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# 19th CENTURY LEAD MINING ON THE NORTH SIDE OF THE RIVER DERWENT NEAR CROOKED OAK, IN SOUTH NORTHUMBERLAND.

By Raymond A. Fairbairn

## SYNOPSIS

*This article has been mainly based on the Middleton Papers which are housed in the Northumberland Records Office.<sup>1</sup> It is concerned with various attempts by small mining partnerships to exploit mineral veins located at the edge of the orefield, and with the interaction of the mine adventurers with the landowner. The presence of a smelt mill is noted.*

## INTRODUCTION

Early in the 19th century, Sir Charles Monck of Belsay Castle (who was born a Middleton on 7th April 1779 and took the name Monck when he was 20 years old, in compliance with an injunction in the will of his maternal grandfather, Lawrence Monck) and Mr George Silvertop of Minsteracres owned adjacent estates situated on the north bank of the River Derwent. The estates included that small peninsula of Northumberland, bounded on three sides by the Derwent, to the south of Crooked Oak, in which Silver Tongue Lead Mine is situated.

Though the estates were on the eastern extremities of the lead-bearing region, the old and productive Healeyfield lead mine was less than a mile to the south, in the lands of the Dean and Chapter of Durham. In 1822, when it was proposed to start mining in Sir Charles Monck's land, the lead industry was flourishing, with pig lead bringing £22 per ton, and so it is not surprising that the landowners were interested in seeing that the lead ore on their estates was exploited.

## LOCATION

The exact location of some of the workings mentioned in the papers is not known. This is particularly true for the mines in the Monck estate.

The Act for the division of Bolbec Common names the freeholders who received allotments. These include, "*Sir Walter Blackett, for Crooked Oak, 15 acres, for Coalpitts, 276 acres; Sir William Middleton, Bart, for Hole Raw, Orchardfield, Crooked Oak, Wallish Walls, Mosswood and Allans Ford, 576 acres; George Silvertop, esq., for Crooked Oak, 39 acres; Cronkley and Mill Shield, 380 acres; Minsteracres and Newfield, 758 acres*". The award was made on February 9th 1771. George Silvertop purchased the barony and the remaining manorial rights from Mr George Baker in 1800. The places named in the Act as belonging to Sir W. Middleton had been in the family for a long time, probably from the 14th century, and it seems that they still were in the 19th century.<sup>2</sup>

The 1838 agreement to let, between Thomas Teasdale and partners and George Silvertop, describes the area involved as belonging "*to the Manor of Bulbeck bounded on the west by George Silvertop's freehold farm of Crook Oak along the Derwent until the said Manor adjoins the Manor of Newlands and from thence to near Greymare*

*Hill and so along the Coal Road joining to Barlow Hill and so along the Parish Road going to Sir Williams Lodge and from thence along the Corbridge Turnpike Road to a lane which leads to Crooked Oak and including the said Farm to the Derwent*". The underlined portion had been crossed out and an insertion made. Unfortunately the insertion is far from clear, but appears to read "*House called the Manor Houses tenanted by James Elliot & so down the lane contiguous thereto to the Derwent and from there to George — ? — 's Farm at Crooked Oak*". From this description, it seems that the peninsular and the north bank of the Derwent would be in the Silvertop estate, as would the land to the east as far as Sir Charles Monck's lands. The boundary between the two estates was close to where the Hysope Cawk Vein crosses the Derwent.

## THE VEINS

According to Smith, "*there are three veins converging within the narrow tongue of ground enclosed by a bend in the river, Old Silvertongue Vein ranging N-S, Middle Vein ranging N. by W. - S. by E., and another to the west of these, ranging N.W.- S.E.*"<sup>3</sup>

*"The Old Silvertongue Vein throws down to the west, the amount of displacement increasing southwards from 9 to 18 feet, whilst the Middle vein has a downthrow to the east of 12 feet at the river. This vein has been traced for a short distance beyond the Derwent.*

*"The veins carry barytes, very white samples of which can be picked up from old spoil-heaps, but from all accounts were not very productive of galena. The lead, however, is credited with having contained 30 ozs. of silver per ton"*.

*"Near Hisehope Burn on Muggleswick Common galena has been observed as small strings in the Millstone Grit"*.

In a memorandum in the Middleton Papers, the Healeyfield vein is said to throw the strata up 20 fathoms on the west side (c.f. 21 fathoms according to Smith). The Hysope Vein throws up the west side 12 fathoms and two veins west of these veins throw up the west side 1½ fathoms each. There was also a vein a few fathoms to the east of Silvertongues that was thought to carry ore. It confirms that the Silvertongues Vein runs north-south. A letter from Teasdale of the 10th February 1838 confirms that the Hysope Vein enters Sir George Monck's property.

## THE LEAD MINES

### 1822-1824

From the surviving correspondence, it is evident that Sir Charles had no experience of lead mining, but by 1822 he was in possession of a sample of lead ore from a vein that ran through his land.

On the 27th July 1822 Thomas Teasdale wrote to Sir Charles, informing him that the vein from which the sample was obtained was not the Healeyfield Vein, and he requested "*preference of taking it on regular terms*". No time was lost as, on the 28th July, permission was granted for Teasdale to view the vein and, on the 8th August, he

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reported that it was worth making a trial in it. On the 15th August, Teasdale sent a proposed lease to Sir Charles, writing that he had copied '*regular clauses of Lead Mine Leases for your perusal and signature*'. This may seem a little presumptuous, but it was apparently a genuine attempt to help. Sir Charles sent the letter to Robert Pearson of Westgate Street, Newcastle upon Tyne, with suggested additions, and a request for advice. In particular he asked if 1/7th duty was sufficient. Pearson returned two copies of the lease, presumably to be signed by Teasdale, and commented on '*dues which vary sometimes a fifth but more generally a seventh of the ore*'.

Sir Charles entered into a 21 year agreement with Teasdale on September 2nd 1822 with a duty of 1/7th of the ore produced. A copy of the agreement is appended. Work on the level began soon after the lease was granted and, by the 11th November, they expected to meet the vein in a few weeks' time.

It cost 23 shillings per fathom to drive in the plate beds and no propping was required. They expected to have to drive about 43 fathoms to reach the vein and they hoped to achieve this by the New Year. The trial was a failure, however. On the 20th February 1823, Teasdale reported that they had cut nothing but two strings and requested that the terms of the lease be waived to allow them to try the Hyssop Vein which was within 20 yards of the estate boundary. Permission was granted and a drift begun on the north side of the river in Hyssop Cawk Vein.

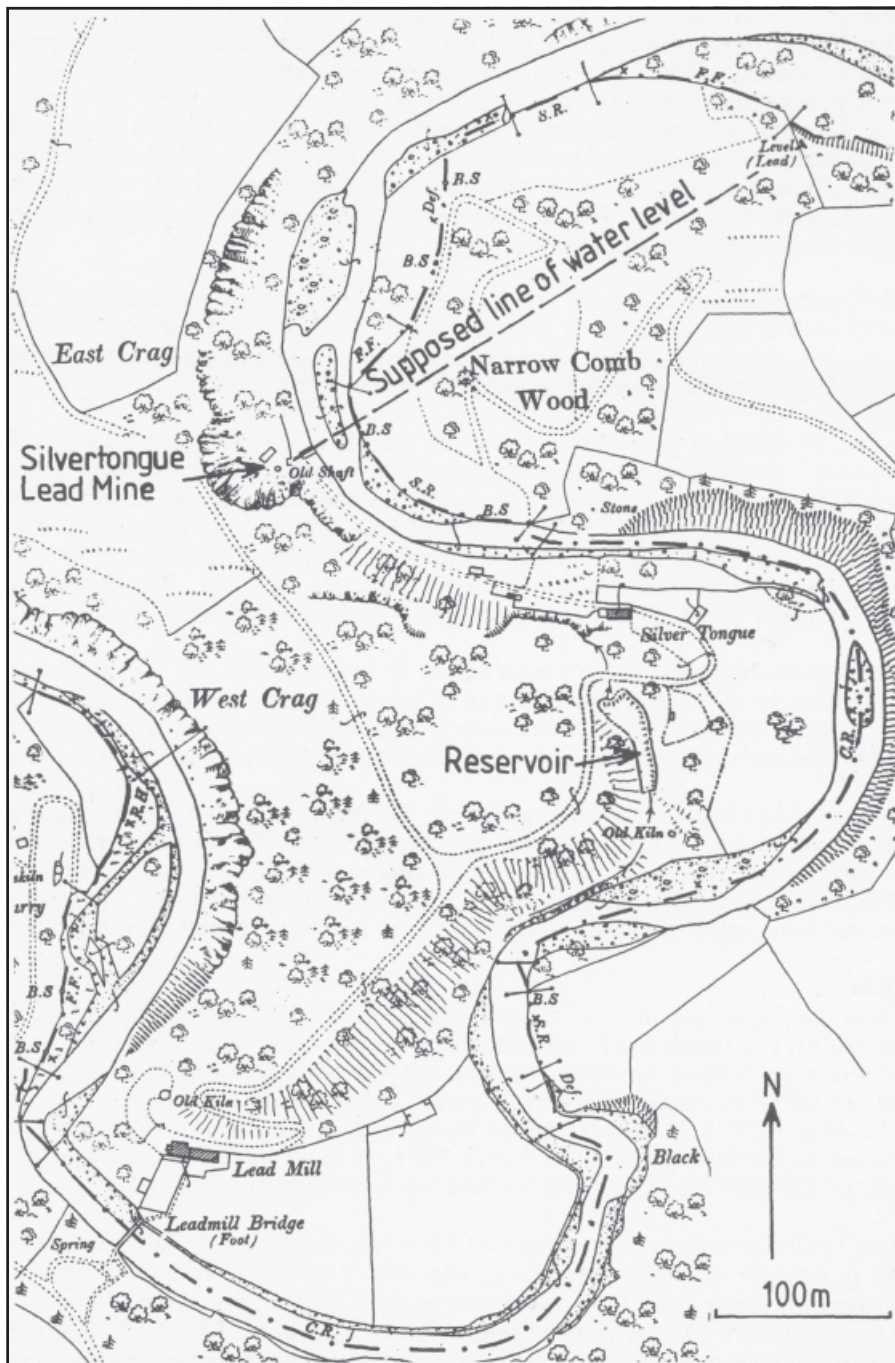
Hopes of success seem to have been fading by January 1824 and Sir Charles set aside the cost of timber owed to him as a "*small contribution to your undertaking*". Teasdale wrote on the 30th January, admitting that the prospects of getting ore immediately were not great, but he remained optimistic for eventual success.

By July 1824 Teasdale was sinking a shaft, '*in North Healy Field*' in Sir Charles estate and was having difficulty in supporting the sides. He requested permission to use stone from a small ruin. It would appear that the ruin was a cottage at Wallish Walls, and that permission was being sought retrospectively. Sir Charles granted permission, but took exception to their helping themselves to the stone.

### 1838

There is a 14 year gap in the correspondence relating to the workings and it seems probable that no work was done on the estate during this period. It is evident from later correspondence, however, that Teasdale had been exploring in the adjacent estates which belonged to George Silvertop and the Dean and Chapter. On the 12th May 1838, a 21 year lease was signed to cover the area of Bolbec Manor owned by Mr Silvertop and, in March 1838, it is recorded that Teasdale had offered £700 for the lease of Healeyfield Vein at a duty of 1/5th.

Item 7 of the agreement concerning Sir Charles' ground specifies that "*The Lessee not to unwater or suffer the water of any other Mine or Mine Ground to pass through the levels or drifts of this demise without the Consent of the Lessor ...*". It is clear from a letter written by John Aynsley, land agent for Sir Charles, that permission was given



for a level to be driven for a short distance through his estate to drain the shaft in Silvertop's land. In a letter of the 17th November 1838, Aynsley says that the shaft on Silvertop's royalty was already 25 fathoms deep, where No 1 Vein was found to be broken into three strings. The intention was to sink to 30 fathoms, then, when the water level reached the shaft and a new water wheel was installed, they would sink further. The cost of sinking was £22 per fathom. A plan shows the "*Supposed Line of Water Level*", starting on the south side of the Derwent (NZ05904945) and running in a straight line up to Silvertongue Mine, a distance of about 400 metres.<sup>4</sup> The level mouth was said to be '*300 yds above where the Hyssop Vein comes into*' Sir Charles Monck's property.

Teasdale enjoyed some success in the Silvertop royalty, presumably at Silvertongue Mine, and by 1840 was working an east-west vein which was running into Sir Charles' estate. Because it was going to involve some expense to develop the workings in Sir Charles' estate, Teasdale applied to Sir Charles for a new lease. From the prolonged correspondence on this subject, it is clear that Sir Charles was displeased that Teasdale had abandoned the search for lead on his property and he tried to impose unusually harsh terms for the lease. No agreement was reached and finally Sir Charles wrote that it was not his wish to let the mine on his estate.

### 1862

A further attempt to work lead on Sir Charles' estate was proposed by Messrs John Seymour and Co on 26th August 1862. The proposal was for leave to make a trial of a vein at Wallish Walls and Mosswood for a period of two years. The result of this initiative is unknown.

## THE PARTNERS

### 1822-1824

The agreement with Sir Charles Monck does not mention that Teasdale had partners, but in a letter to Monck of the 27th July he wrote that "[I] *can get some very respectable persons to join [me] in a trial of the vein*". Thomas Teasdale was probably one of the Teasdales of Slaley. Thomas was a name much favoured by that family, and at least three men of this name were alive during the period covered. This Thomas was apparently an experienced miner for, in the letter of the 27th July 1822, he states that he has had 18 years' practice in viewing and working in mines. He seems to have been the agent for the partnership, with the other partners providing capital, though he retained a financial interest for, in his letter of 1st July 1840 to Sir Charles, he writes, "*but I really dare not venture to enter upon your description of conditions in an untried Country that may ruin me and my family*". Little else is known of him, except that he wrote from the Plate Glass Works, Forth Banks, in 1824, and from Croft House, Corbridge in 1838. Of the other partners nothing is known.

### 1838

The agreement between Teasdale and Silvertop includes the names of the mining partners. These were Thomas Teasdale of Corbridge, James Baker of Newcastle, John Weir of Newcastle, and Jane and Matthew Hall of Newcastle. In 1840 the partnership is referred to as the Silvertongue Lead Mining Company.



**1862**

When Mr Dolphin made an application in August 1862, on behalf of a party residing in the neighbourhood of Allensford to work for lead, Thomas Harrison, acting on behalf of Sir Charles, requested more information concerning the partnership. The Company consisted of

Rev.J.P.Dunn	Roman Catholic Priest.
Samuel Leybourn	Railway Agent.
Matthew Elliot	Farmer.
John Seymour	Brewer.
John Calvert	Grocer.
William Watson	Agent for Healeyfield Lead Mine Company.

Watson was also agent for the new company. It is not known who Mr Dolphin was or what his role was in the company.

Mr Boyd, Agent for the Dean and Chapter of Durham, was recommended to Sir Charles, should he require a Mineral Agent.

**OUTPUT**

The only record of production for these veins is that of 138 tons in 1848. The silver content was 30 ozs per ton. Teasdale wrote that he lost £1,200 in his efforts to work the ground in Sir Charles' estate in 1822-1824. In a letter dated November 1838, Mr Aynsley, recording a conversation he had had with Mr John Cookson on the railway, wrote "*that Mr Silvertop had lately renewed the lease of lead of Bolbeck Manor and his own freehold property to Messrs Teasdale and Co: and that Teasdale had been offered 30,000£ for the lead*". Whether this meant only Mr Teasdale's share in the lease or the whole lease and the company's lease of the Dean and Chapter's lead on the Derwent is not known. With lead bringing £19 per ton, this equates to over 1500 tons of pig lead. This seems far more than could be obtained from Silver Tongue.

**THE MINERS**

The conditions agreed with Sir Charles specify that four pickmen should be employed for at least ten months in the year, though this could be reduced to two when making the trial.

John Seymour and Co. undertook to employ two pickmen in making a trial.

No information is available regarding the number employed in the workings on the Silvertop property, but the size of some of the projects described would require more than four pickmen.

In 1838 five cottages were built by Sir Charles Monck at Moss Wood (NZ06955055) for the lead miners. The five cottages were leased to the Silvertongue Lead Mining Company for 21 years at £24 15s per annum. Sir Charles was to let gardens to the cottagers.

### **THE LEASES/AGREEMENTS**

The landowner and the mine adventurer were interdependent, yet both had different objectives. The relationship was held together by the lease or agreement which records the compromise arrived at by the two parties.

The objective of the landowner was to ensure that the mineral on his land was mined as efficiently as practical, yielding as high a duty as possible, and so maximising his profit. At the same time he would wish to minimise the damage to his property. He took almost no risk, and did not usually invest in the mining enterprise. Sir Charles states in a letter to Teasdale that "*My first purpose ... is to secure the immediate, continued, and efficient working of the lead veins in my lands*".

The miner had no interest in the land. His objective was to find and exploit the mineral at as low a cost as possible, making sufficient profit to satisfy the shareholders of the enterprise.

Payment to the owner of the mineral rights was usually in the form of duty i.e. a part of the ore produced. The duty agreed with Sir Charles was 1/7th, whereas Mr Silvertop was satisfied with 1/9th duty, but also got an annual rent of £20. The inclusion of an annual land rent is unusual and, when Sir Charles asked for one, Teasdale pointed this out.

### **THE 1822 AGREEMENTS**

*Conditions of letting Alansford Lead Mine by Sir Charles Monck Bart to Thomas Teasdale.*

*1st Term 21 years from 2nd September 1822 for all the Mines Veins and Strings of Lead Ore in Alansford Estate belonging to Sir Charles Monk.*

*2nd The Lessee to have liberty to sink Pits Shafts and drive Levels and to erect Engines for drawing Water or Ore Subject to certain Conditions hereafter named Also liberty of erecting Bingsteads and other necessary apparatus for washing and dressing the Ore (the liberty of Hushing for Ore and erecting smelt Mill or smelt Mills excepted) also liberty to apply the springs of water for the washing of the Ore or other Purposes leaving such a portion in a pure state for the Use of the farms as may be thought necessary by the Lessor or his Agent.*

*3rd The lessee to pay all Damages caused by the winning and working the Mine As also all Damages done or caused to be done to the Lessor or his Tenants and adjoining Occupiers and owners by the Buddle or other Water.*

*4th The lessee to have wayleave and passage to and from the Mine.*

*5th The Lessee to pay or deliver one seventh part of the Ore produced from the demised Mine unto the Lessor the same being well dressed and made fit for smelting and clear of every Expence.*



*6th The Lessee from time to time to give the Lessor or his Agent at least three days notice in writing of his Intention of weighing of the dressed Ore so as the Lessor or his Agent or Agents may attend to receive his one seventh Part thereof such weighing off not to be made oftener than once in two Months except by assent of the Lessor or his Agent.*

*7th The Lessee not to unwater or suffer the water of any other Mines or Mining Ground to pass through the levels or drifts of this demise without the Consent of the Lessor being first had for that purpose in writing and in case of breach of this restriction by the Lessee the Lease to be absolutely void from that time.*

*8th The Lessor reserves the Power to grant to any other Mining Party liberty of driving any Drift or Level out of the Lessees Drift or Level for the working or unwatering any other Mining Grounds adjoining, he the Lessee being paid reasonable satisfaction for the same according to the damage done to his Drift by such new Drift in driving or using it.*

*9th The Lessee to carry on the Mine according to the best mode of Mining leaving a barrier of 100 yards against every other adjoining Property excepted permitted to do otherwise by the Consent of the Lessor in writing.*

*10th The Lessee after the Commencement of the working shall continue the same at least 10 Months in every Year by employing four Pickmen (with liberty when making the trial to have only two Men until they get Lead Ore excepting in the case of civil wars snow or other unforeseen accident) otherwise the Lease to be absolutely void.*

*11th The Lessor or his Agent or whom he shall appoint to have liberty at all times during the Term to examine and survey the Mine and make a Plan thereof.*

*12th The Lessor or his Agent or whom he shall appoint to have liberty at all times during the term to examine the delivery books to determine the quantity of ore wrought and also liberty to examine the books or accounts of sales of Ore taken away and also liberty to take Copies thereof and the Lessee to furnish the Lessor at any time when required so to do in writing with a true statement of all the beds of Stone and other Matter sunk or driven through in the natural order of succession beginning at the surface with the Name Quality and thickness of each bed which statement must be declared to be true and signed by the Lessee.*

*13th The Lessee at the End or sooner determination of the Lease to leave all the Levels Shafts -?- Sumps and other Workings properly timbered and in good working repair except leave from the Lessor to the contrary is obtained.*

*14th The Lessee to have liberty of six Months after the End or sooner determination of the Term to remove all the engines ropes rollers and other Materials and Implements used on the Premises he having performed the Covenant of the Lease leaving all the Timber in the Shafts Sumps and Levels and all Building of Brick or Stone for the use of the Lessor without any Payment for the same The Lessor to have*

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*the Power to purchase the whole or any Part of the aforesaid Engines Ropes Rollers or other Materials he giving the Lessee One Months Notice of his Intention the value of which being left to the determination of two disinterested persons independently chosen and on them disagreeing to the determination of an umpire chosen by the said two persons for that Purpose.*

*15th The Lessor and Lessee to agree to all other usual and common Clauses contained in Lead mine Leases.*

*16th In Case the Lessee make any Neglect or Default of the Covenants Clauses or Agreements the Lease to be void.*

*17th A Lease to be prepared and executed when required by the Lessee or Lessor at their mutual Expence.*

*We the undersigned Sir Charles Miles Lambert Monck Baronet and Thomas Teasdale of Forth Banks in the County of Northumberland do hereby consent and agree to the above mentioned Terms and Conditions Witness our hands this thirtyfirst day of August one thousand eight hundred and twenty two.*

*Chas: M: L: Monck  
Thomas Teasdale*

### **EXTRACTS FROM THE 1838 AGREEMENT BETWEEN THOMAS TEASDALE AND PARTNERS AND GEORGE SILVERTOP**

*“for 21 years, from the 12th day of May 1838 paying unto the said George Silvertop ..., the certain sum of Twenty pounds in each year from the aforesaid 12th day of May 1838 free from all Taxes or Cesses whatsoever ...*

*“to pay ... one clear ninth part of all the Lead ore raised ... washed as is usual in all takes of Lead.*

*“shall not lift or carry away any ore until giving notice in writing to ... George Silvertop ... whom may appoint to weigh or examine or take away the said ninth part ...*

*“shall pay for all damages done to the properties of the common land in leaving off working any part thereof and make the same good and in plowable condition, and shall fill in all Pits and all trial places, and not work in any plantation or gardens within the common lands.*

*“Likewise ... to the farm or woodlands of the Freehold of Crooked Oak, shall not cut down any trees [in the farm and woodlands] without the consent ... of George Silvertop ... not make any trials in that part of the Farm which comes within this agreement...*

*“if either parties are anxious to have a Lease prepared on stamp, that the same shall accordingly be done at the joint expence of the Parties.*

*“[The partners agree] to indemnify ... George Silvertop ... against any Claim or Claim, of any Parties that may have been connected with the Mines heretofore.*

*agreed, on giving Twelve Months Notice to George Silvertop ... and on performing all the within conditions, that at the end of the 6th, 9th, 12th, 15th & 18th years of the said Term, the said Parties hereto may give up the said Lease”.*

## TODAY

### SILVERTONGUES MINE

**NZ05504925**

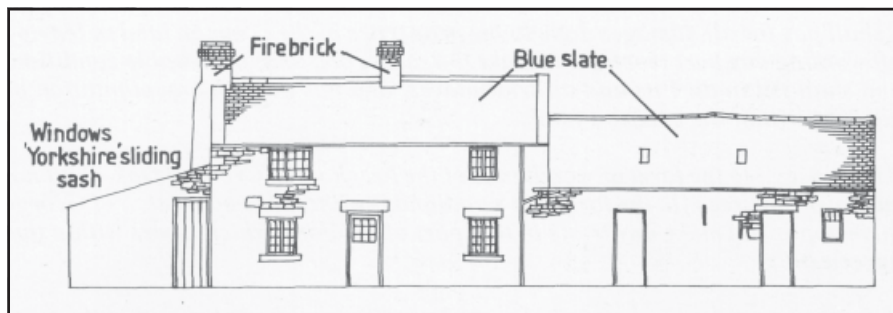
The only surviving evidence of the enterprises are the ruins associated with Silvertongues Mine. The shaft has run in, but there may still be access from the shaft into a high level. Without entering the shaft, it is not possible to see if the apparent openings in the north and south sides of the shaft are due to the collapse or are levels.

Above the shaft on the north side is a block of masonry, in the position of the building shown on the map. The purpose of this building is not known.

The rectangle shown on the map below the shaft, beside the river, is the remains of a substantial wheel pit. The wheel must have been about 1½ metres wide and at least six metres in diameter. The method of getting the water to the wheel is not known, however, unless there was a leat along the road, in which case the head was not very great.

The building marked as Silver Tongue is now a ruin, but the remains of the various small structures marked on the map nearby can all still be seen. The long retaining wall to the west of Silver Tongue may be the remains of bing or bousesteads.

South of Silver Tongue is a reservoir that appears to have been excavated out of the hillside. A leat leads from the reservoir to near Silvertongues, but the level of the leat is such that most of the depth of the reservoir could not be drained by it. The leat feeding the reservoir runs along the north bank of the river, but many feet above it. The source of the water has not been traced.



The Lead Mill from the South.

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Below the reservoir is a D-shaped flat area, outlined on the map. This may have been the dressing floors.

Sufficient remains of the old mine buildings etc. to give the impression that it has been a substantial enterprise, far greater than the few records suggest, and the site may be worthy of further investigation.

### SILVERTONGUE LEAD MILL

**NZ054488**

At the tip of the Crooked Oak peninsula is a small cottage which is marked on the early editions of the O.S. maps as a lead mill. A track is indicated linking Silvertongue Lead Mine and the mill.

The appearance of the building gives no clue to its original use, except for the presence of an oversized chimney on the west end, but the track leading up the hill from the mill includes black glassy slag in its fabric. The windows on the south side are 'Yorkshire' horizontally sliding sash, as used in the 18th century. The roof is of Welsh blue slates, which would not have been available in the area until the early 19th century.

The second clause of the agreement made with Sir Charles Monck specifically precludes the right to erect a smelt mill, but there is no mention of a smelt mill in the agreement made with George Silvertop. It is assumed that the smelt mill was built to process the ore from Silvertongue Mine. On the evidence of the windows, the mill was built most probably built in the 18th century, before Thomas Teasdale's involvement in the mines.

Two lime kilns are shown, and one is clearly associated with the mill. The kilns presumably burnt limestone extracted from the mine. The northerly kiln is small and does not have a true arch, the front having been recessed to the eye by corbelling. The kiln near the mill has an oval pot and two round headed draw arches.

### ACKNOWLEDGEMENTS

The writer is grateful to Sir S. Middleton for permission to quote from the Middleton Papers, and to the staff of the Northumberland Records Office for their assistance.

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