EL 7940

WEBBS POUND

CENTRAL MOUNT BLEECHMORE

FIRST ANNUAL
~~FINAL~~ REPORT to 25th FEB. 1994.
ALCOOTA 1:250 000 Map, Section 70/5

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0872.

(Compiled by L.A.Johannsen
18March, 1994.)

SUMMARY.

An exploration program aimed at testing the geological nature of the Webbs Pound topographic feature was conducted, with particular emphasis on identifying any deep seated ultrabasic intrusive occurrences. The program involves ground magnetic surveys and drilling, and a total of $4,270.00 was spent on the SEL area in the anniversary year.

CONTENTS

LIST OF FIGURES

PROJECT AIMS

The aims of the project are to identify and test intrusive structures of a type which might carry economic mineralisation of, (for example), Diamond, Platinum Group Metals, Gold, Niobium, Rare Earth Elements, or other minerals in economic quantities, such as Apatite, Vermiculite, etc.

LOCALITY

The project area is located in the center of the Mount Bleechmore complex, (ALCOOTA Geological 1:250 000, 70/5), and is accessed via station roads from the Plenty Highway, (Figs. 1 & 2.).

EXPLORATION PHILOSOPHY

The area was selected to test the nature of a large flat bottomed pound with an area of about 60 hectares, situated under the eastern flank of Mount Bleechmore, in the approximate center of the Mt. Bleechmore complex.

EXPLORATION TECHNIQUES

The target was identified using airphoto, geological and magnetic map research, followed up with ground reconnaissance to confirm the topographical nature of the feature.

On inspection it was decided that a ground magnetometer reconnaissance should show if any substantial difference exists between the underlying geology of the pound, and that of the surrounding rocks of the Mount Bleechmore complex, (gneiss, migmatite,etc.)

Percussion drill samples would give information about the mineral and chemical make up of the floor rocks.

WORK COMPLETED

MAGNETIC SURVEY METHODS

Magnetic reconnaissance was conducted across the surface of the target feature, but no variation of any consequence was observed.

The instrument used for surveys is a Geometrics G836 Proton Magnetometer giving a reading of local field intensity rounded to the nearest ten. several readings were taken at each station to guarantee field stability, and thus reasonable accuracy. No correction for diurnal variation was applied.

DRILLING PROGRAM.

A total of 48 meters was drilled into the floor of the pound, comprising two holes of 24 meters each. (FIG.3.)

POU 1	24m.
POU 2	24m.

DRILLING EQUIPMENT

The drillrig used was an Ingersol-Rand ECM 350 air track machine, mounted along with an I-R 900cfm compressor on a semi-trailer. It has a boom mounted air hammer and is probably best described as a percussion RAB drill.

DRILL SAMPLES

A bulk sample was taken from each hole, and after reduction a portion of the material from POU 1 was sent to Analabs, Brisbane, for analysis. (Fig.4.)

ENVIRONMENTAL CONSIDERATIONS

Webbs Pound is accessed by a major road development constructed by the Pastoral Lease proprietors to open up an area which previously could only be reached by walking across the ridges of the Mt. Bleechmore complex.

The floor of the pound is largely free of trees and scrub, except for some Teatree and Rivergums growing in the drainage channels. No timber was cleared to gain access to the drill sites and no earthworks were necessary. The holes were backfilled to groundlevel before vacating the site, and any rubbish was removed (not buried) on departure.

ABORIGINAL CEREMONIAL AND SIGNIFICANT SITES

Shortly after the EL was granted, an excursion through the Mt. Bleechmore area with one of the specific Senior Traditional Owners was conducted, for the express purpose of ensuring that the exploration program in no way conflicted with any sensitive Aboriginal areas. During this trip certain localities in the hills surrounding the pound were declared as out of bounds, but no restriction was placed on exploration in the pound area itself.

EXPENDITURE TO 24/2/94

Expenditure details for the anniversary year are as follows:

Percussion RAB drilling, (48m @ $35/m),..$1 680.00
Share of Mob/demob drill, (155km @$6/km),$930.00
Toyota field vehicle, (910km @ $1.00/km),..$910.00
Time engaged in exploration activities,
(other than drilling and Mag),
(14hrs @ $35.00/hour),$490.00
Magnetic reconnaissance, (3hrs @ $35.00/hr),$105.00
Share of Aboriginal Sites clearance costs,
Travel, (Toyota, 85km @ $1.00/km),..... $85.00
Time engaged, (3 hours @ $35.00/hour),.. $105.00

TOTAL... $4 270.00

EXPLORATION RESULTS

INTERPRETATION AND CONCLUSIONS

(By Dr.S.K.Dobos,
6 Pandian Cr.
BELBOWRIE, QLD.)

As part of the overall geological strategy for diamond exploration in an area which according to conventional wisdom is non-prospective, it was decided to analyse the bulk rock composition of the most mineralogically or physically unique samples from each of the major drill holes in the area. This was done to establish the compositional range of the rocks and residual materials in the area, and to provide data for the interpretation of the mobility of elements during the weathering process. At the same time any suspected [relatively] unaltered lamproitic or kimberlitic rocks might become obvious, especially if the major element data are combined with trace element data.

Our exploration strategy revolves in part around the fact that any igneous rock now present at or near the surface of the earth, but which originated under depth/pressure conditions within the thermodynamic stability field of diamond, is itself potentially diamondiferous, (especially if the bulk rock composition had a sufficiently high chemical potential of C), or may have picked up diamonds (as xenocrysts) from deep-seated rocks (also within the P/T constraints) through which it passed on its way to the crust.

This model is not nearly so restrictive as the Kimberly- and Argyle-related models, both of which require specific host rocks, but of course does include them. It does, however, require geochemical signatures and/or mineralogical compositions indicative of the required P/T conditions for diamond stability, such as high Na pyroxenes, high Mg and/or high Na $\pm$ Ti garnets, high Mg ilmenites and so on.

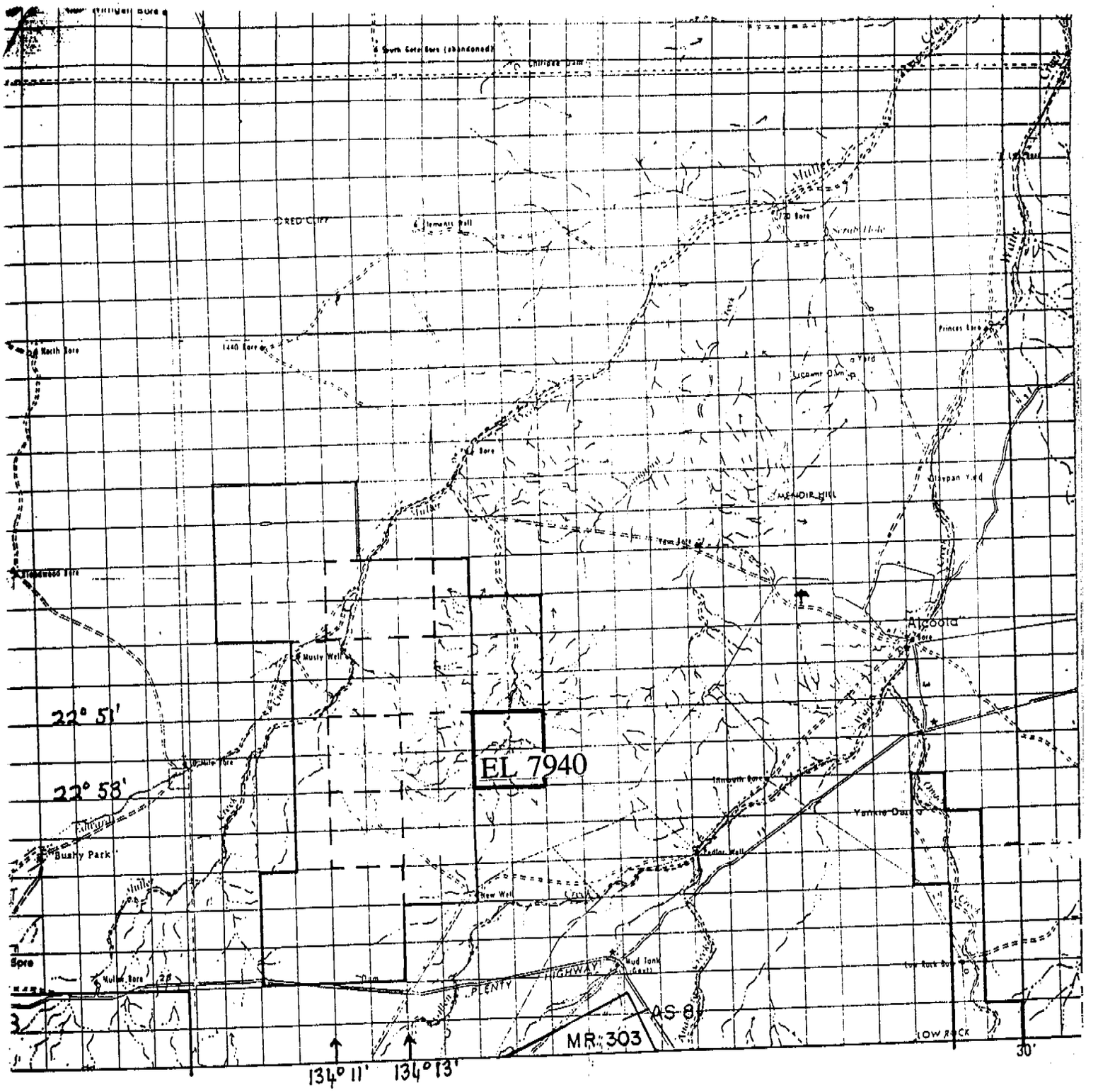
With respect to bulk rock analyses, the above apply in terms of separating out the (regional high-grade metamorphic) country rocks from those igneous rocks which have the potential to have been derived from depths exceeding 150km. Carbonatites, kimberlites, lamproites and other ultra-potassic rocks, certain anorthosites, and ultramafic/ultrabasic rocks are all geochemical targets which warrant further mineralogical attention.

With regard to the samples from Webbs Pound, it is most likely that these are residual materials which have arisen principally from the breakdown of feldspar and biotite, common phases in the Mount Bleechmore Complex. Any opaques and garnet tend to resist weathering better, and appear to be transported away rather than weathered in situ.

A layer of haziness is cast on the trace element data, insofar as the majority of materials analysed are partly or completely altered. The chemical data therefore reflect a range of values, of which some are relatively "mobile" (Sr), through to "immobile" (Zr). Our interpretation of the data accounts for the possibility of selective removal/enrichment of the elements.

The sample from the drillhole POU 1, (from EL 7940), shows no sign of belonging to any of the rock groups mentioned above. It represents country rock, and as far as our current exploration program is concerned, it is "dead".

Dr. Dobos' comments above on the trace element data, and the future of diamond and general exploration in the EL via our current philosophy, are unambiguous, and we do not propose to continue.



ALCOOTA Tenement map, Section 70/5, Scale 1:250 000

SCALE 1:250 000

5 10 15 20 25 30 35 40 45 50 kilometres

FULL LATITUDE AND LONGITUDE VALUES ARE SHOWN AT THE SHEET CORNERS, WITH EVERY 15' VALUE BEING LABELLED AROUND THE NEATLINE.

rail route marker 18
highway; Road bridge .....

Aboriginal Land Claim Boundary .....
Exploration Licence (application) ..... A
Exploration Licence (granted) ..... EL
Mining Reserve ..... RQ or MR
Business Area ..... BA
Dredging Claim ..... DC

Licence to treat tailings
Machinery Area
Machinery Lease
Mineral Claim
Mineral Lease
Tenement number

EL 7940

FIG. 1

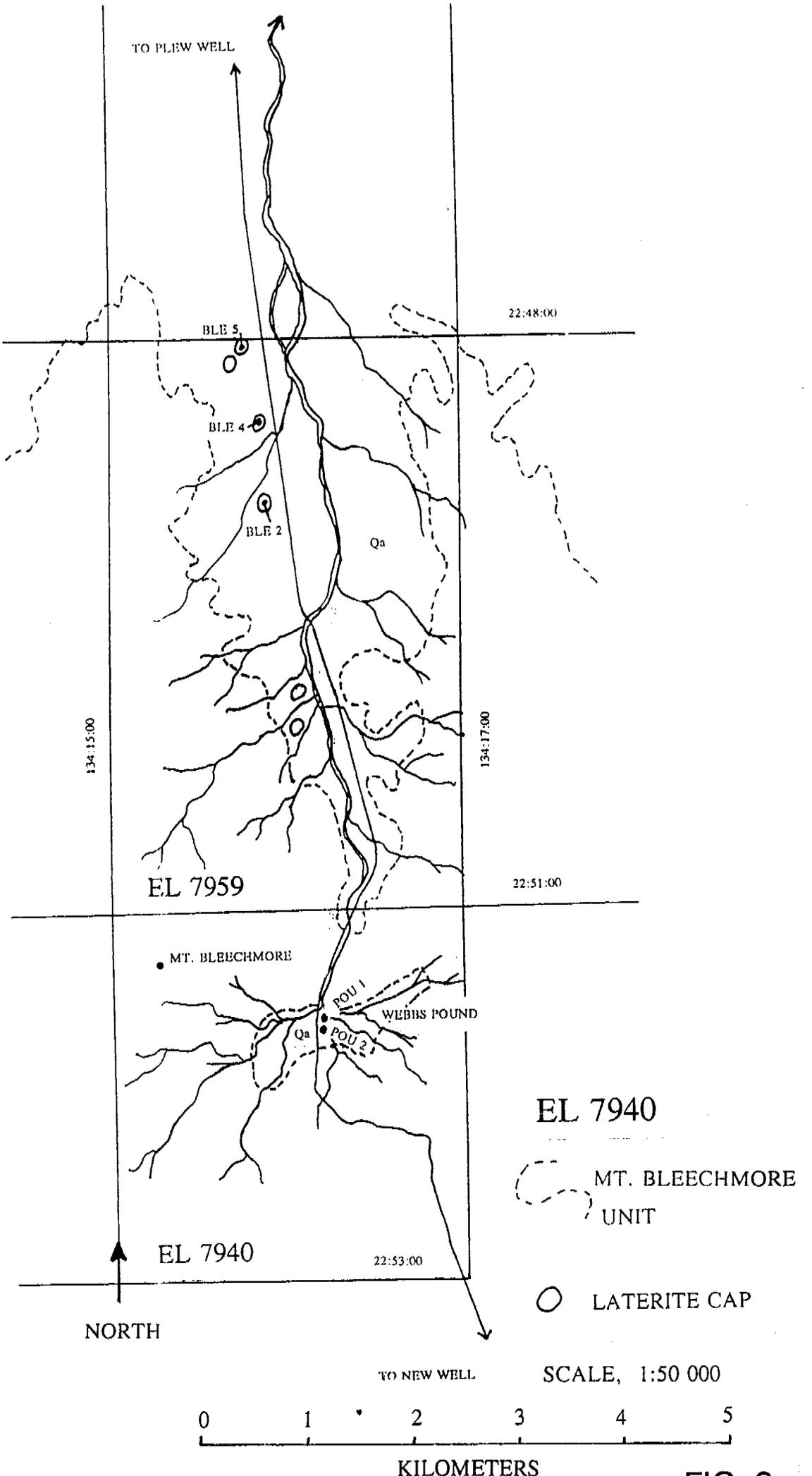
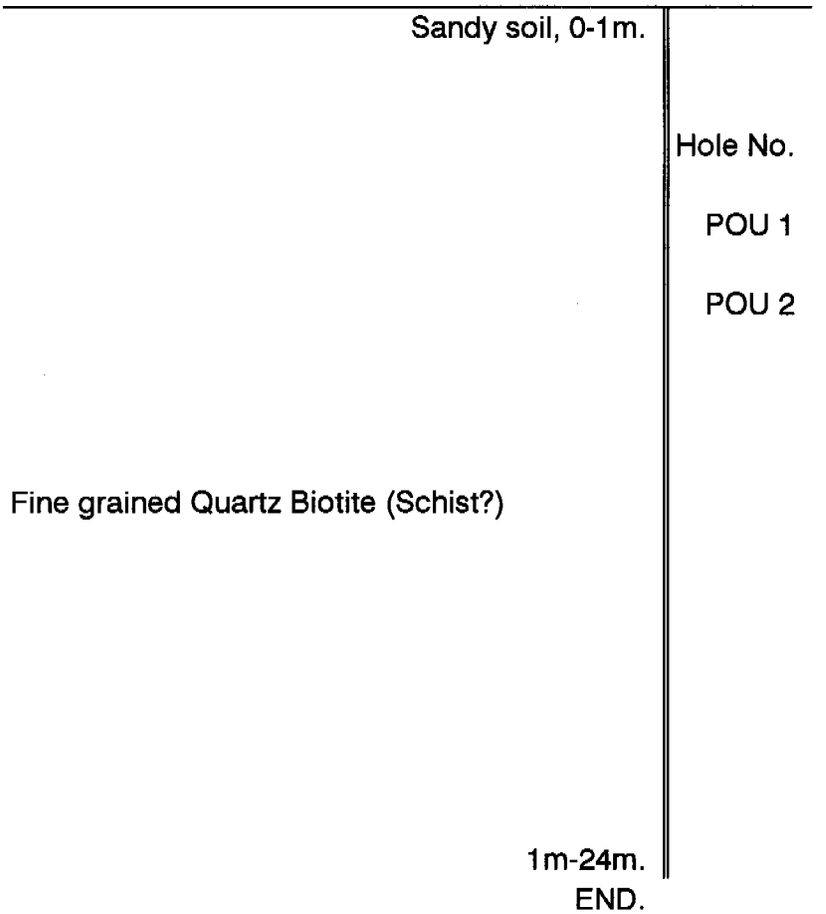

TO PLEW WELL
22:48:00
BLE 5
BLE 4
BLE 2
Qa
134:15:00
134:17:00
EL 7959
22:51:00
MT. BLEECHMORE
POU 1
WEBBS POUND
Qa
POU 2
EL 7940
22:53:00
NORTH
TO NEW WELL
EL 7940
MT. BLEECHMORE UNIT
LATERITE CAP
SCALE, 1:50 000
0 1 2 3 4 5
KILOMETERS

FIG. 2

EL 7940

COMMON SECTION, PERCUSSION HOLES
POU 1 & POU 2.



Hole No.	Meters
POU 1	24
POU 2	24

EL 7940

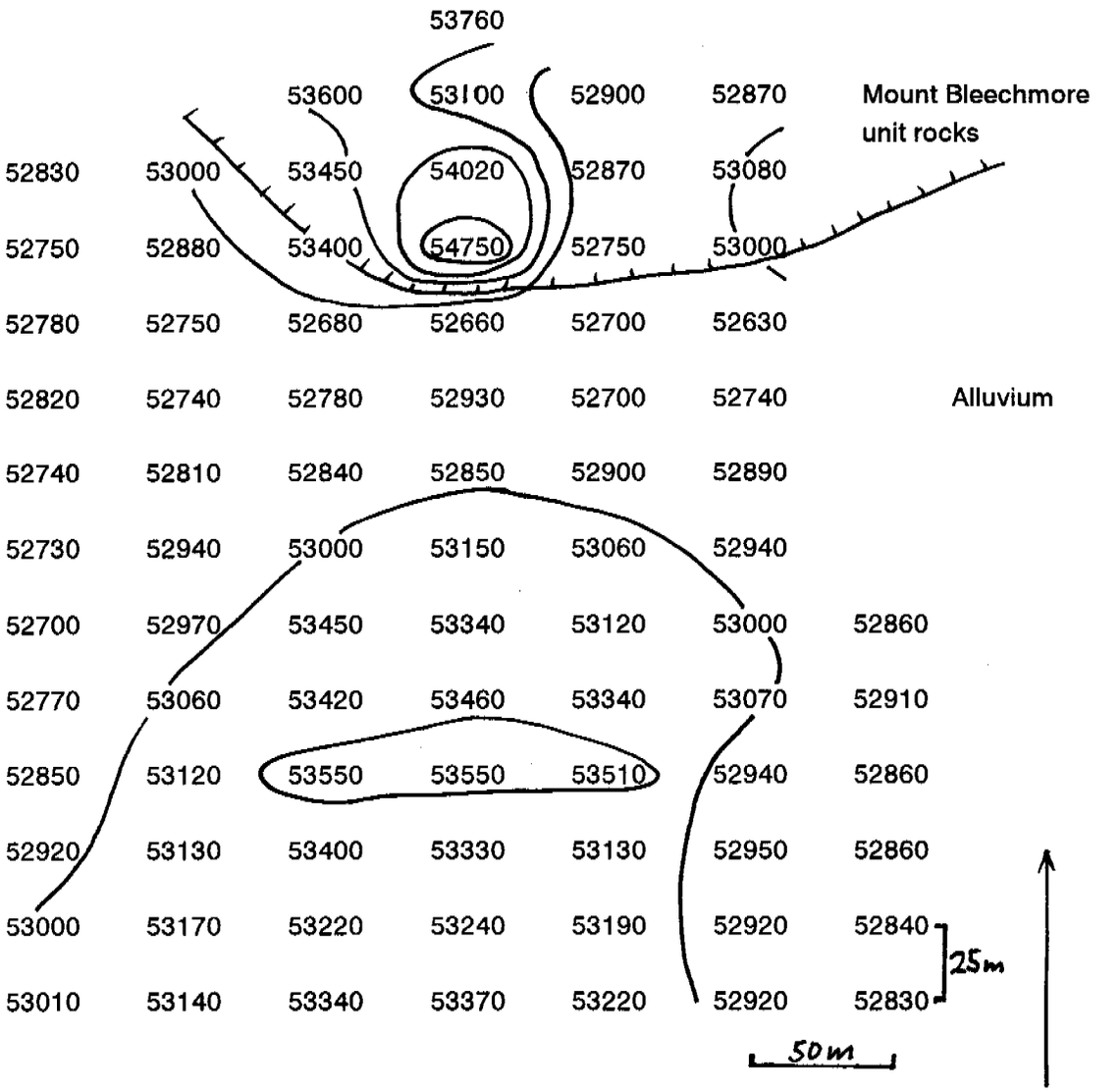
Drill Sections

FIG. 3

	Sc	Cr	Ni	Cu	Zn	Sr	Y	Nb	Zr	Ba/10	La	Ce	Nd
POUnd 1	4	74	<10	<5	94	112	7	<10	134	84	36	76	27

EL 7940 Trace Element Data Analabs/SKD/2/94

EL 7940
FIG. 4.



WEBBS POUND
Informal magnetic reconnaissance
Line spacing: 50m
Station spacing: 25m

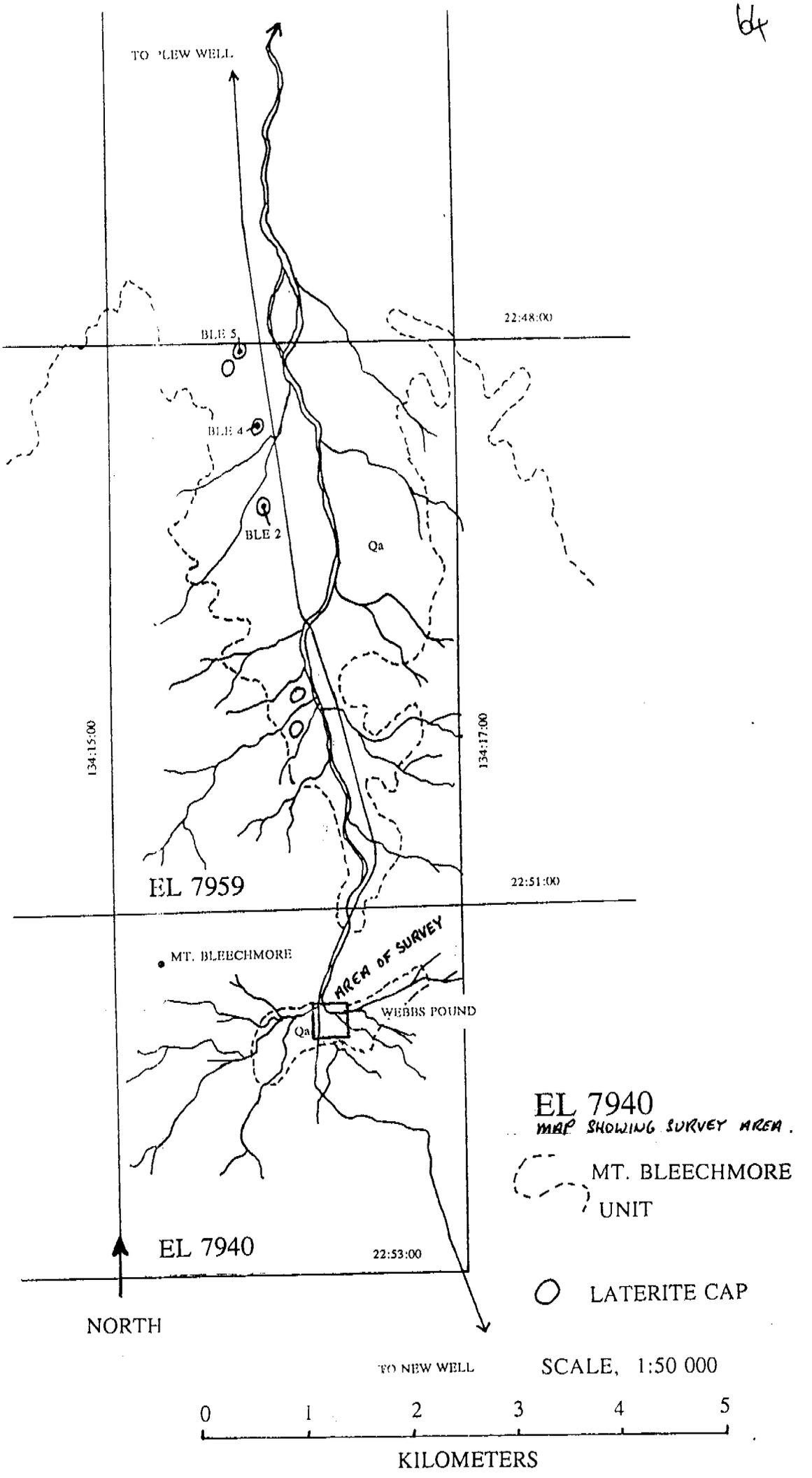
[No measured baseline or grid control.]

INSTRUMENT:
GEOTECHNICS G836 Total field magnetometer

EL 5940

WEBBS POUND

Magnetic line data
[with simple contour.]
Not to scale.


TO NEW WELL
22:48:00
BLE 5
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EL 7959
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MT. BLEECHMORE
AREA OF SURVEY
WEBBS POUND
Qa
EL 7940
22:53:00
NORTH
TO NEW WELL
EL 7940
MAP SHOWING SURVEY AREA.
MT. BLEECHMORE UNIT
LATERITE CAP
SCALE, 1:50 000
0 1 2 3 4 5
KILOMETERS