

**NEW TERMS AND PROCEDURES FOR PROSPECTING LICENCES
UNDER MINERALS DEVELOPMENT ACTS, 1940 TO 1995**

Summary

PURPOSE OF NEW TERMS

1. The New Terms, operate on and from **1 November 1994**, and are intended to-
 - (a) ensure that substantial and dynamic minerals prospecting work programmes are carried out and to improve access to prospective ground by prospectors with dynamic work programmes, in order to facilitate the discovery and development of further viable minerals deposits as quickly as possible;
 - (b) simplify the licensing system considerably for both the Minerals Industry and the Department of the Marine and Natural Resources, and
 - (c) ensure that prospecting is carried out according to the best environmental practice and with proper consideration for the rights of landowners/occupiers.

OUTLINE OF NEW TERMS

2. The main elements of the New Terms are as follows:
 - (1) All Prospecting Licences (PLs) to be modernised and to be for a fixed term of 6 years (rather than the previous arrangement with renewable two-year or one-year licences) - except where a licence for a shorter period is warranted;
 - (2) All PLs to contain a **conditional guarantee** of renewal;
 - (3) Revised and simplified PL fee structure - see paragraph 7 following;
 - (4) Replacement of the previous IR£1,000 Deposit/Bond system by having the Minister for the Marine and Natural Resources nominated as an interested party on each licensee's Third Party and Employer's Liability Insurances;

- (5) More comprehensive PL application form;
- (6) Enforcement of reporting deadlines for licensees;
- (7) Increased minimum work programmes to be required of all PL holders, so as to ensure that there is adequate prospecting activity on an ongoing basis;
- (8) Limitation of PLs to particular groups of minerals so that, where warranted, other prospectors (i.e. with interest, expertise, etc.) could be licensed to undertake prospecting activity in the same area in relation to other minerals.
- (9) Increased flexibility for PL holders in concentrating prospecting expenditure within groups of PLs for contiguous areas, rather than treating each PL separately;
- (10) Simplification of Ministerial approval procedure for acceptable Joint Ventures, so as to eliminate delays for the Minerals Industry;
- (11) Release to Open-File at the Geological Survey of Ireland of prospecting data which are more than 6 years old - this requirement will apply to all PLs granted under the revised terms and procedures outlined above unless the Minister for the Marine and Natural Resources accepts that there are good grounds for not doing so in particular cases.
- (12) Integrated requirements in relation to good environmental practice in minerals prospecting.

As heretofore, all costs incurred by the Minister for the Marine and Natural Resources in examining applications for State Mining Leases/Licences, Environmental Impact Statements and related studies etc., must be reimbursed by the person making such application, etc.

DETAILS OF NEW TERMS

5. The PL application fee was increased to **IR£150** from IR£50 (fixed in 1989) on 1 November, 1994 for new Prospecting Licences.
6. PLs will be granted for a basic term of 6 years (except where a shorter period is warranted) which will be subdivided into three periods of two-years. The basic term of 6 years is designed to encourage worthwhile prospecting activity and, hopefully, lead to a mining proposal by the PL holder. PLs will be liable to be automatically revoked if the licensee fails to carry out the work and expenditure programme required or to submit an adequate work report for any period. PLs will contain a conditional guarantee of renewal for licensees who satisfactorily observe the terms and conditions of their existing PL.
7. The fees in the table below will apply and have effect by reference to the start day of the existing or last licence, as the case may be, so as to ensure that fees are paid at the appropriate level of the scale for the new Prospecting Licence.

PROSPECTING LICENCE FEES (IR£)

Two-Year Period	Current Fees £	Previous Fees (i.e. pre 1/11/94) £
First	600	350
Second	700	350
Third	1,200	875
Fourth and each subsequent two-year period	2,000	1,400

Thus, the fee will be £2,000 per two-year period where a new Prospecting Licence is granted to any person who was the holder of a Prospecting Licence for 6 years or more.

The revised fees are flat fees per Prospecting Licence (rather than calculated by reference to geographic area, as is necessary in some cases at present) and are designed to reflect the real costs to the Department of operating the prospecting licence system.

A reduced fee of IR£1,000 for an initial six year term will apply from time to time as a promotional incentive for specific areas which, in the opinion of the Minister, have been underexplored with regard to their mineral potential.*

***Promotional incentive for underexplored ground**

As from 1 May 1995 the following incentive fees and expenditure requirements apply for 6-year licences:

FEES (IR£)			
	Standard	Open Ground	Open Areas
First 2 years	600	300	300
Second 2 years	700	300	300
Third 2 years	1,200	400	400

EXPENDITURE REQUIREMENTS (IR£)			
	Standard	Open Ground	Open Areas
First 2 years	8,000	2,000	2,000
Second 2 years	12,000	3,000	4,000
Third 2 years	16,000	4,000	8,000

INDEMNITY PROVISIONS

8. Section 8(4) of the 1940 Act stipulates that every PL must contain a clause whereby the licensee indemnifies the Minister for the Marine and Natural Resources against any claims arising under the licence. Accordingly, on and from 1 November 1994,
 - (a) The licensee will formally declare that he/she is indemnifying the Minister, and
 - (b) The Minister for the Marine and Natural Resources will be nominated as an interested party on each PL holder's Third Party and Employer's Liability Insurance. This will enable the Minister to ensure that the insurance cover is adequate and that the policy is not cancelled or let lapse without the Minister being notified. A nomination of this kind is standard Insurance Industry practice. This change will yield a cost saving for PL holders and expedite processing of PL applications (as compared with arrangements applicable before that date).

9. **For obvious policy reasons, minerals prospecting must be undertaken in such a manner so as to avoid or minimise any environmental damage, and where damage is occasioned to ensure full and speedy restoration or rehabilitation. Licence holders will be expected to observe the Guidelines for Good Environmental Practice in Mineral Exploration annexed hereto, in addition to complying with specific environmental conditions contained in the Prospecting Licence.**

APPENDICES

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APPENDIX 1

Minerals Prospecting Licence Terms and Procedures - Information Note with details of Minerals Prospecting Licence Work Reports Requirements.

APPENDIX 2

Statement of Interest for Prospecting facilities under the Minerals Development Acts, 1940 to 1995.

APPENDIX 3

Sample newspaper advertisement of Notice of Minister's intention to grant a Prospecting Licence under the Minerals Development Acts, 1940 to 1995.

APPENDIX 4

Revised application form for a Minerals Prospecting Licence under the Minerals Development Acts, 1940 to 1995.

APPENDIX 5

Revised standard Minerals Prospecting Licence under the Minerals Development Acts, 1940 to 1995.

APPENDIX 6

Guidelines for Good Environmental Practice in Mineral Exploration.

APPENDIX 7

Guidelines for regional airborne geophysical surveying for minerals.

APPENDIX 8

Geophysical Work Report Guidelines.

APPENDIX 9

Minerals Development Acts 1940 to 1995 and Regulations made thereunder.

MINERALS PROSPECTING LICENCE TERMS AND PROCEDURES

As and from **1 November, 1994** the Terms and Procedures outlined below are applied to Prospecting Licences under the Minerals Development Acts, 1940 to 1995. [Further information may be obtained from the Exploration and Mining Division, Department of the Marine and Natural Resources, Beggar's Bush, Haddington Road, Dublin 4., Telephone: (01) 6707444, Fax: (01) 6609627]

1. DURATION OF LICENCES

1.1 Prospecting Licences will be granted normally for a period of 6 years divided into three periods of two years. Failure by a Licensee to carry out a satisfactory work and expenditure programme in each two-year period and to report satisfactorily on same may, at the absolute discretion of the Minister, result in immediate revocation of the Licence.

1.2 The Minister may grant a Licence for a shorter period than 6 years if the Minister considers that to be appropriate in the particular circumstances.

1.3 If on expiry of a Licence the Licensee has fulfilled all of the obligations imposed under the Licence, the Minister undertakes to renew the Licence, provided that:

(i) the Licensee undertakes to carry out an acceptable work and expenditure programme, and

(ii) the Minister may restrict the renewed Licence to certain minerals rather than license prospecting for all minerals as previously covered by the Licence.

2. MINERALS

2.1 Prospecting rights will relate to the minerals specified in the Licence.

2.2 If it appears to the Minister that there are certain minerals within the area covered by a Prospecting Licence, which are not being adequately explored by the Licensee, the Minister may

(a) direct the Licensee to carry out such exploration or other activities as he considers appropriate, or

(b) after prior notice to and consultation with the Licensee, revoke the Licence in respect of such minerals. The Minister may then, at the absolute discretion of the Minister, grant a Prospecting Licence to other parties in respect of such minerals.

3. ENVIRONMENTAL CONSIDERATIONS

All prospecting must be carried out in an environmentally sensitive manner which avoids environmental damage. Licensees shall have regard to the Guidelines for Good Environmental Practice in Mineral Exploration annexed hereto (see **Appendix 6**).

4. EXPENDITURE REQUIREMENTS

4.1 METALLIFEROUS MINERALS: The minimum work programme expenditures will be as follows for two-year phases:

- (i) **First Two-Year Phase - IR£ 8,000**
- (ii) **Second Two-Year Phase - IR£12,000**
- (iii) **Third Two-Year Phase - IR£16,000.**

In cases where a Prospecting Licence is granted to the existing Licensee, or an associated company or Assignee of the existing Licensee for a further period of 6 years, work programmes will be determined on a case by case basis but expenditure requirements will be substantially in excess of the amount required for the third two-year phase of the original Licence. (In this document an "associated company" means a company which is a shareholder of the Licensee or of which the Licensee is a shareholder.)

4.2.1 The Minister may, at his absolute discretion, require greater expenditure commitments than those set out in Paragraph 4.1.

4.2.2 As a promotional incentive, reduced expenditure commitments are applied to underexplored ground (see footnote on page 3).

4.3 An individual or company offered a Licence as a result of a Competition will be required to meet in **full** the expenditure commitments proposed or required for the **first two-year phase** even if these are in excess of the figures above.

4.4 NON-METALLIFEROUS MINERALS: The minimum work programme expenditures will be such amounts as the Minister may consider appropriate in individual cases.

4.5 Work programme expenditures in relation to **all** minerals must relate to expenses incurred in a technical field programme but ancillary costs attributable to prospecting will also be allowed up to a maximum of 10% of the total work programme expenditure required under the preceding paragraphs.

4.6 Carry-over of expenditure: Expenditure on prospecting which is significantly in excess of the specified requirements in any period for any area may, if the Minister consents upon written application, be carried forward as qualifying towards expenditure on prospecting for the subsequent phase for the area. However, a minimum of 25% of the expenditure requirement for each area must be spent regardless of any expenditure carried-over.

4.7 Expenditures on work programmes for Prospecting Licences for contiguous areas may be aggregated, provided that

- (i) the total expenditure requirement for the group is met, and
- (ii) at least 25% of the expenditure requirement (for a two-year phase) for each area within the group is met.

Aggregation of expenditure may be applied more than once in a **group** of Licences, but the 25% minimum required expenditure concession will only be allowed for one two year period in the life of each Licence.

Unless non-contiguous areas are, in the opinion of the Minister, part of a wider integrated exploration programme, no aggregation of expenditure will be allowed and the specific expenditure requirements in respect of each individual Licence must be met. In this context, "a wider integrated exploration programme" shall mean an exploration programme carried out in non-contiguous areas dealing with the same geological terrain, results from which should be equally applicable to all the non-contiguous areas. Such areas should not normally be separated by more than two Prospecting Licence Areas.

5. FEES PAYABLE

5.1 On application: A fee of IR£150 per licensed area.

On grant of Licence: The total fee for a 6-year Licence will be IR£2,500, payable in instalments as follows, at the commencement of the:

First 2-year Phase	- IR£ 600
Second 2-year Phase	- IR£ 700
Third 2-year Phase	- IR£1,200.

Where the Licence is renewed after the initial 6-year period the fee will be £1,000 per annum, payable, in the case of a 6-year renewal period, in instalments of £2,000 at the commencement of each two-year phase (but see footnote on page 3 for details of promotional incentive for underexplored ground).

6. INTERIM REPORT

6.1 An Interim Report may be required within one calendar month after one year of each two-year phase. This report, if required, should provide details of all work done during the previous year. Reports must conform with the instructions contained in the "Minerals Prospecting Licence Work Reports Requirements" (annexed hereto).

7. END OF TWO-YEAR PHASE PROCEDURES

7.1 One calendar month before the end of each two-year phase the following must be supplied to the Exploration and Mining Division of the Department of the Marine and Natural Resources:

- (i) Work Report: Full reports are required of all work carried out and of all results obtained from prospecting, including details of all occurrences of

minerals of potential economic significance. Reports must conform with the instructions contained in the "Minerals Prospecting Licence Work Reports Requirements". These Reports will be regarded as confidential subject to Paragraph 9 below. Where the Licensee is reporting on a group of Licences, individual Reports must be provided for each Licence. This is to facilitate transfer of data to "Open-File" at the Geological Survey of Ireland, Beggar's Bush, Haddington Road, Dublin 4, for consultation by the public (see Paragraph 9). If the ground has been worked as a block then a summary report for the block as a whole must be provided as well; the summary report will remain confidential until the last Prospecting Licence in the block is surrendered or revoked;

- (ii) Completed work programme/expenditure summary sheet for each area, and

where one or two two-year phases have yet to run,

- (iii) Details of proposed work programmes for the **next two-year phase**, and
- (iv) An undertaking in writing that a stated minimum expenditure will be incurred during the next **two-year phase** unless results, at any stage, indicate that further expenditure on prospecting would not be justified, in which case the Licence must be surrendered without delay to the Department.

7.2 All of the above documentation must be received not later than one calendar month before the end of the two-year phase, unless the Minister agrees to a specific extension of the deadline to meet particular circumstances. Failure to provide all of the documentation by the deadline will result in revocation of the Licence(s) and the inclusion of the area(s) in the next appropriate Competition.

8. STATEMENTS OF INTEREST

8.1 A party which has not reached the stage of making formal application for a Prospecting Licence may establish its interest in an area by a written submission of a "Statement of Interest" to the Exploration and Mining Division of the Department of the Marine and Natural Resources in the format annexed hereto. In the event of there being, subsequently, one or more applications for a Prospecting Licence for the area (or part of the area) referred to in the Statement of Interest, the person who submitted the Statement of Interest will be notified by that Division; if the interested party wishes to apply for a Licence over any part of the area referred to in the Statement of Interest such application must be made within two weeks of notification by the Exploration and Mining Division. Failure to reply by that date will be taken as a withdrawal of the Statement of Interest. All of the applications will be assessed on their respective merits without any regard to time priority.

8.2 A Statement of Interest will remain valid only until publication by the Department of the following edition of the map showing areas held under State Mining and

Prospecting facilities. This map is currently published on 1 May and 1 November each year.

- 8.3** Where a Licence is held for a particular mineral or group of minerals, the licensee's interest in other minerals in that area will be noted for the duration of the term of that Licence and he will be notified of any application for a Licence in respect of other minerals in that area. The licensee may then make an application in respect of those minerals under the same conditions as outlined above in par **8.1**.

9. OPEN FILING OF WORK REPORTS

- 9.1** When a Licence is surrendered all the relevant work reports, including Interim Reports, are put on "Open File" at the Geological Survey of Ireland, Beggar's Bush, Haddington Road, Dublin 4 and are available for consultation by the public.
- 9.2** All Work Reports which are at least **6** years old on Licences granted after **1 November, 1994** will be put on "Open File" at the Geological Survey of Ireland, Beggar's Bush, Haddington Road, Dublin 4. However, in special circumstances and where a Licensee makes an adequate case in writing such Reports or parts thereof will continue to be held on a confidential basis.
- 9.3** The Department of the Marine and Natural Resources will be approaching Licensees for open-filing of Work Reports which are more than **6** years old on Licences granted before **1 November, 1994**.

10. INSURANCE

10.1 The Licensee will be required to take out and maintain Public Liability and Employer's Liability insurance, on terms and with a company approved of by the Minister, which approval shall not be unreasonably withheld, covering:

- (i) any liability, loss claim or proceedings in respect of any injury or damage whatsoever to any property real or personal insofar as any such injury is caused by or arises in relation to anything done or not done pursuant to this Licence for so long as this Licence continues in force, provided that such injury or damage is due to any negligence, omission or default on the part of the Licensee or the officers servants or employees of the Licensee or contractors or persons in privity with the Licensee.
- (ii) any liability loss, claim or proceedings whatsoever arising under any statute or at Common Law in respect of personal injury to or disease contracted by or the death of any person whomsoever arising out of or in the course of or attributed to the exercise of any of the rights and privileges conferred by this Licence for so long as this Licence continues in force.

10.2 The said insurance policies shall include provisions by which, in the event of any claim in respect of which the Licensee would be entitled to receive indemnity under the policy being brought or made against the Minister the Insurer will indemnify the Minister against such claims and any costs, charges and expenses in respect thereof. The Licensee shall comply with all conditions in any policy or policies of insurance under the clause and will pay all premiums thereunder and will on demand produce the policies and

receipts for the premiums to the Minister or any person authorised by the Minister for the purpose. The Licensees shall maintain the nomination of the Minister as an interested party on such Insurance Policies.

11. JOINT VENTURE AGREEMENTS

11.1 Joint Venture Agreements will generally be looked upon favourably by the Minister provided that:

- (i) the incoming partner is acceptable to the Minister,
- (ii) existing work programmes and expenditure requirements are fully up to date i.e. that the Licence(s) is/are in good standing; and
- (iii) future work programmes and expenditure proposed by the Joint Venture are acceptable to the Minister.

11.2 Joint Venture Agreements for Licences will generally only be permitted after the first 2 year phase of the Licence. However, Joint Venture Agreements can be allowed earlier when the work programme for that phase has been completed by the Licensee to the satisfaction of the Minister.

11.3 The Minister reserves all of the existing rights of the Minister under the Minerals Development Acts, 1940 to 1995, and the terms of the Prospecting Licences in question. In particular, the Minister will not be affected by, or influenced by, any inter-company financial agreements when setting out the fiscal or other terms of any subsequent State Mining Lease, Licence or Permission.

12. SURRENDER OF LICENCES

On surrender of a Licence the Licensee shall immediately return the Licence to the Exploration and Mining Division of the Department of the Marine and Natural Resources together with the final Work Report and Confidential Summary Sheet. The Licensee must also complete the Prospecting Licence Surrender Form and forward it to that Division.

13. GENERAL

13.1 Failure by a Licensee to observe the foregoing provisions may result in immediate revocation of the Licence and shall be taken into account when any subsequent application for a Prospecting Licence by the individual or company in question is being considered.

13.2 Nothing in the foregoing terms and procedures shall be construed as limiting in any way any rights and powers of the Minister under the Minerals Development Acts, 1940 to 1995, or any Prospecting Licence granted thereunder.

**EXPLORATION AND MINING DIVISION
DEPARTMENT OF THE MARINE AND NATURAL RESOURCES
BEGGAR'S BUSH
HADDINGTON ROAD
DUBLIN 4
Telephone: (01) 6707444
Fax: (01) 6609627**

MINERALS PROSPECTING LICENCE WORK REPORTS REQUIREMENTS

1. A separate Work Report must be submitted for each Licence area.
2. Where two or more contiguous Licences are held by a Licensee and where the group of Licences are explored as a block, a summary block Work Report must also be submitted.
3. All Work Reports are to be submitted to Exploration and Mining Division, Department of the Marine and Natural Resources, at least one calendar month before the expiry of each two year phase of a Prospecting Licence, or at any other time as directed by the Minister.
4. A separate work summary and expenditure sheet must be submitted for each Licence area for each phase. (A work summary/expenditure account is not required for a block of Licences.)
5. The Work Report must include details of all exploration activity carried out in the Licence area during the relevant phase (normally a two-year period). Specifically the Work Report should include information on the following:
 - (a) Basis for interest in the area;
 - (b) A summary of work carried out to date, whether by a previous or the current Licensee;
 - (c) A summary of the exploration carried out during the phase to which the report relates, together with an explanation as to why the particular programme was decided on;
 - (d) A detailed account of each of the techniques used. For standard exploration techniques a brief description of the methodology used is adequate, but where a new technique or a novel approach was used, an explanation of that technique or approach should be included.
 - (e) All results, both raw and interpreted data, should be included, either in the body of the report or as an appendix/appendices, in digital format wherever possible;
 - (f) Conclusions reached;
 - (g) Proposals for further work, if any.

6. All maps submitted must show the following:
 - (a) Topographical/geographical information, including a bar scale in metric units;
 - (b) Prospecting Licence boundaries and PL numbers;
 - (c) For any interpretative maps e.g. geological maps, the name(s) of the person(s) responsible for the interpretation should be clearly written on the map;
 - (d) Every map, plan or section should include information on the company or person responsible for the document, whether Licensee or consultant;
 - (e) Maps should be submitted on a scale of 1:25,000 unless this is clearly inappropriate. If a different scale is used for the principal map, there should also be a summary or index map at a 1:25,000 scale showing the highlights of the results;
 - (f) All maps should show clearly the date of compilation and/or revision, together with the name(s) of the person(s) responsible for same.

7. Information obtained from diamond drilling is particularly valuable and reports on diamond drilling must include the following:
 - (a) A six-inch (1:10,560) location map with the drill site and the relevant drill hole number clearly marked;
 - (b) A completed log for each hole to include
 - (i) Hole Number
 - (ii) National Grid Reference for hole location (to nearest 10 metres),
 - (iii) Ground elevation at hole collar,
 - (iv) Core diameter,
 - (v) Drilling method,
 - (vi) Details of ground conditions especially cavernous ground, and
 - (vii) Whether flowing artesian water was encountered;For inclined boreholes the inclination and drilling direction should be stated and plotted on base maps;
 - (c) The log should also include
 - (i) Both a descriptive and illustrative account of all lithologies encountered, including overburden type(s),
 - (ii) Details of all minerals of economic significance encountered, including quantities,
 - (iii) Information, including reference numbers on samples (including part-core) removed for analysis, assay or further investigation, cross-referenced to submitted analysis for which expenditure is claimed, and
 - (iv) An explanatory legend for symbols used;
 - (d) Location of core i.e. where the core is stored. It should be noted that under no circumstances should the core be disposed of before first being offered to the Director of the Geological Survey of Ireland.

8. The Work Report should also include copies of all consultants' reports.
9. Finally, it should be remembered that on surrender of a Licence or after the Work Report is 6 years old, whichever is the sooner, all Work Reports will be placed on Open-File at the Geological Survey of Ireland, Beggar's Bush, Haddington Road, Dublin 4. If a Licensee feels that certain information should remain confidential, even after surrender of the Licence (e.g. in respect of a novel exploration technique), such information should be supplied separately to the main Work Report. If, in the opinion of the Minister, there is just cause for continuing to treat such information as confidential, then only the main Work Report will be placed on Open-File. The Minister will review the status of such confidential material regularly and may, at the discretion of the Minister, either continue to treat such information as confidential or may release it to the Open-File system.

APPENDIX 2

**STATEMENT OF INTEREST FOR PROSPECTING FACILITIES UNDER
THE MINERALS DEVELOPMENT ACTS, 1940 TO 1995**

Application is hereby made to lodge a `Statement of Interest' for prospecting facilities in an area in County(ies)

The area concerned is included:

(a) within the following Prospecting Licences _____

as marked on the attached copy of the relevant part of the most recent Prospecting Licence Competition Map issued by the Department of the Marine and Natural Resources; or

(b) in an open area the boundaries of which are given on the attached map at a scale of half inch/one inch/six inches to the mile/1:25,000 or other appropriate scale.

Name(s) and address of Applicant(s):

Date : _____

To: Exploration and Mining Division,
Department of the Marine and Natural Resources,
Beggar's Bush,
Haddington Road,
Dublin 4,
Ireland.

[SAMPLE]

MINERALS DEVELOPMENT ACTS, 1940 TO 1995

Notice of Intention to grant a Prospecting Licence

WHEREAS it appears to the Minister for the Marine and Natural Resources that there are minerals under the lands described in the Schedule to this Notice and that such minerals are not being worked,

TAKE NOTICE that, in exercise of the powers conferred on him by subsection (1) of Section 7 of the Minerals Development Act, 1940, as amended, the Minister for the Marine and Natural Resources intends to grant a prospecting licence in respect of such minerals to

AND THAT he has deposited in the office of the Geological Survey of Ireland, Beggar's Bush, Dublin 4 and in the Garda Stations indicated in the Schedule to this notice maps showing the boundaries of such lands.

AND THAT in the event of a objection being made within 21 days from the date of this notice, to this application, the Minister for the Marine and Natural Resources reserves the right to make details of the objections known to the applicant where he considers this necessary in order to fully consider the validity of any objections received.

SCHEDULE

Names of Townlands in Co.

(Maps deposited in the Garda Stations at

END OF SCHEDULE

**Exploration and Mining Division
Department of the Marine and Natural Resources
Beggar's Bush
Dublin 4**

FORM NO 1

**ROINN NA MARA AGUS ACMHAINNÍ NÁDÚRTHA
DEPARTMENT OF THE MARINE AND NATURAL RESOURCES**

**APPLICATION FOR A PROSPECTING LICENCE UNDER THE MINERALS
DEVELOPMENT ACTS, 1940 TO 1995**

A separate form should be used for each application. More than one area may be included on the same form only if the areas are adjacent and for the same minerals. If more than one form is used, the relative priorities of all areas must be given. Licences are granted for 6 years unless a shorter period is warranted.

(1) Name(s) of Applicant(s) in full

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(2) Address(es) of Applicant(s)

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(3) Address(es) of Applicant(s) Registered Office

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Company Telephone and Fax Number.....

(4) Nationality of Applicant(s)

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(5) Occupation of Applicant(s)

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In the case of a company that is not the holder of a current prospecting licence, the application must be accompanied by copies of its most recent Annual Report and audited accounts, together with information concerning its share capital and details of significant shareholdings.

(6) A description of the area sought. In the case of ground for which established boundaries are shown on the prospecting licence map, the area required can simply be referred to by one or more licence numbers. For 'open ground' the boundaries required should be outlined in red on a one inch (or, where appropriate, six inch) Ordnance Sheet.

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(7) A priority listing of areas, or in the case of open ground, a breakdown of the area in terms of sub-areas in order of priority of interest (where practical or relevant). The area with the highest priority should be listed first.

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(8) The basis of the interest of the applicant in this ground (all minerals which are of interest, the basis for the belief that these minerals might be present etc.), and for which the applicant will carry out exploration.

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The applicant is invited to submit any maps, diagrams or reports which support the belief of the applicant that minerals are present. This information will be treated as confidential, and will not be placed on Open File at the Geological Survey of Ireland at any stage. Such information will assist in determining which applicant (if any) in the case of competition will be offered a Licence over the area.

(9) (a) A full and detailed description of the programme of prospecting which the applicant proposes to carry out for each of the areas applied for including particulars of any special techniques or equipment to be used.

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(b) Estimates, **for each two year phase** of the 6-year Licence term, of the proposed expenditure on each category of activity comprising the programme for each area applied for

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(10) Information concerning the applicant's previous experience in prospecting for minerals (if not previously the holder of a Prospecting Licence).

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(11) Names, addresses, qualifications and experience of technical experts or advisers who will organise and carry out the prospecting programme. If the applicant will be the operator, then this should be stated.

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(12) Amount of capital available for operations under the Licence(s) now applied for

(a) At present available

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(b) Which applicant can make available

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and the source

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Applicants may be asked to provide evidence that these amounts are available.

(13) Names and addresses of persons to whom the Minister can refer for evidence as to (a) character, (b) financial standing and (c) technical qualifications of the applicant(s). Independent references must be provided to cover each aspect.

(a)

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(b)

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(c)

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I/We hereby declare that all the foregoing particulars are correct. I/We enclose herewith the Ordnance Sheets referred to under (6) and a remittance of £150.00 per Prospecting Licence being the prescribed fee on application.

Signature(s) of Applicant(s)

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Date

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THE SECRETARY
Department of the Marine and Natural Resources,
Exploration and Mining Division,
Beggars Bush,
Haddington Road,
Dublin 4.

Note

Acceptance of applications for prospecting licences for consideration will not create any obligation on the part of the Minister to grant any facilities.

AREA NO.

PROSPECTING LICENCE UNDER MINERALS DEVELOPMENT ACTS, 1940 TO 1995

The Minister for the Marine and Natural Resources (hereinafter referred to as "the Minister") in exercise of the powers conferred by Part II of the Minerals Development Act, 1940 (Act No. 31 of 1940) as amended by Part III of the Petroleum and Other Minerals Development Act, 1960 (Act No. 7 of 1960), the Minerals Development Act, 1979 (Act No. 12 of 1979) and the Minerals Development Act, 1995 (Act No. 15 of 1995), hereby grants to

(hereinafter referred to as "the Licensee") a Prospecting Licence to authorise the Licensee to enter on such land (hereinafter referred to as "the Licensed area") as is specified in the First Schedule to this Licence and there do all such things as the Licensee considers necessary or desirable for the purpose of ascertaining the character, extent or value of the [.....] lying on or under such land and, in particular, and without prejudice to the generality of the foregoing power, for the purposes aforesaid to make borings, sink pits, remove water from old workings, and take and remove reasonable quantities of any such minerals for the purpose of analysis, test, trial or experiment.

This licence is granted subject to the following terms and conditions :-

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| Duration. | 1. (i) Subject to Clause 2 following, this Licence shall be and continue in force for the period of 6 years from the day of 199 . |
| | (ii) The Licensee shall during first two-year phase of this Licence carry out with due diligence the scheme of prospecting including geological or geophysical survey and programme of test drilling agreed by the Minister and the Licensee as set out in the Third Schedule to this Licence and shall spend not less than IR£..... on such prospecting work during the first two-year phase of the Licence, provided that the Licensee shall not be held liable for non-performance of any of the foregoing obligations in any case where non-performance was caused by force majeure. |
| | (iii) One calendar month before the end of each subsequent two-year phase of this Licence, if the Licensee wishes this Licence to continue in force, a work programme for the second or third two-year phase of the Licence shall be proposed by the Licensee for the approval of the Minister. |
| Revocation of Licence. | 2. The Minister may at any time, if the Minister considers that there are reasonable grounds for so doing, revoke this Licence. |
| Failure to comply with work programme expenditure or reporting obligations. | 3. Failure by the Licensee to comply with Clauses 1 (ii) and (iii), or to complete approved work programmes within the relevant two-year phase of this Licence, or to submit Work Reports which are satisfactory to the Minister one calendar month before the end of each phase or within such further period as may be agreed by the Minister, may, at the absolute discretion of the Minister, result in the immediate revocation of this Licence. |
| Ministerial directions, etc. | 4. If it appears to the Minister that there are certain minerals within the area covered by this Licence and that such minerals are not being adequately explored by the Licensee, the Minister may, at the discretion of the Minister, direct the Licensee to carry out such prospecting as the Minister considers appropriate or, after prior notice to and consultation with the Licensee, grant a Prospecting Licence to another party or Prospecting Licences to other parties in respect of such minerals. |
| Avoidance of | 5. The Licensee shall execute all operations in or in connection with the Licensed area in |

harmful methods of prospecting.	a proper and workmanlike manner in accordance with good prospecting practice and good environmental practice and shall comply with any instructions from time to time given by the Minister in writing relating to any of these matters and shall also comply with any instructions from time to time given by the Minister in writing for securing the health, safety and amenities of persons employed in or about the Licensed area.
Protection of mines, strata and mineralisation.	6. Where any borehole drilled within the Licensed area intersects or penetrates any mine (including historic workings) or any strata or mineralisation which might reasonably be expected to be involved in any subsequent mining development, such borehole shall be cased and or plugged in such manner as to ensure that subsequent mining by whatever party shall not be adversely affected.
Protection of aquifers.	7. Where drilling or trenching is undertaken in the Licensed area, the Licensee shall take all necessary precautions, including appropriate sealing of boreholes, to ensure that neither the integrity of any aquifer nor the quality of any groundwater shall in any way be impaired.
Protection of the Environment and Preservation of amenities.	8. The Licensee shall carry out all operations within the Licensed area so as to avoid damage to the environment and the amenities of the Licensed area and to avoid or minimise disturbance of persons resident in the Licensed area. The Licensee shall comply with the relevant requirements of the: Local Government (Planning and Development) Acts, 1960 to 1993; Local Government (Planning and Development) Regulations, 1994; Local Government (Water Pollution) Acts, 1977 and 1990; Wildlife Act, 1976 and Ministerial Orders made thereunder; National Monuments Acts, 1930 to 1994, and European Communities (Natural Habitats Regulations, 1997). All rights granted under this Licence are subject to the relevant requirements of the above enactments and such other law as may be applicable.
Plans, records and reports.	9. The Licensee shall, if directed to do so by the Minister, provide the Minister or any person authorised by the Minister and within any time limit specified by the Minister, with any or all information available to the Licensee on the Licensed area including reports, maps, samples, data, environmental impact and feasibility studies. In particular, a report acceptable to the Minister on all prospecting under this Licence up to the date of the report must be submitted one calendar month prior to the final day of each two-year phase.
Confidentiality.	10. All records, returns, plans, maps, samples, accounts, interpretations, reports and other information which the Licensee is or may be from time to time required to furnish under the Licence will be supplied at the expense of the Licensee and will not (except with the consent in writing of the Licensee which will not be unreasonably withheld) be disclosed to any person not in the service or employment of the State until after revocation or surrender of the Licence or six years have elapsed after being furnished, whichever is the earlier. Longer periods may be agreed by the Minister in particular cases.
Resident Manager.	11. The Licensee shall, before commencing any operations in the Licensed area, furnish to the Minister the name and address of the Manager resident for the time being in Ireland under whose supervision such operations are to be carried on. Any change shall be immediately notified to the Minister. Any notice which the Minister, or any person authorised by the Minister is, in accordance with the terms of this Licence, required or entitled to serve upon the Licensee, shall be sufficiently served if the same shall be delivered or sent by post to such Manager at such address.
Notification of	12. The Licensee shall immediately inform the Minister in writing of the making of any

disputes.

claim or the commencement of any action, suit, proceeding or arbitration arising out of the exercise or purported exercise of the rights and privileges granted by this Licence, or arising from or attributed to any act or omission of the Licensee or the officers, servants, employees of the Licensee or contractors or persons in privity with the Licensee, and shall furnish to the Minister all of the information which the Minister may from time to time require as to any such claim, action, suit, proceeding or arbitration.

Indemnity against certain claims and demands.

13. The Licensee shall at all times keep the Minister effectually indemnified against any claim or demand whatsoever in respect of the land or the minerals which are the subject of this Licence or for injury or damage to any person or property or for nuisance or in any way arising out of or attributed to the exercise of any of the rights and privileges conferred on the Licensee by this Licence or attributed to any act or omission of the Licensee or the officers, servants, agents or employees of the Licensee or contractors or persons in privity with the Licensee whether such claims shall be made against the Licensee or the Minister or the Licensee and the Minister jointly or severally or with others. The said indemnity shall extend to all claims for damage to property or equipment or machinery howsoever caused and all claims including claims for personal injuries allegedly suffered by employees of the Licensee, third parties or any other person howsoever caused.

Insurance.

14. The Licensee shall take out and maintain Public Liability and Employer's Liability insurance, on terms and with a company approved of by the Minister, which approval shall not be unreasonably withheld, covering:
 - (i) any liability, loss claim or proceedings in respect of any injury or damage whatsoever to any property real or personal insofar as any such injury is caused by or arises in relation to anything done or not done pursuant to this Licence for so long as this Licence continues in force, provided that such injury or damage is due to any negligence, omission or default on the part of the Licensee or the officers servants or employees of the Licensee or contractors or persons in privity with the Licensee.
 - (ii) any liability loss, claim or proceedings whatsoever arising under any statute or at Common Law in respect of personal injury to or disease contracted by or the death of any person whomsoever arising out of or in the course of or attributed to the exercise of any of the rights and privileges conferred by this Licence for so long as this Licence continues in force.

The said insurance policies shall include provisions by which, in the event of any claim in respect of which the Licensee would be entitled to receive indemnity under the policy being brought or made against the Minister the Insurer will indemnify the Minister against such claims and any costs, charges and expenses in respect thereof. The Licensee shall comply with all conditions in any policy or policies of insurance under the clause and will pay all premiums thereunder and will on demand produce the policies and receipts for the premiums to the Minister or any person authorised by the Minister for the purpose. The Licensees shall maintain the nomination of the Minister as an interested party on such Insurance Policies.

Fencing, etc.,
of openings.

15. The Licensee shall keep all openings, excavations and underground workings made in exercise of the rights conferred by this Licence properly fenced off for the protection of persons and animals to the satisfaction of the Minister, and shall, at the expiry or sooner termination or revocation of this Licence in cases where such openings, excavations and underground workings remain open, by agreement with the Minister, to be utilised for subsequent development, leave all such openings, excavations, and underground workings so fenced off and also in such condition that subsidence of the surface is guarded against to the satisfaction of the Minister, and, if the Licensee shall fail to do so, the Minister shall be entitled to fence off such openings, excavations or underground workings to the satisfaction of the Minister or to take such steps as the Minister thinks proper to guard against such subsidence of the surface and the expenses incurred by the Minister in so doing shall be reimbursed to the Minister on demand by the Licensee.

Reinstatement
of land.

16. The Licensee shall reinstate to the satisfaction of the Minister all lands affected by any operations under this Licence and shall comply with any written directions given by the Minister for the purpose. If the Licensee fails to do so, the Minister shall be entitled to carry out such works from time to time as appear necessary to the Minister whether during or after the currency to this Licence and the costs incurred by the Minister in doing so shall be reimbursed to the Minister on demand by the Licensee.

Compensation.

17. (i) The Licensee shall pay and discharge all claims for compensation properly made in respect of damage caused by the Licensee or the officers, servants or employees of the Licensee or contractors or persons in privity with the Licensee to land or minerals or water supplies or in respect of nuisance or in respect of injury to any person, property or animals attributed to an act or omission of the Licensee or the officers, servants or employees of the Licensee or contractors or persons in privity with the Licensee.
- (ii) If the Licensee fails to pay and discharge the claims referred to at paragraph (i) of this Clause within three months after being put on notice thereof the Minister shall be entitled to pay compensation and costs to the claimants in settlement or towards and on account of all such claims as are brought to the notice of the Minister **AND** the Licensee shall repay to the Minister on demand all moneys so paid by the Minister and shall reimburse the Minister in respect of all costs incurred by the Minister in treating with, negotiating on, or defending such claims.
- (iii) The Minister shall make reasonable inquiry into claims coming to the notice of the Minister but shall be entitled to make payments in accordance with paragraph (ii) of this Clause notwithstanding that such claims may be made against the Licensee alone or the Minister alone or the Licensee and the Minister jointly and severally, or against them or either of them with others, without being obliged to require formal legal proofs thereof or to secure the concurrence of the Licensee in such payments.
- (iv) Nothing herein contained shall be construed to release or exonerate the Licensee from such claims or any part thereof.
- (v) The provisions of this Clause shall not be construed to derogate from or modify the indemnity afforded the Minister by the Licensee as provided by Clause 13 of this Licence.

- Drilling and trenching.
18. A minimum of two weeks' advance notice in writing shall be given to the Minister of proposed borehole and shaft sinking intended to reach a depth of more than 20 feet below the surface and a journal of such shaft or borehole and specimens shall be kept for inspection by the Minister or by the servants and agents of the Minister. No trenching shall be carried out without the prior written approval of the Minister. Such approval should be sought at least 20 working days prior to the date on which trenching operations are planned to commence. All drilling and trenching shall be carried out in such a way as to facilitate proper re-instatement of the land and the Licensee shall observe all written directions given by the Minister in this regard.
- Restriction on assignment of Licence.
19. The Licensee shall not without the prior written approval of the Minister assign, or attempt to assign, any rights granted by this Licence to any person and shall not without the prior written approval of the Minister sub-license or part with the possession of any of the rights hereby granted.
- Rights of access for authorised persons.
20. Any person authorised by the Minister shall be entitled at all reasonable times to enter into and upon the Licensed Area and all workings of the Licensee thereon or thereunder for the purpose of verifying that the conditions of this Licence are being complied with.
- Rights of Third Parties.
21. The Licence hereby granted does not grant any rights in relation to minerals the prospecting for which is not covered by this Licence. The Licensee shall not do anything or permit anything to be done by any person on behalf of the Licensee or with the privity of the Licensee which would, or would tend to, obstruct or impede any other person lawfully exercising rights under a Prospecting Licence for other minerals duly granted to such person by the Minister.
- Prospecting Licence Undertaking.
22. If on the expiry of this Licence at the end of the term referred to in Clause 1 (i) hereof, or at the end of any further term where this Licence is renewed, the Minister is satisfied that the Licensee has fulfilled all the obligations imposed by this Licence and that the Licensee continues to satisfy the financial, technical, environmental and other requirements of the Minister, the Minister undertakes, on application made by the Licensee in writing, to grant a renewal of the Licence to the Licensee, for a further term of such duration as the Minister may consider appropriate, provided that the said application shall be made not later than the expiration of the term referred to in Clause 1(i) hereof or the expiration of any term of renewal of this Licence and provided that the Licensee undertakes to carry out a work programme which is acceptable to the Minister and to meet all associated expenditures as the Minister may require for the further term.
- Applicable Law.
23. This Licence and any agreement entered into pursuant thereto shall be governed by and construed in accordance with the laws of Ireland.
- General.
24. Nothing in this Licence shall be construed as limiting in any way the rights and powers of the Minister under the Minerals Development Acts, 1940 to 1995.

FIRST SCHEDULE

LIST OF TOWNLANDS

SECOND SCHEDULE

MAP OF THE LICENSED AREA

THIRD SCHEDULE

WORK PROGRAMME

GUIDELINES FOR GOOD ENVIRONMENTAL PRACTICE IN MINERAL EXPLORATION

The following 'Guidelines for Good Environmental Practice' are intended to amplify and supplement the specific requirements contained in Prospecting Licences and other provisions as issued by the Exploration and Mining Division (EMD), Department of Communications, Energy and Natural Resources.

General Principles

- * Environmentally responsible management should be an integral component of all exploration programmes.
- * Those involved in exploration activities should make themselves fully aware of any ecological or cultural areas of interest within the boundaries of their prospecting licence.
- * There should be compliance with all relevant Government laws and regulations for the protection of the environment. Where such laws and regulations do not adequately protect the environment, best contemporary practice in environmental management standards shall be maintained in conjunction with effective exploration, regardless of the location of operations.
- * The environmental consequences of each exploration activity should be considered and planned for. Any needed changes to technique and practice should be made in order to conform with these Guidelines.
- * Every effort should be made to avoid pollution of the environment during exploration, arising either through inappropriate waste disposal or waste management.
- * Holders of Prospecting Licences should take responsibility for ensuring that all contractors and employees are fully informed of these Guidelines and legislative requirements and should ensure that adequate insurance cover is in place prior to entry.
- * There should be full consideration and close liaison with relevant landowners and regulatory authorities.
- * Any damage to vegetation, land surface or landowner property that may occur as a result of exploration activities

should be minimised and corrected without undue delay.

Commencement and Supervision of Work

Where practicable, agreement must be obtained from landowners before entering onto lands for geological mapping, geochemical or geophysical surveying, trenching or drilling. There must be due regard for agricultural activities of landowners, and exploration programmes should be appropriately scheduled so as to cause minimum or no disturbance to such activities. Where disturbance of land or farming activity is expected e.g. during trenching or drilling, compensation must be agreed with the farmer or landowner beforehand. Where disturbance exceeds that which was agreed with the landowner and agreement on the damage cannot be achieved, Teagasc, or another agreed party, should act as arbitrator.

With respect to drilling or trenching, there should be a field supervisor whose name, company address and telephone number are given to the landowner. The field supervisor should be acquainted with relevant local regulations (control of crop or stock disease, quarantine regulations, etc.). The exploration company will accept responsibility for the actions of their contractors and of their subcontractors and of all persons employed by them in connection with the works, except for actions carried out expressly at the request of the owner or occupier of the land.

Field equipment, other than drill rigs and heavy excavation machinery needed to be left in place overnight, should not be left unattended in fields or by roadsides. On the completion of work, care should be taken to ensure that no equipment or materials are left behind which may cause injury to persons or animals, or cause pollution.

With regard to any drilling or excavation works, the field supervisor must, before work is initiated, discuss and identify with the landowner suitable entry points, watering points for stock, power and telephone cables, pipelines, etc. Particular attention should be paid to sensitive areas (crop harvesting, etc.), livestock management (calving, foaling, etc.), disease spread and spread of



noxious weeds. Target areas should also be checked for sensitive ecological sites or any archaeological features and measures taken to prevent any damage.

The field supervisor must also inform the landowner as to the remedial measures that would be immediately undertaken in the event of water or land pollution, and inform the relevant landowners and appropriate regulatory bodies immediately in the event of any pollution incident. It should be noted that planning permission may be required for certain activities such as construction of access roads.

Drilling

Both groundwater and surface environmental concerns must be considered, and the location planned so as to minimise or avoid interference with water or pollution sources. Where possible, drillholes should be located downhill from water sources and karst features, and uphill from any pollution sites. There must be full compliance with requirements under the Local Government (Water Pollution) Acts, 1977 to 1990. A photographic record should be kept for all sites, showing the situation before, during, on completion and after a suitable rehabilitation time has elapsed. For certain environmentally sensitive areas (e.g. wetlands), it may be necessary to use modified vehicles for minimum access damage.

Vehicle access routes to the site should be agreed in advance with the landowner.

Where there is a possibility of artesian conditions, precautionary steps should be taken to handle the water flow. If artesian conditions are encountered, the flow must be shut off within the lithological unit in which such conditions arise. If the drillhole is collared in unconsolidated overburden likely to contain an aquifer, the casing should be kept at least 300mm above ground level and the return water prevented from entering the casing area. If groundwater pollution is a potential problem or if there is any groundwater flow from drilling operations, the drillholes should be fully sealed. Where future re-entry of a drillhole is envisaged, secure and lockable caps must be fitted.

Since both fuel and hydraulic oils are used by drilling and pumping equipment, fail-safe storage and anti-vandal spillage precautions must be taken. Bulk tanks should be kept locked and in secure locations well away from areas where spillage could affect people or stock. Fuelling procedures should be specified for contractors and separate containers kept in the vicinity of unattended rigs or pumps should be made secure. Pumps should be located far enough back from water sources so that any pollution can be contained. In case of spillage, contingency provisions should be on hand (e.g. straw bales), and remedial action immediately undertaken. The

exploration company is totally responsible for all materials, liquids or other substances brought onto the land and any consequential damage resulting from these materials.

As regards drilling water, the following procedures must be adopted:

(a) Check pumping location relative to downstream abstractions for potable or animal drinking water. If significant abstraction impact is likely, users should be notified, where possible, and their agreement sought, especially in periods of low flow; (b) Where the water quality is suspect it should be analysed, and contaminated water must not be used. Should bacterial contamination be suspected during drilling, the drillhole should be disinfected (chlorinated) before abandonment; (c) Return water should be treated by settling to minimise the possibility of solids being made available to grazing animals; (d) Return water, even after settling, should not be discharged directly into a watercourse. Discharges should be allowed to percolate to the watercourse, allowing further filtering of the return water.

Care should be taken to minimize damage to vegetation, and on cessation of drilling and clearance of the site, rehabilitation should be commenced at the earliest appropriate time.

Noise problems can arise when drilling in proximity to residential areas. Where drilling and pumping must take place in such locations, care should be taken to reduce noise emissions, at source, to acceptable levels and activity should not be permitted during unsocial hours.

In addition, drilling and pumping sites should be securely fenced to exclude grazing animals; drill rods should be stacked in the safest possible manner, inside the site; all oils and greases should be securely stored and at no time should grease be accessible to livestock; the highest possible standard of housekeeping should be insisted upon on the drilling site, storage and assembly areas and meticulous clearance carried out when work is completed; on completion of the work the site and the access routes should be restored to their condition prior to commencement, or as close thereto as possible; in any event, the restoration must be to the satisfaction of the landowner, and if compensation or rehabilitation is required it should be finalised without delay.

Excavations

Similar concerns with regard to surface aspects of groundwater and drilling apply to excavations, and the same approach should be used. If possible the work should be done in dry weather, and surface runoff water diverted around the trench or trial hole. A photographic record should be kept for all sites, showing the situation before, during, on completion and after a suitable rehabilitation time has elapsed. Care in planning the

actual trench work is also needed from a safety aspect, information regarding which is obtainable from the Health and Safety Authority, Hogan Place, Dublin 2.

Excavation should not take place adjacent to streams or rivers which are potential spawning grounds for fish species. If possible, excavations should also be avoided in fields with old 'french drains'; if encountered they should be correctly replaced.

A temporary fence must be erected around any excavation, equipment and spoil heaps. The fence should be at an appropriate distance beyond the opening, and no chemicals/petroleum-based products should be kept in this area. Unless otherwise agreed with the landowner the fence should be adequate for the purpose of excluding any livestock kept on adjoining land. All temporary fencing should be erected in position before excavation commences and subsequently maintained until reinstatement of land is completed.

If pumping is necessary to prevent excavations from becoming waterlogged, the discharge must be directed into suitable drains or onto stable slopes, and not directly into receiving waters.

All topsoil should be kept separate and stacked to one side of the working area and kept free from the passage of vehicles and plant. In sensitive areas of vegetation, sods should be taken and carefully preserved for reinstatement. Subsoil and hard-core materials should be kept separate from topsoil. Contaminated soil should be clearly identified and remediated.

Reinstatement of land must be carried out without delay, according to best contemporary environmental practice. After backfilling, the topsoil should be carefully replaced, and additional topsoil provided if reasonably required for proper reinstatement. Care should be taken to restore ground to a condition at least equivalent to that existing before the commencement of the works. This should involve the topsoil being left in a loose and friable condition; appropriate levelling off of the ground so as to present a neat appearance (the level of the trench area should be the same as that of the undisturbed surrounding ground one year after restoration is completed); the removal of all stones in excess of 50mm (2") in diameter from the surface; and the reseedling of the area in consultation with the landowners. The rate of seeding and time and method of sowing including application of fertiliser, should be in accordance with good agricultural practice.

On completion of the works the company must remove all temporary buildings, fences, roadways, all surplus soil, stones or gravel and any debris such as trees, brushwood, etc. and any other matter that does not naturally belong to the site. The site should be left clean and tidy, to the satisfaction of the landowner, and if required by the

landowner, the company should plant shallow-rooted trees, shrubs, or hedging to replace any which have been removed.

If compensation is required, it should be finalized without delay. Follow up visits should be made after 6 months to assess the quality of restoration, and any required remedial work undertaken to the satisfaction of the landowner.

If it is intended to keep open excavations after completion of prospecting and exploration work, it may be necessary to get planning permission, either on a temporary or a permanent basis, as appropriate. Advice must be sought from the Local Authority.

Water Services

All necessary precautions must be taken to protect all watercourses and water supplies against pollution attributable to any exploration activity. Where excavations are adjacent to watercourses, care should be taken to ensure that no debris or soil enters the watercourse either inadvertently or by flooding during periods of high water discharge. All proper steps should be taken to reduce to a minimum any interference with water supplies.

Before trenching or drilling operations commence, the company or its agents should acquaint themselves with the position, type and size of all underground services in the selected location. In the event of a water pipe or supply being severed, the company or its agents should effect an immediate repair or provide alternative supplies. In the event of a well or other private water supply being permanently affected or destroyed by any exploration activity, the company should construct an alternative supply (e.g. a well) as soon as possible; in the meantime, alternative supplies must be provided.

Pumping and other Groundwater Tests

Where such testing is required, relevant landowners in the area should be notified, and there must be a continuous emergency telephone service and suitable emergency facilities in place to ensure that a wholesome, potable water supply is continuously available to any affected parties. The relevant Local Authority should be made aware of such proposed tests and the arrangements, and any needed approvals obtained from them. The arrangements for such tests should include appropriate controls to avoid adverse impacts arising from disruption of existing water supplies and disposal of pumped waters, and suitable records of water quality and monitoring procedures must be kept. Such information should be made available to the relevant Local Authority on completion of the work. Where required, a licence under the Local Government (Water Pollution) Acts, 1977 to 1990 must be obtained.

Geophysical Surveys

Cables must not be left unattended in areas where livestock are present. If necessary, arrangements should be made with the landowner to remove livestock at a mutually convenient time for the duration of the work.

Record of Work

Suitable records of all excavation work or work relating to groundwater testing must be kept by the company, including a complaints register (and action taken) for inspection by officials of the Department of Communications, Energy and Natural Resources and the relevant Local Authority as required. After completion of the work, a summary report, including relevant data, must be furnished to the Department and the relevant Local Authority.

Restricted Areas

Under European Union Directives recently implemented by Ireland, certain areas are designated as Special Areas of Conservation (SACs) or Special Protection Areas (SPAs). Within these areas certain exploration activities may now be restricted, and require specific permission. All holders of Prospecting Licences are required to ascertain whether there are any SACs or SPAs in their ground and to comply with any restrictions advised by EMD. Approval to carry out restricted activities must be sought in writing, with full details of work to be undertaken and one month's notice, from the Exploration and Mining Division of the Department of Communications, Energy and Natural Resources.

Companies must bear in mind that it is necessary to ascertain also the location of National Nature Reserves, National Monuments, Rural Environmental Protection Schemes and gas pipelines within the licence area and to ensure that there is no interference with such sites or features. With regard to:

(a) National Nature Reserves: no access is permitted without the prior approval of the Minister for Arts, Heritage, Gaeltacht and the Islands, and no trenching or drilling is to be undertaken without the prior approval of the Minister for Communications, Energy and Natural Resources;

(b) Sites indicated on the Sites and Monuments Record Constraint maps (available for inspection at County Libraries or Local Planning Authority): such sites are not to have any exploration work undertaken in or adjacent

to them without the prior approval of the Minister for Arts, Heritage, Gaeltacht and the Islands. Such approval should be sought through the Exploration and Mining Division of the Department of Communications, Energy and Natural Resources;

(c) Rural Environmental Protection Schemes (REPS): no work should be conducted in an area subject to REPS without the prior approval of the landowner(s)/ user(s). Maps and details of REPS areas are available from the Farm Development Services (Teagasc) in each Department of Agriculture, Fisheries and Food county office;

(d) Gas pipeline routes: no trenching or drilling is permitted within 30m of the pipeline without the prior approval of Bord Gáis Éireann.



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GUIDELINES FOR REGIONAL AIRBORNE GEOPHYSICAL SURVEYING

General Purpose of Guidelines

The purpose of these Guidelines is to allow regional airborne geophysical surveying for minerals to be conducted in an orderly and co-ordinated manner throughout the State, in order to serve the National Minerals Policy objective of identifying, as quickly as possible, further commercially viable mineral deposits for development. Thus, the Guidelines complement the Minerals Development Acts, 1940 to 1999, which regulate minerals prospecting and development in the State.

The Guidelines are additional to the requirements of the Air Navigation and Transport Acts and other legislation concerning the use and safety of civil aircraft in flight. Data on those requirements should be obtained directly from the Irish Aviation Authority, Aviation House, Hawkins St., Dublin 2.

Additionally, a licence is required under the Wireless Telegraphy Act, 1926, as amended, for radio systems for use in such surveys.

Applications for such licences should be addressed to the Commission for Communications Regulation, Block DEF, Abbey Court, Irish Life Centre, Abbey Street, Dublin 1. The importation and re-exportation of radio systems and other equipment for use in such surveys are governed by the Customs Acts. Information on the requirements of those Acts should be obtained directly from Customs Administration, Castle House, South Great George's Street, Dublin 2.

Guidelines to be Followed

Planning stage: Before a regional airborne survey is commenced, the Exploration and Mining Division (EMD) of the Department of Communications, Energy and Natural Resources must be advised at least 20 working days in advance of the nature, extent and area of the proposed survey and the proposed start and completion dates.

On receipt of notification, EMD will ascertain if there are any Special Protection Areas (SPAs) in the proposed area. SPAs are sites protected under the European Birds Directive (1979), and access (including airborne work) may, depending on the bird species, be allowed only at certain times of the year. No work over SPAs may commence without the prior written approval of EMD.

Persons proposing to conduct regional airborne geophysical surveys for minerals are required also to discuss their proposals with EMD, particularly with regard to:

- * proposed survey area and flying height, line spacing and tie lines;
- * geophysical parameters to be measured;
- * instrumentation and navigation systems to be used;
- * processing and interpretation techniques to be used;
- * content and format of the survey data submission as outlined in the EMD publication "Reference guidelines for the format and content of airborne geophysical survey data submissions to Exploration and Mining Division".

KEY FEATURES

- "Open Skies" Policy - free to fly over currently licensed ground
- All raw, processed and interpreted data lodged with Exploration and Mining Division
- All data confidential for 4 years
- At end of confidentiality period all data publicly available
- Substantial exploration expenditure credits

These guidelines, which outline EMD data submission requirements in detail, are available from EMD and are based on internationally recognised data formatting and archiving systems. EMD recommend that any persons planning to carry out an airborne survey would take these guidelines into consideration before the data acquisition stage.

Provision should also be made for representatives of EMD to be made aware, on a confidential basis, of the principal practical aspects involved in the conduct of the proposed survey. EMD should also be advised as to the person responsible for the conduct of the survey and be supplied with the day-time and after-hours telephone and fax numbers of that person.



Survey stage: EMD should be kept fully informed of the progress of the survey. Within three months after the completion of the survey, all survey data (see EMD Airborne Survey Data Guidelines) must be lodged on a confidential basis with EMD (the 'lodgement date'). In addition, a full geological interpretation of the results of the survey (either by the contractor or the licensee concerned) is required to be lodged with EMD on a confidential basis within six months of the survey being completed.

The extent of the areas flown and the names of the companies involved may be made publicly known by EMD after one month following completion of the survey. All other details will remain confidential unless otherwise agreed by the company or companies involved (see 'public release' below).

Exploration expenditure credits

Where a regional airborne geophysical survey is conducted by or on behalf of the holder of a Prospecting Licence under the Minerals Development Acts, 1940 to 1999, the total cost of that survey will be accepted by EMD towards the required exploration expenditure for any then licensed area covered by the survey for a period of up to two years after completion of the survey. The cost of the survey will be apportioned equally for all Prospecting Licence areas held and covered by the survey, unless the licensee wishes to apportion part of the survey costs over additional areas covered by the survey and for which a Prospecting Licence is granted within four years after the completion of the survey, in which case the credit would be available for the first two year term (only) of the Licence(s). In any event, the total credit towards the exploration expenditure of the licensee will not exceed the total cost of the survey. Where exploration expenditure relates to the reprocessing of previously acquired survey data, the licensee is required to submit all reprocessed survey data in accordance with the EMD Airborne Survey Data Guidelines. The same public release procedures apply to reprocessed survey data.

Where a regional airborne geophysical survey is carried out by a person or company who does not, at the time of the survey, hold a Prospecting Licence in the area surveyed, and where such person or company acquires a Prospecting Licence (or Licences) in the area surveyed within four years after the completion of the survey, the total cost of that survey will be accepted by EMD towards the expenditure requirement(s) for the first two year term (only) of the said Prospecting Licence(s).

Where, within four years after the completion of a regional airborne geophysical survey the holder of a Prospecting Licence acquires airborne survey data for the area of the Licence from a person who conducted the survey, or on whose behalf that survey was conducted (irrespective of whether or not that person is the holder of a Prospecting Licence over any areas covered by the survey), any reasonable payment expended on such acquisition or on reprocessing will be accepted by EMD towards the exploration expenditure requirement for that Licence for a period of up to two years after said acquisition.

Public Release

Airborne survey data will remain confidential for four years after the 'lodgement date'. At the end of this four year period all airborne survey data will be publicly released. However, such data in respect of Prospecting Licence areas still held will remain confidential for a further two year period (maximum), if so requested, in writing, by the holder of the Prospecting Licence. Where such a request is made, the holder of the Prospecting Licence will be required to provide EMD with a copy of all data appropriate for public release after the four year period and with written notification listing the Prospecting Licence areas and data to remain confidential.

Where the holder of a Prospecting Licence has acquired data over that ground from the person on whose behalf the survey was conducted, then all hard copy images, maps and reports relating specifically to that area will be provided by the licence holder on surrender to go on public release. All other data will remain confidential until four years after the completion of the survey.

Airborne Survey data which is released for public inspection may be used by the State in generating products for the purpose of stimulating mineral exploration.



**GUIDELINES FOR GEOPHYSICAL WORK REPORTS
SUBMITTED TO EXPLORATION AND MINING DIVISION**

Any geophysical work reports that are submitted by the Licensee are regarded as supplementary to the work reports required under the Mineral Prospecting Licence Terms and Procedures.

The Licensee is required to notify the contractor, if one is used, of these guidelines and should ensure that the contractor's report(s) follow these guidelines.

GENERAL

A variety of geophysical techniques are used in exploration for minerals. Irrespective of the technique used, presentation of the raw data and results should follow the following format.

REPORTS

- All reports on geophysical work should include the manufacturer's name, model and a summary of relevant technical specifications of geophysical equipment used.
- All the geophysical measurements should be listed in a tabular form such that in the case of linear traverses, data along each traverse should be separated by a header "line number" followed by the table containing X,Y (National Grid Co-ordinates), station number and the geophysical parameter(s) measured along that traverse e.g. gravity, magnetic, resistivity, etc., together with the relevant units of measurement.
- Information on survey parameters (line and station spacing, measuring frequency, etc.), methodology in general and the specific field technique used should also be provided.
- All the data, raw and processed, should be provided in analogue (paper records) and, if available, in ASCII format on computer disc. In the case of random data, an arbitrary line number should be used as a "header".
- Separate sections should deal with the interpretation and assessment of the data and the basis for conclusions reached should be stated.
- If physical properties of rocks are measured (e.g. rock density, magnetic susceptibility, electrical resistivity), full details of the results as well as information on rock type, sample location (National Grid Co-ordinates) and depth, method used, should all be provided.

MAPS

- Maps should preferably be on an appropriate standard metric scale e.g. 1:25,000, 1:50,000, although other appropriate scales are acceptable e.g. 6" to a mile, 1" to a mile.
- Maps should have the National Grid Co-ordinates. (National Grid references for each corner of the non-metric 6" to a mile and 1" to a mile maps are available from the Ordnance Survey or Geological Survey of Ireland.)
- Maps should have a north arrow and a bar scale.
- Maps should clearly indicate sufficient details about the type of geophysical survey e.g. gravity, magnetic, etc. together with information on the person/contractor responsible for the work.
- Maps should have traverse lines and points of observation clearly marked and identified.
- Maps should include the PL boundaries and numbers, and adequate geographical information.

SPECIFIC GEOPHYSICAL TECHNIQUES

An Industry standard format should be followed to provide all information to enable a full interpretation of the data. In addition, the following approach should be used for gravity or magnetic surveys.

Gravity Surveys

- A local base station made in the course of the survey should be tied into the National network of base stations (DIAS) using the nearest National base station, information on which can be obtained from the Geological Survey of Ireland.
- Results of topographical surveying, if carried out, should be provided in map form.

Magnetic Surveys

- Depending on the size of the area and the instrumentation used, a local base station reading should be recorded as frequently as is appropriate. Where no dedicated base station magnetometer is used, arrangements should be made for diurnal corrections by, for example, reoccupying the base station at appropriate intervals or using third party magnetograms.

MINERALS DEVELOPMENT ACTS 1940 TO 1995

Acts

Minerals Development Act, 1940 (No. 31)

Petroleum and Other Minerals Development Act, 1960 (No. 7) (Part III)

Minerals Development Act, 1979 (No. 12)

Minerals Development Act, 1995 (No. 15)

Regulations

Minerals Development Regulations, 1979 (No. 340)

Minerals Development (Amendment) Regulations 1994 (No. 319)

**Minerals Development (Application fees for certain State mining facilities) Regulations,
1996 (No. 259).**