IRISH MINING - THE NEED FOR ACTION.

A CASE STUDY OF EXPLOITATION.

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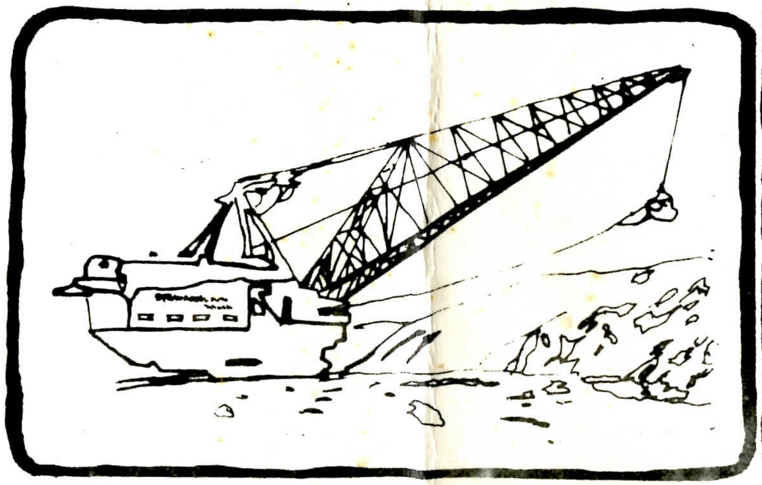

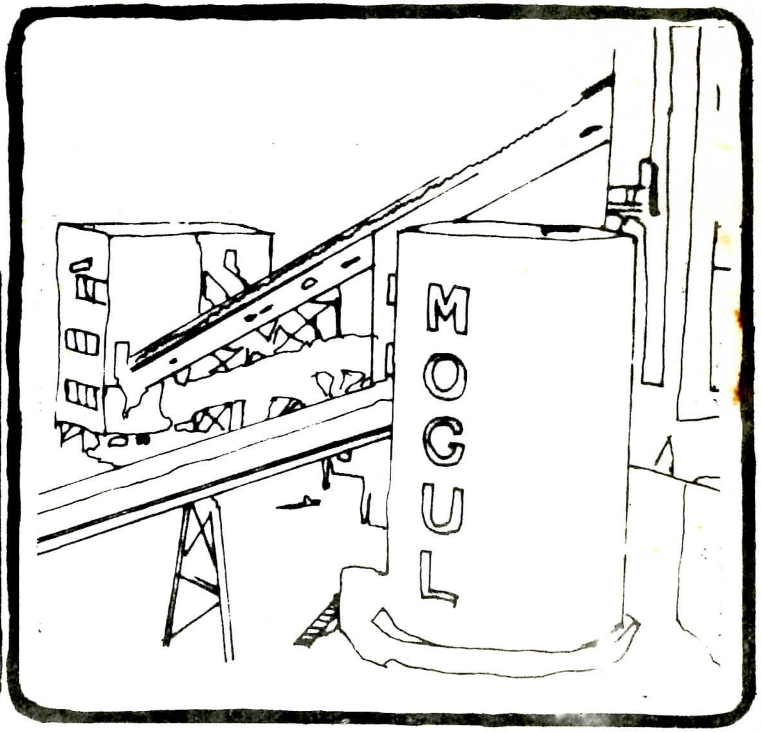

Resources Study Group

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INTRODUCTION

This pamphlet contains a detailed study of the mineral wealth of Ireland. Ten aspects of this very important industry were researched in great depth. What emerged amounts to a massive indictment of those who legislate in the name of the Irish people.

- Throughout our history we have been led to believe that Ireland has no mineral resources. With 9,800,000 tons of lead/zinc/copper/silver ore mined since 1958, and a minimum ore reserve of 50 million tons remaining in 1971, the "no-minerals" myth is being well and truly exploded. By 1970 Ireland had the largest underground zinc mine in Europe, at Silvermines; the largest producing lead mine in Europe, at Tynagh; the largest producing silver mine in Europe; one of the largest copper mines in Europe; the fifth largest mercury mine in the world, at Gortdrum; and the most profitable Barytes deposit in the world.

- If democracy means economic, and not just paper freedom, it would seem natural that such immense wealth be used for the benefit of the Irish people. In fact half a dozen North American mining corporations own and control this fundamental indicator of economic independance.

- Between the mid-1960s and the early 1980s (when the present ore reserves run out), these international corporations will have recorded a net profit of £250-£300 million.

- Practically none of this money will remain in Ireland. As the government proudly proclaims to intending investors, there is no restriction on the repatriation of profits from Ireland to foreign financiers. This means that during the estimated life of the mines £166-£200,000 per person employed in the mines will be taken our of the country in profits.

- Under legislation introduced in 1967, these international corporations do not have to pay one penny in tax on this massive sum.

The penetration of the Irish economy by international finance, of which the mining takeover is but one example, affects all aspects of economic, political and cultural life in this country.

THE COLONIAL ERA

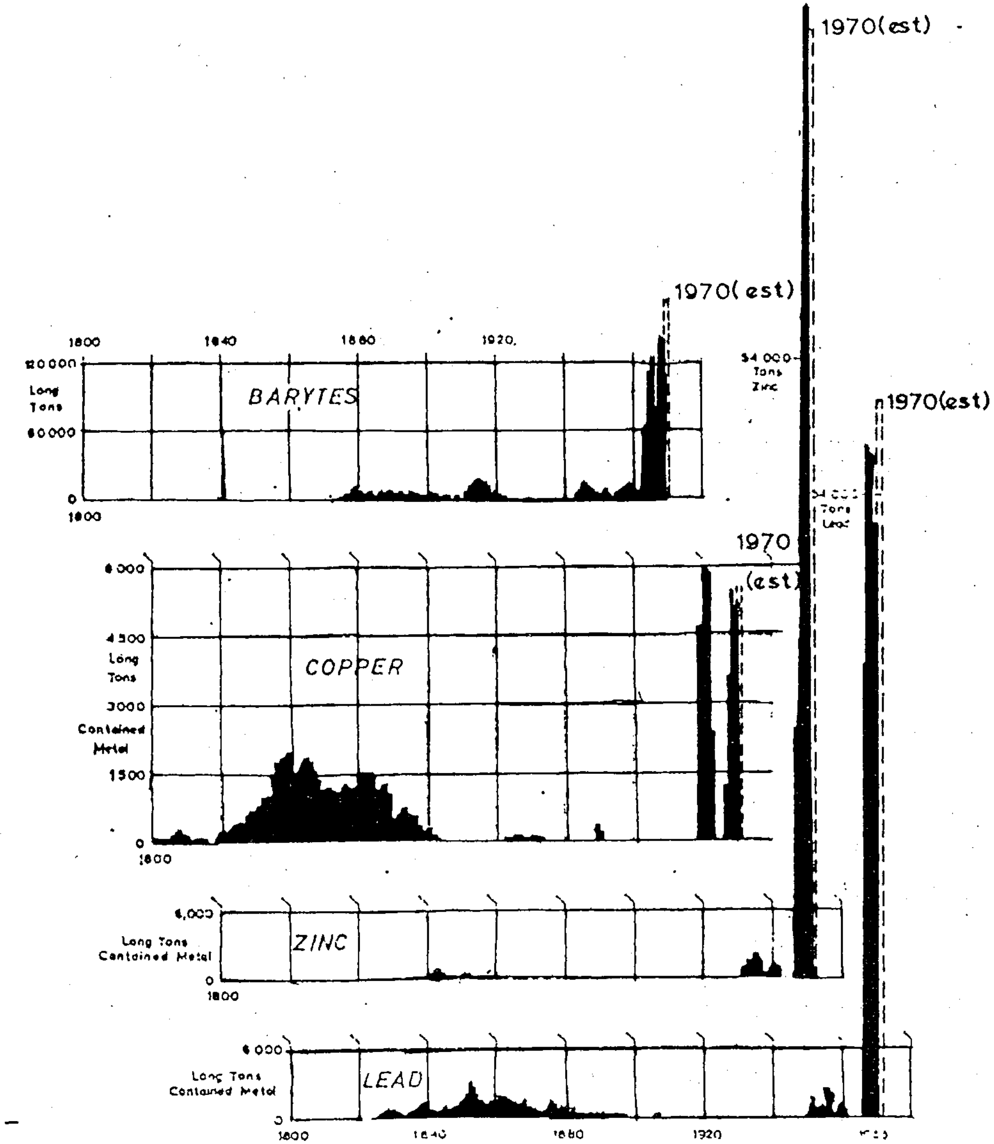
Mining has had a long history in Ireland. Copper,bronze, silver and gold had long been known to exist as evidenced by the gold ornaments in the National Museum; but mining on an organised scale as we know it, did not start until the beginning of the seventeenth century, by which time Ireland's history of colonial exploitation had well and truly begun. From then on, mining operations in Ireland were dictated by English needs. The myths that Ireland had no minerals, and that Irishmen were incapable of working them, were assiduously cultivated; expansion of mining in Ireland was a mere overflow from the activities of English entrepreneurs. (When demand slackened, Irish mines were the first to be hit.)

The usual pattern for mineral exploitation was that it formed part of the development of the estates of the English landlords planted during the various settlements in the seventeenth century, sometimes with the help of a grant from the English government, such as the one given to the Earl of Cork for his iron-works on the Blachwater. Iron was mined at such places as Cappoquin, Toome in Ulster, and at Arigna. There were also lead and silver mines, again exploited by English landowners, near Youghal, in Kerry and in Tipperary. These latter mines employed 500 Englishmen and gave the English king a revenue of £800 per year. However, in some cases, lead and silver were mined by Irish farmers, the English crown taking 1/6 of the revenue from the silver mines and 1/10 of the revenue from the lead mines.

The rebellion of 1691 naturally had as one of its targets this sudden English exploitation of Irish resources. In particular, iron foundaries set up on the coast to use cheaper English ores were destroyed, as were other foundries employing large numbers of skilled English and Dutch workmen. (Very few Irishmen were given skilled jobs in mining.) After the rebellion, English entrepreneurs were reluctant to invest in Irish mining, with the result that exports of iron ore fell from 788tons in 1641 to 28 tons in 1669, and exports of lead fell in this period from 201 tons to 2 tons. Irish ability to use charcoal for smelting iron ore was drastically curtailed by the Elizabethan and Stuart policy of plundering Irish woods to build ships for the English navy. Wood was also exported in other forms, such as staves for barrels. Afurther blow to Irish smelting capacity was dealt by Cromwell, who saw Irish wood as a natural resource and as places where Irish rebels could hide from the invading armies- a situation which has curious parallels in present-day Viet-Nam.

At the beginning of the Eighteenth century, very little mining was being carried out, because English capitalists preferred to work mines in their home country, where capital was more secure than it had been in Ireland in the seventeenth century. Indeed, some English mining companies went so far as to take leases on Irish mines to prevent them from being worked to the detriment of their English operations. The Irish government made grants totalling £5000 in 1717 and 1729 to encourage Irish coal mining, but this was embezzled. A grant of 2/= per ton of Irish coal produced was given in 1758 and a duty on foreign coal was imposed in 1791. Mines in Tyrone were producing 3700 tons per year in 1770,and mines in Kilkenny, owned by Lord Wandesford, were producing 10,000 tons per year around 1783. As far as the iron industry went, smelting was hindered by lack of wood, and hence charcoal. The main mine was at Ballymurtagh, but smelting stopped in the 1750s because of the lack of charcoal. However, coal from Arigna began to be used in 1789 to smelt local iron ore; about 1000 tons of pig irom was thus obtained. Small quantities of copper and lead were also produced- exports of lead grew from 6 tons in 1783 to 929 tons in 1808.

Mineral production continued on a small scale in the nineteenth century, despite the efforts of numerous Irish bodies to awaken interest in Irish mineral potential . From 1812 on, the Dublin society produced a number of reports on Irish mineral resources. Several Irish-owned mining companies were set up, but came to nothing. Barytes, from Cork and Sligo, were produced at a rate of about 15,000 tons per year in the 1880s and 20,000 tons p.a. by 1915. Lead production averaged 2,000 tons per year in this period in Co. Monaghan, reaching a peak of 3,000 tons p.a. in the 1850s. In the 1860s and early '70s, about 15,000-20,000 tons of zinc were produced per year at Avoca, among other places. Copper was mined at Allihilies, Co. Cork and at Lackmore Co. Tipperary. Production reached 2,000 tons by 1840, and averaged about 1,200 tons p.a. from 1850 to 1870.



THE PAST 50 YEARS

"THE NATION'S SOVEREIGNTY OVER THE NATION'S MATERIAL RESOURCES IS ABSOLUTE." Pádraig Pearse

(A) The Path to a Multinational Corporative Takeover

The birth of what could be called a modern mining industry came about during the period 1955-1958.

1958 is taken as the dividing point in time for three reasons. On the more general level it marks the opening up of Ireland to International Corporativism. On the more specific plane of mines it witnessed the emergence of Northgate Exploration Limited as a corporate entity in Canada. Northgate as will become clear in the pages that follow, was to become the centre of the Irish Mining Industry in the '60s. The third factor that marks out 1958 as the point of departure is that Mianrai Teoranta, the state sponsered Mineral Exploration and Development Company, was, to all intents and purposes, "murdered" by the governments decision to "invite" International Mogul Mines of Canada to operate the Avoca copper deposit in Co. Wicklow.

Birth is never an isolated incident. The embryonic form exists long before the actual emergence. To a high degree it determines the structure after birth.

Since its inception the modern mining industry in Ireland has followed a particular course of development. In order to fully comprehend the most basic suppositions steering this course it is necessary to understand how, in the years long before 1958, these suppositions came about. That the resources of Ireland should be used to the benefit of the people of Ireland has never been a principle of Leinster House, however, the 1940 'Mining Development Act ' changed what had gone before in three basic ways. When the Land Commision had bought land from the landlords and let it out to tenant farmer/owners as a rule the mineral right which would normally become the property of the new tenant 'owners' was reserved to the Land Commision (State). Secondly a clear distinction between prospecting for and working of minerals was made. Under the Act once a prospecting licence had been granted by the Minister for Industry and Commerce to a certain corporation for a specific area no one, not even the farmer on whose land the drilling was taking place, had the right to halt such exploration.

Third break from what had gone before was in relation to 'compulsary acquisition' of mines or mineral deposits that, in the Minister's discression, were not being used as efficiently as they might be.

On paper these three pieces of legislation may not seem an altogether new development. After all, it can be argued that the clause in relation to prospecting emphasised that-"It should not be lawful for any licenseeunder a prospecting licence to work any minerals lying on or under the land in respect to which such licence was granted"; and that "compulsory acquisition of property would be made by the Mining Board as set out under theprovisions of the(1931) Mining Act, that is, after due compensation had been paid." In practice, however, the 1940 legislation gave rise to a new and definite kind of mining industry - especially in the longer term. What it had in effect done was to transfer a huge volume of power in relation to the development of the mineral resources of the country into the hands of the Minister for Industry and Commerce. This State concentration of power was a pre-requisite for the development of an Irish mining industry. However, two paths lay open to the deValera Government. They could either build up a mining industry around a state company or, in the longer run, they could open up Ireland to International Corporativism. There was not a third alternative. The maintenance and development of an Arthur Griffith type 'native capitalism' would have required legislation, halting the flow of domestically owned funds out of the country (a flow which had reached the £1,000 million mark by the late 1960s). And a far greater degree of government control throughout the economy. Successive Dublin Governments have been either unable or unwilling to contemplate such a course of action. Even with such measures it is doubtful in the extreme if an 'independant' capitalist system could exist here for any length of time.

By the end of the war it had become quite clear what the deValera Government's long term intentions vis-a-vis the type of Mining Industry they wanted to see developping in Ireland might be. Sean Lemass, the then Minister for Industry and Commerce, and as such the Minister responsable for the mining industry, outlined the interpretation of the 1940 Legislation thus:-"The fundamental assumption of the 1940 Act is that the working of minerals is primarily a matter for private enterprise." (1). In practice what this meant, whether Lemass realised of not, was that the working of minerals would be primarily the concern of foreign 'private enterprise'.

The history of the twenty years that followed Lemass's pronouncement provides ample illustration of the two, rather than the three alternative thesis.

Under the provisions of the 1941 Mineral Exploration and Development Act, a national 'Minerals Exploration' Company was set up; its finance coming directly from the Dail. Its delegated task was to carry out mineral exploration throughout Ireland. In practice however, it spent most of its time in the actual production of phosphates and pyrites foruse in the manufacture of super-phosphates during the war years. In1945, under the Minerals Company Act, the Minerals Exploration Company was amalgamated with the Slievardagh Coalfield Company (set up under the Slievardagh Coalfield Development Act, 1941, to exploit the 5,500,000 ton coal reserve at Slievardagh, Co. Tipperary). The new company was known as Mianrai Teoanta.Mianrai was thus both a prospecting and producing company. For the year ending December 31st

1946 Mianrai recorded a production figure of 66,114 tons of phosphates and 6,096 tons of pyrites (also 64,000 tons of coal).(2). In that same year the Government tried to withdraw from Slievardagh, but failed.

In 1947 Mianrai submitted fifteen estimates for exploration for the period 1947-1954. Projected expenditure was £598,000. On March 10th 1955 in reply to a question in the Dail, Mr. Norton, the then Minister for Industry and Commerce reported that:"the exploration work undertaken by Mianrai Teoranta has established the existence at Avoca of substantial quantities of copper ore (and that) Mianrai Teoranta have undertaken negotiations with a number of mining concerns which have shown an interest in the development of the deposits on a commercial scale ".(3). This was the first major ore find. From the very announcement of its existence it was obvious that ther was no intention of ever trying to set up a State Mining Company.

On Feb. 8th 1955 the Finance (Profits of Certain Mines- Temporary Relief from Taxes) Bill was given its second reading in the Dail. Much insight as to what was actually happening vis-a-vis Avoca emerged in the course of the debate. The main provision of the Bill was that new mines commencing production before 1960 would be subject to no tax on profits for the first four years of production and only 50% of normal tax rates for the five years following that date. Gerald Sweetman, the then Minister, for Finance, in introducing the Bill went out of his way to emphasise:-"That the Bill is of general application and does not relate to any particular mining company".(4). To anyone who had observed the negotiations going on between the Government and 'a foreign Mining Corporation', it was obvious that the need to introduce the Bill was brought about primarily in order to fulfill a prior agreement with International Mogul Mines in relation to the operation of Avoca.

On January 3rd Avoca had been leased to St. Patrick's Copper Mines Ltd., a subsidiary of Irish Metal Mining Ltd., which was in turn owned by International Mogul Mines of Canada, for the period of 21 years from October 1st 1955. Mogul had only to pay £542,966 for Avoca and that was for the money Mianrai too had spent on exploration and development at Avoca prior to October 1st 1955. Over the period of theoperation of the mine Mogul was required to pay only between 4% to 9% of the operating profits to Ireland (i.e. 91% of operating profits to Mogul).

Sean Lemass, then in the opposition, takes up the following story.
"The Minister has emphasised that the Bill is of general application and has urged that should be considered not in relation to a particular project but on its merits as a measure designed to change tax laws. That is a childish pretence. Every deputy knows that this Bill has resulted from a bargain with one group in

relation to a particular undertaking. There was no detailed consideration of the system of taxation which exist and there is nothing logical about the changes in the tax code which the Minister is now proposing..... In so far as anyone outside the government service was consulted about this Bill, it was the Canadian groups interested in Avoca". Lemass Continued by pointing out that:- "By the beginning of 1954 it was obvious that a stage had been reached (at Avoca) at which decisions on the future commercial development had to be taken. In February 1954....the Board of Mianrai Teoranta advertised these mines in a number of foreign newspapers....So far as I have been able to find out no attempt was made to consider or explore the possibility of the development of these Avoca minerals by an Irish Undertaking."

This latter statement by Lemass is important not in its advocation of 'native capitalism' but in showing that as early as 1954 the Government was unable to even contemplate the creation of a mining industry based on native capital.

1955 and 1956 saw Ireland in the midst of an economic slump. Native Capitalism had hit rock bottom. The Government reaction to the crisis was predictable. They introduced the 'Control of Manufacturers Bill' 1957, which had the effect of opening up Ireland to International Corporativism; (not that it had ever been effectively excluded, when it is realised that between 1933 and 1957 276 foreign corporations were able to be set up in Ireland under 'special' Ministerial licence).

B. THE SELL OUT

The embryo had reached gestation. The emergence of a mining industry totally under the control of foreign Corporations had begun. Within a matter of years legislators and native industrialists alike had become intermediaries under the direct or indirect control of the international Corporations.

The principle that the nations sovreignty over the nations material resources is absolute(1) was now thoroughly disgarded. Avoca was to be the first. Let Lemass in his opposition days enlighten us as to the situation surrounding the Avoca deal....."The Company (Mogul) is to invest the Undertaking approximately £2,250,000 ....According to statements which are published in Canada,by Mogul Mines Corporation in the Newspapers there, in connection with the share issue which they were planning, the Avoca rock averages about 1.12% copper, 0.16% lead, .053% zinc, and8.1% sulphur (pyrites). In a statement published in the Toronto Globe and Mail on the 17th September 1955, at the insistance of this Mogul Mining Corporation, it was estimated that the whole operation will break even so far as Mogul Mining Corporation is concerned with copper selling at 30cents per pound, that is, £240 per ton....If the company achieves its target of production 4,000,000 ton of rock per year, average 1.12% copper, ...the net yield of copper from the operation is likely to be around 9,000 tons per year and with copper selling at £240 per ton, the whole operation, so faras theMogul Mining Corporation is concerned, will break even... that is to say, the costs involved are clearly round £2,000,000 per year of which.....about 10% will represent ways paid to workers at Avoca.

For some time past the price of copper has been fluctuating between £390 and £400 per ton. The price yesterday was £397 per ton. If, therefore Mogul are correct in their estimate that their operation will break even with copper selling at £240 per ton, then it is clear that at present prices, asuming that these prices are maintained, and that their output is at the rate of 3,000 tons per day as they are planning, the profit they will make will be somewhere between £1,300,000 and £1,400,000 per year tax free....In addition to the profit which they can hope to earn at the present price of copper, there will also be profit coming in from the sale of the lead,zinc and sulpher concentrates. .....With the scale of operation they are plan-

why your next plant should be in IRELAND

Complete exemption of tax on export profits for 15 years.

No restrictions on repatriating profits.

All the labour you need—and grants to train them in special skills.

Non-repayable cash grants for factory sites, buildings and new machinery.

Like some more reasons?

Mr. Niall Mooney, representative in France of the Industrial Development Authority, will be pleased to tell you how Ireland could help YOUR manufacturing company to expand production —if only you had a plant there.
Contact him at 62 Rue de Ponthieu, Paris 8 (256 0049).

INDUSTRIAL DEVELOPMENT AUTHORITY OF IRELAND *Lansdowne House, Ballsbridge, Dublin 4. Tel: Dublin 685161 Cables: IDA, Dublin.*

INTERNATIONAL HERALD TRIBUNE 24th NOV. 1970 ning, and the present price of copper, not less than £5,000,000 in profits (will be forthcoming) during the four years that they will be operating free of tax". (2). Lemass goes on to say that over the life time of the mine £10,000,000, £12,000,000 or £13,000,000 will be made in profits. AFellow Fianna Fail T.D.* (still in opposition) came out even more strongly: "We have not got many prospects in this country of generating profits on the scale which may arise in Avoca. Asum of £10milliom, £12million or £13 million is a big sum for this country, a big sum of money to contemplate being paid for the using of Irish resources, to the Mogul Mining Corp. shareholders in Toronto."(3).

Lemass and Aiken were back in power in March of 1957. The situation did not improve. In fact the policy of sell out to international corporations excellerated. Patrick Kilroy, reviewing the "Control of Manufacturers Act, 1964" recalls how this new manufacturers act, brought in under the Government which was headed by Sean Lemass, was far more comprehensive than any that had gone before, in that it "abolishes immediately the restrictions on any company which had carried on business continuously in the state for the last five years and abolishes all control from January 1st 1968 by repealing the 1932, 1934, and 1958 (Manufacturers) Acts from that date."(4).

Thus 1958 saw Mogul begin production at Avoca, the Industrial Development Act initiated the open door policy in relation to the take over by foreign capital and in 1958 Northgate Exploration Ltd, emerges as a corporate entity in Toronto.

The pace of foreign penetration quickened. It was not confined to Mining. Under the huge grant schemes and tax free allowences offered by the Lemass Government foreign corporations began to take over the fastest growth sectors throughout the economy.

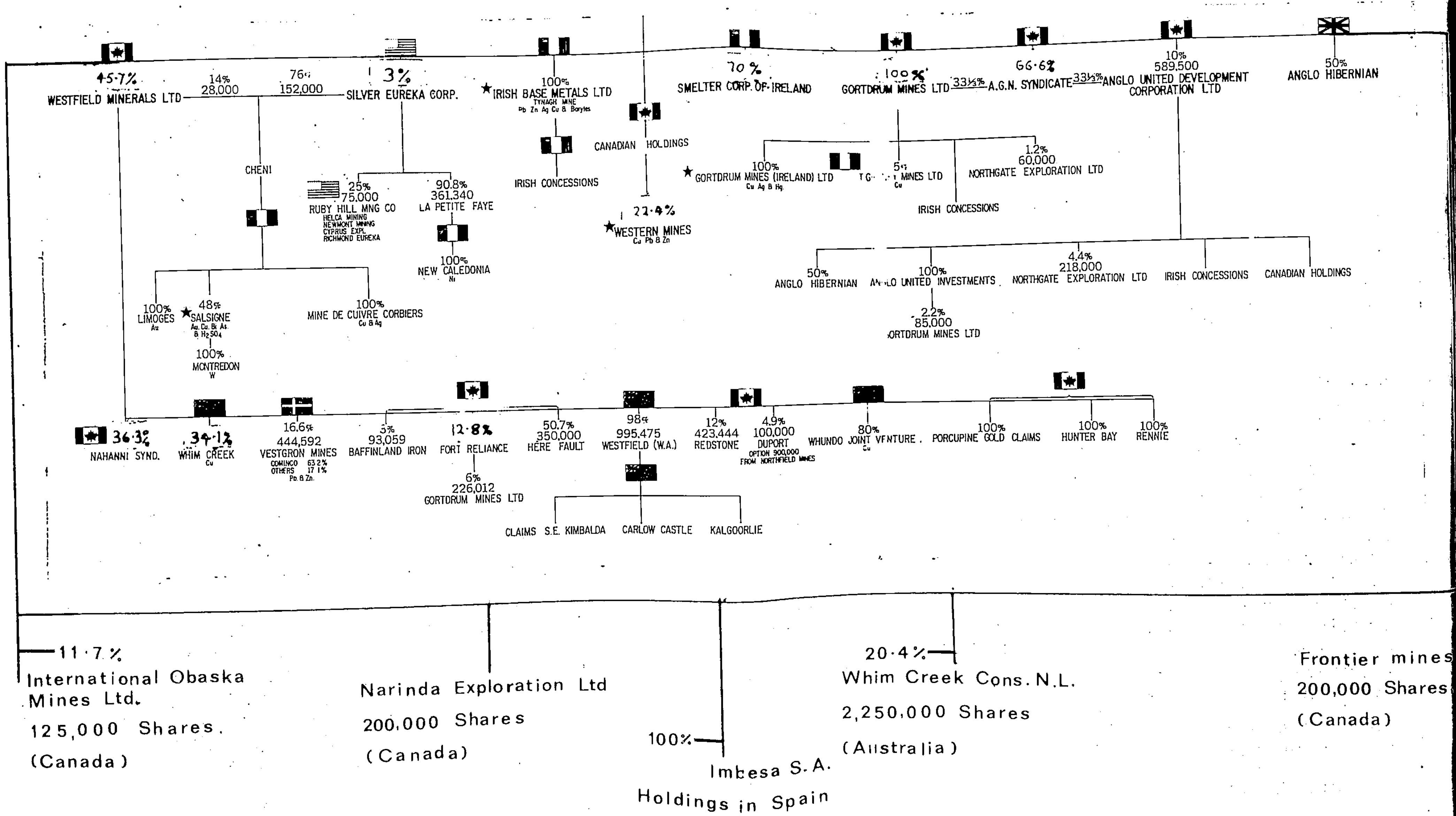
Northgate Exploration Ltd., an insignificant corporation until it started exploration in Ireland, grew rapidly on the profits it earned here. After less than three years exploration and an expenditure of a couple of hundred thousand pounds Northgate uncovered a rich lead/zinc/copper/silver deposit near Tynagh, Co. Galway, in late 1961. A fully owned Northgate subsidiary, Irish Base Metals Ltd., was set up to operate Tynagh. Production, which began in late 1965, has been averaging 710,000 tons of ore extraction since it reached its 2,000 ton per day capacity in late 1966.(5). By 1970 Tynagh had become the largest producing lead mine in Europe. (6).

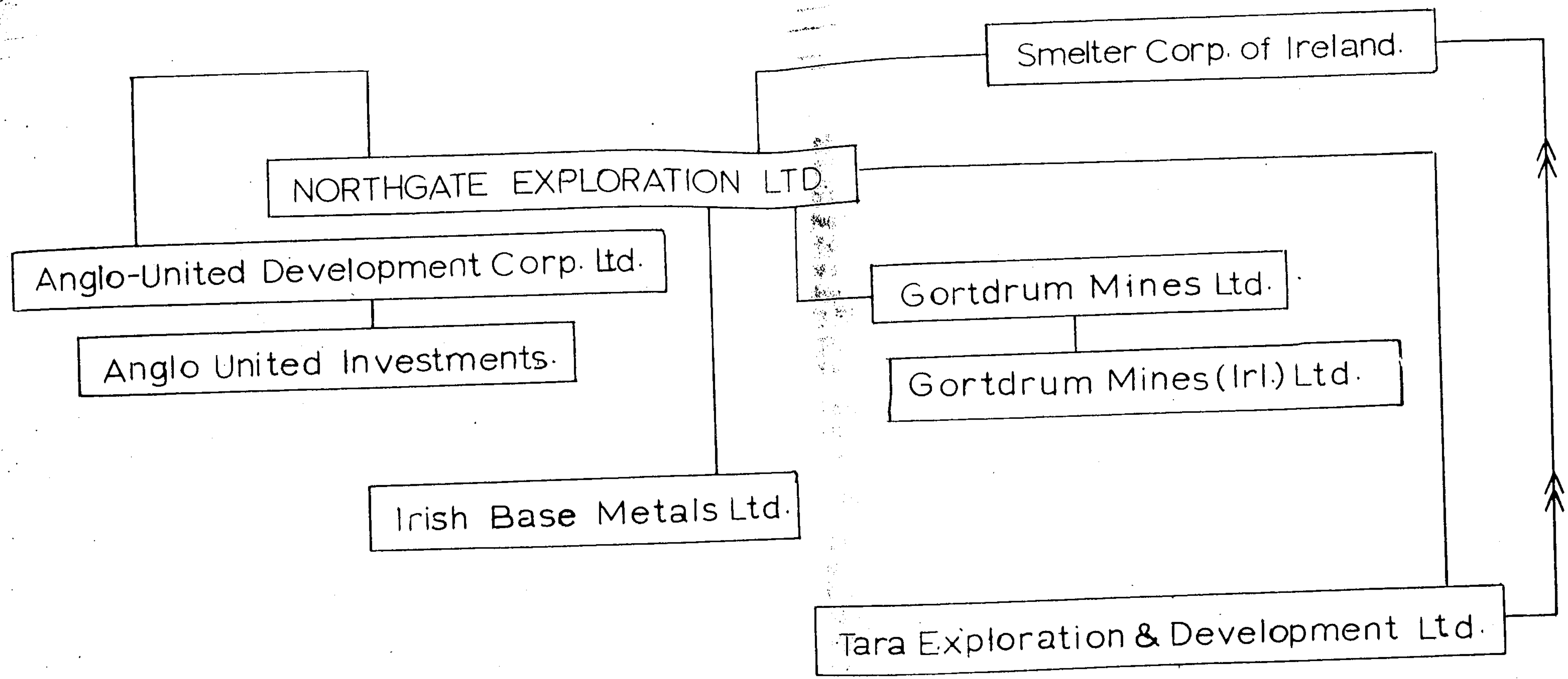
Northgate's Irish Empire grew rapidly after Tynagh. This is hardly surprising when we come to realise that between late 1965 and the end of 1970 $36,628,000 (£15,261,666) net profit has been recorded by Northgate.(7). By 1970 Northgate had control of the copper/silver/mercury mine at Gortdrum near Tipperary town; a 70%

* Frank Aiken.

NORTHGATE EXPLORATION LIMITED

(PRINCIPAL HOLDINGS)





NORTHGATE

Subsidiary & Associate Companies -

Irish Division.

direct interest in the Smelter Corporation of Ireland (the remaining 30% being held by Northgate's Associate Company, Tara Exploration and Development Ltd.); a 10% interest in the Anglo United Development Corporation, (which is at present prospecting in Ireland); a 10% interest (through Tara and Gortdrum) in Avoca Mines Ltd. which through its fully owned subsidiary, Avoca Mines (Irl.) Ltd., operates a copper/pyrites mine in south Co. Wicklow, and had associate status, (with the same corporate address and president), with Tara Exploration and Development Ltd..

At the time that Northgate was in the process of uncovering the huge deposit at Tynagh, St. Patrick Copper Mines Ltd., which had extracted some 3,143,543 tons of ore (8) since it had begun operations in 1958, was in the process of opting out. On July 20th 1962 the mine was transferred back to the Minister for Industry and Commerce. The Irish people were the real lo sers on this deal. Between 1958 and 1962 £2,000,000 of state money had been invested in Avoca. Mogul had invested considerably less, and it had reaped the profit on the ore extracted.

In 1966 a consortium, also Canadian, took an option on the Avoca mine. Late in 1970 the extraction of copper ore and pyrites began again. This time the mine was taken over by Avoca Mines (Irl) Ltd., which is a wholly owned subsidiary of Avoca Mines Ltd., of which Discovery Mines of Canada holds 47% of the shares, the Patino Corporation 10.66% , Superior Oil and Canadian Superior Oil 10% between them, and Northgate, through Tara and Gortdrum, 10%.

By the middle of 1968 the largest underground zinc mine in Europe was in operation near Nenagh in north Tipperary. Run by Mogul of Ireland Ltd., of which Mogul Mines of Canada holds 75% of the shares and Silvermines Ltd. owns the remaining 25%, it has a 3,00 ton per day ore extraction capacity. The ore deposits at Silvermines are even greater than those at Tynagh. Accordingly profit returns will run somewhat higher.

In 1967 the Canadian firm Gortdrum Mines Ltd., operating through its wholly owned subsidiary Gortdrum Mines (Irl.) Ltd., had brought the copper/silver/mercury/ deposit at Gortdrum into production. Late in 1970 Northgate bought out Gortdrum. Since Gort drum commenced production in July of 1967, something in the region of 1,000,000 tons of ore has been extracted. By 1970 Gortdrum had become the 5th largest mercury mine in the world. (9).

At Ballynoe, near the Silvermine mine, what has been described as "possibly the best (Barytes) deposit in the world" (10) was brought into production in 1963 by Magcobar (Irl.) Ltd., which is a wholly owned subsidiary of Dresser A.G. of Zurich. Averaging on ore extraction of somewhat under 200,00 tons per annum by the late 1960s it is projected that the life span of this mine is 20-25 years.

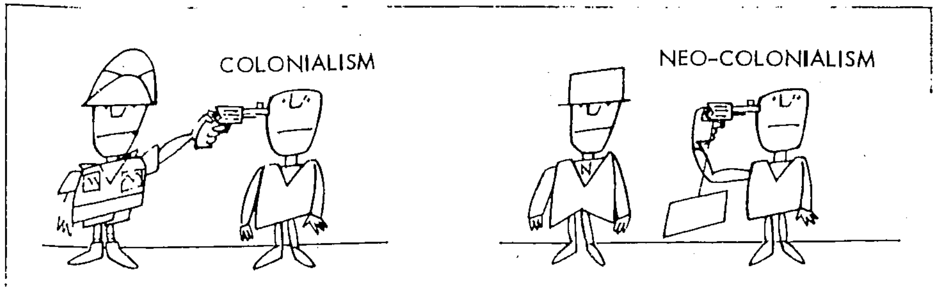
At Bennets bridge, North Kilkenny, a huge dolomite deposit, estimated at 75 years supply (11) isbeing worked by the Quigley Magnisite division of the Pfizer Chemical Corporation of New York, since mid 1970. The extraction rate is projected at 250,000 per annum. (12).

Late in 1970 Tara Exploration and Development Ltd. uncovered, near Navan, what the Irish Press has described as 'one of the biggest strikes in Irish mining history......even better than the now firmly established Tynagh mine' (13). All indicators, as drilling proceeds, are that this projection is correct.

At the begging in/ of 1971 an 'extensive area of lead/zinc mineralisation' (14) was found near Ballinalack, about five miles from Mullingar, by Syngenore Exploration, which is a subsidiary of Moranda Mines of Canada. According to the (15) Financial Times of London:-"It looks as though this (Ballinalack) might well be another 'Navan'." This was even before such expectations could have been verified by drilling. Obviously in the estimation of the Financial Times the possibility of uncovering more 'Navans' is very great indeed. It is not alone. According to Dr. Williams, head of the Geological Survey Office of Ireland, "we are only just scratching the surface of the Irish mineral field." (16). And according to Tara's Managing Director M.V. O'Brien, speaking at the same seminar, "One or two substantial deposits every five years was to be expected. (17). In terms of Navan, Silvermines, and Tynagh, this means that between 25,000,000 and 30,000,000 tons will be added to the known ore reserve (50,000,000 tons) every five years. 7,405 sq.miles (I8) of Ireland was given up to mineral exploration by mid I970. Nearly all of it was under the direction of foreign corporations (Northgate alone, through its various subsidiaries and associated companies held 252 prospecting licenses covering some 3,000 sq.miles. The situation is getting worse. The pace of issuance of prospecting licences to foreign corporations is accelerating.

Lemass and Lynch have not been idle. Under the provisions of the "Petroleum and other Minerals Development Act", introduced in I960, all of the 26 counties has been given to foreign corporations for purposes of oil exploration.

In I967, perhaps the greatest sell-out of all occured. In that year; after the Tynagh, Avoca, Gortdrum, and Silvermines deposits had been found, the Lynch Government legislated (I9) that no tax was payable on profits earned for the first 20 years of mining operations begun prior to I986. All the mines have a life of less than 20 years.



'Honest Jack'

The truth, for foreign consumption
(taken from an I.D.A. pamphlet)

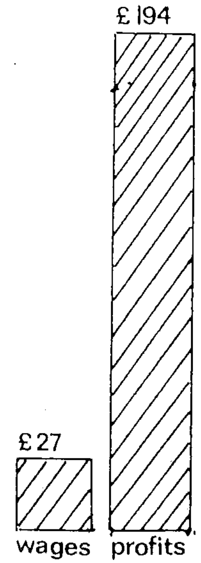
23 Presence or absence of State industries — As stated at No. 19 above, State participation in industry is confined to cases where private enterprise is unable or unwilling to undertake new activities of potential value to the nation.

24 Do State industries receive favored treatment? — No. State industries do not receive favored treatment.

For home consumption.....
from Jack Lynch at F.F. Ard Fheis 1969

The Fianna Fáil Government will not hesitate to avail of public enterprise, rather than rely on private enterprise, to engage in desirable industrial or economic promotion or expansion so as to increase national prosperity and expand employment.

Tynagh wages/profit



Figures given are:-
Wages: average wage per week per employee (the employee is taxed)
Profits: average profit per week per employee (this profit is tax free)

Part 2

MINERAL PROSPECTING

Name of Corporation	Prospecting licences held	Sq. miles covered
Irish Base Metals Ltd. (N)	49	622
Anglo United Dev. Corp. Ltd.(N)	I7	I63
Gortdrum Mines Ltd. (N)	54	682
Tara (N)	I32	I,5I8
Mogul of (Irl.) Ltd. (M)	IO	29
Con-Mog Exploration (M)	8	93
Irish Metal Mining Co. (M)	I2	85
Basic Exploration (Irl)Syndicate (M)	3	20
Dennison Mines	I9	2IO
Rio-Tinto Finance +Exploration Ltd(R)	9I	I,I4I
American Smelting + Refining Co.(R)	22	266
Anglo-Austral (R)	9	99
Consolidated Goldfields	30	368
South Crafts	9	I08
Penarraroya	65	74I
Moranda	66	62I
Patino Mining Corp.	II	I28
Canadian Johns-Manville Corp.	4	57
Zermac Mines	I	3
Northfield Mines	8	64
Argosy Mining Co.	8	98
Dehli Pacific	6	79
Ballymore Exploration Ltd.	4	3I
Caleckey Mines Ltd.	4	I
Lancourt Mines	I	9
Silvermines Ltd.	I2	I39
Newmount Mining Corp.	I	I2

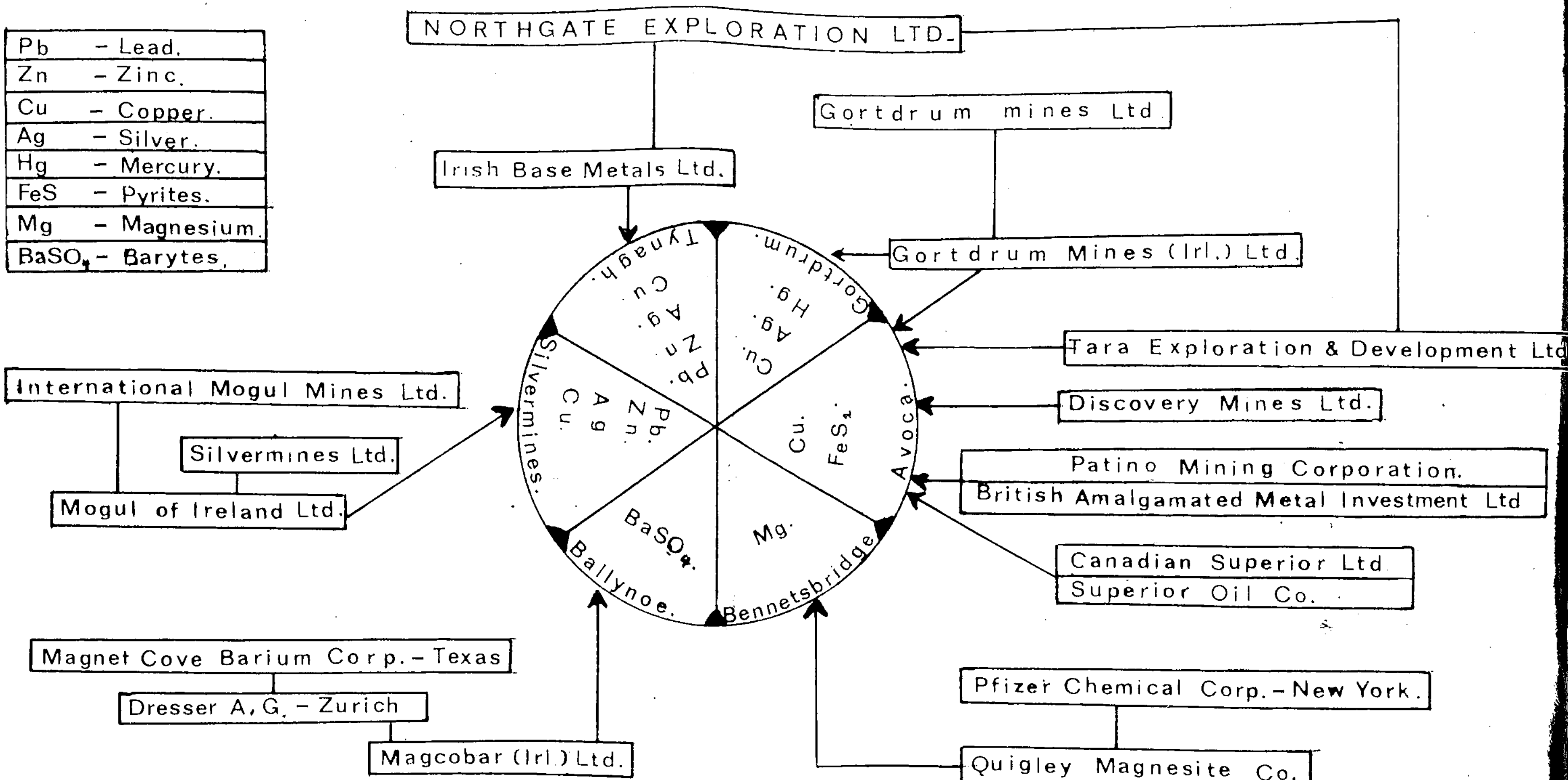
N - Northgate Group
M - Mogul Group
R - Rio-Tinto Group

By Mid I970 7,324 sq. miles of Ireland had been divided up between various foreign mining corporations for the purpose of mineral prospecting (I). Three years earlier it was less than one third that number. The rate of issuance is forever accelerating.

Prospecting licences for mineral exploration are granted under the "Petroleum and other minerals Developments Act" I960. Under the agreement made between the Minister for Industry and Commerce and the various mining corporations a graded scale of Royalties, not exceeding 9% of profits, is payable to the Irish Gov., that is,9I% of net profit goes into the pockets of the financiers in London and Wall street.

Three major corporate groupings and something in the region of a score of individual mining and exploration corporations were involved in prospecting by the middle of I970(2). The Northgate group operating through Gortdrum, Irish Base Metals and Anglo United Dev. Corp. held 252 Prospecting licences covering some 2,985 sq. miles. International Mogul Mines Ltd., through its subsidiary and associate companies, holds 33 prospecting licences covering 23I sq. miles. The International zinc Corp., Rio-Tinto, headed the third group and held I22 prospecting licences covering I,507 sq. miles.

The first large scale mineral exploration of Northern Ireland is now expected to get underway. The Minister of Commerce,Mr. Roy Bradford, announces that two prospecting licences have already been granted to the Rio Tinto-Zinc groups Rio Tinto Finance and Exploration over a hundred square miles in Co. Down and fifty square miles in Co. Tyrone. (Financial Times January 22 1971)



MINES IN PRODUCTION — 1970.

TYNAGH

Ownership and Ore Reserve.

Tynagh is owned and operated by Irish Base Metals Ltd.-(a wholly owned subsidiary of Northgate Exploration Ltd.). After less than two years prospecting and an overall exploration budget not exceeding a couple of hundred thousand dollars, Northgate uncovered a rich lead/zinc/copper/ silver deposit near Tynagh, Co. Galway. This was in 1961.

The estimated size of this deposit forever seems to increase. In 1966, it was estimated at 6,900,000 tons(1) At the beginning of 1970, after 2,530,357(2) tons had been mined the ore was 10,009,000 tons.(3) Adding ore extracted to ore still in the ground, we get an initial ore reserve of 12,539,357 tons. Northgate President P.J.Hughes, speaking at the Annual General Meeting of the Corporation in the Royal York Hotel in Toronto on May 26th 1970, said that "there is ample evidence to expect that further tonnage may be discoverd in this favourable structural environment."

Projecting an annual extraction rate of 700,000 tons, the Tynagh ore reserve will run out in mid I983. It should be noted that in accordance with the provisions of the I967 Finance Act no income tax or Corporate income tax is due on profits earned at Tynagh until late I985, that is, two years after the ore reserve runs out.

Of the 9,299,000 (4) tons of ore still in the ground on December 3Ist.I970, 7,599,520 tons was underground ore with the remaining 1,699,480 tons ready for open pit mining. The average lead/zinc/copper/silver contents being 5.5% 4.5% 0.4% I.I02 ozs per ton respectively.

Profits Past and Projected

Net profit for the period I965 (when production began) to the end of I970 was 36,628,000 dollars (£I5,26I,666).(6)

It should be noted however that this is net profit. The operating profit over this period was $46,974,000 (7)(£I9,974,750). The difference, £4,7I8,684, is composed mainly of two items- depreciation and "Amortisation of preproduction expenditures". Let us look at these in more detail.

Depreciation of fixed assets has been recorded at rates bearing in mind the expected life of the assets and the life of the ore reserve - $I,300,000 (8) per year. This will continue over the life of the mine.
Amortization of pre-production expenditure, unlike the depreciation allowance, will be terminated at the end of open-pit mining. What this means is that all pre-production expenditure will have been paid off by late 1972 or early 1973. In the past this item has varied from $500,000 (£208,333) to $800,000 (£333,333) (8)

After 1972 this sum will be transferred to net profit. Against this must be balanced the additional operating cost of underground mining after 1972. By the end of 1969 Northgate had invested$1,155,000 (£481,250)(9) in the development of the underground mine. It is estimated that $6,600,000 (£2,777,777)(9) will be required to complete this development. This cost shouldbe financed out of the operating profits over the next few years without depleting net profit.

Estimating the life of the mine to be in the region of 12.5 years (1971) and the annual net profit to be 8½ mill. dollars and,adding this to the $36,628,000 dollars (£15,261,666) already earned, we come up with a total net profit over the life of Tynagh of approximately $143,128,600 (10)(£59,636,666).

This profit projection is reflected in the appreciation of Northgate's equity. If the value of Northgate's 5,154,000 shares is estimated at the 1958 high (stock exchange, Toronto) we arrive at a figure of 3,504,856 dollars(£1,460,035). If we do the same for 1970 we come up with a figure of 92,775,600 dollars (£38,656,500)[11]. This represents a capital appreciation to shareholders of 2,650%.

It would seem reasonable to apply an annual discount rate of 10% to the future profit flow in order to express its value in terms of present prices. If this is done, we find that the present equity value of the company is not disproportionate to the discounted future profit flow.

SILVERMINES

Ownership and Ore Reserve

The Silvermines complex near Nenagh, Co.Tipperary, is operated by Mogul of (Ireland) Ltd., which was incorporated as a private company in March 1964. Mogul of Ireland is 75% owned by International Mogul Mines of Canada. The other 25% equity stock in Mogul of Ireland is owned by Silvermines Ltd.

The Silvermines complex was brought into production on May 20th, 1968, with a daily capacity of 3,000 tons. During the period ending December 31st, 1969, 1,470,127[1] tons of ore had been mined.

On 31st December, 1969, an ore reserve of 12,500,000 tons, containing 7.3% Zinc, 2.8% Lead and 0.9oz.per ton silver, was still to be mined. This figure, taken in conjunction with the 1,470,127 tons already mined, gives an initial ore reserve of 13,970,127 with an approximate average zinc, lead, silver content of 6.0%, 3.0% and 0.70 oz. per ton respectively. No taxation, income or corporate, is payable on profit earned at Silvermines until May 1988; seven years after ore reserves run out.

Profits: Past and Projected

Because Mogul of (Ireland) Ltd. is a private company it is not obliged to publish an annual report. This being the case net profit must be estimated from the data available from similar operations - such as at Tynagh. Let us compare the two - Silvermines and Tynagh.

Tynagh's initial ore reserve was approximately 12% smaller than that of Silvermines. Metal content (averaging 6.0% zinc, 3% lead and 0.7 oz. per ton of silver at Silvermines, as opposed to 4.5% zinc, 5.58% lead, 0.47% copper and 1.10 oz. per ton silver at Tynagh) is in terms of price of pure metal extracted per ton, approximately equal. Thus Silvermines is approximately 12% larger than Tynagh. This being so, and given the higher initial capital cost of bringing Silvermines into production and the higher operational costs of underground mining, net profit over the life of the mine should be between 144,000,000 dollars (£60,000,000) and 152,000,000 dollars £66,500,000)(3).

A closer look at Silvermines Ltd. must be taken at this stage. Is it the exception that it seems? Is it, in fact, an Irish Company?

It was incorporated in Ireland and has some Irish citizens as directors, but to get a clear understanding as to where the power lies it is necessary to analyse the list of shareholders(4). Silvermines' issued share capital consists of 8,180,527 stock units of 1/- each. Among the smaller (less than 15,000 shares) subscribers to Silvermines' stock approximately 25% are foreign When it comes to examining the larger shareholders we find nearly all of them to be foreign. A short list will suffice: Baron Glenconnor (British) holds 510,000 shares. Draper, Dobie and Co.Ltd. (Toronto) hold 842,541. The Midland Bank Ltd. hold 120,000 shares and the Bank of Scotland 1,073,251 (both in trust). Tennant Securities Ltd. (London) hold 725,000, while a score of other foreign interests hold lots of 20,000 to 90,000 shares. These large shareholders between them own 3,500.000 shares, or 43% of Silvermines equity. This, taken in conjunction with 25% of small holdings held by foreign interests gives effective control of Silvermines to foreign interests. Silvermines can be treated in the same way as Northgate, Mogul etc.

According to the Irish Times (20/1/71), a statement from Mogul announcing a new ore strike near the existing mine at Silvermines is iminent. On January 19th Mogul's shares rose by 1 dollar (from 10.37 dollars to 11.37 dollars) in anticipation of the announcement. Like Tynagh's, Silvermines deposit, forever seems to increase.

GORTDRUM

Ownership and ore Reserve

Gortdrum is operated by Gortdrum mines (Ireland) Ltd., a subsidiary of Gortdrum mines of Canada, which Northgate explorations Ltd. acquired in August 1970.

On December 31st. 1969 (1) 2,513,200 tons (averaging 1.33/% copper and 1.02 oz. silver per ton) and 1,003,200 tons (containing 0.65/% copper and 0.85 oz. silver per ton) were stock piled. Adding to these sums 1,000,000 (2) tons extracted between July 1967 and December 1969, we derive an initial ore deposit in the region of 4,500,000(3) tons. Over the life of the mine it is estimated that between 700,000 and 900,000 lbs. of mercury will be obtained.

As of December 31st. 1970 the estimated life of Gortdrum was six to seven years. (Note that all profits from Gortdrum are tax free until July 1987).

Profit

Over the life period of the mine it is projected that a net profit of 14,687,000dollars (£6,119,626) is realizable (4).

The share appreciation of Gortdrum, though not as massive as Northgate's, is none-the-less extremely great. At par, Gortdrum's equity can be valued at $ 3,860,222 (£1,608,429) (5). However by mid 1969 share dealings were taking place at 5 times the par value, which gave Gortdrum's equity a value of 19,301,000 dollars (£8,041,666) (6). Grant Johnston $ Co. Ltd., of the CAnadian and Toronto Stock exchange was advising its clients, on July 14th 1969, that the present value of Gortdrum Mines was estimated at $ 7.00 per share, and that at a price/earning ratio of 10 times the 1969 earnings estimate, the selling price would be 7.50 dollars - $ 10.00 per share. Thus share appreciation can be estimated at anything between 500/% and 1,000/%. It should be noted that thlis figure puts an equity value on the company far in excess of the projected profit outlined above and assuch indicates a possible underestimation of profits.

AVOCA

Ownership and .Ore Reserves

Avoca was first brought into production in 1958. Mianrai Teo, the state prospecting company, uncovered sizeable deposits of copper and pyrites as early as 1954. In 1956 St. Patrick's Copper Mines, a wholly owned subsidiary of Irish Copper Mines Ltd., which in turn is a subsidiary of International Mogul Mines of Canada, leased Avoca from the Minister for Industry and Commerce for a period of 21 years.

It was estimated that over a period of four years, given an annual extraction rate of 1,000,000 tons of ore, £5,000,000 would be made in profit.

It is interesting to note that Avoca was handed back to the Minister for Industry and Commerce in mid 1962, after International Mogul Mines declared that St. Patrick's Copper Mines Ltd., was pulling out. Between 1958 and 1962 the IRish Government gave £2.5 million to the Avoca operation. Mogul invested only £2m.

Between 1966 and March 1969 an option was taken on the property by a consortium of Canadian firms. After extensive exploration Avoca Mines Ltd. was formed in Toronto, to mine the estimated 8,700,000 tons of ore [2] (containing 1.0/% copper and 7.3/% pyrites). Avoca Mines (Ireland) Ltd., a wholly owned subsidiary was to be involved in the extraction stage.

Discovery mines, whose Northwest territories Gold Mine, was becoming exhausted, took a 47/% share in Avoca Mines Ltd. The Patino Mining Corporation, Superior Oil Co., and Northgate, through its subsidiary and Associate companies, Gortdrum and Tara respectively, each took a 10/% interest.

Between 1958 and 1962 3,142,543 [3] tons containing 0.75/% copper were mined adding the 1958/62 extractions figure to the existing ore reserve, an initial ore deposit of 11,843,743 tons can be deduced.

With production commencing at the beginning of 1971, the estimated life of the mine is 11 years. No tax is payable until October 1990.

Profits

Because of the higher metal content in the present ore reserve (1.0/% copper and 7.3/% pyrites as opposed to 0.75/% copper and 7.3/% pyrites in the 1958/62 ore mined), it is projected that over the life span of Avoca a net profit of about £10,000,000 will be forthcoming[4].

BALLYNOE

Ownership and Ore Reserve

Ballynoe is operated by Magcobar (Ireland) Ltd., for Dresser A.G. (Zurich), which in turn is operating on behalf of Magnet Cove Barium Corporation, Houston Texas.

Barytes have been mined at Ballynoe since 1963. Production increased rapidly until by 1966 125,000 tons of Barytes was mined. By 1970 upwards of 170,000 [1] tons were mined. In 1966 it was estimated that the existing ore reserve was enough to ensure a life for Ballynoe of about 20-25 years[2] - that is, an initial ore deposit of not less than 3,5000,000.

The quality of the Barytes found is such, that no washing or other form of 'benification' is necessary. According to Tara's Managing Director, M.V. O'Brien, the Ballynoe deposit is "possibly the best deposit in the world". [3]. Certainly production costs are minimal. Less than 30 men are employed at Ballynoe.

Barytes, with a specific gravity of 4.3/%, is used in oil and gas well drilling. Most of Ballynoe's Barytes find its way into the American market after being shipped from Foynes.

In January 1971 the projected life of the Ballynoe mine was 14 years.

Profits

Because Magcobar (Ireland) Ltd. is a private company, statistics are hard to come by. However, for the first nine months of 1969 Silvermines Ltd., from which the Ballynoe property is leased, was paid £52,696 in Royalties. Over the life of the mine these Royalties alone would amount to £1,475,000 (4).

The Barytes mined at Ballynoe varies in purity between 83% and 89/%. Crude Barytes is sold on the open market at around 8.50 dollars (£3.10.0) per ton. Ground Barytes sells on the open market at between 31 dollars and 36 dollars (£12.10.0 ' 14.10.0) per ton. A Magcobar spolesman who was interviewed over the phone although unwilling to give specific information on corporate finance, states that the greater part of the Ballynoe Barytes is of the ground variety. This being the case, given the minimal cost of extracting and crushing the Barytes, it is estimated that, with 50/% of the Ballynoe ore being sold as crushed and the other 50/% as crude, an average profit in the region of £4 per ton seems likely.

Over the life of the mine it is thus projected that a net profit in the region of £14,000,000 will be forthcoming.

BENNETSBRIDGE

Ownership and Ore Reserve

The Bennetsbridge dolmite deposit is mined by the Quigley Magnesite division of the Pfizer Chemical Corporation of New York. Production at Bennetsbridge began in mid 1970 with a projected annual extraction rate of 230,000 tons of crushed dolmite.

According to the Irish Times the Bennetsbridge deposit consists of top quality dolmite with at least 75 years supply (2).

The crushed Dolmite is transported by rail to Dungarvan, Co. Waterford, where it is chemically treated with salt water to produce 75,000 tons of high purity 93% - 95% Magnesium oxide per year (3). The Magnesis (the more common the name for Magnesium oxide) is then transported to Cork, where 80% is shipped to America to be used in the production of Refractor materials for lining steel furnaces and for preparing Magnesia chemicals used in fertilizers and synthethic rubber.

Pfizer owns a company, Roofchrome Ltd., which manufactures refractor materials in Cork at the Tivoli Industrial Estate.

Profit

Quigley Magnesite, being a private company, does not have to produce an annual report. It is therefore necessary to estimate its net profit past and projected. This is by no means easy.

The major cost component involved in the making of sea-water magnesium is the initial capital outlay required for the processing plant (at Dungarvan the plant cost $ 10,000,000, or £4.1 million) [4]. The cost of extraction, transportation, processing and plant depreciation allownace is certainly not higher than 60% of the £37 (6) per ton which sea-water Magnesium is now fetching on the open market. Over a period of only 20 years, not the 75 years supply said to exist at Bennetsbridge, a profit of £21,000,000 [7] will be recorded by Pfizer.

PRESS COMMENT

£120m. TO GO ABROAD FROM TYNAGH MINE

Tynagh mines will produce £120,000,000 of ore in the next 15 years. The mines have been in operation at Tynagh since 1965 yet Senator Jack McQuillian could state recently: "The only benefit for Ireland from this £5,000,000 concern was the employment local people got from it." ....

The people living near the Tynagh mines themselves would seem to qualify further what the Senator has claimed because during the last few months they have been engaged in a campaign with Galway County Council and the Government demanding their share of the mine's wealth.

The United Irishman
Nodlaig 1968

MINING

Towards the end of last term a "resources study group" was set up, mainly composed of Trinity students in disciplines ranging from Economics and Law to Geology.

The purpose of the group was to expose the massive profiteering which was being conducted by two Canadian firms who hold the major share of the ownership of the four mines in the country.

Following from the findings, the Trinity delegation at the U.S.I. congress in Killarney proposed the following resolution which was recieved with almost unanimous acceptance; "That Congress condemns the sell out of almost all the mineral resources of the country to foreign business firms and is prepared to actively and financially help in revealing the extent of the failure on the part of the Government to the Irish people, and furthermore calls on Irish technologists, members of political parties and the general public to demand the nationalisation of all mineral resources and processing plant".

Liason- (TCD)
20th January, 1971

COMMENT
by Frank Ward

THE point was made during the week that foreign profit in the mining industry in Ireland would be between £250 and £300 million even after an initial investment of £25 million was deducted.

The point was also made that in the last five years Tynagh mines had produced £15 million profit after an initial investment of £5 million while in its life the mine could be expected to produce £60 million profit without a penny of it for tax.

I know it can be dangerous to play around with figures on that scale and that it can be misleading to generalise. But it does make you think. So I make it our thought for the week.

SUNDAY PRESS - 24-1-71

TAKING a leaf out of the Republic's taxation code in respect of mining, Stormont last year passed the Mineral Development Act and is now beginning to cash in on the simplification which this Act brought to the mechanics of obtaining prospecting licences by centralising ownership of mineral rights in the Ministry of commerce.

So far 12 companies are in the field and the past week marked the granting of the first licence to be issued by the Ministry under the new regulations. It will enable Rio Tinto Finance and Exploration, a subsidiary of Rio Tinto Zinc, to investigate 125 square miles in Co. Down, including the Mourne Mountains and 50 square miles of Co. Tyrone and exploration is expected to get under way within the next few weeks.

THIS WEEK IN BELFAST

In view of the successes achieved by Northgate at Tynagh and by Tara at Navan it is not surprising that those companies should also be looking across the border and have filed applications.

The base metal type deposit such as lead, copper and zinc are the primary interest of the prospecting companies and it is estimated that there is a 50-50 chance of coming across deposits of these metals that would justify commercial development.

The Irish Times
25th January, 1971

DEFINITE FINDS NOT YET IN PRODUCTION 5

LOCATION	MINERAL DEPOSIT	CORPORATION	PROJECTED PROFIT
Navan, Meath	'one of the biggest strikes in Irish mining history, reported to be even better than the now firmly establish -ed Tynagh mines...' (I) : mineral-isation ranging from 7% to 43% lead-zinc. Equity value of Tara ~~estimated at £I5m in DEc. I970.~~	TARA	If projected ore reserve proves accurate then profit return over life of mine will be in £60m region.
Vale of Aherloe, Co. Tipperary.	3,000,000 tons of ore, containing I.2% copper, I.66 oz of silver, per ton.	DENISON MINES	If further drilling turns up 'periphery ore' then it could well be in the 'gortdrum category'
Moate, Co. Westmeath.	I25,000 tons containing 6.4% zinc, I% lead.	GORTDRUM MINES	'Of doubtful commercial value'.
Aclare, Co. Carlow.	2,000,000 tons if lithium deposit.	NORTHGATE	
Ballinalack, Co. Westmeath.	'Might well be another Navan'(2)	SYNGENORE	If "Financial Times" is correct then it will produce profits as projected at Navan. As far as a firm projection concerned we feel it is too early to say.

SMELTING

AT PRESENT:

The Smelter Corporation of Ireland Limited was formed in 1968 with a share capital of £300,000. It is controlled by Northgate with a 70% holding and Tara Exploration with 30%. Tara is an associate company of Northgate. Managing director is Mr Sidney Filer who was previously employed by Imperial Smelting Ltd. Under a 1967 Act S.C.I.L. were granted a licence to operate a smelter.

Not only are our mines totally owned by foreign interests but also the smelting process is proposed to be wholly owned by those same interests. As will be seen, the smelter is highly important, both in itself and the ancillary industries which will depend on it. £7m. has been mentioned as the government grant towards this venture (S.C.I.L. have not denied this figure). In return for £7m. and all the profits repatriated to Canada, Ireland will only receive employment for 400 persons in the smelter.

In processing the ore to metal, the value is upgraded and more than doubled. With a yearly output from the mines of 120,000 tons of zinc (see table of extraction of zinc and other metals) this represents a minimum of £7.7m in terms of value added to the ore. There is also the lead, silver and copper residues from the smelting process which are to be sold to continental smelters. High quality cadmium metal is also produced directly from the process. The value added from these processes plus a Government grant of £7m must ensure an enormous profit for the smelter plant.

S.C.I.L. also propose to refine lead/zinc ore from Greenland in the Irish Smelter. (Northgate financed exploration of Greenland using profits from Irish mining.) At the present rate of extraction, the known lead/zinc ore reserve will last for 12-15 years. However, in view of the Navan lead/zinc mineralisation find, and Mr. M.V. O'Brien's (Manager of Tara Exploration) expectation that a major (in relation to Tynagh) find will recur every 2 years, the smelter will be operational for a long time. An additional factor is that Ireland is situated on the International Shipping routes and the smelter could be operational on foreign ore supplies well into the 21st century.

The smelter as proposed by S.C.I.L. is based on the Lurgi electrolytic zinc refining process. It consumes 35MW and produces zinc at 99.995% purity. The number employed will be 400 and cost of plant is £20m. S.C.I.L. have acquired a site at Little Island, near Cork City. There has been some objection in Cork to the siting mainly on environmental grounds.(2) S.C.I.L. claim that the electrolytic process is virtually pollutionfree, with no possibility of breakdown. However, in any technical process one cannot absolutely say that plant breakdown will not occur. In plants similar to the proposed smelter (Eitrheim, Norway, and Datteln, West Germany) breakdowns have occurred, with resulting damage to the surrounding country-side due to the increased emission of sulphur dioxide and sulphuric acid fumes. S.C.I.L. propose to dispose of 200,000 tons of solid residue consisting of "complex solids of ammonia and iron" over a ten year period. There has been no mention of whether it contains such hazardous elements as arsenic, mercury, lead, zinc and/or fluoride salts. These residues are transferred to a lagoon - with no precautions to stop seepage into the estuary and water table. The zinc dust emission levels (proposed by S.C.I.L.) are greater by 18% than the average emission reported by the British Government Inspector for such plants.

At present in the Free State there are no facilities for constant monitoring of pollution. This is typical of the unplanned character of Irish industrial development, with S.C.I.L. giving lavish promises ("We are employing the worlds' leading metallurgical engineers and designers" Mr. Filer) ,(I), yet there are at present no means to enforce any anti-pollution laws - because there is no means of checking whether there is pollution, and if so, to what level.

The suitability of Little Island as a site is also questionable for other reasons: In the Cork City area demand for skilled technicians is already outstripping supply. The Smelter would be sited on valuable building land. Cork relative to other areas in Ireland is not an underdeveloped area.** There are several petro-chemical plants in the process of being constructed in the Cork Harbour Area.

In summary of this first section, the government's action on the smelter must be termed reprehensible. It is allowing a large project to be set up in an umplanned manner, unrelated to the real needs of Ireland. The smelter will be foreign controlled, with resulting repatriation of of the considerable profits. It will mean an extension of the present foreign monopoly of mining into the metal refining area.

** There has been a 5 - 9% increase in population in the Cork area over the period 1951 - 1961, with a decline of 5 - 9% in Connacht over the same period.

OUR VIEW:

We consider that a state-run smelter should be constructed, with resulting gains in balance of payments. The profit would be used to finance uncreasing expenditure in health, education and welfare. The state would have control of this key section of industry.

When the enormous potential of ancillary metal industries is considered on the one hand, and the social needs of the Irish people on the other, there is a case for siting the smelter in an underdeveloped area. The smelter,(as run by the State Mining Corporation) could be sited in an area with large unemployment and high emigration. It would be built on land with little agricultural use - with genuine pollution prevention devices and safeguards installed.

With Aliwminiwm Môn's precedent for landscaping their proposed Aluminium Smelter in Anglesey in mind, Landscape Architects would be specially employed to design the setting of the plant, to reduce any disfigurement of the surrounding countryside. The wishes of the local people would be respected from the beginning.

Considering the position of the mines in Ireland, the smelter could be sited in an underdeveloped area west of the Shannon.

The ancillary zinc metal industries which would be built adjacent to the smelter, would have the potential to contribute a large proportion of Ireland's GNP - and exports. Their importance cannot be stressed enough. The value of the metal, when worked into finished products is increased many times. With our enormous ore reserves, these spin-off metal industries can be a realistic way of building up a planned, integrated engineering industry and thus break away from dependance on agriculture (which is a declining industry). We wish to emphasise here that Ireland already possesses most of the skills necessary to operate these industries. We can purchase any skills that are necessary from abroad. These spin off industries would be state run, in association with the Mining Corporation. The industries would be initially financed with the capital from the mining sector.

The potential of ancillary metal indu stries entails the emergence of a sizable new town where the workers would live.

We strongly urge that further investigation be undertaken on the possibility of siting the smelter, the ancillary industries and a new town in a Gaeltacht area. (Presumably Conamara - with its harbours, nearness to the Galway railhead and power-grid, would be the most suitable). It would be an exercise in extensive planning with special attention to ensuring that the culture of the area is fostered.

Instead of declining, (basically due to the capitalist system, which takes no account of social needs), the Gaeltacht could rise again.

So the alternatives are: An extensive industry geared to the needs of the ordinary Irish people - or a foreign owned smelter plant, with the enormous profits repatriated to North America.

Zir
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	1966	1967	1968	1969	1970 (1)	1971 (2)
Zinc	21,435	35,489	62,803	107,473	115,000	120,000
Lead	37,122	58,765	63,812	58,937	80,000	84,000
Copper	1,155	5,950	8,776	8,196	9,500	14,000
Pyrites	—	—	—	—	15,000	85,000
Magnesia	—	—	—	—	25,000	75,000
Silver	36.1	55.2	59.4	57.4	60.0	58.0
Barytes	100,000	120,000	125,000	140,000	165,000	178,000

(1) Estimates for 1970.

(2) Aprojection from past trends with reference to up to date information.

(3) All figures express pure metal in tons.

EXTRACTION OF MINERALS

INDUSTRIAL DEVELOPMENT OPPORTUNITIES

IRELAND

IRELAND: AS SEEN BY THE I D.A.

ENVIRONMENT FOR ENTERPRISE

Ireland has shown that when a country really hungers after progress, things get done. Her aspirations towards higher living standards through industrialisation have already been given shape and substance. Stagnation, however, must still be shunned, as external competition grows more intense year by year. State policy, therefore, is fully committed to broadening and improving the industrial spectrum by all possible means.

As a nation, Ireland is wedded to the free enterprise system. Taxation, legislation and social climate are all so shaped as to offer the private entrepreneur unimpeded scope for development.

Companies in Ireland may be wholly owned by non-nationals. They are subject only to the same regulations as apply to Irish-owned companies. There is a degree of freedom from Government interference in their operations that is not matched in most other Western democracies.

Ireland continues to strive for an even better dynamic in her approach to industrial development. There is a constant and enthusiastic debate on possible means to infuse the economic environment with still stronger stimulants to success.

OIL EXPLORATION

The extent of Multinational corporative penetration in the field of mineral exploration has already been documented. Let us now examine the field of oil and gas exploration.

'No oil!,no gas!; or 'if there is oil or gas why not allow international corporations develop them?'-these are the attitudes of those who legislate. As it was a decade ago with minerals so now with oil.

To comprehend the extent of corporative penetrations let us examine the history of oil and gas prospecting in relation to the issuence of exploration licences. These licences in relation to oil and gas prospecting are granted under Part 2 of the'Petroleum and other Minerals Development Act, 1960' as applied by the Continental Shelf Act, 1960. On March 24th 1960, Ambassador Irish Oil Ltd. was granted an exploration licence authorising it to explore for petroleum, for a period of five years, in an area comprising the whole of Ireland, including the sea bed and subsoil which lie beneath the territorial waters and the high seas, under the control and jurisdiction of those in Leinster House. The consideration for the licence was £500.

Following the'voluntary liquidation'of Ambassador Irish Oil Ltd. on June 19th 1961, the exploration licence granted in March 1960 was terminated. Anew exploration licence was issued in the joint names of three American oil companies Ambassador Irish Oil Co. of FortWorth, (Texas), Continental Oil Company of Ireland Ltd.,Houston, (Texas), and Ohio Oil International of Ireland Ltd., (later renamed Marathon Petroleum (Irl.) Ltd.) of Findlay, Ohio.

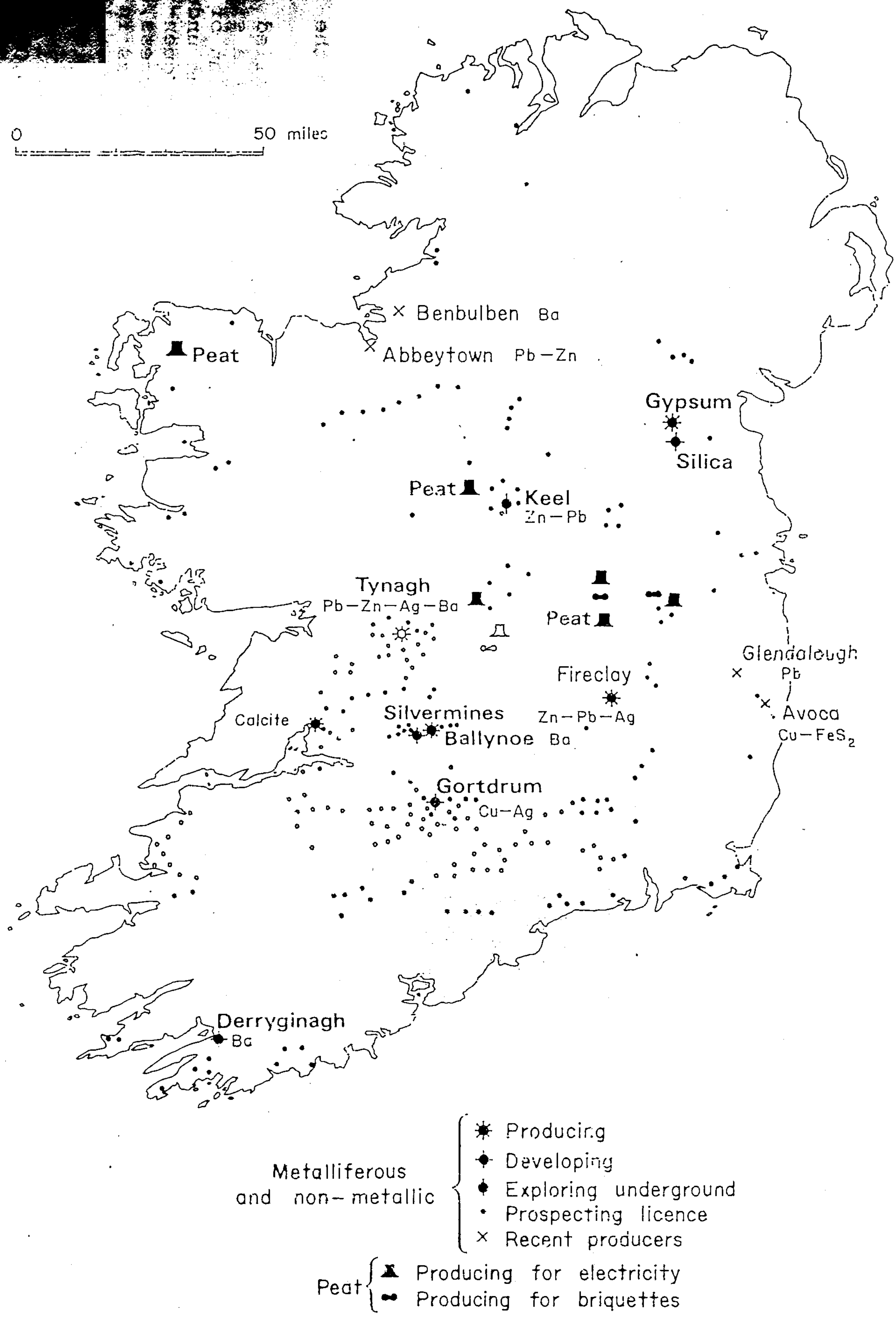
The licence which was subject to a 'consideration fee' of £10 was valid for the period commencing 19thJune 1961 and ending March 28th 1965. On November 2nd 1964 Ambassador &Continental Oil assigned its 37½% share to Marathon. Marathon Petroleum (Irl.) Ltd., whose parent, Marathon Oil Co. of Ohio, has interests in over 20,000 oil and gas wells throughout the world, had become monopolist in oil exploration in Ireland.

By agreement with the Government on 30th July 1969 Marathon's exploration area was amended to include the whole of Ireland (16,961,000 acres,) the sea bed and subsoil which lies beneath the territorial water, and areas of the Continental Shelf comprising an area of 17,515 sq. miles.

Since then Marathon has laid emphasis on specific sectors of the Continental Shelf under Irish jurisdiction and given up some of the land and territorial water areas. Not surprisingly, when we recall where oil and gas have been found in the North Sea.

On May 7th 1970'Offshore Petroleum Lease No. 1' was issued Marathon for 21 years for a consideration of £25,875 per year , for the first six years and thereafter for the sum of £51,750 peryear. This lease however, is more than a permission to prospect for oil and gas. It is an agreement between Marathon and the Dublin Government stipulating that all petroleum found will be divided between the two parties in the ratio 87½ to 12½ - the 87½ going to Marathon, the 12½ to Ireland.

On January 5th 1971 the Irish Times carried an article reporting that Marathon had found 'some evidence of hydrocarbon in its oil drilling operations' and quoted Marathon V.P. G.A.Young, that it is 'enough to give us encouragement'.



Map showing mineral production, development and exploration localities in Ireland as at mid-February, 1966

PART 3

"Funds derived from the sale of mineral resources should be converted to other forms of capital that are of equal or greater value particularly into basic industrial installations and into power, transportation and communication systems. Conversion of higher grade resource assets into current living expenses by means of export can lead to tragedy". Harrison S.Brown. (1)

ENCLAVE CHARACTERISTICS 8

The history of mining is rich in folklore about gold rushes, sensational strikes, luck chance, and ruin; with the result that even today people still tend to think of mining and prospecting as being governed mainly by fortune. This gives rise to the view that when someone hits it rich he has the right to take all - whatever the sum and irrespective of the needs of the community. Thus, the argument is heard that since mining is a speculative and a risky business, foreign prospectors,who stake a claim,have a right to extract large profits from Ireland, - even if the consequence of this is an enclave development.

However, because of the advances of modern technology, mining is no longer such a risky business, (see the section on exploration in Chapter 9). Developments in air-borne prospecting instruments and geochemisrty have made it possible to explore thoroughly for relatively little cost, and low risk. This should be borne in mind when reading the rest of this chapter, which quantifies the impact of mining on the Irish economy.

Two main points emerge. Firstly the ridiculously low percentage of the Gross Output (value of pure metal) entering the Irish economy. Secondly, even though Ireland is in great need of developing an independent and self-sustaining industrial base, which could be a spill-over from the mineral processing stage, the Government is allowing Europe and North America to use Ireland's industrial potential to generate enormous wealth for themselves.

Since Tynagh came into production late in 1965 about $113,000,000 (£47,082,000), at metal recovery (gross value) has been generated (1). Calculating the wages paid (2), royalties'given' to the Irish Government (3), Smelting, shipping and marketing expenses (4), operating expenses (5), depreciation allowances (6), exploration expenses (7), net profit (8), amortization of pre-production expenditures(9), and taxation(10), we find that the percentage of gross value generated at Tynagh which finds its way into the Irish economy is only 27.77%.

Tynagh cannot be seen in isolation. A detailed breakdown of Silvermines will give almost a similar percentage, because(with the exception of the fact that the extraction process is an underground one in Silvermines, as opposed to opencast mining at Tynagh), the production process, structure of ownership etc. are the same as in Tynagh.

With ore reserves as outlined in Chapter 4, this means that Tynagh, over its life, will generate a gross value of approximately $400,000,000

(£166,000,000). Less than $110 million(£44.8m.) of this will ever find its way into the Irish economy.

Since the Silvermines'deposit is greater than Tynagh's and all indicators show Navan to be at least as big as Tynagh (not to mention'smaller' mines such as Gortdrum, Avoca, Ballynoe, and Bennetsbridge) it is projected that, over the life span of these three mines alone, between $1,000,000,000 (£416,000,000) and $1,200,000,000 (£483,000,000) (gross value) will be generated, but less than 30% of this will in fact be added to the Irish National Income. The other 70% will contribute to the economic growth of the big **Western** Industrial Powers.

> **17 Presence or absence of class antagonism**
>
> Ireland is singularly free from class antagonism; there is no popular movement to exploit the division between worker and management. Few countries are as united behind the concept of democratic capitalism as Ireland. There is no Communist party in Ireland.

-from the I.D.A.

WILL IT WORK?

1. The" Lack of Funds" Argument.

The cost of bringing the six mines (outlined in Chapter 4) into production was in the regionof £23,000,000 (1). This represents a capital outlay of less than the cost of three Jumbo Jets. Add to this thecost of a systematic prospecting programme by a State exploration company ,and a total outlay of not more than £30 million would be required. It should be noted that this outlay was made over a period of ten years, and as such would have constituted but a small proportion of Government expenditure in any one year . In 1956, when speaking of the Avoca Mine , Sean Lemass said:-"so far as finance is concerned , I do not think that it would have been impossible to have raised , here(in Ireland) the money required for the development....on the scale contemplated by the Canadian companies."

2. The "Lack of Expertise" Argument.

It has been claimed that,if the Irish Government were to take over the mines,there would not be sufficient technical competence and expertise available to operate them. On the contrary, at the present time there are many Irish graduates now trained in mining techniques, working for International companies throughout the world. With suitable employment oportunities here in Ireland, it is to be expected that many of these would return. Even if this source does not prove to be fully adequate "there is no reason to think that an Irish company, charged with the development of these minerals could not obtain the technical advice needed,from a firm of consulting engineers in Britain, Canada and the U.S.A. or any other part of the world."(2)

The case of the skilled employees is somewhat similar. Foreign workers are imported,in many instances to fill the technical positions. But "in so far as we depend entirely on skilled foreign executives and technicians for our industrial development, then the chance of training our own people in these spheres, and are giving the knowledge and technical competance which might lead to subsequent development, is reduced." (Sean Lemass.February 8th 1956 Dail Eireann)

3. The Question of State Marketing.

It has been argued that state marketing boards would be unable to find sufficient outlets for our minerals. Examples from other countries prove this to incorrect:- Indonesia is the largest oil producer east of Suez. The productive capacity of Indonesia is already 50% of that of the middle east producers and by 1972 it will have a daily output of two million barrels. The Indonesian State Marketing Board have had no difficulty in finding outlets for this export, (Agip, Continental Oil, Compagnie Francaise des Petroles, and Mobil all buy from Indonesia).

The state refining company in Peru has signed a trade contract exporting 50,000 tons of refined copper to Yugoslavia.

With a government willing to withstand the pressures from international corporations, Ireland could realign her trading relationships so as to ensure the most beneficial markets.

4. The'fluctuating base metal price'argument.

With lead and zinc constituting by far the largest part of Irish mineral deposits, only the smaller mines such as Avoca, and to a lesser extent Gortdrum would be affected by the extensive price fluctuations which occur in the copper market. Taking the overall price of the metal extracted from Tynagh, Silvermines, or possibly, in the future, at Navan or Ballinalack, an overall stability can be expected until the mid-1970s at least. According to the U.S. Bureau of mines, it is projected that an increase in demand "of between 50% and 65% for zinc and copper and 135%for lead" will occur between the mid-60s and the mid-70s. There is no reason to believe that this rate of growth will not continue afterwards.

5. The"Inefficient Nationalized Industry" Argument.

It is often said of nationalised industries that they are less efficient than those that are privately owned and that they impose the cost of their inefficiency on the tax-payer. In fact, the obligations of public industries to the society often means that their profits are reduced, (e.g. the E.S.B.'s commitment to rural electrification and the use of peat in power generation,). Yet in the year 1969-1970 the

E.S.B. recorded a surplus of £188,757; Aer Rianta £1,750,772, Aer Lingus a net profit of £644,000, Comhlucht Suicre na hEireann Teo a net profit of £300,000 , and Bord na Mona a record trading profit of £1.8 Million. These profits are contributing to the national budget rather than to the incomes of a few shareholders either at home or abroad.

6. The Extractive Industry Insecurity Argument

Due to the advances made by modern technology, mineral exploration need no longer be a'hit and miss'process.

Given the existence of the aerial camera, the airbourne magnetometer (measures anomalies or irregularities in the earth's magnetic flux, attributable to buried mineral deposits), the scintillometer (measures the emanations from radioactive ores and is also used widely in oil exploration because the radiation flux above oil pools is often less than in the normal earth background) and the electromagnetic induction method (working on the same principle as the mine-detector), a systematic prospecting program covering the whole of Ireland could be initiated at little cost.

An airbourne survey would cost about £3 per linear kilometer or about £2,000 per 1000 sq. kilometers (6). If electromagnetic induction is added the total cost is £7-9000 per 1,000 sq. kilometers (7). To conduct such a survey of the whole Free State would involve an expenditure of only £512,000.

7. The attack on free enterprise argument.

If this pamphlet seems to be an attack on Free Enterprise, it is. The reason we attack 'free' enterprise is thatit is not conducive to freedom. Freedom is the right to basic neccessities and the control of one's own destiny.'Free'enterprise gives us emigration and unemployment and as such negates the very principles its proponents claim of it.

Ireland's mineral wealth is being eroded at an accelerated pace. This is not a unique phenomenon in the world. Other countries have already met this challenge in various ways. It is not uncommon for foreign mining companies in 'Third World' countries to be nationalised; even in countries where Western influence is strong. In Congo-Kinshasa, the Mobutu Government nationalised Union Miniere in 1967; albeit with compensation. The importance of this measure is illustrated by the fact that the Congo produces 10% of the World's copper. Before nationalisation 50% of the Gross National Product had flowed into the hands of expatriots.(1)

In another 'Western orientated' economy, Suharto's Indonesia, the recent oil agreements stipulate that the State is to take 65% of the production 2. The Peruvian military regime nationalised all the oilwells owned by the American International Petroleum Corporation within the past year. During the past few months the Allende Government in Chile has nationalised all that country's copper mines.

The foreign take-over of our mining industry is not an isolated event. Foreign Corporations now occupy the fastest growing sectors throughout our economy. Thus the situation arises where, instead of each factory being joined to others in Ireland by a series of mutually reinforcing links, so as to promote growth, these factories are essentially geared to produce components for their parent plants abroad. The inevitable result is that subsidiary plants in Ireland are liable to be closed down in the event of a recession in America or one of the other countries owning factories here. Our increasing dependence on the employment provided by these hybrid factories makes us liable to political pressure from international corporations and foreign Governments.

At present there exists two alternative paths open to this country . We can take control of our resources, use them to build an independent industrial base, and share the wealth thus generated among all the people (not just the few as at present) or we can allow the present situation to continue and reduce Ireland to the status of a neo-colony supplying Western Europe and North America with raw materials and components.

This latter 'alternative' is economically, politically and socially indefensible. Under it, the gross inequalities of the existing social order would be increased and much of the wealth created by the Irish people would be creamed off to shareholders of the various international corporations in London, New York Toronto and elsewhere.

The way ahead must be that of a state run industrial centre . The considerable surplus generated should be used to finance the development of a solid industrial base, tuned to the raw materials most readily available, which could stem the tide of emigration and eliminate the permanent pool of nearly 60,000 unemployed. Control over the mineral wealth of the country being essential for the fulfillment of this task,

WE DEMAND THAT:

---ALL FOREIGN INTERESTS IN THE IRISH MINING INDUSTRY BE NATIONALISED WITHOUT COMPENSATION (WHY SHOULD WE PAY FOR OUR OWN RESOURCES ?)

---A STATE MINING COMPANY BE SET UP TO PROSPECT FOR, EXTRACT, SMELT, AND MARKET THE MINERAL WEALTH OF THIS COUNTRY

---CONSIDERING (1) THE GEOGRAPHICAL DISTRIBUTION OF THE ORE DEPOSITS, (2) THAT A COASTAL SITE IS DESIREABLE, (3) THAT, WITH AN INTEGRATED NATIONAL ECONOMIC POLICY, IT WILL BE POSSIBLE TO CONTROL THE LOCATION OF SECONDARY INDUSTRY SO AS TO TAKE FULL ADVANTAGE OF THE CONSIDERABLE SPILL OVER EFFECTS FROM MINING, (4) THAT THE OVERALL ECONOMIC DEVELOPMENT OF IRELAND, AND NOT JUST PARTS OF IT, MUST BE A MAJOR PRIORITY---THE SMELTER BE LOCATED IN AN UNDERDEVELOPED REGION WEST OF THE SHANNON AND IF POSSIBLE IN THE GAELTACHT AREA

---IN THE EVENT OF ANY SHORTAGES OCCURRING IN PARTICULAR MINING SKILLS (BECAUSE OF THE EMPLOYMENT POLICIES PURSUED BY EXISTING INTERNATIONAL MINING CORPORATIONS) THE TECHNICAL PERSONNEL OF THESE CORPORATIONS SHOULD BE GIVEN THE OPPORTUNITY TO PARTICIPATE IN A CRASH PROGRAM TO TRAIN IRISH WORKERS IN THESE SKILLS AND IN THE SETTING UP OF A SCHOOL OF MINING IN IRELAND

---IN THE EVENT OF THESE CORPORATIONS REFUSING TO GIVE SUCH TECHNICAL ASSISTANCE WE SHOULD REASSESS OUR FOREIGN RELATIONS SO AS TO BRING IRELAND INTO CONTACT WITH THOSE GOVERNMENTS AND PEOPLES THAT WILL GRANT THE REQUIRED TECHNICAL ASSISTANCE WHILE AT THE SAME TIME REPECT THE RIGHT OF THE IRISH PEOPLE TO THE WEALTH OF IRELAND.

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George O'Brien: Economic History of Ireland, in the 18th Century.

Eileen McCracken: 'The Woodlands of Ireland! 1959. Irish Historical Studies. Sept.

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(1). Dail Debate on the Minerals Company Bill. Oct. 8th 1947.

(2). Dail Debate on the Minerals Company Bill. Oct. 8th 1947.

(3). Dail Question Time. March 10th 1955.

(4). Dail Debate 8th Feb. 1956

(5). Dail Debate 8th Feb. 1956.

(6). Dail Debate July 4th 1957.

(7). Patrick Kilroy: 'Companies Act 1963' published by the Institute of Chartered Secretaries.

(8). Patrick Kilroy: 'Companies Act 1963' published by the Institute of Chartered Secretaries.

Part B.

(1). Padraig Pearse 'The Sovreign People'.

(2). Dail Debate 8th Feb. 1956.

(3). Dail Debate 8th Feb. 1956.

(4). See Ref.7, Chapter 2 Part A.

(5). Financial Post Corporation Investment Service.- Toronto.

(6). M.V.O'Brien: Irish Geological Association Seminar. Jan 16th 1971. U.C.D. Belfield.

(7). Financial Post Corporation Investment Service.- Toronto. also, Northgate estimate at the end of the 3rd. Quarter 1970.

(8). The Northern Miner - Toronto, Sept. 10th 1970.

(9). As Ref. 6 above.

(10). As Ref. 6 Above.

(11). Irish Times special supplement on 'Quigley Magnesite', which appeared on the opening day of the Dungarvan Processing Plant. 1970.

(12). As Ref. 11 Above.

(13). Irish Press. December 4th 1970.

(14). Irish Times January 8th 1971.

(15). Financial Times, January 13th 1971.

(16). Dr.Williams-Director of the Geological Survey of Ireland, as in 6 Above.

(17). M.V. O'Brien , as in 6 Above.

(18). Report by the Minister for Industry and Commerce for the 6months ending June 30th 1970; in accordance with Section 77 of the Mineral Development Act 1940. and- Geological Survey of Ireland - State Mining and Prospecting Facilities- current 31st October 1970.

(19). Announced in Budget 1967.

Chapter 3.

(1). As in Ref 18 Above Chapter 2 Part B.
(2). As in Ref 18 Above Chapter 2 Part B.

Chapter 4.

(A) TYNAGH

(1) 1966 Concentration figures
3.4m tons. 4.8% Pb. 4.3% Zn. 2.2oz. Ag. per ton and 3.5m tons 9.2% Pb. 7.5% Zn. 3.4oz Ag per ton. 0.6% Cu.
('Review of mining activities in the Republic of Ireland' M.V.O'Brien pub.1966)

(2) Extraction figures.

Oct. 22nd 1965 - Dec. 31st 1965	70,000 tons	
1966 -	545,693	
1967 -	703,511	
1968 -	709,913	
1969 -	501,240	
1970 -	716,000	

(Estimated. Financial Post Corporation Investment Service. Toronto.
")
1970 - Northgate Annual Report (1969)

(3) Ore reserves - 31st Dec. 1969
10,009,000 (2,409,480. Opencast
(7,599,520. Underground
(Financial Post Corporation INvestment Service Toronto)

(4) Ore Reserve Dec. 31st 1970
9,299.000 (1,692,480 Opencast
7,599,520 Underground)
(Calculated)

(5) Mineral Concentrations Jan. 1st 1970
5.5% Pb. 4.5% Zn. 0.46% Cu. 1.15oz Ag. per ton. (Northern Miner "Toronto - Sep. 17th 1970)

(6) Nett Profit - 1965 - '69 (Financial Post Corp. Inv. Serv. T.
1970 estimates:-
Jan. - Jun (Northgate SemiAnnual Report
July - Dec. Projection Calculations)

(7) Operating Profit 1965-1969
1970 (Fin. Post Corp. Inv. Ser. Toronto. Northgate Semi Annual Report)

(8) 1966-1969 Depreciation + Amortization valves (Northgate Annual Report)

(9) Costs allocated to underground mining + projected costs for development of u/gd mine (Northgate Annual Report 1969)

(10). Total Nett Profits (calculated from 6 in relation to ore reserve)

(11) 1958 + 1970 'Highs' of share prices on toronto stock Exchange (Financial Post Corporation Investment Service - Toronto)

(B) SILVERMINES

(1) Tonnage of Ore extracted 20th May, '68 - 31st Dec. '69 (Canadian Mines Handbook '70

Ore Reserve remaining 31st Dec. '69 + Mineral concentrations (Canadian Mines Handbook '70+71)

(2) Initial Ore reserve + approximate mineral contents (calculated from 1.)

(3) Estimated nett profit of the mine in toto (over complete life span of mine) (Calculated from 2. in comparison with data from Tynagh as outlined above)

(4) Share breakdown by owner-ship of Silvermines Ltd. (List of share holders - Companies Office, 14, Earlsfort Terrace, Dublin 2)

C <u>GORT DRUM</u>

(1) Dec. 31st 1969 Ore Reserve: 2,513,200 tons, and stock pile of 1,003,200 tons (Canadian Mines Handbook '70-'71)

(2) Extraction figures - July '67-Dec.'69. approx. 1 million tons (Annual estimated extraction 500,000 tons)

(3) Initial ore Reserve - 4,500,000 tons (Calc. from 1 + 2)

(4) Profit estimated from capital flow since'67 in relation to ore reserve and metal content (Calc. from 3 + Research Dept. of Grant Johnston + Co. Ltd. Member of Canadian + Toronto Stock Exchange.)

(5) Gortdrum equity estimated at par. (Research Dept. - Grant Johnston and Co. Ltd.)

(6) Share price of mid 1969 (Research Dept - Grant Johnston and Co. Ltd.)

D <u>AVOCA</u>

(1) Sean Lamass: Projection of Avoca Profit over 1st four tax free years of operation (Dail Debate Feb. 8th 1956)

(2) Estimated Ore reserve at commencement of 1970 production (FinancialPost. 1970 Survey of mines - pub. by Maclean and Hunter - Toronto.)

(3) Estimated Ore Extraction 1958-62 ("The Northern Miner" Toronto Sept. 10th 1970)

(4) Estimated in relation to: Earlier Dail Projections (8th Feb. 1956). Present Ore Reserves, Metal content + prevailing copper + pyrite prices ("The Northern Miner" Toronto Sept. 10th 1970 + Dail Debate: 8th Feb. 1956 + Financial Post 1970 Survey.)

E <u>BALLYNOE</u>

Ore extraction figures for 1970 - calculated from Silvermines Ltd. Royalty receipt 30th Sept. 1970 (Silvermines Ltd. Annual Report)

(2) Estimated 20-25 year life span of reserve ("The Northern Miner" 12th Oct. 1966)

(3) Importance of Ballynoe reserve in relation to known world Barytes deposits.

3 contd.

(M.V.O."Brien - speaking at I.G.A. Seminar 16th January, 1970)

(4) Royalty to Silvermines Limited (Silvermines Limited Annual Reports)

F BENNETSBRIDGE

(1) Estimated annual extraction of Dolomite (Irish Times supplement "Quigley Magnesite - Dungarvan)

(2) Life span of Dolomite reserve (as above)

(3) Magnesium Oxide extracted from Dolomite - quantity per annum (as above)

(4) Initial Capital Cost of Dungarvan processing plant - $ 10 million (as above)

(5) Expenditure calculations:- (a) Extraction:- Less than 20 men employed at Bennetsbridge
(b). Transportation:- 4d per ton mile (estimate) Bennetsbridge - Dungarvan - 230,000 tons per annum, Dungarvan -Cork - 75,000 tons per annum (Site Observation) (Coras lompar Eireaun I.T. Supplement)

5. C. Processing:- Chemical interaction of salt water and Dolomite to produce Magnesium Oxide requires an adequate supply of sea water, large settling tanks, Crushers + plant, Dep. reciation allowance and other processing requirements, estimated to total £15 per ton maximum (estimated)

(6) Open market price of Magnesium Oxide - £37

6 contd.
per ton (Roofchrome Limited Cork)

(7) 20 year estimate of profit of all processed material from the mine (Calculated from 1 - 6)

CHAPTER FIVE

(1) Irish Times - Dec. 4th 1970

(2) " The ore picture is still building up and ... the next detail will further encourage the growing theory that NAVAN could develop into a bigger proposition than the Tynagh mine ..." (Financial Times - 13th Jan. 1971)

XXX
CHAPTER SIX

(1) Press information release (smelter corporation of Ireland Limited) (Cork Dec. 12th 1969)

(2) Cork Smelter study report - submission to Cork county Manager

NOTE: erratum
N.V.O'Brien 's projection should read every 5 years (not every 2 years, as printed)

CHAPTER 7

Half yearly report on xxx xxxx petroleum leases granted under Part II of the "Petroleum and other minerals developments Act" 1960, and current during the period Jan. 1st 1970 - June 30th '70

Exploration licences granted under Part II of the Petroleum and other minerals Development Act 1960 as applied by The Continental Shelf Act, 1968 and current during the period Jan. 1st 1970 - June 30th 1970

Both reports published by the Minister for Industry and Commerce

CHAPTER EIGHT

(1) Financial Post Corporation Investment Service, Toronto.

(2) Wages
350 men employed when mine is operating at its 2,000 ton per day capacity. Prevailing wage levels up to 1969 got from the statistical abstract (published C. S. O.). 1970 average wage estimated at £27 per week (I. T. G. W. U. - Irish Base Metals Limited wage agreement) Aggragate figure, expressed in terms of gross output, 1.73%.

(3) Royalties
Calculated at 9% nett profit, that is, 3.6% of gross output

(4) Smelting, Shipping & Marketing expenses:
Estimated, from the Consolidated statements of income for Northgate, at approximately 30% of gross output.

(5) Operating and Administrative Expenses
This excludes wages and includes such expenses as power consumption, systems maintenance, general expenses (such as public relations) and overall administrative costs. The aggragate figure, derived from the consolidated statements of income for Northgate, and expressed in terms of gross output, is estimated at 17.7%

(6) Depreciation Allowance
The agregate depreciation allowance, estimated as a percentage of gross output, is 5.4%. Depreciation allowance for plant and equipment, calculated in relation to the overall ore reserve, of the mine, must, however, be seen as a net addition to the investible funds available to Northgate in any given year. This sum concerns the Irish economy only to the extent that overall Northgate investment does (Ref. 8b below).

Only that allowance for plant and equipment requiring renewal prior to the "death" of the ore reserve will find its way into the Irish economy. This being a very small part of the overall investment at Tynagh, 'mobile equipment' every four years anda crusher plant every six years, it is estimated that one tenth of the aggregate depreciation allowance will enter the Irish economy (this figure could well be less as much has to be imported).

(7) Exploration expenditure

Calculated at 2% of gross output this entire provision cannot be said to enter the Irish market. Much of the geochemical analysis is not carried out in Ireland but in North America. Expenditure on geochemical analysis, being second only to geophysical examination inrelation to an exploration program, is calculated at not less than 25% of program cost (see Tara annual reports).

(8) Net Profit

Expressed as a percentage of metal value (gross output) this , the largest single item appearing in the consolidated statment of income for Northgate, is estimated at 37%.

A Distributed profits

Constitutes approximately 11% of gross output. With Northgate, a Canadian based Corporation, it is assumed that atleast 75% of distributed profits flow out of the country to be spent on reinvestment outside Ireland. This estimate of 2.7% (gross output) remaining in Ireland is no doubt too generous considering that the investment policies of the Company, and its chief executives, (who are the 'Irish' shareholders), would not be expected to differ much.

B Undistributed profits

26% of metal value (gross output) consists of undistributed profit. Considering the Northgate investment policy of using the profits generated at Tynagh to finance its expansion into a major international mining corporation.

(See: principal holdings of Northgate as set out in diagram in Chap. 8. Also-- "Northern Miner" Sept. 10TH 1970, estimating Northgate's assets and interests in affiliated companies to have risen from $18.2 millions (1967) to $55.4 millions (1970)---none of this is projected to stay in Ireland.)

(9) Amortization of pre-production expenditure

This accounts for 2.8% of gross output. As the $12.5 millions used to bring Tynagh into production was raised outside Ireland (See Ref. 1 Chap 10 (A)) such amortization as takes place, in no way contributes to the expansion of the Irish economy.

(10) Taxation

No taxation is payable on profits earned at Tynagh. (See Finance Act 1967).

(11) Aggregating those expenditures which filter into the economy: 1.73% (wages); 3.6% (royalties); 17.7% (operating and advertising costs); 0.54% (depreciation allowance); 1.5% (Exploration Expenditures); 2.7% (distributed profit); we get a sum of 27.77% (gross output)

CHAPTER NINE

(1) R.H. Green and Ann Seidmann, 'Africa---Unity or Poverty?'

(2): Economist Intelligence Unit - Quarterly Reports 1970: Indonesia.

(3) E.I.U. (as in (2) above)

CHAPTER TEN

(1) (A) Tynagh

$12,500,000: initial cost of bringing mine into production.
(The Financial Post Corporation--Investment Services).

Breakdown of financing:

$6,000,000 (Canadian): 6½% first mortgage sinking fund bonds, series A, to Northgate for a net consideration of $5,115,000;

$6,000,000 (U.S.): 6¼% first mortgage sinking fund bonds, Series B, at par to British and European interests.

$1,054,497 (Canadian): 'Advance' by Northgate to its operating subsidiary at Tynagh: "Irish Base Metals Ltd." - - retired in 1964 through issuance of 351,500 5% redeemable preferance shares, £1 par value.

Northgate purchased Irish Base Metals Ltd.

Series A bonds in 1964 through the private placement of $6,000,000 (Canadian) of Northgate 6½% "collateral trust debentures". This netted the Company the sum of $5,700,000. A further $500,000 was obtained from the sale of 125,000 Northgate shares.

By December 29th 1967, the long term debt had been paid off in full.

(B) Silvermines

Initial capital expenditure in bringing mine into production: $22,000,000 (Canadian).

7% first mortgage bonds, Series A, dated October 15th 1965- due Sept. 1985. This issue was entirely purchased by Mogul for $5,433,000 who in turn sold the lot for the same price plus 245,000 of its own shares to Burn's Brothers, and Denton Ltd. who offerred the bonds and bonus shares to institutional (financial) investors at an aggregate price of $5,932,500 with each $1,000 bond carrying a bonus of 35 Mo-ul shares.

6¾% first mortgage bond, Series B, issued Dec. 31st, 1968, and due Sept. 1st, 1973.

6¾% first mortgage bonds, Series C, :$1,000,000 (U.S.) issued Dec. 31st, 1968, and due Sept. 1st 1973.

6¾% first mortgage bonds Series D, issued June 30th 1969, and due Sept. 1st 1971-$5,000,000

(Notes payable). - - Due May 31st 1970: $255,109.

(C) Avoca

Initial capital expenditure required to bring Avoca into full production estimated at $6.5m- --3.6m for underground mine,1.6m for mill and plant rehabilitation and 700,000 working capital plus other unspecified expenses.
$4m was already raised by mid-1970. Discovery Mines, for 2,249,942 Avoca shares contributed $1.5m. A $2.5m bank loan was also guaranteed. A further $1,735,000 was payable to the Irish Government for Mine, Mill and Equipment,inherited from the old St. Patrick's Copper Mine of 1958-'62. This sum is repayable at a rate of 15% of net profit per year.

(D) Gortdrum

8% first mortgage bond (Gortdrum Irl.). Due Dec. 1st, 1972: $6.5m. On December 31st 1968, $5,572,000 was outstanding.

Trust Deed provides for retirement of $700,000 of bonds by Dec. 1st 1968; $850,000 by Dec. 1st 1969; $1,225,000 by Dec. 1st 1970; $1,500,000 by Dec. 1st 1971 and $2,225,000 by Declst, 1972.

(E) Ballynoe

Surface ore - - -minimal initial expenditure.

(F) Bennetsbridge

Surface Dolomite- - -initial expenditure minimal.

$10,000,000 expended on Magnesium Oxide processing plant at Dungarvin Co. Waterford.

(2) Sean Lemass, Feb 8th 1956, Dail Eireann.

(3) R.H.Green and Ann Seidmann: 'Africa-- Unity or Poverty?'.

Economist Intelligence Unit, Quarterly Reports 1970 --- Indonesia.

(4) Technology and Economic Development: (Scientific American Books' Series)

(5) Various Annual Reports

(6) 'Technology and Economic Development' as in (4) pp 113-117.

(7) as in (6) above.

NETWORK OF INTER-DIRECTORSHIPS

Smelter Corp of Irl Ltd

Directors Officers	Nat
P J Hughes	Ir-Can
M V O'Brien	Irish
G T Smith	Can
M Pickard	Can
S P Boland	Irish
S Filer	Brit

Tara Exp + Dev Co Ltd

Directors Officers	Nat
P J Hughes	Ir-Can
M V O'Brien	Irish
C Carroll	Irish
J Hanratty	Irish
S P Boland	Irish
J McParland	Irish
M Gilroy	Ir Can
M McCarthy	Irish

Magobar (Irl) Ltd

J A Meyer	USA
Hans Berger	Swiss
D J Mayne	Irish
R B Harrison	Can
O Mulholland	Irish

Quigley Magnesite Ltd

J Mulcahy	USA
J C O'Connor	Irish
D A Mulcahy	Irish
T A Mulcahy	Irish

Irish Base Metals Ltd

Directors Officers	Nat
G W Armstrong	Can
D R Derry	Can
W James	Can
M Gilroy	Ir-Can
J McCausland	Can
S P Boland (Sec)	Irish
M Pickard	Can
G T Smith	Can
M V O'Brien	Irish
P J Hughes	Ir-Can
M Trebucq	French
W Casper	German
J McParland	Irish
A Dejaer	Belgian
G White	English
M McCarthy	Irish
H White	Canadian
G Wilson	Can

Gortdrum Mines Ltd

Directors Off.	Nat
G W Armstrong	Can
D R Derry	Can
W James	Can
M Gilroy	Ir-Can
J McCausland	Can
M Pickard	Can
G T Smith	Can
P J Hughes	Ir-Can

Northgate Exploration Ltd

G W Armstrong	Can
D R Derry	Can
W James	Can
M Gilroy	Ir-Can
J McCausland	Can
S P Boland	Irish
M Pickard	Can
G T Smith	Can
P J Hughes	Ir-Can
M Trebucq	French

Avoca Mines Ltd

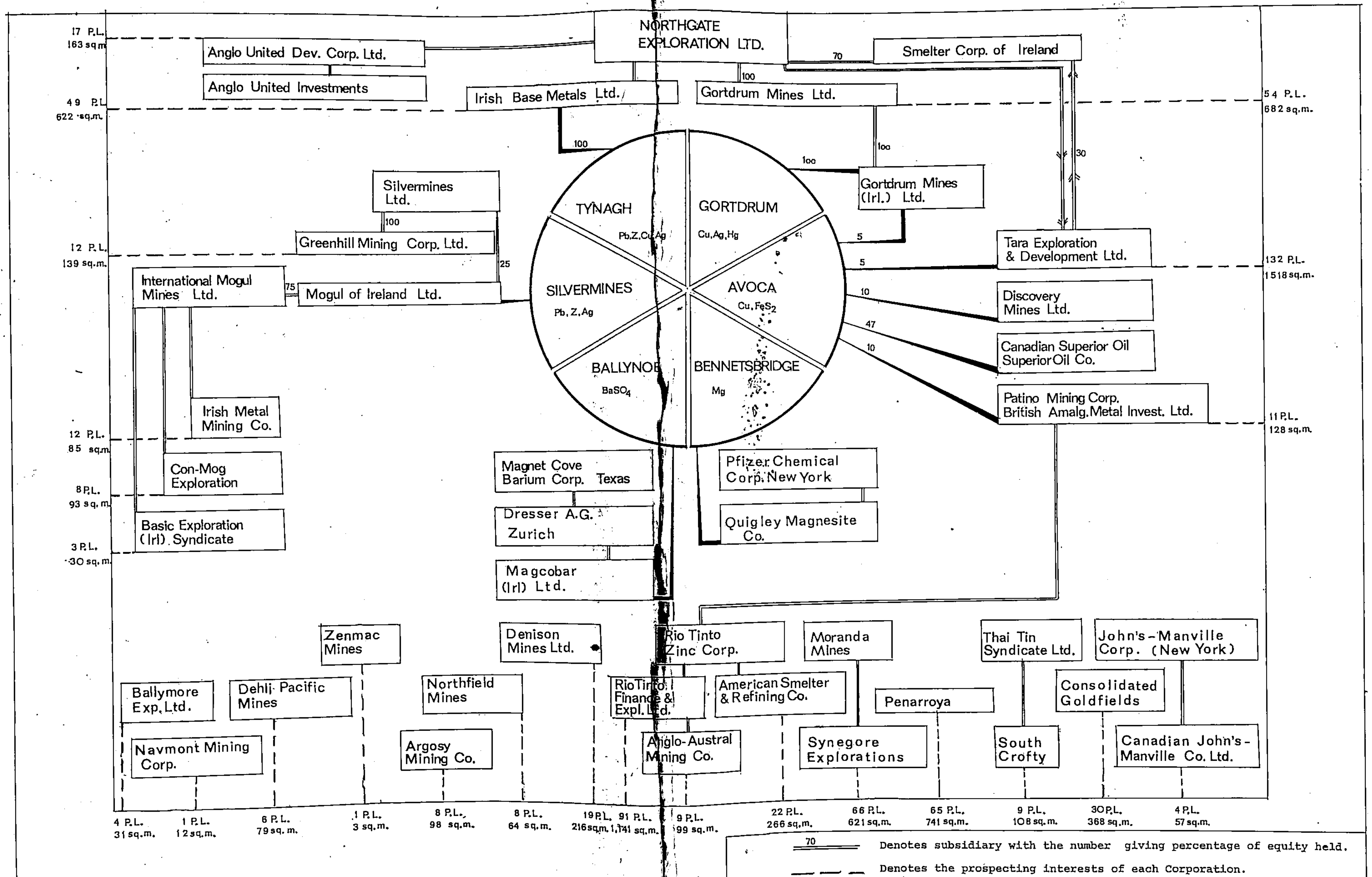
M V O'Brien	Irish
A F Feldmeg	Can
L C. Burns	Can
D Mewsel	Can

Mogul Of Irl Ltd

S A Perry	Can
P S Cross	Can
P W Knight	Can
C W Burns	Can
L C Burns	Can
R Bell	Can
W Eichler	Germ
S Ronan	Can
M A Cooper	Can
W Casper	Germ
W James	Can
H M Wilson	Brit
F G Townsend	Can
Rt Hon Barron-Glewconor	Brit
G E Russel	Irish
L G Chance	Irish
C F Burns	Can

Silvermines Co Ltd

Rt Hon Barron-Glenconnor	Brit
G E Russell	Irish
L G Chance	Irish
R T Renton	Brit
T J McLaughlin	Irish



CONTROL OF IRISH MINING