GEOPEKO
A DIVISION OF PEKO-WALLSEND OPERATIONS LTD.

D83/3

EXPLORATION LICENCE 3056

ANNUAL REPORT

3RD MARCH 1982 - 2ND MARCH 1983

BY

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GORDON
PETROCARB
DEPT. MINES AND ENERGY

NORTHERN TERRITORY
GEOLOGICAL SURVEY

DARWIN

MARCH, 1983

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1. INTRODUCTION

The Exploration Licence 3056 was granted to Petrocarb Exploration N.L. on the 3rd March 1982. For the twelve months under review the licence area was under the control of a joint venture agreement between Peko-Wallsend Operations Ltd. and Petrocarb Exploration N.L.. Geopeko, the mineral exploration division of Peko Wallsend Operations Ltd. have acted as managers for the joint venture and as such have been responsible for exploration, tenure maintenance and reporting. Exploration licence 3056 covers an area of 53.7 kms^2 (17 blocks) in the Huckitta-Mount Sainthill locality on the Huckitta 1:250000 sheet (SF 53-11). The licence area is located on Jinka station, approximately 225km north-east of Alice Springs. Vehicular access from Alice Springs is via the Stuart and Plenty Highways and then on station tracks. The Molyhil airstrip is situated centrally within the EL.

2. PHYSIOGRAPHY

The licence area is relatively flat lying, between 430 and 546m (Mount Sainthill) above sea level. Mount Sainthill is the most pronounced topographic feature within the E.L. however there are a number of other small ridges and hills with a noticeable north-west to south-east trend. The drainage of the area is primarily a dendrittic pattern running south-east across the licence area. There is however a secondary pattern radiating from the high ground around Mount Sainthill. All the creeks form tributaries to the Marshall river to the south. Adjacent to the creeks there is a relatively dense growth of eucalypts, whilst for the most part the vegetation is sparse, composed primarily of acacia scrub, with small trees and open grassland. There is no permanent, naturally occurring surface water, however the development of the Molyhil mine has led to the installation of a number of bores and dams.

Climatically the area has short, cool winters and long hot summers with temperatures in excess of 40^{o}C. The annual rainfall is less than 250mm, with poor reliability, it falls primarily in storms between November and March. Rock outcrop for the region is relatively good throughout on the small rocky hills.

3. EXPLORATION PHILOSOPHY

The area was originally placed under application by Petrocarb as part of their programme in the search for Molyhil-type, scheelite - molybdenite bearing skarn mineralization. Molyhil itself is situated on the eastern side of the E.L. and it is this close proximity that made the area highly prospective. The original discovery of Molyhil was made by the Johannsen family in 1971 as a result of a regional prospecting programme. The main part of what is today known as the Molyhil deposit i.e. the open pit, was discovered by a ground magnetic programme undertaken by the Northern Territory Geological Survey (Barraclough 1979 and Woyzbun 1980) on behalf of the Johannsen family (Fama Mines). The close association between scheelite and molybdenite mineralization and the massive magnetite, together with fairly broad geological parameters farmed the basis of Geopeko's exploration programme.

4. WORK UNDERTAKEN

a. Data Review and Literature Search

The first stage of Geopeko's exploration programme was a review of literature from previous company exploration and government survey work this was undertaken at the offices of the Northern Territory Dept. of Mines and Energy in both Alice Springs and Darwin. In the past three years the area has been remapped jointly by the B.M.R. and the Northern Territory Geological Survey and they have produced provisional maps at a scale of 1:25 000. The Northern Territory Geological Survey has recently released the results of an airborne magnetic and radiometric programme which covered the following 1:100,000 sheets:

Dneiper	5952
Jinka	6052
Jervois Range	6152
Brahma	6051
Plenty Downs	6151
Plenty River	6251

The results were released as contoured plans at a scale of 1:100,000. The survey was flown with a flight line spacing of 500m with a nominal terrain clearance of 100m and a sample interval of 55m. The magnetic data proved to be of insufficient detail for locating Molyhil-type geophysical anomalies. The Molyhil deposit was studied in great, detail by the Northern Territory Geological Survey on behalf of the then owners of Molyhil, Fama Mines in 1976. Geological mapping was undertaken at both semi-regional and detailed scales over Molyhil and its immediate environs. A detailed, ground magnetometer survey was carried out over the original Molyhil discovery and the area of the open pit, the magnetometer survey provided a clear indication of the extent of the mineralized bodies that have subsequently been mined at the open pit some 700m east of the original discovery at Molyhil. The work of the Northern Territory Geological Survey has been reported by Barraclough (1979) and Woyzbun (1980).

A number of companies have worked in the area within the past 10 years. In the late 1970's Otter exploration covered the E.L. as part of their search for uranium,with an airborne survey and the systematic ground follow-up of anomalies, which appeared to cluster

where Adelaidean sediments unconformably overlye the Middle and Lower Proterozoic of the Arunta Block (Kojan 1980). Ransom (1978) wrote a report on behalf of Abminco Exploration on "The Scheelite Prospects Of The Jervois Range, Bonya Creek and Molyhil Areas, Northern Territory" in which he assesses much of the earlier work undertaken in the area and describes a number of deposits. Central Pacific Minerals worked in the area during the late 1960's (prior to the discovery of Molyhil). Their work deals mainly with the areas to the North of the E.L., notably the Jinka Plain (Bowen et al 1972). Anaconda carried out exploration for Molyhil-type deposits over an area that included the north-west corner of EL 3056. They undertook mapping, geochemistry and ground magnetics though they failed to find indications of substantial mineralization (Mason 1979, Barraclough 1979). There have also been a number of reports on the regional geology by the B.M.R.

b. Regional Mapping 1:50,000 and 1:10,000

The E.L. 3056 has formed part of the area covered by a regional geological mapping programme which Geopeko has undertaken over the southern half of the Huckitta 1:250 000 sheet. The mapping was carried out at a scale of 1:50 000 using the government produced RC9 photographs. The E.L. is located toward the eastern part of the Arunta complex, a belt of lower and Middle Proterozoic rocks that spreads in a wedge across the southern half of the Northern Territory, narrowing towards the east. The E.L. is crossed from the south-east to the north-west by the major Delny-Mount Sainthill fault zone which divides the northern and southern blocks of the Aruntas and locally divides the Lower Proterozoic, Harts Range Group in the south from the Middle Proterozoic, Jinka Granite in the north. The fault zone up to five kms wide contains slithers of Harts Range Group that have been enveloped by Jinka Granite, thus providing an ideal environment for skarn mineralization of the Molyhil type. Because of the importance of the Delny-Mount Sainthill fault in the formation of Molyhil-type deposits it was decided to extend the 1:50,000 regional mapping programme to 1:10,000 scale in the immediate area of Molyhil. This more detailed mapping provided information on the northern and southern boundaries of the fault zone. Overlying the Proterozoic rocks there is an extensive cover of unconsolidated sediments of Cainozoic and Quarternary age. For the 1:50,000 and 1:10,000 plans see appendix Ia and Ib.

c. Follow-up of Petrocarb Aeromagnetic Survey

An aeromagnetic survey was flown by Aerodata in July 1981 for Petrocarb, covering an area of 36 km^2. The reason for this survey was to gain magnetic data for the area beyond that of the Molyhil mine mineral leases which had been covered by Woyzbun's 1977 survey (P.Woyzbun 1980). The Aerodata survey outlined 15 anomalies which were selected for further, ground magnetics. The ground magnetics determined seven anomalies that were considered to have the criteria for a Molyhil-type deposit. These anomalies were tested by fences of air-track holes. The conclusions of the air-track drilling were that the anomalies were caused by concentrations of disseminated magnetite within the Jinka Granite. The analyses of rock chip samples gave no indication of the presence of tungsten and molybden mineralization. For location of anomalies see appendix 11.

d. Molyhil-South Air Track Drill Programme

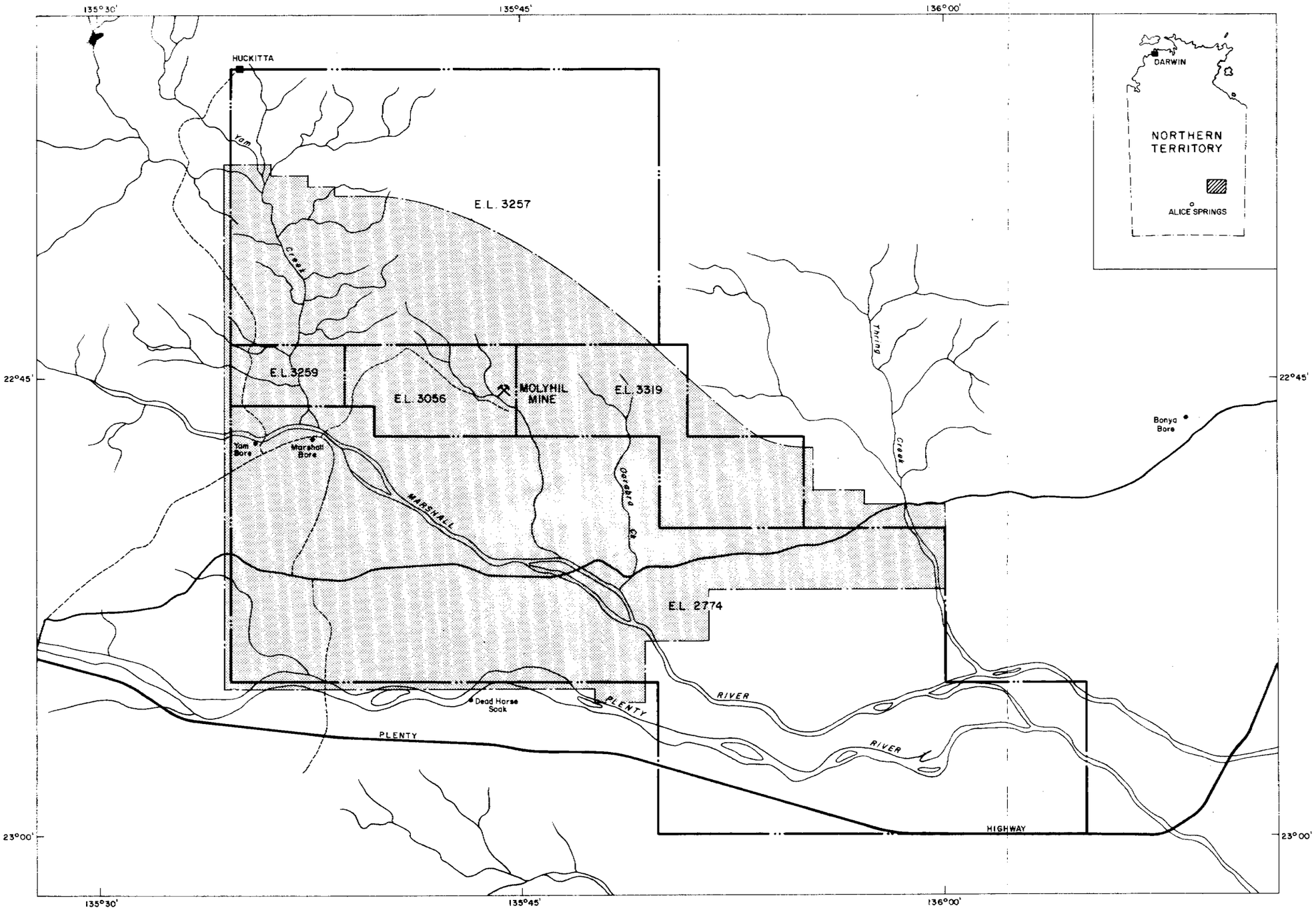
Following the discovery of a calc-silicate horizon in close proximity to Jinka Granite, an air-track drill programme was mounted. The area of the programme was approximately 2.7km south of Molyhil, in the south eastern corner of the E.L. Attention was drawn to this area as a result of the 1:10,000 scale mapping. A total of 132, three metre holes were drilled in eight north-south traverse lines, 100m apart with holes drilled at 20m intervals along each traverse lines. From each hole two samples were taken, the first from 0 to 1m for geochemical analysis and the second from 1 to 3m for geological observation. The samples were geologically logged and prepared for analysis at the Molyhil camp. The results of this programme were of interest in so far as they showed the presence of fairly extensive sub-cropping Jinka Granite south of what had previously been thought to be its southern limit, thereby placing the southern boundary of the Delny Mount-Sainthill fault zone further south than had previously been mapped. The analyses of the samples showed emphatically that there was no indication of tungsten, molybdenum or copper mineralization. For location and findings of the programme see appendix 111.

e. Airborne Magnetic Survey

Using the Molyhil deposit as a model for further exploration a detailed airborne magnetic survey was undertaken over two areas of the tenure held by the Peko-Petrocarb joint venture, the whole of E.L. 3056 was included in one such area. The survey was contracted to Austirex International. The flight line spacing was 150m, with a mean terrain clearance of 80m and an average sample interval of 45m. Flight path recovery was by means of a Range-Range radar positioning and guidance system. The results from this survey have been produced at scales of 1:10,000 and 1:50,000 (the latter scale was produced to compliment the regional mapping). The results of the aeromagnetic survey indicated a total of five anomalies that were considered worthy of ground follow-up. The anomalies were located on the ground by a series of broad traverse lines, once located, magnetometer readings were taken at 25m intervals along north-south and east-west traverse lines, the data was then plotted and modelled. For a number of smaller shallow anomalies where surface outcrop was present the data was not plotted as no further work was required. The results of the reconnaissance magnetics were assessed with two criteria in mind.

i Surface geology
ii The magnetic signature of the anomaly

Where the magnetic anomaly had an obvious shallow source and the surface outcrop was inconsistent with a Molyhil-type deposit no further work was considered necessary. Conversely where the source of the anomaly was thought to be relatively deep (25-50m), it was decided to test the origin by percussion drilling. The modelling of the magnetic data gave an indication of such things as depth (both to the top of the suspected body and to its centre), its approximate dimensions, the angle and direction of dip and its expected magnetic susceptibility. For the ground magnetic plans and 1:10 000 contoured plans of aeromagnetic data, see appendix IVa and b.



LEGEND:

Area of airborne geophysics

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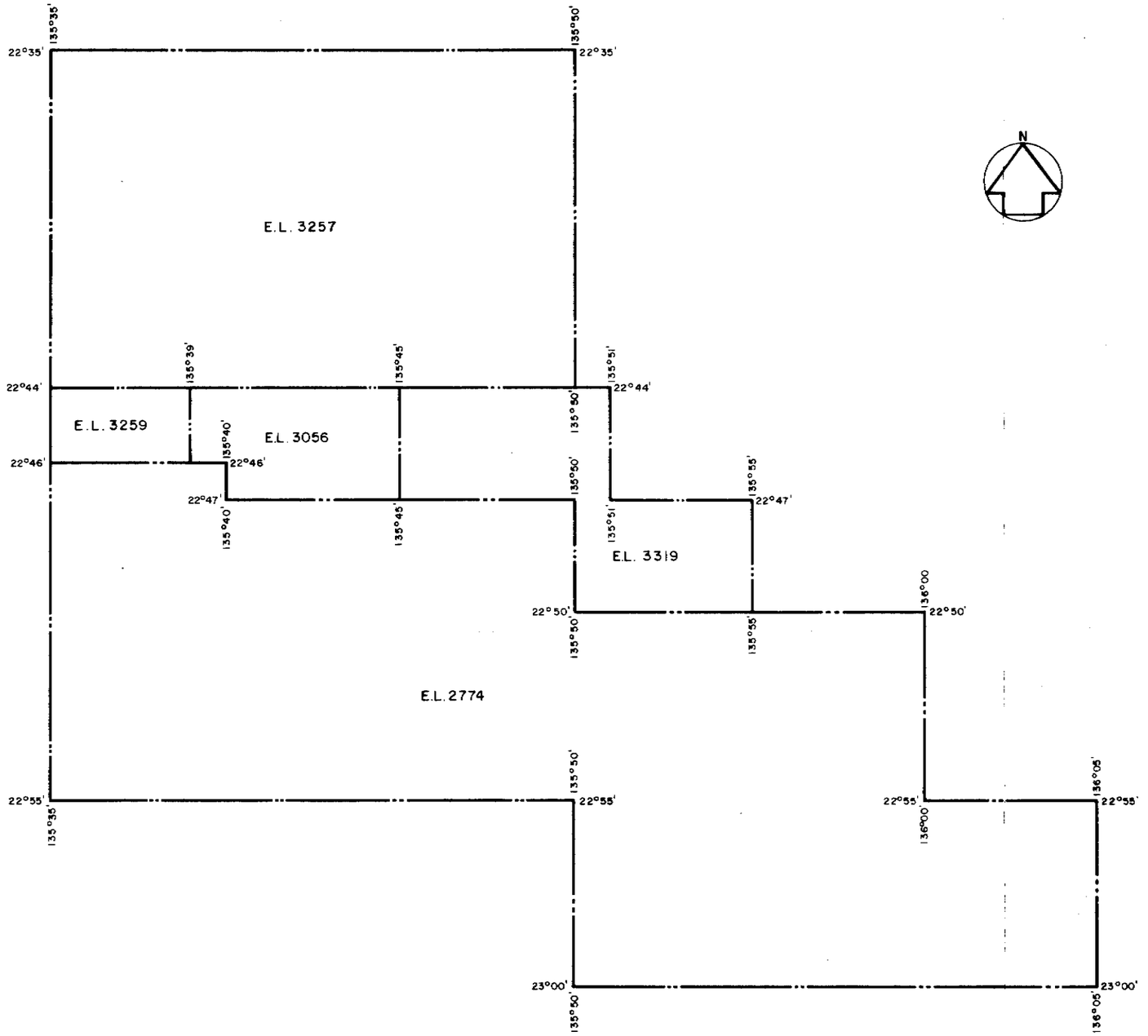
0 5 10km

FIG. No. 1

PROJECT	MOLYHIL
AREA	HUCKITTA 1:250 000
DATA	EXPLORATION LICENCES 3257, 3259, 3056, 3319 and 2774 LOCATION DIAGRAM

SCALE	COMPILED	DATE	DRAWN
1:250 000	S.D.T	APR., 1983	R.F.



	GEOPEKO A DIVISION OF PEKO-WALLSEND OPERATIONS LTD		
	0 5 10km		FIG. No. 2
PROJECT	MOLYHIL		
AREA	HUCKITTA 1:250 000		
DATA	EXPLORATION LICENCES 3257, 3259, 3056, 3319 and 2774		
SCALE	COMPILED	DATE	DRAWN
1 250 000	S.D.T.	APR., 1983	R.F.

f. Airborne Radiometric Survey

A radiometric survey was undertaken together with the magnetic survey, the gamma-ray spectometer gave data for the total radiation intensity plus data for the uranium, thorium and potassium energy levels. The results were presented as contoured plans at a scale of 1:50,000. Two anomalies were considered worthy of ground follow-up. The first anomaly is located one km north-west of Molyhil and was found to be associated with a faulted granite outcrop that contained sheared quartz and an area of ferruginous granite which was found to give readings of 8000 cps compared with a background of 2000 cps. The granite itself is very course grained and locally porphyritic with 20mm phenocrysts of microcline, it gave readings of 4000 cps and the sheared quartz gave readings of 7000 cps. The cause of the anomaly is thought to be uranium associated with faulting, the anomaly was located within the Delny-Mount Sainthill fault zone. Other granite outcrops within the immediate vicinity gave readings of a background level i.e. 2000 cps. The second anomaly is located 400m south of the trig point on Mount Sainthill gave background readings of 2000 cps which rose to 5000 cps in an area of finely bedded quartites. The highest readings were taken in small caves. Locally there was a slight increase in ferruginous staining, the host lithology varied slightly throughout the anomaly. The anomaly is thought to relate to faulting, Mount Sainthill being situated on the southern side of the Delny-Mount Sainthill fault zone. Whilst both anomalies were derived from the uranium channel of the spectrometer they are not thought to have any economic significance. The Molyhil open pit can also be detected as an anomaly on the uranium data. Major creeks stand out on the thorium and potassium plans. For the 1:50 000 plans see appendix V.

g. Percussion Drill Programme

Two anomalies were tested by percussion drilling in EL 3056, they were scorpions 54 and 55. Scorpion 54 was drilled to a depth of 28m and scorpion 55 to 49m. The drilling was contracted to the Overland Drilling Company, using a Warman 500 with a Sullair 750 CFM, 250 psi compressor. A seven inch (178mm) diameter hole was drilled and collared with six metres of pvc piping. Rock chip samples were collected over three metre intervals by means of a Warman chip collector. The samples were logged at the drill site

and magnetic-susceptibility readings were taken from each bag of rock chips; the susceptibility readings could then be compared with the expected susceptibility and depth at which the anomaly was modelled, thus enabling an on-site assessment as to the cause of the anomaly. The following information was marked on the collar pipe of each hole:

i The scorpion number
ii The hole number
iii The depth of hole
iv The depth to water table (if reached)
v The date the hole was drilled

For full details of drill logs see appendix VI

h. Sample Preparation, Grain Counting and Analysis

The rock chip samples were sieved at 2mm, the +2mm material was bagged and stored whilst the 300g was then roll mixed and a scoop full (estimated to be 20g) was then taken from the centre of the pile and levelled. The 20g sample was then spread carefully in a 500x300mm plastic tray and observed under a high intensity Ultra-Violet light. The process of observation was repeated at least twice for each sample. Where scheelite grains were either observed or suspected the sample was sent for analysis. Samples from scorpions 54 and 55, which both intersected calc-silicates, were sent for chemical analysis of their tungsten and copper contents as a matter of course. The analytical material was taken from the -2mm fraction. The analysis were undertaken by Analabs in Darwin and Perth.

5. RESULTS

a. Drilling

The drilling indicated that both scorpion 54 and scorpion 55 were caused by disseminated magnetite in calc-silicates. The calc-silicates gave no indication of metasomatic alteration and therefore, from a geological point of view are unlikely to be hosting scheelite and molybdenite mineralization.

b. Grain Counting

No scheelite grains were positively identified by grain counting from E.L. 3056.

c. Analyses

Of the samples analysed the highest tungsten value was 3.5 ppm with an overall, average of 2.4 ppm. The highest copper value was 85 ppm with an average of 27.4 ppm. From these values there is no indication of geochemical enrichment such as one would expect to be associated with a Molyhil type body.

For the results of the grain counting and the chemical analyses, see the drill logs in appendix V

6. CONCLUSIONS

From the exploration programme undertaken there is no indication of scheelite-molybdenite mineralization in E.L. 3056 away from Molyhil itself.

7. EXPENDITURE

E.L. 3056 forms part of a regional exploration programme and therefore expenditure has been allocated on an aerial basis. For a break down of the expenditure see table 1.

Table 1

EXPENDITURE ON EL 3056

Major Activity	Salaries	Wages	Consultants/ Contractors	Vehicles	Travel & Accom.	Field Accom.	Communi-cations	Freight	Analysis	Tenement Expenses	Other	Sub Totals
GEOLOGY	1702.6	179.3	235.3									2117.2
GEOCHEMISTRY	440.8	179.3							368.1			988.2
GEOPHYSICS	530	179.3	2705.5									3414.8
GRIDDING			328.1									328.1
DRILLING SOIL PROBE			59.9									59.9
PERCUSSION			2543.7									2543.7
DIAMOND			-342						-99.5			-441.5
DRAFTING	214.2	27.3										241.5
GENERAL	260.5	768.3	187.2	1090.9	491.5	1028.1	123.6	109.1		71.1	329.1	4459.4
SUB TOTALS	3148.1	1333.5	5717.7	1090.9	491.5	1028.1	123.6	109.1	268.6	71.1	329.1	13711.3

TOTAL	13711.3
MANAGEMENT/OFFICE OVERHEADS	4227.9
GRAND TOTAL	17939.2

8. REFERENCES

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APPENDIX Ia

EXPLORATION LICENCE 3056

ANNUAL REPORT
1983

1:50,000 Regional Mapping

HUCKITTA SF53-11

JINKA IV

6052-IV

GEOPEKO

SCALE 1:50 000

1000 0 1000 2000 3000 4000 5000 Metres

AUSTRALIAN MAP GRID

MOLYHIL PROJECT

REGIONAL INTERPRETATION GEOLOGY

STRATIGRAPHY

GEORGINA BASIN

PALAEOZOIC	DEVONIAN	Dulcie Sandstone	Dud	Quartz sandstone with interbedded silty calcareous sandstone, pebbly conglomerate
	ORDOVICIAN CAMBRIAN	Nora Fm.	Oln	Siltsone, dolerite, oolitic ironstone, sandstone
		Tomahawk Beds	Cot	Calcareous sandstone, siltsone, dolerite and limestone
	MIDDLE TO LATE CAMBRIAN	Arrinthrange Fm.	Cua	Dolomite, limestone, stromatolitic dolerite, minor cherts, siltstones, and sandstone
		Arthur Creek Beds	Cma	Shale, laminated blue-black limestone, sandstone,dolomite
	EARLY CAMBRIAN	Errarra Beds	Cle	Pale brown fossiliferous dolomite
		Mount Baldwin Fm.	Clb	Red brown cross-bedded sandstone, rare siltstone
				HUCKITA MOVEMENT
UPPER PROTEROZOIC	ADELAIDEAN	MYPUNGA GROUP: Elkera Fm.	Puk	Interbedded red brown siltstone, dolomite, sandstone and shale. Stromatolitic dolomite (Georginia Howchini)
		MYPUNGA GROUP: Grant Bluff Fm.	Pug	Sandstone, thinly bedded, shale
		MYPUNGA GROUP: Elyuah Fm.	Pus	Shale, basal pebbly sandstone
				TOOMBA MOVEMENT
		KEEPERA GROUP: Corabra Arkose	Puo	Arkose, sedimentary breccia, dolomite
				RINKABEENA/ABEYONDA MOVEMENTS
		Mount Cornish Fm.	Puc	Diamictite blue grey
		Yacoo Beds	Puy	Sandstone and granule conglomerate

ARUNTA BLOCK

			pCr	
MIDDLE PROTEROZOIC		JINKA GRANITE AND EQUIVALENTS	pg	Granite, porphyritic granite, leucogranite, adamellite-granodiorite
		MARRAKESH METAGABBRO	pdm	Gabro, dolerite, diorite, metanorite
EARLY PROTEROZOIC	DIVISION 3	Utopia Quartzite	plu	Metaquartzite
		Ledar Schist	pln	Biotite-muscovite-quartz schist, minor pebbly metaquartzite
	DIVISION 2	Bonya schist	pCo	Biotite-muscovite schist, muscovite schist, quartzofeldspathic schist, andalusite schist, calc-silicate, amphibolite
		Kings Legend Amphibolite member	pCk	Amphibolite with feldspar porphyroblaste
		Muscatte Gneiss Complex	pCm	Granitoid, quartzofeldspathic gneiss, leucogranite, granite gneiss, amphibolite
			pCq	Quartzite, muscovite schist, tourmaline quartzite, garnet-sillimanite gneiss
		HARTS RANGE GROUP	pCh	Undivided sequence, mainly garnet biotite gneiss, calc-silicates, quartzite
		Brady Gneiss	pCh_b	Biotite gneiss, schistose garnet-muscovite-biotite gneiss
		Irindina Gneiss	pCh_i	Garnet biotite gneiss, sillimanite gneiss
		Bruno Gneiss	pCh_o	Porphyroblastic feldspar gneiss, calc-silicate
		Entia Gneiss	pCh_e	Quartzofeldspathic gneiss, amphibolite
			pC	Quartzofeldspathic gneiss, biotite gneiss, migmatite, calc-silicate
		Cockleberry Metamorphics	pCv	Calc-silicate, cordierite-anthophyllite gneiss, biotite-feldspar gneiss, felsic gneiss
		Deep Bore Metamorphics	pCp	Corierite felsic granulite, mafic granulite, para amphibolite, calc-silicate, sillimanite gneiss
	DIVISION 1	Kenandra Granulites	Csk	Quartzofeldspathic gneiss, commonly migmatic and garnet rich, mafic granulite, biotite gneiss

NORTHERN TERRITORY GEOLOGICAL SURVEY

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LOCATION INDEX

5953 II	6053 III	6053 II
5952 I	6052 IV	6052 I
5952 II	6052 III	6052 II

HUCKITTA SF53-11

JINKA-III

6052-III

GEOPEKO

SCALE 1:50 000

1000 0 1000 2000 3000 4000 5000 Metres

AUSTRALIAN MAP GRID

MOLYHIL PROJECT

REGIONAL INTERPRETATION GEOLOGY

STRATIGRAPHY

GEORGINA BASIN

PALAEOZOIC	DEVONIAN	Dulcie Sandstone	Dud	Quartz sandstone with interbedded silty calcareous sandstone, pebbly conglomerate
	ORDOVICIAN CAMBRIAN	Nora Fm	Oln	Siltstone, dolerite, oolitic ironstone, sandstone
		Tomahawk Beds	€ot	Calcareous sandstone, siltstone, dolerite and limestone
	MIDDLE TO LATE CAMBRIAN	Arrinthrunga Fm.	€ua	Dolomite, limestone, stromatolitic dolerite, minor cherts, siltstones, and sandstones
		Arthur Creek Beds	€ma	Shale, laminated blue-black limestone, sandstone, dolomite
	EARLY CAMBRIAN	Errarra Beds	€le	Pale brown fossiliferous dolomite
		Mount Baldwin Fm.	€lb	Red brown cross-bedded sandstone, rare siltstone
				HUCKITA MOVEMENT
UPPER PROTEROZOIC	ADELAIDEAN	KEEPERA GROUP / MYPUNGA GROUP — Elkera Fm.	Euk	Interbedded red brown siltstone, dolomite, sandstone and shale. Stromatolitic dolomite (Georginia Howchini)
		Grant Bluff Fm.	Eug	Sandstone, thinly bedded, shale
		Elyuah Fm.	Eue	Shale, basal pebbly sandstone
				TOOMBA MOVEMENT
		KEEPERA GROUP — Gerabra Arkose	Euo	Arkose, sedimentary breccia, dolomite
				RINKABEENA/ABEYONGA MOVEMENTS
		Mount Cornish Fm.	Puc	Diamictite blue grey
		Yacoo Beds	Puy	Sandstone and granule conglomerate

ARUNTA BLOCK

MIDDLE PROTEROZOIC			p€r	
		JINKA GRANITE AND EQUIVALENTS	Eg	Granite, porphyritic granite, leucogranite, adamellite-granodiorite
		MARAKESH METAGABBRO	Edm	Gabro, dolerite, diorite, metanorite
EARLY PROTEROZOIC	DIVISION 3	Utopia Quartzite	Etu	Metaquartzite
		Ledar Schist	Eln	Biotite-muscovite-quartz schist, minor pebbly metaquartzite
	DIVISION 2 — HARTS RANGE GROUP	Banya schist	p€a	Biotite-muscovite schist, muscovite schist, quartzofeldspathic schist, andalusite schist, calc-silicate, amphibolite
		Kinga Legend Amphibolite member	p€k	Amphibolite with feldspar porphyroblasts
		Mascotte Gneiss Complex	p€m	Granitoid, quartzofeldspathic gneiss, leucogranite, granite gneiss, amphibolite
			p€q	Quartzite, muscovite schist, tourmaline quartzite, garnet-sillimanite gneiss
			p€h	Undivided sequence, mainly garnet biotite gneiss, calc-silicates, quartzite
		Brady Gneiss	p€h_b	Biotite gneiss, schistose garnet-muscovite-biotite gneiss
		Irindina Gneiss	p€h_i	Garnet biotite gneiss, sillimanite gneiss
		Bruna Gneiss	p€h_g	Porphyroblastic feldspar gneiss, calc-silicate
		Entia Gneiss	p€h_e	Quartzofeldspathic gneiss, amphibolite
			p€	Quartzofeldspathic gneiss, biotite gneiss, migmatite, calc-silicate
		Cockleberry Metamorphics	p€v	Calc-silicate, cordierite-anthophyllite gneiss, biotite-feldspar gneiss, felsic gneiss
		Deep Bore Metamorphics	p€p	Cerierite felsic granulite, mafic granulite, para amphibolite, calc-silicate, sillimanite gneiss
	DIVISION 1	Kanandra Granulites	€sk	Quartzofeldspathic gneiss, commonly migmatic and garnet rich, mafic granulite, biotite gneiss

NORTHERN TERRITORY GEOLOGICAL SURVEY

CR83/141

LOCATION INDEX

5952 -I	6052 -IV	6052 -I
5952 -II	6052 -III	6052 -II
5951 -I	6051 -IV	6051 -I

APPENDIX Ib

EXPLORATION LICENCE 3056

ANNUAL REPORT
1983

1:10,000 Semi-Regional Mapping

E.L. 3257
E.L. 3319

a	Amphibolite, metadolerite
apl	Aplite
b	Biotite gneiss
c/s	Calc-silicate rock
f	Quartzofeldspathic gneiss
fm	Muscovite-bearing quartzofeldspathic rock
g	Granite
gd	Adamellite-granodiorite
gg	Granitic gneiss
gl	Leucogranite
rapg	Granite containing k-feldspar phenocrysts
gtoid	Granitoid
ia	Cordierite-anthophyllite rock
j	Quartz rich metasediment
m	Marble
mi	Migmatite, migmatitic gneiss
mn	Mafic granulite
mt	Unclassified metamorphic rock
p	Porphyroblastic-feldspar gneiss
pa	Mafic calc-silicate rock, layered amphibolite
qf	Magnetite quartzite
qt	Quartzite
r	Metamorphically retrogressed rock
s	Biotite-muscovite schist
sb	Biotite schist
sc	Chlorite tremolite-actinolite schist
sf	Quartzofeldspathic schist
sm	Muscovite schist
qbgn	Garnet-biotite-plagioclase-quartz gneiss
qgn	Garnet-bearing quartzofeldspathic gneiss
k	Andalusite-mica schist
z	Sillimanite-bearing gneiss
zm	Sillimanite and muscovite gneiss

TN MN

HUCKITTA SF 53-11

NOTE : *This map is compiled from uncontrolled photos.*
E.L. Boundaries (position approximate)

GEOPEKO LIMITED

SCALE 1:10000 (photo)

No. :

DATE : 5/8/1982

GEOLOGIST : S C

DRAWN :

CHECKED :

MOLYHIL PROJECT

DETAILED GEOLOGY

NORTHERN TERRITORY GEOLOGICAL SURVEY

CR 83/141

Sheet 3

Geology by S. CARTHEW

E.L. 3257
E.L. 3056
E.L. 3056
E.L. 3319
MOLYHIL FAULT
DELNY – MOUNT SAINTHILL FAULT
MOLYHIL MINE
Pg
Pug
Pue
Puk
Og
$p\epsilon hi_{(1)}$
$p\epsilon hi_{(2)}$
$p\epsilon hi_{(3)}$

a	Amphibolite, metadolerite
al	Aplite
b	Biotite gneiss
c/s	Calc-silicate rock
f	Quartzofeldspathic gneiss
fm	Muscovite-bearing quartzofeldspathic rock
g	Granite
gd	Adamellite-granodiorite
gg	Granitic gneiss
gl	Leucogranite
rapg	Granite containing k-feldspar phenocrysts
gtoid	Granitoid
ia	Cordierite-anthophyllite rock
i	Quartz rich metasediment
m	Marble
mi	Migmatite, migmatitic gneiss
mn	Mafic granulite
mt	Unclassified metamorphic rock
p	Porphyroblastic-feldspar gneiss
ca	Mafic calc-silicate rock, layered amphibolite
qf	Magnetite quartzite
qt	Quartzite
r	Metamorphically retrogressed rock
s	Biotite-muscovite schist
sb	Biotite schist
sc	Chlorite tremolite-actinolite schist
sf	Quartzofeldspathic schist
sm	Muscovite schist
gbm	Garnet-biotite-plagioclase-quartz gneiss
qgm	Garnet-bearing quartzofeldspathic gneiss
k	Andalusite-mica schist
z	Sillimanite-bearing gneiss
zm	Sillimanite and muscovite gneiss

T.N M.N.

HUCKITTA SF 53-11

5953-4 5953-1 5953 6053 6153 5953-3 5953-2 6052 5952 6152

22°00′ 22°30′ 23°00′ 135°00′ 135°30′ 136°00′ 136°30′

Note: This map is compiled from un-controlled photos.
E.L. Boundaries(position approximate)

Grant Bluff
MT. SAINTHILL
1 2 3
MARSHALL CK
Marshall Bore
22°45′S
135°45′E
0 5 10 Kms.
SCALE 1:250,000
SF 53-11 (N.T.)

GEOPEKO LIMITED

0 100 200 300 400 500 600 700 800 900 1000 APPROX.
SCALE 1:10 000 (photo)

No.

DATE: 5-AUG-1982
GEOLOGIST: S.C.
DRAWN:
CHECKED:

MOLYHIL PROJECT

DETAILED GEOLOGY

NORTHERN TERRITORY GEOLOGICAL SURVEY

CR 83 / 141

Sheet 2

Geology by S.CARTHEW

MOLYHIL FAULT

DELNY — MOUNT SAINTHILL FAULT

E.L. 3257
E.L. 3056

Pg

Pr

Pue

Pug

pCh i(1)

pCh i(2)

pCh i(3)

Tl

Explanation

a	Amphibolite, metadiorite
apl	Aplite
b	Biotite gneiss
c/s	Calc-silicate rock
f	Quartzofeldspathic gneiss
fm	Muscovite-bearing quartzofeldspathic rock
g	Granite
gd	Adamellite-granodiorite
gg	Granitic gneiss
gl	Leucogranite
rapg	Granite containing k-feldspar phenocrysts
gtoid	Granitoid
ia	Cordierite-anthophyllite rock
i	Quartz rich metasediment
m	Marble
mi	Migmatite, stromatitic gneiss
mn	Mafic granulite
mt	Unclassified metamorphic rock
p	Porphyroblastic-feldspar gneiss
pa	Mafic calc-silicate rock, layered amphibolite
qf	Magnetite quartzite
qt	Quartzite
r	Metamorphically retrogressed rock
s	Biotite-muscovite schist,
sh	Biotite schist
sc	Chlorite tremolite-actinolite schist
sf	Quartzofeldspathic schist
sm	Muscovite schist
qbgn	Garnet-biotite-plagioclase-quartz gneiss
qgn	Garnet-bearing quartzofeldspathic gneiss
k	Andalusite-mica schist
z	Sillimanite-bearing gneiss
zm	Sillimanite and muscovite gneiss

T.N. M.N.

HUCKITTA SF 53-11

5953-4 5953-1 5953 6053 6153 5953-3 5953-2 6052 5952 6152

22°00' 22°30' 23°00' 135°00 135°30' 136°00' 136°30'

Grant Bluff

Mt. Sainthill

Marshall Bore

Marshall Ck.

1 2 3

135°45'E 22°45'

0 5 10 Kms.

SCALE 1:250,000
SF 53-11 (N.T.)

Note: This map is compiled from un-controlled photos.
E.L. Boundaries (position approximate)

GEOPEKO LIMITED

0 100 200 300 400 500 600 700 800 900 1000 APPROX.
SCALE 1:10 000 (photo)

No.

DATE: 5-AUG-1982
GEOLOGIST: S.C.
DRAWN:
CHECKED:

MOLYHIL PROJECT

DETAILED GEOLOGY

NORTHERN TERRITORY GEOLOGICAL SURVEY.

CR83/141

Sheet 1

Geology by S.CARTHEW

APPENDIX II

EXPLORATION LICENCE 3056

ANNUAL REPORT
1983

1:10,000 Plan Showing the Petrocarb
Contoured Magnetic Data and the Location
of Anomalies

PETROCARB EXPLORATION N.L.

AIRBORNE MAGNETOMETER SURVEY

TOTAL MAGNETIC FIELD CONTOUR MAP

SHOWING LOCATION OF GROUND MAGNETIC RECONNAISSANCE TRAVERSES

MOLYHILL AREA

NORTHERN TERRITORY

SURVEYED AND COMPILED BY AERODATA SERVICES (1980) PTY LTD

DATE OF SURVEY JULY 1981

PHOTOSCALE 1:10 000

500 0 500 metres

AIRBORNE SURVEY SPECIFICATIONS

MAGNETOMETER	Geometrics G 803 High Performance Magnetometer Resolution 0.50 nano Tesla Cycling rate 0.50 seconds
DATA ACQUISITION	YEW three channel chart recorder, Hewlett Packard 9825 Computer, Hewlett Packard 9875 Data Cassette Drive and an Aerodata Digital Acquisition System
FLIGHT LINE SPACING	Traverse lines 150 metres
FLYING HEIGHT (sensor height)	60 metres mean terrain clearance
AIRSPEED	90 knots (average)
NAVIGATION	Visual from planned flight strips
FLIGHT PATH RECOVERY	On to photomosaic approximately every 480 metres

REFERENCE

CONTOUR INTERVAL 10 nano Tesla

500 nano Tesla
100 nano Tesla
50 nano Tesla
10 nano Tesla

magnetic high

magnetic low

MAGNETIC VALUES FOLLOW CONVENTION OF READING FROM LOW TO HIGH INTENSITY

Surveyed Grid

Reconnaissance Grid

E.L. BOUNDARY (approx position)

NORTH

E.L. 3257
E.L. 3056

E.L. 3056
E.L. 3319

SCORPION 29
SCORPION 28
SCORPION 27
SCORPION 24
SCORPION 21
SCORPION 30
SCORPION 22
SCORPION 26
SCORPION 23
SCORPION 35
SCORPION 34
SCORPION 31
SCORPION 32
SCORPION 25
MOLYHIL

82 500N
83 500N
84 500N
75 000E
77 500E
77 300E
82 500N

PLAN NO 6389 S/C

APPENDIX III

EXPLORATION LICENCE 3056

ANNUAL REPORT
1983

Plans Showing Location and Results
of the Molyhil-South Airtrack Programme

575600

576700

7480760

7480760

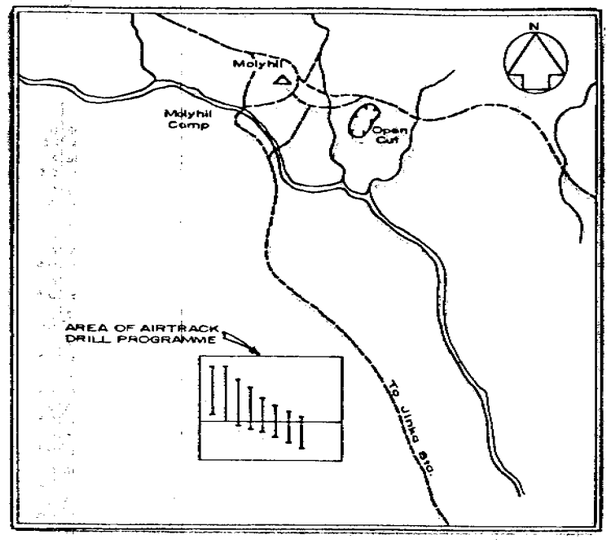
LINE 8 | LINE 7 | LINE 6 | LINE 5 | LINE 4 | LINE 3 | LINE 2 | LINE 1 | LINE 0.5 | LINE 00 | LINE -0.5 | LINE -1.0 | LINE -1.5

-21 N
-20 N
-19 N
-18 N
-17 N
-16 N
-15N
-14 N
-13 N
-12 N
-11 N
-10N
- 9N
- 8N
- 7N
- 6N
- 5N
- 4N
- 3N
- 2N
- 1N

7480260 N BASE LINE

7480260

- 1S
- 2S
- 3S
- 4S
- 5S
- 6S
- 7S
- 8S
- 9S
- 10S



7479960

7479960

575600

576700

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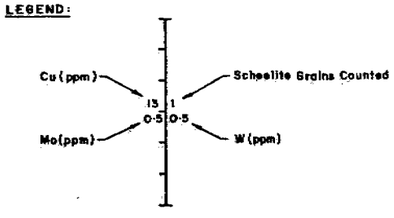


CR 83 / 141

NORTHERN TERRITORY GEOLOGICAL SURVEY

GEOPEKO
A DIVISION OF PEKO WALLSEND OPERATIONS LTD

40 0 40 80 120 metres

DWG No TF 2896

PROJECT	MOLYHIL
AREA	MOLYHIL SOUTH
DATA	GEOCHEMICAL ANALYSIS AND GRAIN COUNTING RESULTS

SCALE	COMPILED	DATE	DRAWN
1:4000	S Turley	January, 1983	TL Ward

575600

576700

7480760

7480260

7479960

Sample No.

-21 N
-20 N
-19 N
-18 N
-17 N
-16 N
-15 N
-14 N
-13 N
-12 N
-11 N
-10 N
- 9 N
- 8 N
- 7 N
- 6 N
- 5 N
- 4 N
- 3 N
- 2 N
- 1 N
7480260 N BASE LINE
- 1 S
- 2 S
- 3 S
- 4 S
- 5 S
- 6 S
- 7 S
- 8 S
- 9 S
-10 S

LINE 8

qz felds gn
qz felds gn
qz felds gn
qz felds gn
qz gn
qz, cl, sch
qz, qcl magt sch
qz, minor cl, biotite, magt
qz, minor cl, biotite, magt
qz, magt, gn, minor cl, epid
qz, cl, gn, minor magt
cl, qz, gn, accessory magt, epid
cl, sch
qz, calc silicates
qz, sch
gr (epid)
gr (epid)
gr (epid)
gr (epid)
gr (epid)

LINE 7

qz felds gn
qz felds gn
qz felds gn
cl, qz, sch
qzcl rock
qz felds cl gn
qz with epid
gr with cl sch
gr with cl sch
qzcl sch
qzcl magt sch
qz magt gn
qz with cl
qz, cl, magt, sch
qz, cl, magt, sch
qz, cl, serc, sch with epid
serc, cl, qz, epid
qz, serc, sch
qz, qzcl sch
qz cl gn
qz, minor cl gn
qz, gn

LINE 6

qz felds biotite gn
qz cl sch
qz with magt, calc silicates calc silicates
cl, gr
qz, cl, gn, gr
qz, cl, gn, gr
qzcl sch
qzcl sch with magt
qzcl sch
epid gr
cl sch
serc, sch

LINE 5

qz gn
qz gn
No Sample
No Sample
ca sil
qz cl sch + gr
qz cl gn + gr
qz cl sch
qz cl sch
qz cl epid
cl sch
qz felds bands
qzite
qzite Not St Hill
qz cl sch
qz sch qzite

LINE 4

black + white augen gn
black + white augen gn
ca sil
No Sample
qz cl sch
qz cl sch
qz cl sch + cal
qz cl sch + epid
qz cl sch
qz cl sch
qz Not
qz cl gn
qutzite
qutzite

LINE 3

gr
gr
cl sch
gar cl sch
qz mag + gn
qz magt gn
qz magt gn
qzite
qz magt gn
ca sil
pink qz felds gn gneissic
black + white augen gn
black + white augen gn

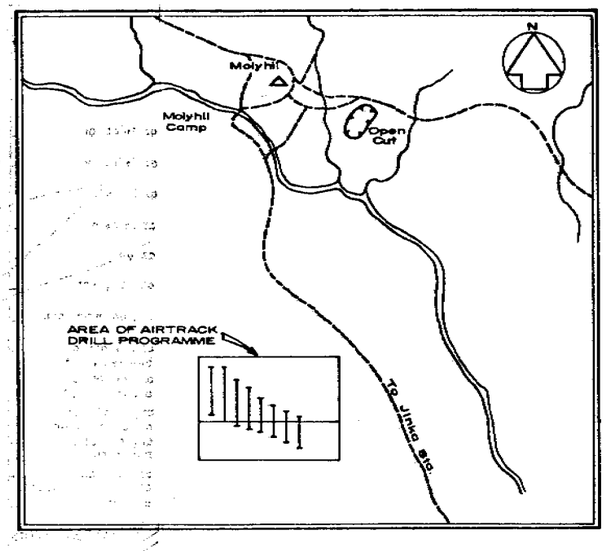
LINE 2

gr
gr
qz felds gn
qzite
qzite
gr epid
gr
qz felds gn
augen gn
augen gn
augen gn
qzite
qzite

LINE 1

gr
gr
gr
gr
gr
gr
gr
gr/qz gr gn
gr casi
ca si
gn
gn

LINE 0·5 gr
LINE 00 gr
LINE -0·5 gr
LINE -1·0 qz
LINE -1·5 gr



Jinka Granite
Calcified Silicates
Quartzites
Gneiss - quartz chlorite quartz magnetite quartz
Quartzo Feldspathic Gneiss
Sericite Schist
Outcrop
Sand Dune

GEOPEKO
A DIVISION OF PEKO-WALLSEND OPERATIONS LTD

40 0 40 80 120 metres

DWG No TF 2896

PROJECT	MOLYHIL
AREA	MOLYHIL SOUTH
DATA	GEOLOGY

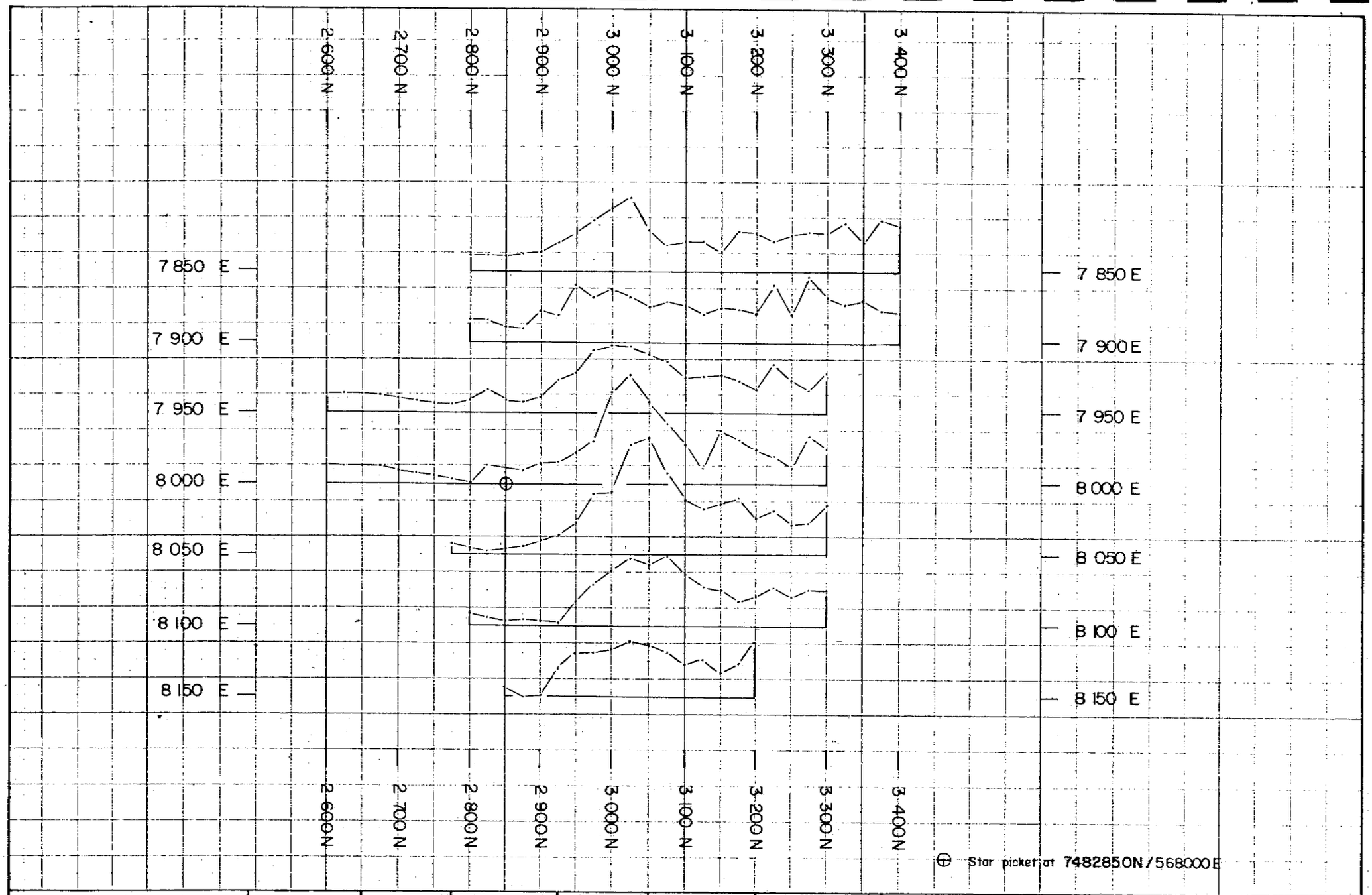
SCALE	COMPILED	DATE	DRAWN
1:4000	S Turley	January, 1983	T L Ward

APPENDIX IVa

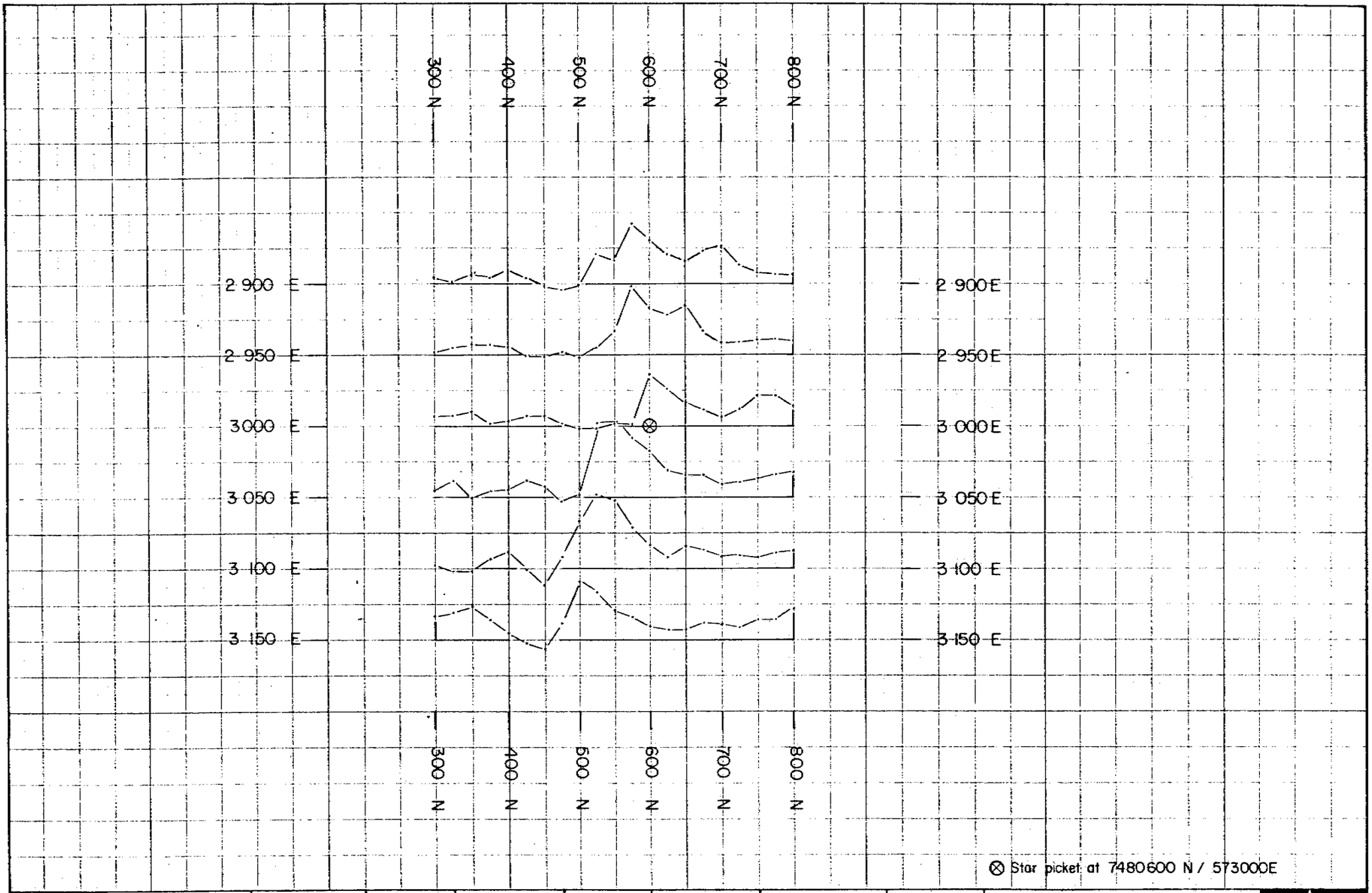
EXPLORATION LICENCE 3056

ANNUAL REPORT
1983

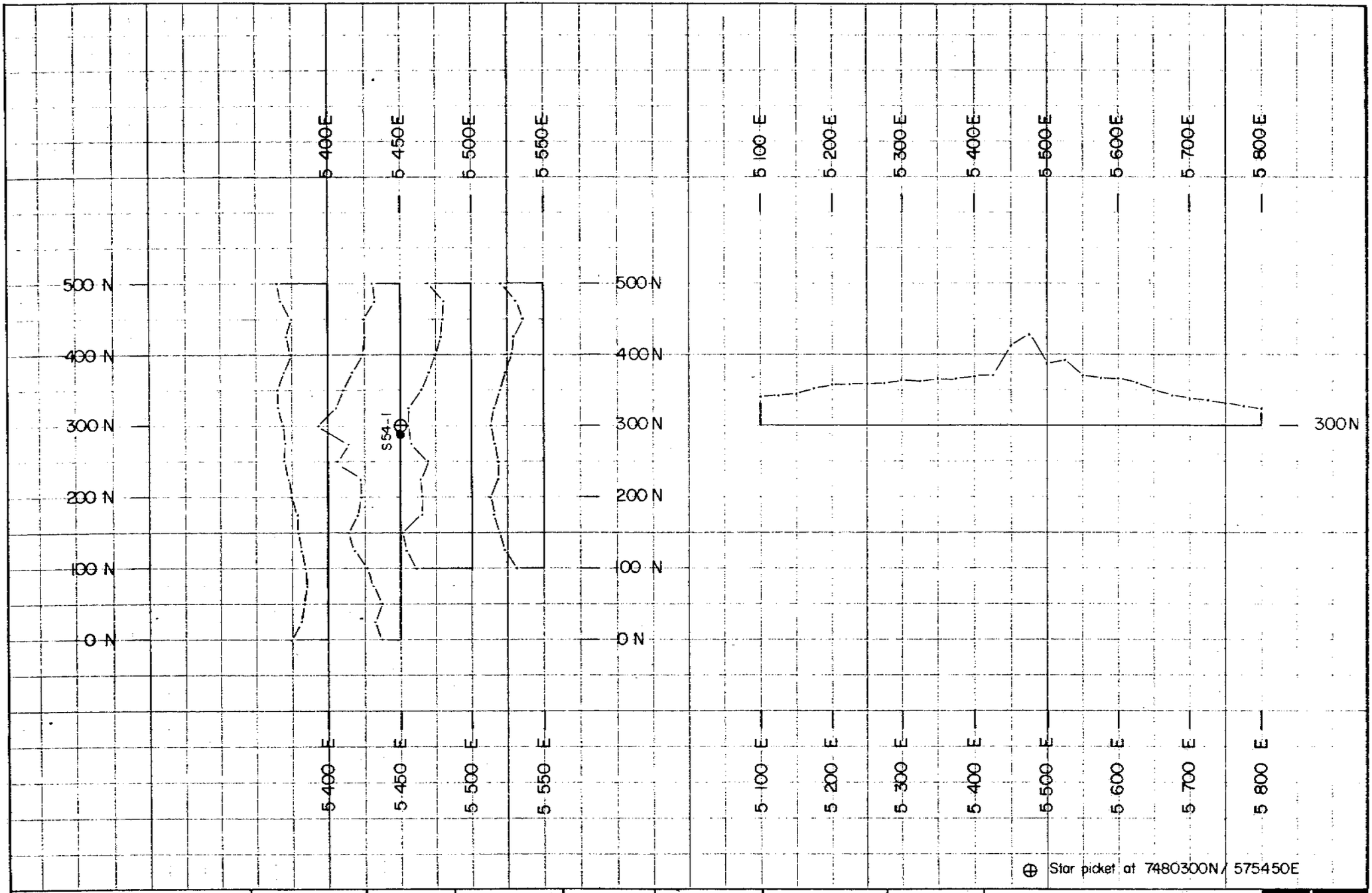
Ground Magnetic Plans



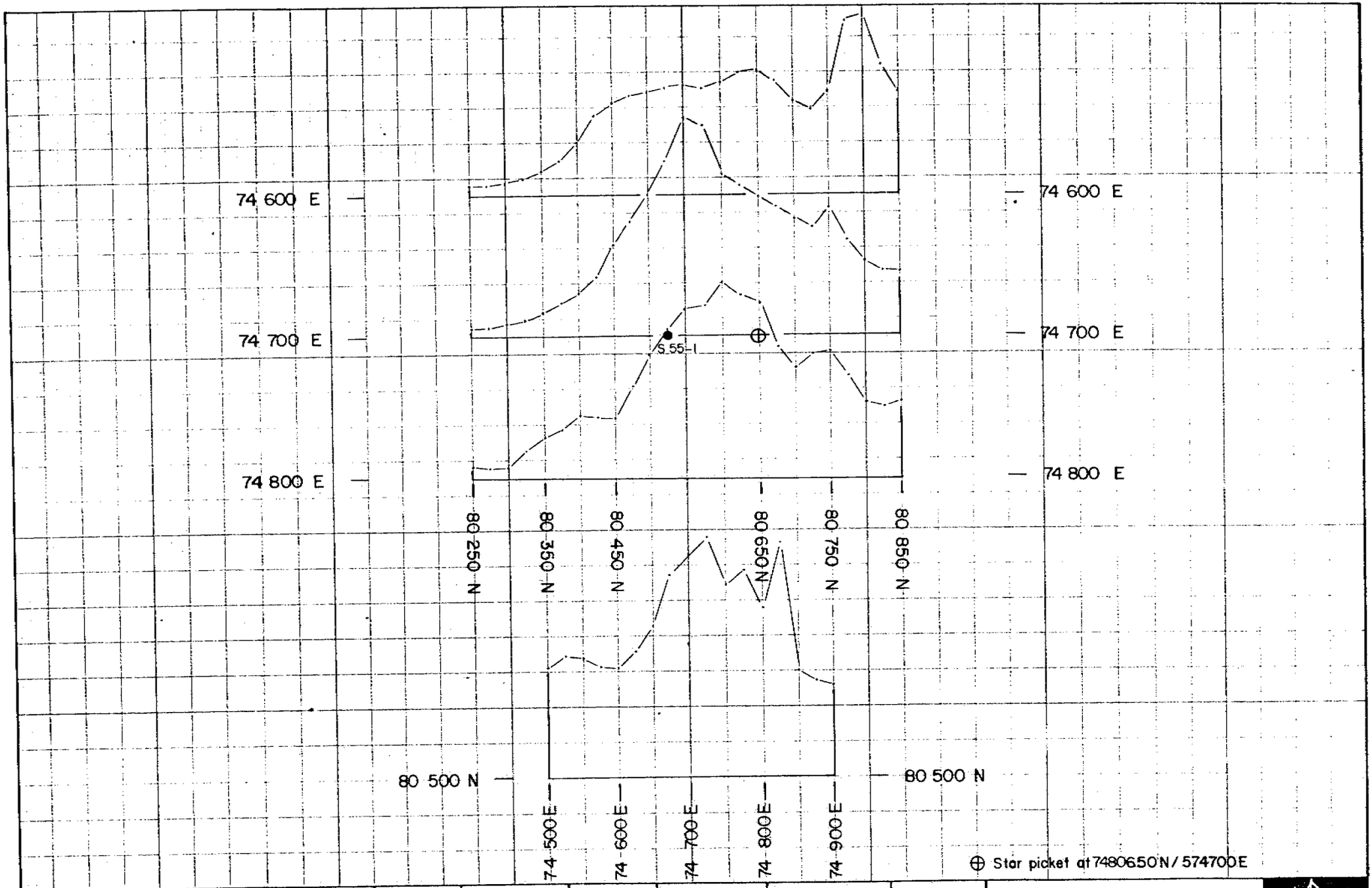
GEOPEKO LTD. Geophysical Surveys. Plan No. 6523 S/C	Instrument	G 816	Datum		Hor Scale	1:5000	AREA	Molyhil
	Observer	T.H	Base Peg		Vert Scale	1cm: 500nT	PROSPECT	SCORPION 48
	Scale Fact		Date	NOV '82	Contour Int		PLAN SHOWS	Profiles of Total Magnetic Intensity



GEOPEKO LTD.	Instrument	G 816	Datum	52000nT	Hor Scale	1:5000	AREA	Molyhil
Geophysical Surveys.	Observer	T.R	Base Peg		Vert Scale	1cm : 1000nT	PROSPECT	SCORPION 49
Plan No. 6521 S/C	Scale Fact		Date	NOV '82	Contour Int		PLAN SHOWS	Profiles of Total Magnetic Intensity



GEOPEKO LTD.	Instrument	G-816	Datum	52 000nT	Hor Scale	1:5 000	AREA	Molyhil
Geophysical Surveys.	Observer	T.H	Base Peg		Vert Scale	1cm : 500nT	PROSPECT	SCORPION 54
Plan No. 6533 S/C	Scale Fact		Date	NOV'82	Contour Int		PLAN SHOWS	Profiles of Total Magnetic Intensity



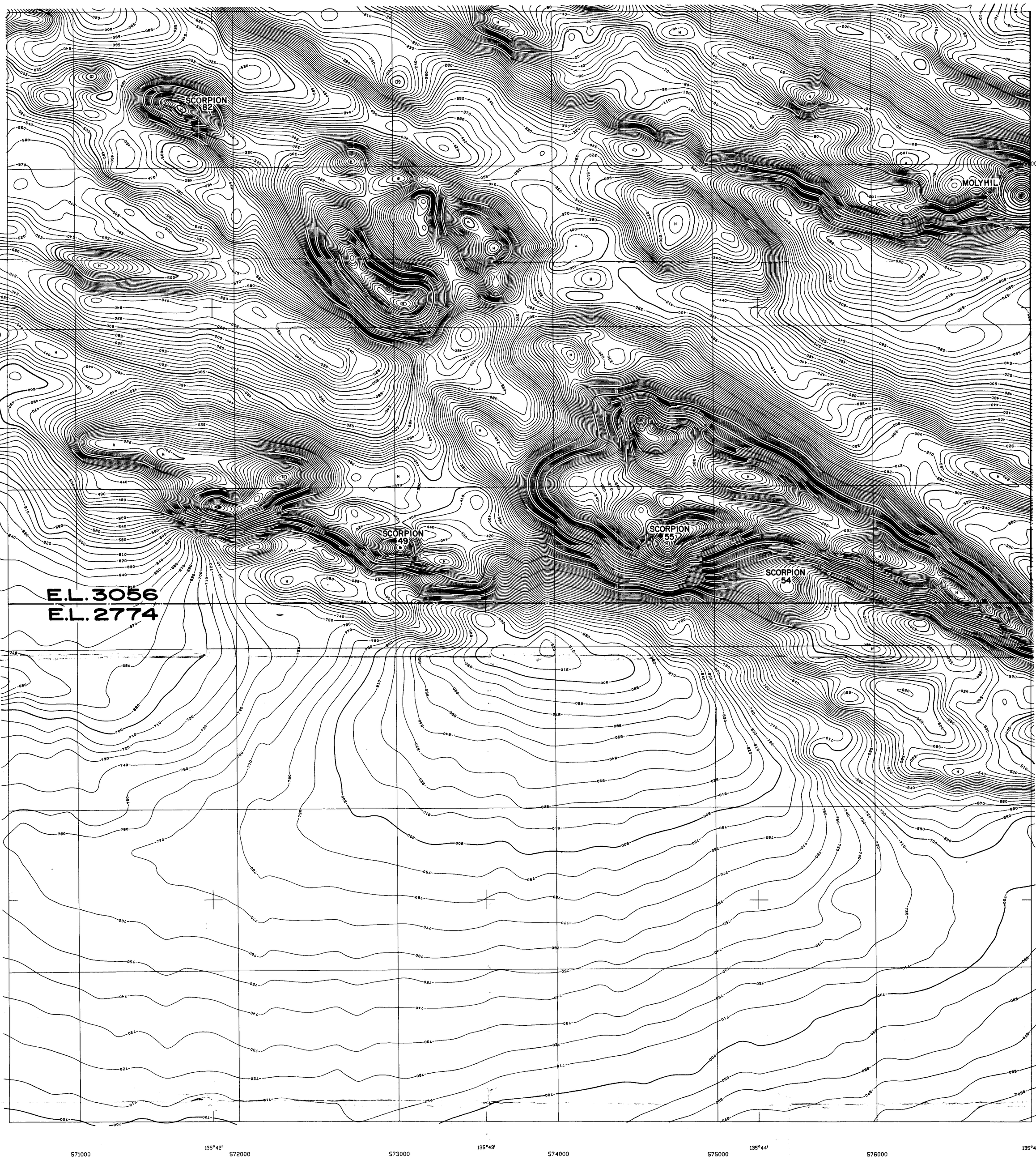
GEOPEKO LTD. Geophysical Surveys.	Instrument	G 816	Datum	52000nT	Hor Scale	1:5000	AREA	Molyhil
	Observer	I.O	Base Peg		Vert Scale	1cm : 500nT	PROSPECT	SCORPION 55
Plan No. 6522 S/C	Scale Fact		Date	NOV '82	Contour Int.		PLAN SHOWS	Profiles of Total Magnetic Intensity

APPENDIX IVb

EXPLORATION LICENCE 3056

ANNUAL REPORT
1983

1:10,000 Contoured Plans
of Geopeko's Aero Magnetic Data



EUROBRA
AIRBORNE GEOPHYSICAL SURVEY
TOTAL MAGNETIC INTENSITY

SURVEY SYSTEM

AIRCRAFT	NOMAD 22B VH-CPX
DOPPLER	DECCA 72
COMPASS	SPERRY GM9
NAVIGATION COMPUTER	DECCA TANS 94470
MAGNETOMETER	GEOMETRICS G813 Stinger Installation
SPECTROMETER	GEOMETRICS GR800D
Downward array	50340 cc NaI(Tl)
Upward array	8390 cc NaI(Tl)
ACQUISITION SYSTEM	SONOTEK IGSS1
RADIO NAVIGATION POSITIONING SYSTEM	MOTOROLA MINI RANGER MK 3

FLIGHT SPECIFICATION

TRAVERSE LINE INTERVAL	150 metres
TRAVERSE LINE DIRECTION	0 or 180 degrees
TIE LINE INTERVAL	3000 metres
TIE LINE DIRECTION	90 or 270 degrees
TERRAIN CLEARANCE	80 metres
SPEED	60 metres/sec
ACQUISITION INTERVAL	0.5 second
NAVIGATION	Real-time range range radar Doppler assisted

DATA PROCESSING

REGIONAL FIELD	IGRF Model 1980 removed
GRID CELL SIZE	60 metres

Survey by
AUSTIREX INTERNATIONAL LTD
July - August 1982

Project management and data processing by
GEOPEKO GEOPHYSICAL GROUP

HUCKITTA SF53-11
JINKA-311
6052-311
GEOPEKO

1:10 000

200 0 200 400 600 800 1000 Metres

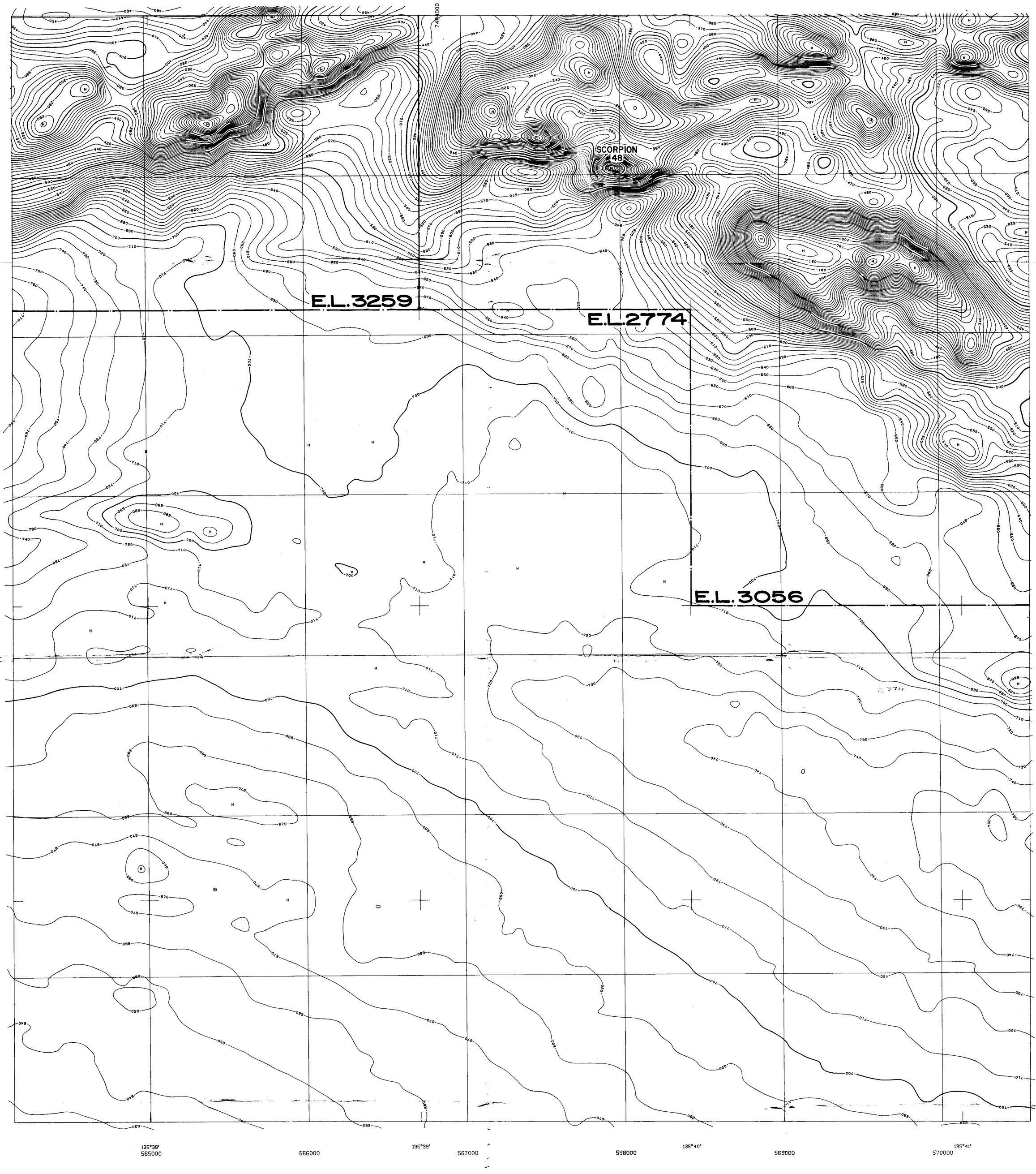
AUSTRALIAN MAP GRID
LOCATION DIAGRAM

N

6052 423	6052 422	6052 133
6052 314	6052 311	6052 244
6052 313	6052 312	6052 243

NORTHERN TERRITORY GEOLOGICAL SURVEY
CR83/141

DRAWN	REVISION	DATE
DATE		
GEOPHYSICS		
APPROVED		
DRAWING No.	REVISION No.	



EUROBRA
AIRBORNE GEOPHYSICAL SURVEY
TOTAL MAGNETIC INTENSITY

SURVEY SYSTEM

AIRCRAFT	NOMAD 22B VH-CPX
DOPPLER	DECCA 72
COMPASS	SPERRY GM9
NAVIGATION COMPUTER	DECCA TANS 9447D
MAGNETOMETER	GEOMETRICS G813 Stinger Installation
SPECTROMETER	GEOMETRICS GR800D
Downward array	50340 cc NaI(Tl)
Upward array	8390 cc NaI(Tl)
ACQUISITION SYSTEM	SONOTEK IGSS1
RADIO NAVIGATION POSITIONING SYSTEM	MOTOROLA MINI RANGER MK 3

FLIGHT SPECIFICATION

TRAVERSE LINE INTERVAL	150 metres
TRAVERSE LINE DIRECTION	0 or 180 degrees
TIE LINE INTERVAL	3000 metres
TIE LINE DIRECTION	90 or 270 degrees
TERRAIN CLEARANCE	80 metres
SPEED	60 metres/sec
ACQUISITION INTERVAL	0.5 second
NAVIGATION	Real-time range range radar Doppler assisted

DATA PROCESSING

REGIONAL FIELD	IGRF Model 1980 removed
GRID CELL SIZE	60 metres

Survey by
AUSTIREX INTERNATIONAL LTD
July – August 1982

Project management and data processing by
GEOPEKO GEOPHYSICAL GROUP

HUCKITTA SF53-11
JINKA-314
6052-314
GEOPEKO

1:10 000

200 0 200 400 600 800 1000 Metres

AUSTRALIAN MAP GRID

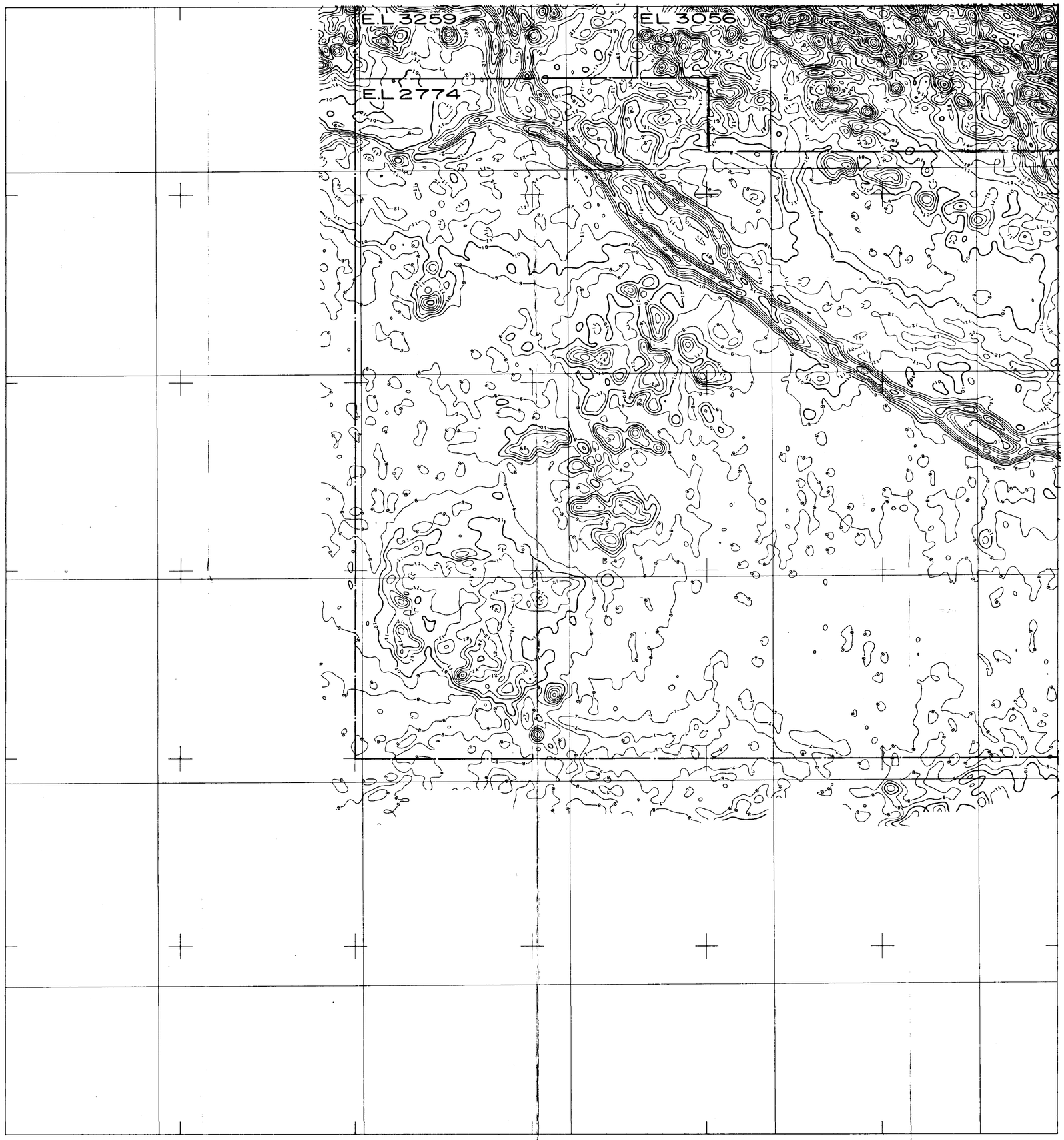
LOCATION DIAGRAM

N

6052 432	6052 423	6052 422
6052 341	6052 314	6052 311
6052 342	6052 313	6052 312

CR83/141
NORTHERN TERRITORY GEOLOGICAL SURVEY

DRAWN	REVISION	DATE
DATE		
GEOPHYSICS		
APPROVED		
DRAWING No.	REVISION No.	



HUCKITTA SF53-11

JINKA-3

6052-3

GEOPEKO

1:50 000

1000 0 1000 2000 3000 4000 5000 Metres

AUSTRALIAN MAP GRID

LOCATION DIAGRAM

5952 1	6052 4	6052 1
5952 2	6052 3	6052 2
5951 1	6051 4	6051 1

N

EUROBRA
AIRBORNE GEOPHYSICAL SURVEY
TOTAL RADIOELEMENT (ur)

SURVEY SYSTEM

AIRCRAFT	NOMAD 22B VH-CPX
DOPPLER	DECCA 72
COMPASS	SPERRY GM9
NAVIGATION COMPUTER	DECCA TANS 94470
MAGNETOMETER	GEOMETRICS G813 Stinger installation
SPECTROMETER	GEOMETRICS GR800D
Downward array	50340 cc NaI(Tl)
Upward array	8390 cc NaI(Tl)
ACQUISITION SYSTEM	SONOTEK IGS1
RADIO NAVIGATION POSITIONING SYSTEM	MOTOROLA MINI RANGER MK 3

FLIGHT SPECIFICATION

TRAVERSE LINE INTERVAL	150 metres
TRAVERSE LINE DIRECTION	0 or 180 degrees
TIE LINE INTERVAL	3000 metres
TIE LINE DIRECTION	90 or 270 degrees
TERRAIN CLEARANCE	80 metres
SPEED	60 metres/sec
ACQUISITION INTERVAL	0.5 second
NAVIGATION	Real-time range range radar Doppler assisted

DATA PROCESSING

GRID CELL SIZE	60 metres
2D LOW PASS FILTER	
Cut off frequency	0.2
Termination frequency	0.25

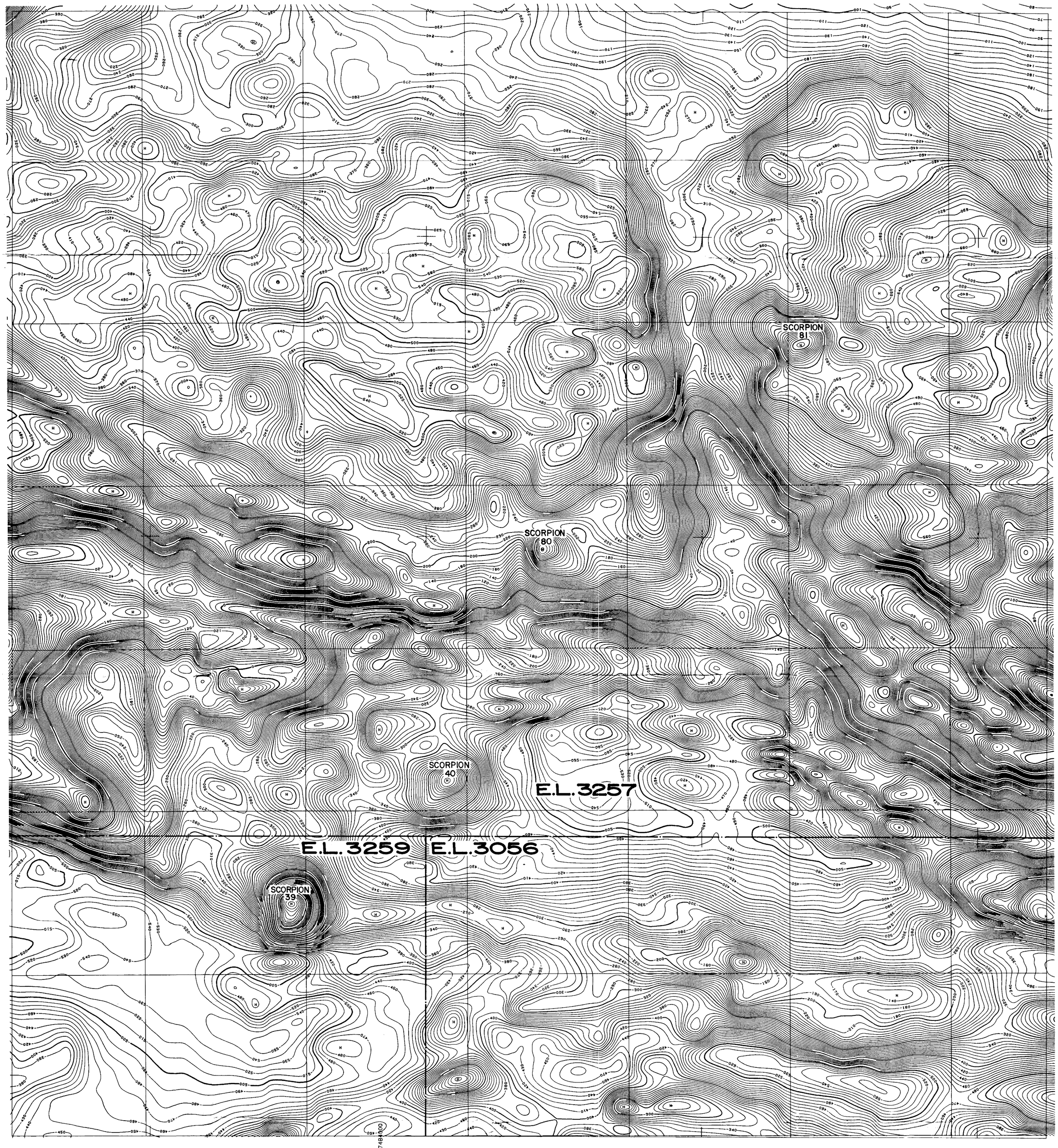
CR83/141

NORTHERN TERRITORY GEOLOGICAL SURVEY

DRAWN	REVISION	DATE
DATE		
GEOPHYSICS		
APPROVED		
DRAWING No.	REVISION No	

Survey by
AUSTIREX INTERNATIONAL LTD
July - August 1982

Project management and data processing by
GEOPEKO GEOPHYSICAL GROUP



EUROBRA
AIRBORNE GEOPHYSICAL SURVEY
TOTAL MAGNETIC INTENSITY

SURVEY SYSTEM

AIRCRAFT	NOMAD 22B VH-CPX
DOPPLER	DECCA 72
COMPASS	SPERRY GM9
NAVIGATION COMPUTER	DECCA TANS 94470
MAGNETOMETER	GEOMETRICS G813 Stinger installation
SPECTROMETER	GEOMETRICS GR800D
Downward array	50340 cc NaI(Tl)
Upward array	8390 cc NaI(Tl)
ACQUISITION SYSTEM	SONOTEK IGS51
RADIO NAVIGATION POSITIONING SYSTEM	MOTOROLA MINI RANGER MK 3

FLIGHT SPECIFICATION

TRAVERSE LINE INTERVAL	150 metres
TRAVERSE LINE DIRECTION	0 or 180 degrees
TIE LINE INTERVAL	3000 metres
TIE LINE DIRECTION	90 or 270 degrees
TERRAIN CLEARANCE	80 metres
SPEED	60 metres/sec
ACQUISITION INTERVAL	0.5 second
NAVIGATION	Real-time range range radar Doppler assisted

DATA PROCESSING

REGIONAL FIELD	IGRF Model 1980 removed
GRID CELL SIZE	60 metres

Survey by
AUSTIREX INTERNATIONAL LTD
July - August 1982

Project management and data processing by
GEOPEKO GEOPHYSICAL GROUP

HUCKITTA SF53-11
JINKA-423
6052-423
GEOPEKO

1:10 000

200 0 200 400 600 800 1000 Metres

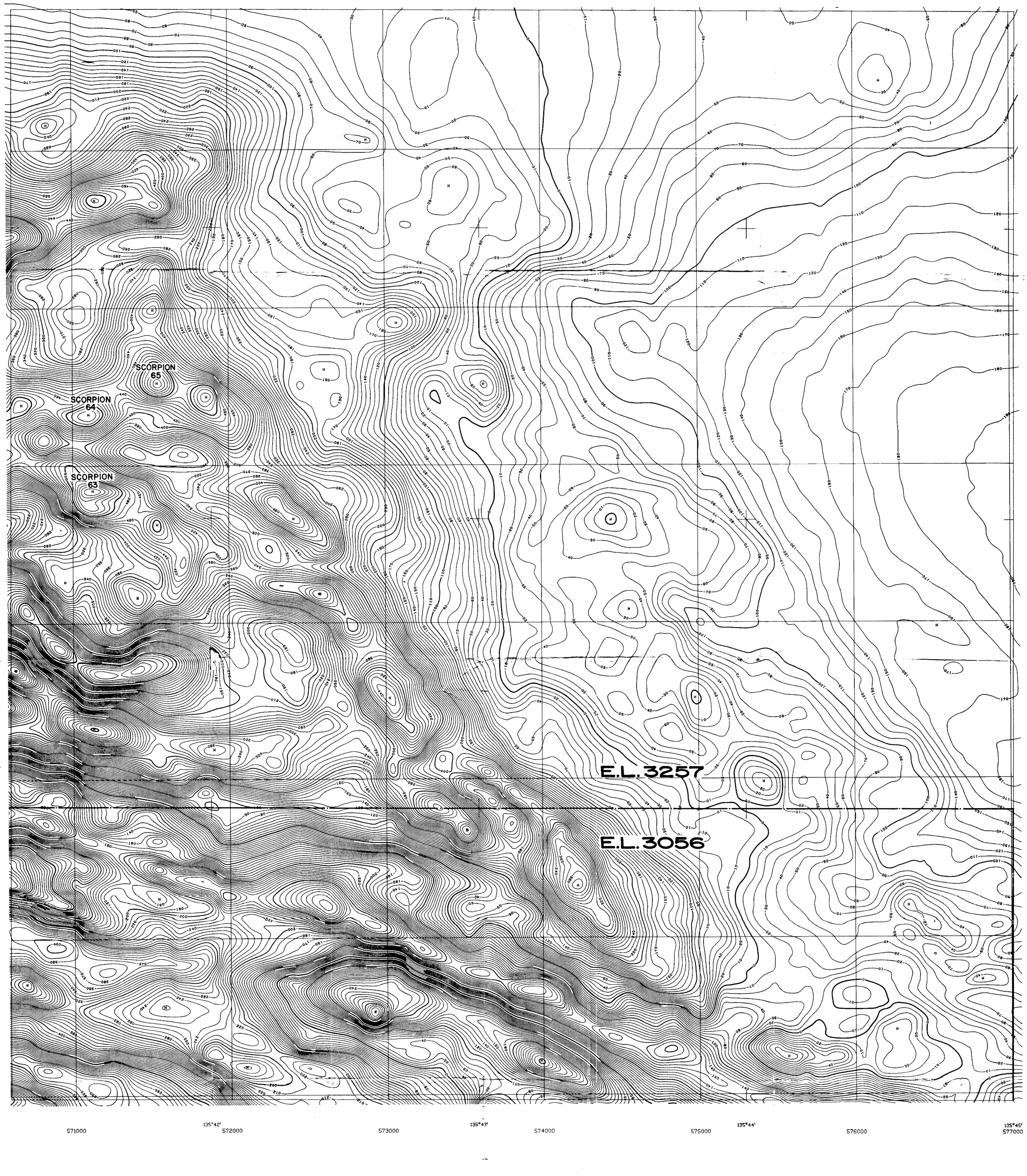
AUSTRALIAN MAP GRID
LOCATION DIAGRAM

N

6052 431	6052 424	6052 421
6052 432	6052 423	6052 422
6052 341	6052 314	6052 311

NORTHERN TERRITORY GEOLOGICAL SURVEY
CR83/141

DRAWN	REVISION	DATE
DATE		
GEOPHYSICS		
APPROVED		
DRAWING No.	REVISION No.	



EUROBRA
AIRBORNE GEOPHYSICAL SURVEY
TOTAL MAGNETIC INTENSITY

SURVEY SYSTEM

AIRCRAFT	NOMAD 22B VH-CPX
DOPPLER	DECCA 72
COMPASS	SPERRY GM9
NAVIGATION COMPUTER	DECCA TANS 94470
MAGNETOMETER	GEOMETRICS G813 Stinger installation
SPECTROMETER	GEOMETRICS GR800D
Downward array	50340 cc NaI(Tl)
Upward array	8390 cc NaI(Tl)
ACQUISITION SYSTEM	SONOTEK ICSS1
RADIO NAVIGATION POSITIONING SYSTEM	MOTOROLA MINI RANGER MK 3

FLIGHT SPECIFICATION

TRAVERSE LINE INTERVAL	150 metres
TRAVERSE LINE DIRECTION	0 or 180 degrees
TIE LINE INTERVAL	3000 metres
TIE LINE DIRECTION	90 or 270 degrees
TERRAIN CLEARANCE	80 metres
SPEED	60 metres/sec
ACQUISITION INTERVAL	0.5 second
NAVIGATION	Real-time range range radar Doppler assisted

DATA PROCESSING

REGIONAL FIELD	IGRF Model 1980 removed
GRID CELL SIZE	60 metres

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July - August 1982

Project management and data processing by
GEOPEKO GEOPHYSICAL GROUP

HUCKITTA SF53-11
JINKA-422
6052-422
GEOPEKO

1:10 000

200 0 200 400 600 800 1000 Metres

AUSTRALIAN MAP GRID
LOCATION DIAGRAM

N

6052 424	6052 421	6052 134
6052 423	6052 422	6052 133
6052 314	6052 311	6052 244

NORTHERN TERRITORY GEOLOGICAL SURVEY

CR 83/141

DRAWN	REVISION	DATE
DATE		
GEOPHYSICS		
APPROVED		
DRAWING No.	REVISION No.	

APPENDIX V

EXPLORATION LICENCE 3056

ANNUAL REPORT
1983

1:50,000 Contoured Plans
of Geopeko's Airborne Radiometric Data

135°30' 135°32'30" 135°35' 135°37'30" 135°40' 135°42'30" 135°45'

22°30' 22°32'30" 22°35' 22°37'30" 22°40' 22°42'30" 22°45'

7510000 7505000 7500000 7495000 7490000 7485000

555000 560000 565000 570000 575000

E.L 3257

E.L 3259

E.L 3056

HUCKITTA SF53-11

JINKA-4

6052-4

GEOPEKO

1:50 000

1000 0 1000 2000 3000 4000 5000 Metres

AUSTRALIAN MAP GRID

LOCATION DIAGRAM

N

5953 2	6053 3	6053 2
5952 1	6052 4	6052 1
5952 2	6052 3	6052 2

EUROBRA

AIRBORNE GEOPHYSICAL SURVEY

POTASSIUM (per cent)

SURVEY SYSTEM

AIRCRAFT	NOMAD 22B VH-CPX
DOPPLER	DECCA 72
COMPASS	SPERRY GM8
NAVIGATION COMPUTER	DECCA TANS 9447D
MAGNETOMETER	GEOMETRICS G813 Stinger installation
SPECTROMETER	GEOMETRICS GR800D
Downward array	50340 cc NaI(Tl)
Upward array	8390 cc NaI(Tl)
ACQUISITION SYSTEM	SONOTEK IGSS1
RADIO NAVIGATION POSITIONING SYSTEM	MOTOROLA MINI RANGER MK 3

FLIGHT SPECIFICATION

TRAVERSE LINE INTERVAL	150 metres
TRAVERSE LINE DIRECTION	0 or 180 degrees
TIE LINE INTERVAL	3000 metres
TIE LINE DIRECTION	90 or 270 degrees
TERRAIN CLEARANCE	80 metres
SPEED	60 metres/sec
ACQUISITION INTERVAL	0.5 second
NAVIGATION	Real-time range range radar Doppler assisted

DATA PROCESSING

GRID CELL SIZE	60 metres
2D LOW PASS FILTER	
Cut off frequency	0.2
Termination frequency	0.25

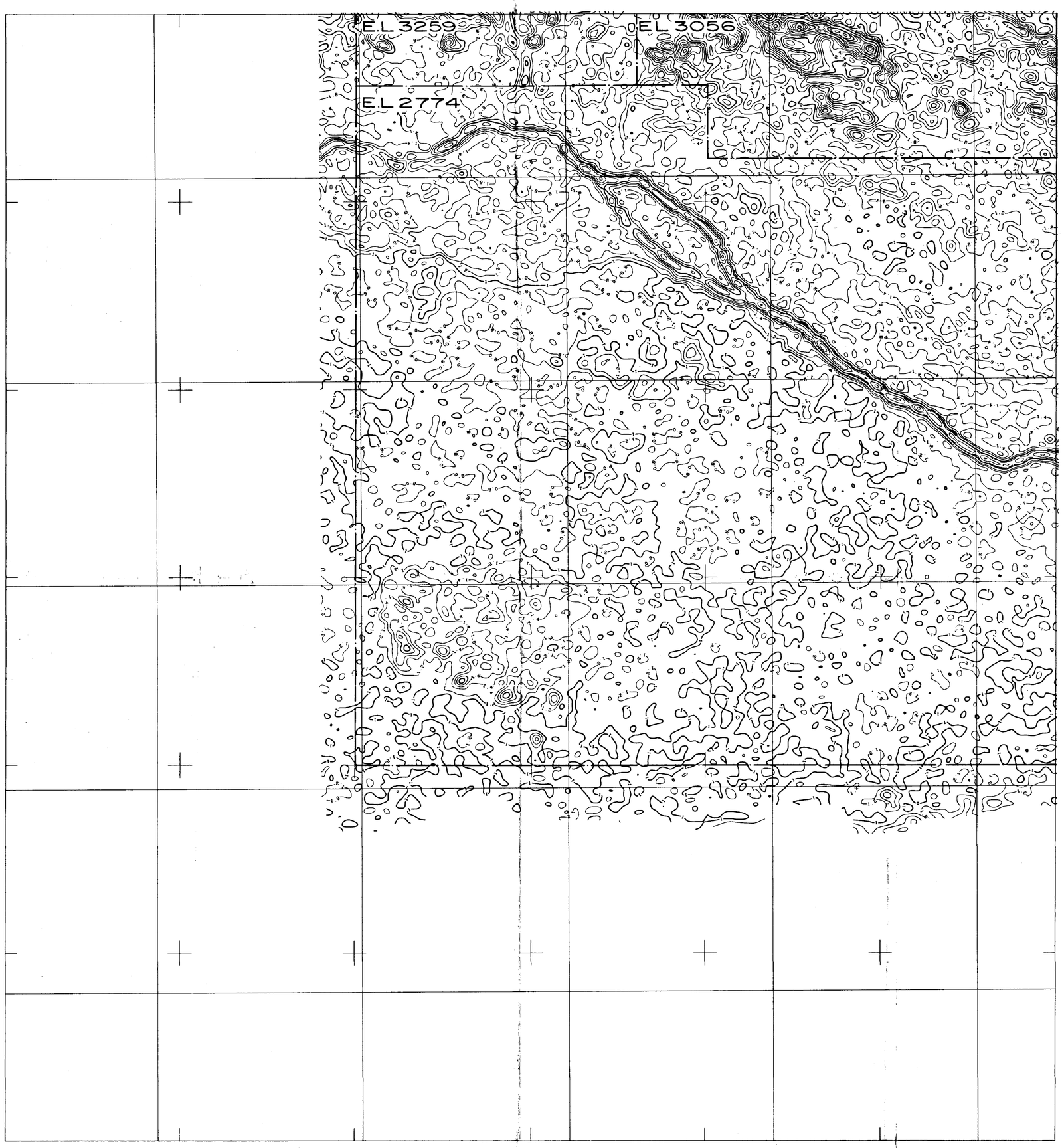
Survey by
AUSTIREX INTERNATIONAL LTD
July - August 1982

Project management and data processing by
GEOPEKO GEOPHYSICAL GROUP

NORTHERN TERRITORY GEOLOGICAL SURVEY.

CR83/141

DRAWN	REVISION	DATE
DATE		
GEOPHYSICS		
APPROVED		
DRAWING No.	REVISION No.	



HUCKITTA SF53-11

JINKA-3

6052-3

GEOPEKO

1:50 000

1000 0 1000 2000 3000 4000 5000 Metres

AUSTRALIAN MAP GRID

LOCATION DIAGRAM

N

5952 1	6052 4	6052 1
5952 2	6052 3	6052 2
5951 1	6051 4	6051 1

EUROBRA
AIRBORNE GEOPHYSICAL SURVEY

POTASSIUM (per cent)

SURVEY SYSTEM

AIRCRAFT	NOMAD 22B VH-CPX
DOPPLER	DECCA 72
COMPASS	SPERRY GM9
NAVIGATION COMPUTER	DECCA TANS 9447D
MAGNETOMETER	GEOMETRICS G813 Stinger installation
SPECTROMETER	GEOMETRICS GR8000
Downward array	50340 cc NaI(Tl)
Upward array	8390 cc NaI(Tl)
ACQUISITION SYSTEM	SONOTEK IGSS1
RADIO NAVIGATION POSITIONING SYSTEM	MOTOROLA MINI RANGER MK 3

FLIGHT SPECIFICATION

TRAVERSE LINE INTERVAL	150 metres
TRAVERSE LINE DIRECTION	0 or 180 degrees
TIE LINE INTERVAL	3000 metres
TIE LINE DIRECTION	90 or 270 degrees
TERRAIN CLEARANCE	80 metres
SPEED	60 metres/sec
ACQUISITION INTERVAL	0.5 second
NAVIGATION	Real-time range range radar Doppler assisted

DATA PROCESSING

GRID CELL SIZE	60 metres
2D LOW PASS FILTER	
Cut off frequency	0.2
Termination frequency	0.25

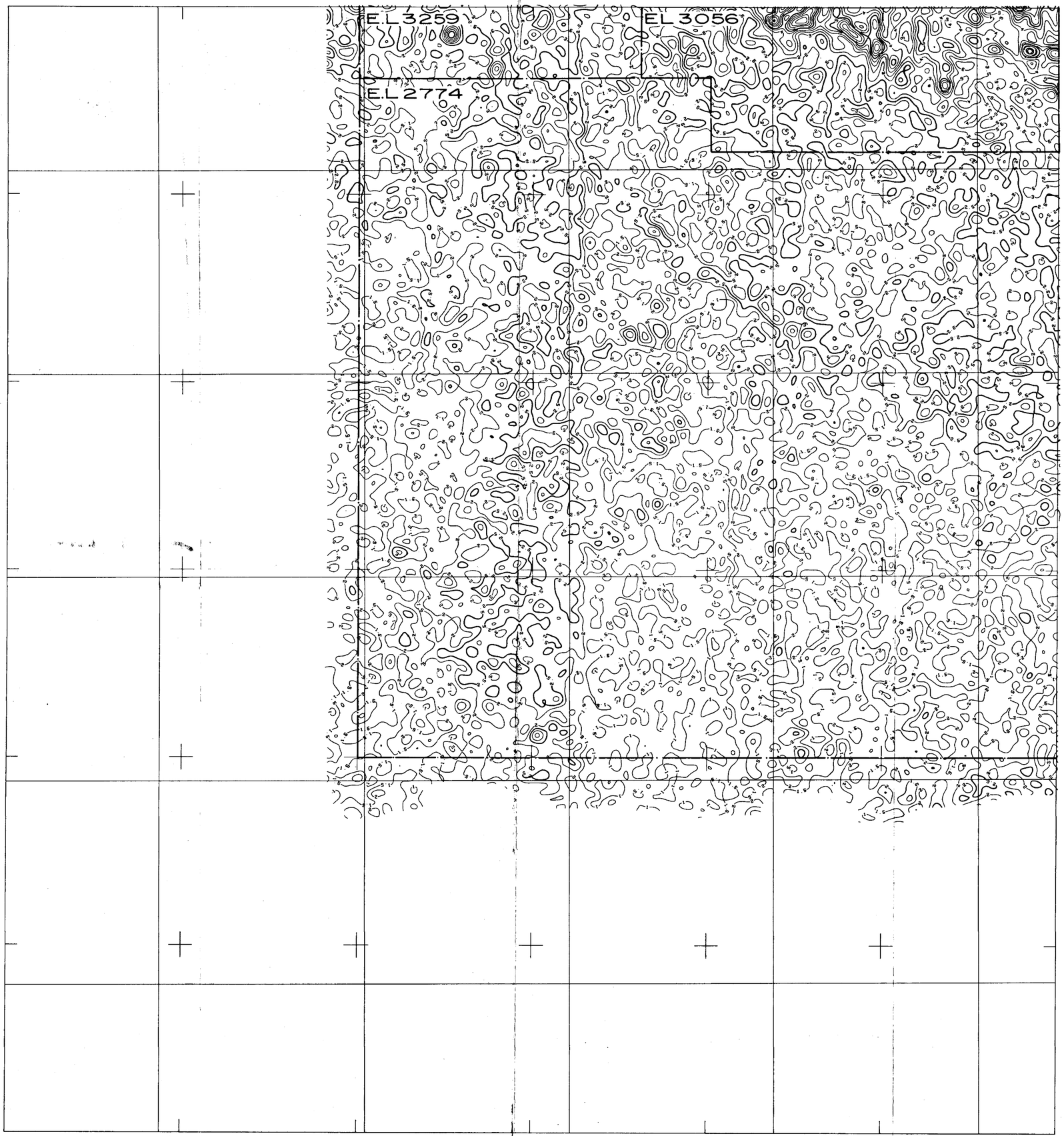
Survey by
AUSTIREX INTERNATIONAL LTD
July – August 1982

Project management and data processing by
GEOPEKO GEOPHYSICAL GROUP

NORTHERN TERRITORY GEOLOGICAL SURVEY

CR83/141

DRAWN	REVISION	DATE
DATE		
GEOPHYSICS		
APPROVED		
DRAWING No.	REVISION No.	



HUCKITTA SF53-11

JINKA-3

6052-3

GEOPEKO

1:50 000

1000 0 1000 2000 3000 4000 5000 Metres

AUSTRALIAN MAP GRID

LOCATION DIAGRAM

N

5952 1	6052 4	6052 1
5952 2	6052 3	6052 2
5951 1	6051 4	6051 1

EUROBRA

AIRBORNE GEOPHYSICAL SURVEY

EQUIVALENT URANIUM (ppm)

SURVEY SYSTEM

AIRCRAFT	NOMAD 22B VH-CPX
DOPPLER	DECCA 72
COMPASS	SPERRY GM9
NAVIGATION COMPUTER	DECCA TANS 94470
MAGNETOMETER	GEOMETRICS G813 Stinger Installation
SPECTROMETER	GEOMETRICS GR8000
Downward array	50240 cc NaI(Tl)
Upward array	8390 cc NaI(Tl)
ACQUISITION SYSTEM	SONOTEK IGS51
RADIO NAVIGATION POSITIONING SYSTEM	MOTOROLA MINI RANGER MK 3

FLIGHT SPECIFICATION

TRAVERSE LINE INTERVAL	150 metres
TRAVERSE LINE DIRECTION	0 or 180 degrees
TIE LINE INTERVAL	3000 metres
TIE LINE DIRECTION	90 or 270 degrees
TERRAIN CLEARANCE	80 metres
SPEED	60 metres/sec
ACQUISITION INTERVAL	0.5 second
NAVIGATION	Real-time range range radar Doppler assisted

DATA PROCESSING

GRID CELL SIZE	60 metres
2D LOW PASS FILTER	
Cut off frequency	0.15
Termination frequency	0.2

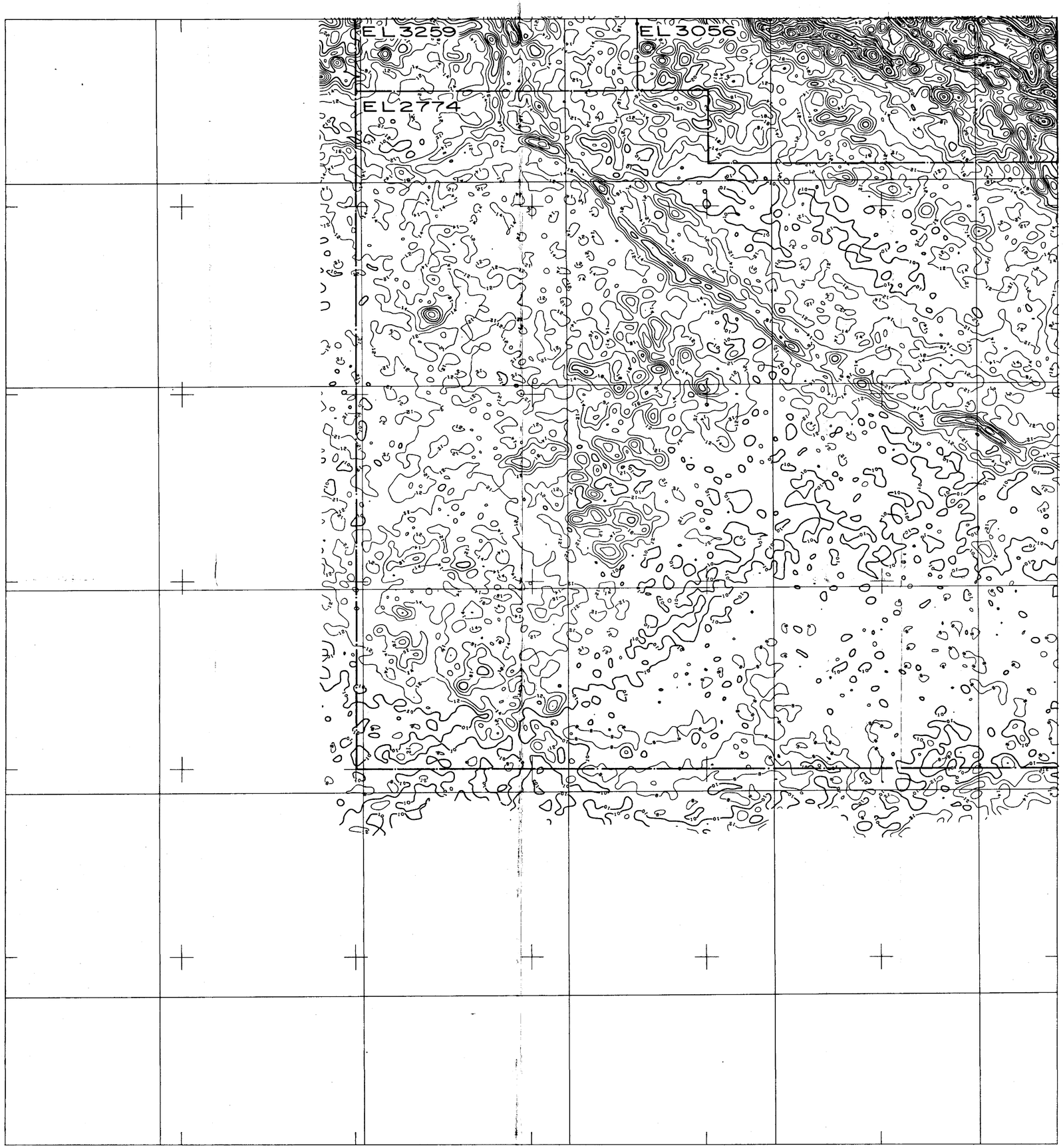
NORTHERN TERRITORY GEOLOGICAL SURVEY

CR83/141

DRAWN	REVISION	DATE
DATE		
GEOPHYSICS		
APPROVED		
DRAWING No.	REVISION No.	

Survey by
AUSTIREX INTERNATIONAL LTD
July - August 1982

Project management and data processing by
GEOPEKO GEOPHYSICAL GROUP



HUCKITTA SF53-11

JINKA-3

6052-3

GEOPEKO

1:50 000

1000 0 1000 2000 3000 4000 5000 Metres

AUSTRALIAN MAP GRID

LOCATION DIAGRAM

5952 1	6052 4	6052 1
5952 2	6052 3	6052 2
5951 1	6051 4	6051 1

N

EUROBRA
AIRBORNE GEOPHYSICAL SURVEY
EQUIVALENT THORIUM (ppm)

SURVEY SYSTEM

AIRCRAFT	NOMAD 228 VH-CPX
DOPPLER	DECCA 72
COMPASS	SPERRY GM9
NAVIGATION COMPUTER	DECCA TANS 9447D
MAGNETOMETER	GEOMETRICS G813 Stinger installation
SPECTROMETER	GEOMETRICS GR800D
Downward array	50340 cc NaI(Tl)
Upward array	8390 cc NaI(Tl)
ACQUISITION SYSTEM	SONOTEK IGSS1
RADIO NAVIGATION POSITIONING SYSTEM	MOTOROLA MINI RANGER MK 3

FLIGHT SPECIFICATION

TRAVERSE LINE INTERVAL	150 metres
TRAVERSE LINE DIRECTION	0 or 180 degrees
TIE LINE INTERVAL	3000 metres
TIE LINE DIRECTION	90 or 270 degrees
TERRAIN CLEARANCE	80 metres
SPEED	60 metres/sec
ACQUISITION INTERVAL	0.5 second
NAVIGATION	Real-time range range radar Doppler assisted

DATA PROCESSING

GRID CELL SIZE	60 metres
2D LOW PASS FILTER	
Cut off frequency	0.2
Termination frequency	0.25

NORTHERN TERRITORY GEOLOGICAL SURVEY

CR83/141

DRAWN	REVISION	DATE
DATE		
GEOPHYSICS		
APPROVED		
DRAWING No.	REVISION No.	

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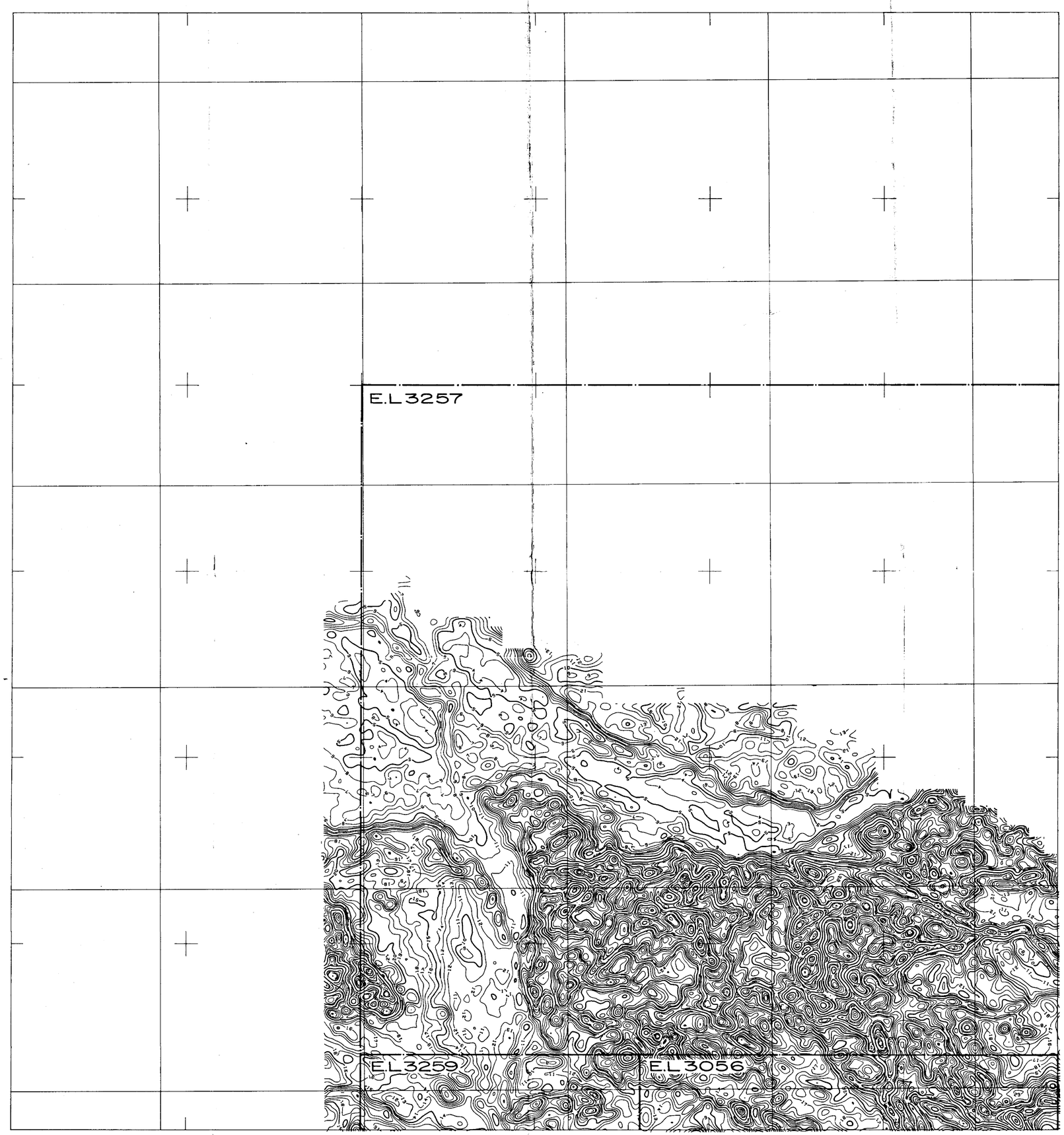
AUSTIREX INTERNATIONAL LTD
July - August 1982

Project management and data processing by
GEOPEKO GEOPHYSICAL GROUP



HUCKITTA SF53-11

JINKA-4

6052-4

GEOPEKO

1:50 000

1000 0 1000 2000 3000 4000 5000 Metres

AUSTRALIAN MAP GRID

LOCATION DIAGRAM

5953 2	6053 3	6053 2
5952 1	6052 4	6052 1
5952 2	6052 3	6052 2

N

EUROBRA

AIRBORNE GEOPHYSICAL SURVEY

TOTAL RADIOELEMENT (ur)

SURVEY SYSTEM

AIRCRAFT	NOMAD 22B VH-CPX
DOPPLER	DECCA 72
COMPASS	SPERRY GM9
NAVIGATION COMPUTER	DECCA TANS 9447D
MAGNETOMETER	GEOMETRICS G813 Stinger installation
SPECTROMETER	GEOMETRICS GR800D
Downward array	50340 cc NaI(Tl)
Upward array	8390 cc NaI(Tl)
ACQUISITION SYSTEM	SONOTEK IGSS1
RADIO NAVIGATION POSITIONING SYSTEM	MOTOROLA MINI RANGER MK 3

FLIGHT SPECIFICATION

TRAVERSE LINE INTERVAL	150 metres
TRAVERSE LINE DIRECTION	0 or 180 degrees
TIE LINE INTERVAL	3000 metres
TIE LINE DIRECTION	90 or 270 degrees
TERRAIN CLEARANCE	80 metres
SPEED	60 metres/sec
ACQUISITION INTERVAL	0.5 second
NAVIGATION	Real-time range range radar Doppler assisted

DATA PROCESSING

GRID CELL SIZE	60 metres
2D LOW PASS FILTER	
Cut off frequency	0.2
Termination frequency	0.25

Survey by
AUSTIREX INTERNATIONAL LTD
July - August 1982

Project management and data processing by
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NORTHERN TERRITORY GEOLOGICAL SURVEY
CR83/141

DRAWN	REVISION	DATE
DATE		
GEOPHYSICS		
APPROVED		
DRAWING No.	REVISION No.	

135°30' 135°32'30" 135°35' 135°37'30" 135°40' 135°42'30" 135°45'

22°30' 22°32'30" 22°35' 22°37'30" 22°40' 22°42'30" 22°45'

7510000 7505000 7500000 7495000 7490000 7485000

555000 560000 565000 570000 575000

E.L3257

EL3259

EL3056

HUCKITTA SF53-11

JINKA-4

6052-4

GEOPEKO

1:50 000

1000 0 1000 2000 3000 4000 5000 Metres

AUSTRALIAN MAP GRID

LOCATION DIAGRAM

N

5953 2	6053 3	6053 2
5952 1	6052 4	6052 1
5952 2	6052 3	6052 2

EUROBRA

AIRBORNE GEOPHYSICAL SURVEY

EQUIVALENT THORIUM (ppm)

SURVEY SYSTEM

AIRCRAFT	NOMAD 22B VH-CPX
DOPPLER	DECCA 72
COMPASS	SPERRY GM9
NAVIGATION COMPUTER	DECCA TANS 94470
MAGNETOMETER	GEOMETRICS G813 Stinger Installation
SPECTROMETER	GEOMETRICS GR8000
Downward array	50340 cc NaI(Tl)
Upward array	8390 cc NaI(Tl)
ACQUISITION SYSTEM	SONOTEK IGS51
RADIO NAVIGATION POSITIONING SYSTEM	MOTOROLA MINI RANGER MK 3

FLIGHT SPECIFICATION

TRAVERSE LINE INTERVAL	150 metres
TRAVERSE LINE DIRECTION	0 or 180 degrees
TIE LINE INTERVAL	3000 metres
TIE LINE DIRECTION	90 or 270 degrees
TERRAIN CLEARANCE	80 metres
SPEED	60 metres/sec
ACQUISITION INTERVAL	0.5 second
NAVIGATION	Real-time range range radar Doppler assisted

DATA PROCESSING

GRID CELL SIZE	60 metres
2D LOW PASS FILTER	
Cut off frequency	0.2
Termination frequency	0.25

NORTHERN TERRITORY GEOLOGICAL SURVEY

CR83/141

Survey by
AUSTIREX INTERNATIONAL LTD
July - August 1982

Project management and data processing by
GEOPEKO GEOPHYSICAL GROUP

DRAWN	REVISION	DATE
DATE		
GEOPHYSICS		
APPROVED		
DRAWING No.	REVISION No.	

135°30' 135°32'30" 135°35' 135°37'30" 135°40' 135°42'30" 135°45'

22°30' 22°32'30" 22°35' 22°37'30" 22°40' 22°42'30" 22°45'

7510000 7505000 7500000 7495000 7490000 7485000

555000 560000 565000 570000 575000

E.L3257

E.L3259 E.L3056

HUCKITTA SF53-11

JINKA-4

6052-4

GEOPEKO

1:50 000

1000 0 1000 2000 3000 4000 5000 Metres

AUSTRALIAN MAP GRID

LOCATION DIAGRAM

N

5953 2	6053 3	6053 2
5952 1	6052 4	6052 1
5952 2	6052 3	6052 2

EUROBRA

AIRBORNE GEOPHYSICAL SURVEY

EQUIVALENT URANIUM (ppm)

SURVEY SYSTEM

AIRCRAFT	NOMAD 22B VH-CPX
DOPPLER	DECCA 72
COMPASS	SPERRY GM9
NAVIGATION COMPUTER	DECCA TANS 94470
MAGNETOMETER	GEOMETRICS G813 Stinger Installation
SPECTROMETER	GEOMETRICS GR8000
Downward array	50340 cc NaI(Tl)
Upward array	8390 cc NaI(Tl)
ACQUISITION SYSTEM	SONOTEK ICSS1
RADIO NAVIGATION POSITIONING SYSTEM	MOTOROLA MINI RANGER MK 3

FLIGHT SPECIFICATION

TRAVERSE LINE INTERVAL	150 metres
TRAVERSE LINE DIRECTION	0 or 180 degrees
TIE LINE INTERVAL	3000 metres
TIE LINE DIRECTION	90 or 270 degrees
TERRAIN CLEARANCE	80 metres
SPEED	60 metres/sec
ACQUISITION INTERVAL	0.5 second
NAVIGATION	Real-time range range radar Doppler assisted

DATA PROCESSING

GRID CELL SIZE	60 metres
2D LOW PASS FILTER	
Cut off frequency	0.15
Termination frequency	0.2

Survey by
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July - August 1982

Project management and data processing by
GEOPEKO GEOPHYSICAL GROUP

NORTHERN TERRITORY GEOLOGICAL SURVEY

CR83/141

DRAWN	REVISION	DATE
DATE		
GEOPHYSICS		
APPROVED		
DRAWING No.	REVISION No.	

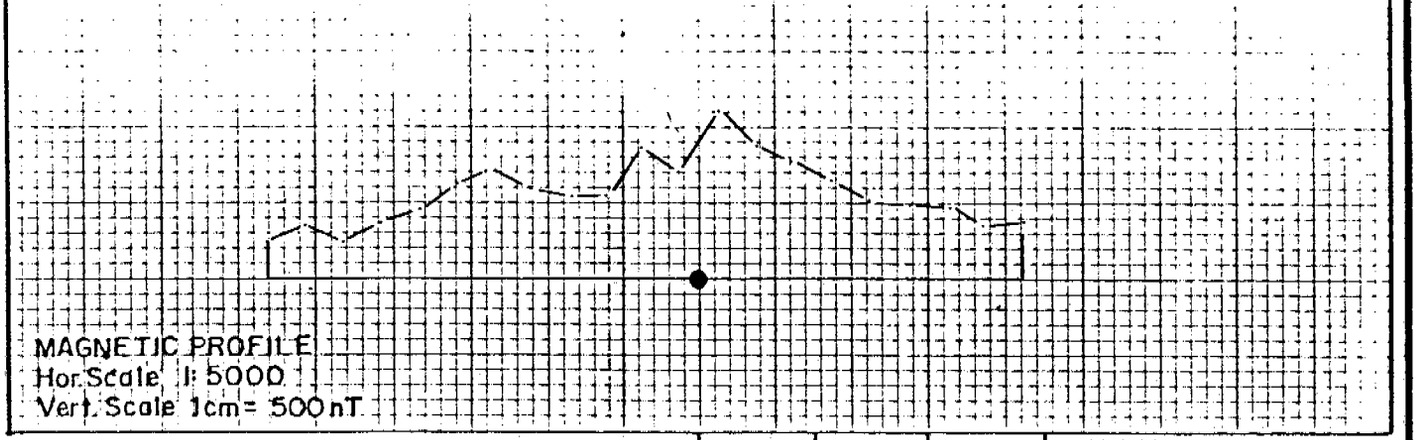
APPENDIX VI

EXPLORATION LICENCE 3056

ANNUAL REPORT
1983

Percussion Drill Logs for Scorpions 54 and 55.

Including Results of Grain Counting
and Chemical Analyses.



MAGNETIC PROFILE
Hor. Scale 1: 5000
Vert. Scale 1cm = 500nT

S54-1

	Mag Sus 10-3 cgs	Cu ppm.	W ppm	SURFACE
Weathered granite with hornblende	1.1	25	3.0	6
	2.0	35	3.0	10
	3.3	40	3.0	13
	3.2	85	1.0	16
Calc-silicate	5.0	45	2.0	19
	4.9	35	1.0	22
	4.9	40	1.0	25
	3.7	50	1.0	28
				31
				34
				37
				40
				43
				46
				49
				52
				55
				58
				61
				64
				67
				70
				73
				76
				79
				82

GEOPEKO

PROJECT	PEKO – PETROCARB EXPLORATION J.V.		
AREA	MOLY HIL		
DATA	SCORPION 54 PERCUSSION DRILLING		
SCALE	COMPILED	DATE	DRAWN
1:500	B.L.K / T.H.	FEB 83	A.FLEMING

GEOPEKO - DARWIN DRILL LOGGING SHEET

AREA/PROSPECT MOLYHIL DRILL HOLE NO: SCORPION 54-1 DATE 1.12.82 / 2.12.82 LOGGED BY S. TURLEY

DOWN HOLE DEPTH FROM m	DOWN HOLE DEPTH TO m	GEOLOGICAL DESCRIPTION	FROM m	TO m	MAG. SUS. 10^{-3} cgs units	GRAIN COUNT	Cu ppm	W ppm
0	6	WEATHERED GRANITE WITH HORNBLENDE	0	6	1.1	0	25	3.0
		Weathered layer of calcrete on top of granite. Veins of quartz. The granite						
		composed major: orange-pink microcline, quartz plagioclase with minor biotitic						
		hornblende-rich metasediment present containing accessory magnetite.						
6	7	DARK, GREY CALC-SILICATE	6	7	1.3	0	-	-
		Sub-crystalline calc-silicate composed of major amphibole (?hornblende)with pyroxene.						
		Granite and siliceous fragments present.						
7	10	DARK, GREY CALC-SILICATE	7	10	2.0	0	35	3.0
		Medium to fine grained, charcoal grey unit, with a light grey-green medium grained						
		crystalline component with minor granite. Major amphibole and pyroxene with minor						
		magnetite.						

GEOPEKO - DARWIN DRILL LOGGING SHEET

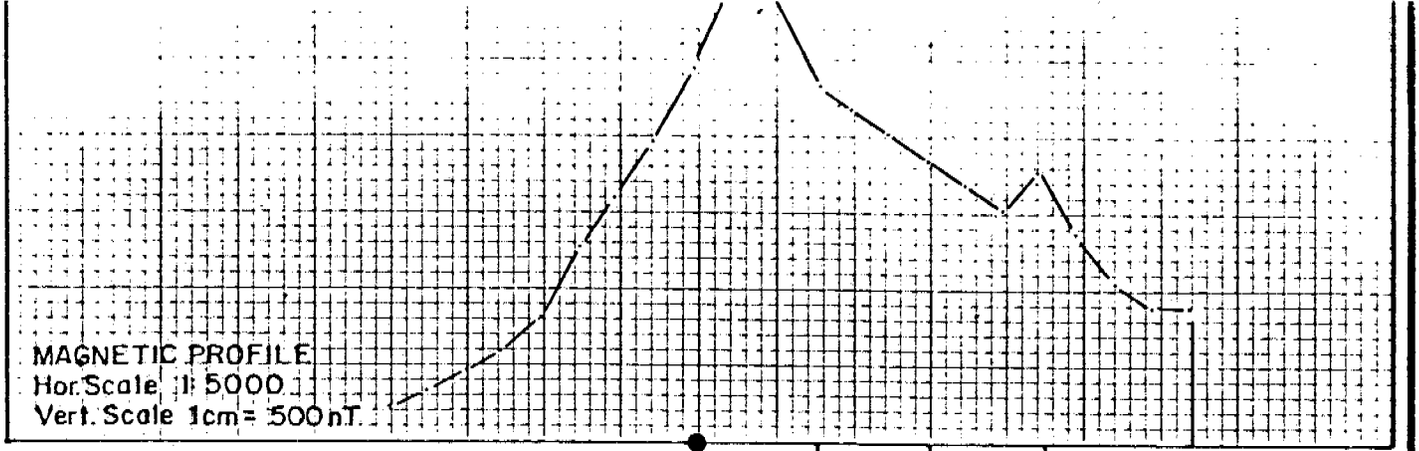
AREA/PROSPECT MOLYHIL DRILL HOLE NO: SCORPION 54-1 DATE..... LOGGED BY .....

DOWN HOLE DEPTH FROM m	DOWN HOLE DEPTH TO m	GEOLOGICAL DESCRIPTION	FROM m	TO m	MAG. SUS. 10^{-3} cgs units	GRAIN COUNT	Cu ppm	W ppm
10	13	DARK GREY-GREEN CALC-SILICATE	10	13	3.3	0	40	3.0
		Fine-medium calc-silicate with very fine banding. Major amphibole, pyroxene and						
		quartz with minor mica (?phlogopite) and accessory magnetite.						
13	16	DARK GREY-GREEN CALC-SILICATE	13	16	3.2	0	85	1.0
		As above with the presence of accessory almandine garnet.						
16	19	DARK GREY-GREEN CALC-SILICATE	16	19	5.0	0	45	2.0
		Composed of dark amphibole with a platy tabular habit whilst the pyroxene is						
		crystalline and equigranular. Major amphibole (?hornblende) and pyroxene with						
		accessory magnetite and traces of pyrite.						
19	22	DARK GREY-GREEN CALC-SILICATE	19	22	4.9	0	35	1.0
		As above - with accessory pyrite and biotite.						

GEOPEKO - DARWIN DRILL LOGGING SHEET

AREA/PROSPECT MOLYHIL DRILL HOLE NO: SCORPION 54-1 DATE..... LOGGED BY .....

DOWN HOLE DEPTH		GEOLOGICAL DESCRIPTION	FROM	TO	MAG. SUS.	GRAIN COUNT	Cu	W
FROM m	TO m		m	m	10^{-3} cgs units		ppm	ppm
22	25	DARK GREY-GREEN CALC-SILICATE	22	25	4.9	0	40	1.0
		As above - with minor magnetite.						
25	28	DARK GREY-GREEN CALC-SILICATE	25	28	3.7	0	50	1.0
		As above.						
28		EOH						
		* Magnetic Susceptibility in 10^{-3} cgs units						



S55-1

Mag Sus 10^{-3} cgs	Cu ppm	W ppm	SURFACE
2.5	10	3.5	6
3.5	10	2.0	10
3.7	5	1.5	13
3.7	5	3.0	16
4.8	5	3.0	19
7.5	5	4.5	22
6.2	25	3.0	25
6.5	5	3.0	28
6.5	5	3.5	31
7.0	5	2.0	34
6.8	5	3.5	37
7.2	x	2.0	40
6.5	5	3.5	43
6.8	5	3.0	46
6.6	5	2.0	49
			52
			55
			58
			61
			64
			67
			70
			73
			76
			79
			82

Calc-silicate

GEOPEKO

PROJECT	PEKO - PETROCARB EXPLORATION J.V.
AREA	MOLY HIL
DATA	SCORPION 55 PERCUSSION DRILLING

SCALE	COMPILED	DATE	DRAWN
1:500	B.L.K / T.H.	FEB 83	A.FLEMING

GEOPEKO - DARWIN DRILL LOGGING SHEET

AREA/PROSPECT MOLYHIL DRILL HOLE NO: SCORPION 55-1 DATE 2.12.82 LOGGED BY S. TURLEY

DOWN HOLE DEPTH FROM m	DOWN HOLE DEPTH TO m	GEOLOGICAL DESCRIPTION	FROM m	TO m	MAG. SUS. 10^{-3} cgs units	GRAIN COUNT	Cu ppm	W ppm
0	6	WEATHERED CALC-SILICATE	0	6	2.5	0	10	3.5
		Medium grained crystalline fragments of grey-green calc-silicate. Composed of dark,						
		grey-green amphibole with light, green pyroxene. Oxidized fragments and red clays						
		present.						
6	10	CALC-SILICATE	6	10	3.5	0	10	2.0
		Major amphibole (?hornblende), pyroxene and quartz with minor biotite, microcline and						
		epidote with accessory magnetite and hematite with trace red fine grained mineral						
		?garnet. The overall appearance of the unit is a dark green-grey medium to fine						
		grained crystalline rock with a massive structure.						
10	13	CALC-SILICATE	10	13	3.7	0	5	1.5
		As above with the absence of microcline and garnet.						

GEOPEKO - DARWIN DRILL LOGGING SHEET

AREA/PROSPECT MOLYHIL DRILL HOLE NO: SCORPION 55-1 DATE 2.12.82 LOGGED BY S. TURLEY

DOWN HOLE DEPTH		GEOLOGICAL DESCRIPTION	FROM	TO	MAG. SUS.	GRAIN COUNT	Cu	W
FROM m	TO m		m	m	10^{-3} cgs units		ppm	ppm
13	16	CALC-SILICATE	13	16	3.7	0	5	3.0
		As above.						
16	19	CALC-SILICATE	16	19	4.8	0	5	3.0
		As above with microcline and possible garnet. Some fragments have a weathered appearance.						
19	22	CALC-SILICATE	19	22	7.5	0	5	4.5
		As above						
22	25	CALC-SILICATE	22	25	6.2	0	25	3.0
		As above with tremolite and minor pyrite.						
25	28	CALC-SILICATE	25	28	6.5	0	5	3.0

As above.

GEOPEKO - DARWIN DRILL LOGGING SHEET

AREA/PROSPECT MOLYHIL DRILL HOLE NO: SCORPION 55-1 DATE 2.12.82 LOGGED BY S. TURLEY

DOWN HOLE DEPTH		GEOLOGICAL DESCRIPTION	FROM	TO	MAG. SUS.	GRAIN COUNT	Cu	W
FROM m	TO m		m	m	10^{-3} cgs units		ppm	ppm
28	31	CALC-SILICATE	28	31	6.5	0	5	3.5
		As above						
31	34	CALC-SILICATE	31	34	7.0	0	5	2.0
		As above.						
34	37	CALC-SILICATE	34	37	6.8	0	5	3.5
		As above.						
37	40	CALC-SILICATE	37	40	7.2	0	x	2.0
		As above with very minor bands of red mineral ?garnet.						
40	43	CALC-SILICATE	40	43	6.5	0	5	3.5
		As above with lighter colour and higher proportion of quartz and feldspar present.						

GEOPEKO - DARWIN DRILL LOGGING SHEET

AREA/PROSPECT MOLYHIL DRILL HOLE NO: SCORPION 55-1 DATE 2.12.82 LOGGED BY S. TURLEY

DOWN HOLE DEPTH		GEOLOGICAL DESCRIPTION	FROM	TO	MAG. SUS.	GRAIN COUNT	Cu	W
FROM m	TO m		m	m	10^{-3} cgs units		ppm	ppm
43	46	CALC-SILICATE	43	46	6.8	0	5	3.0
		As above, light in colour with talc on joint surfaces.						
46	49	CALC-SILICATE	46	49	6.6	0	5	2.0
		As above.						
49		EOH						
		* Magnetic Susceptibility in 10^{-3} cgs units						