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THE SILVERMINES — SPORADIC WORKING: 1289 — 1874

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Introduction

The Tipperary historian Dermot F. Gleeson tells of silver mining on the slopes of Knockaunderrick (Silvermines) between 1289 and 1303, of the period that followed up to 1612, providing rich detail about the mid-17th century working.¹ The purpose of this article is to discuss the evidence on whether mining did take place here before 1631, to retell the story for the rest of the 17th century in the light of other evidence, and to give something of the subsequent history of the mine until its closure in 1874.

In the geological context Silvermines is unique amongst Irish mines. Not only does it have argentiferous lead, but also commercial quantities of copper, zinc and barytes, as well as sulphur. Industrial outlets for the last three were not found until the second half of the last century and the smelting of copper presented major problems until the 18th century.

Lead does not seem to have come into common use in Ireland until the sixteenth century, although the use of precious metals such as silver, of course, goes well back into prehistory. A peculiarity of Irish silver deposits is that they tend to be associated with the upper section of lead veins, so that as one goes deeper the silver content usually diminishes.²

The appellation “Silvermines” is of comparatively recent origins. By the 19th century the name had come to mean either the village or the entire mineralised fault-line stretching along the hill slope from there to Shallee Cross. Up to 1650 or so the name Knockaunderrick (with variant spellings) had been applied to the hill.

Because of the vagueness of references, it is almost impossible to say which location along the fault-line was being worked at any time up to 1845. In spanning nearly 250 years, this article embraces the enterprises in Table I, for which there is evidence along the mineralized line of “Silvermines”.

TABLE I
OPERATIONS AT SILVERMINES, 1631 — 1874

	<i>PROPRIETOR-OPERATOR</i>	<i>Production</i>
1631-'33	Charles I — Whitmore and Webb	Reported loss £4,000
1633-'42	Charles I — Hamilton, Brooke and Russell	Peak (?) 240 tons p.a. at £25 per ton.
1645c. 1670	(Ownership in dispute)	?
1672c. 1690	James Hamilton (+ Prittie)	Some lead?
1694-1704	In dispute? (Hamilton/Prittie)	None?
1707-'08	Prittie — Sir Humphrey Davey, etc.	?
1724-c.'34	Prittie — “Company for melting down lead with Pit Coal and Sea Coal”	
1758-c.'63	Martin O'Connor	?
1763-?	“Local gentlemen”	“200 or 300 ton lead;
1770	?	90 tons copper; 5 tons lead”.



c.1790-c.1800	Hardy, Tydd, Tydd and White	“£300 p.a. profit”.
1801	Cornelius Bolton	None?
1802-'05	Dunally Mining Company	None?
1814-'24	Dunally — various trials	None
1835-'40	Salmon; Taylor & Co.; McGregor	None
1840-'45	Mining Company of Ireland	None
1845-'74	General Mining Company of Ireland	(see Table III)
1870-c.'78	Shalee Silver Lead Mining Company	None?

Mining, 1290 — 1631

In 1289 Italians came into Tipperary and opened a mine in an unspecified location for an unspecified ore. Fourteen years later they were reportedly attacked by the Normans and the works abandoned. Gleeson assumes that silver was the mineral sought, and gives reasons for thinking the locality was Knockaunderrick.³ Supporting his contention is a single placename of 1336 “Meianarge” in O’Kennedy territory.⁴

It is unlikely that there was a “meian” of “arge” (silver) there. Furthermore, the Kennedys’ overlords, the Butlers, might have been considering restarting the mine in 1375 when they asked for and were granted the right to all lead and half the silver found in their territory.⁵ However, as no more appears about this it is impossible to say what they had in mind.

Another 120 years pass before there is another reference (circa 1500) — “in Ormond a myndys of silver.”⁶ This may not have been the Silvermines, however, since Knockaunderrick is not among a listing of about the same date giving all known mineral locations in Ireland.⁷ Furthermore, when a decision was made to provide the mint with silver from an Irish source in the 1540s, the deposit chosen was not in Ormond, but in Bannow in county Wexford.

The story of that ill-fated enterprise is told elsewhere, but the fact that it cost up to £8,500 to produce £474 worth of silver may well have prejudiced anybody else who might have been considering similar activities elsewhere in Ireland.⁸ There are indeed no further references to developing Ireland’s mineral resources until the end of the century; not until 1612 is there a reference to a “long since intimated Silvermine”.

Gleeson assumes that this 1612 mine is Knockaunderrick and cites secondary evidence in support.¹⁰ While there are other references to silver in the years that follow, there is nothing to suggest a Tipperary location, and silver could have been got in any of 50 places in Ireland.¹¹ & ¹² The first specific reference to Knockaunderrick does not come until 1631, when Messrs. Whitmore and Webb were granted mining rights here.

Royal Grantees — 17th Century

In theory, all precious metals belonged to the king. In practice, by the 17th century rights to mine anywhere where there might be gold or silver were let out to whoever had the royal ear, at a rent or royalty on ore raised. Thus in 1631 all such mines in Munster were let to Messrs. Whitmore and Webb, who had “taken much trouble in finding out divers mines royal”. It was at Silvermines they concentrated their activities, and claimed to have spent £4,000 developing it.

It seems that they found no silver — only lead and copper.¹³ Presumably they then decided to cut their losses and abandoned the working. The sequence of events immediately after this is not clear, but the names of three knights are next mentioned in connection with the mine — Sir George Hamilton, Sir Basil Brook and Sir William Russell.¹⁴



Of these, the first was the most significant figure. He was the governor of Nenagh Castle, groom of the bedchamber to Charles I, brother-in-law of the Duke of Ormond, and fourth son of the Duke of Abercorn.¹⁵ He was also a catholic (agressively so, it seems) and a committed royalist.

The other two knights may have simply provided the finance for the operation, which was stated to have been over £30,000.¹⁶ While this figure may have been exaggerated, it would seem that during the later 1630s mining-expertise was imported from England and the continent and a substantial programme of testing and development set up, as well as the building of a range of buildings, including smelters and refiners for extracting silver from the ore.¹⁷ Apparently they did find silver, although how much is not stated.¹⁸

However, there are two reports of the value of the lead and silver in 1641, making it possible to calculate their combined quantity. One report produces a figure of 270 tons (probably the more accurate) and the other 1,000 tons.¹⁹ Whichever figure is true, the mine would probably have then been regarded as in its infancy, and it would have been expected that future development would produce even greater returns since it could hardly have been anticipated how superficial the silver, and how fragmentary the lead really was.²⁰

Living at Silvermines in 1640 reportedly were “five hundred English men and divers strangers.”²¹ This seems to be a conveniently rounded figure, but may simply be an inflated estimate of all outsiders, including families. It seems that they may have been part of a plantation policy; about 250 acres of land was at the disposal of the miners who farmed and kept sheep.^{22 & 23} The immediate owner of the area, John Kennedy, seems to have welcomed the enterprise, and the indications are that good relations existed between local people and the mining colony up to the outbreak of the rebellion in 1641.



A plan of the Silvermines published some 125 years ago. The main plan looks from south (left) to north (right). The vertical scale is 1½ inches to 1 mile, and the horizontal scale 1 inch to 1 mile.



Even then, John Kennedy seems to have lent them protection and advice. His younger brother, however, was not as well disposed, and early in 1642 assembled a gang which attacked the miners. Fourteen of them were reportedly killed, mainly women and children, and a great deal of damage was done to the workings.

John Kennedy was apparently outraged. He ordered the arrest of his brother, who went into hiding and then committed suicide. This attack and rumours of massacres of English throughout the country presumably sufficiently scared the miners to cause them to leave.

It is unlikely that any work was done over the following years, as anarchy swept the country. At its height, Hamilton and Ormond arrived back at Silvermines with some miners to get the operation going again in order to make lead bullets for the royalist army.²⁵ With the approach of O'Neill, however, they were apparently forced to abandon this, and so Silvermines lay idle again.²⁶ There is a suggestion that some attempt may have been made, following Cromwell's victory, to restart them.²⁷ By then, however, many of the forests appear to have been cleared, and there was a shortage of timber for smelting.²⁸

With the restoration of the monarchy, it seems that Hamilton hoped to resume on the same scale as before; indeed he procured a 61-year lease from Charles II.²⁹ However, he died around 1665 leaving Silvermines to his son, a naval officer. He was killed in naval service soon afterwards, leaving the mineral rights in turn to his son, James, who was still a child.³⁰

The mineral rights were one thing; but the ownership of the land was another. A Cromwellian planter, Col. Henry Prittie, had taken possession of Knockaunderrick and it seems that during the minority of Hamilton he decided to exploit the mines for himself.³¹ He may have seen a way of getting over the fuel problem by the use of the newly-introduced reverberatory furnace, which could use coal.³²

This enterprise, which began around 1680, was destined to be shortlived because of the outbreak of the Jacobite War. Much of the fighting took place around Limerick. Prittie's castle being reported to have undergone a 21-day siege.³³

Following the Williamite victory the question of resuming the mining operation arose. Prittie was now challenged by Hamilton, who tried to lease the mine himself in 1700.³⁴ This conflict seems to have gone through various court procedures in which Hamilton's royal prerogative was upheld "to the great hardship of Mr. Prittie". It finally took an act of Parliament to establish the principle that it was the landowner who had first right to the minerals on his land. Hamilton, who since 1701 had become Duke of Abercorn, was given £4,000 compensation for his lease.³⁵

18th-Century Leases

With the various legal entanglements cleared away, one would have expected Prittie to have resumed mining operations. The fact that he did not suggests that the various surface showings of silver and lead had already been worked out, and that there did not seem to be any more. Rather than spending money themselves on probable futile searches, the various Pritties (they were all named Henry) of the 18th century adopted a policy of leasing mining rights to interested parties. Since few of these leases have survived it is not possible to build a cohesive picture of Silvermines from the sporadic references to it from 1707 to 1801.

In 1707-1708 the mine, smelter and tools from the previous operation (of the 1680s) were leased to a company which included Sir Humphrey Davey, James Harrison of Cloughjordan (Prittie's father-in-law), John Bayley of Ballynacloogy, John White of Ballyellis and Matthew Pennefeather of Dublin.³⁶ This, or a slightly later enterprise, may have created some local expectation as Prittie applied for and was granted in 1718 royal permission to have two markets a week at Silvermines "alias Ballgown" and four three-day fairs annually.³⁷



The anticipated economic activity cannot have occurred, as six years later the mineral lease was on offer again. This time there was no mention of silver, but copper had been discovered. Thus in 1724 Silvermines was let to the awkwardly named “Company for Smelting Down Lead with Pit Coal and Sea Coal”, whose brief was to test “the mines of lead, copper or any other material”.

Nothing seems to have survived about the origins of this enterprise, except that its manager was a Robert Spencer and its chief refiner a William Gilltrap. They must have had some success, however, as they negotiated a new lease seven years later, containing the peculiar provision that “they should make their option and convey as fast as they could the low level in order to finish same”.³⁸

Of this urgent developmental work no more survives, but the company must have abandoned the enterprise well before that 31-year lease expired, as in 1758 it was in the hands of Martin O’Connor.³⁹ He had moved to Silvermines after his copper-mining enterprise at Avoca had failed, and apparently now hoped to run three other mines from there — Killarney and two Dublin mines, Dunsink and Loughshinny.⁴⁰ Since no more is heard about these enterprises, presumably they all failed.

It is not clear either how any of this may relate to activity by Thomas Sadlier of Nenagh who, at an unspecified date, was “much interested in developing the neighbouring mines”.⁴¹ Perhaps he was involved in one or both of the companies which around mid-century were said to have been working for lead but discarded the copper they had found. One was at “Knockeen” (Gortadina?), of which the only information available indicates that they ran into problems.

The other at “Keevestown” was described as a new discovery (Shallee?), where a number of “local gentlemen” raised two to three hundred tons of lead. Perhaps it was the discarded copper from these operations that was exported from the area in 1770 — ninety tons of it, plus five tons of lead.⁴²

The next reported working was at Shallee, where a wedge of rich ore was exploited by a company of four shareholders — two Tydds, a Harding and one Henry White, who were said to have made £300 annually out of it each for an unspecified number of years.⁴³ A smelter was reported to have been built here which produced sheet lead and shot.⁴⁴ In 1792 it was described that it was being “very productive” and that pure silver had been found.⁴⁵

A refinery for this seems to have been built in which silver plate for the Dunally family was reportedly made.⁴⁶ The manager of this operation was named as a Captain Hall, not to be confused with Col. Hall, below. After his death in the late 1790s the enterprise was reported to have “dwindled into insignificance”, although the more likely explanation is that the wedge of ore was exhausted and no more had been found.⁴⁷

Thus by about 1800 the hillslopes of Knockaunderrick were silent once more. There was plenty of evidence left, however, of the cumulative effects of 170 years or so of sporadic mining, to judge by one contemporary description.

The hills bear all the marks of internal wealth — the shattered fragments split the mountain sides where the dark gashes, torn and blackened by the explosion of powder in mining, a few blasted stumps of burnt herbage — savagely picturesque — innumerable shafts and levels with other works overgrown with creeping briars and weeds.⁴⁸

The owner of all this was Henry Sadlier Prittie, who in January 1800 was created Lord Dunally. On his death the following year it passed to his son, the second Lord Henry, who leased it to Cornelius Bolton, an associate of the family.⁴⁷ & ⁴⁸ Bolton had been involved in lead mining on his estate in Faithlegg, county Waterford as well as in other mineral ventures along the



Waterford coast in association with his colleague, Col. Robert Hall.⁴⁹

Presumably they inspected the old workings and decided that all that was needed was capital and expertise. Both pledged to put their own money into it, but more was needed. Dunally persuaded his relatives and neighbours to join with him, Bolton and Hall, in a company to be known as the Dunally Mining Company.

Dunally Mining Company (1802- 50)⁵¹

The company comprised about sixty shares divided; see Table II.⁵⁰ The shareholders met regularly to decide how much more per share each should pay for the development of this mine, to discuss details of its running, and eventually, they hoped, to decide how the profits would be used. They were free to buy and sell their shares, but anybody who did not meet a “call” for further contributions sacrificed his share, which was then sold to the highest bidder — if there was any.

While the minutes of these shareholders’ meetings have survived, it is not clear how much each contributed initially. However, the company seems to have been undercapitalized from the start. By the second meeting in April 1802 there was “not sufficient money to keep going”.

Dunally and Holmes had to lend the company £250 which in October 1802 the other shareholders then did not want to pay back. By the following May the company owned £1,200 for labour and materials. By the end of that year £97 seems to have been contributed on each share — the exact sum is not clearly stated — but there were calls for £20 extra per share.

At this stage (from June 1803) principal shareholders were busily looking for buyers for their shares. In October 1804 the first formal mention of the dissolution of the company appears, but it lasted until the following October. The final meeting is recorded thus: “At a General quarterly meeting of the Dunally Mining Company held at Silvermines on Tuesay the” (sic). Thus the shareholders dramatically ended their corporate existence; but what of the workforce?

TABLE II
PRINCIPAL SHAREHOLDERS (DUNALLY MINING COMPANY)⁵¹

Name	Address & Relationship with Prittie	Number of Shares April 1802/July 1805
Col. Hall	Geneva Barracks, Co. Waterford	10
I.ord Dunally	Killboy, Co. Tipp.	8
Cornelius Bolton	Faithlegg, Co. Waterford (Cousin)	8
Richard Perry	New Abbey, Co. Tipp.	6
J. Perry	Woodroofe, Tipp.	5
Peter Holmes	Peterfield, Tipp.*	5
J. Bayly	Ballynacloghy?***	5
W. Warren	Dublin (?)	3
G. Lynge	? (?)	2
? Trant	?/(Lady Dunally’s family?)	0
? Jephson	?/(Lorenzo J. (M. Dunally’s daughter) — and single shares	0 7

* In 1765 a Peter Holmes had married Elizabeth, great-aunt of the first Lord Dunally.

** In 1736 Henry Prittie had married Deborah, widow of John Bayley.



Peter Holmes	Peterfield, Tipp.	5	3
J. Bayly	Ballynacloghy?	5	0?
W. Warren	Dublin (?)	3	3
G. Lynge	? (?)	2	0
? Trant	?/(Lady Dunally's family)	0	6
? Jephson	?/Lorenzo J. (M. Dunally's daughter — and single shares	0 7	2 6

The company seems to have started off with benevolent intentions towards their employees, many of whom were brought in from England. In charge of the works was a "Captain" (the courtesy title used applied to all Cornish mine overseers) Thomas, holder of one share. Possibly these miners were enticed to come to Silvermines by various guarantees, including a social insurance scheme.

Forming a preface to the minutes of the company are details of a "Fund for Sick and Wounded miners" to be applied to the following classes of employees: "First Class — miners, dressers, smelters, carpenters, smiths and all others whose wages exceed 1/6d per day"; Second Class — "Labourers and all other men whose wages do not amount to 10d and do not succeed 1/6d; Third Class — "Lads and others whose wages do not amount to 10d."

All were to pay about the equivalent of one day's wages per month, would get free medical attention, most of their wages while bed-ridden and about two-thirds of it while convalescing. If workers' contribution to the scheme did not meet the total costs, the shareholders "feel so much for interests of their workpeople (that) the deficiency be paid and charged at the cost of the mine".

Only one beneficiary is mentioned for this admirable scheme; he was allotted six shillings per week in July 1803. It may have been significant that at a meeting six months earlier it had been decided to offer a ten-guinea reward for the detection of fraudulent sickness. Another potential source of "illness" may have been frustrated by another resolution at the same meeting, that "Mr. Warren be directed to prosecute all illegal retailers in spiritous liquors in the town of Silvermines".

Perhaps this should be seen in the context of a further resolution then passed:

"as it appears that numbers of the miners are very remiss in their attendance at divine service Mr. Warren will be empowered to inflict a fine of one shilling for the first omission, half a crown for the second and for the third dismissal from the works . . ."

Such concern about the spiritual welfare of the miners was not reflected in a similar concern for their temporal welfare, as over the following year they were not paid. By October 1804 they were owed £40. Whatever tensions this provoked are unrecorded, but the following dignified letter was read out to the shareholders from "The Adit Miners":

Being employed to work and bound in agreement to forfeit 11/4d per (?stern? term? item) for each and every (/stern?/...) that said miners would neglect or absent themselves from their regular duty in said work, they have performed their promises and agreements, but had suffered a great loss for want of power through the neglect of the company. The said miners being strangers and having met with such disappointment, to their great inconvenience, that they cannot possibly stand this place without being considered for their loss".

The shareholders decided that the petition was "deserving of consideration" and investigation. At the same meeting they appointed as the new treasurer one of their number, Richard Perry



(6 shares) and granted him twice the salary (i.e. £100 per annum) enjoyed by his predecessor, as well as giving him a two per cent commission. That was the last meeting of the company apart from the abortive one noted above.

As the minutes of these meetings contain few references to mining matters (as distinct from financial and organizational details), it is not possible to explain why the operation failed. One report says that capital was wasted on “unnecessary and expensive work”; another refers to “monstrous and expensive trials” and condemns the “disorganized and incongruous manner of working”⁵²

While there is no record of any of this expenditure being reimbursed through ore sales, the minutes of July 1803 state that copper was raised, and that Col. Hall was to arrange for it to be sold, also that lead was ready for smelting. The quantities, however, must have been quite small. The end may have come that September when, according to one report, Col. Hall and Warren (the secretary) abandoned Silvermines and left the other shareholders too demoralized to continue.⁵³

Complicating the picture however, is a report of a separate operation between April and June of that year (1803), when a Mr. Lawrence claimed to have raised copper and lead at “Knockeen” (Gortadina?), but was forced to abandon the working because the Summer was too dry to keep his waterwheel turning.⁵⁴ What relationship there may have been between this and the Dunally Mining Company is not clear.

However, it does seem that some of the Dunally directors went on to open a copper mine further south at Lackamore, while Col. Hall took himself back to Killarney, to which he had originally been posted from Devon. There he re-opened successfully the old copper mines and went on to discover and exploit 13 copper showings along the coast of west Cork.⁵⁵

Gold and Sulphur (1805- 45)

There was probably some disillusionment with the Silvermines area after the collapse of the Dunally Mining Company, since there is no evidence of major investment there for over thirty years. However, trials were carried out there during this period. In 1814 a Mr. Judson was reported to have been working there. In 1824 there was a tremendous burst of mining interest in these islands, resulting in the setting up of four major joint stock companies in Ireland.

Two of these carried out tests in the Silvermines area shortly afterwards. The Hibernian Mining Company investigated and dismissed Shalee, and the Imperial Mining Company reportedly spent a considerable sum on fruitless trials over the rest of the area.⁵⁶ The mines then apparently lay idle for another ten years or so.

Sometime in the mid-1830s much local excitement must have been created by the discovery of gold on the other side of Knockaunderrick, with the possibility of its continuing through the mountain into Dunally territory.⁵⁷ It was probably in this climate that Salmon approached Lord Dunally offering his experience of gold mining prospecting in Wicklow.⁵⁸ He also purported to represent the respectable firm of John Taylor of London, on whose behalf he persuaded Dunally to grant him a mining lease. Salmon probably did not have much opportunity to put whatever plans he had into operation, because Taylor took legal proceedings against him and won the lease.⁵⁹

At about the same time Salmon seems to have approached the holder of the mineral rights at Shalee, Donatus O'Brien, and offered him £4,000 for a lease. This apparently alerted the estate agent there, Thomas Maguire, to Shalee's potential; he negotiated his own lease from O'Brien, Salmon and Maguire and lost.⁶⁰

Maguire now in the late 1830s, it seems, sought capital and came to a private agreement with



Thomas McGregor, the manager of the Agricultural Bank in Nenagh.⁶¹ This produced substantial investment in the mine, although there is no report of whether any ore was raised. Meanwhile Salmon had appealed the verdict and final judgement was not given until 1844. Once again it went against Salmon.⁶²

Salmon had thus lost the mining rights on both mineral properties along the Silvermines fault. The first victor, John Taylor, carried out some desultory tests on the Dunally estate in 1839, and then sold it the following year to the successful Mining Company of Ireland for £853.⁶³ During the summer of 1840 they carried out a number of tests at Gortadina and Ballygown for sulphur, which had recently become a valuable commodity, as well as checking the lead potential. By 1844 they had decided not to persevere further because of “the refractory nature of the rock”, as well as the expense of transporting ore from there.⁶⁴

Thus, at the same time, the Shallee and Dunally leases became available, and it seems to have occurred to a number of people that the two localities could fruitfully be worked in conjunction with each other and with Lackamore. A deal was done in 1845 and a number of interests converged to set up the General Mining Company of Ireland. Amongst its directors was Lord Dunally, and its permanent secretary was the former estate agent Maguire, who presumably did well out of the sale of his lease to the company.⁶⁵

Over most of the next three decades both Shallee and the three Dunally mines of Gortadina, Garryard and Ballynow were worked by the General Mining Company of Ireland. This was originally intended to be an ambitious quarter-of-a-million pound enterprise, comprising 25,000 £25 shares, with first payment of £1.12.6d, the rest of the capital to be called in as required. However, only one-third of the shares (3715) were bought, giving initial capital of just over £6,000 and this was enough to keep the company going over the next eight years.⁶⁶ This operation, however, was far removed from the gold which had attracted current attention to the area.

Mining and Moral Perceptions

“Employ the people; enrich yourselves” was the motto adopted by the General Mining Company of Ireland and was to be its *leitmotif* over the next ten years. The last two words need no explaining; the first three were apparently taken seriously, however, with the silent addition of the adjective “deserving”. The company would never indeed have been founded, according to its chairman, “had it not been for the happy change resulting from the sobriety of the workmen”.

At the end of their first year he was able to assure his shareholders of the people’s “general good conduct . . . (and) strict adherence to sober and industrious habits”.⁶⁷ Gratifying as this must have been to the shareholders in 1846, they must also have been reassured in the following year, as terrible rumours of a people driven desperate by famine circulated, that “not a single outrage” had been reported from the mine and that the distribution of three tons of meal per week to the “people” had proved “most beneficial”⁶⁸.

The fruits of this by early 1850, according to the directors, was that “not a single act of violence, aggression or disturbance” had occurred.⁶⁹ To that gratifying picture must be added a modest profitability, so that by mid-1853 shareholders had still only paid £1.12.6d on each share and had received as dividends £1.0.8d. Should they have chosen to sell in June 1853 they would have got up to £7 per share.⁷⁰ Any that did so were lucky; the problems started in July.

What exactly went wrong is difficult to assess. A later comment blames it on a drop in the price of both copper and lead which cost the company £4 and 30/- per ton, respectively, according to their own calculations.⁷¹ However, the real problem may have been failure to invest profits



during the good years, specifically in purchasing two steam engines, one for pumping and one for crushing.

As the ore closer to the surface was worked out, these became more necessary. By the end of 1853 the mine was hampered without them, but then they could not be afforded.⁷² This obstacle could presumably have been overcome had it not been compounded with labour difficulties, in addition to doubts about the integrity of the management.

In July 1853 the editor of the *Mining Journal*, writing of a visit he had paid to Silvermines, expressed concern that the miners were being still paid with meal three years after the Famine had ended, and deprecated the reason the company had given for continuing to do so. It was to stop a “weekly indulgence” in drink, he was told.⁷³ He mentions a strike which seems to have been quickly resolved for the time being, at least.⁷⁴ By the end of the year, however, questions were being asked about the administration of the company, and Maguire the secretary later admitted that he had not had time to look after the company’s affairs properly.⁷⁵

Amongst the things that had taken up his time, it transpired, was the sale of their Lackamore mine. It went for a mere £400. He himself, however, was the purchaser. He was then involved in setting up a London company which was to buy the lease from him for £10,000.⁷⁶ It also transpired that he had added into the company’s accounts an unauthorized payment for himself of £400 annually. The Company’s auditor resigned in disgust.⁷⁷

The anger of the shareholders at these revelations erupted at the next general meeting of the company in May 1854. One practical proposal came from it, however — that a committee of shareholders be set up to investigate the problems and to report back to a reconvened general meeting in July.⁷⁸ This was duly done, but could not be fully reported as the debate became too personal and irrelevant.

It did emerge, however, that the company was “not well managed”, that there was “a want of honesty” and that there could be no improvement while the present nine directors were in charge. After a “noisy discourse” the directors were forced to resign and a special general meeting was called to elect a new board.⁷⁹

Murray and Maguire had, it seems, no intention of retiring gracefully. First they ensured that notices of the meeting did not go out to everyone; then they began to transfer shares with a view to rigging the meeting.⁸⁰ It seems that they were only partly successful, and in an “acrimonious” meeting only four of the old directors were elected on to the new board, although Murray topped the poll.⁸¹

Maguire was apparently defeated and played no further part in the company. However, for a reason unspecified, one of the five new directors resigned within two weeks and Murray replaced him with his own representative, regaining a majority. As one shareholder despondently commented: “Our director has now become dictator”.⁸²

Murray apparently decided to give priority to financial matters, namely miners’ wages. Reportedly, the settlement made to the miners the previous year was generous; to get them back to work a series of advances were made on the payments they should have been getting for their sub-contract work. By the Autumn of 1854 £1,622 was allegedly actually owed by the miners; this had been kept secret from the shareholders.⁸³

Murray decided that he would not pay anything until the next round of sub-contract was expired, justifying his action: “If the miners had the money it would be misspent and the course pursued was for their benefit”. He assured the shareholders that his real aim was “to improve the moral condition of the people”⁸⁴ The miners not only unappreciatively went on strike, but also sued the company for their wages. A total of sixty writs were issued on behalf of the



miners; these were heard in five courts in October and November 1854.

The company apparently pleaded that since this was an “organized conspiracy” the miners had no case. An anonymous letter stated that the miners were beaten in court, had then been made a fair offer by the company but had gone on strike again.⁸⁵ An informed observer, however, was able to point out that the writer of this letter was a magistrate named Carroll, one of the Murray’s henchmen on the board of directors, and that while Carroll had given judgement against the miners in his own court, in the four other courts the miners had won.⁸⁶

Whatever the real outcome of the litigation, the directors tried to put a brave face on it before the next half-yearly general meeting in December 1854. The shareholders were assured that the company was going strong enough to survive a sustained strike because they had £10,000 worth of ore on the surface to be prepared for shipping. At the meeting it transpired that there was only £450 worth, much of it very poor copper only £4-13/- per ton which had cost £8 per ton to raise, prepare and ship. The strike had cost the company an estimated £3,500.

There were worse revelations. One of the auditors, a former director of the company, refused to sign the accounts. They had been written in pencil, contained no receipts or vouchers, did not tally with the bank statements and in one place showed that £300 had been borrowed by Murray who had then requested that this be overlooked.⁸⁷ Details of the resultant furore have not survived. All one observer could say was that “there are certain rumours floating about”, adding that the company “have something fatal hanging over them”.⁸⁸

The miners’ reaction on all of this is not recorded, but it would be understandable if they took a sceptical view of the concern of the directors for their moral welfare. They did go back to work in late 1854 or early 1855, but the tensions at the mine lead to at least one other shortlived strike and at harvest time the miners at Shallee did not turn up.⁸⁹ It was also hinted that they were engaged in “a system of espionage” and may have been responsible for the new engine house collapsing.⁹⁰

The company’s financial problems continued, but the directors tried to make a £591 loss in the first half of 1855 appear as a profit of £1,153 in their financial statement.⁹¹ They had less control over the public citing of their shares, whose depressed state they blamed on a conspiracy against them, against which they were taking “active steps”. They assured shareholders also that a London party was anxious to buy their shares at par.⁹²

While a modest profit of £250 was actually made in the second half of 1855, the industrial tensions continued until 1856 and a loss was made in both halves of that year, with a further loss of £451 into 1857, when it was candidly admitted that there was no great hope for the future.⁹³ ⁹⁶ One piece of good news, however, was that Murray was resigning as Chairman. After that a “new spirit” was commented on as animating the directors, who were going to re-open Ballynow and work it for sulphur.⁹⁷

This was done and the sulphur sent by train to Dublin from the Autumn of 1857. A new rich vein of lead silver was reported from Shallee about the same time.⁹⁸ Despite that, the company’s loss for the half-year was £1,304 ⁹⁹

Troubles 1858 - 1874

By 1858 the company was again in trouble. It had survived that almost continuous loss since mid-1853 by making calls on shareholders, which by mid-1858 amounted to an extra £2.7.6d. per share, bringing the nominal price to £4. Any shareholders who failed to pay up then forfeited their shares, which were then sold for whatever price the company could get for them. Unallotted shares were similarly sold.¹⁰⁰

This could not go on indefinitely, and in the Summer of 1858 the shareholders were informed



that an arrangement had been made with a London-based mining company, which would lease and work the mines for an initial three-year period.¹⁰¹ Apparently the deal fell through, and the only glimmer of hope the shareholders had was that sulphur sales might prove remunerative.¹⁰² However, it is possible that the directors were holding back a piece of news which might reverse fortunes of the company. In January 1859 they were able to reveal that zinc had been confirmed at Garryard.¹⁰³ Testing over the next two years revealed that it lay in a bed ten to sixty feet deep over several acres.¹⁰⁴

Salvation from the zinc proved to be something like the end of the rainbow — always close enough to seem to be worth pursuing, but never actually reached. The fluctuations of fortune of the General Mining Company of Ireland may most easily be read in Table III for the years from 1859-1873. Reportage of the company's activities is relatively sparse over those years, but it is clear that their operation was always extremely precarious.

They survived the early 1860s by selling unallotted shares and by other stratagems not relevant here.¹⁰⁵ In 1866 they made the bold decision to process the zinc themselves by burning it to produce zinc oxide. However, instead of building one furnace, they built eleven of them, and over the next five years discovered there was little market for zinc oxide.^{106 & 107} More drastic measures were then called for and in 1870, it seems, they set up a subsidiary company to raise £30,000, at least half of which would go back in to the General Mining Company of Ireland's coffers.

This was the Shallee Silver Lead Mining Company, which in return were to get the lease of Gortadina and Shallee.¹⁰⁸ It is unlikely that this device raised much money, and by the end of the year G.M.C.I.'s £7 shares could be had for 12/-.¹⁰⁹ Through 1871 there were attempts to create finance by changing the capital structure, but it was apparent that the mine's running costs were not being met,¹¹⁰ While the directors tried to put a brave face on it in 1872, by the middle of the following year the truth could no longer be concealed.¹¹¹

The engine pumping out the zinc mine had burst its boiler and the mine had been flooded. The eleven furnaces were cold and idle for lack of fuel. A cheque for £1,000 from the Shallee company had proved worthless. An individual who had expressed an interest in buying the remaining works had decided against it.¹¹² After these reverses, there was no option left but to wind up the company, pay off the miners and agree to the appointment of a liquidator who would sell the assets for whatever he could get, so they might be divided among the shareholders.¹¹³

There are no further reports of the General Mining Company of Ireland, although the Shallee company may have lasted for another few years.¹¹⁴ In any case, no Irish mines survived the depression in the mineral prices which had started in the 1860s and accelerated in the '70s as cheap ore from central and southern Europe, as well as from America, began to flood world markets. The industrial depression of the 1880s ensured that there was no hope of revival thereafter. The 20th century history of these mines must await another chronicler.¹¹⁵

Before summing up, and in the absence of maps, plans or sections of the old workings,¹¹⁶ a bird's-eye view may be taken of the mines as they were in what may have been the hey-day of their activity in early 1860.¹¹⁶ Flying east to west at Ballygown, just south of Silvermines village, our bird would have overflowed the deep pits made testing for zinc and sulphur. Amongst them were the company's offices, "a remarkable group of buildings".

Flying westward he would have seen the collapsed engine shaft and 80 foot open cast at Ballynow and viewed the remains of the older workings - "A labyrinth of winding levels whinzes and sometimes spacious excavations that may well be compared to a large underground burrow". A little beyond that he would have seen the development of the new zinc mine at Garryard, with engine shaft and underground trackway system.



Further west he could view the open-cast pits at Gortadina, with various levels running off them and the great water-wheels which drained them. One pump, in particular, might have caught his eye. The water did not turn a wheel, but ran along the arm of a lever to a cistern at the end. The weight of the water then forced down a plunger until it reached a crucial level, when the water drained out of the cistern and a counter-weight brought arm and plunger up, to start again.

Amongst them were the company's offices, "a remarkable group of buildings". Nearby among more sheds and offices he would have seen, first, the chimney-stack and then the characteristic housing for the big steam engine. Wheeling left he could look down on a series of 17 incisions into the hill slope, each about 60 yards long, up to 30 feet deep and 3 to 6 feet wide. These were the workings on parallel veins of lead and silver at Shallee.¹²³

TABLE 3
ORE PRODUCTION RECORDED FROM SILVERMINES

DATE ¹¹⁷	SHALEE ¹¹⁸		GORTADINA ¹¹⁹			GARRYARD ¹²⁰	BALLYNOW ¹²¹	VALUES ¹²²
	LEAD	SILVER	LEAD	SILVER	COPPER	ZINC	COPPER	
1845	15	?						£200
1846	120	?						£2,000
1847	209	?						£3,000
1848	340	?						£5,000
1849	329	?						£5,000
1850	473	?			154			£16,000
1851	405	?					97	£5,000
1852	720	12,000						£20,000
1853	180	720	154	154				£7,000
1854	192	3,420	145	2,900				£10,000
1855	28	600	100	1,593				£4,000
1856	*311	470	311	470				£6,000
1857	*163	470	163	?	130		15	£4,000
1858	* 84	470	84	?	42		37	£2,000
1859	24	360	16		37			£1,000
1860	90	1850	15	10	540			£2,500
1861	32					890	42	£1,500
1862	67		1,597		?			£4,000
1863	60	165	3,892			?		£8,000
1864	158	3,746			3,500			£7,000
1865	40	830	109	4,360		4,040		£11,000
1866	122	3,145	64	3,490		677		£5,000
1867	83					132		£1,500
1868	128		120	1,111		79		£3,500
1869	158	5,480				64		£5,000
1870	79	2,815				312		£4,000
1871	30					321		£1,500
1872	37	505				605		£3,500
1873						234		£1,954

NOTES:

1. Question-marks indicate that silver or zinc may have been produced, but that the quantity was not recorded.



2. Blanks indicate that there was probably no ore produced.
3. *For 1856-1858 the mineral statistics give only joint figures for lead and silver at Shalee and Gortadina.
4. The values specified in the right-hand column are approximate only.

The Social Dimension

The difficulty with a study like this is that the evidence comes solely from the proprietors' side. One can say almost nothing about living or working conditions for the 500 foreigners reported to be at Silvermines about 1640. We have no idea how many were employed in subsequent 17th century operations.

For the 18th century we scarcely have even the capitalist side, and the tantalizing glimpses we get of the miners in the Dunally company minutes disappear again during the various trials over the next 40 years. The few details we get of the miners' strikes of the mid-1850s have to be interpreted mainly out of the pious hypocrisy of the chairman. For this last phase of working there are two independent sources of information, which, however, seem to be partly contradictory.

Table IV gives one based on the company's own reports. Although its motto was "employ the people and enrich yourselves", it is apparent that the latter took priority, the former remaining an aspiration. While the figures in Table IV seem to imply that mining at Silvermines made a significant social and economic contribution to the locality, studies elsewhere have indicated that a proportion of the workforce may have seen themselves as agriculturalists first, with mining as merely a subsidiary source of income.¹²⁴ There is some evidence that this may also have been the case at Silvermines.

TABLE IV
EMPLOYMENT AT SILVERMINES (1846-1855)¹²⁶

Year	Number employed	Additional detail.
1846	150	All at Shalee
1847	?	Said to be 1013, but this probably included part-time and dependents.
1848	?	
1849	300	
1850	700	
1852	?	
1853	600 (in June)	200 underground, 270 women and children, with 170 tradesmen and surface workers.
1854	?	
1855	230	130 underground; 100 on the surface.



TABLE V
PEOPLE AND HOUSING 1831 — '81¹²⁷

Table VI	People						Houses					
	1831	1841	1851	1861	1871	1881	1831	1841	1851	1861	1871	1881
Kilmore Parish	3769	5138	3613	2793	2166	1620	602	936	619	513	428	320
Ballygown		89	32	10	7	3		13	7	5	2	1
Ballynow		26	0	0	0	0		4	0	0	0	0
Garryard		184	182	146	106	63		35	26	23	19	13
Gortadina		83	74	44	33	32		17	14	11	16	5
Shallee		535	630	413	319	262		96	98	85	66	54
Silvermines Town	791	682	488	370	291	231	123	134	90	69	64	57

It seems that the random figures that have survived for employment at Silvermines between 1846 and '55 (Table IV), convey an exaggerated picture of the social and economic significance of mining there during this relatively flourishing period for the G.M.C.I. This is borne out by the census figures in Table V. The dramatic increase in population in the parish in which the mines stand between 1831 and 1841 was at a time when there was no mining beyond the sinking of a few test holes — with the real activity being conducted in the law courts.

In 1851, 800 are reported to have been employed at the mines. Yet that year saw a drop in population in the parish since 1841 which seems considerably greater than the national average. While Shallee townland admittedly shows an increase in the number of people living there, only two new houses had appeared at this apogee of mining activities. The company's expressed priority, "Employ the people . . .", was not realised over those years, nor over the following two decades of their operation. Not alone is the decline in population around their works well in excess of the national average between 1851 and 1871, but the closure of the mines (around 1874) which should have caused an even more drastic decline over the decade did not do so.

It is difficult to believe that so much economic activity could have been of so little benefit to the local people. A remotely possible explanation for these census figures comes from a local oral source, who suggests that the unmarried miners slept in hostels, the inference being that they were not recorded. A Miss Hosey is reported to have kept one near Shallee "with eleven feather beds in a little haggart."¹²⁸

The same source says that his grandfather (born in 1849) worked as part of a team of three, mining copper and lead — never calamine — that was too dangerous because somebody might remove the props to make it easier for the wheelbarrow". One of the team had his thumb shattered by a sledge while holding a crowbar; "he just tied it up and continued — that's how things were then". He also said that the railway was not used, but that the ore was brought to Killaloe by cart; this is confirmed by an independent oral source.¹²⁹ However, if this is correct, it should have given even more employment.

Perhaps other oral sources may throw more light on social circumstances around Silvermines up to 1874. There is probably other hitherto undiscovered printed references, perhaps in family archives. The collection and preservation of such material, as well as of the industrial remains of this neglected part of our heritage, is important.

FOOTNOTES

1. Gleeson, a., "The Silver Mines of Ormond, *R.S.A.I. Journal*, Vol. 75(i), June 1937, pp.101-116.
2. Based on research (ongoing) into metal mining in southern Ireland.
3. Gleeson, op. cit., pp.102-104.
4. *Calendar of Ormond Deeds*, Vol. 1, I.M.C. 1932; No. 682. p.287-289.
5. Ibid. Vol. II.; No. 200, p. 140-141. Letter Patent Ed. III; 12 Feb., 1375.
6. *The Red Book of the Earls of Kildare*, I.M.C., 1964, p.12-13.
7. The Hamner Papers, in Addenda to *Calendars of State Papers Ireland 1601-'03*. mines listed p.670-671. (The dating given, 1497, may be too early).
8. See Cowman, D., "The Royal Silver Mines of Bannow" in *Decies IX*, pp.19-25; also, forthcoming, *Wexford Historical Society Journal*.
9. C.S.P.I., 1611-'14, p.251; letter from Lord Treasurer.
10. One would expect a royal patent for such to be noted in C.S.P.I.; there is no record of one. Gleeson, op. cit., pp.106-7 quotes Scott, who in turn was probably quoting Boate (note 14 below), who said that lead was mined c.1612 to roof Bunratty Castle. This may have been so, but there is no specific reference to Knockaunderrick until 1631 (note 13 below, which Gleeson was apparently unaware of).
11. E.g. C.S.P.I., 1651-'25, p.195-5 and 256-7; *Advertisement for Ireland* (anon) ed. O'Brien in *R.S.A.I. Journal* 1923, p.9; *Acts of Privy Council of England*, 1623-'25, H.M.S.O., 1923 pp.63, 89, 159. More significantly, perhaps, it is not given in F. Mathew's O.F.M. listing of Irish mines in 1630, *Wudding Papers*, ed. Jennings, I.M.C. 1953.
12. See Kinahan, G.H., *Economic Geology of Ireland*, Geological Society of Dublin 1886, p.11-25, with listing of all known silver sources.
13. C.S.P.I. 1625-'32, p.609, and *ibid.* 1633-'37, pp.4-5. The latter gives the starting date and provides the first specific reference to "Knockanndright". Also *Calendar of Patent Rolls of Charles I*, p.582. None of these mentions silver. However, Crofton Croker in 1824 cites a letter (no provenance given), dated Jan. 2nd 1633, from Wentworth to the king, referring to "these first fruits of your royal mines" which apparently was a 300 oz. ingot of silver; *Researches in the South of Ireland*, reprinted Dublin 1981, p.320-1.
14. Boate, G., *Ireland's Natural History*, (first published London 1652) in *A Collection of Tracts and Treatises* — Vol. I, Dublin 1860, p. 117.
15. See *Burke's Peerage*, (various) under Abercorn and D.N.B. under Hamilton, George and John.
16. See refs in C.S.P.I. 1647-'60, *passim* (index, Hamilton, George) and 1625-1632, p. 512, letter from Bishop of Derry.
17. C.S.P.I. 1660-'62, p.153-4, Hamilton's petition to the king 1660.
18. *Idem.* with further details from Boate, op. cit.
19. Boate, op. cit., p.116, gives values of lead as £11-£12 per ton and silver as worth 5/- per oz. 48 ozs. of silver per ton are quoted which would make total value £23-£24 per ton. Boate says the king got one-sixth of the silver and one-tenth of the lead, which he values at £800. This would require about 270 tons of argentiferous lead, which is not too far from the figure of 201¼ tons cited as being raised "before the revolution" in CSPI, 1668-70, p.55.
20. This is the figure given by the silver refiner Powell in the 1650s, when he was clearly trying to present reasons for the re-opening of the mine. His figures add up to what seems a highly inflated total of £24,000 worth of ore in 1640 at £24 per ton — in T.C.D. MS. 883, pp.9-10. (I would like to thank Dr. Stephen Briggs for this reference).
21. C.S.P.I. 1660-'62, pp.153-4.
22. One near contemporary saw this as a means to "force civility" on the Irish — undated and unprovenanced report in C.S.P.I., 1647-'66, Addenda, p. 327-8. Boate (op. cit., p.115) give a value of £20 to arable and pasture worked by the miners. Estimating from values given to such lands in the *Civil Survey* (ed. Simmington), Vol. II, I.M.C. 1934, this would amount to between 200 and 250 acres. This seems to be confirmed in a MS source quoted by Gleeson (1937) p. 113, concerning a court case in 1658 relating to 200 acres belonging to the silver mines.
23. Depositions, quoted by Gleeson (1937), p.110-111 (especially evidence of Anne Sherring), and also by him in *The Last Lords of Ormond*, London 1938, p.73-74. In the latter, Robert Lanton had cattle, hay and wool.



24. Idem (1937) Depositions, especially Anne Sherring and Walter Timmes.
25. C.S.P.I. 1660-'62 p.153, cit. and p.431-432 King to Lord Justices. The former claims the cost of this as £2,000, the latter £3,000! See also *ibid*, p.330, King to Sir George Hamilton. Hamilton implies that Ormond was with him, but this was hardly so to judge from Carte's *Life of James, Duke of Ormond*, Vol III 1652 341-407 (events 1648).
26. See Bagwell, R., *Ireland under the Stuarts*, Vol. II, London 1909, p. 169.
27. Gleeson (1937) p. 112 & 113, quotes two MS sources (his refs. 40 and 45), indicating at least an intention of mining in 1654 and the continuing presence of miners in 1658. This latter reference, however, must be set against the *Census of Ireland c. 1659* (ed. Pender, I.M.C. 1939, p.322) showing only ten households at "Maynes Royall", with a similarly thin population on the surrounding townlands, all of whom were recorded as being Irish.
28. Gleeson (1938) p.210 quotes a MS stating that an order was made for the planting of 100 acres of wood near the mine in 1656. *The Civil Survey* Vol II (op. cit), p.211, reports "no timber woods but some woods only fit for fireboote, plowboot and cabins".
29. C.S.P. Domestic 1671-'72, p. 386, King to L.L. 1672; also *ibid*. 1695, p. 207.
30. *Irish Commons Journals*, Vol II, 1692-1713, 334, Hamilton's petition, of 13 October 1703, sets out biographical details. See also D.N.B. Hamilton, George and John.
31. "Journal of Thomas Dinely" (in 1682), *Journal of K.A.S.* Vol. IV, p.272. The newly opened mines he ascribes to Prittie. However, C.S.P. Dom 1695, p.207, implies that the mines had been worked for lead by Hamilton.
32. The application of John Hodges' invention to Ireland given in C.S.P. Dom 1689-'90, p.563 and 1690 91, p.20.
33. *Burke's Peerage*, 1865 under "Dunalley". This is not a very creditable source.
34. D. 623 (46) in P.R.O.N.I., Hamilton to Rice, 1700.
35. C.S.P. Dom 1703-'04, p.123, list of bills 1703 stating Prittie's grievance leading to revocation of grant from James II to Lord Abercorn, 4th Anne, ch. 12
36. "Manuscripts at Knockboy" in *Analecta Hibernica* XII, 1943, p. 150
37. Lodge, Fairs and Markets, 1338-1773, P.R.O.I. MS A5363.
38. Lease Aug. 1724, Henry Prittie to "Governors and Company for Smelting . . ." and lease May 1731, Prittie to same — in Reg. Deeds 43/245/28057 and 66, 351/46690 respectively. (I would like to thank Dr. Thomas Power for these references).
39. MS. at Kilboy, loc. cit., p.150. O'Connor's lease is dated 20 March 1758.
40. "The Case of Martin O'Connor of Silvermines", petition Dublin 1762 and "State of the Copper Trade in Ireland for the consideration of the House of Connors" undated - MS. P. 4034, N.L.I.
41. "Note booke of Councillor Th. Sadlier . . ." undated — MS. 9428, N.L.I.
42. Report of Wm. Lawrence to Dublin Society, undated and unprovenanced report in MS 8146 N.L.I., envelope 13. The figures come from customs' returns, MS. "Dublin Imports and Exports". N.L.I., vols. 1870 to 1880.
43. Idem, env. 13.
44. Report on Shallee 1824, quoting a miner who had worked there, in Hibernian Mining Company, correspondence and minute book, MS 657 N.L.I., between minutes 7 and 11 Oct. 1824. A second copy at the back of the vol. gives date 1796.
45. Beaufort, D.A., *Memorial of a Map of Ireland illustrating the topography of that kingdom*. London 1792, p. 103.
46. *Mining Journal* 1836, II, p.86, letter "Hibernicus". He gives no date or authority. Reference also in "Report of the Itinerant Minerologist", in *Transactions of the Dublin Society*, Vol II 1800, p.116.
47. Report on Shallee 1824, loc. cit., with map at back of bound vol. by Nicholas Sinnott. Ten tons were reported out of 8 or 10 shafts.
48. *Gazeteer of Ireland*, Vol. III, London 1845, p.235, quoting Peter Holmes.
49. *Burke's Peerage*, op. cit., MS at Kilboy, "Maps oat Kilboy" loc. cit., p.150, has various references to the Boltons, including lease of the mines, 1801. References to Hall and Bolton in *Waterford Memoirs of the Geological Survey in Ireland*, 1865 statement by James Hore, Vol. VI, Co. Waterford; also Butler, M., *History of the Barony of Gaultier*, Waterford 1913, pp.123 & 125.
50. This section is drawn from the minutes of the Dunally Mining Company, MS. 341, N.L.I. The date (month) of each meeting is given in the text.



51. Ibid. collated from various references and listings given at meetings April 1802 and July 1803. Relationships taken from Burke's Peerage, op. cit., although this needs further investigations.
52. Journal 1846 (henceforth HJ) 1846, p. 105 letter St. Pierre Foley II, and report Wm. Lawrence, loc. cit.
53. Idem, report, and Report on Shallee 1824, loc. cit.
54. Idem, report by Lawrence on what is presumably his own working.
55. Details of the Col's life may be gathered from the writings of this son S.C. Hall — *Ireland, its scenery, character, etc.* London 1841, p. 140 et seq.; *Killarney and the South of Ireland*, London 1865, p.125-126; and various refs. in *Retrospect of a long life*, London 1883. Part of bound ledger MS. 7900, N.L.I. was used by the "Lackamore Company" as a "miners ledger". It identifies Perry as secretary of the company.
56. Wm. Lawrence, loc. cit., mentions Hudson and Imperial Mining Company trials. Report Shallee 1824, loc. cit, gives Hibernian Mining Company tests. The mining boom of 1824 has yet to be written up.
57. When this gold was discovered is not clear, but the earliest reference I have found is the typescript of Ordnance Survey Name Book, Boolrunta, Par. Killoscully, Bar. Owey and Arra, Wilkinson Dec. 1838. He refers to it in the present tense, but not as a new discovery.
58. There are various references to Salmon's goldmining leases in Wicklow in the Quit Rent Office collection at the P.R.O.I. — no. 2B 46 31.
59. MJ 1838 VI & VII p. 171 & 179 (respectively) — "Law intelligence".
60. MJ 1839 VIII p. 58, "Law intelligence", Salmon v. Maguire.
61. Mentioned in typescript O.S. Name Books, Tipperary, Barony of Upper Ormond, Parish Kilmore, Name Book 4, Silvermines Village.
62. MJ 1844 p.198 "Law Intelligence", Salmon v. Maguire etc.
63. The printed half-yearly reports of the Mining Company of Ireland in N.L.I. give a good picture of the scale of their activities. Purchase of the lease from Salmon is mentioned in the report 1st June 1840.
64. Ibid, reports 1840-'44. For details of enhanced price of sulphur, see Houghton on the Avoca pyrite trade in *Geological Society of Dublin Journal*, Vol. V, 1853, p. 283.
65. MJ 1846, p. 248 & 482, Reports ½ A.G.M.s of G.M.C.I. These show Donnelly as director and Maguire as secretary.
66. MJ 1865, p.53, Dublin Correspondent, giving background of GMCI.
67. MJ 1846, p.248 & 482, cit., These company reports usually cite the motto.
68. MJ 1847, p.597, rep. ½ A.G.M..
69. MJ 1850, p.270, rep. ½ A.G.M..
70. MJ 1854, p.325, letter "An English Shareholder".
71. MJ 1856, p. 43, Dub. Cor cit.
72. MJ 1853, p.772. as admitted by Chairman at ½ A.G.M..
73. Ibid p.428, letter "H.E." whom I take to be Henry English.
74. Ibid, p.464, anon. report.
75. Ibid, p.755, letter, A. Flanagan, Dublin.
76. MJ 1854, p.472. Dub. Corr.
77. Ibid, p.376 & 463, rep. on adjourned and resumed ½ A.G.M.
78. Ibid, p.463, also having the report of shareholders' subcommittees.
79. Ibid, and comments Dub. Corr., p.472.
80. Ibid, p.549, Dub. Corr.
81. Ibid, p.549, rep. meeting and 556, Dub. Corr.
82. Ibid, p.564, letter "L.S.D.", Dublin.
83. Ibid, p.631, letter "A Shareholder" and p.656, Dub. Corr.
84. Ibid, p.817, rep. ½ A.G.M.
85. Ibid, p.716, anon. item, supposedly citing Nenagh Guardian.
86. Ibid, p.737, Dub. Corr., and 832, letter Hambly.
87. Ibid, p.817, rep. ½ A.G.M.
88. MJ 1855, p.27, Dub. Corr.
89. Ibid. pp.364 & 544 Dub Corr.; pp.552 & 590 "British Mines" reports from Silvermines.



90. Ibid, pp.39 & 27, Dub. Corr.
91. Ibid, p.344, financial statement and 332 & 334, comments of Dub. Corr.
92. Ibid, p.360, "Mining Market", rep. meeting.
93. Ibid, p.776, Dub. Corr.
94. MJ 1856, p.102. "British Mines", Capt. King's report.
95. Ibid, p.332, 776 & 832, Dub. Corr, on accounts and meetings.
96. MJ 1857, p.360, Dub. Corr on finances and p.406 rep. ½A.G.M.
97. Ibid, p.700 & 732, Dub. Corr.
98. Ibid, p.832, Dub. Corr. reporting on his visit there.
99. Ibid, p.800, Dub. Corr.
100. MJ 1853-'58, passim, monthly share price quotations plus comments Dub. Corr.
101. MJ 1858, p. 391. Report ½ A.G.M.
102. Ibid, p. 823. Report ½ A.G.M.
103. MJ, 1859, p.57, Apjohn's report. Two items were published on the discovery in *Geological Society of Dublin Journal*, Vol. VIII, 1862-'64; p.107, Apjohn. "on the Occurrence of Electric Calamine at the Silvermines in the County of Tipperary", and p. 244-251, Wynne, "Some Remarks upon the Mining District of Silvermines . . ."
104. Ibid, G.S.D., Vol. X, p. 111-112, Beete Jukes "On the Way Calamine occurs at Silvermines".
105. Reports ½A.G.M.s in MJ 1859, . 417; 1860, p. 855; 1861, p. 364.
106. MJ 1866, p. 81, G. Henwood IV; 1868, p.404 & 880, Reports ½A.G.M.s.
107. MJ 1869, p.81, G.M.C.I. Advt. seeking buyers for zinc oxide; 1871, p.492, ½A.G.M. — admission by chairman of difficulties in breaking into the zinc market; 1871, p.1083, ½A.G.M. — frank admission of failed sales.
108. MJ 1870, p.781 anon. item: p.795, offering shares in Shallee Co. There were three Dublin directors and R. Going Collis of Nenagh.
109. Ibid, p.1072. Irish Mining Share Market.
110. MJ 1871, p.492 & 1083, Reports ½ A.G.M.s.
111. MJ 1872, p.541, Report ½ A.G.M.
112. MJ 1873, p.631, Report ½ A.G.M.
113. MJ 1874, p.111, Report ½ A.G.M.
114. Hunt, J. (compiler) *Mineral Statistics* published annually from 1853 gives only public ore sales — i.e. Shallee could have been selling privately. It also lists mining companies in the 1860s and '70s. MJ 1877, p.1045,, letter J. Phillips mentions a new discovery at Shallee that year.
115. See Cole. G., *Memoir and Map of . . . Mines in Ireland*, S.O. 1922, p.122-3 and for post-war workings *Mineral Deposits in Europe* Vol. I, (various editors), London 1978, p.333.
116. It is strange that according to its own listing the Geological Survey of Ireland does not have plans of Silvermines.
117. Figures for the first three years are from *Thoms Directories* 1864-'49; figures 1848-'52 *Record of the School of Mines*, Vol. 1, Pt. iv., compiled by R. Hunt, H.M.S.C. 1853; figures from 1853 on are taken from the annual published volumes of *Mineral Statistics* (H.M.S.O.) for each year following. These refer only to the public sales of ore and there is no record of what may have been sold privately (e.g. The G.M.C.I. could well sold to the Ballycorus smelter of the Mining Company of Ireland without it being recorded here).
118. Shallee is frequently quoted in *Mineral Statistics* as Shallee Esae or West; I have simply added the figures. Lead is given as tonw of unrefined ore, usually 70 to 80% rich. The amount of silver contained by the lead is not given until 1852.
119. Lead ore in tons, silver in ounces. It is difficult to account for the sporadic tonnages of copper. Between 1856 and '58 lead was marketed only as "Silvermines".
120. Zinc, which I take to be from Garryard, is frequently recorded only as "Silvermines".
121. The gap in copper production here might be attributable to the collapse of the main shaft in 1852. In 1855 the G.M.C.I. tried to sell Ballynow to a London Company, but apparently did not succeed (Report in *Mining Journal* 1855 p.360.).
122. For most years these figures are little more than guesses based on the mineral quoted in the *Mineral Statistics* i.e. lead values of about £20 per ton in the 1850s declining to £12 per ton in early 1870s; copper depended on quality which I have taken as averaging £20 per ton; zince averaged



- about £2 per ton in early 1860s and £3 in early 1870s; silver stayed fairly constant at about 5 per oz.; no price quoted for zinc oxide.
123. Collated from Wynne "Some remarks upon the mining district of Silvermines", in *Geological Society of Dublin Journal*, Vol. VIII, 1862-'64, p.244-251, (which includes map), and *Memoirs of the Geological Survey*, Explanation to sheet 134 (for Clare, Tipp. and Limerick), 1861, p.32-41. The pump is described by the Dublin Correspondent of the MJ 1857, p.800, following a visit by him there.
 124. See Cowman, D., "Life and Work in an Irish Mining Camp c. 1840; Knockmahon Copper Mines, Co. Waterford", in *Decies XIV*, May 1880, p.30.
 125. MJ 1855, p.552, "British Mines", report of Capt. King complainint of a shortage of workers while the harvest was being gathered, dated Aug. 18th.
 126. Numbers for 1846 & '47 in MJ 1847, p.597, report ½ A.G.M.; numbers for 1849-'51 & '53 in MJ 1856, p.91, Dublin correspondent based on the company's reports; corroboration and detail for 1853, before the crisis began, in MJ 1853, p.348 & 428, Report ½ A.G.M. and letter "H.E."; numbers 1855 in MJ 1855, p.770, Report ½ A.G.M.
 127. Compiled from Abstracts of Returns, 1832-'81, Parish of Kilmore; the townlands are given from 1841 on. Shallee is in Killoscully Parish and given in four sections which I have combined.
 128. John "Bawnty" (? spelling) Ryan of Shallee Lower interviewed by me on 20th July 1977. He said that his grandfather, William Bannin (? spelling) died in 1934 aged 85, when John was 14.
 129. Michael Gleeson of Coolreagh, interviewed by T. Hallissy on 7 June 1917. Typescript notes in Geological Survey office titled "Mines and Mining in Shallee East and LWest Stopes" (under "Silvermines").

