



# ENVIRONMENTAL PROTECTION AUTHORITY

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Telephone (09) 222 7000

Mr Keith Morris  
DEPARTMENT OF CONSERVATION &  
LAND MANAGEMENT  
KARRATHA

Your Ref:

Our Ref:

Enquiries: 202/76/8.2

Dear *Keith*

Herewith for your information a copy of the draft record of the 9 February 1988 meeting of the Consultative Group provided by the Department of Primary Industry and Energy.

You will note that plans are proceeding for the Technical Consultative Group to visit the Monte Bello Islands in November of this year. I will be in touch with you some weeks before the visit is arranged.

If you have any queries on the attached then please do not hesitate to contact me.

Yours sincerely

Norman Orr

27 July 1988

o209LET1/JW

Att:



Department of Primary Industries and Energy

Reference:

88/0882

Mr P Vincent  
Office of the Minister for  
Aboriginal Affairs  
197 St Georges Terrace  
PERTH WA 6000

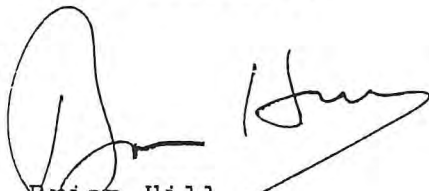
Dear 

Following distribution of the draft record of the 9 February 1988 meeting of the Consultative Group, amendments have been made to pages 2 and 7. A copy of the amended record of the meeting is attached.

As advised in my letter of 24 March 1988, the Minister visited Maralinga and Oak Valley on 28 and 29 May. A copy of the Minister's press release issued following this visit is attached. Also attached is a copy of ARL's latest report on radioactivity measurements in the Oak Valley region.

You will be interested to know that plans are proceeding for the Technical Assessment Group to visit the Monte Bello Islands immediately before the next TAG meeting in November this year.

Yours sincerely



Brian Hill  
Convenor  
Consultative Group  
20 June 1988

CONSULTATIVE GROUP - RECORD  
OF MEETING OF 9 FEBRUARY 1988  
TRAVELODGE CANBERRA

1 ATTENDANCE

As Attached.

Apologies registered for Mr Graham Burrows who replaces Dr Roger Allen as Head of BDRSS, Mr Andrew Collett, Solicitor representing Aboriginal interests, and Mr Aubrey Lynch, Western Australian Aboriginal Representative.

Welcome to Mr Mike Donovan, representing Mr Burrows, and Dr Malcolm Collings of the South Australian Public Health Service who replaces Dr Chris Baker.

Mr Pat Ryan, Mr Pat Davoren and Ms Karen Powell of the Department of Primary Industries and Energy were introduced.

Acknowledgement of contributions to Consultative Group by Dr Allen, Dr Baker, and Mr Graham McGregor.

2 INTRODUCTORY REMARKS

The main purpose of the meeting was to hear from Mr Des Davy an outline of the progress of the TAG Study Program.

Mr Hill briefly outlined developments since the last meeting, namely the radioactivity measurements at Oak Valley by ARL, Senator Evans' visit to Maralinga, Mr John Kerin's meeting in London with Lord Trefgarne and his later meeting with Lord Glenarthur in Australia, and the Supernova rocket proposal.

Record of 4th meeting accepted.

3 TAG STUDY PROGRAM

Mr Davy reported on progress to date

- progress reviewed in the context of the purpose of the studies and how the results are meeting TAG's objectives.

(a) Aerial Survey

- certainly met TAG's objectives

- acknowledged work of EG&G in obtaining measurements as good as TAG could have hoped for and assistance of UK in providing helicopters and personnel. TAG had expectations of EG&G achieving a sensitivity of 1.5-2 Bq/g for Pu<sup>239</sup>, instead a level of 1 to 1.5 was achieved

- final report of survey is not anticipated until mid-year as the final format is yet to be decided
- in essence the results for Taranaki provide a good confirmation of ARL's work on the ground although the survey has provided much more detail on the north and northeast plumes
- data obtained on levels of caesium fallout from major trials will be very helpful to the radioecology program
- results for the area which included Wewak, TM100 and TM101, and the Kittens and Dobo minor trials areas filled in details of earlier knowledge
- in the area encompassing the Village, the airfield, TM50 and Kuli, nothing not previously known showed up, except for the somewhat greater extent of the already known presence of uranium at Kuli and TM50
- Mr Davy undertook to provide copies in the form of transparencies to Mr O'Shea of the aerial survey result maps shown at the meeting
- the results of the aerial survey are of such a level of sensitivity that there is no longer a need for the type of ground survey originally proposed; that is, by UK RAF personnel using hand held monitors.
  - .. the primary objective of the ground survey as originally envisaged was to extend the known location of the plumes, to provide data on plutonium contamination to a sensitivity greater than 1Bq/g, to establish activity concentration depth profiles, particularly in undisturbed areas, and to check variations of the contamination within the scale of averaging obtained by the aerial survey.
  - .. the proposed UK survey would achieve levels a little over 1Bq/g
  - .. A high resolution detector such as used by ARL in their work at Oak Valley is capable of achieving sensitivity levels of .05 bq/g when counted over 16 hours. However, it averages activity over a relatively large area and hence does not provide a high area resolution capability as would hand held monitors when their sensitivity is adequate.

(b) Inhalation Hazard Study

- final report will not be available until mid 1989

- .. because of meteorological conditions, (the low frequency and seasonal nature of dust storms) air sampling cannot produce significant results for most of the year
- .. although artificial dust raising activities produced positive results, namely the collection of dust on the filters of the high volume air samplers, the material obtained has contained very little plutonium as the solar heating required to provide the necessary instability to suspend plutonium particles in air was not present
- Handout on Respirable Dust Loading - Aboriginal Style Activities provided
  - .. TAG is trying to refine the figure for the intake of dust through ingestion and inhalation to a factor closer to the real risk factor
  - .. acceptable exposure levels are being re-evaluated world-wide following disclosure that exposures at Hiroshima and Nagasaki were actually 1/2 to 1/3 of what had previously been the basis for calculations. This means that the risk co-efficient has gone up by a factor of 2 to 3.
  - .. NRPB has recommended that it would be prudent to work to a reduction of the current levels for workers by a factor of 3 and for the public by a factor of 2.
  - .. TAG would like the UK to examine quite low levels of activity in Study 5 but the UK is restricted by the limited tissue available from the small animals (ie. mice) with which they are working.
  - .. TAG is having to place a great reliance on the anthropologists to determine the nature and timing of activities that would lead to dust inhalation.

c) Study 5 - Radiochemistry

- Handout provided on radioactivity in samples provided to the UK, and explained
  - .. high reading for one of the rabbit samples may be due to cross contamination of the flesh from the pelt in the homogenisation process. Subsequent analysis of the pelt and bone from the same animal will confirm or reject this hypothesis. This particular rabbit was caught in an area that should not have been contaminated. If the results prove genuine the phenomenon could be explained by the observation that for quite some distance to the entrance of the warren, the lichens, which are good absorbers of deposited material, were stripped.

- explained preparation of samples for transport to the UK
  - .. in reconstituting one sample the UK biologists found what appeared to them to be red Maralinga soil.
  - .. highlighting emphasis TAG is placing on the work of the anthropologists - method of preparation, eating, and preferential distribution of parts of the animals.
- Limited material available thus far on ingested material
  - .. TAG concerned with the amount of dust that ends up on food from the pelt, in preparation, storage in trees, between periods of consumption. From observations by the anthropologists, there is little doubt that reasonably large quantities of soil are ingested. TAG's concern is the quantification and significance of this.
  - .. As part of the study program, food has been prepared in the Aboriginal way to quantify amounts of soil ingested.
  - .. One method of quantification that is currently being assessed by 2 of the TAG members is the analysis of faeces. Problems associated with this method relate to the presence of carbonates in Maralinga soils, and the fine particulate nature of the clays. For both, the measurement of "grit" in dispersed faeces samples would be low relative to the real intake.
  - .. While plutonium in its initial deposited form is an oxide and stable, the presence of carbonate rocks presents the possibility of biological changes caused by its absorption by plants. There is thus a danger that results could underestimate the amount absorbed by up to a factor of 10 if the gut transfer factor for the oxide was used.
  - .. the question of the fraction of plutonium transferred across the gut for ingested soil, fire ash, vegetable matter and animal matter will have to be settled.
    - ... during the time of the Royal Commission, the AAEC estimate was 0.1%
    - ... UK's recent estimate is .05%
    - .. 0.1% was recently accepted by ICRP for when the chemical form is unknown (Mr Davy undertook to provide Mr O'Shea with a copy of the relevant ICRP booklet).
    - ... 0.01% is more appropriate if the form is known to be oxide



- There is no data as yet from the UK on wound contamination, that is, the flow of plutonium from the wound site into other organs, lymph nodes, etc.

.. only preliminary analysis has been completed

(d) Further TAG Studies

- Two groups of studies were identified in the TAG Interim Report

- 1) Those with the purpose of determining levels of contamination
- 2) The methods and costs of handling that contamination.

Approved studies fall into the first Group.

- TAG at its January meeting identified the need for further studies which fall into the second Group

- 1) Geological study of the Maralinga region, particularly in the Taranaki area, to identify the potential for deep trench disposal of contaminated material currently on the surface. An updated estimate for this work is being sought from the SA Department of Mines.

- 2) A Scoping Engineering Study which will provide costed options for clean-up. New methods will need to be examined as part of this study

An in situ vitrification method which involves the passage of a large electric current. The technology is being developed in the US and might have application with the debris pits with a view to producing a stable glassy compound

A French method involving the spraying onto soils of a combination of plastic type polymer materials. The solution penetrates soil and solidifies enabling the contaminated soil to be removed for disposal.

Gravity separation of surface plutonium ("plutonium mining") - possibility of evaluating this US process on Maralinga soils being explored with US.

- TAG also identified the need for a study of the Contents of Non-Radioactive Burial Pits

Original proposal that a magnetometer survey be carried out as part of the aerial survey was unable to proceed due to technical difficulties

TAG now propose to examine contents of known burial pits not identified as containing radioactive material for radioactivity. If no radioactivity is detected there can be greater confidence that all pits containing radioactive material have been identified as such. This will be useful in the event that future pits are discovered as the Government will be able to state that the pits contain no radioactive material.

- TAG will almost certainly ask the anthropologists to undertake supplementary studies. They have, for example, been asked to provide nutritional records of the Oak Valley people.

e) Timescale for Studies

- final report on current studies will not be completed until mid-1990
- Mr Davy outlined proposed TAG meeting dates in Sydney (with a visit to Monte Bellos and Oak Valley), London, Canberra, Honolulu
- Mr Weir expressed the concern of the South Australia Government that the studies are taking longer than the two years nominated originally and sought assurance that delays were not the result of a lack of Commonwealth funding.
- Mr Hill asked whether it was practicable in scientific terms to hasten the studies, noting the Minister's expressed interest in maintaining momentum on the studies.
- Mr Davy advised that most of the delays have involved the bioavailability and chemical/radiochemical analysis studies which are being conducted in the UK. Delays occurred in the initial mechanism of collecting and arranging the transport of samples to the UK, and practical work in the bioavailability study is expected to continue until the end of 1989. The nature of the laboratory analyses being undertaken means that meaningful results cannot be attained in a shorter time-frame. The matter is further complicated by the fact that because of Chernobyl, the Laboratory of the UK Government Chemist is actually conducting the radiochemical analyses instead of NRPB, and the relocation of that Laboratory in mid-1988 is also expected to affect timing. Mr Davy raised the possibility of samples being sent elsewhere such as the USA. This could also be a useful Quality Assurance exercise. There is no possibility of using interim results.



- Mr O'Shea indicated that the Oak Valley community was content with the way the studies are proceeding. He did not believe that once the people are given the message regarding the extended timescale there would be any outrage or great concern over what is an unavoidable delay. The community's main interest is that the study program be done properly. However, both he and Mr Barton expressed the Maralinga Tjarutja's concern about difficulties arising out of the large media and public interest in Maralinga. Public organisations included anti-nuclear groups, groups with an interest in Aboriginal health, the existence of many of whom they are unaware until approached. The Maralinga Tjarutja needs to be able to explain the current position to such interests.
- The Group accepted the extended timescale and agreed that this acceptance be reported to the Minister. Various avenues of how to satisfy the Community's requirements for publishable information on the timing of the studies such as a press release, statement by the Minister were explored. Another possible mechanism was a visit by the Minister, possibly in conjunction with the Minerals and Energy Mining Conference and his visit to Roxby Downs. In this context Mr O'Shea announced that he and Mr Barton would be inviting the Minister to Oak Valley.

#### 4 RADIOACTIVITY MEASUREMENTS IN OAK VALLEY AREA

- . Copies of the ARL report outlining the results of the measurements taken by Ms Cheryl Richardson during the August and December field trips were distributed.
- . Mr Davy advised that current knowledge of the levels of activity show no cause for concern.
- . Mr O'Shea said that for the Maralinga Tjarutja this matter was far more important than the contamination at Taranaki.
  - Keen to see more of this ground survey work done and strongly support continuation of the work
  - It is a cause for concern that areas which were affected by the NW plume are already Aboriginal held land and therefore the more information that is available about the area the better
- . Mr Weir advised that the exclusions that were made to the lands granted to the Aborigines, viz the 5km strip from West Street and the Emu site were based on the best knowledge available at the time. South Australia would ideally like to be in a position to hand these excised areas over to the Aborigines. However, any decision on this would have to await the TAG's final report.

- The Oak Valley community camp has moved some twenty kilometers over the past 12 months and it is not possible to predict the camping sites which will be in use six, twelve or eighteen months from now

- Data on the location of areas of contamination will assist in determining potential camps.

Mr Rawson advised that the Department has provided funding for Ms Richardson's salary till the end of the financial year to enable the work to continue. Depending on the availability of the Ge(HP) Detector ARL expect to commence the next field trip in late February or early March.

Mr O'Shea said that the Maralinga Tjarutja are happy with past ARL reports and appreciated the briefings from Geoff Williams and Keith Lokan.

The conflict with the teachers over radioactivity has been completely resolved.

#### 5 SENATOR EVANS' VISIT TO MARALINGA

Was raised briefly

Mr Knill raised the question of the respective quantities of plutonium in the burial pits and on the ground, which received some publicity as a result of the visit

- Mr Rawson outlined the background and advised that there is disagreement at the scientific level over the respective quantities

- Mr Davy advised that on the technical level there is no difference on whether 2kg or 20kg are in the pits.

#### 6 MR KERIN'S VISIT TO LONDON

- Mr Hill advised that this visit resulted in a good exchange with Lord Trefgarne, Mr Kerin's UK counterpart.

- Mr Kerin during the debriefing following the visit said he had impressed on Lord Trefgarne that the momentum on the TAG Studies be maintained.

#### 7 SUPERNOVA SOUNDING ROCKETS - MARALINGA TJARUTJA LANDS

Mr Hill said that he was glad the Department was able to be of assistance to the Maralinga Tjarutja in the satisfactory outcome. He expressed the view that common sense had prevailed in this matter.

Mr O'Shea commented on the issue of the overlapping of the Maralinga Tjarutja lands with the Woomera Prohibited Area

- Maralinga Tjarutja had consented to the Woomera Prohibited Area remaining as it provided a Commonwealth controlled buffer to the rest of the lands
- Considers that the prohibition could be left in place until TAG reports
- Would ideally like to see the area become a Maralinga/Emu Range Prohibited Area for the purpose of public safety only rather than for defence purposes.
- . Put the Government on notice that any future proposals of a similar nature to the Supernova Rockets would be strongly resisted.

#### 8 STUDY OF EFFECTS OF US ATOMIC TESTING ON BIKINI ISLANDERS

Mr Knill outlined the purpose and program of the study tour he and Mr Barton are undertaking.

- historical background of Bikini people removed from their home atoll to make way for US Atomic tests
- attendance and contribution at 2 seminars in Honolulu
- 3 weeks on the islands themselves where they will be exchanging accounts of experiences with the Bikinians
- visit to Bikini itself to inspect site works, soil conservation, walls and infrastructure
- meetings in the US with members of BARC, lawyers representing the Eniwetok and Bikini people, Congress representatives, and the Brookhaven Laboratory which monitors for long term genetic effects of radiation exposure

#### 9 MONTE BELLO ISLANDS

Mr Vincent advised that Western Australia would like the transfer of the islands to be finalised by the end of the year

- Deed of indemnity is now resolved, the latest version being acceptable to the State
- appreciated TAG's view that the Management Guidelines for the Islands should have been more detailed. However, legislation requires the development of a Management Plan to follow certain processes, which means a fuller Management Plan as such cannot be developed at the initial stage

Mr Davy and Mr Vincent agreed on an exchange between Mr Davy and the WA Authorities so that the Management Plan can be developed to an acceptable standard before the proposed TAG visit to the islands in September this year

Mr Vincent was advised that revocation of the Islands as a Prohibited Area would be achieved by a notice by the Minister for Defence to such effect published in the Commonwealth Gazette.

#### 10 OTHER MATTERS

Mr Vincent asked that the question of the affiliation of Western Australian Aborigines to the Oak Valley people and the frequencies of travel between the areas be addressed:

- Mr O'Shea undertook to take this matter up with the Anthropologists
- Mr Barton briefly outlined the travel routes used by the community and suggested changes would result from road making in the region.

the UK Report on the Health of Participants in Nuclear Testing was raised

- Mr Rawson undertook to provide a copy of the report to Mr Weir.

ATTENDANCE - CONSULTATIVE GROUP MEETING  
9 FEBRUARY 1988

MEMBERS

Commonwealth Government

- . Mr B J Hill, (Convenor), Deputy Secretary, Department of Primary Industries and Energy
- . Mr J G Jones, Assistant Secretary, Department of Aboriginal Affairs
- . Mr A Ponsford, Department of Prime Minister and Cabinet

United Kingdom

- . Mr P Reddicliffe, First Secretary, British High Commission
- . Mr M Donovan, British Defence Research and Supply Staff

Aboriginal Groups

- . Mr A Barton, Administrator, Maralinga Tjarutja
- . Mr D O'Shea, Solicitor to Maralinga Tjarutja

South Australian Government

- . Mr S J Weir, Senior Coordination Officer, Department of Premier and Cabinet
- . Mr G Knill, Administrative Officer, Office of Aboriginal Affairs
- . Dr M Collings, A/g Executive Director, Public Health Service

Western Australian Government

- . Mr P Vincent, Consultant to Minister for Aboriginal Affairs

TECHNICAL ASSESSMENT GROUP

- . Mr D Davy, Convenor

OBSERVERS

- . Mr P Ryan, First Assistant Secretary, Department of Primary Industries and Energy
- . Mr R N Rawson, Assistant Secretary, Department of Primary Industries and Energy
- . Mr P Davoren, Department of Primary Industries and Energy
- . Ms J Lang, Department of Primary Industries and Energy
- . Ms K Powell, Department of Primary Industries and Energy
- . Mr C Rodgers, Department of Foreign Affairs and Trade
- . Ms E Amiel, Department of Aboriginal Affairs

# MEDIA RELEASE

MINISTER FOR PRIMARY INDUSTRIES AND ENERGY  
JOHN KERIN M.P.  
CANBERRA

PIE 88/183K

May 30 1988

## GOOD PROGRESS REPORTED ON MARALINGA REHABILITATION STUDIES

Primary Industries and Energy Minister, Mr John Kerin, has received a first hand report on the progress of rehabilitation studies being conducted at the former South Australian nuclear test sites of Maralinga and Emu.

After talks yesterday with residents at the Aboriginal outstation at Oak Valley, about 120 km from the old Maralinga site, Mr Kerin said he was satisfied with progress on the project and impressed with its thoroughness.

Six scientific studies into the nature, extent and potential hazards of the residual radioactivity at the former test sites are being carried out by a Technical Assessment Group (TAG), supported by the Australian and British Governments.

TAG was established in 1986 in response to the recommendations of the Royal Commission into British nuclear tests in Australia.

"TAG convenor, Mr Des Davy, told me that all studies were well advanced, although there have been some unavoidable delays in obtaining, characterising and analysing samples in the important Bioavailability Study," Mr Kerin said.

"In view of the likely significance for future Aboriginal use of the test sites, the TAG study program can not be completed without the results of the Bioavailability Study, which is underway in the United Kingdom. The study will establish the nature of plutonium found on material at some of the test sites, which in turn will determine the type of clear-up operation required. These results will be known late next year.

"Also, two additional studies to cover geological and engineering aspects are essential if TAG is to fulfil its terms of reference. I have been assured these can be completed within the existing timeframe," Mr Kerin said.

The remaining five aspects under study are anthropology, radioecology, inhalation, chemical analyses and regional airborne radioactivity.

A Consultative Group comprising representatives of the Australian, UK, South Australian and West Australian Governments has been kept informed of progress on all studies and has expressed satisfaction with the professional approach employed by TAG. Mr Kerin said the Aboriginal community had been involved at all stages of the consultative process, and its representatives had confirmed their satisfaction with progress.

"Obviously at the forefront of everyone's concerns is that the studies are thorough, and I am convinced that obligation is being met by TAG," Mr Kerin said.

Further information: Jim Devine (062) 72 6649 (w)  
(062) 88 2448 (h)





DEPARTMENT OF COMMUNITY SERVICES AND HEALTH

# Australian Radiation Laboratory

LOWER PLENTY ROAD, YALLAMBIE, VICTORIA 3085 :: TELEX AA31726 :: TELEPHONE: 433 2211 :: FAX: 434 5654

In reply please quote

## INTERIM REPORT - DETECTOR MEASUREMENTS IN THE OAK VALLEY AREA

Field measurements of radioactivity in the Oak Valley area by use of a high resolution germanium (Ge[HP]) detector are presented. For the purposes of presentation these have been divided into eight geographical areas (Fig 1).

1. Taranaki
2. West Street
3. South West traverse (1):235 deg 5 km north from West St./10th Ave.
4. Western Avenue
5. North East traverse:020 deg corner Western Ave./Oak Valley Rd.
6. Oak Valley Road
7. Oak Valley
8. South West traverse (2):225 deg 29.5 km north west, Oak Valley Rd./  
Western Ave.

The measurements are presented (Figs 2 - 4) in units of kilobecquerel per square metre (kBq/m<sup>2</sup>) of americium-241. To convert to concentrations of total plutonium (i.e. including all isotopes), these must be multiplied by a factor of about ten. N.D. denotes not detectable and the estimated standard deviations are given in parentheses and refer to the least significant figure. In all three measurements in area 7 (Oak Valley), no plutonium was detected.

Subsequent to our initial report of 4th February 1988, further measurements were carried out during March 1988 in areas 4, 5 and 6 along with the commencement of a 16 km traverse in area 8. The total measurements recorded so far are insufficient to definitely delineate the North West plume beyond the limit of the 1987 aerial survey. Proposed field measurements during July and November 1988 are: locating the North plume along 25th Avenue, continuation of the area 8 traverse and commencement of a traverse in area 5 at 10 km bearing approximately 045 degrees, and a south west traverse off West Street between Western Avenue and 25th Avenue.

It is not possible at this stage, in the absence of a full dose/risk assessment specific to the Maralinga situation, to make definite conclusions about the health implications of these low levels of plutonium. However, a comparison can be made with the recommendation of the U.S. Environmental Protection Agency (1985) that plutonium concentrations below 0.5 Bq/g are considered safe for unrestricted access for a Western lifestyle. Assuming that all of the plutonium is in the top centimetre of soil, the level of 0.5 Bq/g corresponds to a concentration of 8.5 kBq/m<sup>2</sup> of plutonium or about 0.85 kBq/m<sup>2</sup> of americium. All measurements north west of Western Avenue are below this level.

Cheryl Richardson  
A.R.L

4th May 1988

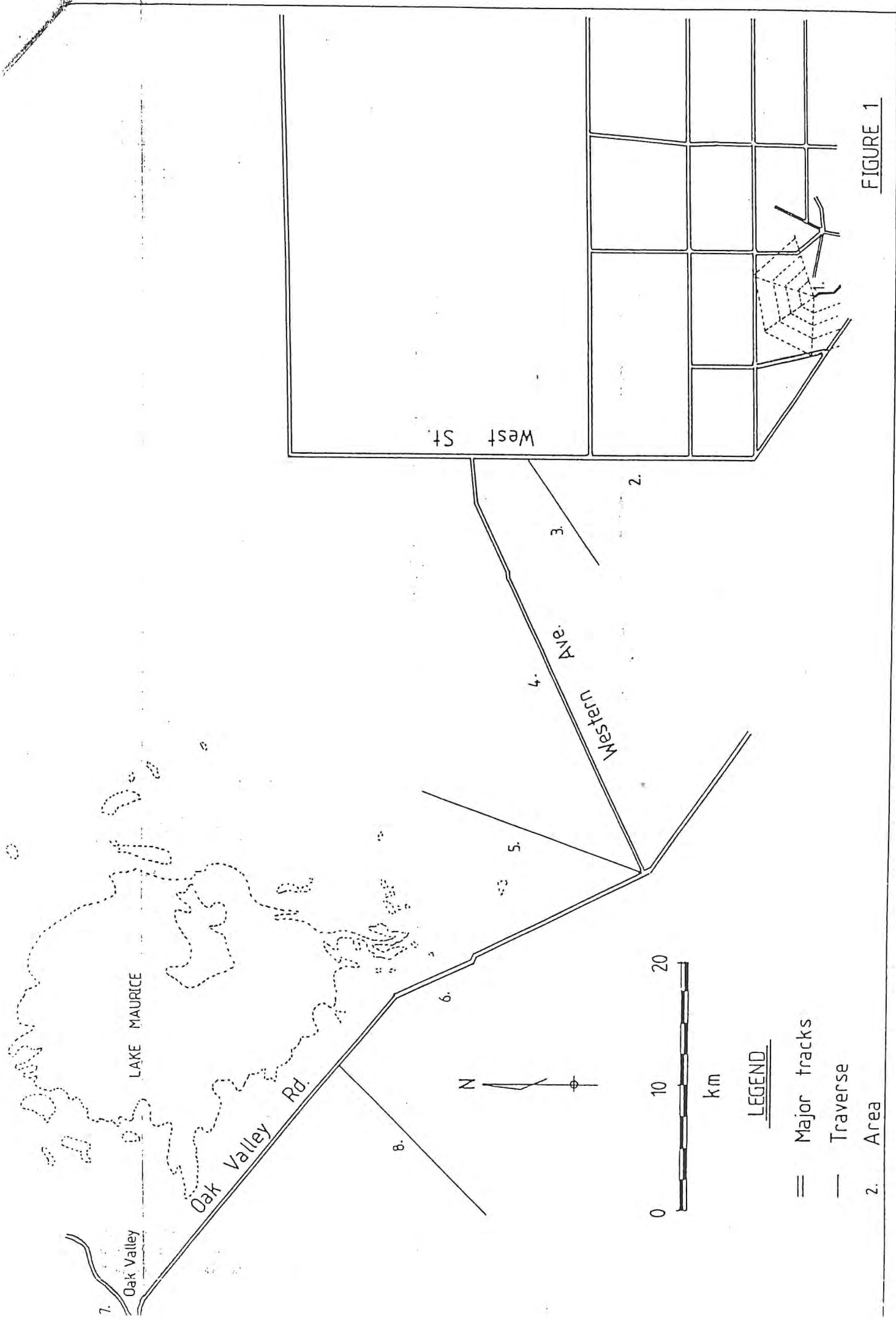
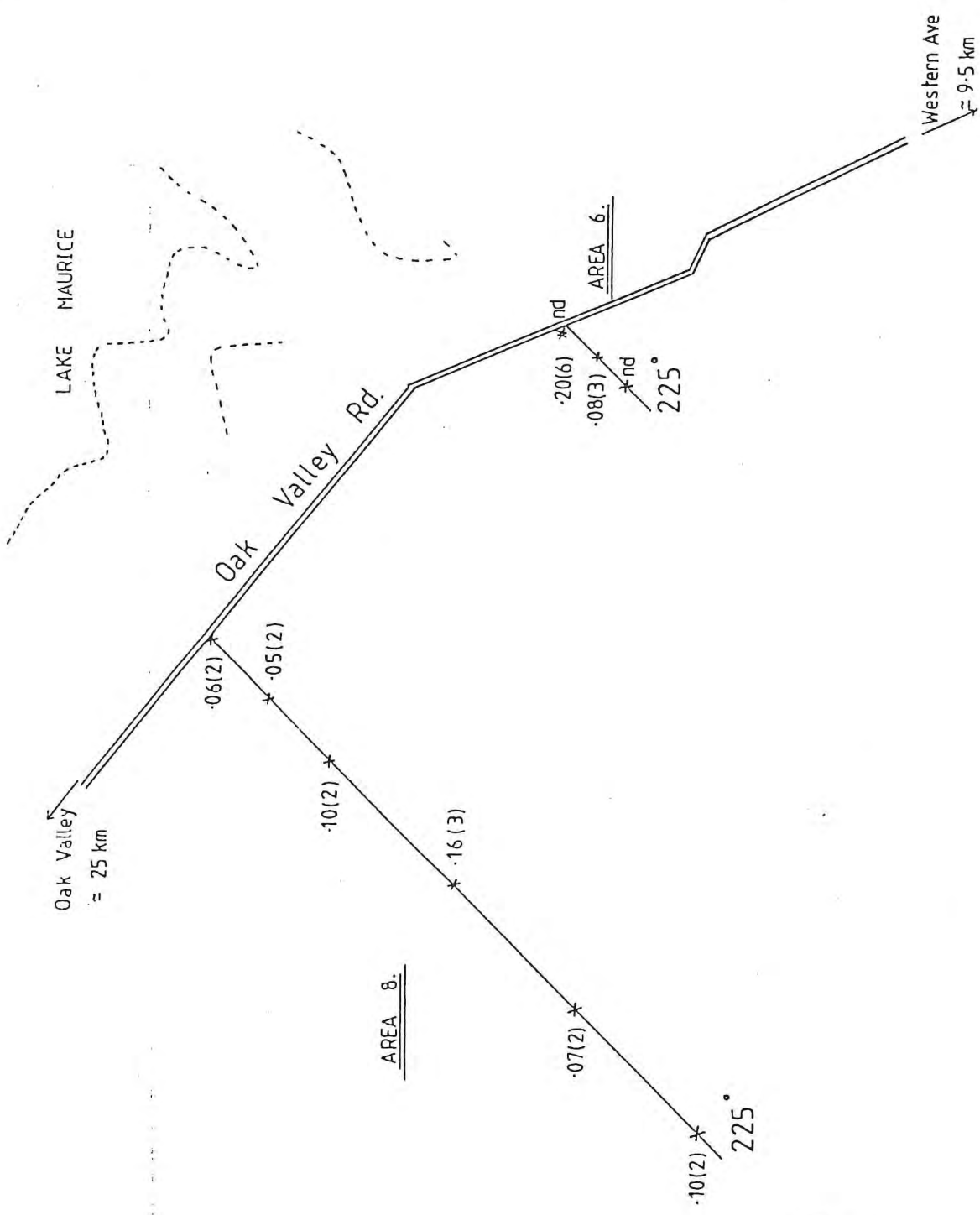


FIGURE 1





- = Major track  
 x Ge[HP] detector location  
 \* Traverse  
 $^{241}\text{Am}$  kBqm<sup>-2</sup>

LEGEND

FIGURE 3

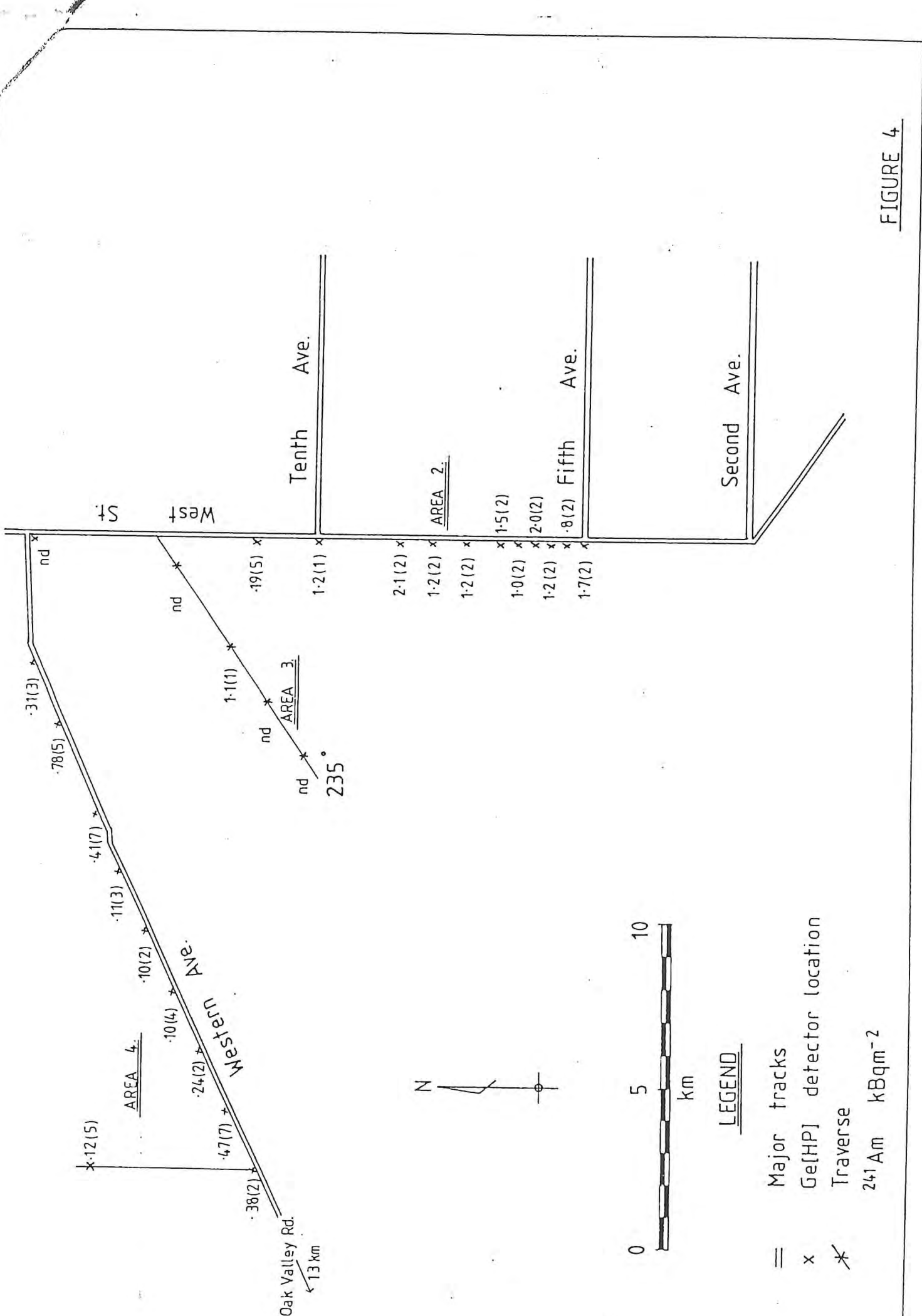


FIGURE 4

LEGEND

- = Major tracks
  - x Ge[HP] detector location
  - \* Traverse
- 241 Am kBqm<sup>-2</sup>