ANNUAL REPORT

ON

EXPLORATION LICENCE NO 2535

Compiled by

J.H. DUKE

Tennant Creek, N.T.

February, 1982

ANNUAL REPORT ON EXPLORATION LICENCE NO 2535

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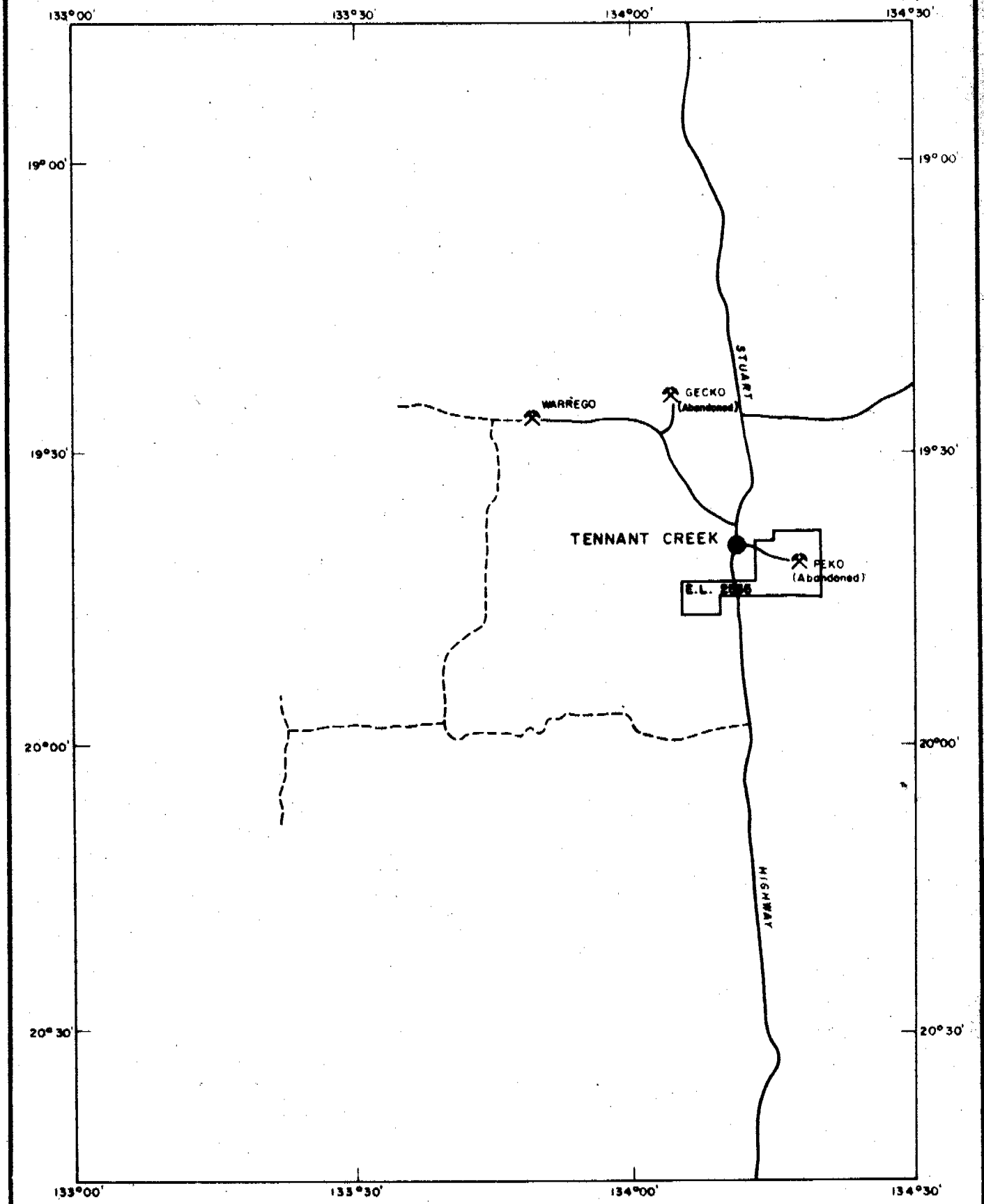
INTRODUCTION

Exploration Licence No. 2535 held by Peko Exploration Limited was granted on the 13th November, 1980 for a period of twelve months. This report outlines the exploration activities conducted by Geopeko on behalf of Peko Exploration Limited for the first twelve month term of the Exploration Licence ending 12th November 1981.

Main access to the Exploration Licence area (see Access and Locality map attached) is via the Stuart Highway and a bitumen road from Tennant Creek to the abandoned Peko and Juno Mines.

Much of the first year of exploration has involved compilation of existing geological data derived from mining and exploration activities at Peko and Juno Mines and the prospects which lie within the Exploration Licence area. (see TF 2698 attached).



AREA OF RENEWAL OF E L. APPLICATION

SEALED ROAD

VEHICLE TRACK

GEOPEKO

TENNANT CREEK NORTHERN TERRITORY

PROJECT	CENTRAL FIELD
AREA	EL 2535
DATA	ACCESS AND LOCALITY

DRAWN	COMPILED	SCALE	DWG. No.
T.L.Ward	February 1982	1:1000.000	TF 2695

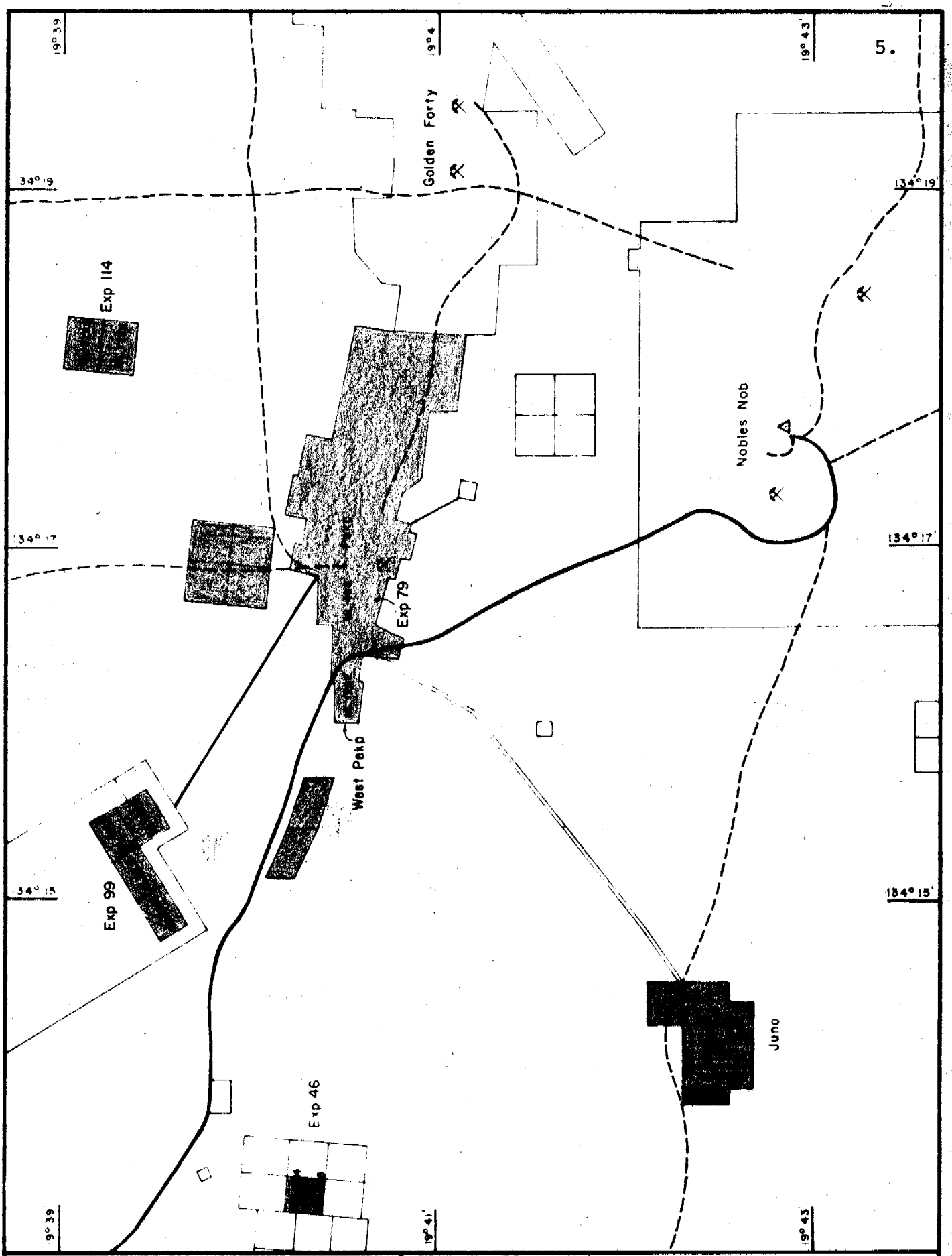
2. TENURE

Forty two (42) leases within the Exploration Licence are held by either Peko Exploration Limited or Peko Wallsend Operations Limited. These are as follows:-

Number	Area (ha)	Name
Exploration Leases		
GML 824E	7.89	Explorer 46
GML 825E	7.89	Explorer 46
ML 610E	15.9	Explorer 99
ML 611E	14.8	Explorer 99
ML 612E	15.9	Explorer 99
ML 613E	15.9	Explorer 99
ML 772E	15.0	Explorer 114
ML 773E	15.0	Explorer 114
Peko Leases		
GML 102E	4.1	Peko
GML 268E	8.1	Peko West
GML 269E	7.4	Peko East
GML 340E	7.3	Peko North
ML 1E	16.2	Peko East Extended No 1
ML 2E	16.2	Peko East Extended No 2
ML 3E	16.2	Peko East Extended No 3
ML 12E	16.2	Bushall No 1
ML 26E	11.7	Peko North Extended
ML 40E	14.9	Peko No 5
ML 43E	3.6	Bushall No 4
ML 44E	16.2	Bushall No 3
ML 45E	12.9	Bushall No 2
ML 46E	15.4	Bushall No 5
ML 65E	7.3	Peko North Extended No 2
ML 88E	16.2	West Peko Extended
ML 128E	16.2	West Peko 1A
ML 218E	8.5	Bushall No 2 Extended
ML 219E	12.5	Bushall No 3 Extended

TENURE CONTINUED

Number	Area (ha)	Name
Peko Leases		
ML 562E	16.2	Peko No 6
ML 563E	11.7	Peko No 7
ML 564E	11.7	Peko East Extended No 4
ML 565E	10.2	Peko South East No 2
ML 566E	13.7	Peko South East No 1
ML 620E	7.3	Gravel 1
ML 621E	9.3	Gravel 2
Juno Leases		
GML 709E	7.9	Juno 1
GML 710E	7.9	Juno 2
ML 386E	8.1	Juno 3
ML 221E	15.4	Explorer 8 North East
ML 223E	9.7	Explorer 8 South
ML 224E	15.4	Explorer 8 East
ML 618E	4.95	Juno 4
ML 619E	5.24	Juno 5



PEKC CLAIMS

MAJOR Cu Au DEPOSITS OR MINES

GEOPEKO

TENNANT CREEK NORTHERN TERRITORY

PROJECT	**E.L. 2535**
AREA	CENTRAL FIELD
DATA	LOCATION OF MINES AND PROSPECTS WITHIN E.L. 2535

DRAWN	COMPILED	SCALE	DWG. No.
TLW 2/82	JHD 2/82	1:50000	TF 2698

3. REGIONAL GEOLOGY

Although a considerable part of the Exploration Licence is covered with superficial sand and bulldust, geological and geophysical work over some 25 years has revealed a fairly complete picture of regional geology. (see Geological Map of Tennant Creek attached).

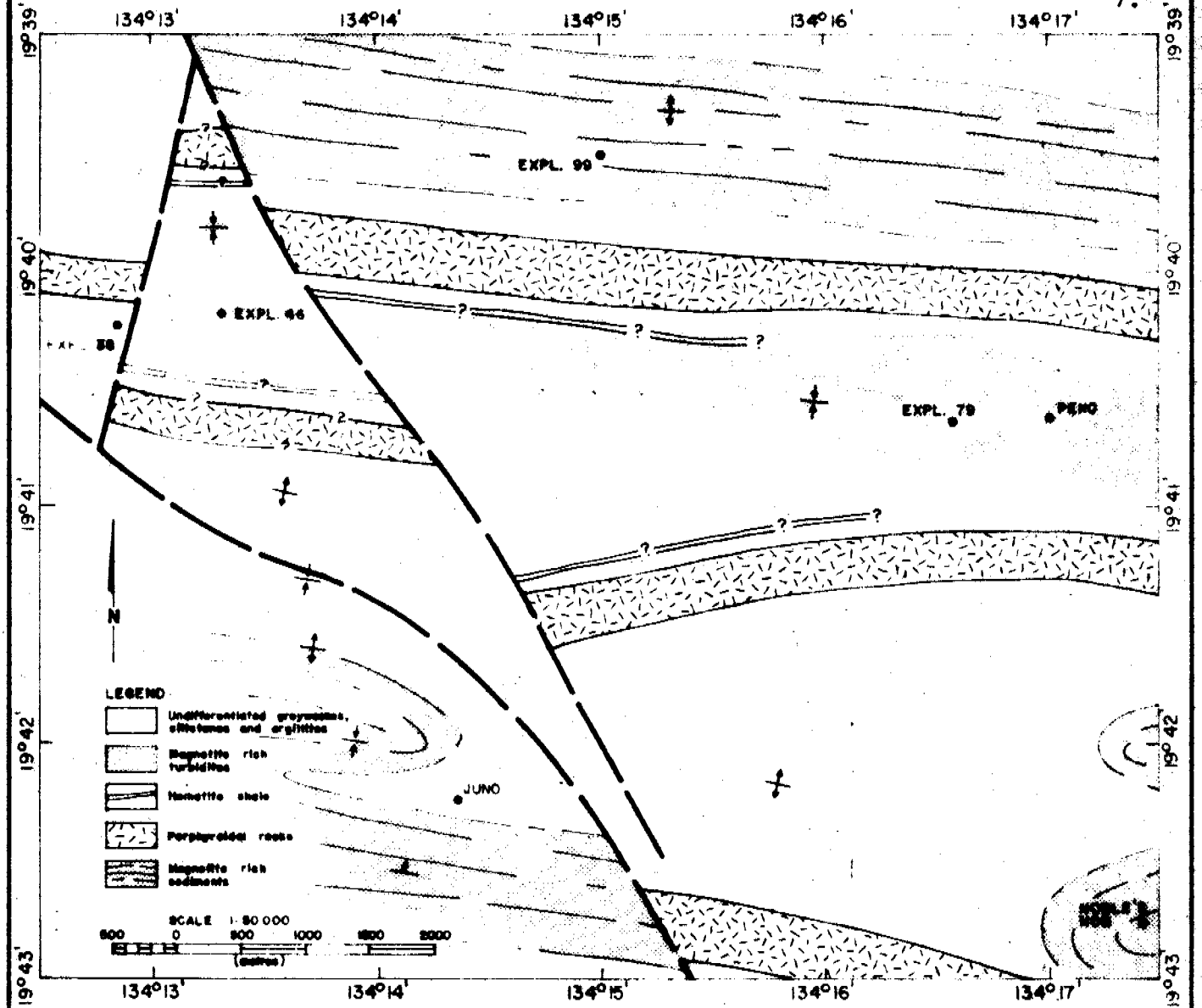
Within the southern portion of the Exploration Licence granite has either been mapped or inferred from aeromagnetics. Sediments and porphyroids of the Lower Proterozoic Warramunga Group occupy the remainder of the Explorer Licence. In the vicinity of Péko Mine and Nobles Nob Mine, the outcrop and sub outcrop of porphyroidal rocks define a syncline and anticline, the amplitude and orientation of which, characterises the folding typical of Warramunga Group rocks.

The postulated stratigraphy of the Warramunga Group rocks is shown in Table 1 below.

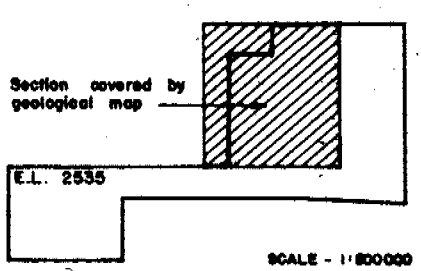
TABLE 1

Warramunga Group Stratigraphy in the Peko - Juno Area of Exploration Licence No. 2535.

Age	Rock Unit		Lithology
Lower Proterozoic	WARRAMUNGA GROUP	Carraman Formation	Turbidites (locally magnetite-rich) Hematite Shale Porphyroidal rocks Magnetite rich Sediments



INTERPRETATIVE GEOLOGICAL MAP OF JUNO - PEKO AREA



GEOLOGICAL MAP SHOWN IN RELATION TO E.L.2535

	GEOPEKO TENNANT CREEK NORTHERN TERRITORY			
	PROJECT	CENTRAL FIELD		
	AREA	JUNO-PEKO AREA		
	DATA	INTERPRETATIVE GEOLOGY OF JUNO-PEKO AREA		
	DRAWN	COMPILED	SCALE	DWG No
	TLW 2/82	JMD/LJF 2/82	1:50000	TF 2700

4. REGIONAL GEOPHYSICS

A low level aeromagnetic survey over the Peko - Juno - Nobles Nob area was carried out by Geometrics on behalf of Geopeko Limited and Australian Development Limited in 1973. (see Magnetic Contour Maps attached).

Analysis of the low level results indicates two parallel WNW-ESE trending features:-

(a) A "aeromagnetic ridge" in the northern part of the Exploration Licence. This appears to be due to magnetite-bearing greywackes, siltstones and shales.

(b) A line of anomaly highs just south of the aeromagnetic ridge. These anomalies reflect both ironstone bodies and local concentrations of diseminated magnetite in the host rocks.

5. PROSPECT EVALUATION

Since it was found in the 1930's that copper-gold mineralisation at Peko was associated with magnetic rocks, exploration in this area has concentrated on testing magnetic anomalies. The four prospects described below are magnetic anomalies which can be identified from the low-level aeromagnetics (see the Total Magnetic Intensity Contour Map attached).

Explorer 46

(a) Location

The Explorer 46 prospect is situated at the intersection of latitude 19°40'15" with longitude 134°13'15".

(b) Tenure

GML 824E and GML 825E are held by Peko Wallsend Operations Limited over the prospect.

(c) Geology

No outcrop occurs within the leases but drilling has shown that Lower Proterozoic Warramunga Group sediments lie beneath the bulldust and gravel.

(d) Geophysics

Interpretation of omit low-level aeromagnetic and ground geomagnetic data has shown that the anomaly is a combined response to magnetite-bearing sediments and an ironstone body.

(e) Planned Work

Geological information derived from diamond drilling at Explorer 46 will be used in the formation of an acceptable model of the geology hosting economic mineralisation within the Exploration Licenece area.

PROSPECT EVALUATION CONTINUED

Explorer 79

(a) Location

The Explorer 79 prospect is situated at the intersection of latitude 19°40'38" with longitude 134°16'35".

(b) Tenure

ML's 46E and 88E are held by Peko Wallsend Operations Limited over the prospect.

(c) Geology

Drilling results indicate that magnetite-rich sediments of the Lower Proterozoic Warramunga Group lie below bulldust and superficial sand.

(d) Geophysics

This anomaly is a residual of the Peko magnetic anomaly.

(e) Planned Work

Stratigraphic and structural information from drilling at this prospect will be used in the geological modelling exercise.

Explorer 99

(a) Location

The Explorer 99 prospect is situated at the intersection of latitude 19°39'30" with longitude 134°15'00".

(b) Tenure

ML's 610E, 611E, 612E and 613E are held by Peko Wallsend Operations Limited over the prospect.

(c) Geology

Examination of limited outcrop and drill core reveals magnetite-bearing sediments of the Lower Proterozoic Warramunga Group.

(d) Interpretation of the low-level aeromagnetic data indicates this linear anomaly to be part of the "aeromagnetic ridge".

PROSPECT EVALUATION CONTINUED

Explorer 99

(e) Planned Work

Geological information from drilling at this prospect will be used for the geological modelling exercise scheduled for the second year term of Exploration Licence 2535.

Explorer 114

(a) Location

The Explorer 114 prospect is situated at the intersection of latitude 19°39'20" with longitude 134°18'10".

(b) Tenure

ML's 772E and 773E are held by Peko Wallsend Operations Limited over the prospect.

(c) Geology

No outcropping rocks occur over the anomaly. However drilling results show that fine magnetic sediments of the Lower Proterozoic Warramunga Group lie under bulldust and gravel.

(d) Geophysics

Interpretation of the low-level aeromagnetic data indicates that this linear anomaly is part of the "aeromagnetic ridge" feature.

(e) Planned Work

Information from the drilling of this anomaly will be used for the geological modelling exercise.

6. EXPENDITURE

The total expenditure on Exploration Licenece No 2535 for its first twelve month term was $19,057.00. Although the twelve month period ended on the 12th November, 1981, the expenditure figure given is taken from Geopeko monthly financial statements up to the 31st October, 1981.

The minimum expenditure committment as prescribed under Section 1 of the Terms and Conditions schedule of the Exploration Licence Document was $10,000.00.

Most of the expenditure was derived from geological, drafting and some geophysical services, and from administration costs.

ANNUAL REPORT MAPS

ON

EXPLORATION LICENCE NO 2535

Compiled by

J. H. DUKE

Tennant Creek, N.T. February, 1982.

133° 45'
134° 00'
134° 15'
134° 30'
19° 15'
19° 30'
19° 45'

SHORT RANGE

Gibson Creek
Mango Waterhole
Bombee Waterhole
Cudna Waterhole
Mango Monde Waterhole
Phillip Creek
Kellamun Lagoon
Phillips Creek
Burnett Waterhole
Orlando
Wallaga Mine
GREAT WESTERN
Flynns Monument
WHITE HILL
STATION HILL
Tennant Creek
MT CLELAND
Mahonie Waterhole
Petuna Waterhole
HAMPDEN
LONE STAR HILL
Tennant Creek
MT SAMUEL
El Dorado
Peko
Basement
E.L. 2535

CAMBRIAN

- Gum Ridge Formation
- Point Wakefield Beds
- Helen Springs Volcanics

MIDDLE PROTEROZOIC

- Tomkinson Creek Beds
- Basic Dykes & Sills

LOWER PROTEROZOIC

Warramunga Group

- Undifferentiated
- Carraman Formation
- Bernborough Formation
  Whippet Sandstone
- Porphyroids
- Granite
- Magnetite bearing sediments

Geological and Topographic Symbols to BMR Standards

INTERPRETATIVE GEOLOGICAL MAP OF TENNANT CREEK CENTRAL FIELD

SCALE 1:250 000

Compiled by B.T. Williams 1981

GEOPEKO

TENNANT CREEK

405000 410000 415000 420000 425000 430000

134°05' 134°07'30" 134°10' 134°12'30" 134°15' 134°17'30" 134°20'

19°37'30" 19°40' 19°42'30" 19°45' 19°47'30"

783000 782500 782000 781500

N

AREA 'B'

AREA 'A'

E.L. 2535

INSTRUMENT : GEOMETRICS G-803 PROTON MAGNETOMETER

	AREA 'A'	AREA 'B'
CONTOUR INTERVAL	20·0 gammas	10·0 gammas
Shading on low side	10·0 gammas	5·0 gammas
DATUM	Arbitrary	Arbitrary
FLIGHT LINE SPACING	200 metres	201·1 metres
FLIGHT ALTITUDE	100 metres	91·4 metres

SURVEYED and COMPILED by GEOMETRICS - 1973

CR 82/1059

GEOPEKO

TENNANT CREEK NORTHERN TERRITORY

600 0 800 1000 1600 2000 2600 Metres

DWG. No. TF 2694

PROJECT	E.L. 2535
AREA	TENNANT CREEK
DATA	TOTAL MAGNETIC INTENSITY CONTOURS WITHIN E.L. 2535 BOUNDARIES

COMPILED	DATE	DRAWN	CHECKED	SCALE
J.H. Duke	February 1982	TLW	JHD	1:50000

134 10E 134 11 134 12 134 13 134 14 134 15

19 36S 19 36

19 37 19 37

19 38 19 38

19 39 19 39

19 40 19 40

134 10 134 11 134 12 134 13 134 14 134 15

TOTAL MAGNETIC INTENSITY

SHEET 410940

TENNANT CREEK NT

AUSTRALIAN DEVELOPMENT LIMITED

CR82/059

N

SCALE 1: 12,000

METRES 500 0 500 1000 METRES

FEET 1000 0 1000 2000 3000 FEET

CONTOUR INTERVAL . . . . . 10.0 GAMMAS
SHADING ON LOW SIDE . . . . . 5.0 GAMMAS
DATUM . . . . . ARBITRARY
FLIGHT LINE SPACING . . . . . 660 FT. (1/8 MILE(S))
FLIGHT ALTITUDE . . . . . 300 FEET MTC
FLOWN AND COMPILED 1973
INSTRUMENT . GEOMETRICS G-803 PROTON MAGNETOMETER

SURVEY AND COMPILATION BY:

geoMetrics

134 10E 134 11 134 12 134 13 134 14 134 15

19 40S 19 40

19 41 19 41

19 42 19 42

19 43 19 43

19 44 19 44

134 10 134 11 134 12 134 13 134 14 134 15

TOTAL MAGNETIC INTENSITY

NOBLES NOB AREA N.T.

SHEET 1

GEOPEKO LIMITED

CR 82/059

410 944

SCALE 1 : 12,000

500 0 500 1000 METRES

1000 500 0 1000 2000 3000 FEET

CONTOUR INTERVAL . . . . . 20.0 GAMMAS
SHADING ON LOW SIDE . . . . . 10.0 GAMMAS
DATUM . . . . . ARBITRARY
FLIGHT LINE SPACING . . . . . 200 METRES
FLIGHT ALTITUDE . . . . . 100 METRES
FLOWN AND COMPILED 1973

INSTRUMENT . . GEOMETRICS G-803 PROTON MAGNETOMETER

N

SURVEY AND COMPILATION BY:

geoMetrics

134 15E 134 16 134 17 134 18 134 19 134 20

19 36S 19 36

19 37 19 37

19 38 19 38

19 39 19 39

19 40 19 40

134 15 134 16 134 17 134 18 134 19 134 20

TOTAL MAGNETIC INTENSITY

SHEET 415940

TENNANT CREEK NT

AUSTRALIAN DEVELOPMENT LIMITED

CR82/059

N

SCALE 1: 12,000

METRES 500 0 500 1000 METRES

FEET 1000 0 1000 2000 3000 FEET

CONTOUR INTERVAL . . . . . 10.0 GAMMAS
SHADING ON LOW SIDE . . . . . 5.0 GAMMAS
DATUM . . . . . ARBITRARY
FLIGHT LINE SPACING . . . . . 660 FT. (1/8 MILE(S))
FLIGHT ALTITUDE . . . . . 300 FEET MTC
FLOWN AND COMPILED 1973

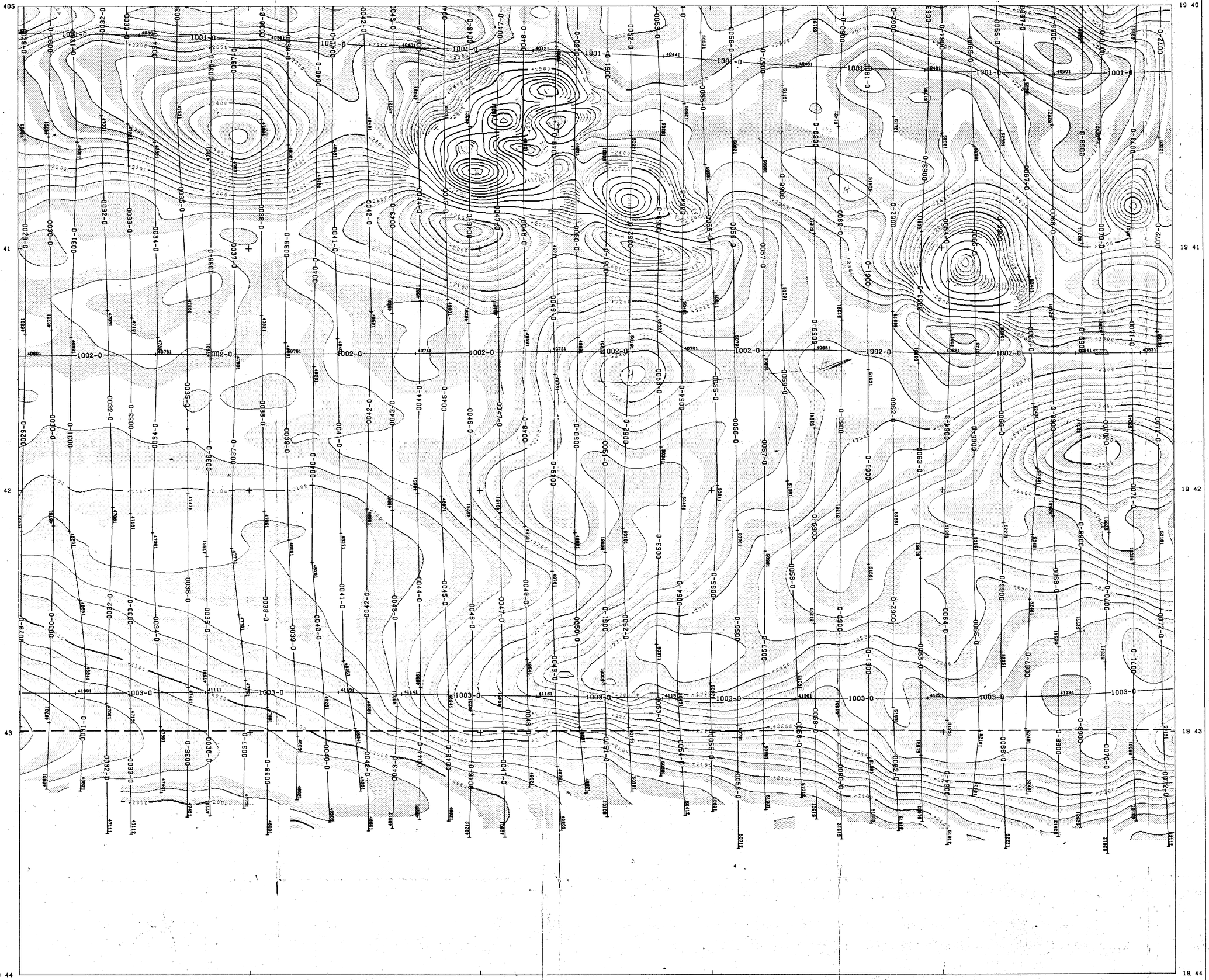
INSTRUMENT . GEOMETRICS G-803 PROTON MAGNETOMETER

SURVEY AND COMPILATION BY:

geoMetrics

134 15E | 134 16 | 134 17 | 134 18 | 134 19 | 134 20

19 40S | 19 41 | 19 42 | 19 43 | 19 44



TOTAL MAGNETIC INTENSITY

NOBLES NOB AREA N.T.

SHEET 2

GEOPEKO LIMITED

CR 82/059

415944

SCALE 1 : 12,000

500 0 500 1000 METRES

1000 500 0 1000 2000 3000 FEET

CONTOUR INTERVAL . . . . . 20.0 GAMMAS

SHADING ON LOW SIDE . . . . . 10.0 GAMMAS

DATUM . . . . . ARBITRARY

FLIGHT LINE SPACING . . . . . 200 METRES

FLIGHT ALTITUDE . . . . . 100 METRES

FLOWN AND COMPILED 1973

INSTRUMENT. . GEOMETRICS G-803 PROTON MAGNETOMETER

N

SURVEY AND COMPILATION BY:

geoMetrics

N