FINANCIAL ASSISTANCE FOR MINERAL EXPLORATION (M.E.I.G.A.)

COMPANY: EXPLORATION VENTURES LTD REF: AE 8
MRD 84/5/4
PROJECT: HUNTLY-OLD MRD 144/5/4

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- Soils research project "Results of fieldwork in the Huntly area" RHH 2.2.71

- Geological report 9.8.71 to 31.12.71 with 5 enclosures:

  1. Geological map: float and outcrop - West Huntly (NJ44 SE)

  2. Geological map: float and outcrop Marnoch (NJ55SE, 54NE, 64NE, 65SW)

  3. Apparent chargeability (NJ55NW)

  4. Apparent resistivity (NJ55NW)

  5. SP Traverses - Dunbennan Wood (NJ48/41)

· Extract from application, 6.8.71, ".... outline of proposed project .... geological considerations .... work programme .... " with accompanying plan, 1" : 4 miles

· * Letter to DTI from EVL 6.7.72

· Technical report 1st January - 6th July 1972, with enclosures 1 to 39:

Fig 1 Geological Float and Outcrop Map (NJ44NE)

2 Geological Float and Outcrop Map (NJ54SW & SE)

3 Geological Float and Outcrop Map (NJ55SW & SE)

4 Geochemical Soil Values in ppm for Cu and Ni (Aultmore - NJ45NE)

5 Apparent Chargeability Values in Milliseconds (Scraib Wood - NJ5450/5550)

6 Apparent Resistivity Values in Ohm Metres (Scraib Wood - NJ5450/5550)

7 Apparent Chargeability Values in Milliseconds (Scraib Wood - NJ5449/5549)

8 Apparent Resistivity Values in Ohm Metres (Scraib Wood - NJ5449/5549)

9 Apparent Chargeability in Milliseconds (Yondertown - NJ5453/5553)

10 Apparent Resistivity in Ohm Metres (Yondertown - NJ5453/5553)

. . . . (continued)

Fig 11 Apparent Chargeability Values in Milliseconds (Cuttlehill - NJ4947/4948)

12 Apparent Resistivity Values in Ohm Metres (Cuttlehill - NJ4947/4948)

13 Apparent Chargeability Values in Milliseconds (Broadland - NJ4742/4842)

14 Apparent Resistivity Values in Ohm Metres (Broadland - NJ4742/4842)

15 Apparent Chargeability Values in Milliseconds (Broadland - NJ4641/4741, 4841/4941)

16 Apparent Resistivity Values in Ohm Metres (Broadland - NJ4641/4741, 4841/4941)

17 Apparent Chargeability in Milliseconds (Hill of Brunstane - NJ5440/5540)

18 Apparent Resistivity Values in Ohm Metres (Hill of Brunstane - NJ5440/5540)

19 Apparent Chargeability Values in Milliseconds (Corse of Kinnoir - NJ5443/5543, 5442/5542)

20 Apparent resistivity Values in Ohm Metres (Corse of Kinnoir - NJ5443/5543, 5442/5542)

21 Apparent Chargeability Values in Milliseconds (Conniecleugh - NJ54SW)

22 Apparent Resistivity Values in Ohm Metres (Conniecleugh - NJ54SW)

23 Vertical Magnetic Intensity Values in Gammas (Yondertown - NJ5454/5554)

24 Vertical Magnetic Intensity Values in Gammas (Yondertown - NJ5453/5553)

25 Vertical Magnetic Intensity Values in Gammas (Tarryblake - NJ5250/5350)

26 Vertical Magnetic Intensity Values in Gammas (Tarryblake - NJ5050/5150)

27 Vertical Magnetic Intensity Values in Gammas (Cuttlehill - NJ4946)

28 Vertical Magnetic Intensity Values in Gammas (Cuttlehill - NJ4948)

29 Vertical Magnetic Intensity Values in Gammas (Cuttlehill - NJ4847/4947)

30 Vertical Magnetic Intensity Values in Gammas (Cuttlehill - NJ5047/5147)

31 Vertical Magnetic Intensity Values in Gammas (Cuttlehill - NJ5048/5148)

32 Vertical Magnetic Intensity Values in Gammas (Broadland - NJ4247)

33 Vertical Magnetic Intensity Values in Gammas (Broadland - NJ4641/4741, 4841/4941)

. . . . (continued)

Fig 34 Vertical Magnetic Intensity Values in Gammas (Auchmill - NJ54SW/SE)

35 Borehole Location Plan for DDH HK14 & 15 (Bridges - NJ5642/5742)

36 Borehole Location Plan for DDH HK16 & 17 (Dundennan - NJ4840/4841)

37 *Diamond Drill Core Log - HK14

38 *Diamond Drill Core Log - HK15

39 Diamond Drill Core Log - HK16 CAIRNIE

- * §‡ Diamond drill targets at Bridges HK 14 & 15 (Drg 35)

- * §‡ Diamond drill targets at Dunbennan HK 16 & 17

- * §‡ Geochem. Soil. Cu, Ni. NJ45NE

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‡ Not in London * Not in Keyworth § Not in Edinburgh

AE 8 is related to AE 22

EXPLORATION VENTURES LIMITED

Application for contributions under the Mineral Exploration and Investment Grants Act 1972

Geological Report : Huntly AE8

During the period 9th August to 31st December, 1971, geological and geophysical investigations were undertaken in this district.

(i) Geology

Reconnaisance mapping took place over the Marnoch basic mass and over rocks forming the western envelope of the Huntly basic mass. Outcrops were examined and the distribution of float types recorded.

Petrographic reports were prepared for cores from earlier diamond drill holes HK3, HK4, HK6, HK8, HK10, HK11, HK12, HK13. No drilling actually took place.

(ii) Geophysics

a) Self Potential

A survey was carried out in the Dunbennan Wood area. A moderate S.P. anomaly was found to be associated with magnetic and I.P. anomalies.

b) Induced Polarization

Reconnaissance surveys employing Scintrex 25 watt time domain equipment with dipole-dipole array covered a magnetically anomalous area west of Knock Hill.

Enclosures

1. Geological Map: Float and Outcrop - West Huntly (NJ44SE)
2. Geological Map: Float and Outcrop - Marnoch (NJ55SE, 54NE, 64NE, 65SW)
3. Apparent chargeability values in milliseconds (NJ55NW)
4. Apparent Resistivity values in ohm - metres (NJ55NW)
5. S.P. Traverses - Dunbennan Wood (NJ48/41)

MINERAL EXPLORATION INCENTIVE SCHEME

APPLICATION

Superseded - see attached

for assistance

1. Applicant — Exploration Ventures Limited

   Address — 49 Moorgate, London EC2R 6BQ

   Telephone No. — 01-606-1020

   Contact — Mr. R.B. Riley or Mr. M.J. Lynch

2. Project title — Huntly

3. Applicants' organisation & financial structure

   Please see this Company's letter dated 6th August, 1971.

4. Outline of proposed project, including geological considerations (see plan attached)

   This area encompasses the main Huntly younger basic intrusive and is separated from the Brodiesord area by a corridor of Dalradian rocks. Geophysical and geochemical work and exploratory drilling have revealed a distinctive pattern. The Marnoch gabbro is also included. The minerals sought are Cu, Ni and associated metals.

5. Work programme and costs of project

   The majority of the work planned for this area revolves around further diamond drilling of which there is already an estimated 13,000 feet on 12 proposed sites. Detailed induced polarisation and ground magnetic surveys will be used to pinpoint the sites precisely. A programme of soil sampling is also to be carried out. During all phases of this detailed work, geological examination plays a large part.

   When drill core becomes available a programme of metallurgical work will be undertaken.

   The estimated costs involved until 31st December, 1971 are:

	£
Salaries and wages	

HUNTLY DISTRICT - AL8

Technical Report for Period 1st January - 5th July 1972

During the period, geological, geophysical and geochemical surveys were undertaken in this district. In two areas the results from previous detailed work led directly to a programme of diamond drilling. Selected core samples were subsequently assayed for Cu and Ni content.

1. Geology (Figs. 1-3)

Float and outcrop mapping was carried out on 1:10560 sheets NJ 44, NJ 54 SW, SE, NJ 55 SW, SE. Particular emphasis was placed on the identification of anomalous quantities of sulphides within basic and ultrabasic rocks as an aid to geophysical and geochemical anomaly assessment.

2. Geochemistry

2.1. Soil Sampling (Fig. 4)

At Aultmore an area of high magnetic intensity was further evaluated by systematic soil sampling on a 1000' x 200' grid pattern. Samples were taken from the 'B' soil horizon and analysed for total Cu and Ni content by atomic absorption methods. No results of economic significance were forthcoming.

3. Geophysics

3.1. Induced Polarization (Figs. 5-22)

Detailed polarization surveys using Scintrex Mk 7 2.5 kw equipment with gradient arrays further investigated potential economic targets at Scraib Wood, Yondertown, Cuttlehill, Corse of Kinnoir, Hill of Brunstane and Broadland. With the exception of the last two named, all areas showed sufficiently encouraging chargeability and resistivity responses to warrant their testing by diamond drilling at a later date.

Reconnaissance induced-polarization surveys, using Scintrex 25 watt equipment with dipole-dipole arrays, covered newly accessible ground in the Conniecleugh and Huntly Castle areas. No results worthy of follow-up were forthcoming.

3.2. Ground Magnetometry (Figs. 23-24)

Detailed ground magnetic surveys with Scintrex MF1 & MF2 fluxgate equipment were used to define better areas of possible economic interest at Yondertown, Cuttlehill, Broadland and Tarryblake. Anomalous patterns, which merited subsequent investigation by diamond drilling were outlined at the first three.

cont...

A short reconnaissance magnetic survey filled in a gap in coverage at Auchmill Farm. No economically significant results were revealed.

4. Diamond Drilling (Figs. 35-39)

Three diamond drill holes investigated strong magnetic and induced polarization anomalies outlined by previous detailed work at Bridges and Dunbennan.

Selected sections of core were assayed for copper and nickel, but no economic values were obtained. Finely disseminated sulphides, magnetite and some graphite are believed to be the cause of the anomalous geophysical responses.

5. Special Projects

5.1. Soils Research Project

Statistical studies were carried out on the data previously collected, prior to the preparation of the final report. (These results may be found in the final report submitted in October 1973, which applies to most EVL areas and time periods, including Huntly in 1972).

cont...

Enclosures

Enclosed

Sent to Geochem Div.

Fig.
1. Geological Float and Outcrop Map (NJ44NE)
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3. Geological Float and Outcrop Map (NJ55SW & SE)
4. Geochemical Soil Values in p.p.m. for Cu and Ni (Aultmore - NJ45NE)
5. Apparent Chargeability Values in Milliseconds (Scraib Wood - NJ5450/5550)
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30. Vertical Magnetic Intensity Values in Gammas (Cuttlehill - NJ5047/5147)
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36. Borehole Location Plan for D.D.H. HK16 (Dundennan - NJ4840/4841)
37. Diamond Drill Core Log - HK14
38. Diamond Drill Core Log - HK15
39. Diamond Drill Core Log - HK16.

Enclosed ~~Sent to Geochem Div~~

Enclosed

7.12.1973

E.M. Jones

REPORT NO. 4.

FROM MRD 84/5/4 Huntly old.
copy to MRD 144/5/2 open file Huntly
MRD 144/5/3 Brodiesord

Soils research project

Results of fieldwork in the Huntly area

Summary

This report evaluates further studies of Soil type/float type/soil geochemistry relationships.

The four areas investigated were Auchincrieve, Brodiesord, Dunbarrow and Brown Hill.

All four show broadly similar patterns, namely a close correlation between dominant float type and soil geochemistry, and a less obvious (but more probably indirect) relationship between soil type and soil geochemistry. Most of the base metal anomalies are though to originate from silicate minerals in solid or mechanically dispersed rock.

It may be worth having a look at the sites listed on p.7, where geochem anomalies are not associated with ultrabasic float. Some of these anomalies could conceivably originate from oxidising sulphides, although there are other possible explanations.

There is a possibility that assessment of soil type/float type/soil geochemistry relationships may be fouled up by the generalisations of data needed in order to prepare understandable maps. Some kind of computerised assessment seems preferable, and we shall try this out.

Future work (in the laboratory) will concentrate on developing and [illegible] the hydrous oxide coating procedure, on assessing present soil sampling procedures (by comparing our own A and B horizon geochemical data with standard "B" horizon data); and writing and testing a simple computer data evaluation programme.

RHH
PCDC
2.2.71.

Soils research project.

Results of fieldwork in the Huntly area.

Introduction.

A previous study[1] showed that soil type and float information may indicate base metal dispersion mechanisms and possible sources of base metal geochemical anomalies in soils.

Later chemical work[2] showed that metal values in hydrous oxides are strongly influenced by soil type. Since these studies also indicated a close relationship between base metals associated with hydrous oxides and the presence of sulphide mineralization, it is clear that knowledge of the soil types present in an area of interest is necessary for the effective interpretation of geochemical data.

This report outlines the results of further studies of soil type/float type/ soil geochem. relationships in four areas of interest to CGF. From these additional studies, it was hoped to confirm the previous conclusions; and thereby to indicate the advantages of using soil and float data generally in exploration.

Study areas.

Four areas were investigated:

1). Auchincrieve	a) 35	pits	on	a	1000x500 ft.	grid
	b) 30	"	"	"	500x250 ft.	"
	c) 64	"	"	"	100x100 ft.	"
2). Brodiesord	488	"	"	"	1000x500 ft.	"
3). Dunbennan	50	"	"	"	1000x500 ft.	"
4). Brown Hill	240	"	"	"	1000x500 ft.	"
Total:	907 pits					

The areas are shown in Fig. 1. Fieldwork commenced on Sept. 14th and was completed on Dec. 14th, giving an average of about 70 pits/week.

Methods.

At each site the following information was noted:

i). General site data - relief position, presence of glacial features, river terraces etc; signs of disturbance or possible contamination

ii). Soil type

iii). The nature of the soil parent material e.g. alluvium, scree, hillwash, terrace sand, boulder clay etc.

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[1] Soils research project: 'Fieldwork results from Belhelvie and Arthrath' (Feb.'70)

[2] Soils research project: 'Detection of sulphide weathering products in soils over ultrabasic rocks' (Sept. '70)

Soil samples were taken from A and B horizons (G horizons in gley and peaty gley soils).

20 float stones were collected from the B horizons and identified. Rounded stones (usually quartzites) were noted but not included in the 20.

Maps showing the distribution of dominant soil and float types were then prepared for each area and the information compared with available -80 soil geochemical information (Ni, Cu).

Summary of information from the four areas.

1. Auchincrieve. The three areas are shown in Fig. 2.

Geology.

Picrite, olivine gabbro, graphitic gabbro, granite and black schist are all thought to be present in the areas. Mineralization seems to be largely confined to the graphitic gabbros.

Relief.

The areas lie on a spur sloping steeply to the south, with the R. Isla to the west, south and east.

Float. Outcrop is limited, but where present there is a good correlation between float and solid geology, i.e. most of the float seems to be quite local. Dominant float types are shown in Fig. 3.

Float and soil geochem.

There are some fairly good correlations between float rock types and soil geochemistry (Figs. 4,5). Granite, schist, and olivine gabbro are generally associated with near-background Ni, Cu values (less than 200, 60 ppm respectively). Cu values in picrite may reach 250 ppm, and Ni over 1000 ppm., contrasting with the soils associated with graphitic gabbro and olivine gabbro (in part) which have Cu and Ni values locally exceeding 1000 ppm; and generally almost as much Cu as Ni.

Soils and soil geochem.

The distribution of the soil types is shown in Fig. 6.

In area (a) the soil geochemical values are too low for much correlation with soil type to be possible. There is no correlation apparent in area (b). In area (c) however, there is a very clear correlation between the highest Ni and Cu values and brown earths, the geochemical trough between the two anomalies coinciding with Mottled gley soils.

Whether or not a soiltype/soil geochem correlation is detectable therefore seems to depend on the scale of the study in this case.

2. Brodiesord.

Geology.

The rocks strike NNE/SSW. Most of the area is underlain by serpentinised picrite, gabbro (including olivine gabbro) or gneiss, but calcsilicate, epidiorite, troctolite and many altered basic and ultrabasic rocks are alos present in minor amounts.

Relief.

The relief is closely related to the geology. Quartzites outcrop on the western margin of the area along the crests of Durn and Fordyce Hills, which are aligned with the strike. Serpentinised picrite outcrops on the eastern slopes of these hills, giving way to gabbro and olivine gabbro flooring the central valley, which is covered with thin (less than 25 ft.) moraine or glacial outwash. The small hills on the eastern margin of the study area are mainly gneiss.

Float.

Drift seldom exceeds 25 ft., even in the central valley, and is considerably thinner on the slopes of Durn and Fordyce Hills. Although there has been some downslope displacement (which mainly has taken the form of some masking of the picrites by quartzitic head) the float generally seems to reflect underlying geology with little displacement. The distribution of dominant basic and ultrabasic float types is shown in Fig. 7.

Float and soil geochem.

+200 ppm Ni/ -50 ppm Cu/ +50% serpentinised picrite float correlate fairly well in the western part of the map. Ni values are generally lower, but Cu values higher to the east, coinciding more or less with dominant gabbro float. On most other rock types both Cu and Ni values in soils are low. (Figs 8,9).

Sporadic high Ni values (+300 ppm) associated with low Cu (-50 ppm) and minor amounts of ultrabasic float at e.g. D,E 13 may be due to either serpentinised picrite buried below shallow drift or to finely divided serpentinised picrite or its weathering products in sand,silt or clay fractions.

Similar Ni values associated with higher Cu (+50 ppm), again with only minor amounts of ultrabsic float, may be due to unserpentinised picrite near surface, or possibly to sulphides, or their respective weathering products. Sites which belong in this category are I21-H22; F,G,H 18; N,O 14.

Soils and soil geochem.

High Ni values can be seen to coincide with virtually any soil type (Fig. 10) and are therefore probably due to silicate-Ni derived from

serpentinised picrite.

High Cu values occur mainly in mottled gleys, gleys and peaty gleys. A silicate origin for them seems likely also (from gabbros underlying the valley floor). Correlation of high Cu with soil type seems to be fortuitous, therefore, although the possibility of some hydromorphic dispersion cannot be entirely ruled out.

3. Dunbennan.

The southern part of this area has been considerably disturbed (reservoir, pylons etc.).

Geology.

The strike is roughly N/S. The dominant rocks are picrite, troctolite, olivine gabbro and altered ?hypersthene gabbro.

Relief.

Picrite outcrops on the top and upper slopes of Dunbennan Hill, which is aligned with the strike. Olivine gabbro and troctolite underlie most of the lower slopes. They are covered by alluvium close to the R. Deveron.

Float.

Drift is thin on the top of Dunbennan with many picrite outcrops and much picrite float. The picrite has travelled downslope to some extent, covering part of the troctolite and olivine gabbro outcrop. Although there seems to have been some mixing of float on the lower slopes, the dominant float rock type reflects the underlying geology quite well. The distribution of dominant float types is shown in Fig. 11.

Float and soil geochem.

Ni geochem is shown in Fig. 12 and Cu in Fig. 13.

+1000 ppm Ni occurs where picrite float overlies solid picrite; +200 ppm correlates fairly well with +50% picrite float. Ni values over part of the 'trocto-gabbro' and troctolite adjacent to the picrite exceed 200 ppm but more usually are between 100 and 200 ppm. Over the gabbro, Ni is seldom more than 100 ppm and may be much less where alluvium is present.

Cu values from 50 to 100 ppm correlate with 50% picrite float, but values of 50-100 ppm Cu are also found over the adjacent troctolite, (Trocto-gabbro' and gabbro. The only Cu above 200 ppm occurs at where gabbro, picrite and andalusite schist meet and virtually outcrop.

Soils and soil geochem.

Ni values above 200 ppm are mainly associated with brown earths and mottled brown earths, though sometimes with mottled gleys and gleys also. The same goes for +50ppm Cu values. Poorly drained soils with high metal contents are usually downslope of higher values, and may be due to hydomorphic dispersion.

4. Brown Hill.

Geology.

The strike is generally ENE/WSW. The main rock types are gabbro, serpentinised picrite, quartzite and (mainly hornfels) schists, with some serpentinization of basic and country rocks.

Relief.

The relief is dominated by a ridge aligned with the strike, consisting of Evron and Brown Hills, the latter rising to over 1500 ft. This ridge separates valleys to the N and S, the southern valley being underlain by serpentinised picrites. The hillsides are generally very steep with numerous rock outcrops and minor screes.

Float.

Except near rock outcrops the float is fairly well mixed, probably because of downslope movement. A small patch of boulder clay at C7-F5 is associated with poorly drained soils and contains rounded quartzite pebbles. The drift in the northern valley is generally thicker than in the southern. The dominant float types are shown in Fig. 15.

Float and soil geochem.

Ni values above 200 ppm are associated with serpentinised picrite (solid or float), or serpentinised adjacent rocks. Cu values are generally less than 50 ppm. Ni values are lower but Cu higher in gabbros and schist (-100, +50ppm respectively). Both Ni and Cu form linear anomalies parallel to the strike (Figs 16,17).

Soils and soil geochem.

The distribution of soil types is shown in Fig. 18. Ni values ranging from 200 to +1000 ppm are associated with peaty gleys, gleys and mottled gleys of the southern valley underlain by serpentinised picrite. They are therefore probably due to silicate-Ni. +50 ppm Cu is mainly found in brown earth, mottled brown earth and mottled gley profiles.

Conclusions.

1. In all areas with the exception of Brown Hill there seems to be a reasonable correlation between dominant float type and adjacent solid geology. There seems to have been little displacement due to glacial activity. At Brown Hill, the steep slopes have mixed the float rather more than in the other areas.

2. In all areas there is a quite close correlation between dominant float type and soil geochemistry, often close enough to suggest characteristic ranges of Ni and Cu values for each type:-

Dominant float	Location	Ni range	Cu range.
Quarzite, Gneiss	Brodiesord	-100	-50
Hornfels schist, gabbro	Brown Hill	-100	30-100
Gabbro	Auchincrieve	80-200	40-200
Olivine gabbro	Brodiesord	100-200	40-100 (-200)
'Trocto-gabbro'	Dunbennan	100-200(-400)	-50(-100)
Serpentinised picrite	Brown Hill	400-1500	-50
" "	Brodiesord	200-700	-50
Picrite	Dunbennan	200-1000+	50-200
Graphitic gabbro	Auchincrieve	400-1100	500-1400

Note: the great difference in the Cu/Ni ratios between picrite and serpentinised picrite - and the possible uncertainty this suggests in the use of Cu/Ni ratios in data assessment.

3. There is a good correlation between soil type and soil geochemistry at Dunbennan and Brown Hill. At Auchincrieve there is a very good correlation in area (c) between mottled gley soils and offpeak Ni/Cu values. This correlation is not apparent in the coincident part of area (b), in which a larger grid was used. At Brodiesord there is only a weak correlation between soil type and geochemistry.

4. In most areas float and/or bedrock type appears to be the factor chiefly influencing geochemical values, with anomalies tending to follow the strike. The correlation between soil type and geochemistry seems to be indirect i.e.

a) bedrock controls slope intensity and float type
b) slope intensity controls soil type
c) float type controls soil geochemistry
therefore d) the apparent correlation between soil type and geochem found in some areas (e.g. Brown Hill).

5. Another possible explanation for the rather weak correlation between soil type and geochemistry is suggested by the Auchincrieve data (see 3 above). It is possible that the generalisations which have to be made in preparing intelligible soil and soil geochemical maps may obscure important relationships. Other ways of evaluating this kind of data are therefore required.

6. Mineralization. One of the outstanding features of this study is the much closer correlation between float and soil geochem. than between soil type and soil geochem. This suggests that most of the base metal geochemical anomalies are due to silicate-bound metal (especially where the anomalies occur in poorly drained soils)

Although finely divided ultrabasic material may be responsible for some of the anomalies not associated with ultrabasic float, some of these could possibly be due to oxidising sulphides.

Parts of Brodiesord and Brown Hill areas where this situation occurs are:

Brodiesord: I21-H22; F,G,H 18; N,O 14
Brown Hill: G4-I4

The other pustanding feature is the close correlation between soil type and geochemistry at Auchincrieve (c), which is the best mineralized area of the four investigated. This supports the idea put forward previously[1] that sulphide-derived basemetals are apparently extremely mobile in poorly drained soils. Since this explanation may account for the distinct 'trough' in the Ni and Cu values at Auchincrieve (c) it could also explain the absence of any pronounced anomaly associated with bedrock sulphides at Muirtack (Arthrath).

7. This study seems to confirm the importance of taking soil types into consideration when looking for sulphide mineralization.

Further work.

Laboratory studies including:

i) Comparison of A and B horizon data

ii) Improvement of precision and lowering of the detection limit of the hydrous-oxide coating procedure.

and also

iii) developing a simple multivariate data handling computer technique to improve and simplify data assessment.

RHH
PGDC
2.2.71

1 Soils research project: 'Detection of sulphide weathering products in soils over ultrabasic rocks' Conclusion 2.i (Sept. '70)

Fig. 37

Drilled By	LPI	Collar Co-ordinates	56519mE4265mN	D.D.H. No.	BK 14
Date Started	23.5.72	Collar Elevation		Area	BRIDGES
Date Completed	3.6.72	Orientation	270 Grid N.	Length	170.28
H from	Collar m.	Recovery		Purpose	Test IP/Magar
NQ from	9.75 m.	Inclination at collar	45°	Logged By	W.P.Lindqvist
from	m.	Corrected at toe	40°	Date	5th June, 197

Consolidated Gold Fields Limited

DIAMOND DRILL CORE RECORD

Project: E.V.L. (HUNTLY)

METRES		GEOLOGICAL LOG				ASSAY RECORD						
From	Represents	Rock Type	Graphic Log	Intersec. Angle	Description	Sample No.	From	Length	Ref			
0	9.14	OVERBURDEN			Open hole to 6.10 metres. Recovered fragments of vein quartz, granite gneiss, siliceous hornfels & vesicular andesite.							
9.14	7.77	GRANITE GNEISS		40-50°	Medium grained Qtz-plag-biolite rock with a pronounced biotite foliation. Muscovite present in coarser grained "veins" that paralled the foliation.							
				40-50°	A few narrow bands of finer grained quartzite and, near the base, zones richer in foliated biotite. Rock well jointed but not weathered.							
16.91	6.56	MIXED METAMORPHIC COUNTRY ROCKS.		30-40° 10-30°	A crudely banded and patchy intermixture of graphite-rich petitic schist and siliceous hornfelsic material, containing numerous thin quartz veins. General xenolithic appearance but no sign of igneous material. A few narrow veinlets of graphite. Section as a whole moderately weathered.							
23-47	8.53	INTERMIXED QTZ-PLAG PEGMATITE & METAMORPHICS		40°	Less than 10% recovery. Mobilized pelitic-siliceous contact metamorphics permeated with quartz and quartz-plagioclase veins. Sets of parallel fractures infilled with amphihole/biotite.							

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DIAMOND DRILL CORE RECORD

Project: LVL

Sheet No. 2

D.D.H. No. [illegible] 14

METRES		GEOLOGICAL LOG				ASSAY RECORD			
From	Represents	Rock Type	Graphic Log	Intersect Angle	Description	Sample No.	From	Length	Rec.
32.0	22.45	COARSE GRAINED			Moderate weathering and minor slickensiding				
		BIOTITE			over 0.5m suggests a faulted or sheared upper				
		HYPERSTHENE		70-80°	contact - orientation of slickenside zones				
		GABBRO			70-80°. Rock consists of subhedral to				
					euhedral greenish clinopyroxene and brownish				
					bronzites set in pale grey-blue matrix of				
					plagioclase. There is 5-7% biotite much				
					of which is molded around interstitial				
					patches of ilmenite.				
					Throughout the pyroxenes are lightly to				
					severely uralitized. Around 0.1-0.2%				
					disseminated pyrrhotite - chalcopyrite is				
					present with specks of pyrite confined to				
					fracture surfaces.				
					The upper ⅓ of the section is medium				
				50-60°	grained with a pronounced foliation, whilst				
					the lower ⅔ is very coarse to pegmatitic				
					with a less obvious foliation.				
					A number of plagioclase-quartz-biotite				
					granite veins with biolite-rich margins				
					truncate the gabbro foliation. Veins at;				
				0-10°	43.00-45.50m				
				45°	46.95-47.25m				
				45°	49.60-49.70m				
				45°	52.20-52-70m				
				65°	54.30-54.45m				
					Plus numerous small veins up to 3 cm wide.				

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DIAMOND DRILL CORE RECORD

Project: DVL

Sheet No. 3

D.D.H. No. HK 14

METRES		GEOLOGICAL LOG				ASSAY RECORD						
From	Represents	Rock Type	Graphic Log	Intersec. Angle	Description	Sample No.	From	Length	Rec.			
					The granitic vein contacts along which there has been later movement plus other fractures of all orientations are commonly infilled with pale green to dark green talc containing specks and discontinuous coatings of pyrite.							
54.45	1.50	PEGMATITIC PYROXENITE (weakly mineralized)			A Granitic vein within which there are late talc-filled fractures separates the pyroxenite from the hypersthene gabbro. Made up of 80-90% very coarse, pale brown orthopyroxene with minor interstitial plagioclase, flaky biotite and serpentinised olivine. No foliation is evident. The section contains some 1-2% sulphides mainly as medium size disseminated grains of visible pyrrhotite and chalcopyrite (ratio about 6:1), but partly as large numbers of very fine grained secondary sulphides within the serpentinized olivines. Throughout the section are numerous irregular fractures infilled with grey to green talc. Talc also locally replaces interstitial plagioclase.	0346	54.45	1.50	95%	0.026	0.046	

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DIAMOND DRILL CORE RECORD

Project: EVL

Sheet No. 4

D.D.H. No. EX 14

METRES		GEOLOGICAL LOG				ASSAY RECORD					
From	Represents	Rock Type	Graphic Log	Intersec. Angle	Description	Sample No.	From	Length	Rec.	%Cu	%Ni
55.95	42.25	TROCTOLITES			A thick section of olivine-rich rocks	0347	55.95	2.00	99%	0.018	0.073
		and PICRITES			constantly varying between fine to very	48	57.95	2.00	"	0.024	0.100
		(weakly			coarse grained troctolites and picrites with	49	59.95	2.00	"	0.014	0.061
		mineralized in			local developments of dunite and anorthosite	50	61.95	2.00	"	0.012	0.081
		part)			and hypersthene gabbro.						
					The rocks are composed of dark grey-green to	0351	63.95	2.00	"	0.022	0.086
					black cumulus olivine (generally serpentinized	52	65.95	2.00	"	0.090	0.224
					and highly magnetic) and interstitial grey to	53	67.95	2.00	"	0.073	0.200
					bluish-grey plagioclase, with a lesser amount	54	69.95	2.00	"	0.029	0.115
					pale brown othopyroxene and minor ilmenite.	55	71.95	2.00	"	0.027	0.115
					Pyroxene increases in amount over the top	56	73.95	2.00	"	0.014	0.099
					2 metres to give a transitional contact with						
					the pyroxenite, although the actual contact as						
					logged is worked by a talc filled shear.						
					About 0.5-1% of primary disseminated						
					sulphides is present throughout the section						
					with local enrichment in the upper 27 metres.						
					The best intersection between 65.85m and						
					72.09m runs about 2-3% sulphide grains	0357	88.95	2.00	99%	0.018	0.015
					containing recognisable coarse granular	58	90.95	2.00	"	0.011	0.084
					pentlandite.	59	92.95	2.00	"	0.022	0.125
					The primary sulphide is interstitial to the	60	94.95	2.00	"	0.025	0.146
					olivine and texturally identical to the	61	96.95	1.25	"	0.023	0.139
					plafioclase. It varies sympathetically with						
					the grain size of the plagioclase (and olivine)						
					thus in fine grained zones primary sulphide is						
					less obvious.						

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DIAMOND DRILL CORE RECORD

Project: VL

Sheet No. 5

D.D.H. No. HK 14

METRES		GEOLOGICAL LOG				ASSAY RECORD			
From	Represents	Rock Type	Graphic Log	Intersec. Angle	Description	Sample No.	From	Length	Rec.
					Very fine grains of secondary sulphides				
					and slightly coarser secondary magnetite are				
					scattered through the serpentinized olivine.				
					The texture of the rock varies from massive-				
					granular to moderately well foliated.				
					Two sections from 92.00 to 93.00m, and				
					from 93.00 to 93.90m show marked grading both				
					in grain size of the silicates and the olivine-				
					plagioclase-pyroxene proportions. The grading				
					direction indicates that the rocks get				
					younger up the hole.				
					The rocks are cut by numerous granitic veins				
					and talcose filled shears of at least two ages.				
					Near the shears both the granite and picrite/				
					troclolite feldspars are replaced by talc.				
					Thickest granite veins at;				
				45°	75.95 - 78.35m				
				30°	78.42 - 79.02m				
				10°	86.40 - 87.20m				
					Talcose shears vary from 1cm to 20cm				
					thick and intersect core at angles between				
					0° and 70°. They are spread fairly evenly				
					through the section at about two shears per				
					metre.				

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DIAMOND DRILL CORE RECORD

Project: EVL Sheet No. 6 D.D.H. No. HK 14

METRES From	METRES Represents	Rock Type	Graphic Log	Intersec. Angle	Description	ASSAY RECORD Sample No.	From	Length	Rec
					Primary foliation inters. angles thus;				
				50°	58.10m Inters				
				45°	62.05 50° 90.85m				
				55°	63.20 60° 92.0 m				
				60°	65.20				
				60°	75.50				
				75°	79.60				
				0°	83.10 (possible				
					fold nose)				
98.20	2.44	BIOTITE HYPERS-			Short section of gabbro bounded top and				
		THENE GABBRO		30°	bottom by talcose shears 5-6cm thick. Section				
					grades from very fine grained at top to				
					pegmatitic at base. Pyroxenes partially				
					uralitized.				
					Occasional fine flecks of pyrrhotite.				
					Intersected in upper part by granitic vein.				
100.64	17.36	PICRITE			Predominantly serpentinized picrite with				
		(v. weakly			local transitions to troctolite. Varies in				
		mineralized)			grainsize from fine to pegmatitic. Picrites				
					generally finer grained with visible				
					foliation. Troctolites coarser and have				
					geanular to blotchy appearance. Numerous				
				20-80°	talcose shears in all directions. Also				
					some sections cut by closely spaced parallel				
				45°	serpentine hairline fractures.				

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DIAMOND DRILL CORE RECORD

Project: LVL

Sheet No. 7

D.D.H. No. HK 14

METRES		GEOLOGICAL LOG				ASSAY RECORD						
From	Represents	Rock Type	Graphic Log	Intersec. Angle	Description	Sample No.	From	Length	Rec.			
					Feldspar in troctolites partially altered							
					to pale green talc.							
					Fairly evenly disseminated the picrites							
					is about 0.5% of fine sulphide flecks.							
					Partially talc-altered granitic veins at							
				45°	99.40 to 100.00m							
				65°	102.00 to 102.35m							
				40°	116.60 to 116.80m							
					BIOTITE HYPERSTHENE Gabbro bands partially							
					uralitized and in places severely altered to							
					talc at							
				?	113.5 - 114.05							
				60°	114.75 - 115.00							
				45°	15cm thickness of "biolite schist" in							
					contact with base of granite vein at 116.8m.							
					Primary foliation angles:							
				50°	109.00							
				45°	114.60 Transitional contact with below							
118.00	8.42	TROCTOLITE			Predominantly coarse grained biotchy serp-							
		(v.weakly			entinized troctolite with local transitions							
		mineralized in			to finer grained moderately foliated picrite.							
		part)			Numerous talcose shears and serpentine							
					hairline fractures as above.							

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DIAMOND DRILL CORE RECORD

Project: EVL | Sheet No. 8 | D.D.H. No. EK 14

METRES		GEOLOGICAL LOG				ASSAY RECORD						
From	Represents	Rock Type	Graphic Log	Intersec. Angle	Description	Sample No.	From	Length	Rec.			
					About 0.1-0.5% fine sulphide flecks in the							
					picritic zones.							
					Partially talc-altered granitic veins at							
				?	119.95 - 120.25							
				45°	122.90 - 123.10							
				45°	123.20 - 123.45							
				40°	123.70 - 124.10							
				45°	124.50 - 124.70							
					Leucocratic biotite hypersthene gabbro							
					bands at							
				55°	119.75 - 119.95							
				55°	120.85 - 121.15							
				60°	124.15 - 124.40							
					Over the bottom 0.5m the troctolite becomes							
					rich in feldspar and almost anorthositic.							
126.42	0.60	ANORTHOSITE			A sudden change from coarse grained troct							
					to medium grained anorthosite containing a							
					few % biotite and little else. Upper							
					contact parallels vague foliation in both							
				60°	troctolite and anorthosite. Lower contact							
				70°	with a 15cm calcite-talc vein.							
127.02	1.83	ALTERED OLIVINE			Greenish medium to coarse grained olivine-							
		HYPERSTHENE			hypersthene gabbro rather blotchy in							
		GABBRO			appearance. Local transitions to troctolite.							
					Feldspar severely altered to talc near							
					numerous talcose shears one of which is							
					co-axial with core for 0.5m.							

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DIAMOND DRILL CORE RECORD

Project: EVL Sheet No. 9 D.D.H. No. MK 14

METRES From	METRES Represents	Rock Type	Graphic Log	Intersec. Angle	Description	Sample No.	From	Length	Rec	% Cu	% Ni
128.85	1.35	ANORTHOSITE			Talcose shear at upper contact. Anorthosite						
					as above but contains 5 - 7% biotite and minor						
					ilmenite. A 20cm thickness of pegmatitic						
					troctolite near the base.						
30.20	13.26	TROCTOLITE &			Transitional contact through leurocratic						
		PICRITE			into coarse grained to fine grained troctolites						
		(weakly			grading into picrites and local developments						
		mineralized)			of dunite. All olivines severely						
				70°	serpentinized and magnetic. Granite vein at	0362	136.20	2.00	99%	0.013	0.067
					139.35m - 139.75m. Numerous talcose shears	63	138.20	2.00	"	0.011	0.047
				50°	in all directions. Parallel hairline	64	140.20	2.00	"	0.017	0.071
				45°	serpentine fractures. Primary foliation and	65	142.20	1.26	"	0.023	0.093
					banding consistent.						
					Very fine to medium grained disseminated						
					sulphides present varying from 0.1-0.3% in						
					troctolites to about 1.5% in some picritic						
					sections. Richest section is basal 1½ metres						
					avg. 1% sulphides.						
193.46	4.04	COARSE OLIVINE			Coarse to pegmatitic blotchy gabbro grading						
		HYPERSTHENE			downwards from a pyroxenitic gabbro to a						
		GABBRO			near-anorthositic rock at the base. Both						
					contacts & also zones within are highly						
					sheared with introduced biotite and talc.						
					All olivines serpentinized. Uralitization						
					locally serve. Trace only of sulphides.						

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DIAMOND DRILL CORE RECORD

Project: EVL Sheet No. 10 D.D.H. No. MK 14

METRES From	METRES Represents	GEOLOGICAL LOG Rock Type	Graphic Log	Intersec. Angle	Description	ASSAY RECORD Sample No.	From	Length	Rec.	% Cu	% Ni
147.50	0.20	BIOTITE GRANITE		70°	Granite vein part altered to talc						
147.70	1.30	TROCTOLITE (very weakly mineralised)			Med. t coarse troclolite grading picrite. Less than 0.2% visible sulphides.						
149.00	0.70	SHEARED ANORTHOSITE		50°	Possibly a sheared biotite anorthosite with a talcose sheared upper contact and an irregular transitional lower contact.						
149.70	4.45	URALITIZED GABBRO (weakly mineralized)			Med. to coarse greenish olivine-hypersthene gabbro grading hypersthene gabbro. Pyroxenes severely uralitized, olivines serp. Irratic development med. disseminterstit sulphides gen. favouring olivine zones. Locally up to 3% sulphides; Po:Cpy ratio 3 or 4: 1	0366	149.70	2.00	99%	0.039	0.037
						67	151.70	2.45	"	0.010	0.019
						0368	154.70	2.00	99%	0.012	0.017
						69	156.70	2.75	"	0.014	0.018
				40°	Granite vein 153-0-153.3m. Numerous talc shears.						
154.15	0.55	NORITE		40°	Sharp non-tectonic contact with fine to medium grained bluish green norite. Severely uralitized in places. Occasional specks of sulphide. Vague foliation.						
154.70	4.75	URALITIZED GABBRO (weakly mineralized)		70°	As above. Transitional upper contact. Coarsely banded into finer and coarser zones.						
				70°	Granite vein 156.00-157.00m. Numerous talcose shears & fractures.						

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DIAMOND DRILL CORE RECORD

Project: EVL

Sheet No. 11

D.D.H. No. MK 14

METRES		GEOLOGICAL LOG				ASSAY RECORD			
From	Represents	Rock Type	Graphic Log	Intersec. Angle	Description	Sample No.	From	Length	Rec.
					Apparent small dyke norite at 158.60. Sulphides				
					as in U.gab. above.				
159.45	1.25	NORITE		80°	Norite as above. Vague foliation.				
160.70	5.95	URALITIZED GABBRO			Uralitized gabbro as for 149.70-159.15m				
166.65	1.35	BRECCIATED METASEDS. & GABBRO			Intermixed Qtz-mica schist, quartzite and uralitized gabbro-severely brecciated, altered & veined by talc, quartz and calcite. Ilmenite in basic rocks altered to creamish leucoxene. No sulphides.				
168.00	2.28	URALITIZED GABBRO			As above but biorite-rich in parts & contains a few metaseds xenoliths. Only trace sulphides.				
					Hole ends 170.28 metres.				

Fig. 28

Drilled By	D.P.I.	Collar Co-ordinates	56425 42384	D.D.H. No.	BK 19
Date Started	4/5.6.72	Collar Elevation	3	Area	BRIDGES
Date Completed	9 .6.72	Orientation	295° Grid N.	Length	117.24m
H from	0 m.	Recovery		Purpose	Test IP/Mag anom
NQ from	34.15 m.	Inclination	45°	Logged By	W.F.LINDQVIST
from	m.	Corrected		Date	13th June,19

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DIAMOND DRILL CORE RECORD

Project: EVL (HUNTLY)

METRES From	METRES Represents	Rock Type	Graphic Log	Intersec Angle	Description	Sample No.	From	Length	Rec.
0	34.30	OVERBURDEN			Open hole to 34.3m Sand, gravel, clay.				
34.30	1.20	GRANITE			Broken fragments of pegmatitic biotite granite Possibly a larger boulder rather than bedrock!				
35.50	0.45	PYROXENITE			Coarse grained, slightly weathered greenish rock composed of large interlocking ortho and clino-pyroxenes with minor interst. plagioclase. Numerous fine specks of pyrite.				
				80°	Broken upper contact, but sharp unfaulted lower contact with troctolite.				
35.95	21.55	TROCTOLITE/ PICRITE (v.weakly) mineralized)			Med to coarse grained olivine-plagioclase rock with 10-15% orthopyroxene in upper part dropping to 5-7% elsewhere. Grades between picrite and troctolite. Troctolite tend to be coarser grained & blotchy in appearance, while picrite medium grid granular rocks. Generally a vague banding and lamination present in picrite zones. Sometimes quite pronounced. Olivine gen. severely serpentinized & contains 5-7% fine grid magnetite. Pyroxene often fringed with brown biotite.				

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DIAMOND DRILL CORE RECORD

Project: EVL Sheet No. 2 D.D.H. No. HK 15

METRES		GEOLOGICAL LOG				ASSAY RECORD					
From	Represents	Rock Type	Graphic Log	Intersec. Angle	Description	Sample No.	From	Length	Rec.		
					Talc shears and narrow alter in zones common						
					Also narrow serpentine veins in all directions.						
					Talc altered granite veins at						
				40°	45.95 - 46.55m						
				45°	54.10 - 54.60m						
					Ubiquitous sec. magnetite renders rocks highly magnetic. About 0.3% fine to very fine grained pyrrhotite with occ. recognisable blebs of pentlandite & Chalcopyrite evenly dissem. through core. Slightly coarser sulphides in uppermost 6 metres where sulphide content reaches about 0.6-0.7%.						
					Primary banding/foliation readings as						
				45°	follows: 43.60m						
				40°	49.70m						
				55°	58.00m						
5.7.50	21.60	PICRITE/			Heavy dark serpentinized picrite grading						
		TROCTOLITE			troctolite with talc shears & alteration zones,						
		with meta-			and dissem. magnetite as above.						
		sediment bands			20% of section consists of bands and	0371	64.60	4.00	99%	0.024	0.080
		(weakly			smaller xenolithic patches of meta-sediments-						
		mineralized			quartz-biotite schists, graphitic pelitic	73	68.60	2.00	"	0.015	0.091
					hornfels and zoned calcsilicate hornfels.						

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DIAMOND DRILL CORE RECORD

Project: EVL Sheet No. 3 D.D.H. No. EK 15

METRES		GEOLOGICAL LOG				ASSAY RECORD						
From	Represents	Rock Type	Graphic Log	Intersec. Angle	Description	Sample No.	From	Length	Rec.			
					Pelitic bands are often very graphitic and							
					along contacts and later fractures. There are							
					concentrations of graphite containing coarse							
					patches of pyrrhotite.							
					In some places the xenolith-picrite contacts							
					remarkably sharp with no apparent min. or tesc							
					change in igneous rock. More often contact	0379	76.60	2.00	99	0.075	0.185	
					gradation with patches and discontin. develop-	0375	76.60	2.00	"	0.031	0.115	
					ments of coarse pyroxenite material that in							
					probably local product of assimilation of							
					sedim. material by magma. or else an insitu							
					alteration of cumulus olivine.							
					Often the metaseds. esp. graphite-rich							
					ores, have apparently intruded the picrite							
					and even produced picrite xenoliths. Prob.							
					due to deformation & flow of soft metaseds							
					into brittle fractured picrite.							
					Metased. intersections vary in length							
					from 1.0cm to 1.0m & are fairly evenly							
					distributed over section. Contacts in all							
					directions.							
					The section is slightly enriched in sulphides							
					over the upper troctolite and runs about 0.4-							
					0.5% fine to coarse disseminated. Exceptional							
					section 76.60 - 78.60m runs about 2% sulphide							
					& contains a 7cm length running 10-15% sulphide							

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DIAMOND DRILL CORE RECORD

Project: EVL Sheet No. 4 D.D.H. No. [illegible] 15

METRES		GEOLOGICAL LOG				ASSAY RECORD					
From	Represents	Rock Type	Graphic Log	Intersec Angle	Description	Sample No.	From	Length	Rec.	%Cu	%Ni
					Primary foliation quite prominent in parts						
					of the troctolite. Readings thus:						
				35°	61.30m						
				50°	70.60m						
				60°	75.50m						
79.10	22.20	PICRITE/			Fine to med. grid granular picrite grading						
		TROCTOLITE			into troctolite with occ. zones 1-2cm across	0376	80.60	2.00	99%	0.017	0.185
		(weakly			of very coarse material. Rock med.serpentinized	77	82.60	2.00	"	0.022	0.115
		mineralized)			magnetic bearing & magnetic. Vague primary	78	84.60	2.00	"	0.017	0.106
					foliation throughout.	79	86.60	2.00	"	0.027	0.101
					Extensive talcose & chloritic? alter in of	80	88.60	2.00	"	0.025	0.110
					picrite f'spar adjacent to talcose shears at;						
					82.00m						
					89.00m						
					92.00m						
					100.40m						
					Numerous narrow (1-5mm) serpentine-carbonate						
					veins at high angles to core axis. 4cm						
				45°	granite vein at 80.67m.						
					Meta sediment (graphite-rich) zones at;						
					81.10m						
					88.30m						
					Very fine to medium grid disseminated						
					sulphides throughout & averaging 10.6%. Med						
					grid interstitial sulphide patches erratically						
					distributed 5 x 2m sections in upper part						

Consolidated Gold Fields Limited

DIAMOND DRILL CORE RECORD

Project: EVI

Sheet No. 5

D.D.H. No. HK 15

METRES		GEOLOGICAL LOG				ASSAY RECORD			
From	Represents	Rock Type	Graphic Log	Intersec Angle	Description	Sample No.	From	Length	Rec.
					avg. around 0.8-1.0% sulphide, but sulphide				
					content falls away in the lower half.				
					Primary foliation angles thus:				
				70°	79.40m				
				70°	90.50m				
				60°	93.60m				
101.30	6.40	PICRITE/DUNITE			Picrite zone above increases rapidly in				
		(serpentinized)			olivine content over last 0.9m, and then there				
		(very weakly		45°	is a sharp, unfaulted contact into highly				
		mineralized)			serpentinized picrite/dunite - a massive dark				
					green rock with minor interstitial plag. Small				
					zones also of troct. 0.1m from there upper				
				?	contact is a small fault zone with brecciation				
					and carbonate veining.				
					Massive steatite zone from 101.77-102.40,				
					and a partially steatitized granite pegmatite				
					from 102.75 - 104.45m				
				20-40°	Steatite zone contacts				
				15-20°	Granite vein contacts				
					Minor fine to med. disseminated specks of				
					mainly pyrrhotite in picrite/dunite. Steatite				
					& granite barren.				
107.70	9.54	PICRITE-HYPERSTHENE			Grey to brown med to coarse grained rock				
		THOLEIITIC GABBRO			with a vague foliation. Plentiful interstitial				

Consolidated Gold Fields Limited

DIAMOND DRILL CORE RECORD

Project: KVL

Sheet No. 6

D.D.H. No. HR 15

METRES		GEOLOGICAL LOG				ASSAY RECORD						
From	Represents	Rock Type	Graphic Log	Intersec. Angle	Description	Sample No.	From	Length	Rec.			
					ilmenite and a little interstitial serpent-							
					inized olivine particularly in upper part.							
				70°	Upper contact is very sharp but marked by							
					a thin talcose shear.							
					Patchy talcose alteration in upper 0.5m.							
					Moderate to severe uralitization of pyroxenes							
					throughout the section.							
					About 0.6% med grain. disseminated							
					pyrrhiotite in uppermost metre, but below							
					this only an occasional speck.							
					Primary foliation;							
				45°	112.2m							
				55°	116.2m							
					Tourmaline granite pegmatite vein at							
				25°	110.2 - 110.6. Also 7cm thick granite							
				50°	vein near upper contact.							
					Hole ends 117.24 metres.							

Ltd.

Fig. 39

Drilled By	Irish Drilling	Collar Co-ordinates	49469mE41257mS
Date Started	30 June 1972	Collar Elevation	660ft.
Date Completed	5 July 1972	Orientation	261° Grid N.
BQ from	4.70 m.	Recovery	
from	m.	Inclination	45°
from	m.	Corrected	

Consolidated Gold Fields Limited

DIAMOND DRILL CORE RECORD

Project: EVL

D.D.H. No.	BK 16
Area	CHINNIE
Length	149-06
Purpose	Test mo /IP anomal
Logged By	W.F.Lindqvist
Date	10.7.72

METRES		GEOLOGICAL LOG				ASSAY RECORD						
From	Represents	Rock Type	Graphic Log	Intersec. Angle	Description	Sample No.	From	Length	Rec.			
0	4.70	OVERBURDEN			Incl. numerous boulders troctolite rocks.							
4.70	19.80	WEATHERED PICRITE		50°	Dark blackish-green weathered picrite grading in places into troctolite & dunite. Igneous lamination well developed. Olivine severely serpentinised & rock thus magnetic due to 2nd'y magnetite. Barren of sulphides except for occas. pyrite speck. Bottom 2½m highly fractured and limonitic. Limonite probably a normal weathering/leaching product of picrite alteration rather than of sulphide derivation. Recovery 90%							
24.50	49.26	BANDED TROCTOLITES plus thin mineralized zone			Intimately banded section composed of layers of troctolite and troctolitic gabbro, grading into picrite and dunite on one hand, & olivine gabbro, hypersthene gabbro & anorthosite on other. Few bands exceed 1m in thickness; most in 0.1 - 0.5m range. Most bands in themselves contain textural & mineralogical variations.							

Consolidated Gold Fields Limited

DIAMOND DRILL CORE RECORD

Project: EVL Sheet No. 2 D.D.H. No. IX 16

METRES		GEOLOGICAL LOG				ASSAY RECORD						
From	Represents	Rock Type	Graphic Log	Intersec. Angle	Description	Sample No.	From	Length	Rec			
					Band contacts vary from transitional to very							
					sharp. Numerous examples of possible graded							
					beds all except one, indicate rocks getting							
					younger up the hole.							
					Parallel to the banding is a well-developed							
					igneous lamination produced by alignment of							
					olivine grains and the preferred orientation of							
					long dimensions of plag. & orthopyroxene.							
				45-50°	Banding angle consistent, but steepens							
				80°	gradually near base of section.							
					Numerous talc & calcite filled fractures at							
					various angles through core.							
					Olivine partially or wholly serpentinized,							
					thus magnetic nature of rock, dependent							
					both on olivine content & degree of serpent-							
					ization. Olivine & magnetite contents of							
					section as a whole around 25% & 2.3% resp.							
					Very minor amounts of fine dissem. sulphides							
					mainly pyrrhotite - through section, most							
					occurring in olivine-rich bands, dug sulphide							
					content around 0.2 - 0.4%.							
					About 8% coarse interstitial pyrrhotite							
					minor chalcopyrite in altered hypersthene							
					gabbro at 32.45-33.30m. Dissem. graphite with	0389	32.45	0.85	99%	0.23	0.37	
					sulphides and also as massive selvedges							
					replacing troctolite at contact.							

Consolidated Gold Fields Limited

DIAMOND DRILL CORE RECORD

Project: EVL Sheet No. 3 D.D.H. No. HK 16

METRES		GEOLOGICAL LOG				ASSAY RECORD						
From	Represents	Rock Type	Graphic Log	Intersec. Angle	Description	Sample No.	From	Length	Rec			
					Alteration disguises nature of gabbro content,							
					but sulphide-graphite mineralization probably							
					of late origin. Talc veins cut across and are							
					obviously later than mineralization.							
					Core recovery good around 99%.							
73.76	1.24	PICRITE			A thicker band of serpentinized picrite with							
					minor gradations into dunite and troctolite.							
				80°	Banding & lamination well developed. Occas.							
					fine specks of pyrrhotite. Mod. magnetic.							
75.00	16.95	BANDED			Geological features, background sulphide							
		TROCTOLITES			content and core recovery as for Banded							
					Troctolites 24.50-73.76m. Banding and							
				80°	lamination 'steep' at top of section but							
				50°	gradually 'flatten' towards base.							
91.95	4.90	DUNITE			Dark bluish-black massive serpentinized	0390	91.95	1.52	90%	0.026	0.14	
				50°	dunite into minor laminated picrite, troctolite							
					and anorthosite. Rock mod. magnetic. Numerous							
					talcose fractures & shears. Very minor fine							
					dissem. sulphides but abundant pyrrhotite							
					coatings along hairline fractures at 91.95-							
					93.27m.							
					Narrow biolite-plag. pegmatite veins cut							
					across igneous lamination.							
					99% recovery.							

Consolidated Gold Fields Limited

DIAMOND DRILL CORE RECORD

Project: [illegible]

Sheet No. 4

D.D.H. No. HK 16

METRES		GEOLOGICAL LOG				ASSAY RECORD						
From	Represents	Rock Type	Graphic Log	Intersec Angle	Description	Sample No.	From	Length	Rec.			
96.85	5.05	BANDED TROCTOLITES			Geological features, background sulphide content and core recovery as for Banded Troctolites 24.50-73-76m.							
				45-50°	Banding/lamination well developed.							
101.90	3.67	PYROXENITIC GABBRO (mineralized)		70°	A med to coarse grained brownish granular rock with contacts truncating sharply the banding/lamination of surrounding troctolite. Thus a later intrusive or pegmatite-hydrothermal phase. Orthopyroxene part uralitized & gen. fringed by coarse biotite..	0391	101.90	2.00	99%	0.077	0.15	
						0392	103.90	1.67	"	0.062	0.15	
					Enriched in patches & veins of sub-massive to disseminated sulphides-pyrrhotite plus minor chalcopyrite - which average about 8-10% of the section. Small amount dissem. graphite intermixed with sulphides.							
					Core recovery 99%							
105.57	43.49	BANDED TROCTOLITES			Geological features, background sulphides and core recovery as for Banded Troctolites 24.50-73.76m.							
					Numerous thin pyroxenitic cross-cutting dykes/veins in upper part of section - these identical to pyroxenitic gabbro above but not mineralised.	0393	108.82	2.00	99%	0.013	0.065	
						0394	110.82	2.00	"	0.041	0.10	
						0395	112.82	2.00	"	0.023	0.086	

Consolidated Gold Fields Limited

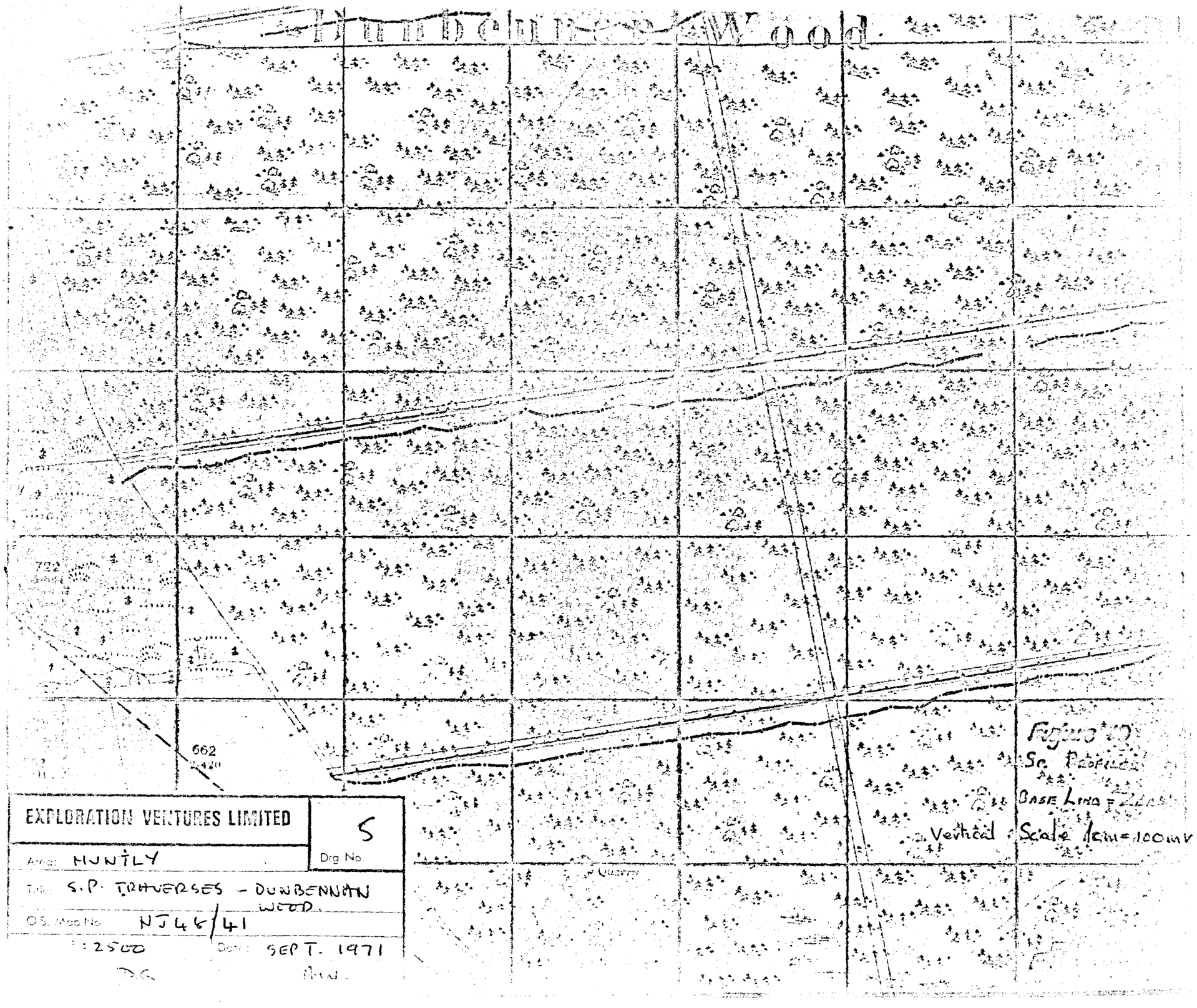
DIAMOND DRILL CORE RECORD

Project: EVL

Sheet No. 5

D.D.H. No. [illegible] 16

METRES		GEOLOGICAL LOG				ASSAY RECORD					
From	Represents	Rock Type	Graphic Log	Intersec Angle	Description	Sample No.	From	Length	Rec		
					Igneous lamination/banded well developed.	0396	114.82	2.00	99%	0.029	0.095
				40-60°	Numerous 'graded' bands indicate rocks getting	0397	116.82	2.00	"	0.014	0.066
					younger up hole.						
					Olivine gabbro more plentiful in this						
					section than elsewhere (till subordinate to						
					troctolite.						
					Hole ends 149.06m (ft)						


Dunbennan Wood
722
662
2,420
Figure 10
Sp. Profiles
Base Line = Zero
Vertical Scale 1cm=100mV
EXPLORATION VENTURES LIMITED
5
Drg. No.
Area: HUNTLY
Title: S.P. TRAVERSES - DUNBENNAN WOOD.
O.S. Map No. NJ46/41
1:2500
Date: SEPT. 1971
D.G.
A.W.

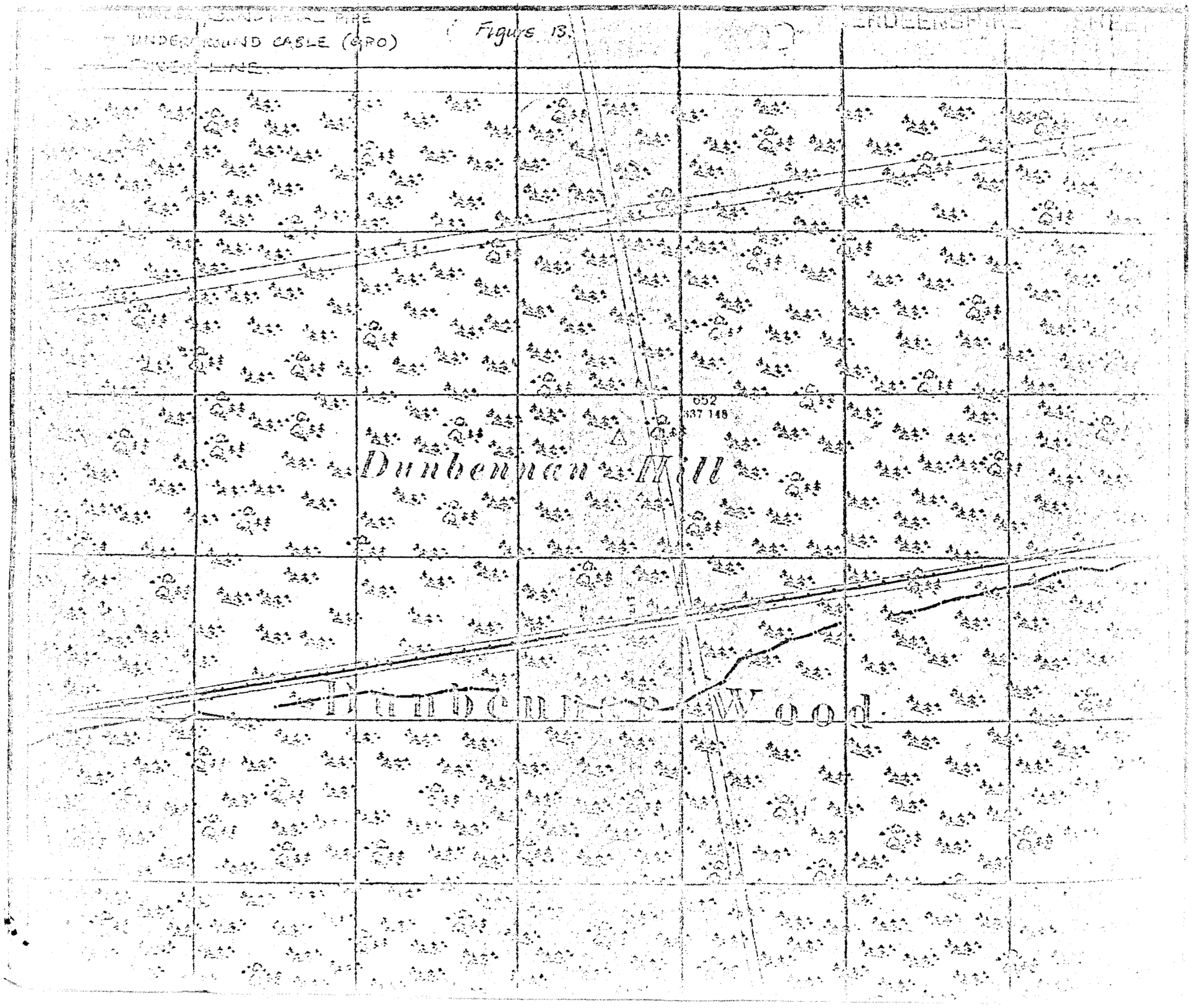
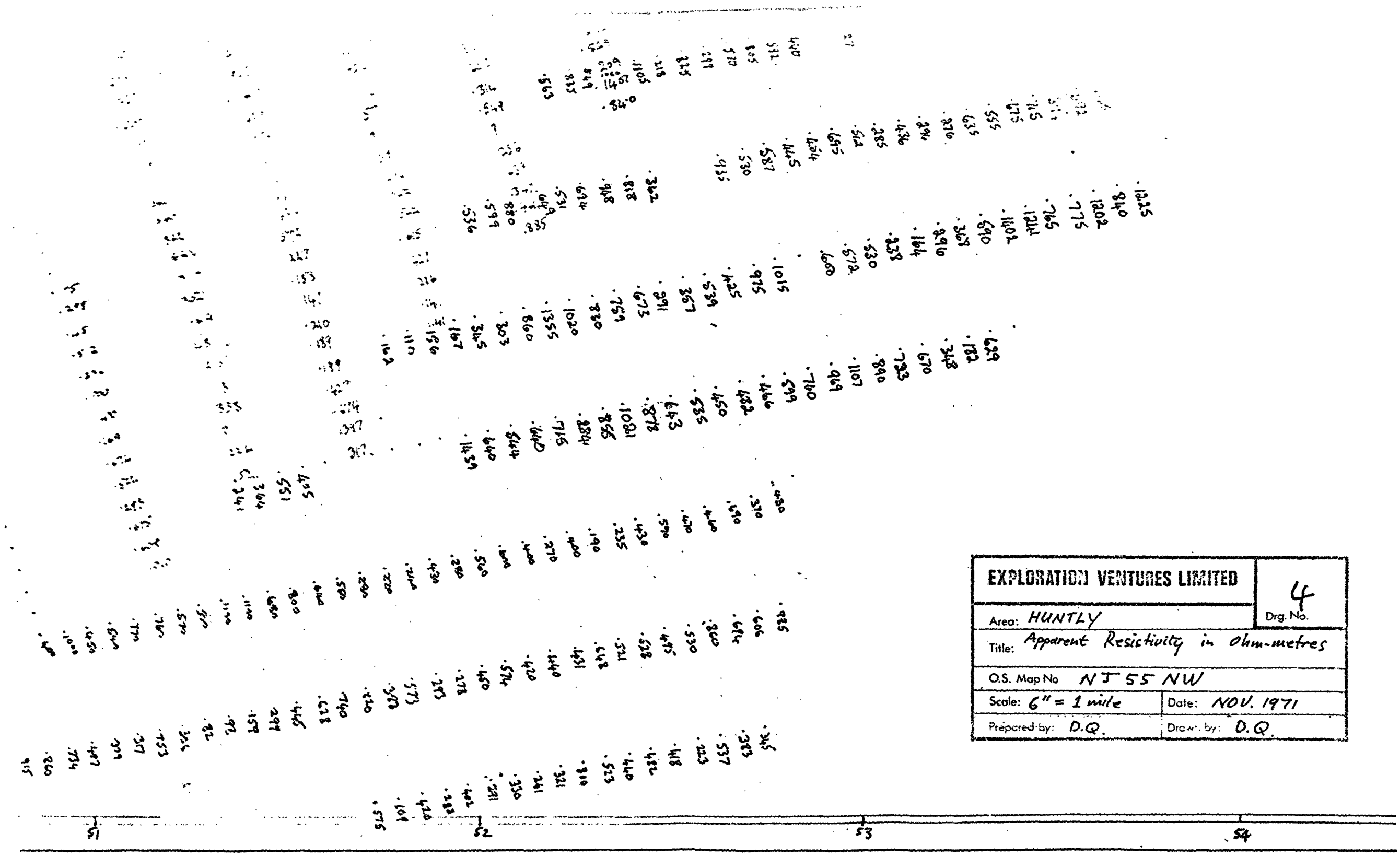


Figure 13.



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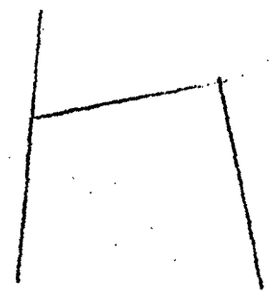
Area: HUNTLY		
Title: Apparent Resistivity in Ohm-metres		
O.S. Map No NJ 55 NW		
Scale: 6" = 1 mile	Date: NOV. 1971	
Prepared by: D.Q.	Drawn by: D.Q.	



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.1805	.740	.272	.729	.715	.765	
.930	.640	.272	.625	.675	.1241	
.820	.635	.505	.819	.555	.1402	
.1070	.670	.415	.758	.635	.690	
.690	.695	.582	.742	.276	.368	.629
.730	.530	.297	.390	.296	.296	.182
.732	.1240	.490	.310	.436	.164	.348
.890	.825	.392	.527	.285	.238	.670
.1999	.870	.935		.512	.530	.723
.2650		.945	.440	.695	.572	.890
		.625	.592	.454	.660	.1107
		.1055	.805	.445		.969
		.524	.570	.587	.1015	.760
		.295	.299	.530	.975	.599
		.945	.325	.935	.425	.466
		.906	.218		.539	.482
		.494	.1105		.357	.450
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			.835	.531	.1020	.856
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				.347	.860	.715
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					.156	.1439
					.110	
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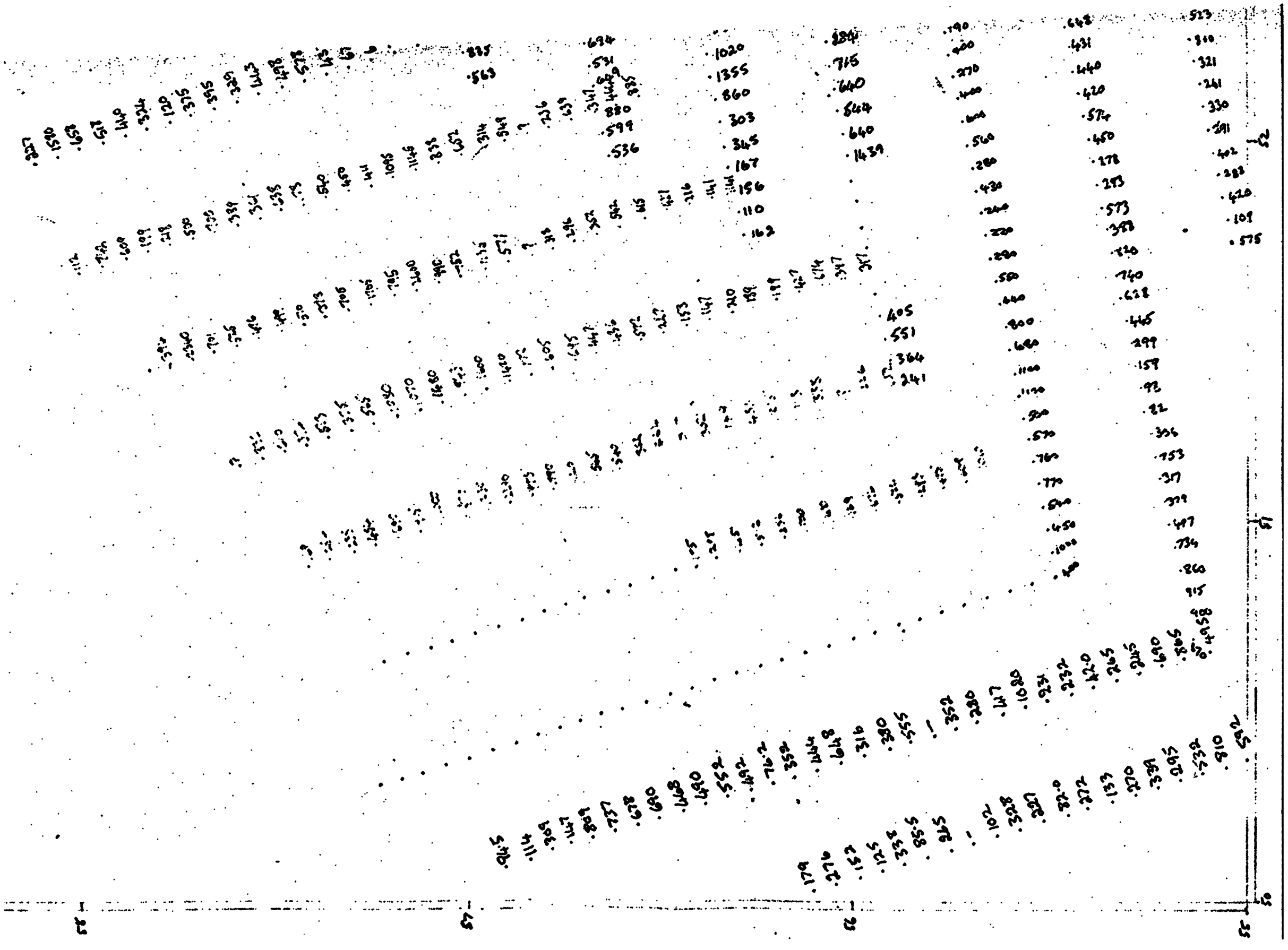

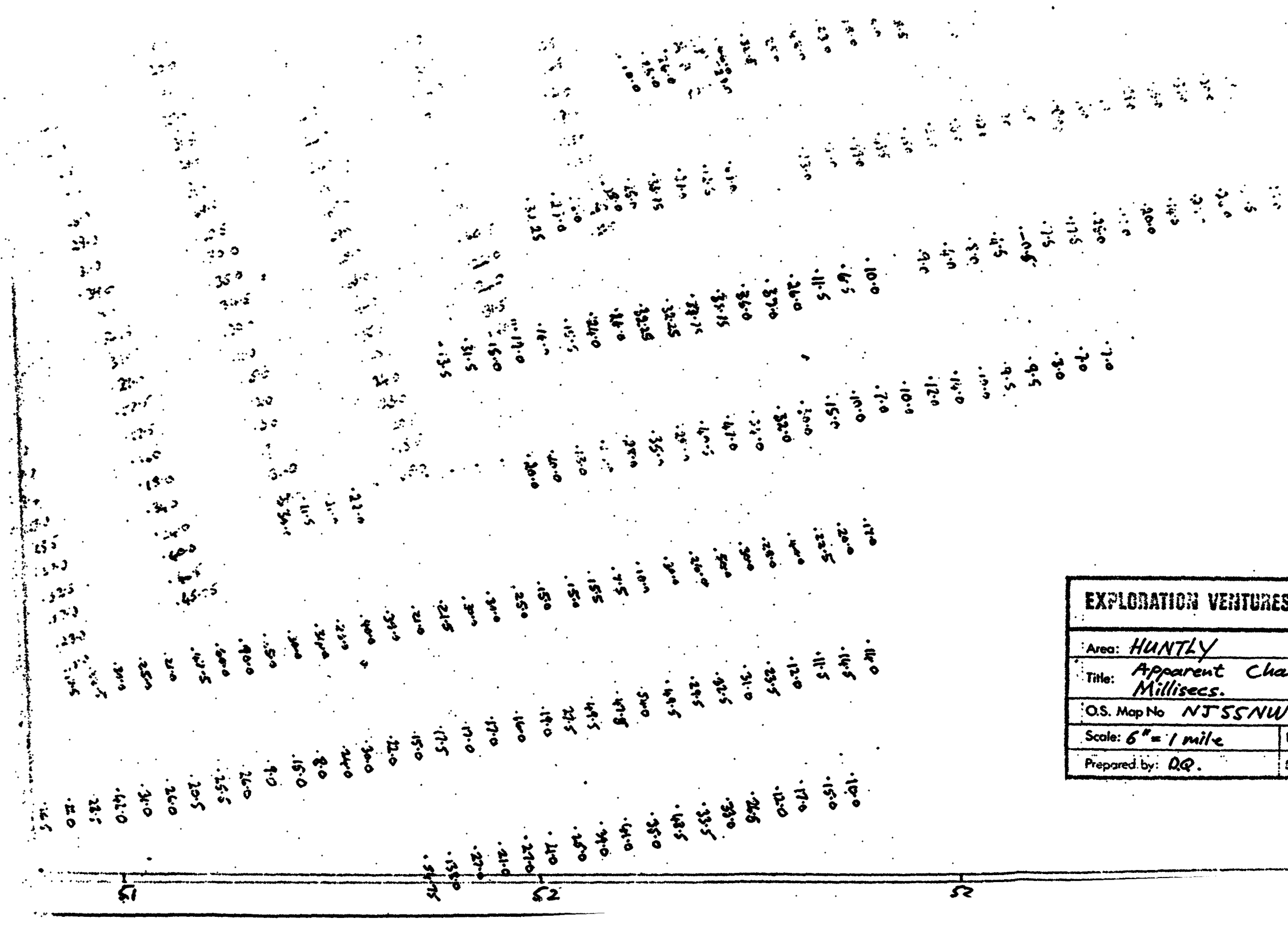

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Title: Apparent Chargeability in Millisecs.		
O.S. Map No NJ55NW		
Scale: 6" = 1 mile	Date: NOV. 1971	
Prepared by: D.Q.	Drawn by: D.Q.	

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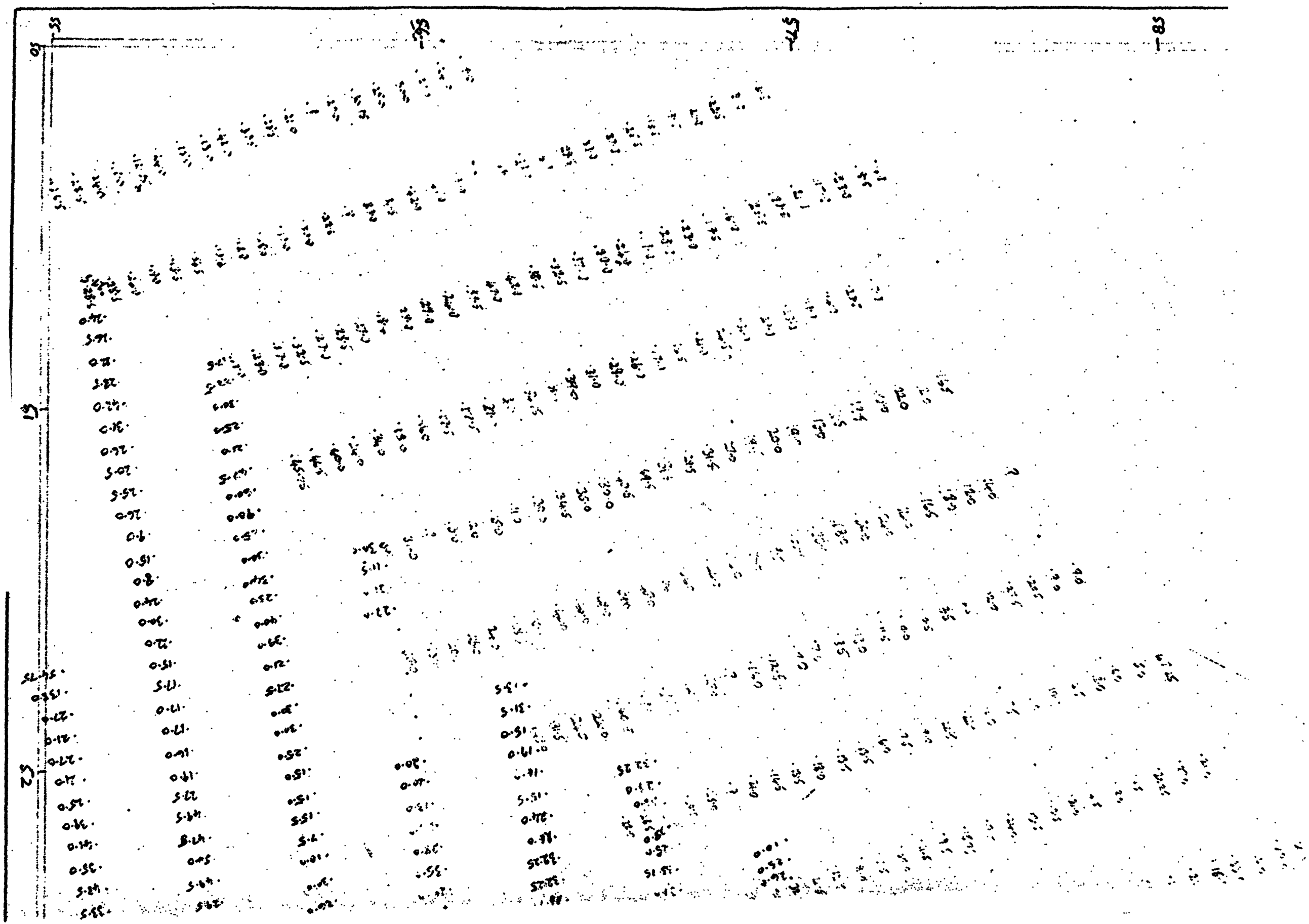
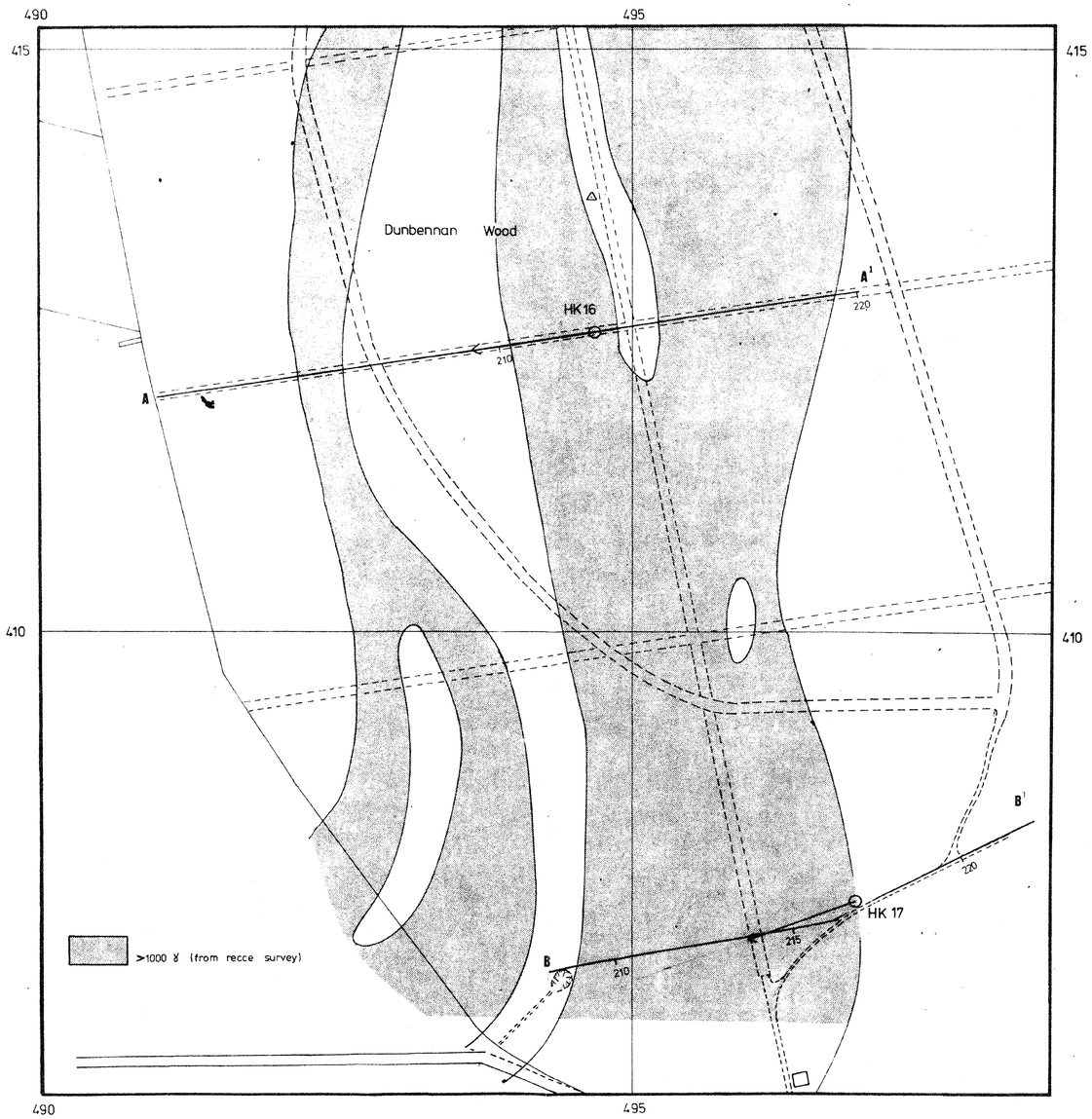
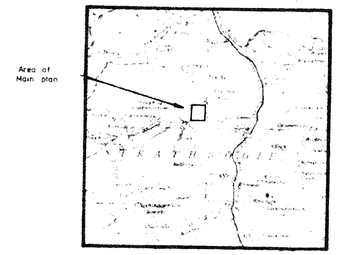


EXPLORATION VENTURES LIMITED

Fig. 36



Location diagram of 1 2500 plan



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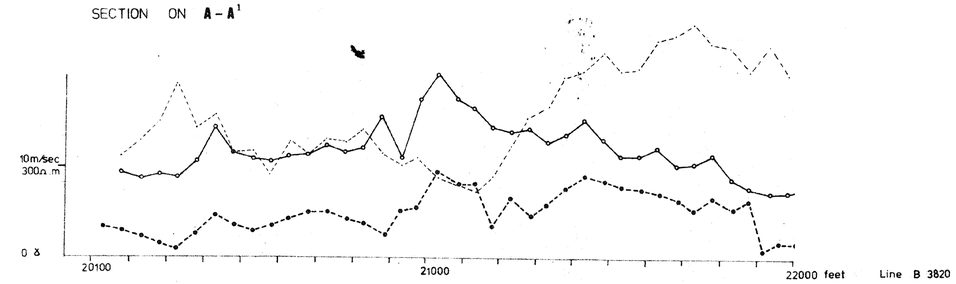
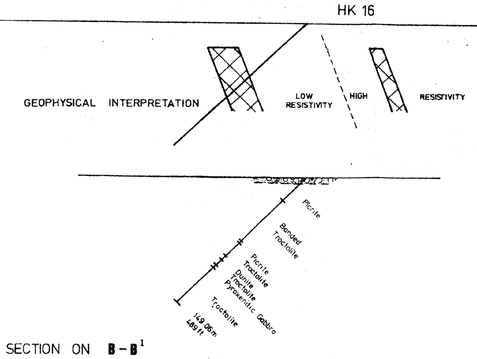


HK 16



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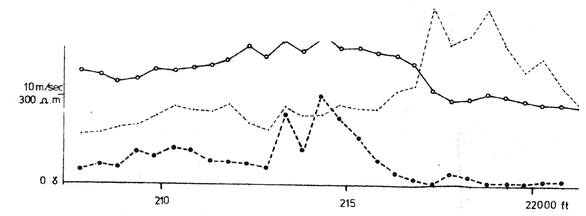
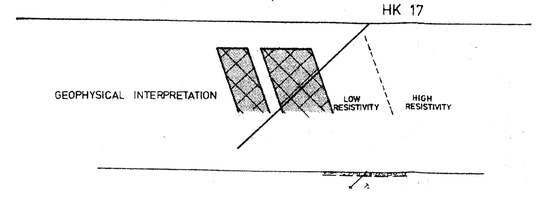


HK 17



Consolidated Gold Fields Ltd.
EXPLORATION

Project:	Exploration Ventures Ltd.
Area:	Huntly - Knock
Title:	DIAMOND DRILL TARGETS AT DUNBENNAN, ABERDEENSHIRE
Drawing No. D 023 Fig. 36	O.S. Map No. NJ 4840 & 4841
	Scale: 1 : 2500 — Prepared by: M. Springett
	Date: June 1972 — Drawn by: M. S.
	Revisions: 2/7/72. M.S.

KEY

- Magnetics
- I.P. Chargeability
- I.P. Resistivity
- Magnetic and chargeable body
- Magnetic body within area of high chargeability

VERTICAL SCALES

I.P. CHARGEABILITY m/secs: 70, 50, 30, 10, −10

I.P. RESISTIVITY ohm.metres: 1000, 700, 500, 300

gamma: 1500, 1000, 500, 0

PLAN AND SECTION SCALE

0 50 100 150 200 250 300 metres

0 250 500 750 1000 feet

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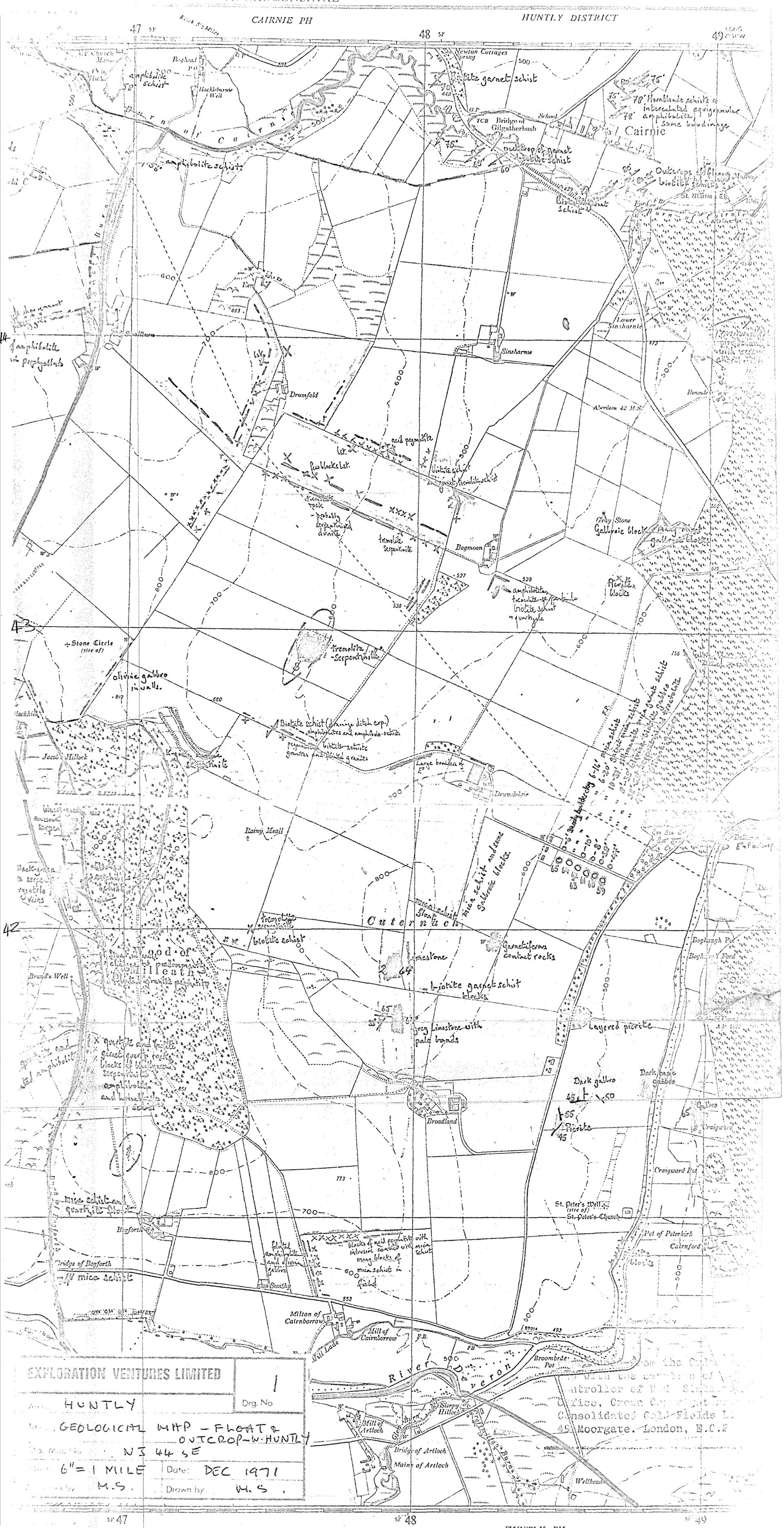
EXPLORATION VENTURES LIMITED	Drg. No. 2
Area: MARNOCH	
Title: GEOLOGICAL, FLOATS OUTCROP MAP	
O.S. Map No. NJ 55SE, 55NE, 65NW, 65SW	
Scale: 6" 1 INCH	Date: OCT 1971
Prepared by: LAC	Drawn by: LAC


CAIRNIE PH
HUNTLY DISTRICT
Bogfoot P.O.
Hackleburnie Well
Newton Cottages
Bridge of Gilgatherbush
School
Cairnie
Sinsharnie
Lower Sinsharnie
Drumfold
Aberdeen 42 M.S.
Gray Stone
Bogmoon
Stone Circle (site of)
Jacob's Hillock
Rainy Meall
Drumdelgie
Cuternach
Broadland
Craigward Pot
St. Peter's Well (site of)
St. Peter's Church
Pot of Peterkirk
Cairnford
Bogforth
Bridge of Bogforth
Milton of Cairnborrow
Mill of Cairnborrow
Mill Lade
River Deveron
Broombrae Pot
Sleepy Hillock
Mill of Artloch
Bridge of Artloch
Mains of Artloch
Wellhead
Brand's Well
Wood of Millheath
amphibolite schist
amphibolite garnet schist
Hornblende schists & intercalated epigranular amphibolite. Some boudinage
outcrop of garnet biotite schist
Outcrops of biotite schist
Biotite schist
acid pegmatite
biotite schist
hornblende schist
Serpentinite
tremolite serpentinite
olivine gabbro in walls.
Biotite schist (drainage ditch exp.)
amphibolites and amphibole schists
pegmatites biotite schists granites and biotite granites
Large boulders of
mica schist and quartzite blocks
mica schist and gabbroic blocks.
tremolite
biotite schist
Garnetiferous contact rocks
biotite garnet schist blocks
Grey limestone with pale bands
Layered picrite
Dark gallro
Dark basic gabbro
Picrite
folded amphibolite and olivine gabbro
blocks of acid pegmatite with intrusive contact with mica schist
many blocks of mica schist in field
mica schist
EXPLORATION VENTURES LIMITED
Drg. No. 1
HUNTLY
GEOLOGICAL MAP - FLOAT & OUTCROP - W. HUNTLY
NJ 44 SE
6" = 1 MILE
Date: DEC 1971
M.S.
Drawn by M.S.
Consolidated Gold-Fields L
49 Moorgate, London, E.C.2
HUNTLY PH

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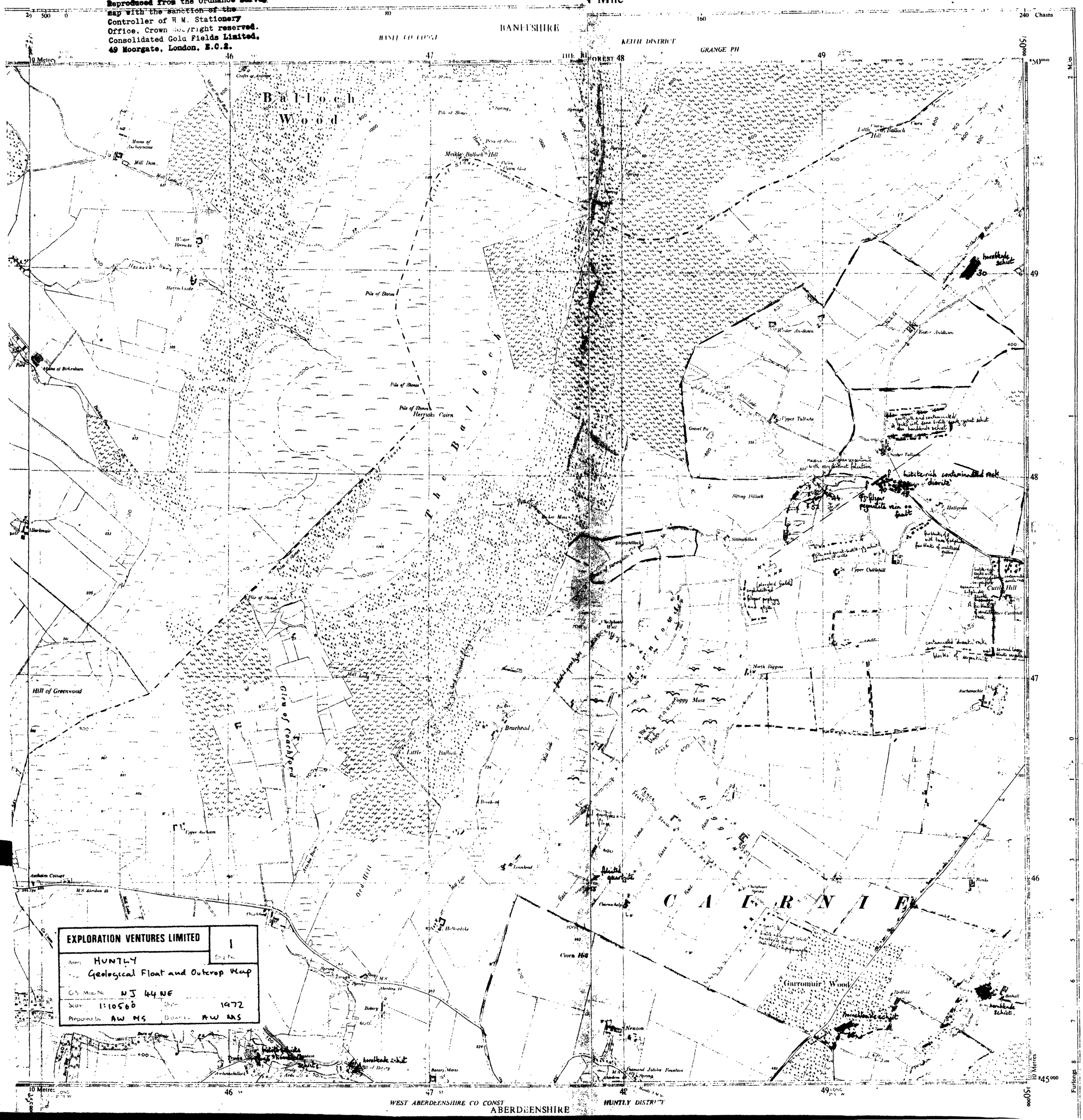

EXPLORATION VENTURES LIMITED | 1 Dwg. No.

Area: HUNTLY
Geological Float and Outcrop Map
O/S Map No. NJ 44 NE
Scale 1:10560 Date 1972
Prepared by AW MS Drawn AW MS

SHEET NJ 54 SW

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ORDNANCE SURVEY
Scale 1:10,560 or 6 Inches to 1 Mile

SHEET NJ 54 SE

ORDNANCE SURVEY
Scale 1:10,560 or 6 Inches to 1 Mile

SHEET NJ 54 SE

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ORDNANCE SURVEY, CHESSINGTON

THE NATIONAL GRID
TO GIVE A GRID REFERENCE CORRECT TO 100 METRES

THE NATIONAL GRID
TO GIVE A GRID REFERENCE CORRECT TO 100 METRES

SHEET NJ 55 SW — ORDNANCE SURVEY — Scale 1:10,560 or 6 Inches to 1 Mile — SHEET NJNJ 55 SE — ORDNANCE SURVEY — Scale 1:10,560 or 6 Inches to 1 Mile — SHEET NJ 55 SE

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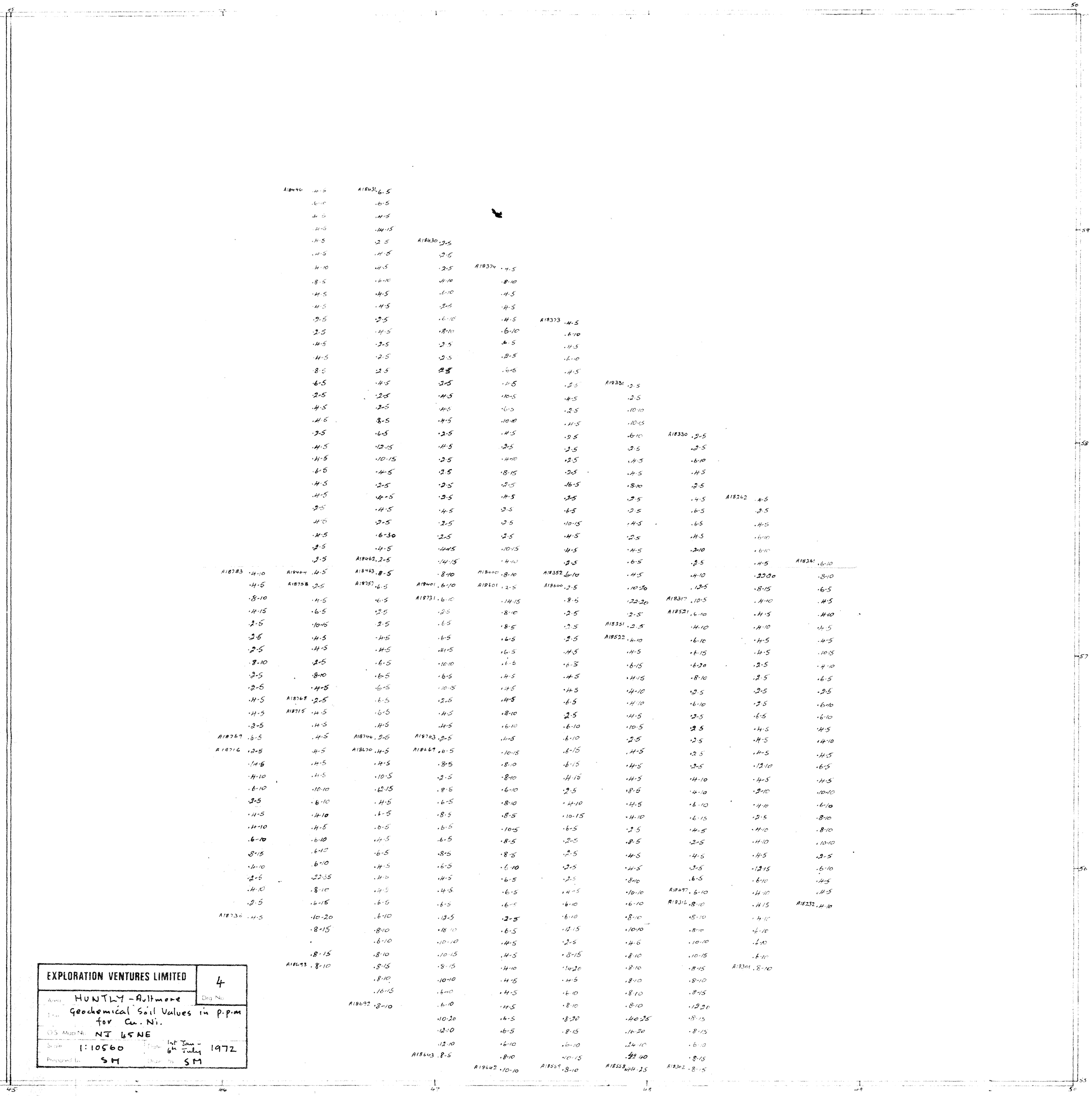
THE NATIONAL GRID
TO GIVE A GRID REFERENCE CORRECT TO 100 METRES

INDEX TO ADJOINING SHEETS

SURVEY DIAGRAM

Abbreviations — Boundaries



EXPLORATION VENTURES LIMITED

Drg. No. 4

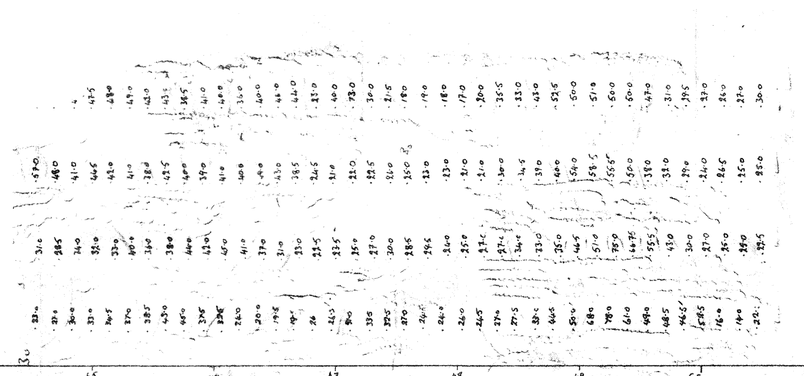
Area: HUNTLY - Aultmore

Title: Geochemical Soil Values in p.p.m for Cu. Ni.

O.S. Map No. NJ 45NE

Scale: 1:10560 Date: 1st Jan - 6th July 1972

Prepared by: SM Drawn by: SM



EXPLORATION VENTURES LIMITED	5 Drg. No.
Area: HUNTLY – Scrub Wood	
Title: Apparent Chargeability Values in (millisecards)	
O.S. Map No. NJ 5450 – 5550	
Scale: 1: 2500	Date: April, 1972
Prepared by: DQ	Drawn by: DQ

EXPLORATION VENTURES LIMITED

6

HUNTLY - Scrub Wood

Apparent Resistivity Values in Ohm Metres

Line No. NS 5450-5550

Scale 1:2500

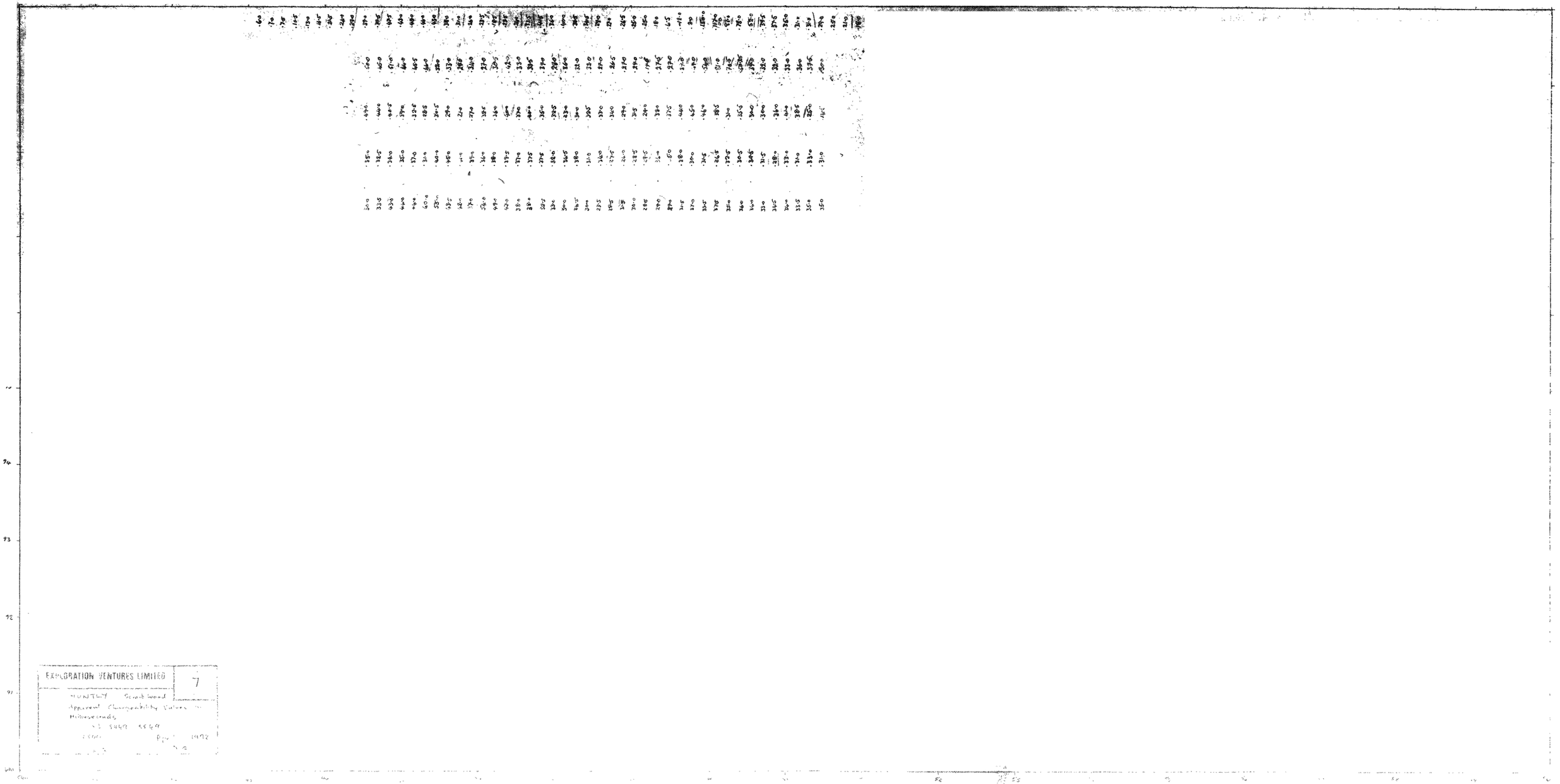
Drawn D.A.

April, 1972

D.A.

D

·780	·810	·820	
·820	·940	·800	
·800	·840	·740	·750
·870	·880	·700	·850
·870	·880	·850	·750
·860	·970	·970	·810
·760	1040	·1380	·990
·610	·960	·1380	·1020
·465	·800	·1170	·980
·44	·770	·1060	·790
·280	·700	·880	·850
·220	·485	·790	·935
·260	·330	·710	·970
·440	·215	·51	·780
·380	·178	·335	·600
·350	·355	·230	·560
·350	·540	·375	·375
·360	·450	·595	·265
·370	·475	·450	·260
·380	·45	·535	·520
·400	·320	·500	·900
·510	·410	·510	·845
·480	·500	·535	·830
·490	·455	·590	·770
·440	·435	·550	·680
·430	·305	·370	·510
·360	·280	·355	·370
·210	·240	·315	·385
·160	·220	·280	·340
·220	·210	·280	·320
·220	·194	·290	·350
·260	·225	·425	·435
·450	·380	·455	·465
·760	·785	·1020	·600
·830	·980	·1290	·1080
·920	·1140	·1470	·1420
·1000	·1230	·1620	·1650
·1000	·1160	·1460	·1940
·880	·1040	·1460	·1850
·760	·1000	·1300	·1750


EXPLORATION VENTURES LIMITED
7
HUNTLY Scrub Wood
Apparent Chargeability Values in
Milliseconds
1992

EXPLORATION VENTURES LIMITED

Area: Hunter - Sarah Wood

Apparent Resistivity Values in Ohm Metres

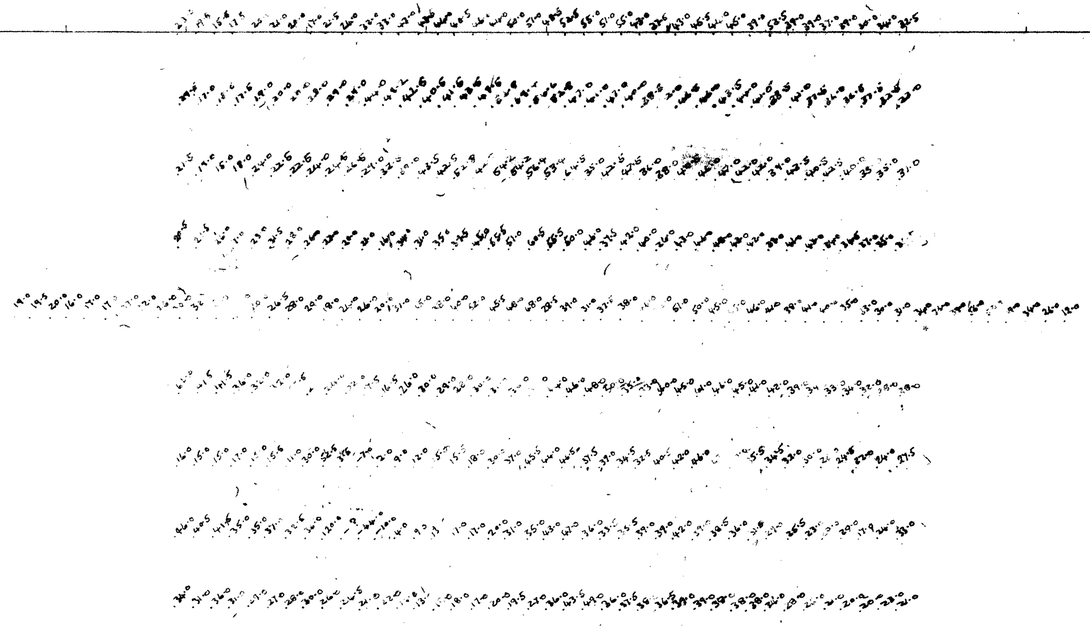
Date: 8

Date: 11-2-00

Date: Nov 1 1972

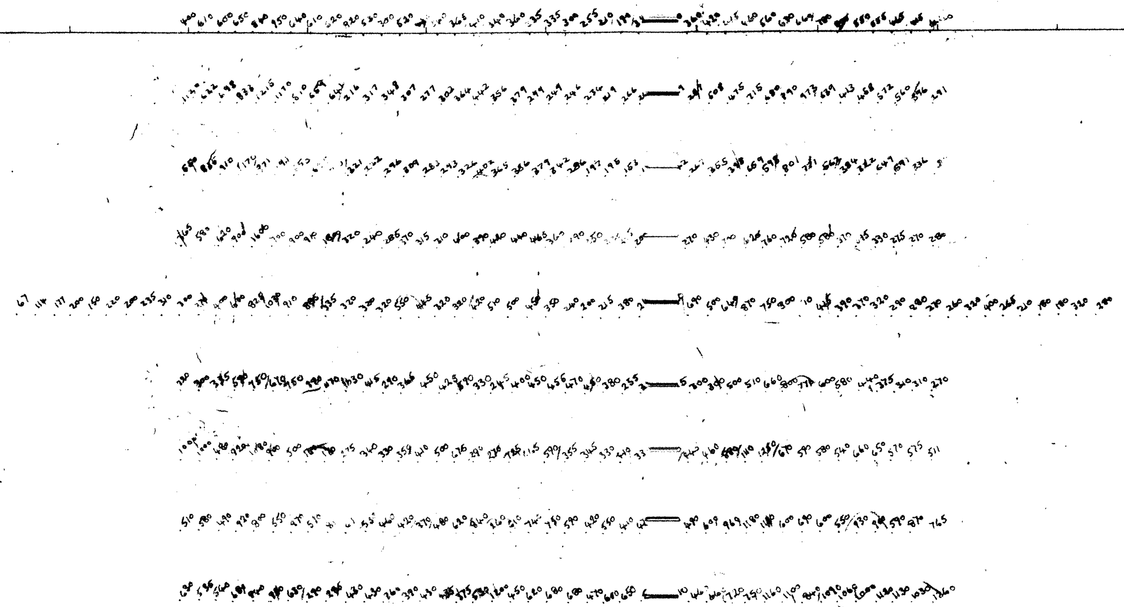
D.A.

.257				
.305				
.350				
.420				
.455				
.510				
.560				
.680				
.670				
.660	.500	.480	.590	.900
.700	.485	.390	.268	.510
.570	.370	.205	.196	.275
.615	.330	.220	.200	.210
.580	.187	.230	.235	.200
.366	.155	.200	.225	.170
.260	.112	.190	.160	.220
.180	.166	.160	.155	.240
.132	.185	.200	.200	.360
.160	.215	.200	.220	.355
.280	.196	.190	.240	.275
.30	.245	.200	.230	.325
.360	.295	.200	.260	.370
.260	.305	.210	.380	.460
.330	.15	.200	.290	.400
.285	.200	.300	.330	.380
.250	.270	.375	.460	.385
.230	.355	.300	.460	.350
.330	.370	.320	.340	.400
.360	.350	.370	.290	.430
.390	.370	.418	.340	.420
.650	.430	.560	.365	.440
.590	.545	.370	.350	.425
.485	.500	.310	.350	.430
.560	.265	.290	.390	.540
.660	.240	.260	.400	.540
250	.225	.270	.510	.578
.245	.210	.260	.560	.630
.240	.174	.330	.570	.675
.50	.102	.450	.620	.780
.150	.190	.520	.810	.870
.200	.345	.610	.930	.1300
.340	.510	.710	.930	.1330
.585	.690	.840	.1100	.920
.630	.630	.840	.1180	.1000
.660	.720	.850	.1180	.960
.850	.890	.890	.1100	.1020
.940	.880	.950	.980	.750
.840	.630	.1070	.1000	.860
.700	.715	.1070	.1000	.825
.570				
.530				
.600				
.580				
.480				
.450				
.350				
.280				
.200				

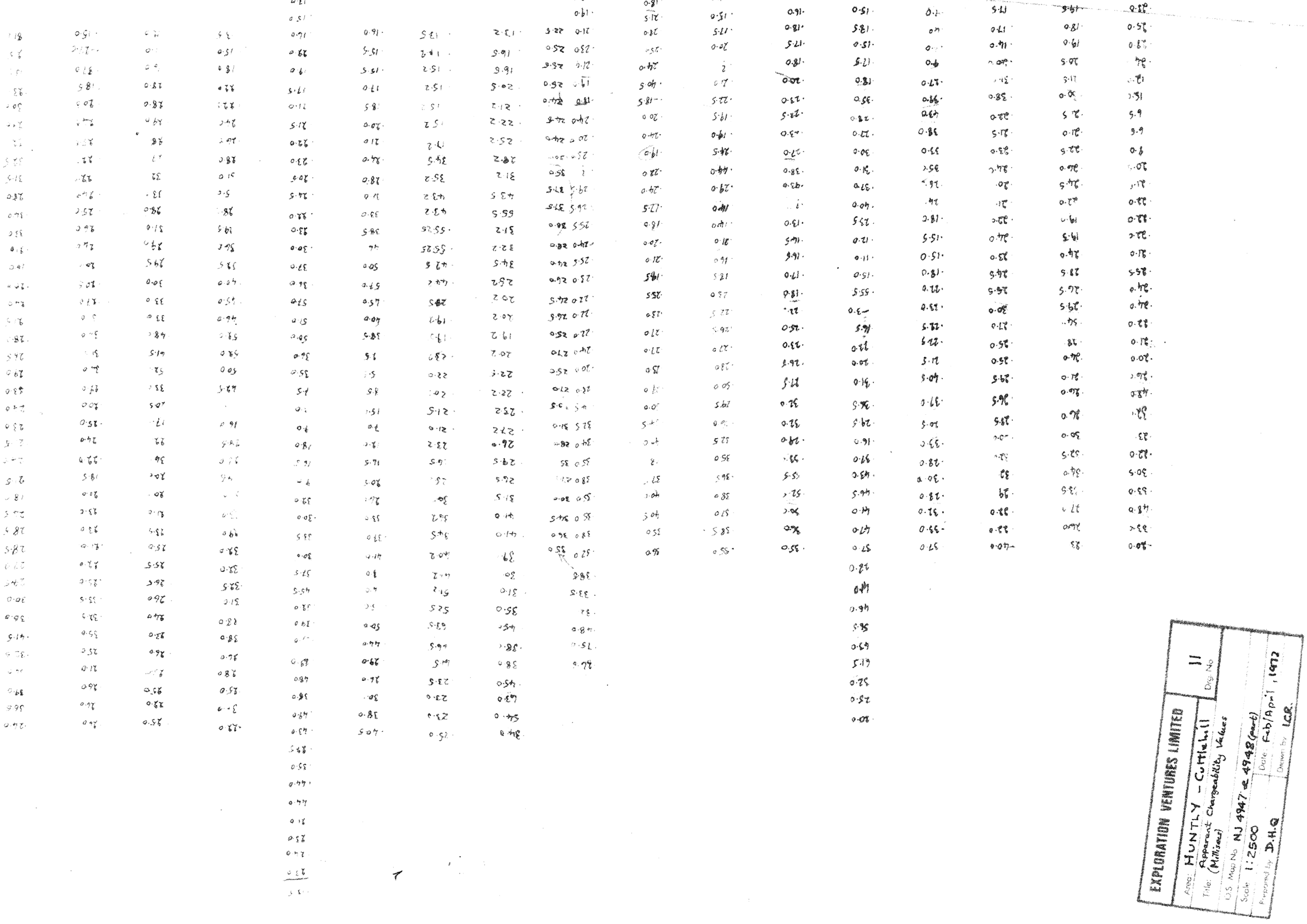


EXPLORATION VENTURES LIMITED	9
HUNTLY	
YONDERTOWN - APPROXIMATE CHARGEABILITY VALUES IN MILLISECONDS	
NJ 5453 - 5553	
112.00	May, 1972
DQ	DQ

6530



EXPLORATION VENTURES LIMITED	10
HUNTLY	
YONDERTOWN – APPARENT RESISTIVITY VALUES IN OHM METRES	
NJ 5653 – 5553	
1:2500	May 1972
DR	DR



EXPLORATION VENTURES LIMITED

Area: HUNTLY - Cuttlehill

Title: Apparent Chargeability Values (Millisec)

Dwg. No. 11

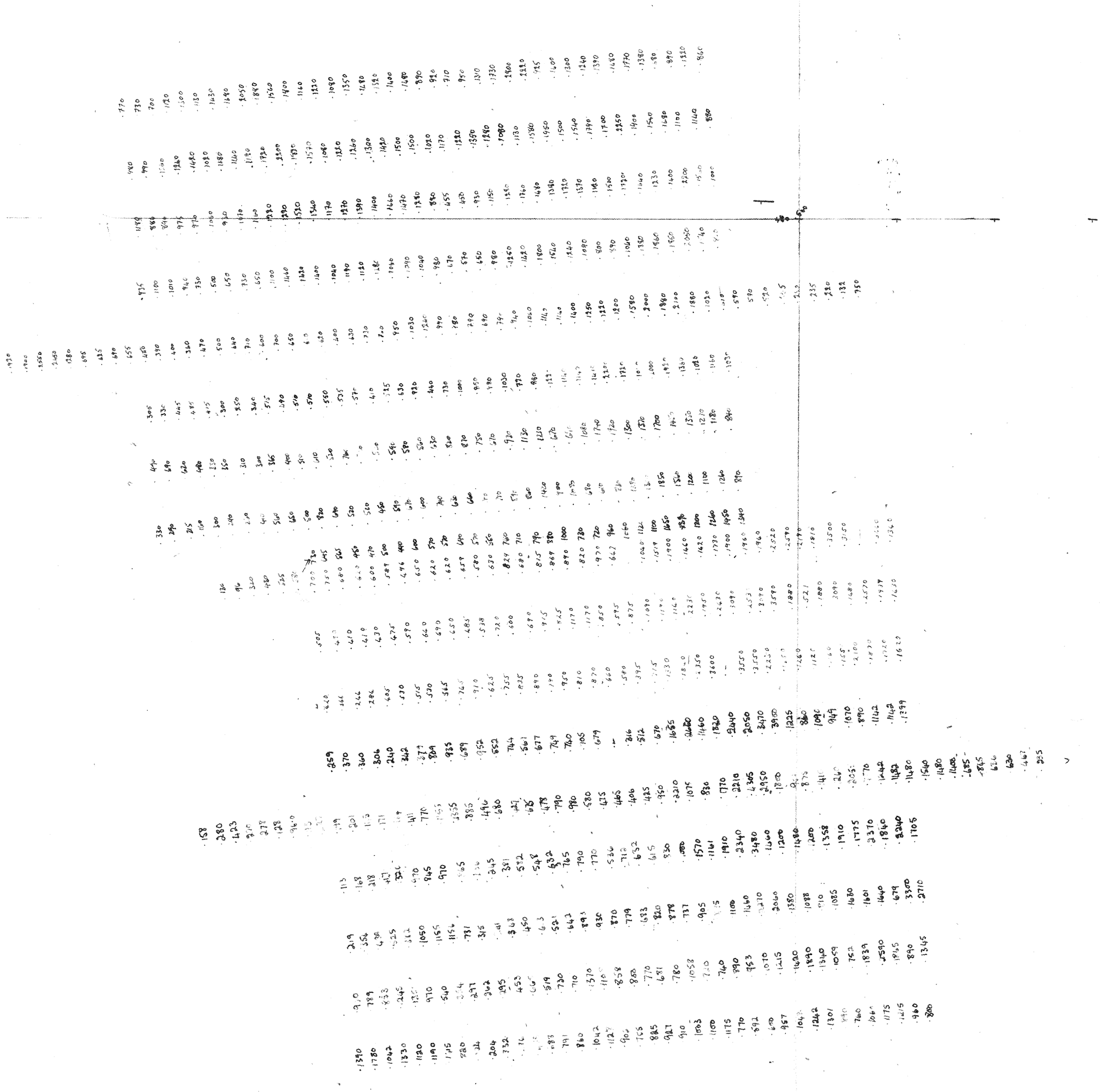
U.S. Map No. NJ 4947 & 4948 (part)

Scale 1:2500

Date Feb/April, 1972

Prepared by D.H.Q.

Drawn by I.C.R.



EXPLORATION VENTURES LIMITED	12
Area: HUNTLY - Cuttlehill	Drg. No
Title: Apparent Resistivity Values (Ohm metres) -	
O.S. Map No. NJ 4947 & NJ 4948 (part)	
Scale: 1:2500	Date: Feb/April 1972
Prepared by: D Q	Drawn by: D Q

EXPLORATION VENTURES LIMITED

Area: HUNTLY-Broadland
Title: Apparent Chargeability Values in Milliseconds
O.S. Map No. NJ 4742, 4642
Scale: 1:2500
Date: April-May 1972
Drawn by: DQ
Prepared by: DQ
Drg No. 13

23.0	25.5	27.0
25.0	21.0	[illegible]
22.0	23.0	[illegible]
22.0	26.5	[illegible]
25.0	25.0	[illegible]
26.0	26.0	[illegible]
28.0	29.5	[illegible]
32.5	37.0	[illegible]
37.0	39.0	[illegible]
39.0	36.0	[illegible]
38.0	35.0	[illegible]
38.5	39.0	[illegible]
42.5	46.0	
37.5	38.0	[illegible]
35.0	38.0	[illegible]
35.0	36.0	[illegible]
37.5	36.0	
37.5	33.5	39.0
37.0	31.0	35.5
37.5	30.0	35.0
35.0	37.0	35.0
33.0	39.0	36.0
36.0	32.0	36.0
33.0	31.0	37.0
29.0	36.0	32.0
21.5	33.5	30.5
27.0	28.0	28.5
21.0	28.0	25.0
20.0	19.0	[illegible]
24.0	18.0	23.0
20.0	21.5	25.5
17.0	16.0	26.0
16.0	18.0	31.0
20.0	15.0	23.0
23.0	15.0	21.0
26.0	21.0	15.0
20.0	26.0	17.0
18.5	36.0	21.0
15.0	6.0	32.5
15.0	9.0	28.0

480

470

EXPLORATION VENTURES LIMITED

Area: HUNTLY – Broadland

Title: Apparent Resistivity Values in Ohm Metres

O.S. Map No. NJ 4742, 4842

Scale: 1:2500

Date: April-May 1972

Drg. No. 14

1280	2750	[illegible]
2250	2270	[illegible]
1960	1860	1850
1500	1760	1800
1860	1660	1940
2360	1800	1930
1110	2600	2400
480	720	[illegible]
850	620	[illegible]
980	960	[illegible]
1060	1260	[illegible]
1670	1650	[illegible]
1560	1680	[illegible]
1760	2550	[illegible]
1300	1580	[illegible]
960	1300	[illegible]
875	1640	[illegible]
480 870	1670	[illegible]
1640	2620	[illegible]
1960	2060	[illegible]
2000	2200	[illegible]
1860	2410	[illegible]
1980	2090	[illegible]
1640	1220	2250
950	740	[illegible]
680	670	[illegible]
375	1120	[illegible]
930	1170	[illegible]
1270	980	[illegible]
1260	1180	[illegible]
910	1040	[illegible]
650	570	[illegible]
650	670	[illegible]
640	860	[illegible]
940	960	[illegible]
1030	950	[illegible]
365	940	[illegible]
640	210	[illegible]
560	360	[illegible]
650	660	[illegible]

520

EXPLORATION VENTURES LIMITED

15

HUNTLY - Broadland
Apparent Chargeability Values in Milliseconds
N36441-4741, 4941-4941
1:2500
April May 1972
DQ

						7.5	14.0	21.5	26.0	16.0	23.0
						17.0	20.5	21.0	5.0	18.5	24.0
						15.0	24.0	21.0	16.0	18.7	21.5
						12.0	17.0	21.5	18.0	22.0	26.0
						7.0	14.0	17.0	21.0	22.5	27.5
						13.5	18.0	24.0	17.0	22.0	24.5
						18.5	22.0	28.0	26.0	23.0	25.0
						23.0	27.0	34.0	30.0	32.0	37.0
						24.0	27.0	33.0	28.5	35.0	33.0
						24.0	25.0	28.0	26.0	37.0	37.0
						28.0	24.0	22.5	26.0	35.0	37.0
						28.0	24.0	21.0	25.5	30	40.0
						29.0	29.0	15.0	16.0	33.0	40.0
						30.0	30.0	17.0	20.5	37.0	37.0
						34.0	31.0	25.0	29.0	35.0	33.0
						34.0	41.0	30.5	46.0	36.5	39.0
						38.0	39.0	17.0	22.5	24.0	41.0
						36.0	45.0	43.0	38.5	38.5	41.0
						34.0	41.0	35.5	49.0	37.0	37.5
						33.0	38.5	50.0	52.0	39.0	35.0
						39.0	46.0	54.0	65.0	43.0	35.0
						39.0			44.0	42.0	39.0
						34.0	20.0	18.0	37.5	39.5	33.5
						34.0	33.0	24.0	42.5	34.0	50.0
						32.5	35.0	32.0	47.0	36.0	40.0
						37.0	30.0	30.5	34.5	37.0	37.5
						24.0	24.0	42.0	23.0	31.0	35.0
						22.0	20.0	48.5	23.0	33.0	28.0
					13.5	24.0	23.0	44.0	24.0	23.0	29.0
					13.0	18.0	23.0	44.0	26.5	24.0	41.5
					24.0	23.0	25.0	30.0	24.0	31.0	44.0
					24.5	24.0	24.5	36.5	22.0	26.0	30.0
					22.5	24.0	23.5	35.0	24.0	24.5	28.0
					22.5	31.0	29.5	30.0	25.0	22.0	23.0
					30.0	29.0	28.0	29.0	24.0	24.0	25.0
					47.0	27.0	24.0	37.0	32.5	24.0	44.0
19.0	23.0	32.0	35.5	48.0	34.0	29.0	22.0 (40.0)	33.0 (40.0)	29.0		44.5
23.0	27.5	31.5	35.5	45.0	44.0	30.0 (46.0)	44.0 (42.0)	40.0 (46.0)	24.0		47.0
19.0	25.0	29.0	32.0	38.5	58.5	30.0 (46.0)	40.0 (42.0)	40.0 (46.0)	33.0		19.0
27.0	27.0	32.0	29.0	36.0	44.0	32.0	35.0	44.0			
25.5	26.5	29.0	30.0	32.0	36.0	42.0	36.0	33.0			
26.0	28.5	31.5	31.5	28.0	34.0	31	12.5	32.5			
26.0	27.5	31.0	30.0	28.5	28.5	14.0	11.0	26.0			
24.0	28.0	28.0	23.5	26.0	26.0	21.0	33.0	26.0			
23.0	24.0	27.0	36.0	26.0	24.5	23.0	31.0	25.0			
24.0	24.0	28.0	27.0		22.0	25.0	32.5	25.0			
26.5	22.5	26.0	18.5		22.0	25.0	27.0	28.0			
25.0	23.0	26.5	20.0		21.0	21.0	23	22.5			
27.0	26.0	21.0	19.0		21.0	16.5	22.0	18.0			
26.0	24.0	22.0	21.5	22.5	22.0	20.0	12.0	18.0			
26.0	25.0	23.5	22.0	26.0	24.0	18.5	16.0	16.0			
26.0	26.5	23.5	23.5	34.0	21.0	16.0	13.0	17.5			
26.5	30.0	26.0	26.0	25.0	22.0	14.0	20.5	16.0			
27.0	31.0	27.5	26.0	26.5	22.0	16.0	15.0	17.5			
24.0	29.5	29.5	26.0	21.0	21.5	16.5	12.0	15.5			
28.5	27.0	32.0	29.0	24.0	22.5	18.0	16.5	20.0			
23.0	25.0	29.0	33.5	27.0	24.0	18.0	17.5	26.5			
23.0	24.0	26.0	26.0	27.0	26.0	19.0	25.0	26.5			
21.5	25.0	26.0	26.5	28.0	29.0	24.5	32.0	28.0			
19.5	24.0	25.0	26.5	27.0	26.0	26.0	36.0	41.0			
24.5	23.5	26.5	23.0	26.0	28.0	31.5	37.0	37.0			
27.5	23.0	26.0	29.0	28.0	27.5	21.0	42.0	32.0			
27.5	19.0	26.0	26.0	27.0	28.5	35.0	37.0	33.0			
26.0	23.5	20	26.0	23.5	30.0	32.0	35.0	32.0			
24.5	27.0	19.0	22.0	22.5	27.0	31.5	32.5	38.0			
26.0	25.0	31	28.0	28.0	30.0	35.0	32.0	33.5			
25.5	28.0	22	28.0	27.0	30.0	15.0	30.0	28.0			
27.5	25.5	23.0	23.0	25.0	29.0	21.0	31.0	37.0			
26.5	22.5	19.5	23.5	21.5	24.0	23.5	31.0	32.0			
	21.0	20.0	16.0	21.0	26.0	32.0	25.5	22.0			
			19.0	21.0	23.0	24.0	26.0	30.0			
21.5				22.0	23.5	27.0	27.0	26.0			
22.5	20.0	26.5			23.5	27.5	19.5	23.0			
17.5	20.0	21.0	26.5			33.0	22.0	20.0			
18.5	19.0	20.0	22.5	23.0				19.0			
18	18.0	20.0	21.0	21.0	22.0						
				19.5							
				19.5							
				18.0							
				18.0							
				16.0							
				14.0							
				14.0							
				16.5							
				17.0							

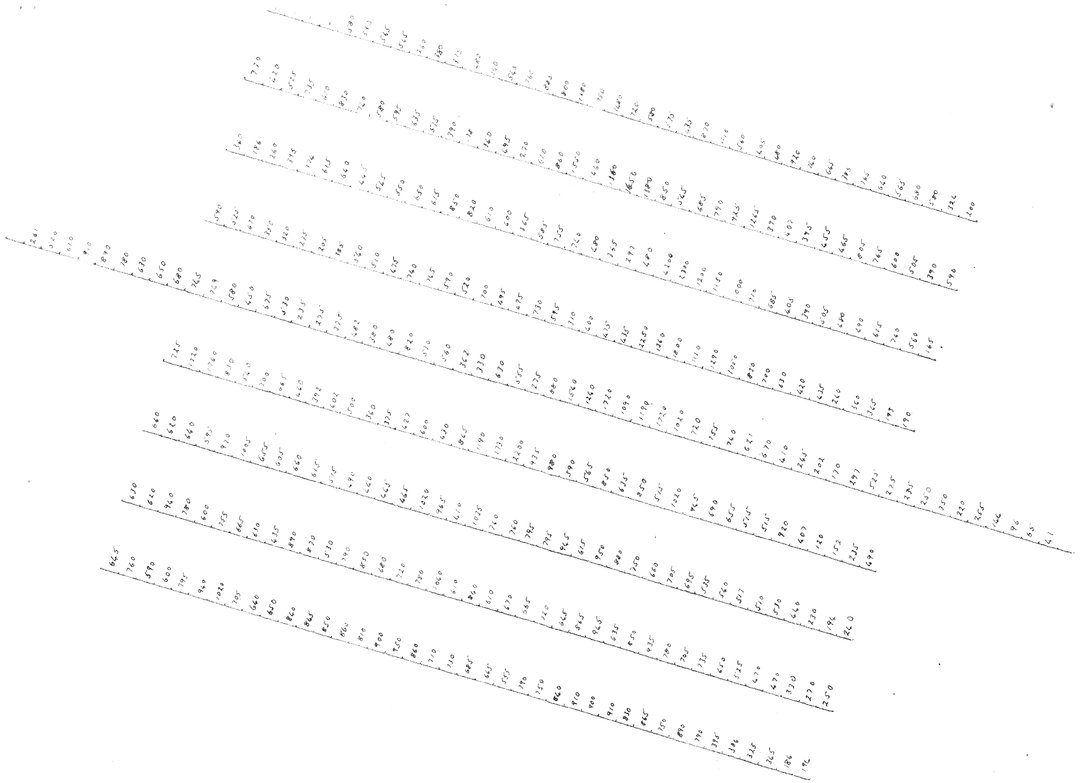
7.5
6.0
7.0
5.5
12.5
36.0
19.0
16.5
18.0
19.0
26.0
20.5
25.0
26.0
18.0
57.0
75.0
57.0
69.0
37.5
36.0
36.0
28.0
32.0
63.0
29.0
19.0
19.0
22.0
12.5
16.0
19.0
7.0
6.5
3.5
3.5
6.0

EXPLORATION VENTURES LIMITED

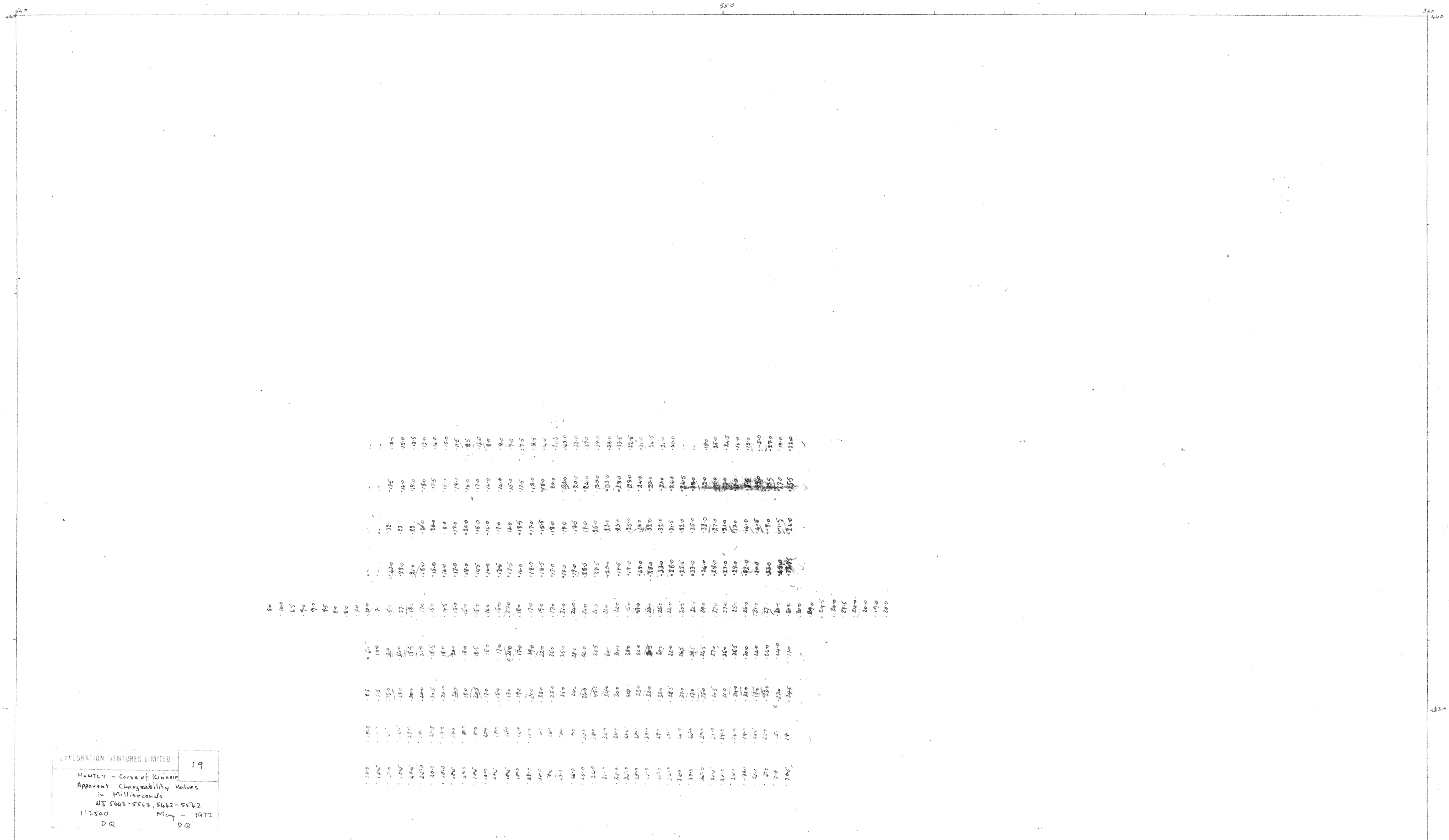
16

HUNTLY - Broadland Fm
Apparent Resistivity Values in Ohm Metres
NJ4041-4741, 4841-4941
1:2500
April May 1972
DQ
DQ

EXPLORATION VENTURES LIMITED	17
HUNTLY - Hill of Brunstane	
Apparent Chargeability Values in Milliseconds	
NJ 5440 - 5540	
1:2500	Feb 1972
DQ	DQ



EXPLORATION VENTURES LIMITED	18
HUNTLY - Hill of Brunstane Apparent Resistivity Values in Ohm Metres NI 5440-5540 1:2500 Feb 1972 DQ DQ	



EXPLORATION VENTURES LIMITED

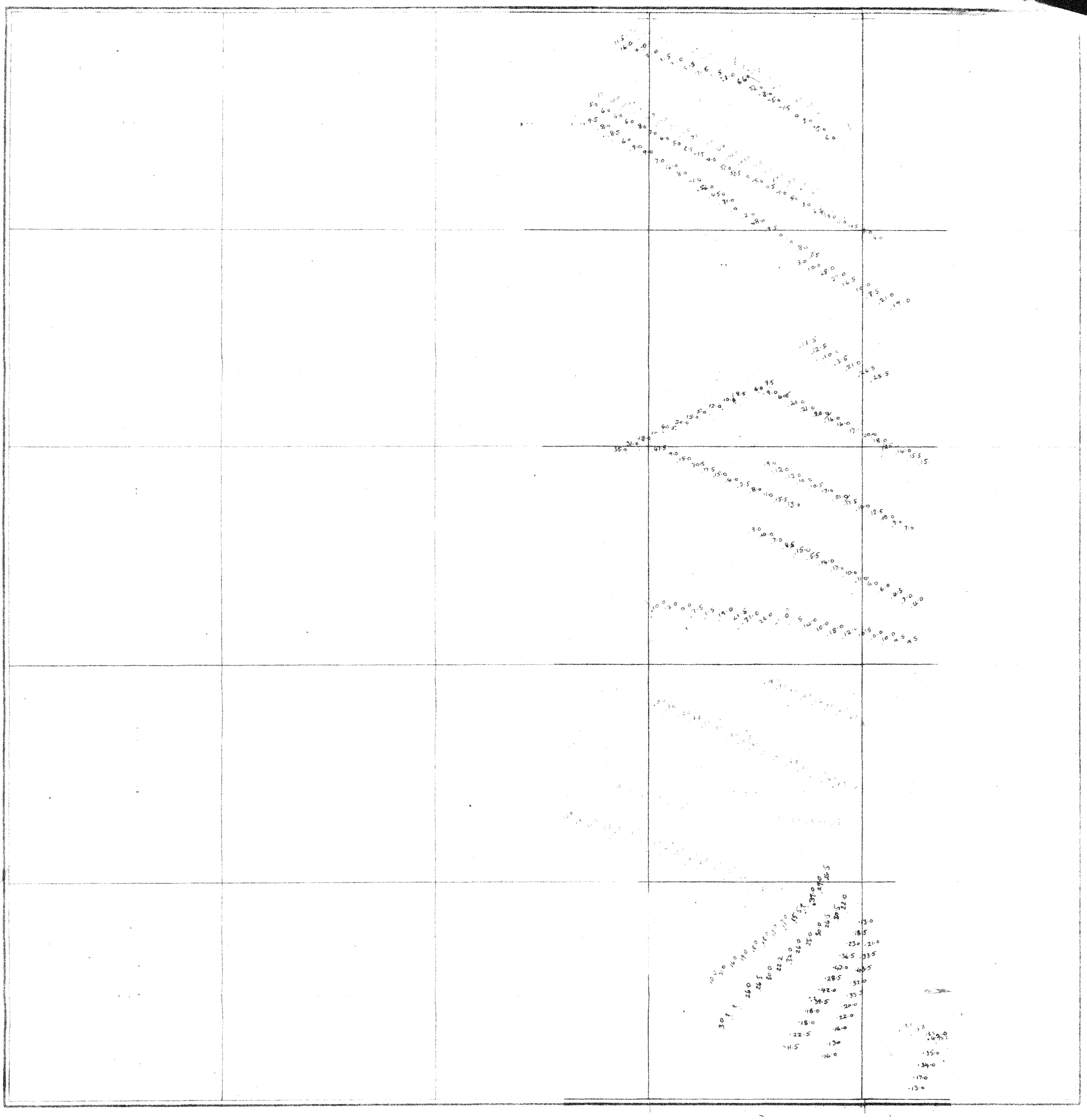
19

HUNTLY – Corse of Kinnoir
Apparent Chargeability Values
in Milliseconds
NJ 5443-5543, 5442-5542
1:2500 May – 1972
DQ DQ

EXPLORATION VENTURES LIMITED

20

HUNTLY – Corse of Kinnoir
Apparent Resistivity Values in
Ohm Metres
WT 5443 – 5543, 5442 – 5542
1:2500 May 1972
DQ DQ



EXPLORATION VENTURES LIMITED | 21

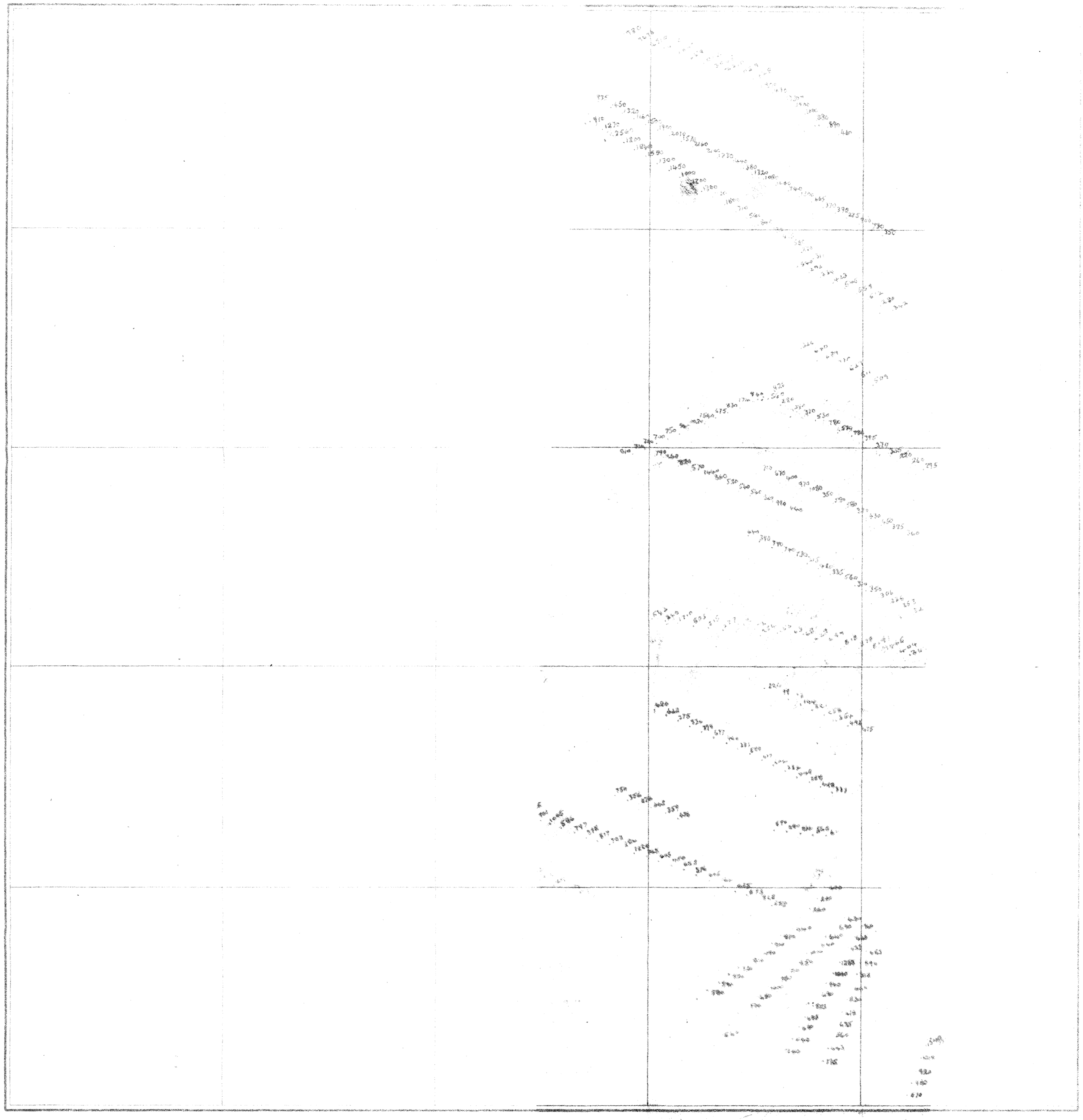
HUNTLY - Coniecleugh

Apparent Chargeability Values in Milliseconds

NJ 54SW

1:10560 June, 1972

DQ DQ



EXPLORATION VENTURES LIMITED

22

HUNTLY - Coniecleugh

Apparent Resistivity Values in Ohm Metres

NJ 54 SW

1:10560 June, 1972

DQ DQ

EXPLORATION VENTURES LIMITED

23

HUNTLY, Yondertown
Vertical Magnetic Intensity Values in Gammas
NS 5456 - 5554
1:2500 June, 1972
DQ DQ

·812	·822	·867	·822	·862
·822	·842	·842	·827	·867
·822	·852	·827	·817	·862
·827	·832	·817	·817	·857
·827	·832	·812	·817	·857
·827	·827	·807	·797	·857
·817	·802	·817	·807	·862
·812	·822	·802	·802	·857
·807	·807	·807	·822	·867
·812	·802	·807	·807	·857
·807	·807	·807	·797	·857
·807	·797	·812	·807	·857
·797	·802	·777	·807	·847
·807	·797	·792	·807	·842
·807	·792	·797	·812	·862
·807	·787	·792	·797	·857
·797	·787	·792	·802	·862
·802	·787	·792	·812	·857
·802	·787	·792	·802	·857
·802	·787	·792	·807	·882
·807	·772	·787	·817	·872
·822	·757	·792	·802	·862
·827	·767	·782	·82	·867
·827	·787	·787	·792	·852
·852	·782	·78	·792	·857
·812	·767	·802	·79	·872
·817	·792	·797	·02	·847
·807	·797	·807	·812	·852
·807	·767	·812	·802	·862
·822	·777	·802	·842	·827
·842	·812	·807	·802	·837
·862	·807	·812	·827	·842
·832	·822	·827	·832	·872
·877	·832	·847	·822	·822
·882	·842	·847	·802	·837
·872	·847	·842	·782	·832
·862	·857	·847	·797	·842
·837	·847	·847	·807	·842
·837	·832	·827	·812	·857
·802	·797	·827	·827	·877
·817	·802	·832	·822	·852
·817	·797	·827	·827	·842
·807	·777	·827	·827	·837
·817	·787	·797	·812	·847
·837	·797	·802	·807	·857
·822	·802	·787	·822	·862
·837	·797	·807	·812	·857
·817	·777	·802	·822	·857
·802	·777	·792	·847	·842
·797	·777	·797	·842	·842
·807	·792	·787	·837	·837
·822	·782	·782	·847	·847
·807	·782	·792	·852	·857
·817	·777	·782	·807	·862
·817	·772	·802	·832	·862
·817	·767	·812	·822	·867
·807	·777	·812	·822	·837
·817	·767	·807	·847	·882
·817	·777	·802	·81	·847
·817	·777	·807	·797	·827
·817	·787	·802	·777	·857
·807	·782	·812	·782	·882
·797	·777	·80	·772	·847
·792	·782	·792	·802	·827
·802	·787	·787	·827	·842
·802	·782	·797	·837	·827

EXPLORATION VENTURES LIMITED

HUNTLY - Vondeviewn

Vertical Magnetic Intensity Values

in Gammas

NTS 5453-5553

1:500

DQ June, 1972

DQ

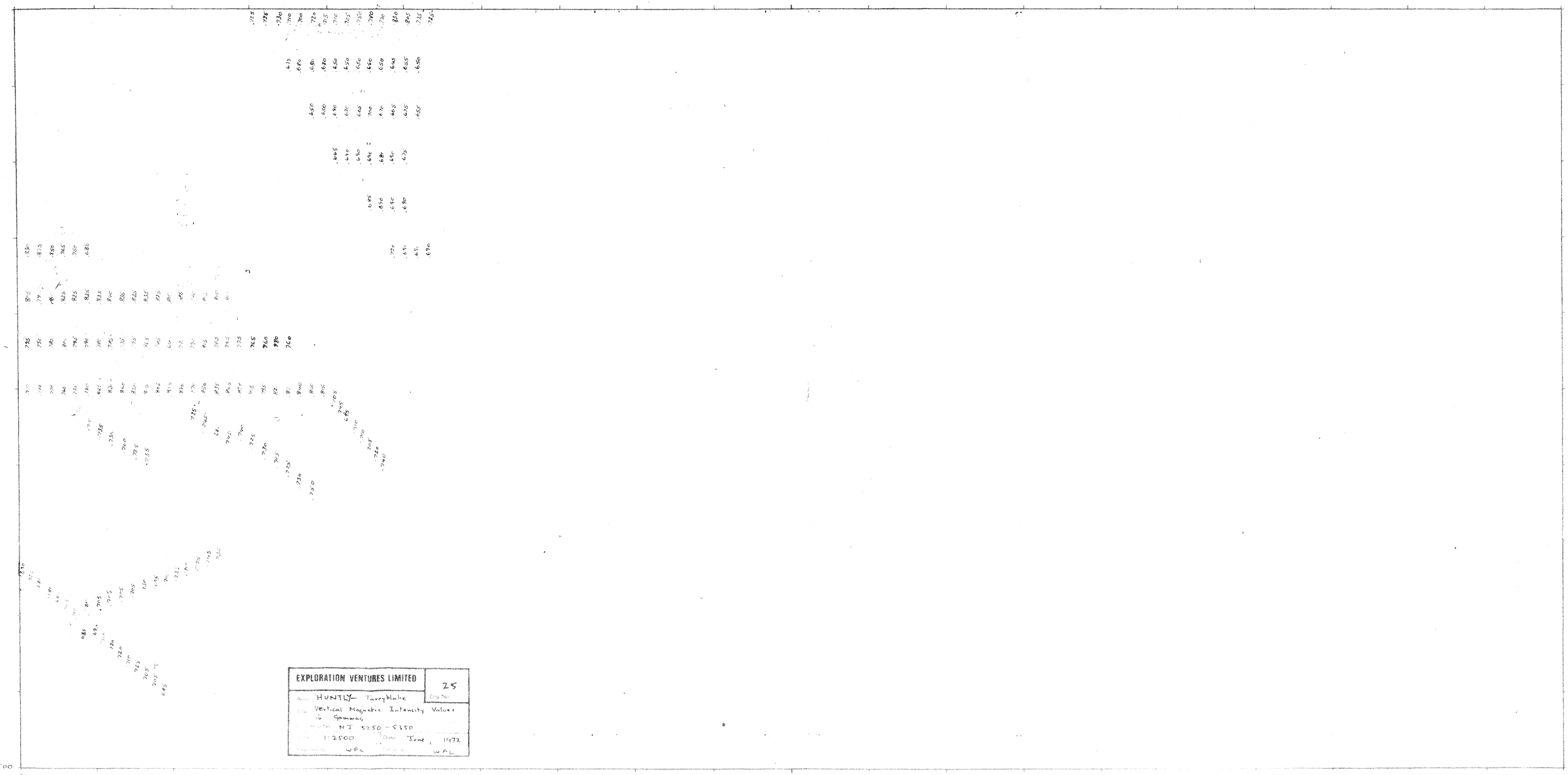
24

·817					·79	·807	·817	·852
·797					·767	·797	·817	·852
·802					·792	·812	·817	·847
·822					·792	·822	·817	·847
·802					·797	·827	·812	·847
·812					·807	·822	·827	·822
·792					·822	·822	·812	·827
·827	·802				·812	·807	802	·827
·817	·807	·822			·812	·817	·797	·837
·802	·812	·792	·787		·802	·827	·80	·817
·812	·807	·812	·777		·817	·832	·80	·807
·817	·807	·817	·777		·827	·817	·82	·817
·817	·807	·817	·772		·822	·827	·797	·807
·817	·837	·822	·782	767	·827	·837	·80	·807
·832	·827	·817	·797	817	·847	·867	·79	·807
·817	·802	·817	802	832	·842	·837	·807	·802
·822	·807	·807	802	·842	·832	·827	·802	·807
·822	797	·802	·787	·837	·827	·817	807	·812
·822	792	·807	·782	·822	·812	·807	·797	·817
·812	802	·802	·782	·827	·817	·822	·797	·812
·812	·802	·807	·787	·812	·817	·807	·802	·822
·812	·802	·792	·787	·812	822	·827	·802	·822
·817	·802	·802	·787	·817	827	·822	807	·807
·832	·802	·787	·787	·812	807	·817	·797	·822
·812	·807	807	·772	·807	797	·832	·802	·827
·812	·812	·782	·782	·797	797	·827	·807	·827
·827	·807	·802	·787	·797	802	·837	·812	·822
·822	·807	·817	·792	·802	·807	·842	·807	·832
·827	·822	·812	·772	817	·822	·842	·822	·837
·837	·812	·797	·782	·822	·827	·852	·822	·857
·832	·817	·822	·782	·817	·837	·872	·837	·857
·837	·827	·822	78	·832	·847	·882	·857	·857
·867	·847	·837	797	·867	·872	897	882	·882
·862	·852	·857	827	·882	·887	917	932	897
·867	·862	882	·912	·882	·872	917	957	·922
·882	·872	917	957	·867	·852	882	927	·882
·847	·867	897	977	·847	·837	·867	·872	·857
·837	·837	·857	·822	·822	·822	·847	·807	·837
·822	·842	·822	·817	·812	·822	·847	·792	·827
·827	·812	·812	792	·807	787	·842	·792	·827
·832	·817	·812	·797	792	812	·707	·792	·822
·852	·822	·807	·792	·812	·812	847	·792	·822
·827	·817	807	·782	·817	·817	·847	·772	·807
·817	·812	·797	·787	·812	·812	·842	·797	·807
807	·792	·792	·787	·807	·807	·827	802	·817
·807	·802	·787	·782	797	802	·822	·802	·812
·812	·807	·792	·772	·797	792	·832	·802	·822
77	·797	·797	·787	·787	·792	·827	797	·802
·822	·807	·792	·777	·792	·797	·827	·797	·797
·832	·802	·802	·777	·792	·792	·817	·797	·802
·822	·802	·80	·782	·792	·787	·812	·782	·802
·822	·807	80	·777	·792	·782	·812	·787	·802
·817	·802	792	·772	·792	·792	·822	787	·812
·807	·797	·802	787	·787	·792	·842	802	·822
·812	·787	·787	797	02	797	·837	·812	·822
·807	·807	·792	807	17	·802	·837	·812	·817
·812	·792	·787	797	·837	·802	·839	·817	·817
·822	·802	·792	·792	·827	·797	·827	·812	·822
·812	·802	·797	·797	·822	·792	·807	·822	·822
·832	·817	·787	787	·782	·782	812	·767	·817
·822	·852	·812	·787	·792	·787	·797	·792	·812
·822	·837	80	·827	·797	·827	·797	·807	·812
	·822	79	797	812	·857	842	·827	·812
		·792	·787	·797	837	·877	·822	797
		·787	·787	82	812	·847	·827	802
		·782	·782	79	797	812	·812	·817

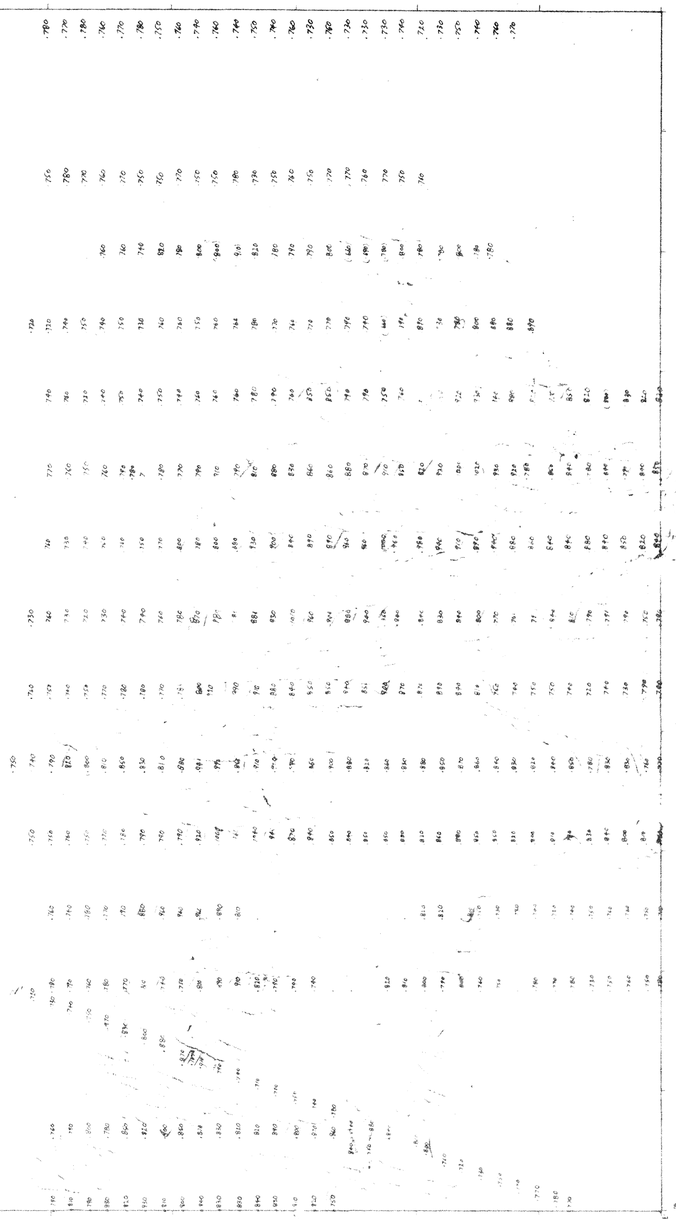
54

53

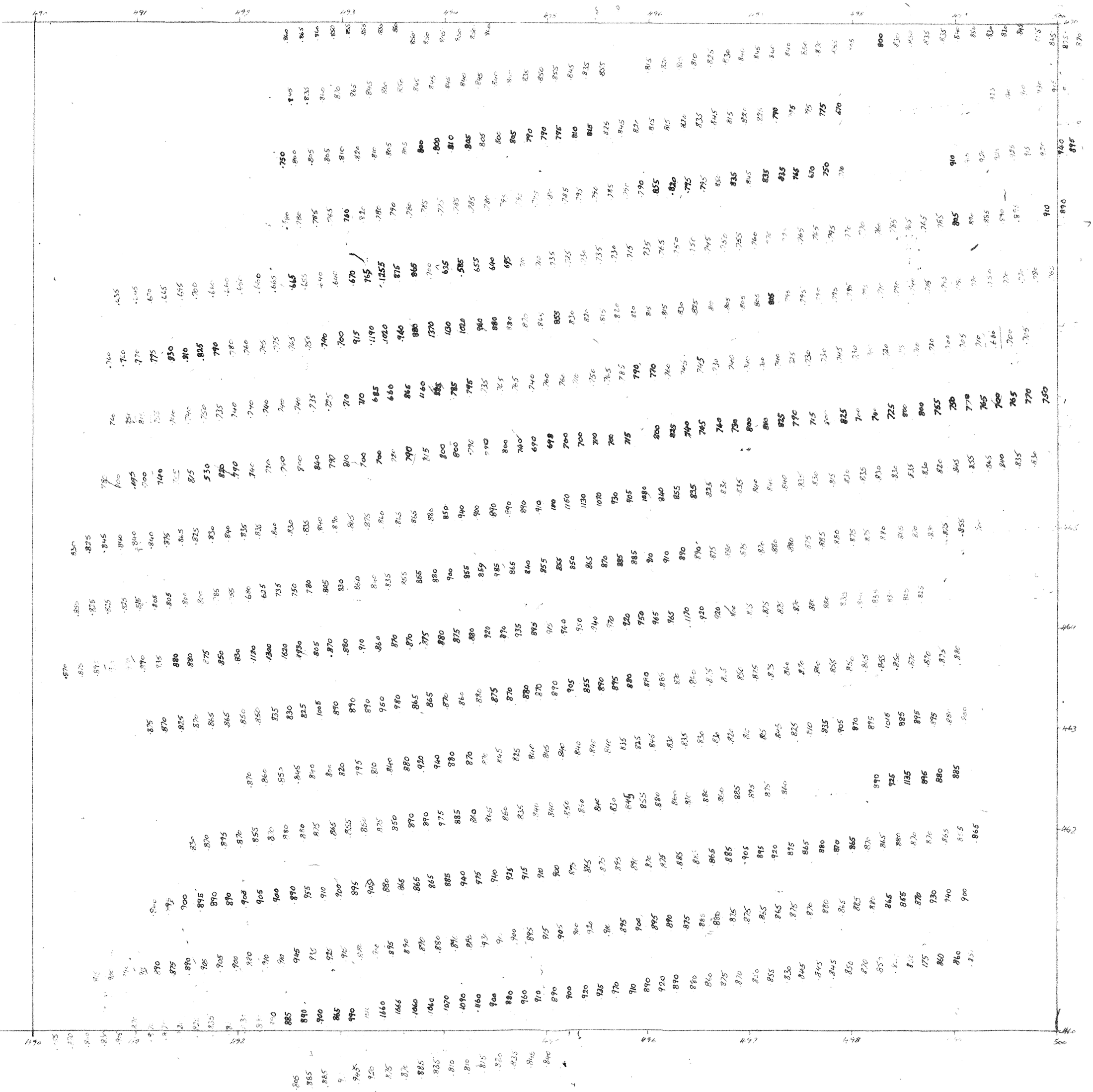
54



EXPLORATION VENTURES LIMITED	25
Area HUNTLY – Tarryblake	Dwg No
Title Vertical Magnetic Intensity Values in Gammas	
Flight Nos NJ 5250 – 5350	
Scale 1:2500	Date June, 1972
Prepared by WFL	Drawn by WFL



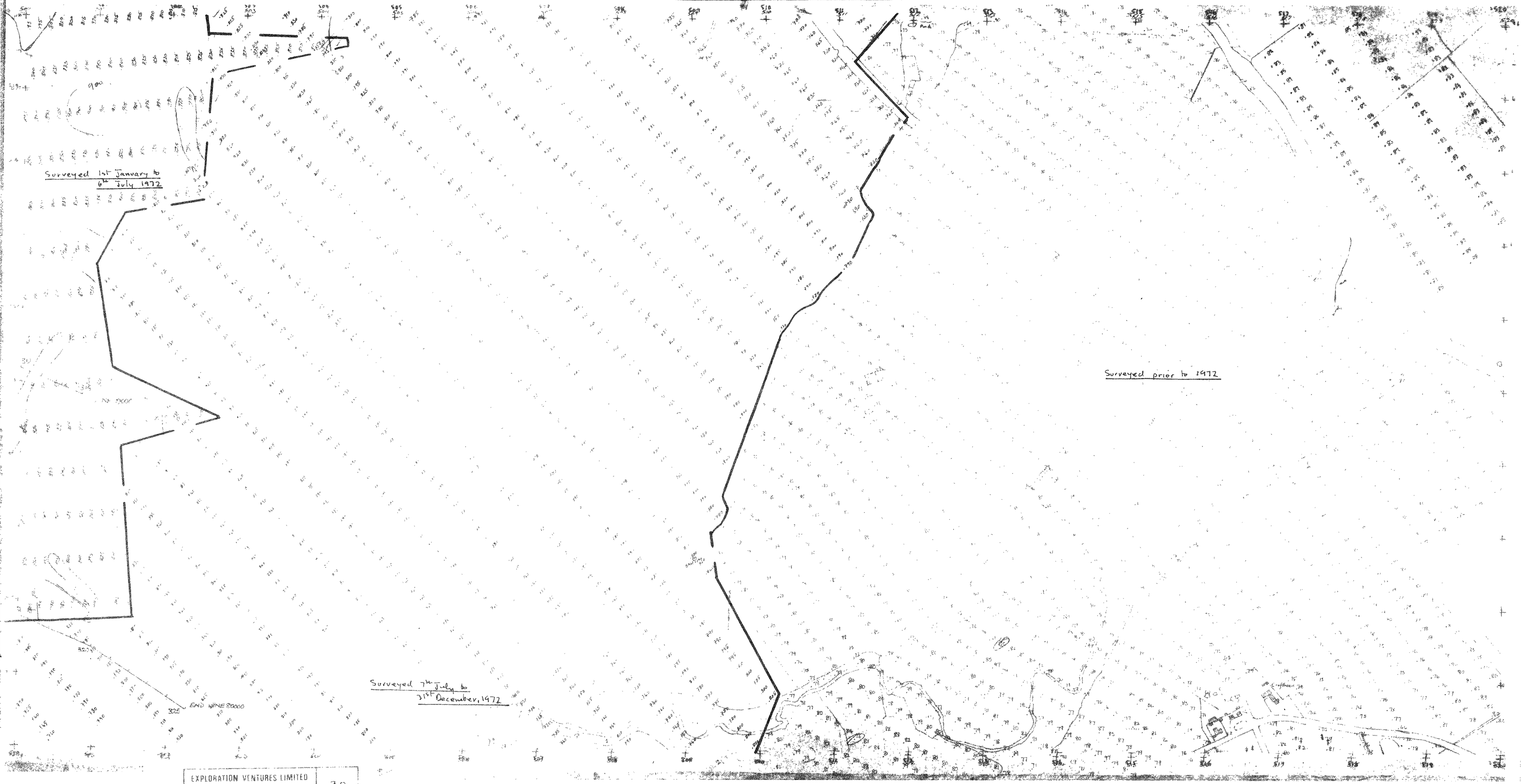
EXPLORATION VENTURES LIMITED	26
Area: HUNTLY - Tarryblake	Chart No.
Title: Vertical Magnetic Intensity Values in Gammas	
Grid Ref: NJ 5050 - 5150	
Scale: 1:2500	Date: June 1997
Prepared: WPL	Drawn by: WPL



EXPLORATION VENTURES LIMITED	Dra No 27
Area HUNTLY - Cuttlehill	
Title Vertical Magnetic Intensity Values in Gammas	
O.S. Map No NJ 4946	
Scale 1:2500	Date APRIL 72
Prepared by	Drawn by

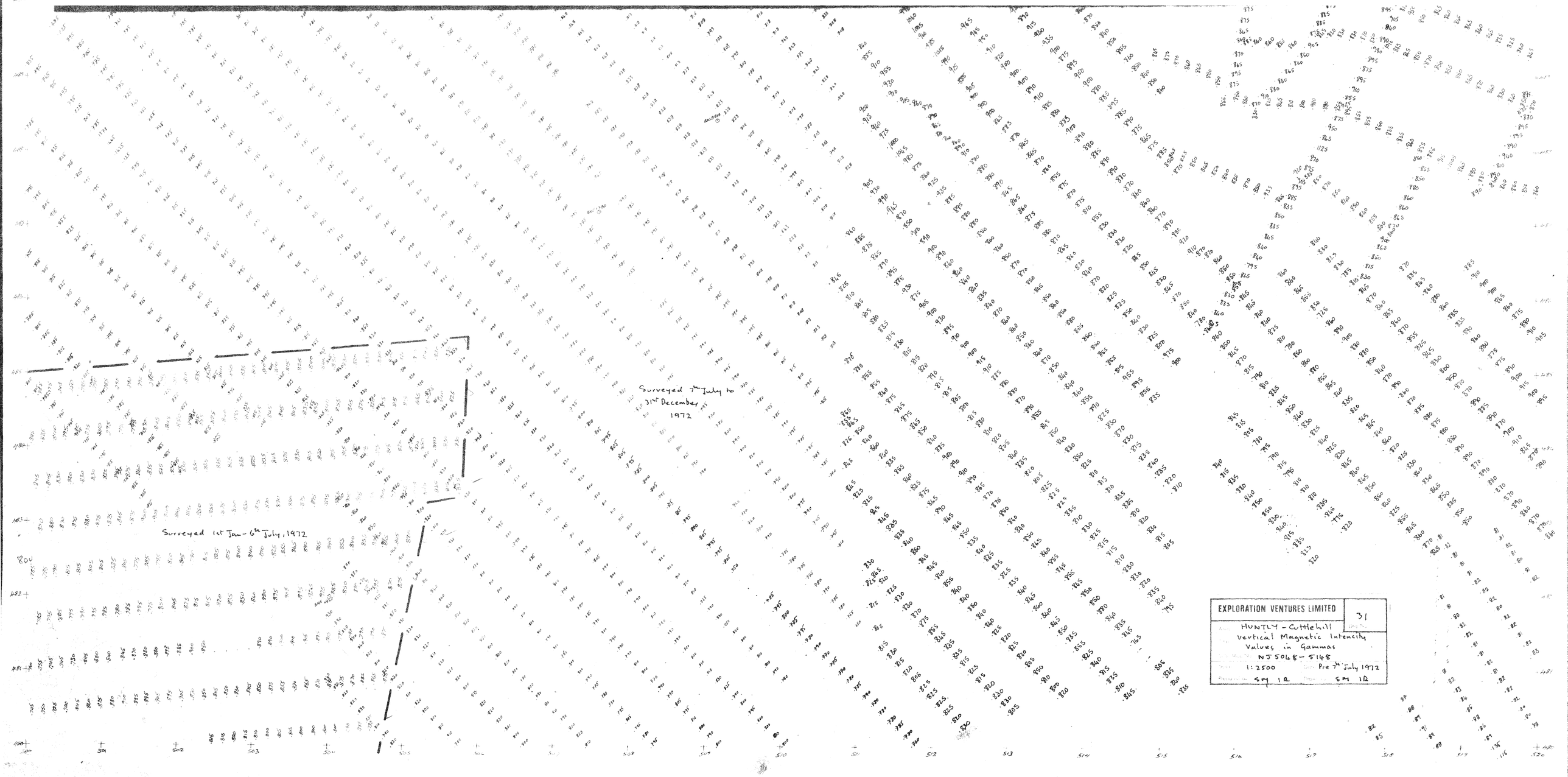
EXPLORATION VENTURES LIMITED	28
Area: HUNTLY - Cuttlehill	Drg. No.
Title: Vertical Magnetic Intensity Values in Gammas	
O.S. Map No. NJ 4948	
Scale: 1:2500	Date: APRIL 1972
Drawn by: D.H.G.	Checked by:

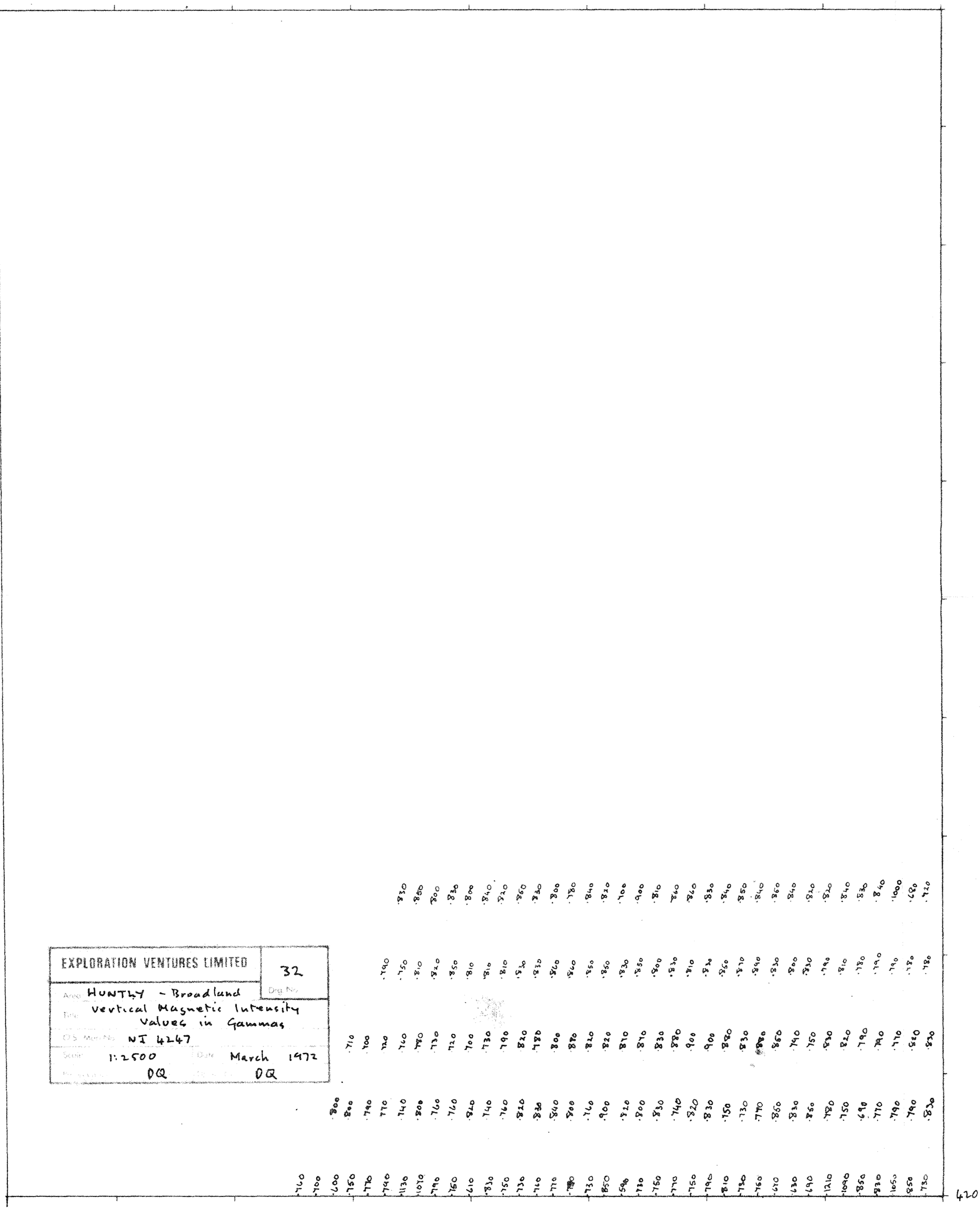
EXPLORATION VENTURES LIMITED	29
Area: HUNTLY - Cuttlehill	Drg. No.
Title: Vertical Magnetic Intensity Values in Gammas	
O.S. Map No. NJ 4966 - 4967	
Scale: 1:2500	Date: 1st Jan. 6th July 1972
Prepared by: S.M.	Drawn by: S.M.



EXPLORATION VENTURES LIMITED | 30

HUNTLY - Cuttlehill
Vertical Magnetic Intensity
Values in Gammas
NJ5047-5147
1:2500 1st Jan to 6th July 1972
SM 1R SM 1R

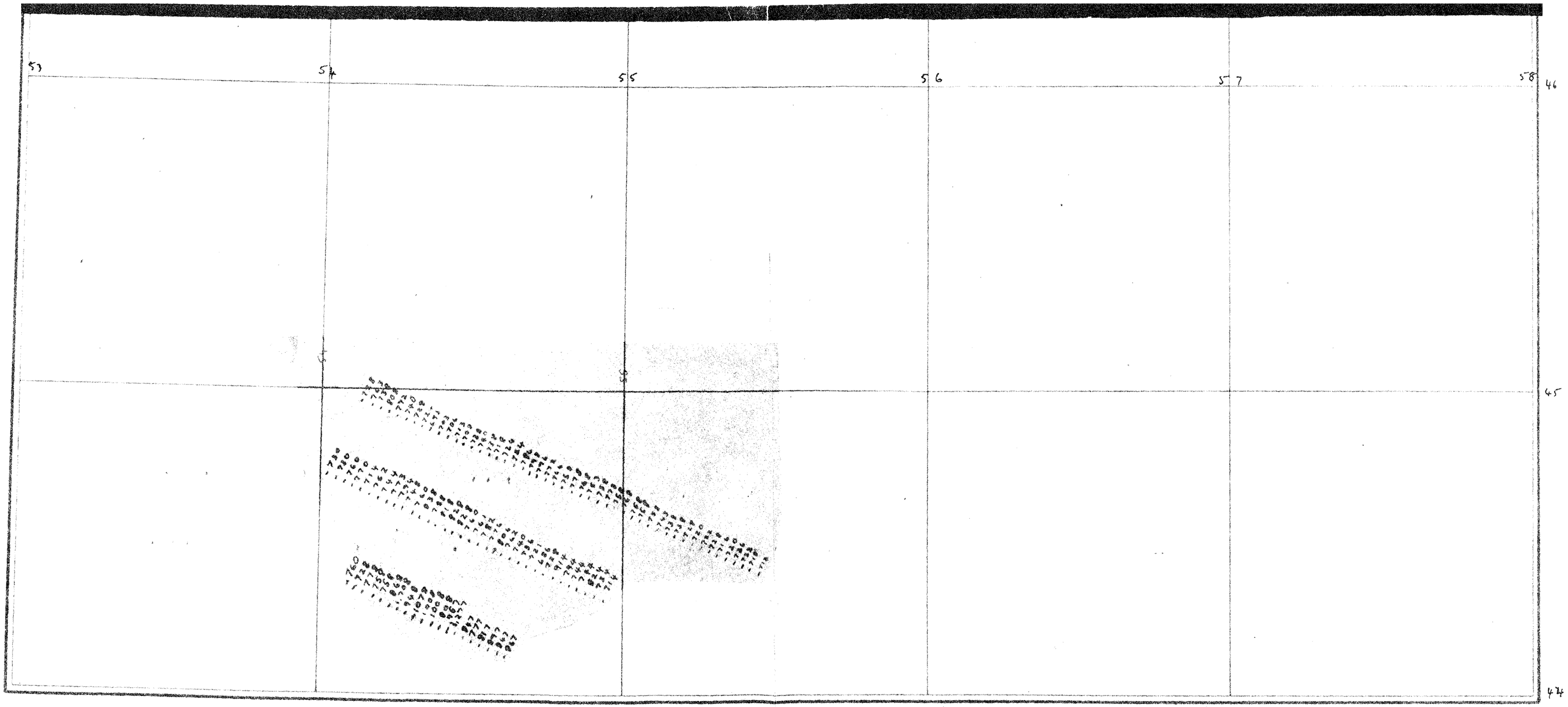

Surveyed 1st July to 31st December 1972
Surveyed 1st Jan - 6th July, 1972
EXPLORATION VENTURES LIMITED
31
HUNTLY - Cuttlehill
Vertical Magnetic Intensity
Values in Gammas
NJ5068 - 5148
1:2500
Pre 7th July 1972
SM 1R
SM 1R


EXPLORATION VENTURES LIMITED
32
Drg. No.
Area HUNTLY - Broadland
Title Vertical Magnetic Intensity Values in Gammas
O.S. Map No. NI 4247
Scale 1:2500
Date March 1972
DQ
DQ
420

EXPLORATION VENTURES LIMITED

33

HUNTLY - Broadland Fm
Vertical Magnetic Intensity
Values in Gammas
NT 4941 - 4741, 4941 - 4941
1:2500
March - 1972
DB



EXPLORATION VENTURES LIMITED | 34

HUNTLY - Auchmill

Vertical Magnetic Intensity

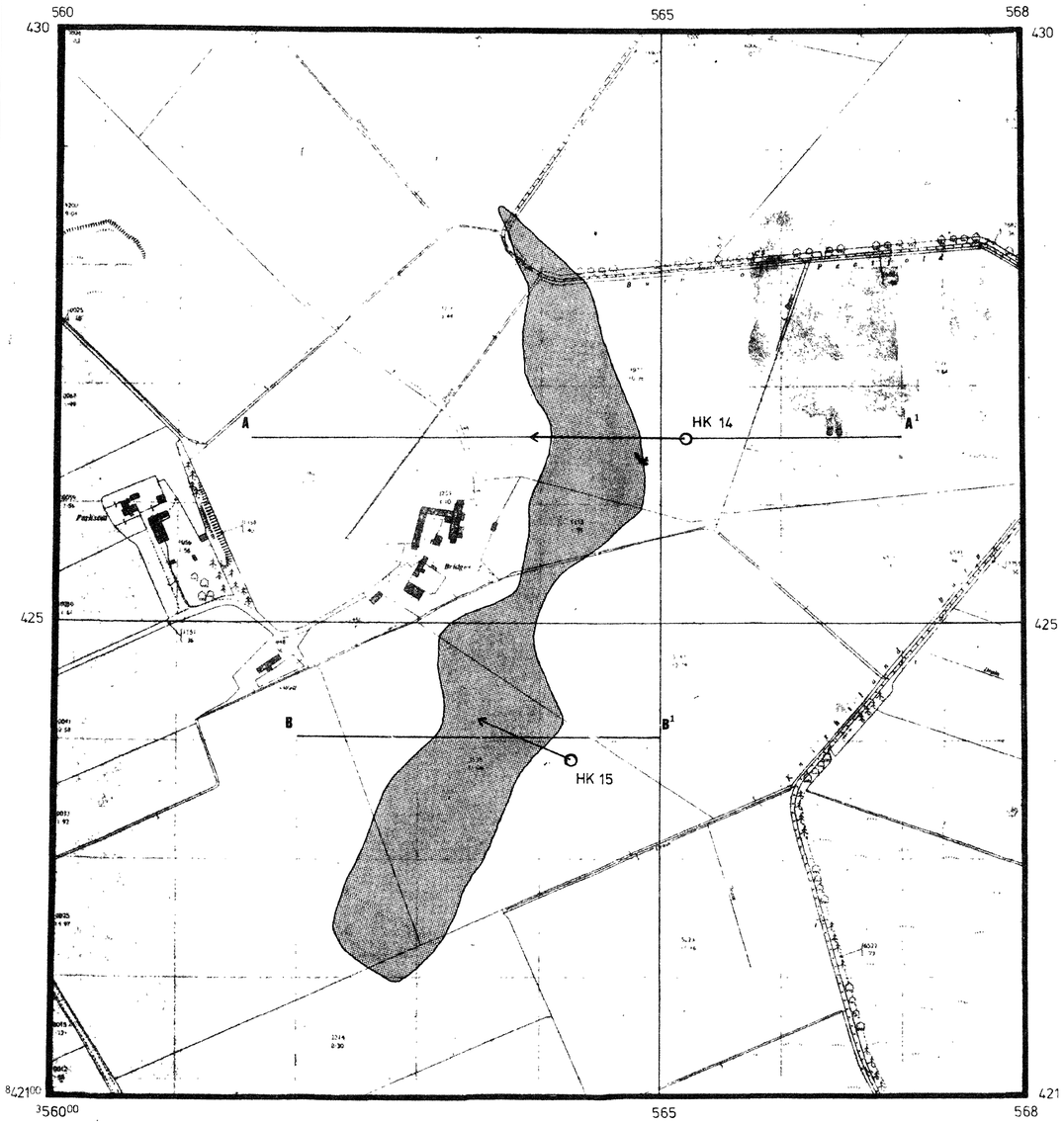
Values in Gammas

NJ 54 SW SE

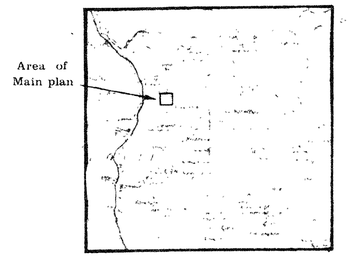
1:10560 Jan 1972

DQ DQ

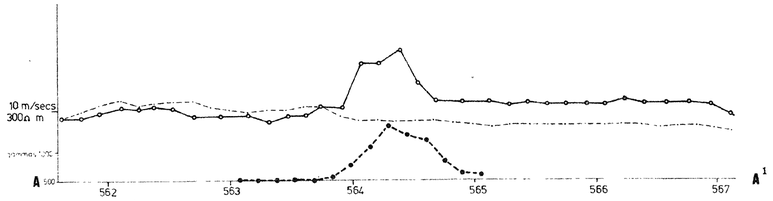
Fig. 35

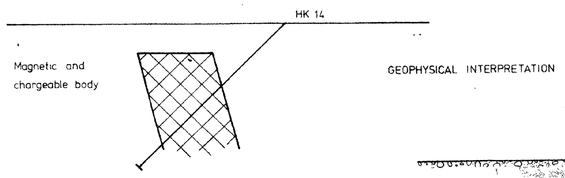


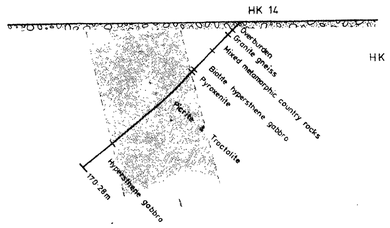
Location diagram of 1:2500 plan



SECTION ON A-A¹





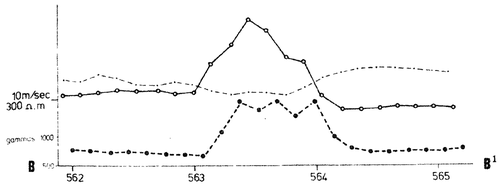


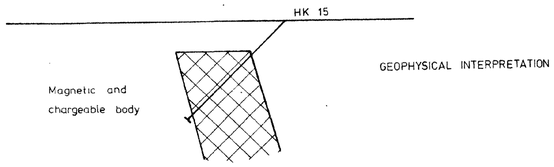
HK 14 GEOLOGICAL SECTION

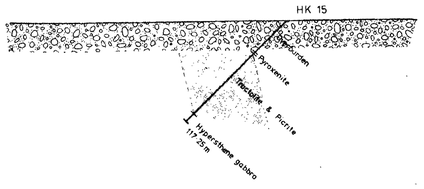
Overburden

Magnetic and chargeable body causing anomaly.

SECTION ON B-B¹







HK 15 GEOLOGICAL SECTION

Consolidated Gold Fields Ltd.
EXPLORATION

Project: Exploration Ventures Ltd.

Area: Huntly - Knock

Title: DIAMOND DRILL TARGETS AT BRIDGES, ABERDEENSHIRE

Drawing No.	O S Map No. NJ 5642 & 5742		
D 022	Scale: 1 : 2500	Prepared by: M. Springett	
	Date: June 1972	Drawn by: M.S.	
Fig. 35	Revisions: 27.6.72 Geol. added M.S.		

KEY

Magnetics

I.P. Chargeability

I.P. Resistivity

Area of high magnetic values

PLAN AND SECTION SCALE

0 50 100 150 200 250 300 metres

0 250 500 750 1000 feet

VERTICAL SCALES

I P CHARGEABILITY: 70, 60, 50, 40, 30, 20, 10, 0, -10

I P RESISTIVITY: 5000, 2000, 1000, 700, 500, 300, 200, 100

m²secs

ohm metres

MAGNETICS: 1500, 1000, 500, 0

gamma

DIAMOND DRILL HOLE DATA

DDH	Collar Co-ordinates mE	mN	Elevation	Bearing Grid N	Incl	Depth	Deepened to
14	56519	42656	345ft ± 10	270°	45°	170·28	
15	56425	42384		295°	45°	117·25	