

*The following reports form part of a single volume of copies of original reports, submitted roughly quarterly and mostly to the Chief Agent at Newcastle in line with the recommendations of the report from Cockshutt and Bows to the Beaumonts on 19<sup>th</sup> January 1805 (NRO ZBK C 1 B 1).*

**18 Apr 1806 Joseph Dickinson to Christopher Blackett**

No.1

April 18th 1806

Coalcleugh, in general, is prosperous there being a prospect of regaining a good part of the Limestone East of the Cross Vein by pumping, which must be submitted to until a better can be found. The Old level at Carrshield will never be of service in opening the East end of CCleugh veins being at too great a distance to the North, & continued too much in easterly direction. The place which I mentioned beside the Limekiln, will be by much the shortest, by directing it to the Low Coalcleugh Vein on what is supposed to be the east side of all the known Cross Veins, & may then be turned both ways in that Vein, & likewise continued Southward to High Coalcleugh Vein, on the East side of the Cross Veins, as before. And if I am not mistaken that level will be wanted before it can be driven up notwithstanding every exertion be used in forwarding it. The west end of the most bearing vein is Welhope with ore at the Boundary and in a little time, now wanting only about [space left] fathoms. The east end of that Vein hath been very unpromising for some time past notwithstanding hath been driven forward in hopes of being better, which was the case last Quarter. The forehead producing more ore in a fortnight or three weeks than in forty fathoms driving behind. The other tryals at Hartley Cleugh, Greenley Cleugh and Swinhope are not yet completed, but going briskly forward – there was a vein cut in Welhope Level about the middle way and worked for ore, being poor, the prices at that time would not carry her forward, the last year that Vein was let at 51/- per Bing, and is likely to work at that, and perhaps lower.

The Allenheads Mines are in general poor, the flatts in the west end doth not produce so much ore as before, & I fear is working out being upon the point of entering the Great Cross Vein. A tryal ought to be made to find the veins on the west side of that Cross Vein, where there is nothing at present discovered to interrupt them, but the throw of that Cross Vein is down on the West side, and be difficult to <win> the Great Limestone which is the principle Sill. The East End of Allenheads Veins is poorer being nearly under the highest part of the fell where the greatest weight or pressure is now acting upon them and the Veins not of the strongest kind believe to be the occasion of their poverty and fear the further the Water Level is driven the more water it produces and fear it will be too much for the Engine. There is a long level driven at a place called Sipton Head & two or three Veins cut by that level, & tryals made of them into the sills, which are only Grit, or firestone, which in general doth not produce much Ore, and no limestone to be found on that part of the common, they have all proved to have

no ore in them, & by their appearance are likely for a Limestone Sill, I think a continuance in driving that level not advisable, unless the Great Limestone could be won, which I fear is at too great a depth.

In Weardale the forehead of Breckonsike Vein is confused at present by veins or strings crossing in all directions, and produces very little ore, the foreheads are driving forwards with all possible speed, in hopes of getting clear of that disturbance, and finding the vein in a prosperous state as before, otherwise the back ground will soon work out with the number of men employed and workable state of the vein. – The veins at Blackdene level, appear to me not strong enough to bear Ore in these under Sills, when the weight or pressure of the upper Sills comes on about Mr Lee's House, and of course another level will be to drive for the more effectual working the Sills above, The Burtree Pasture Vein being the most likely to produce Ore at present, but a part of the ore workings being under Level, makes it more difficult to work, & of course more expensive, some method must be taken to relieve the Water drawing otherwise that expense will be heavier every day. The old mine at Sedlin is nearly worked out, only some of the top sills at present working, the Kilhope Mines are likewise nearly worked out, and Puddingthorne at present will hardly pay the expense of driving the Level, the Limestone being found to be thinner up the fell, which is contrary to expectation. The Level at Levelgate is driving forward, with all the expedition possible, to underwater Longsike & Middlehope Vein, at a greater depth than hath been worked before, and likewise for discovering, & working other Veins that may be found by driving that Level. – The old Workings at Middlehope still continue to raise Ore at a great pace, and likely to continue until the Level reaches them. – A low level is likewise going forward to relieve the forehead of Slitt Lead Mine but is a considerable way behind the forehead, that mine is producing Ore very well at present. A long level is driving on the East side of Middlehopeburn to cut the veins which hath been worked on the West side to a considerable advantage, is still short of the Veins intended, but expected to cut them in a year, or less. – A level is likewise driving at Wolfcleugh to discover Veins there, and to be continued to the old Vein, & is expected will relieve the Engine by taking off a stand of Pumps, it hath already discovered a Vein, which hath produced a considerable quantity of Ore in the Little Limestone on the West side, and hath likewise opened the Veins in Coal Sills, on the East side, which hath produced a very good sample of Ore last Quarter. – Another level below the Smelt Mill was driven Northward to cut Middlehope Veins, on the West side of Rookhope Burn, & hath discovered one of them which at present hath not a favourable appearance in the Great Lime. – At Brandon Walls let Alex Whaley & Co a Bargain to raise ore in Col Beaumont's Liberty at 90 /- per Bing for Ore fit for smelting and to work regularly with at least 4 men the Bargain to be renewed every Quarter at the pleasure of Col Beaumont if they work according to conditions. The tryal is still going on in the fields above Stanhope, where there hath been some old workings, it raises Ore which covers the expense of Dead Work &c Mr Chris Emerson took a Bargain to raise Ore in one of the Veins at Harehopefell, now entering into Col Beaumont's liberty.

Bollihope Leadmine hath produced a considerable quantity of Lead ore the two last quarters, but in cutting thro' the vein to West side is a quantity of Water filled all their workings, it is now settled to sink on the south side of the Vein and if Ore is found there to bring up a level, to let off the water & if sinking doth not answer, some other method must be taken. – The Vein at Green Laws is now producing Ore in the four fathom Limestone, another will join the present Vein about 20 fathoms west, and is then expected to produce something considerable in the Limestone above, & <Mazel> under – there was great expectations from a Vein above the Cross Hill called Highfield, but hath hitherto frustrated their expectation, by the Great Limestone being in a broken and disjointed state, although under the highest part of the fell, and was found on Lord Darlington's side of the fell in a firm state and produced a large quantity of Ore. – Two or three more places are working, but only in a very poor way, & unless something unexpected is found, will be very likely given up in a little time.

Jos. Dickinson

**10 Jul 1806 Joseph Dickinson to Christopher Blakett**

No.2

Dufton 10th July 1806

I send you a Copy of my remarks made this Midsummr Bargains, at Col Beaumonts Lead Mines, whereby you will see the general state of the Mines, and likewise observations necessary to their future working and shall begin with Coalcleugh, at the East end where the Water level is driven to the forehead, and sump nearly sunk for the Pumps to win the great Limestone on the east side of the Cross Vein. – A considerable quantity of Ore hath been raised in the background this quarter, and the best working is in the west flatts, where it had been given over some time past, but is now opening out again and expect will produce Ore for several years to come. – Wellhope West end hath produced very well of Ore last Quarter, is now poor but hope will not be long in that situation and may produce a considerable quantity of Ore in the 24 or 25 fathoms yet to drive before We come to the end of the Boundary. – The East end of Wellhope Vein hath produced more Ore this quarter than for several quarters past, and hope it will relieve the other that is working out. – The Level at Hartley Cleugh is not up to the Vein, but there are some workmen getting Ore in the great Limestone by the old Level, but when the new one is up will make a more effectual tryal in the Vein, and may be continued southward for further discovery if thought adviseable. – The Level at Greenly Cleugh driven in the Vein in the four fathom Limestone hath a better appearance than before, & is only wanting about 20 fathoms of the most suitable place for sinking a shaft, which will Air that Level, and from that Shaft will prove the Great Limestone; both the shaft sinking and driving to it is now Let. – The old Level at Carr Shield is opened that the Workmen can go up, but a quantity of Sludge remains about a yard deep for a considerable way which will be to remove before any fresh tryal can be made. – The new Level besides the Lime Kiln is

secured by Walling at the entering and a bargain let to drive 20 fathoms. – The sinking in Swinhope into the great Lime, to prove the Vein is nearly completed, the Workmen is now cutting into the Vein in that Sill and hath produced a very good sample of Ore which was sent to me in Weardale. – Joseph Little believes the Company's Workmen have driven into Col Beaumont's liberty, and the Ore is now lying at Coalcleugh until the dispute is settled.

At Allenheads the Mines are considerably poorer than before, and were under the necessity of advancing the prices, the West end flatts nearly worked out and in driving the East end level gains so much more water that I fear the Engine will not be able to take it all. – The two last quarters have been opening out an old Shaft at the West end, to see what the old Man had been doing in order to discover the Veins on the West side of the Cross Vein, called Burtree Dikes and find he had sunk the shaft in a part of the Cross Vein, and hath driven Westward from that Shaft about 40 fathoms without finding any Vein or making any Crosscutt for that purpose, and believe the forehead is standing in the Quarry Sill under the Great Limestone; we intend to drive cross to the Southward first, thinking the Vein is more likely to be on that side and if they do not find the Vein must try the other there being a very good opportunity of fixing a water <blast> at a light expense, that being the principal tryal to be made at that Mine which if it should produce as much Ore on the Westside of the Cross Vein, as it hath done on the East, will make Allenheads flourish once more.

In Weardale the Breckonsike Vein, is not yet clear of the Cross Vein, neither in the upper nor under Levels, notwithstanding the background produces a considerable quantity of Ore and may do for years to come. The Burtree Pasture Vein is now Rich in the forehead but the Ore workings is under Level and of course the Water is to draw by hand to the water Level. – If a quantity of Water could be collected to drive a small Engine, to lift 10 or 12 fathoms would relieve the Vein for several years, until a more durable way be found out, and the water in that Level does not go to the Engine but out at the Tail race. – We sent the Engineer, Michael Elliott, to view that at Coal Cleugh, it takes the least room, and considerably less water than the wheel Engines and he is of opinion that one of the same construction will be most suitable. Mr Emerson will take him underground the view the place and then you will hear further. – I have not the least doubt about the success and until that can be done we shall be under the necessity of giving an extra price for raising ore in that part. Sedlin and Midlep or Longsike old Mines are poor, but working at a long price per bing and no alteration for the better expected until the Great Level cuts them at a deeper sett. The flatt Veins in the upper Sills hath raised a considerable quantity of Ore the last quarter, but the same Veins in the under Sills are very poor. The Level on the Eastside of Midlip Burn is yet short of the intended Vein. – The Wolf Cleugh Mines are poor, and likely to continue for another Quarter and then expected to be better. – Bollihope Mine hath produced more Ore in the last Quarter than was expected, but the South end of that Vein will not carry Ore. We have fixed to sink a shaft in the south Forehead both to air the forehead and prove some upper Sills which hath produced Ore in that Country. The Veins in Blackdene Level are very poor, and expect very little more Ore in that depth, but the

level must be carried forward for the more Effectual working the upper Sills in that Vein. – The Great Level at Level Gate, is driving forward as fast as possible. The other old Workings in Killhope, Pudding Thorn and Chapel Pasture nothing material, and remain

&c Jos Dickinson

**14 Oct 1806 Joseph Dickinson to Christopher Blakett**

(no3)

October 14th 1806

Coalcleugh Lead Mine upon the whole is not in so prosperous a state as at Midsummer, some of the old Workings are obliged to be advanced in price, and such a quantity of Water loosed by working in the back forehead, about the Cross Vein, is like to be too much for the Engine, in order to remedy that, ordered the Workmen to Dam the Water back, which comes from the Companys Works on the West end, which expect will give us the relief wanted; if not must seek relief some other way. The prospect for Ore about the East Cross Vein is flattening. There is likewise a Cross Vein near the West end boundary which had been left working for some time past, and by giving a little for a few fathoms driving, is now working northward to a considerable advantage, and from its present point, will continue in Col Beaumont's liberty. – The principle Vein in Welhope is very poor in the West end at present, but hope for another hole of Ore (as the Miners say) before the Vein goes out of the liberty, which is something more than 20 fams The east forehead of that Vein is more promising, but cannot be worked effectually, without carrying a level forward, which had been left working for two or three quarters, and is now wanting to air the forehead. Hartly Cleughhead is near holing to the Ore workings, which consist of several small veins or strings, and by their present points are drawing together, the way we are driving which makes the prospect at the place more promising. Greenlee Cleugh Level Shaft is going forward but not joined, When that happens, will enable us to prove the Vein in the Great Limestone. – The new Level below C. Cleugh is going forward with all possible expedition, and the intended level in Swinhope pointed out to prove the Vein is about one Hundred fathoms driving, and then may be driven along the side of the Veins as far as may be found necessary.

Allenheads Lead Mine hath been more prosperous the last Quarter in the east end than was expected, the Vein to the South of the other, which produced that good sample of Ore, is a very weak one, and hardly will bear the name of Vein, and denominated a string, is very likely to carry Ore, and if any more strings join, maybe a valuable Vein – the West End flatts hath been more productive the last quarter than was expected, and may continue for two or three quarters more, the other parts of the mine are very poor, and of course the prices advanced. – The Cross cutt at the West End, to discover the Vein on the West side of the Great Cross Vein, hath not yet succeeded but intend to continue untill we find a Vein; or ortherwise find there is none.



The Mines in Weardale, in general are poorer than last quarter, Breckonsike Vein at the east end broke into strings, by some cross Veins, sometime since, both in the upper, & under Sills, and is not yet collected again, and of course must not expect the quantity of Ore from that mine as before, untill that happen.

The Burtree Pasture Vein is the most promising at present, but the principal part of the bearing Sill is gone under Water, and cannot be recovered untill Water is collected underground to drive an Engine, we have considerably increased the quantity of water the last Quarr, by rising to prove the Vein in the Sills above the Level, and expect is rising further to prove the Vein in the Limestone, will compleat the quantity required.

The Slitt Lead Mine is much declined the last quarter, both in The upper and under Sills, by cross Veins intersecting the principle Vein, and may be sometime before the Vein recover the former strength. – The Levels on the east side of MiddlehopeBurn are still continued, and the Vein they were intended for not yet found – Middlehope Old Vein still continues to raise Ore in small quantity, and so doth Kilhope and some other mines in that part of the Country. Greenlaws not up to the place where the principle expectation lay, but at present not very hopeful. – The two BlackDean's Levels very poor. The Levelgate great Level still driving on to relieve Middlehope Vein at an undersett

Wolfcleugh doth not answer in the low Sills at present, so well as was expected, and Bollihope Vein doth not carry Ore in the South end of the Vein, the North end still continues to raise Ore, but there is only a little way to the old Works, standing full of Water. --- You will say this is a melancholy picture, but a true one according to my judgement.

Jos. Dickinson

#### **14 Nov 1806 John Mulcaster to James Cockshutt**

James Cockshutt Esq, Huthwaite

Nov 14 1806

Along with this I have sent you an Acct of the operation of Roasting the Lead Ore previous to its being smelted according to your direction as exact as it could possibly be made, as I attended to the weighings necessary at the different works myself which were performed with the utmost scrupulous exactness. –

Yet you will observe that the results are very different at each place – I have attempted to account for the difference between the results of Allenheads and Rookhope Mills in the manner that struck me as the most likely at the time – and which I submit to your consideration and I rather think from the manner in which I understand the roasting was conducted at Dukesfd the same reasoning will equally apply there. – The difference arising from the roasting at Allendheads compared with that of Rookhope Dukesfd may in great measure be accounted for from the different kinds of Lead Ore, as there is little doubt that the benefit will vary in the Ore of different Mines independent of its quality as well as the degree of roasting it has

undergone altho the benefit of roasting the ore appears less at Dukesfd than Rookhope Mill yet the general benefit at Dukesfd exceeds that at Rookhope as you will observe that the quantity of lead made at Dukesfield in both the operations is greater than at Rookhope from the same quantity of Ore of the same quality as they were both from the same heap at the mine, the Agent there having particular directions to that effect.

You will observe from the papers that the roasted Ore requires less fuel to smelt it for the full quantity smelted but requires more fuel during the time the Hearth is at work as the Lead runs considerably quicker and sooner heats the Hearth which has made some people imagine that it may injure its quality but I cannot say that I observe any difference, but we will be better able to determine that afterwards as I had a particular mark set upon the Lead made at each Mill to distinguish the Roasted from the unroasted Ore Lead, and when we receive it at Blaydon we intend to refine it there and get it made into Whitelead and if it should answer that purpose there is little doubt but it maybe used for any thing that Lead is applied to.

The above are all the observations I have at present to make. I hope they will answer the purpose intended. As I assure you that every attention was given by the Agents at the different works as well as by myself in order that the greatest degree of accuracy might be obtained

I am J Mulcaster

Dukesfield Smelt Mill 1 Nov 1806

Taken 30 Bings of Breckonsike Bouse Ore and worked it at the Ore Hearth in the ordinary Way

Produced at	c q lb	hours	fathers
Ore Hearth	112 ps Lead Wt 154 - 24	worked 53 1/2	used 6/7 coals
Slag Hearth	3 1/2 ps 4 3 8	7 3/4	1 cinders
In all	115 1/2 Ps Lead Wt 159 - 4	worked 61 1/4	used 1 6/7 Frs

NB. The grey Slags made at the Ore Hearth from the above Ore weighed previous to being smelted in the Slag hearth 30c[wt] -q -lb

Taken 30 Bings more of Breckonsike Bouse Ore exactly of the same quality as the preceding --the Ore being weight from the same heap to the Ore Hearth and the Roasting Furnace alternately 1/8 of a Bing at each weight.

The Roasting Furnace required 59 1/4 hours to roast the Ore, in which time 2 4/7 Frs of coals were consumed in that operation. The Ore after roasting had lost 6c -q -lb of its original weight. It was then taken to the Ore hearth and smelted in the same manner as the preceding and produced as below.

Produced at	c q lb	hours	fathers
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Ore Hearth 117 Ps lead Wt 161 1 14 worked 46 used 11/14 Coals  
 Slag Hearth 3 1/2 4 3 22 6 1/2 12/14 Cinders  
 Roasted Ore 120 1/2 Ps Ld 166 1 8 worked 52 1/2 1 9/14 Fothers  
 Unroasted 115 1/2 159 0 4 61 1/4 1 12/14  
 More Lead by Roasts 5 ps 7 1 4  
 More time & fuel by unroasted 8 3/4 hours 3/14 Fothers

NB The grey slags made from the roasted ore weighed previously to be smelted at the Slag Hearth 33c 3q 0lb

	c q lb	c q lb
Roasted Ore made common Lead	161 1 14	Slag Lead 4 3 22
Unroasted ore &c	154 - 24	4 3 8
Difference	7 - 18	14

Expenses incurred by Roasting & Smelting 30 Bings of Lead Ore

Roasting 30 Bings of Lead Ore	@ 1/6	2 5 0	
Coals consumed for do 2 4/7 Fo	@ 6/6	16 8 1/2	3 1 8 1/2
Smelters Wages for 7 tons 5 p Lead	@ 7/4	2 13 7 1/2	
Weighing Ore for 7 8	@ 4d	2 6	
Do Lead for 7 8	@ 3 1/2d	2 2 1/4	
Getting in Peats 7 8	@ 2 d	1 3	
Peats consumed ----5 1/2 Sacks	@ 9d	4 1 1/2	
Coals -do - 11/14 Fothers	@ 6/6	5 1 1/4	3 8 9 1/2
Slag hearth Smelter Wages for 4c 3q 22 lb lead	@16/-	3 7 1/2	
Cinders assumed for do 6/7 Fo	@ 8/-	6 10 1/2	10 6

Total Charge of Roasting Smelting 30 Bings of Ore £7 1 0

Expenses incurred by smelting (common way) 30 Bings of Lead Ore

Smelters Wages for 7 tons of lead	@ 7/4	2 11 8	
Weigh Ore & Lead for 7 do & 3 ps do	@ 7 1/2d	4 6	
Getting in Peats for 7 3	@2d	1 2 1/2	
Peats consumed 7 sacks	@ 9d	5 3	
Coals do 6/7 Fos	@ 6/6	5 7	3 8 2
Slag Hearth Smelters Wages for 4c 3q 8lb lead	@16/-	3 6	
Cinders consumed for do 1 Fo	@ 8/-	8 0	11 6
Total charge of smelting 30 Bings Ore (Common way)			£3 19 8 1/2

Extra expense occasioned by roasting 3 bings ore £3 1 3 1/2

More lead obtained by roasting 7c 1q 4lb @ £36-3-3 pr F £12 10 10 3/4



Deductg the expense of Carr: to Blaydon 16-9  
 Extra expense occasioned by roasting as above 3 1 3 1/2  
 Net profit remaining in <favour> of roasting the Ore 9 9 7 1/4  
 The above Profit is = 6/3 3/4 per Bing of Ore or £1-4-11 1/2 per Fr of lead

Observations

The roasting the 30 Bings Lead Ore for this experiment was performed Bing after Bing untill the whole was completed as done at Rookhope Mill the Furnace being continued working from the beginning to the end of the Operation – As I was not present during the time of roasting I could not make any observations of the comparative heat used here with Allenheads & Rookhope Mills. The average time required to roast each Bing of the Ore was 1.975 hours, the Coals consumed 0.0805 Fo[the]rs and the loss of weight 0.26 cwts for each bing of Ore or 2.5 p Cent.

Previous to smelting both the roasted and unroasted Ore the Lead <laid> out of the Pan of the Hearth with the Brouse necessary to begin smelting with were weighed as well before as after each operation, the same as at Allenheads & Rookhope Mills so that by this means the exact quantity of Lead obtained from the Unroasted and Roasted Ore was ascertained.

The average & comparative time as well as the consumption of fuel in each operation was as below

Unroasted ore	1.783 hours	0.0285 Fo.s of Coals required for each Bing of ore
Roasted	1.533	0.0262 for each Bing
do		0.0170 Fo.s of Coals for each hour of working
Unroasted		0.0159 for each hour

J Mulcaster

Rookhope Smelt Mill 18th October 1806

Experiment of Roasting Lead Ore

Taken 30 Bings of Breckonsike bouse ore and worked it at the Ore Hearth in the ordinary way which produced as below

at the		c q lb	Loads
Ore Hearth	105ps of lead q	145 3 - worked 62 1/2 hours	used 7 Coals
Slag Hearth	3	3 3 19	10 7 Cinders
In all	108	Cwt 149 2 19	72 1/2 14 loads

NB the grey slags made at the Ore Hearth from the above Ore weighed before being smelted at the Slag Hearth Cwt 32 – 2-0

Taken 30 Bings more of Breckonsike Ore exactly of the same quality as the above – the Ore being weighed from the same heap to the Ore Hearth, and to the roasting furnace alternately 1/8 of a Bing at each weigh – the Roasting furnace required 59 hours to roast the above Ore in which time 14 Loads of Coals were consumed. - The Ore by roasting had lost 7c 2st 4lb of its original weight – it was then taken to the Ore Hearth and Smelted in the same manner as the preceding which produced as below

Ore hearth	113 ps lead	155-1-20 worked	45 3/4 hours used	6 1/2 coals
Slag hearth	3	4 2	7 3/4	6 cinders
Roasted	116	159 1 22	53 1/2	12 1/2
Unroasted	108	149 2 19	72 1/2	14
More lead				
By roasting	8	9 3 3		
More time & fuel by the unroasted			19 hours	1 1/2 loads

NB the grey slags made at the Ore Hearth from the roasted Ore weighed before being smelted at the Slag Hearth 30c 2q 0lb

	c q lb	c q lb	
Roasted ore made from Lead	155 1 20	Slag lead	1 - 2
Unroasted do	145 3 -	do	3 3 19
Difference	9 2 20		- - 11

Expenses incurred by roasting and smelting 30 Bings of Lead Ore

Roasting Ore for 7 Tons 1 p lead	@5/4	1 17 8	
Coals consumed 14 loads	@1/6	1 1 -	2 18 8
Smelting wages for 7 tn & 1 p	@7/4	2 11 9 1/2	
Weighing Ore for 7 4	@4	2 5	
Weighing Lead for 7 4	@4	2 5	
Peats consumed for 7 tons 4 ps	@1/4	9 8	
Coals do 6 1/2 loads	@1/6	9 9	3 16 1/2
Slag Hearth Smelting Wages 3 ps	@16/-	3	
Cinders consumed for do 6 loads	@1/4	8	11
Total charge of Roasting and smelting 30 Bings of Lead ore			£7 5 8 1/2

Expenses incurred by Smelting (Common Way) 30 Bings of Lead Ore

Smelters wages for 6 Tons 9ps	@7/4	2 8 1 1/2	
Weighing Ore and Lead for 6-12	@8	4 6	
Peats consumed for 6-12	@1/4	9 -	
Coals 7 loads	@1/6	10 6	3 12 1 1/2
Slag Hearth Smelting Wages 3 ps	@16/-	3	
Cinders consumed - 7 Loads	@1/4	9 4	12 4

Total charge of smelting 30 ps lead (Common way)	£4 4 5 1/2
Extra expense occasioned by roasting 30 Bings ore	£3 1 3

C q lb

More Lead obtained by roasting 9 3 3 @ £35 17 6 pr Fo	
allowing for expense Carrge to Blaydon 1 2 6	16 13 11 1/2
Extra expense occasioned by roasting as above	3 1 3
Neat profit remaining in favor of roasting the ore	£13 12 8 1/2

The above profit is 9/1 per Bing of Ore or £1 -18-2 1 1/2 per Fo[the]r of lead. The ore and lead carriage will be £13-4-0 so that the above Saving will more than repay that expense

Observations

The roasting of the Lead Ore at this Mill was performed bing after bing untill the whole was completed the furnace being continued working from the beginning to the end of that operation. The Ore was subjected to a greater degree of heat here than at Allenheads Mill, the temperature of the furnace being kept higher as well as being exposed a longer time to its influence – the furnace at this place is considerably smaller and more powerful than that at Allenheads.

The Average time required to roast each bing of the Ore was 1.966 hours the Coals consumed 0.466 loads and the loss of weight by roasting 0.254 Cwts to each bing of ore or 3.177 per Cwt but probably was more, as the Ore after being roasted lay at the Door all night, before being weighed, and a considerable quantity of rain having fallen during that time it would of course absorb a little water and consequently increase its weight & therefore make the diminution of its original weight appear less that it really was – Previous to smelting both the unroasted and roasted Ore the Lead in the pan of the Hearth with the Brouse were weighed as well before as after each operation the same as done at Allenheads Mill by which means the exact quantity of Lead obtained from the unroasted & roasted Ore were calculated. – The average time consumption of fuel was as follows

Unroasted ore	2.083 hours	0.0233 Loads of Coals for each Bing of ore
Roasted	1.5025	0.0216 for each Bing
Unroasted		0.112 loads Coals for each hour of working
Roasted		0.142 for each hour

Mem: the benefit arising from the Roasting the Lead Ore previous to its being smelted appearing so very different at Allenheads & Rookhope Mill I think may arise from the Ore being exposed to a stronger heat at Rookhope Mill, and consequently more of the

Sulphur evaporated, and probably the loss of the Lead in the operation of smelting may be in the inverse ratio the Sulphur bears to the metallic part of the Ore

J Mulcaster

Allenheads Mill 11th Octr 1806

Experiment of Roasting Lead Ore

Taken 25 Bings of Allenheads Bouse Ore and worked it at the Ore Hearth in the ordinary way which produced as below.

	c q lb		Loads	
Ore Hearth	131ps of lead q	130 3 -	worked 67 hours used	8 1/2 Coals
Slag Hearth	2	2 1 23	5 1/2	3 1/2 Cinders
In all	133	Cwt 133 - 23	72 1/2	12 loads

NB the grey slags made at the Ore Hearth from the above Ore weighed before being Smelted at the Slag Hearth 22 - 3- 7

Taken 25 Bings more of Allenheads bouse Ore exactly of the same quality as the above - the Ore being weighed from the same heap to the Ore hearth, and to the Roasting furnace alternately ¼ Bing, at each weigh. - The Roasting furnace required 45 ¾ hours to roast the above Ore in which time 13 loads of Coals were consumed. The Ore after roasting was diminished c s lb 6 - 7 of its original weight. - it was then taken to the smelting hearths and produced -

Ore hearth	131 ps lead	133 - 14	worked 49 1/2 hours used	6 1/2 coals
Slag hearth	2 1/2	3 2	7 1/2	3 1/2 cinders
Roasted	133 1/2	136 - 16	57	10
Unroasted	133	133 - 23	72 1/2	12
More lead				
By roasting	1/2	2 3 25		
More time & fuel by the unroasted			15 1/2	2 loads

NB the grey slags made at the Ore Hearth from the roasted Ore weighed previous to smelting at the slag hearth 23 - 3 - 0

	c q lb	c q lb
Roasted ore produced common Lead	133 - 14	Slag lead 3 - 2
Unroasted do	130 3 -	2 1 23
Difference common lead	2 1 14	Slag - 2 7

Expenses incurred by roasting & smelting 25 Bings Lead Ore

Roasting 25 bings lead ore	@1/6	1 17 6	
Coals consumed 13 loads	@1/6	19 6	2 17 -
Weighing Ore to furnace for 6 tn	@3	1 6	
Smelting wages for 5 21 p	@7/4	2 3 8	
Weighing Lead for 6	@4	2 -	
Peats consumed for 6	@1/10	11 -	
Coals do 6 1/2 loads	@1/6	9 9	3 7 11
Slag Hearth Smelting Wages 2 1/2p	@16/-	2 2	
Cinders consumed 3 1/2 loads	@1/6	5 3	7 5
Total charge of Roasting and smelting 30 Bings of Lead ore			£6 12 4

Expenses incurred by smelting 25 Bings of Ore (Common way)

Smelters wages for 5 Tons 21ps	@7/4	2 3 8	
Weighing Ore and Lead for 6 tons	@7	3 6	
Peats consumed for 6	@1/10	11 -	
Coals 8 1/2 loads	@1/6	12 9	3 10 11
Slag Hearth Smelting Wages 2 ps	@16/-	1 9	
Cinders consumed - 3 1/2 Loads	@1/6	5 3	7 -
Full expense of smelting 25 ps lead (Common way)			£3 17 11
Extra expense occasioned by roasting 25 Bings ore			£2 14 5

C q lb

More Lead obtained by roasting	2 3 21 @ £35 15 pr Fo		
Deducting the expense Carr to Blaydon	1 2	5 - -	
Extra expense occasioned by roasting as above		2 14 5	
Neat profit remaining in favor of roasting the ore			£2 5 7

The above profit is 1/9 3/4 per Bing of Ore or £~ 7 2 1/2 per pig of lead

Observations

The Roasting of the 25 Bings of Lead Ore at the Mill was performed at 2 shifts or changes of work a sufficient quantity of ore not being at the Mill (belonging the trial) to keep the furnace at work the whole time of the operation so that the consumption of Coals would be a little increased but could not exceed 1/2 load as it was only 3 1/2 hours between the finishing of the first, and the beginning of the second shift. The average time required to roast each bing of the Ore was 1.83 hours. The Coals consumed 0.52 loads & the loss of weight 0.2423 Cwts to each Bing of Ore or 3.003 per Cwt

Previous to the experiment being commenced The old brouse was laid aside, and the lead ore laid out of the pan of the Hearth, and their weight ascertained, as it was necessary to make use of them at the beginning of the 1st shift of smelting. At the



end of each of the operations of smelting the unroasted as well as the Roasted Ore the weighing of the Lead left in the hearth with the Brouse remaining always after each operation was again repeated as above, by which method the exact quantity of Lead, obtained in each of the operations was ascertained. The average time and consumption of fuel occasioned by Smelting at the Ore Hearth each of the <.....> was as below.

Unroasted Ore	2.68 hours	0.34 loads of Coals for each Bing of Ore
Roasted -do-	1.98	0.26 for each Bing
-do-		0.131 loads of Coals for each hour of working
Unroasted	0.126	for each hour

J. Mulcaster

**17 Jan 1807 Joseph Dickinson to Christopher Blakett**

No 4

Jan 17 1807

The Upper Coalcleugh Vein in the east End, is now supposed to be through the principle part of the Cross Vein, and at present is in a promising situation, being let for at 20/-per Bing the ensuing Quarter, notwithstanding its disconvenient situation for taking the Work to Bank. Should it continue another quarter will be under the necessity of driving the Waggon Level forward, and sinking another Whimsey, down into the forehead, which expense will be soon repaid, by reducing the price per Bing for raising Ore, and put a fresh circulation of air into the forehead, which at present is very much wanted; and by damming the water back which came out of the Companies works as much as possible, the Engine is now master of the rest, which I very much feared the last quarter; the back ground in the Great Lime still continues to raise a considerable quantity of Ore and the flatts to the East and West likewise. Welhope Vein to the West is likely to continue to raise Ore to the end of the Boundary; the East End not in a situation to make further tryal, untill the air level be worked forward, and a Sump down to Air the limestone forehead, which will take a considerable time in doing. –

Hartley Cleugh Level is still driving forward, and some Ore raised, but there is still more Veins before, untryed and are drawing nearer one another, where we intend to drive to. The Shaft at Greenley Cleugh not yet down into the level when that is done, will be able to prove the Vein in the Great Limestone. The two new Levels are below Coalcleugh and the other in Swinhope is driving forward, with all the expedition possible.

Allenheads- the Vein to the West of the Great Cross Vein, is not yet discovered being obliged to give over driving to fix a Water <Blast> for Air, which is nearly finished, and then will drive forward again. – The West flatts and the old workings on that side hath raised more Ore than was expected last Quarter. The East end not so

hopeful as present as before, but we have the opportunity of employing Workmen to try both the Vein and Flatts further East than they have been proved before, and upon the whole this Mine hath done very well last Quarter, and likely to continue for another. <Britain> Vein hath been upon the decline for some time past Eastward and not knowing of any other Vein working which is likely to join, hath for the present declined driving her further.

Weardale Leadmines – Breckonsike still continues poor, and confirms what I expected, when the first of the cross Veins was discovered, that it would be to her disadvantage, and is generally so with a rich Vein, and a poor one the contrary, the Back ground is working out so that we shall not be able to raise the quantity of Ore in that Vein as usual, until the Vein in the foreheads collect their wanted strength. Burtree Pasture. by rising to prove that vein in the upper Sills, a considerable quantity of Water hath been lost this quantity and more is expected when we come to the bottom of the Firestone, which believe will be sufficient to carry an Engine, to clear the Water out of the Great Limestone which could be a very great saving, and recover a great part of that Sill which cannot now be <entered>, & the further we drive the more <tell> is going under Water. Sedling & Midlip a Long Sike old Mines still continues to raise small quantities of ore and very likely will continue until the <peat> Level unwater them, at an underset. The upper level on the east side of Middlehope Burn hath not a Vein in the Slate and is now rising to the Firestone to prove her. The under Level at that place is short of the Vein about eight fathoms according to calculation and from the situation of that Level shall be able to prove the Vein in all the principle Sills. Wolfcleugh is poor at present and does not produce Ore so well as might be expected from appearances. The Vein below Rookhope Mill I fear will not answer unless some other Vein or <String> join her. The Slitt leadmine hath been poor last Quarter <Crawlah> Bollihope Greenlaws Lasply head, Hasley Gill & Killhope hath all been upon the decline last Quarter. A Fresh Vein from a collection of <Strings> was discovered last Quarter at Blackdean leadmine by making a Cross cut to a shaft now sinking, the appearance is favourable, but no satisfactory trial made, to know her value.

You will see by the above statement some of the Mines are poor and others upon the advance, which is the general case in all leadmines, and perhaps some of these which are now poor will be prospering next Quarter.

I am etc Jn Dickinson

**10 Jul 1807 Joseph Dickinson to Christopher Blackett**

No.6

Chris: Blackett Esq

Dufton 10 July 1807

I take the liberty of forwarding you a Copy of the remarks made on Viewing the Leadmines belonging to Col Beaumont at Midsummer. Beginning with Coalcleugh the

east end of which looks poorer at present, but hath raised a considerable quantity of Ore last quarter; the West End of which, and the small cross Vein, with the flats attending them, never looked better, but still continue hard to work. Welhope old vein at the West end very poor, but expect another opening for Ore before the end of the Boundary, being about Twenty Fathoms. The east end of which is more promising, having raised a small quantity of ore last quarter, and expect more when completely relieved with Air, which will take another quarter at least. The Cross Level at Wellhope, driven westwards out of the main level, in order to cut out the Vein called the <Mess> cross vein hath completed that undertaking, but no trial made in the Limestone where the Ore may be expected. Another quarter will make further discovery, that from the present appearance are not without hopes. The level at Hartley Cleugh is up to the Veins before worked there, and is now driving westward in one of them which is raising Ore, and expect another vein to join in a little further driving, and we have the Cross vein at no great distance before us, mentioned to be cut in Wellhope, which Cross Vein was very rich in Ore at coming out of Alston Moor liberty. We are now pressing the Vein near Greenley Cleugh in the great Limestone, the forehead of which hath a better appearance than heretofore, and pieces of Ore hath been found in the Vein before, but infrequently of late. The new level below Coalcleugh is driving briskly forward & likewise the other Level in Swinhope, but now slowly owing to a quantity of Clay which causes Walling and Arching. I expect to be in hard ground in a few fathoms driving, and the Vein not far of which hope will repay.

Allenheads Lead Mine hath raised more Ore the last quarter than for several quarters before particularly in the east end; both in the flats and Vein foreheads, some of the leading foreheads we reduced the prices considerably, the West flats still certain to riasse Ore, and are now worked to a great width, and shall be under the necessaity of taking out the Ore with all the expedition possible before the roof break down, which would put a stop to our proceedings then, except at a very great expense of Wood &c. The Crosscut begun at Xmas lat on the west side of the great cross <Vein> is now driven Southward about twenty fathoms. The vein discovered, but we have cut a considerable quantity of Water, which is very useful, going directly to the Engines, and is assisting in drawing out the bottom Water. I hear our orders for going forward with a finishing Crushing Mill here and at Coalcleugh which upon a small scale would soon repay.

Weardale Leadmine still continues poor upon the whole, and being in general soft workings where the Ore lays, particularly Breckonsike, will be under the necessity of picking out the Ore in the Old Workings, before the Old <runnings> breaks down, we expect an underset of Ore at Breckonsike, which cannot be come at untill the low Level be carried up, which we are pursuing with all possible expedition. — There is a better prospect at Blackdean, than for sometime past, having raised more Ore last quarter than for some quantity before, owing to some more strength being come to the Vein from the North, and continuing with the Vein so far.--- A string Vein was cut the last quarr in that long level on the East side of Midlip Burn, a Bargain was let the last quarter to rise into the limestone above the level to prove the Vein, which they have not

accomplished, but the further up to the limestone the better appearance the Vein makes. – We have bargained again with Alex. Whaley at Brandon Walls Engine, for the same price & <Qiza> as before, to Michaelmas 1808, and by that time expect he will prove the Vein at a considerable distance from the Engine, and then may be worked in whatever way may be thought most convenient to Col Beaumont, Alex. Whaley proposed to take a Bargain in the Upper Sills & break fresh ground, a considerable way westward before the Engine, but did not think right to let him that ground until a further consideration. Sedling, Midlip, Slitt, Wolfcleugh, Kilhope &c &c are all raising Ore, but the quantity will be considerably up upon the whole than before, and have upon the whole reduced the prices where it would bear it, and left off all the dead work, that would not injure the general working of the Mines, upon account of the falling prices of Lead.

If you wish anything further to be done, desire You will procure me general directions I remain Yours &c Jos. Dickinson

**16 Sep 1807 Michael Elliott**

Hexham Sept 16th 1807

Description of a Crushing Mill to be erected at Allenheads

Water Wheel 36 feet Diameter & 3 feet wide in the <Clear> will require 14 pair of Arms & 98 Bucketts

The Shrouds - of Cast Iron - 10 In wide or deep in the <Clear> and ½ an In thick with flanges to hold the Buckets & the Shrouds to extend ½ an inch or ¾ beyond the Buckets

The Arms of Oak - Width at the Shroud end 8 Inches

Do- at the centre <...> 11

thickness 3

The flat part of the Arm may be tapered ¼ of an inch

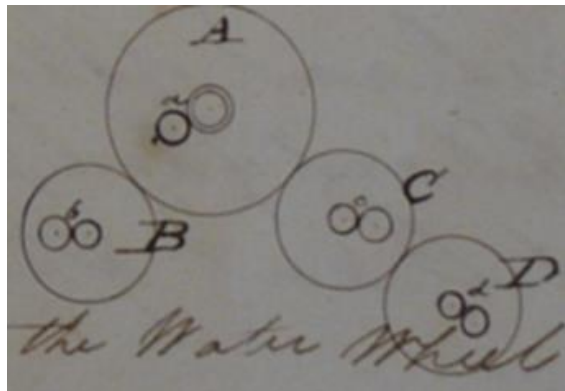
The arms at the centre 3 inches Further apart on each side than at the shrouds & <sprung> to the Shroud.

[Inserted as a marginal note apparently applying to all of the above:] I have this 3 inches to be 4 or 5 inches which arms of this length will very well allow

The Axle tree – say 2 ½ feet Diam.

Rolls - 4 Pairs one pair Fluted & three pairs Plain, (one of these Pairs to crush Chatts instead of <Stampers>) The Diam of the four Pairs Rolls 13 in each

- a the Fluted Rolls
- b & c the 2 plain Rolls
- d the Chat Rolls



These three Wheels [ie. B, C, D] each 2 feet Diam with 39 teeth. A has 80.

A the large Wheel upon the Water Wheel Shaft 6 ½ ft Diam. --

B & C the 2 Wheels giving Motion to the 2 plain Rolls

D a Wheel the same as A & B giving Motion to the Chat Rolls. --- Diameter of B, C & D 8 feet with 39 teeth in each.

Provision to be made for a Fly Wheel to be added if thought needful. The Wheel when finished to be well painted over with Tar & fine Charcoal Dust mixed to a proper consistency & put on quite hot.

#### Crushing Mill for Coalcleugh

Water Wheel Shrouds & Arms - The same as at Allenheads

Rolls – also the same as at Allenheads except the 3rd pair for crushing the Chatts, not here to be used – but instead to have a set of 3 Stampers – here thought necessary from the excessive hardness of the materials.

Here as well as at Allenheads let provision be made for a Fly Wheel- which will not only regulate the Motion but also preserve the Wheels &c from the effect of the irregular Motion which will in time effect the joints of the Wheel &c.

at both places the outer end of the Wheel Shaft to have a [blank space] to receive a coupling Box at any time for purposes that may be needful.

Mr Morrison to direct when the Castings shall be made  
the Diam. of the Gudgeons to be 6 inches  
the Diam. of the wheel to give Motion to the fly 10 feet



the Diam of the lesser wheel upon the Shaft of the Fly < 1-6 / 16>  
Diam of the Fly Wheel 18 ft

An Estimate of the Workmanship for Building a Crushing Machine at Allenheads Lead Mine For Thos Rd. Beaumont Esq. –

The Water Wheel 36 feet Diam, 3 feet in the Clear with two sets of Arms & 4 sets of Rollers with 4 <Spur> Wheels, 8 pinions fitted up with Laying Shafts universal joints & Hitching Boxes in the best way and manner with oak frames and head stocks suitable to the said Machine all in a workmanlike manner & to the satisfaction of the Agents of each place The Workman to find all the Patterns at his own Expense for the Sum of £137 -0 -0

The above Estimate is without Casing the Water Wheel in a <ring> Waggonways or Water Troughs, to be made by day Work.

Also, an estimate for a Crushing Machine at Coalcleugh with 3 Sets of Rollers and one Set of Stamps The Water Wheel the same as above, with laying shafts to the Rollers universal joints &c in the same manner as the above described. Estimate for the sum of £137 conformable to the attached description – This Estimate is without Casing in the Water Wheel &c as above

Witness my hand this 16th day of September 1807

Signed            Michael Elliott

### **21 Oct 1807    Joseph Dickinson to Martin Morrison**

Duften 21st October 1807

Mr Morrison

I take the liberty to send you a statement of the Lead Mines belonging to Colonel Beaumont at Michaelmas 1807 - Beginning with Coalcleugh the East end of which is better than last quarter and likely to continue. - The West flatts with the Cross Vein hath produced a considerable quantity of Ore last Quarter and <offers> to come forward Eastwards, I am informed these flatts were given up Twenty years since being deceived by their inclining more to the South than expected, several cross cutts have been made out of the Horse Level to find them and fallen short, one of these cross cutts is now continued forward, and a Sump into these flatts are raising Ore very well. - The Wellhope Lead Mines continue poor, particularly the West end of the Main Vein which is little more than 10 Fathoms short of the Boundiry, - the East end of that Vein is now left at 40[s] p Bing which has been worked by the fathom for years past.- Should that forehead continue it will be a substitute for the other, the other Vein in Wellhope being

poor and the old workings nearly out, the produce of that Mine will be less than last year. Hartley Cleugh Veins still continue divided and likely to continue so until they come to Cross Vein. - The Trial at Greenley Cleugh is still going forward and the two Levels one below Coalcleugh and the other in Swinhope is driving forward with all possible expedition.

Allenheads Lead Mines being in general in a poor previous situation particularly the East end, the foreheads & flatts at that end being at too much distance from the Whimsey shaft, the most convenient way, will be to sink out of the Fawside Level near to the intersection of that Level and the Vogue Level / about 30 fathoms under/ bringing the Work out at that Level will deliver that Bouse Ore near to the intended Crushing Mills which is fixed on and preparation in making for that purpose. The flatts on the West side have been successful the last Quarter and likely to continue, no further deceiving has been made, of any Vein to the West of the great Cross Vein, We are still cross cutting for that purpose and in hope we shall succeed.

Weardale Lead Mines in general continue upon the decline, Breckonsike the leading Mine begins to work out, and the forehead still continues without Ore in the upper Sills, the low Level about 20 fathoms deeper than the Waggon Level, begins to raise Ore but will be between two or three years before it can take water out of the foreheads of the Great Limestone workings. - Burtree Pasture Mine is poorer last Quarter, a principal part of the Great Limestone is now under Water and We cannot collect a sufficient quantity of Water to drive a small Engine and taking out the water by the workmen is very expensive. Medliss and Slitt Mines both poor, the background nearly worked out and the foreheads have not produced any Ore for some time. - the Vein cut on the East side (in the great Level) of Medliss Burn looks better the further we rise in the Limestone.

Wolfcleugh hath raised more Ore than was expected at Midsummer and particularly on the East side of the Burn, the low Level is upon the point of holing to the Engine and will relieve the uppermost stand of Pumps, and give liberty to sink deeper into the Old Vein. - The rest of the Old Mines are doing very little to increase the quantity of Ore and some of them I fear will hardly save themselves, the Bargains with Alex <Traley> at Brandon Walls and with Chas Emerson of Harhope Gill are both renewed. -

A first summary in the upper Sill of an old Vein on the West side of Weardale at a place called <Burnhope> a Hush for <removing> has been made some time since and was giving up without success two little Boys had found some small pieces of Ore in the sides of the Old Hush gutter and in working further found the quantity of Ore increase which encouraged some workmen to take a Bargain to raise Ore the last quarter, who have made very good wages and there will be three or four partnerships this quarter which expect will do very well at 50Sp Bing without anything for dead work, which is the highest price We have given at this time in any of the Mines, having reduced the prices from 55s to 50sp Bing and likewise the under pricing proportion and dead work price likewise where it could be done, the every one may bear their part in the downfall of Lead.

When Mr Cockshutt was up, a complaint was made by Mr Little and Mr Emerson, about the prices for taking the Work out of the Mines by Levels and Whimseys, they think the present prices being too little, not being any advance for upwards of 30 years and both the Horses and their feed being considerably advanced since that time; they say Mr Cockshutt promised to take that part into consideration the first time he came round and they have done work at the same rate untill now: It being mentioned to him again, I understand he referred it to you and me to settle the prices, and I have made enquiry in Alston Moor of the great Company and some of the others and find the general prices to be 4/6d pShift for the Horse beside the Driver which in some places is 1/2d in others 1/4d and in others 1/6d pShift - I had a conversation with Messrs Emerson and Little and they have agreed to take 4/6d pShift for both Horse & Driver, which believe is very reasonable & if you think it right, desire you will let them know, otherwise they cannot settle Accts with the Workmen

Signed Jos Dickinson

**15 Feb 1808 Joseph Dickinson to Martin Morrison**

Dufton 15 February 1808

Mr Morrison,

Your's of the 9th instant have received and should have given you the Account sooner, but the last of the Duplicates of Bargains &c only came to hand the 12 instant. - In the second week of December when I found it was not likely that I would be able to attend at the Bargains, wrote to the Head Agents at each of the Mines, the state of my Health and that if I did not make my appearance among them on the monday or tuesday after Xmas day desired they would go forward in examining the Mines, Letting Bargains etc when most convenient to themselves, and that I had no other directions for them, further than as at last quarter; that the prices for raising Ore and dead work might be kept as low as possible, and all dead work be discontinued that could be without Injury to the Mines, giving them my reasons for believing the Lead Trade would rather be further down than otherwise from the present appearance on the Continent. - At that time intended sending my Son to the Bargains, but a few days before his setting forward my disorder returned worse than before and he would not leave me in that state.

I find that by the duplicates of Coalcleugh Bargains the Lead prices for raising Ore is the same as last quarter in general and some of the dead work prices reduced and no material alteration in the Mines under Mr Little since I received them last - 8 Men in the East end forehead to raise Ore at 30/ pBing and next to the forehead 8 Men at 24/pBing, next to them at 30/ pBing; The West flatts at 32/6 and the Old ground all the way to 50/ pBing and very little dead work except the Main Levels. - And find by the Duplicates of Allenheads bargains the Lead price p Bing is the same as last quarter one Bargain at east end let at 25/p Bing with 6 Men, another at 21/ with 8 men and at

different prices up to 50/ pBing and <1% pTon> the highest, and no dead work going forward of consequence except the <...pent> to find the Vein on the Westside of the great Cross Vein By the Duplicates of Weardale Bargains I find there is 130 Workmen now in Bargain at Breckonsike which continues poor, the principal part of the Ore bargains are let at 50/pBing only one with 8 Men at 28/ pBing and one at 34/pBing and one at 38/pB and 12 Men at 45/pBing, all the rest at the beforementioned price except four Partnerships with 8 Men each working under level, the average price of which is 40/6 pBing and each Ptnership 30£ for drawing water this Quarter, which according to calculation will advance the price for raising Ore to about 55/ pBing and the more ground there is opened the more it will require to draw the water, there is a low level coming up which will take the water off in two or three Years time; whether or not it would be right to give up working that part until the low level take that water off, you are best able to judge, as knowing the price of Lead, and what situation you are in with the Bishop. - Burtree pasture Mine, is poorer than before, the further We drive, the more of the Sill goes underwater, by the Duplicate there is now about 86 men in Bargain, 8of them at 30/ pBing 8more at 38/ pBing, 28 more in dead work, and the other 42 Men raising Ore from 46 to 50/ pBing. - At Sedlin Old Mine about 60 Men all working at 50/p Bing and no dead work. - At Slitt Mine about 64 Men all raising Ore at 50/pBing, except 8 Men driving level 110/ p fathom. - At Longsike in Midliss about 44Men all raising Ore at 50/ pBing. In Kilhope about 40 men and all raising Ore at 59/ pBing. - At Greenlaws 24 men and their principal dependance is all by the fathom. - At Langley-foot in Burnhope 20 men all at 50/ pBing. At Blackdean 26 men, 10 at 45 & 50/ pBing the other 16 both at Fathom and Bing; which was made in this Mine and level, and Ore found that would work at 45/ or 50/ pBing, if the water had been taken off which could not be done without an Engine, but suppose the present will not be a suitable time for such an undertaking. - At Crawlh 8 Men at 50/ pBing. At Bollihope 7Men, 3 of them at 50/pBing and 4 sinking at 80/ p fathom 150/ pBg Middlehope Shield 8 men mining in the Vein in the great Lime 15/ fm and 30/ pBing. - At Wolf Cleugh 38 men 18 of which to raise Ore at 50/ pBing, 12 driving and sinking by fathom and 8 driving and sinking at 30/ pBing and 30/ p fathom, these are the whole that appear in the Duplicate, but know there must be more Men at most of these places. It sometimes happen the Bargains are not all finished at Quarter end and therefore have to stand over untill they are finished. - I give you the particulars of the Weardale Mines, more than the others, not knowing what situation you may be in with the Bishop and request your directions, (If you wish to discontinue any part of these Mines) before the 25th of March next when I expect by the blessing of God. - Notwithstanding the large Quantity of Ore raised in Weardale I fear the expenses of Crushing Mill, Driving Level, & will be like to outrun & fear the quantity of Ore taken at 90/ pBing will not cover the Expenses. - Request a line when you have fixed the Pays and when Self or Son intends being there to assist I remain Dear Sir

Yrs &c

Josh Dickinson

**25 Mar 1808 Joseph Dickinson to Martin Morrison**

Mr Morrison

In my remarks of the state of the Lead Mines under Colonel Beaumont about the 25th of March 1808 I find the Coalcleugh in general poor, some of the East end workings, in the great Lime which was generally the best, all under water, owing to the Engine getting wrong and could not be repaired immediately, she was going very well when I was there but would require some time to clear the works again, having very little to spare in drawing the general feeder.

The West flatts still continues, and extends considerably that more men may be employed and tho these flatts are very hard, and in general requires a great price p Bing to raise the Ore, there is only one Ptership of 6 Men who is raising Ore at 28/p Bing and nine in any of the Mines above 48/ that being the highest price given at these bargains being a reduction of 2/ p Bing. - At the beginning of the Bargains at Coalcleugh I explained to the workmen what they had a right to expect from the present appearance of the times, - that Lead was down to £22, and if the Frenchmen could bring it lower he would undoubtedly try that when such times as there comes, it was the duty of every man to bear a part; We intended theirs a very small one, only a reduction of 2/ p Bing for raising Ore and dead work reduced in proportion and if only they would continue at their work an Hour or two longer every day they would make up that draw back upon them to their Families & then every man would be doing his duty. - After that was explained to them we had no further trouble, every man took his Bargain at that reduced price chearfully and the report of the prices were gone before me to Allenheads and Weardale and required no further explanation

Wellhope Mines are very poor, the principal Vein to the west end is near to the Boundry & very poor, and the Ore raised at that Mine is all at 48/p Bing except one partnership at 30/ p Bing in a Lime above the great Lime, some trials had been made in this lime before, but none succeeded before this, should it take to carry Ore in this Sill there is a large extent unworked. - The east end of the Main Vein hath been poor last Quarter: the plans of Trial for Hartley Cleugh & Greenley Cleugh not yet finished. The new level below Coalcleugh and the Trial in Swinhope going forward with all possible expedition. - Allenheads is now the most flourishing Mine, particularly the Eastend, one Bargain at 24/ p Bing, 2 Bargains @ 25/ and some more @ 30/ p Bing We have fixed upon a place up the Fawside level for a Whimsey Ring and to sink into the eastend workings a few fathoms before the leading forehead and we are likely to find the Vein to the West of the great Cross Vein, the workmen on the last day of March were coming to a Vein of some sort, which Mr Crawhall promised to describe to me when Cut through, and have been anxiously looking for his Report.

Weardale Lead Mines are in general Poor, Breckonsike and Burtree Pasture produce the most Ore which in general is raised at 48/ p Bing, there being only four or five exceptions and there not much under; In driving up the low level to unwater the great Lime at the forehead at Breckonsike, there is Ore found in the four fathom Lime



and the Hazell Sill under which works at the high price p Bing and keep 30 & 40 men employed we expect the further He drive the Ore will be better, which was found in the Sills above. - Sedlin, Slitt, Longsike and Kilhope all the Ore Bargains at these places are lett at 48/ p Bing ( being 58 Bargains) and no dead work carried forward at any of these Mines except two levels at Slitt. - Wolf Cleugh very poor, three Bargains let at 48/ p Bing and three more Bargains in driving and sinking to make further Trial. - The Vein below Bollihope Mill is more promising than for some time past, but another Shaft will be to sink, before any effectual trial can be made.

Crawlah Lead Mine there Ptnerships all lett at 48/ p Bing. Longlyfoot Lead Mines six Bargains all lett at 48/ p Bing one of them to have 40/ p fathom for driving 6fathoms. ?Level Gate Level is one lett at £6-15/ p fathom and two or three Ore Bargains in the Sills above Level at 48/ p Bing. Blackdean level at £6 p fm & 30/ p Bing <> Ore Bargains above, one at 40/ the other at 45/ p Bing. - GreenLaws and Middle hope shield still continues expensive Mines, every Sill full of water and the Air will not circulate as in some other Mines.

In Novem 18/1805 George Crawhall had measured the ground in Isaac Pearts field at Blackdean that they were under the necessity of taking, at the least for the convenience of Dressing Ore etc & found it to be about 1/7 of an Acre. - if He value the land at £100 p Acre it will amount to about £14-5-8. Or, valuing it at £140 will be £20 which I believe is by far too much for the ground, but suppose he will have some small damage in his other ground, which generally happens in Land so near a Lead mine, which I have proved by experience. Or suppose you should give him 20/ p Year in a Rent charge for the time you have occation for it, and then his Land again, at that time it would be of no further use to you. I had contracted a Cold when I left you and am only just recovering, being confined a few days.

I remain Dear Sir - Your faithful hble St

Jos Dickinson

### **13 May 1808 John Mulcaster to Martin Morrison**

[Note: John Mulcaster refers to his father. This was Robert, the long standing Blaydon agent, who had died not quite 2 months previously, on 19th March 1808.]

Blaydon Refinery, 13 May 1808.

Mr Morrison,

Conformable to your directions I herewith send you a Report of Colonel & Mrs. Beaumont's Smelt Mills & Refinerys with other occurrences relating thereto and am Sir &c, Jno Mulcaster.

Dukesfield Mill.

As considerable Sales of Lead have lately taken place and the demand for some time being principally for Refined lead we have only a small stock of that kind in hand

not sufficient to complete the present Sales - and as a large quantity of common Lead is still remaining unsold, it will be necessary to have also ready a proportion of Refined for any future Sale that may be made. As Mr Morrison was desirous that we should have as much Refined Lead made as soon as possible, and a considerable quantity of refinable lead was laying at this Mill I thought it best to commence the Refinery again, which had been discontinued some time ago on account of their making a bad produce, or over great waste of the Lead in the operation of Refining and Reducing. The Reducing Furnace being very much out of repair and not of a good construction, I desired Mr Westgarth to take it quite down and I sent up one of the Masons we employ to build our Reducing Furnace at Blaydon to superintend the rebuilding of theirs which he has now completed very much to my satisfaction and have little doubt with good reducers of it answering a good purpose - the Refining Furnaces have also undergone the necessary Repairs and expect in a week or two they will be ready to begin Refining.

As Mr. Dixon's Reducers are at present off work at Allen Mill I have desired him to send them over to Dukesfield and stay there a week or fortnight and instruct the Reducers that are intended to remain there, and as one of our Reducers at Blaydon has been obliged to leave off his work on account of ill health, I have taken in his place a young man from Dukesfield who I intend to keep at Blaydon until he is properly instructed in the business after which I will send him back to Dukesfield to remain there as a Reducer.

There is now at this Mill a very large quantity of Lead which the Carriagemen take away very slowly and I am rather doubtful before we can get the whole delivered will be under the necessity of advancing the price of the Carriage, but as the weather has been very unfavourable and as we have not an immediate occasion for the lead, with the approbation of Mr. Morrison, I have resolved to wait a little longer before an advance is offered them.

The South Turnpike road upon which a great part of the Dukesfield and Rookhope Lead is brought to Blaydon is in a very bad Condition especially a branch to Bank Foot, upon which a Tollgate is erected, is almost impassable - Upon representing it to Mr. Morrison he desired me to call upon Mr. Gibson Clerk to the Commissioners, and inform him that unless they would repair the Road immediately, Coll. Beaumont would be under the necessity of enditing it, Mr. Gibson said he doubted they would not be able to do anything more than they have generally done as the Tolls collected were not sufficient to keep the Roads in repair, I told him that in that case there was not any alternative, therefore the road must certainly be endited, & then either the Commissrs. or the Parish would be obliged to make it good, as there was little doubt of getting the enditement passed, which he admitted & promised to speak to the Commissrs. on the subject and inform me of their determination. Unless they do make very considerable repairs it is my opinion that no time should be lost in enditing the road, which will be a great benefit to the Country as well as to Coll. Beaumont and may be the means of making the Surveyors of the other Roads upon which our Carriers travel be more attentive in repairing them in their respective districts, I am certain that in the present condition of the Turnpike we will not get the Lead at present laying at

Dukesfield brought in especially at the latter end of the Year without encreasing the price of Carriage and perhaps not even then without the Road is in a better condition than it was last winter.

The price of Ore Carriage to this Mill not being upon an equality Mr. Westgarth & I have agreed to reduce the price from Breckonsike 6d/Bing, and to advance the price from Coalcleugh and Allenheads 5d/Bing which will be saving on the whole as the quantity from Breckonsike will exceed that from Allenheads & Coalcleugh.

Rookhope Mill.

The Carriage of coals to this Mill having for some time past been conducted in a very irregular manner it was the intention of my Father if he had lived to adopt some new regulations this year to endeavour to remedy that inconvenience.

Many of the Carriagemen took Coals from the Pitt in Cart Loads and laid them down at their own Houses after which they filled them into Sacks of very different sizes, some making the Fother into 10, others into 12 Sacks, and sometimes a greater number just as their sacks were of size, the price of the coals, and for the carriage being charged at the Mill by the Sack or Load, they were in many instances paid for Coals that were never delivered. Upon consulting with Mr. Morrison at the Blanchland Pay it was his opinion that I had better fix a day to meet Mr. Smith the Agent at Rookhope Mill and the Carriagemen at Medomsley, and there state to them such regulations as I thought necessary and endeavour to make a Bargain for the ensuing year. Accordingly Mr. Smith and I met at Medomsley and went both to Mr. Hunter's and Mr. Surtees's Pitts where we saw the Banksmen. I told them that as we had before, the Coals delivered at the Mill in Sacks of very different sizes, we intended for the future to keep a measure of 3 Winchester Bushels which we expected the Carriagemen to carry as a load, but as their future fother was 16 Bolls we would proportion the fothers by that Quantity, for which they would be paid 2s/6d the same as they were charging Country People and not 3s. pr. Load as formerly had been done, which made the fother amount to 2s/8d after some hesitation they agreed to our proposal by which 2d pr. fo. will be saved to Col. & Mrs. Beaumont.

Mr. Smith and myself being of opinion that the price paid for the Carriage of Coal & Cinders was over much We informed the Carriagemen that instead of 1s/3d pr. load for Coals and 10d for Cinders we intended for this year to give only 1s for Coals & 8d for Cinders and that a measure of 3 Winchester bushels would be kept at the Mill for the purpose of measuring the Coals delivered there & any Carriagemen bringing Sacks short of that measure would forfeit the pay for the Carriage of such Coal and Cinders. They all agreed to the regulations but would not accept the price, so we left them, at the same time informing them, that we had other means of furnishing the Mill at a lower price.

As soon as I came home I immediately applied to Mr. Geo. Todd who has taken the Grey-mare Colliery one third nearer to Rookhope Mill than Medomsley and agreed with him, that for the Coals we should want this year either at Dukesfield or Allenheads (which are principally supplied from thence) or Rookhope Mill we were to

pay 2s/9d pr. For. of 16 Bolls instead of 3s/ pr. For. of 15 Bolls the price formerly paid, he also offered to make a further reduction, Provided he could have his payments every 6 Months but as I could not say whether that wd. be Convenient I told him I would <name> his proposal - the allowance [I] believe would be 3d. pr. for.

There has very few coals been sent from this Pit to Rookhope as Mr. Smith does not approve so much of them, as the Medomsley Coals although Mr. Westgarth at Dukesfield gives them the preference for Smelting in the latter opinion I know my Father coincided, I should rather incline to Mr. Westgarths opinion, as they always make a better produce at Dukesfield than at Rookhope , the Medomsley Coals are much better than the Greymare Pit Coals and probably Mr. Smith's Smelters may prefer them as they are enabled to finish their work sooner perhaps at the expence of their employers; I therefore intend to have a Trial made at both places to determine which are the best.

As soon as the Medomsley Carriers understood I was treating for Coals from the Greymare Pit a deputation of them came down to Blaydon and agreed to the terms I had offered them at Medomsley. I accordingly drew up an Agreement to that effect which they signed. The price paid for the Carriage from the Greymare Pitt to Rookhope was 1s/3d pr. sack the same as from Medomsley but I think that 9d. is insufficient for the distance the Carriagemen have to carry them, they have offered to take them at 10d. which if agreed to will make them come considerably lower than the Medomsley Coals.

The following is a statement of the old & new prices from both Medomsley and the Greymare Pit.

#### Medomsley Coals

##### Old price

1 Fothr. or 16 Bolls at the Pit	2- 8	
Carrge. of do. 1/3 p Sack or 10d. p Boll	13- 4	£- 16- 0

##### New price

1 For. or 16 Bolls will cost	2- 6	
Carrge. of do. 1/ p Sack or 8d. p Boll	10- 8	- 13- 2
Leaves a saving of p Fo[ther]		2-10

#### Greymare Coals

##### Old price

1 For. or 16 Bolls at the Pit	3- 2	
Carrge. of do. 1/3 p Sack or 10d. p Bol	13- 4	- 16- 6

##### New price

1 For. or 16 Bolls at the Pit	2- 9	
Carrge. of do. 10d or 6 2/3 d. p Boll	8-11	- 11- 8
Leaves a saving [per For.] of		4-10

By the above alteration on the quantity of Coals consumed at Rookhope Mill if taken from Medomsley, the saving will be upwards of £100 pr. year and near double that if taken from the Grey-mare Pit provided they answer equally well for Smelting.

As it was Mrs. Beaumont's wish that as many Coals as possible should be taken from Mr. Hunter's Pit the Carriagemen the latter end of the last Year were ordered to load here, and am sorry to find it represented by Mr. Smith that they are very inferior to the Coals they have had from Mr. Surtees, to prove which he pointed out the operation of 2 Months, where each was used 1 Month in Smelting the same kind of Ore, which if the Trial was accurately made, was very much in favour of Mr. Surtees Coals, more than the value of them, but as they will answer well enough for the Roasting Furnace I have ordered the Carriagemen to take a part from each and told the Banksmen, that who furnished the best Coals would have the preference, as I think a little competition may make them both more careful.

I have for some time observed with regret that the Ore delivered here was not properly separated, the Ore of several Mines being put promiscuously with into one Bingstead, and in the monthly operation classed all under one head, which is attended with many inconveniences, first it prevents a comparative view of the produce made at different Mills of the same kind of Ore, it also prevents the selecting that part for Refining which will best bear or repay the necessary expences of the refining operation, as the generality of Col. Beaumont's Lead ore is very poor of Silver and the demands for Refined Lead being almost constant to supply that kind to the market to the best advantage in a concern of such magnitude as Coll. Beaumont's is certainly of the utmost importance & the price of Lead lately having been so very fluctuating it becomes the more necessary as what Lead at one time may be refined to advantage will at another time be attended with considerable loss but if the Ore be smelted separate and the necessary Assays made it then becomes very easy for the Refining Agent to select such Lead as will best suit that purpose, and at all times to take that which will be attended with least loss in order that a quantity of refined Lead may be ready to facilitate the sale of the common [un-refined lead] which can seldom be sold separate. As I was fully convinced of the propriety of keeping the Ore separate I have marked out such situations most convenient to the Mill for erecting an additional number of Bingsteads which will soon be prepared, and have desired Mr. Smith to be careful for the future in keeping the Ore from each Mine separate which I expect he will attend to, and altho' the building the Bingsteads will incur some expence, I make no doubt that the erecting them will be a considerable advantage.

Allen Mill.

The Refining at this Mill is for the present laid off as the old wheel which carried the Bellows is now taken out to make room for the new machinery which is in a great state of forwardness and expect in a very short time the whole will be completed, the 2 new hearths in the new Mill are quite finished, and are now working with the new wheel.



When the Refinery was laid off the old Chimney being in a bad state and not large enough to admit the flue of another furnace it was tho't best to take it down, and a new one is now building which will be finished as soon as the Machinery for the Refining Bellows, and as it is very inconvenient to work a Refinery with only one furnace it is intended to erect another immediately which as the Refining is performed here under Mr. Dixon's direction as well as any other of Coll Beaumont's works, it may be found necessary to do more of that kind at this place than has hitherto been done.

The horizontal Chimneys erected here have answered the utmost expectation, my observation upon them I have sent to Mr Cockshutt, but as the extension of them at the other works will be attended with considerable expence, it must rest with Coll and Mrs. Beaumont to give directions how far they would wish to adopt them.

A Roasting furnace will be very necessary here, as well as an additional number of Bingsteads as soon as the Masons are at liberty, but expect before that time, Coll & Mrs. Beaumont will be down in this Country.

#### Allenheads Mill.

The Old [water] Wheel having been for some time in a very precarious State after having undergone small repairs, at length broke down again, by which the work was entirely laid off, as Mr Morrison was at Allenheads at the time he gave orders to Michael Elliott to repair it again and I think as much has been done as the decayed state of the wheel would allow, which will probably make it serve for 12 months or perhaps more; a new crib has been put on all around on one side of the Arms, and new pieces on several parts of the other side wherever they were needful, with pieces of flat iron to bind the shrouds where they were cracked.

#### Blaydon Refinery.

The Slag hearth just built when Mrs. Beaumont and Mr Cockshutt were last here, I am glad to say has as far as its power extends answered very well as it has enabled Us to procure a considerable quantity of Lead which would otherwise have been laying upon the Roads at present, but as it was only fitted up in a very temporary manner, not being certain we could procure a proper flux, and the power of our waterwheel being very limited we can only work the Slag Hearth at the time the Refinery is off work, as we make use of the same Bellows which are also not powerful enough for it, we therefore cannot work above half we would otherwise do, if we had a power sufficient to Carry a proper blast, so we are still unavoidably accumulating a great deal of work until we can either encrease our power or dispose of our extra stock of wastes, which I suppose will be very difficult.

We have got the Reservoir cleaned out and the communication with the Shaft that supplies the Water from the waste deepened and Mr. Morrison is at present casting the Iron pipes for conveying the water to the Refinery which I expect in a little time will be Completed.

I made an application to Mr. Townley's agent for leave to convey a stream of Water through one of his fields which might be done without any other damage than making



a close Conduit through it, and offered to be at every expence and make them a yearly acknowledgement for it, and am sorry that I could not for the present obtain his consent, but We can carry in another way thro' a small piece of common ground cross the Turnpike into Coll Beaumont's own ground which altho' it will be attended with a little more expence will save the Rent.

We have now introduced thro' the whole of Coll. & Mrs. Beaumont's works running the Slag from the Slag hearth into water which has entirely suppressed the use of Stamp Mills which were attended with considerable expence, another improvement has since been adopted of having the Slag run over a Pott with a moveable partition which does not quite reach the bottom, one Part only of which is kept fetled with ashes as before in which the Lead subsides and rises in the other part of the Pot which at the beginning is empty, out of which the Lead is ladled into the Moulds without the necessity of removing the Ashes out of the Pott as formerly done.

Since the above alterations have taken place, the Black Slags are rendered so poor that we have been under the necessity of doubling the price paid for the Lead obtained in working them and rather doubt that it will not be found sufficient, as they are paying much higher at Langley Mill.

I am glad to say that our Lead wharfs here are now in a very different state to what they were when Mrs. Beaumont was last here, We have not now a piece of Lead unsold but are rather in debt to the Mills where we have a large Stock to supply the deficiency and fill up many of the vacancies occasioned by the late extensive sales.

Jno Mulcaster.

**28 Jun 1808 Joseph Dickinson to Martin Morrison**

June 28th 1808

Dear Sir

In examining the Lead Mines under Col Beaumont I find the Eastend of the Coalcleugh Vein is not yet clear of the Cross Veins, a small one being discovered by the Galloway level, which is before the forehead in the Ore workings in a Sill called Pattinson about six or seven foot thick which produces Ore and is let at 35/p Bing to Michaelmas next, the Vein having to cross the main Vein in the great Limestone may be expected to increase the quantity of Ore which at present is not very great the forehead being lett at 32/6 p Bing and the length following at 30/ and the Cross Vein in Pattinson let at 35&40/ p Bing which is the highest price in all the Mines, unless a very particular case. - Wellhope Mines continued poor in the West end and likely to continue to the end of the Boundry and the East end never in a workable situation, the air Levels being so much behind the forehead of the Great Limestone that no effectual trial can be made until there be to the forehead which will take another quarter or two to complete; The little Limestone is raising Ore, but poorer than last quarter; There is a better prospect at Hartley Cleugh than before, having met with a small Cross Vein in the great Lime

which is promising Ore, and let for the Quarter at 36/ p Bing, and by working that vein forward, will lead Us to the East and West Veins, we have been <...ing> to discover.

The Vein at Greenlaw Cleugh still appears unpromising and fear we shall be unfortunate at that place. - The great level below Coalcleugh is still driving forward and at a less price than before, by the Plate being better to work. The level in Swinhope hath cut a vein, but supposed not the whole and are driving cross to find more before we make trial into any Sill.

The Allenheads Lead Mines considerably poorer in the East end than last quarter and have been under the necessity of advancing the prices for raising Ore, The flatts and Craig Shield likewise poor, and the ground hard to work were under the necessity of giving by the fathom, untill further Trial be made; The Cross cut at West end hath not discovered any Vein on the west side of the great cross vein notwithstanding we are considerably beyond the line, but intend to persevere a little further. -

Weardale Lead Mines in general continue poor, the most of the Bargains lett at 48/p Bing, the highest price, and none under 35/ p Bing we have made preparation at Breckonsike for sinking another sump in the forehead, to prove the Vein in the Great Limestone once more, but fear, it will not prove successful; That Mine and Burtree Pasture will raise a considerable quantity of Ore this year, but the principal part at 48/p Bing. Sedlin, Longsike, Slitt, Longlyhead and Kilhope are nearly all at 48/ pBing except driving the necessary Levels; - Blackdean there is 32 Men raising Ore from 40 to 48/ pBing. - Greenlaws hath produced about 150 Bings of Ore last Quarter, in the four fathom lime the prospect at present not good. - Middlehope Shield Mine is more promising, the appearance of Ore in the Vein induces the workmen to raise Ore at a less price per fathom at 30/ pBing to the top of the Limestone, where we intend to air the whole by a Bore hole from a shaft sunk from the surface and then make an effectual Trial and hope to lett Ore Bargains. - These are all the remarks I think necessary at this time expecting to see Coll. Beaumont at Allenheads in a little time and then can explain things more fully, where it is not properly understood for We Miners, like Sailors, have a language of our own best understood by People of the same profession

I remain Dear Sir &c Joseph Dickinson

**16 Oct 1808 Joseph Dickinson to Martin Morrison**

Duften 16th October 1808

Dear Sir

In examining the Mines at Coalcleugh I found several of the old workings poorer than before, and have been under the necessity of advancing the price from 48s to 50s per Bing, the leading foreheads and Principal flatts are nearly the same prices as before, and upon the whole expect Coalcleugh will produce near 3000 Bings of Ore this Year. Wellhope Mines are generally worked out at the west End, the east end more

promising, some small quantities of Ore hath been raised from them. Hartley Cleugh continues to raise ore in the Cross Vein, the price hath been reduced from 36 to 28 per Bing this Quarter. The rest of the Mines in that district continue nearly the same as last Quarter.

Allenheads Mines are very promising at the East end and now let at 35s per Bing which would let at a lower price, but have conditioned to drive through their length at not more than 7 feet in height for the convenience of airing another Partnership of Workmen Sinking before them into the same Vein, about 15 fathoms further East than the present forehead. The whimsey now sinking will take the work out at Fawside level, which will be a particular advantage to the Workings in the East-end. The flatts behind the foreheads continue to raise ore nearly as usual and very little alteration in prices. The flatts at Cragg Shield whimsey, continue very poor I fear will continue so, unless some Strings or small Veins, come to their assistance. The little Shaft at West end continues very good and is now lett at 25s per Bing with Eight Men each Way; its continuance is not expected long but coming at a time when the Price of Lead is high, will leave a Considerable Profit.

Weardale Mines are in general poor, Breckonsike and Burtree Pasture more so than any of the other Mines, and several Places in these Mines worked out, that a few partnerships will be out of employment, Sedlin and Longsike still continue to raise ore, but in smaller quantities, and mostly at 50s per Bing. The upper part of Slitt Lead Mine is poorer than before, and the low level not up to the ground that was productive above. Middlehope Shield is not holed between the upper and under level, but is expected soon and will cause a circulation of Air, and then the Vein may be tried to raise Ore which at present is the most promising trial in Weardale. Killhope still continues nearly as usual, raising ore at 50s per Bing. Greenlaws Mines hath very little ore to see, but the workmen have taken Bargains to raise ore in expectation of Ore being before them. I hope they will not be disappointed. Wolfcleugh and the other Mines, nearly as before. We concluded a Bargain with Alexander Whaley, at Brandon Walls Lead Mine for another Year, upon the same Conditions as before (viz £4.10 per Bing) and bid Mr Emerson at the Rate of £6 per Bing at Harehope Gill which he did not think himself at liberty to take without consulting his Partners in the Mine and then will give an answer. These are all the particulars worth noticing and remain Sir

Jos Dickinson

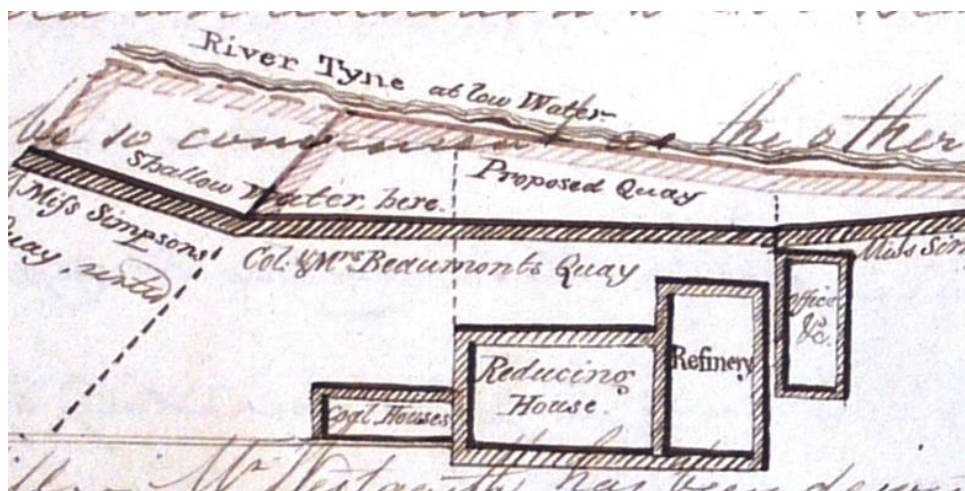
## **29 Oct 1808 John Mulcaster to Martin Morrison**

J.Mulcaster's Report Octobr 29th 1808

Blaydon Refinery.

The Iron Pipes are now all laid & the joints caulked according to the directions given by Mr. Cockshutt; the Pipes are laid in such a manner that the Water can be taken from either Reservoir without stopping the Refinery. The new Reservoir pointed out to

Mr. Cockshutt & approved of by him for collecting the Mud etc. which are brought down from Winlaton by the Rain in great quantities, is now forming & will be much easier cleaned than the large Reservoir. Mr. Townley's agent has been again applied to & his acquiescence to use the waste water is expected, which is very desirable as we have a great quantity of old wastes lying at present quite useless in the Refinery - a new Blowing Machine will be wanted as the Slag Hearth is now wrought by the Refinery bellows. It will also be necessary to increase the Power of the Water Wheel, at present unequal. Michael Elliott thinks the Wheel cannot with advantage be widened, and recommends a Cast Iron one which will be very little more expensive than a wood one & considerably more durable. If it is determined to erect Horizontal Chimnies at this place the sooner in the Spring they are proceeded with the better; the advantages of such erections are ascertained from the experiments & calculations already in the possession of Mr. Cockshutt. - the Quay rented of Miss Simpson and Lord Strathmore is so decayed that it is dangerous to lay Lead upon some parts of it, and to make it useful it is thought that it will be necessary to take it down to the foundations; however, as Coll & Mrs. Beaumont are now only Tenants at Will, it will be prudent to endeavour to obtain a Lease even at an advance. If the Quay is taken down it is recommended to set it out in the manner shewn in the enclosed sketch, considerably more Quay Room being procured thereby, which is necessary; the present Quay therefore must either be put in a state of Security, or, build an addition to Coll Beaumont's own, which will not be so convenient as the other.



#### Dukesfield Mill.

Mr. Westgarth has been desired to employ the Roasting Furnace as much as possible this Winter and to make repeated Trials of Lead ores to ascertain the benefits to be derived from that operation. If it should be found beneficial to employ the Roasting Furnace constantly at this place it will be necessary to erect a new one in a larger house, as the confined situation of the present place, renders it unpleasant & probably injurious to the health of the Workman. It will make a Coal house & save the expence of building one as projected.

Rookhope Mill.

The new Bingsteads are now completed & part of them in use, an opportunity is now afforded of separating the different Ores, the advantages of which have been pointed out. Clay for making Bricks and Stones for the Foundation of Horizontal Chimnies are preparing, so that We shall be ready to commence building early in the Spring. The Roasting of Ore is here constantly practised as usual.

Allenheads Mill.

Nothing worthy of observation has occurred.

Allen Mill.

The Water Wheel shaft has been examined and additional hoops applied & which has in a great measure cured the Wheel of the noise observed before; a small Stream of Water has been conveyed in a Tin Pipe enclosed in a wood Box to fall upon the Gudgeon. The Bingsteads and the new road leading to them are in progress and expect both will be ready for the reception of Ore early in the Spring. The Counting house and Roasting Furnace is deferred 'til Spring that they may be built in better weather. The old Corn Mill and old low Mill House have been taken down and the Stones applied to building the Bingsteads etc.

The Mill Agents who have Furnaces for Roasting Ore, have been desired to attend particularly to that operation and that the Lead so produced be marked with R which is to be continued upon the Lead after Refining as well as upon the labels attached to the Litharge Casks by which the difference of quality (if any) may be observed & pointed out.

**10 Jan 1809 Joseph Dickinson to Martin Morrison**

Dufton 10th Janry. 1809

Mr Morrison

I found your Letter at Coalcleugh on the 26th Decemr. and noted the Contents. In examining the Lead Mines found the West end of Coalcleugh in a favourable Situation, both the Cross East & West Strings producing flatts in the Great Lime, some of them are now raising Ore so low as 28/p Bing at 300 fathoms west of the drawing Whimsey and 30 fms south of the low Level; There is likewise a String to the north of that Level about 30fms very hopeful and raising Ore at 35/ p Bing in two Partnerships, and another Cross cut almost made for a third Partnership to sink into the Limestone for Ore. - the Lead Company had three or four men working for some time past close to the end of this Boundry and brought out their work at Coalcleugh, which took up part of the convenience which should now be useful but from the irregular behaviour of Mr Dodd of late, wishing to leave that work, the men had petitioned Mr Little to employ them under Colonel Beaumont, We have employed them thinking they might



be useful pointing out the different Strings &c about the end of the Boundry and that the more Men may be sent there. - the East end continues poor, the Vein being divided by the Cross Vein into two; the North part we have followed, but the further we drive East the poorer, we are in hopes to find the other better and are making a Cross cut to prove whether or not. -

Wellhope Lead Mines continue poor, the west end being at a stand for some time, being very hard, no Ore, and near the end of the Boundry. - the East end is rather more hopeful of late, - there are likewise more hopes of two east and west veins and two cross veins, both discovered by a long cross cut from Wellhope level to the west, one of these being the Vein that the dispute with Brownlee Hill Company originated, none of them being yet effectually tried. - Hartley Cleugh continues to raise Ore by two Partnerships one at 28/ and the other at 35/ p Bing in the cross vein, which we are pursuing in expectation of meeting with a vein on each side, which we like better than the one we are now working. - Greencleugh Vein is not likely to answer, but by persevering a little further, expect to meet with another a little before which will prove them both. -

Allenheads Lead Mines in general poorer than last quarter, the North vein in particular, only two or three Bargains at that end under 40/p Bing, one of the Bargains at west end, down the little shaft has done very well, and is now lett at 16/ p Bing, being only at the Depth of seven or eight fathoms from the surface. - the flatts at Cragg Shield are more hopeful than in the last quarter. - the Whimsy sinking in Fawside level is in the last 10fms and will completely relieve the East end of the Veins, both in airing and taking out the work without very little help from the workmen, and we intend to take the level forward from the Whimsey foot, close by the top of the Limestone, which will save the sinking of between 2or3 fathoms, in every of the Sumps going down to the Limestone, the old Level being useless by being driven in the dip and is nearly standing full of water. It will be necessary to take a quantity of Old Deads, out of the old workings, near to the Whimsey (which will be done now at a light Expencc) to prove whether there be any Ore left, which will repay, and if so more may be taken afterwards. -

Weardale - Breckonsike is poor in the forehead and yet continues to raise a considerable Quantity of ore in the background, but short of the usual quantity. - Burtree Pasture Vein is more promising in the forehead, the vein being divided for two or three lengths behind is we hope gathering together again and if so may expect that Vein to produce as heretofore. - We have examined the Vein called Sedlin by going down the Engine shaft to the bottom and find the vein is only worked about 23 fathoms east from the Engine shaft foot at that depth which is in one of the Sills now working at Blackdean and there is a Whimsey shaft which would take the work out at a very little distance to the west from the Crushing Mill and nearly upon a level with the Top of its - We likewise examined the old Bargain Book when that work had been done in the year 1759, 60 & 61 and found settling the Engine foot was done at 72/ pfm and the price for raising Ore from 16 to 18/ &c the head price 25/ pBing which is so much short of the present prices, that I have not the least doubt but much good might be done by



settling the Engine three or four fathoms, if the Engine work would be equal to that lift. - I by chance met with Michl Elliott at Alston, and ordered him to survey the Engine next week, to see if the work would be equal to the settling 3 or 4 fms and make his Report to Mr Emerson who will give you further information, - this vein still continues to raise Ore in the upper Sills with nearly 50 Men at 50/ p Bing with very little further expence but must in course work out in time. - Killhope and Longsike both continue to raise Ore out of the old ground at 50/ pBing with very little other expence, the <.....> of them will be relieved by a level going forward to unwater, the other as relief pointed out. Middlehope Shield is raising Ore in two Partnerships of 8 men each, the one at 30/ and the other at 35/ pBing and more might be let, but a communication with the surface is not yet complete to air the whole. - Slitt Lead Mine continues poor on the West side, the East side more promising two ore Bargains being let, but we are short of the place we rested our hopes upon. - Rookhope and Greenlaws both poor last quarter and likely to continue longer, both these Mines being very uncertain. - Blackdean hath raised Ore very well last quarter and likely to continue there being 8 ore Bargains let above the water at 50/ pBing each & two under level at the same price by allowing for drawing water, If the under level continues this quarter, there will be little fear of her continuance, and it would be wasting both money and time striving further without an Engine. In the other small Mines there are very little alteration. - There are no bargains let at any of the Mines at above 50/ p Bing and in some very poor places given a small matter for removing a few old deads, or driving a fathom of poor ground, which method we have adopted some time since & find we can let the Bargains with more pleasure, & more equally according to my judgement and shall continue unless I see a necessity of raising the whole.

Jos. Dickinson

**10 Apr 1809 Joseph Dickinson to Martin Morrison**

Duften 10. April 1809

Dear Sir

In examining Colonel Beaumonts Lead Mines at this time I find very little alteration at Coalcleugh since last quarter. The West flatts continues nearly the same and the cross cuts to the South at the east end to prove if any part of the Vein was off, to that side is not <...> finished, but upon the whole that Mine continues to raise a considerable quantity of Ore. Wellhope Veins being nearly worked out to the West and the East end still continues poor which we are driving forward both ways in expectation of cutting veins on both sides. Greenley Cleugh Vein is more promising than last quarter having produced some small pieces of Ore, and the Vein looks better the nearer we come to the Cross Vein, which is not more than 3or 4 fathoms before the present forehead. The Great Level is still driving forward, and the Sills have taken a sudden rise, which is contrary to the general run and cannot be accounted for unless a vein is before Us; a singular instance of preservation of one of the workmen at that place, a few days before the Bargains, he was preparing to blow up a large piece of

Stone in the forehead which was to throw right to where he was sitting close to it, and by some means the Gunpowder had taken fire before he had finished, and threw him and the Stone together a considerable way back in the level without receiving any material hurt, only from small cuts in his Legs, and other parts of his body which might happen from his tumble, but had broken one his Clogs (Wooden shoes) all to pieces. The level in Swinhope had cut the Vein and have been driving in the same and must now sink a Shaft into the forehead of the Vein to air that part before a proof? can be made in the great Lime. Allenheads Mines have done very well last quarter at West end particularly that Bargain let at 16/pBing, which believe hath raised 300 Bings, the prospect not being so good as before, have advanced them to 20/pBing & the 8 men being eastward have their price contained at 32/ pBing; the Eastend has been poorer last Quarter particularly the North vein and of course some of the prices advanced but upon the whole a considerable quantity of Ore has been raised, for in taking an account at the Bargains of the Bouse Ore not yet drawn out if the Mines find near 150 Shifts underdrawn. We have at last found a Vein to the west of the great cross vein and have fixed upon a place to sink a shaft into the forehead of the cross cut, to prove the Vein in the Sills we may find most likely to produce Ore ; the Whimsey out of Fawside level is now completed, except the wood work at top.

Weardale: Breckonsike in general poor some of the under level Bargains given up, nothing now being left to repay the water drawing of course that must stand until the low level come up to take the water away, some small quantities of Ore may be raised this quarter before the water rises to its stated height. Burtree Pasture Lead Mine still continues to raise a considerable quantity of Ore, but the Limestone is gradually going under Level the further we drive eastward; sometime since we made a rise in the upper Sills above the Level to prove if there was Ore in them and likewise to see if they would produce a quantity of water sufficient to drive an Engine to raise the water out of the great Lime, the upper Siills did not answer to produce Ore in that part, but produced a considerable quantity of water but not quite sufficient for the purpose of driving an Engine, however, upon a second trial further East, which was thought right to make the quantity of water now produced by them both will be equal to the purpose, if they continue to run as at present. Very little alteration at Sedlin Lead Mine in the old workings, some Ore produced at the old Whimsey foot which is now opening and hope there may be some Ore left in the old Works which may be raised at present prices. Middlehope or Longsike is nearly worked out & water made in the old workings>

Slit Lead Mine the low <Slitt> on both sides of the water is raising some small quantities of Ore. Middlehope Shield has not done so well last quarter as was expected and has been under the necessity of advancing the prices this quarter as the Sinking to give the air to the Mine is not yet completed. Wolfcleugh <Crawlah> Kilhope and all the other Mines are nearly all working at 50/pBing which is our highest price. If we think any more is <required> (which sometimes happens) we give something for driving sinking raising or drawing Leads as the place requires which I find to be better than advancing the general price pBing. The last quarter there was a

flattening appearance at Blackdean under lead but was not of long continuance otherwise an Engine might have been very useful there but from the present appearance some good may be expected by selling the Engine at Sedlin and fixing one at Burtree pasture to raise the water out of the great Lime Sill; If Blackdean Vein should gather a little more Strength an Engine might be very usefull, there are some very good Sills under level. I remain Yr

Jos. Dickinson

**30 Jun 1809 John Mulcaster to Martin Morrison**

J Mulcaster's Report of Smelt Mills & Refinery 30 June 1809

[Blaydon]

The reservoirs for the water for Blaydon refinery are now fully completed and Mr. Townley has given leave to convey the Water thro' his Estate which formerly ran waste for which he charges the yearly rent of £2. 2. 0. One of the springs we have got conveyed to the reservoir, the other and most considerable one we will no be able to procure untill a field of Corn is cut, the pipes having to pass thro' a part of it, the distance is very inconsiderable and can be done in two or three days.

A new water wheel with Cast Iron shrouds, Arms and flanges with a new Wheel Case has also been finished, We have also put in a Cast Iron Cistern, the Whole of the conveyance for the Water with the wheel, being now of Cast Iron, I hope their duration will be very considerable. We are at present making a pair of Slag hearth bellows, and wood of sufficient size for the boards being very difficult to procure, and as We shall probably be wanting more for the other Mills, I have adopted the suggestion of Mr. Cockshutt and got them made of Cast Iron, which if they be found to answer we need never be at a loss for boards as the Pattern will always be ready when wanted, the present are very good Castings and I have great expectations that they will answer the purpose.

Nothing has been done to the Quay Wall represented in my last report as being in a dangerous state, the River Jury being upon a view of the River, were shewn the Situation and a sketch of the projection into the River, which they seemed to think too great an encroachment and might probably alter the course of the River. I am not of the same opinion & without We can get the Quay set out considerably farther than it is at present, it would not be worth the expence of rebuilding it; but as we can for the present year dispense with the low Quay, part of which has fallen down, when we have occasion for more Quay-room I think we had better build an addition to the present range of the new Quay, which would be upon Coll Beaumont's own property. - Having been at considerable expence with the Iron Pipes and Reservoirs the horizontal Chimnies have also been deferred this Season.

[Allen Mill.]

Two new Bingsteads and the road across Mr. Dixon's field to the back of them has been made at Allen Mill and two or three more will be added as soon as possible - a Roasting furnace is also in considerable forwardness and will soon be completed. - The Water wheel shaft has lately again begun to have crackling noise and I have had Michael Elliott [a millwright?] to examine it, who thinks the fault is in the Shaft not being sufficiently strong which makes it bend, and occasions the working of the barrelling - Mr Robson is of opinion that it may be cured by drawing every other stave of the barrelling and reducing them as he thinks that the crackling is occasioned by the barrelling being over tight. - But as Mr Cockshutt will probably be in the Country Shortly, I shall not do anything until I have his directions. Timber still continuing very dear the building the Counting house here, has been deferred.

[Rookhope Mill.]

The building of the horizontal Chimnies at Rookhope Mill was late in commencing owing to the very uncertain state of the weather this Spring. I thought that the cheapest and most expeditious [way] to get them done was to advertise the building them by proposals, and have accordingly agreed with the lowest on reasonable terms, the person agreed with is a very good mason & qualified for the undertaking.

Having experienced considerable difficulty last year in procuring Carriers for a sufficient quantity of Lead Ore to the different Mills and especially to Dukesfield, we have been under the necessity of advancing the prices this year which yet appears to be insufficient as the Alston Moor Proprietors have more extensively advanced theirs and in all probability would continue to do so if Coll: Beaumont's were again to be advanced, as many of those miners are under the necessity of having the Lead Ore brought to market to procure money to carry on these mines & therefore will give any price to secure the Carriers. From there being such a demand for Carriers occasioned by the great quantities of Ore being raised at Cross-fell and in Alston Moor which has mostly this year been carried to a considerable distance, it becomes the more necessary for Coll: Beaumont to have a sufficient number of his own Carriers who can be depended upon & therefore the more urgent necessity for enforcing as many of Coll Beaumont's Tenants as have convenience for that purpose to keep Galloways.

The Greenwich Hospital having nearly changed all their old Tenants and very considerably advanced their rents, We have had very little assistance from them this year, which has also made our Lead carriers very scarce & obliged us to raise that carriage considerably from Rookhope & Dukesfield Mills, but I have little fear but that We shall be able to get all the Lead brought in that will be wanted.

**14 Jul 1809    Joseph Dickinson to Martin Morrison**

Duften 14th July 1809

Mr Morrison,

I now sit down to give you the general state of the Lead Mines belonging to Colonel Beaumont as I found them upon examination. Coalcleugh nearly the same as

last quarter, the west and flatts to the south of Galloway level, still continues to raise a considerable quantity of Ore, one Bargain let at 24/ pBing and another at 25/pBing and others at different prices. The flatts on the north side, not so productive, but continue to raise Ore at higher prices than the other; the East end continues nearly the same, being divided, one part is nearly 10 fathoms south of the other ( which the cross cut mentioned in my last has proved) and had raised about 100 Bings last quarter in one of the upper Sills. The Vein in the great Lime continues poor and seems to incline more to the north than usual (the same as before meeting with the last cross vein) but continues to raise Ore at 35pBing and upwards and expect to come nearly to the last years quantity if this quarter doth not deceive us. Welhope Lead Mine is nearly worked out, report says there are some string strings of a vein, a little to the north of the main vein which we are driving cross to in hopes there may be flatts of Ore about them. Hartley Cleugh continues to raise small quantities of Ore but the plan laid down at Xmas last for the more effectually working the veins discovered is not yet completed and will take the greatest part of the quarter to complete them. The trial at Greenleycleugh is given up for the present being so very unpromising in appearance at the junction with the other veins. The great Level below Coalcleugh is driving with all the expedition possible is now in length about 235 fathoms and is now let at 170s pr fa. from the rise of the under Sills and we are not willing to lose any level for fear it should be wanted afterwards which I have so often seen to be the case and may be proved by Coalcleugh which is losing hundreds every year. The level in Swinhope is now driven about 160 fathoms a shaft and water blast is now wanted and then we can drive the level to Swinhope Head and from the vein in the great Lime.

Allenheads Lead Mine continues nearly the same as last quarter, at the west end the vein west of the shaft let at 20 p Bing and the other side let at 35pBing, the flatts at Craig Shield whimsy very poor and is obliged to give both by fathom and bing to drive forward in hopes alteration for the better. The North Vein in the east end poor and likely to continue some time or until some strength from the north comes to her relief, the principal part of that vein being gone in small strings to the south vein which at present is likely to raise a considerable quantity of Ore this quarter being let at 30s (reduced 5s) p Bing, the rest of the Mines being nearly as before and let at different prices all the way to 50s p Bing which we have not exceeded neither here nor at Coalcleugh, except at some particular places a little dead work that was necessary to be done. I fear Col. & Mrs Beaumont when they visit the Mines, will think there is too little progress made in creating the Crushing Mills, both here and at Coalcleugh and likewise the convenience thereto, the cause assigned for the delay is the Weather.

Weardale Lead Mines continue poor, and the prices in general advanced, except the 50s pBing which is never exceeded for raising Ore except upon speculation.

Breckonsike about 100 Workmen, 76 of whom to raise Ore at 50/pBing 8 @ 40/, 8 @ 48/ and 8 driving low level at £10 p fa.m

Burtree Pasture about 88 Workmen, 42 of whom raise Ore at 50s , 36 at 40s p Bing, 8 driving level ay 140s p fm and 2 drawing water at £26 per Quarter.



Killhope 24 Workmen all raising Ore at 50s pBing  
Sedlin 48 ditto ditto  
Middlehope Shield 48 Workmen all to raise Ore at 45/pBing the other 40 all by fathom but more by far being so very hard to work.  
Slitt 60 Workmen, 22 of whom are driving levels and the other 38 raise Ore at 50/pBing  
Longsike 24 Workmen all raising Ore at 50/pBing  
Greenlaws 38 Workmen, 22 at 48/pBing and 50/, the other 16 driving level & opening an old Sump  
Level gate 18 Workmen, 8 driving level and 10 raising raising Ore at 50s pBing  
Langty Head 50 Workmen all at 50s pBing with some little dead work  
Black dean 44 Workmen, 28 at 50s pBing& 16 principally by fm.  
Crawlah 24 ditto 6 at ditto& 18 by Bing and fathom  
Wolfcleugh 47 ditto 15 principally at 50s pBing with some small addition for dead work, 32 by the fathom principally.

The above are the whole of the Bargains let the time I was there, several more will be let afterwards so moving men out of employment, some of them would be taking what they had before refused. Weardale containing so many Mines have described them as above in hopes that you & whoever looks them over would understand them better than altogether. I remain

Jo. Dickinson

### **28 Oct 1809 John Mulcaster to Martin Morrison**

J. Mulcaster's Report of Smelt Mills, Refineries etc

Dukesfield Mill.

The late great Flood having carried away the Mill Dam a little suspension of the works has therefore been occasioned - a temporary Dam has been made in its stead which has enabled the Mill to begin work again, and should there be no great Floods this winter, it may serve untill the spring, when it will be necessary to build a new Dam, which I think will be better placed a little further up the Water where a better foundation may be procured - Owing to the scarcity of Carriers & very wet season there will be a deficiency of Ore here of nearly three Months consumption. Very little Lead is left on hand except what the Mill is making, which may all be delivered so long as the Weather permits the Carriers to travel - The Roasting Furnace is still continued at work with the same advantage as formerly observed.

Rookhope Mill.

The foundation for the Horizontal Chimnies is completed & nothing further could be conveniently done without us roofing part of the Mill where the communication arches join which might endanger laying the Works off, should any bad weather



happen - I thought it advisable to delay the building until the Spring but the materials necessary for completion of the Work will be got ready this Winter; as the bulk of the building is now finished I expect to have the Horizontals at work early next year. The Mill has a sufficient Stock of Ore to keep it working until the Carriage commences next Season, and the Lead I expect will be very near all delivered up to the end of this month.

Allen Mill.

The Roasting Furnace & two additional Bingsteads have been finished there & two more in hands will be as many as wanted for the use of the three east Hearths, a Peat, Coal & Cinder House will be wanted for the three Mills which I have marked out & they will be proceeded [sic] in soon as the Bingsteads are finished - A very Large Stock of Lead Ore is lying at this Mill which will require additional Ore Hearths to smelt it. Wood & Stones have been provided for two new Smelting Hearths, but the season being so far advanced, the building them has been postponed until the Spring - a very considerable quantity of Commn. Bricks will be wanted for the Chimnies which it is desirable to have made near the Mill, on examination two situations appear for that purpose; one where Bricks have formerly been made was awarded to Mr. Ruddock at the late Division the other upon the Comn. at Catton considerably more distant & has no convenience for drying the Bricks, unless leave can be procured from the Proprietor of an adjoining Field. Mr. Williamson's Opinion is that Coll. Beaumont has no right to dig Clay in any of the Allotments without the Proprietors permission, it will therefore be necessary to obtain the consent of the Parties, who will expect a consideration for leave and damages - the less eligible situation is preferable to having them brought from Summer Rods Bar near Hexham, where they have lately been supplied from, the expence of Carriage from that place is considerable, on the quantity that will be wanted, would amount to upwards of £100 - Wm. Robson has had another job at the Wheel Axle tree & cured the crackling noise formerly observed, in his & Dixon's opinion the defect is perfectly cured. Blowing Machines, as well as the Machinery for working them will be wanted for the two new Hearths. I will be obliged if Mr. Cockshutt will give his directions soon as convenient how he intends to have it done that we may proceed with them as soon as possible.

Allenheads Mill,

There being a pair of Double Bellows lying at Rookhope Mill, not used, we have removed them to this Mill and have got them new covered - Mich Elliott is at present fixing them to the No. E Hearth, where there were no Bellows before, this Hearth never having been used since the Arch and Chimney were built. This Mill being so near to the Mines will not have any want of Ore & I expect all the Lead will be got delivered.

Blaydon Refinery.

We have worked a tryal of our New Slag Hearth Bellows with the Cast Iron plates instead of Boards and find they answer extremely well. We have worked up part of the

waste washings procured from the Road adjoining the Refinery & have got about 3 [or 5?] Tons of Lead. I dont fear to procure 15 or 20 Tons more, tis and next year. - A considerable saving might still be adopted here by building Horizontal Chimnies which I wod recommend being built in the Spring, the benefit of them having been sufficiently ascertained.

General Observations.

The Smelters at Rookhope Mill on the 11 Sept. Left off their Work alledging as a reason that they could not make sufficient Wages to keep their families, from the Ore being so very bad - and that they would not go to their Work again unless their Wages were advanced to 10s/. pr For. for every kind of Ore. - I wrote to Mr. Smith that I was not sorry his Smelters had left their work as I believed they had some very bad ones amongst them and was glad of an opportunity of selecting the best and supplying the deficiency with better workmen and that none of them should be set to work till I saw him. I went to Dukesfield & selected 12 of the Smelters there (Dukesfd. Mill being then off Work for want of the Dam) & ordered them to make a tryal of the same Ore the others had left off working to ascertain whether it was the quality of the Ore or want of skill of the Rookhope Smelters that caused the deficiency of their produce and Wages - the difference of Produce was considerably in favour of the Dukesfield Smelters but there certainly was great cause of complaint in the quality of the Ore. When the Rookhope Smelters found there was some danger of losing their employment, they were desirous of being set to work again, requesting the cause of their complaint might be examined into.

I find they have earned upon an average this year about 10s/9d. pr. week but being over many men to each Hearth is part of the cause. - The Wages divided among the proper number would be about 14s/6d for each man - there is now the proper Complement of 4 Men to each Hearth. The Smelters earnings at Dukesfield have been about 9s/8d pr. Week, but there they have also over many. There the proper number would have earned about 13s/6d each pr. Week. When Allen Mill is enlarged we will remove part of the superfluous Men from Dukesfield there. - At Allen Mill the Smelters having constant work and not over many men, earn about 14s/6d each pr. week. At the present price of the necessities of life & considering the Wages paid to common Labourers I think it would be advisable to allow the Smelters a small advance and I wod therefore recommend that they be paid at each Mill 8s/. pr. For. for the Bouse Ore & 9s/4d pr. For. for the Cutting Ore, which will make them earn from 16s to 17s pr. Week allowing not more than 4 men to each Hearth. - As there has been repeated complaints of the Lead Ore not being well dressed, especially that which is made up at this Season after the Carriage ceases & which lays at the Mines over Winter, I took the opportunity to go round the different Mines with the Washing Agents and examined each parcel, and was sorry to find some of them so dirty that I was under the necessity of informing the Washing Agent that unless three parcels were again washed over (which they promised to see done) we could not receive them at the Mill. - From a calculation which I made of the Ore lying at the different Mines and what we have got

at the Mills, I find we have a full years consumption of Smelting on hand according to the present power of the Smelt Mills.

Jno Mulcaster  
Blaydon Refy. 28 Octo 1809.

**30 Oct 1809 Joseph Dickinson to Martin Morrison**

M Morrison

Dufton 30th October 1809

Dear Sir

In examining the Lead Mines I find Coalcleugh nearly as before, the west flatts continuing to raise ore from 24s to 50s per Bing. The flatts to the South of the Horse Level, being more productive, than those to the north. The East end still continues to raise Ore, both on the South & north veins about as usual, which continue their points, and are now divided about 20 fathoms; that to the South continues the property of the Air taking fire, when not worked in for a few days but not so as to do any damage, only frightening the workmen.

Wellhope Lead mines nearly worked out, only a few men in the Old ground at 50s per Bing. Hartley Cleugh continues to raise ore in the Cross Vein, which we are still driving forward, to the other veins, in a contrary direction at each end and expect better from them than at present. The great level below Coalcleugh is still driving forward and the trial in Swinhope likewise.

Allenheads Lead Mine will raise a considerable quantity of Ore this Year and principally owing to the large Quantities raised at the West end, the last Partnership of 8 men is supposed to have raised upwards of 400 Bings in the space of 7 or 8 weeks at 12s per Bing, and is now let for the quarter at the same price, the adjoining partnership have raised a large quantity at 20s per B[in]g and is now let for the quarter at 18s per Bing. The East end forehead is not quite so promising at present, the two or three lengths behind will raise a considerable quantity for two or three quarters which is now let for 30 to 50s per Bing, by this time we hope the forehead will be better again.

Weardale, Breckonsike & Burtree Pasture, in general poorer than last quarter, and of course the prices rather advanced and now let from 38s to 50s per Bing. Sedlin Lead Mine, nearly the same as before, except four Partnerships more, from the Engine foot northward, and all let at 50s per Bing without much assistance. Killhope nearly the same all let at 50s per Bing without any assistance. Blackdean poorer than before and the prices rather advanced, all let at 50s per Bing, except the necessary deadwork. Middlehope Shield, poorer in the West end, and prices rather advanced, Eastward looks better in the level forehead and Rise which is not finished. Slitt Lead Mine, all let at 50s per Bing, except the necessary deadwork, the forehead of level westward more hopeful. Longsike nearly as usual all let at 50s per Bing. Greenlaws poor, now under 50s per Bing, and level driving at 110s per f[atho]m. Levelgate, 14 Men at 50s per Bing in Old Vein, 8 men driving level at 170s per f[atho]m, that level has cut a vein,

supposed to be the vein found on the side of the road above Newhouse, and is now let to rise in the upper Sills to prove; Longtyhead 17 Men at 50s per Bing with 20s per f[athom] for driving a Level. Greenfield 6 Men at 50s & 10s for Sinking. Crawlah 26 Men at 50s with some small sums for deadwork. Wolfcleugh very poor, 40 Men and only 2 at 50s per Bing, all the rest at <B[in]g & f[athom]m>. Bolts Burn, a new trial, 4 men at 50s per B[in]g and 10s more for making the discovery & working all the dead work necessary for the quarter. Brandon Walls, bargained with Alex Whaley, for another Year at 90s per Bing. Hareup Gill, viewed the works, but found no person to treat with; Mr Emerson will treat with them afterwards. I remain Sir

Josh Dickinson

**12 Jan 1810 Joseph Dickinson to Martin Morrison**

Duften 12th January 1810.

Mr Morrison

In examining the mines beginning of this Year I find them as under.

Coalcleugh Lead Mine nearly as last Quarter; the best quality of ore is raised out of the west flatts which in general are worked between 24 & 30s per B[in]g. The Cross-cut at East-end between the North & South veins is not yet finished to prove that vein in the great Lime which is raising ore in the upper Sills. The old workings still continue to raise Ore from 40s to 50s per Bing and likely to continue so for some time. There being near 50 fathoms of unworked ground between the principal vein and White Wood vein at the west end and some strings have been lately discovered, leaving the White Wood vein in her course eastward, and pointing towards the other vein, which upon Trial are found to carry flatts and are now working to advantage which had not been noticed when the main veins had been worked, and very rich in ore. We have now fixed upon a certain place in White Wood vein to drive cross towards the other vein and prove the Strings we may first meet with. If they prove to work to advantage [we] intend driving them through to the other vein which will open out the whole. Wellhope Lead Mine is nearly worked out, and the East end still continues poor and fear it will never bear any Ore of consequence. Hartley Cleugh still continues to raise Ore in the cross-vein which we are driving in until we cut the other East & west veins, which are said to be before us at each end. The Great Level is driving forward with all expedition possible, The Level in Swinhope is now driven to where I think it will be right to Sink into the Lime Sill and prove the vein, we are now making preparation for that purpose, but fear the water will be heavy upon us.

Allenheads Lead Mine still continue to raise Ore at 12 & 18s per Bing at west end, but expect this will be the last quarter being nearly worked out; the last quarter we discovered a vein to the north of the former, and have been driving in it westward until the Lime Sill come up which expect will be very soon and to appearance hath <a right> to produce ore as the other. The East end poorer than last quarter, particularly the forehead, but hope will be better in a little time, We have been under the necessity of

Boring the Shaft at west end, west of the cross-vein, which is sinking to prove the vein there discovered, and boring being a tedious operation fear it will be some time before we can make an effectual trial in that vein. The flatts at Craigshield is more promising than for two or three quarters past; other parts of that Mine is nearly as before. The Colliers Shaft so much talked about in times past, and now necessary to be opened out (the under part being only bored) and the borehole since stopped hath been a very tedious operation to re-open, a plan is now projected which expect will nearly finish the whole next Quarter.

Weardale Lead Mines in general poor; Breckonsike old workings nearly worked out; the principal part of the Ore now raised in that Mine is now from the Sills now unwatered by the low level, and only very few working under 50s per Bing; Burtree Pasture Mine poor in the forehead, and the back ground working at 48 & 50s per Bing except two Bargains one at 45s and the other at 38s per Bing

Killhope Mine, about 30 Men all working at 50s per Bing

Sedling Mine, about 100 Men nearly all at 50s per Bing

Middlehope Shield Mine, more promising than last quarter but only two P[ar]tnerships whose whole dependance is Ore, the others by fathom and Bing.

Slitt Mine all let at 50s per Bing except driving the two levels.

Longsike Mine all let at 50s per Bing, except cross Cut to the North

Greenlaws Mine 34 Men, 18 at 50s & 8 at 30s per Bing, the others driving level.

Levelgate Mine, 8 Men driving level, 10 at 50s per B[in]g & 8 <rising> in the Vein

Blackdean Mine, poorer than last Quarter, about 40 Men, 16 driving levels, the others to raise ore at 50s per Bing

Langtyhead, Wolfcleugh & Crawlh nearly the same as last Quarter.

The above is nearly the state of the different Mines and remain Y[ours] etc

Jos Dickinson

**12 Apr 1810 Joseph Dickinson to Martin Morrison**

Duften 12th April 1810.

Mr Morrison

I now sit down to give the state of the different Mines to begin this Quarter and first with Coalcleugh which is poorer than last, and in <..> the lowest prices a little advanced, Six men to raise Ore at 26s per Bing, 4 Men at 28s, 6 at 30s, 14 at 32s 6 at 36s and upwards to 50s per Bing for about 60 men; very few of these can draw a shift of work to bank under 19s. Wellhope Lead mine nearly done, only 4 men working in the old ground at 50s per Bing. Hartley Cleugh is coming in to supply the place of Wellhope there being now 12 men now working at 42s per Bing and 4 men at 50s per Bing; the Levels are still driving forward to cut veins which that tryal was founded upon, and expect some of them will be discovered very soon. A Mole Catcher near to



Whitfield Hall had found a piece of Ore, and wanted a Lease of the ground where it was found. I sent Mr Little to acquaint him that no Lease would be granted, if what he had found, led to the discovery of a vein of Lead Ore he should be employed as a Workman and rewarded accordingly; after some demur he led them to a place where he turned out a piece of Ore upwards of 20lb weight and from its rusty appearance hath been broken from the vein many years since; it is near to Allen Water which at that place is upon a Limestone, but the water being high at that time no discovery could be made. I expect next Quarter to give you a further Account.

Allenheads Lead Mines, have done very well last Quarter and the prices at the East end reduced to 20 & 25s per Bing and one at West end at 20s from that to 50s per Bing about 80 men, and upwards of 20 men at £12 per F[ath]om. There is a hopeful appearance in the new vein at West end, the limestone only coming up and very strong Ore to the top of the Sill; the Air being gone we are obliged to sink a shaft before a further tryal can be made.

Weardale Lead mines, in general poor, and require high prices; Breckonsike all at 50s per Bing except 8 men at 40s. Burtree Pasture at 50s except 24 men at 48s per Bing, Sedlin nearly all at 50s per Bing, Killhope at 50s per Bing with very little variation; Middlehope Shield 24 men at 45s and 16 men at 50s per Bing but there is still a heavy expence on that place in driving two levels and making convenience for a Crushing Mill. Slitt poor in general both East & West except the forehead of Top Level Westward which is very far from any relief and will be attended with a considerable expense in making consequence for regular working, Longsike only about 12 men at 50s per Bing. Greenlaws a very uncertain and expensive mine, If the Ore pay for driving levels and making Tryals, is as much as I expect from her present appearance. Levelgate very little Ore raised and a great expence in driving Level and making Tryals; Blackdean, very poor only about 6 men at 50s per Bing and 16 men driving Levels etc; Wolfcleugh continues poor; 4 Partnerships (being 16 men) at 50s per Bing and 4 men at 45s per Bing, 30 men in dead work, besides 8 men driving a Level near Tho Smiths House: Crawlh poor by Report, was disappointed seeing that Mine, being obliged to stop (it being so very wet) to view Brandon Walls new vein which is coming into Col: Beaumonts liberty, only two foot short; this vein hath a better appearance than the former, we offered 4 Guineas for getting Ore until Michaelmas next, when the Bargains for the other will expire, and then the Bargains may be renewed for a Year according to their situations; Langtyhead mine, I did not see, but report says very poor.

I am yours Jos Dickinson

**19 Jul 1810    Joseph Dickinson to Martin Morrison**

[Note: Quarterly mining report, concerning lead mines in Allendale and Weardale. Mining Reports pp83-85]

Mr Morrison

Duften July 19th 1810.



Dear Sir,

The State of the different leadmines under Col Beaumont at the beginning of this month as under –

Wolfcleugh leadmine poorer the last Quarter, and of course some of the prices advanced a little, but the hed price still <obtained> for raising Ore the same as before, Wellhope nearly worked out, and no further discovery made since the last quarter at Hartley Cleugh. Further search hath been made, where the Piece of Ore was found (mentioned last quarter) but no discovery of any Vein, which causes a suspicion that the Ore had been carried thither; the Great Level still continues driving as usual, but we find a difficulty in proving the Great Lime in Swinhope. The Level is now continued along the side of the Vein, untill it was supposed the Lime would be strong to bear Ore, we have sunk down by the side of the Vein about Six Fathoms, and in cutting thro' the rider into the vein, the Water burst out and filled the Cross cutt and Sump to the top; a Single Pump, and Tubs were set to work for about four days, and gained only about 10 feet, we are now putting in another set of pumps, and intend trying these and the Tubs about a Week, hoping if the cavities were emptied, the general feeder might be managed, so as to prove the Vein.

Allenheads Leadmine – The West end of the Lime nearly worked out, but there is some under Sills necessary to prove, before that part is given up; The Shaft to the West of the Cross Vein, not yet completed boring; The East End not as rich in Ore as last quarter, and by appearance there may be some trouble coming on that part; the Collier Shaft is now completed, which causes a free circulation of Air through the whole of the East End, that, and the convenience of getting out the work by the Level, is a material help towards driving that forehead.

Weardale Leadmines poorer in general than last quarter particularly Breckonsike & Burtreepasture; In sinking a Sump in Burtreepasture Vein, from the Horse Level into the Ore Workings, in cutting between the sinkings, discovered a Vein with very good Ore, supposed to be a collection of Strings, and likely to produce a quantity of Ore.

Killhope, Middlehope, Sedlin nearly as usual in the Old Ground, working at 50s per Bing except Sedlin at the Engine foot, where we are driving a Level forward, under the Old Mans Works for opening out the Vein, Middlehopeshield hath carried more Ore the last Quarter than before, but the hardness & difficulty of working the Ore advances the Price, only one Partnership at 36s per Bing; 40s & 45s being the general Prices. Black Dene very poor, and not likely to raise any more Ore in the under Sills, we are now driving forward, under the Old Mans Works, in the Top Sills, to see if any Ore be left there; Wolfcleugh continuing poor, nearly as last quarter, and may be expected so unless a Meeting of Veins (as in Westgarth Forster's time) they being weak Veins, and when driving either way from the bottom, the Sills become stronger, and of course too strong for the veins; Crawlh continues to raise Ore nearly as last quarter, and should like to continue the driving forward 70 or 80 fathoms further, in the present situation, upon a consideration of the extraordinary rise of the ground on the surface which might press the vein too much, which appears to be a weak one, and produces

the principle part of the Ore in flats; otherwise it would be necessary to drive a low Level which would be a very great advantage to getting out the Work, and if the Mine continue will be wanted before it can be to the Ore workings. this ought to be taken into consideration at our meeting in August; Greenlaws continues to raise Ore mainly as before at from 40s to 50s per Bing. Slitt Leadmine a better prospect than before to the Westward; very little alteration in the other Lead Mines in Weardale.

Jos Dickinson

**18 Oct 1810 Joseph Dickinson to Martin Morrison**

[Note: Quarterly mining report, concerning lead mines in Allendale and Weardale. Mining Reports pp 86-88]

Mr Morrison

Duften 18th October 1810

I now give you the state of the different Lead Mines under Col Beaumont, as I found them at Michelmas Quarter, and found —

Coalcleugh, which continues poor, the principle part of the Ore raised is from the West Flatts, should they decline or be worked out before the East end is driven through the other cross Vein, Coalcleugh would be in a poor state indeed.

Wellhope Mine nearly worked out, only about 4 Men at 40s per Bing.

Hartley Cleugh Mine continues to raise Ore from different Veins, since my last another small vein being discovered at that place, of a different point from any of the rest, and had produced about 100 Bings of Ore the last quarter the intended veins being not yet cut. The Ore Bargains at these places let from 26s to 50s per Bing.

Swinhope Mine In my last you were informed, that one Set of Pumps could not gain upon the Water lo[o]sed in that Vein in the Great Limestone; since that, two Sets of Pumps and a lot of Water drawers could not gain upon it, and we are now driving another length Westward, the Sill continuing to rise, the Lime Sill will be nearer the level, and shall there make another tryal.

Allenheads Mine hath done very well last quarter, particularly the East End, but from the present appearance, is upon the decline. A strong string which joined that Vein on the North Side, and hath continued with the Main Vein about 100 fathoms, is now likely to leave her to the South, and fear the Main Vein will not be as good when they seperate. I expected it from the appearance last Quarter. The West End still continues to raise Ore in small quantities, but the best part is worked out, the New Vein to the West, mentioned in April last, produces only a small quantity of Ore the limestone being too much broken in that part, but believe it will answer better, when proved to the West of the Great Cross Vein; the Shaft on that side, now sinking, will open a way to prove both that and the other discovered before; The Old Workings in general poor, the Prices for raising Ore this Quarter from 21s to 50s per Bing.

Weardale – Breckonsike – poor both under level and above; the above workings nearly worked out, and the under level not yet to where she was good in the Great Lime above, now let from 45s to 50s per Bing.  
Burtree Pasture hath done very well and likely to continue, is now let from 25s to 50s per Bing, but more at 50s than 25s per B[in]g.  
Sedlin Mine Employs considerably more Men, since the Engine was settled, and Whimsey Shaft opened, but in general at 50s per Bing.  
Killhope nearly as before, employs about 20 Men & all at 50s per B[in]g.  
Slitt Mine is now raising Ore in the four fathom Limestone (West forehead) now let at 36s per Bing, and 12 others raising Ore at 50s per Bing.  
Middlehopesield Mine doing well, employs about 100 Men, continues hard, and not likely to work at a low price, is now let from 37s to 40s per Bing  
Wolfcleugh Mine continues poor, employs about 24 Men at 50s per Bing, but is obliged to have nearly as many in driving Levels etc.  
Crawlah Mine nearly the same as before, employs 10 Men at 50s per Bing. We are preparing for a Level, there being none as yet, and most of them have to draw water out of their Workings, at a great Expenche.  
Levelgate Mine – 8 Men driving the Level to Longsike at 160s per F[atho]m & 4 Men at 50s per Bing.  
Black Dean poor. 16 Men in deadwork and 4 Men to raise Ore at 50s per Bing  
Allercleugh – 14 Men at 35s & 42s per Bing and 10 Men by Bing and Fathom.  
Greenlaws Mine. 12 Men at 50s per Bing, 16 Men by Bing & Fathom, 8 Men driving Level at 126s per fathom.  
Longsike Mine – 4 Men at 50s per B[in]g & 8 Men sinking into the Veins to the North.  
Longtyhead Mine – 10 Men to raise Ore at 50s per B[in]g & 8 to drive a Level  
Brandon Walls Mine – to give Alex. Whaly & Co. 90s per Bing for raising Ore in that Mine, and at Thorney Brow Mine to give him 84s per Bing and 40s per f[atho]m for 8 fathoms driving in the Vein, which is poor, these bargains to continue to October 1811.  
Harupgill Mine by Jos. Lonsdale their Agent, to give that Co. 100s per Bing to October next 1811, of which 1/12th to the Rector of Wolsingham, 1/6th to Col Beaumont, and the rest to Harupgill Co.

You have the whole in as plain a manner, as I can describe. I am etc  
Jos. Dickinson

**5 Jan 1811    Joseph Dickinson to Martin Morrison**

[Note: Quarterly mining report, concerning lead mines in Allendale and Weardale.  
Mining Reports pp 89-90]

Mr Morrison

Newhouse Dufton. Jany 5th 1811

I now sit down to give you the present situation of the different Lead Mines, and first Coalcleugh Leadmine in general poorer than last quarter, and of course some of the lowest prices a little advanced. The East end nearly the same as before; continues to go forward in two distinct Veins both poor at present, no Bargains at Coalcleugh under 35s per Bing, and all the way to 50s and more above that price.

Hartleycleugh Leadmine more promising at present in raising Ore in the Cross Vein, & in another lately discovered. I find that place the last year, had raised nearly 1,000 Bings and according to the present appearance will do better the next. Wellhope Leadmine is nearly worked out only three or four Men taking out the Ore wherever they can find any at 50s per Bing. Two Bargains let at Hartley Cleugh at 26s per Bing, and none above 50s. We are now sinking a Shaft at Swinhope to bring the Air to the Forehead of the Levels and then another attempt will be made to prove the vein in the great Lime, but fear without an Engine it can not be effectually proved.

Allenheads Leadmine East End very poor, a Cross String hath crossed the main Vein, & hath taken all the Ore away but hopes in driving forward the Ore will come in again, and the four lengths behind will raise a considerable quantity, for two or three quarters to come, and by turning the Water Level into the Vein, it is now driving at 50s per Bing, which before was driving at 18£ per fath[o]m. The West End at the <Bent> Whimsey flatts towards the cross vein a further discovery hath been made, by pursuing a string westward hath discovered a fresh flatt. was last quarter let at 30s & is now let at 14s per Bing. One bargain at last had let at 20s, two others at 21s per B[in]g, & other bargains let all the way to 50s per Bing & 12£ per F[ath]om, and none above these prices.

Weardale Mines poorer in general, the lower prices both at Breckonsike and at Burtree Pasture a little advanced this quarter in both these places about 110 Men to raise Ore from 30s to 50s per Bing and none above. Kilhope about 24 Men all at 50s per Bing and unless a Level is carried to that Mine to take out the Old Deads left there 40 or 50 Years since it will be very soon worked out. Sedlin Leadmine both hard and poor but employs about 100 Men, and all working at 50s per Bing. Middlesield being a hard Mine to Work, and not rich in Ore requires a great price per Bing, and except 8 Men at 25s per Bing the others about 100 most of them by Bing and Fathom, and none under 40s per Bing without some help by fathom. Slitt Leadmine employs about 40 Men, and is working from 40s to 50s per Bing. Longsike nearly worked out untill the Level comes to her assistance. Black Dean very poor 8 Men driving low Level 8 more opening Old Level in Old Mans Work, and about 10 men to raise Ore at 50s per Bing. Allercleugh employs about 26 Men 12 at 42s per Bing the others about 50s per Bing. Greenlaws poor, employs about 24 Men, 8 of them driving the level, the others to raise Ore at 50s per Bing. There being at every of these Works several employed in driving Levels, and other necessary Dead Work, which is the case in all Leadmines, but all Dead Work not immediately wanted, hath been avoided for the present. I have had a very unpleasant journey this time, and is now Storm bound here, but expect relief in a day or two.

Wishing you comp[liment]s of the Season etc.

Jos. Dickinson

P.S. Wolfcleugh Crawlah, & Langtyhead all poor, and no Ore raised under 50s per Bing at any of these places.

**9 Apr 1811 Joseph Dickinson to Martin Morrison**

[Note: Quarterly mining report, concerning lead mines in Allendale and Weardale. Mining Reports pp 91-93]

Mr Morrison Esq

Dufton. April 9th 1811

I herewith send you a State of the different Leadmines at this time, and of course begin with

Coalcleugh Leadmine, poorer in general. The two Veins at East End keep their points Eastward, The South Vein about 30 Fathoms South of the other at her forehead and now let at 34s per Bing – there is a Cross Vein pointing nearly South which has just crossed this, & produces Ore about the same price, which we intend to follow, in hopes of further discovery as well as for Ore. The Ore prices at this Mine from 30s to 48s per Bing which is the most I intend to give at this time; and all deadwork, which doth not interfere with the regular working of the Mine discontinued for the present, except the great Level.

Hartley Cleugh – another Vein being discovered since my last, and now let at 20s per Bing. The other Veins being lett from 26s to 48s per Bing. Another Vein being discovered with Ore, near Ninebanks, a few fathoms driving will prove her in the Great Lime Sill, have continued a few fathoms driving a Level.

Swinhope Vein, we cannot prove without an Engine to draw the Water, every thing being ready for that purpose we have discontinued working there untill a further consideration.

Allenheads Leadmine in general poorer except the East End forehead now let at 48s per Bing and the two next lengths let at 21s per Bing each; a Bargain in the West End Flatts let at 14s per B[in]g and except two or three Bargains, all the rest at 48s per Bing, or what is equal by the F[ath]om, & all Dead Work not immediately necessary discontinued.

Weardale Lead Mines, and first Breckonsike, which continues poor in the under Sills, and inconvenient to bring out their Work, and mostly let at 48s per Bing, with the exception of three or four Bargains, a few shillings under.

Burtree Pasture Mine, better in the three forehead lengths, one Bargain at 29s another at 34s the others from that to 48s per Bing.

Sedling Lead Mine is nearly the same as for sometime past and nearly all lett at 48s per Bing which with the help of the Crushing Mill, and their own endeavours, hope they will make a living for themselves & families.



Kilhope Bargains are all let at 48s per B[ing] they being all residents, and in general work the length of the day, hope they will do well.

Middlehope Shield continues a hard and expensive Mine and so far requires a high Price per Bing for working the Ore when the necessary dead work is done, is now let from 30s to 48s per Bing.

Slitt Lead Mine hath done better the two last Quarters in the under Sills, two Bargains let at 40s per Bing, but the upper Works all let at 48s per Bing.

Longsike a single Bargain let at 48s per B[ing] and very little more can be done untill the level be up, which is driving with all expedition possible.

Levelgate Mine about 8 Men for Ore at 48s per B[ing]. The level at 180s per Fathom.

Greenlaws Mine very poor, only 4 men at 28s per Bing. The Level at 130s per Fathom.

Silver Dikes (the Mine above Newhouse) four Ore Bargains from 35s to 48s per Bing besides there driving for further discovery.

Black Dean Mine only about 7 Men for Ore at 48s per Bing and the low Level driving at £12. . . per Fathom.

Crawlah Mine continues poor 18 Men all working at 48s per Bing.

Longtyhead Mine about 15 Men all at 48s per Bing, and a level at 80s per fathom.

Allercleugh Mine very poor, none of the Men but hath by the fathom and Bing, and by taking 2s per Bing of[f] the head Price will be a very great saving particularly in Weardale, where there is almost a continuation of the highest Price, and believe they will bear it best, for they are nearly all residents and go regularly to their work every day, saturday not excepted, and in general work the whole of the day as I am informed which they have not the opportunity of doing where the workmen live at a considerable distance.

I am sorry at not having the pleasure of your Company this time, but hope this will find you in Health.

I remain etc. Jos. Dickinson

**8 Jul 1811     Joseph Dickinson to Martin Morrison**

[Note: Quarterly mining report, concerning lead mines in Allendale and Weardale. Mining Reports pp 93-94]

Martin Morrison Esq. Newcastle

Duften 8th July 1811

I arrived at Coalcleugh on Monday evening the 24th June, and examined the Lead Mines there on the Tuesday and wrote to Mr Emerson to meet me at Allenheads on the Wednesday, to consult how much the Prices might be reduced from the present appearance of the Mines, and from the reduced prices of Bread Corn and the other necessaries of Life; and found they all had fixed 45s to be the highest for raising Ore, the other work in proportion. But on opening your letter, found you were 3s per Bing

under. We have adhered strictly to your Orders, but fear we have been too hard upon several of the Workmen, which is in part owing to the present poverty of the Mines.

I find Coalcleugh Lead Mines poorer than last Quarter, but the East end forehead looks more promising, Wellhope & Hartley Cleugh likewise poorer than last Quarter. One Bargain let at 24s, Two at 26s, One at 30s & from thence to 42s per Bing the highest. Allenhead Leadmine poorer in general, & the appearance of the East forehead says she is upon the decline. Two Bargains let at 20s. One at 25s. One at 26s. One at 28s per Bing and from thence to 42s.

Weardale Leadmines poorer in general, two Bargains at Burtree Pasture let at 28s, and from that to 42s per Bing. Sedlin, Kilhope, Slitt, Crawlah, Wolfcleugh nearly all at 42s, several of these I fear will not leave the Workmen a maintenance at 42s per Bing. I was at Wolfcleugh the 5th June to view the Wheel Case, which is broke down on one side to the bottom, and the dwelling House over it (occupied by two families) also coming down on the same side, it is at present stayed that it cannot shrink further, but the wheel cannot move, and no more water can be drawn untill it be repaired; some little time since a level was driven into the old workings in order to take the top water from the Engine that the Engine Shaft might be sunk into the Quarry Sill, in hopes there might be Ore in that Sill under the Great Lime which was so rich before, and untill the Engine be repaired that tryal cannot be made, the repairing of which will not be less than £100 according to estimation, & therefore desire you will write to Mr Emerson if you intend to have her repaired, and the sooner the better, if it has to be done, as the Water will increase every day

I am etc                      Jos. Dickinson

**18 Oct 1811    Joseph Dickinson to Martin Morrison**

[Note: Quarterly mining report, concerning lead mines in Allendale and Weardale. Mining Reports pp 95-96]

M Morrison Esq

Dufton 18 Octo 1811

On examining the Mines at Coalcleugh find them nearly as last Quarter, or if any alteration for the worse, some of the West Flatts nearly worked out, only one Bargain at 26s per Bing the others from 28s to 40s per Bing the highest. Hartley Cleugh & Wellhope poorer than last Quarter only one Bargain at 26s per Bing, the others from 32s to 40s the highest.

Allenheads Mines poorer than last Quarter, and of course the prices advanced, one Bargain 24s, another at 25s per Bing, and from that to 40s the highest. The East end of that Mine hath very little Ore in it, being just taking the Height of the fells I feared that would be the case, which you will see in my Quarter acct at Midsummer 1810, having so many similar instances, and fear this will not be the last.

Weardale Leadmines in general poorer than last Quarter. Breckonsike, one Bargain at 36s and from there to 40s per Bing. Burtree Pasture poorer than last quarter, two Bargains at 26s, one at 29s & from thence to 40s (Fear this is upon the decline). Sedlin Lead Mine poor and nearly all let at 40s per Bing. Kilhope nearly as before, all let at 40s per Bing.

Middlehope Shield poorer than last Quarter and let from 35s to 40s per Bing. Slitt, poorer than before and let at 40s per Bing.

Longsike all let at 40s per Bing.

Greenlaws, poor only 4 Men at 40s per Bing.

Allercleugh, poorer than last Quar[te]r & let from 38s to 40s.

Levelgate, old ground let at 40s per Bing.

Longtyhead, all let at 40s per Bing.

Bollihope let at £12 per F[ath]om & only £10 for all dead Work.

Pikestones let at £12 per F[ath]om & nothing for Dead Work.

Black Dean very poor, only 4 Men to raise Ore at 40s per B[in]g.

Crawlah, 4 Men at 40s per B[in]g, 6 M[en] at £11.10s per F[ath]om & Sink a Shaft.

Wolfcleugh, poor & let from 30s to 40s per Bing.

Brandon Walls let to Alex. Whaley to Mich[aelmas] 1812 at 70s per Bing.

Harup Gill poor, & no person appeared to take a bargain.

From the above statement, you will see the Mines are in general poor and we have settled the Prices 2s per Bing from the last Quar[ter] and all dead Work reduced in proportion and some discontinued for the present, The prices had been fixed upon by the Agents of the different Mines, from the intelligence Mr Emerson had given them before I went; and fear the Bargains in general are let lower than they can be supported for twelve Months together, without disabling the Men to meet their advance Cash and if so, will increase the Mining Debt.

I hope for Better times & am &c Jos Dickinson

**10 Jan 1812 Joseph Dickinson to Martin Morrison**

[Note: Quarterly mining report, concerning lead mines in Allendale and Weardale. Mining Reports pp 97-99]

M Morrison Esq

Duften 10 Jany 1812

Yours of the 17 Dec last Rec[eiv]ed at Coalcleugh on the 26, the contents of which was a confirmation of the bad news we had in Westmorland. Upon inspecting the Mines at Coalcleugh, and their accounts now preparing for the Pay, found they would bear a little reduction at present, without reducing the Miners to extremity, & therefore reduced the prices for raising Ore to 38s per B[in]g & the Dead Work in proportion, and at Allenheads upon inspecting the Mines, & their Accts. found they wo[ul]d bear

the same reduction. I have made it a general rule through the whole, except in some particular places, where if not worked out at present, not likely to come at afterwards. [i.e. places in the mines where it is worth paying miners extra to make sure all the ore is extracted, as there is unlikely to be access to remove the ore at a later date]

Coalcleugh Mines nearly as last quarter, still continues to raise more Ore than expected from appearances, particularly the East end, by pursuing the South Vein, have found a Cross Vein, which at present continues to raise Ore, and likely to continue, we let 36 Ore Bargains from 25s to 38s per Bing.

Wellhope & Hartleycleugh, prices the same & 15 Ore Bargains

Allenheads Lead Mines poorer than last Quarter, & particularly the Vein in the East End, and the Lime Sill continues to go down to the East, that a part is now under the Water Level, and shall be under the necessity of sinking into a <Slate> Bed under, to drive the level, & to <present> the Water into the Water Level, we have let 26 Ore Bargains at 25s the others from 30s to 38s per Bing.

Weardale, Breckonsike in general poor, the low Level will be up to the forehead in a little time, & will prove the Lime Sill deeper than before which hope will be of service to that Vein, we have let 17 Ore Bargains from 35s to 38s per B[in]g.

Burtree Pasture Vein hath raised a considerable quantity of Ore the last year, but is now divided into two, & fear both will not produce so much the ensuing year, we have let 11 Ore Bargains, from 28s to 38s per B[in]g at that Mine.

Kilhope continues poor, we have now let 6 Ore Bargains at 38s per Bing.

Sedlin Mine continues regularly poor, & may be compared to a Hospital taking all those that hath not employment elsewhere, not less than 23 Ore Bargains all at 38s per Bing.

Middlehope Shield Vein being very hard requires high prices for raising Ore, we have let 11 Ore Bargains from 36s to 38s per Bing, there is hopes of better Eastward.

The Vein recovered from the Lead Co. is very poor & will not work without a price per fathom, I believe the Ore in that Vein will not pay the expences.

Slitt Vein poor, 8 Ore Bargains all at 38s per Bing (the [level short] of expected Ore Longsike, poor in the Old Workings, 6 Ore Bargains at 38s per Bing, the Level not up.

Greenlaws very poor, only One Ore Bargain at 38s per Bing

Levelgate, old ground, five Ore Bargains & all at 38s per B[in]g.

Blackdene, old ground, five Ore Bargains at 38s per Bing

Allercleugh, a poor weak vein but continues to raise Ore in 8 Bargains at 38s per Bing

Crawlah, poor, only 2 Ore Bargains, at 38s per Bing & one at £11.10. per F[ath]om in Lead

Longtyhead, five Ore Bargains at 38s per Bing

Wolfcleugh & Broaddale Pasture 8 Ore Bargains at 38s per Bing.

The above Bargains are what were let at the general Bargains; there being at each of the Mines several Men out of employment, and very likely will find places in the Old Works to try for Ore at the head price, & several of these Bargains at different Mines I fear are taken with a View of having their advance Money continued but I think more

particularly in Weardale, whether I am right in my conjecture or not only time will prove.

I am etc Jos Dickinson

**12 Oct 1812 Joseph Dickinson to Martin Morrison**

[Note: Quarterly mining report, concerning lead mines in Allendale and Weardale. Mining Reports pp 100-102. As Dickinson notes in this report his normal inspection routine was disrupted by his period of illness, and then by an outbreak of typhus at Coalcleugh. Hence there are no Lady Day or Midsummer quarterly reports for 1812, and he relied on additional reports at Michaelmas by Messrs Little, Emerson and Crawhall. These are given on the following page (p103 in the copy volume), dated the following day. ]

Mr Morrison Newcastle

Duften 12th October 1812

About the 25th March last the Weather being exceeding stormy I inspected Coalcleugh Leadmines & let the Bargains, the Mines being poor in the Old Works was obliged to advance the head Price to 42s per Bing by that time the snow being so very deep, & the Frost intense, was obliged to return, after writing to the Head Agents at Allenheads & Weardale; I had in that journey taken Cold, was very unwell for near three Weeks, and then was confin'd to my bed, & never out of the Room for near seven weeks, & was not able at the 24th June to visit the Mines. I am now so far recovered that I have inspected the principal part of the Mines, which I find in general poor, particularly the Old Works, who ought to had an advance, if the times had not been so very discouraging; & fear the head price have been complied with by several to <cover> the advanced Cash.

Coalcleugh hath been visited with a disorder, which the Doctors call a Typhus fever. I did not go there as usual, but after a General Meeting of the Head Agents at Allenheads, Mr Little reported the state of the Mines under his care, I ordered him to let the Bargains himself, & give me the particulars in writing; the principal part of the other Mines I visited in Company with the Head Agents, & was present at letting all the Bargains. I left Messrs. Emerson & Crawhall Inspecting the Mines at Coalcleugh, where they would return immediately when they came out of the Mines, in order to avoid the infection; the Head Agents Report of all the Mines, expect you will receive before this, and therefore shall not be particular in that part, only the Bargains as they are let at present, and shall begin with Coalcleugh, One Bargain at 26s per Bing, Two ditto at 30s, One ditto at 32s, Two ditto at 35s, Two ditto at 36s, Three ditto at 38s, Two ditto at 40s, and Twenty four ditto at 42s per Bing with very little dead Work except the Great Level about £7.10.. per Fathom, expect they will raise their last Quar[ters] quantity of Ore.



Hartleycleugh & Wellhope, One Bargain at 24s per B[in]g, one ditto at 30s, One ditto at 40s & Six ditto at 42s per B[in]g. Driving the Horse Level at 95s per fathom. This place is expected to raise the last years quantity.

Allenheads Mine poorer in general particularly the three last lengths at East End. That now sinking being only about a fathom into the Sill, is considerably better, & lett at 30s per B[in]g. The West end continues poor in the Flatts, & seldom works under the head price; the Tryal to find the Vein on the West side of the Great Cross Vein, hath been attended with several unfortunate circumstances both in Boring and sinking a Shaft to Air that place, & when that was completed in driving Westward in the Vein discovered, it went to nothing, I believe by the Sill going down to the West there are some more Veins before us, and not far distant: Before an effectual tryal can be made, it will be attended with a great Expencc. I have therefore discontinued this tryal for the present, untill a point of the South Vein at Coalcleugh be taken, to see where it points to at Allenheads & then you will hear further from me.

Allenheads Bargains. One at 30s per B[in]g. One at 35s. One at 38s. Seven at 40s. & 14 at 42s per B[in]g. This Mine will fall considerably short of last Years Quantity, & is attended with considerably more dead Work than some others, <besides> the under level sinking seven let at £18 per Fathom; the reason for this Sinking is mentioned in my report in January last.

Weardale leadmines in general poorer than when I last inspected them, particularly those that used to be the best which you will see by the Bargains. Breckonsike Two Bargains at 40s per B[in]g. Eight Bargains at 42s per B[in]g. the low level driving at £9 per fa[tho]m & one to Greenfield at £11.10.. per fathom.

Burtree Pasture. One bargain at 30s per B[in]g. One ditto at 34s. One ditto at 35s. One ditto at 36s. One ditto at 39s & Six ditto at 42s. The Top Level at 130s per fa[tho]m and the Horse Level at 150s per fathom.

Killhope. One bargain at 40s per B[in]g & Six ditto at 42s per Bing.

Sedling. Twenty One Bargains at 42s per Bing, the low level East at £9.10.. per fa[thom] & 30s per Bing. Low level west at £8 and 30s per Bing A Top Level at 66s per f[atho]m & 42s per Bing, & sinking a Sump & £7 per Fathom & 38s per Bing.

Company's Vein. One Bargain at 36s per B[in]g & One at 38s per B[in]g. Driving Level at £9 per Fa[tho]m & 30s per B[in]g, & Rising at £7 per fa[tho]m & 38s per Bing,

Middlehope Shield. Nine Bargains at 42s per B[in]g. driving Level at 90s per Fa[tho]m.

Slitt. 4 bargains at 42s per B[in]g. Driving Low Level at 130s per fa[thom] & 30s per B[in]g.

Longsike Six Bargains at 42s per B[in]g, & a Sump to open for £30.

Earncleugh. 8 Men driving cross at £9 per fa[tho]m.

Greenlaws. Driving Level at 115s per Fa[tho]m & 30s per B[in]g, driving top drift at 53s per fa[thom] & 42 s per Bing.

Allercleugh, Three Bargains at 42s per Bing, driving a drift at 85s per fa[tho]m & 8 Men opening an old Drift.

Blackdean. Seven Bargains at 42s per Bing, driving level at £10 per fa[tho]m & 2 partnerships driving in the Vein at 80s per f[atho]m & 35s per Bing & one partnership draw[in]g out old deads.

Levelgate. One Bargain at 42s per B[in]g. driving level at £9 per fa[thom] & driving Cross at £6 per fa[thom] to Middlehope old Vein.

Longtyhead. Four Bargains at 42s per Bing

Wolfcleugh. Five Bargains at 42s per B[in]g. driving level at £9 per fa[thom] at Broaddale Pasture and 30s per B[in]g, driving level at Wolfcleugh at 90s per fa[thom] & 30s per B[in]g, driving Cross at £11. Sinking Sump at £7 per fa[thom].

Crawlah. Three Bargains at £11 per F[ath]om.

Yew Tree. One Bargain at £11 per F[ath]om & £20 for driving Level.

Peaksid. One Bargain at £11 per F[ath]om

Harehope Gill. To raise Ore at 80s per B[in]g and pay Col Beaumont ¼ Duty Over

Brandon Walls. To raise Ore at 70s per B[in]g, both the two last to be well dressed & made ready for the Mill, & continue for One Year

I remain etc Jos Dickinson

### **13 Oct 1812 Joseph Little to Joseph Dickinson**

[Note: A mining report from Joseph Little, Thomas Emerson, and William Crawhall, concerning lead mines in Allendale and Weardale. Joseph Dickinson's mining report of the previous day notes that he had been unable to inspect all the mines himself due to an outbreak of typhus fever at Coalcleugh, and so he had asked the Mine Agents to write this report.]

We the undersigned have Viewed the different Mines at Allenheads, Weardale & Coalcleugh & our Report is as follows. Viz.

That Allenheads Mine in Wentworth Vein in the back workings is poor, but the foremost sump now opening is more promising than any that has been sunk in that Vein. The Workings at Craigshield in Diana Vein are very hard and poor, but likely to be of a long duration, the foreend is some better than it has been.

Breckonsike Leadmine is considerably poorer at the fore-end than has been, but a great part of the Great Limestone (the principal bearing Strata) being under Water prevents their further proceedence for the present, but the Low Level under the Great Limestone being nearly up it may be expected after being freed from Water, that she will be more prosperous. Burtree Pasture Vein is going on in a prosperous way & producing a great quantity of Ore. Sedlin Vein in the lower Sills is very poor, and if it was not from the good state the Mine is in, & the mode of Working her, it could not have been wrought to so much advantage.

Coalcleugh Leadmine in the old Workings at West End is much as usual, the East end is poorer than it has been, and from the Deepness of the Mine it cannot be wrought until a fresh communication of Air is got, to advantage, (which is soon expected) or the

Low Level being up, which will be some years before it can be got to any of the workings, except the Low Coalcleugh Vein which they expect to cut in two years time.

Hartley Cleugh Mine is likely to raise Ore pretty well at present, but being a soft Mine its continuation is uncertain

Joseph Little Thos. Emerson Wm. Crawhall

Allenheads Octo 13th 1812

**11 Jan 1813 Joseph Dickinson to Martin Morrison**

[Note: Quarterly mining report, on two sides, concerning lead mines in Allendale and Weardale. Mining reports pp 104-105]

Martin Morrison Esq. Newcastle

Dufton 11 Jany 1813.

Yours of the 23 Dec last I rec'd in <c....> & if the times had allowed two or three shillings per Bing more, for some poor places, would have been very acceptable; The Workmen have no place to fly to, & cannot live without some employment; I fear several of them have taken Bargains, which at 42s per B[in]g will not cover the usual allowance, of advance Cash, & will of course increase (what we may call your National Debt) and according to my judgement of the Accounts, you will find something of that [at] the ensuing Pay. I believe the principal part of the Workmen work regularly six days in every Week therefore must be the poverty of the Leadmines which I find in general poorer than last Quarter, which will appear by the Bargains.

Coalcleugh. 6 Men at 28s per B[in]g. 8 Men at 30s. 4 Men at 32s. 14 Men at 35s. 4 Men at 36s. 18 Men at 38s. 10 Men at 40s & 106 Men at 42s per B[in]g. besides some others that hath not appeared, being at a considerable distance, do not come for their Bargains at this Season, untill they come to begin work, between 30 & 40 Men driving Levels at different prices.

Allenheads Lead Mines. Except two or three Bargains at East End mostly poor and let at high prices; we have sunk under Level at East End into the plate at the top of the 4 fa[tho]m Limestone, & expect to prove the Vein in that Sill in a little time. 16 Men at East End at 27s per B[in]g. 6 Men at 34s per B[in]g. 8 Men at 35s per B[in]g. 6 Men at 36s per B[in]g. 8 Men at 38s per B[in]g. 18 Men at 40s & 60 Men at 42s per Bing, besides about 30 Men driving and sinking in Dead Work.

Weardale Lead Mines. In general poorer than last Quarter which you will see by the Bargains.

Breckonsike & Burtree Pasture. 8 Men at 34s per Bing. 8 Men at 35s. 8 Men at 38s. 16 Men at 39s. 16 Men at 40s & 64 Men at 42s per Bing, besides 28 or 30 driving & sinking in Dead Work.

Kilhope. 12 Men at 42s per Bing.

Sedlin. 106 Men at 42s per Bing, beside about 22 Men driving sinking & dead work.

Company's Vein. 4 Men at 40s & 6 Men at 42s besides 6 Men driving Level at 180s per f[atho]m.

Middlehope Shield. 8 Men at 40s. 24 Men at 42s per B[in]g besides 8 Men driving Level.

Slitt. 34 Men at 42s per B[in]g. & 16 Men driving Level etc.

Levelgate. 13 Men at 42s per B[in]g. & 16 Men driving Levels etc.

Greenlaws. 10 Men at 42s per B[in]g. & 8 Men driving Level.

Allercleugh. 20 Men at 42s per B[in]g. & 8 Men driving Level

Black Dean. 46 Men at 42s per B[in]g. & 12 Men in Dead Work.

Barbary. 4 Men at 42s per B[in]g. & 6 Men opening a Shaft.

Longtyhead. 6 Men at 42s per B[in]g. & 8 Men driving Level

Wolfcleugh. 18 Men at 42s per B[in]g. & 8 Men driving to North Vein.

The other Bargains at Crawlh, Yewtree, Peakside, Harehope Gill, & Brandon Walls, are all let by the Year some by F[ath]om & others by the Bing. The above are the Bargains now lett, but expect there will be alterations before the end of the Quarter, & hope they will be for the better, & remain etc

Jos Dickinson

**6 Apr 1813 Joseph Dickinson to Martin Morrison**

[Note: Quarterly mining report, concerning lead mines in Allendale and Weardale. Mining Reports pp 106-108]

Martin Morrison Esq Newcastle

Duften 6th April 1813

Dear Sir,

I now sit down to give you my opinion of the different Lead Mines, with an account of the Bargains we have let, and shall begin as I inspected them, Coalcleugh is poorer in general than last quarter & of course the Prices higher, but believe not equal to the decline of the Mine, The West Flatts which hath been a great support for the some time, is working out, & unless some fresh discovery in that part, will reduce the number of Workmen greatly; the East forehead of the South Vein is the most hopeful at present, and now let to 6 Men at 28s per Bing the other parts of the Mine 4 Men at 30s per B[in]g. 4 at 32s. 6 Men at 35s. 4 Men at 36s. 10 Men at 38s. 15 Men at 40s. 46 Men at 42s and 12 Men at 42s per Bing & something over for dead Work & 20 Men driving Levels & other necessary dead Work, & about 40 Men out of employment.

Hartley Cleugh Lead Mine poorer than for sometime past, which you will see by the Bargains 2 Men at 38s per Bing 6 Men at 40s per Bing. 16 Men at 42s. 10 Men at 42s per B[in]g & a little over for dead Work, & 6 Men driving Levels & other dead work. There is a Vein discovered on the Alston Moor side of the Fell supposed to be Blagill Vein which was formerly wrought to great advantage, and was lost by a Cross Vein

intersecting her, and could not be recovered at that time[.] Joseph Little will point the newly discovered Vein between this & Midsummer, when you may expect to hear further from me concerning that Vein.

Allenheads Lead Mine poorer than for sometime, particularly the East end, which you will see by the Bargains 16 Men at 35s per Bing. 8 Men at 37s. 43 Men at 42s per B[in]g. & 62 Men at 42s per B[in]g & something for dead Work. 37 Men driving levels etc & about 40 Men out of employment. In my January Report of 1812 you will see the reason for sinking under Level at the East end, not meeting with the quantity of Water expected in the Quarry Sill encouraged us to continue the sinking, & if possible to prove the four fathom Lime, we sunk to the top of it, where the Vein had left us a little to the North, but driving cross we cut the Vein at the top of the Sill which had a favourable appearance but at the same time found such a quantity of Water that we could not see the bottom since. If that Sill should carry Ore would open a fresh field of Working every way from the Engine foot.

Weardale Leadmines in general poor, which you will see by the Bargains. Breckonsike. 22 Men at 42s per Bing. 34 Men at 42s & something over & 6 Men driving etc.

Burtree Pasture. 8 Men at 32s per Bing. 8 Men at 35s. 16 Men at 38s. 16 Men at 39s. 18 Men at 42s per Bing with a little over & 12 Men driving Levels etc.

Sedlin. 52 Men at 42s per Bing. & 63 Men at 42s per Bing with something over Company's Vein. 10 Men at 40s per B[in]g. & 42 s per B[in]g. a little over for dead Work Middlehopesield. 32 Men at 42s & 14 Men at 42s a little over. 20 Men driving Levels.

Kilhope. 8 Men at 42s & 6 Men at 42s per B[in]g a little over

Slitt. 17 Men at 42s. 7 Men at 42s with a little over

Longsike. 2 Men at 42s & 12 Men at 42s per B[in]g a little over & 8 Men sinking

Greenlaws. 10 Men at 42s & 8 Men at 42s per B[in]g a little over, 8 Men driving level

Allercleugh. 10 Men at 42s per B[in]g & 14 Men driving Levels by Bing & Fa[tho]m

Levelgate. 10 Men at 42s & 8 Men driving Level to Longsike

Blackdean. 16 Men at 42s. 26 Men at 42s & a little over. 6 Men driving Level.

The above are what Bargains we let at this time besides there will be several whose bargains were not finished at every Mine, & I fear several of those we let were looking to the Cash in advance which will be <found> at the end of the Year increasing the Old Debt. Breckonsike doth not look well, when we have brought up the low Level the only benefit is proving the flatts which hath raised Ore at the head Price [.] Burtree Pasture looks better than for two or three Quarters past & hope will continue. Sedlin hath done very well ever since the Engine Pumps were settled, the North End is nearly up to the Great Cross Vein but the other I hope will continue for many Years. Middlehope Shield & the other adjoining the Co. are very like in appearance I still hope they will be better by driving Eastward particularly Middlehopesield the other we are seeking for Flatts. Kilhope nothing can be expected without driving a Level up the Burn to open out all the Veins. Slitt Mine is nearly done. Longsike is just opening out with the Great Level which will prove the Lime Sill. Greenlaws is more promising at present but fear it will



be as before. Allerclough is producing Ore by rising out of Blackdean Level into the Old Workings & bringing out the Work at that Level[.] Wolfcleugh & Broaddale Pasture are both very poor & fear they will be attended with expence before they be proved.

Yours etc Jos. Dickinson

**30 Jun 1813 George Crawhall to Martin Morrison**

[Note: Quarterly mining report, concerning lead mines in Allendale. Mining Reports pp 109-11. From this date the quarterly mining reports, previously written by Joseph Dickinson for all the Weardale and Allendale lead mines, are now given as three separate reports by the mine agents based at Allenheads (for the Allenheads mine), Coalcleugh (for Coalcleugh and other Allendale mines), and New House (for the Weardale mines). Dickinson was indeed too ill to continue in 1813 – or at least this was sufficient excuse to dismiss him that summer Martin Morrison had written to Joseph Dickinson on 14 June 1813 to dismiss him, ostensibly mainly on the grounds of his infirmity (letter available elsewhere in ‘Dukesfield Documents’). Both Joseph senior and junior were still alive at the time, but presumably the mines inspector had been Joseph junior, as his father at 71 years old was possibly too old for the strenuous underground inspections required by the post. Joseph junior died at Dufton in May 1815 aged just 38 and was buried by his father, less than two years after he had been sacked.]

Coalcleugh Mines June 30 1813

Coalcleugh High Vein & Flatts produce nearly the whole of the Ore that is raised at this time, but are in a bad state for working or raising Ore to an advantage in the present situation not entirely for want of Ore, as the Ore Workings appear to be tolerably fair at present had there been proper communications for the circulation of Air, more convenient Waygates for Banking the Work, which is done at great expence; all the Old Waygates that was necessary to be kept open kept in good repair & new ones made at proper places as the Workings advanced, by forwarding the dead Levels, Air shafts etc would have been a means of raising considerably more Ore, & at a less price per Bing than at present given. These and other inconveniences such as admitting Men to <Coat> Deads improperly & neglecting keeping the by-roads in proper repair have rendered the whole field in a bad state, & particularly bad for want of a sufficient supply of Air; which will be attended with great expence & not a few Years distance before she can be put on a regular plan for working to the best advantage. Many of the Leading Workings at the East End have lately been raising Ore by means of Air Machines etc but now the workings being advanced out of the power of such Machinery at act upon, are standing & cannot be wrought for want of a sufficient supply of atmospherical Air, which cannot be procured by any other means than by

driving the dead Levels forward which are great distance behind the leading Workings, & opening the Air Drifts, Water Levels etc (which I shall explain afterwards) that have been admitted to be wrecked by neglect of repairing, & allowing Men to fill them partially with deads, prevents the circulation of Air into many of the workings. Many other workings that are now raising Ore, are wrought to a great disadvantage; the Men not being able to work more than half their time in some situations for want of Air. The old Workings that are now raising Ore in general are poor & much filled with deads, waygates in bad repair etc, the great expence of drawing Deads from such a deep field prevents many Men from attempting to make a search to raise Ore in places that I am of opinion would produce Ore, had they been in a good situation.

The Top Level or Firestone Level. The forehead now in the Great Slate Sill at the east end of Coalcleugh is driving with 8 Men at £8 per fa[tho]m & is 120 fa[thoms] behind the Galloway Level forehead, which ought to have been the foremost Level in the field; being the only daylevel at the place to admit a sufficient supply of Atmospheric Air into the whole workings below. The next is the Middle Drift 22 fa[thoms] below the Firestone Level, which is driven 120 fa[thoms] east of the last communication from the Firestone Level to the Galloway Level, for purpose of conveying Air into the workings betwixt these Levels, 60 fa[thoms] of which being run together is now opening out with 4 Men, all the West part of this Drift from the last Sump to the Engine is entirely run close & filled with Deads so as to be quite useless. The Third Level in depth is the Galloway Level 11 fa[thoms] below the middle Drift & upon the Top of the Great Limestone, this being the random that produces the principle part of the Ore; the Level is in good repair and driven 180 fa[thoms] east from the last holing from the Firestone Level, which is further than Air can be found to enable Men to Work; the different Workings are standing about the forehead that would raise Ore at reasonable prices, but cannot be got until the other Levels be driven up & proper communications made from one to another.

The Low Level or Water Level from the Engine foot is 17 fa[thoms] deeper than the Galloway Level, the forehead now in the Great Lime & driving with 8 Men at 10£ per fathom is 100 fa[thoms] behind the Galloway Level forehead, this level is in a very bad state, being entirely wrecked & filled with Deads both East & West from the Engine, except a few fathoms at the East End, & by information from the Workmen not a person has been through her for 10 or 12 Years past, the Water finds its way through the Deads, this in addition to almost all the old Sumps being filled with Deads from the Galloway Level to the Water Level, must be a great obstruction to the circulation of Air into the eastward Workings. 6 Men are now opening out this Level eastward.

Whitewood Vein. the East end of this Vein has not been wrought for several Years past & from information was left off[f] poor & much broke into strings, there being a fine stretch of Ground in this Vein to the East, without any obstruction of Cross Veins etc, I

would recommend opening her out & pushing the forehead awhile, if she obtain her former strength I have no doubt but she'll produce Ore.

Low Coalcleugh Vein. I cannot give any information respecting this Vein as nothing has been done in her for five years past, the Engine is standing & all the Levels Waygates etc are nearly run close[;] if any thing is determined to be done, it must be an entire new winning from the surface.

The Low Level at Barney Craig is going forward with 8 Men. I calculate 8 or 10 years before the East End of Coalcleugh be effectually won by it.

Hartley Cleugh is much poorer than she has been & extremely bad for Air & much filled with Deads. I purpose setting in a shaft at the forehead which I expect will in a few Months effectually Air her.

Welhope is very poor & nearly abandoned being only 3 small partnerships working; there is a probability of the East End of Wellhopehead Vein mending if she was driven a few fathoms further & other proper trials made.

With this you have a list of the Bargains let at the different places which you'll refer to for the price per Bing & fa[tho]m etc.

George Crawhall.

Coalcl[eugh] 6 Men at 26s, 4 at 28s, 16 at 35s, 4 at 36s, 20 at 40s, & 75 at 42s per Bing. 42 driving Levels etc.

Hartley Cleugh. 18 at 25s & 28 at 42s per B[in]g. 12 Men driving Levels

Welhope. 7 Men at 42s per Bing

### **30 Jun 1813 Thomas Emerson to Martin Morrison**

[Note: Quarterly mining report, concerning lead mines in Weardale, written by the Mine Agent based at New House in Weardale. Mining Reports pp 112-114]

Weardale June 30th 1813

Breckonsike is very poor, but I thought it advisable to continue the Low Level, as the Vein has sometimes been dead for as long a distance as at present.

Burtree Pasture Vein is very strong at the fore-end & likely to continue so, but not as rich as it was about the middle of last Quarter, the foremost Working is let to 8 Men at 25s per Bing, we expect to cut into a new length in a few days time.

Kilhope is very poor & not much expectation of being better, without further tryal. I think the most likely thing to be done now, is to continue the Old Mans Level up to Kilhope Head, which will not only lay many of the Old Workings Water free, but enable us to make new Tryals.

Sedlin is raising Ore much the same as it has done for sometime back, at the highest Price.

The Company's New Vein continues poor, but we are in expectation of a Vein joining it from the Sun-side which I hope will make it more productive.

Middlehopeshield. The back Workings are poor, but we have some better appearance at the fore-end, but the Air is so very bad (being between two & three hundred fathoms from the last Waygate) that we found it necessary to sink a new Shaft from the surface, down to the low workings, which will make it some time before proper tryal can be made in the Great Limestone.

Slitt, Longsike, Allercleughhead & Levelgate, are all poor. We have got very little Tryal in Longsike Vein from Levelgate side, as yet.

Blackdean is raising Ore tolerably well at the high Price.

Barbary. We have got some poor Workings here, by the Company driving up a Level, from Ireshope Burn & unwatering the Old Workings.

Longtyhead, Greenlaws & Wolfcleugh are only poor

I am etc

Tho. Emerson

Weardale Bargains

Breckonsike

34 Men at 42s per Bing

8 do. at 42s do. & £8 for Cutt[in]g X

8 do. at 30s do. & £8 per fathom

8 do. driving at 250s

58

Burtree Pasture

28 Men at 42s per Bing

8 do. at 40s do.

16 do. at 28s do.

8 do. at 35s do.

8 do. at 25s do.

8 do. at 20s do. & £10 per fa[tho]m

8 do. driving at £6.10.. per fa[tho]m

84

Kilhope

16 Men at 42s per B[in]g

16

Sedlin

80 Men at 42s per B[in]g

8 do. at 42s do. & 6£ for Cutting X

6 do. 42s do. & 10£ for do.

4 do. 48s do. & 8£ sinking Sump

16 do. 30s do. & 7£ per fa[tho]m driving

8 do. 30s do. & 10£ per fa[thom] do.

122

Company Vein

6 Men at 42s per Bing & 3£ per fa[thom] for 5 fa[thoms]

4 do. 40s do. & 4£ for Cutting X

6 do. 30s do. & 9£ per fa[thom] driving

16

Middlehope Shield

32 Men at 42s per Bing

8 do. at 42s do & 25£ for Sump[ea]d Sink[in]g

8 do. at 42s do. & £4.. drawing Deads

12 do. £400. for sink[in]g a Waygate f[ro]m Surface to low Workings

60

Slitt

12 Men at 42s per Bing

4 do. at 42s do. & £4 Sinking

8 do. at 30s do. & £4 per fa[thom] for 10 fa[thoms]

24

Longsike

20 Men at 42s per Bing

16 do. at 35s & £10 per fa[thom] Sinking 4 fathoms

36



Allercleugh Head

4 Men at 42s per Bing

8 do. at 42s do. & 40s per fa[thom]

4 do. at 42s do. & £10 for driving 10 fa[thom]s

16

Levelgate

8 Men at 42s per Bing

8 do. at 30s do. & 195s per fa[tho]m

16

Blackdean

32 Men at 42s per Bing

6 do. at 42s do. & £18 for rising to middle level

6 do. at 42s do. & £8 for rising

6 do. at 42s do. & £6 for rising

6 do. at 32s do. & £8 per fathom

56

Barbary

22 Men at 42s per Bing

8 do. at 30s do. & £10 per fa[tho]m

30

Longtyhead

9 Men at 42s per Bing

4 do. at 42s do. & 24s per fa[tho]m for 10 fa[thom]s

6 do. at 40s do. & 78s per fa[thom]

19

Greenlaws

9 Men at 42s per Bing

8 do. at 42s do. & 85s per fa[tho]m

8 do. at 30s do. & 140s per fa[thom]

25

Wolfcleugh

16 Men at 42s per Bing

6 do. at 42s do. & £6 for taking up a <Sump>

2 do. at 42s do. & £2 for making a Waygate

6 do. at 30s do. & 100s per fa[tho]m

30

**30 Jun 1813 William Crawhall to Martin Morrison**

[Note: Quarterly mining report, concerning Allenheads lead mine, written by the Allenheads Mine Agent. Mine Reports p 114]

Allenheads June 30th 1813

Allenheads Leadmines are in general poor, excepting two lengths at East End of Whitworth Vein, & the leading forehead in Ditto which is now driving at 35s per Bing. Diana Vein at Craigshield is some better than she has been, but from the extreme hardness of the Flatts, we cannot get her wrought under 42s per Bing.

The Vein cut upon the four fathom Limestone at East End has a very promising appearance but in attempting to sink into the four fathom Limestone we loosed a great quantity of Water, which entirely prevented us seeing further, it required 24 Men to keep the feeder under, & after contending with the water a Week the feeder did not at all abate, & in consequence she was left off. the Sump is 17 ½ fathoms under the lowest Water Level at East End. There are 8 Men at 35s per Bing, 16 Men at 30s do. 8 Men at 37s do. 8 at 38s do. 16 Men at 40s do. & 85 at 42s per B[in]g besides about 30 Men driving & Sinking in Dead Work & about 20 Men on Labourage & Surface Work

William Crawhall

**30 Sep 1813 George Crawhall to Martin Morrison**

[Note: Quarterly mining report, concerning Allendale lead mines, written by the Mine Agent at Coalcleugh. Farney Shield, the site of the new trial mentioned in the report lies on the west side of West Allendale, about 4km north of Coalcleugh. Mining Reports pp 115-116]

September 30/1813

Coalcleugh

Coalcleugh Mine in general are producing Ore rather better than last quarter & upon an average at less prices per Bing, the Sun Vein & Flatts at the East End are producing tolerably well for the No. of Men that are employed in that part; the Low Level in the Gt Limestone was then in a hard twitch, is now opened, & has produced from 60 to 70 Bings in a few Weeks & from all appearances at present will continue raising Ore for a while; the other dead Levels etc that were named in the last Report as being a great distance behind the leading Workings are now driving & opening out with every exertion we can enforce. The West End Workings chiefly consisting of Flatts & Strings are poorer than last Quarter & are working fast out, so that if nothing new is discovered, that is unknown of, they will of course in a short time be exhausted.

Nothing has been done at the East End of Whitewood Vein, except a trial in a cross string that runs from Whitewood Vein to the Sun Vein, where we sunk a Sump to the Flatt & had a fair prospect for raising Ore, but could not be wrought or effectually tried for want of Air, therefore we are under the necessity of driving a Top Level and sinking another Sump to the random of the Flatt which will require about Six months to make a communication to enable us to make an effectual trial.

We have not begun to open out Low Coalcleugh Vein, I would like to have a partnership going forward with it, but having instructions to reduce the price per Bing & moderate the expenditure as much as could be done, prevented me from making a beginning until I had further advice.

The Barneycraig Level etc, is going forward as expeditiously as we can find means to forward her.

The workings in Wellhope are poor but raising more Ore than last quar[te]r, by repairing the Levels Waygates, etc has enabled us to employ double the number of Men in raising Ore, but at the highest Prices.

Hartleycleugh continues much the same as last quar[ter] & by referring to the Bargains you'll find about the same number of Men employed in raising Ore & Dead Work & very little variation in the Prices etc.

The trial at Farneyshield is going forward, sometime since I turned the Level in a direction to cut the Vein at the shortest distance, & are and are only a few fathoms from her now, by Xmass I expect to give a perfect account of this place, but I don't rest with great expectation from it.

Geo. Crawshall Sept[emb]er 1813

Highest price for raising Ore 40s. 1 P[ar]tn[er]s[hi]p at 21s. 2 at 26s. 1 at 30s. 1 at 33s. 5 at 35s. 1 at 36s. 5 at 28s

## **2 Oct 1813 William Crawhall to Martin Morrison**

[Note: Quarterly mining report, concerning the Allenheads lead mines, written by the Mine Agent at Allenheads. Mining Reports pp 116-117]

Allenheads

Allenheads Mines are much the same as last Quar[ter] with the exception of three lengths at East End in Wentworth Vein, which are richer in Ore than they have been the Vein being much wider & easier to Work, the foremost length is now wrought by 8 Men at 24s per Bing. from the depression of the Strata eastward the Great Limestone in the foremost length is about 6 fathoms under Water, consequently we are under the necessity of keeping 8 Men constantly employed drawing water, The West forehead of Diana Vein is more promising than she has been, but the back Workings are extremely hard & poor.

The Workings at the West end are entirely cut off by the Great Cross Dyke, & there has been no discovery made of any Vein on the West side of it yet. There is a Level driven west of the dyke about 40 fathoms, & from the forehead of it we have cut cross about 60 fathoms to the South, and are obliged to leave off the forehead for want of Air, and there is no means of Airing her effectually but by Boring or Sinking a Shaft at the Crosscut forehead.

The different prices given for raising Ore etc may be known on referring to the Abstract of Bargains

Willam Crawhall Octo 2/1813

1 P[ar]tns[hi]p at 28s. 1 at 32s. 1 at 38s. 23 at 40s

### **15 Nov 1813 Thomas Emerson to Martin Morrison**

Weardale

Breckonsike continues very poor at the forehead, and as the Vein bears more to the North than her usual point, I have set on a Cross Cut to the Sun to see if anything can be found to that side. We have cut Greenfield Vein by the level drove from Breckonsike, which has part Ore in it, but not so strong as expected, we cannot judge much how it will turn out untill a rise is made up into the four fathom Limestone, which is not much above the Level roof.

Burtry Pasture Vein is very strong & raising Ore tolerably well, and as there is several Strings off to the North side, which I expect will come to her in a few fathoms driving, therefore should suppose that she may get better.

Sedlin Vein is very strong both at the East & West leading foreheads, and likely to raise Ore very well.

The Companys New Vein is very poor.

Kilhope. I have begun the low Level according to the Plan pointed out in my last report, for without some new winning the Old Workings will soon be done.

Middlehope Shield continues poor. last quarter I expected to have got a Grove, at the foreend, down into the Flat Beds, as we had a good sample of Ore at the Top of the Great Limestone; but I was sorry to find that the vein straightened downwards, contrary to what it had done in the other back lengths.

Longsike & Slitt are both very poor.

Blackdean Vein is likely to raise Ore tolerably well at the best Price per Bing.

Barbary is only poor.

Wolfcleugh has rather some better appearance than she has had for sometime back. We have cut Foul Wood Vein, from Broad Dale Pasture Level, which has part Ore in it, but only straight, yet I do not doubt but it will widen, as the Old Man has seemingly raised Ore very well, in the top Beds, for some Hundred fathoms west from where she is now cut, and as the Coal Hazels & best part of the Great Limestone are laid Water free by this winning, I expect a fair prospect.

Levelgate. The Low Level in Longsike new Vein was poor at the Quarter End; but I am glad to say that it is much improved since that time, for they now have a strong Vein & tolerable good Ore in the roof of the Level; but it cannot be wrought to advantage now, for want of Air,

Allercloughhead is poor

Greenlaws was poor at the Quarter end; but is now raising Ore very well

Crawlah, Yewtree & Pikestone are only poor

Longtyhead is very poor

Tho. Emerson Nov.15/1813

### **31 Dec 1813 William Crawhall to Martin Morrison**

[Note: Quarterly mining report, concerning the Allenheads lead mines, written by the Mine Agent at Allenheads. There is no date given, but the quarterly report was usually written soon after the Christmas Quarter Day. A postscript notes that the predicted holing-through in Wentworth Vein that Crawhall noted in the text, had in fact happened soon after the main report was written. Mining reports p 119]

December Quarter 1813 Allenheads

Allenheads Mines are in general poor and from their present appearance I am apprehensive the Ore to be raised in the ensuing Quar[ter] may fall short of the usual quantity. Diana Vein in the West Forehead is tolerably productive 8 Men raising Ore at 40s per Bing & an[othe]r Partn[ers]hip sinking to the forehead in G[reat] Lime[stone] w[hi]ch will be holed in 3 or 4 Weeks time when I expect it will work at 30s per Bing, the back workings in this Vein are very poor, several of the Men have left their situations in it; of those rem[ainin]g 1 P[ar]tnership of 6 Men raising Ore at 40s per Bing & 3£ per fa[thom] for driving 4 fathoms. 2 P[ar]tnerships of 8 Men ea[ch] at 40s per B[in]g & 5£ per fa[thom]. One P[ar]tnership of 6 Men at 42s per Bing & 2 do. of 4 Men ea[ch] at 40s per B[in]g. the reason of the above prices per fa[thom] being given is to open a communication for Air.

The Workings in the Old Flatts at West End are very poor, the Ore that is raised is got mostly by opening out old Workings & ridding Deads, there are three P[ar]tnerships of 6 Men & two of 2 Men in raising Ore at 42s per Bing. Wentworth Vein at East End is much the same as last Quartr, the foremost length wrought by 8 Men at 24s per B[in]g & another p[ar]tnership of 8 Men sinking to the foreh[ea]d of do. which I expect will be holed in a fortnights time[,] the Vein will then work eastward at 28s or 30s per Bing. the back workings of do. are nearly wrought out, two p[ar]tnerships of 8 Men ea[ch] have left their workings, of those remaining, 8 Men at 28s & 8 Men at 38s per B[in]g, 5 P[ar]tnerships of 4 Men ea[ch] at 40s, two do. of 2 Men ea[ch] at 42s per B[in]g. The Workings in the Old Vein are very poor & employ 6



P[art]ner[shi]ps all at the high of 42s per Bing. The Swinhope Level is driving with all expedition by 8 Men who relieve each other, work day & night at 80s per fa[tho]m. a shaft is sinking before them by 6 Men at 50s per fa[thom] to air the Level which will be down by the time the Level is driven to hole into it. We still have near 40 Men out of employ & few places workable at the present prices unoccupied without commencing fresh trials etc.

Wm. Crawhall

The East forehead & Sump in Wentworth Vein was holed 17 Jan 1814 & a Bargain let, to drive the forehead Eastward 6 feet high and 4 ½ feet wide, 15 fathoms, or till Lady Day, at 25s per Bing for the Ore they raise in driving.

### **31 Dec 1813 George Crawhall to Martin Morrison**

[Note: Quarterly mining report, concerning Allendale lead mines, written by the Mine Agent based at Colacleugh. The report is undated, but from its position in the book of reports is clearly the Christmas 1813 report. From the text it seems that George Crawhall was appointed to his post at Coalcleugh in 1813. Mining Reports pp 120-121]

The Mines in the Coalcleugh district are at this time considerably poorer than they have been the last two quarters that I have been at Coalcleugh, & of course many of them require an advance in the Price per Bing or an equivalent adequate to a small advance to enable the Workmen to make a livelihood in many of the Old Workings. The Sun Vein & Flatts at the East End in the Great Limestone is the most productive of any part of this Mine, but not so good as last Quar[ter] , the Ore Bargains are let at the following prices: 6 Men raising Ore at 22s per Bing, 6 at 30s, 6 at 34s, 4 at 35s, 8 at 35s & 12 at 40s per Bing. 4 Men are raising Ore in the Top Sills at the east end at 38s per Bing & 12 at 40s per Bing, the West End Workings at Coalcl[eugh] in the Limestone are poorer than usual & many of them working fast out, they cannot be expected to be of long duration without we find something thats unknown, the Ore Bargains in this part are 4 Men raising Ore at 30s per Bi[ng], 4 at 35s per B[in]g 8 at 36s, 26 at 40s per B[in]g & 14 at 42s per B[in]g. a part of these Men at 40s per B[in]g have a few pounds over for making trials , drawing Deads etc.

The Old Workings in the rem[ainin]g parts of this Mine are very poor & the Bargains let at the highest prices thats admitted to be given[.] 36 Men are raising Ore at 40s & 42s per B[in]g & about 30£ are given to diff[eren]t p[ar]tner[shi]ps for ridding & drawing deads etc. The Dead Work that is necessary to be done at this place to carry the Mine on in a regular manner such as Levels, Sumps etc we are pushing forward as rapidly as possible, we are also making preparations for putting in the new Stand of Pumps at High Coalcleugh Engine that were got some years back, should they answer the intended purpose, they will enable us to get some lower workings that I expect will be productive.

I have just now employed 4 Men in opening out Low Coalcleugh Vein & if we meet with no unexpected obstruction I purpose employing a few more Men in a short time. The Barney Craig Level is driving with 8 Men & making very good progress, 8 Men are sinking to meet the Level forehead for a communication for Air.

We have not cut the Vein in the Trial at Furneyshield as I expected in the last report, but are in expectation of cutting her every week. The Workings in Wellhope continue very poor & require the best prices for raising Ore that can be given, 10 Men are raising Ore at 42s per Bing & 4 Men cutting X to the Vein in Little Limestone.

Hartley Cleugh is not so productive as she has been for sometime past, the last length we opened in the South end has been quite dead, should she continue so any length of time, I'm afraid we will have a <partnership> fallen out of employment shortly, being such a soft Vein, the back ground works fast out, the Bargains are 12 Men raising Ore at 26s per B[in]g & 32£ for driving 2 foreheads, 6 Men at 30s per B[in]g & 35s per fa[thom] for 10 fa[thoms], 10 Men at 38s per B[in]g & 16 Men at 40s per B[in]g. 24 Men are employ'd in driving Levels, sinking Shafts etc.

Geo. Crawhall

**4 Jan 1814 Thomas Emerson to Martin Morrison**

[Note: Quarterly mining report, concerning Weardale lead mines, written by the Mine Agent based at New House Mining reports pp 121-122]

Jany 4/1814

Weardale

Breckonsike continues poor, have let 10 Ore Bargains one at 40s & the remainder at 42s per Bing. The Low Level is driving at 160s per fa[thom] & 30s per Bing.

Greenfield I mentioned in my last report that we had cut this Vein by the Level drove from Breckonsike, it has drained the Old Workings, so that we have let One Ore Bargain to 10 Men at 38s per Bing.

Burtree Pasture Vein continues very strong & likely to raise Ore tolerably well, have let 13 Ore Bargains from 28s to 42s per Bing. Sedlin is rather poor; but from the great number of Workmen employed is likely to raise a good quantity of Ore for the ensuing Quarter. We have let 25 Ore Bargains from 40s to 42s per Bing. The East Low Level driving at 210s per fa[thom] & 30s per Bing. The West Low Level at 170s per fa[thom] & 30s per B[in]g & the middle Level at 110s per fa[thom] & 38s per Bing.

Kilhope is poor, have let 6 Ore Bargains at 42s per B[in]g. The Low Level is driving at 110s per fa[thom].

Company's new Vein is poor, we only let 2 Ore Bargains at 42s per B[in]g. The Waggon Level is driving at 170s per fathom & 40s per B[in]g. Middlehopeshield continues poor, we have let 8 Ore Bargains at 42s per B[in]g. The High Level is driving at 90s per fa[thom] & 30s per B[in]g. Slitt very poor, have let 8 Ore Bargains at 42s per B[in]g. Longsike poor, have let 6 Ore Bargains at 42s per B[in]g & the Firestone Level driving in the new Vein at 60s per fa[thom] & 40s per B[in]g.

Greenlaws only poor, have let 3 Ore Bargains at 42s per B[in]g. the Waggon Level is driving at 150s per fa[thom] & 30s per B[in]g

Levelgate the Low Level is now driving at 170s per fa[thom] & 30s per B[in]g in Longsike new Vein (as observed in my last Report) which is hard, but very strong & promising of now being only about 50 fathoms from where some tolerable workings, in the Great Limestone, were left off on account of being much watered, which this Level will not only drain, but will be the means of getting the work out at 2/3 less expence than formerly. I therefore hope to be able to give a good account of this place in a little time. Have let 6 Ore Bargains in the back workings One at 40s & the others at 42s per B[in]g.

Blackdean generally poor, but from so many Men being employed is likely to raise a good quantity of Ore this Quart[er]. We have let 14 Ore Bargains at 42s per Bing. The Low Level is driving at 160s per fa[thom] & 32s per B[in]g. Middle Level at 80s per fa[thom] & 35s per B[in]g. The High Level at 130s per fa[thom] & 38s per B[in]g.

Longtyhead. very poor, let 3 Ore Bargains at 42s per B[in]g & the East Level driving at 78s per fa[thom] & 30s per B[in]g.

Allercleughhead poor, let 4 Ore Bargains at 42s per B[in]g

Barbary is poor, let 6 Ore Barg[ai]ns at 42s per B[in]g & the Low Level driving at 200s per fa[thom] & 30s per B[in]g. Wolfcleugh only poor let 6 Ore Bargains one at 40s & the others at 42s per Bing. The Waggon Level driving at 78s per fathom.

Tho. Emerson

**31 Mar 1814 George Crawhall to Martin Morrison**

[Note: Quarterly mining report, concerning Allendale Lead Mines, written by the Mine Agent based at Coalcleugh]

March 31st 1814

Coalcleugh

The Mines at Coalcleugh in general are much better than they were the last Bargains, and have produced a considerable greater quantity of Ore the last quarter than I expected from their appearance at Christmas and from the present state in all probability will continue raising an equal quantity of Ore in the ensuing quarter. We have got one communication from the top Level into the eastend workings completed which affords us great relief in a part of the workings for Air, there will require two more similar holings from the top Level to the Low Level before we can effectually Air the leading workings at the eastend so as to be wrought to an advantage[;] we are going forward with the second communication with all expedition. The other deadwork we have in hand is likewise going forward as rapidly as we can enforce.

The Sun Vein at the east end which is the principal support of the Mine is raising ore at present very well particularly the last two lengths that we have lately open'd; the number of Men employed to raise Ore in this Vein are 6 Men at 20s per Bing, 16 Men at 30s per Bing 6 Men at 36s per Bing, 8 Men at 38s per Bing & 14 Men at 40s per B[in]g. The westend workings are much the same as last quarter & are producing full as much Ore at present as they have done this Year, there are 4 Men raising Ore at 30s per Bing, 4 Men at 35s per Bing, 8 Men at 36s per Bing, 18 Men at 40s per B[in]g and 10 Men at 42s per Bing some of those at 40s per B[in]g have a few pounds over for siding and drawing Deads.

The other old workings in the top sills etc continue very poor, and much exhausted, there are 10 Men raising Ore at 40s per Bing, & 30 Men at 42s per Bing.

Low Coalcleugh Vein, we are now opening out the Engine Shaft in this Vein, but only make bad progress the Shaft & Engine Wheelcase being entirely crushed together & fallen in for a considerable number of fathoms in length & breadth, which renders it a very difficult and dangerous undertaking, but I expect in a short time we will get the most dangerous part secured, & then we shall make better progress.

Wellhope continues very poor & no variation of the Bargains since last quarter, 10 Men are raising ore at 42s per Bing.

Hartley Cleugh is extremely poor, & at present not producing more than  $\frac{1}{4}$  of the quantity of Ore she raised last Year, the No[rth] & So[uth] Foreheads in the Vein which was the most productive workings at this place are producing no Ore at present & the back ground being so much wrought out that it produces considerably less than usual, 6 Men are raising Ore at 30s per Bing and 22 Men raising Ore at 40s per Bing.

Furney Shield. We have cut the Vein in this trial which makes a very bad appearance in the Great Limestone at the random she is cut, we are now sinking to prove the low part of the Sill and if there be no better prospect shortly than at present we'll be under the necessity of abandoning her

I remain etc Geo. Crawhall

6 Apr 1814 Thomas Emerson to Martin Morrison

[Note: Quarterly mining report, concerning Weardale Lead Mines, written by the Mine Agent based at New House in Weardale. Mining Reports pp 124-125]

Newhouse April 6/1814

Weardale

Breckonsike continues poor, have let 8 Ore Bargains at 42s per Bing & the Low Level is driving at 170s per fa[thom] & 30s per Bing.

Greenfield. We have not got the rise up to the great Limestone, so that only One Ore Bargain is let at 42 per Bing.

Burtree Pasture Vein is likely to raise ore very well, have let 17 Ore Bargains from 28s to 42s per Bing.

Kilhope is likely to raise rather more Ore than it has done lately, we have cut a vein by driving the Level, which we have let 2 Ore Bargains of 6 Men Each in, the whol[e] Ore Bargains are 9 at 42s per Bing the Low Level is driving at 110s per Fathom.

Sedlin Vein continues very strong & likely to raise Ore much as usual, have let 19 Ore Bargains at 42s per Bing the East Low Level is driving at 200s per fa[thom] & 30s per Bing and the West Low Level at 170s per fa[thom] & 30s per Bing.

Company's Vein is very poor only one Ore Bargain let at 42s per Bing & the Waggon Level driving at 189s per fa[thom] & 40s per Bing.

Middlehope Shield is very poor, have let 4 Ore Bargains at 42s per Bing & one to sink into the Great Limestone at the foreend where the Vein seems to be stronger than it has been for many Fathoms back, which I hope will turn out to get some Ore[;] it is let at 200s per fa[thom] & 30s per Bing.

Slitt is poor, let 6 Ore Bargains at 42s per Bing

Levelgate is raising more Ore than it has done[,] have let 11 Ore Bargains one at 40s & the rest at 42s per Bing

Longsike is poor let 4 Ore Bargains at 42s per Bing

Allercleughhead. Only One Ore Bargain let at 42s per B[ing]

Blackdean is raising Ore tolerably well, have let 15 Ore Bargains at 42s per Bing, the Low Level is driving at 170s per Fath[om] & 32s per Bing & the Middle Level at 80s per fa[thom] & 35s per Bing



Barbary is only poor let t6 Ore Bargains at 42s per Bing & the Low Level driving at 200s per Fathom & 30s per Bing.

Wolfeleugh rather poor let 5 Ore Bargains at 42s per Bing & the Waggon Level driving 100s per Fathom.

Earncleugh. The new Vein just now cut, seems very promising, we are going to sink down to the Great Limestone & rise up to the Little Limestone, both of which places I have great expectation of, but shall give you a particular account of this place after the necessary trials are made.

Thos. Emerson

### **12 Apr 1814 William Crawhall to Martin Morrison**

[Note: Quarterly mining report, concerning the Allenheads lead mines, writing by the Mine Agent at Allenheads. Mining Report p 123]

April 12/1814

Ladyday Bargains Allenheads

Allenheads Mines have raised considerably more Ore than I expected the last quarter, from the appearance they had when the Xmass Bargains were let, altho we have had no particular rich Mine, the workings in general have been tolerably productive & from their present appearance I flatter myself the Ore to be raised in the ensuing quarter will be equal to what has been raised last quarter.

Diana Vein in the West forehead is driving by 6 Men at 30s per Bing & the back workings east from the forehead are more productive of Ore than they hitherto have been. there are 24 Men raising Ore at 42s per Bing & 18 Men at 40s per B[in]g, the East forehead is driving by 6 Men at the random of the high Flatt at £10 per fa[thom] which has carried no Ore for the last 10 fa[thoms] & is now considerably worse to drive being in a twitch. The Workings at the west End are much the same as they were last Quar[te]r. 8 Men raising Ore at 42s per B[in]g & which is mostly got by ridding deads in the Old Workings. Wentworth vein in the east forehead is poorer than it has been. it is now driven by 8 Men at 28s per Bing & the next length west of the forehead wrought by 9 Men at 32s per Bing & the second length from the foreh[ea]d wrought by 8 Men at 28s the back workings in ditto are raising more Ore than they did last Quarter, having 6 Men at 38s, 20 Men at 40s & 6 Men at 42s per Bing. The Workings in the Old Vein are very poor, & employ 7 P[ar]tnerships at the high Price of 42s per Bing & one p[ar]tners[hi]p of 4 Men at 40s per Bing.

Swinhopehead Level is driving with all speed by 8 Men at 84s per fathom. We are under the necessity of Walling & Arching the Level as it is driven, which rather

impedes our progress. The foremost Shaft into the Level is now complete & the p[ar]tner[shi]p that Sunk the Shaft, are now cutting cross to the Vein under the Little Limestone. At High Swinhopehead there are 6 Men raising Ore at 42s per Bing & a p[ar]tners[hi]p of 8 Men driving a length westward in the Plate at 70s per fathom.

I am etc Wm Crawhall

**1 Jul 1814     George Crawhall to Martin Morrison**

[Note: Quarterly mining report, concerning Allendale Lead Mines, written by the Mine Agent based at Coalcleugh. It is undated but from its position in the book of mining reports is clearly one of the July 1814 reports, written after Midsummer Quarter Day. The new trial at Kiersleywell Row is at the north end of Mohope in East Allendale. Fairbairn (2000 p 35) mentions this mine but his OS grid reference has an incorrect digit (it should be NY77415154). The other new trial, at Bates Hill, is a mile east of this, near the East Allen. Mining Reports pp 128-130]

Coalcleugh Mines

The Mines at Coalcleugh etc are poorer at this time than they were last Bargains, & many of the best workings last quarter require an advance of the price per Bing the ensuing quarter. We are pushing the Dead Work as rapidly as possible to get proper communications into the Eastend Workings but have not yet effected any more than what was done last quarter end. The number of Men employed raising Ore in the East end flats & Sun Vein are 6 Men at 20s per B[in]g. 6 at 30s. 4 at 36s. 12 at 38s. 26 at 40s. & 6 Men at 42s per Bing. the West End workings are poorer than last quarter, & a part of the Men that were raising Ore are under the necessity of leaving their situations on account of being so much wrought out and poorer than usual, 4 Men are raising Ore at 30s per Bing. 4 at 35s. 8 at 36s. 18 at 40s. & 8 Men at 42s per Bing.

There are 6 Men raising Ore at 40s per B[in]g & 24 Men at 42s in different parts of the old Workings, those places in general are very poor. We are now making better progress in opening out Low Coalcleugh Vein than last quarter, yet a great distance from having her on a regular footing to make an attempt to search for Ore. Barney Craig Level, we have holed this Level to the Borehole that was putting down for Air, which I expect will afford a sufficient supply to drive her up to cut Low Coalcleugh Vein; we have also cut a weak Vein in this Level but have not got convenience to make any trial for Ore. Furneyshield, we have made an effectual trial in the Limestone, where we cut the Vein, & found her to carry no Lead that is worth prosecuting so of course she is abandoned.

Wellhope continues very poor & only 6 Men raising Ore at 42s per B[in]g & have employed a P[ar]tners[hi]p of Men to drive the East Level forehead which has stood many years, & make a trial into the Limestone which will take 4 or 5 Months to open out a length.

Hartley Cleugh is something better than last quarter but still very poor, the North forehead is now producing some Ore, which had been quite dead for sometime past, the other workings are much the same as last Bargains, there are 10 Men raising Ore at 40s & 6 Men at 30s per Bing. 20 Men are employed in driving Levels & making other Trials.

I have begun two new trials since Ladyday Bargains one at Kiersley Row where we have set out a new Level, the other at Bateshill where we are opening an old Level; these are both places that formerly have been productive in Ore, but have not been prosecuted for 40 or 50 Years; in 3 or 4 Months I expect to be into the Vein at each Place, & be able to form an idea whether they are worth persevering in or not.

I remain Sir Y[ou]rs

Geo: Crawhall

**6 Jul 1814    Thomas Emerson to Martin Morrison**

[Note: Quarterly mining report, concerning Weardale Lead Mines written by the Mine Agent based at New House in Weardale. Mining Reports pp 130-131]

Weardale Mines

Breckonsike is very poor, have only let 5 Ore Bargains at 42s per B[in]g & the Low Level is driving at £8 per fa[thom] & 30s per Bing 26 Men employed. Greenfield is likely to raise <part> Ore this quarter at the best price per Bing, have let Bargains to 20 Men at 42s per Bing. Burtree Pasture continues very strong & likely to raise Ore much as usual, have let 18 Ore Bargains at from 28s to 42s per B[in]g, 92 Men employed. Sedlin keeps much the same as last quarter raising a good quantity of Ore at the high price, have let 17 Ore Bargains at 42s per Bing, 104 Men employed.

Kilhope is likely to raise rather more Ore than last quarter, have let 9 Ore Bargains at 42s per B[in]g, 38 Men employed. Earncleugh, this new place continues promising, have let 2 Ore Bargains of 8 Men each, in the little Limestone at 40s per B[in]g & we have sunk a Sump down to the top of the great Limestone & find the Vein there very strong so that I think there is not much fear but we will get some tolerable workings as soon as sufficient trial can be made in the said Great Limestone. Companys Vein has been very poor, but we have just now cut a strong Cross Vein which is likely to raise <part> Ore, 8 Men are now working in it at 40s per Bing.

Middlehope Shield continues very poor have only let 4 Ore Bargains at 42s per Bing, 16 Men employed.

Levelgate, we have had the Level very hard of late which has frustrated us getting a hole to the old Workings in Longsike Vein, as soon as expected; but I hope to drain the

Water from them in the course of this quarter, have let 9 Ore Bargains at 42s per Bing, 59 Men employed.

Slitt is very poor let 7 Ore Bargains at 42s per Bing, 26 Men employed.

Longsike is very poor, only let 3 Ore Bargains at 42s per Bing, 12 Men employed

Allercloughhead is much wrought out have only let 1 Ore Bargain at 42s per Bing, 2 Men employed

Greenlaws is very poor, have only let 2 Ore Bargains at 42s per B[in]g, 18 Men employed.

Blackdean is raising Ore tolerably well at the best price, have let 16 Ore bargains at 42s per B[in]g. Longtyhead only poor have let 4 Ore Bargains at 42s per B[in]g, 98 Men employed.

Barbary is poor, have let 3 Ore Bargains at 42s per Bing, 24 Men employed

Wolfeleugh, we have been much stopped here this summer for want of water to drive the Engine so that we have only let 2 Ore Bargains at 42s per Bing, 8 Men employed.

Broaddale Pasture is likely to raise more Ore than it has done lately, have let 4 Ore Bargains at 42s per Bing, 20 Men employed.

Tho. Emerson  
Newhouse July 6th 1814

**9 Jul 1814 William Crawhall to Martin Morrison**

[Note: Quarterly mining report, concerning the Allenheads Lead Mine, written by the Mine Agent at Allenheads. Mining reports pp 127-128]

Midsummer Bargains 1814 Allenheads Mines

The Mines at this place have not been so productive after the last quarter as I expected they would have been, from the appearance they had when I let the Ladyday Bargains. The principal failure has been the leading Forehead in Wentworth Vein, for five fathoms driving the Vein produced no Ore of any consequence but I am glad to inform you the Vein is now much richer of Ore & likely to produce a considerable quantity the ensuing quarter from the flats to the North of the Vein.

From the present appearance of the Mines in general at this place I expect there will be as much Ore raised in the ensuing quarter, as has been in any of the previous quarters. Wentworth Vein in the East forehead is richer of Ore than it hitherto has been, & is driving at 32s per Bing by 8 Men, & the length west is wrought by 8 Men at 35s per Bing the 2nd length by 8 Men at 32s per B[in]g & the third length from the forehead raising Ore by 8 Men at 28s per Bing, the back Workings in this Vein are considerably poorer than they were last quarter many being wrought out; there are now 6 Men raising Ore at 38s per B[in]g: 18 Men at 40s. 4 Men at 30s & 8 Men at 42s per Bing.

The Workings in the Old Vein are much the same as last quarter & employ 8 p[ar]tner[sh]ips, all at the high price of 42s per Bing & 1 p[ar]tner[sh]ip at 40s per Bing. The Workings in the Old Flatts at West End are very poor, only employing 1 p[ar]tner[sh]ip of 6 Men & the Ore they raise is principally got by opening out old workings and ridding deads. The West End of Diana Vein is very promising, the length driving out of the foremost Sump is wrought by 8 Men at 34s per Bing & after being holed to the next length, & a free communication for Air, I expect will work at a lower price, the length of d[itt]o is wrought by 6 Men at 30s per Bing, the back workings in Diana Vein are poor & wrought by one p[ar]tner[sh]ip of 8 Men at 40s per B[in]g & five p[ar]tner[sh]ips of 6 Men each at 42s per Bing.

Swinhopehead Level is driving will all speed, we have got 21 fathoms driven last quarter by 8 Men, & had it all to wall, and we now expect the low Level will stand without walling; if so there will be more ground driven this quarter than last. We have tried the Vein in the Little Limestone at the Level head which carries no Ore, the p[ar]tner[sh]ip that tried the Vein is now sinking another Shaft before the Level forehead which will be down by the time the Level is driven to hole into it. High Swinhope head is now very productive of Ore having one P[ar]tner[sh]ip of 8 Men raising Ore at 35s per Bing, & a P[ar]tner[sh]ip of 6 Men driving a drift at 42s per Bing, & have no doubt but in a little time we will be able to employ as many more men in raising Ore.

I remain Sir etc.

Wm. Crawhall

Allenheads July 9th. 1814

### **30 Sep 1814 George Crawhall to Martin Morrison**

[Note: Quarterly mining report, concerning Allendale Lead Mines, written by the Mine Agent based at Coalcleugh. Mining Reports pp 131-132]

Coalcleugh Septem 30th 1814

The Mines at Coalcleugh have produced as much Ore the last quarter as they have done any of the preceding quarters in the course of last Year, & the present Bargains



are let on an average, at as low prices for raising Ore as they have been during the last Year: the deadwork etc is going forward with the usual rapidity to enable us to get a sufficient supply of Air into the leading workings at the east End. The Eastward Sun Vein & Flatts continue raising tolerably well, the present Bargains are 6 Men raising Ore at 26s per B[in]g, Four Men at 28s, 4 Men at 30s per B[in]g, 12 Men at 35s, 16 at 38s, 6 at 40s, & 16 Men at 42s per Bing.

The West end Workings continue very poor except one place in a Flatt which has been very good for the last Month, but not so good at present as it has been[.] 4 Men have taken a Bargain to raise Ore in it at 20s per B[in]g, the other Bargains at the West End & other old Workings at different places are 4 Men raising Ore at 35s per B[in]g, 8 at 40s, & seventy at 42s per Bing.

The Barney Craig Levels are going forward as usual, but have not cut any Veins. Wellhope continues very poor, 10 Men are raising Ore at 42s per B[in]g. the eastend of Wellhope which we begun last quarter is now driven 20 fa[thoms] in the Plate upon the Great Limestone, the Vein is much stronger & has a better appearance for raising Ore now than when he begun, we are now sinking into the Limestone which is likely to produce Ore from the present appearance.

Hartley Cleugh is very poor at present the Vein at the North end is become very weak & offers very badly for raising Ore this Quarter, the South end continues sufficiently strong but produces so little Ore, that the Ground we have lately opened cannot be let to raise Ore by the Bing. The number of Men raising Ore are 10 at 30s, 6 at 35s & 18 at 40s per Bing.

The New Tryals begun at Kiersleywell Row & Bateshill are going forward, but have not got them opened to the Vein in the parts which we expect to produce Ore.

I am etc

Geo: Crawhall

#### **6 Oct 1814 Thomas Emerson to Martin Morrison**

[Note: Quarterly mining report, concerning Weardale Lead Mines, written by the Mine Agent based at New House in Weardale. Mining reports pp 134-136.]

Weardale Lead Mines. Octo 6/1814

Breckonsike Vein continues very poor, only 32 Men employed & driving the Low Level at £7.10.. per fa[thom] & 30s per B[in]g, & the remainder raising Ore at 42s per Bing. Greenfield is not so hopeful as last quar[te]r, have let ore Bargains to 14 Men at 42s per B[in]g. Burtree Pasture Vein is not quite so rich at the forehead, as it was a few lengths further back; but continues very strong & likely to raise a great quantity of Ore, have let Bargains to 120 Men, 8 driving the Low Level at £10 per fa[thom] & 30s per Bing & the remainder raising Ore from 32s to 42s per Bing. Kilhope is raising Ore much the same as last Quarter, have employed 34 Men, 8 driving the Low Level at £6 per

fa[thom] & the rest to raise Ore at 42s per B[in]g. Sedlin Vein continues very strong: but only poor, yet from the great number of Men employed is likely to raise a good quantity of Ore, have let Bargains to 118 Men, 8 driving the Low Level east at £10 per fa[thom] & 30s per B[in]g, 8 driving the Low Level west at £9.9 per fa[thom] & 30s per B[in]g & the remainder raising Ore & 42s per B[in]g.

Earncleugh Vein is very strong, but poor, have employed 48 Men, 8 Cutting cross from the Level to the Vein at the East end at £5 per fa[thom], 8 driving the Waggon Level Westward at £5 per fa[thom], & the remainder to raise Ore at 42s per B[in]g.

Middlehopeshield is very poor, have only let Bargains to 16 Men, 8 driving the top Level at £5.5 per fa[thom] & the others to raise Ore at 42s per B[in]g.

Companies Vein the cross vein that we discovered by driving the other Vein, is likely to raise part Ore, but being so much out of Air, which cannot be remedied for some time, that we could only employ 8 Men to raise Ore at 42s per Bing.

Slitt is very poor, only 10 Men employed to raise Ore at 42s B[in]g

Longsike Vein is much wrought out in the Top Sills, & the Ore to be got in the low Beds, in this Vein, will in future be brought out at Levelgate so that it will go under the denomination of that place, have only let Ore Bargains to 12 Men at 42s per B[in]g.

Levelgate is likely to raise considerably more Ore than it has done of late, though we have not got a through Waygate as yet, to the Old Workings in Longsike new Vein have let Bargains to 86 Men, 8 driving the Low Level at £10 per fa[thom] & 30s per Bing, & the remainder to raise Ore at 40s to 42s a B[in]g.

Barbary is only poor, have let Bargains to 22 Men 8 driving the Low Level at 10£ per fa[thom] & 30s per B[in]g & the rest to raise Ore at 42s per B[in]g. Greenlaws is very poor have let Bargains to 20 Men. 4 driving the Waggon Level at £8 per fa[thom] & 30s a B[in]g. 8 opening a Waygate for Air at £6 per fa[thom] & the rest to raise Ore at 42s per Bing.

Blackdean raised Ore very well last Quart[er] & is likely to do the same this, yet it requires the best prices per Bing. have let Bargains to 86 Men. 6 driving the low Level at £8 per fa[thom] & 32s per B[in]g. 8 driving the high Level at £6 per fa[thom] & 38s per B[in]g & the remainder raising Ore at 42s per B[in]g.

Longtyhead is very poor have let Bargains to 18 Men. 6 driving the West Level at 60s per fa[thom] & 30s per B[in]g. 6 driving the East Level at 70s per fa[thom] & 30s per B[in]g & the rest to raise Ore at 42s per Bing. Wolfcleugh is poor, have let Bargains to

24 Men, 8 Cutting Cross to the Vein at 90s per fa[thom], 6 driving the low Level from the Engine foot at £8 per fa[thom] & 42s per Bing & the rest to raise Ore at 42s per Bing.

Broaddale Pasture is raising Ore tolerably well, but being a straight Vein requires the best Price per B[ing], have let Ore Bargains to 22 Men at 42s per B[ing].

Crawlah Mines are poor, have let 8 Men a Bargain to raise Ore at 42s per Bing & £4 per fa[thom] for driving the Limestone forehead 10 fa[thoms], 4 Men to raise <Lead> at £10.10 per Fa[thom]

12 Men driving the Tailrace Level to the intended new Engine at £160 per Contract. I have viewed Thornly Brae & Harehope Gill Mines: but as the proprietors were not present at the time, I have not settled with them yet, the latter place has raised about 500 Bings of Ore for last Year, & seems as hopeful now, as I ever saw it.

Thos Emerson

**8 Oct 1814 William Crawhall to Martin Morrison**

[Note: Quarterly mining report, concerning Allenheads lead mine, written by the Mine Agent based at Allenheads. Mining Reports p133.]

Allenheads. Mich[aelma]s Bargains Octo 8/1814

The Mines at Allenheads have raised more Ore the last quarter than I expected they would have done from the state they were in at Mids[ummer] Bargains, but am sorry to inform you, from the present appearance of many of the workings they are not likely to be as productive for the succeeding quar[ter] & particularly Diana Vein which is in general poor the leading forehead wrought by 8 Men last quar[ter] at 34s is now advanced to 42s per B[ing] & am apprehensive the Workmen will not be able to make Wages at that price[,] two lengths east of the leading foreh[ea]d in ditto is wrought by 14 Men at 40s per B[ing], the back Workings in do. are very poor & from the extreme hardness of the Flatts 2 Ptner[shi]ps of 6 Men each have left their situations, the remainder all at the high price of 42s per B[ing] employing 24 Men.

The Workings in the Old Vein & at Flatts Shaft are much the same as last Quar[ter] employing 3 p[ar]tners[hi]ps at 40s per B[ing] & 2 p[ar]tners[hi]ps at 42s, the Ore they raise in principally got by opening out Old Workings and Ridding Deads.

Wentworth Vein is more promising than it has been for these two previous Quar[ter]s & am glad to inform you that many of the workings in it are now wrought as a reduced price from what they were last quart[er], the East forehead is now driving at 21s per B[ing] by 8 Men, & the length west of it is wrought by 8 Men at 30s per B[ing] & the next two lengths west by 16 Men at 32s per Bing, the back Workings in this Vein

are likely to be more productive of Ore than last Quar[ter], bearing a reduction of the price per B[in]g. two p[ar]tners[hi]ps at 40s & 1 p[artnershi]p at 30s, 4 Men at 32s, 2 at 37s, & 4 p[ar]tners[hi]ps at 42s per Bing.

Swinhope Level is driving with all speed by 8 Men, we have got 30 fa[thoms] last q[uar]te[r] & expect to accomplish as much before Xmass.

Willam's Vein at Swinhopehead continues rich of Ore we have only got two lengths opened in the Great Limestone & the West forehead is driving by 8 Men at 20s per B[in]g & the length east wrought by 6 Men at 35s per B[in]g & expect by Xmass to have two more p[ar]tners[hi]ps working for Ore.

I am etc Wm. Crawhall

### **31 Dec 1814 George Crawhall to Martin Morrison**

[Note: Quarterly mining report, concerning Allendale Lead Mines, written by the Mine Agent based at Coalcleugh. Mining Reports pp137-138]

Coalcleugh Xmass Barg[ain]s 1814

The Mines at Coalcleugh are considerably poorer than ever they have been during this Year; & many of the Old Workings that have been raising Ore is completely wrought out, which has caused a number of Men to be out of employment at present, many others are so poor that I am afraid the Workmen will not earn their Subsistence Money. We have got the second communication completed from the Top Level to the Galloway Level at the East End which is of great benefit to the present Workings for Air, & will enable us to get forward with some fresh trials, we have begun to Sink a Sump from the Galloway Level to the East forehead in the Great Limestone which has not been put forward for several Months past for want of Air, after it is finished we shall be able to set the Low Level forward in the Great Limestone which will open some fresh ground that I expect will be productive: we have got the new Stand of Pumps that's been lying for several Years put to the Engine which I expect will answer a good purpose, but for want of a sufficient supply of water to work the Engine, from the intense frost, we cannot yet ascertain whether she will be capable of drawing the whole of the Water or not. The Ore Workings at the East End are not so productive as they have been the Flatts being much exhausted, & the Sun String considerably poorer in both the East & West foreheads; the different Bargains let to raise Ore consist of four at 28s per B[in]g, 6 at 30s, 12 at 35s, 20 at 38s, 20 at 40s & 12 at 42s per Bing. The Workings at the West End & the other parts of Coalcleugh are very poor & many of them wrought out, we have not lately met with any fresh Strings or Flatts that have been productive & the Old ones being so much exhausted has caused a No. of Men to be <out> of employment the different Bargains let to raise Ore consist of 4 Men at 30s, 10 at 40s, 54 at 42s & 10 at 200s per Fa[thom] of Lead.

The Barney Craig Levels are getting forward very well, but have not cut any Veins.

Wellhope is still very poor & only 8 Men raising Ore at 42s per B[in]g, we have not got the Sump that was begun last quarter at the West End down to the Great Limestone so that I cannot give any more information than the last report.

Hartley Cleugh. The North end of this Vein has been so weak & poor for a great distance that we have abandoned it, the south end has a considerable better appearance at present than she had had for sixty fathoms back. I have let a Bargain to 6 Men in the last open'd length at 25s per B[in]g, the other Bargains are 2 Men raising Ore at 35s & 32 at 40s per Bing.

The Trial at Kiersley Well Row is going forward, the Level has crossed the Vein where it has formerly been wrought but have not got to the places where we expect to meet with some whole Ground. We have not got much done at Bateshill since last Quarter, the Level forehead being at a stand for want of Air, untill we opened an Old Shaft which we now have in hand.

I remain etc Go. Crawhall

Coalcleugh Dec 31/1814

**6 Jan 1815 Thomas Emerson to Martin Morrison**

[Note: Quarterly mining report, concerning Weardale Lead Mines, written by the Mine Agent based at New House in Weardale. Mining reports pp 139-141.]

Breckonsike has been long dead at the fore End, but we thought it adviseable to continue the Low Level a little further, with an expectation of the Vein mending. Have let Bargains to 42 Men, 8 Men driving the Low Level at £7.10. per fa[thom] & 30s per B[in]g & the remainder to raise Ore at 42s per B[in]g. Greenfield Vein is poor, have let Bargains to 10 Men, 6 driving the Low Level at £6 per fa[thom] & 42s per Bing & the other 4 raising Ore at 42s per Bing.

Burtree Pasture Vein continues very strong & likely to raise Ore very well, have let Bargains to 112 Men, 8 driving the Low Level at £6.10 per fa[thom], 8 driving the Waggon Level at £6.10s per fa[thom] & the remainder to raise Ore from 32s to 42s per Bing. Kilhope is only poor, have let Bargains to 46 Men, 8 driving the Low Level at £6 per Fa[thom] & the remainder to raise Ore at 42s per Bing.

Sedlin Vein is very strong, but rather poor, yet from the number of Men employed is likely to raise Ore about as usual, have let Bargains to 130 Men, 8 driving the East Low



Level at £10 per fa[thom] & 30s per B[in]g, 8 driving the West Low Level at £9.9. per fa[thom] & 30s per B[in]g & the remainder to raise Ore at 42s per B[in]g.

Companies Mine is raising Ore tolerably well in the X Vein but from its situation for Air (as named in my last) it requires the best price, have let Bargains to 14 Men at 42s per B[in]g. Middlehope Shield is very poor, have let Bargains to 20 Men, 8 driving at the top of Gt Limestone at £5.5.. & 42s per Bing & the others to raise Ore at 42s per B[in]g.

Earncleugh, The Vein continues very strong, but rather poor. We have 48 Men employed, 8 driving at the top of the Great Limestone Westward at £4 per fa[thom] & 42s per Bing, 8 Rising to the Little Limestone at £5 per fa[thom] & the remainder to raise Ore at 42s per Bing.

Green Laws continues poor, we have let Bargains to 21 Men, 8 sinking a Waygate for Air, as <named> in my last report & 4 driving the Waggon Level at £7.7.. per fa[thom] & 30s per Bing, the remainder to raise Ore at 42s per Bing.

Slitt is much wrought out, have let Bargains to 24 Men to raise Ore at 42s per B[in]g.

Longsike very poor, have let Bargains to 23 Men to raise Ore at 42s per Bing.

Allercleugh Head. There are only 10 Men employed at this place now, 6 sinking a Sump to the Low Level at £30 per Contract & 4 Men to raise Ore at 42s per Bing.

Levelgate. We have got a Level drove up, under the Great Limestone to where the Water was standing in Longsike Vein, which has drained the Old Workings & therefore expect to raise more Ore this quarter than has been done of late, have let Bargains to <80/30> Men, 8 driving the Waggon Level at £8 per fa[thom] & 30s per B[in]g & the remainder to raise Ore at from 40s to 42s per Bing.

Blackdean has raised more Ore of late than was expected & is likely to get about the same this Quarter but requires the best Price, have let Bargains to 94 Men 6 driving the Low Level at £8.10.. per fa[thom] & 32s per B[in]g, 8 Men driving the High Level at £6.10.. per fa[thom] & 38s per B[in]g & the remainder at 42s per B[in]g.

Barbary is only a poor Vein, have let Bargains to 26 Men, 8 driving the Low Level at £10 per fa[thom] & 30s per B[in]g & the remainder to raise Ore at 42s per Bing.

Longtyhead is poor, have let Bargains to 14 Men, 6 to have £3 per fa[thom] for rising 4 fathoms & 42s per B[in]g & the rest to raise Ore at 42s per Bing.

Wolfeleugh very poor, have let Bargains to 18 Men, 6 driving from the Engine foot Eastward at £7 per fa[thom] & 42s per Bing & the rest to raise Ore at 42s per Bing.

Broaddale Pasture is raising Ore some better than it has done at the best Price, have let Bargains to 20 Men, 8 driving Low Level at £4 per fathom, & the rest to raise Ore at 42s per Bing.

Crawlah. The 12 Men employed at the New Tryal, are going on tolerably well, they have got the Engine Shaft down to the top of the Great Limestone & the flank level, or tail race is nearly up to the said Shaft. The Old Workings are only poor, 12 Men raising Ore at 42s per Bing or £10 per Fa[tho]m for Lead.

I remain etc Thomas Emerson

Newhouse Jany. 6/1815

**27 Jan 1815 William Crawhall to Martin Morrison**

[Note: Quarterly mining report, concerning Allenheads Lead Mine, written by the Mine Agent based at Allenheads. Mining reports pp 136-137]

Allenheads Xmass Barg[ain]s Jany 27 1815

I am sorry to inform you the Mines at Allenheads are in general poorer this quar[te]r than they were the last altho' they have raised a good quantity of Ore since Mich[aelmas]s.

Diana Vein. the leading forehead in this vein <West> at present carries so little Ore that it cannot be driven at Bingle & has been in that state for the last three fathoms driving, & is not expected to improve in Ore for a few fathoms further[,] the forehead is now driving by 6 Men at 120s per fa[thom], this Vein is now wrought by 24 Men at 40s per B[in]g & 18 Men at 42s per B[in]g. the East forehead in ditto has been driven 29 fathoms without producing any Ore & latterly at the high price of 200s per fa[thom] which I have now left off & instead trying this Vein again about 100 fathoms further East on new Ground. the Workings in the Old Vein & at Flat Shaft are much the same as last Quarter wrought by 16 Men at 40s per Bing & 8 Men at 42s per Bing.

Wentworth Vein is not so rich in the leading forehead as last quart[er] but the back Workings in ditto are much the same, the former Length is now wrought by 8 Men at 29s per Bing, the foremost Sump is sinking by 8 Men at 37s per B[in]g, the back Workings in this Vein are wrought by 8 Men at 30s per B[in]g. 12 Men at 32s per B[in]g. 4 Men at 35s per B[in]g 2 Men at 37s 8 Men at 38s 16 Men at 40s & 10 Men at 42s per Bing. There are 48 Men driving Levels & working deadwork in different parts of the Mine.

Swinhope Level is driving with speed, we have now got a part of the great Limestone in the bottom of the Level which much impedes the progress of driving.

Williams Vein at Swinhope head continues rich of Ore, now employing 4 p[ar]tners[hi]ps of Men working for Ore, Viz 6 Men at 30s per Bing 8 Men at 28s 6 Men at 35s & 8 Men at 34s per B[in]g. I expect before Midsummer to have as many more Men working for Ore.

I remain etc Wm: Crawhall

Allenh[ead]s Jany 27/1815

31 Mar 1815 George Crawhall to Martin Morrison

Coalcleugh Leadmines March 31st. 1815

The Mines at Coalcleugh continue very poor and has produced less Ore the last quarter than usual, the old Workings are getting more exhausted every Bargain letting & having no fresh ground opened that is productive has rendered the number of Workmen unable to take their Bargains in their old situations. - the Sump named in the last Report begun to sink to the Low Level forehead at the <East> is not completed, and until that be finished I am not able to make any further trial in the Limestone. - I have also begun a Level upon the Great Limestone in the Sun Vein at the East end to drive in a North direction in some cross <strings> that has been very productive in the Flatts on the South Side of the Sun Vein, to be contained in that direction untill it cuts Whitewood Vein, which will make an effectual trial in her 160fm further than where she has been left of in the Limestone, & from the survey we have made, this Level will be about 70fm to drive before the Vein is cut. - The Ore workings at the East end are poorer than they have been, and require greater prices pBing for raising Ore than usual the different Bargains let to raise the Ore consist of 10 Men raising Ore at 30/pBg 10 Men @ 35/ & 12 Men @ 38/. 15Men@ 40/. & 16 Men @ 42/pBg. - The West end and other old Workings continue very poor, the Bargains are 10 Men raising Ore at 40/ pBg & 50Men at 42/pBg. - The Barney Craig Levels are going forward as usual but have not cut any Veins. I have lately take the line of Leasing of Hopehead Vein & run it over the Fell, I found it to be considicallly nearer the direction of Coalcleugh Sun Vein than the Low Coalcleugh Vein which was expected to take the same, the line of bearing of Swinhope Head Vein is 1/4 of a Mile to the South of the Low Level forehead. -

Wellhope continues very poor, the Sump we were sinking last quarter is down to the <Eardow> of the high Flatt & appears to raise more Ore than she had done when left of, but not in sufficient quantity to work by the Bing, she is now driving at 100/pfm & 30/ pBg. 10 more Men are raising Ore at 42/pBg.

Hartley cleugh has not such a good appearance for raising Ore as she had last quarter, the south end is much poorer and requires an advance of the price pBg. We have discovered a part of the Vein at the North end to be lying off to the West and are now pursuing her; which is sufficiently strong but contains very little Ore - the Ore Bargains let here are 6 Men raising Ore @ 28/pBg 2Men @ 35/pBg & 26 Men @40/pBg.

Kiersley Row Level is going forward alongside of the Vein where she has formerly been wrought but not got to any whole ground to make a trial for Ore. -

Bateshill, we have not got the Shaft we were in <har..> with last quarter opened to the Level & untill that be done we shall not be able to get into the Level to make any further trial. -

I remain Geo. Crawhall

**5 Apr 1815 William Crawhall to Martin Morrison**

Allenheads Ladyday Bargains April 5/1815

Allenheads Mines are in general poorer this quarter than I ever recollect them. Diana Vein the leading forehead in this Vein westward carries no Ore, & for the last 5 fathoms driving, had not a particle of Ore in it, and very little appearance of any Vein; I am apprehensive the Vein has fled from its general bearing, and if in the course of 3 or 4 fathoms more driving there is not an alteration, I propose cutting cross to the North & South to prove whether the Vein has left the general bearing or not. - the back workings in this Vein are much wrought & part of the Men have left their workings - this Vein is now wrought by 14 Men @40/- pBg & 12 Men @ 42/- pBg. We have not yet cut this Vein at the East End or the new Ground? but are driving with all speed.

The Workings at Flatt Shaft and in OldVein are much the same as last quarter, wrought by 8 Men @ 40/- pBg & 12 Men @ 42/- pBg. - Wentworth Vein we have not yet proved through. - The large Cross Vein, which I informed you of, but the Sills are not so much thrown down on the East side of the Cross Vein as was at first apprehended, we think the thro? is about 5 or 6 feet but that we have not yet exactly ascertained. - the forehead is now driving by <8> Men Southwards against the <plan> check on the Westside of the Cross Vein @ 37/- pft in the flats and wants about 2fathoms of intersecting Wentworth Vein; & the forehead improves in Ore the nearer we approach the Vein.

The back Workings <in Sills> are poorer than last quarter wrought by <> Men @33/- pBg 6 Men @ 30/- 9Men @ 35/- 20 Men @40/- 16 Men@42/- & 2 Men @ 37/- pBg. -

Swinhope Level is now entirely in the Great Limestone I expect in the course of 20 fathoms driving to get the High Flatt, when it may be expected to raise as much Ore as will drive the Level.

Williams Vein at Swinhopehead has produced a great quantity of Ore last quarter and continues rich - wrought by 6 Men @30/- pBg 8Men @ 28/- 6Men @ 35/- & 8 Men at @ 34/- pBg and expect in a months time to have 14 more Men working for Ore

I am - Wm. Crawhall

**5 Apr 1815 Thomas Emerson to Martin Morrison**

Weardale Mines.

NewCastle 5th April 1815

Breckonsike continues poor, have let Bargains to 30 Men, 8 to drive the Low level @£8pfm 30/pBg the remainder to raise Ore @ 42/pBg. - Greenfield Vein is likewise poor have let Bargains to 12 Men, 6 to drive the Waggon Level at £6 pfm & 42/ pBg. The rest to raise Ore @42/pBg.

Burtree Pasture Vein is likely to raise Ore much the same as it has done for some time back have let Bargains to 110 Men 8 to drive the Waggon Level @£6-10/ pfm 8 to drive the High Level @£6-10/ pfm & the remainder to raise Ore atfrom 32/ to 42/ pBg.

Kilhope is rather poor have let Bargains to 26 Men 8 to drive the Low Level @£7-10pfm & the others to raise Ore @ 42/ pBg.

Sedlin is much the same as last quarter have let Bargains to 115 Men 8 to drive the East Low Level @£10 pfm & 30/ pBg. 8 to drive the Middle Level @£6 pfm & 40/ pBg - the remainder to raise Ore at 42/ pBg.

<Comlains> [Companies] Grove the cross Vein is more hopeful than it was last quarter have let Bargains to 14 Men 8 to raise Ore @ 38/ pBg & 6 @42/ pBg. Middlehope Shield has been at a very low ebb have let Bargains to 20 Men 8 to drive the High Level @ £8-10 pfm 6 to drive the Cross Vein ( that is a <peat> measure cut the <.....>) at £4 pfm & 42/pBg). The remainder to raise Ore @ 42/ pBg. From the points taken of the Veins that is now raising Ore tolerably well with Comps. Grove we were led to believe that it was the same as the Cross Vein at this place, which induced us to make a tryal in it, & I am glad to say that we have met with something rather hopeful, within a few days past, which I hope will turn out to be of some magnitude but from the little trial we have got of it yet, I cannot speak with certainty.

Earn Cleugh Vein is only poor have let Bargains to 32 Men 8 to drive the High Level @ £3-10 pfm & 42/ pBg. 8 to sink into the Great Limestone 28£ pfm & 42/ pBg. Longsike only 8 Men raising Ore @ 42/pBg. Greenlaws is poor have let Bargains to 18 Men 4 to drive the Waggon Level @ £7-7 pfm & 30/ pBg the remainder to raise Ore at 42/ pBg.

Leadgate The workings in Longsike Vein that the Old Man had left off is the Great Limestone, are poorer than they in the higher Side, had formerly been but from the number of Men that are now employed I should expect to raise a good quantity of Ore,



have let Bargains to 106 Men & to drive the Waggon Level @ £7 pfm & 30/ pBg, 8 to drive the Vogue Level @ £3 pfm & 42/ pBg and the remainder to raise Ore @ 40/ & 42/ pBg.

Blackdean is raising Ore much as usual have let Bargains to 88 Men, 6 to drive the Low Level @ £8-10 pfm & 32/ pBg, 8 to drive the High Level @ £6 pfm & 38/ pBg. The remainder to raise Ore @ 42/ pBg.

Langtyhead is only poor have let Bargains to 22 Men 6 to drive the East Waggon Level @ £4 pfm, 6 to drive the West @ £2-10 pfm & 42/ pBg the rest to raise Ore @ 42/ pBg. Barbary is only a poor turn? But likely to raise more Ore this year than it did the last at the high price. Have let Bargains to 36 Men 8 to drive the Waggon Level @ £10 pfm & 30/ pBg 6 to drive the Low Level @ £6-10 pfm & 42/ pBg, the remainder to raise Ore @ 42/ pBg.

Wolfcleugh is much the same as last quarter have let Bargains to 29 Men , 6 to drive the Low Level from the Engine post at £6-10 pfm & 42/ pBg the rest to raise Ore @ 42/ pBg. - Broaddale Pasture is more hopeful at the forehead than it was last quarter, have let Bargains to 42 Men 8 to drive the Low Level @ £5 pfm & 42/ pBg, 8 to <math>\diamond</math> the Low Level @ £8 pfm & the remainder to raise Ore @ 42/pBg. -

Thos. Emerson

### **30 Jun 1815 George Crawhall to Martin Morrison**

Coalcleugh Lead Mines June 30. 1815

The Mines at Coalcleugh etc in general are extremely poor, & the produce of course becomes less. - I had a consultation with the other Agents previous to the Bargains respecting to the prices to be given &c. we was all of an Opinion that it would not be advantageous to Col. Beaumont to reduce the price pBing in the poorest Workings, as many of the Mens earnings do not exceed their subsistence Money, & this Quarter being the close of the Year it would be attended with a great deal of labour & expense in cleaning out the workings & keeping a seperation; we have reduced the price of the better workings as much as they wod <admit> of.

We have the Sump at the East End holed to the Low Level, but <fear> the extra quantity of Water we have <losed> & the scanty supply of <dbey> Water to work the Engine occasioned by the dry season; I am afraid we will get very little done this quarter as the Low Level is nearly full of Water. -

The Level begun last quarter to drive to the North is a cross String at the East End is going forward and offers to do tolerably well as far as we have driven in the Limestone, I have let a Bargain in it to 4 Men at 30/pBg. We have not begun any fresh trials this quarter or carrying forward any dead work but what is necessary further conducting & carrying on the regular Workings.

The Ore Bargains at Coalcleugh East end consist of 10 Men raising Ore @ 30/pBg. 6 Men @ 35/ pBg. 14 Men @ 30/ pBg. 12Men @ 40/pBg & 28 Men @ 42/ pBg. at the West end 12 Men are raising Ore @ 40/pBg & 30 Men @ 42/pBg.

The Barney Craig Levels are going forward as usual but have met with no Veins.

Welhope, the foremost length we have opened at the East End is extremely poor & cannot be wrought at the price that is now given, the other old Workings are equally poor which has rendered me unable to let one single Bargain, so that place is entirely abandoned for the present.

Hartley Cleugh - the South End continues to raise a quantity of Ore, but not so good as usual, the north end has become so poor that we are under the necessity of abandoning it: the Bargains to raise Ore are 6 Men @ 28/pBg 8 Men @35/ & 10 Men @ 40/ pBg.

Keirsley Row & Bates hill trials are going forward as usual, I have let Bargains to 4 Men to raise Ore @ 40/ pBg @ Keirsley Row, it being the first attempt to raise Ore, I cannot form an idea of the produce as we have not run into this Vein.

I remain &c George Crawhall

### 3 Jul 1815 William Crawhall to Martin Morrison

Allenheads. July 3, 1815

The Veins in this place are as poor in general as they were last quarter. We have now made Wentworth Vein <..> on the East side of the Cross Vein at East End. I have driven the Cross Vein further South than where it was expected to have intersected Wentworth Vein: our apprehension from the great strength of the Cross Vein is taken from the usual <bearing> joined to the Cross Vein in her direction, which is not unusual in occurrences of this kind.

There is no Ore of any consequence in the Cross Vein forehead, but a fine open Sparry Vein; & have no doubt of this getting a communication for Ore and sunk to the Flatts but the Vein will be production of Ore: the forehead is now driving by 8 Men @ 100/ pfm & expect in the course of a Month to be able to see the Flatts - The back Workings in Wentworth Vein are much the same as last quarter wrought by 6Men @32/ pBg. 6Men @ 33/pBg 6Men @ 35/. 13Men @ 37/ ?? 12Men@ 40/. & 10Men @ 42/ pBg.

The Workings in the Old Vein at Flatt Shaft are poorer than last quarter wrought by 10 Men @40/ & 6Men @ 42/ pBg.

Diana Vein is extremely poor I have left the West forehead of for the present for the last 12 fms. Driving the Vein has not produced any Ore and am apprehensive it is terminating here; as there is little appearance of any Vein in the forehead - am now cutting Cross to the North but have not yet discovered any Vein - the back workings in this Vein are poorer & now wrought by 10 Men @ 40/ . & 12 Men @ 42/ pBg - will not be able to cut this Vein at the Trial at East End before <Xmas>, if then.

Swinhope Vein continues <rich> of Ore, now wrought by 14 Men @ 32/. 8 Men @ 34/. 6 Men @ 35/. 6 Men @ 30/. 8 Men @ 42/. & 8Men @ 28/.pBing with little dead work. - The Low Level is driving in the <BlackBed> in the Great Limest. @ 160/ pfm and expect in a little time to get Ore.

I am &c William Crawhall

**4 Jul 1815     Thomas Emerson to Martin Morrison**

Midsummer 1815.            New House Weardale July 4/1815

Breckonsike Vein is very poor, but as we have had some strings come to her of late, I thought it adviseable to drive the Low Level forward, in expectation that something more will join to help her, have let Bargains to 24 Men, 8 to drive the said Level 2@ £8 pfm & 30/ pBg. The remainder to raise Ore at 42/ pBg.

Greenfield is poor, have let Bargains to only 10 Men, 6 to drive the Low Level@£6 pfm &42/ pBg & 4 to raise Ore @ 42/ pBg. The Low Level is about 10fm back from where the Old Man had raised Ore very well in the Top Sills; therefore I hope that we will do better, as soon as we get under the Old Man workings. - Burtree Pasture Vein continues very strong but not rich, yet I expect that it will raise a good quantity of Ore this Quarter, have let Bargains to 112 Men, 8 to drive the High Level @ £5.10 pfm, the remainder to raise Ore at, from 30/ to 42/pBing.

Kilhope is poor, have let Bargains to 24Men @ 42/ pBg.

Sedlin Vein is very strong at the East End and likely to raise Ore about as usual, at the best price; but at the West End we are drove as far as it is thot. prudent to do, for fear of loosing more Water than the Engine would be able to draw, being done up to the side of the Burtree Syke - have let Bargains to 110 Men 8 to drive the Low Level @ £9.15 pfm & 30/ pBg. - Companies Grove the Cross Vein is rather poorer than it was last Quarter, have let Bargains to 14 Men, 8 @ 38/ pBg & 6 @ 42/pBg.

Earn Cleugh is very poor, have let Bargains to 20 Men, 8 to drive the High Level @ £3.10 pfm & 42/ pBg & the remainder to raise Ore @ 42/ pBg.

Slitt is poor, have let Ore Bargains to 18 Men @ 42/ pBg.

Lead Gate Longsike Vein is rather poor in the Grt. Limestone, but as it is very strong, I expect it will produce a good quantity of Ore this Quarter - have let Bargains to 88 Men, 8 to drive the Waggon Level @ £8 pfm & 30/ pBg, the remainder to raise Ore @ 40/ & 42/ pBg.

<Green Lawes> is poor, have let Bargains to 16 Men, 4 to drive the Waggon Level @ £8 pfm & 30/ pBing the remainder to raise Ore @ 42/ pBg.

Black Dean is raising Ore much as usual at best price - have let Bargains to 24 Men 6 to drive the East Level @ £4 pfm & 30/ pBg & the remainder to raise Ore @ 42/ pBing.

Barbery is poor, have let Bargains to 38 Men 8 to drive the Waggon Level @ £10 pfm & 30/ pBing. 6 to drive the Low Level @ £7 pfm & 42/ pBg 6 to drive back onto the Engine Shaft at £8 pfm & 42/ pBg. The remainder to raise Ore @ 42/ pBg.

Wolfcleugh is poor have only let Bargains to 10 Men to raise Ore at 42/ pBg.

Broaddale Pasture is likely to raise Ore tolerably well this quart. Have let Bargains to 28 Men, 8 to drive the Low Level @ £6 pfm & 35/ pBg, 8 to raise Ore @ 30/ pBg 8 to raise Ore @ 49/ pBg & 4 @ 42/ pBg.

Middlehopeshield is poor have let Bargains to 32 Men 8 driving the Top Level @ £5 pfm, the remainder to raise Ore (principally in the X Vein) @ 42/ pBg.

AllerCleughhead is poor, have let Bargains to 10 Men to raise Ore at 42/pBing.

Tho. Emerson

### **30 Sep 1815 George Crawhall to Martin Morrison**

Coalcleugh Sept 30 1815

The Mines at Coalcleugh continue poor tho' the last quarters Producers? is more than expected at Midsummer. We are now getting forward with the Eastend Low Level in the Great Limestone which produces a quantity of Ore but so poor as to require the highest price pBing we can give. The Level driving to the North in a cross String continues raising Ore much the same, as soon as the Whitewood Vein is cut which is expected to be from 30 to 40 fathoms to the North of the forehead, I have great confidence of meeting with some tolerable workings.

I have begun no fresh trials this quarter, & only carrying on what dead Works is requisite for the Ore Workings. The Ore Workings at the East End are considerably poorer than they have been the last Year, but the East & West foreheads in the <Sun> Vein are nearly dead at present, & the other parts of the Vein & Flatts are getting much exhausted. The Bargains let to raise Ore consist of 10 Men @ 30/ 6 Men @ 35/ 4 Men @ 36/ & 44 Men @ 38/ pBing. The West End Workings continue much the same as last Quarter, the Bargains are 4 Men raising Ore @ 30/. 58 Men @ 38/ & 8 Men @ 180/ p Ton for Lead.

Low Coalcleugh, we are opening an Old Level in the CoalSills with four Men, & have let a Bargain to 6 Men to raise Ore in the Old Workings above the Lead @ 35/ pBg.

Hartley Cleugh, the last opened length at the South End a great deal better than she has been for a 100 fam back & from all appearances at present is likely to continue it is now wrought by 6 Men @ 21/ pBg, the other workings are poor, 2 Men are raising Ore @ 30/. 4 Men @ 35/ & 10 Men @ 36/ pBg.

Kiersleyrow & Bateshill trials are going forward & have raised a small quantity of Ore at each place; the Old Workings have been left very poor so far as we have seen: 4 Men are raising Ore at Kiersley row @ 35/ pBg & 2 Men @ Bateshill @ 35/pBg

I am &c George Crawhall

5 Oct 1815 Thomas Emerson to Martin Morrison

Mich 1815

Newhouse Oct 5/1815

Breckonsike - We have cut through the cross Vein or string at the fore end that I mentioned in my last Report & have met with some other strings near the point of the Old Vein, which have some Ore in them but at present are much divided, We therefore thought it right to continue the Level hoping the said Strings may come together in a little time so as to form a more regular Vein. - The old Workings are much wrought out - have let Bargains to 20 Men - 8? to drive the low Level @8£ pfa & 30/pBg. The remainder to raise Ore at 38/ pBg.

Greenfield Vein continues poor, have let Bargains to 12 Men - 6 to drive the low Level @£6 pfa & 38/pBg, the other 6 to raise Ore @ 38/ pBg.

Burtree Pasture Vein is rather promising at the fore end, @ the back lengths likely to raise Ore about as usual, have let Bargains to about 122 Men 8 to drive the high Level @£5-15-pfa, 8 to drive the low Level @10£pfa & 8 to raise Ore @ 28/pBg, 32@ 30/- 8@35/- the remainder @ 38/pBg.

Kilhope is poor, have let Bargains to 24 Men 8 driving the low Level @ £7.10pfa, the remainder to raise Ore @ 38/pBg. - Sedlin Vein @East end is likely to raise Ore much the same as it has done for some time past but the old lengths west from the Engine are much wrought out. Have let Bargains to 80 Men 8 to drive the East Level @ £9.15pfa& 30/pBg the remainder to raise Ore @ 38/pBg.

Companies Grove - We have drove the North End of the Cross Vein nearly up to the <Bousclay> which I informed Mr Dodd of, but he has let one Man a Bargain to raise Ore from the present forehead to their Old Vein which if drove up will be the means of Airing our Workings which is much wanted should there be more than 10fa we are to have our proportion of the Ore. Have let a Bargain to 8 Men to raise Ore in the South end @ 38/ pBg. - Middlehopeshield the Cross Vein is rather more hopeful than it was last Quarter so that I expect in a little time to have more work for the Crushing Mill - have let Bargains to 36 Men & to drive the low Level @ £5pfa. The remainder to raise Ore @ 38/ pBg. - Earn?Cleugh is poor have let Bargains to 22 Men - 8 to drive the West Waggon Level @£4.10pfa. & the remainder to raise Ore @ 30/pBg. - AllerCleugh Head only 6 Men employed to raise Ore @ 38/pBg.

Slitt is poor - have let Bargains to 16 Men to raise Ore @ 30/ pBg.

Levelgate from the great number of Men employed is likely to raise more Ore than last Quarter tho' the Workings in general are but poor - have let Bargains to 108 Men 8 to drive the low Level @£7.10 pfa & 30/ pBg 8 to drive the middle Level @£4 pfa & 30/ pBg & the remainder to raise Ore @ 38/pBg.

Greenlaws continues poor, have let Bargains to 16 Men - 4 to drive the Waggon Level @ £6.10 pfa& 30/pBg & the remainder to raise Ore @ 38/pBg. - Blackdean continues to raise Ore much as usual, have let Bargains to 74 Men, 6 to drive the low



Waggon Level @£8 pfa & 32/ pBg - 6 to drive the middle Level @ £4 pfa & 35/ pBg & the remr @ 38/ pBg.

Langty head is poor, have let Ore Bargains to 15 Men to raise Ore @ 38/ pBg.

Barbary Vein is very <str.> but rather poor, have let Bargains to 38 Men 6 to drive the low Level @ £6 pfa & 35/ pBg & the remr to raise Ore @ 38/ pBg.

Guinea Grove is an old Working that has not been open for some time before last year, it has raised Ore tolerable well of late and likely to continue so, have let Bargains to 16 Men 8 to raise Lead @ £8.10 pTon & the other 8 @ £9 pTon.

Wolfcleugh is poor, have let Bargains to 16 Men 8 to sink the Engine shaft down to the 4 fa Limestone & the remr to raise Ore @ 30/pBg.

Broaddale Pasture is likely to raise Ore tolerably well have let Bargains to 28 Men 8 to drive the low Level @ £6 pfa & 30/ pBg 8 to raise Ore @ 30/ & the rest @ 38/pBg.

Crawlah - the Ore Workings are poor have let Ore Bargains to 28 Men 16 sinking the Engine shaft @ £18 pfa 6 to raise Ore @ 38/pBg & 6 to raise Lead @ £9 pTon. We have got the Engine to work.

Thos. Emerson

#### **6 Oct 1815 William Crawhall to Martin Morrison**

Michaelmas Bargains

Allenheads Octor. 6 1815

Allenheads Leadmines are much the same as last quarter, the foremost Sump sunk is the Vein intersecting Wentworth Vein is not so promising as we at first expected, there is no Ore of any consequence The back Workings in Wentworth Vein are full as rich as last quarter wrought by 6 Men @ 32/pBg 6Men @ 35/ pBg 16 Men @ 36/ pBg & 30 Men @ 38/pBg. - The Workings in the Old Vein & at Flatt Shaft are poor wrought by 6 Men @ 36/ pBg & 8 Men @ 38/pBg. - Diana Vein is also very poor excepting one length wrought by 6 Men @ 36/pBg & all the others wrought by 18 Men @ 38/ pBg. We have not done any thing more at the West forehead last quarter & want 20 fas. yet of cutting this Vein, at the trial I mentioned in my last Report, at the East End of this Vein.

Swinhope Mines I think are not so rich as last quarter altho' producing a great quantity of Ore wrought by 8 Men @ 34/ pBg. 12 Men @ 30/ pBg 14 Men @ 32/pBg. 8 Men @ 34/ pBg & 6 Men @ 35/ pBg.

The Low Level at Swinhope is driving in the Great Limestone at £8 per fa. I expect to get as low as the High Flatt before Xmas when we then will be ably to reflore the Vein as we go up.

I am. &c William Crawhall

#### **29 Dec 1815 Thomas Emerson to Martin Morrison**

Xmass Bargains.

Newhouse Dec 29 1815

Breckonsike Vein at the foreend is stronger & some better like than it has been for more than 100 fathoms back, it has some Ore in it, but only poor yet - have let Bargains to 22 Men, 8 to drive the Low Level @ £7pfa. & 30/ pBg & the remr. to raise Ore at 38/ pBg.

Greenfield is poor, have let Bargains to 12 Men 6 to repair the Level @ 50/pfa & 38/ pBg & the other 6 to raise Ore @30/pBg. –

Burtry Pasture Vein is likely to do tolerably well for the insuing quarter, which has enabled us to reduce the price pBg of many of the Workings, have let Bargains to 130 Men, 8 to drive the Low Level @ £10 pfa, 8 to raise Ore in the foremost length @ 25/pBg 8 to raise Ore @ 26/ pBg 24 @ 30/ & 22 @ 35/. 16 @ 36/ & the remr @ 38/ pBg.

Kilhope is very poor have let Bargains to 20 Men 8 to drive the Low Level @ £7.5-pfa & the remainder to raise Ore @ 38/pBg. -- Sedlin continues much the same as last quarter, have let Bargains to 82 Men 8 to drive the Low Level @ £9.9 pfa & 30/pBg & the remainder to raise Ore @ 38/pBg.

Middlehope Shield - the North end of the Cross Vein is likely to raise Ore tolerably well, have let Bargains to 38 Men 8 to drive the South Level @ £6 pfa 8 to drive the North Level @ £5 pfa. 8 to raise Ore @ 32/ pBg & the remainder to raise Ore @ 38/pBg. - Leadgate the Vein in the Great Limestone is only poor, but very strong & likely to raise a good quantity of Ore at the best price pBg - have let Bargains to 116 Men 8 to drive the Waggon Level @£7 pfa &30/pBg & the remr to raise Ore @ 38/pBg.

Blackdean is likely to raise Ore much the same as she done for some time back, have let Bargains to 78 Men - 6 to drive the Low Level @£8 pfa &32/pBg. 8 to sink under Level @ £8 pfa & 38/ pBg 6 to drive the Middle Level @ £4 pfa & 35/pBg & the remainder to raise Ore @ 38/pBg - Earncleugh is very poor have only 12 Men employed. 6 to drive the Waggon Level westward @ £5 pfa & 30/pBg & the other 6 to raise Ore @ 38/ pBg.

Langtyhead is very poor have let Bargains to 8 Men to raise Ore @ 38/ pBg.

Barbary is a very strong Vein, but only poor, have let Bargains to 40 Men, 12 to sink under Level @ £12 pfa & 38/ pBg & the remainder to raise Ore @ 38/pBg. Wolfcleugh is very poor have let Bargains to 14 Men to raise Ore @ 38/ pBg.

<Broaddale> Pasture is poorer at present than she was last quarter - have let Bargains to 24 Men, 8 to drive the Low Level @ £6 pfa & 30/ pBg the remainder to raise Ore @ 38/ pBg.

From the information rcd. from Mill of the depressed state of the Lead Trade, I have reduced the Price pBg & fa[thom] wherever I thout. it could be done without injuring the Concern, have also reduced many of the <Wagemen> Woodhewers & Wood Carriers.

I am &c T. Emerson

31 Dec 1815 George Crawhall to Martin Morrison

Xmass Bargains 1815

Coalcleugh Dec 31 1815

The Mines at Coalcleugh &c continue very poor and particularly the Old Workings, the East End forehead in the Limestone is better than last quarter & now raising Ore at 30/ pBg. the Level driving to Whitewood Vein continues much the same as last quarter : we have no other fresh tryals on hand at Coalcleugh at present - In consequence of the depressed state of the Lead trade we have had instructions from Mr Morrison to reduce the the expenditure as much as possible and be done without impeding the works that's necessary to be carried on for the regular conducting of the Mines, it was considered impracticable by all other principal Agents to reduce the price pBg in the poorest workings more than what was done last quarter as the greater part of their earnings are not adequate to those employed on regular wages. It was therefore agreed to reduce the Wages of all the Mechanics Labourers & others employed in Contract work in proportion to their respective situations so as to average nearly 12/ P week p Man.

The Ore Workings at the eastend are very poor both in the Flatts & Sun Vein. The Flatts eastward are nearly cut of by a cross Vein which throws the east <cheek> 6 fathoms down, the Sun Vein is extremely poor at the eastforehead & westward she is nearly wrot. to the intersection of the Old Vein. the Ore Bargains are 18 men raising Ore at 30/ pBg 6 @ 32/pBg 2 Men @ 35/pBg & 4 Men @ 36/ pBg & 41 Men @ 38/ pBg. The westward Workings are also poor the Bargains are 4 Men raising Ore @ 35/pBg & 70Men @ 38/pBg.

Low Coalcleugh is much the same as last quarter 6Men are raising Ore @ 35/ pBg & 4 Men opening out the Top Level. - Hartley Cleugh - we have opened another length at the south end since last quarter which I am sorry to say has a bad appearance for raising Ore at present but I think it is owing to a cross Vein that I expect is near us, from the Strata being much broke & quite in a state of confusion. the Ore Bargains are 12 Men raising Ore @ 21/ pBg 2 Men @ 30/pBg & 20 @ 36/pBg.

Kiersleyrow & Bates hill trials are going on but have opened no fresh ground to raise Ore since last quarter, 6 Men are raising Ore @ 35/ pBg, their workings are extremely poor.

I am &c Geo. Crawhall

### **31 Dec 1815 William Crawhall to Martin Morrison**

[Note: undated but in sequence between Emerson's Dec 1815 and April 1816 reports from Weardale, and no other report from East Allendale for that quarter is included in the collection]

The Mines at Allenheads are poorer in general than they were last quarter, the forehead in the Cross Vein at East End has been driven last qu. 51/2 fa. without providing any Ore, & it is now driving @ £8 p fa. - since the Bargains were let the Men

have driven 1 fa. more & the forehead now carries Ore and is more flattering but not of that consequence to be wrought at any price we can afford to give pBg. - The Workings in Wentworth Vein are worse than last quarter many of the lengths being nearly wrought out - the Vein is now wrought by 8 Men @ 34/ pBg. - the Workings in the <Old> Vein & at Flatt Shaft are much the same as last quarter wrought by 21 Men @ 38/ pBg < > Men @ 37/ pBg & 6 Men @ 36/ pBg.

Diana Vein is wrought by 6 Men @ 36/ pBg & 26 @ 38/pBg. there has been nothing done at the West forehead last Quarter & in the Cross Cutt driving for Diana Vein at the East End we have cutt a strong String (a small Vein) which is now working by 6 Men @38/ pBg which has caused us to leave of the Cross Cutt for the present, under the Men working for Ore get driven out in the Vein.

I am very sorry I am under the necessity of making such an unfortunate report of Swinhope Mines this quarter. The West forehead in the Vein in Great Limestone is driving @ £5 pfa. without producing any Ore of consequence & the East forehead such like, the other part of the Vein are wrought by 8 Men @24/ pBg 8 Men @ 34/ 26 Men @32/ & 6 Men @ 35/ pBg.

The Low Level is now driving @ £10 pfa. & wants about 14 fa of being being holed to the foremost shaft when done will try the Vein & if productive of Ore will explore the Vein as the Level goes up.

In consequence of your instructions relating the necessity of reducing the expenditure on acct. of the depressed state of the Lead Trade, Mr.E[merso]n, G.C. & myself had a consultn. previous to the Bargains & consider it impracticable to reduce the price pBg in the present Workings lower than they were last quarter - I am apprehensive you will think our prices very high, but I am confident the greatest part of those at the high price, their wages will not be adequate to those employed today. - It was also agreed by the principal Agents to reduce the Wages of all the Mechanics, Labourers & others by the day & by Contract work in proportion to their respective situations so as to average near 12/ pWeek - we have reduced our Woodmen from 14/ to 12/ pWeek & the others in proportion.

I am Sr Wm. Crawhall

**1 Apr 1816 William Crawhall to Martin Morrison**

[Note: Undated, but given sequence in the volume it appears to cover the spring quarter in 1816, and dated here accordingly]

<Our Mines> at Allenheads upon the whole are likely to be more productive of Ore the succeeding quarter than they have been last quarter from their present appearance altho' we have not one rich Working in all the Field. The old Workings in general I think are better, from <wch> I expect our greatest produce this Year. - we are continuing the X cut in the X Vein at the East End Southward, without producing any

Ore of consequence & have not yet been able to prove where Wentworth Vein intersects it. –

Wentworth Vein is now wrought by 8 Men @ 28/ pBg 14 Men @ 33/ pBg 6 Men @ 32/. 6 Men @ 34/. 21Men @ 35/ pBg & 3 Men @ 37/ pBg. -- The Workings in the Old Vein & Flat Shaft are more promising than last quartr. Wrought by 16 Men @ 35/. 8 Men @ 34/. & 6 Men @ 33/ pBg.

Diana Vein there has been nothing more done at the West End of this Vein last quarter, from every appearance it seems to be terminating or become so <> that there is no encouragement for making further trials , as we have driven 15 fathoms in the <> of the Vein which produced no Ore, or had the least appearance of having any & have made some good trials by cutting cross to the north & South without effect. I think the most probable chance for being productive in making further trials in this Vein would be to open out an Old Shaft 110 fa west from the present forehead, and cutting the Vein in new ground leaving that space whole.

The Workings in Diana Vein are now wrought by 24 Men @ 36/pBg & 8 Men @ 34/ pBg. The Cross Cut driving for Diana Vein at the East End we are now able to continue & expect there <> 14 fa of cutting Ditto the String in the Cross Cut is now wrought by 2 Men @ 33/ pBg. - Swinhope Mines the leading <Forehead > in this Mine continues extremely poor, the West forehead for the last 16 fa driving has not produced any Ore & is now driving by 6 Men @ £5 pfa and the east forehead is so poor of Ore that I can not get it wrought at any price I can afford pBg. the other parts of the Vein are wrought by 14 Men @ 28/ pBg 12 Men @ 34/. & 6 Men @ 35/ pBg. - I expect the Level will be holed to the foremost Shaft in the course of a Month, after which I intend to try the Vein immediately.

In consequence of your information relating the depressed state of the Lead Trade, I have reduced the greatest price pBg for raising Ore to 35/ & the others both pBg & Dead Work in proportion.

I am Sr Wm. Crawhall

**1 Apr 1816 George Crawhall to Martin Morrison**

[Note: Undated, but given sequence in the volume it appears to cover the spring quarter in 1816, and dated here accordingly]

Coalcleugh Leadmines are a great deal poorer than they have been for the last year, & from the present State of the Workings the produce will be considerably less than it has been, & no appearance of a change for the better at present. - The eastend forehead in the Limestone has been so extremely close and hard the last quarter that 8 Men have only been able to drive 5 fa. she is now rather more open & produces Ore. - The Level driving in the Cross String towards Whitewood Vein is getting very well forward & 8 Men raising Ore in it. - We have reduced the price pBg in the present Workings from 38/ to 35/ pBg - many of the old Workings are so much exhausted that the Workmen



cannot make a livelihood at the prices we are now giving & not being able to earn their Subsistence Money has caused a great number of Men to be out of employment.

The eastward Workings are becoming very poor and particularly the Flatts which are much wrought out, & many of the Men have left them, the Ore Bargains consist of 14 Men raising Ore @ 30/ pBg 6 Men @ 32/ pBg & 34 Men @ 35/ pBg. 4 Men are raising Ore @ 28/ pBg & 4 Men @ 30/pBg in the Old X String. - The Westward Workings are much the same as last quarter, the Bargains are 4 Men raising Ore @ 33/. & 56 Men @ 35/. - 20 Men are raising Ore in the <L.palls> @ 35/ pBg.

Hartleycleugh South end is much more promising for raising Ore than last quarter it appears we have got thru the troubles we were then about, & the Vein has taken her regular course but does not contain much Ore, yet a good prospect of improving in a few fathoms driving, the Bargains are 6 Men raising Ore @ 21/ pBg 6 Men @ 27/ pBg <2> Men @ 28/pBg 11Men @ 30/ pBg & 11Men @ 32/pBg.

Keirsleyrow , Bateshill & Barney Craig there is no alteration in the tryals of any of these places since last quarter, the Levels etc are all going on as usual. –

I am &c George Crawhall

#### **9 Apr 1816 Thomas Emerson to Martin Morrison**

Weardale.

April 9. 1816

Breckonsike is poor have let Bargains to 18 Men, to raise Ore @ 35/ pBg. From the low price for Lead I propose to give up the Low Level for the present. - Greenfield have only let Bargains to 6 Men to raise Ore at 35/pBg.

Burtree Pasture Vein is likely to raise Ore very well for the ensuing quartr have let Bargains to 133 Men 8 to raise Ore @ 21/ pBg 8 @ 22/. 32 @ 30/. 18@ 32/ & the rest @ 35/ pBg.

Sedlin is only poor have let Bargains to 71 Men to raise Ore @ 35/ pBg. -- Kilhope is poor have let Bargains to 24 Men 8 to drive the Low Level @ £6.15 pfa. & the remr. to raise Ore @ 35/ pBg. -- Middlehope Shield the cross Vein continues hopeful at the North End , have let Bargains to 26 Men 8 to drive the Waggon Level @ 5£ pfa, 8 to raise Ore @ 28/ & the remr. @ 35/ pBg.

Greenlaws is poor, have let Bargains to 14 Men, 8 to drive the Waggon Level @ £7 pfa.& 30/pBg. & the rem. to raise Ore @ 35/ pBg. -- Companys Vein is so much drove out of power of Air that we can get very little wrought but we expect relief soon from the Companys Men <> to our Workings when I hope we will be able to raise Ore tolerably well - have let Bargains to 14 Men 8 to repair the Level @ 40/.pfa & 35/ pBg the remr. to raise Ore @ 35/ pBg

Coalcleugh is poor, have let Bargains to 12 Men 6 to drive the Waggon Level @ £5 pfa & 30/pBg & the remr. to raise Ore @ 35/pBg. - Slitt is poor, have let Bargains to 12 Men to raise Ore @ 35/ pBg.

Levelgate is still rather poor, but from the great number of Men employed is likely to raise a good quantity of Ore, have let Bargains to 133 Men - 8 to drive the Waggon Level @ £4 pfa & 30/ pBg, 8 to drive the Waggon Level @ £4 pfa & 35/ pBg & the remr. to raise Ore @ 35/ pBg. -- Blackdean is rather poorer than it has been, have let Bargains to 72 Men 6 to drive the Low Level @ £7.15 pfa & 32/ pBg & the remr. to raise Ore @ 35/ pBg. - Barbary is a strong but only poor Vein, have let Bargains to 32 Men - 8 to drive the Low Level @ £6 pfa & 35/ pBg 6 to drive the Middle Level @ £6 pfa & 35/ pBg & the remainder to raise Ore @ 35/ pBg,

Wolfcleugh is poor, have let Bargains to 12 Men to raise Ore @ 35/ pBg - Broaddale Pasture is not quite so well as it did last quarter, have let Bargains to 22 Men - 8 to drive the Waggon Level @ £6 pfa & 30/ pBg the remr. to raise Ore @ 35/ pBg.

Sir Youll see by this Statement that we have reduced the price very much for raising Ore particularly at Burtree Pasture, we likewise have laid off all the Dead Work that can properly be done without at present. - I hope from the general state of the Mines that we will raise Ore tolerably well for the ensuing quarter.

I am Sr Tho. Emerson

### **30 Jun 1816 George Crawhall to Martin Morrison**

June 30th 1816

The Mines at Coalcleugh continue very poor and nothing new has been discovered since last Bargains.

The eastward forehead in the Great Limestone is getting better forward than last quarter, but not very productive of Ore in the Level in the cross String driving to Whitewood Vein is going on very well, & eight Men are raising Ore @ 30/ pBg. In the Limestone, but the forehead is very poor at present. - The Sun Vein at the East end continues very poor, but the Flatts have raised more Ore last quarter than was expected at the Bargains; the present Bargains consist of 18 Men raising Ore at 39/ pBg, 6 @ 32/. & 28 @ 35/ pBg.

The westward Workings are very much wrought out but nearly the usual quantity of Men continue raising Ore at the highest price given, the Bargains are 4 Men raising Ore @ 34/ pBg & 46 Men @ 35/ pBg. - 18 Men are raising Ore in the Top Sills @ 35/ oBg. -

Hartley cleugh continues raising Ore much the same as last quarter, in consequence of the South Level being much harder than usual we have not been able to open any new ground that produces Ore, since the last Bargains, the present Bargains are <Six> Men raising Ore @ 24/. 6 Men @ 25/. 2Men @ 28/. 8? Men @ 30/. & 5? Men @ 32/ pBg. --

Bateshill I expect we have got to the foremost part of the Old Works with the Level, which is at the bottom of the Limestone, & are now rising in the Vein which is very poor, but I expect it will be better in the high part of the Stratum. Keirsley Row Level is going forward the same as last quarter & 4 Men raising Ore in the Old Works at 35/ pBg.

I am &c George Crawhall

**30 Jun 1816 William Crawhall to Martin Morrison**

[Note: Undated, but given sequence in the volume it appears to cover the spring quarter in 1816, and dated here accordingly]

The Mines at Allenheads are much the same as the last quarter - we are now getting Ore in the Cross Vein at the East end tolerably well & the Vein is more <flattering?> than it has been since first cut, the forehead is now driving by 4 Men @ 30/ pBg but cannot prove Wentworth Vein to the East of this Vein. - Wentworth Vein is considerably poorer than last quarter three lengths of which the Workmen have discontinued being nearly wrought out, the other parts of the Vein are now wrought by 8 Men @ 28/pBg - 8 Men @ 30/. 14 Men @ 32/. 2 Men @ 33/. 8 Men @ 34/. & 18 Men @ 35/pBg. - The Workings in the Old Vein & at Flatt Shaft have produced Ore tolerably well the last quarter, and from their present appearance are as promising for the succeeding qu. wrought by 4 Men @ 30/. - 3Men@ 32/. - 6Men@33/. 2Men &34/. - & 12 Men @ 35/ pBg. - Diana Vein is very poor, having made no further trials at the west end of this Vein last quarter, & the back Workings are nearly wrought out, two partnerships having discontinued, the Vein is now wrought by 10 Men @35/ pBg. 10 of the Men who wrought this Vein last quarter are now employed washing Bouse. - Diana Vein is now cut in the Cross Cut, driven at the East end that I mentioned in my last Report I have great pleasure in informing you the Vein has a much better appearance richer of Ore than any part of it that has been opened, the Vein was cutt the 14th June & have not got much done in it. the ptrsp of 6 Men that drove the cross cutt are now raising Ore in the Vein @ 25/pBg. - Swinhope Mines continue very poor, the West forehead produces no Ore of any consequence & the Eastforehead I have left off for the present, the other parts of the Vein are wrought by 8 Men @ 28/. 18 Men @ 32/. & 4 Men @ 34/pBg. - the Level is now holed to the foremost Shaft at the <...dem> of the high flatt in the Great Limestone, I intend to cutt cross to North & South to try both Veins from the Level forehead

I am. Wm. Crawhall

**30 Jun 1816 Thomas Emerson to Martin Morrison**

[Note: Undated, but given sequence in the volume it appears to cover the summer quarter in 1816, and dated here accordingly]

In Weardale - Breckonsike is very poor have only let Bargains to 12 Men, to raise Ore @ 35/ pBg.

Greenfield is likewise poor, have let Bargains to 6 Men to raise Ore @ 35/pBg. -- Burtree Pasture is not quite so good at the forehead as last quarter, but the back lengths are raising Ore tolerably well - have let Bargains to 136 Men - 8 to raise Ore @ 24/. 22Men @ 28/. - 8 @ 30/. - 24 @ 32/. - 20Men @ 34/. & the remainder @ 35/ pBg.

Sedlin has been very poor but is looking rather better at the fore-end, have let Bargains to 64 Men - 8 to drive the Low Level @ £8 pfa & 30/ pBg & the remainder to raise Ore @ 35/ pBg. - Kilhope is poor, have let Bargains to 20 Men, 8 to drive the Low Level @ £6.10 pfa & the remainder to raise Ore @ 35/ pBg.

Middlehope Shield is likely to raise Ore tolerably well, have let Bargains to 28 Men - 8 to drive the Waggon Level @ £5 pfa, 16 to raise Ore @ 28/ pBg & the remainder @ 35/ pBg.

Earncleugh is very poor - only 8 Men employed - 6 to drive the Waggon Level @ £5 pfa & 30/ pBg & the other two to raise Ore @ 35/pBg.

Companies Grove is likely to raise more Ore than it has done, have let Bargains to 34 Men, 6 to raise Ore @ 30/. and the remainder at 35/ pBg. - Slitt is poor, have let Bargains to 12 Men, to raise Ore @ 35/ pBg.

Levelgate is likely to raise Ore considerably better than she has done, yet many of the Workings <require> the best price pBg. - have let Bargains to 162 Men 8 to drive the Waggon Level @ £4 pfa & 30/ pBg, 8 to drive the high Level @ £4 pfa & 35/ pBg, 6 to raise Ore @ 24/ pBg, 8 @ 28/ pBg & the remainder @ 35/ pBg. -- Blackdene is only poor, have let Bargains to 58 Men - 6 to drive the Waggon Level @ £7-5- pfa & 32/ pBg & the remainder to raise Ore @ 35/ pBg. -- Greenlaws is raising rather more Ore than she has done but regains the best price , have let Bargains to 26 Men to raise Ore @ 35/ pBg. We have left off driving the Waggon Level this quar. on acct. of the depressed state of the Lead Trade.

Barbary is only poor, have lett Bargains to 22 Men to raise Ore @ 35/ pBg - have left off driving the Low Level for the present. - Wolf Cleugh is poor, have let Bargains to 24 Men to raise Ore @35/ pBg.

Broaddale Pasture is poor, have let Bargains to 24 Men - 8 to drive the Low Level @ £5 pfa & 30/ pBg. the remainder to raise Ore @ 35/ pBg.

Thos. Emerson

### **30 Sep 1816 George Crawhall to Martin Morrison**

State of Coalcleugh Leadmines Sept. 30th 1816

Coalcleugh Mines etc continued very poor and nothing new has been discovered since last bargains, from the appearance of the present workings I am of opinion that a great part of the present bargains let at the reduced price of 30/- will not admit the workmen to exceed from 6/ to 9/ pWeek earning, and those in the best situations not more than from 9/ to 12/ pWeek without some unforeseen circumstance occur which is frequently the case in Mining and particularly so in Flatts which comprize nearly the

whole of the work at Coalcleugh. - I have not set aside any of the Deadwork that's necessary to be continued for working the Mines effectually, but have reduced the price in proportion to the price of Bings & all the Labourage, Carriage etc - as near as we can calculate to bear an equal proportion - the Eastend forehead in the Limestone has been better last quarter than for twelve months past and has produced about 100 Bings of Ore. The Level in the cross string driving to Whitewood Vein is going forward (which I expect will be cut this year too) but not so productive of Ore as it has been.

The Eastend Workings are very poor & the best of them requires nearly as great a price as can be given which makes very little variation in the Bargains, as the inferior ones require a much greater price could it have been given, the Bargains are 8 Men raising Ore @ 28/ pBg 10Men @ 29/ pBg and 34Men @ 30/ pBg.

The Westend Workings continue much the same as last quarter, the Bargains are 4 Men raising Ore @ 28/ pBg & 40Men @ 30/ pBg - 18 Men are raising Ore in the topsills at 30/ pBg.

Hartley Cleugh is poorer than last quarter, we have opened another length at the South end which has not a good appearance for raising Ore, and in consequence of the background being so much wrought out has caused about 29 Men to be out of employment. The Bargains are six Men raising Ore at 20/pBg and 18 Men at 28/ pBg. - Keirsleyrow Level is going forward and 10 Men have taken Bargains to raise Ore @ 30/ pBg. - Bateshill trial is going forward with four Men, who are trying the Vein before the old works, but not a good prospect for much Ore so far as we have seen.

I remain &c Geo. Crawhall

## **2 Oct 1816 Thomas Emerson to Martin Morrison**

Newhouse 2nd. October 1816

Breckonsike Vein is doing very little at present, have only let Bargains to 11 Men to raise Ore @ 30/pBing.

Greenfield is poor, have let Bargains to 6 Men to raise Ore@ 30/pBing.

Burtree Pasture is likely to do as well as usual, have let Bargains to 153 Men 6 to cut cross to the Vein out of the foremost sump at £2 p f[atho]m. 8 to sink into the quarry <hazel> at £5 p fm; 8 to raise Ore at 22/ pBing; 8 at 26/. 14 at 27/. 26 at 28/. And the remainder at 30/pBing.

Kilhope is poor, have let Bargains to 30 Men; 8 to drive the low level at £6 pfm; 8 to sink to the said Level at £6 pfm, and the remainder to raise Ore at 30/ pBing.

Sedlin continues poor, have let Bargains to 66 Men; 8 to drive the low Level at £7-10-. pfm and the remainder to raise Ore at 30/pBing.



Middlehope Shield is more hopeful than she has been, have let Bargains to 30 Men; 8 to drive the low Level at £4pfm; 8 to raise Ore at 26/. 8 at 27/. and the remainder at 30/ pBing.

Company's Groove is looking better than last quarter, have let Bargains to 36 Men; 20 to raise Ore at 28/ and the remainder at 30/ pBg.

Green Laws is poor, have only let Bargains to 12 Men to raise Ore at 30/ pBing. -

Slitt is poor, have let Bargains to 16 Men to raise Ore at 30/ pBing. -

Levelgate is still rather poor in the great Limestone, but will raise a good quantity of Ore, from the great number of Men employed, have let Bargains to 140 Men ; 8 to drive the low Level at £4 pfa and 30/ pBing for Ore, 6 to raise Ore at 24/. 8 at 28/. and the remainder at 30/ pBing.

Blackdean, - is poor, have let Bargains to 60 Men; 8 to drive the low Level at £7-10-. pfm and 30/ pBing for Ore, and the remainder to raise at 30/ pBing.

Guinea Grove is poorer than it has been, have let Bargains to 16 Men; 8 to raise Lead at £7 pTon and the remainder at £7-5-.

Barbary is poor, have let Bargains to 20 Men; 8 to drive the Waggon Level at £3 pfm the remainder to raise Ore at 30/ pBing.

Broaddale Pasture is poor, have let Bargains to 24 Men; 8 to drain the Waggon Level at £5 pfathom and 28/ pBing; and the remainder to raise Ore at 30/ pBing.

Crawlah. We have 8 Men driving the new Level from the Engine foot at £4p fa.m; they have cut a Vein lately, but have not made any trial in the Great Limestone, to prove it as yet.

The old workings are only poor, have let Bargains to 10 Men in them, to raise Lead at £7-10-. PTon

Thos. Emerson

**5 Oct 1816 William Crawhall to Martin Morrison**

Allenheads. Oct 5/1816  
Michaelmas Bargains

Allenheads Mines are much the same as stated in the last report, and upon the whole likely to produce more Ore the ensuing quarter, the Old Workings I think are better - the cross Vein at the East end is wrought by 4 Men @ 28/ pBg, and has every appearance of continuing productive, after the water level gets up (which I suspect will be in the course of six months) the Vein will then be wrought to greater advantage clearing the Vein of water and causing a good communication for Air which will enable us to work the whole of the great Limestone, we now are only able to work about 1/3 of its depth.

Wentworth Vein is now wrought by 32 Men @ 38/ pBg 8 Men @ 20/ pBg and 6 Men @ 28/ pBg. The Workings in the Old Vein and Flattshaft have been tolerably productive last quarter & are let for the ensuing quarter to 20 Men @ 30/ pBg & 10Men @ 28/ pBg.

Diana Vein is now wrought by 10 Men @ 30/pBg, 2 Men @ 29/ pBg & 6 Men @ 28/ pBg, this Vein where cut at Eastend last quarter is considerably poorer than when first cut, so much that I am under the necessity of raising the price from 25/ to 28/ pBg for the ensuing quarter.

Swinehope Mines are now let for the ensuing quarter to 8 Men @21/ pBg 10Men @ 30/pBg & 8 Men @ 28/ pBg, the west forehead in Limestone continues as poor as last quarter - the low Level is driving in the Great Limestone with all speed, we gave cut the Vein from the Level X has come to a great quantity of water which totally prevents us working it, till the water Level is under the High Flatt

According to your directions have reduced the highest price pBg for raising Ore to 30/ and have reduced all the plate Levels and Dead work let by Bargain about one seventh, their situations considered and have reduced all the wood cutters & carriers of wood 1/7 for the ensuing year, and our Newcastle Carriage from 3/4 to 2/8 pCwt. Timber etc to be reduced in proportion for the present year. Millwrights from 22/- to 19/- pWeek. Joiners, Smiths, Woodmen etc in proportion –

I am etc Willm. Crawhall

**1 Jan 1817    George Crawhall to Martin Morrison**

[Note: Date not given but sequence in letter book indicates it relates to the last quarter of 1816]

Coalcleugh Bargains

The Mines at Coalcleugh are extremely poor & nearly the whole of the Ore Workings require considerably more price pBing (if the value of Lead would admit of it) to make the Workmen a sufficient maintenance than is now given as there is nothing of consequence at Coalcleugh but Workings that have been wrought for a series of years & of course they got much exhausted & require a greater price; the earnings are now & will be the ensuing quarter very low, and without we meet with something shortly more productive than what we have, it will be impossible to continue the

number of Workmen that are now employed at Coalcleugh; they are nearly all employed at present but I am afraid a part of their earnings will not exceed their Subsistence Money. - We have met with nothing new since the last Report, but I am of opinion we are approaching near to Whitewood Vein in the North Level at the east end we have cut some strong strings that I suppose to be near the Vein. The eastward forehead in the Limestone is not so good as last quarter & producing very little Ore at present, there is nothing more particular, the other necessary Dead Work is going on at Reduced Prices. - The Barneycraig Level is going on as usual but have cut no Veins. The eastward Workings are generally poor, the Bargains consist of 4 Men raising Ore @ 25/. 6 @ 29/. & 40 Men @ 30/ pBing. the Westward Workings are also poor, the Bargains are 4 Men raising Ore @ 28/ & 52 @ 30/ pBing. 16 Men are raising Ore in the topsills @ 30/ pBing.

Hartley Cleugh - We have opened a length since last quar. at the south end which continues very poor and no better appearance for raising Ore, the back ground us raising Ore much better than last quarter, & the Men are all employed, the Bargains are Six Men raising Ore & 20/. 6 @ 26/. & 20 & 28/ pBing.

Keirsley Row Level is going forward with 6 Men & 10 Men are raising Ore @ 30/ pBing. Bateshill has produced a few Bings of Ore the last Quarter but have met with nothing that will work at the price pBing now given, 4 Men continue making a further trial.

I remain etc

George Crawhall

**1 Jan 1817 William Crawhall to Martin Morrison**

[Note: Date not given but sequence in letter book indicates it relates to the last quarter of 1816]

Allenheads Leadmines are much the same as last quarter, except (for) 2 or 3 of the best Workings, which are fast working out & get considerably poorer. -

The Cross Vein at the East End is wrought by 4 Men @ 2<9>/pBg. I think the prospect better in this Vein than last quart. If the Vein was unwatered and a better communication for Air which I expect to be able to accomplish in the course of a few months, which will enable me to employ more Workmen & expose the whole thickness of the great Limestone.

Wentworth Vein is wrought by 8 Men @ 20/ oBg & 50 Men @ 30/. I have 20 Men working Dead Work, Driving plate Levels, & sinking in the Vein to unwater the Cross Vein, & 18 Men driving the Horse Level in Fawside & the top Level to try the upper Sills in the aforementioned Cross Vein, which I expect to be within 40 fathoms of. - The Workings in Flat Shaft & in the Old Vein are likely to produce Ore this quarter more than they have raised last, let to 37 Men @ 30/. & 10 @ 28/ pBing.

Diana Vein is let for the ensuing quar. to 10Men @ 30/. 2 @ 29/. & 6 @ 28/ pBg. this Vein upon the whole is considerably poorer - I have 6 Men cutting Cross in the Limestone to Diana Vein 40 fathoms further East than this Vein has ever been wrought or proved.

Swinhope Mines are let for the ensuing quarter to 16 Men @30/. & 6 Men @ 21/. PBg. - This Mine is considerably poorer than last quar. I am apprehensive in the Ore Bargains that are let, the Men will not be able to make more than 8/. or 9/. I think the West forehead continues without Ore, I have loosed a large feeder of Water in the forehead which I expect comes from a strong Cross Vein that we have cut in the plate Level driving Westward 6 fathoms before the Limestone forehead, which I flatter myself when cut in the Limestone will be productive of Ore.

The Low Level is driving by 8 Men @ 190/. pfa in the great Limestone, and I am not able to try the Vein further yet on account of the Water loosed last quart.

I am &c Wm, Crawhall

### **6 Jan 1817 Thomas Emerson to Martin Morrison**

Newhouse 6th January 1817

#### A Statement of the Weardale Lead Mines

Middlehope Shield continues to raise Ore tolerable well, have let Bargains to 58 Men 8 to drive the Waggon Level at £3.15- pfam. 16 to raise Ore at 26/. pBing, 8 at 27/.pBg, 8 at 28/. pBg and the remainder at 30/.pBg.

Company's Grove is likely to raise Ore much the same as usual, have let Bargains to 50 Men, 8 to drive the Waggon Level and raise Ore at 28/. per Bing and the remainder to raise Ore at 30/.

Slitt is poor, have let Bargains to 21 Men, to raise Ore at 30/ pBing. –

Greenlaws continues poor, have let Bargains to 14 Men to raise Ore at 30/ pBing.

Levelgate is only poor, have let Bargains to 134 Men, 8 to drive the Waggon Level at £4 pfam & 30/ pBing, 8 to drive the Vogue Level at £2-10 pfam& 30/ pBing, 8 to raise Ore at 25/ pBing and the remainder at 30/.

Black Dean, is poor at present, have let Bargains to 43Men 6 to drive the low Waggon Level at £7.10 pfm&30/pBing & the remainder to raise Ore at 30/.

Breckonsike is poor, have let Bargains to 19 Men to raise Ore at 30/ pBing. –

Burtree Pasture is not so good at the fore-end; there is a cross vein come thro' which has rather injured her at present, the back lengths are raising Ore tolerable well, have let Bargains to 185 Men, 8 to drive the Waggon Leven at £5 pfm; 12 to sink in the Quarry < Hazel > at £5-10pfm & 30/ pBing; 8 to raise Ore at 22/ pBing; 8 at 25/; 8 at 26/; 6 at 27/; 28 at 28/ & the remainder at 30/pBing. –

Sedlin is poor, have let Bargains to 88 Men, 8 to drive the low Level at £7-10pfm & 30/ pBing; 8 to drive to Middle Level at £5 pfm and 30/ pBing, and the remainder to raise Ore at 30/pBing. –

Barbary is much the same as last quarter, have let Bargains to 22 Men to raise Ore at 30/pBing.

Wolf Cleugh is very poor, have only let Bargains to 4 Men to raise Ore at 30/ pBing.

Broad-Dale pasture is poor, have let Bargains to 15 Men, 8 to drive the Level at £5 pfm and 28/ pBing, the remainder to raise Ore at 30/.

Bolts-Burn - This is a new place. - towards the latter part of last summer I was induced to set on a Level on the East side of Rookhope Burn with an expectation of finding the Company's Old Vein and I am glad to inform you that we have cut a Vein near the place expected, which is rather hopeful considering the situation where it is cut, as the Sills are not very good but I hope it will lead to a discovering of the Vein on the West side of the Burn, which may be of great use to Col Beaumont and the Country as the Sill is very good from the Burn - side to the Fell- top; We have let a Bargain to 8 Men to raise Ore at 30/ pBing.

Thos. Emerson

### **31 Mar 1817 George Crawhall to Martin Morrison**

Coalcleugh March 31/1817

The Mines at Coalcleugh have not been so unproductive for several years as at present, the Old Workings get much reduced and no new trials that has been made have not yet been so productive as to make up the deficiencies; We have found nothing new since the last Bargains -- The east <forurd> in the Limestone continues very poor, but the Flat in the last opened length is better & let to 8 Men @ 25/ pBg, the North level in the Cross String has produced Ore tolerably well the last quarter but have not yet cut Whitewood Vein as was expected, the other Workings in present are very poor - the Bargains in the East End consist of 8 Men raising Ore @ 25/ pBg & 44 Men @ 30/ pBg. at the West End 46 Men are raising Ore @ 30/ pBg - Hartley Cleugh - the Strata at the south end is broke if in consequence of the Vein crossing a Brook where the Great Limestone (the only bearing Stratum) has entirely disappeared and nothing but Clay & other irregular substances in its place from the appearance of the situation the Level will be to drive 100 fat. before the Strata <put> regularly on or any probability of producing Ore, this unforeseen circumstance has caused a number of Men to be out of employment & in consequence of which we have begun the North Level which has stood 12 Months, but is now driving at a low price with 8 Men viz. @ 50/. pfa. & 20/.pBg. Which required nearly double that price could the Workmen had employment elsewhere, the Old Workings are much the same as last quarter & the Bargains are 4 Men raisg Ore @ 20/. & 20 Men @28/.pBg.



Keirsley Row has produced Ore better than at the last quarter than before & in all probability may continue as I expect we are not far from the fore-end of the Old Works - the Bargains are 8 Men raising Ore @ 20/ pBg- 4 Men driving the Level & 6 Men cutting X to the Sun Vein.

Bates Hill has a much better appearance for raising Ore than has been since it was last opened - 4 Men have been taken at Bargain to raise Ore at 30/ pBg.

I am et.

Geo. Crawhall

**11 Apr 1817 William Crawhall to Martin Morrison**

Allenheads, April 11/1817

The State of Allenheads Lead Mines is quite as promising this quarter as they were the last -

The Cross Vein at East End is wrought by 4Men @ 29/pBg & 6 Men @28/ pBg& is considerably better since the Bargains were let, & is likely to produce more Ore this quar. than was raised last - but have not yet unwatered the Vein by the Low Level coming up under the Great Limestone which prevents us working the Limestone lower than the top of the High Flatt -

Wentworth Vein is wrought by 8 Men @ 20/ pBg 6 Men @ 28/. & 38 Men @ 30/ pBg. I have 20 Men driving Slate Levels & sinking to unwater the Cross Vein so as to enable us to work it more effectually - & 12 Men cutting Cross Cuts in <plate> to different parts of Wentworth Vein.

The Workings in the Old Vein & Flatt Shaft are in general poorer than in last quarter - now wrought by 8 Men @ 28/ pBg & 22 Men @ 30/ pBg.

Diana Vein is let for the ensuing quarter to 6Men@ 28/ pBg 2 Men @ 29/ pBg & 14 Men @ 30/ pBg.-

Swinhope Mines are considerably poorer this quarter than they were last - now wrought by 18 Men @ 30/ pBg & 6 Men @ 28/ oBg - we have <. >. to try the Vein much at the West forehead yet in consequence of the large feeder of Water <> last quarter. - The Low Level is driving by 8 Men @ 190/ pfa & 30/ pBg for what Ore they raise in driving in Great Limestone, & have 8 Men cutting Cross out of this Level to try the Vein @ 160/ pfa & 28/ pBg for raising Ore.

I am Wm. Crawhall

**17 Apr 1817 Thomas Emerson to Martin Morrison**

Newhouse April 17/1817

Weardale - MiddlehopeShield is raising Ore much the same as last quar. have let Bargains to 46 Men - 8 to drive the Waggon Level @ £3-15 pfa - 8 to raise Ore @ 26/. PBg 24@ 27/. & 6@30/pBg.

Companies Grove is rather poor at present, have let Bargains to 40 Men - 12 to drive the Waggon Level & raise Ore @ 20/ pBg & the remainder to raise Ore @ 30/pb.

Slitt is poor, have let Bargains to 14 Men to raise Ore @ 30/ pBg.

Levelgate is only poor but from the great No. Of Men employed is likely to raise a good quantity after this quar. have let Bargains to 169 Men - 8 to drive the Waggon Level @ 80/. Pfa. & 30/ pBg 8 to drive the Vogue Level @ 50/ pfa & 30/ pBg, 8 to drive a Drift under the Limestone at £3 pfa & 30/pBg- 6 to raise Ore @ 26/ pBg - 8 @ 28/. P? & the remainder @ 30/ pBg.

Coalcleugh [Crawlah?] is doing very little at present have only let Bargains to 6 Men - 4 to rise into the Pattinson Sill @ 40/ pfa & 30/ pBg & 2 to raise Ore @ 30/ pBg.

Blackdean is very poor, have let Bargains to 30 Men - 6 to drive the Waggon Level @ £7.10 pfa & 30/pBg - & the remainder to raise Ore @ 30/ pBg -- Breckonsike is poor have let Bargains to 12 Men to raise Ore @ 30/ pBg.

Burtree Pasture, the Cross Vein mentioned in our last, has taken the Old one of her <point>, so that we have not been able to discover her thro' it as yet, the back lengths are raising Ore much the same as last quarter, have let Bargains to 124 Men - 8 to sink in to the Quarry Hazel @ £6 pfa & 27/ pBg - 8 to raise Ore @ 26/ pBg - 20 @ 27/pBg 26 @ 25/ pBg & the remainder @ 30/ pBg.

Sedlin is only poor, have let bargains to 48 Men 8 to drive the Low Level @ £7 pfa & 30/pBg & the remainder to raise Ore @ 30/pBg.

Kilhope is poor have let Bargains to 22 Men - 8 to drive the Low Level @ £5.15 pfa & the remainder to raise Ore @ 30/pBg.

Barbary continues poor, have Bargains to 16 Men to raise Ore @ 30/ pBg.

Longtyhead is likely for raising more Ore this quar. than she has done of late, have let Bargains to 14 Men to raise Ore @ 39/pBg.

Wolfcleugh is very poor - have only let Bargains to 7 Men to raise Ore @ 30/pBg

Broaddalepasture is raising Ore much the same as last quar. - have let Bargains to 23 Men - 8 to drive the Level @ £5 pfa & 28/pBg & the remainder to raise Ore @ 30/pBg.

Boltsburn continues hopeful - but requires the best price p Bing - have let Bargains to 30 Men - 8 to drive the Level @ 10/ pfa & 30/pBg - & the remainder to raise Ore @ 30/pBg.

Thos. Emerson

### **30 Jun 1817 George Crawhall to Martin Morrison**

Coalcleugh Mines 30 June 1817

Coalcleugh Mines are no better than last quarter, with the exception of one working in the Flat at the east end which is tolerably good. We have cut into a Cross dyke in the

Galloway Level forehead which has entirely cut off both the Vein and Strata. We have driven 15fms into it and no appearance of coming to the east side of it. I expect it will not be less than from 25 to 30 fms wide before we come to the east check where the Strata <puts> regularly on and no search can be made to find the Vein until we get perfectly through it.

The other trials etc are regularly foreword but nothing have been met with since last bargain worthy of notice.

The ore bargains at the east end consist of 8 Men raising Ore at 20/ pBing, four men at 28/ and thirty five Men at 30/pBing. .. at the west end 44 Men are raising Ore at 30/ pBing and 18 Men raising ore at 30/pBing in the top sills.

Hartley Cleugh, the south Level is going forward but it has not got to where we expect the Strata putting on to be productive; the Ore bargains are four men raising Ore at 20/ pBing and fifteen men at 28/ pBing.

Keirsleyrow, We have cut a cross Vein at the Level forehead which has thrown the west check off the Limestone six fathoms down, and apparently been the cause of the Vein being lost when formerly wrought, as there are no appearances of any Old Workings to the west of it. We are now making search to find the Vein, which I expect we will effect in a short time, 8 Men are raising Ore at 30/ pBing.

Bateshill is not so promising as last quarter; We are trying another length forward and 4 Men raising Ore at 30/pBing.

I am &c Geo. Crawhall

### **8 Jul 1817 William Crawhall to Martin Morrison**

Midsummer 1817

Allenheads July 8th 1817

I have now got through the Midsummers Bargains and consider the State of the Mines at Allenheads upon the whole better than last quarter. We have all our men employed except about 14 which I hope to be able to give employment to in the course of this week.

The Cross Vein at East End is now wrought by 6 Men at 28/ pBing and 4 at 29/ for raising Ore, and have 14 Men driving a plate Level southward in this Vein from the leading forehead, who I expect will accomplish this length of ground before Michaelmas and be working Ore also. - we have not unwatered the Limestone in this Vein consequently are not able to work it lower than last quarter.

Wentworth Vein in all probability will be more productive of Ore this quarter than last, now wrought by 8 Men at 20/ pBing, 12 Men at 28/ and 36 at 30/ pBing and 18 Men are driving and cutting across in the plate to different parts of this Vein.

The workings in the Old Vein and at Flatt Shaft are much the same as last quarter, now wrought by 6 Men at 28/ pBing and 25 at 30/. 12 Men are opening out two old shafts into the flats at West end, which accomplished will enable me to work that part of the Mine to greater advantage than we hitherto have done. -

Diana Vein is more promising for the ensuing quarter than last, now wrought by 12 Men at 28/& 14 Men at 30/ pBing. –

Swinhope Mines, are much the same as last quarter, now wrought by 6 Men at 28/ and 12 Men at 30/ pBing; little has been done at the West forehead of this Vein since last quarter from the Water standing so much in the Vein. The low Level is now extremely hard and driving at 210/ per fathom by 8 Men. We have cut the Vein in two places from this Level at 20 fathoms distance which is very poor. 8 Men are driving in the Vein now at 100/ pfathom & 30/ pBing for what Ore they raise in driving. I am et  
Wm. Crawhall

**11 Jul 1817 Thomas Emerson to Martin Morrison**

New House. 11th July 1817

A Statement of the Weardale Lead Mines

Breckonsike is very poor, have only let Bargains to 8 Men to raise Ore at 30/pBing.

Burtree Pasture is poorer than hitherto, the back lengths being much wrought out and We have not found the Vein at the fore end as yet, have let Bargains to 137 Men, 12 to cross cut each way before the cross Vein in order to discover the old one at £10 pfam: 8 to raise Ore at 26/pBing, 22 Men at 27/, 26 Men at 28/ and the remainder at 30/pBing.

Killhope is more hopeful than last quarter, have let Bargains to 32 Men, 8 to drive the Level at £5-5pfathom and the remainder to raise Ore at 30/pBing.

Sedlin continues poor, have let Bargains to 59 Men 8 to drive the Low Level at £7 pfam and 30/pBing, 8 to raise Ore at 27/ and the remainder at 30/pBing.

Middlehope Shield is likely for raising a good quantity of Ore this quarter, have let Bargains to 42 Men, 8 to raise Ore at 26/pBing, 16 at 27/; 16 at 28/ and the other 2 at 30/pBing.

Middlehope is likely for raising Ore much the same as last quarter, have let Bargains to 48 Men, 8 to drive the Level north at £3 pfa and 36/ pBing; 12 to drive the Level south and raise Ore at 28/pBing; 6 to rise up into the Coal Sills at £3-10 pfm and 36/ pBing and the remainder to raise Ore at 30/pBing.

Slitt is poor, have let Bargains to 8 Men to raise Ore at 30/pBing.

Levelgate continues to raise Ore tolerably well, have let Bargains to 154 Men, 8 to drive the Waggon Level at £5-10 pfa and 30/pBing, 8 driving a drift under the Limestone at

£2-10pfa and 30/pBing, 6 to raise Ore at 20/pBing, 8 at 26/ and the remainder at 30/pBing.

Black Dean is only poor, have let Bargains to 28 Men, 6 to drive the Waggon Level at £7 pfm and 30/ pBing & the remainder at 30/pBing.-

Barbary is poor, have let Bargains to 20 Men, 6 to drive the Level at £5 pfa and 30/ pBing and the remainder to raise Ore at 30/pBing.

Longty head continues much the same as last quarter, have let Bargains to 20 Men to raise Ore at 30/ pBing.

Wolfeleugh is doing very little at present have only let Bargains to 8 Men; 4 to drive a drift in the Limestone at £2 pfm and 30/ pBing and the remainder to raise Ore at 30/pBing.

Bolts Burn is rather poorer than last quarter, have let Bargains to 32 Men: 8 to drive the Waggon Level at £2 pfm and 30/pBing, 8 to drive the Vogue Level at £1 pfm & 30/pBing and the remainder to raise Ore at 30/ pBing. –

Thos. Emerson

### **30 Sep 1817 George Crawhall to Martin Morrison**

Coalcleugh Leadmines Septr. 30th 1817

Coalcleugh Mines in general are better than last quarter, the foremost length at the Eastend of the So. Vein is very good we have got another Sump down & cutting cross about 20fas. before the forehead and we have met with a Flat that has some Ore in it, which gives us a flattering prospect of the Vein being good when it is cut, the cross Vein to the North has raised Ore very well the last quarter, and the north String cut at the north extremity of the cross Vein offers much better to raise Ore then last quarter, all the other old workings continue very poor and nothing new has been discovered. We have not got through the great cross Dyke at the Eastend so that I can give you no more information respecting it than what was in my last report. The Ore Bargains consist of 8 Men raising Ore at 20/ pBing, 4 Men at 28/pBing and 37 Men at 30/ pBing. at the westend 50Men are raising Ore at 30/pBing and 8 Men in the topsills at 30/pBing.

Hartley Cleugh Mines are excessively poor, we have sunk a shaft from the surface to the low Level forehead and have not met with any sound Strata, the So. Level is going forward the north Level is also going forward but produces very little Ore, the other workings are very poor and much wrought out , the Bargains are 10 Men raising Ore at 28/ pBing.



Keirsleywellrow, we have driven the Level 10 fathoms through the cross Vein and have now turned it in a north direction in search of the old Vein, but have not yet met with any thing of consequence. 6 Men are raising Ore in the background at 30/pBing.

Bateshill continues very poor, we have driven the Level 10fas. the last quarter which has made no improvement. 4 Men are raising Ore in the background at 30/pBing.

I am &c Geo. Crawhall

### **30 Sep 1817 George Crawhall to Martin Morrison**

Weardale Leadmines Sept. 30th 1817

The Mines in Weardale generally are poorer than they were at Midsummer bargains and I calculate of the general produce being less the ensuing year than last on account of some of the Levels not being up to the forend workings at the principle places which I have stopd on account of being wrought to a great disadvantage I shall endeavour to describe the situation of each particular place under the different inspecting agents in their respective districts.

West district under the inspection of John Tinniswood.

Kilhope Mines in all probability will be more productive in a short time than they have been for a long time past, a low Level at the bottom of the Great Limestone is driving up to drain the old workings a part of which is already drained and producing Ore, a Whimsey Shaft is also sinking which we calculate of holing to the Level in four or five months after which we shall be able to open some more favourite ground that I flatter myself will be productive and employ more Men, the present bargains consist of 26 Men raising Ore at 30/ pBing, 8 Men driving the Level and 8 Men sinking the Shaft.

Guinea Grove has been very productive the last year according to the number of Men employed and from all appearances may continue but the Strata dip so fast that the Great Limestone has got below the Level and renders the workings very inconvenient by having the Water to raise which takes a great part of the workmens time. I would recommend a low Level to be begun to drain the four fathom Limestone which I think may be productive, and it also will enable us to rob the old works more effectually; the bargains are 8 Men raising Ore at 25/pBing and 20 Men at 30/pBing.

Breckonsike, the foreheads in this Vein have been given over some years since and I am afraid are not worthy of perseverance, the back ground is very much wrought out and only 8 Men raising Ore at 30/pBing.

Burtree Pasture, The workings in this Vein west of the cross Vein are generally good, but being wrought to a considerable depth below the random of the lowest Level, and having the Water to drain causes them to require a greater price pBing than they might have wrought at had they been freed from Water. the cross Vein at the

forend has thrown the Limestone 3 fathoms down so that we only have one fathom hold of it with the lowest Level, and should it be productive of Ore it will be entirely under Water. - the Vein east of the cross Vein is taken 14 fathoms to the South of the point of the Old Vein and is very poor and hard, but I think has sufficient strength to carry Ore if it was driven a few fathoms forward. in consequence of the Great Limestone getting principally under Water at the forend, and the Quarry Hazell raising Ore as deep as can be wrought for Water, west of the Cross Vein, I would recommend an Engine to be erected at the most convenient place in this Vein to win the four fathom Limestone & probably it might have power to raise the Water from some lower Strata, which I have not the least doubt would be productive of Ore under the parts where she has been so rich in the Limestone and Quarry Hazell above. - The Ore bargains in this Vein consist of 44 Men raising Ore at 25/ oBing 42 Men at 28/ pBing and 54 Men at 30/ pBing.

Sedling, the workings in this Vein are excessively poor, the west end is all worked out to the Burtree Dyke which has cut the Vein entirely off. The Eastend Level Foreheads are very poor and have no appearance of improving, the last two sump lengths opened will not work at the best price pBing we are now giving, I have assisted some of the partnerships with a few pounds more than the best price pBing as it will be wrought at less expense now when every thing is in good repair, than at any future period, the Ore Bargains consist of 36 Men raising Ore at 30/ pBing.

East district under the inspection of John Cleminson

Levelgate, the workings in this Vein are poorer than they were last quarter and have been wrought to a great disadvantage for want of the low Waggon Level being up to drain the workings, the top Level which we have now stopd is 100 fathoms before the low Level, and the workings have been attended with a good deal of unnecessary expense by sinking dumps, drawing water and using a greater quantity of Wood than will be required if the low Level was driven up, which will relieve all those inconveniences: the produce will be considerably less this year in consequence of stopping the forend workings until the Level be up. the Bargains are 8 Men raising Ore at 20/pBing 8 Men at 25/ pBing 28 Men at 28/ pBing and 89 Men at 38/pBing.

Blackdean Vein is considerable poorer than usual and very few Men are employed the low Level is going forward and 20Men raising Ore at 30/pBing.

Elmford Vein, Eight Men have opened an Old Level at the bottom of the Great Limestone for nothing and are now raising Ore at 30/pBing. I think it would be adviseable to begin a low Level under the 4 fathom Limestone which I expect will be whole & the Level will only be about 100 fathoms to drive to cut the Vein.

Lonthead Vein has produced Ore tolerably well the last quarter and has the appearance of continuing , it is a very soft and uncertain Vein, the Men frequently work for a number of weeks and get nothing but when they meet with Ore it is got very rapidly which makes up the lost time. - the Bargains are 20 Men raising Ore at 30/pBing.

Barbary Vein is excessively poor and the foreheads very hard, also a bad prospect of becoming better if it does not improve in a few fathoms driving we will be under the necessity of laying it in. 6 Men are driving the low Level and 14 Men raising Ore in the back ground at 30/pBing.

Slit Vein is very poor and all the Levels have been given up three years since, only 8 Men are raising Ore at 30/pBing. when the times will admit of expending Money in such places I would like to push the Levels forward, as they have gone a very short distance without Ore, and the Vein had dead places in it in the Ground that has been gone through.

Middlehope Shield, the cross Vein is raising Ore very well at present, but I am afraid it will not be of long duration as the low Level is nearly up to where the Limestone has been wrought back from the Govt. Cos. Level and after the Levels are holes to each other, the produce will be considerably less on account of a great part of the Vein being wrought. I have begun the South Level in the cross Vein which has stood a long time on account of its poverty but I think there is the same probability of raising Ore as at the North end if it was pushed forward; the Ore bargains consist of 12 Men raising Ore at 20/pBing, 8 Men at 27/pBing, 16 Men at 28/pBing, 16 Men at 29/pBing and 20Men at 30/pBing.

Earncleugh Vein has been entirely left off working for being so poor. I have employed six Men to cut cross to a north Vein that I think is likely to raise Ore a few fathoms distance from the other Vein, at some future period I would recommend the Level forehead to be put forward westward it has been left off on account of the Strata being broken or unsound but the ground rising rapidly and the other Strata <pulling> on, I think there is no doubt of the other Strata being perfectly sound at a short distance where the Vein is likely to be more productive.

Greenlaws Vein is very poor and has raised little Ore the last year and no apparent prospect of getting better shortly. the Level is going forward which is about 30 fathoms short of a Cross Vein that I expect will make no alteration and if not for the better it must be abandoned, only 4 Men are raising Ore at 30/ pBing.

Rookhope district under the inspection of John Forster.

Wolfeleugh, the Old Vein is so excessively poor that we cannot let one bargain at 30/ pBing. the Engine is sunk to the bottom of the 4fathom Limestone and a very strong Vein cut, but no Ore in it. we are trying her east from the Engine foot in the Limestone. the Vein is also cut in the Quarry Hazel and driven a few fathoms but so poor that it will not work at any price pBing, another Level is driving at the bottom of the Great Limestone which is some better but will not work by Bing. the new Vein is nearly as poor and only 4 Men raising Ore at 30/pBing.

Foolwood Vein is very poor and only 4 Men raising Ore at 30/pBing.

Boltsburn Vein continues much the same as when first opened 24 Men are raising Ore at 30/pBing and we have begun a new Vein to cut the Ore on the west side of Rookhope Burn.

Crawlah, the Level is going forward from the Engine foot but have cut no Veins. 12 Men are raising Ore in the old workings at 30/pBing.

N.B. I have viewed all the regular working Mines and have placed as many Men to them as is my power and I am sorry to say a great number remains out of employment, and it appears evidently to me that the population depending upon the Mines is considerably more than they can support according to the present value of Lead

I remain &c George Crawhall

**23 Oct 1817 William Crawhall to Martin Morrison**

Michaelmas Bargains 1817

Allenheads Mines

We have now got through the Michs. Bargains which commences the new year and have all the workmen at this place in employ, The appearance of the Mines in general is more flattering than they have been for a few years past altho' we have no particular rich workings. - We have now discovered Wentworth Vein on the east side of the Cross Vein at Eastend which I have every reason to hope will be as productive as it has hitherto been, and the cross Vein carries Ore tolerably well southward so far as it has been driven, this enables us to drive more men in the foreheads.

Should the Strata continue dipping eastward as it generally does in all those Mining districts, a low Level would be adviseable for the future Workings of those Mines effectually but from the flatness of the Country would be under the necessity of going a considerable distance down the Vale to procure the necessary Level, this however if adopted will be a work of time and great expense before it would be accomplished, although by such an undertaking there is a probability of discovering Veins that are unknown at present and would also intersect the Swinhope Veins (which cross about two miles below this place) in a situation which would not be made practicable without a Level of this kind or an Engine. - Should you think of commencing such a work of time, I'll make the necessary Levellings, Surveys etc and an estimate of the probable expense and time it would require to accomplish.

The Cross Vein at Eastend is now wrought by 10 Men at 28/ pBing and 6 Men sinking on the eastside of this Vein in Wentworth Vein at 100/ p fathom and 20/ pBing for raising Ore - the other parts of this Vein are now wrought by 20Men at 28/pBing and 34 Men at 30/ pBing, 32 Men driving plate levels, boring et in this Vein to unwater the Great Limestone.

The Workings in the Old Vein and at Flat Shaft are much the same as last quarter, wrought by 6 Men at 28/pBing and 18 Men at 30/pBing, the 12 Men opening out the two old shafts as mentioned in last report have nearly finished them and one of the

partnerships is raising Ore at 28/ pBing in sinking and in every appearance is likely to continue productive.

Diana Vein in the eastend is richer of Ore than has been for some years past and is now wrought by 12 Men at 28/pBing, & 6 Men at 30/ pBing.

Swinhope Mines are poorer than last quarter they are now wrought by 14 Men at 30/pBing and the west forehead in the Limestone is driving at 100/pfathom and 28/pBing but it produces little Ore. the String we cut in the plate in September last so flattering is not yet proved in the Limestone, the Men having only got their Sump down a week ago: we have not yet been able to make my further discovery in the North Vein since its quarter. - the Low Level is better to drive than last quarter it is now driving by 8 Men at 160/ pfathom and 28/pBing for what Ore they raise in driving but the Vein continues very poor.

I am &c William Crawhall

Allenheads Octr. 23rd 1817

### **30 Dec 1817 William Crawhall to Martin Morrison**

Xmas Bargains 1817

Allenheads Mines - Dec. 30/1817

I have now got through the Lead Mines Bargains at this place for March quarter 1818 and have great pleasure of informing you, from this present appearance, they are likely to produce more Ore this Year than they have done in one year for some time past, and have all the workmen in employment. We are not able to work Wentworth Vein discovered on east side of Cross vein mentioned in last report to advantage, on account of Water, but expect to unwater the working in the course of this quarter by a Low Level driving in the Great Limestone by 6 Men at 126/pfathom which after holed to the foremost Sump will enable us to extend the workings in this Vein further east and make a better communication of Air. I have six men sinking in this vein at 140/ pfathom and 20/pBing for what Ore they raise. The Cross Vein is now wrought by 6 Men at 28/pBing 4 Men at 24/ and expect in a month to have 6 Men more, working Ore in this Vein who are now sinking to the South foreh. at 140/pfathom.

Wentworth Vein is wrought by 20 Men at 28/pBing; 30Men at 30/ pBing, 6 Men cutting cross at 120/pfathom and 28/pBing, 33 Men are Boring, Sinking and driving plate drifts in this Vein.

The workings in Old Vein and at Flat Shaft are wrought by 6 Men at 28/ pBing, 22Men at 30/, and 6 Men at 160/ pTon when smelted into Lead. The Shafts mentioned in last Report are now finished and 6 of the Men have the above Bargains at 160/ pTon, the other 6 Men to cut cross to South Diana Vein (110 from West from whence the forehead was left) to prove this Vein in new ground.



Diana Vein in the east end is now the richest Mine at Allenheads, the east forehead is driving by 6 Men at 21/pBing and the West length adjoining wrought by 6 Men at 18/, 6 Men at 28/ and the old workings in the Vein wrought by 20 Men at 30/ pBing.

Swinhope Mines are very poor wrought by 20 Men at 30/ pBing, the west forehead is rather better than last quarter, have sunk three Sumps in North Vein, and am sorry to inform you can find no Ore of consequence,

The Low Level is much the same as last quarter, it is now driving at 168/pfam and 28/pBing for what Ore they raise in driving but the Vein continues very poor.

Wm. Crawhall

### **30 Dec 1817 William Crawhall to Martin Morrison**

[Note: Date not given but sequence in letter book indicates it relates to the last quarter of 1817]

#### Coalcleugh Mines

In general are poor with the exception of two workings in South Vein at East -end, the foremost length opened in this Vein mentioned in last quarter's Report is not so rich now, but likely to produce a considerable quantity of Ore; is now wrought by 8 Men at 20/pBing and this Vein is cut at east end of this length in cross-cut named in last Report and have the forehead driving eastward by 8 Men at 20/pBing and from what we have yet opened the Vein does not appear to be so rich as the length west has been but have seen little into it only having cut the Vein a week before Xmas, there is about 100 fam. of whole ground from this Vein forehead Westward to Cross dyke which I have little doubt of carrying Ore. -

The Cross Vein to North has raised Ore tolerably well last quarter and from present appearance is more flattering for the coming, being considerably softer better's ? drive.- all the other old workings in Flats at west end are very poor and some nearly wrought out, nothing new has been discovered, causes the Men to continue their old workings whom I am apprehensive will not be able to earn their subsistence money at the present price per Bing. - the great cross dyke at east end is not yet cut through, I can give you no more information respecting it than in the previous reports.

The Ore Bargains at East end consist of 16 Men at 20/ pBing as above mentioned and 57 Men at 30/pBing,- at the West end 53 Men raising Ore at 30/ pBing and in the top sills 11 Men raising Ore at 30/pBing.

Bateshill raising no Ore, have driven the Level at random of high flat in great Limestone 10 fathoms, without producing any Ore, and have 6 Men sinking from high flat to low drift in bottom of great Limestone, and 4 Men trying the Coalsills above great Limestone who find no Ore and I think the prospect bad, but if any further trials are to be made, now is the best time when the Shafts and other conveniences are all in good repair.

Keirsley Row Mine raising no Ore, and am prevented making further trials in Cross vein mentioned in last Report, in consequence of the Level running together for near 30 fathoms, caused by a <crease in the Level Sole> and am under the necessity of driving as much new Level. –

Hartley Cleugh, is extremely poor, the south Level forehead has been driven 25 fms last quarter and is continued by 8 Men; the Strata does not appear to be any sounder; and if the Limestone does not <flect> on again in the course of driving 40 or 50fms further I think the prospect of finding the Ore very doubtful at the South end. The North Levels are going on but produce no Ore and I also think the prospect very bad in this end; the Old Workings are nearly wrought out; the Ore bargains are 4 Men raising Ore at 30/ pBing.

I am sorry I cannot give you so favourable a Report of the Mines in West Allen below Coalcleugh as I could wish. If there is nothing new discovered in the course of this Year will not be able to keep the number of Men employed to advantage. -

William Crawhall

### **30 Dec 1817 George Crawhall to Martin Morrison**

[Note: Date not given but sequence in letter book indicates it relates to the last quarter of 1817.]

Weardale Mines

West district

Kilhope Mines are no better than last quarter; the low Level mentioned in the last Report is not driven up to the Whimsey Shaft so that we have opened no more fresh ground and little variation have taken place in the old workings; the Bargains consist of 20 Men raising Ore at 30/ pBing.-

Guinea Grove has been very good the last quarter which has enabled us to reduce the price pBing in the leading workings, the Water in the workings below the Level has increased very much, and should it continue increasing I am afraid the under Level workings will be entirely lost until a lower Level be taken up. I have begun the low Level under the four fathoms Limestone that was recommended in the last Report. The Bargains consist of 8 Men raising Ore at 20/ pBing; 8 Men at 21/ and 20Men at 30/pBing.

Breckonsike no trials or dead work are going on at this Vein and only 10 Men raising Ore at 30/pBing.

Burtree Pasture, the workings in this Vein continue tolerably good, but being wrought to a greater depth below the Water Level every quarter causes them to be attended with more expense as the deeper it is wrought the quantity of Water increases which now requires double the number of Men to draw it, than it did three months back. The vein at the foreend east of the Cross Vein is very poor, and appears much

weaker than last quarter, which leads me to think we have not the whole Strength of the Vein and in order to make a further discovery I am induced to continue the south cross cut (which is driving with 8 Men) in expectation of meeting with something better. The Bargains consist of 28 Men raising Ore at 25/pBing, 22 at 28/ pBing and 100 Men at 30/ pBing. - We are purposing putting in an Engine as recommended in the last Report, as expeditiously as possible, we have measured the quantity of water that can be procured to work it, and find the power quite inadequate to work a water wheel ( which would have been preferable to any other construction could it be done) & are under the necessity of putting in a Hydrostatic Engine, similar to that at Coalcleugh, which will be done at less expense & I expect will answer the purpose.

Sedlin Vein continues very poor and little alteration in the foreheads. We are approaching with the Levels near to some ground that was more productive in the upper strata which gives us expectation of improving. We are also sinking a Sump 30fms before the last one but have not yet tried the Vein. The Bargains consist of 40 Men raising Ore at 30/pBing.

#### East district

Level gate . The workings in this Vein are rather poorer the last quarter, and we are opening no fresh ground at the forend in consequence of the Waggon Level not being up to the foremost workings and the back ground working out; of course We must expect the produce less for some time. We have sunk a Sump through the four fathom Limestone which I had great expectation of, but it has a bad appearance for raising Ore and not being satisfied with this trial I have begun another Sump about 40fms distant from the other, which will make a satisfactory trial in the Limestone. The Bargains consist of 6 Men raising Ore at 24/pBing, 8 Men at 25/, 28men at 28/ and 80 Men at 30/ pBing.

Blackdean. The workings in this Vein are very poor and no new trials on hand: the Waggon Level is going forward in the Vein and 28 Men raising Ore at 30/pBing.

Elmford. The old Level is opened to such a distance that the Men are unable to bank the work without the assistance of a Horse; we are now enlarging the Level to put in a Horse which will bank the work at one half of the expense and be of farther advantage in drawing Old Dead &c which generally produced a quantity of Ore from old wrought Mines; 8 Men are raising Ore at 30/pBing.

Longtyhead Is it yet so good as last quarter, but I can not see any cause why it may not be as productive as it had been; the Level is going forward in the Vein and 14 Men raising Ore at 30/pBing.

Barbary is some better than last quarter, the Vein in the Level forehead is stronger and contains more Ore, which gives Us hopes that it may be productive again, 16 Men are raising Ore at 30/pBing.

Slitt Vein.- After examining the situation of the Level forehead particularly, and finding them so very poor, hard, and want of Air., We thought them unworthy of expanding money upon them as yet. We are making a trial in the Quarry Hazel 40fms

before the last One, but I think the prospect is not a very good one. - There was formerly an Engine in at Slitfoot, but taken out upwards of fifty years since, and removed to a place at Wearhead, that was more productive at the time and in an immediate want of an Engine. From the most accurate information I can collect of the situation when left off from some old Miners who were Workmen at the time and place, it appears that the Engine was taken away more for the cause of being wanted at another place than from the actual poverty of this; and that they recollect other places being left that would work at the prices now given. I am of the opinion that if an Engine was replaced, there would be no fear of meeting with workings that would answer. The Bargains in this Vein are 8 Men raising Ore at 30/ pBing.

Middlehope. The cross Vein has been very good this last quarter, and continues so in the ground that has been cut through at that time, but Middlehope Shield Level being now holed to the Level to the Governor & Co Vein, in the Cross Vein, will cause this part to be soon wrought out, having no whole ground but flats and the poorest parts of the Vein that is left; the Flats offer to carry Ore very well in some places but in others good for nothing. - the North and South foreheads are both very poor and producing no Ore. - The Bargains consist of 8 Men raising Ore at 20/pBing; 8 Men at 22/ , 16 Men at 28/; 8 Men at 29/ and 22 men at 30/pBing.

Earncleugh.- In the Cross-cut begun last quarter to cut a north Vein we have unexpectedly met with a cross vein which has taken the other  $\diamond$  point, and I am now of opinion has also been the cause of the first Vein ceasing to carry Ore. as we have not cut the Vein at the distance expected, we are continuing the cross cut 10fms farther, but I think it doubtful meeting with anything.

Greenlaws- has no better appearance than last quarter and has been so long dead and become so expensive that if it does improve in a little time I think it unworthy of persevering in.

#### Rookhope district

Wolfeleugh. We have got very little done at the trials begun last quarter in consequence of the Engine wheel, being a very old one and having fallen to pieces, and the workings filled with Water; the Wheel is now repaired and set to work, but the Water is not got out.

Bolts-burn Vein is poorer than last quarter, the Levels are going on and 18 Men raising Ore at 30/pBing. -

#### Stanhope district

Crawlah, No alteration has taken place in the workings this quarter, 14 Men are raising Ore at 30/pBing. -

Yew tree Vein in Bollihope, 4 Men have taken a bargain to raise Lead at 170/ pTon and £12 for opening a Level. -

George Crawhall