followed by a sequence of shales, red, gray and orange weathering. On Cork 3 and 5 another limestone unit is exposed; beneath it is a thick (50-100 feet) bed of chert pebble conglomerate. All of these sediments strike NW to W and dip gently north, with the exception of the above-mentioned limestone and conglomerate which dip south. Beneath the conglomerate is a thick sequence of red weathering shales which dips north. This may be interpreted as an unconformity between the overlying conglomerate and the shale underneath. Near the contact of the feldspar porphyry, the sediments carry disseminated chalcopyrite.

Feldspar porphyry is exposed as an elliptical mass on Cork 4, 7, 8, 9 and 10. This intrusive contains up to 5% accessory pyrite and smaller quantities of chalcopyrite. Although mineralized throughout, copper mineralization, as evidenced by malachite staining, is concentrated near the edge of the porphyry and in the abutting sediments or volcanics. The porphyry is both the source and control of copper mineralization on the property. Small dykes of porphyry occur frequently away from the main mass of the intrusion, but they are invariably barren.

Medium grained diorite is exposed south of the claim group. Contact relations with other rocks were not observed.

CONCLUSIONS & RECOMMENDATIONS

No conclusions have been made pending further work, including mapping and induced polarization surveying.


N. J. McGinn, B.Sc.
Prof. Eng.

AFFIDAVIT

I, G. J. McGinn of.... *Geophot. Services* in the
District of.... *Calgary*.... *Alta.*.... make oath and
say:

That I have done or caused to be done, work on the
Cork group of mineral claims, situate at Burwash Creek in
the Whitehorse Mining District, to the value of at least
\$2,400.00, since the fourth day of July, 1967.

Sworn and subscribed to at..... **WHITEHORSE, Y.T.**
this..... day of..... **AUG - 4 1967**..... 1967.

G. J. McGinn

M. White
A Commissioner for taking Affidavits
in and for the Yukon Territory.

CORK LOCATION MAP

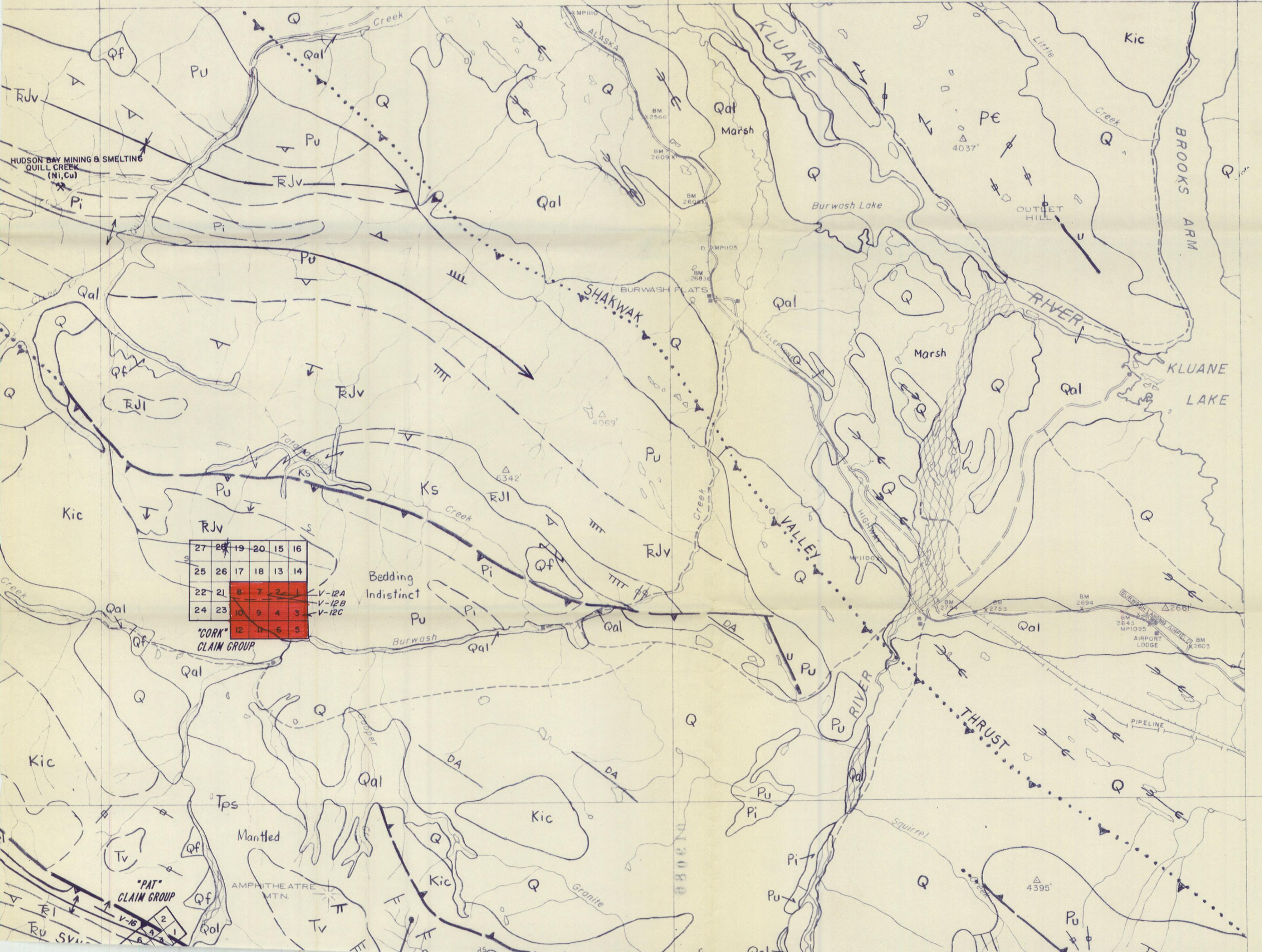
139°30'

1" = 1 MILE 15'

139°00'

C.G. IN RED

61°30'



27	28	19	20	15	16
25	26	17	18	13	14
22	21	8	7	2	1
24	23	10	9	4	3
"CORK" CLAIM GROUP		12	11	6	5

V-12A
 V-12B
 V-12C

Bedding Indistinct

"PAT" CLAIM GROUP

AMPHITHEATRE MTN.

Mantled

Tps

Kic

Qal

Qf

Q

Q

Q

Q

Q

Q

Q

Q

Q

Q

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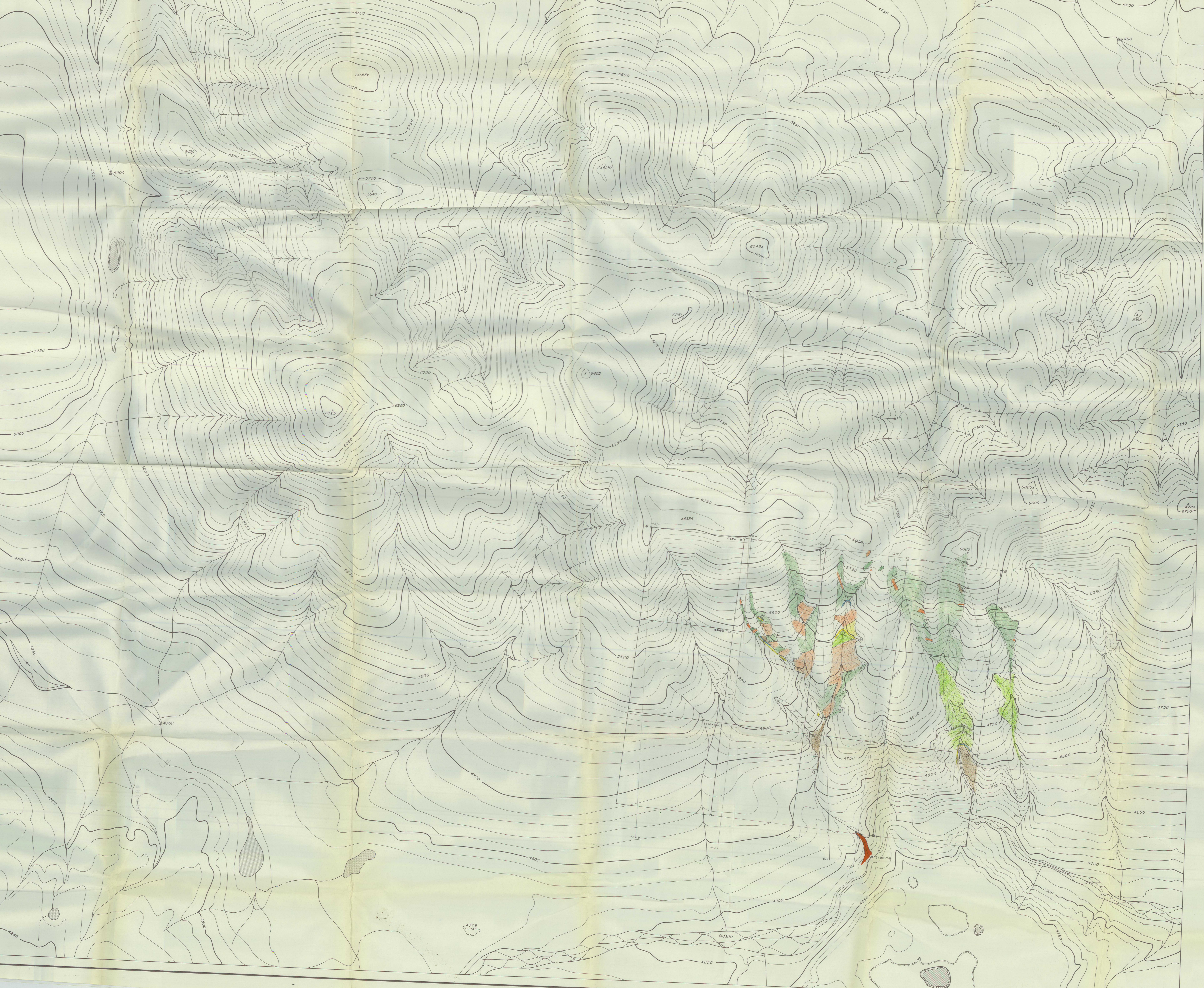
Q

Q

Q

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Q



- BASIC DYKE
- VOLCANICS
- FELSIC PORPHYRY
- QUARTZITE
- MUDS
- SANDS
- SEDIMENTARY COVERINGS
- TRENCH
- SPIRAL
- UNIFORM
- IRREGULAR
- SPRINGS
- DRAINAGE



GEOPHOTO SERVICES LTD.
CORK CLAIMS
 SCALE: 1" = 400'
 CONTOUR INTERVAL 50'
 Drawn by G. O'Connell

SOUTH
A

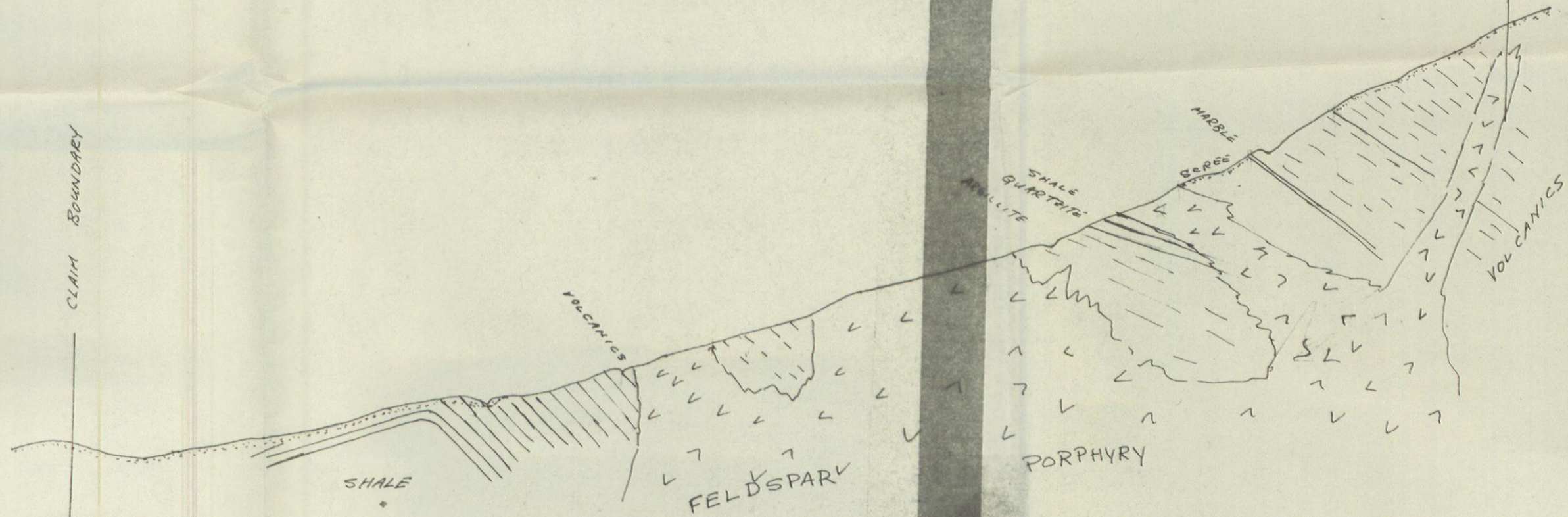
NORTH
A'

CROSS SECTION A-A'
CORK GROUP
SCALE 1"=400'

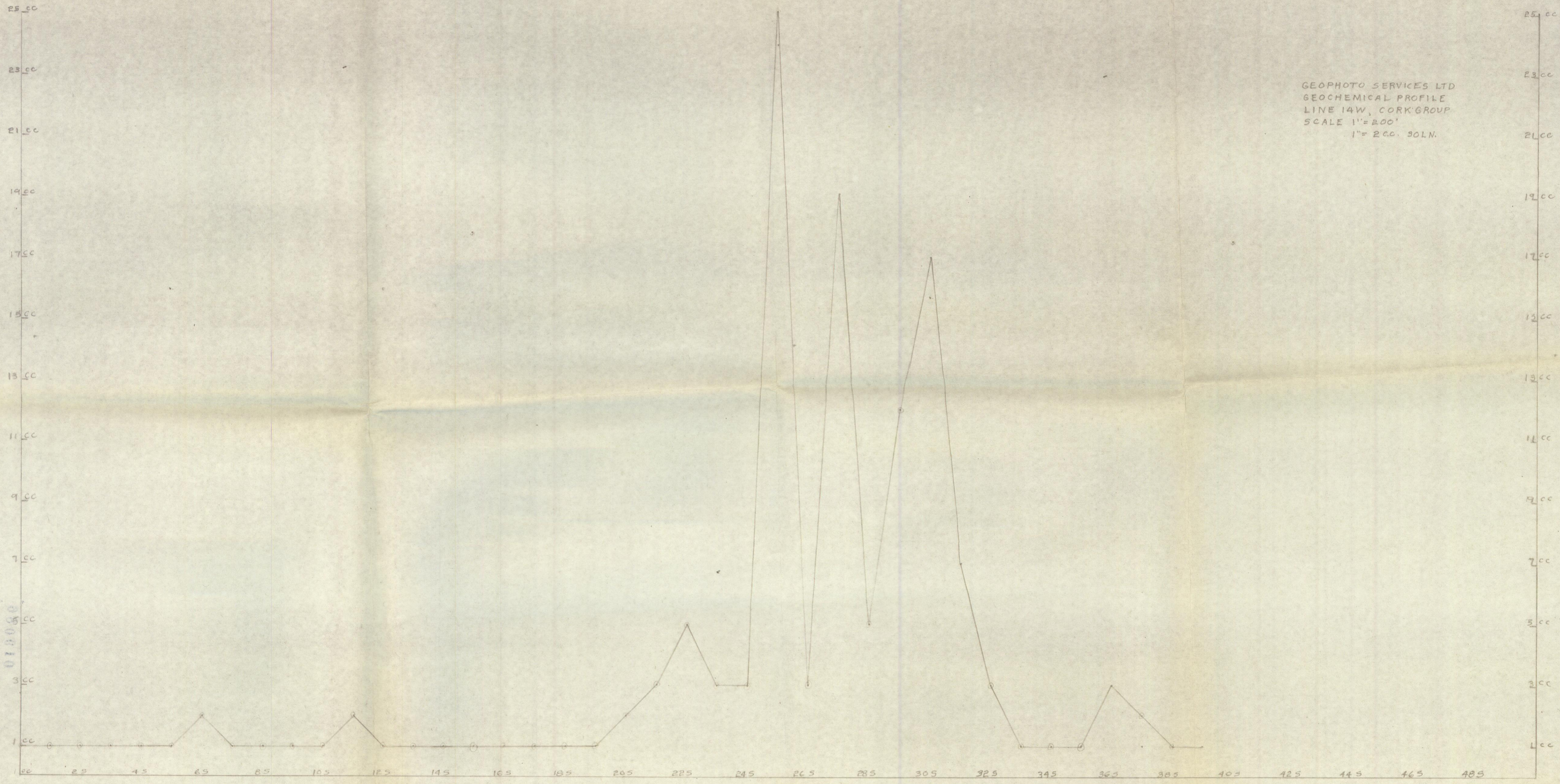
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5200 -
4800 -
4400 -
4000 -

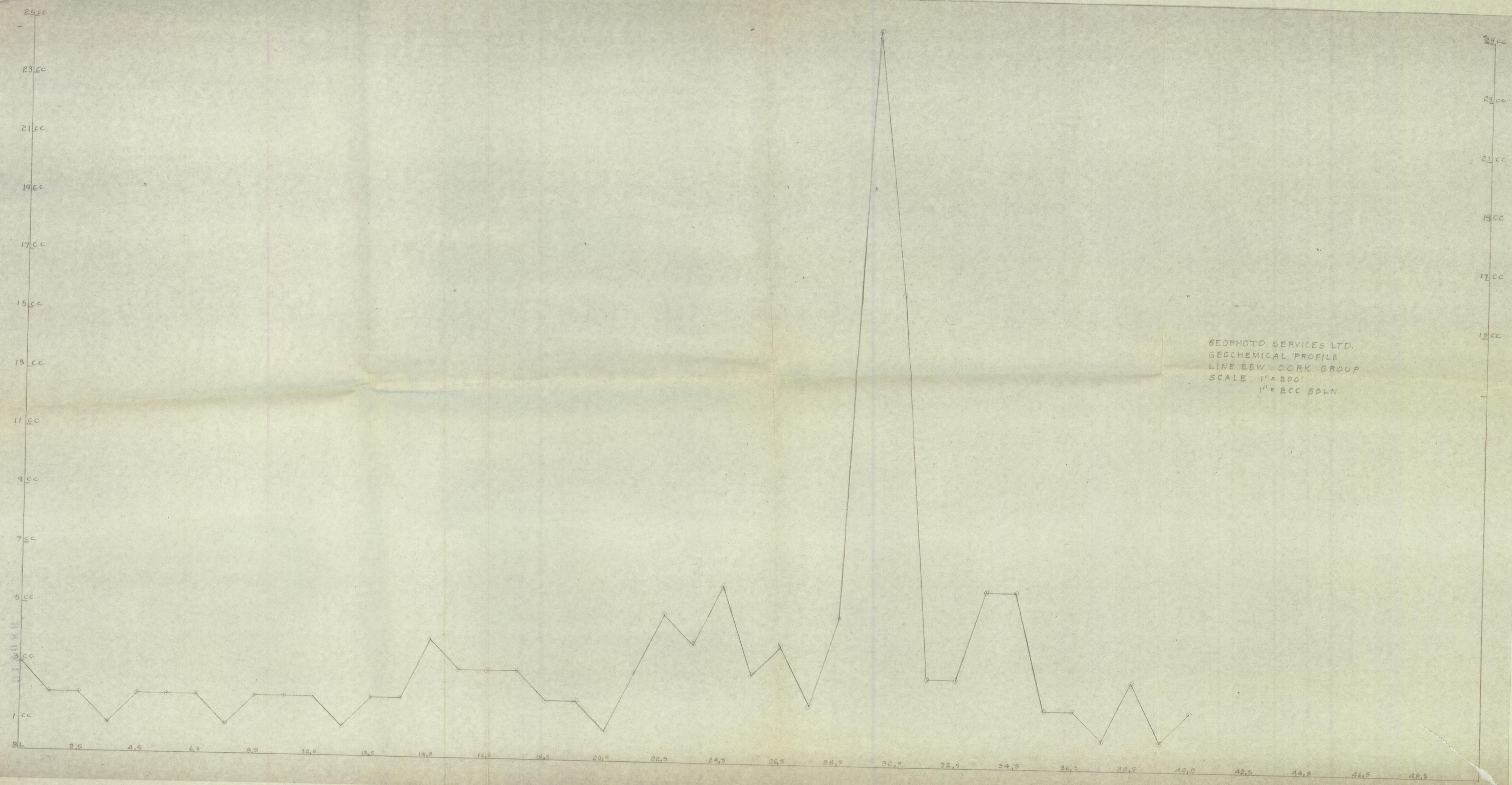
CLAIM BOUNDARY

CLAIM BOUNDARY



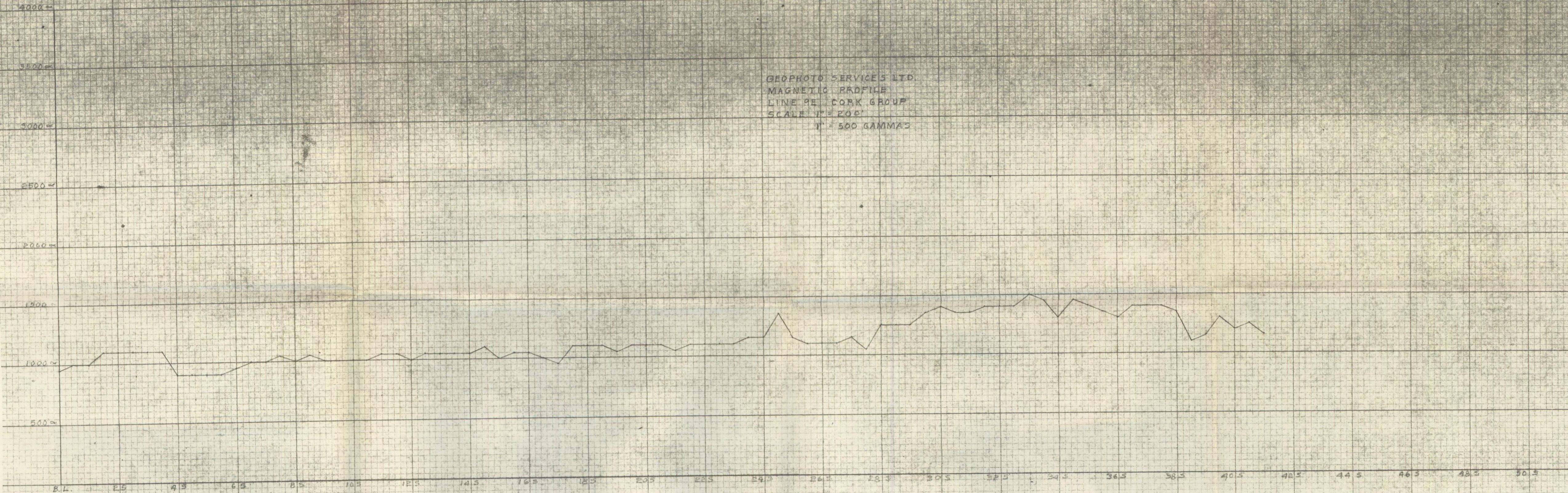
GEOPHOTO SERVICES LTD
GEOCHEMICAL PROFILE
LINE 14W, CORK GROUP
SCALE 1"=200'
1"=200. SOLN.

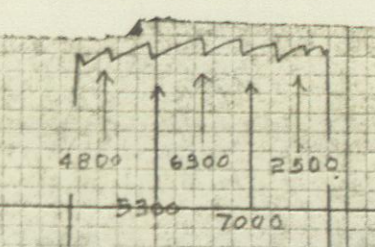
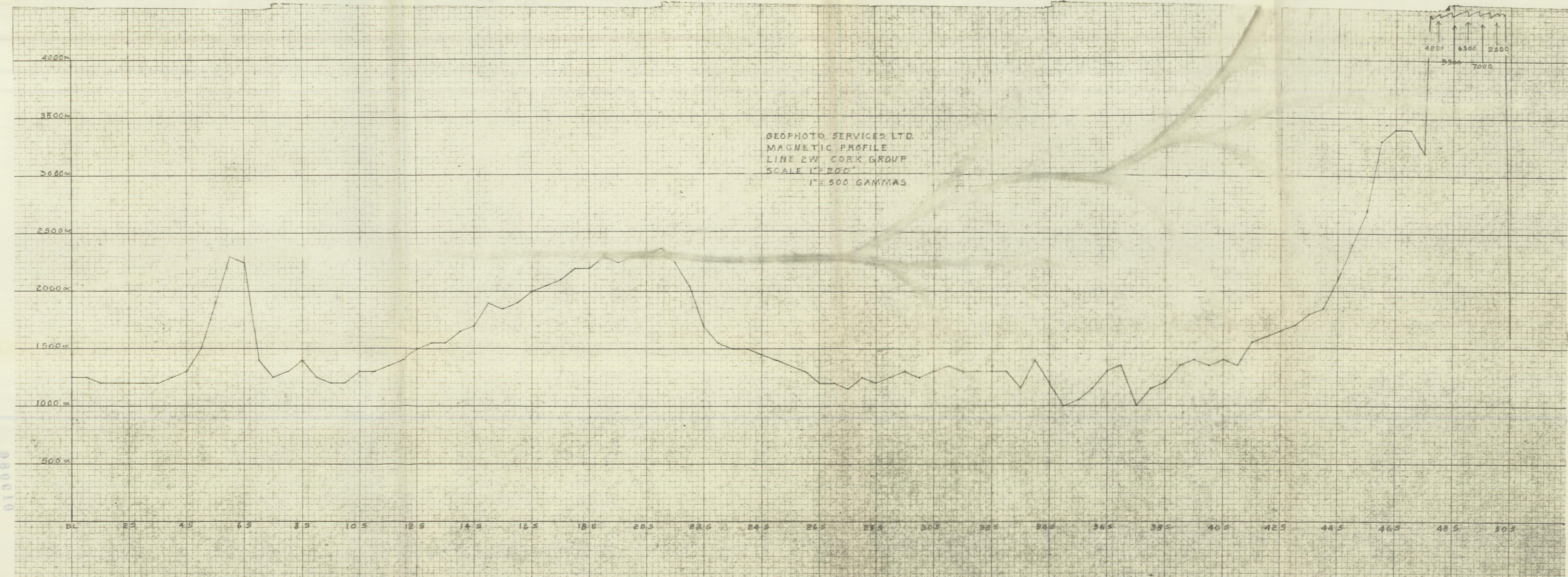




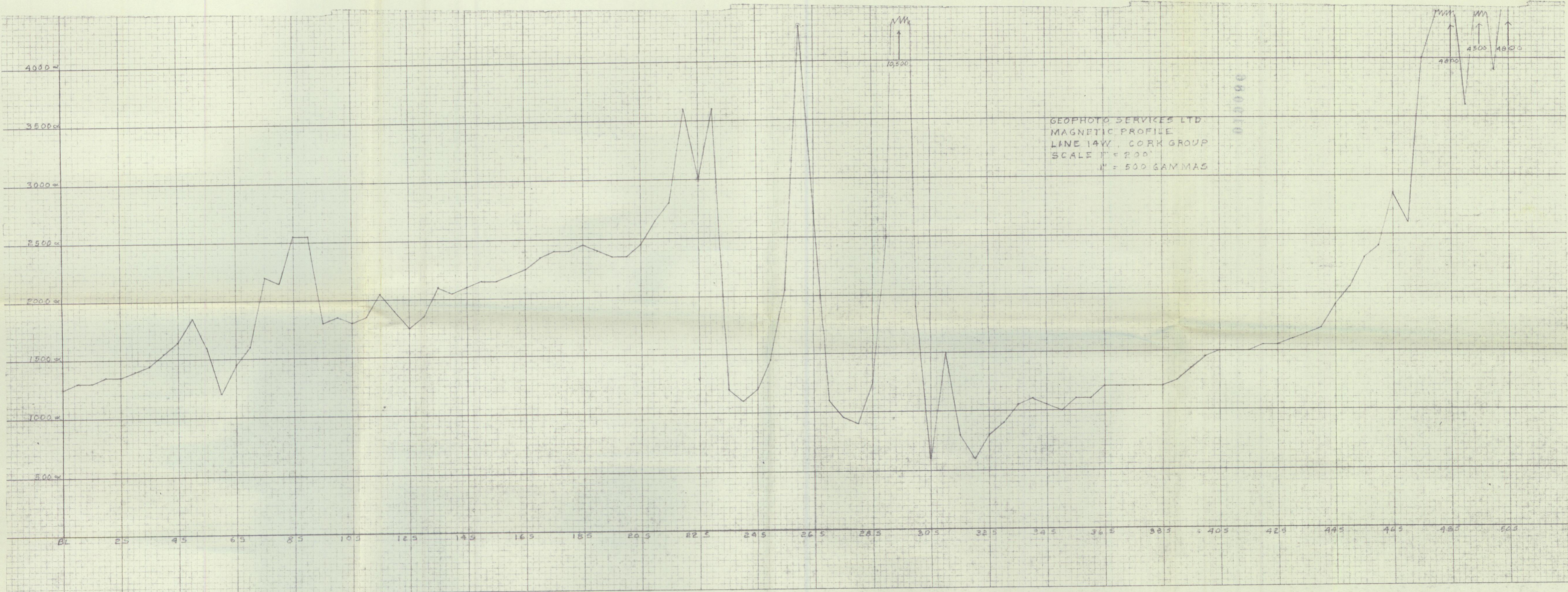
GEOPHOTO SERVICES LTD.
 GEOCHEMICAL PROFILE
 LINE 25W - CORK GROUP
 SCALE 1" = 200'
 1" = 200 SOLN

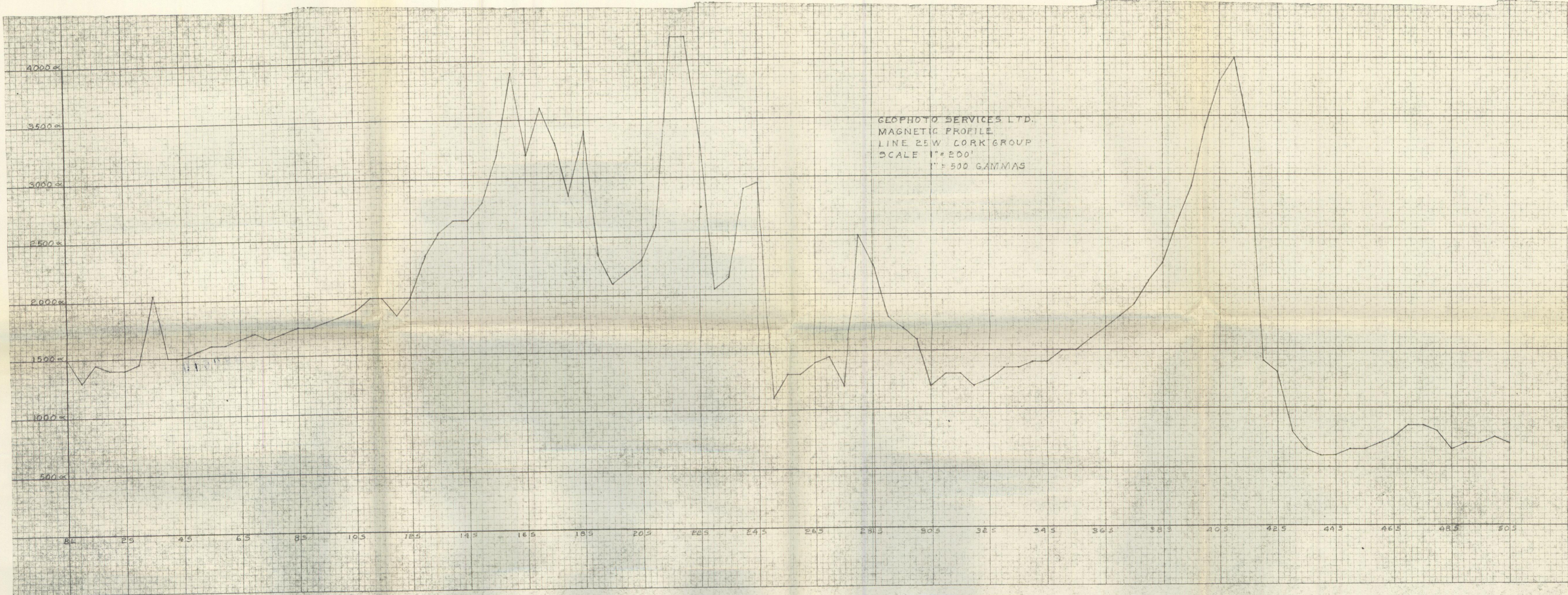
GEOPHOTO SERVICES LTD.
MAGNETIC PROFILE
LINE 9E CORK GROUP
SCALE 1" = 200'
1" = 500 GAMMAS

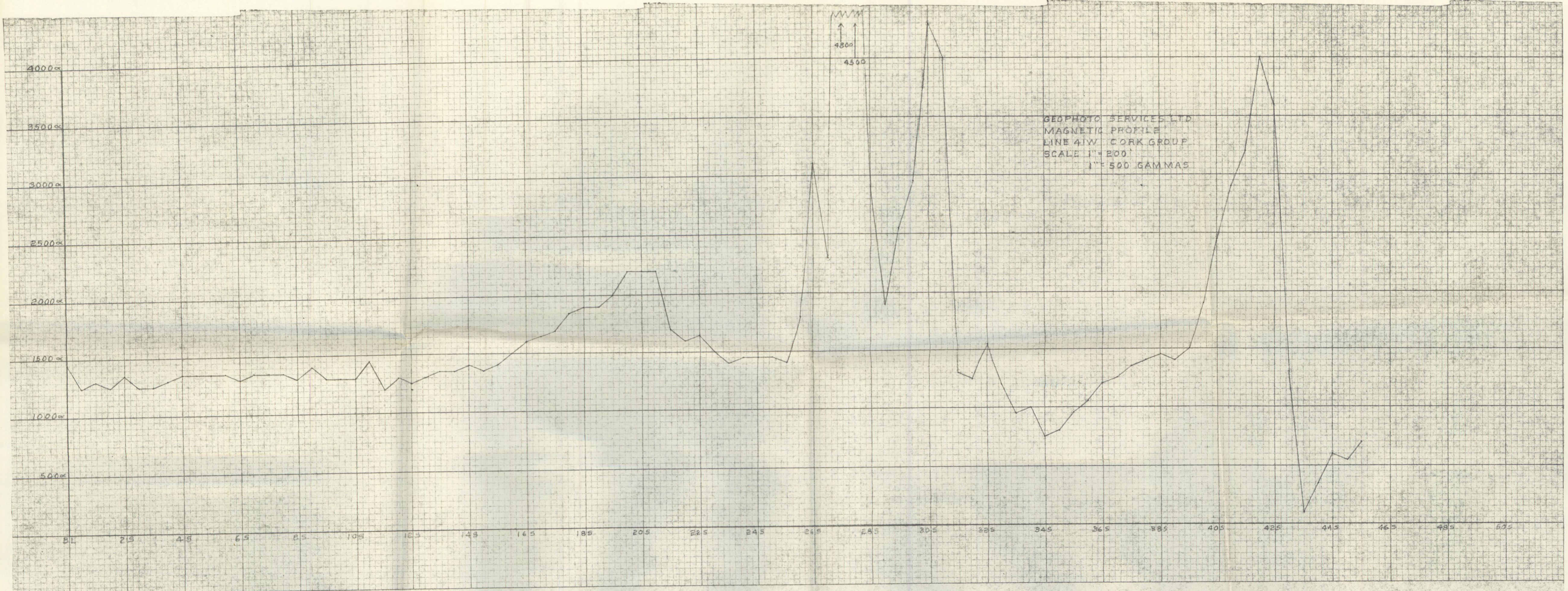




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GEOPHOTO SERVICES LTD
MAGNETIC PROFILE
BASELINE CORK GROUP
SCALE 1" = 200'
1" = 500 GAMMAS

