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EL 860 AND EL 1167

REEDY LAGOON

PROGRESS AND FINAL REPORTS TO LICENCE SURRENDER FOR THE PERIOD 20/7/81 TO 4/8/86

Submitted by
Stockdale Prospecting Ltd
1986

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PRIMARY INDUSTRIES AND RESOURCES SA

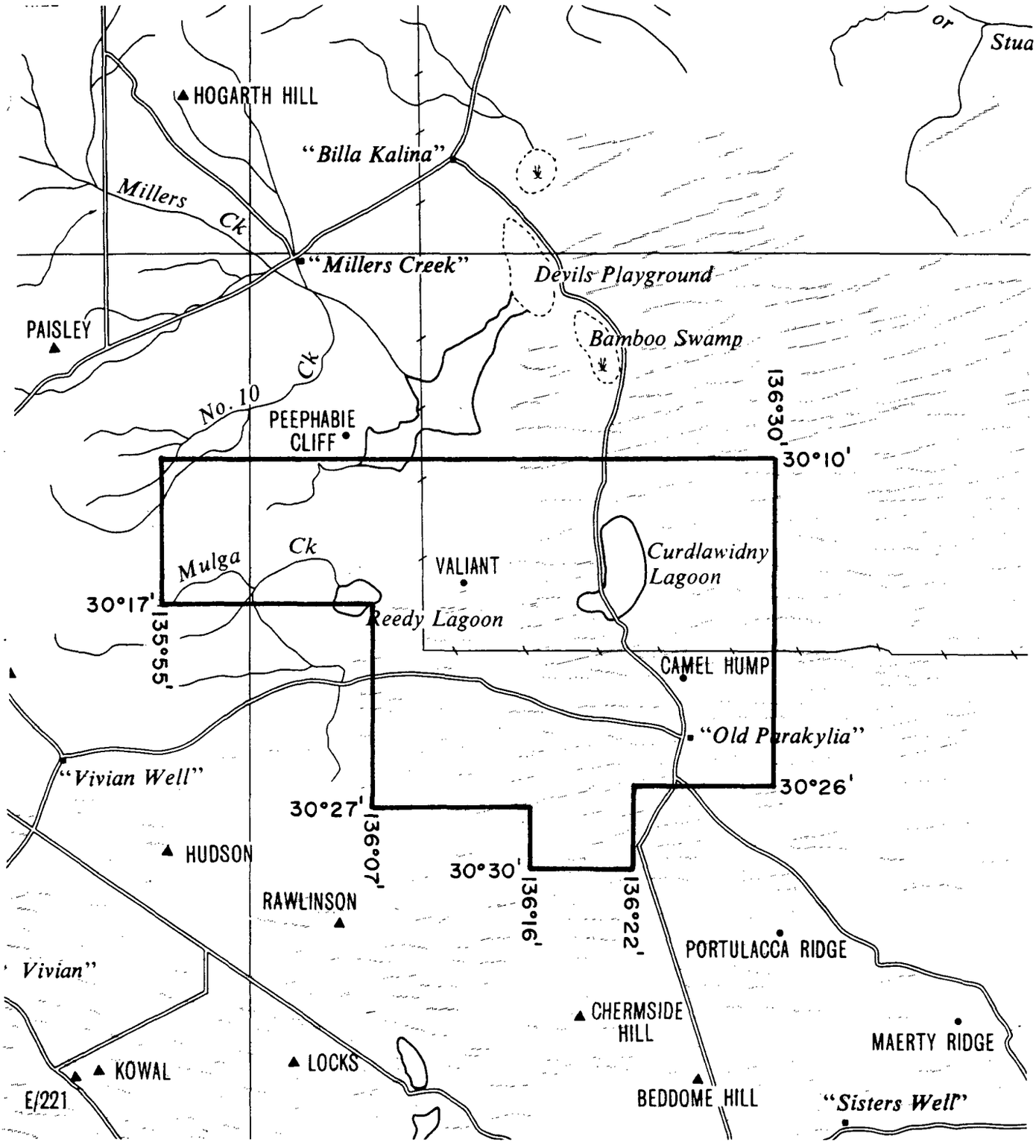
Transparencies in
Cylinder 4345/1.

CONTENTS ENVELOPE 4345

TENEMENT: E.L. 's 860 and 1167 Reedy Lagoon.

TENEMENT HOLDER: Stockdale Prospecting Ltd.

SCHEDULE A



EXPIRED

SCALE 1:500,000

KILOMETRES 10 0 10 20 30 40 50 KILOMETRES

APPLICANT: STOCKDALE PROSPECTING LIMITED

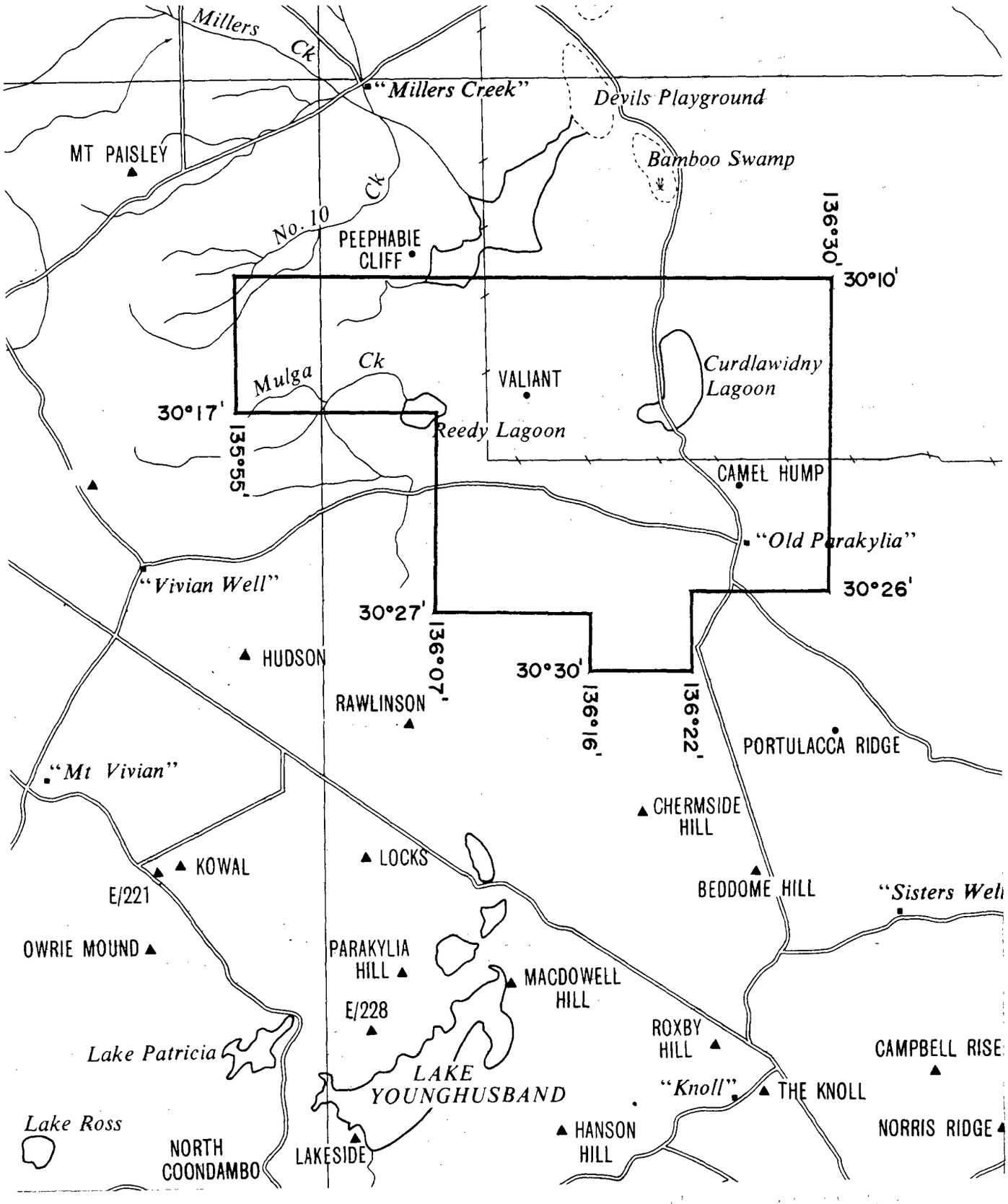
DM: 149/83 AREA: 1436 square kilometres (approx.)

1:250000 PLANS: KINGOONYA

LOCALITY: REEDY LAGOON AREA - Approx. 100km northeast of Kingoonya

DATE GRANTED: 5·8·83 DATE EXPIRED: 4·8·~~84~~ ~~85~~ 86 EL No: 1167

SCHEDULE A



SCALE 1:500,000

KILOMETRES 10 0 10 20 30 40 50 KILOMETRES

EXPIRED

APPLICANT: STOCKDALE PROSPECTING LIMITED

DM: 733/80

AREA: 1436 square kilometres

1:250000 PLANS: KINGOONYA

LOCALITY: REEDY LAGOON AREA – Approximately 100 kilometres north-east of Kingoonya

DATE GRANTED: 20·7·81

DATE EXPIRED: 19·7·82 83

EL No: 860

STOCKDALE PROSPECTING LIMITED

EXPLORATION LICENCE NUMBER 860: REEDY LAGOON

FIRST QUARTERLY REPORT FOR THE PERIOD ENDED 19TH OCTOBER, 1981

STOCKDALE
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Project Name: REEDY LAGOON

Title: EXPLORATION LICENCE NUMBER 860
FIRST QUARTERLY REPORT FOR THE PERIOD ENDED 19TH OCTOBER, 1981

Author/s: H.R. ROBISON, T.J. INGHAM

Project Leader:

Keywords: PHOTOGEOLOGY, GEOMORPHOLOGY, HEAVY MINERAL SAMPLING, STRATIGRAPHY, BORE HOLE DATA.

1 : 250,000 Sheet Name/s & No/s.: KINGOONYA SH 53-11

Text Pages No.: 9

Plan Nos.: 5

Table Nos.:

Appendices:

Date: NOVEMBER, 1981

DISTRIBUTION: SADME, HRR, TJI, IC.

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STOCKDALE PROSPECTING LIMITED

EXPLORATION LICENCE NUMBER 860: REEDY LAGOON

FIRST QUARTERLY REPORT FOR THE PERIOD ENDED 19TH OCTOBER, 1981

1. INTRODUCTION

Exploration Licence No. 860 occupies an area of 1,436 square kilometres and is located in the north eastern part of the Kingoonya 1:250,000 map sheet (Map 1). The licence was granted on 20th July, 1981.

This report summarises Stockdale Prospecting Limited's activities in the area prior to the grant of the licence, and details of work carried out in the period to 19th October, 1981.

2. PHYSIOGRAPHY

2.1 Topography

The area lies between 100 m and 150 m above sea level, and is of subdued relief, with a slight but perceptible increase in altitude from east to west. A few small hills form local eminences rising some 15 to 20 m above this general surface. Much of the area is covered by east-west trending vegetated longitudinal dunes, averaging some 6 m in height, which reach their greatest density and development in the north-eastern part of the licence. To the west, treeless silcrete gibber plains are a more characteristic landform. Surface drainage is poorly developed, and primarily consists of clay pans and small gutters in the intra-dunal corridors. Major elements of drainage are represented by Curdlawidny Lagoon (GR 435255) and, in the west, the Mulga Creek system (GR 400250), which flows into the licence area from higher ground around Mount Vivian.

2.2 Climate and Vegetation

The climate is semi-arid to arid (Forbes, 1977), with high summer temperatures, a low annual rainfall (about 150 mm) and a high potential evaporation rate in the order of 3500 mm. Vegetation is sparse in the west, and becomes better developed to the east over the sand dunes; it is typified by blue bush (Kochina spp), salt bush (Atriplex spp), mulga and myall (both Acacia spp) (Forbes, op. cit.).

2.3 Access

Access to the area is via the sealed road from Port Augusta to Woomera and thence north and westwards by reasonable dirt roads to "Parakylia" homestead, located in the southern part of the licence. From "Parakylia" a number of station tracks offer limited access to the licence area. A short (800 m) airstrip at Parakylia is suitable for light aircraft.

The whole of the licence lies within the Woomera Prohibited Area, and permission to enter the area is required from the Defence Support Centre at Woomera.

3. GEOLOGY

The licence area is situated near the south-western margin of the Great Artesian Basin and consequently most of the licence area is underlain at shallow depth by sub-horizontal sediments of Cretaceous age, which are covered by a variety of younger superficial deposits. The basal Cretaceous unit is the Cadna-owie Formation which is described (Forbes, op. cit.) as "brownish clayey (pale) or ferruginised (dark) sandstone; pebbly to bouldery sandstone" and has been tentatively asssigned a Neocomian age. This is overlain by the Aptian (?) Bulldog Shale, a white altered flaggy to medium-bedded shale, with claystone, siltstone and lithic sandstone. It may be noted that on the adjacent Billa Kalina map sheet area both the Cadna-owie and Bulldog Shale are described as containing cobble and boulder beds (Ambrose and Flint, 1981) and that field observations indicate that this is also the case in the area of EL 860.

The Cretaceous sediments are overlain and largely obscured by a number of Tertiary and Quaternary deposits, several of which relate to palaeodrainages and shorelines (see below). The Tertiary deposits are primarily silcretes, at least some of which have their origin in a regressive Miocene lake system which covered the licence and adjacent areas (Ambrose and Flint, 1979). As the silcretes contain clasts of silcrete, it is readily apparent that more than one episode of silcretisation has occurred. The Quaternary deposits occur as a variety of soils, colluvium, alluvium and wind-blown sands, the latter forming the dunes referred to above. There is a suggestion that the nature of the Quaternary deposit seen may reflect the underlying geology with for example the dunes being derived from the Cadna-owie Formation; however this relationship has yet to be confirmed and formalised.

The Cretaceous sediments unconformably overlie both Permian rocks of the southern extremity of the Arckaringa intracratonic basin (Wopfner, 1980), and older sediments of the Stuart Shelf. These older sediments in turn unconformably overlie Proterozoic basement, the surface of which is irregular, probably due to a combination of block faulting and differential erosion. However, knowledge of the pre-Cretaceous rocks of the licence area is almost exclusively limited to that obtained from drill and bore hole data.

4. BACKGROUND TO CURRENT PROSPECTING

Much of the Stuart Shelf area was covered by a wide ranging helicopter -supported reconnaissance heavy mineral sampling programme carried out by Stockdale Prospecting Limited during 1979 and 1980. During the course of this programme, heavy mineral stream and loam samples were collected at an average density of 1 sample per 6 - 7 square kilometres. Examination of the concentrates showed a few scattered samples to contain single grains of indicator minerals of kimberlitic type. Although the incidence of these grains was low, it was regarded as reliable, and an exploration licence application, now granted as EL 860, was therefore lodged over the area of interest. It was recognised that the complex geological and geomorphological history of the area would make the determination of the provenance of these grains a difficult task.

5. CURRENT PROSPECTING

5.1 Photogeological Study

Stockdale's Technical Services Division was requested to carry out an interpretation of the available aerial photography to examine the geology and geomorphology of the area, and to identify any anomalous features which might represent the surface expression of kimberlitic intrusive rocks. In order to place the observations made in a more regional perspective the study area was extended to cover the north - eastern portion of the Kingoonya 1:250,000 map sheet. The Kingoonya 1:250,000 4, 5, 7 colour composite Landsat image (106/081) was also examined.

Each stereopair from the Kingoonya 1972 1:89,000 colour photography was studied for drainage, outcrop, general geology, geomorphology and any anomalous features. This information was plotted on clear overlay material and mosaiced to form a photo-interpretation map (Map 2). A field visit was then undertaken to check ground truth, visit what were considered to be type localities, and examine features of possible interest.

A small outcrop of (?) Proterozoic rocks was noted near Millers Creek No. 13 Bore (GR 414246) but, except from drill holes, no other rocks of this age are known within the EL area. Pink and pale green crystalline dolomitic limestone occurring near "Parakylia" and as float to the north, and white crystalline limestone seen in the spoil of a disused well at the northern end of Curdlawidny Lagoon (GR 435262) are probably of Cambrian Age.

To the north of the licence Permian sediments are known to occur on the western edge of Devil's Playground and the southern flank of Miller's Creek Plateau (Ambrose and Flint, 1979), and include a heterogeneous suite of boulders and erratics (Baglin and David, 1977). Boulders are also seen within EL 860, where they occur scattered over Curdlawidny Lagoon, and in sandstones in outcrop and dam spoil north of "Parakylia". Similar sandstones, in places also containing erratics, are preserved under remnant caps of silcrete and minor laterite along the western edge of a north-south chain of lakes (GR 423240) some 15 km WNW of "Parakylia".

Within the study area the Cadna-owie Formation consists of marginal marine and fluvial-deltaic sandstones, often ferruginised, conglomerates and shales. These form discontinuous areas of low, dark outcrop and suboutcrop, and are often difficult to distinguish on the photographs from areas of lag gravel. Angular to rounded boulders of quartzite, reddish porphyry (Gawler Range Volcanics), jasper and some granite were noted.

The Bulldog Shale overlies the Cadna-owie Formation, and consists of a marine transgressive sequence of argillaceous limestone, shale, mudstone, sandstone and conglomerate. This unit is extensively altered in places, and kaolin and gypsum are widespread and abundant, whilst the shales are frequently silicified beneath Tertiary silcrete cappings. Angular to rounded quartzite boulders are present, whilst other exotic clasts have been reported in the literature.

There appears to have been some reworking of erratics (and presumably other material) from the Permian into the Cadna-owie Formation, and thence into the Bulldog Shale. The suggestion is that the less resistant boulders are destroyed during these processes, so that whilst the Permian displays the full suite of erratics, the Cadna-owie has a less varied boulder content and the Bulldog shale carries almost exclusively quartzite clasts.

Tertiary sediments in the area appear restricted to silcretes and other duricrusts, capping palaeodrainages and/or features related to the regressive Miocene lake (see above), of which Curdlawidny Lagoon appears to be a remnant. Duricrusted ridges, interpreted as representing a palaeo-shoreline developed during a still stand in the regression of the lake, occur 4 km north of Parakylia.

The geomorphological history of the area is complex, and has involved a number of erosion cycles, which have led to a number of planation surfaces now covered with lag gravels. Sand dunes partly derived from the erosion of Permian (?) and Cretaceous sediments have migrated over this landscape.

The first stages of deposition of the Miocene lake system were characterised by a warm, high rainfall climate, during which time the EL area was part of the shallow lake basin. In later stages, a more arid climate developed, resulting in a westward contraction of the lake, and in silicification of shoreline features and other suitable environments during pauses in the regression (Ambrose and Flint, 1979).

The Tertiary features are post-dated, and in places overlain, by recent sand dunes. The latter are of longitudinal type, and are well developed to the east of Curdlawidny Lagoon. The dunes are generally about 6 m in height, and may reach lengths in excess of 10 km. They are essentially east-west trending and sub-parallel, but are sometimes seen to converge and/or coalesce. Vegetation is fairly well developed, and the dunes may be regarded as fixed. However modification is currently occurring, through the addition of wind-borne sediments to the crests, and by deflation and the development of blow outs where vegetation is sparse. Spillage into the swales broadens the width of the dune structures.

Vegetated and bare pans are scattered throughout the interdunal corridors, and may form the foci for locally developed internal drainages. In some instances (eg GR 423240) chains of pans form conspicuous alignments, which may well be structurally controlled. Drainage channels following the swales may terminate in the small interdunal pans, or where better developed, flow greater distances and reach major "lakes" such as Curdlawidny Lagoon. In extreme cases these channels have sufficient erosive power to modify the tips of dunes.

Lag gravels occur scattered through the dune field and on the surfaces of some pans. They are also developed in the extreme west of the EL. They consist predominantly of quartzite and silcrete clasts, but in some areas a more varied suite is seen, as at GR 425261 where gneiss, granite, limestone, porphyritic rhyolite and ? greywacke were observed in addition to quartzite and silcrete. As the surfaces on which the lag gravels occur are still in the process of exhumation, it is apparent that the boulder suite seen must relate to the age of the surface exhumed and the nature of the sediment forming the retreating scarp.

Curdlawidny Lagoon (together with Bamboo Swamp and the Devil's Playground which lie to the north, outside the EL) is a remnant of a Quaternary lake, itself a remnant of the Miocene lacustrine system. Sedimentation is currently active here, although occurring at a slow rate. The eastern margin is marked by a lunette, behind which drainage accumulates along a chain of lagoons. The lunette is interpreted as a Quaternary shoreline. At the south-western margin of the lagoon fluvial sediments fan out as deltaic accumulations where streams terminate.

At least three drainage cycles have been observed within the EL, the earliest being the now silicified Tertiary cycle associated with the Miocene lake system. A younger Quaternary drainage, also primarily lake-oriented, may be distinguished from this as it is unsilicified. Both these palaeodrainages are now modified and incised by the third, current cycle. However, the major elements of the landscape are interpreted as likely to be of long standing, and that erosional development since the Tertiary has modified rather than drastically changed them. It is concluded that the licence area has been part of a large shallow basin, within which detrital material has been of essentially locally derived origin, since early Tertiary times.

5.2 Compilation of Drilling Data

As part of the survey of background information, drill and borehole (water well) information available on SADME open files was compiled for the licence and surrounding area. Most of the holes within the licence are water wells, and interpretation is therefore subjective as it has been made by attempting to match the driller's descriptions with the lithological descriptions given in literature for the various formations. Data collated is indicated on Map 3, which suggests that the Permian is only patchily present within the east, but thickens to the north and west. The maximum thickness of Quaternary is about 12 m, and was recorded from localities just outside the western and northern EL boundaries. This is a significant observation, which indicates that the development of surficial deposits is not sufficient to prevent heavy mineral dispersion from a bedrock source.

5.3 Heavy Mineral Sampling

A high density heavy mineral sampling programme over an east-west strip of some 320 km^2 in the north of the EL has recently been completed. The programme was carried out from a base camp at "Old Parakylia" Homestead, and covers parts of the Curdlawidny and Peephabie 1:50,000 topographic map sheets (Maps 4 and 5). Samples were collected using two sampling teams in a "leap frogging" technique supported by a Hiller 12-E helicopter, which permitted a high degree of accuracy in navigation and sample location.

Sample sites were "drainage oriented" and interdunal drainage channels and pans were preferentially sampled. Where such sites were not available, loam scape samples were collected. In a few instances, surface material and gibber plain areas consisted entirely of pebbles and fine gypsiferous dust, and no sample could be collected. However, the pre-determined sample density of 1 sample per square kilometre was closely adhered to, with a total of 323 samples collected.

Material collected was screened at 12 and 36 mesh on site to produce a retained sample of about 15 kg of -12/+36 mesh. Sites were flagged and marked with aluminium tags to aid recovery if required. Samples were transported to the Central Treatment Plant in Whyalla for treatment, and jig concentrates were onforwarded to the company's Melbourne laboratory for heavy liquid separation and mineralogical examination. Sample weights, concentrate weights and a count of common garnet grains present are being recorded for all samples to monitor the effectiveness of the sampling techniques employed. Data currently to hand indicates that they are highly satisifactory.

Results have been received for about half the samples collected, and the presence of kimberlitic indicator minerals has been confirmed. However at present their distribution pattern is rather confused and an assessment of its significance is best left until all results are available. The relatively complex geological, and particularly geomorphological, history of the area will make following the indicator minerals to source a difficult proposition.

6. FUTURE PROGRAMME

Further work within EL 860 will be as follows:

1. A more detailed study of the local geology to obtain a better understanding of the area and to assist in the interpretation of heavy mineral dispersion.

2. Additional sampling over positive areas to provide more indicator mineral grains for study.

3. An examination of the area for palaeodrainage, also as an aid to the interpretation of heavy mineral dispersion.

4. Examination of anomalous photo-features by ground checking, heavy mineral sampling and ground magnetometry as appropriate.

7. STAFF

The staff employed within the Exploration Licence during the report period were as follows:

Classification	Average No. Employed
Geologists	2.5
Field Technician	1
Prospecting Hands	4
Mechanic	2 months
Cook	1
(Pilot - contractor's staff)	1

Supervision was provided by the Regional Geologist with assistance from the Exploration Manager. The project was supported by the facilitiies of our office, laboratory and Technical Services Division in Melbourne.

8. EXPENDITURE

Expenditure for the period was $236,533, which has been allocated as follows:

Management/Office Services	$52,288
Field Staff - Technical	31,884
- Other	21,538
General Field Expenses	34,458
Transport - Ground	17,608
- Air	36,418
Sample handling - preparation	18,243
Equipment Amortisation	18,336
Specialist Services	
- Photogeology	5,259
- Other	501
TOTAL FOR THIS PERIOD	$236,533

K.J. Stracke
EXPLORATION MANAGER

H.R. Robison,
T.J. Ingham

Whyalla,
November, 1981
:bshrr4

Distribution: SADME, HRR, TJI, IC.

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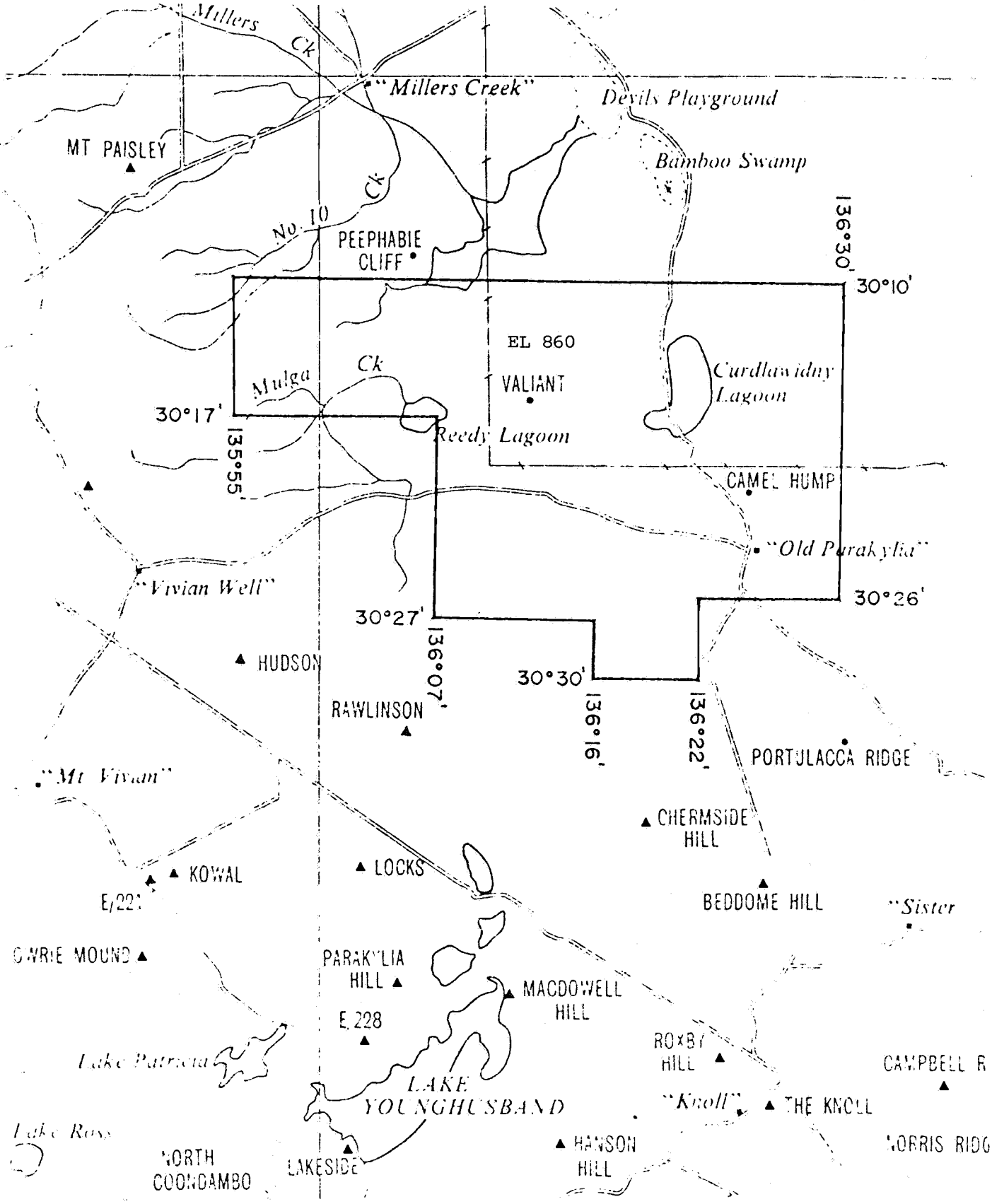
SCHEDULE A

MAP 1



LOCATION MAP

NOTE There is no warranty that the boundary of this Exploration Licence

136° 30'

SANDY PLAINS

possible extension of drainage channel from Millers Ck

Rjv

15'

reworked sediment

capping ?

Ydr

F10

prominent cap outlier

infilled with dunes

level II

receding shoreline

level I

lag gravels in pans between dunes

CURDLAWIDNY LAGOON

G

F9

F8

SANDY PLAINS

E.L. 860

30° 15'

31° 15'

? Rjv or Ydr

F7

reworked sediment

F6

receding shoreline

modified dunes

F3

dunes encroaching lake system

F4

track

silcrete ridges

F5

"OLD PARAKYLIA" H/S

30° 30'

136° 00'

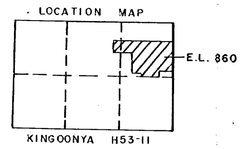
15'

136° 30'

Legend

- G — Gilgai
- Bedding traces
- Dip of bedding
- Lineaments
- F12 — Photo Anomalies (see 'Reedy Lagoon' report)
- Lake or pan
- Road, track or fence
- Dam
- Level I — Present lake level
- Level II / III — Infilled lake relative to level I
- P — Pediment surface
- Escarpment
- Si — Silicified Tertiary drainage
- Pdr — Abandoned Early Quaternary drainage
- Ydr — Recent drainage
- Rjv — Rejuvenated Early Quaternary drainage
- Previous extent of shoreline
- Trend of dunes

LOCATION MAP



4345-1

MAP 2

STOCKDALE PROSPECTING LIMITED

PART KINGOONYA H53-11

PHOTOINTERPRETATION (OVER E.L. 860)

Compiled	I.J. & S.J.W.
Drawn	M.A.K.
Date	OCT '81
Scale	1:89,000
Revised	
	SEL 12178

136° 30' E

30° 15' S

E.L. 860

○ ?Q — 3m
Klc — 40.5
Plb — 140.5
Pwo
BOH-169.8

○ Plb — 95.1
?Pwm
BOH-148.0

Q — 7.9
Klc — 18.9
?Pz
K1 ● ○ BOH-22.2

Q-Pz — 45.6
Єh — 136.8
Pwo — 186.8
Pwm — 414.8
Pp
BOH-551.6

K3 ○ Q-Pz — 30.4
Єh — 152.0
Pwm — 425.6
Pp
BOH-577.6

○ Klc — 12.2
Plb — 54.9
?Pz
BOH-92.7

○ Q — 3.0
Klc
BOH-63.0

Klc — 48.7
Plb
○ BOH-51.0

○ Q — 6.7
Kmb — 14.0
Klc
BOH-49.2

○ Q — 2.0
Plb — 34.7
Pwm
BOH-44.6

○ Q — 12.2
Plb — 39.6
Єh — 41.1
Pwm
BOH-48.8

○ Klc — 26.5
Єh — 38.3
Pwo — 44.1
Pwm
BOH-48.3

○ Q — 7.2
Kmb — 27.3
Klc — 47.1
Pwm
BOH-52.0

● AS 1
Q — 8.0
Kmb — 12.2
Єh — 92.2
Pwo
BOH-156.2

○ Q — 3.0
Plb — 17.0
Єh
BOH-37.1

○ Plb — 23.9
Pft
BOH-31.1

○ Q — 2.4
Єh
BOH-37.9

Q — 4.6 ○
Klc — 15.8
?Pz
BOH-31.0

○ Q — 5.5
?Pz
B.O.H-20.8

○ Q — 3.6
Єh
BOH-33.6

○ Q — 2.1
Klc — 26.2
Plb — 39.2
?Pz
BOH-43.7

○ Q — 8.1
Plb
BOH-31.5

● P2
?Q — 5.0
Klc — 7.5
Єh BOH-26.5

● P3
?Q — 5.0
Klc — 32.0
Єh
BOH-40.0

N

5 0 5 10 15 20
KILOMETRES

○ Water bore interpretation of driller's logs tentative

AS.1 ● Drillhole: A.S. Australian Selection P/L 1978
K Kennecott Expl. (Aust.) Ltd. 1979
P BHP Co. Ltd 1976

-3.0 Depth to base of unit (metres)

BOH. 31.1 Depth to base of hole (metres)

Q	- Quaternary		MESOZOIC
Kmb	- Cretaceous	Bulldog Shale	
Klc		Cadna-owie Formation	
Plb	- Permian	Boorthanna Formation	PALAEOZOIC
Pz	?	Uncertain, ? Lower Palaeozoic	
Єh	- Cambrian	Andamooka Limestone	
Pwo	- Marinoan	Arcoona Quartzite Member	PROTEROZOIC
Pwm		Woomera Shale member	
Pft	- Sturtian	Tapley Hill Formation	
Pp	- ?Willouran	Pandurra Formation	

LOCATION MAP

KINGOONYA H53-11

Map 3

STOCKDALE PROSPECTING LIMITED

H-53-11 E.L. 860

DRILL HOLE DATA

Compiled HRR	Drawn MAK	Date NOV. '81	Scale 1:250,000	SEL 1323

AUSTRALIA 1:50 000
TOPOGRAPHIC SURVEY

CURDLAWIDNY

SOUTH AUSTRALIA

REFER TO THIS MAP AS:
SERIES R742
SHEET 6137-I
EDITION 1-AAS

E.L. 860

PARAKYLIA HOMESTEAD 20 km

PRODUCED by the Royal Australian Survey Corps under the direction of the Chief of the General Staff.
PRINTED by the Royal Australian Survey Corps, 1980
DISTRIBUTED to the Defence Services by the Royal Australian Survey Corps and to all other map users by the Department of National Development and Energy
CONTROL Horizontal: Triangulation and EDM Traversing
Vertical: Airborne Profile Recorder
Supplemented by Aerotriangulation
AIR PHOTOGRAPHY. Super Wide Angle flown 1973
COMPILATION By photogrammetric methods in 1978 with field verification in 1978.
ACCURACY. Horizontal: 90% of well defined detail within ±12.5m of true position
Vertical: 90% of elevations within ±10m except in areas of dense vegetation where this may not be achieved

UNIVERSAL GRID REFERENCE

BEFORE GIVING A GRID REFERENCE, CIVILIAN USERS SHOULD STATE THE NUMBER AND NAME OF THIS MAP."

6137-I CURDLAWIDNY

GRID ZONE DESIGNATION 53J — 100 000 METRE SQUARE IDENTIFICATION: PG	TO GIVE A STANDARD REFERENCE ON THIS SHEET TO NEAREST 100 METRES			
IGNORE the SMALLER figures of any grid number; these are for finding the full co-ordinates. Use ONLY the LARGER figures of the grid numbers; example 621000	SAMPLE POINT: 97-			
	1 Read letters identifying 100 000 metre square in which the point lies:	PG		
	2 Locate first VERTICAL grid line to LEFT of point and read LARGE figures labelling the line either in the top or bottom margin, or on the line itself.		30	
	3 Estimate tenths from grid line to point		0	
	4 Locate first HORIZONTAL grid line BELOW point and read LARGE figures labelling the line in either the left or right margin, or on the line itself.			58
	5 Estimate tenths from grid line to point			3
	SAMPLE REFERENCE			PG308583
	If reporting beyond 18° in any direction, prefix with Grid Zone Designation, eg			53JPG308583

SERIES R742
SHEET 6137-I
EDITION 1-AAS

GRID CONVERGENCE 10 MILS (0·5°)

GRID-MAGNETIC ANGLE 120 MILS (6·5°)

TRUE NORTH, GRID NORTH AND MAGNETIC NORTH ARE SHOWN DIAGRAMMATICALLY FOR THE CENTRE OF THIS MAP. MAGNETIC NORTH IS CORRECT FOR 1975 AND MOVES EASTERLY BY LESS THAN 2 MILS (0·1°) IN ABOUT NINE YEARS
TO CONVERT A MAGNETIC BEARING TO A GRID BEARING ADD GRID-MAGNETIC ANGLE

SCALE 1:50 000

kilometres 0 1 2 3 4 5 6 7 8 kilometres

FULL LATITUDE AND LONGITUDE VALUES ARE SHOWN AT THE SHEET CORNERS. WITH MINUTE TICKS AROUND THE NEATLINE. EVERY FIFTH TICK IS LABELLED
BLACK NUMBERED GRID LINES ARE 1000 METRE INTERVALS OF THE UNIVERSAL TRANSVERSE MERCATOR GRID ZONE 53 (AUSTRALIAN MAP GRID), AUSTRALIAN NATIONAL SPHEROID
GRID VALUES ARE SHOWN IN FULL ONLY AT THE SOUTH WEST CORNER OF THE MAP
VERTICAL DATUM AUSTRALIAN HEIGHT DATUM
HORIZONTAL DATUM AUSTRALIAN GEODETIC DATUM 1966
TRANSVERSE MERCATOR PROJECTION
CONTOUR INTERVAL 20 METRES
ELEVATIONS IN METRES

Users can also assist in the improvement of this product by alerting corrections and additions which come to their attention and mailing to DEPARTMENT OF DEFENCE (ARMY OFFICE), RUSSELL OFFICES CANBERRA 2600 AUSTRALIA.

LEGEND

- Built up area; Divided highway, Metropolitan route marker
- Recreation reserve with oval; Drive in theatre; Underpass
- Sealed road two or more lanes; National route marker
- Sealed road one lane; Embankment
- Unsealed road two or more lanes
- Unsealed road one lane; Cutting
- Vehicle track, Road bridge; Gate; Stock grid
- Foot track; Foot bridge
- Multiple track railway; Station
- Single track railway; Light railway
- Railway tunnel, bridge, underpass
- High voltage transmission line
- Fence; Prominent telephone line
- Mine; Windmill, Church, Building
- Horizontal control point; Spot elevation
- Contour with value; Supplementary contour
- Depression contour; Sand; Distorted surface
- Levee, bank or sand ridge; Joint or rock fissure
- High cliff; Escarpment
- Vegetation, Dense, geodium, scattered
- Vegetation distinctive; Distinctive grass
- Orchard or vineyard; Line of trees or windbreak
- Mangrove swamp; Area subject to inundation
- Swamp, Swamp definite boundary
- Perennial lake; Watercourse
- Intermittent lake; Watercourse
- Mainly dry lake; Watercourse
- Tank or small dam; Perennial waterhole
- Saline coastal flat, Intertidal flat
- Navigation light; Intertidal ledge or reef
- Pier, Exposed wreck, Prominent submerged wreck
- Prominent submerged reef, rock
- Indefinite watercourse; shoreline; Rock bar or wreash

o Sample locations, 1981

● Kimberlitic gornet

4345-2

WATERCOURSE GUIDE

All watercourses on this map are mainly dry.

MEAN TEMPERATURE RAINFALL
MIRIKATA

°C 40 30 20 10 0 -10

Average Annual 187mm

mm 25 20 15 10 5 0

J F M A M J J A S O N D

DEF:ARMY/9335

INDEX TO ADJOINING MAPS

BILLA KALWA 6138 III	EMU CREEK 6138 II	6238 III
PEEPHABIE 6137-IV	CURDLAWIDNY 6137-I	MIDDEN SWAMP 6237-IV
REEDY LAGOON 6137-III	PARAKYLIA 6137-II	WIGAN 6237-III

PART OF 1:100 000 MAP
6137 PARAKYLIA

STOCKDALE PROSPECTING LTD
CURDLAWIDNY
SOUTH AUSTRALIA

SAMPLE LOCATION MAP

Current Sampling to: (19-10-81)

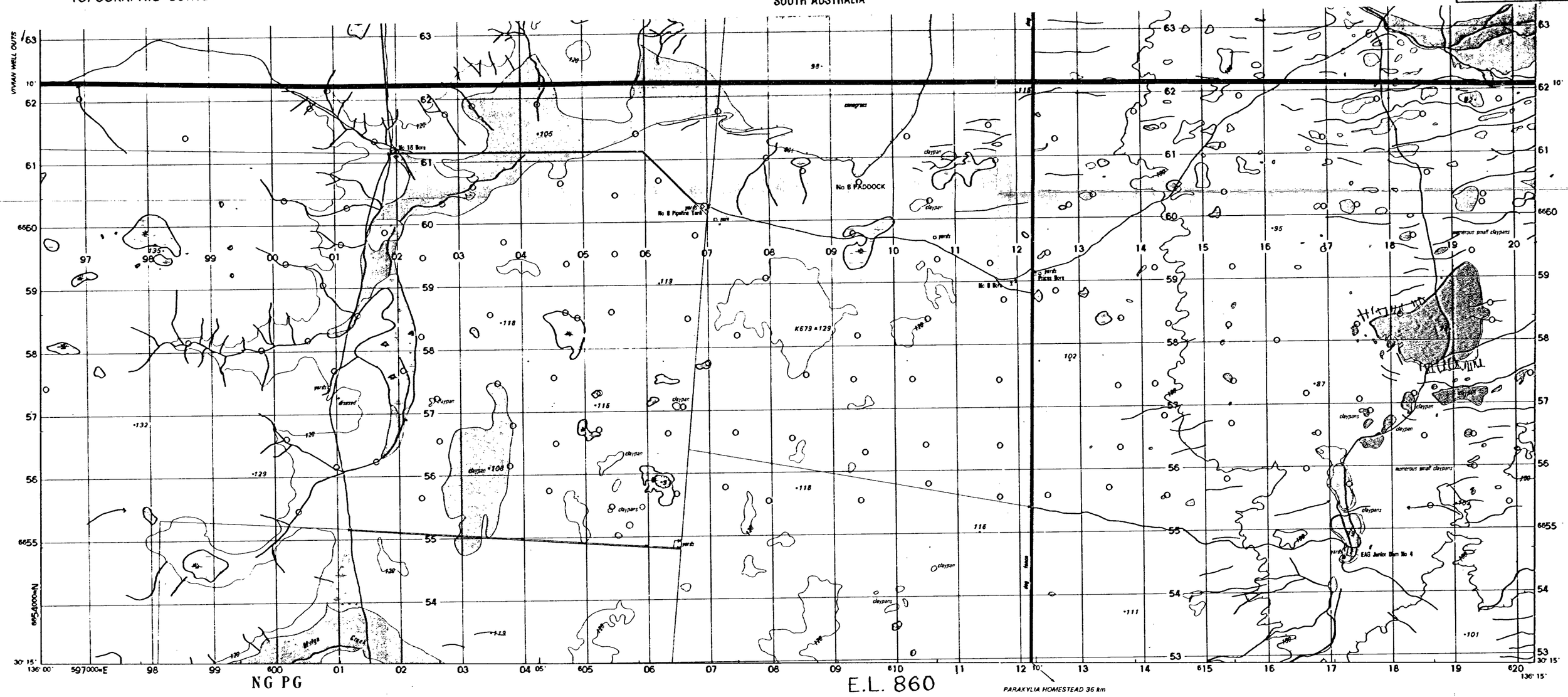
Map 4

AUSTRALIA 1:50 000
TOPOGRAPHIC SURVEY

PEEPHABIE

SOUTH AUSTRALIA

REFER TO THIS MAP AS:
SERIES R742
SHEET 6137-IV
EDITION 2-AAS



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PRINTED by the Royal Australian Survey Corps, 1979.
DISTRIBUTED to the Defence Services by the Royal Australian Survey Corps and to all other map users by the Department of National Resources.
CONTROL: Horizontal: Transferred from Lands Department Control
Vertical: Airborne Profile Recorder
Supplemented by Aerotriangulation.
AIR PHOTOGRAPHY: Super Wide Angle flown 1972 and 1973.
COMPILATION: By photogrammetric methods in 1976 with field verification in 1977.
ACCURACY: Horizontal 80% of well defined detail within ±12.5m of true position
Vertical 90% of elevations within ±10m except in areas of dense vegetation where this may not be achieved

SCALE 1:50 000

kilometres 0 1 2 3 4 5 6 7 8 kilometres

FULL LATITUDE AND LONGITUDE VALUES ARE SHOWN AT THE SHEET CORNERS, WITH MINUTE TICKS AROUND THE NEATLINE, EVERY FIFTH TICK IS LABELLED
BLACK NUMBERED GRID LINES ARE 1000 METRE INTERVALS OF THE UNIVERSAL TRANSVERSE MERCATOR GRID: ZONE 53, (AUSTRALIAN MAP GRID), AUSTRALIAN NATIONAL SPHEROID
GRID VALUES ARE SHOWN IN FULL ONLY AT THE SOUTH WEST CORNER OF THE MAP
VERTICAL DATUM: AUSTRALIAN HEIGHT DATUM
HORIZONTAL DATUM: AUSTRALIAN GEODETIC DATUM 1966
TRANSVERSE MERCATOR PROJECTION
CONTOUR INTERVAL 20 METRES
ELEVATIONS IN METRES

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WATERCOURSE GUIDE

All watercourses on this map are mainly dry

© Commonwealth of Australia 1979.

DEF/ARMY/7930

INDEX TO ADJOINING MAPS

MOGARTH 6038 II	BILLA KALINA 6138 III	EMU CREEK 6138 II
PAISLEY 6037-I	PEEPHABIE 6137-IV	EUROLAWDNEY 6137-I
WINGILPIN 6037-II	REEDY LAGOON 6137-III	PARAKYLIA 6137-II

PART OF 1:100 000 MAP
6137 PARAKYLIA

UNIVERSAL GRID REFERENCE
BEFORE GIVING A GRID REFERENCE, CIVILIAN USERS SHOULD STATE THE NUMBER AND NAME OF THIS MAP.
6137-IV PEEPHABIE

GRID ZONE DESIGNATION	TO GIVE A STANDARD REFERENCE ON THIS SHEET TO NEAREST 100 METRES
53J 100 000 METRE SQUARE IDENTIFICATION NG PG 400	SAMPLE POINT: *PEEPHABIE CLIFF* + 137 1 Read letters identifying 100 000 metre square in which the point lies: PG 2 Locate first VERTICAL grid line to LEFT of point and read LARGE figures labelling the line either in the top or bottom margin, or on the line itself: 04 3 Estimate tenths from grid line to point: 5 4 Locate first HORIZONTAL grid line BELOW point and read LARGE figures labelling the line in either the left or right margin; or on the line itself: 64 5 Estimate tenths from grid line to point: 0 SAMPLE REFERENCE: PG045840 If reporting beyond 100 m in any direction, prefix with Grid Zone Designation, eg: 53JPG045840

IGNORE the SMALLER figures of any grid number, these are for finding the full co-ordinates like ONLY the LARGER figures of the grid numbers; example:
59 7000

SERIES R742
SHEET 6137-IV
EDITION 2-AAS

GRID CONVERGENCE 10 MILS (0.5°)
GRID-MAGNETIC ANGLE 120 MILS (6.5°)
GN TN MN

TRUE NORTH, GRID NORTH AND MAGNETIC NORTH ARE SHOWN DIAGRAMMATICALLY FOR THE CENTRE OF THIS MAP. MAGNETIC NORTH IS CORRECT FOR 1975 AND MOVES EASTERLY BY 2 MILS (0.1°) IN ABOUT NINE YEARS.
TO CONVERT A MAGNETIC BEARING TO A GRID BEARING ADD GRID-MAGNETIC ANGLE.

LEGEND

Built-up area; Divided highway; Metropolitan route number
Recreation reserve with oval; Drive-in theatre; Underpass
Sealed road two or more lanes; National route number
Sealed road one lane; Embankment
Unsealed road two or more lanes
Unsealed road one lane; Cutting
Vehicle track; Road bridge; Gate; Stock grid
Foot track; Foot bridge
Multiple track railway; Station
Single track railway; Light railway
Railway tunnel, bridge, underpass
High voltage transmission line
Fence; Prominent telephone line
Mine; Windmill, Church, Building
Horizontal control point; Spot elevation
Contour with value; Supplementary contour
Depression contour; Sand; Disturbed surface
Levee, bank or sandridge; Joint or rock fissure
High cliff; Escarpment
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Intermittent lake; Watercourse
Mainly-dry lake; Watercourse
Tank or small dam; Perennial waterhole
Saline coastal flat; Intertidal flat
Navigation light; Intertidal ledge or reef
Pier; Exposed wreck; Prominent submerged wreck
Prominent submerged reef, rock
Indefinite watercourse, shoreline; Rock bars or swash

o Sample locations, 1981

MEAN TEMPERATURE RAINFALL
WOOMERA

°C 40 30 20 10 0 −10
mm 25 20 15 10 5 0
Average Annual 181mm
J F M A M J J A S O N D

STOCKDALE PROSPECTING LTD
PEEPHABIE
SOUTH AUSTRALIA
SAMPLE LOCATION MAP
Current Sampling to: (19-10-81)

4345-3

Map 5

STOCKDALE PROSPECTING LIMITED

EXPLORATION LICENCE NO. 860, REEDY LAGOON

SECOND QUARTERLY REPORT FOR THE PERIOD ENDED

19TH JANUARY, 1982

STOCKDALE
PROSPECTING
LIMITED
Incorporated in the State of Victoria

Registered Office
581 Little Collins Street
Melbourne Victoria 3000

60 Wilson Street
South Yarra Victoria 3141
Australia
Telephone (03) 241 7522
Telex Stodal AA39546

Project Name: REEDY LAGOON

Title: EXPLORATION LICENCE NO. 860, REEDY LAGOON
SECOND QUARTERLY REPORT FOR THE PERIOD
ENDED 19TH JANUARY, 1982

Author/s: P.E. BURTON
H.R. ROBISON

Keywords: HEAVY MINERAL SAMPLING, PALEO-ENVIRONMENT

1 : 250,000 Sheet Name/s & No/s.: KINGOONYA, SH 53-11

Text Pages No.: 2

Plan Nos.: 7

Table Nos.: -

Appendices: -

Date: FEBRUARY, 1982

Distribution: SADME, PEB, HRR, IC.

CONTENTS

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Map 1	1:500,000	EL 860, Location	
Map 2	1: 50,000	Curdlawidny	6137 - I
Map 3	1: 50,000	Peephabie	6137 - IV
Map 4	1: 50,000	Paisley	6037 - I
Map 5	1: 50,000	Parakylia	6137 - II
Map 6	1: 50,000	Reedy Lagoon	6137 - III
Map 7	1: 50,000	Wingilpin	6037 - II

STOCKDALE PROSPECTING LIMITED
EXPLORATION LICENCE NO. 860, REEDY LAGOON
SECOND QUARTERLY REPORT FOR THE PERIOD ENDED 19TH JANUARY, 1982

1. INTRODUCTION

This report summarises exploration activities carried out in EL 860 (Map 1) for the three month period to 19th January, 1982.

2. PROSPECTING PROGRESS

Treatment and examination of samples collected last quarter from an east-west strip in the north of the licence area has been completed. The results of these samples are encouraging and show a broad dispersion of kimberlitic indicator minerals throughout the area sampled. However, their distribution does not yet delineate a source area, and current programmes hope to establish this.

2.1 Heavy Mineral Sampling

a) Follow-up sample traverses were carried out over some positives to provide greater statistical reliability. A total of 66 samples were collected on this exercise (Maps 2 and 3) using both vehicle and helicopter support.

b) A sampling programme at a broader density (1 sample per 4 square kilometres) was carried out in an area south of the previously sampled strip, and extended west to the boundary of the EL (Maps 2 - 7). These samples were mainly drainage oriented and a total of 92 were collected, using a Bell 47 J helicopter. Results from this programme are still awaited.

All samples were transported to the Central Treatment Plant in Whyalla for treatment. Concentrates were then forwarded to the laboratory in Melbourne for anlaysis.

2.2 Geological Survey

A Geological report is currently being compiled to establish whether there is any connection between the distribution of the indicator grains and the Upper Carboniferous/Permian glacial deposits, the Cretaceous sediments, or the Tertiary lake sediments.

Lithological type sections were visited and the predominant pebble and boulder types on the numerous pans in the area were mapped, to try to delineate the boundaries of the predominant lithologies within the sampled area. This exercise is continuing.

Indications at present suggest that the complex Palaeo-environments and geomorphology of the area may have masked any real evidence of grain dispersion from which correlation with the predominant lithologies could be made.

Further investigations will be made in this respect.

3. FUTURE PROGRAMME

Further work in the licence area will include a combination of the following:

i) Additional heavy mineral sampling.
ii) Barrage sampling of the glacial deposits to establish whether these are a source of indicator minerals.
iii) Ground magnetometry over anomalous photo-features.
iv) Continuation of the geological study.

4. STAFF

The staff employed within the exploration licence during the report period were as follows:

Classification	No. Employed
Geologist	2
Prospecting Hand	3
Cook	1
(Helicopter Crew - Contractor's)	2

5. EXPENDITURE

Expenditure for the period was $82,298, which has been allocated as follows:

Management/Office Services	$ 26,734
Field Staff - Technical	8,572
- Other	5,193
General Field Expenses	3,903
Transport - Ground	11,217
- Air	4,914
Sample handling - preparation	11,009
- examination	5,464
TOTAL FOR THIS PERIOD	$ 82,298
Total previously reported	$236,533
Total to date	$318,831

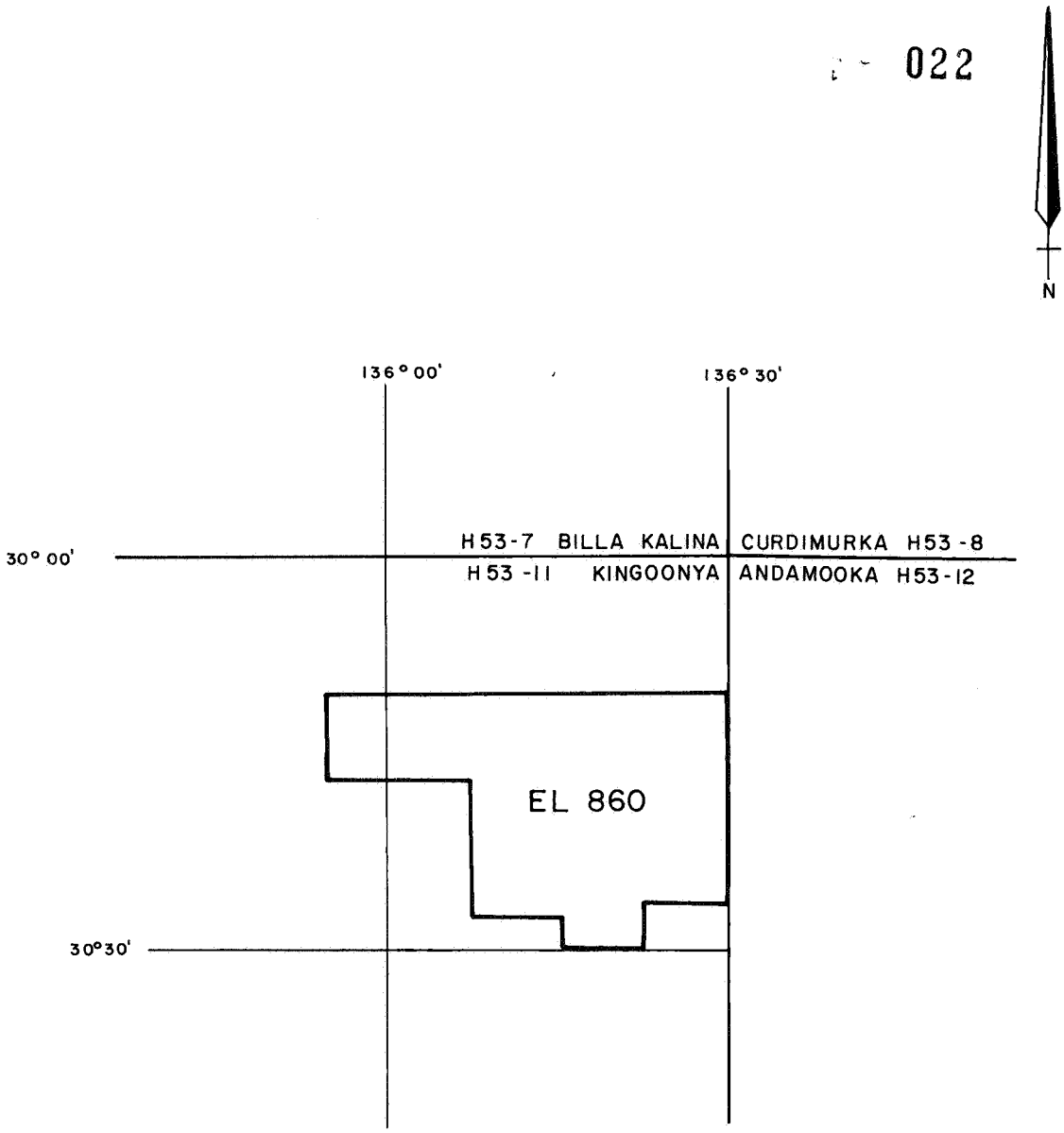
P.E. BURTON
H.R. ROBISON
Whyalla,
8/2/82

K.J. STRACKE
Exploration Manager

DISTRIBUTION: SADME, HRR, PEB, IC.

:bspeb2

022



50 0 50

KILOMETRES

MAP. I

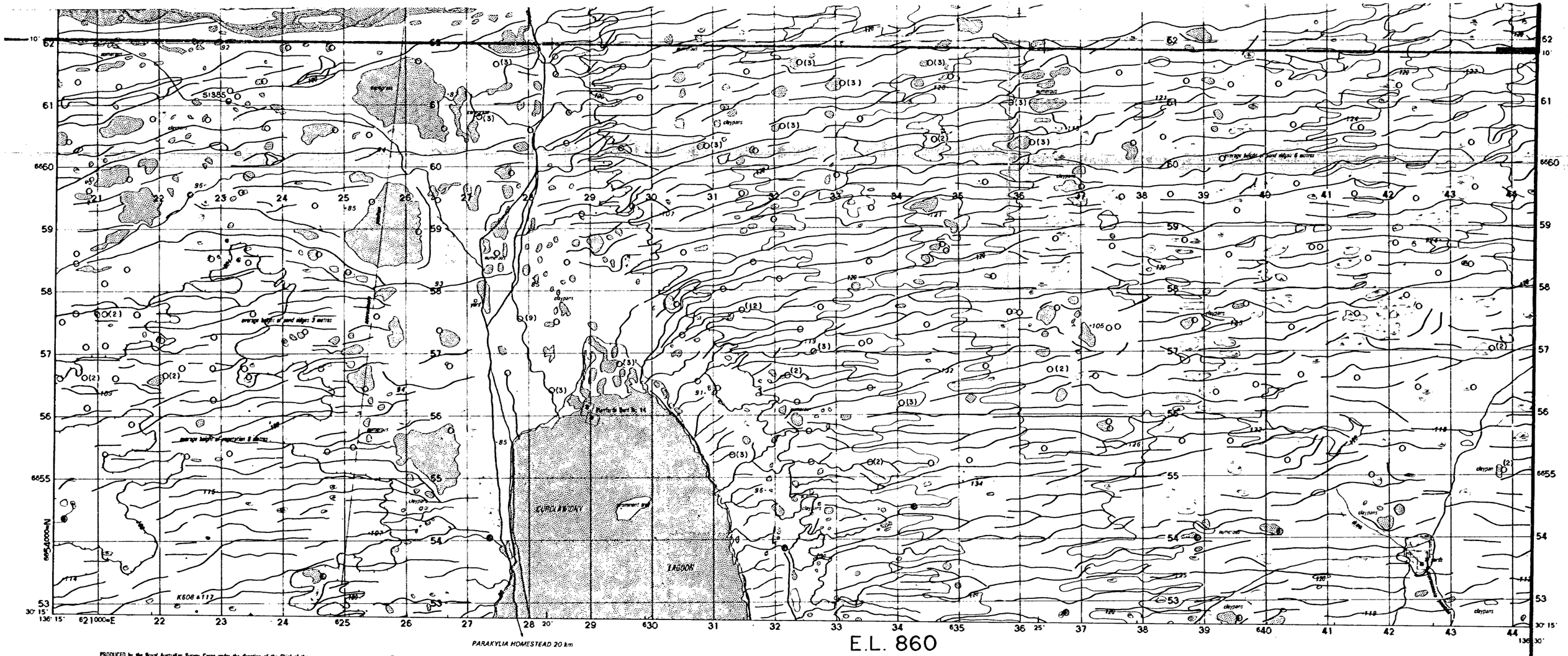
STOCKDALE PROSPECTING LIMITED	
H53-11 KINGOONYA EXPLORATION LICENCE 860 LOCATION MAP	Compiled Drawn A.D.S Date FEB '82 Scale 1:1 MILLION Revised SEL 1374

BASED ON SEL 1374

AUSTRALIA 1:50 000
TOPOGRAPHIC SURVEY

CURDLAWIDNY
SOUTH AUSTRALIA

REFER TO THIS MAP AS:
SERIES R742
SHEET 6137-I
EDITION 1-AAS



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CONTROL Horizontal Triangulation and EDM Traversing
Vertical Airborne Profile Recorder
Supplemented by Aerotriangulation
AIR PHOTOGRAPHY Super Wide Angle flown 1973
COMPILATION By photogrammetric methods in 1978 with field verification in 1978
ACCURACY Horizontal 90% of well defined detail within ±12.5m of true position
Vertical 90% of elevations within ±10m except in areas of dense vegetation where this may not be achieved

UNIVERSAL GRID REFERENCE

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6137-I CURDLAWIDNY

GRID ZONE DESIGNATION	TO GIVE A STANDARD REFERENCE ON THIS SHEET TO NEAREST 100 METRES		
53J	SAMPLE POINT 91-		
100 000 METRE SQUARE IDENTIFICATION	1 Read letters identifying 100 000 metre square in which the point lies	PG	
PG	2 Locate first VERTICAL grid line to LEFT of point and read LARGE figures labelling the line either in the top or bottom margin, or on the line itself		30
	3 Estimate tenths from grid line to point		0
	4 Locate first HORIZONTAL grid line BELOW point and read LARGE figures labelling the line in either the left or right margin, or on the line itself		58
	5 Estimate tenths from grid line to point		3
IGNORE the SMALLER figures of any grid number; these are for finding the full co-ordinates. Use ONLY the LARGER figures of the grid numbers; example	SAMPLE REFERENCE	PG308583	
02 1900	If reporting beyond 10° in any direction, prefix with Grid Zone Designation, eg	53JPG308583	

SERIES R742
SHEET 6137-I
EDITION 1-AAS

GRID CONVERGENCE 10 MILS (0.5°)
GRID-MAGNETIC ANGLE 120 MILS (6.5°)
TRUE NORTH, GRID NORTH AND MAGNETIC NORTH ARE SHOWN DIAGRAMMATICALLY FOR THE CENTRE OF THIS MAP. MAGNETIC NORTH IS CORRECT FOR 1975 AND MOVES EASTERLY BY LESS THAN 2 MILS (0.1°) IN ABOUT NINE YEARS
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SCALE 1:50 000

kilometres 0 1 2 3 4 5 6 7 8 kilometres

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TRANSVERSE MERCATOR PROJECTION
CONTOUR INTERVAL 20 METRES
ELEVATIONS IN METRES

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LEGEND

Built-up area; Divided highway; Metropolitan route number
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Sealed road one lane; Embankment
Unsealed road two or more lanes
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Navigation light, Intertidal ledge or reef
Pier, Exposed wreck, Prominent submerged wreck
Prominent submerged reef, rock
Indefinite watercourse, shoreline; Rock bare or awash

O Sample locations
● Samples (current quarter)
Kimberlitic garnet
(3) Total samples taken on same location.

WATERCOURSE GUIDE

All watercourses on this map are mainly dry.

MEAN TEMPERATURE RAINFALL MIRIKATA

°C 40 30 20 10 0 -10
mm 25 20 15 10 5 0
Average Annual 167mm
J F M A M J J A S O N D

DEF:ARMY/9335
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INDEX TO ADJOINING MAPS

BALLA KALWA 6138-III	EMU CREEK 6138-II	6238-III
PEEPHABIE 6137-IV	CURDLAWIDNY 6137-I	MIDDEN SWAMP 6237-IV
REEDY LAGOON 6137-III	PARAKYLIA 6137-II	WIGAN 6237-III

PART OF 1:100 000 MAP
6137 PARAKYLIA

MAP 2

STOCKDALE PROSPECTING LTD

CURDLAWIDNY
SOUTH AUSTRALIA

SAMPLE LOCATION MAP

Current Sampling to: 19-1-82

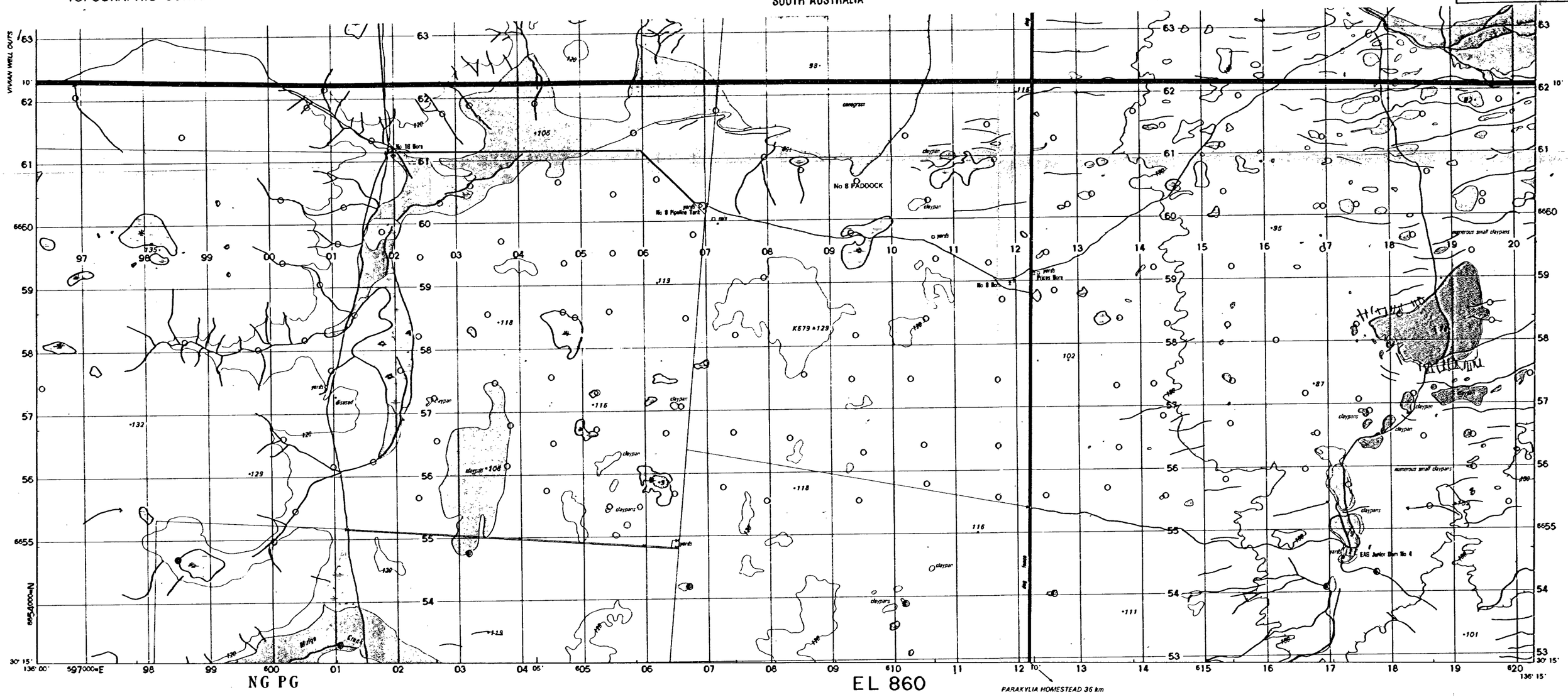
43145-4

AUSTRALIA 1:50 000
TOPOGRAPHIC SURVEY

PEEPHABIE

SOUTH AUSTRALIA

REFER TO THIS MAP AS:
SERIES R742
SHEET 6137-IV
EDITION 2-AAS



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ACCURACY: Horizontal: 90% of well defined detail within ± 12.5m of true position.
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SCALE 1:50 000

Kilometres 0 1 2 3 4 5 6 7 8 Kilometres

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TRANSVERSE MERCATOR PROJECTION
CONTOUR INTERVAL 20 METRES
ELEVATIONS IN METRES

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UNIVERSAL GRID REFERENCE
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6137-IV PEEPHABIE

GRID ZONE DESIGNATION. 53J	TO GIVE A STANDARD REFERENCE ON THIS SHEET TO NEAREST 100 METRES.		
100 000 METRE SQUARE IDENTIFICATION	SAMPLE POINT: *PEEPHABIE CLIFF* ± 137		
PG	1 Read letters identifying 100 000 metre square in which the point lies:	PG	
600	2 Locate first VERTICAL grid line to LEFT of point and read LARGE figures labelling the line either in the top or bottom margin, or on the line itself.		04
IGNORE the SMALLER figures of any grid number: these are for dividing the 1km co-ordinates. Use ONLY the LARGER figures of the grid numbers; example	3 Estimate tenths from grid line to point:		5
597000	4 Locate first HORIZONTAL grid line BELOW point and read LARGE figures labelling the line in either the left or right margin, or on the line itself.		84
	5 Estimate tenths from grid line to point:		0
	SAMPLE REFERENCE:	PG045840	
	If reporting beyond 18° in any direction, prefix with Grid Zone Designation, eg:	53JPG045840	

SERIES R742
SHEET 6137-IV
EDITION 2-AAS

GRID CONVERGENCE 10 MILS (0.5°)
GRID-MAGNETIC ANGLE 120 MILS (6.5°)
GN TM MN

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Sealed road one lane; Embankment
Unsealed road two or more lanes
Unsealed road one lane; Cutting
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Indefinite watercourse; shoreline; Rock bars or swash

○ Sample locations

WATERCOURSE GUIDE

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MEAN TEMPERATURE RAINFALL
WOOMERA

°C 40 30 20 10 0 -10
Average Annual 181mm
mm 25 20 15 10 5 0
J F M A M J J A S O N D

43455-5

● Samples (current quarter)

DEF/ARMY/7930

INDEX TO ADJOINING MAPS

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PAISLEY 6037-I	PEEPHABIE 6137-IV	CURDLAWIDNEY 6137-I
WONGILPSH 6037-II	REEDY LAGOON 6137-III	PARAKYLIA 6137-II

PART OF 1:100 000 MAP
6137 PARAKYLIA

MAP 3

STOCKDALE PROSPECTING LTD
PEEPHABIE
SOUTH AUSTRALIA

SAMPLE LOCATION MAP

Current Sampling to: 19-1-82

AUSTRALIA 1:50 000
TOPOGRAPHIC SURVEY

PAISLEY
SOUTH AUSTRALIA

REFER TO THIS MAP AS:
SERIES R742
SHEET 6037-I
EDITION 2-AAS

DEPUTY PADDOCK
COOLARRIKINNA CORE
CENTRAL PADDOCK
BIRTHDAY PADDOCK
E.L. 860
VIVIAN WELL OUTSTATION 24 km

135° 45' 573000mE 6654000mN 30° 15'
136° 00'

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AIR PHOTOGRAPHY. Super Wide Angle Enron 1972 and 1973.
COMPILATION. By photogrammetric methods in 1976 with field verification in 1977.
ACCURACY. Horizontal: 90% of well defined detail within ±12.5m of true position.
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UNIVERSAL GRID REFERENCE
BEFORE GIVING A GRID REFERENCE, CIVILIAN USERS SHOULD STATE THE NUMBER AND NAME OF THIS MAP:
6037-I PAISLEY

GRID ZONE DESIGNATION: 53J	TO GIVE A STANDARD REFERENCE ON THIS SHEET TO NEAREST 100 METRES
100 000 METRE SQUARE IDENTIFICATION: MG	SAMPLE POINT: 146 • — 1 Read letters identifying 100 000 metre square in which the point lies: MG; 2 Locate first VERTICAL grid line to LEFT of point and read LARGE figures labelling the line either in the top or bottom margin, or on the line itself: 65; 3 Estimate tenths from grid line as point: 6; 4 Locate first HORIZONTAL grid line BELOW point and read LARGE figures labelling the line in either the left or right margin, or on the line itself: 61; 5 Estimate tenths from grid line as point: 5
IGNORE the SMALLER figures of any grid number; these are for finding the full co-ordinates but ONLY the LARGER figures of the grid numbers; example: 573000	SAMPLE REFERENCE: MG659615 — If reporting beyond 18° in any direction, prefix with Grid Zone Designation, eg: 53JMG659615

SERIES R742
SHEET 6037-I
EDITION 2-AAS

GRID CONVERGENCE 10 MILS (0.5°)
GRID-MAGNETIC ANGLE 110 MILS (6.8°)
GN YM MN
TRUE NORTH, GRID NORTH AND MAGNETIC NORTH ARE SHOWN DIAGRAMMATICALLY FOR THE CENTRE OF THIS MAP. MAGNETIC NORTH IS CORRECT FOR 1975 AND MOVES EASTERLY BY 2 MILS (0.1°) IN ABOUT NINE YEARS.
TO CONVERT A MAGNETIC BEARING TO A GRID BEARING ADD GRID-MAGNETIC ANGLE.

SCALE 1:50 000
Kilometres 0 1 2 3 4 5 6 7 8 Kilometres

FULL LATITUDE AND LONGITUDE VALUES ARE SHOWN AT THE SHEET CORNERS, WITH MINUTE TICKS AROUND THE NEATLINE. EVERY FIFTH TICK IS LABELLED
BLACK NUMBERED GRID LINES ARE 1000 METRE INTERVALS OF THE UNIVERSAL TRANSVERSE MERCATOR GRID, ZONE 53, (AUSTRALIAN MAP GRID), AUSTRALIAN NATIONAL SPHEROID
GRID VALUES ARE SHOWN IN FULL ONLY AT THE SOUTH WEST CORNER OF THE MAP
VERTICAL DATUM: AUSTRALIAN HEIGHT DATUM
HORIZONTAL DATUM: AUSTRALIAN GEODETIC DATUM 1966
TRANSVERSE MERCATOR PROJECTION
CONTOUR INTERVAL 20 METRES
ELEVATIONS IN METRES

Users can also assist in the improvement of this product by marking corrections and additions which come to their attention and mailing to DEPARTMENT OF DEFENCE (ARMY OFFICE), RUSSELL OFFICES, CANBERRA 2600, AUSTRALIA.

LEGEND
- Built up area; Divided highway; Metropolitan route marker
- Recreation reserve with oval; Drive-in theatre; Underpass
- Sealed road two or more lanes; National route marker
- Sealed road one lane; Embankment
- Unsealed road two or more lanes
- Unsealed road one lane; Cutting
- Vehicle track; Road bridge; Gate; Stock grid
- Foot track, Foot bridge
- Multiple track railway; Station
- Single track railway; Light railway
- Railway tunnel, bridge, underpass
- High voltage transmission line
- Fence; Prominent telephone line
- Mine; Windmill, Church, Building
- Horizontal control point; Spot elevation
- Contour with value; Supplementary contour
- Depression contour; Sand; Disturbed surface
- Levee, bank or sandridge; Joint or rock fissure
- High cliff, Escarpment
- Vegetation; Dense, medium, scattered
- Vegetation distinctive; Distinctive grass
- Orchard or vineyard; Line of trees or windbreak
- Mangrove swamp; Area subject to inundation
- Swamp; Swamp definite boundary
- Perennial lake; Watercourse
- Intermittent lake; Watercourse
- Mainly dry lake; Watercourse
- Tank or small dam; Perennial waterhole
- Saline coastal flat; Intertidal flat
- Navigation light; Intertidal ledge or reef
- Pier; Exposed wreck; Prominent submerged wreck
- Prominent submerged reef, rock
- Indefinite watercourse, shoreline; Rock bars or swash

● Sample locations (current quarter)

4345-6

WATERCOURSE GUIDE
All watercourses on this map are mainly dry

MEAN TEMPERATURE RAINFALL TARCOOLA
°C 40 30 20 10 0 -10
mm 25 20 15 10 5 0
Average Annual 170mm
J F M A M J J A S O N D

DEF/ARMY/7920

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EBA 6037-IV	PAISLEY 6037-I	PEEPHARBIE 6137-IV
LOOKOUT 6037-III	WINGFIELDIN 6037-II	REEDY LAGOON 6137-III

PART OF 1:100 000 MAP
6037 EBA

MAP 4

STOCKDALE PROSPECTING LTD
PAISLEY
SOUTH AUSTRALIA

SAMPLE LOCATION MAP
Current Sampling to: 19-1-82

AUSTRALIA 1:50 000
TOPOGRAPHIC SURVEY

PARAKYLIA
SOUTH AUSTRALIA

REFER TO THIS MAP AS:
SERIES R742
SHEET 6137-II
EDITION 2-AAS

BILLA KALINA HOMESTEAD 46 km

MILLERS CREEK HOMESTEAD 52 km

VIVIAN WELLS OUTSTATION 42 km

KOOLYMILKA 46 km

CORDIAMONY LAGOON

BULLOCK PADDOCK

HOME PADDOCK

WOOLLY PADDOCK

THORN PADDOCK

CATCH HOLE PADDOCK

E.L. 860
S.P.L.

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RAM PADDOCK

LES PADDOCK

MAJENDIE PADDOCK

NEW HOLDING PADDOCK

HOLDING 3 PADDOCK

LITTLE RED LAKE PADDOCK

RED LAKE

BIG RED LAKE PADDOCK

HOBBS PADDOCK

NOBLES PADDOCK

TOLLS PADDOCK

BEAMISH PADDOCK

WENDTS PADDOCK

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COMPILATION: By photogrammetric methods in 1977 with field verification in 1978.
ACCURACY: Horizontal: 90% of well defined detail within ±12.5m of true positions.
Vertical: 90% of elevations within ½ contour interval in areas of dense vegetation where this may not be achieved.

UNIVERSAL GRID REFERENCE
BEFORE GIVING A GRID REFERENCE, CIVILIAN USERS SHOULD STATE THE NUMBER AND NAME OF THIS MAP:
6137-II PARAKYLIA

GRID ZONE DESIGNATION: 53J	TO GIVE A STANDARD REFERENCE ON THIS SHEET TO NEAREST 100 METRES
100 000 METRE SQUARE IDENTIFICATION: PG	SAMPLE POINT: K606 x 119 1 Read letters identifying 100 000 metre square to which the point lies: PG 2 Locate line VERTICAL grid line to LEFT of point and read LARGE figures labelling the line either in the top or bottom margin, or on the line itself: 31 3 Estimate tenths from grid line to point: 6 4 Locate first HORIZONTAL grid line BELOW point and read LARGE figures labelling the line in either the left or right margin, or on the line itself: 44 5 Estimate tenths from grid line to point: 5 SAMPLE REFERENCE: PG3154465 If reporting beyond 10^6 in any direction, prefix with Grid Zone Designation, eg: 53JPG3154465

IGNORE the SMALLER figures of any grid number; these are for finding the full two-references. Use ONLY the LARGER figures of the grid numbers; example: 621000

SERIES R742
SHEET 6137-II
EDITION 2-AAS

GRID CONVERGENCE 10 MILS (0.5°)
GRID-MAGNETIC ANGLE 120 MILS (6.5°)
GN TN MN

TRUE NORTH, GRID NORTH AND MAGNETIC NORTH ARE SHOWN DIAGRAMMATICALLY FOR THE CENTRE OF THIS MAP. MAGNETIC NORTH IS CORRECT FOR 1975 AND MOVES EASTERLY BY 2 MILS (0.1°) IN ABOUT NINE YEARS
TO CONVERT A MAGNETIC BEARING TO A GRID BEARING ADD GRID-MAGNETIC ANGLE.

SCALE 1:50 000

Kilometres 0 1 2 3 4 5 6 7 8 Kilometres

FULL LATITUDE AND LONGITUDE VALUES ARE SHOWN AT THE SHEET CORNERS. WITH MINUTE TICKS AROUND THE NEATLINE, EVERY FIFTH TICK IS LABELLED
BLACK NUMBERED GRID LINES ARE 1000 METRE INTERVALS OF THE UNIVERSAL TRANSVERSE MERCATOR GRID, ZONE 53, (AUSTRALIAN MAP GRID), AUSTRALIAN NATIONAL SPHEROID
GRID VALUES ARE SHOWN IN FULL ONLY AT THE SOUTH WEST CORNER OF THE MAP
VERTICAL DATUM: AUSTRALIAN HEIGHT DATUM
HORIZONTAL DATUM: AUSTRALIAN GEODETIC DATUM 1966
TRANSVERSE MERCATOR PROJECTION
CONTOUR INTERVAL 20 METRES
ELEVATIONS IN METRES

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LEGEND

Built-up area; Divided highway; Metropolitan route marker
Reservation reserve with oval; Drive-in theatre; Underpass
Sealed road two or more lanes; National route marker
Sealed road one lane; Embankment
Unsealed road two or more lanes
Unsealed road one lane; Cutting
Vehicle track, Road bridge; Gate, Stock grid
Foot track; Foot bridge
Multiple track railway; Station
Single track railway; Light railway
Railway tunnel, bridge, underpass
High voltage transmission line
Fence; Prominent telephone line
Mine, Windmill; Church; Building
Horizontal control point; Spot elevation
Contour with value; Supplementary contour
Depression contour; Sand; Disturbed surface
Levee, bank or sand ridge; Joint or rock fissure
High cliff; Escarpment
Vegetation; Dense, medium, scattered
Vegetation distinctive; Distinctive grass
Orchard or vineyard; Line of trees or windbreak
Mangrove swamp; Area subject to inundation
Swamp; Swamp defines boundary
Perennial lake; Watercourse
Intermittent lake; Watercourse
Mainly dry lake; Watercourse
Tank or small dam; Perennial waterhole
Saline evaporite flat; Intertidal flat
Navigation light; Intertidal ledge or reef
Pier; Exposed wreck; Prominent submerged wreck
Prominent submerged reef, rock
Indefinite watercourse, shoreline; Rock bare or smooth

WATERCOURSE GUIDE
All watercourses on this map are mainly dry

MEAN TEMPERATURE RAINFALL WOOMERA
°C 40 30 20 10 0 -10
mm 25 20 15 10 5 0
J F M A M J J A S O N D
Average Annual 191mm

INDEX TO ADJOINING MAPS

PEEPHABIE 6137-IV	CURDLAMONY 6137-I	WOODEN SWAMP 6237-IV
REEDY LAGOON 6137-III	PARAKYLIA 6137-II	WIGAN 6237-III
LOCK 6136-IV	BEDDOME 6136-I	STALEY 6236-IV

PART OF 1:100 000 MAP
6137 PARAKYLIA

DEF/ARMY/9336

MAP 5

STOCKDALE PROSPECTING LTD
PARAKYLIA
SOUTH AUSTRALIA

SAMPLE LOCATION MAP
Current Sampling to: 19-1-82

Sample locations (current quarter)
Possible Kimberlitic garnet.

4345-7

AUSTRALIA 1:50 000
TOPOGRAPHIC SURVEY

REEDY LAGOON
SOUTH AUSTRALIA

REFER TO THIS MAP AS:
SERIES R742
SHEET 6137-III
EDITION 2-AAS

NG PG

E.L. 860

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E.L. 860
S.P.L.

NG PG

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Vertical: Adelaide Flinders Datum(m).
Supplemented by Aerotriangulation.
AIR PHOTOGRAPHY: Super Wide Angle Runs 1972 and 1973.
COMPILATION: By photogrammetric methods in 1978 with field verification in 1977.
ACCURACY: Horizontal: 90% of well defined detail within ±12.5m of true position.
Vertical: 90% of elevations within ±16m except in areas of dense vegetation where this may not be achieved.

UNIVERSAL GRID REFERENCE
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6137-III REEDY LAGOON

GRID ZONE DESIGNATION: 53J
100 000 METRE SQUARE IDENTIFICATION: PG
GIVING THE SMALLER figure of any grid number; these are for finding the full co-ordinates. Use ONLY the LARGER figures of the grid numbers; example:
507000

TO GIVE A STANDARD REFERENCE ON THIS SHEET TO NEAREST 100 METRES
EXAMPLE POINT: 778
1 Read bottom left-hand 100 000 metre square in which the point lies: PG
2 Locate first VERTICAL grid line to LEFT of point and read LARGE figures labelling the line either in the top or bottom margin, or on the line itself: 06
3 Estimate tenths from grid line to point: 3
4 Locate first HORIZONTAL grid line BELOW point and read LARGE figures labelling the line in either the left or right margin, or on the line itself: 33
5 Estimate tenths from grid line to point: 4
SAMPLE REFERENCE: PG063334
If requiring beyond 10" to any direction, prefix with Grid Zone Designation, etc: 53JPG063334

SERIES R742
SHEET 6137-III
EDITION 2-AAS

GRID CONVERGENCE 10 MILS (0.5°)
GRID-MAGNETIC ANGLE 120 MILS (6.5°)
TRUE NORTH, GRID NORTH AND MAGNETIC NORTH ARE SHOWN DIAGRAMMATICALLY FOR THE CENTRE OF THIS MAP. MAGNETIC NORTH IS CORRECT FOR 1979 AND MOVES EASTERLY BY 2 MILS (0.1°) IN ABOUT NINE YEARS.
TO CONVERT A MAGNETIC BEARING TO A GRID BEARING ADD GRID-MAGNETIC ANGLE.

SCALE 1:50 000
Kilometres 0 1 2 3 4 5 6 7 8
FULL LATITUDE AND LONGITUDE VALUES ARE SHOWN AT THE ENDS OF CORNERS, WITH MINUTE TICKS AROUND THE NEATLINE, EVERY FIFTH TICK IS LABELLED
BLACK NUMBERED GRID LINES ARE 1000 METRE INTERVALS OF THE UNIVERSAL TRANSVERSE MERCATOR GRID, ZONE 53, (AUSTRALIAN MAP GRID), AUSTRALIAN NATIONAL SPHEROID
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VERTICAL DATUM: AUSTRALIAN HEIGHT DATUM
HORIZONTAL DATUM: AUSTRALIAN GEODETIC DATUM 1966
TRANSVERSE MERCATOR PROJECTION
CONTOUR INTERVAL 20 METRES
ELEVATIONS IN METRES

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LEGEND

Built-up area; Divided highway; Metropolitan route marker
Reservation reserve with over; Drive-in theatre; Underpass
Sealed road two or more lanes; National route marker
Sealed road one lane; Embankment
Unsealed road two or more lanes
Unsealed road one lane; Cutting
Vehicle track; Road bridge; Gate; Stock grid
Foot track; Foot bridge
Multiple track railway; Station
Single track railway; Light railway
Railway tunnel, bridge, underpass
High voltage transmission line
Power; Prominent telephone line
Mine; Windmill; Church; Building
Horizontal control point; Spot elevation
Contour with value; Supplementary contour
Depression contour; Bank; Disturbed surface
Levee, bank or sandridge; Joint or rock fissure
High cliff; Escarpment
Vegetation; Dense, medium, scattered
Vegetation distinctive; Distinctive grass
Orchard or vineyard; Line of trees or windbreak
Mangrove swamp; Area subject to inundation
Swamp; Swamp definite boundary
Perennial lake; Watercourse
Intermittent lake; Watercourse
Muddy dry lake; Watercourse
Tank or small dam; Perennial waterhole
Saline control flat; Intermittent flat
Navigation light; Intermittent ledge or reef
Pier; Exposed wreck; Prominent submerged wreck
Prominent submerged reef, rock
Indefinite watercourse, shoreline; Rock bare or awash

WATERCOURSE CODE
All watercourses on this map are mainly dry.

MEAN TEMPERATURE RAINFALL WOOMERA
°C 40 30 20 10 0 -10
Average Annual 161mm
mm 25 20 15 10 5 0
J F M A M J J A S O N D

DEPARMAP/7929
© Commonwealth of Australia 1979.

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WINGILPIN 6037-II	REEDY LAGOON 6137-III	PARAKYLIA 6137-II
KOWAL 6036-I	LOCK 6136-IV	BEDDOME 6136-I

PART OF 1:100 000 MAP
6137 PARAKYLIA

MAP.6
STOCKDALE PROSPECTING LTD
REEDY LAGOON
SOUTH AUSTRALIA

SAMPLE LOCATION MAP
Current Sampling to: 19-1-82

● Sample locations (current quarter)

4345-8

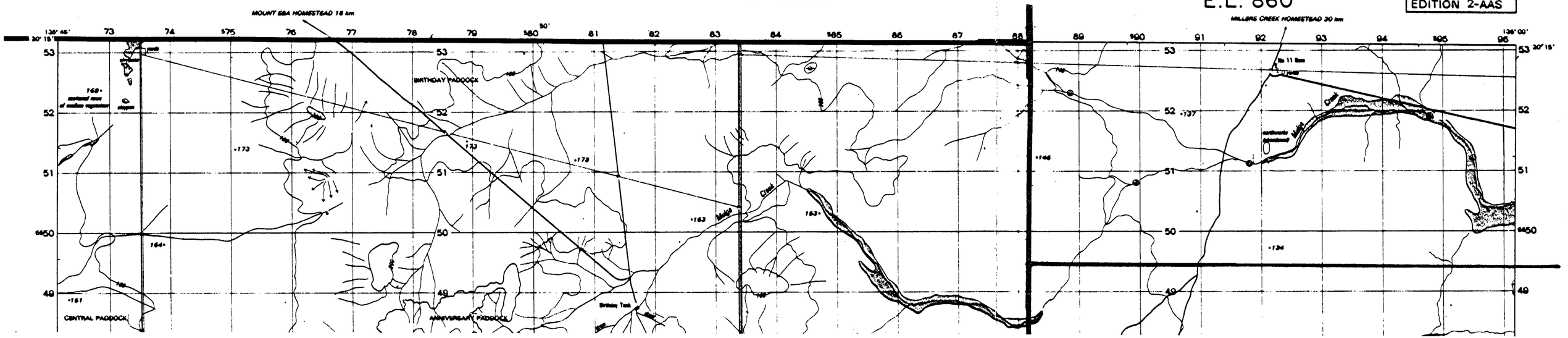
AUSTRALIA 1:50 000
TOPOGRAPHIC SURVEY

WINGILPIN

SOUTH AUSTRALIA

REFER TO THIS MAP AS:
SERIES R742
SHEET 6037-II
EDITION 2-AAS

E.L. 860



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AIR PHOTOGRAPHY: Super Wide Angle Mono 1972 and 1973.
COMPILATION: By photogrammetric methods in 1978 with field verification in 1977.
ACCURACY: Horizontal: 90% of well defined detail within ± 12.5m of true position.
Vertical: 90% of elevations within ± 10m except in areas of dense vegetation where this may not be achieved.

UNIVERSAL GRID REFERENCE

BEFORE GIVING A GRID REFERENCE, CIVILIAN USERS SHOULD STATE THIS NUMBER AND NAME OF THIS MAP:-

6037-II WINGILPIN

GRID ZONE DESIGNATION: 53J	TO GIVE A STANDARD REFERENCE ON THIS SHEET TO NEAREST 100 METRES
100 000 METRE SQUARE IDENTIFICATION: NG	SAMPLE POINT: 218 & MOUNT VIVIAN
	1 Read between identifying 100 000 metre squares to obtain the grid letters: NG
IGNORE the SMALLER figures all grid number; these are for finding the full co-ordinates. Use ONLY the LARGER figures of the grid numbers; example: 573000	2 Locate first VERTICAL grid line to LEFT of point and read LARGE figures labelling the line either to the top or bottom margin, or on the line itself: 84
	3 Estimate tenths from grid line to point: 9
	4 Locate first HORIZONTAL grid line BELOW point and read LARGE figures labelling the line to either the left or right margin, or on the line itself: 41
	5 Estimate tenths from grid line to point: 1
	SAMPLE REFERENCE: NG8441
	If reporting beyond 10° in any direction, prefix with Grid Zone Designation, eg: 53JNG8441

SERIES R742
SHEET 6037-II
EDITION 2-AAS

GRID CONVERGENCE 10 MILS (0.5°)
GRID-MAGNETIC ANGLE 110 MILS (6.0°)

TRUE NORTH, GRID NORTH AND MAGNETIC NORTH ARE SHOWN DIAGRAMMATICALLY FOR THE CENTRE OF THIS MAP. MAGNETIC NORTH IS CORRECT FOR 1976 AND MOVES EASTERLY BY 2 MILS (0.1°) IN ABOUT NINE YEARS.
TO CONVERT A MAGNETIC BEARING TO A GRID BEARING ADD GRID-MAGNETIC ANGLE.

SCALE 1:50 000

Kilometres 0 1 2 3 4 5 6 7 8 Kilometres

FULL LATITUDE AND LONGITUDE VALUES ARE SHOWN AT THE SHEET CORNERS, WITH MINUTE TICKS AROUND THE NEATLINE, EVERY FIFTH TICK IS LABELLED
BLACK NUMBERED GRID LINES ARE 1000 METRE INTERVALS OF THE UNIVERSAL TRANSVERSE MERCATOR GRID, ZONE 53, (AUSTRALIAN MAP GRID, AUSTRALIAN NATIONAL SPHEROID)
GRID VALUES ARE SHOWN IN FULL ONLY AT THE SOUTH WEST CORNER OF THE MAP
VERTICAL DATUM: AUSTRALIAN HEIGHT DATUM
HORIZONTAL DATUM: AUSTRALIAN GEODETIC DATUM 1966
TRANSVERSE MERCATOR PROJECTION
CONTOUR INTERVAL 20 METRES
ELEVATIONS IN METRES

Users are also invited in the improvement of the map sheet by marking corrections and additions which come to their attention and mailing to DEPARTMENT OF DEFENCE (ARMY OFFICE), RUSSELL OFFICES, CANBERRA 2600, AUSTRALIA.

LEGEND

Built-up area; Divided highway; Metropolitan route marker
Reservation reserve with wall; Drive-in theatre; Underpass
Sealed road two or more lanes; National route marker
Sealed road one lane; Embankment
Unsealed road two or more lanes
Unsealed road one lane; Cutting
Vehicle track; Road bridge; Gate; Stock grid
Foot track; Foot bridge
Multiple track railway; Station
Single track railway; Light railway
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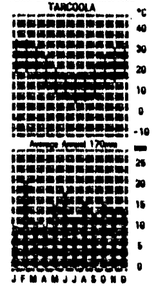
High voltage transmission line
Fence; Permanent telephone line
Mine; Windmill; Church, Building
Horizontal control point; Spot elevation
Contour with value; Supplementary contour
Depression contour; Sand; Disturbed surface
Levee, bank or sandridge; Dune or rock feature
High cliff; Escarpment
Vegetation; Dense, medium, scattered
Vegetation distinctive; Distinctive grass
Orchard or vineyard; Line of trees or windbreak
Mangrove swamp; Area subject to inundation
Swamp; Swamp definite boundary
Perennial lake; Watercourse
Intermittent lake; Watercourse
Muddy dry lake; Watercourse
Tank or small dam; Perennial waterhole
Saline seasonal flat; Intermittent flat
Navigation light; Intermittent bridge or reef
Pier; Exposed wreck; Permanent submerged wreck
Permanent submerged reef, rock
Indefinite watercourse, shoreline; Rock bare or awash

WATERCOURSE GUIDE

All watercourses on this map are mainly dry.

MEAN TEMPERATURE RAINFALL TARCOOLA



DEFAIRMW7921

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LOOKOUT 6037-III	WINGILPIN 6037-II	REEDY LAGOON 6137-III
VIVIAN 6036-IV	KORNAL 6036-I	LOCK 6136-IV

PART OF 1:100 000 MAP
6037 EBA

MAP 7

STOCKDALE PROSPECTING LTD

WINGILPIN
SOUTH AUSTRALIA

SAMPLE LOCATION MAP

Current Sampling to: 19-1-82

● Sample locations (current quarter)

4345-9

STOCKDALE PROSPECTING LIMITED

EXPLORATION LICENCE NO. 860 : REEDY LAGOON

THIRD QUARTERLY REPORT FOR THE PERIOD ENDED 19TH APRIL, 1982

STOCKDALE
PROSPECTING
LIMITED
Incorporated in the State of Victoria

Registered Office
581 Little Collins Street
Melbourne Victoria 3000

60 Wilson Street
South Yarra Victoria 3141
Australia
Telephone (03) 241 7522
Telegraphic Address Telex 30728
Telex Stodal AA39546

Project Name: REEDY LAGOON

Title: EXPLORATION LICENCE NO. 860, REEDY LAGOON
THIRD QUARTERLY REPORT FOR THE PERIOD ENDED
19TH APRIL, 1982

Author/s: T.J. INGHAM

Keywords: HEAVY MINERAL SAMPLING, GEOLOGY, GROUND MAGNETICS

1 : 250,000 Sheet Name/s & No/s.: KINGOONYA SH 53 - 11

Text Pages No.: 3

Plan Nos.: 4

Table Nos.: -

Appendices: -

Date: MAY, 1982

Distribution: SADME, TJI, WHYALLA, IC.

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Map 2 : SEL 1528 1: 86,000 Photo-anomaly F10, Location

FIGURE

Figure 1 Ground Magnetometer Traverses, F10

STOCKDALE PROSPECTING LIMITED

EXPLORATION LICENCE NO. 860 : REEDY LAGOON

THIRD QUARTERLY REPORT FOR THE PERIOD ENDED 19TH APRIL, 1982

1. INTRODUCTION

This report summarises exploration in Exploration Licence No. 860 (Map 1) during the three month period to the 19th April, 1982.

The results of heavy mineral sampling conducted last quarter were received, the geological investigation has continued and a ground magnetometer survey has been carried out over a photo-feature.

2. PROSPECTING PROGRESS

2.1 Heavy Mineral Sampling

No additional systematic heavy mineral sampling has been carried out in the licence this quarter. However, the results of sampling carried out last quarter have become available. These results have confirmed the broad scatter of kimberlitic indicator minerals previously reported, and have indicated a "cut-off" to the south of Curdlawidny Lagoon, where samples are essentially negative.

However, there is still no simple dispersion pattern apparent, and resolution of the anomalies observed will require a protracted effort.

2.2 Geological Study

The investigation of local geology commenced last quarter has been continued and has concentrated on mapping of the Upper Carboniferous/Permian and Cretaceous units present in the area. This programme is being continued.

2.3 Ground Magnetometer Survey

A small scale ground magnetometer survey was carried out over a photo anomaly identified near the north western corner of the Exploration Licence (Map 2). The photo feature is a pan anomaly, with internal drainage and no outcrop. It could also be described as a vegetation anomaly associated with a small pan on the gibber plain to the west of the paleolake system.

This anomaly is a feature of approximately 800 x 500 metres in size, and the ground magnetometer survey consisted of four survey lines. Three lines at 250 m spacing orientated N - S were bisected by one E - W line. All lines were one kilometre in length. Readings were taken at 50 metre intervals.

The magnetic profiles observed (Figure 1) did not appear to be of immediate interest, and a two bag sample of -12/+36 mesh material collected from the pan did not contain kimberlitic indicator minerals. It is therefore tentatively concluded that the feature is not of interest. However, the profiles have been forwarded to Melbourne for examination by the Senior Geophysicist.

3. FUTURE PROGRAMME

Further work to be carried out in this licence area is as follows:-

i) continuing assessment of the results of sampling to date;
ii) continuation of the geological study where necessary; and
iii) additional ground magnetometer surveys over anomalous photo-features.

At the present time consideration is also being given to flying an airborne geophysical survey over part of the Exploration Licence.

4. STAFF

Exploration has been carried out be a team of 3 geologists, two prospecting hands and a cook, supported by a Contractor's helicopter flight crew of two.

The project has been supported by the Regional Office in Whyalla, and the facilities of the company's Head Office, Laboratory and Technical Services Division in Melbourne.

5. EXPENDITURE

Expenditure of $44,721 for the quarter has been allocated as follows:-

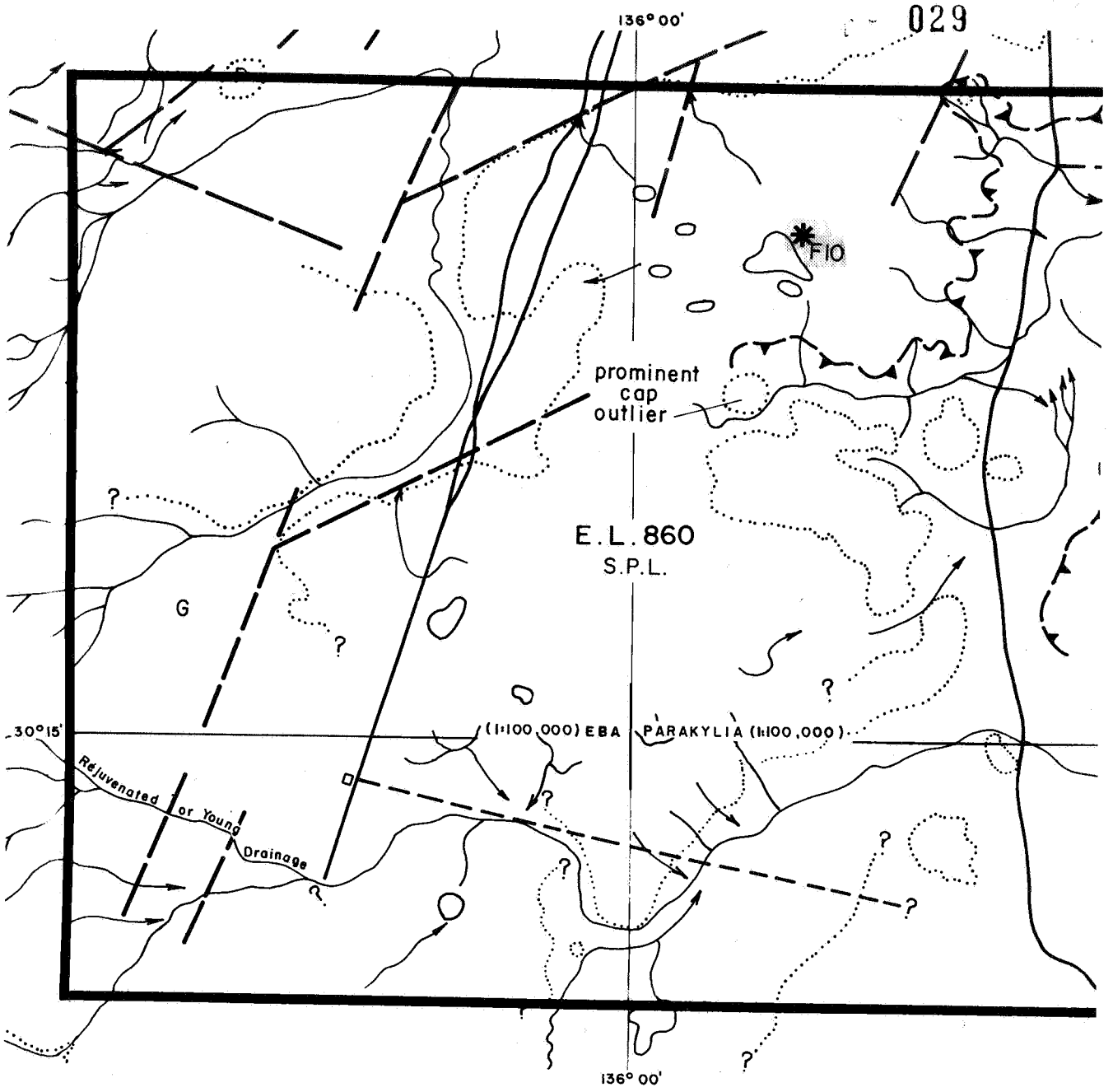
Management/Office Services	12,778
Field Staff - Technical	7,580
- Other	6,042
General Field Expenses	4,896
Transport - Ground	3,100
- Air	3,670
Sample Handling	
- Treatment	3,740
- Examination	2,490
Specialist Services:	
- Photogeology	66
- Drafting	359
TOTAL FOR THIS PERIOD	$ 44,721
TOTAL PREVIOUSLY REPORTED	$318,831
TOTAL TO DATE	$363,552

K.J. STRACKE
Exploration Manager

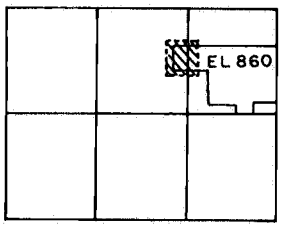
T.J. INGHAM,
Whyalla,

May, 1982

:bstji2



LOCATION MAP



KINGOONYA H53-11

✱ PHOTO ANOMALY

MAP 2

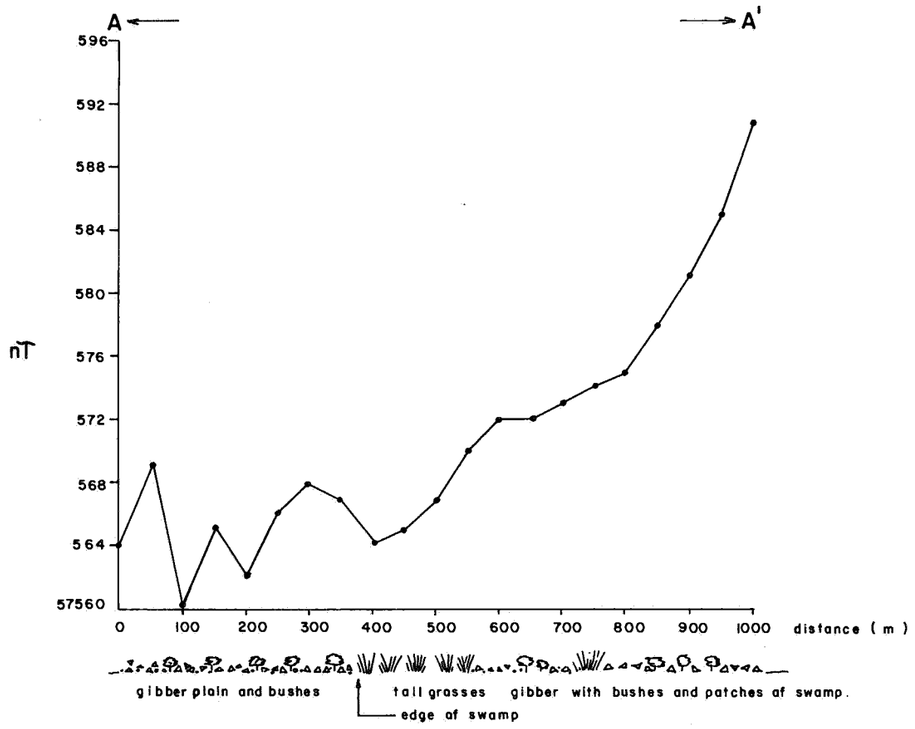
STOCKDALE PROSPECTING LIMITED

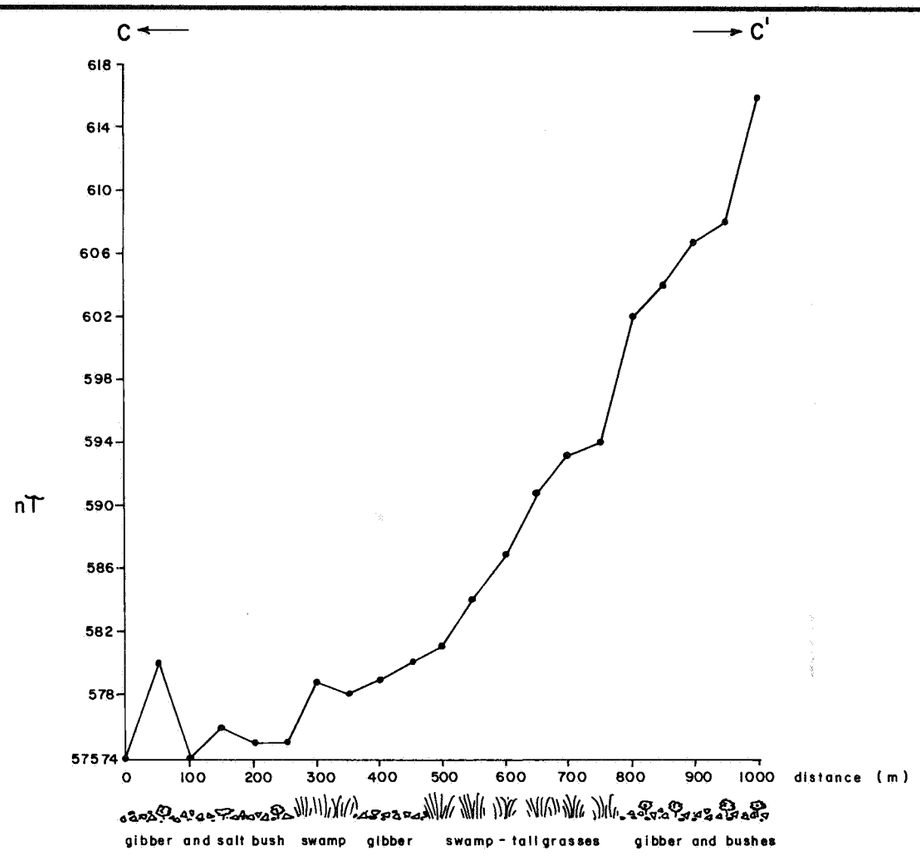
H53-11 KINGOONYA
REEDY LAGOON AREA
E.L. 860
LOCATION PLAN
PHOTO-ANOMALY F10

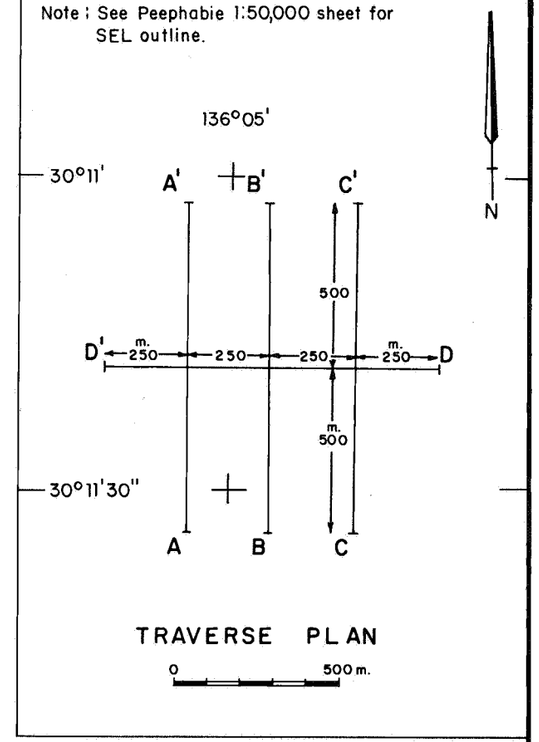
Compiled	S. Wright
Drawn	A.D.S
Date	MAY '82
Scale	1:89,000
Revised	
	SEL 1528

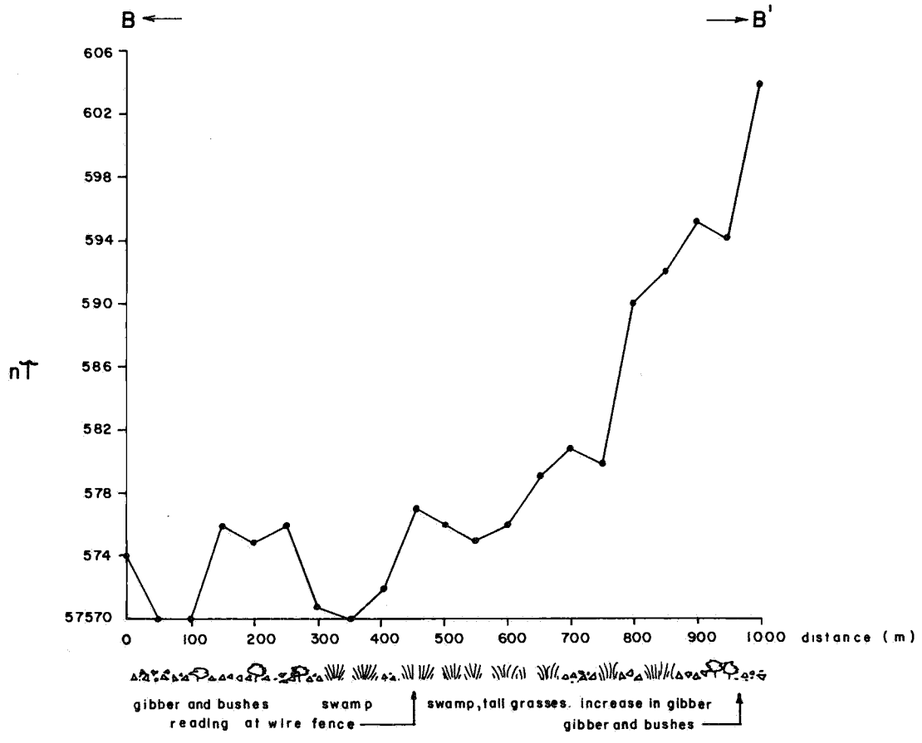
BASED ON SEL 1217

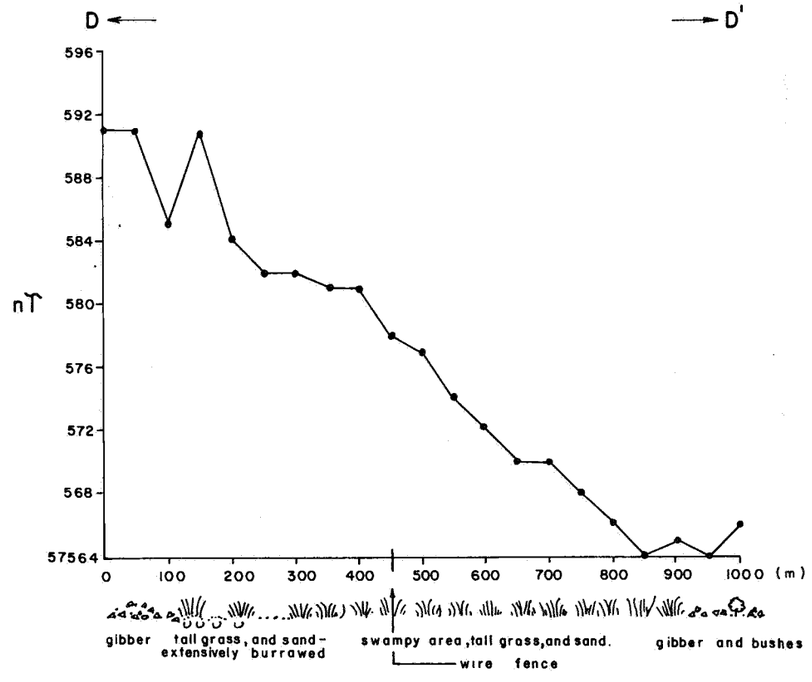
030











Vertical scale 1cm. = 100m.

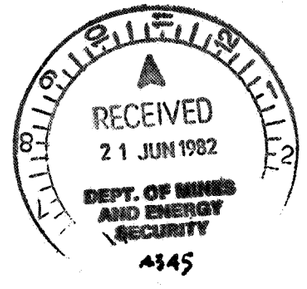


Fig. 1

STOCKDALE PROSPECTING LIMITED

H53-11 KINGOONYA
EL 860 - REEDY LAGOON AREA
FIO ANOMALY
GROUND MAGNETOMETER
TRAVERSES A,B,C and D

Compiled K.A.H	Drawn A.D.S	Date MAY '82	Scale SEE MAP	SEL 1527

STOCKDALE PROSPECTING LIMITED

EXPLORATION LICENCE NO 860 : REEDY LAGOON

FOURTH QUARTERLY REPORT FOR THE PERIOD ENDED 19TH JULY, 1982

STOCKDALE
PROSPECTING
LIMITED
Incorporated in the State of Victoria

Registered Office
581 Little Collins Street
Melbourne Victoria 3000

60 Wilson Street
South Yarra Victoria 3141
Australia
Telephone (03) 241 7522
Telex Stodal AA39546

Project Name: REEDY LAGOON

Title: EXPLORATION LICENCE NO 860, REEDY LAGOON, FOURTH QUARTERLY REPORT FOR THE PERIOD ENDED 19TH JULY, 1982

Author/s: T.J. INGHAM

Keywords: HEAVY MINERAL SAMPLING, GEOLOGY, GROUND MAGNETICS

1 : 250,000 Sheet Name/s & No/s.: KINGOONYA SH53 - 11

Text Pages No.: 3

Plan Nos.: 1

Table Nos.:

Appendices:

Date: JULY, 1982

Distribution: SADME, HRR, TJI, IC.

CONTENTS

MAPS

STOCKDALE PROSPECTING LIMITED

EXPLORATION LICENCE NO 860 : REEDY LAGOON

FOURTH QUARTERLY REPORT FOR THE PERIOD ENDED 19TH JULY, 1982

1. INTRODUCTION

This report summarises exploration in EL 860 (Map 1) during the quarter ending 19th July, 1982. Additional photo-geological and geological investigations have been carried out during this period.

2. PROSPECTING PROGRESS

2.1 Heavy Mineral Sampling

No additional samples have been collected. As previously reported the dispersion pattern of the indicator mineral grains found to date does not delineate a primary source.

2.2 Photogeology

The company photo-geologist re-examined aerial photographs of the licence area and re-selected anomalous features for follow-up. Most of these were co-incident with the features selected during the previous photostudy.

Seven features were visited on the ground. Several were found to be only subtle colour changes in soil type or silcrete lag gravel cover on pans, rather than diagnostic photo-features. Some difficulty was experienced in locating these features. All have been sampled with negative results.

No further work is contemplated at present.

2.3 Geological Study

Geological investigations in the licence area have been carried out during heavy mineral sampling and other work as part of an ongoing programme. Company geologists to date have tended to concentrate on the Upper Carboniferous and Mesozoic units in the area. However as some difficulty was encountered in recognition of various lithologies and surfaces, it was decided that a field visit/consultation with R.B. Flint of SADME would be beneficial. The Chief Geologist, Research and Technical Services Division, participated in the field survey and two field geologists from Parakylia base camp supervised the excursion. The

field visit was very useful and many aspects of the geology are now better understood. Although this has little immediate effect on the possible delineation of a source for the heavy mineral anomalies, it will be of considerable assistance in the interpretation of results within EL 860 and the adjacent area.

The co-operation of Mr. R.B. Flint and of SADME is gratefully acknowledged.

3. FUTURE PROGRAMME

The course of further exploration within this licence is now dependent on the outcome of investigations in progress in a similar geological environment elsewhere. A programme for EL 860 will be developed when this information is to hand.

4. STAFF

Exploration on this licence this quarter has been carried out by a team of two geologists, two prospecting hands, a cook and a helicopter crew of two (pilot and engineer). Consultants/specialist utilised have been R.B. Flint of SADME and Chief Geologist, RATS Division, Dr. R.V. Danchin. The project has been supervised by the Regional Geologist, with advice and assistance from the Exploration Manager and supported by the Whyalla Regional Office, Head Office in Melbourne and the Melbourne Laboratory and Technical Services Division.

5. EXPENDITURE

Expenditure of $14,506.00 for the quarter has been allocated as follows:

Management/Office Services	$ 1,991
Field Staff - Technical	2,345
- Other	1,941
General Field Expenses	46
Transport - Air	2,637
Sample Handling:	
- Preparation	440
- Examination	204
- Tenement Costs	2,157
Equipment amortisation	1,320
Specialist Services:	
- Drafting	425
- Photogeology	1,000
TOTAL FOR THIS PERIOD	$14,506
TOTAL PREVIOUSLY REPORTED	$363,552
TOTAL EXPENDITURE TO DATE	$378,058

Alan Lawrey.

T.J. INGHAM
Whyalla,

for K.J. STRACKE
Exploration Manager

August, 1982

:bstji7

STOCKDALE PROSPECTING LIMITED

EXPLORATION LICENCE NO. 860

REEDY LAGOON

5TH QUARTERLY REPORT FOR THE PERIOD ENDED 19TH OCTOBER, 1982

STOCKDALE
PROSPECTING
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Melbourne Victoria 3000

60 Wilson Street
South Yarra Victoria 3141
Australia
Telephone (03) 241 7522
Telegraph Anmercosa Telex 30728

Project Name: REEDY LAGOON

Title: EXPLORATION LICENCE NO 860, REEDY LAGOON.
FIFTH QUARTERLY REPORT FOR THE PERIOD ENDED
19TH OCTOBER, 1982.

Author/s: H.R. ROBISON

Keywords: -

1 : 250,000 Sheet Name/s & No/s.: KINGOONYA SH53-11

Text Pages No.: 1

Plan Nos.:

Table Nos.:

Appendices:

Date: NOVEMBER, 1982.

Distribution: SADME, Whyalla, TJI, IC.

STOCKDALE PROSPECTING LIMITED

EXPLORATION LICENCE NO 860 : REEDY LAGOON

FIFTH QUARTERLY REPORT FOR THE PERIOD ENDED 19TH OCTOBER, 1982.

There has been no work carried out on the licence area (Map 1) during this quarter, as resources have been allocated to adjacent tenements.

The course of future activity in the area will be determined by the outcome of investigations currently in progress in similar geological environments elsewhere.

No expenditure has been incurred this quarter, and expenditure to date remains at $378,058.

H. R. Robison,
Whyalla,
November 1982.

STOCKDALE PROSPECTING LIMITED

EXPLORATION LICENCE NO 860 : REEDY LAGOON

SIXTH QUARTERLY REPORT TO 19TH JANUARY, 1983

STOCKDALE
PROSPECTING
LIMITED
Incorporated in the State of Victoria

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581 Little Collins Street
Melbourne Victoria 3000

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South Yarra Victoria 3141
Australia
Telephone (03) 241 7522
Telex Stodal AA39546

Project Name: REEDY LAGOON

Title: EXPLORATION LICENCE NO 860 : REEDY LAGOON
SIXTH QUARTERLY REPORT TO 19TH JANUARY, 1983

Author/s: H.R. ROBISON

Keywords: DRILLING, BULK SAMPLING

1 : 250,000 Sheet Name/s & No/s.: KINGOONYA SH 53 - 11

Text Pages No.: 2

Plan Nos.: 1

Table Nos.: -

Appendices: -

Date: January, 1983

Distribution: SADME, WHYALLA, PEB, IC.

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MAPS

STOCKDALE PROSPECTING LIMITED

EXPLORATION LICENCE NO 860 : REEDY LAGOON

SIXTH QUARTERLY REPORT TO 19TH JANUARY, 1983

1. INTRODUCTION

This report covers exploration activity within EL 860 (Map 1) for the period ended 19th January, 1983. A drill hole was bored in an unsuccessful attempt to provide a water supply for bulk sampling, and a number of possible locations for bulk samples were examined.

2. DRILLING

Examination of drilling records for the area showed that a drill hole known variously as PRE-1 or AS-1 and drilled by Australian Selection (Pty) Ltd in 1978 had reportedly intersected flows of 20,000 gph at 80 m and 30,000 gph at 100 m. It was planned to drill a new hole adjacent to PRE-1 (Map 1) in order to provide a water supply for a bulk treatment plant. P. Nitschke Drilling was contracted to drill this hole, and used a Bourne 2000 rig. However the hole was abandoned at 64 m as the air return was lost. No water was encountered.

The bore hole is located at GR 437 800 y E/1245 300 y N on the Kingoonya 1:250,000 map sheet. A summary log is:-

0 - 22 m	Quaternary sands
22 - 40 m	Clays
40 - 64 m	Andamooka Limestone

3. EXAMINATION OF BULK SAMPLE SITES

A number of localities in the vicinity, and to the south, of Curdlawidny Lagoon at which the Upper Carboniferous Boorthanna Formation is present in outcrop or sub-outcrop have been examined. This continuing programme is intended to locate areas from which uncontaminated samples of pebble/boulder bed facies Boorthanna sediments can be collected to ascertain their heavy mineral content.

4. FUTURE PROGRAMME

Investigation of the Boorthanna Formation will continue and bulk samples will be collected from selected sites.

5. EXPENDITURE

Expenditure of $8,959 for the quarter has been allocated as follows:

	EL 860
Management/Office services	$ 1,662
Field Staff - Technical	600
Samplehandling:	
- Preparation (Recharge)	- 870
- Examination	2,992
Specialist Services:	
Drilling	4,556
Drafting	19
TOTAL FOR THIS PERIOD	$ 8,959
TOTAL PREVIOUSLY REPORTED	$378,058
TOTAL EXPENDITURE TO DATE	$387,017

Alan Bamsey.
for K.J. STRACKE
Exploration Manager

H.R. ROBISON,
Whyalla

January, 1983

:bshrr20

STOCKDALE PROSPECTING LIMITED

EXPLORATION LICENCE NO 860: REEDY LAGOON

SEVENTH QUARTERLY REPORT FOR THE PERIOD ENDED 19TH APRIL, 1983

STOCKDALE
PROSPECTING
LIMITED
Incorporated in the State of Victoria

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581 Little Collins Street
Melbourne Victoria 3000

60 Wilson Street
South Yarra Victoria 3141
Australia
Telephone (03) 241 7522
Telex Stodal AA39546

Project Name: BOORTHANNA TROUGH

Title: EXPLORATION LICENCE NO 860: REEDY LAGOON
SEVENTH QUARTERLY REPORT FOR THE PERIOD ENDED 19TH APRIL, 1983

Author/s: D.P. EMSLIE

H.R. ROBISON

Keywords: BARRAGE SAMPLING

1 : 250,000 Sheet Name/s & No/s.: KINGOONYA SH 53 - 11

Text Pages No.: 1

Plan Nos.: 3

Table Nos.: -

Appendices: -

Date: April, 1983

Distribution: SADME, WHYALLA, DPE, IC.

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MAPS

STOCKDALE PROSPECTING LIMITED

EXPLORATION LICENCE NO 860: REEDY LAGOON

SEVENTH QUARTERLY REPORT FOR THE PERIOD ENDED 19TH APRIL, 1983

1. INTRODUCTION

This report covers exploration activity within EL 860 (Map 1) for the period ended 19th April, 1983. Loam and barrage samples were taken during the quarter.

2. SAMPLING

2.1 Loam Sampling

Three loam samples were collected. One sample was taken at a photo anomaly site (Map 2) and two from the area adjacent to the site selected for the barrage sample (Map 3).

2.2 Barrage Sampling

Two barrage samples from the Boorthanna Formation were collected (Map 3). The first sample had a mass of 346 kg, and after examination produced a kimberlitic type garnet. As control on possible contamination of this sample was suspect, a second barrage sample was taken at the same locality. The result of this sample is awaited.

3. FUTURE PROGRAMMES

Future work will depend on the results obtained from the samples submitted.

4. STAFF

Staff employed during the quarter were as follows:

Geologists	3
Prospecting Hands	4

EXPENDITURE

Expenditure of $24,062 for the quarter has been allocated as follows:

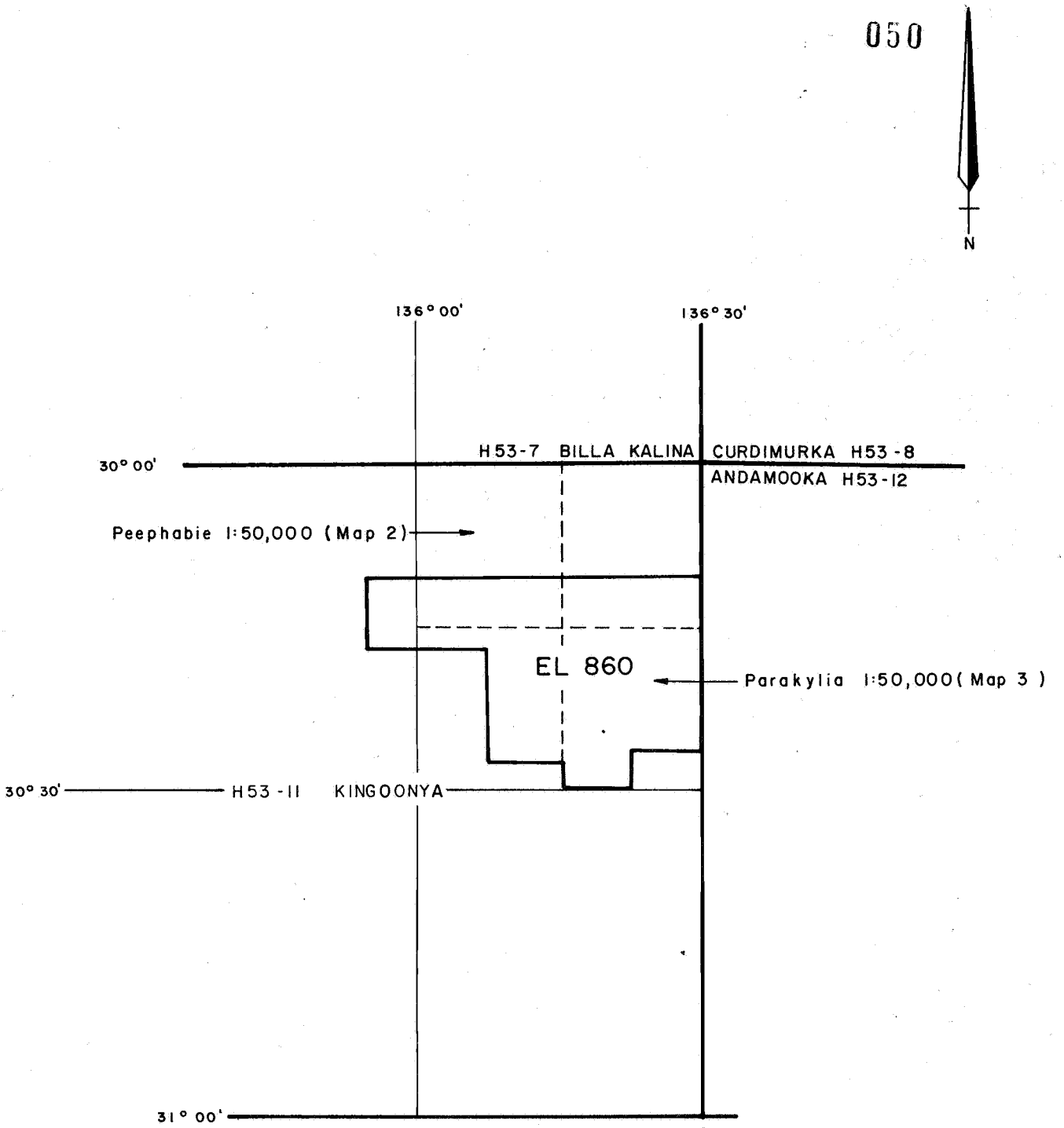
	EL 860
Management/Office Services	$ 4,697
Field Staff: Technical	1,960
: Other	2,065
Sample Handling: Treatment	8,800
: Examination	5,440
Specialist Services:	
: Remote Sensing	1,000
: Drafting	100
TOTAL THIS PERIOD	$ 24,062
TOTAL PREVIOUSLY REPORTED	$387,017
TOTAL EXPENDITURE TO DATE	$411,079

D.P. EMSLIE
Parakylia

K.J. STRACKE
Exploration Manager

April, 1983
:bsdpe4

050



MAP. 1

STOCKDALE PROSPECTING LIMITED	
H53-11 KINGOONYA EXPLORATION LICENCE 860 LOCATION MAP	Compiled Drawn A.D.S Date FEB '82 Scale 1:1 MILLION Revised SEL 1374 B

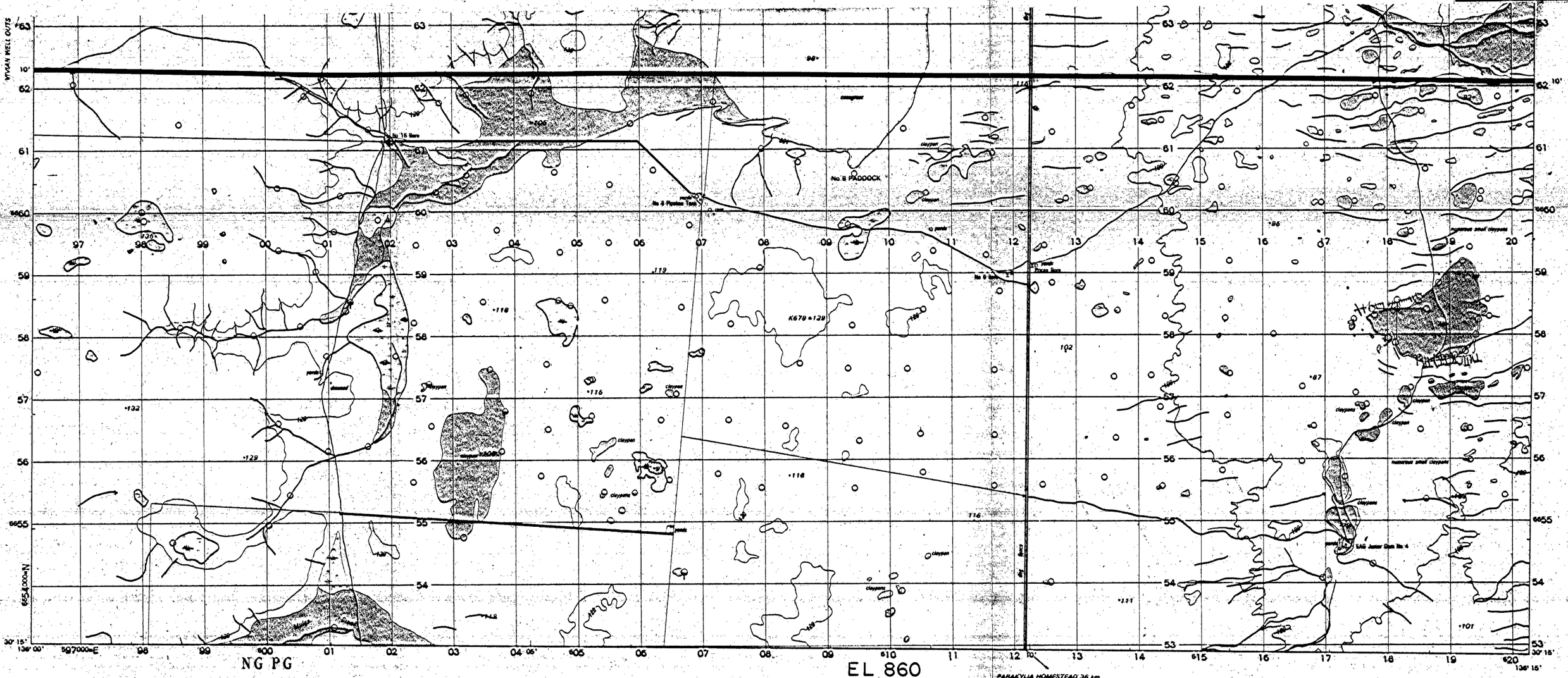
BASED ON SEL 1374

AUSTRALIA 1:50 000
TOPOGRAPHIC SURVEY

PEEPHABIE

SOUTH AUSTRALIA

REFER TO THIS MAP AS:
SERIES R742
SHEET 6137-IV
EDITION 2-AAS



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Supplemented by Aerotriangulation.
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6137-IV PEEPHABIE

GRID ZONE DESIGNATION: 53J	TO GIVE A STANDARD REFERENCE ON THIS SHEET TO NEAREST 100 METRES
100 000 METRE SQUARE IDENTIFICATION: NG PG	SAMPLE POINT: PEEPHABIE CLIFF A 137
600	1 Read letters identifying 100 000 metre square in which the point lies: PG
IGNORE the SMALLER figures of any grid number; these are for finding the full co-ordinates. Use ONLY the LARGER figures of the grid numbers; example:	2 Locate first VERTICAL grid line to LEFT of point and read LARGE figure labelling the line either to the top or bottom margin, or on the line itself: 04
597000	3 Estimate tenths from grid line to point: 5
	4 Locate first HORIZONTAL grid line BELOW point and read LARGE figure labelling the line to either the left or right margin, or on the line itself: 84
	5 Estimate tenths from grid line to point: 0
	SAMPLE REFERENCE: PG045840
	If reporting beyond 10° in any direction, prefix with Grid Zone Designation, ie: 53JPG045840

SERIES R742
SHEET 6137-IV
EDITION 2-AAS

GN TN MN
GRID CONVERGENCE 10 MILS (0.5°)
GRID-MAGNETIC ANGLE 120 MILS (6.8°)
TRUE NORTH, GRID NORTH AND MAGNETIC NORTH ARE SHOWN DIAGRAMMATICALLY FOR THE CENTRE OF THIS MAP. MAGNETIC NORTH IS CORRECT FOR 1975 AND MOVES EASTERLY BY 2 MILS (0.1°) IN ABOUT NINE YEARS.
TO CLAIM A MAGNETIC BEARING TO A GRID BEARING ADD GRID-MAGNETIC ANGLE.

SCALE 1:50 000

Kilometres 0 1 2 3 4 5 6 7 8 Kilometres

FULL LATITUDE AND LONGITUDE VALUES ARE SHOWN AT THE SHEET CORNERS, WITH MINUTE TICKS AROUND THE NEATLINE, EVERY FIFTH TICK IS LABELLED
BLACK NUMBERED GRID LINES ARE 1000 METRE INTERVALS OF THE UNIVERSAL TRANSVERSE MERCATOR GRID, ZONE 53, (AUSTRALIAN MAP GRID), AUSTRALIAN NATIONAL SPHEROID
GRID VALUES ARE SHOWN IN FULL ONLY AT THE SOUTH WEST CORNER OF THE MAP
VERTICAL DATUM: AUSTRALIAN HEIGHT DATUM
HORIZONTAL DATUM: AUSTRALIAN GEODETIC DATUM 1966
TRANSVERSE MERCATOR PROJECTION
CONTOUR INTERVAL 20 METRES
ELEVATIONS IN METRES

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LEGEND

- Built-up area; Dotted highway; Metropolitan route marker
- Reservation reserve with oval; Drive-in theatre; Underpass
- Sealed road two or more lanes; National route marker
- Sealed road one lane; Embankment
- Unsealed road two or more lanes
- Unsealed road one lane; Cutting
- Vehicle track; Road bridge; Gate; Stock grid
- Foot track; Foot bridge
- Multiple track railway; Station
- Single track railway; Light railway
- Railway tunnel, bridge, underpass
- High voltage transmission line
- Fence; Permanent telephone line
- Mine; Windmill; Church; Building
- Horizontal control point; Spot elevation
- Contour with value; Supplementary contour
- Depression contour; Sand; Disturbed surface
- Levee, bank or earthbags; Joint or reef feature
- High cliff; Escarpment
- Vegetation; Dense, medium, scattered
- Vegetation distinctive; Distinctive grass
- Orchard or vineyard; Line of trees or windbreak
- Mangrove swamp; Area subject to inundation
- Swamp; Swamp defines boundary
- Perennial lake; Watercourse
- Intermittent lake; Watercourse
- Muddy-dry lake; Watercourse
- Tank or small dam; Perennial
- Saline coastal flat; Intertidal flat
- Navigation light; Intertidal ledge or reef
- Pier; Exposed wreck; Prominent submerged wreck
- Prominent submerged reef, rock
- Indefinite watercourse, obsolete; Road, track or pipeline

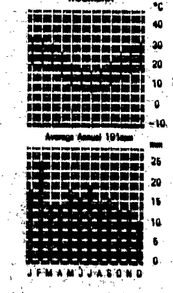
Sample locations

Samples (current quarter)
Chrome diopside
Possible kimberlitic garnet
Kimberlitic garnet

WATERCOURSE GUIDE

All watercourses on the map are mainly dry.

'MEAN' TEMPERATURE RAINFALL WOOMERA



DEFARMY/7939

INDEX TO ADJOINING MAPS

HOGARTH 6038-II	BILLA KALINA 6136-III	EMU CREEK 6138-II
PAISLEY 6037-I	PEEPHABIE 6137-IV	CUROLA MONEY 6137-I
WINGALPIN 6037-II	REEDY LAGOON 6137-III	PARAKYLIA 6137-II

PART OF 1:100 000 MAP
6137 PARAKYLIA

MAP 2

STOCKDALE PROSPECTING LTD
PEEPHABIE
SOUTH AUSTRALIA

SAMPLE LOCATION MAP

Current Sampling to: 19 · 4 · 83

4345-10

AUSTRALIA 1:50 000
TOPOGRAPHIC SURVEY

PARAKYLIA
SOUTH AUSTRALIA

REFER TO THIS MAP AS:
SERIES R742
SHEET 6137-II
EDITION 2-AAS

BILLA KALINA HOMESTEAD 45 km

MILLERS CREEK HOMESTEAD 52 km

VIVIAN WELLS OUTSTATION 42 km

KOOLYMILKA 46 km

E.L. 860
S.P.L.

THE WHOLE OF THIS MAP LIES WITHIN THE COMMONWEALTH AREA PROCLAIMED AS APPROPRIATE UNDER THE DEFENCE (SPECIAL UNDERTAKINGS) ACT 1952-1966 AND THE DEFENCE FORCE REGULATIONS MADE UNDER THE DEFENCE ACT 1903-1975. AUTHORITY TO ENTER MUST BE OBTAINED FROM THE DEPARTMENT OF DEFENCE.

CURDLAMINCHY LAGOON
BULLOCK PADDOCK
WOOLLY PADDOCK
HORN PADDOCK
CATCH HOLE PADDOCK
HOME PADDOCK
RAM PADDOCK
HOLDING PADDOCK
LITTLE RED LAKE PADDOCK
LES PADDOCK
RED LAKE
BIG RED LAKE PADDOCK
MAJENOIE PADDOCK
NOBLES PADDOCK
HOBBS PADDOCK
TOLLS PADDOCK
BEAMISH PADDOCK
WENDYS PADDOCK

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Supplemented by Aerotriangulation.
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COMPILATION: By photogrammetric methods in 1977 with field verification in 1978.
ACCURACY: Horizontal: 90% of well defined detail within ± 12.5m of true position.
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UNIVERSAL GRID REFERENCE
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6137-II PARAKYLIA

GRID ZONE DESIGNATION: 53J
100 000 METRE SQUARE IDENTIFICATION: PG
IGNORE the SMALLER figures of any grid number: these are for finding the full co-ordinates. Use ONLY the LARGER figures of the grid numbers; example: 521000

TO GIVE A STANDARD REFERENCE ON THIS SHEET TO NEAREST 100 METRES
SAMPLE POINT: K604 ▲ 779
1 Read bottom identifying 100 000 metre square in which the point lies: PG
2 Locate first VERTICAL grid line to LEFT of point and read LARGE figures labelling the line either in the top or bottom margin, or on the line itself: 21
3 Continue reading from grid line to point: 5
4 Locate first HORIZONTAL grid line BELOW point and read LARGE figures labelling the line in either the left or right margin, or on the line itself: 44
5 Estimate tenths from grid line to point: 5
SAMPLE REFERENCE: PG215446
If reporting beyond 18° in any direction, prefix with Grid Zone Designation, eg: 53JPG215446

SERIES R742
SHEET 6137-II
EDITION 2-AAS

GRID CONVERGENCE 10 MILS (0.5°)
GRID-MAGNETIC ANGLE 120 MILS (6.5°)
TRUE NORTH, GRID NORTH AND MAGNETIC NORTH ARE SHOWN DIAGRAMMATICALLY FOR THE CENTRE OF THIS MAP. MAGNETIC NORTH IS CORRECT FOR 1975 AND MOVES EASTERLY BY 2 MILS (0.1°) IN ABOUT NINE YEARS.
TO CONVERT A MAGNETIC BEARING TO A GRID BEARING ADD GRID-MAGNETIC ANGLE.

SCALE 1:50 000

Kilometres 0 1 2 3 4 5 6 7 8 Kilometres

FULL LATITUDE AND LONGITUDE VALUES ARE SHOWN AT THE SHEET CORNERS, WITH MINUTE TICKS AROUND THE NEATLINE, EVERY FIFTH TICK IS LABELLED
BLACK NUMBERED GRID LINES ARE 1000 METRE INTERVALS OF THE UNIVERSAL TRANSVERSE MERCATOR GRID, ZONE 53, (AUSTRALIAN MAP GRID, AUSTRALIAN NATIONAL SPHEROID
GRID VALUES ARE SHOWN IN FULL ONLY AT THE SOUTH WEST CORNER OF THE MAP
VERTICAL DATUM: AUSTRALIAN HEIGHT DATUM
HORIZONTAL DATUM: AUSTRALIAN GEODETIC DATUM 1966
TRANSVERSE MERCATOR PROJECTION
CONTOUR INTERVAL 20 METRES
ELEVATIONS IN METRES

Users can also assist in the improvement of this product by marking corrections and additions which come to their attention and mailing to DEPARTMENT OF DEFENCE (ARMY OFFICE), RUSSELL OFFICES, CANBERRA 2600, AUSTRALIA.

LEGEND

Built-up area; Divided highway; Metropolitan route marker
Reservation reserve with oval; Drive-in theatre; Underpass
Sealed road two or more lanes; National route marker
Sealed road one lane; Embankment
Unsealed road two or more lanes
Unsealed road one lane; Cutting
Vehicle track; Road bridge; Gate; Stock grid
Foot track; Foot bridge
Multiple track railway; Station
Single track railway; Light railway
Railway tunnel, bridge, underpass
High voltage transmission line
Fence; Permanent telephone line
Mine; Windmill; Church; Building
Horizontal control point; Spot elevation
Contour with value; Supplementary contour
Depression contour; Sand; Disturbed surface
Levee, bank or sand ridge; Joint or rock fissure
High cliff; Escarpment
Vegetation; Dense, medium, scattered
Vegetation distinction; Distinctive grass
Orchard or vineyard; Line of trees or windbreak
Mangrove swamp; Area subject to inundation
Swamp; Swamp definite boundary
Perennial lake; Watercourse
Intermittent lake; Watercourse
Mostly dry lake; Watercourse
Tank or small dam; Perennial watercourse
Saline coastal flat; Intertidal flat
Navigation light; Intertidal ledge or reef
Pier; Exposed wreck; Permanent submerged wreck
Permanent submerged reef, rock
Sample location
Sample location (current quarter)
Possible kimberlitic garnet
Kimberlitic garnet
Barrage sample

WATERCOURSE GUIDE
All watercourses on this map are mostly dry.

MEAN TEMPERATURE RAINFALL WOOMERA
°C 40 30 20 10 0 -10
Average Annual 191mm
mm 25 20 15 10 5 0
J F M A M J J A S O N D

INDEX TO ADJOINING MAPS

PEEPHARE 6137-IV	CURDLAMINCHY 6137-I	HIDDEN SWAMP 6237-IV
REEDY LAGOON 6137-III	PARAKYLIA 6137-II	WIGAN 6237-III
LOCK 6136-IV	BEDDOME 6136-I	STALEY 6236-IV

PART OF 1:100 000 MAP
6137 PARAKYLIA

DEFIARMY/6336

MAP 3

STOCKDALE PROSPECTING LTD
PARAKYLIA
SOUTH AUSTRALIA

SAMPLE LOCATION MAP
Current Sampling to: 19·4·83

4345-II

STOCKDALE PROSPECTING LIMITED

EXPLORATION LICENCE NO 860 : REEDY LAGOON

EIGHTH QUARTERLY REPORT FOR THE PERIOD ENDED 19TH JULY, 1983

No work has been carried out in this licence area during the current quarter.

No kimberlitic type minerals were identified in the 3 loam samples or the barrage sample collected during the previous quarter (quarterly report for period ended 19/4/83).

Further work will depend on the progress of exploration activity in nearby tenements.

D. P. Emslie,
Parakylia,
July, 1983.

Distribution: SADME, Whyalla, DPE, IC.

STOCKDALE PROSPECTING LIMITED

EXPLORATION LICENCE NO 1167: REEDY LAGOON

FIRST QUARTERLY REPORT FOR THE PERIOD ENDED 4TH NOVEMBER, 1983

Exploration Licence 1167 was granted from 5th August, 1983 over ground previously held as EL 860 so that exploration in this area could continue.

No work has been carried out in this licence area during the current quarter. Further work will depend on the progress of exploration activity in nearby tenements.

Expenditure of $6,774 incurred previously has now been allocated as follows:

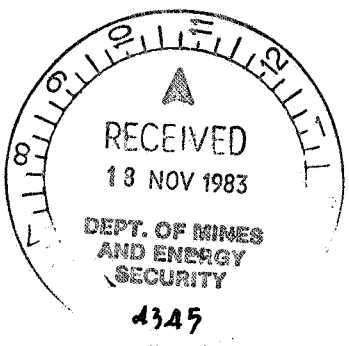
Management/Office Services	$ 983
Field Staff : Technical	$ 398
Tenement Costs	$ 2,233
Specialist Services:	
Remote Sensing	$ 2,360
Drafting	$ 800
TOTAL EXPENDITURE THIS PERIOD	$ 6,774
TOTAL PREVIOUSLY REPORTED (as EL 860)	$411,079
TOTAL EXPENDITURE TO DATE	$417,853

D.P. Emslie
Parakylia

K.J. Stracke
Exploration Manager

November, 1983

:BSDPE6



STOCKDALE PROSPECTING LIMITED

EXPLORATION LICENCE NO 1167 : REEDY LAGOON

SECOND QUARTERLY REPORT FOR THE PERIOD ENDED 4TH FEBRUARY, 1984.

Registered Office
581 Little Collins Street
Melbourne Victoria 3000

STOCKDALE
PROSPECTING
LIMITED
Incorporated in the State of Victoria

60 Wilson Street
South Yarra Victoria 3141
Australia
Telephone (03) 241 7522
Telex Stodal AA39546

Project Name: REEDY LAGOON

EXPLORATION LICENCE NO 1167

Title: SECOND QUARTERLY REPORT FOR THE PERIOD ENDED 4TH FEBRUARY, 1984.

Author/s: D. P. EMSLIE

Edited/Approved: H. R. ROBISON

Keywords: HEAVY MINERAL SAMPLING, BARRAGE SAMPLING.

1 : 250,000 Sheet Name/s & No/s.: KINGOONYA SH53-11

Text Pages No.: 2

Plan Nos.: 2

Table Nos.: 1

Appendices: -

Date: FEBRUARY, 1984.

Copy to: SADME, HRR, DPE, IC.

Circulate to:

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STOCKDALE PROSPECTING LIMITED

EXPLORATION LICENCE NO 1167 : REEDY LAGOON

SECOND QUARTERLY REPORT FOR THE PERIOD ENDED 4TH FEBRUARY, 1984.

1. INTRODUCTION

This report covers all work carried out in Exploration Licence 1167 (Map 1) for the quarter ended 4th February, 1984. Work included stream and barrage sampling.

2. SAMPLING

2.1 Stream Sampling

A total of 35 stream samples were taken from drainages in the vicinity of 13 Mile Dam over an area of 12km^2 (Map 2). Outcrops of Jurassic Algebuckina Sandstone are present in the head-waters of these streams and occur as a line of low bluffs overlain by Millers Creek dolomite (Tertiary).

The sampled area is covered mainly by aeolian dunes with calcrete developed in the interdunal areas. Because of the sand choked nature of the drainages in places, the samples collected ranged from 14 to 56 l. of -12+36# material.

2.2 Barrage Sampling

Seven hundred litres of -4# friable material was collected from an outcrop of Algebuckina Sandstone. All loose surface material was cleared from the sampled area and a fresh surface exposed so as to avoid possible contamination. The outcrop consisted of a coarse matrix supported pebbly conglomerate which contained abundant quartz and kaolin.

2.3 Results

No results have been received from any of the above mentioned samples.

3. FUTURE PROGRAMME

No work is planned for the next quarter in this Exploration Licence.

4. STAFF

Staff employed during this period were as follows:

Geologists	3
Prospecting Hands	3
Cook	1
Helicopter Crew	1

The project has been supported by facilities of the Regional Office in Whyalla and the Head Office in Melbourne.

5. EXPENDITURE

Expenditure of $ 19,456 for the period has been allocated as shown in Table 1.

Alan Lawsey.

D. P. Emslie,
Parakylia,
February, 1984.

for K.J. Stracke,
Exploration Manager.

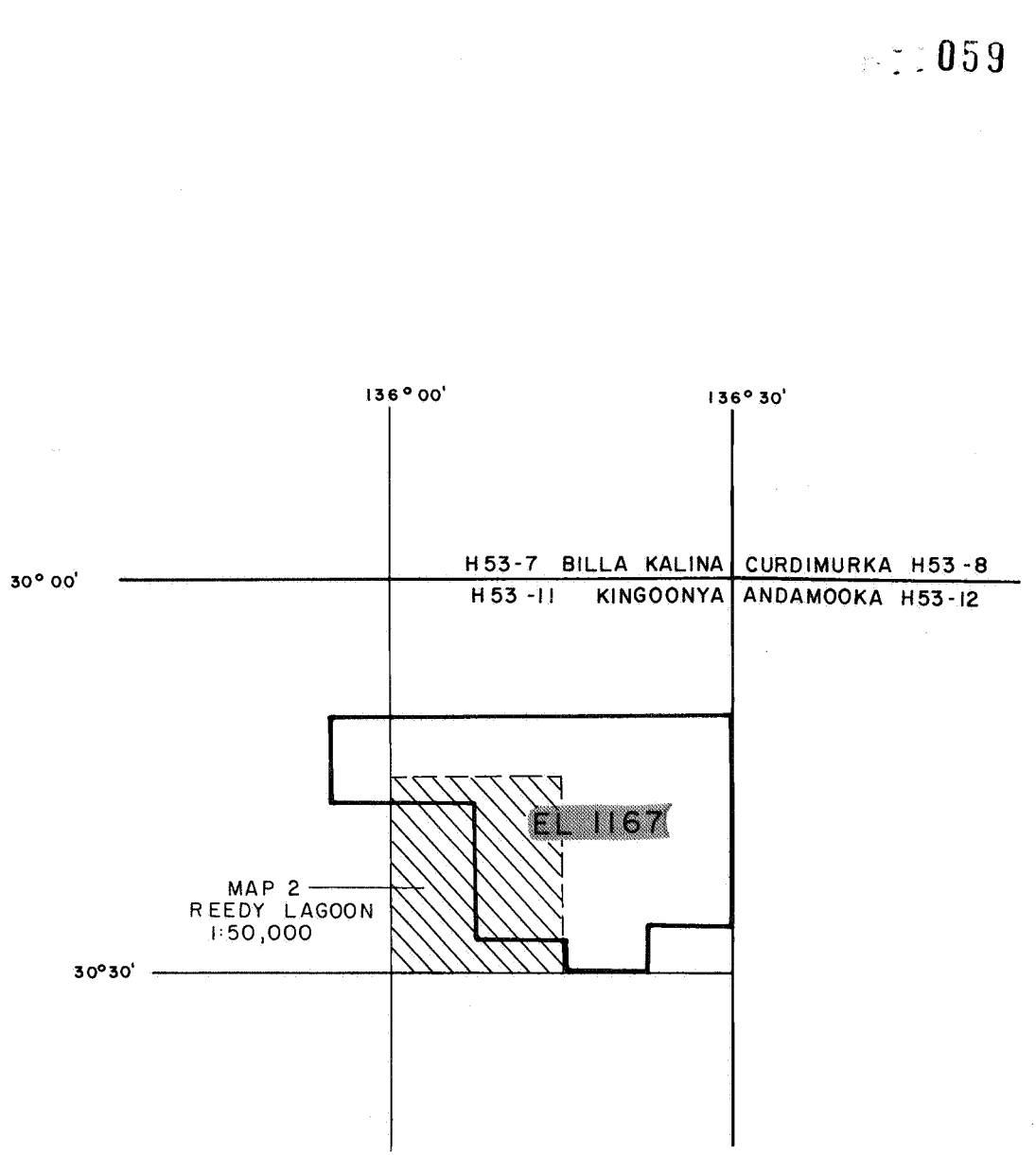
TABLE 1:

Expenditure of $19,456 for the period has been allocated as follows:

Management/Office Services	$ 3,468
Field Staff : Technical	3,299
: Other	303
Air Charter	310
Sample Treatment	1,376
Sample Examination	10,700
TOTAL FOR THIS PERIOD	$ 19,456
TOTAL PREVIOUSLY REPORTED	$417,853
TOTAL EXPENDITURE TO DATE	$437,308

ALC:bs

059



MAP. 1

STOCKDALE PROSPECTING LIMITED	
H53-11 KINGOONYA EXPLORATION LICENCE 1167 LOCATION MAP	Compiled Drawn A.D.S Date FEB '82 Scale 1:1 MILLION Revised OCT. '83 SEL 1374

BASED ON SEL 1374

AUSTRALIA 1:50 000
TOPOGRAPHIC SURVEY

REEDY LAGOON
SOUTH AUSTRALIA

REFER TO THIS MAP AS:
SERIES R742
SHEET 6137-III
EDITION 2-AAS

PRODUCED by the Royal Australian Survey Corps under the direction of the Chief of the General Staff.
PRINTED by the Royal Australian Survey Corps, 1979.
DISTRIBUTED by the Defence Services by the Royal Australian Survey Corps and to all other map users by the Department of National Resources.
CONTROL: Horizontal: Transferred from Lands Department Control.
Vertical: Airborne Profile Recorder.
AIR PHOTOGRAPHY: Super Wide Angle 1972 and 1973.
COMPILATION: By photogrammetric methods in 1978 with field verification in 1977.
ACCURACY: Horizontal: 90% of well defined detail within ±12.5m of true position. Vertical: 90% of elevations within ±10m except in areas of dense vegetation where this may not be achieved.

UNIVERSAL GRID REFERENCE
BEFORE GIVING A GRID REFERENCE, CIVILIAN USERS SHOULD STATE THE NUMBER AND NAME OF THIS MAP: 6137-III REEDY LAGOON

SERIES R742
SHEET 6137-III
EDITION 2-AAS

GRID CONVERGENCE 10 MILS (0.5°)
GRID-MAGNETIC ANGLE 120 MILS (6.5°)

TRUE NORTH, GRID NORTH AND MAGNETIC NORTH ARE SHOWN DIAGRAMMATICALLY FOR THE CENTRE OF THIS MAP. MAGNETIC NORTH IS CORRECT FOR 1979 AND MOVES EASTERLY BY 3 MILS (0.2°) IN ABOUT NINE YEARS.
TO CONVERT A MAGNETIC BEARING TO A GRID BEARING ADD GRID-MAGNETIC ANGLE.

SCALE 1:50 000

FULL LATITUDE AND LONGITUDE VALUES ARE SHOWN AT THE SHEET CORNERS, WITH MINUTE TICKS AROUND THE NEATLINE, EVERY FIFTH TICK IS LABELLED
BLACK NUMBERED GRID LINES ARE 1000 METRE INTERVALS OF THE UNIVERSAL TRANSVERSE MERCATOR GRID, ZONE 53 (AUSTRALIAN MAP GRID), AUSTRALIAN NATIONAL SPHEROID
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TRANSVERSE MERCATOR PROJECTION
CONTOUR INTERVAL 20 METRES
ELEVATIONS IN METRES

Users can also assist in the improvement of this product by marking corrections and additions which come to their attention and mailing to DEPARTMENT OF DEFENCE (ARMY OFFICE), RUSSELL OFFICES, CANBERRA 2600, AUSTRALIA.

LEGEND

WATERCOURSE GUIDE
All watercourses on this map are mainly dry.

MEAN TEMPERATURE RAINFALL WOOMERA

DEF/ARMY/7929
© Commonwealth of Australia 1979.

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PAISLEY 6037-I	PEEPHANE 6137-IV	BURDLAWONEY 6137-I
WINGILPIN 6037-II	REEDY LAGOON 6137-III	PARAKYLIA 6137-II
KOWAL 6036-I	LOCK 6136-IV	BEDDOME 6136-I

PART OF 1:100 000 MAP 6137 PARAKYLIA

○ Sample location
● Sample location (current quarter)
▲ Barrage sample

MAP. 2

STOCKDALE PROSPECTING LTD
REEDY LAGOON
SOUTH AUSTRALIA

SAMPLE LOCATION MAP
Current Sampling to: 4 / 2 / 84

4345-12

STOCKDALE PROSPECTING LIMITED

EXPLORATION LICENCE NO 1167 : REEDY LAGOON

THIRD QUARTERLY REPORT FOR THE PERIOD ENDED 4TH MAY, 1984

No work has been carried out in this licence area during the past quarter.

All the stream samples and the 1 barrage sample previously collected are negative (2nd quarterly report for the period ended 4/2/84).

The area from which the above-mentioned samples were collected was visited by R. Flint (SADME) and confirmed to represent a unit of the Jurassic Algebuckina Sandstone.

Expenditure of $2,618 incurred previously, but not previously reported, has now been allocated as follows:

Management/Office Services	$ 502
Field Staff: Technical	925
Other	910
General Field Expenses	66
Specialist Services:	
Photogeology	214
TOTAL EXPENDITURE THIS PERIOD:	$ 2618
TOTAL PREVIOUSLY REPORTED:	$437308
TOTAL EXPENDITURE TO DATE:	$439926

D.P. Emslie,
Sunny Creek,
May, 1984.

K.J. Stracke,
Exploration Manager.

STOCKDALE PROSPECTING LIMITED

EXPLORATION LICENCE NO 1167 : REEDY LAGOON

FOURTH QUARTERLY REPORT FOR THE PERIOD ENDED 4TH AUGUST, 1984.

No work has been carried out in this licence area during the past quarter.

for D. P. Emslie,
Whyalla,
August, 1984.

STOCKDALE PROSPECTING LIMITED

EXPLORATION LICENCE 1167: REEDY LAGOON

FIFTH QUARTERLY REPORT FOR THE PERIOD ENDING 4TH NOVEMBER, 1984

No work has been carried out in this licence area during the past quarter.

B.H. NEWELL
Whyalla,
November, 1984

BHN:bfs3

STOCKDALE PROSPECTING LIMITED

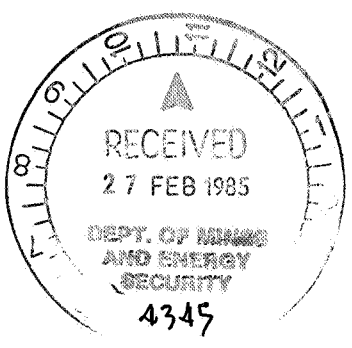
EXPLORATION LICENCE 1167 : REEDY LAGOON

SIXTH QUARTERLY REPORT FOR THE PERIOD ENDING 4TH FEBRUARY, 1985

No work has been carried out in this licence area during the past quarter.

H. R. Robison,
Whyalla,
February, 1985.

Distribution: SADME, WHYALLA, MELBOURNE.



STOCKDALE PROSPECTING LIMITED

EXPLORATION LICENCE 1167 : REEDY LAGOON

SEVENTH QUARTERLY REPORT FOR THE PERIOD ENDING 4TH MAY, 1985.

No work has been carried out in this licence area during the past quarter.

Further work is dependant on results from exploration in nearby tenements.

B. H. Newell,
Whyalla,
May, 1985.

Distribution: SADME, WHYALLA, IC.

STOCKDALE PROSPECTING LIMITED

EXPLORATION LICENCE 1167 : REEDY LAGOON

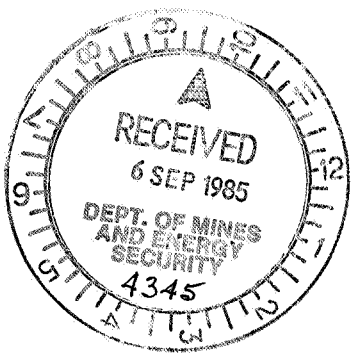
EIGHTH QUARTERLY REPORT FOR THE PERIOD ENDING 4TH AUGUST, 1985.

No work has been carried out in this licence area during the past quarter.

Further work is dependant on results from exploration in nearby tenements.

B. H. Newell,
Whyalla,
August, 1985.

Distribution : SADME, WHYALLA, IC.



STOCKDALE PROSPECTING LIMITED

EXPLORATION LICENCE NO 1167 : REEDY LAGOON

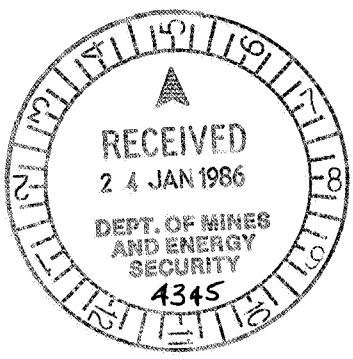
REPORT FOR THE PERIOD ENDING 4TH FEBRUARY, 1986.

No field work has been carried out in this licence area during the past quarter.

Re-assessment of all exploration data is in progress. A new forward programme will be formulated following this review.

B. H. Newell,
Whyalla,
February, 1986.

Distribution: SADME, Whyalla, Melbourne.



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STOCKDALE PROSPECTING LIMITED

EXPLORATION LICENCE NO 1167 : REEDY LAGOON

REPORT FOR THE PERIOD ENDING 4TH MAY, 1986.

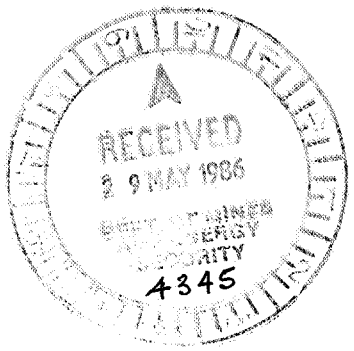
No field work has been carried out in this licence area during the past quarter.

B. H. Newell,
Whyalla,
May, 1986.

Distribution: SADME, WHYALLA, MELBOURNE.

NO FURTHER REPORTS EXPECTED.

awn 6/11/86.

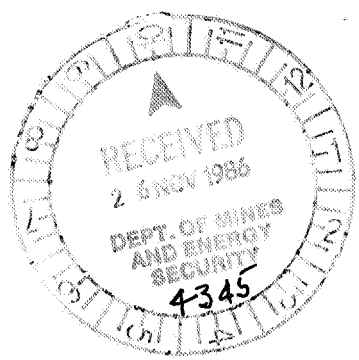


STOCKDALE PROSPECTING LIMITED

EXPLORATION LICENCE NO 1167 (FORMERLY EL860)

REEDY LAGOON

FINAL QUARTERLY REPORT FOR THE PERIOD ENDING 4TH AUGUST, 1986 AND RELINQUISHMENT REPORT



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STOCKDALE
PROSPECTING
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Incorporated in the State of Victoria

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581 Little Collins Street
Melbourne Victoria 3000

60 Wilson Street
South Yarra Victoria 3141
Australia
Telephone (03) 241 7522
Telex Stodal AA39546

Project Name: REEDY LAGOON

Title: EXPLORATION LICENCE NO 1167 (FORMERLY EL 860) FINAL QUARTERLY REPORT FOR THE PERIOD ENDING 4TH AUGUST 1986, AND RELINQUISHMENT REPORT.

Author/s: B.H. NEWELL

Edited/Approved: H.R. ROBISON

Keywords: HEAVY MINERAL SAMPLING, INDICAT OR MINERALS, DIAMONDS, GROUND MAGNETICS, DRILLING, PHOTOGEOLOGY.

1 : 250,000 Sheet Name/s & No/s.: KINGOONYA SH53-11

Text Pages No.: 9

Plan Nos.: 16

Table Nos.: 2

Appendices: –

Date: SEPTEMBER 1986

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STOCKDALE PROSPECTING LIMITED

EXPLORATION LICENCE NO 1167 (formerly EL 860):REEDY LAGOON

FINAL QUARTERLY REPORT FOR THE PERIOD ENDING 4TH AUGUST, 1986

AND RELINQUISHMENT REPORT.

1. INTRODUCTION

Exploration Licence No 1167 (formerly EL 860), Reedy Lagoon lies in the north eastern part of the Kingoonya 1:250 000 scale map sheet (SH53-11) in central South Australia (Figure 1). The licence covers 1436 square kilometres and is approximately 100 kilometres north east of Kingoonya.

This report summarizes all work undertaken in EL 860/1167 by Stockdale Prospecting Limited during the period from July 1981 until August 1986. Work undertaken during this period included literature studies, remote sensing studies, heavy mineral sampling (stream, loam and barrage) limited magnetometer surveying and an attempt to drill a water bore.

2. LEGAL

2.1 Title

Title was originally granted to Stockdale Prospecting Limited as Exploration Licence No 860 on 20th July 1981 for a period of 12 months and subsequently extended for an additional twelve months. The licence was replaced by Exploration Licence No 1167 on 5th August 1983. This licence was successively renewed for periods of 12 months on 13th June 1984 and 1st July 1985.

2.2 Memorandum of Variation

Exploration Licence No 1167 forms part of a much larger area of interest on the East Gawler Craton in which Stockdale is conducting an integrated exploration programme. In recognition of similar geological problems throughout, the Minister of Mines and Energy consented by Memorandum of Variation dated 13th September 1983, to the amalgamation of Schedule B commitments of all licences held, joint ventured or under application by Stockdale within this larger region (Figure 2).

3. ACCESS

Access to the area is via the sealed road from Port Augusta to Woomera and thence north and westwards by reasonable dirt roads to "Parakylia" homestead, located in the southern part of the licence. From "Parakylia" a number of station tracks offer limited access to the licence area. A short (800m) airstrip at Parakylia is suitable for light aircraft.

The whole of the licence lies within the Woomera Prohibited Area, and permission to enter the area is required from the Defence Support Centre at Woomera.

4. PHYSIOGRAPHY

4.1 Topography

The area lies between 100m and 150m above sea level, and is of subdued relief, with a slight but perceptible increase in altitude from east to west. A few small hills form local eminences rising some 15 to 20m above this general surface. Much of the area is covered by east-west trending vegetated longitudinal dunes, averaging some 6m in height, which reach their greatest density and development in the north-eastern part of the licence. To the west, treeless silcrete gibber plains are a more characteristic landform. Surface drainage is poorly developed, and primarily consists of clay pans and small gutters in the intra-dunal corridors. Major elements of drainage are represented by Curdlawidny Lagoon (GR 435255) and, in the west, the Mulga Creek system (GR 400250), which flows into the licence area from higher ground around Mount Vivian.

4.2 Climate and Vegetation

The climate is semi-arid to arid (Forbes, 1977), with high summer temperatures, a low annual rainfall (about 150mm) and a high potential evaporation rate in the order of 3500mm. Vegetation is sparse in the west, and becomes better developed to the east over the sand dunes; it is typified by blue bush (Kochina spp), salt bush (Atriplex spp), mulga and myall(both Acacia spp) (Forbes, op. cit.).

5. GEOLOGY

The generalized Stratigraphy for the Kingoonya 1:250 000 scale sheet is shown in Table 1.

The licence area is situated on the Stuart Shelf in the northern part of the Gawler Craton and to the west of the Torrens Hinge Zone (Figure 3). The area is also within, and near the south-western margin of the Great Artesian Basin and consequently Mesozoic and younger cover rocks predominate.

Mesozoic sediments unconformably overlie both Permian rocks of the southern extremity of the Arckaringa intracratonic basin

TABLE 1:

STRATIGRAPHY KINGOONYA 1:250 000 SH53-11

CAINOZOIC	QUATERNARY TO RECENT	Qrl	Pale reddish to white sand and clay of lakes, claypans, swamps, partly saline and gypsiferous.
		Qrg	White windblown gypsum marginal to claypans.
		Qra	Reddish sand, clay and gravel of drainage channels.
	PLEISTOCENE	Qrt	Pale reddish, brownish or dark gravels commonly composed of silcrete or ferruginous fragments.
		Qpt	Remnant older gravel sheets : Composition similar to Qrt.
		Qrn	Reddish sandy soils, lacking coarse gravel and sand ridges.
		Qrs	Reddish quartz sands forming longitudinal dunes. (Units Qrt to Qrs commonly underlain by calcrete and "Illeroo Pedoderm" reddish sandstone)
		Qpy	Sandy pale brownish and greenish claystone, Woolnomulla Bluff.
	TERTIARY	Tmd	?ETADUNNA FORMATION: White dolomite rock and (in some places) an underlying greenish or grey claystone
		Tsi	Pale grey, brownish or yellowish silcrete, generally only bouldery remnant. Some ferruginisation and possible silicified Tertiary sandstone with plant impressions.
MESOZOIC	CRETACEOUS NEOCOMIAN-APTIAN	Klb	?BULLDOG SHALE : White shale, claystone or siltstone.
		Klc	?CADNA-OWIE FORMATION: Pale clayey and pebbly to bouldery sandstones; dark ferruginised coarse sandstone. (Cretaceous and some older units bleached by deep chemical weathering of Cretaceous or Tertiary age.)
PALAEOZOIC	CAMBRIAN	€	ANDAMOOKA LIMESTONE. Brown and grey limestone.
PROTEROZOIC	ADELAIDEAN	Ew	TENT HILL FORMATION: Pale brown to grey, cross-bedded flaggy sandstone (?ARCOONA QUARTZITE MEMBER). Reddish, brownish and greenish flaggy siltstone and sandstone in Beddome region.
	CARPENTARIAN	pEv	GAWLER RANGE VOLCANICS: Reddish quartz-feldspar porphyry or fine-grained volcanic rock; sometimes layered.
		pEc	?CORUNNA CONGLOMERATE: White or brownish quartzite or conglomerate; schistose diamictite (sheared bouldery siltstone) south-east of Mount Eba.
LOWER PROTEROZOIC		pE	?CLEVE METAMORPHICS: Quartzite and ironstone of Mount Eba; iron formations.
		pEg	?Granite west of Kingoonya.

After Forbes, 1977.

(Wopfner, 1980), and older sediments of the Stuart Shelf. These older sediments in turn unconformably overlie Proterozoic basement, the surface of which is irregular, probably due to a combination of block faulting and differential erosion. However, knowledge of the pre-Cretaceous rocks of the licence area is almost exclusively limited to that obtained from drill and bore hole data.

The basal Mesozoic unit is the Cadna-owie Formation which is described (Forbes, op.cit.) as "brownish clayey (pale) or ferruginised (dark) sandstone ; pebbly to bouldery sandstone", and has been tentatively assigned a Neocomian age. This is overlain by the Aptian (?) Bulldog Shale, a white altered flaggy to medium-bedded shale, with claystone, siltstone and lithic sandstone. It may be noted that on the adjacent Billa Kalina map sheet area both the Cadna-owie and Bulldog Shale are described as containing cobble and boulder beds (Ambrose and Flint, 1981) and that field observations indicate that this is also the case in the Licence area.

The Cretaceous sediments are overlain and largely obscured by a number of Tertiary and Quaternary deposits, several of which relate to palaeodrainages and shorelines. The Tertiary deposits are primarily silcretes, at least some of which have their origin in a regressive Miocene Lake system which covered the licence and adjacent areas (Ambrose and Flint, 1979). As the silcretes contain clasts of silcrete, it is readily apparent that more than one episode of silcretisation has occurred. The Quaternary deposits occur as a variety of soils, colluvium, alluvium and wind-blown sands, the latter forming the dunes referred to above. There is a suggestion that the nature of the Quaternary deposit seen may reflect the underlying geology with for example the dunes being derived from the Cadna-owie Formation ; however this relationship has yet to be confirmed and formalised.

6. PHOTOGEOLOGICAL STUDY

Stockdale's Technical Services Division was requested to carry out an interpretation of the available aerial photography to examine the geology and geomorphology of the area, and to identify any anomalous features which might represent the surface expression of kimberlitic intrusive rocks. In order to place the observations made in a more regional perspective, the study area was extended to cover the north-eastern portion of the Kingoonya 1:250 000 map sheet. The Kingoonya 1:250 000 4, 5, 7 colour composite Landsat image (106/081) was also examined.

Each stereopair from the Kingoonya 1972 1:89 000 colour photography was studied for drainage, outcrop, general geology, geomorphology and any anomalous features. This information was plotted on clear overlay material and mosaiced to form a photo-interpretation map (Figure 4). A field visit was then undertaken to check ground truth, visit what were considered to be type localities, and examine features of possible interest.

A small outcrop of (?) Proterozoic rocks was noted near Millers Creek No 13 Bore (GR 414246) but, except from drill holes, no other rocks of this age are known within the EL area. Pink and pale green crystalline dolomitic limestone occurring near "Parakylia" and as float to the north, and white crystalline limestone seen in the spoil of a disused well at the northern end of Curdlawidny Lagoon (GR 435262) are probably of Cambrian Age.

To the north of the licence Permian sediments are known to occur on the western edge of Devil's Playground and the southern flank of Miller's Creek Plateau (Ambrose and Flint, 1979), and include a heterogeneous suite of boulders and erratics (Baglin and David, 1977). Boulders are also seen within the licence, where they occur scattered over Curdlawidny Lagoon, and in sandstones in outcrop and dam spoil north of "Parakylia". Similar sandstones in places also containing erratics, are preserved under remnant caps of silcrete and minor laterite along the western edge of a north-south chain of lakes (GR 423240) some 15 km WNW of "Parakylia".

Within the study area the Cadna-owie Formation consists of marginal marine and fluvial-deltaic sandstones, often ferruginised, conglomerates and shales. These form discontinuous areas of low, dark outcrop and suboutcrop, and are often difficult to distinguish on the photographs from areas of lag gravel. Angular to rounded boulders of quartzite, reddish porphyry (Gawler Range Volcanics), jasper and some granite were noted.

The Bulldog Shale overlies the Cadna-owie Formation, and consists of a marine transgressive sequence of argillaceous limestone, shale, mudstone, sandstone and conglomerate. This unit is extensively altered in places, and kaolin and gypsum are widespread and abundant, whilst the shales are frequently silicified beneath Tertiary silcrete cappings. Angular to rounded quartzite boulders are present, whilst other exotic clasts have been reported in the literature.

There appears to have been some reworking of erratics (and presumably other material) from the Permian into the Cadna-owie Formation, and thence into the Bulldog Shale. The suggestion is that the less resistant boulders are destroyed during these processes, so that whilst the Permian displays the full suite of erratics, the Cadna-owie has a less varied boulder content and the Bulldog shale carries almost exclusively quartzite clasts.

Tertiary sediments in the area appear restricted to silcretes and other duricrusts, capping palaeodrainages and/or features related to the regressive Miocene Lake (see above), of which Curdlawidny Lagoon appears to be a remnant. Duricrusted ridges, interpreted as representing a palaeo-shoreline developed during a still stand in the regression of the lake, occur 4 km north of Parakylia.

The geomorphological history of the area is complex, and has involved a number of erosion cycles, which have led to a

number of planation surfaces now covered with lag gravels. Sand dunes partly derived from the erosion of Permian (?) and Cretaceous sediments have migrated over this landscape.

The first stages of deposition of the Miocene Lake system were characterised by a warm, high rainfall climate, during which time the EL area was part of the shallow lake basin. In later stages, a more arid climate developed, resulting in a westward contraction of the lake, and in silicification of shoreline features and other suitable environments during pauses in the regression (Ambrose and Flint, 1979).

The Tertiary features are post-dated, and in places overlain, by recent sand dunes. The latter are of longitudinal type, and are well developed to the east of Curdlawidny Lagoon. The dunes are generally about 6m in height, and may reach lengths in excess of 10km. They are essentiallly east-west trending and sub-parallel, but are sometimes seen to converge and/or coalesce. Vegetation is fairly well developed, and the dunes may be regarded as fixed. However modification is currently occurring through the addition of wind-borne sediments to the crests, and by deflation and the development of blow outs where vegetation is sparse. Spillage into the swales broadens the width of the dune structures.

Vegetated and bare pans are scattered throughout the interdunal corridors, and may form the foci for locally developed internal drainages. In some instances (eg GR 423240) chains of pans form conspicuous alignments, which may well be structurally controlled. Drainage channels following the swales may terminate in the small interdunal pans, or where better developed, flow greater distances and reach major "lakes" such as Curdlawidny Lagoon. In extreme cases these channels have sufficient erosive power to modify the tips of dunes.

Lag gravels occur scattered through the dune field and on the surfaces of some pans. They are also developed in the extreme west of the EL. They consist predominantly of quartzite and silcrete clasts, but in some areas a more varied suite is seen, as at GR 425261 where gneiss, granite, limestone, porphyritic rhyolite and ? greywacke were observed in addition to quartzite and silcrete. As the surfaces on which the lag gravels occur are still in the process of exhumation, it is apparent that the boulder suite seen must relate to the age of the surface exhumed and the nature of the sediment forming the retreating scarp.

Curdlawidny Lagoon (together with Bamboo Swamp and the Devil's Playground which lie to the north, outside the EL) is a remnant of a Quaternary Lake, itself a remnant of the Miocene lacustrine system. Sedimentation is currently active here, although occurring at a slow rate. The eastern margin is marked by a lunette, behind which drainage accumulates along a chain of lagoons. The lunette is interpreted as a Quaternary shoreline. At the south-western margin of the lagoon fluvial sediments fan out as deltaic accumulations where streams terminate.

At least three drainage cycles have been observed within the EL, the earliest being the now silicified Tertiary cycle associated with the Miocene Lake system. A younger Quaternary drainage, also primarily lake-oriented, may be distinguished from this as it is unsilicified. Both these palaeodrainages are now modified and incised by the third, current cycle. However, the major elements of the landscape are interpreted as likely to be of long standing, and that erosional development since the Tertiary has modified rather than drastically changed them. It is concluded that the licence area has been part of a large shallow basin, within which detrital material has been of essentially locally derived origin, since early Tertiary times.

7. DRILL HOLE DATA

Drill and borehole (water well) information available on SADME open files was compiled for the licence and surrounding area. Most of the holes within the licence are water wells, and interpretation is therefore subjective as it has been made by attempting to match the driller's descriptions with the lithological descriptions given in literature for the various formations. Data collated is indicated on Figure 5 which suggests that the Permian is only patchily present within the east, but thickens to the north and west. The maximum thickness of Quaternary is about 12 m and was recorded from localities just outside the western and northern EL boundaries. This is a significant observation, which indicates that the development of surficial deposits is not sufficient to prevent heavy mineral dispersion from a bedrock source.

8. SAMPLING

8.1 Reconnaissance Sampling

The licence area was sampled at an average density of one sample per 6-7 square kilometres using helicopter supported sampling teams. Drainage samples were preferred, but loam scrapes were also collected.

A total of 218 samples were collected (A,B,S and N series) and the sample locations are shown in Figure 6. Examination of the concentrates showed the presence of single grains of kimberlitic indicator minerals in a few scattered samples.

8.2 Follow-up Sampling

8.2.1 Stream and Loam Sampling

A high density heavy mineral sampling programme was conducted in two phases. Sample locations and results are shown on Figures 9 to 12.

Sample sites were "drainage oriented" and interdunal drainage channels and pans were preferentially sampled. Where such

sites were not available, loam scrape samples were collected. In a few instances, surface material and gibber plain areas consisted entirely of pebbles and fine gypsiferous dust, and no sample could be collected. Material collected was screened at 12 and 36 mesh on site to produce a retained sample of about 15 kg of -12+36 mesh. Sites were flagged and marked with aluminium tags to aid recovery if required.

The first phase of sampling covered an east-west strip of approximately 320 square kilometres in the north of the licence area. A total of 323 samples were collected at a density of one per square kilometre (S and P series).

The second phase of sampling covered the rest of the licence area at a broader density (one sample per 4 square kilometres). A total of 92 samples were collected (S and P series).

8.2.2 Detailed Sampling

A broad dispersion of kimberlitic indicator minerals occurs in the north of the licence area i.e. there appears to be a "cut-off" to the south of Curdlawidny Lagoon, where samples are essentially negative.

Five positive sites were resampled at a greater density to confirm the results and provide greater statistical reliability. The follow-up sampling is shown on Figures 7 and 8. No further diamonds were recovered from the vicinity of sample P5676 or any of the other follow-up. The dispersion pattern of the indicator minerals does not delineate a primary source.

8.2.3 Photofeature Sampling

Following a re-interpretation of the available air photo cover (Figure 13), several anomalous features were selected. Most of these were co-incident with the features selected during the previous photostudy (Figure 4).

Seven features were visited on the ground. Several were found to be only subtle changes in soil type or silcrete lag gravel cover on pans. All were sampled, but no indicator minerals were recovered.

Photo anomaly F10 (Figure 14) was sampled separately (30 kg -12/+36 mesh material) during a ground magnetometer survey. No indicator minerals were recovered.

8.2.4 13 Mile Dam Area Sampling

Sampling was conducted in the vicinity of 13 Mile Dam to test Jurassic Algebuckina Sandstone as a possible secondary source of indicator minerals.

A total of 35 stream samples were taken from drainages in the vicinity of 13 Mile Dam over an area of 12 square kilometres (Figure 15). Outcrop of Algebuckina Sandstone are present in

the headwaters of the streams.

The area sampled is covered mainly by aeolian dunes with calcrete developed in the interdunal areas. Samples collected ranged from 15 to 60 kg of -12+36 mesh material due to the sand choked nature of the drainages in places.

No indicator minerals were recovered.

8.2.5 Barrage Sampling

Two barrage samples (each 346 kg) from the Boorthanna Formation were collected (Figure 10). The first sample (Z0393) contained a kimberlite type garnet. As contamination was suspected, a second sample (Z0701) was taken at the same locality. This was negative, and subsequent check stream sampling (Z0897 - Z0898) was also negative.

Approximately 1000 kg of -4 mesh friable material was collected from an outcrop of Algebuckina Sandstone (Sample Z3500) Figures 11 and 15. The outcrop consisted of a coarse matrix supported pebbly conglomerate which contained abundant quartz and Kaolin. No indicator minerals were recovered.

9. DRILLING

Examination of drilling records for the area showed that a drill hole known variously as PRE-1 or AS-1 and drilled by Australian Selection (Pty) Ltd in 1978 had reportedly intersected flows of 20 000 gph at 80m and 30 000 gph at 100m. It was planned to drill a new hole adjacent to PRE-1 in order to provide a water supply for a bulk treatment plant. P. Nitschke Drilling was contracted to drill this hole, and used a Bourne 2000 rig. However, the hole was abandoned at 64m as the air return was lost. No water was encountered.

The bore hole is located at GR 437 800 y E/1245 300 y N on the Kingoonya 1:250 000 map sheet. A summary log is :-

0	-	22m	Quaternary sands
22	-	40m	Clays
40	-	64m	Andamooka Limestone

10. GROUND GEOPHYSICS

A small scale ground magnetometer survey was carried out over a photo anomaly identified near the north western corner of the Exploration Licence (Figure 14). The photo feature is a pan anomaly, with internal drainage and no outcrop. It could also be described as a vegetation anomaly associated with a small pan on the gibber plain to the west of the palaeolake system.

This anomaly is a feature of approximately 800 x 500 metres in size, and the ground magnetometer survey consisted of four survey lines. Three lines at 250m spacing orientated N - S were bisected by one E - W line. All lines were one kilometre

in length. Readings were taken at 50 metre intervals.

Magnetic profiles are shown in Figure 16.

11. CONCLUSION

Kimberlitic indicator minerals and a microdiamond were recovered mainly from the northern part of the licence area. The indicator minerals dispersion pattern does not appear to delineate a primary source and it is concluded that the indicator minerals are related to secondary sources.

Limited ground magnetic surveying failed to identify any primary sources.

Remote sensing studies and associated sampling did not indicate any surface expressions of kimberlitic emplacement worthy of further follow-up.

12. EXPENDITURE

Expenditure for the period during which Stockdale Prospecting Ltd held Exploration Licence No 860/1167 totalled $ 469 138 The allocation of this expenditure is detailed in Table 2.

B.H. Newell,
District Geologist,
Whyalla.

H. R. Robison,
Chief Geologist - South.

TABLE 2

Expenditure of $469138 for Exploration Licence 1167 (including EL 860) has been allocated as follows:

Management/Office Services	$	5320
Field Staff : Technical		5275
: Others		1092
Air Charter		0
Sample Treatment		2686
Sample Examination		7199
Central Treatment Plant		4828
Sundry Field Expenses		66
Transport and Travel		42
Remote Sensing		304
Tenement Costs		5108
TOTAL	$	31830
TOTAL PREVIOUSLY REPORTED	$	437308
TOTAL EXPENDITURE TO DATE	$	469138

JE:OFG182

AMBROSE G.J., & FLINT R.B., 1979 A Regressive Tertiary Lake System and Silicified Strand Lines, Billa Kalina Area, South Aust. SADME Rpt. Bk. 79/104 (unpublished)

AMBROSE G.J., & FLINT R.B., 1981 Billa Kalina, South Australia. Explanatory Notes, 1:250 000 geological series. Sheet SH/53-7. Geol.Surv. S.Aust.

BAGLIN G.R., & DAVID L.J., 1977 Progress Report for EL 333, Billa Kalina. Samedan Oil Corp. SADME Open File Report, Env. 3067 (Unpublished).

FORBES B.G., 1977 Notes on the Kingoonya 1:250 000 Preliminary Geological Map. SADME Rpt Bk. 77/7 (unpublished).

WOPFNER H., 1980 Development of Permian Inter-cratonic Basins in Australia. Fifth International Gondwana Symposium, Wellington , New Zealand. February, 1980.

084

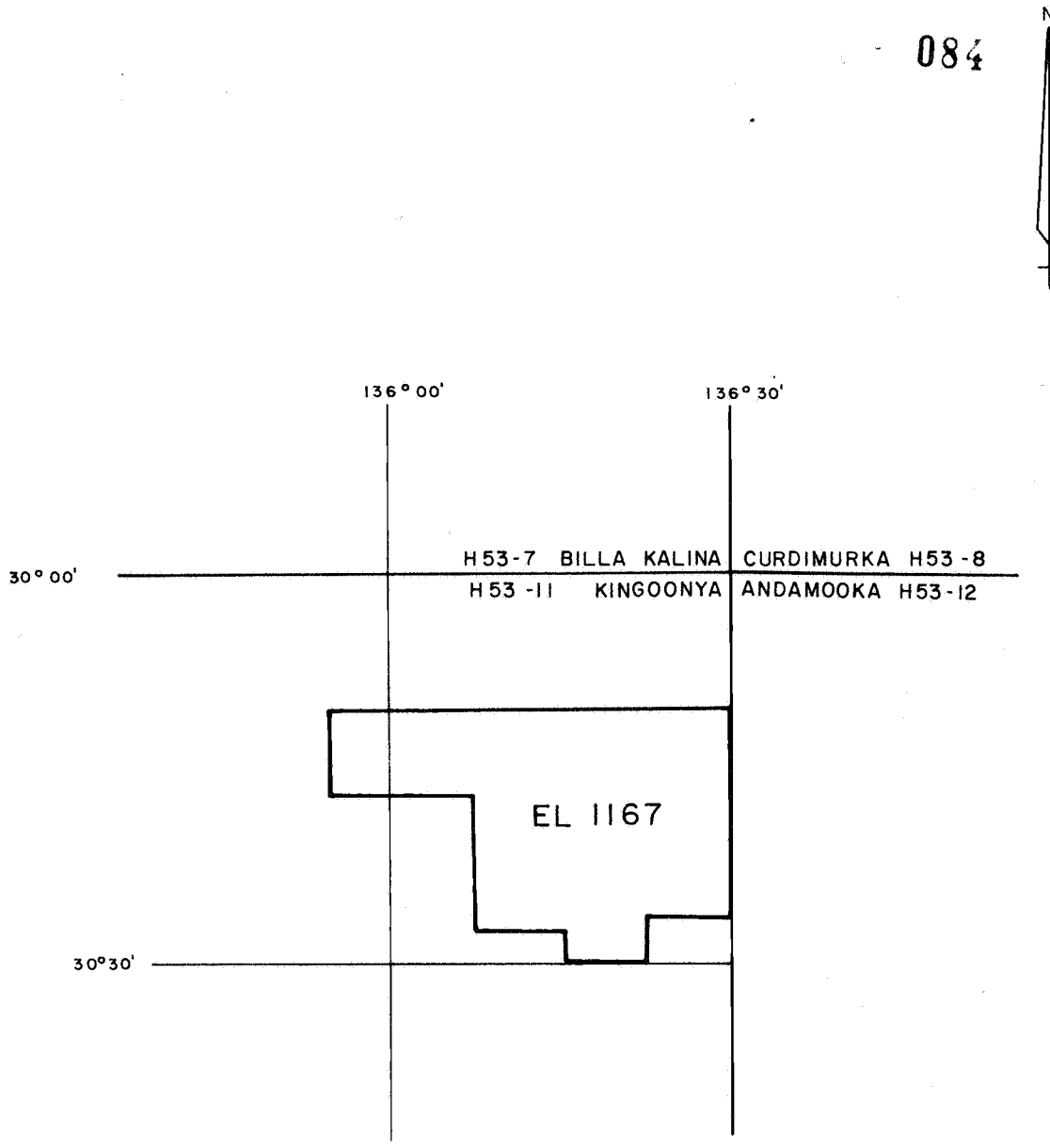
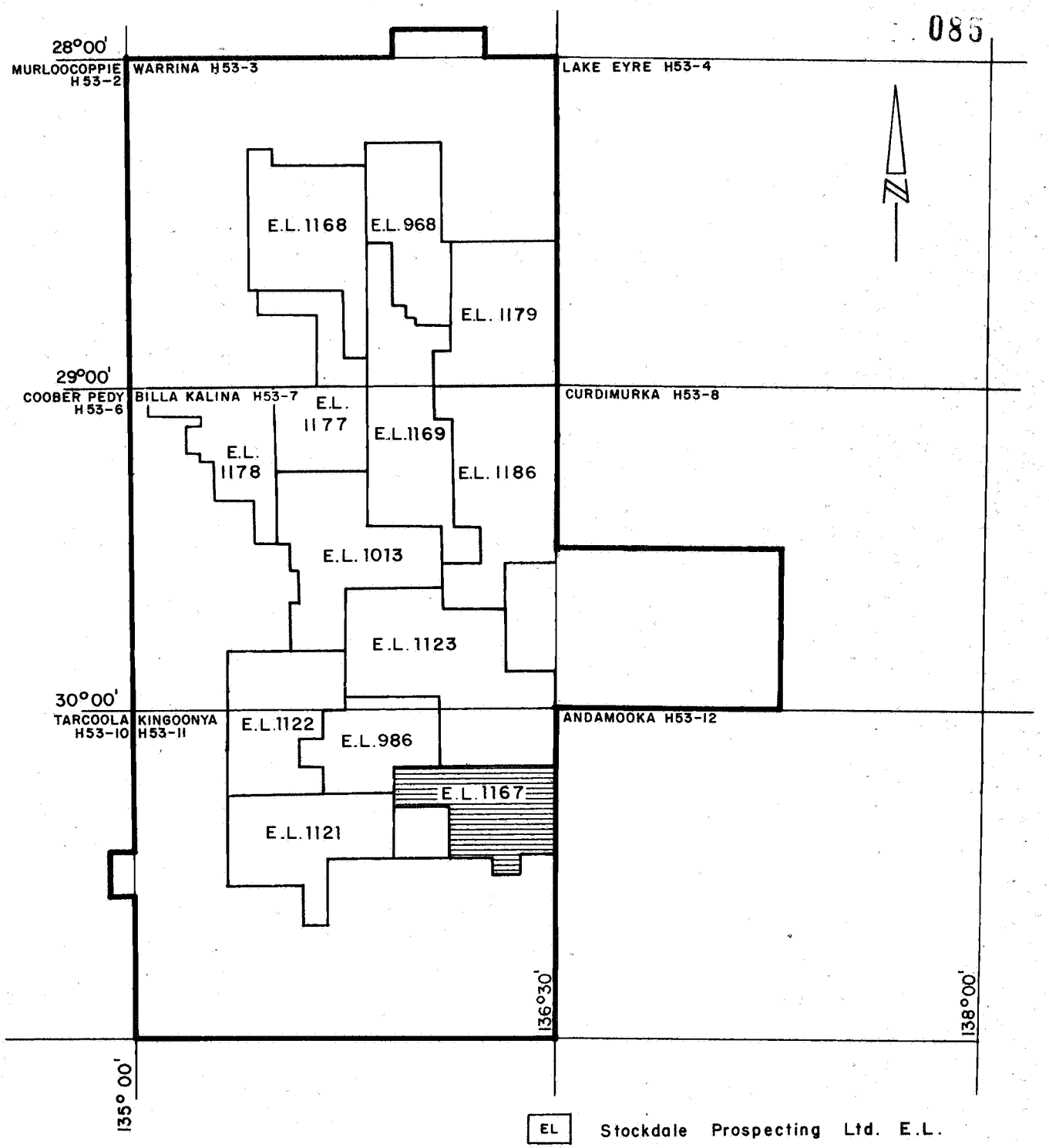


FIG. 1

STOCKDALE PROSPECTING LIMITED	
H53-11 KINGOONYA EXPLORATION LICENCE 1167 LOCATION MAP	Compiled Drawn A.D.S Date FEB '82 Scale 1:1 MILLION Revised OCT '83 SEL 1374

BASED ON SEL 1374



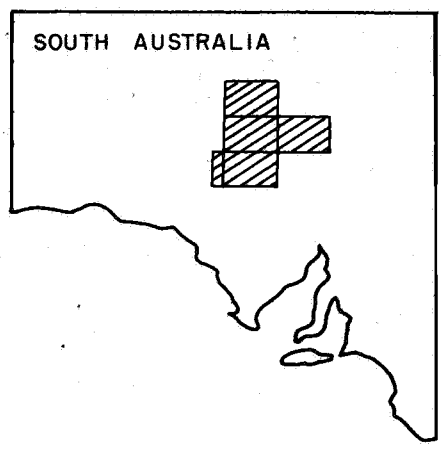
EL Stockdale Prospecting Ltd. E.L.

EL S.P.L. E.L. for relinquishment

Target area at 1/9/83

50 0 50 100 KM.

SCALE 1:2,000,000



LOCATION DIAGRAM

BASED ON SEL 1263

Figure 2

STOCKDALE PROSPECTING LIMITED

SOUTH AUSTRALIA

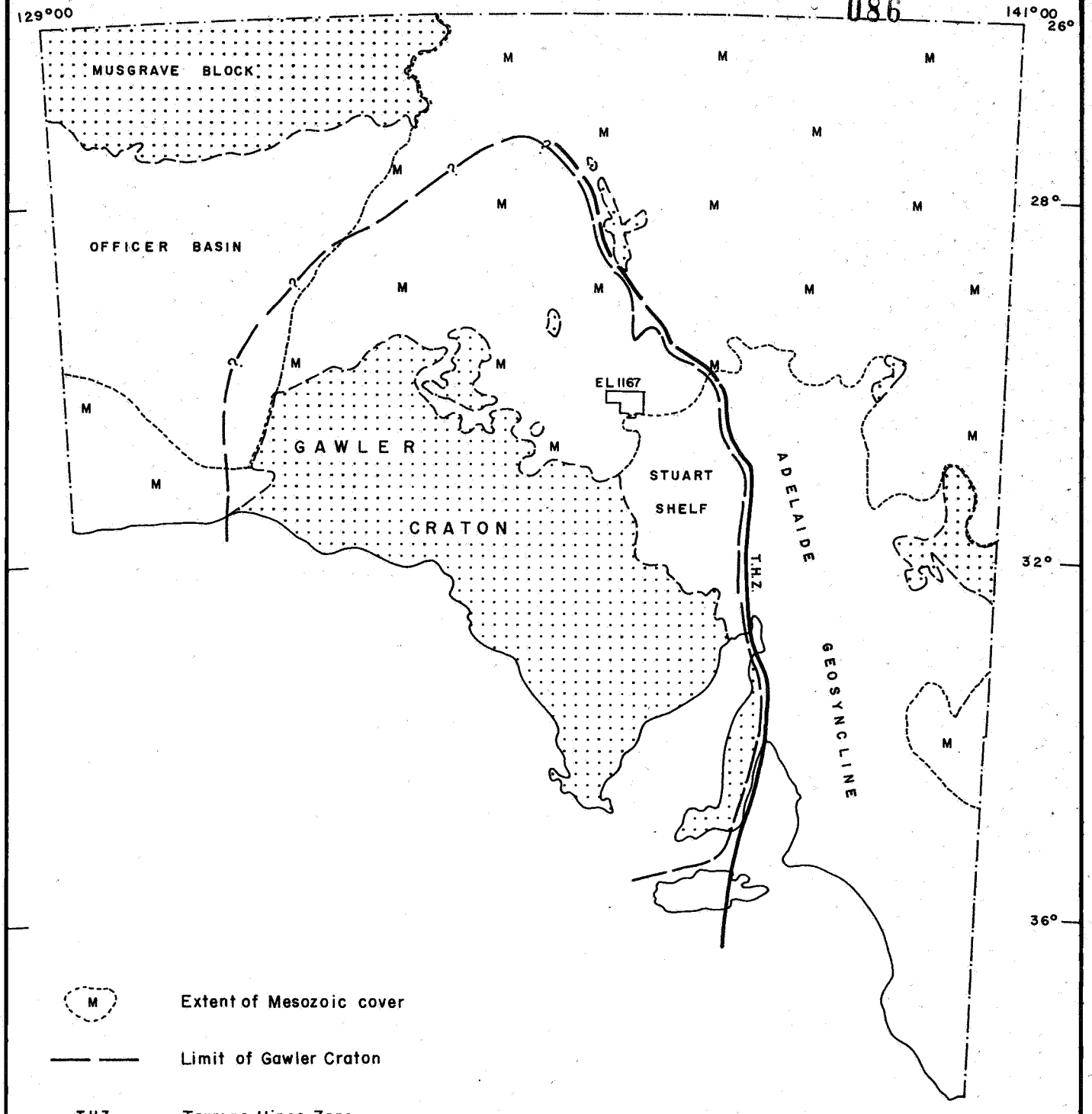
E.L.1167-REEDY LAGOON

S.P.L. TENEMENTS

SUBJECT TO

MEMORANDUM OF VARIATON

Compiled	
Drawn	A.D.S
Date	JULY '82
Scale	1:2 MILLION
Revised	28/3/86
	SEL 1591G



M — Extent of Mesozoic cover

Limit of Gawler Craton

T.H.Z. — Torrens Hinge Zone

Exposed basement

E.L. 1167

Figure 3

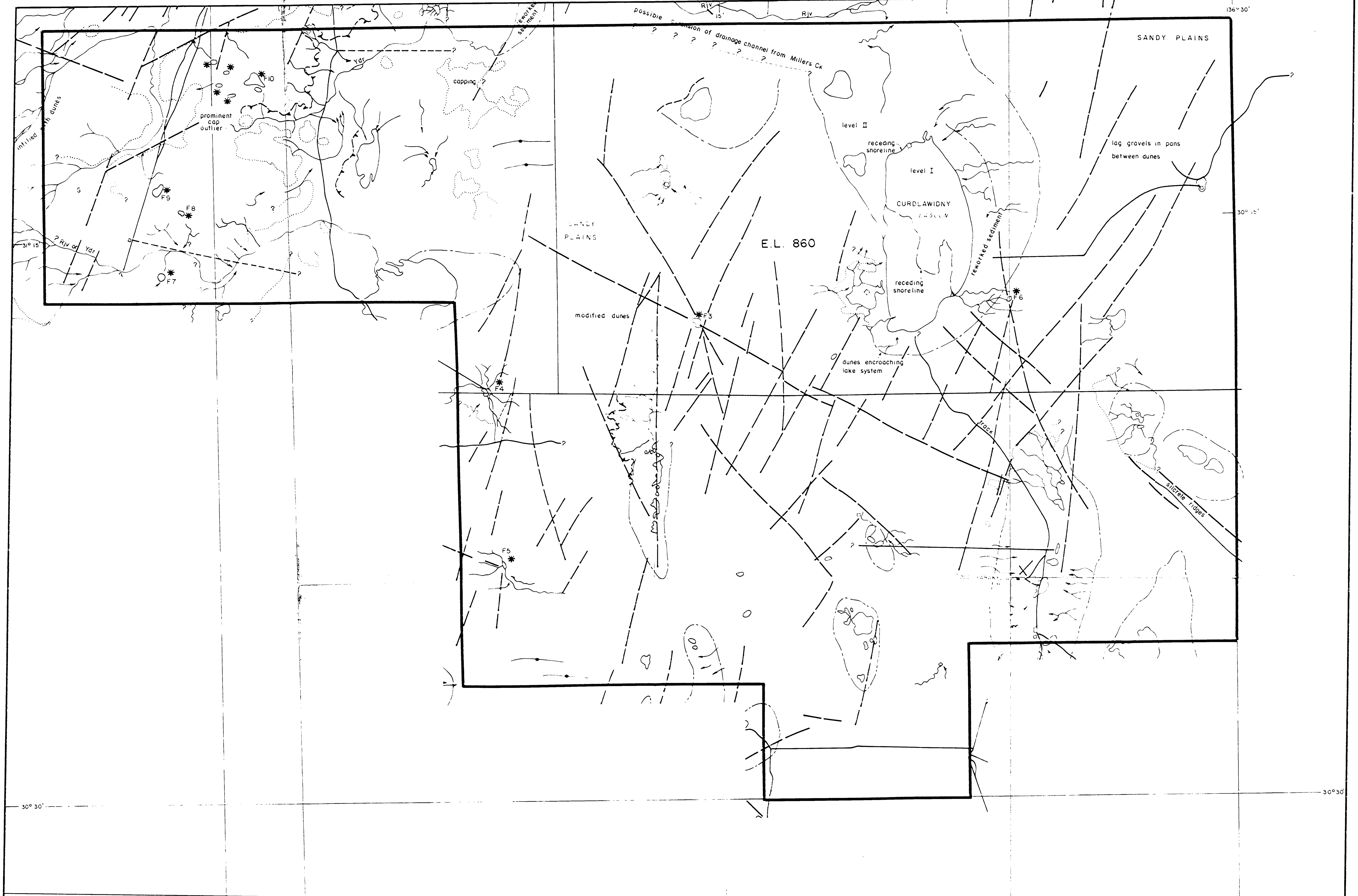
STOCKDALE PROSPECTING LIMITED

SOUTH AUSTRALIA

E.L. 1167 REEDY LAGOON
GEOLOGICAL SETTING

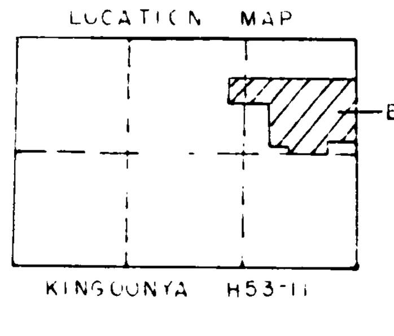
Compiled	H.R.R.
Drawn	MAK.
Date	4·10·86
Scale	7,500,000
Revised	
SEL	1324 b

This map is based on the inset map on the S.A. Geological 1:1,000,000 map, S.E. sheet.



Symbol	Meaning
G	Gilgai
	Bedding traces
	Dip of bedding
	Lineaments
F12	Photo Anomalies (see 'Reedy Lagoon' report)
	Lake or pan
	Road, track or fence
	Dam
Level I	Present lake level
Level II	Infilled lake relative to level I
P	Pediment surface
	Escarpment
Si	Silicified Tertiary drainage
Par	Abandoned Early Quaternary drainage
Ydr	Recent drainage
Rjv	Rejuvenated Early Quaternary drainage
	Previous extent of shoreline
	Trend of dunes

LOCATION MAP



4345-13

FIG 4

STOCKDALE PROSPECTING LIMITED

PART KINGOONYA H53-11

PHOTOINTERPRETATION
(OVER E.L. 860)

Compiled	IJ & SJW
Drawn	MAK
Date	OCT '81
Scale	1 89,000
Revised	
SEL 1217B	

087

136° 30' E

30° 15' S

E.L. 860

?Q — 3 m
Klc — 40·5
Plb — 140·5
Pwo
BOH-169·8

Plb — 95·1
?Pwm
BOH-148·0

Klc — 12·2
Plb — 54·9
?Pz
BOH-92·7

Q — 3·0
Klc
BOH-63·0

Klc — 48·7
Plb
BOH-51·0

Q — 7·9
Klc — 18·9
?Pz
K1 ● BOH-22·2

Q-Pz — 45·6
Eh — 136·8
Pwo — 186·8
Pwm — 414·8
Pp
BOH-551·6

Q-Pz — 30·4
Eh — 152·0
K3 Pwm — 425·6
Pp
BOH-577·6

Q — 6·7
Kmb — 14·0
Klc
BOH-49·2

Q — 2·0
Plb — 34·7
Pwm
BOH-44·6

Q — 12·2
Plb — 39·6
Eh — 41·1
Pwm
BOH-48·8

Klc — 26·5
Eh — 38·3
Pwo — 44·1
Pwm
BOH-48·3

Q — 7·2
Kmb — 27·3
Klc — 47·1
Pwm
BOH-52·0

AS1 ●
Q — 8·0
Kmb — 12·2
Eh — 92·2
Pwo
BOH-156·2

Plb — 23·9
Pft
BOH-31·1

Q — 4·6
Klc — 15·8
?Pz
BOH-31·0

Q — 5·5
?Pz
BOH-20·8

Q — 3·0
Plb — 17·0
Eh
BOH-37·1

Q — 2·4
Eh
BOH-37·9

Q — 3·6
Eh
BOH-33·6

Q — 2·1
Klc — 26·2
Plb — 39·2
?Pz
BOH-43·7

Q — 8·1
Plb
BOH-31·5

P2 ●
?Q — 5·0
Klc — 7·5
Eh
BOH-26·5

P3 ●
?Q — 5·0
Klc — 32·0
Eh
BOH-40·0

N

5 0 5 10 15 20
KILOMETRES

○ Water bore interpretation of driller's logs tentative

A.S.1 ● Drillhole: A.S. Australian Selection P/L 1978
K Kennecott Expl. (Aust.) Ltd. 1979
P BHP Co. Ltd 1976

- 3·0 Depth to base of unit (metres)

BOH. 31·1 Depth to base of hole (metres)

Q	- Quaternary		MESOZOIC
Kmb	- Cretaceous	Bulldog Shale	
Klc		Cadna-owie Formation	
Plb	- Permian	Boorthanna Formation	PALAEOZOIC
Pz	?	Uncertain, ? Lower Palaeozoic	
Eh	- Cambrian	Andamooka Limestone	
Pwo	- Marinoan	Arcoona Quartzite Member	PROTEROZOIC
Pwm		Woomera Shale member	
Pft	- Sturtian	Tapley Hill Formation	
Pp	- ?Willouran	Pandurra Formation	

LOCATION MAP

KINGOONYA H53-11

FIG. 5

STOCKDALE PROSPECTING LIMITED

H-53-11 E.L. 860

DRILL HOLE DATA

Compiled	Drawn	Date	Scale	
HRR	MAK	NOV '81	1:250,000	SEL 1323

088

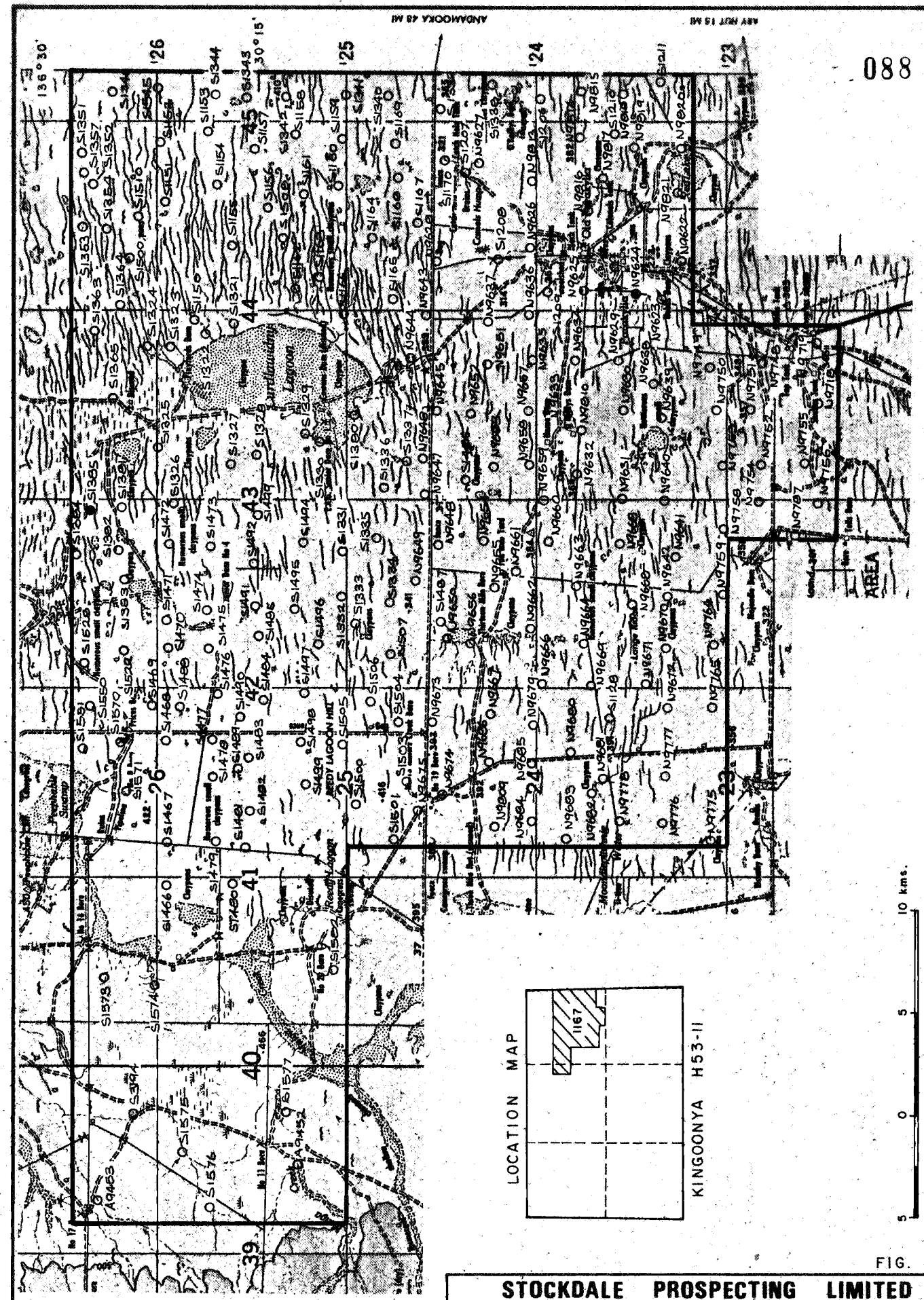


FIG. 6

STOCKDALE PROSPECTING LIMITED

SOUTH AUSTRALIA
KINGOONYA H53-11
REEDY LAGOON AREA
EL 1167 (SPL)
SAMPLE LOCATIONS
AS AT 4-10-86

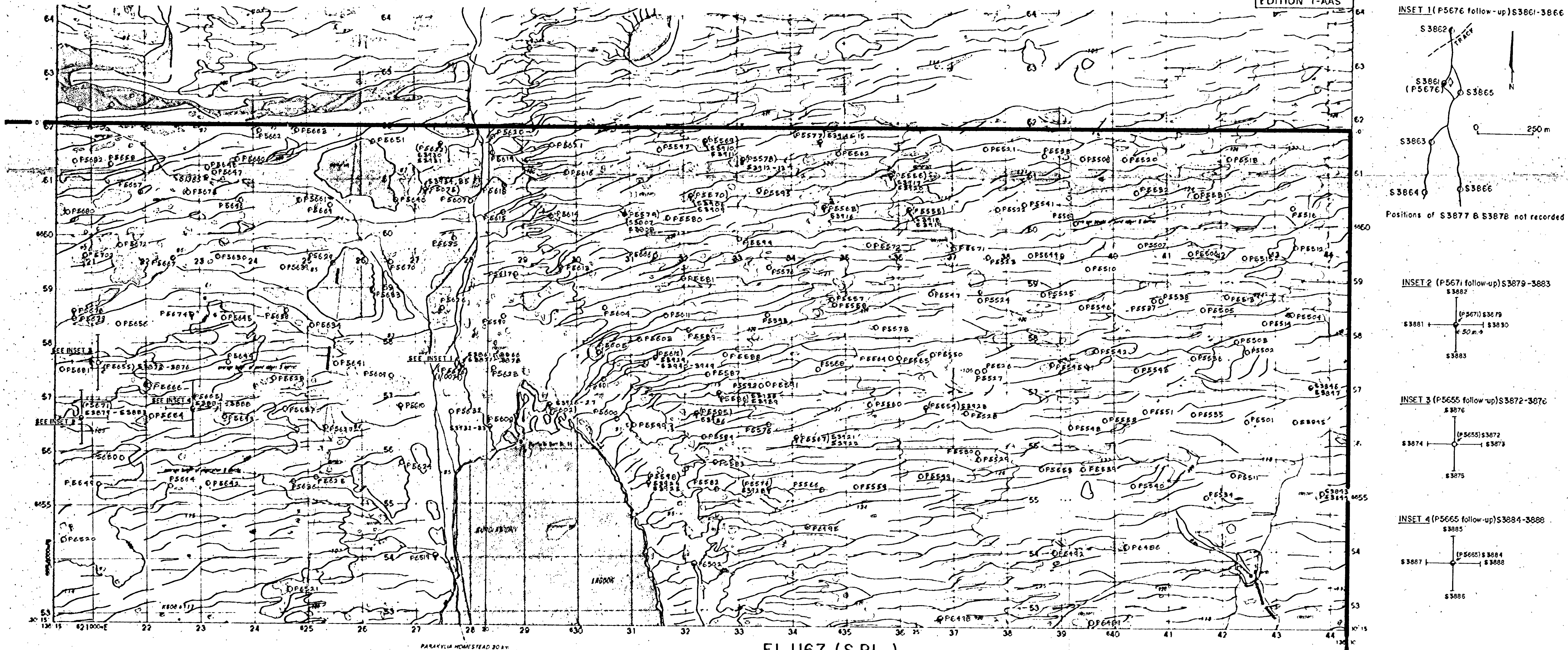
Compiled	BHN
Drawn	ADS
Date	NOV '86
Scale	1:250,000
Revised	
SEL 2846	

AUSTRALIA 1:50 000
TOPOGRAPHIC SURVEY

CURDLAWIDNY

SOUTH AUSTRALIA

REFER TO THIS MAP AS
SERIES R742
SHEET 6137-I
EDITION 1-AAS



EL 1167 (S.P.L.)

SCALE 1:50 000

CONTOUR INTERVAL 20 METRES

○ Sample location
♁ Chrome diopside
♀ Possible kimberlitic garnet
⊕ Kimberlitic garnet
◇ Diamond

Commonwealth of Australia 1980

UNIVERSAL GRID REFERENCE

LEGEND

INDEX TO ADJOINING MAPS

SERIES R742
SHEET 6137-I
EDITION 1-AAS

Diamond ff. Location.

4345-14

FIG 7

STOCKDALE PROSPECTING LTD

CURDLAWIDNY
SOUTH AUSTRALIA

SAMPLE LOCATIONS

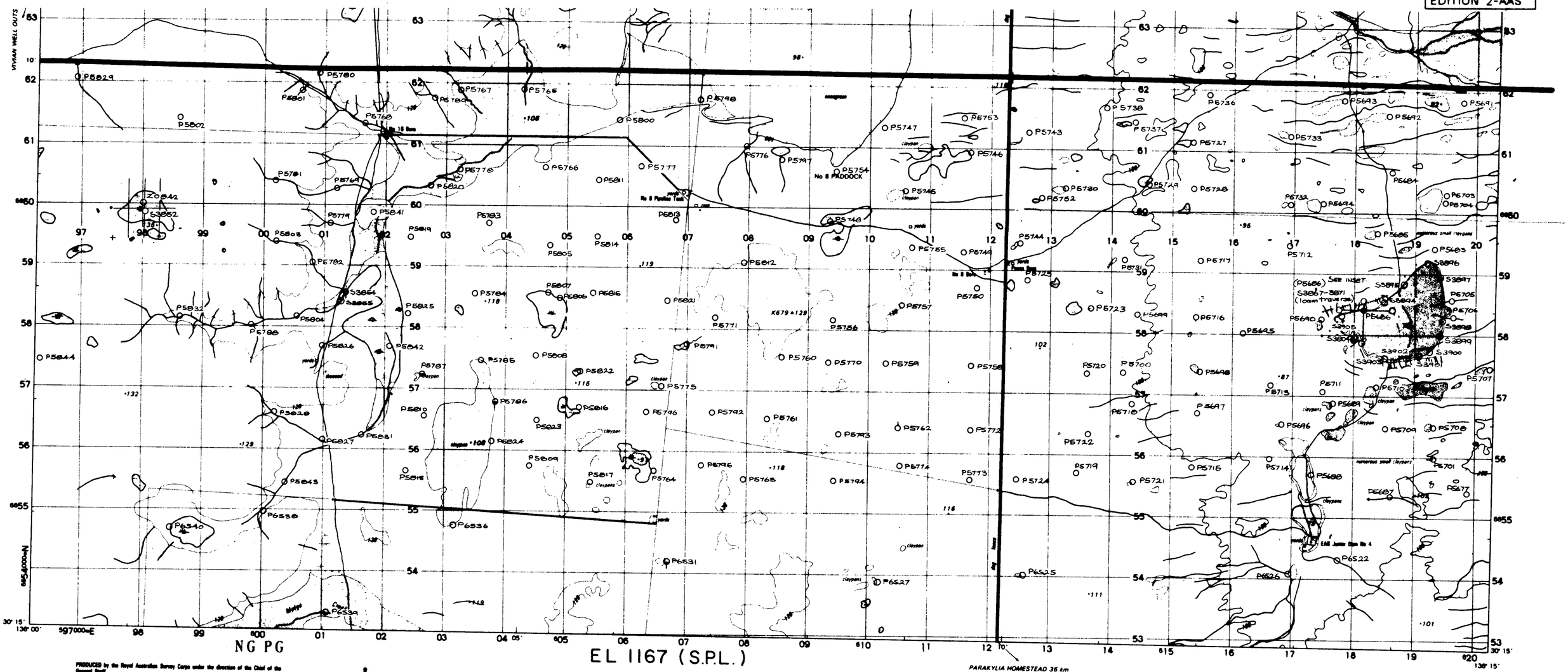
AS AT : 4/10/86

AUSTRALIA 1:50 000
TOPOGRAPHIC SURVEY

PEEPHABIE

SOUTH AUSTRALIA

REFER TO THIS MAP AS:
SERIES R742
SHEET 6137-IV
EDITION 2-AAS



PRODUCED by the Royal Australian Survey Corps under the direction of the Chief of the General Staff.
PRINTED by the Royal Australian Survey Corps, 1979.
DISTRIBUTED to the Defence Services by the Royal Australian Survey Corps and to all other map users by the Department of National Resources.
CONTROL: Horizontal: Transferred from Lands Department Control.
Vertical: Abridged Profile Resector.
Supplemented by Aerotriangulation.
AIR PHOTOGRAPHY: Super Wide Angle Raven 1972 and 1973.
COMPILATION: By photogrammetric methods in 1976 with field rectification in 1977.
ACCURACY: Horizontal: 90% of well defined detail within ±12.5m of true position.
Vertical: 90% of elevations within ±1/2a except in areas of dense vegetation where this may not be achieved.

DEF/ARMY/7830

UNIVERSAL GRID REFERENCE

BEFORE GIVING A GRID REFERENCE, CIVILIAN USERS SHOULD STATE THE NUMBER AND NAME OF THIS MAP:
6137-IV PEEPHABIE

GRID ZONE DESIGNATION: 53J
100 000 METRE SQUARE IDENTIFICATION
NG PG
400
IDENTIFY the SMALLER figures of any grid number; these are for finding the full co-ordinates when ONLY the LARGER figures of the grid numbers, example:
597000

TO GIVE A STANDARD REFERENCE ON THIS SHEET TO NEAREST 100 METRES
SAMPLE POINT: PEEPHABIE CLIFF + 137
1 Read bottom identifying 100 000 metre square in which the point lies:
2 Locate first VERTICAL grid line to LEFT of point and read LARGE figures labelling the line either in the top or bottom margin, or on the line itself:
3 Estimate tenths from grid line to point:
4 Locate first HORIZONTAL grid line BELOW point and read LARGE figures labelling the line in either the left or right margin, or on the line itself:
5 Estimate tenths from grid line to point:
SAMPLE REFERENCE: PG 946 640
If reporting beyond 10° is any direction, prefix with Grid Zone Designation, ex: 53JPG946640

SERIES R742
SHEET 6137-IV
EDITION 2-AAS

GRID CONVERGENCE 10 MILS (0.5°)
GRID-MAGNETIC ANGLE 120 MILS (6.6°)
GN
7m MN

TRUE NORTH, GRID NORTH AND MAGNETIC NORTH ARE SHOWN DIAGRAMMATICALLY FOR THE CENTRE OF THIS MAP. MAGNETIC NORTH IS CORRECT FOR 1975 AND DECREASES EASTERLY BY 2 MILS (0.1°) IN ABOUT NINE YEARS.
TO CONVERT A MAGNETIC BEARING TO A GRID BEARING ADD GRID-MAGNETIC ANGLE.

SCALE 1:50 000

Kilometres 0 1 2 3 4 5 6 7 8

FULL LATITUDE AND LONGITUDE VALUES ARE SHOWN AT THE SHEET CORNERS, WITH MINUTE TICKS AROUND THE NEATLINE, EVERY FIFTH TICK IS LABELLED
BLACK NUMBERED GRID LINES ARE 1000 METRE INTERVALS OF THE UNIVERSAL TRANSVERSE MERCATOR GRID, ZONE 53, AUSTRALIAN MAP GRID, AUSTRALIAN NATIONAL SPHEROID
GRID VALUES ARE SHOWN IN FULL ONLY AT THE SOUTH WEST CORNER OF THE MAP
VERTICAL DATUM: AUSTRALIAN HEIGHT DATUM
HORIZONTAL DATUM: AUSTRALIAN GEODETIC DATUM 1966
TRANSVERSE MERCATOR PROJECTION
CONTOUR INTERVAL 20 METRES
ELEVATIONS IN METRES

Users can also assist in the improvement of this product by marking corrections and additions which come to their attention and mailing to DEPARTMENT OF DEFENCE (ARMY OFFICE), RUSSELL OFFICES, CANBERRA 2600, AUSTRALIA.

LEGEND

Built-up area; Divided highway; Metropolitan route marker
Recreation reserve with oval; Drive-in theatre; Underpass
Sealed road two or more lanes; National route marker
Sealed road one lane; Embankment
Unsealed road two or more lanes
Unsealed road one lane; Cutting
Vehicle track; Road bridge; Gate; Stock grid
Foot track; Foot bridge
Multiple track railway; Station
Single track railway; Light railway
Railway tunnel, bridge, underpass
High voltage transmission line
Fence; Prominent telephone line
Mine; Windmill; Church; Building
Horizontal control point; Spot elevation
Contour with value; Supplementary contour
Depression contour; Sand; Disturbed surface
Levee, bank or sandridge; Joint or rock Reserve
High cliff; Escarpment
Vegetation; Dense, medium, scattered
Vegetation distinctive; Distinctive grass
Orchard or vineyard; Line of trees or windbreak
Mangrove swamp; Area subject to inundation
Swamp; Swamp definite boundary
Perennial lake; Watercourse
Intermittent lake; Watercourse
Mainly-dry lake; Watercourse
Tank or small dam; Perennial waterhole
Saline covered flat; Intertidal flat
Navigation light; Intertidal ledge or reef
Pier; Exposed wreck; Prominent submerged wreck
Prominent submerged reef, rock
Indefinite watercourse, shoreline; Rock bare or awash

O Sample locations

O Samples (current quarter)
Ó Chrome diopside
Ọ Possible kimberlitic garnet
Ọ Kimberlitic garnet

FIG. 8

STOCKDALE PROSPECTING LTD
PEEPHABIE
SOUTH AUSTRALIA

SAMPLE LOCATIONS

AS AT : 4/10/86

4345-15

AUSTRALIA 1:50 000
TOPOGRAPHIC SURVEY

PAISLEY
SOUTH AUSTRALIA

REFER TO THIS MAP AS:
SERIES R742
SHEET 6037-I
EDITION 2-AAS

THE WHOLE OF THIS MAP LIES WITHIN THE COMMONWEALTH AREA PROCLAIMED AS APPROPRIATE UNDER THE DEFENCE (SPECIAL UNDERTAKINGS) ACT 1958-1968 AND THE DEFENCE FORCE REGULATIONS MADE UNDER THE DEFENCE ACT 1903-1975. AUTHORITY TO ENTER MUST BE OBTAINED FROM THE DEPARTMENT OF DEFENCE.

E.L. 1167 (S.P.L.)

PRODUCED by the Royal Australian Survey Corps under the direction of the Chief of the General Staff.
PRINTED by the Royal Australian Survey Corps, 1978.
DISTRIBUTED by the Defence Services by the Royal Australian Survey Corps and to all other map users by the Department of National Resources.
CONTROL Horizontal Transferred from Lands Dept Control
Vertical Airborne Profile Recorder
Supplemented by Aerotriangulation
AIR PHOTOGRAPHY Super Wide Angle flown 1972 and 1973.
COMPILATION By photogrammetric methods in 1978 with field verification in 1977.
ACCURACY Horizontal: 90% of well defined detail within ±12.5m of true position
Vertical: 90% of elevations within ½ the contour interval in areas of dense vegetation others this may not be achieved

UNIVERSAL GRID REFERENCE
BEFORE GIVING A GRID REFERENCE, CIVILIAN USERS SHOULD STATE THE NUMBER AND NAME OF THIS MAP.
6037-I PAISLEY

GRID ZONE DESIGNATION 53J
100 000 METRE SQUARE IDENTIFICATION: WG
IGNORE the SMALLER figures of any grid number. These are for finding the full co-ordinates but ONLY the LARGER figures of the grid numbers, example 873000

TO GIVE A STANDARD REFERENCE ON THIS SHEET TO NEAREST 100 METRES

SAMPLE POINT: 146

1. Read letters identifying 100 000 metre square in which the point lies — WG
2. Locate first VERTICAL grid line to LEFT of point and read LARGE figures labelling the line either in the top or bottom margin, or on the line itself. — 85
3. Estimate tenths from grid line to point — 0
4. Locate first HORIZONTAL grid line BELOW point and read LARGE figures labelling the line in either the left or right margin, or on the line itself. — 81
5. Estimate tenths from grid line to point — 8

SAMPLE REFERENCE: WG858818

If reporting beyond 10" in any direction prefix with Grid Zone Designation, eg 53JWG858818

SERIES R742
SHEET 6037-I
EDITION 2-AAS

GRID CONVERGENCE 10 MILS (0.6°) — GRID-MAGNETIC ANGLE 310 MILS (18.6°)

TRUE NORTH, GRID NORTH AND MAGNETIC NORTH ARE SHOWN DIAGRAMMATICALLY FOR THE CENTRE OF THIS MAP. MAGNETIC NORTH IS CORRECT FOR 1975 AND MOVES EASTERLY BY 2 MILS (0.1°) IN ABOUT NINE YEARS.
TO CONVERT A MAGNETIC BEARING TO A GRID BEARING ADD GRID-MAGNETIC ANGLE

SCALE 1:50 000

kilometres 0 1 2 3 4 5 6 7 kilometres

FULL LATITUDE AND LONGITUDE VALUES ARE SHOWN AT THE SHEET CORNERS. WITH MINUTE TICKS AROUND THE NEATLINE, EVERY FIFTH TICK IS LABELLED.
BLACK NUMBERED GRID LINES ARE 1000 METRE INTERVALS OF THE UNIVERSAL TRANSVERSE MERCATOR GRID, ZONE 53, AUSTRALIAN MAP GRID, AUSTRALIAN NATIONAL SPHEROID
GRID VALUES ARE SHOWN IN FULL ONLY AT THE SOUTH WEST CORNER OF THE MAP
VERTICAL DATUM AUSTRALIAN HEIGHT DATUM
HORIZONTAL DATUM AUSTRALIAN GEODETIC DATUM 1966
TRANSVERSE MERCATOR PROJECTION
CONTOUR INTERVAL 20 METRES
ELEVATIONS IN METRES

Users can also assist in the improvement of this product by marking corrections and additions which come to their attention and drafting to DEPARTMENT OF DEFENCE ARMY OFFICE, RUSSELL OFFICES, CANBERRA 2600, AUSTRALIA

LEGEND

Built-up area; Divided highway; Metropolitan route marker
Recreation reserve with oval; Drive in theatre; Underpass
Sealed road two or more lanes; National route marker
Sealed road one lane; Embankment
Unsealed road two or more lanes
Unsealed road one lane; Cutting
Vehicle track; Road bridge; Gate; Stock grid
Foot track; Foot bridge
Multiple track railway; Station
Single track railway; Light railway
Railway tunnel; Bridge; underpass
High voltage transmission line
Fence; Prominent telephone line
Mine; Windmill, Church, Building
Horizontal control point; Spot elevation
Contour with value; Supplementary contour
Depression contour; Sand, Bitumen surface
Levee bank or sandridge; Joint or rock figure
High cliff; Escarpment
Vegetation, Dense; mallee, scattered
Vegetation distinctive; Distinctive grass
Orchard or vineyard; Line of trees or windbreak
Mangrove swamp; Area subject to inundation
Swamp; Swamp definite boundary
Perennial lake; Watercourse
Intermittent lake; Watercourse
Mainly dry lake; Watercourse
Tank or small dam; Perennial waterhole
Saline coastal flat; Intertidal flat
Navigation light; Intertidal bridge or reef
Pier; Exposed wreck; Prominent submerged wreck
Prominent submerged reef, rock
Indefinite watercourse, shoreline; Rock bars or marsh

WATERCOURSE GUIDE
All watercourses on this map are mainly dry

MEAN TEMPERATURE RAINFALL
TARCOOLA
°C 40 30 20 10 0 -10
mm 25 20 15 10 5 0
Average Annual 170mm
J F M A M J J A S O N D

INDEX TO ADJOINING MAPS

MILLERS CREEK 6038 III	HOGARTH 6038 II	BILLA KALINA 6138 III
EBA 6037-IV	PAISLEY 6037 I	PEEPHABIE 6137 IV
LOOKOUT 6037 III	BYNG HILL 6037 II	REEDY LAGOON 6137 III

PART OF 1:100 000 MAP
6037 EBA

DEF/ARMY/7920
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FIG. 9
STOCKDALE PROSPECTING LTD
PAISLEY
SOUTH AUSTRALIA
SAMPLE LOCATIONS
AS AT :4/10/86

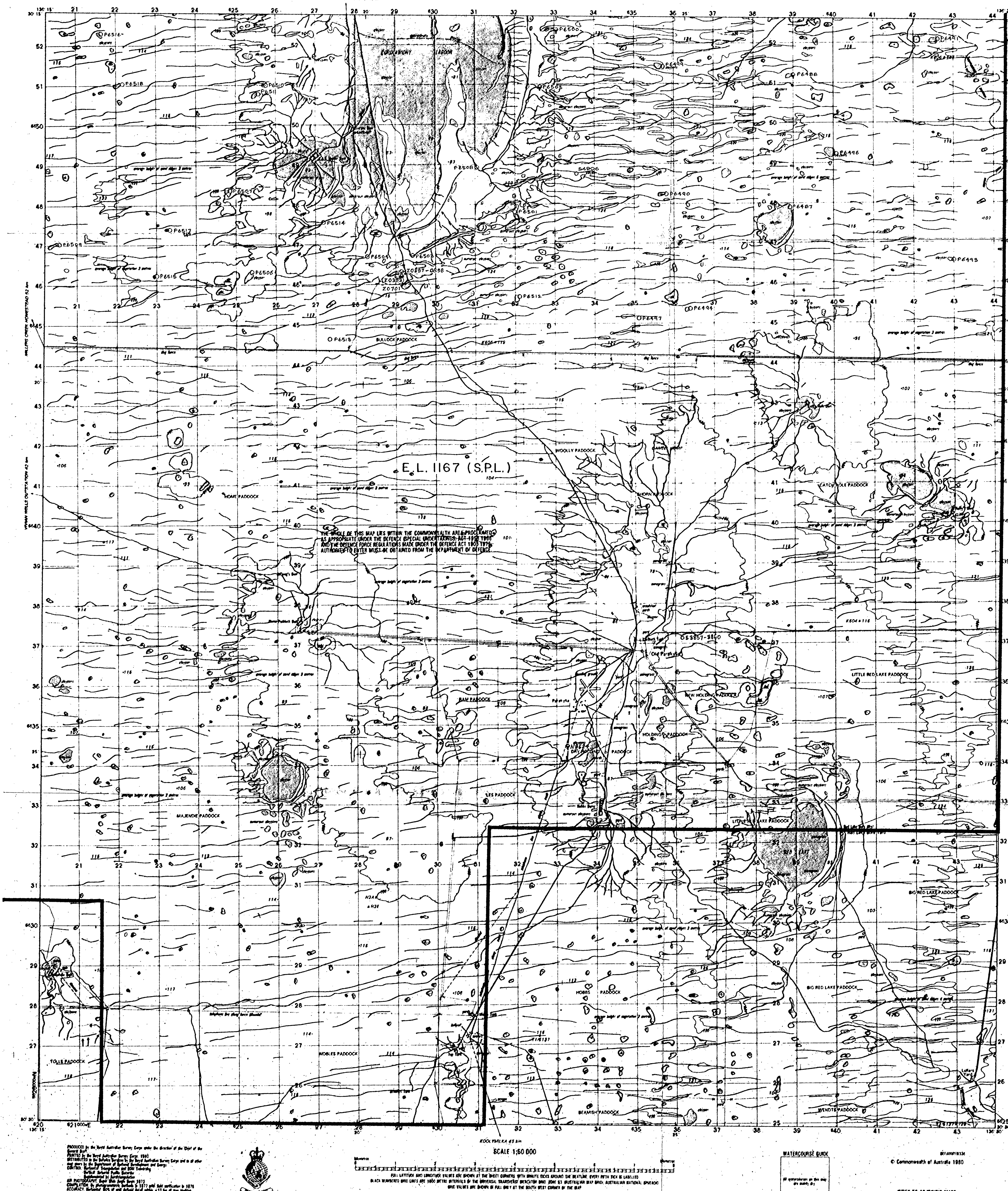
4345-16

AUSTRALIA 1:50 000
TOPOGRAPHIC SURVEY

PARAKYLIA

SOUTH AUSTRALIA

REFER TO THIS MAP AS:
SERIES R742
SHEET 6137-II
EDITION 2-AAS



SCALE 1:50 000

FULL LATITUDE AND LONGITUDE VALUES ARE SHOWN AT THE SHEET CORNERS WITH MINUTE TICKS AROUND THE NEATLINE, EVERY FIFTH TICK IS LABELLED
BLACK NUMBERED GRID LINES ARE 1000 METRE INTERVALS OF THE UNIVERSAL TRANSVERSE MERCATOR GRID ZONE 53 (AUSTRALIAN MAP GRID), AUSTRALIAN NATIONAL SPHEROID
GRID VALUES ARE SHOWN IN FULL ONLY AT THE SOUTH WEST CORNER OF THE MAP
VERTICAL DATUM AUSTRALIAN HEIGHT DATUM
HORIZONTAL DATUM AUSTRALIAN GEODETIC DATUM 1966
TRANSVERSE MERCATOR PROJECTION
CONTOUR INTERVAL 20 METRES
ELEVATIONS IN METRES

● Kimberlitic garnet.

WATERCOURSE GUIDE
All watercourses on this map are mainly dry

INDEX TO ADJOINING MAPS

PEEPHABIE 6137 IV	CURDLAWIDNY 6137 I	WIDDEN SWAMP 6237 IV
BEEDY LAGOON 6137 III	PARAKYLIA 6137 II	WIGAN 6237 III
EBCK 6136 IV	BEDOONE 6136 I	STALEY 6236 IV

PART OF 1:100 000 MAP
6137 PARAKYLIA

MEAN TEMPERATURE RAINFALL WOOMERA

LEGEND

UNIVERSAL GRID REFERENCE
BEFORE GIVING A GRID REFERENCE, CIVILIAN USERS SHOULD STATE THE NUMBER AND NAME OF THIS MAP:
6137-II PARAKYLIA

SERIES R742
SHEET 6137-II
EDITION 2-AAS

FIG. 10
STOCKDALE PROSPECTING LTD
PARAKYLIA
SOUTH AUSTRALIA
SAMPLE LOCATIONS
AS AT : 4/10/86

4345-17

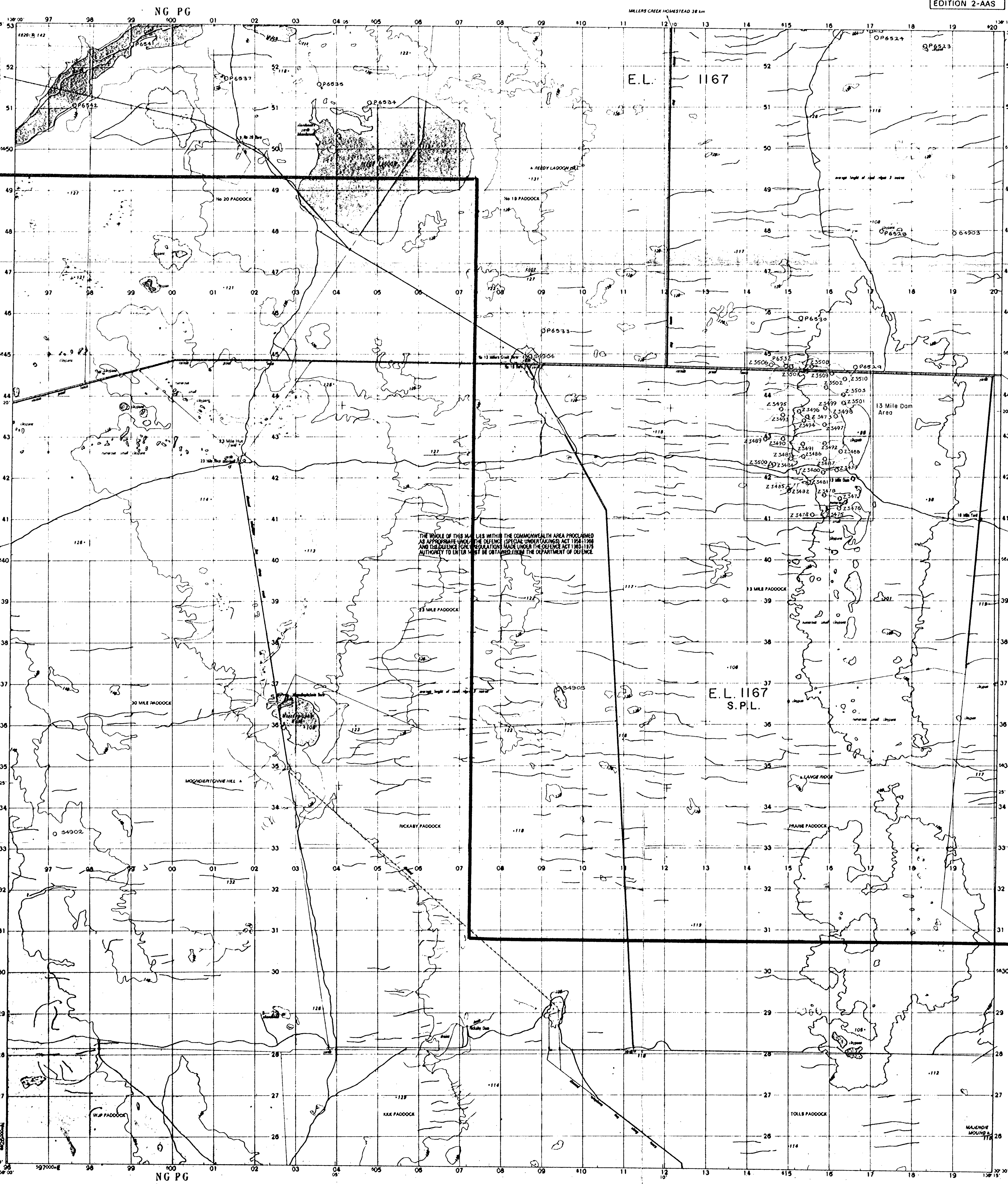
AUSTRALIA 1:50 000
TOPOGRAPHIC SURVEY

REEDY LAGOON

SOUTH AUSTRALIA

REFER TO THIS MAP AS:

SERIES R742
SHEET 6137-III
EDITION 2-AAS



SCALE 1:50 000

CONTOUR INTERVAL 20 METRES

ELEVATIONS IN METRES

LEGEND

UNIVERSAL GRID REFERENCE

SERIES R742
SHEET 6137-III
EDITION 2-AAS

WATERCOURSE GUIDE

All watercourses on this map are mainly dry.

MEAN TEMPERATURE RAINFALL WOOMERA

INDEX TO ADJOINING MAPS

PAISLEY 60374	PEEPHABIE 6137 IV	BUROLAWONEY 6137 I
WINGALPIN 6037 II	REEDY LAGOON 6137 III	PARAKYLIA 6137 II
KOWAL 60384	LOCK 6136 IV	BEDOOMIE 6136 I

PART OF 1:100 000 MAP
6137 PARAKYLIA

FIG. 11

STOCKDALE PROSPECTING LTD

REEDY LAGOON
SOUTH AUSTRALIA

SAMPLE LOCATIONS

AS AT : 4/10/86

4345-18

AUSTRALIA 1:50 000
TOPOGRAPHIC SURVEY

WINGILPIN
SOUTH AUSTRALIA

REFER TO THIS MAP AS:
SERIES R742
SHEET 6037-II
EDITION 2-AAS

EL 1167 (S.P.L.)

MOUNT EBA HOMESTEAD 18 km

MILLERS CREEK HOMESTEAD 30 km

MOUNT EBA HOMESTEAD 16 km

PARAKYLIA HOMESTEAD 43 km

MOUNT EBA HOMESTEAD 37 km

MOUNT VIVIAN HOMESTEAD 12 km

MOUNT VIVIAN HOMESTEAD 15 km

KOOLYMILKA 88 km

BIRTHDAY PADDOCK
CENTRAL PADDOCK
ANNIVERSARY PADDOCK
No 11 SOUTH PADDOCK
HOUSE PADDOCK
TABLELAND PADDOCK
POLICE CAMP PADDOCK
PONDS PADDOCK
FISHERS PADDOCK
SOUTH VIVIAN PADDOCK
SISTERS PADDOCK

RANGE
BLUFF
WINGILPIN
MOUNT VIVIAN RANGE
219 a MOUNT VIVIAN
223 a WINGILPIN BLUFF

THE WHOLE OF THIS MAP LIES WITHIN THE COMMONWEALTH AREA PROCLAIMED AS APPROPRIATE UNDER THE DEFENCE (SPECIAL UNDERTAKINGS) ACT 1958–1968 AND THE DEFENCE FORCE REGULATIONS MADE UNDER THE DEFENCE ACT 1903–1975 AUTHORITY TO ENTER MUST BE OBTAINED FROM THE DEPARTMENT OF DEFENCE.

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Vertical: Airborne Profile Recorder.
Supplemented by Aerotriangulation.
AIR PHOTOGRAPHY: Super Wide Angle flown 1972 and 1973.
COMPILATION: By photogrammetric methods in 1978 with field verification in 1977.
ACCURACY: Horizontal: 90% of well defined detail within ±12.5m of true position.
Vertical: 90% of elevations within ±10m except in areas of dense vegetation where this may not be achieved.

UNIVERSAL GRID REFERENCE

BEFORE GIVING A GRID REFERENCE, CIVILIAN USERS SHOULD STATE THE NUMBER AND NAME OF THIS MAP.
6037 II WINGILPIN

GRID ZONE DESIGNATION: 53J
100 000 METRE SQUARE IDENTIFICATION: MG
IGNORE the SMALLER figures of any grid number; these are for finding the full co-ordinates. Use ONLY the LARGER figures of the grid numbers; example: 573000

TO GIVE A STANDARD REFERENCE ON THIS SHEET TO NEAREST 100 METRES

SAMPLE POINT: 213 a MOUNT VIVIAN

1 Read letters identifying 100 000 metre square in which the point lies:	MG
2 Locate first VERTICAL grid line to LEFT of point and read LARGE figures labelling the line either at the top or bottom margin, or on the line itself:	84
3 Estimate tenths from grid line to point:	9
4 Locate first HORIZONTAL grid line BELOW point and read LARGE figures labelling the line at either the left or right margin, or on the line itself:	41
5 Estimate tenths from grid line to point:	1
SAMPLE REFERENCE:	MG8441

If reporting beyond 18° in any direction, prefix with Grid Zone Designation, eg: 53JMG8441

SERIES R742
SHEET 6037-II
EDITION 2-AAS

GRID CONVERGENCE 10 MILS (0.5°)
GRID MAGNETIC ANGLE 110 MILS (6.0°)
GN
TM MN

TRUE NORTH, GRID NORTH AND MAGNETIC NORTH ARE SHOWN DIAGRAMMATICALLY FOR THE CENTRE OF THIS MAP. MAGNETIC NORTH IS CORRECT FOR 1975 AND MOVES EASTERLY BY 2 MILS (0.1°) IN ABOUT NINE YEARS.
TO CONVERT A MAGNETIC BEARING TO A GRID BEARING ADD GRID MAGNETIC ANGLE

SCALE 1:50 000

Kilometres 0 1 2 3 4 5 6 7 8 Kilometres

FULL LATITUDE AND LONGITUDE VALUES ARE SHOWN AT THE SHEET CORNERS, WITH MINUTE TICKS AROUND THE NEATLINE, EVERY FIFTH TICK IS LABELLED
BLACK NUMBERED GRID LINES ARE 1000 METRE INTERVALS OF THE UNIVERSAL TRANSVERSE MERCATOR GRID: ZONE 53, AUSTRALIAN MAP GRID. AUSTRALIAN NATIONAL SPHEROID
GRID VALUES ARE SHOWN IN FULL ONLY AT THE SOUTH WEST CORNER OF THE MAP.
VERTICAL DATUM: AUSTRALIAN HEIGHT DATUM
HORIZONTAL DATUM: AUSTRALIAN GEODETIC DATUM 1966
TRANSVERSE MERCATOR PROJECTION
CONTOUR INTERVAL 20 METRES
ELEVATIONS IN METRES

Users can also assist in the improvement of this product by marking corrections and additions which come to their attention and mailing to DEPARTMENT OF DEFENCE, ARMY OFFICE, RUSSELL OFFICES, CANBERRA 2600, AUSTRALIA

LEGEND

Built up area, Divided highway, Metropolitan route marker
Recreation reserve, with oval, Drive-in theatre, Underpass
Sealed road, two or more lanes, National route marker
Sealed road, one lane, Embankment
Unsealed road, two or more lanes
Unsealed road, one lane, Cutting
Vehicle track, Road bridge, Gate, Stock grid
Foot track, Foot bridge
Multiple track railway, Station
Single track railway, Light railway
Railway tunnel, Bridge, underpass

High voltage transmission line
Fence, Prominent telephone line
Mine, Windmill, Church, Building
Horizontal control point, Spot elevation
Contour, with value, Supplementary contour
Depression contour, Sand, Disturbed surface
Levee, bank or sand ridge, Joint or rock fissure
High cliff, Escarpment
Vegetation, Dense, medium, scattered
Vegetation Distinctive, Distinctive grass
Orchard or vineyard, Line of trees or windbreak

Mangrove swamp, Area subject to inundation
Swamp, Swamp definite boundary
Perennial lake, Watercourse
Intermittent lake, Watercourse
Mainly dry lake, Watercourse
Tank or small dam, Perennial waterhole
Saline coastal flat, Intertidal flat
Navigation light, Intertidal ledge or reef
Pier, Exposed wreck, Prominent submerged wreck
Prominent submerged reef, rock
Indefinite watercourse, shoreline, Rock bare or awash

WATERCOURSE GUIDE
All watercourses on this map are mainly dry.

MEAN TEMPERATURE RAINFALL
TARCOOLA
°C 40 30 20 10 0 -10
mm 25 20 15 10 5 0
Average Annual 170mm
J F M A M J J A S O N D

INDEX TO ADJOINING MAPS

EBA 6037 IV	PAISLEY 6037 I	PEEPHABIE 6137 IV
LOOKOUT 6037 III	WINGILPIN 6037 II	REEDY LAGOON 6137 III
VIVIAN 6036 IV	KOWAL 6036 I	LOCK 6136 IV

PART OF 1:100 000 MAP
6037 EBA

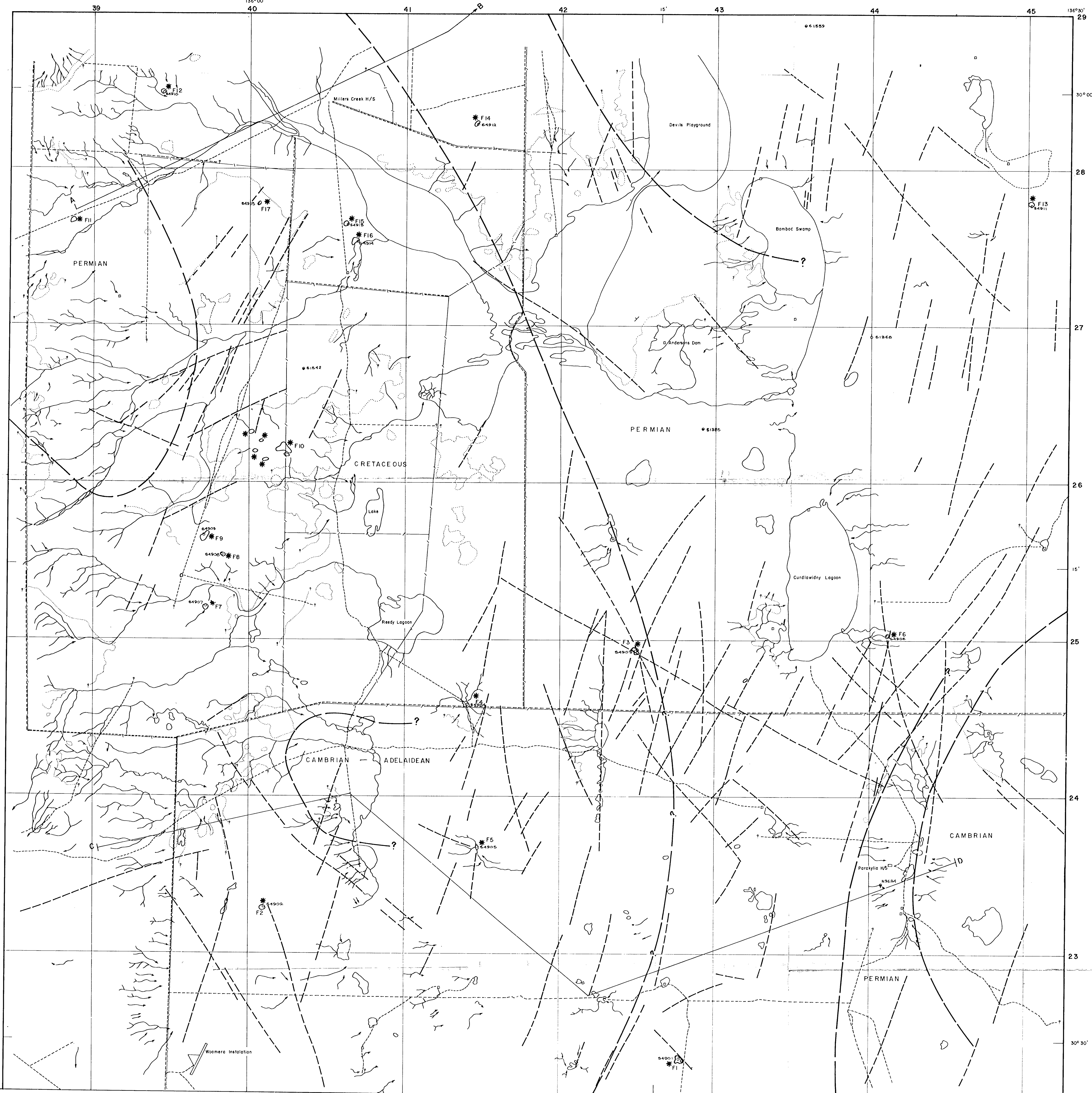
DEF.ARMY/7921

FIG. 12

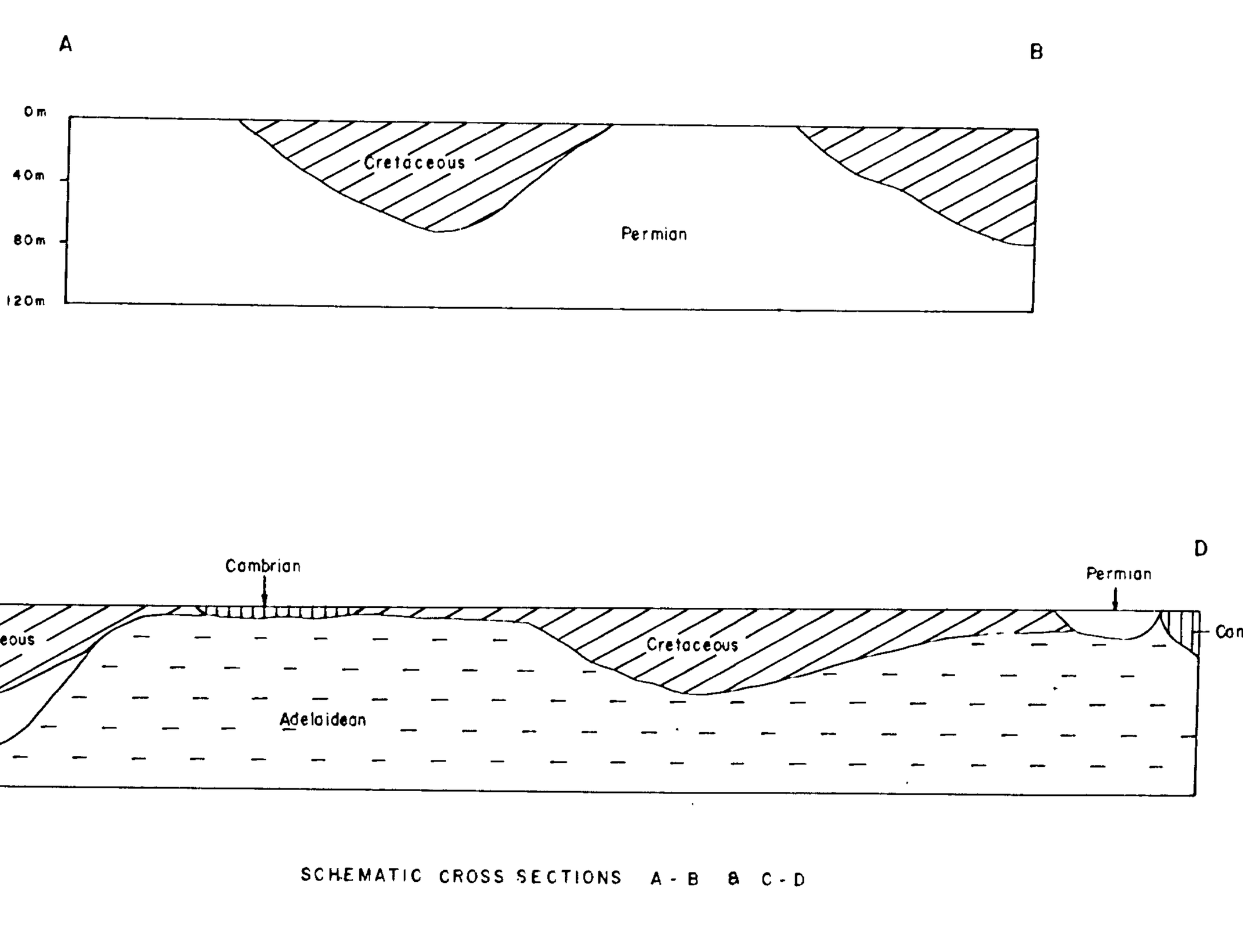
STOCKDALE PROSPECTING LTD
WINGILPIN
SOUTH AUSTRALIA

SAMPLE LOCATIONS
AS AT: 4/10/86

43 45-19

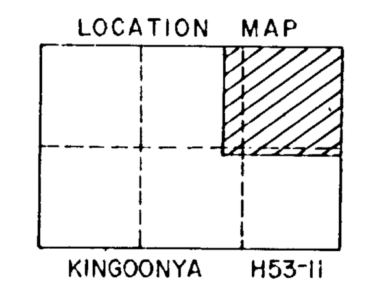


January 1981
S4901 - 4915



SCHEMATIC CROSS SECTIONS A - B & C - D

Bedding traces
Dip of bedding
Lineaments
Photo anomalies (F1)
Creek, lake
Road
Fence
Geological crossection (A — B)
Approximate pre-tertiary outcrop from water bore hole logs
Dam
EL Application (DM 733/80)



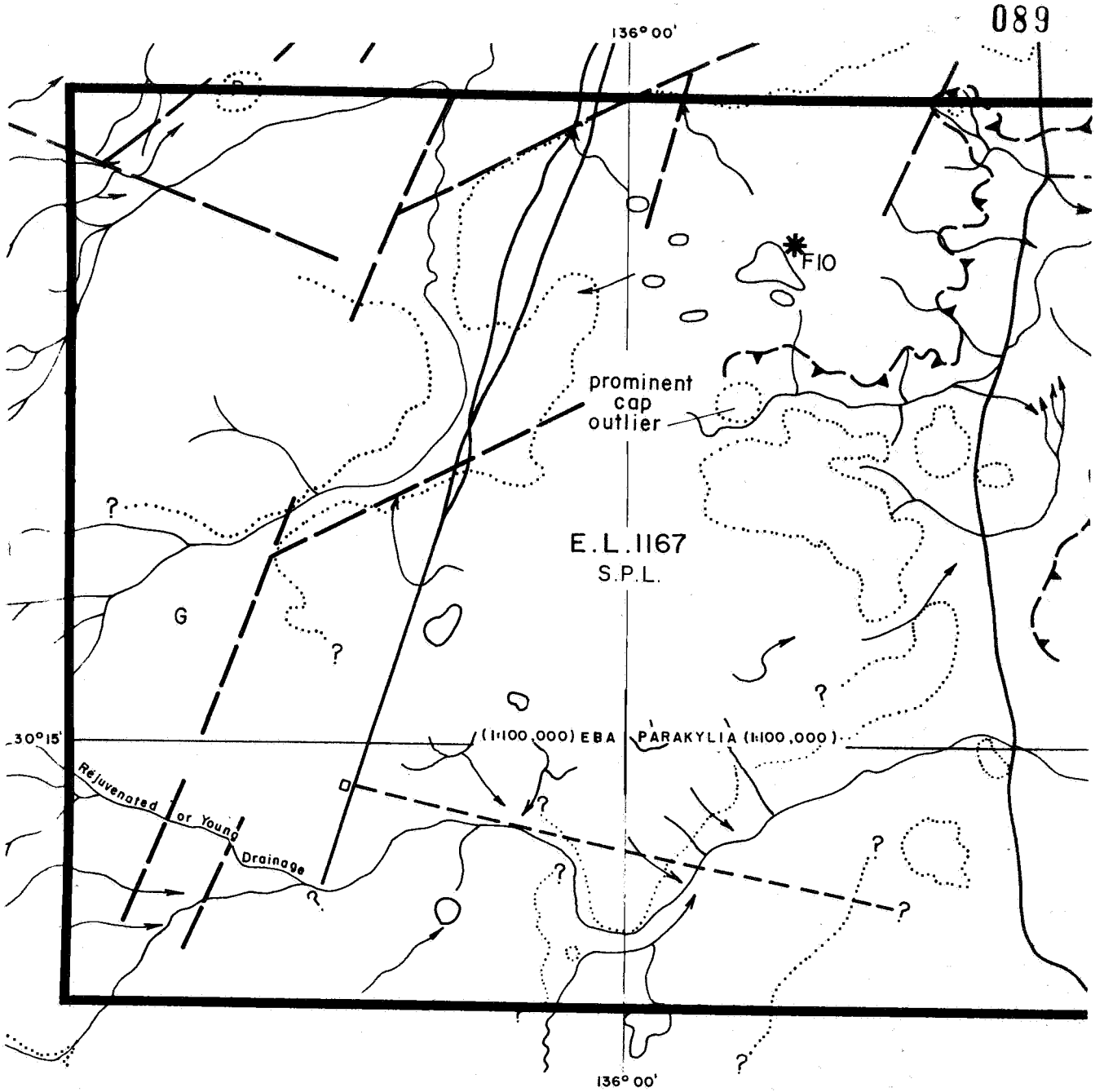
4345-20

FIG 13

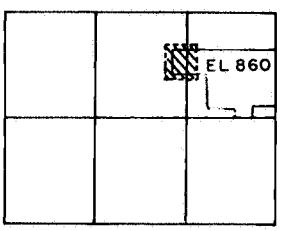
STOCKDALE PROSPECTING LIMITED

PHOTOINTERPRETATION
REEDY LAGOON E.L.

Compiled	Drawn	Date	Scale	
SJW	MAK	FEB '81	1:100,000	SEL 1096



LOCATION MAP



KINGOONYA H53-11

F10 ✱ PHOTO ANOMALY

Note : See SEL 1527 for F10 anomaly ground magnetometer traverses A, B, C and D.

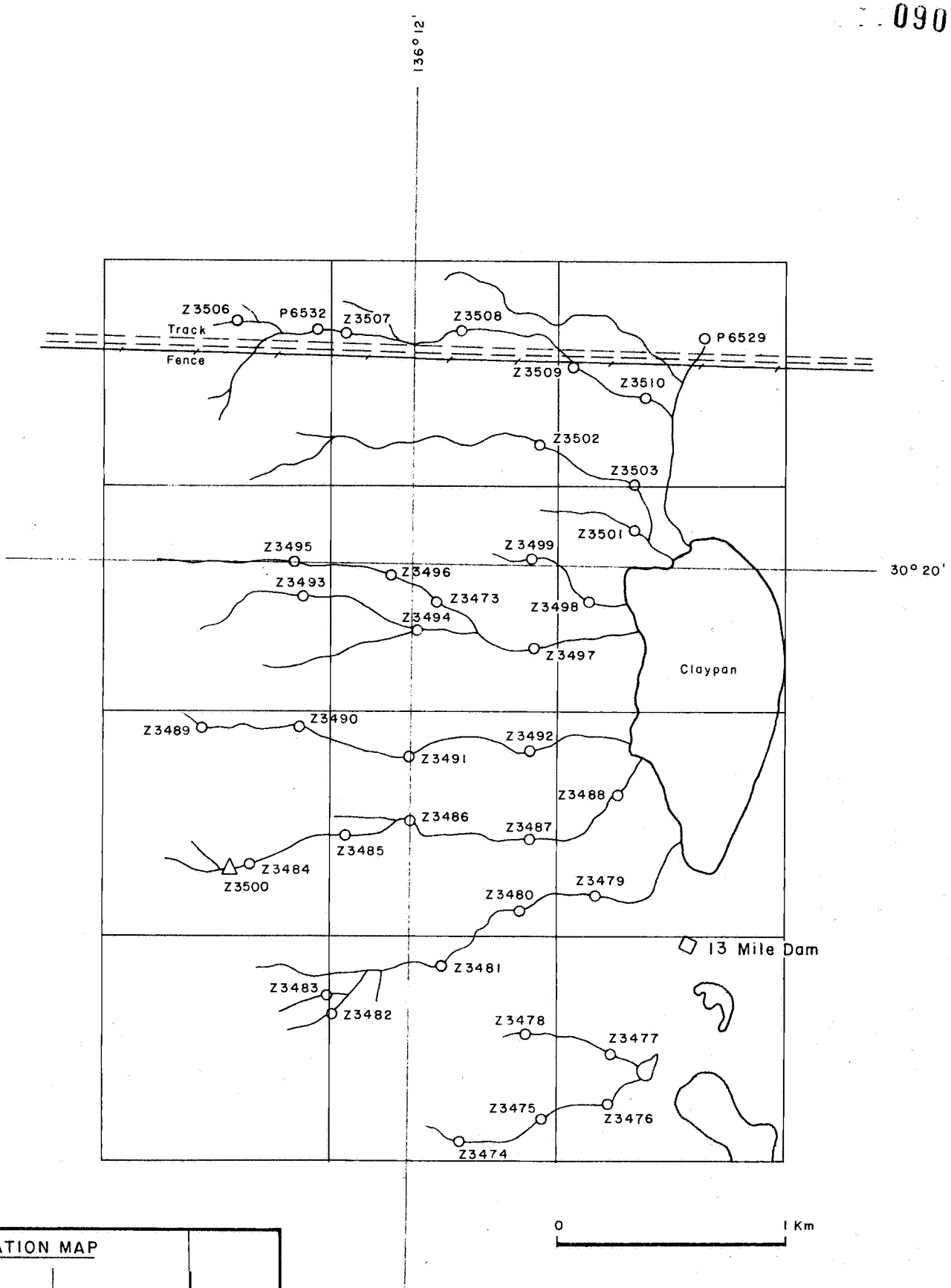
FIG. 14

STOCKDALE PROSPECTING LIMITED

H53-11 KINGOONYA
REEDY LAGOON AREA
EL 1167
LOCATION PLAN
PHOTO-ANOMALY F10

Compiled	S. Wright
Drawn	A.D.S
Date	MAY '82
Scale	1:89,000
Revised	
	SEL 1528

BASED ON SEL 1217



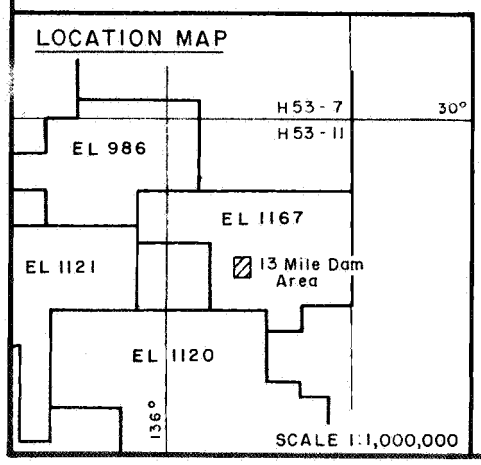


FIG. 15

STOCKDALE PROSPECTING LIMITED

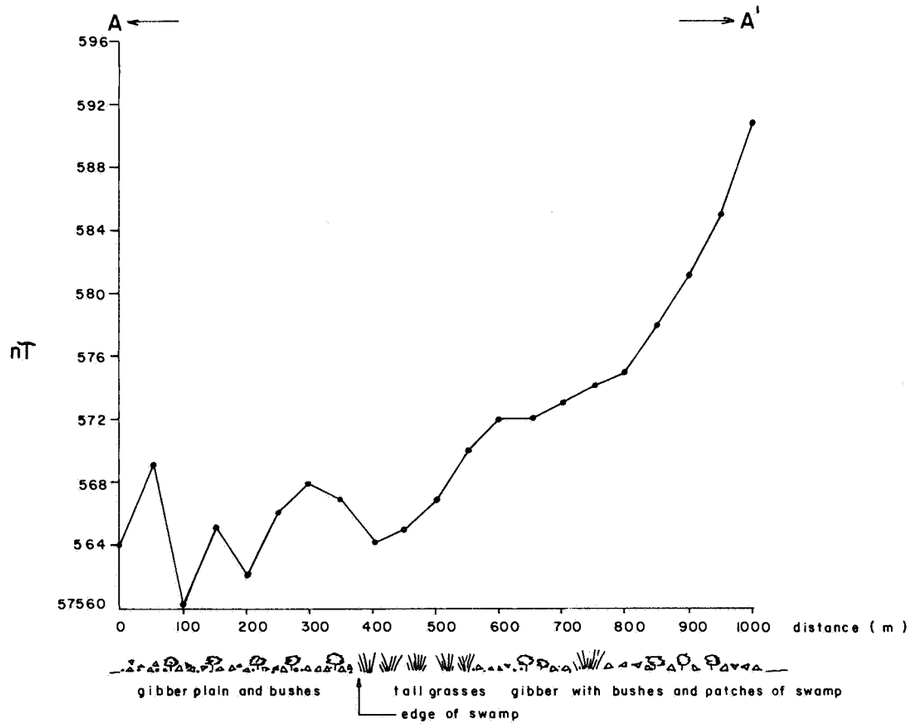
KINGOONYA H53-11

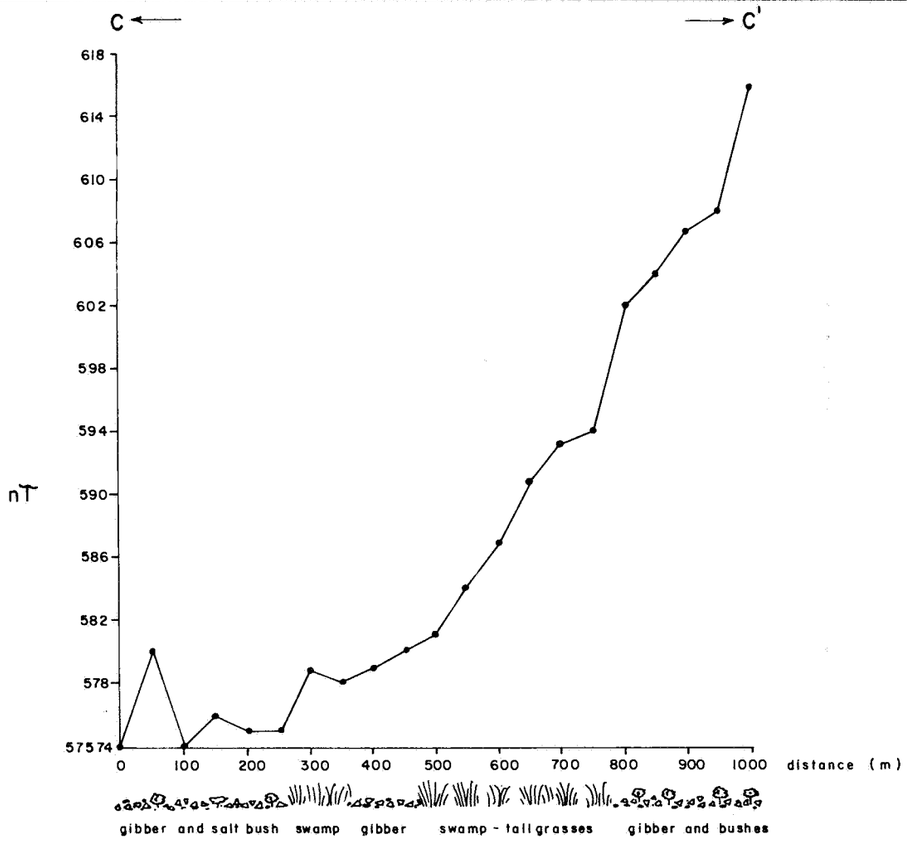
13 MILE DAM AREA

SAMPLE LOCATIONS

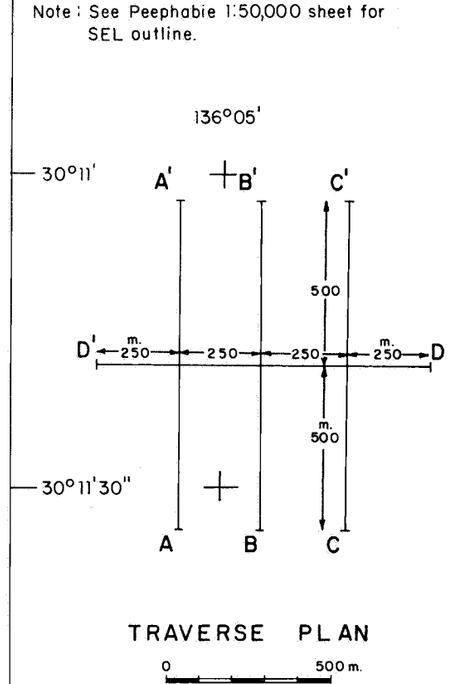
Compiled	
Drawn	APS
Date	Feb 84
Scale	1:25,000
Revised	
SEL 2162	

091

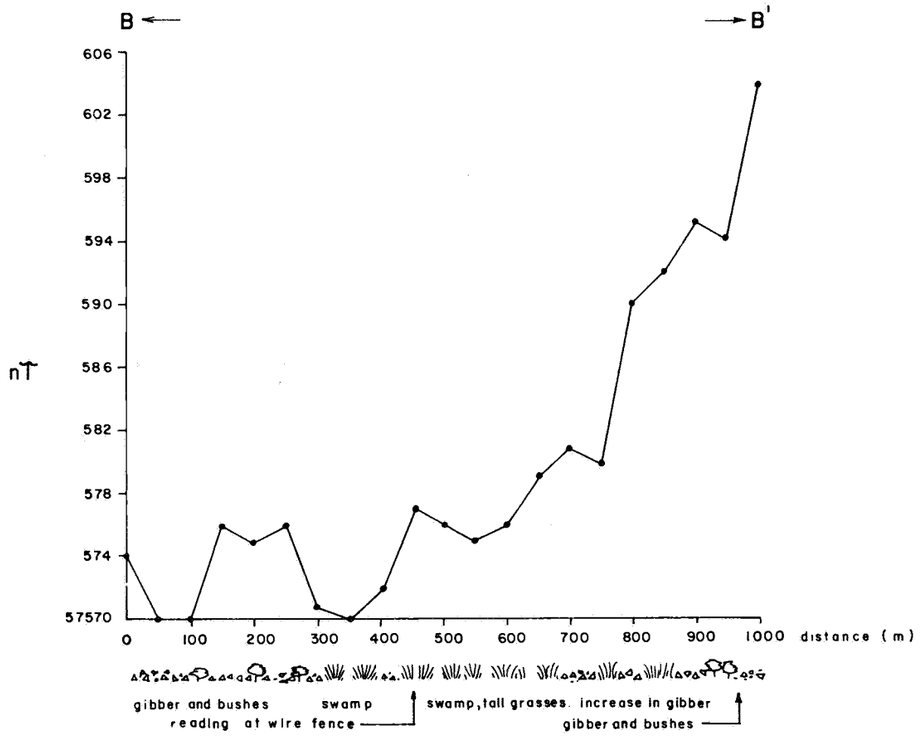


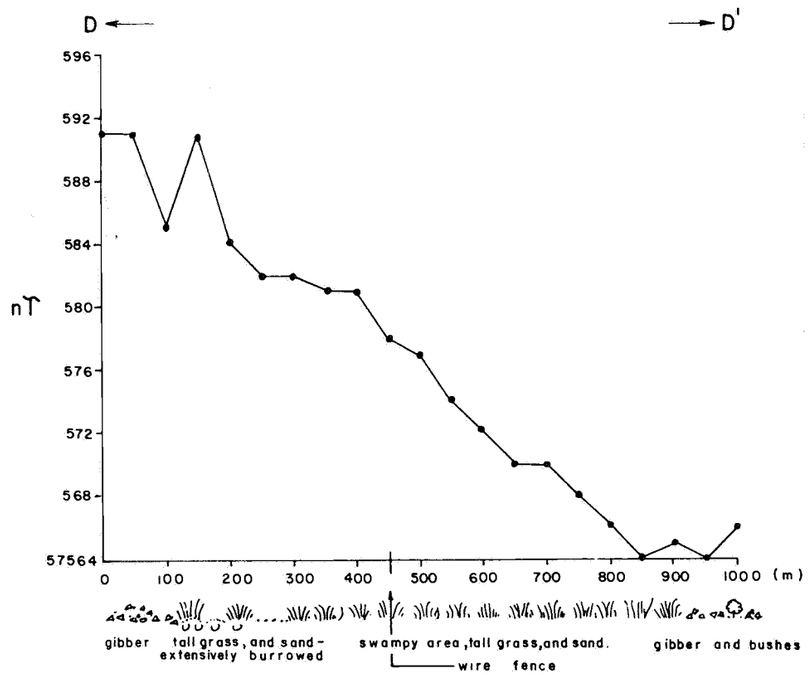


Note : See Peephabie 1:50,000 sheet for SEL outline.



LOCATION MAP





Verticol scole 1cm. = 100m

FIG. 16

STOCKDALE PROSPECTING LIMITED

H53-11 KINGOONYA
EL1167- REEDY LAGOON AREA
FIO ANOMALY
GROUND MAGNETOMETER
TRAVERSES A,B,C and D

Compiled K.A H	Drawn A.D.S	Date MAY '82	Scale SEE MAP	SEL 1527