15. MADAM PELE (EL2367 AND EL 6938)

15.1 Introduction

Madam Pele Central (EL 2367)

The Madam Pele prospect lies approximately 17 kilometres south of Dead Bullock Soak and 45 kilometres southwest of The Granites. Access to the prospect is via the Mount Neverest exploration track to its junction with the Tanami Downs Stockroute, then east to Madam Pele.

The area is marked by a prominent north-east south-west trending magnetic ridge that has been compared in form and amplitude to that marking the mineralised sequence at The Granites. To the east lies a complex circular magnetic anomaly within a porphyritic granite.

Previous work in the area consisted of reconnaissance mapping and rock chip sampling with subsequent auger and RAB traverses. Limited ground magnetics and costeaning were restricted to the magnetic stratigraphy. No encouragement for host rock type or gold intersections was received from this work.

The previous one kilometre spaced RAB drill traverses were considered to have insufficiently tested the prospective stratigraphy at a suitable density. A further phase of detailed vacuum drilling with traverses at 400m intervals was undertaken in 1992.

Madam Pele West (EL 6938)

The area is contained within the north eastern part of EL6938. Access to the area is via Madam Pele Ridge (4km west along bush tracks) which is located 16km south-south-west of Dead Bullock Soak.

A reconnaissance vacuum drill program was designed to extend vacuum coverage west south west from Madam Pele Ridge towards the Hyatt prospect.

Madam Pele East (EL 2367)

The area is located approximately 20km south-south-east of Dead Bullock Soak and 35km south west of The Granites. Previous geological/geophysical interpretations of the area suggested that the region is entirely underlain by granite and therefore did not warrant coverage by earlier geochemical surveys. The area was tested in 1992 for styles of mineralisation not evident at The Granites or Dead Bullock Soak.

15.2 Work Undertaken

Madam Pele Central (EL 2367)

Main activities for the reporting period were grid establishment, vacuum drilling, costeaning, mapping and rock chip sampling, as well as further petrological examination of costean samples.

Details of work carried out are summarised in the table below-

MADAM PELE CENTRAL - WORK CARRIED OUT

		Vacuum Drilling						Costeans		RAB Drilling			
LATERITE	LAG	CRC	PETROLOGY	HOLES	METRES	SAMPLES	BCL	METRES	SAMPLES	HOLES	METRES	SAMPLES	PERIOD ENDED
-	-	-	-	-	-	-	-	-	-	-	-	-	June 90
-	-	24	17	-	-	-	-	289.1	298	296	2254	801	Dec 90
-	-	-	-	-	-	-	-	-	-	-	-	-	June 91
-	-	-	-	-	-	-	-	-	-	-	-	-	Dec 91
-	-	-	-	-	-	-	-	-	-	-	-	-	June 92
-	-	16	20	289	1081.8	516	64	311	311	-	-	-	Dec 92
-	**-**	**40**	**37**	**289**	**1081.8**	**516**	**64**	**600.1**	**609**	**296**	**2254**	**801**	**TOTALS**

Mapping and CRC Sampling

Limited rock chip sampling was undertaken in conjunction with geological mapping. Samples were dispatched for analysis for Au (Analabs method 334) and As (Analabs method 115). A geological description of the Madam Pele area based on the mapping project is present in the appendices.

Costeaning

Seven costeans were excavated across the magnetic stratigraphy at Madam Pele Ridge to aid in mapping and to confirm the barren calibre of misidentified sinkholes as historical workings.

Samples were composited over 1m intervals and dispatched for analyses for Au (Analabs method 334) and As (Analabs method 115).

Vacuum Drilling

Part of the vacuum drilling program was designed to infill existing RAB and auger traverses over the linear magnetic stratigraphy at a 400m x 50m drilling density. The drill hole interval was 50m. Average hole depth was 3.4m, ensuring one discrete bedrock sample.

Broad spaced vacuum drilling was undertaken to test for porphyry style mineralisation in a circular "noisy" magnetic porphyry granite complex to the east of Madam Pele Ridge. Drill spacing was 1km x 1km. Bedrock sampling was complemented with bulk cyanide leach (BCL) sampling of the surfical horizon at each drill site above bedrock.

Drill samples were composited on site and dispatched for analysis for Au by Analabs method 334 (30g aqua regia digest with carbon rod finish) and As by Analabs method 115 (perchloric acid digestion/hydride generation with atomic absorption spectrometry finish.) In addition a suite of other elements were assayed as part of the evaluation of the magnetic granite complex at Madam Pele Hills.

Details of assay techniques used are contained in the appendices.

Representative samples were collected from each drill composite to assist geological interpretations and for petrological work as required.

Madam Pele West (EL 6938)

Vacuum Drilling

Reconnaissance vacuum drilling coverage was extended westwards along the linear magnetic trend from Madam Pele towards the Hyatt prospect to determine bedrock geology and geochemistry.

4 holes were drilled for a total of 34 meters (LSV1203-1206) which yielded 4 bulk cyanide leach samples and 4 base of hole samples.

Drilling was undertaken on a 1km x 1.8km AMG grid. At each drill site a 5kg BCL sample was collected immediately beneath the aeolian sand cover, together with a BOH sample taken in recognisable bedrock.

BCL samples were analysed for Au, Ag, and Cu, and BOH samples were analysed for Au (Analabs method 334), As (Analabs method 115) and also a suite of trace elements which included Ag, Bi, Cu, Mo, Pb, Zn, Sb, Sn, W, U. See appendix 2 for analytical methods.

Unfortunately water/alluvial cover hindered the program, and consequently the program was reduced to four holes, (only two of which reached bedrock).

Madam Pele East (EL 2367)

Vacuum Drilling

A reconnaissance vacuum drill program consisting of 9 holes was completed simultaneously with the drilling of the Madam Pele magnetic granite program. These holes were designed primarily to extend previous vacuum drilling west of Blackwood Bluff and to investigate possible geological variations within the granite.

Drilling was completed on 1km x 1.8km AMG grid. At each drill site a 5kg BCL (Bulk Cyanide Leach) sample was taken immediately beneath aeolian cover, together with a BOH (Bottom of Hole) sample taken in recognisable bedrock, i.e. below the iron enriched capping of the bedrock profile.

Analysis of BOH samples was for Au (Analabs method 334), As (Analabs method 115), and Ag,Bi,Cu,Mo,Pb,Zn,Sb,Sn,W,U. (see appendices).

9 holes were drilled for a total of 45 meters (LSV 1230-1238) which yielded 10 bulk cyanide leach samples and 9 base of hole samples.

15.3 Results

Madam Pele Central (EL 2367)

Mapping and CRC Sampling

Madam Pele has undergone Lower Greenschist Facies metamorphism, with the development of chlorite in the mafic units and sericite in the pelitic units.

Geology encountered from grid south to grid north consists of granite, foliated micaceous and chloritic schists and dolerite intrusives. Inferred Davidson Beds composed of graphitic schists and chert rich iron formations (quartz-sericite? tuffs) are approximately coincident with the magnetic ridge. Farther to the north, greywacke and quartz-sericite schists of the Madigan Beds are encountered. Extensive quartz elluvium derived from quartz veining of the sheared Madigan Beds cover most of the land surface at Madam Pele Ridge. This elluvium is widespread over the central and northern part of the grid.

The structural setting is that of a east-north-east trending shear zone. However the absence of anomalous geochemistry infers that the potential mineralised fluids did not have access to these structural foci. The reader is referred to the appendices for a discussion of the geological setting.

No mineralisation has been identified at Madam Pele Ridge. In particular the lack of arsenic in the system diminishes the comparison to The Granites mineralisation model. Rock chip and colluvial vacuum sampling of the quartz veins within the Madigan Beds and at the Davidson/Madigan contact produced only occasionally anomalous results. The lack of associated arsenic diminishes the potential for an Anomaly 2 style epigenetic quartz related deposit, and draws comparison to the unmineralised quartz veined Anomaly 9 area.

The porphyritic granite complex at Madam Pele East returned low multielement values.

Two significant results were received from rock chip sampling at the sheared contact between the Davidson and Madigan Beds in the north-east part of the grid. The values were (Au/As) 0.15ppm/310ppm, and 0.32ppm/35ppm.

Costeaning

Costean sampling failed to produce any significant (<0.1ppm Au) results.

Vacuum Drilling

Results of the work located anomalous gold associated with quartz veining within Madigan Beds turbidites near the sheared contact with Davidson Beds. The Davidson Beds that constitute the magnetic sourced stratigraphy were found to be barren where sampled. However, they are considered to retain limited prospectivity.

Contoured equal population frequency plots are presented in the appendices.

Significant drilling results (>10ppb Au) are summarised as follows:

Hole No.	From	To	Intersection(m)	Assay Au/As	Unit
MPV054	0	1.7	1.7	18 ppb/20 ppm	Aeolian sand,laterite,qv colluvium
MPV059	1.7	3.4	1.7	20 ppb/210 ppm	Dolerite
MPV064	0	3.4	3.4	13 ppb/20 ppm	Ptm 2%qv
MPV081	0	1.7	1.7	11 ppb/10 ppm	Aeolian sand, qv colluvium
MPV082	0	1.7	1.7	270 ppb/10 ppm	Aeolian sand, qv colluvium
MPV113	0	1.7	1.7	17 ppb/10 ppm	Aeolian sand, qv colluvium
MPV137	1.7	3.4	1.7	11 ppb/ 5 ppm	Ptdd

* Ptm: Madigan Beds.
* Ptdd : Intrusive dolerite.
* qV : Quartz veining

Madam Pele West (EL 6938)

Vacuum Drilling

Two adjacent vacuum holes LSV1203 and LSV1204 1km to the north, both returned anomalous results. LSV1204 collected a BCL results of 1.36ppb (0.9ppb is the anomaly threshold) sampled over metasediments. LSV1203 intersected granite but returned BOH results anomalous in Ag (2.22ppm), Mo (18.4ppm), Pb(602ppm), Zn (98ppm) and Sb (1.11ppm). The anomalous threshold was determined by cursory scanning of results.

The program was prematurely terminated owing to wet sampling conditions, intersected at 10m depth.

Madam Pele East (EL 2367)

Vacuum Drilling

No anomalous BOH results were received. (BOH anomaly thresholds Au >4ppb, As>ppm).

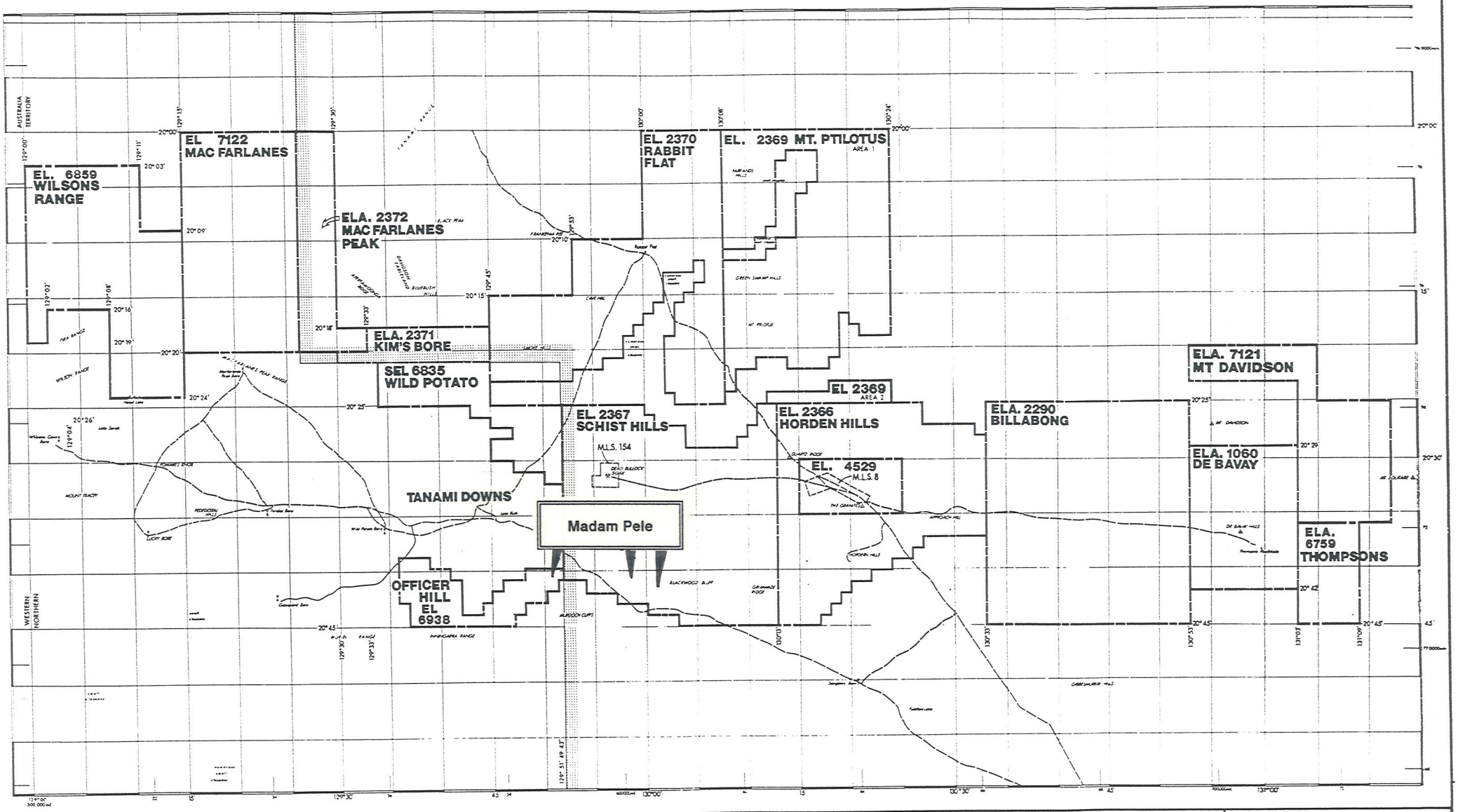
An anomalous BCL result of 0.95ppb Au (LSV1236) was received from the eastern extremity of the coverage, west of Blackwood Bluff. (BCL anomaly threshold >0.90ppb).

The reconnaissance drill pattern of 1km x 1.8km failed to indicate any grouped geochemical anomaly. The BCL result of 0.95ppb is adjacent to a magnetic ridge within the granite. Farther to the north, a 1200nT amplitude magnetic anomaly was auger traversed by Geopeko, 1969, as the Pioneer Anomaly 28 which intersected lamprophyre.

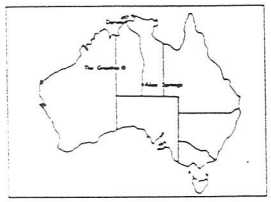
15.4 **Plans**

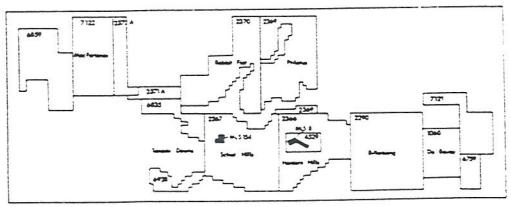
Drawing No.	Title	Scale
1100-1534	Madam Pele Ridge Vacuum Drilling Geology & Assay 16200E	1:500
1100 1533	Madam Pele Ridge Vacuum Drilling Geology & Assay 17200E	1:500
1100 1532	Madam Pele Ridge Vacuum Drilling Geology & Assay 18000E	1:500
1100 1531	Madam Pele Ridge Vacuum Drilling Geology & Assay 18400E	1:500
1100 1530	Madam Pele Ridge Vacuum Drilling Geology & Assay 19400E	1:500
1100 1529	Madam Pele Ridge Vacuum Drilling Geology & Assay 19800E	1:500
1100 1528	Madam Pele Ridge Vacuum Drilling Geology & Assay 20400E	1:500
1100 1526	Madam Pele Ridge Vacuum Drilling Geology & Assay 20800E Sht 1	1:500
1100-1527	Madam Pele Ridge Vacuum Drilling Geology & Assay 20800E Sht 2	1:500
1100 1524	Madam Pele Ridge Vacuum Drilling Geology & Assay 21200E Sht 1	1:500
1100 1525	Madam Pele Ridge Vacuum Drilling Geology & Assay 21200E Sht 2	1:500
1100 1522	Madam Pele Ridge Vacuum Drilling Geology & Assay 21600E Sht1	1:500
1100 1523	Madam Pele Ridge Vacuum Drilling Geology & Assay 21600E Sht2	1:500

Drawing No.	Title	Scale
1100-1487	Madam Pele Ridge Geology Sheet 1	1:5000
1100-1488	Madam Pele Ridge Geology Sheet 2	1:5000
1100-1486	Madam Pele Ridge Interpreted Geology	1:5000
1100-917	Madam Pele Fact Geology, Geochemical Sampling Sht7	1:5000
1100-916	Madam Pele Fact Geology, Geochemical Sampling Sht8	1:5000
1100-915	Madam Pele Fact Geology, Geochemical Sampling Sht10	1:5000
1100-912	Madam Pele Fact Geology, Geochemical Sampling Sht11	1:5000
1100-918	Madam Pele Fact Geology, Geochemical Sampling Sht12	1:5000
1100-946	Madam Pele Fact Geology, Geochemical Sampling Sht14	1:5000
1100-947	Madam Pele Fact Geology, Geochemical Sampling Sht15	1:5000
1100-1552	Madam Pele Ridge Costeans Geology & Assay	1:200



LOCATION MAP





LEGEND

NORTH FLINDERS MINES LIMITED

Tanami Reconnaissance : Northern Territory.

EL LAYOUT

KILOMETRY

DATA BY

DRAWN

Drg. No. 20-1

Fig. 15A

selected delineation drilling

MLS 154

SCHIST HILLS

Schist Hills Camp

intense rock chip and BCL sampling

SYMINGTON

MAGELLAN

DCR delineation

MT. NEVEREST

selected delineation drilling

MAGELLAN

selected delineation drilling

ANOMALY 9

ANOMALY 7

Madam Pele West

Bedrock not reached

MADAM PELE HILLS

Madam Pele East

BLACKWOOD BLUFF

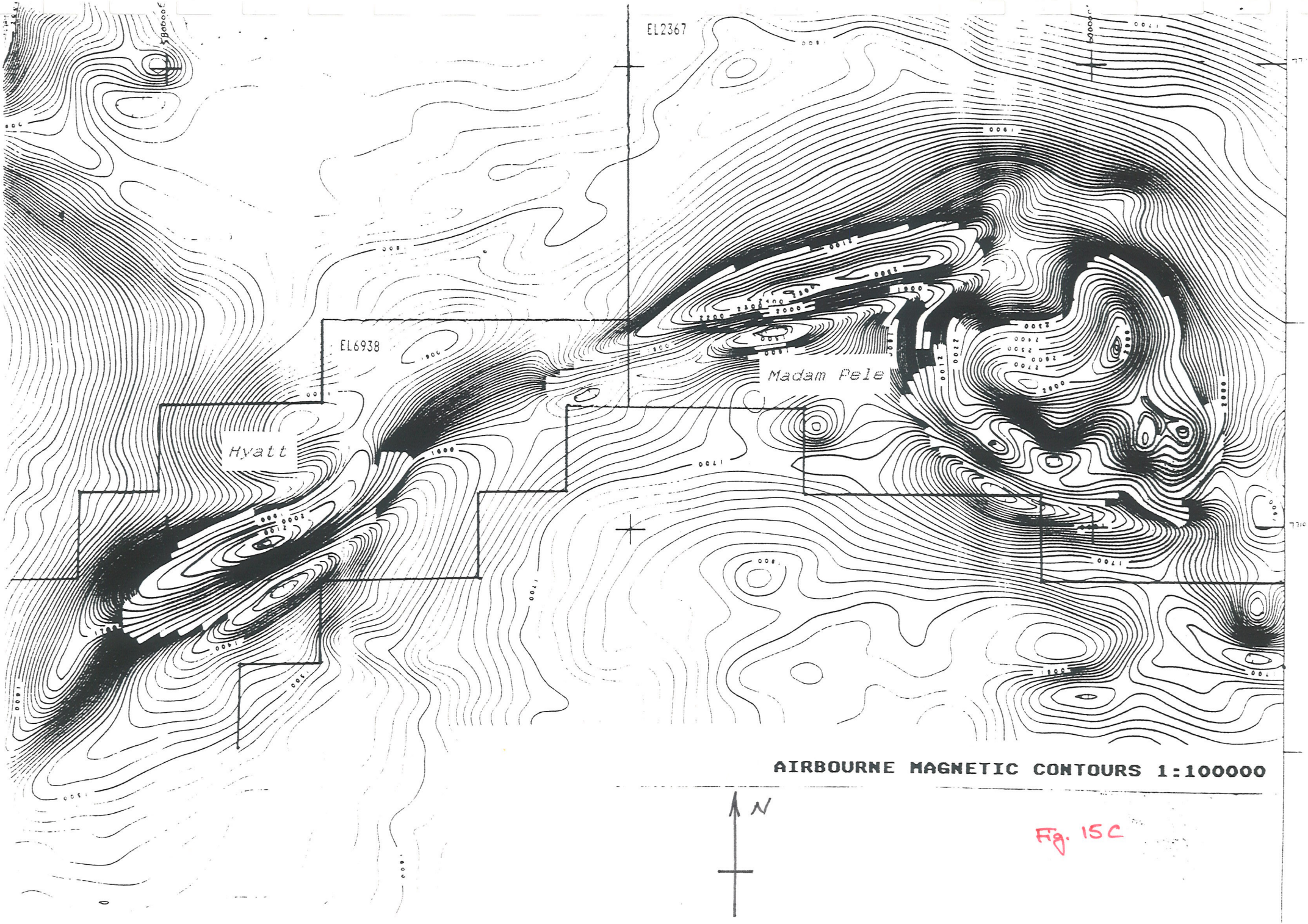
Doctor Abbotts Bore

NTS 517

FIGURE 3 : RECONNAISSANCE VACUUM DRILLING

1: 100,000.

Fig. 15B



AIRBOURNE MAGNETIC CONTOURS 1:100000

Fig. 15C