NEIMME/BUD/3

NEIMME/BUD/3/1

John Buddle of the Parish of Wallsend in the County of Northumberland, Thomas Ramsay of Burnt House in the Parish of Chester-le-Street in the County of Durham, and Thomas Taylor the Younger of Whitehill Point in the Parish of Tinmouth in the said County of Northumberland Colliery Viewers, severally make oath and say, that having been requested by the Agents of His Grace the Duke of Northumberland they did on the 21st day of September 1808 descend a Pit or staple then lately sunk on Shire-moor adjoining to the East Boundary of Backworth antient Infield Grounds into the antient Workings of a Colliery, which antient Workings are within the Holy Stone Farm in the Copyhold Grounds of the said Ra Wm Grey in the Township of Backworth aforesaid and are particularly

NEIMME/BUD/3/2

delineated and described in the plan, marked with the Letter A, exhibited shewn to and subscribed by these Deponents John Buddle and Thomas Ramsay at the time of swearing this their affidavit. And these deponents say that they proceeded in a South West direction about 70 yards by a passage recently made through the Antient Workings which were so completely crushed for that distance that no trace of their manner or directions of the Workings could be discovered, but it was perfectly clear and evident to these Deponents that the Coals had all been wrought away, and that after having gone through this passage (which upon the plan is coloured yellow) which extends 35 yards into Backworth Royalty, they arrived at a Water level Drift, in an upstanding and perfect state, running in a North west direction having the whole Coal on its Southern side and the old crushed workings to the Northward, and Deponents proceeded in this drift for about 177 yards when they arrived at the bottom of the first old Pit as (marked on the Plan) which was quite open to a greater distance upwards than the Eye could reach which Pit had evidently been a Coal Pit, and by which a great quantity of Coals must have been wrought, as its sides near Bottom which are strong post or sand stone were deeply indented by the friction of Chains, which had been used in

drawing the Coals. And these Deponents following this Drift which takes a more Northerly direction here for about 56 yards further, the Deponents met with another old Pit (marked second old Pit on the Plan) the Roof being much fallen in at this Pit, Deponents could not find the marks in the Stone to prove it had been used as a Coal Pit, but from the direction of the Sledge marks which they observed very distinctly at no great distance from its bottom, as also a Sledge, in a very high state of preservation, and from other circumstances their can hardly be a doubt of its having been used as a Coal Pit. From this Pit they proceeded in a North Westerly direction for about 82 yards further where the Water level drift and the Workings terminate at a Trouble, and these Deponents further say that on arriving in the Water level Drift they carefully examined the Wall sides, and found from the direction of the Pick Marks which are very conspicuous, in several places, that the Drift had been driven in the direction in which they proceeded as above and is herein before particularly mentioned. And all these Deponents positively say that a great quantity of Coal has been formerly got out of Backworth Royalty, and these Deponents have not the least doubt of such Coals having been drawn to Bank out of Pits sunk in Backworth Ground as is proved by the

fact of the pit being deeply marked at the Bottom as before described and that the Coal wrought out of Backworth Royalty to the extent the Deponents have explored has been won and wrought by virtue of an Outstroke or Outstrokes from Shiremoor Colliery, and these Deponents ground this their opinion not only on the fact of the direction of the Pick marks but also on the two Pits in Backworth Royalty already described which were evidently in Deponents Judgment a continuation of the original Race of Pits, sunk in Shire moor Colliery, and they cannot entertain a doubt, but that Backworth, and Shire moor Collieries have been wrought by the same persons as from the fact of no Barrier having being left between Shiremoor and Backworth it is clear to these Deponents that the two Royalties had been wrought in Common, and it having been thought that the Workings in

Backworth were a continuation of the Race of Pits in Shiremoor. These Deponents having been again desired by the agents of the said Duke to descend the Pits of Shiremoor Colliery for the purpose of ascertaining whether the Judgment so formed by these Deponents was well founded and correct they again on the 26th of July 1809 descended a pit in Shire moor Colliery called the West Pit in one of Mr Gray's allotments of the said Moor and proceeded by the late workings of the Pit into the antient Water level Drift in Shire moor Colliery nearly at the place

NEIMME/BUD/3/5

where it enters Backworth Royalty and in examining the sides of the Drift they found Pick marks thereon immediately under the Boundary Hedge between Shiremoor and Backworth antient Infield Lands, which clearly prove to these Deponents that this Drift has been extended from Shire moor into Backworth, and corroborates the opinion of the Deponents, that the Coal wrought out of Backworth Royalty has been won and wrought by virtue of an Outstroke or Outstrokes from Shire moor Colliery. And these Deponents say that they then proceeded in the antient workings of Backworth Royalty in a Northern direction about 100 yards which is to the full rise of the Colliery from the Water level Drift, and found the Pillars of Coal to the Eastward near to Shire moor Boundary crushed and the Roof much fallen in which confirmed these Deponents in their opinion that these Collieries had been wrought in common. And these Deponents further say that they then returned to the place where they first entered the antient Water Level Drift in Shire moor, and travelled in an Easterly direction in the antient Drift and Workings for the distance of 500 yards. At the distance of 250 yards or thereabouts from Backworth Boundary Hedge in Shire moor old workings, they found the Engine Pit by which the Winning of Backworth had been effected. At the End of 500 yards the workings were so much fallen in as not to allow Deponents to proceed further

NEIMME/BUD/3/6

they therefore followed the recent workings of Shiremoor Colliery about 800 yards and then entered

the antient Workings again from which point the Deponents followed the Antient Water level Drift for about 800 yards further in an Easterly direction when they entered the antient workings of Murton Colliery, and proceeded in the same direction for about 700 yards and deponents again entered Shire moor antient Workings. And these deponents further say that in the course of travelling the last 700 yards they found an old Coal Pit and next passing through the antient Workings of Shire moor for about 50 yards, the Deponents entered again the old Murton Workings, in which Deponents travelled in a South East direction for about 30 yards when they ascended an old Pit in Lord Collingwood's Copyhold ground in the Township of Murton, and these Deponents further say that from the general appearances of the old Workings they are convinced that the Water level Drift and old workings have been carried forward from the East to the Westward and they are decidedly of opinion that the antient Collieries of Murton, Shiremoor and Backworth have all been wrought in common, as they cannot find that any Barrier or Warrens of Coal whatever have been left between them, and this Deponent Thomas Taylor the younger for himself saith that the Lessees of the said Duke are now working the Collieries both in the Township of Murton and in Shire moor and all these Deponents say that the broken Ground

(coloured blue on the Plan) on the surface of the Copyhold Lands of Wm Gray in the Holystone Farm in the Infield Fields in Backworth corresponds in a great measure with the crushed Workings lately discovered there and that the adjoining Grounds in Shire moor are fallen in, in the same manner as the crushed Ground in the Holystone Farm and appear to have been wrought together, in Common, and to have sunk in a similar manner. And these Deponents John Buddle and Thomas Ramsay say that they on the 7th day of August Inst. did again view the antient Workings under Beckworth when they did discover another Pit in the crushed workings (marked No 3 on the Plan) and travelling more extensively than they had done formerly made an actual survey to the full extent represented on the Plan, and say that the Water was standing on the surface on or about the place where the Pit No 3

had been discovered below Ground and it appeared that the Coal had been drawn to Bank at this Pit by the mark on a Deal Board placed there for support of the Roof. And this Deponent Thomas Taylor saith the Lessees of the Duke of Northumberland are now working Iron Ore and Coal in the Township of Murton in the Copyhold Grounds of Wm Metcalfe, Wm Rossitor and Thomas Turnbull and

NEIMME/BUD/3/8

have erected Blacksmiths and Wrights Shops, Fire and other Engines and Buildings for the use of the Collieries, and laid Waggon Ways without the least opposition from the Proprietors paying double Rent for the Damage done as is usual for the Waste and spoil of Ground occasioned thereby, and this Deponent further says that the said Coal is now also wrought in Shire moor in the allotment of Ra Wm Grey Esquire in the Field next adjoining to his Copyhold Land which Colliery is now nearly exhausted and the Coal at Backworth is now wrought up to and wanted, but owing to the injunction of this Honorable Court the same has not been wrought which is not only a Loss to the said Duke of £1000 per annum but is also a great predjudice to his tenants who will be obliged to take upon or pay Damage for the Waggon ways, which they will not otherwise have sufficient Business to employ.

NEIMME/BUD/3/9

Willington August 16th 1809

Mr Buddle

Sir

Messrs Knowsley Chapman and Co having now an offer made them of about 50 acres of Coal under Fawdon Estate, and as it is the point or Tract of Coal that so very much interferes with the regular working of the two Collieries of Kenton and Coxlodge conjointly, (which will be more readily seen by reference to the enclosed Plan) that being the case those Gentlemen are very desirous to seize

the opportunity of securing it, provided they can have liberty of Outstroke from Coxlodge, for the purpose of working the same, which indulgence I trust you will agree with me ought not to be withheld from those Gentlemen considering the hardships they labour under, in working their Colliery. Will you therefore have the goodness to lay this request before Mr Riddell for his acquiescence stating to him at the same time that the usual price for such liberty shall be paid him by the Lessees. They also wish that as the Tract in Question is so very circumscribed that instead of a single Drift or Outstroke being made into Fawdon that leave be given to continue the sheth of Boards or Workings that will be made from the New sinking Pit regularly forward

NEIMME/BUD/3/10

from Coxlodge through Fawdon into Kenton, not paying any respect to leaving the Barriers at the respective Boundaries, as it is proposed that a Barrier of Coal of 60 yards in breadth shall be left in Fawdon as represented by the dotted line a, a, and which will prevent any injury that can arise to Kenton or Coxbridge Collieries, by working the remaining part of Fawdon, and consequently will add to Mr Riddell the Coal that will be obtained from the Barrier which would have to be left in Coxlodge as described on the Plan bb.

The favour of your procuring as early an answer to this request as you possibly can will very much oblige.

Your Obedient Humble Servant

John Watson

NEIMME/BUD/3/11

NEIMME/BUD/3/12

Walls-end Colliery 20th August 1809

Jasper Gibson Esquire.

Solicitor, Hexham,

Sir,

I received the letter, and Plan which accompanies this, from Mr Watson yesterday; and on considering the situation and Circumstances of Coxbridge Colliery and the nature of this request, think that I may with propriety venture to recommend, a compliance in the request of Messrs Knowsley Chapman and Co. for permission to work about 50 acres of Coal out of Fawdon Estate, by Outstroke from Coxlodge, as stated in Mr Watson's letter.

The advantage to be derived to the Lessees from this privilege, is an accretion of Coal which will enable them to work a liberal quantity until the new Winning of Coxlodge is accomplished. The benefit accruing from it to Mr Riddell, is the Outstroke Rent on all the Coals to be wrought out of Fawdon, and also the Rent on the Coals to be wrought out of the Coxlodge Barrier. The Barrier marked a,a ,on the sketch will be substituted for the Coxlodge Barrier, and will give ample security to that Colliery.

The usual Rent paid for Outstroke is 7.6 per Tentale,

viz, For breaking the Barrier underground £ 0.2.6

For drawing the Coals up the Shaft……0.2.6

For Heap Room and Way leave……..0.2.6

£ 0.7.6

NEIMME/BUD/3/13

But in this case, as the granting of the privilege must certainly be considered as an indulgence, I think the Lessees ought to pay 9s per Tentale, and which I should expect, they will not object to.

As the Proprietor of Fawdon is now in treaty for the letting of the Coal in that Estate, it is desirable to know Mr Riddell's determination as soon as may be, as in the event of Fawdon Coal being let, it will be necessary to reserve that part, which is proposed to be wrought by outstroke from Coxlodge.

I hope you received my packet inclosing the Statement of Rent for Coxlodge Colliery up to December 25th 1808, as also Mr Chapman's letter. Whenever you may happen to come to Newcastle I shall be glad to avail myself of the opportunity to meet you there as I wish to have some conversation with you on the subject of Mr Chapman's letter and other matters relative to Coxlodge Colliery.

I am, Sir,

Your most obedient humble servant

John Buddle

NEIMME/BUD/3/13a

Extract

If my private Viewer will redirect to intelligible language, I will attend to it. And if Mr Buddle and Mr Watson will (???) certify that working of the Pillars of Coal left by Lord Deleval for the support of the

Roof V removing them, will not in any wise damage(?) the Colliery, I may perhaps lay such Certificate, if expressed in terms that are intelligible before my Lawyers. In the meantime I insist that they shall not work, or remove any of the Pillars of Coal which my predecessor left for the support of the Roof.

NEIMME/BUD/3/14

Swindon Colliery

Walls end Colliery 25th August 1809

Sir J.B. Riddell Bart

Sir,

Agreeable to your instructions I have viewed Swindon Colliery, and find that Mr Cumming is working the same in as regular, and orderly a manner as the nature of the Mine will allow. The principal point to be attended to in Collieries of this description, is to keep the Master Drain or Water Level Drift from the Engine Pit, as nearly as possible on an horizontal line; or true Water Level Course, so that the whole of the newly won tract of Coal to the dip of the former workings may be obtained to the fullest extent and this I conceive has been very well attended to, in the Case in question, as appears from the following account of a levelling from the end of the Water Level Drift, near to the present working Coal Pit, to the Pump well of the Engine.

	Ft.	In.
Fall of Ground from the Top of the Coal Pit to the Top of the Engine Pit……..	67.	5 ½
Depth of Engine Pit to the delivery drift ……	23.	3.
	90.	8 ½
Depth of Engine Pit below the Delivery Drift ……	38.	3

Carried forward 128.11 ½

NEIMME/BUD/3/15

Ft. In.

Brought forward……128.11 ½

Feet. In.

Depth of Coal Pit……..118.0

Water Level below the Bottom of Ditto……..9.0 127.0

Level lost from the Engine to the Coal Pit in a distance of about 190 yards 1.11 ½

N.B. The above loss of Level, leaves barely a sufficient descent for the Water to pass off from the workings to the Pump Well of the Engine.

SECTION

Coal Pit

The former Workings of the Colliery went no deeper than to the free Water Level Line a,a,

NEIMME/BUD/3/16

Mr Cumming has won the Coal below the free Water Level Line a,a to b; by virtue of a Water Wheel which works two sets of 7 Inch Pumps.

On making enquiry as to the expense of working the Colliery I find that Mr Cumming has agreed with Proudlock to work the Coals for 3/.p Fother , including the Horse for drawing them up the Pit – Mr Cumming sinking the Pits, finding Machinery and keeping the Pumping Engine in repair. If therefore

The annual Vend be 3000 Fothers, the selling price being 4/.

Mr Cumming will receive……..£ 150. 0.0

From which deduct the Rent at 9…….. 112.10.0

Left Mr Cumming to find Sundries……..£ 37.10.0

But as Proudlock pays Mr Cumming 1/. Per Fother for the Small as well as the best Coals the Sum received by Mr Cumming will exceed the above amount in the proportion of the difference of Rent viz. 5 per Fother for the quantity of small sold, and which can only be ascertained by inspection the sale Book kept by the Bankman.

Mr Cumming is of opinion that some of the rival Collieries which at present injure him in the sale of his Coals will cease to work in the course of two, or three years, when he fully expects that he will be able to advance the price of 5/. per Fother at least, besides increasing his Vend very considerably. Should these speculations of Mr Cumming be realized, there is no doubt of the Colliery leaving him an ample profit.

It must be remarked, that although the Colliery is not wrought strictly according to the letter of the Lease, which expresses that sufficient Pillars of Coal shall be left for the support of the Roof, it does not follow that it is injudiciously wrought, but on the contrary I am of opinion that the present system, is preferable to that prescribed by the Lease which is not applicable to the nature and circumstances of the Mines.

I am etc, etc

John Buddle.

NEIMME/BUD/3/18

Walls end Colliery 23rd November 1809

In consequence of a letter from the Earl of Lonsdale of which the following is a Copy, I requested Mr Ramsay to accompany me to Whitehaven, where we arrived on the Evening of the 24th November.

Cottismore, 22nd November 1809

Sir,

A large Feed of Water having suddenly burst into the Colliery at Whitehaven and Mr Bateman being very anxious to have your assistance and advice in a matter which he was entirely unprepared for, I shall be obliged to you, if your Engagements permit, if you could go to Whitehaven as soon as possible, and take with you any experienced Viewer you might think proper. As the Works are filling very fast it is unnecessary for me to add, that every moment is of Consequence.

I am Sir,

Your most obedient Servant

Lonsdale

To John Buddle Esquire.

Walls end Colliery

Newcastle upon Tyne

NEIMME/BUD/3/19

On enquiry we found that in drifting through an upcast Dyke in the Main Band Seam of about 6 Fathom, a large Feeder of Water about 2200 Gallons per Minute burst out of its Fissure from the bottom upwards. This took place on the Morning of the 21st Inst. and the Feeder continued with little of any abatement until this afternoon, when it diminished about ¼ th part.

An ineffectual attempt had been made to stop this Feeder by laying a Flooring of close jointed planks upon it, which Flooring was stayed down by Props from the Roof, but this Scheme was rendered abortive by the Soft Clay in the Fissure of the Dyke yielding to the pressure of the Water, and suffering it to escape past the sides of the Flooring.

The Men who were employed in laying this Flooring as above described, were soon so affected in the Eyes by the effluvia discharged from the Water as to become nearly blind.

Knowing that this latter circumstance could only arise from Waste or stagnant Water, we were naturally led to enquire if there was no some old Waste near to this place? This enquiry produced the following information, Viz.

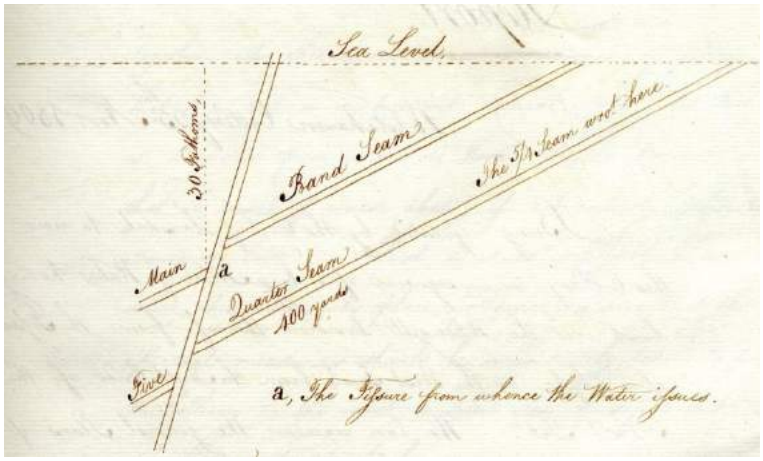
NEIMME/BUD/3/20

1. That a Seam called the Five Quarter Seam lies 40 Fathoms below the main-band Seam.
2. That the Rise part of the Five Quarter Seam had been formerly wrought to a certain extent.
3. That those former Workings of the Five Quarter Seam were filled with Water up to the Sea Level.
4. That the dip part of these old Workings was 400 yards distant from where the Water broke out at the Dyke in the main Band.

5. That from the rise of Colliery the Sea Level where the Water from the Five Quarter Seam discharged was 39 Fathoms above the Level of the Main Band where the Water burst out, and
6. That the Coal of the 5/4 Seam was pervious, and would not turn water.

The following Sketch shows the position of the Seams etc.

NEIMME/BUD/3/21



The above circumstances induced us to think……it more than probable, that the Feeder of Water was issuing from the Five Quarter Coal Waste, for as it was allowed that, the Coal of that Seam was pervious, it was by no means unlikely that the Fissure of the Dyke should be equally so.

Should the above surmise prove correct the Waste Water will soon be discharged, as the Waste is of limited extent, and scarcely any Feeders upon it, but as it would not be prudent to risk the safety of such valuable Collieries upon uncertain Data, it was agreed that the most effectual Measures of security should be taken, as pointed out in the following **Report.**

NEIMME/BUD/3/22

Report

Whitehaven Colliery 25th November 1809

Being requested by the Earl of Lonsdale to view this Colliery in consequence of a large Feeder of Water having burst into the Whingill Division thereof from the Fissure of a Dyke in the West Trial from the South Ends of this North Pit. We have examined, the general Plans of the Colliery, as also such parts of the Works underground, as we found necessary to furnish us with the requisite information on the subject of our enquiry.

It is necessary to observe that the workings of this Colliery are in two Divisions, which for the sake of distinction we shall call the Whingill or Rise Division, and the Howgill or Dip Division. _____There is not communication whatever between these Divisions, except by a Stone Drift of 420 yards in length.

The Feeder of Water issuing from the Fissure of the Dyke as above stated, discharges an alarming torrent, but from the appearance and smell of the Water,

NEIMME/BUD/3/23

together with other circumstances, we are fully of opinion, that it is not a regular and natural Spring, but that it is discharged from some old Works, or other Cavities, and that it must of course abate, if not entirely subside sooner or later. But as it is impossible to ascertain when this may take place, prudence requires that the most effectual measures should be immediately taken to place the Colliery in the most complete state of safety that its situation will admit for.

The most effectual plan to secure the Divisions of the Colliery, is by fixing Frame Dams in the South Rolly Road, and Thirl [Thill?] immediately adjoining the Fissure of the Dyke from whence the Water issues in the North Pit; but as we are doubtful that the Dams cannot be made perfectly tight and secure in that situation, we strongly recommend Mr Bateman's Plan of fixing an effectual Frame Dam on the Stone Drift between the two divisions of the Colliery, to be completed without delay.

By fixing an effectual Frame Dam in this Home Drift, the Howgill or dip Division of the Colliery will be completely secured, and as it is presumed that the old Works to the dip of the William, James, Lady, George part of Davy, and North Pits, are sufficiently capacious

NEIMME/BUD/3/24

to receive the Feeder of Water in question for about three Months, there is time enough to endeavour to fix the Dams, recommended in the South Rolly Road and Thirl adjoining the Orifice from which the water is discharged.

As we have reason to believe that this Feeder of Water is discharging from the former old workings of the Six Quarter Coal which are not extensive, we flatter ourselves, that before the Dams in the North Pit can be completed, that, that important Fact will be fully ascertained, which of course will render their completion unnecessary, at the same time, we are by no means so confident in our opinion as to advise any delay in the completion of these Dams.

We do not find it necessary to detail the Plans of the different Dams, and the manner of fixing them here, as we have discussed the subject fully with Mr Bateman, and the Parties who have to carry them into execution. _____To conclude, we must observe that in our mind, this accident has by no means arisen from negligence, or want of attention, but on the contrary feel it incumbent upon us in Justice to the Managers of the Colliery, to state, that in our opinion everything has been done on the occasion which professional ability and zeal for the welfare of the concern could effect.

John Buddle

Thomas Ramsay

NEIMME/BUD/3/25

Sketch of Mr Bateman's Frame Dam, to be fixed in the Stone Drift.

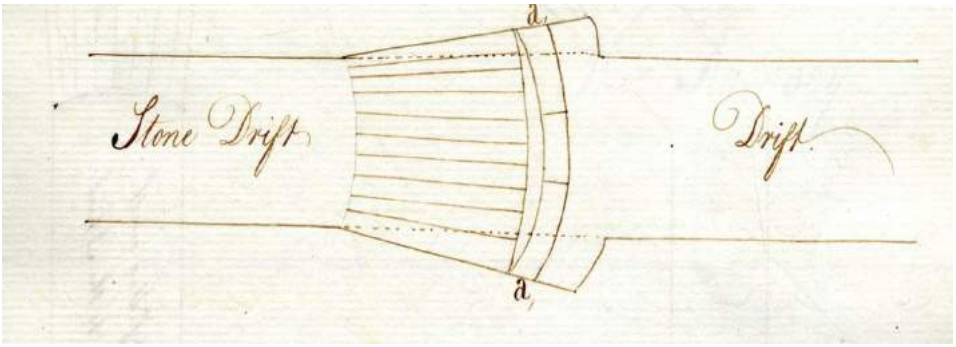
Dimensions of the Dam.

Length _____10 Feet

Tailsend----------8 Feet Square

Head ditto _____8 feet high and 11 Feet wide

Being a Tapir of 18 In. per Side.



In addition to Mr Bateman's Dam, we recommended an Oak Dam. a,a, to be placed against its head. _____ This Dam to be made of Oak Fellies swept with a Radius of 12 feet, and 12 In. in the Bed, a sheeting of Deal ½ in thick to be placed between each piece of crib, or Felly, both in the Joints and Bedwise, for the purpose of wedging in.

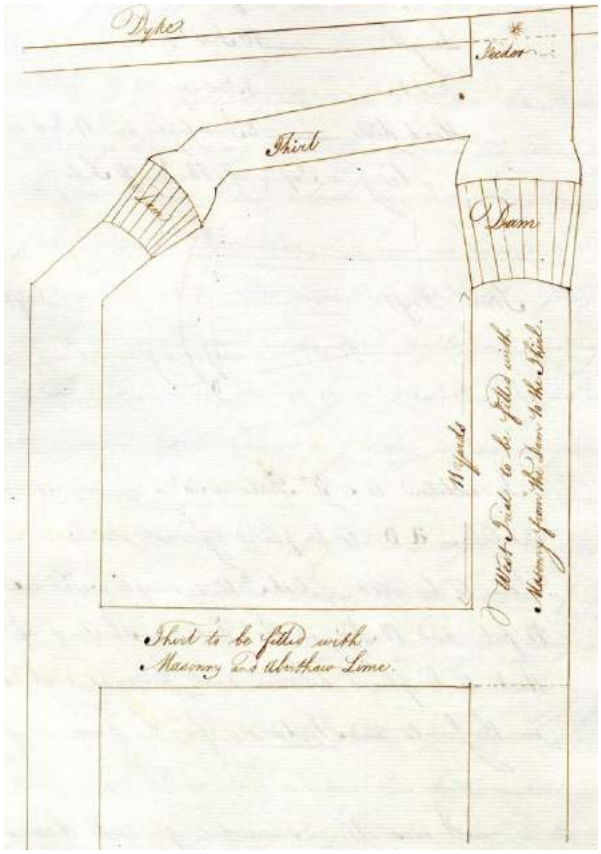
It was also recommended provided there should be time, that the Drift should be built, up against the head of the Dam for 20 yards with good Masonry and Aberthaw Lime.

The Dams on the Rolly Way and Thirl, near the Fissure

NEIMME/BUD/3/26

of the Dyke from which the Water issues are to be constructed of Fir in the same manner as the Dam in the Home Drift.

The following Sketch shews their position.



The Coal and Thill are very hard. _____ The Roof is a strong gray Metal in thin Lamina.

NEIMME/BUD/3/27

Should the Feeder continue to discharge the same quantity of water, the Dam in the Stone Drift must be finished by Wednesday next, as there is not standage in the dip Workings to hold it for longer than that time. But after that Dam is completed, there is standage enough in the Whingill division of the Colliery to hold it for three Months.

John Buddle.

Thomas Ramsay.

Newcastle 1st December 1809

We the undersigned having met this day for the purpose of endeavouring to put a Value upon that part of the Low main Coal seam in **Jesmond Estate** belonging to **Wm Hodshon Esquire** found that we could not make progress owing to the want of the necessary Data on which to ground an Estimate, and principally from the want of a satisfactory Boring to the seam in question. _____The only Borings to this Seam in the immediate neighbourhood of Jesmond are in the Town Moor and Heaton; that in the Town moor gives a favourable account of the Sean, but that

NEIMME/BUD/3/28

in Heaton gives quite the reverse. We therefore submit to the Proprietors of the Mine, that they should make a boring to the Low main Seam, at their joint expense, in a centrical part of the Estate, and we think the South end of the Palm Tree Close may be a proper place for such Boring.

John Buddle.

John Watson.

No1. December 18th 1809

Terms proposed for leading **Kenton** and **Coxlodge Coals**, the Contractor to have no Selling on Money, Grass. Money etc etc

---

1. In addition to 3d per Chaldron for loading Coals to (which is independent of the distance) to be paid as under. Viz,
2. Leading on the Wooden Way per Mile 6 ½d per Chaldron, any Fraction of Wooden Way to be accounted 1/2 a Mile with the addition of so much Iron Way as will make up the Deficiency.

3. Leading on the Iron Way per Mile 4d per Chaldron excepting the half Mile Uphill through Brodies Farm for which with the short descent from the Geers there will be allowed an

NEIMME/BUD/3/29

Addition of 2d per Chaldron.

4. A Fraction if amounting to ¼ shall be called ½: but if less than a ¼ shall be accounted as nothing.

At the above Rates in the present state of the Way the leading per Chaldron from the Engine Pit to the South will stand thus, the distance being 5 7/16Miles Viz.

Filling per Chaldron----------0.3

Uphill from the Geers……..0.2

Wooden way 1 ½ Mile at 2 ½d per Chaldron Extra..0.3which will leave 2s¾

The whole distance 5 7/16 Miles estimated as Iron Way at 4d……1.9¾

2.6 ½ per Chaldron

And when the whole way is Iron there will be a Deduction of 1 ½ Miles at 2 ½d, viz. 3 ¾d per Chaldron from 2s. 6½d which will leave 2s/3d per Chaldron (as the ¼ is accounted ½).

Additional Clauses

5. That the Contractor, shall, on being required, have Horses for any given Number of Waggons; but that the Waggons shall not be required to make more than 15 Gaits per Week from the present Pits viz.

2 Gaits one day and 3 the next, and shall be found Employment equal to 9 Gaits per Week, viz. 2 Gaits 1 day and 1 the next; either in leading Coals, or other work.

6. That Coal Waggons or Ballast Waggons carrying equal to a Chalder, shall Ballast the Ways, or strengthen the Batteries at the Rate of 8d per Mile for the loadin[g] distance, and 4d per Gait for filling and emptying.

7. That Back Loads of Timber, Iron etc. from the Staith shall be brought at Half Price per Gait, accounting 30 Cwt as a Back Load, which may be disposed in as many Waggons as expedient.
8. That Stables and Waggonmens Houses etc as customary be found by the Owners, so far as wanting those on the Farm now about to be taken.
9. That Waggonmen when not employed leading shall be employed on the Colliery at the rate of 2s/6d per Day.
10. If when without sufficient Coal work the Contractors Horses

---

No 2. Observations on the Keep of a Horse.

Mr J.C's Estimate of a Horses Annual Charge.

3 Tons of Hay at £4.10.0, NB. The price of New hay is mostly from £3 to £3.10.0…£13.10.0

Grass----------7.10.0

Oats 3 Bushills per week at 3/6 for 52 weeks…… 27.6.0

Shoes----------2.0.0

Interest of Cost and Wear and Tear of a Horse……..7.0.0

Viz. 41s per Day on 280 Days----------£37.6.0

The Carriage Men estimate their Horses at----------0.3.0 per Day

We estimate their conditions for Oats, Grass etc at a limited Price to be equal

to £14 per Annum which on 280 days is----------0.1.0

In all £ 0.4.0

Mr Blackett who leads his own Coals 5 Miles rates his Horse at 4/- per Working Day.

Therefore all these Accounts agreeing we may fairly charge the Cost of a Horse per Working Day to be 4s/-

By the practical Experiment of the Charges of different Collieries which have no local advantage to the Carriage Men (viz. men who find their own Horses) it appears that 5d per Chaldron per Mile is sufficient on Wooden Ways and rather less (with the addition of 3d per Chaldron for filling etc.) The Carriage Men estimate themselves and their Horses at the same Rate; therefore the Horse alone is 2 ½d per Mile; to which we have to add one third for Extra allowances, for Oats etc. which will make an advance of nearly a Penny, consequently the Charge on a Wooden Way may be called 6d a mile, the Charge of leading two Chalders together on a suitable Iron Rail Way, is, Horse and Man included less than 3 ½d per Mile, therefore the proposed price is more than ½d per Chaldron per Mile than what experience has proved the work may be done for.

From the Engine Pit at Kenton is 5 7/16 Miles and 2 Gaits per Day may be called the Average Work and will be easy Work as 26 Miles is found to be a fair Average Days work on a Rail Way.

By 2 Gaits 4 Chaldrons would be taken to the Staith the Pay for which at 4d per Chaldron per Mile amounting to ……..7s.3d

To which add 3d per Chalder for filling, equal to ……1.0

8.3

Out of which after deducting 18d per Gait for the Men (these men have now 15d) there will remain 5.3 for the Horse but supposing only 5/- there will then be 25 % Profit.

NEIMME/BUD/3/32

No: 3. Observations relative to Kenton Colliery continued

Our present Charge from the Engine Pit is 2s.10d per Chaldron to which setting –

on, Money, Oats, etc, add 1/3 upon one half allowed for the Horse and we shall have nearly 6d more, viz. 3s.4d per Chaldron._____We have too long laboured under this

enormous charge, the Men having declined to lead from intermediate places at the same proportion per Mile, as from the Engine Pit, even giving them into the usual estimated allowance for filling the Coals which evidently was to their advantage. What was proposed is, that we should use our own Horses to convey two Waggons each to Ouseburn Valley, and bring the light ones back, which I have ascertained to be practicable with the greatest ease._____

We are now on the point of effecting it, and the charge will then stand, viz.

Leading from Ouseburn to the Staith, by Carriage Men 20d per Gait 9 and 4 Gaits per day)……1s 8d

Additional charge on Oats etc at [?] per Working Day as before stated will be per Gait ……...0.3

The distance from the Engine Pit to the Ouseburn Geers is 2 3/16 Miles therefore our Horses can go 5 Gaits per Day, but say only 4 and the charge will be a Man per Day 3/-, a Horse 4/- } 7s for 8 Chaldrons viz……..0.10 ½

2.9 ½

which deducted from 3s.4d per Chaldron leaves a saving of 6 ½d per Chaldron in less than half of the Way, (or much

more if we go 5 Gaits). At 24000 Chaldrons annually which is much less than I expect we shall have to lead 1d per Chaldron amounts to £100 a year.

We have not now the means of leading the Coals we can sell without adopting the measures recommended.

The Carriagemen have hitherto had no Bargain of their Contract, because from having no Staith down the Water to lay our Coals upon, and the Upper Staith being full, they were always without work when we had no ships, which will not be the case after May next, and is also provided for by the 5th Clause of the proposed Agreement.

William Chapman

NEIMME/BUD/3/34

Hebburn Colliery 23rd October 1809.

At a **Board** held here this Day

Present

Mr Rankin

Mr Ellison

Mr Thomas

Mr Walters did not come till the business of the day was nearly over

Mr Woodhouse

Mr Nelson

Mr Buddle

The **Colliery Plan** was examined and the quantity of whole Mine and Pillars yet remaining to be wrought was estimated, and gave the following result viz.

Jarrow

	Whole Coal Acres	Broken Acres
Above the Dyke	33	160
Below the Dyke	40	40
	73	200

Hebburn

Above the Dyke	18	388
Below Ditto	130	137
	148	525

Dean and Chapter

Below the Dyke	100	100

NEIMME/BUD/3/35

Estimate of the Produce of Coal in Hebburn Colliery.

Jarrow Whole Coal

Chaldrons

Above the Dyke 33 Acres at 1092 Chaldrons per acre……..36,036

Below Ditto 40 Ditto at 630 Ditto per acre_____25,200

Broken.

Both sides the Dyke 200 Acres at 400 Chaldrons per acre _____ 30,000

141.236

Hebburn Whole Coal

Above the Dyke 18 acres at 1240 Chaldrons per acre……22,320

Below Ditto 130 Ditto at 965 Ditto per Ditto_____ 125,450

Broken

Both sides the Dyke 525 acres at 400 Chaldrons per acre…….210,000

357,770

Dean and Chapter

Whole and Broken 100 acres at 1000 Chaldrons per acre……..100,000

_____

Quantities collected

	Chaldrons
Jarrow_____	141,236
Hebbburn _____	357,770
Dean and Chapter_____	100.000
	599,006
Deduct 1/8th for Small and Waste ____	74,875
Total Profitable Coal	524,131

At 40,000 Chaldrons Vend per ann. The Colliery will last 13 Years. Continued/

NEIMME/BUD/3/36

On discussing in the fullest manner the situation of the Colliery Underground, as to its capability of affording a regular annual supply of Coals, it was agreed that the Maximum Annual quantity of Ship Coals should be stated at 40,000 Chaldrons upon which the following **Estimate** was founded.

_____

Estimate of the Annual Charge of Working 40,000 Chaldrons of Ship Coals at Hebburn Colliery

supposing the **Coals** to produce 1 ¾ Chaldrons per Score will require 22,858 Scores to be Wrought.

	£	s	d
Pit Charges including every article charged in }			
The Overmen's Bills for working 22,858 Scores }_____	15,943	9	--
Screening , Wailling, Heap Keepers, Corf Batters etc.----------	2057	4	--
Waste wprk £1500, Shift work £ 800_____	2,300	--	--
Labourage, Cartage, and Horsekeeping----------	1170	--	--
Corving, £857.3.6, small Corves £ 128.11.0_____	985	14	6
Joiner Work----------	1000	--	--
Smith Work_____	845	--	--
forward . **£**	24,301	7	6

NEIMME/BUD/3/37

	£	S	d
Brought forward	24,301	7	6
Mason Work_____	550	--	--
Working Pumping Engines £1040, ditto machines £488.2s	1,528	2	--
Leading Coals 40,000 Chaldrons_____	833	6	8
Waggons and Ways, making and keeping in Repair---------	156	--	--
Binding Pitmen_____	260	--	--
Stationary----------	25	--	--
Colliery Rent on 2296 Tons @ 15/6d per £1729.8.0_____			
But as the short Workings of Jarrow Grange are to make up it will not exceed_____	1181	19	--
Agency (not charged)----------	710	--	--
Cesses and Taxes_____	360	--	--
Stowing----------	2,500	--	--
Keeping Upper and Underground Horses viz. 156 Horses at 1 ½ boll per Week 12168 bolls Oats 8s per £4867.4.0			

Ditto 91 Cwt of hay 709 tons.16 cwt Hay .110/per 3903.7.0			
Purchase to make up Compliment of Horses and to keep up the Stock 46 Horses at £ 25	8,770	11	--
Bricks £400, lime £50, Stones and Tiles £80	1150	--	--
Ropes, Pit Ropes 18 2/3 Tons, Grab Rope 12 cwt, 3 Jack ropes 18cwt, small Ropes 10 cwt. 20 2/3 Tons of Ropes at £120.	530	--	--
Timber 350 Loads at £10. £3500, Oak, Elm, and Oak Plank £300	2,480	--	--
Iron 35 Tons from £22 ti £33 say £27 per Ton----------	3,800	--	--
Props 22,700 at 9d			
Cast iron Goods----------	945	--	--
Sadlery Goods and Hardware	851	5	--
White paint etc £40, Horse Drugs£50, Leather £40	700	--	--
	235	--	--
forward	130	--	--
NEIMME/BUD/3/38	51,997	11	2
Brought forward £			
Brazier for Pit Lamps and Iron Goods	51,997	11	
Plumber Work £220. Flannels etc £170----------	20	--	2
Candles £385, Grease £180 and Oil 12 Tons at £40 £480----------	390	--	--
Nails £310, Beech Rails £35, Gunpowder £70----------	1,045	--	--
Sundry small Contingent Charges, Keel Dues, Allowances, Bed Money, Loft Rents etc	515	--	--
	500	--	--
	54,467	11	--
Deduct for Oil to be Deducted off Overmen's Bills----------			2
£	300	11	2
Cost per Chaldron: £	54,167	0	0
	1	7	1
October 23rd 1809			
John Buddle.			
40,000 Chaldrons Ship Coals sold at 33s……..	£	s	d
Small Coals	66,000	--	--
	400	--	--
Cost Working----------	66,400	--	--
Profit £	54,167	--	--

40,000 Chaldrons Ship Coals sold at 31s----------	12,233	--	--
Small Coals_____			--
	62,000	--	
		--	--
Cost Working----------	400		--
	62,400	--	
Profit £			
	54,167	--	--
10,000Chaldrons Ship Coals sold at 29s ----------			--
	8,233	--	
Small Coals_____			--
	58,000	--	
			--
	400	--	
Cost Working----------			--
	58,400	--	
Profit £			--
	54,167	--	
	4233		--

NEIMME/BUD/3/39

Valuation of Elswick Colliery Stock

December 31st 1809

	Value of Materials Including the Workmanship.			Value of Materials etc as using Stock or the Turn, they would be worth to an Undertaker viz to stand to his Debit as Dead Stock.		
	£	s	d	£	s	d
Materials and Workmanship for the Staith	473	--	--	460	--	--
Waggon Way Branches_____	186	--	--	150	--	--
Ballast Waggon Way----------	50	--	--	25	--	--
10 Coal Waggons and Materials_____	180	--	--	160	--	--
2 Ballast Waggons----------	18	--	--	18	--	--
Inclined Plain, House and Materials_____	300	--	--	250	--	--
Wood Bridge etc----------	10	--	--	6	--	--
Oak Plank_____	100	--	--	60	--	--
Screen----------	73	--	--	60	--	--

Metal Materials to spare_____	80	--	--	80	--	--
Gin with Materials----------	76	--	--	50	--	--
Saw Pits_____	97	9	--	60	--	--
Tinker's Lodge----------	12	--	--	6	--	--
Lathe_____	21	4	--	12	--	--
Grindstone----------	--	10	--	--	10	--
Woodhouse for the use of the Workmen_____	10	--	--	5	--	--
Machine Fire House----------	10	--	--	8	--	--
Landsale Stalls_____	5	--	--	3	--	--
11 Sledges----------	10	--	--	7	--	--
Flying Cradle_____	--	10	--	--	10	--
Water Tubs----------	15	--	--	12	--	--
Smith's Slack Troughs_____	8	--	--	8	--	--
Corf Bow Pattern----------	1	--	--	--	15	--
Smith's Drilling House_____	12	--	--	10	--	--
2 Screwing Clams----------	5	--	--	5	--	--
Conduit Covers_____	10	--	--	---	---	---
Forward £	1763	13	0	1456	15	0

NEIMME/BUD/3/40

	£	s	d	£	s	d
Brought Forward	1763	13	0	1456	15	0
Gates_____	14	--	--	10	--	--
Railing ……..	5	--	--	5	--	--
Joiner's Shops_____	75	--	--	30	--	--
Hogger Pump……..	2	10	--	2	10	--
Tackle Roll 15/-_____3 Jack Rolls 30/-_____	2	5	--	2	5	--
Ship Screws……..	3	--	--	3	--	--
Stable_____	100	--	--	80	--	--
Ropes etc……..	150	--	--	150	--	--
Wheel Barrows at Pit Heaps_____	8	--	--	8	--	--
9 Pair of Underground Gears……at 14/- £6 . 6. 0						
3 Hay Ropes_____ 1.10.0						
3 Pokes……..0. 7.0	8	3	0	8	3	--
4 West Houses_____	400	--	--	350	--	--
Smith's shops……..	160	--	--	145	--	--
Carving House_____	43	--	--	37	--	--
Office, Dwelling House, Store House etc……..	660	--	--	600	--	--
Main Engine and Materials_____	2500	--	--	2200	--	--
Machine and Materials……..	1800	--	--	1200	--	--
Pumping Apparatus attached to Ditto_____	320	--	--	300	--	--
Timber in the Raff Yard as per Particulars……..	192	8	--	192	8	--
Articles in Smith's Shops, Implements etc _ ____per Ditto	382	16	5	382	16	5
Ditto in Store House……. as per Ditto	173	12	--	173	12	0
Valuation of Horses_____ as per Ditto	311	--	--	311	--	--
Farming Materials…….. as per Ditto	164	1	--	164	1	--
Geho,[?] Trapping etc _____ as per Ditto	23	10	--	23	10	--
Underground Materials…… as per Ditto	2181	18	3	1500	--	--

100 Tons of Hay_____ at £6 each £600.0.0						
40 Bolls of Oats…….. at 7/- each 14.0.0						
60 Ditto of Wheat_____ at 22/- each 66.0.0	705	--	--	705	--	--
1000 Chas of Coals resting …….. At 18/2 per Chaldron	908	6	8	908	6	8
Total £	13,057	3	4	10,948	7	1

NEIMME/BUD/3/41

Live and Using Stock Viz. £ s d

Ropes_____£ 150. 0. 0.

Underground Gears etc …… 8. 3. 0

Timber in the Raff Yard_____192. 8. 0

Articles in Store House……..173. 12.0

Horses _____ 311. 0. 0

Farming Materials…… 164. 1. 0

Geho, Trapping etc _____ 23. 10. 0

Hay and Corn etc ……..705. 0. 0

Coals_____908. 6. 8

£ 2636. 0. 8

December 31st 1809

Report and Estimate of the Profit which Elswick Colliery should made yearly, to remunerate the Proprietors for the Capital sunk in the Concern.

_____

As the value of a Colliery depends solely upon the Profit to be derived from a regular Annual Vend of Coals, and which must be larger or smaller, according to the Situation and circumstances of the Colliery, to produce a fair Return to the adventurer for his Capital expended in the Winning after defraying the Working Charges; but as Elswick Colliery has

not yet been able to obtain an adequate Vend for the Capital expended in the Winning, and for the support of the Establishment indispensably necessary for carrying

NEIMME/BUD/3/42

on the Concern, it does not of course furnish correct Data on which to ground an Estimate of its value, as a current going Colliery, we must therefore proceed hypothetically.

This Colliery is now completely won, and in a situation to produce 18,000 to 20,000 Chaldrons of Ship Coals yearly, but as this quantity is much beyond what there is any reasonable prospect of obtaining, at least for many years, I think the fairest ground on which to form an Estimate of its Value, will be, to assume such an Annual Vend, as the Cost of the Winning, and the support of the Establishment would require to remunerate the Proprietors for the Capital Expenditure.

It is necessary to premise, that from the best information that can be obtained there is Mine enough to supply a Yearly Vend of 20,000 Chaldrons for nearly 100 years, its value therefore considered as an Annuity amounts to a perpetuity; but I will consider its value for the residue of Mr Hodgson's Lease only viz. 37 ½ years.

By the Colliery Books it appears that the Total Sum advanced by the Proprietors up to

	£ s d
The 31st Dec 1809 is …….	20,420. 11. 8
Owing to Sundry Tradesmen, Rents etc ……	4,577. 13. 0
Total amount of Capital employed……	24,998. 4. 2.
From which deduct the Value of the Materials, as worth	
to be sold as old Stock _____	7,425.14.2
Leaves sunk in the Concern	£ 17,582.10.6

NEIMME/BUD/3/43

Now to redeem £17,582.10s.6d the sum sunk as above stated in 37 ½ years allowing the Proprietors 15 % per annum for the same, will require a Yearly Revenue of £ 2651.0.0.

To produce this Revenue it will require a Vend of about 14,000 Chaldrons of Round, and from 3,000 to 4,000 Chaldrons of Small Coals to be sold at the present prices viz. 18/- for the Round, and 7/- per Chaldron for the Small.

A Yearly Profit of £1810 would pay the Proprietors 10% per annum on the Capital sunk, and redeem the same in 37 ½ years which under the present circumstances of the Colliery and price of Coals would arise on a Vend of about 10,000 Chaldrons Best and 3,000 Chaldrons Small.

John Buddle

Memorandum.

Total amount of Stock as per Valuation £10,948. 7. 1.

Articles which would sell for the Sum at which they are valued viz.

Timber in the Raff Yard…	£ 192.8.0	
Horses_____	311.0.0	
Hay, Grain and Potatoes..	705.0.0	
Resting Coals_____	908.6.8	
		2,116.14.8

It is to be supposed that this Part of the Stock might sell for 40% less

than the Sum valued…… £ 8,831.12.5

Then £100 : £40 : £ 8831.12s 5d : £ 3,532.12s 11d

3532.12.11

5298.19. 6

2116.14. 8

£ 7415.14. 2

NB. Supposing the Colliery to make a Profit of £ 2651 yearly; it would in that Case be worth to a purchaser allowing him to make 10% on the purchase Money and to redeem the same in 37 ½ years, about £ 26,000.

NEIMME/BUD/3/44

Report on Twyzell Colliery 1st September 1803

We have examined the mode of working Twizell Colliery now wrought in the low main and Hutton Seams and carried on by Messrs. Featerstonhaugh and Co as Lessees. And we are of opinion that Thomas Wade Esq. the Lessor ought to have a proper Indemnity from the said Lessees or from their Predecessors, for all or any Trespasses that have hitherto been made under the Lands adjoining to the said Twizell Colliery.

We are of opinion that the present Mode of working the Colliery will produce the largest Proportion of Round Coal, but according to our Judgment a much greater quantity of Coal would be obtained by a first and second working, to do which, the Winnings ought to be 14 yards in the Hilton, and 12 yards in the Low main, leaving the Wall 9 yards thick in the former, and 7 in the latter.

And it appears to us that 1/8th part of the Hutton seam being Small, and about 1/18th part of the Lowmain being also Small, is cast back by the Hewers and left Underground, but on perusing the abstract of the Lease, as we do not find any Clause to justify such Proceeding, are of opinion that they, the said Lessees ought not to leave such proportion of the Mine underground, without the approbation and Leave of the Lessors.

Signed

Thomas Humble.

John Buddle Junior

NEIMME/BUD/3/45

Blank Page.

Abstract of Hartley Colliery Valuation taken in December 1808

By Messrs Phineas Crowther, John Robinson, John Stoker, Peter Russell and Thomas Stanton

	Timber Materials			Cast Iron Wrought, Iron, Brass, Copper & Lead Materials			Total		
	£	s	d	£	s	d	£	s	d
Ballast Crane and Old Oak laying beside Dyke	42	2	0 ½	19	12	10	61	14	10½
Boiler Plate Furnace				48	15	5	48	15	5
Chatham Pit	17	2	3	268	10	3	285	12	6
Cart Gear and Cartwright's Shop	34	1	5	11	17	5	45	18	10
Deal Trimmers for Ships	1	0	0				1	0	0
Davy House Engine				750	14	5	750	14	5
Fire Coal Trunk	5	5	0				5	5	0
Joiner's Shop and Robert Jackson's Workshop	2	5	5	12	14	2	14	19	7
Large Wood Bridge	352	12	5	10	16	6	363	8	11
Landsale Pit	32	19	0				32	19	0
Nightingale and Chatham Pits	23	2	6	234	2	7	257	5	1
Nightingale Pit Main Engine & Sundries laying beside Ditto	172	16	6 ½				172	16	6 ½
Old Main Engine, 2 Boilers & Ditto……Ditto	144	3	4	1174	14	9	1318	18	1
Sliver Hill Main Engine 2 Boilers & Ditto……..Ditto	169	9	0	884	3	9	1053	12	9
Spout, West of Coppiras House	34	10	7				34	10	7
Spout, East of Ditto	34	2	0				34	2	0
Spout, West of Drawbridge	3	5	0				3	5	0
Spout, in the Cut & Sundry Timber in 2 old Spouts in Ditto	25	5	10				25	5	10
Stock in Raff Yard, Saw Pits and Joiner's Shop	82	14	2				82	14	2
Store House under Colliery Office	12	0	11 ½	2	0	11	14	1	10½
Store House at Dairy House	15	8	9				15	8	9
Store Houses No 1 £46.6.5, No2 £26.4.5.& No 3 £ 61.4.8				133	15	6	133	15	6
Stack Garth at Dairy House	3	6	8				3	6	8
Smiths Shops				197	10	0	197	10	0

	£	s	d	£	s	d	£	s	d
Waggon Ways……	622	0	4 ¼	___	__	__	622	0	4 ¼
Wrought Iron Plate Way on the Waggon Way_____	___	__	__	58	15	8	58	15	8
Waggons, Waggon Coops and Stock in Waggon Wrights Shop……..	98	18	8	429	10	3	528	8	11
Whim Gins, including Iron Shaft, Frame and Pulley Wheels_____	27	5	0	___	__	__	27	5	0
	1955	16	10 ¾	4237	14	5	6193	11	3 ¾
Horses, Hay, Carts and Trappings etc as per Valuation_____							1095	18	3

NEIMME/BUD/3/48

Percy–main Colliery. March 7th 1810

On measuring the quantity of Coal remaining unwrought in Percymain Colliery, this morning, I find it to be as follows, viz

In Bewick and Crasters Royalty, after making a reasonable Deduction,	acres
for loss by Dykes and Barriers ……	216
In the Duke's Ditto……	625
Total acres unwrought…….	841

Stating the average thickness of the Seam at 6 feet the produce per acre, under the present system of working, from the Whole Mine, is…….. 979 Ch

Pillars…….. 561 Ditto

1540 Ch. Per acre

but may with safety be stated at 1600 Ch. Per acre.

The aggregate Produce per acre is	1600 Ch.
From which deduct ¼ for Small	400
Leaves the quantity of Ship Coals	1200 Ch per acre

Then 841 the Total Number of Acres, multiplied by 1200, gives 1,009,200 Ch. the total Quantity of Ship Coals, contained in the Mine.

And supposing the Annual Vend of Ship Coals to be 45,000 Ch. the above quantity will supply that Vend for 22 ½ years.

Now to Value the Colliery

I will assume the Profit per Chaldron to be 8/-, or £18,000 a year,

NEIMME/BUD/3/49

and stating the Duration of the Colliery at 20 years only, which is the Term of the Duke's Lease from the 25th Inst. and considering the Yearly Profit, as an Annuity, payable yearly, for 20 years, it is worth to a Purchaser allowing him 10% per annum, on his Capital
£ 153,252

which is also to be redeemed in the time, 8.514 years Purchase, or Live and Using Stock

worth in ready money 9,700

Dead Stock 34,184 from which Deduct 40% leaves 20,515, the revertionary Value of which,

to be sold at the end of 20 years, allowing a Purchaser 5% is 7,730

1/9th is £18.964.13s.4d Total Value £170,682

John Buddle

NEIMME/BUD/3/50

Walker Colliery

Newcastle upon Tyne 22nd

July 1810

Messrs Fenwick, Buddle and Hill.

Gentlemen

The Right Worshipful Isaac Cookson Esquire, Junior. Mayor and the other Gentlemen of the Common Council of this Town, have requested, that I should take your opinion as to Walker Colliery, and to give your Answers to the following Questions,

I remain Gentlemen

Your obedient Servant

John Watson

Question 1. What quantity of Coal is it probable will be obtained from the High Main Coal Seam in this Colliery, stating its duration upon a Vend that may fairly be expected therefrom during its continuance?

Answer. On examining the Plan of this Colliery we are of opinion that the Pillars which now remain unwrought will produce 48,000 Chas of Merchantable Coals, which Quantity will supply an assumed annual Vend of 36,000 Chas for Sixteen Months.

NWIMME/BUD/3/51

Question 2. Is it your opinion that the Low main Coal Seam, or other intermediate Seams in this Colliery can be let or wrought to Profit at present, or at any future period? In order to enable you more fully to answer this question you will examine the Borings made, which explored those Seams at the Charlotte Pit in the Year 1802, which accompanies this request?

Answer. From an investigation of the Boring made in the Charlotte Pit in 1802, we do not see Grounds to hope that either the Low main, or any of the intermediate Seams of Coal, between that Seam and the High main are likely to meet the immediate attention of any Mining Adventurer. We are however decidedly of opinion that the working of those Seams, will hereafter become an object of pursuit, and consequently a source of Revenue to the Corporation.

Question 3. Should you be of opinion that the Low main or other Coal Seams in this Estate, is now, or will hereafter prove beneficial to the Revenue of the Corporation, by letting or working them, what effectual Plan would you adopt to secure access to the same in that case; as you will observe when the High main Coal Seam is exhausted and the Colliery ceases working, the High main Coal Waste will of course be filled with Water. Should you recommend any of the Shafts to be Tubbed at that Seam in

NEIMME/BUD/3/52

order to prevent their being annoyed by the Water when Sinking to the Low main or other Seams, you will be pleased to point out which of the Shafts you would recommend to be secured for that purpose, and what may be the probable expense of completing the same?

Answer. Being of opinion that the Low main and some of the other Seams below the High main will at no very distant period, become a source of Revenue to the Corporation, we recommend that access should be preserved to those Seams by effectually Tubbing the Charlotte and Jane Pit Shafts through the Waste of the High main Coal Seam. It occurs to us that the best mode of effecting this purpose will be by Cast Iron Tubbing and Masonry, the former not to be less than 12 Feet inside Diameter, 2 ½ Inches thick in the Shell, and the latter to be composed of good Ashlar Stones, and put together by Roman Cement, Aberthaw Lime, Terras, or some other good Water Cement. Previous to fixing the Tubbing, we recommend that the two Pits before mentioned should be secured by Pillaring and Stowing the Workings immediately adjoining the same, to the distance of 80 Yards in every direction, after which we advise the Shafts to be enlarged above and below the Seam, in all, for a distance of 5 Fathoms in each Pit, in order to receive Tubbing of the dimensions above recommended, the expense of effecting the whole of which we estimate at £6000.

NEIMME/BUD/3/53

Question 4. You will have the goodness to extend your inquiries to the adjoining Colliery of Lawson's Main, in order to ascertain what measures are pursuing by Messrs Harrison Gorst and Co in respect to perforating the Barrier between that Colliery and Byker Old Waste, and state your opinion as to the injury Walker Colliery may sustain in the event of their letting off the Water from the Byker Wastes; as it will perhaps be necessary to ascertain this fact to enable you to state at what time it may be necessary to have the Tubbing put into the Shafts if you advise it to be done?

Answer. We have considered the Proceedings of Messrs Harrison Gorst and Company at Lawson main, and have not the least doubt but that they have it in their power to perforate the Red Lane Barrier, and discharge the Water from the Old Byker Waste to an unlimited extent. The injury which Walker Colliery may suffer from this Circumstance depends solely upon the quantity of Water which may find a passage through the Byker Frame Dams; but as this cannot be possibly ascertained until those Dams have actually sustained that increase of pressure, which Messrs Harrison and Co have in their power to subject them to, we have not sufficient grounds at present to enable us to determine the probable magnitude of the injury. We however think there is a Chance of those Dams resisting the Water to such an extent as that the spare Engine Power of Walker Colliery may contend with the leakage. In this

NEIMME/BUD/3/54

case the practicability of securing access to the lower Seams at the Charlotte and Jane Pits appear to us unquestionable but should the event prove otherwise and the leakage exceed the Power of the Engines; we do not see the possibility of effecting their security while the Water is permitted to flow into the Workings of Walker Colliery.

Thomas Fenwick

John Buddle

George Hill

NEIMME/BUD/3/55

Report on Hebburn Colliery

Newcastle 10th March 1810

On duly weighing all the Circumstances of the Creep in the A Pit at Hebburn Colliery, which has passed the North Barrier of Whole Coal and Stowing, and is advancing over the Pillars in a Western Direction, towards the C Pit, we can scarcely indulge the hope of its subsiding, but that it will in course of time extend to the C Pit. Under this impression we strongly recommend, that the long Coal Barrier to the Eastward of the C Pit Workings should be supported without delay by Pillaring and Stowing, to such an extent, as will increase it to the Breadth of 85 Yards.

When strengthened by Pillaring as above, we conceive that this Barrier will effectually secure the C Pit Workings from the Creep; but we apprehend that there will be considerable difficulty, in preserving the C Pit in a safe Working State, during the continuance of the Creep, and while the Pillaring of the Barrier is in hand, from the increased discharge of inflammable air which will unavoidable take place, especially after the Ventilation of the A Pit Waste is interrupted, by the closing of the ingates etc at the Shaft.

To obviate this danger as much as may be, we recommend, that in the event of the C Pit Air Course being

NEIMME/BUD/3/56

likely to be overpowered in the Return, by an extra discharge of Foulness from the Creep; that all the Communication through the Long Barrier should be closed by good Clay Dams, and the Foulness to be discharged by Pipes into the upcast Shaft, above the reach of the Furnace. We further recommend that all the Openings and Communications from the A to the B Pit should be also shut off by Pillaring and Dams in the same way, as between the A and C Pits Workings, in order to prevent the Creep discharging any inflammable matter into that Pits Workings.

John Buddle

John Watson

Thomas Ramsay

NEIMME/BUD/3/57

Report on Washington New Colliery 24th March 1810.

This Colliery contains Four workable Seams viz

1. The High main
2. The Maudlin
3. The Low main
4. The Hutton

The principal Seam viz, the High main Coal Seam was wrought out some years ago; since which the Workings have been supplied from the other Seams, in various proportions to suit the Circumstances of the Trade.

The annexed Synopsis shows the Quantity of Coal remaining to be wrought on the 31st December 1809 in the different Seams, both in the Freehold and Common the aggregate amount of which is 71,012 Tons /403 Bolls.

If we assume the Annual Vend of the Colliery at the average of the last Seven Years, it will be 1967 Tons / 150 Bolls, consequently 72,012 Tons / 403 Bolls divided by 1967 Tons / 150 Bolls, gives 36.101 years, the time which the Colliery will supply that Vend.

NEIMME/BUD/3/58

Mr Musgrave's Proportion of the aggregate quantity of Coal remaining unwrought in the Mine will be as follows.

In his Freehold viz.

	Whole Mine		Pillars		Total	
	Tons	Bolls	Tons	Bolls	Tons	Bolls
Maudlin's Seam……	5,578	150	6,478	-----	12,056	150
Low main----------	10,431	22	1082	220	11,512	242
Hutton's Seam…….	13,043	297	627	352	13,671	209
	29,053	29	8187	132	37,240	161

In the Common viz.

	Whole Mine		Pillars		Total	
	Tons	Bolls	Tons	Bolls	Tons	Bolls
Maudlin's Seam----------	6,866	316	5,235	82	12,101	398
Low main…….	3,472	-----	3,431	-----	6,903	-----
Hutton's Seam----------	2,533	-----	3,628	-----	6,161	55
	12,871	316	12,294	137	25,166	13

	Tons	Bolls
5/12ths of 25,166 Tons / 13 Bolls is……	10,485	372
Total of Freehold brought down……	37,240	161
Mr Musgrave's Total Expectancy……	47,726	93

John Buddle

NEIMME/BUD/3/59

Workings for the last Seven Years Viz.

	Tons	Bolls
1803		
June 30th ----------	1089	168
December 31st……	1056	36
1804		
June 30th ----------	945	168
December 31st……	974	428
1805		
June 30th ----------	1020	216
December 30th……	1015	288
1806		
June 30th----------	841	112
December 31st……	1043	232
1807		
June 30th ----------	704	80
December 31st …….	913	300

1808		
June 30th ----------	988	400
December 31st ……..	1253	432
1809		
June 30th ----------	812	368
December 31st ……..	1111	64
	13,771	212
Average	1967	156

NEIMME/BUD/3/60-61

Synopsis of the Number of Acres of Whole Mine and Pillars remaining unwrought in the different Seams of Coal, in Washington New Colliery on the 31st December 1809, as also the Quantity of Coal to be obtained from the same.

Seams	Freehold						Common					
	Whole Mine	at per Acre	Produce	Pillars	at per Acre	Produce	Whole Mine	at per Acre	Produce	Pillars	at per Acre	Produce
	A. R. P.	Tons	Tons. Bolls	A.R.P	Tons	Tons.Bolls	A.R.P	Tons	Tons.Bolls	A.R.P	Tons	Tons.Bolls
Maudlins, Mr Musgrave	65.0.39	85 ½	5,578 150	158.0.0	41	6,478. 0	80.1.10	85 ½	6866..316	127.2.30	41	5,235. 82
Ditto Mr Shafto	41.0.13	"	3,512. 196	----------	----------	----------	----------	----------	----------	----------	----------	----------
Low main Mr Musgrave	186.1.3	56	10,431. 22	46.0.0	23 ½	1081. 220	62.0.0	56	3,472. 0	146.0.0	23 ½	3,431. 0
Ditto Mr Shafto	41.0.13	"	2,300. 242	----------	----------	----------	----------	----------	----------	----------	----------	----------
Hutton Mr Musgrave	191.3.11	68	13,043.297	29.0.32	21 ½	627. 352	37.1.0	68	2,533. 0	168.3.0	21 ½	3628.55
Ditto Mr Shafto	41.0.13	"	2,793. 231	----------	----------	----------	----------	----------	----------	----------	----------	----------
	566.2.12	**---**	**37,659.258**	233.0.32	---	8,187. 132	179.2.10	---	12,871.316	442.1.30	---	12,294.137

Seams	Total Acres of Whole Mine	Produce	Total Acres of Pillars	Produce	Total Produce
	A.R.P	Tons. Bolls.	A.R.P	Tons. Bolls	Tons. Bolls
Maudlin's Mr Musgrave	145.2.9	12,445 26	285.2.30	11,713. 82	24,158 108
Ditto Mr Shafto	41.0.13	3,512. 196	----------	----------	3,512. 196
Low main Mr Musgrave	248.1.3	13,903. 22	192.0.0	4,512. 220	18,415. 242
Ditto Mr Shafto	41.0.13	2,300. 242	----------	----------	2,300. 242
Hutton Mr Musgrave	229.0.11	15,576. 297	197.3.32	4,255. 407	19,832. 264

Ditto Mr Shafto	41.0.13 746.0.22	2,793. 231 50,531. 134	---------- 675.2.22	---------- 20,481. 269	2793. 231 71,012. 403

NEIMME/BUD/3/62

Estimate of the Cost of laying the Coals on Bank at the New Pit Kenton Colliery, in Answer to a Query put by Mr William Chapman.

In the following Estimate I have assumed that the system of Working will be such, as under the circumstances of the Colliery I should consider the best; the leading Features of which are 1st. that the Hewing price is reduced to its minimum. 2nd that the Seam can be wrought with 16 Peck Corves, the Waggons and Teams –in being laid off, and 3rd that the Rolly Roads, are made in the most advantageous lines of conveyance, without following the Headways, and Boardways direction of the Workings indiscriminately, which is too often persevered in to a fault.

I shall also assume the following Data.

1. That the team will produce 1/5th of small, then 1 Score will yield $\frac{20 \times 2 - 8}{24}$ = 1.3 Ch. of Ships Coals per Score.
2. That the Vend of the Colliery for the first year after the New Pit begins work (which is the period to which this Estimate applies) shall be 30,000 Chaldrons of Ship Coals, 13,000 Ch. of which is to be supplied by the Engine Pit and 17,000 Ch. by the New Pit.
   Then $\frac{17000}{1.3}$ = 12,753, the Number of Scores to be wrought out of the New Pit in the Year.
   And allowing the pit to work 10 Days per Fortnight, and 26 Fortnights in the Year we have $\frac{12,753}{26x10}$ = 49 .05 but say 50 Scores the daily Workings.
   This I should propose to do by working single Shift, and drawing two Corves at a pull.
3. An Horse 14 ½ Hands high will put 15 Scores of 16 Peck Corves per Day, 100 yards distance where the Seam rises from 1 in 12 to 1 in 15 _____ But where the Rolley Way is laid upon a proper Line he will put 36 Scores per day the same distance. Then supposing one half of the Rolley Roads to be laid on a proper Level, and the other half to the full rise of Colliery, the average Work of one Horse will be 25.5 but say 25 Scores per Day for 100 Yards.
   An Horse of the above description will cost £66. Per annum Keeping, allowing for wear and tear, and upholding Stock.
   The allowing 260 Working Days in the Year he will cost 5s 1d per Day nearly or $\frac{61}{25}$ = 2.44 per Score per 100 yards, but say 3 per.

NEIMME/BUD/3/64

A Boy will drive 20 Scores per day, 100 Yards distance for 1s 4d = 64 per Score.

Then the Horse at 3d + the Boy at 64d = 3d.64 Total Cost per Score of Putting.

Supposing the Average Distance 600 yards then the Cost per Score will be 3d.64 x 6 =

1s 9d.84 but say 2/- putting on Rolly way.

4. The inby putting to be done by Boys, with a 16 peck Corf
at per Score for 60 yards……£ 0.1.2
For increase of distance at the rate of
1 for every 20 yards……0.0.4
Bounty to Hewers for putting when Boys cannot be
procured called Furtherance ……0.0.4
Addition for Helpers up etc……0.0.2
£ 0.2.0

Estimate

	£	s	d
Hewing with a 16 Peck corf including the cost of Small left below …….. per Score	-----	3	9
Ditto…..under the Top_____ Ditto	-----	---	1
Ditto……Double Wet and Ramble…….. Ditto	-----	---	2
Narrow work of every kind_____ Ditto	-----	1	---
Consideration for Hitches and Balks…….. Ditto	-----	---	1
Putting Coals by Barrowmen and Horses_____ Ditto	-----	4	---
Trapping…… Ditto	-----	---	3
Hooking on Corves at Crane and Shaft_____ Ditto	-----	---	4½
Brought Forward £	-----	9	8½

NEIMME/BUD/3/65

	£	s	d
Brought Forward	-----	9	8½
Overmanship, including Oil, Candles and Nails_____ per Score	-----	1	---
Laying, Repairing and Shovelling the Rolly Way…… Ditto	-----	---	3
Ditto_____ Ditto_____Tram Way____ Ditto	-----	---	1
Masonry, Building Stoppings_____ Ditto	-----	---	4
Smith Work, Shovels, Boards, Corf Bows etc…… Ditto	-----	---	4
Wright Work_____ Ditto	-----	---	1

Keeping Underground Furnace……..	Ditto	-----	---	1¼
Repairing Shaft, exclusive of Timber_____	Ditto	-----	---	½
Smart Money to Wounded Men……..	Ditto	-----	---	1
Binding Pitmen_____	Ditto	-----	---	2
Waste and Shift Work……..	Ditto	-----	---	9½
Timber for all Purposes, Brattice, Props and planks_____	Ditto	-----	2	---
Interest on Cost of Machine and Repairs……..	Ditto	-----	---	4 ½
Working the Machine, Finding Grease, Hemp and Leather	Ditto	-----	---	4 ½
Ropes_____	Ditto	-----	---	7
Bankmen, including Horses and waiting on……..	Ditto	-----	---	4 ½
Corving, including Small Work_____	Ditto	-----	---	6
Skreening and Heap Charges……..	Ditto	-----	---	6
Surgery_____	Ditto	-----	---	1
Finding Rollies and Trams……..	Ditto	-----	---	1 ½
Ditto, Rolly and Tram Way_____	Ditto	-----	---	3
Nails 1/2d…….Grease 2d……..	Ditto	-----	--	2 ½
Unforseen incidents_____		-----	---	1 ¾
		-----	18	6

18s/6d per Score = 11s/1d per Chaldron

John Buddle

The Engine Keeping, Colliery and Way Leave Rents, Agency, Stationary etc are not included in the above Estimate.

NEIMME/BUD/3/66

Report on Whitefield Colliery

Midsummer 1803

The Colliery known by the name of Whitefield is composed of two different Collieries viz. Chopwell and Stella Grand Lease.

The Seams of Coal wrought for many years back in Chopwell Colliery, are denominated the Stone Coal, Five Quarters, Three Quarters, and Brockwells; The Five Quarters and Stone Coal are nearly exhausted, the last two Pits in this Colliery being sunk to these Seams, but their situation being on the Top of an high and very dry Hill where no Water could be procured for the Drawing of the Coals by Steam Machinery and the Dearness of Hay and Corn being

such as to preclude the application of Horses for that purpose, so as to work the Coal to any Profit, these Pits have been abandoned till such a Reduction in the Prices of these articles takes place, as will warrant their being set to work again. The Brockwells and Three Quarters Seams are now in Work, and may continue to afford Coals for some years to come, provided they continue of a Workable Thickness, and of such a Quality as to be Merchantable, both of which circumstances the Reporter much doubts.

NEIMME/BUD/3/67

In the other Colliery of Stella Grand Lease, the Brockwells and Three Quarter Coals were exhausted about two years ago on the Rise of the great Dyke, being loosed by a Day-Level, or Free Water Course and a New Winning has been established in Heath's Field to the Depth of near 80 Fathoms; on the Dip side of the same Dyke which pierces through these four seams above mentioned; This Winning is denominated the A Pit; on the opening out of which in the Five Quarters Coal, numerous Dykes and Troubles were met with, which not only produced the Fire Damp (destroying several Men;) but obstructed the regular Course of Workings so much as on both these accounts to prevent the Owner from obtaining any Emolument from the same.

The Dip from this Pit Shaft is so very great to the South that no Workings could be extended in that Direction; to the West, North and East, the Interruption from these Dykes and Troubles has been such as to require an enormous Expense for effecting Openings through the same to establish a moderate Circulation of Air for the Safety of the Workmen; and the very imperfect Working of the Coal so intersected by these Dykes and Troubles; and which have been the cause of very great Loss of Mine, and that too in the Vicinity of the Shaft, where the only advantage should have been derived therefrom.

At 450 Yards East from the Shaft the

NEIMME/BUD/3/68

Seam now in Work seems to be free from these Dykes and Troubles, and Stucks [?] or lays pretty fairly for obtaining Coals; but from the great distance of these Workings from the Shaft, the present putting Price is so great, that when the Keeping of Horses, Crane Men, Drivers, Barrow Way Plates, Oil and Candles, composing the same are considered, every Advantage naturally to be expected on the Opening of a New Pit, is nearly lost to the Owner. The Stone Coal in this Pit is only 29 inches thick and hard, so that together with the untoward Circumstances above mentioned as to the Five Quarters Coal which this and the other Seams will be equally liable to, it, as well as these others, will be attended with a very considerable additional Expense both in Hewing and Putting the same. For where Horses cannot, with advantage, be introduced for Putting of Coals, the doing of that Business by Barrowmen (Men and Boys) has become so uncertain, vexatious and expensive, that it is scarcely possible to obtain any <u>determinate</u> Quantity of Work by such uncertain means; as the Working of the Colliery it totally dependent on these Boys (who are now become since the Opening of so many Collieries in thicker Seams of Coal, where they find easier Employment) so scarce, expensive to be engaged; high Prices to be paid them; consequent abatement of Work; and too frequently total Idleness; that the Profits to be derived from such thin Seams as compose

NEIMME/BUD/3/69

this Colliery, are of late years, extremely reduced indeed.

It is necessary here to state that this A Pit is sunk to the Lowest Seam at the Depth of 54 Fathoms below the ancient Colliery Water Course which was effected without the Application of a Steam Engine; but whether another Pit can be sunk down without the aid of such Machinery, is highly problematical:--- Should a New Pit call for a Steam Engine, such an Erection and Keeping (if necessary) will be attended with an Expense incompatible with the Selling Prices of the Coals produced; under the Circumstances of having to convey them 3 Miles to the River.

The great Expense and uncertainty of Putting Coals underground by Means of Boys, called Barrowmen, as before adverted to; together with the present and future Increase of the Depth of the Pits, (namely from 40 Fathoms in the Old Colliery, to nearly 80 Fathoms in the new Opening) has rendered the Introduction of Galloways underground to put the Coals instead of Boys absolutely necessary; not the any saving arises from such alteration, but only that the Owner can command the Work of the Horses, with a Degree of certainty, not to be reckoned upon where Boys only are employed in that Species of Work;--- The present Workings viz. in the A Pit 9 (and the case will be the same in all the other Pits to be sunk near

NEIMME/BUD/3/70

to Greenside) are and will be in Seams of Coal so low in height or Thickness, that considerable Quantities of Stone require cutting and Removal to obtain room to introduce Galloways for the Purpose above mentioned, and is attended with a very considerable Expense.

When the Pits of this Colliery were only One-Half (and less) of the present Depths, with a free Water Course, the situation for Workings was then widely different from the present; as Pits could then be sunk nearer to each other, and of course, the Distances of Putting the Coals underground; from the Workings to the Shafts were moderate; a less number of Boys were required; less Expense in Keeping the Barrow Ways; fewer Candles used. With several other concomitant Advantages unnecessary to be mentioned, but which are, in a great Measure, lost under the circumstance of deep Pits and thin Seams, as in the case now under Consideration.

It may be observed here, that the Pits might be sunk nearer to each other, in order to obviate the Putting Charges by Barrowmen complained of above, but when we consider the hazard of Sinking Pits <u>without</u> a free Water Course; the chance of meeting with Feeders of Water in the Sinking, the great Expense of such deep Sinkings, and contending with these Feeders; the very few Situations where Pits can be sunk to adapt them properly both to work the Seams with Effect, and to command a Supply

NEIMME/BUD/3/71

of Water, (independent of Drawing it from a great Depth) for working Steam Machinery in Drawing the Coals, and what is of the utmost Consequence, the Want of a legal Right in the Bishop of Durham to warrant his Lessees either to sink Pits or, <u>more particularly</u>, to lay Waggon Ways in or over the

Copyholds of his Tenants, under which this Colliery called Stella Grand Lease lies; this observation falls to the Ground.

A considerable Risk attaches to the Winning of this Colliery with full Effect, arising from the nearness of the Seams to each other, and under so great a Weight of incumbent Strata, which subjects them to creep and of Course a great Loss of Mine is the consequence; besides the increased Danger from the Fire Damps under these particular Circumstances.

Under the above discouraging Circumstances, daily heightened by the Increase of Labour, and Colliery Materials of all Denominations, it became necessary to look out for some mode of Relief in the general Economy of this Colliery, if such could be discovered; and which presents itself in the shape of a New Winning thereof to be established near the Stye Gate at One Mile Distance from the River: The objects in View in the accomplishment of this Winning are,

1. The Barlow Field Seam at the Depth of 52

NEIMME/BUD/3/72

Fathoms, being found of a Merchantable Quality; its Thickness as bored, being 4 Feet 2 Inches; and which Seam is not workable in the present-going Part of the Colliery, being only 3 Feet thick and foul from Bands.

2. The Distance being only 1 Mile from the River, at the Winning; the Leading Charge, Keeping of Waggon Way and Waggons, would be considerably reduced below the present Charges.
3. The Convenience of Dispatch when the Staith is underground.
4. The hope that this Seam may produce larger Coals, which in Conjunction with the Stone Coal and the Round of the other Seams may make a London-Market Coal, and consequently increase the Vend, on which so much ultimately depends.
5. The Prospect of the Stone Coal, Five Quarters, Three Quarters, and Brockwells' Seams turning out well here, which may be hoped for, as the Upper Seams both wrought, and that bored to are in a higher Degree of Perfection than in the present working Part of the Colliery:-- But which a future Boring will reduce to some Degree of Certainty.

NEIMME/BUD/3/73

6. If these Seams should all prove Merchantable, a Pit here will be of considerable Duration, without increasing the Leading Charge etc.

Notwithstanding the above flattering Advantages in Contemplation to be derived from this Winning, it must not be neglected to state, that the same, if much Water is met with (requiring a Steam Engine) and from the extravagant Prices of Materials, may cost a considerable Sum of Money: But, however, under all the most prominent Features of the Business a vigorous Attempt to accomplish this Winning seems fairly warrantable.

John Buddle Senior

(see forward)

NEIMME/BUD/3/74

Statement of the Shares of the Proprietors of Stella Grand Lease Colliery in the Fine on the Renewal of a Life in the same in 1793.

	£	s	d
Rental ……	359.	2.	½
Deduct the reserved Rent..	6.	13.	4
Neat Annual Rental …….	352.	8.	8 ½
Add 1/4th thereof …….	88.	2.	2.
Fine …. £	440.	10.	10 ½
Fees…	11.	2.	0
Total……	£451.	12s.	10 ½d

Shares and Proportions of the above; Denominator of the Fraction 480

Sir Henry Vane Bart. 3/12 + 1/45 + 1/160 =	134 Shares	£ 126. 1. 8	
John Silvertop Esq. 6/24 + 1/24 + 1/192} =	145 Ditto …….	136. 8. 8	
1/480 + 1/320…….. }			
Mr Beaumont _____2/24 =	40 Ditto …….	37. 12. 9	
Mr Simpson …….. 2/24 =	40 Ditto …….	37. 12. 9	
The Bishop of Clonfort Vc _____ 2/24 =	40 Ditto …….	37. 12. 9	
Mr Fenwick (Mr Silvertop) …….. 1/24 =	20 Ditto …….	18. 16. 4 ½	
Mr Carr _____ 1/24 =	20 Ditto …….	18. 16. 4 ½	
Mr Gray ……1/24 + 1/60 =	28 Ditto …….	26. 6. 11	
Mr Lamb _____ 1/60 =	8 Ditto ……..	7. 10. 6 ½	
Mrs Montague (Sir H Vane)…….. 1/96 =	5 Ditto ……..	4. 14. 1	
Total	480	£ 451. 12. 10 ½	

NEIMME/BUD/3/75

The present Lives 1793

Henry Vane Junior. …. Aged 22 Years, (New Life)

William Carter……..Ditto 55 Years

Michael Humble …….Ditto 53 Years

William Witham (New Life)

New Fine £725.0.0

Coals Wrought in Grand Lease Colliery since the 1st Year of Sir Henry Vane's Lease Viz.

	Tons	Waggons
In 1798 ……	361	15
" 1799 _____	476	18
" 1800 ……	582	5
" 1801 _____	359	13
" 1802 …….	278	21
" 1803 _____	319	21
" 1804 …….	305	17
" 1805 _____	671	1
" 1806 …….	911	19
" 1807 _____	976	21
" 1808 …….	930	21
" 1809 _____	976	0

NEIMME/BUD/3/76

April 16th 1810

An Approximate Estimate of the Value of the Lessees Interest in East Kenton and Cox-lodge Collieries.

I call this an Approximate Estimate of the Value of the above Collieries; because, the peculiar circumstances under which they at present labour, render it necessary to assume hypothetic Data, on which to found an Estimate, of the Working Charges etc.--------- To form an Estimate on the actual expense which the Coals have Cost working for some time past; and what they must unavoidably cost, until the New Pit is fairly established in Coal Work, and a very material change of System is made; would be fallacious; as the Colliery will inevitable work to Loss, until the present Sinking Pit is completely opened out, and established as a Current-going Coal Pit. I therefore proceed upon the following Data.

1. That it will be Nine Months from this Time before the New Pit is fairly opened out, so as to work to profit.
2. That the Colliery will be continued in Work in the mean time. That 18,750 Chaldrons will be

NEIMME/BUD/3/77

wrought and vended, and that the Loss by working that quantity will be £3000.

3. That the completing of the New Engine Pit, and the present Sinking Pit, together with Waggon Ways, Heapsteads, Skreens, and all other Appendages, will cost £14,000.
   Sinking £ 3000
   Engine 5000
   Machine 1500
   Bratting}
   Tubbing} 1500
   Stone drifting 500
   New Pit}
   Completing}2500
   £ 14,000
4. That the Yearly Vend will be 30,000 Chaldrons of best Coals and that the produce of Small, will not be more than 1/8th of the whole quantity sent to Bank, exclusive of what may be stowed below.
5. That Kenton Colliery will be given up after the Coal is wrought out of it, and the New Winning of Cox-bridge is accomplished. When the Colliery and Outstroke Rents for Kenton will cease, ----------I shall assume this at 7 years.
6. The duration of the Colliery to be taken at the Term unexpired in Coxlodge Lease viz. 17 Years 8 Months from the 25th Inst., for although there is Mine enough to supply the Vend for a much longer period; we cannot with propriety, attach any Value to the Contingency of a Renewal of the Lease, at the expiration of the present Term.
7. That the present Selling Price of the Coals, and the

price of Colliery Materials, and Working Charges, will continue to bear nearly the same proportion during the Term of the Lease.

Estimate

Quantity 30,000 Chasubles Ship Coals Yearly

	£	s	d
Laying the Coals at Bank as per Estimate see Page 64…….. per Cha.	-----	11	1
Colliery and Way Leave Rents £ 2726.5.6. _____ per Ditto	-----	1	10
Poor's Rate, High Way Cess etc suppose 3/- in the £, will be 3 ¼d per Cha. but say …… per Ditto	-----	-----	3½
Agency { Viewers £300} { Agents 200} £ 600 _____ per Ditto { Staithmen Clerk 100]	-----	-----	4¼
Keeping main Engine £ 800 per Annum …….. per Ditto	-----	-----	6¼
Sinking New Pits, suppose 4 in all, to cost in Boring, Drifting etc £ 3000 each, or £ 12,000 in all to be expended in 12 Years = per Ditto £ 1000 per Year _____	-----	-----	8
Keeping Waggon Way and Waggons, including Fences etc …….. per Ditto	-----	-----	9

Leading Coals by Carriagemen _____ per Ditto	-----	3	4
Timber for Underground Purposes 100 Loads Per Annum @ £7 = £700…… per Ditto	-----	-----	5¼
Wrights and Sawyers 10 Men @ 20/- per Week each £520 p.annum per Ditto	-----	-----	4
Smiths and Iron, not included in Pit Estimate, Waggon Repairs; nor Engine Keeping …… per Ditto	-----	-----	3
Forward		19	10¼

NEIMME/BUD/3/79

	£	s	d
Brought Forward ……..	-----	19	10 ¼
Labourage, Cartage, Leading Workmen's Fire Coal, and Colliery Materials etc. say 4 Gehoes @ £150 each…… £600}			
10 Labourers at 16/- per Week _____ 410} per Chal.	------	------	8 ¾
Cart and Ballast Waggon Trapping, Greases etc…….. 34}			
£1050			
Masonry, in Repair of Houses, etc including Bricks, Lime etc £500 per Ditto	------	------	4
Surgery £50, Stationery £50 …….. per Ditto	------	------	1
Small Cordage, Hardware and Sadlery Goods _____ per Ditto	------	------	3
Skreen Bars and small Cast Iron Goods …….. per Ditto	------	------	2
White Paint and Horse Drugs _____ per Ditto	------	------	1
Flannel 1d, Nails 1d, Keel dues 1d, allowances 1d …… per Ditto	------	------	4
Setting over Troubles, driving Levels etc (omitted) in Estimate of Underground Charges _____ per Ditto	------	------	6
Sundry unforeseen incidents, such as accidents by Fire, Staith Charges etc etc _____ per Ditto	------	1	-----
Total Cost, Working and delivering at the Staith per Chaldron	1	3	4
Coals sold at the Pit will not be chargeable with …… Way Leave …….. £ 0.0.9			
Leading_____ 0.3.4			
Waggons & Waggon Way. 0.0.9			
Staith Charges _____ 0.0.2	------	5	-----
Cost of Coals which may be sold at the Pit per Chaldron	------	18	4

_____

Way Leave Rent etc 5s.0d per Chaldron

Colliery Rent …… 1s.1d per Ditto

6s.1d

23s/4d – 6s/1d leaves 17s/3d Net working Charge, but as the Working of the Small is not included in the allowance for several of the Permanent Charges, 15/- may be stated

NEIMME/BUD/3/80

as the Cost at the Pit _____

Then,

30,000 Ch. after deducting 1s per Ch. for Fittage ..... @ 30/- £45,000

Supposing 12,000 Ch. to be vended by Spout @ 6d 300

15,000 Ch. Small to be sold at Pit _____ @ 6/- 450

Amount of Sales ..... £ 45,750

Working and Leading 30,000 Ch..... @ 23s/4d £ 35,000

Working 4000 Ch. Small _____ @ 15/4 3067

Colliery Rent on 1500 Ch. Small to be sold by Landsale @ 1/- 75 38,142

Annual Profit £ 7,608

As the Estimate of the Working Charge is made upon a liberal Scale, the

Yearly Profit may be stated at _____ £ 8,000

Stating the Annual Profit of the Colliery at £8,000, and considering it as an Annuity for 17 Years which is the Term, unexpired in Coxlodge Lease, that I consider the Colliery will work to profit, after allowing the necessary time for completing the New Pit. And allowing the Purchase of that Annuity 10% per Annum, and his Capital to be redeemed in 17 Years, it will be worth 8 Years Purchase, or

£64,000

Forward

Brought Forward £64,000

The Amount of Stock as Valued on January 1st 1810 is £26,872. 8s. 1d

From which deduct the Cost of Sinking the }

Several Pits, included in the same, as not } £ 2019.10s.0d

being objects of Valuation _____ }

New Houses, and Stalls in Stables which

will I presume, become the property of the

Lessors, at the expiration of the Lease, and which

as well as the Sinking of the Pits, I have considered 763.0s.0d

as conducive to the Annual Profit of £8000,

but upon which no revertionary Value will

accrue to the Lessees at the expiration of the Lease. 2792.10s .0d.

Net Value of Stock £ 24,079.18.1

Deduct Value of Dead Stock 14,970.18.1

Leaves Live and Disposable Stock 9,109

Dead stock, worth, to be sold, as Old Materials at 40% less than the Sum at which it is valued, viz. £8982, but say £9000. ---------- Then £9000 to be received at the end of 17 Years 8 Months

Allowing a Purchaser 5% per Annum, is worth in ready Money …… 3750

As the Kenton Pumping Engine and Coal Machines will become useful to Coxlodge; after Kenton ceases to work. I shall state the advantage arising from that circumstance, (instead of selling them as old Materials, at _____ 1,200

Total Forward £ 78,059

NEIMME/BUD/3/82

Brought Forward £ 78,059

Deduct the expense of the New Winning and North Pit …….. £14,000

Loss by working the Colliery, before the New Pit can be

Established in Current Coal Work…….. 3,000 17,000

Net Value at 10% £ 61,059

Stating the Yearly Profit at £8,000 and allowing a Purchaser 12% per Annum, and his Capital to be redeemed, as above stated, it will be worth

7' 12 Years Purchase, or _____ £ 56,960

Cost of New Winning, North Pit & Loss …….. £ 17,000

Live Stock …… £9,109

Dead Ditto _____ 3,750

Engine & Machinery ……. 1,200 14,059 2,941

Value at 12% …….. £ 54,019

Taking the Profit as above at £8,000 per Annum, and allowing a Purchaser 15% per Annum, on the same principle, it will be worth 6 Years Purchase, or …… £ 48,000

From which, deduct, the Difference between the Cost of the New Winning etc

and the value of the Stock …….. 2,944

Value at 15% …….. £ 45,059

John Buddle

NEIMME/BUD/3/83

Blank Page.

NEIMME/BUD/3/84

Report on Hebburn Colliery April 9th 1810

To Messrs Fenwick, Watson and Ramsay.

Gentlemen,

You are requested by the Proprietors of this Colliery to answer the following **Queries.**

Query 1. Considering the progress which the Creep has made since it passed the Barrier, North of the A Pit Shaft; are you of opinion, that anything more can be done, for the protection of the C Pit Workings, West of the Coal Barrier? Should you be of opinion, that the rapid progress of the Creep, will not allow time, to carry the pillaring and Stowing formerly projected, for the security of the above Workings, into effect; to such an extent as to give reasonable grounds to believe, that it will prove effectual. In what time do you suppose the Creep will pass over the East Way of the C Pit, to the Coal Barrier, and how long do you imagine it may dwell upon the Coal Barrier, before it will pass over the same, into the West Workings?

Observation

In Case you should be of opinion; that pillaring and Stowing any more, for the protection of the C Pit Workings, will be unavailing; it is intended to discontinue the same, and to work as many Coals as possible, out of the Staple, and West Way, of that Pit; until the Creep passes the Coal Barrier, and stops all further proceedings.

NEIMME/BUD/3/85

Answers

Answer to Query 1.

Owing to the rapid and unexpected progress the Creep has made from the A, to the C Pit Workings has unfortunately prevented the completion of the Pillaring of the Board Rooms, for the purpose of strengthening the Long Coal Barrier, East of the C Pit Shaft, which was recommended to be done in a former Report, as a measure highly necessary; Through that circumstance, we consider any more Stowing to be made in support of that Barrier unnecessary (except which is recommended in answer to Query 10th) under the present circumstances of the Colliery, for two reasons, Viz. ___ The 1st is the want of time to execute it, in an effectual way, so as to answer any good purpose.____ The 2nd is, we think the Quantity of Coal to be obtained in the said C Pit, not sufficient to warrant the expense.

From the hitherto rapidity of the Creep we have the strongest reasons to suppose it will soon approach the C Pit Coal Barrier, and on its approach to that Barrier, we recommend an immediate

abandonment of that Pit; but in the mean time we would advise as many Coals to be worked therefrom as can with safety be procured.

NEIMME/BUD/3/86

Queries

Query 2. Considering the nature and strength of the Coal Barrier, and the Dams which have been put into all the Passages through the same; do you think that the C Pit may be wrought with safety, until the Creep actually arrive at, and pass over the Coal Barrier?

Note. It is not intended to work this Pit, with the Furnace, but by a Steam Ventilator, and Mills only to be used in the return of the air, for the use of the Onsetters etc. By this it is presumed that the danger of explosion will be obviated.

Query 3. In the event of the Creep stopping the C Pit, how long do you think the B Pit may continue to supply the working of two Shifts, say, from 50, to 60 Scores per Day, independently of the Coal which may eventually be obtained from the Old Creep, and the Whole Coal in the NE extremity of the A Pit Workings?

Query 4. Do you think that the Old Creep to the East of the B Pit, in Jarrow Grange can be cut through, so as to gain access to the whole Coal in the NE extremity of the A Pit. In what time can this be done, and what will it cost?

Query 5. Are you of the opinion that the Old Crept Pillars in the East Ways of the A, and B Pits, can be wrought to Profit?

NEIMME/BUD/3/87

Answers

Answer 2. We conceive the C Pit may be continued at Coal Work until the Creep approaches near to the Barrier through the cautious means pointed out to us, by Mr Buddle in a note to the 2nd Query; yet much will depend upon occurring circumstances in the meantime; to which every necessary attention undoubtedly will be paid.

Answer 3. We are of opinion that the duration of the B Pit, will be about 20 Weeks, working a Quantity of 50 Scores per Day, supposing the Coal to serve the Workings, to be situated on the North side of the East Mothergate, and adjoining the Barriers, between Hebburn and Jarrow Grange.

Answer 4. We have instances of Creeps being cut through with success in adjoining Collieries, similar in every respect to the B Pit Old Creep; therefore we have no hesitation of saying that the ridding through the Creep for the obtaining of the Whole Coal to the North and East extremity of the A Pot highly practicable; the expense of which, we estimate at £800. And the time required to complete the same should be about 18 Weeks.

Answer 5. Not being able to ascertain how the pressure of the Creep has affected these Pillars, we cannot with any degree of certainty say how far they may be wrought to profit; yet we think it advisable for an attempt to be made to ascertain their situation, and on the [Continued on Page 89]

NEIMME/BUD/3/88

Queries

Query 6. After the present Creep is settled; is it likely that the Pillars which it has crushed may be wrought to Profit?

Query 7. You will please to bestow, particular attention on the Metal Coal Seam, and state, whether in your opinion, it may be wrought to Profit, either at this, or any future period? You will also turn your attention, to the probability of the Bensham and Low-main Seams, existing in a workable state in this Colliery?

Query 8. Combining all the Circumstances of this Mine, both as to its prospects in the High-main, and other Seams do you think that it may be wrought to Profit, and that those Prospects are such, as to hold out, fair, and reasonable inducements for the Proprietors to carry it on, after the Coal which is immediately available in the High Main Seam shall be wrought of?

NEIMME/BUD/3/89

Answers

[continued from Page 87] event of their being found to produce 500 Chaldrons of Ship or Merchantable Coals per Acre , at the present selling prices, we think they may be wrought to Profit.

Answer 6. As much depends upon the state of the Coal in the Pillars, through the pressure of the Creep, we are of opinion that if a similar quantity of Merchantable Coal can be obtained per Acre, from them, as we have stated in our answer to the foregoing Question, our opinion is, that those Pillars may be wrought to Profit.

Answer 7. From the information we have obtained, we find the Metal Coal Seam in this Colliery to be good in Quality, but its height has been found rather variable; therefore we are of opinion that it cannot be wrought to Profit at present, and that of its working to Profit hereafter will depend on the future state of the Coal Trade. As no investigation has been made at Hebburn Colliery of the Bensham, and Low-main Coal Seams, the probability of either of them existing in a workable state appears to us very uncertain.

Answer 8. Combining all the Circumstances of this Mine, both as to its prospects, in the High –main and other Seams, we do not at present recommend the Working of the Lower Seams, with that of the High-main Coal Seam, in as much, as it may render the Profits through that general working, doubtful; and from our foregoing observations on those Lower Seams, we do not think that there are reasonable inducements, when the High-main Coal is wrought off for the Proprietors to continue the Colliery.

NEIMME/BUD/3/90

Queries

9. From the experience which you have had of Creeps, and the measures of prevention resorted to, according to the various situations, and Circumstances of the same. Are you of opinion, that the Plans which have been carried into execution, on the present occasion were such, as you would have approved, and adopted under similar circumstances, or would you have resorted to any other? Should you be of opinion that any better measures of prevention could have been resorted to, than those employed, have the goodness to point them out.

10. In the event of the Creep overrunning the C Pit, what in your opinion will be the expense of re-establishing the Colliery in Current Coal Work, after the whole Coal, now accessible in the B Pit, shall be wrought off? You will observe that the principal Field of Whole Coal remaining unwrought, lies on the South or dip side of the Main Dyke, and you are requested to say whether in your opinion the

same may be won, and wrought to Profit, in conjunction with the Coal which may eventually be obtained from the old Creep and whole Mine to the Eastward of the A and B Pits?

Should anything for the advantage of the Colliery occur to you, which the above queries do not embrace, you will have the goodness to state your sentiments thereon freely; and it is particularly requested that the different queries may be answered as fully as possible.

NEIMME/BUD/3/91

Answers

9. From our acquaintance of Creeps, under the various situations, and circumstances, that we have in our practice Viewed them; we are decidedly of opinion, that the Plans and Methods resorted to from time to time, to prevent the destructive effects of the Creep in this Colliery, were fully calculated to accomplish everything that experience and skilful practice could suggest; although the result has unfortunately been such, as the most experienced Miner could not have anticipated.

10. On the event of the Creep overrunning the C Pit, we are of opinion, the expense of re-establishing the Colliery, so as to produce an Annual Vend of 25,000 Chaldrons of Ship Coals, together with the expense of winning a Tract of Coal of about 70 Acres on the south side of the Main Dyke will be about £6600. And after investigating to the best of our ability the Expenses that will attend the Working of the same, we are of opinion on calculating every charge, together with the Fittage, that a Profit of 5/- per Chaldron will be left for the Owners, estimating the selling Price of the Coals to be 33/- per Chaldron and that the Quantity of 137,000 Chaldrons will remain to work from this time; at the same time, it must be observed that our Calculation is founded on the presumption that this Colliery will continue working in this Quarter, with success, and without any serious accident taking place, and also that the B Pit will not at all be obstructed in Coal work, which we can scarcely indulge a hope of, to believe, when we consider the present dangerous situation the Colliery is placed in.

We also beg leave to recommend that the first Three Boards, South from the C Pit be properly Stowed, from the Winning Headways, for a distance of three Pillars, for the better security of the C Pit Shaft.

Newcastle upon Tyne — Thomas Fenwick

13th April 1810 — John Watson

Thomas Ramsay

NEIMME/BUD/3/92

Hebburn Colliery 27th April 1810

Further Answers to Hebburn Queries as per Page 84.

Answer to Query 1. It appears to us that the effects of the Creep at present prevailing in the East Workings of the C Pit, are already manifest, at too short a distance from that Shaft to admit of further pillaring or any other means being at all efficacious, towards the preservation either of the Shaft itself or of the West workings; however the progress of Creeps is so uncertain that, although we feel no doubt whatever of the C Pit being shortly rendered useless for the present it is impossible for us to say exactly at what period that event may take place, but considering the rapidity with which the Creep is now proceeding Westward, we presume to assert it as our opinion, that Coal Work cannot be carried on longer than a very few Days from this time, and as the Barrier formed of whole Coal and Stowing directly to the North and South of the Shaft does not appear to us to be

sufficiently, formidable, to give any effectual resistance to the pressure, we think that its effect must at a very early period be experienced in the workings, on the West side of the Shaft.

Answer 2. We have deliberately weighed all the circumstances in which the C Pit is placed, and though the current of atmospheric air for its Ventilation, seems to be

NEIMME/BUD/3/93

induced upon a plan at once cautious and judicious, we cannot think that, the hazard of an explosion is altogether obviated, on the contrary we do not hesitate to declare it is our most clear and decided opinion that, the safety of the Work people, demands the immediate relinquishment of that Pit; for although we do not apprehend danger to arise from the present South workings below the Staple, we consider that the communication between these Workings and the Shaft, must be very soon cut off; and the effects of Creeps are generally so uncertain that notwithstanding the precautions taken to prevent it, sudden gusts of Foulness, may be discharged from the Creeping Waste, which may render the whole Mass of the circulating current so inflammable as to endanger its igniting at the Engine Furnaces, or Lamps upon the surface; and thus cause an explosion which we conceive could not fail to prove fatal to those who might happen to be in the Mine at the time.

Answer 3. Independent of what Coal may be expected from the Pillars overwhelmed by the old Creep, and by the working of the whole Mine remaining to the North East of the A Pit, it appears from admeasurement upon the Colliery Plan that there are 116 Acres of whole Coal which may be worked to the B Pit and may afford 53,476 Scores and serve that Pit 3 years at the rate of 55 Scores per Day. That Profit can be derived from the working of any of the

NEIMME/BUD/3/94

Pillars in the Colliery, appears to us so doubtful a Case that we do not think ourselves justified in including the Coals that might be expected to be obtained therefrom in this calculation.

Answer 4. Unless means could be adopted for the effectual ventilation of the Crept Waste in Jarrow Grange, we do not see that the gaining of access to the extreme whole Coal of the A Pit is practicable at least safe.

Answer 5. We humble submit it as our opinion that the old Crept Pillars in the East Wastes of the A, and B Pits cannot be wrought to Profit.

Answer 6. We consider our answer to the last Query as applying also to this, viz. that it is not practicable to work to profit any of the Walls, which have experience the pressure of a Creep at such a prodigious depth; but this opinion we give with great deference, and are not without reason to think that an attempt ought hereafter to be made at a partial working of the Pillars.

Answer 7. We have paid particular attention to the reports, which we have been able to learn, respecting the state of the Metal Coal, and though these are favourable as far as

NEIMME/BUD/3/95

they relate to the quality and construction of the seam, still we think this Bed of Coal too thin, and that it lies at too great a Depth from the surface to warrant us in stating that it can be worked to profit at this time, though at a future period we doubt not that it will become an important object. And we hold the same sentiments in regard to the Bensham and Low-main Seams of Coals, which though they have not been explored upon the Spot, we are enabled to judge of from the Borings and actual Workings made in Neighbouring Collieries.

Answer 8. In order to enable us to reply satisfactorily to this Query we must revert to two of our former answers. In Answer 2 we have recommended the abandonment of the C Pit, as a step in our opinion, not to be delayed, but as absolutely and indispensably necessary, for the reason there assigned, and in the answer to the preceding Question we have negatived any present attempts to work any of the Seams of Coal lying below the upper main Seam, it appears to us therefore, the only Coal which presents itself for work is that which remains entire in the B Pit; and as that Pit in consequence of the late accident is become inaccessible, we see no other way for the Proprietors to proceed but by suspending the working of Coals altogether until access can be obtained and work resumed in the B Pit.

NEIMME/BUD/3/96

If after that time, the whole Mine can be prepared with due dispatch and a respectable quantity of Coals raised at the B Pit, the Creep to the Westward may in the meantime subside, and probably work may recommence at the C Pit by the time the B Pit Coal is exhausted; if however the circulating Air in the B Pit is rendered as inflammable before it reach the surface, as that which ascends the upcast side in the C Pit Shaft, we cannot with any propriety recommend the B Pit to start work again in the present deranged state of its Waste, but in this case think it right that the Working of Coals be suspended in toto until the Creep has entirely subsided.

Answer 9. We do not see that any but proper measures have been adopted with a view to put a stop to the progress of the Creep so general in this Mine. Slowing with Stones and Rubbish the places where the Coal has been taken away and excavated is considered as the best substitute for whole Coal and consequently next to whole Coal forming the most resistance to the pressure of a Creep. And the Stowing to the N.E. of the A Pit Shaft we think has been put in, in the most judicious situation, and to what we would have supposed a sufficient extent in order to prevent the Creep from proceeding further West.

NEIMME/BUD/3/97

Answer 10. Though it is our opinion that not only the C Pit but the whole of its Waste on the North or upper side of the Dyke will ultimately be overrun we consider that the Workings below the Staple are completely out of danger from the present Creep, therefore that the expense of re-establishing this part of the Mine in Current Coal Work would not be very considerable provided the state of the Wastes be found such as to admit either of the regular mode of Ventilation, being practised or of being shut off altogether by proper and effectual Dams. In round Numbers we would estimate this Cost at £1000. And in the event of the whole Colliery being relinquished for a time we suppose the expense of putting it in a state to recommence work may be £3000 exclusive of the expense of working the Pumping Engines and of occasional visitations underground during the interval that the Pits may be off work, but what period may elapse before perfect order will be restored in the interior of the Mine it is quite out of our power to determine.

We have no doubt that the rest of the whole Coal lying in the Dip side of the North Dyke may be won and wrought to profit at the B Pit, but as we have stated in answer to two preceding Queries, we do not think

NEIMME/BUD/3/98

It likely that any of the Pillars of Coal within the region of the Creep can at present be attempted to be removed either in part or wholly with safety. The whole Mine to the East of the A and B Pits we consider by far the most valuable tract of Coal that remains of Hebburn Colliery and provided a passage could be obtained to it we think it would not fail to turn out of advantage to the Lessees. In consequence of the Note at the end of the concluding Query it is our duty now to state that we think those Queries embrace all the points necessary to be attended to in the present situation of this

Colliery; We beg however to recommend that all possible expedition be used in pumping out of the Pits the water lately let in to extinguish the Fire as we conceive that the longer it remains there the more injurious must be its effect to the Mine generally. And we flatter ourselves that we have replied to the Queries as fully and with as much freedom as the extreme urgency of the Case seems to demand.

William King

Edward Steel

George Hill

John Straker

NEIMME/BUD/3/99

May 22nd 1810

An Approximate Estimate of the **Quantity of workable Coal**, remaining in **Hebburn Colliery** together with the probable **Profit** that may eventually arise from working the same **and,**

First, That which may be obtained with comparatively the greatest chance of success._____ this Tract of Coal lies to the N.East, East and South East of the A, and B Pits, and agreeable to the principle upon which this Estimate is founded must be wrought by the B Pit only.

	Whole Coal	Pillars
In Hebburn	Acres	Acres
Above the Dyke ……..	6	6
Below Ditto	60	85
	66	91

In Jarrow	Whole Coal	Pillars
Above the Dyke …….	Acs. 37	Acs. 67
Below Ditto	40	40
	77	107

NEIMME/BUD/3/100

Produce Viz.

		Chaldrons per Acre		Chaldrons
Whole	{ In Hebburn, above the Dyke 6 Acres @	10.92	=	6,552
	{ Ditto, below Ditto 60 Ditto @	965	=	57,900

	Total in Whole	66	64,452
Pillars	{ Ditto above the Dyke	6 Acres @ 400 = 2,400}	
	{ Ditto below Ditto	85 Ditto @ 400 = 34,000}	36,400
			100,852
	Deduct 1/7th Small	_____	14,407
	Neat Ship Coals in Hebburn		86,445
Whole	{ In Jarrow, above the Dyke	37 Acres @ 1092 =	40,404
	{ Ditto below Ditto	40 Acres @ 965 =	38,600
	Total Whole	77 Acres	79,004
Pillars	{ Ditto above the Dyke	67 Acres @ 400 = 26.800}	
	{ Ditto below Ditto	40 ditto @ 400 = 16,000}	42,800
	Deduct 1/7th Small	_____	17,400
	Neat Ship Coals in Jarrow	_____	104,404
	Hebburn Ditto brought down ……		86,445
	Total Quantity of Ship Coals		190,849

_____

Of the above Quantity there is Chaldrons

Above the Dyke	In Hebburn	Whole	6,552
	Ditto ……..	Pillars	2,400
	In Jarrow ……	Whole	40,404
	Ditto ……..	Pillars	26,800
			76,156
	Deduct 1/7th Small		10,879
		Forward	65,277 Chaldrons

	Chaldrons
Brought Forward ……..	65,277

Below the Dyke	In Hebburn	Whole	57,900	
	Ditto	Pillars	34,000	
	In Jarrow	Whole	38,600	
	Ditto	Pillars	16,000	
			146,500	
	Deduct 1/7th Small		20,928	125,572
			Total	190,849

The foregoing Quantity of Coal, as has already been stated, must be wrought by the B Pit only. This Pit will work 50 Scores per Day double shift , and supposing 10 ½ Working Days per Fortnight, or 273 days in the Year, the whole quantity to be drawn in a year will be 273 x 50 = 13,650 Scores.

It is assumed that the Seam will make 1/7th of small but to enable the Machine to draw as many Ship Coals as possible, no more small than what may be barely necessary to supply the Engines, and Workmen must be drawn to Bank; this we shall assume to be 1/9th of the whole Quantity; the difference between which and 1/7th viz. 2/63rd must be stowed underground.

Then 13,650 Scores ___ 1/9th or 1510 Scores = 12,134 Scores the neat quantity of Ship Coals to be drawn to Bank in one year.

And 12,134 Scores x 2 1/12 Chaldrons = 25,279 Chaldrons but say 25,000 Chaldrons of Ship Coals in the Year.

Now as the whole quantity of Coal above the

Dyke is 65,277 Chaldrons it will supply the B Pit working double shift for 65,277 = 2.61 or 2 years and 7 months.

25,000

To obtain this Coal above the Dyke with tolerable safety it will be necessary in the first place to suspend Coal Work for 5 or 6 Months and to expend £6,500 on the undermentioned Work Viz.

	£
Putting in Safety Dams round the B Pit Shaft, cutting through the old Creep in Jarrow }	
Grange, to gain access to the whole Coal, which remains unwrought in the North East}	2,500
extremity of the A Pit, and winning out the same for Coal work _____	
Cutting out the Old south East Creep in Jarrow Grange, so as to ventilate it completely}	
Which will answer the double purpose of making it ready for working the Pillars, and}	4,000

Adding greatly to the Safety of working the above Tract of whole Coal _____ £ 6,500

To obtain the Coal below the Dyke, viz. 125,572 Chaldrons or 5 years working at 25,000 Chaldrons yearly, it will require £3,500 additional to be expended , in sinking a new Staple together with Stone Drifting, and other appendages and pumping the Water out of the old Staple, making the whole Expenditure for gaining access to

NEIMME/BUD/3/103

190,849 Chaldrons of Ship Coals or 7 years and 7 months working at 25,000 Chaldrons yearly £10,000.

N.B. I should propose to expend the 6,500 in 12 to 18 months and the remaining £3500 in 12 Months more.

To work Hebburn Colliery by one Pit upon so small a yearly Quantity as 25,000 Chaldrons it is scarcely necessary to observe that the utmost Economy must be observed in every Department, and on this principle, it is, that the following Estimate of the Working Charge is made, supposing the colliery to be carried on, for the purpose of working the above quantities of Coal above and below the Dyke, either jointly or separately.

Estimate of the Yearly Expense of Working Hebburn Colliery above the Dyke, to produce 25,000 Chaldrons of Ship Coals, supposing the Establishment to be put upon the most economical Principle.

£		£	s	d
Agent 150	Engines	1200	..	..
Viewer 150	_____	380	..	..
Under " 80	Agency	10,237	10	..
£ 380	.....	1,100	..	..
	Every Article charged in the Overmens Bills on 13,650 [?] @ 15/-	220	..	..
	_____			
	20 Underground Horses	13137	10	0
	@ £55			
	4 Banksmens Ditto			
	_____			
	Forward £			

NEIMME/BUD/3/104

		£	s	d
	Brought Forward	13,137	10	..
4 Crab and Jack Horses @		220	..	..

£55_____	825	..	..
15 Waggons ……. Ditto @ Ditto	330	..	..
…….	520	16	8
6 Ballast Waggon & Cart Ditto @ Ditto	500	..	..
_____	1000	..	..
Leading 25,000 Chaldrons @ 5d	682	10	..
……	500	..	..
Waste and Shift Works	574	..	..
_____	100	..	..
Ropes	800	..	..
……..	540	..	..
Corving on 13,650 [?] including small Work 1/-	150	..	..
Labourage, Cartage and Horsekeeping above Ground_____	115	..	..
4 Joiners £174, Smiths £400	2859	10	..
……..	200	..	..
Masons	80	..	..
_____	..	..	..
Timber, 80 Loads ……..@	100	..	..
£10.	600	..	..
Iron, 20 Tons _____ @	80	..	..
£27.	120	..	..
Working Machines	52	..	..
……	24,086	6	8
Binding Pitmen £100, Stationary £15	913	13	4
_____	25,000	..	..
Colliery Rent –{ 1452 Tons at 32/6d £2359.10.0			
}			
{ Hebburn Certain rent 500.0.0			
}			
Cesses and Taxes (exclusive of Property Tax)			
……..			
Sadlery Goods and Hardware			
_____			
Cast iron, enough on hand			
……			
Bricks, Lime etc			
_____			
Grease, Candles and Oil			
……..			
Surgery £30. Gunpowder £50			
_____			
Keeping Waggon Way and Waggons			
…….			
Off Putter at Staith			
_____			
Add for sundry omissions			
……..			
Total £			

NEIMME/BUD/3/105

£25,000 the Cost of working 25,000 Chaldrons above the Dyke ---- The Charge of working below the Dyke will be 4/- per Chaldron more or £ 30,000 on 25,000 Chaldrons. ----- Therefore the Cost of working the Coals, and delivering them at the Staith according to the above Estimate will be :-

Above the Dyke …….20/- per Chaldron

Below Ditto ……..24/- per Ditto

But as no Leading Charge, nor Colliery Rent falls upon the Small Coals consumed by the Engines and Workmen, the following Deductions must be made on that account.

Colliery Rent …… 2s/3½d per Chaldron

Leading Charge ……..0.10½d per Ditto

3s/2d per Chaldron

Consequently the small Coals wrought for the Engines etc from above the Dyke will cost 16s/10d per Chaldron and from below the Dyke 20s/ 10d per Chaldron.

From the above Data the probable Profit to arise from working the Coal from above the Dyke, will be as follows viz.

Supposing the Coals to sell on the Average at 30s/ per Chaldron neat after allowing the expenses at the Fitting Office, and Loss by occasional Freighting

NEIMME/BUD/3/106

Then 65,277 Chaldrons of Coals …… @ 30/- £ 97,915. 10. 0

Suppose 21,759 Chaldrons by spout …….. @ 6d 543. 19. 6

Amount of Sales …… £ 98,459. 9. 6

Deduct Working Charge viz.

65,277 Ch. best @ 20s/ £ 65,277.0.0

8000 Ch. Small 16/10 6733.6.8

72,010. 6. 8

26,449. 2. 10

Deduct Cost of cutting through the Creep etc. as per Fo. 102 ……

6,500. 0. 0

Probable Profit to arise from working the Coal above the Dyke £

19,949. 2. 10

Then stating the Selling Price of the Coals as above; the probable Profit to arise from working the Coals, balow the Dyke will be,

125,572 Chaldrons best Coals …… @ 30/- £

188,358. 0. 0

41,890 Chaldrons Spout …… @ 6d

1047. 5. 0

Amount of Sales ……

189,405. 5. 0

Deduct Working Charges

125,572 Ch. best @ 24/- £ 150,686.8 0

15,000 Ch. Small 20s/10d 15,625.0.0 ……

166,311. 8. 0

23,093. 17. 0

Deduct cost of Sinking Staple etc. _____

3,500. 0. 0

Probable Profit to arise from working the Coals below the Dyke £

19,593. 17.0

NEIMME/BUD/3/107

Profit { above the Dyke ……. £

19,949. 2. 10

{ Below the Dyke …….

19,593.17. 0

Total ….. £

39,542. 19. 0

£ 39,543 in 7 years and 7 months is equal to

£ 5,214 Yearly

The above it is presumed, may be obtained with tolerable certainty; besides which there is a prospect of obtaining,

Secondly, the undermentioned Quantities of Coal also out of

		Whole Pillars	Acres Acres
Hebburn,	Above the Dyke …….	-----	-----
___,,___	Below the Dyke ……..	156	199
		Whole Pillars	Acres Acres
Jarrow	Above the Dyke …….	3	55
__,,__	Below the Dyke …….	17	17
		20	72

Produce	Chaldrons
Hebburn, below the Dyke, whole, 156 Acres @ 965 Ch =	150,540
_____,,_____,,_____, Pillars , 199 " @ 400 =	79,600
	230,140

	Acres	Ch.	Ch.	
Jarrow, Whole above the Dyke	3	@ 1092 =	3276	
__,,__ Pillars, Ditto ……	55	@ 400 =	22,000	
			25,276	
Whole & Pillars, below Dyke	17	@ 1365 =	23,205	48,481
				278,621
Deduct 1/6th Small ……				46,436
Neat Quantity of Ship Coals				232,185

NEIMME/BUD/3/108

In the event of the working of the above quantity being practicable (which the cutting out of the Creep as estimated for Folio 102 will in a great measure ascertain) the A Pit may be established in Coal work at the end of two years by an additional expenditure of £ 2000 in which case the Colliery will be capable of supplying an Annual Vend of 36,000 Chaldrons. The extra expense of working which, allowing for all extra Charges, incidental to working Coals out of a Creep will be 1s/- per Chaldron on the Ship Coals and 21s/10d on the Small.

The Total Quantity of Coal to be wrought will therefore be 232,185 Chaldrons as per last page, and 190,849 as per Folio 100 making in all 423,034 Chaldrons.

	Chaldrons.
We shall then have to work in the first two Years	50,000
And in the following 10 Years and 3 Months	373,034
Total …….	423,034

The Profit to arise from working the above Quantity of Coals will be as under, viz.

Profit to be made during the first two years commencing after a Lapse of six Months in £ 15,444

which time the workings will be all from above the Dyke, and 50,000 Ch. will be wrought

out of the whole quantity of 65,277 Chaldrons 3`: 19949 :: 24: £ 15,444 …….

Forward

NEIMME/BUD/3/109

Brought Forward £ 15,444. 0. 0

The Value of the remaining Coal above the Dyke will be …… 4505. 2. 10

£ 19,949. 2. 10

Profit to arise from working the Coals under the Dyke from Folio 106 ……. 19,593.17. 0

£ 39,542. 19. 10

The Profit on the Quantity estimated Folio 107 will be viz.

232,185 Chaldrons, best …… @ 30s/- £ 348,277. 10. 0

77,395 Chaldrons. Spoutage ….. @ 6d 1,934. 17. 6

350,212. 7. 6

Working 232,185 Ch. best @ 25/- £290,231.5s.0d

29,000 Ch. Small 21/10 31,658 0. 0 321,889. 5. 0

28,323. 2. 6

£

65,866. 2. 4

Deduct the Sum to be expended in preparing the A Pit for Coal work …….

2,000. 0. 0

Total Profit …£

65,866. 2. 4

The Yearly Profit to arise from the above will be £7722 for two years, and 35042 for 10 years and 3 months.

Thirdly. We shall now proceed to estimate the probable Profit which the Colliery may yield supposing all the remaining whole Coal and Pillars to be workable.

NEIMME/BUD/3/110

In this case the quantity of Coal in

	Whole	Pillars
Hebburn, is, above the Dyke ……	39 acres	390 acres
-----,,----- below Ditto …….	156 acres	43 acres
	195	433
Jarrow, above the Dyke ……...	51	116
---,,--- below Ditto ……...	57	-----
	108	116

Produce	Chaldrons	Chaldrons
Hebburn Whole above the Dyke 39 acres @ 1492 =	58,188	
----,---- Pillars …….. Ditto 390 Ditto @ 400 =		156,000
----,---- Whole below Ditto .. 156 Ditto @ 1365 =	212,940	
----,---- Pillars, …… Ditto .. 43 Ditto @ 400 =		17, 200

444,328

Jarrow viz.		Ch.	Ch.	
Whole, above the Dyke	51 acres @ 1492	= 76,092		
Pillars ……. Ditto ….	116 Ditto @ 400	= 46,400		
Whole, below Ditto …	57 Ditto @ 1365	= 77,805	200,297	
			644,625	
Deduct 1/6th Small _____			107,437	
		Total Quantity of Ship Coals	537,188	

Stating the first 2 Years Vend at 50,000 Chaldrons and the remaining 13 ½ years at 36,000 Chaldrons the Profit will stand as follows _____ Viz.

NEIMME/BUD/3/111

Total Quantity of Ship coals 537,188 Chaldrons

Above the Dyke in B Pit 65,277

Below Ditto …… 125,572 190,849

346,339

	£.	s	d
Profit to arise from working the B Pit above the Dyke as per Folio 106 …….	19,949.	2.	10
Ditto from working Ditto below the Dyke as per Folio 106 _____	19,593	17	0
	£ 39,542	19	10

Then 346,339 Chaldrons @ 30s/- £519,508. 10. 0

115,446 Spoutage @ 6d 2,886. 3. 0

£ 522,394. 13. 0

Working Viz.

346,339 Chaldrons … @ 25s/- £432,923. 15.0

43,600 Small …. @ 21s/10d 46,911. 13. 4 479,865b.8..4 42,529. 4. 8

£ 82,072. 4. 6

Deduct the Expense of preparing the A Pit for Coal Work …… 2,000. 0. 0

£ 80,072. 4. 6

The Yearly Profit to arise from the above will be £7722 for two Years, and £4787 for 13 ½ years.

_____

The Value of the Engines, etc as per Inventory is £

_____

From the foregoing **Estimates** of the different Chances the following Results may be drawn.

First, that part of the Colliery which may be wrought, with the most flattering prospect of success, will yield an Annual

NEIMME/BUD/3/112

Profit of £5214 for 7 Years and 7 Months see Folio 7.

Then considering this sum as an Annuity for 7 Years and 7 Months, and allowing a purchaser 15%

and his Capital to be redeemed in the time, it is worth 4 1/3rd years Purchase, or _____
£ 22,594

Revertionary Value of Stock, to be sold at the end of 7 Years and 7 Months allowing a Purchaser

5% per Annum

_____

Value

£

_____

Secondly Taking the result of the Calculation Folio 109, we have a yearly Profit of £7722 for 2 Years, and £5042 for 10 ¼ years.

Then £7722 for 2 years, is worth as an Annuity at 15% 1.625 years purchase, or
£ 12,548

and £5042 for 10 years to commence at the end of 2 years considered as above, is

worth 3.82 years Purchase, or _____
19,260

31,808

Revertionary Value of Engines etc £ at the end of 12 ¼ years allowing the

Purchaser 5% per Annum _____

Total

Value £

NEIMME/BUD/3/113

Thirdly According to the result of the Estimate Folio 111 we have a Yearly Profit of £7722 for 2 years, and £4787 for 13 ½ years.

Then £7722 per annum for 2 years is worth as per last Page ……
£ 12,548

And £4787 for 13 ½ years to commence at the end of 2 years is worth at 15% 4 years Purchase or
19,148

£

31,696

Revertionary Value of Stock as per last Page _____

_____

Total £

NEIMME/BUD/3/114

June 1st 1810

An Approximate Valuation of Hebburn Colliery

The Quantity of Coal contained in this Mine is as follows:

		Whole Acres	Pillars Acres
Hebburn	Above the Dyke …….	38	390
	Below Ditto …….	156	43
		194	433

Jarrow	Above the Dyke ……..	51	-------	116
	Below Ditto ……..	57	-------	
		108		116

PRODUCE

						Chaldrons
Hebburn	Whole above the Dyke	38	acres	@ 1492	Chaldrons =	56,696
	Pillars ditto	390	"	@ 400	" =	156,000
	Whole above the Dyke	156	"	@ 1365	" =	212,940
	Pillars Ditto	43	"	@ 400	" =	17,200
						442,836

Jarrow

Whole above the Dyke 51 Acres at 1492 = 76,092 Chaldrons

Pillars Ditto 116 acres @ 400 = 46,400

Whole below 57 acres @ 1365 = 77,805 200,297

643,133

Deduct 1/7th Small …….. 91,877

Total neat Quantity of Ship Coals 551,256

NEIMME/BUD/3/115

Of the foregoing Quantity 65,277 Chaldrons lie above the Dyke, in Jarrow Grange, and may I should suppose be put on Ship Board, exclusive of £6500 to be expended in cutting through the Creep etc for 20/- per Chaldron and 16s/10d per Chaldron for the small to be drawn to bank for the use of the Engines and Workmen only. NB. It is assumed that all the Small Coals, except what is barely sufficient for the Engines and Workmen, are to be stores underground. I shall assume the neat selling price of the Coals to be 31/- after deducting, Fittage, and all expenses at the Fitting Office.

Then,

65,277 Chaldrons of best Coals ……..	31s	£ 101,179 .	7s. 0d
Spoutage on 21,757 Chaldrons ……..	6d		543 . 19s. 6d
		Amount of Sales £	101,723. 6. 6

Deduct Working Charge

65,277 Ch. of best Coals …….20/- £65,277. --. --.

8,000 Ch. Small (1/9th)…… 16/10 6733. 6. 8. 72,010. 6. 8.

29,712. 19. 10.

Deduct the Expense of Cutting through the Creep etc…… 6,500. 0. 0.

Profit to arise from working the Coal above the Dyke …… £ 23,212. 19. 10.

Now as I imagine that the B Pit only can work Coals for the first two years (unless the Creep should stop at the C Pit Barrier) in which case not more than 25,000 Chaldrons of Ship Coals can be wrought yearly, it

NEIMME/BUD/3/116

follows that the whole quantity of Ship Coals to be wrought in two years will be 50,000 Ch. Then if 65,277 Ch. affords an aggregate Profit of £23,212.19s.10d but say £23,213, 50,000 Ch. will leave a Profit of £17,780 or £ 8,890 for each year.

After the first two years, there will remain to be wrought 15,277 Ch. above the Dyke in Jarrow Grange, which will sell for 15,277 Ch. best Coals …….. 31/- £ 23,679. 7. 0.

Spoutage 5000 Ch. …… 6d 125. 0. 0.

£23,804. 7. 0.

Deduct Working Charge 15,277 Ch. best @ 20/- £15,277. 0. 0

1900 Ch. small 16/10 1,599. 3. 4. 16,876. 3. 4.

Profit £6928. 3. 8.

The remaining Coal viz. 551,256 ___65,277 = 485,979 Ch. being principally below the Dyke and crushed Pillars, will I suppose cost 25/- per Chaldron working on the Best and 21/10 on the Small, exclusive of £5500 to be expended in Sinking Staples, pumping Water, cutting thro' Creeps etc. and as the Colliery at the end of two years will be put into a state to work 36,000 Chaldrons yearly, the above quantity viz 485,979 + 15,277 = 501,256 will supply that Vend for 14 years nearly. Then the Profit to be make on this quantity will be

485,979 Chaldrons …… 31/- £753,267. 9. 0

Spoutage on 16,000 Chaldrons ……..6/- 4,000. 0. 0.

Amount Sales £757,267. 9. 0.

NEIMME/BUD/3/117

Amount of Sales Brought Forward £ 757,267. 9. 0.

Deduct Working Charge viz 485,979 Ch. best ……. 25/- £607,473. 15. 0

60,000 Ch. Small ……21/10 65,500. 0. 0. 672,973. 15. 0.

£84,293. 14. 0.

Profit to be made on remaining Coal above the Dyke brought from Folio 110 6928. 3. 8.

91,221. 17. 8.

Deduct Money to be expended in Sinking Staples etc …… 5,500. 0. 0.

Neat Profit ……£85,721. 17. 8.

The £85,721 /14 years = £6122.17s.3d yearly, but say £6000 yearly Profit.

Under all the Circumstances of Hebburn Colliery I will consider 15% per annum as a fair return for the risk of Capital expended in the purchase, and the Capital to be redeemed also in the Course of 10 Years.

Then we have an Annuity or Revenue of £8890 for the first two years Folio 116

which is worth allowing a Purchaser 15% per Annum

and his Capital to be redeemed 1.625 years Purchase or …….. £14,446

and a Yearly Profit of £6000 for 14 years to commence

at the end of 2 years which is worth allowing a Purchaser as above 4.328 years or 25,968

Forward £40,414. 0. 0.

NEIMME/BUD/3/118

Brought Forward ……£40,414. 0. 0.

Value of Engines Machines, Waggon Ways and Staith, Workmens Houses

Stock A Pit Pumping Engine £1900

Ditto Machine ……. 700

B Pit North Engine ----- 2100

Boulton & Watts ditto 4000 £8700

B Pit Machine

C No. Side Ditto

So. Side Ditto ____

Skreens A Pit £….

B “

C “ ____

Heap Steads A Pit

B “

C “ ____

Staith, Workmens Houses

NEIMME/BUD/3/119

Newcastle June 23rd 1810

Messrs. Fenwick, Buddle, Watson and Hill.

Gentlemen

You are requested by the Lessors and Lessees of Walker colliery to give your opinion on the propriety of working the Pillars contained in the westernmost division of the Waste in the Charlotte Pit and state whether your concern that such working would at all endanger the safety of the Frame Dams or Coal Barrier which separate that Colliery from Lawson main.

Answer. We have duly considered all the circumstances connected with this Question, and are of opinion that the Pillars of this Division of the Waste may be wrought without prejudice to the Dams or Barrier, provided the following precautions be taken, which we think will give ample security to the same, viz. to pillar and stow up the Dam Boards, and the five adjoining Boards on each side thereof for 60 Yards East down from the Barrier, and also to pillar and stow all the rest of the Boards in that division for the distance of 40 Yards East down from the said Barrier. We further advise that no Coal be worked from the Pillars for the distance of 60 Yards from the stowing above recommended, and that the thirlings within this 60 yards be also stowed up.

Since your Report to the Corporation of Newcastle of the 22nd of February last, a considerable quantity of water

NEIMME/BUD/3/120

has been let off from the waste of Old Byker, you are therefore directed to state whether the late events at Lawton Main have been of such a nature as to cause any change in the opinions on that subject expressed in your former Report.

Answer. The events above alluded to having been nearly what we had anticipated, we do not see any grounds for changing our opinion on that subject, as we have the satisfaction to observe that Byker Dams, have given a much more effectual resistance to the pressure of the Lawson Main Water that we had reason to expect. To conclude, we beg leave to advise that no time be lost in putting in

the Stowing which we recommended in our former Report for the security of the Charlotte and Jane Pit Shafts.

NEIMME/BUD/3/121

Hebburn Colliery 5th July 1810

To Messrs. Steel, Watson, Tho. King and Hill.

Gentlemen,

You are requested to take into consideration the general Situation of this Colliery, and to direct your attention particularly to the present state of the Creep. You will please to ascertain as nearly as you can, the extent of the Creep, as also the progress which it has made in South and West direction since the C Pit ceased Coal Work on the 27th April last.

You are also requested to examine the Long Coal Barrier in the C Pit and to state whether it has suffered at all, from the pressure of the Creep, or to what extent it has been injures, with a view to enable you to answer the following Questions.

1. From the length of time which the Long Coal Barrier has opposed the advance of the Creep to the Westward do you think that it will ultimately stop its progress in that Direction?
2. Should you be of opinion that the Long Coal Barrier will not entirely stop the progress of the Creep to the Westward, how long do you think it may retard the same?
3. Do you think that the Barrier to the North of the Shaft is more likely to resist the Creep than the Barrier to the South of the Shaft, while it may effectually be resisted, by the Barrier to the North of the Shaft.

NEIMME/BUD/3/122

4. Should the Creep eventually pass over the Barrier to the South of the Shaft, and the North Barrier resist it; do you think, that the East and West Coal Barrier, running West up from the C Pit Shaft to the Boundary, will resist the Creep, (after having passed the South Barrier) so as to give security the N.W. Division of the C Pit Workings, or do you think that the West Barrier may be strengthened by Pillaring and Stowing, in such a manner, as to effect the Security of the above Workings?

After having answered the above Queries, which are principally respecting the probability of the Creep being retarded, or stopped by the Barriers in the C Pit, you will please to give the following you fullest consideration.

A. Do you think that under existing circumstances Coal Work can with propriety be resumed, either in the B, or C, Pits and that it may be resumed with advantage to the Proprietors.

Should your reply to this Query be in the affirmative; you will please to point out where you would advise the Working to recommence together with the mode of Ventilation.

B. Should you be of opinion that the Barrier to the South of the C Pit Shaft, will stop the Creep, would you recommend the

NEIMME/BUD/3/123

Pillars in the South West Division of this Pit, to be wrought off previously, or subsequently to working the whole Coal in the N.W.Division? Or should you be of opinion that the Creep will ultimately pass the Barrier to the South of the Shaft; would you advise an immediate working of the Pillars in the South West Division, in anticipation of such event? In this case you will please to point out the mode of Ventilation the Waste, and the proportion of Coal to be taken off the Pillars as also what extent of Pillaring and Stowing you would advise to be done, in support of the West Barrier. Having considered the above in the fullest manner, should you find it difficult to point out a mode of ventilating the C, Pit so as to admit of the recommencement of Coal Work, with not more than ordinary Risk. Mr Buddle will submit a Plan, to your consideration, by which he thinks the C, Pit may be ventilated, without incurring more than ordinary Risk, and on which your candid opinion is requested. You will also have the goodness to advise, generally upon the State of this Colliery, and to make your remarks, freely, upon anything that may occur, in the course of your investigation; which may not be included in the foregoing Queries.

NEIMME/BUD/3/124

Newcastle July 7th 1810

At the desire of the Proprietors we have considered the general state of Hebburn Colliery. We have examined the situation of the C, Pit in particular, and directed our attention to the progress and effect of the Creep, in the East Waste, and after weighing all these circumstances, are of opinion, that Coal Work may be immediately resumed, in the remaining whole Mine, of the North West district of the C, Pi provided the mode of ventilation, pointed out by Mr Buddle, be adopted; we beg leave however to recommend that all the openings in the Long Coal Barrier, be effectually shut up, by Clay or Frame Dams, and that the discharge from the crept Waste, be admitted through a Pipe to be inserted in one of those Dams, and conveyed from thence, into the ascending side of the Shaft. We would also suggest the necessity of having the Current, after its ascent to the surface, taken completely out of reach of any light.

We will proceed if required without delay, in giving distinct Answers to the various queries, contained in the Request of the 5th Inst., offered for our consideration.

Edward Steel
John Watson
Thomas King
George Hill

NEIMME/BUD/3/125

Newcastle July 9th 1810

Answers to the 1st, 2nd, and 3rd Queries of the annexed Request.

After examining the State of Hebburn Colliery, in the C Pit we are of opinion, that the Creep has not at all injured the Long Coal Barrier, so far as we had the means of examining it, we therefore presume, that it will effectually resist the Creep, in that direction; but recommend as a further security, to the South West division of Coal, in the C Pit, that 2 Pillars West, with the West Winning headway, should be stowed, from the Shaft, to the Staple South.

Answer 4th Should the Creep pass over the Barrier, to the South after what has been recommended, to be done, we conceive it proper for security, to the North West division, that the 2 south Boards of that division, joining the West Barrier, should be stowed 12 Pillars West.

Answer to A. Under existing circumstances, we are of opinion, that Coal Work may be resumed, in the whole mine, in the North West division of the C Pit, with advantage to the Proprietors, according to the Plan pointed out in the annexed Report, of the 7th Instant.

Answer to B. We would recommend that the whole Mine, of the North West division of the C Pit, should be previously wrought, considering

NEIMME/BUD/3/126

the Stowing recommended, to give security against the Creep, making any further Progress to the West. With respect to strengthening the West Barrier, we beg leave to refer to the latter part of the Answer to the 4th Query. We also further refer, to the report of the 7th Instant, relative to the conclusion of the request of the 5th Instant.

Edward Steel
John Watson
Thomas King
George Hill

Alnwick 27th June 1810

Dear Sir,

I now send you more at length (a Copy of No.2) the particulars of the 2 objects referred to you, for your opinion and report; hoping they may afford you, rather more information, than you collected from the Minutes which I gave you on Monday last, where I had the pleasure to see you. I met the Architect afterwards, who promised me to attend to your concerns without loss of time.

I am Dear Sir, Yours Sincerely,

D W Smith

NEIMME/BUD/3/127

Newcastle upon Tyne

Monday 25th June 1810

To His Grace the Duke of Northumberland,

May it please your Lordship,

In obedience to Your Grace's Commands of the 20th inst. to submit certain Matters, to Mr Buddle, relative to the Colliery Business, for his opinions thereon; we sketched the following, for his consideration, as the objects of Reference to him.

1st. On inspecting the Walbottle Colliery, the Dukes Colliery Agent observed that the Clay, which constitutes the Hill, or bottom of the Coal, was wrought and disposed of by the Lessees, hitherto, without sufficient leave or paying any Acknowledgement; they being restricted to Work the Coal only.

With respect to this Clay, therefore which it is apprehended is of considerable Value, Mr Buddle's opinion is desired – particularly whether it should be permitted to be wrought at all, or not, lest of due care be not taken, in the Manner of doing it, it may have a tendency to accelerate any inclination, which the Mine, may discover of a Creep; and which in that case, would probably cause more Coal to be lost, than any advantage, to be derived from working the Clay would renumerate.

As however, it may be a convenience to the Lessees, by employing the Workmen, when Trade is flat, it would perhaps be advisable not altogether to prevent them but allow their proceeding under certain restrictions, as may prevent the above surmise, from occurring – for instance, to work in the middle of the Boards only – perhaps in every other Board or passage

NEIMME/BUD/3/128

and in dry places only, and also that they may only be induced to use such permission in cases of Urgency.

Whether on Shilling per Ton, or what other Sum, is the proper proportion of Rent, which they ought to pay for it, including that already wrought, and sold, - considering that the Price of this Article frequently fluctuated, and that there is much more difficulty attending the procuring of it, at one time than another. And under these Circumstances, whether a standing Agreement should be made, or the Rent be altered, under a conditional contract, from time to time, as occasion may require by the Colliery Board.

2ndly. The Petition of Wm. Robinson of Tatehouse, which states "if his Grace, will grant him a Licence for 21 Years, he will give £20 a year for Snoker Colliery in the Neighbourhood (the Mine having been lying Waste there for 15 years) and win it, at his own charge and expense; to be clear at any three Years, by giving 6 months notice – will give undeniable Security for the Rent, and to have 6 Months to win it in, before the Rent commences"

However objectionable this Proposal was considered by the Colliery Board, particularly in Point of the guarantee of Rent, still from existing circumstances, the Board and upon the recommendation of his Grace, thought the Application worthy of consideration; especially as to exercise the Dukes right upon all Royalties where the soil, was not in his Grace, was most desirable. As it would be an

NEIMME/BUD/3/129

object, gained if Robinson should find the principal Seam of this Colliery, at his own Expense; and as this Colliery if opened, might probably command the Trade of Corbridge, and it's Vicinity.

It is believed that the small upper Seams, have been exhausted, or nearly so – and were of inferior Coal – that now to be sought is the principal Seam, the workings of the rise Coal have been discontinued upwards of a Dozen Years, when the Mine was abandoned by Mr Bainbridge, who on

Account of being so intercepted with Dykes, or Troubles, entirely lost the Seam, which Robinson now appears confident of regaining, he having first won the Colliery about 34 Years ago.

The Situation perhaps is as eligible as any of his Graces Landsale Collieries.

The Board thought that for £20 per Annum, Robinson should not be allowed to vend above 800 Fothers, and that he might be able to pay about 4[?] for overs – but they are aware that it will be right to consider when the Coal is found, what Rent he ought to pay for his 21 Years Lease, seeing that it must depend on the goodness of the Coal, and the Vend, he is likely to have for it.

In contemplating the subject of this Mine, Mr Buddle's opinion and directions are especially requested among other things, as to the Manner in which he should win the Colliery.

D.W.Smith

NEIMME/BUD/3/130

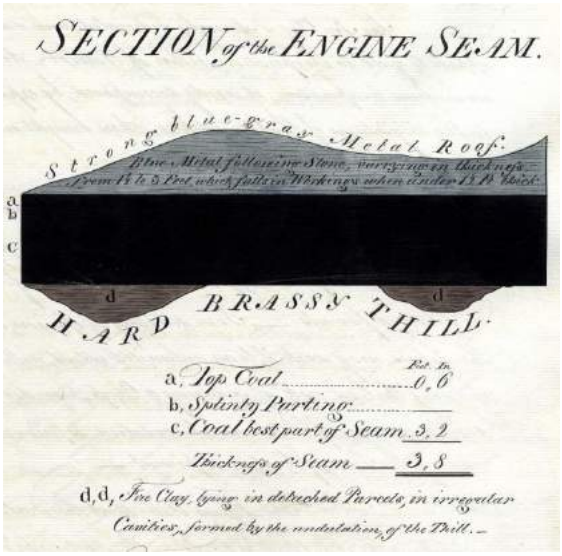
To enable me to inform an opinion as to the propriety of allowing the Lessees of Walbottle Colliery to work the Fire Clay, which is met with in the Thill of the Engine and Splint Coal Seams; I found it necessary to inspect the Workings of the Duke Pit in the former, and those of the Catch Pit in the latter Seam.

In the Workings of the Duke Pit in the Engine Seam – I observe that the fire Clay does not form the regular Thill of the Seam, but that it is interposed between the Thill and the Coal, in irregular detached Patches, varying considerable both in thickness and figure, and which according to the best idea I can form do not exceed more that 1/7th or 1/8th Part of the Field of Coal. The Thill of the Seam, which is a very hard Post, mixed with Pyrites, has an undulating Surface, which in some Places, comes in contact with the Bottom of the Seam, and in other places recedes from it, to the depth of 18 inches. It is in these places where the Thill recedes from the bottom of the Coal, forming irregular Swellies or Basons, that the Fire Clay is found; as it fills up the interval between the Thill and the bottom of the Seam, and forms an uniform Surface, on which the Coal reposes.

In considering the effect which working the Fire Clay may have in producing Creeps, every other concomitant circumstance ought to be regarded; such as

NEIMME/BUD/3/131

the thickness of the Seam, the strength of the Coal, the nature of the Roof and the flatness or obliquity of the Seam etc. The following Section of the Engine Seam will elucidate all that is necessary on the present occasion.



The coal is of uniform and firm texture, and the Seam does not deviate materially from an horizontal Position.

The <u>Following Stone,</u> which is a laminated Blue-gray Stone and is interposed between the Top of the Seam

NEIMME/BUD/3/132

and the Roof, generally falls in the Workings, when it is under 18 Inches in thickness. And as this frequently happens where the Fire Clay is worked, it becomes a Substitute, in a great measure, for the Fire Clay by filling up the Space which the Fire Clay had occupied, and giving lateral support to the Coal Walls.

The Fire Clay is strongly indurated and does not appear to yield to the operation, either of Water or Air, in an uniform temperature, it is only decomposed by exposure to the vicissitudes of the Atmosphere, when brought out of the Mine.

Having duly considered all the above circumstances, particularly that of the Fire Clay, not occupying more than 1/7th or 1/8th Part of the whole [?] of Coal in detached Parcels – I am decidedly of opinion that the Lessees may work it to an unlimited extent, without running the least risk of inducing a Creep, provided the same proportion of Pillar and Excavation is preserved in the working the Seam of Coal as at present.

The Lessees state that their sole object in working the Fire Clay is to oblige their principal Small Coal customers, (the Tyne Iron and Northumberland Glass Companies) and to employ their Workmen, where the Coal Trade is flat. They state the Expense of working it as follows, by the Waggon of 53 Cwt.

NEIMME/BUD/3/133

£. s. d.

Working or digging the Clay……	0.2.6
Putting (Conveyance Underdriving)……	0.2.0
Rolley and Tram Way ……..	0.0.1
Overmens'Charge (find candles etc) ……..	0.0.8
Drawing and Bankmen ……..	0.0.6
Ropes and Engine ……..	0.1.0
Corves ……	0.0.3
Smith 2nd Horsekeeper 1 ……..	0.0.3
Wailing,(Picking out the Refuse) ……..	0.0.3
Upholding Rollies and Trams ……	0.0.4
Leading to the Staith ……..	0.1.6
Waggon Way and Waggons ……..	0.0.6
Staith Expenses ……..	0.0.6
Wear and Tear of two Pumping Engines ……..	0.1.6
	£ 0.11.10

I believe the above Charges may be pretty correct, but think, that for the wear and tear of the pumping Engines, objectionable, as the Engines must be employed to drain the Colliery, whether the Fire Clay is wrought or not, and I do not imagine that the working of the Clay was in the contemplation of the Lessees, at the original Winning of the Colliery. I should therefore state, the Cost of Working the Clay at 10s/4d per Waggon.

	£. s. d.
The Lessees sell the Clay ……..at	0..13. 0 per Waggon
Working Charge ……..	0. 10. 4
Left for Profit and Rent ……	£ 0. 2. 8.

NEIMME/BUD/3/134

The Catch Pit Workings are in the Splint Coal Seam.

Section of the Splint Coal Seam.

	Feet	In.
Fine Coal ----------	3.	0
Splint ----------	0.	8
	3.	8

Immediately under the Seam is a regular Stratum of Fine Clay 2 feet thick. This Clay, being too hard for grinding, is not merchantable, consequently the Lessees do not work it except in the Rolley Roads, where it is taken up to make Horse height.

Considering the fluctuating price of the Fire Clay, (which till very lately did not sell for more than 12/- per Waggon) and the increased difficulty which must occasionally attend the working of it; I submit that One Shilling per Waggon is the utmost Rent that the Lessees ought to pay, for the same, and that the Rent should be paid by the Waggon on the Number of Waggons wrought, under an Annual Agreement, which may be renewed, or altered, as circumstances may require.

John Buddle

NEIMME/BUD/3/135

Walls End Colliery, July 23rd

1810

Jespher Gibson Esquire.

Solicitor, Hexham,

Dear Sir,

The Tanfield –moor People, having at last, got the Water drawn out of the old workings of upper Lintz Colliery. I have this day (in consequence of your Letter of the 5th December last) examined with Mr Fenwick, such part of the old Workings made from upper Lintz, into Tanfield –moor, as are at present accessible.

The extent of the Trespass into Tanfield-moor, as far as we have been able to explore, is A0,R3,P22, but it is evidently more extensive; and its limits can only be ascertained by the progressive extension of the present Workings in Tanfield-moor; I should however hope, that it will not exceed 2 or 2 ½ Acres at most, but may probably be less. Should Mr Selby be liable to make restitution, for the Coal formerly wrought by this Trespass from upper Lintz, I am apprehensive that it will be rather a serious business to him; for as the old Workings and Pillars in upper Lintz seem so much crushed, as far as we could penetrate into them, as to preclude the possibility of giving an equivalent in Coal; I see no other plan for Mr Selby than to make a pecuniary Satisfaction, amounting to the Value, or Profit to be made, on the quantity of Coal of which the Proprietors of Tanfield-moor has been deprived, by this Trespass; I should guess the Profit which Mr Pit is now making of the adjoining coal, at £900 to £1000 per Acre but this I name with caution as I am not yet in possession of the necessary information to enable me to make an estimate.

I have written this, rather prematurely, that

NEIMME/BUD/3/136

is before I am prepared to state the quantity of Coal, which has been wrought, out of Tanfield-moor, and its value; But I have done it, under the impression, that it may be possible, to make the successors of the Lessees who wrought Lintz Colliery, and who of course committed the Trespass in question, accountable to Mr Selby, and therefore, that no time should be lost in taking the necessary measures for that purpose, for it must be observed that the Emolument derived by Mr Selby's

predecessors from the Coal wrought out of Tanfield-moor by this Trespass, would be comparatively small, as it would be nothing more than the Tentate Rent, upon the quantity produced. The Profit made by working the Coal would fall into the hands of the Lessees, therefore if possible, I think their Successors ought to be made accountable to Mr Selby; but all this I submit to your better judgement.

Should any Merchantable Coal happen to be left in upper Lintz old Colliery, of which I have great doubts, it is very desirable on the part of Mr Selby, I conceive, to allow the Tanfield-moor people to work it, that being the easiest mode of getting his Mine to Market, as well as the best way of making retribution, for the Coal wrought, by the Trespass. I should therefore advise that every reasonable encouragement and facility be given to Mr Pit, to induce him to explore the old Workings in upper Lintz.

John Buddle

NEIMME/BUD/3/137

Newcastle 24th July 1810

Gentlemen,

As to a provisional Assignee to the Estate of Harrison, Cooke & Co. Bankrupts, and in conformity to a Letter received, a copy of which is here annexed, I am to request your opinion of the Collieries wrought by them as Lessees at Urpeth and South Heaton, so that the same is transmitted in time to be laid before the Creditors, at a meeting to be held in London, on Saturday 4th August next.

I shall give directions that you are furnished with such information as you may require, of which it is possible to obtain, and am,

Gentlemen,

Your very obedient Servant

Signed Martin Morrison,

Messrs, Buddle and Fenwick

NEIMME/BUD/3/138

Newcastle 30th July 1810

In compliance with Mr Morrison's Letter of the 24th Inst, a Copy of which accompanies this Report, we have investigated the Colliery Concerns of Messrs Harrison, Cooke & Co. at Urpeth and South Heaton.

In making this investigation we have experienced considerable difficulty, from the want of correct information, respecting the Way-leave and other Rents, paid by the above Firm. We have therefore, in many instances, been obliged to assume the necessary data, to enable us to complete our

Estimates and trust that, upon the whole, the result will be sufficiently accurate to answer the main object of the Creditors.

We have further to observe that we have been obliged to assume both the Selling Price, and quantity of Coals to be vended annually, as we are not informed that the Coals have been sold at any specifiable Price, either on the Tyne or Wear; We have therefore, stated the selling Price of Bewick's main Coals, at their equivalent Price in the London Market, and that of South Park-main at what we conceive to be their intrinsic value when compared with Coals of similar quality.

In valuing a Colliery, the first object of

NEIMME/BUD/3/139

Consideration is, the extent of the Mine, or the quantity of Merchantable Coals, which it will yield.

In Urpeth Colliery, we are of opinion, that the following quantities of Merchantable Coals may be obtained from the present working Pits. Viz.

	Chaldrons
From the High-main, or Bewick's main Seam ----------	63,520
The Five-quarter, or South Park-main Ditto ----------	73,000
Total Quantity of Coal at present available ----------	136,520

We have assumed the annual Vend, from the,

Tyne at Bewick's-main ……..	20,000	
South Park-main……..	5,000	25,000
Wear at Bewick's-main ……	5,000	
South Park-main ……	10,000	15,000
Aggregate annual Vend ----------		40,000

Then 136,520

40,000 gives 3 Years and 4 Months, the time which the Coal, at present won, will supply the Vend.

Our estimate of the Expense of Working and Leading the Coals, gives the following result.

NEIMME/BUD/3/140

To the River Tyne

	£. s. d.
Working Coals and producing them at the Top of the Pit,	
including Colliery Rent, and Mr Teareth's Annuity per Ch.	0. 13. 6 ¼

Bewick's main	Loading from the Pits, to the Staith, and delivering the same	
	on Ship Board, including Wayleave Rents, and Damage of	0. 5. 6 ½
	Ground -----per Ch.	
	Cost free on Board, exclusive of Fittage	£0. 19. 0 ¾

Park-main	Working Coals etc as above …….	£0. 19. 0 ¾
	Loading Ditto ……	0. 5. 6 ½
	Cost, free on Board, exclusive of Fittage	£ 0. 15. 0 ¾

To the River Wear

Bewick's main	Working Coals etc as above …….	£0. 13 6 ¼
	Loading ditto ……..	0. 7. 1 ¼
	Cost into the Keels	£1. 0 .7 ½
Park main	Working Coals etc as above ……..	£0. 9. 6 ¼
	Loading Ditto ……..	0. 7. 1 ¼
	Cost into the Keels	£0. 16. 7 ½

NEIMME/BUD/3/141

The assumed Vend from the Tyne annually.

20,000 Chaldrons of Bewick's main Coals ……	at 24/-	£ 24,000. 0. 0
5,000 Ditto of Ditto Park-main Ditto ……..	at 21/-	5,250. 0. 0
Spoutage on 8,000 Chaldrons (supposed quantity to be vended by spout) at 6d		200. 0. 0
Amount Sales		£ 29,450. 0. 0

Deduct the Working and Loading Charges viz.

20,000 Chaldrons of Bewick's – main Coals at 19s/ 0 ¾d		£ 19062. 10. 0	
5,000 Chaldrons of Ditto Park-main Ditto at 15s/0 ¾d		3765. 12.6	
Fittage on 25000 Chaldrons ……..	at 1s/- …….	1250. 0. 0	24,078. 2. 6

Annual Profit, to be made on Coals vended to the Tyne, exclusive of Property Tax £ 5,371.17. 6

The assumed Vend to the River Wear

5,000 Chaldrons Bewick's-main Coals	at 21s/-		£ 5,250. 0. 0
10,000 Ditto Ditto Park-main Ditto	at 17s/-		8,500. 0. 0
Amount Sales			£ 13,750. 0. 0
Deduct the Working and Loading Charges, viz.			
5,000 Chaldrons Bewick's-main Coals	at 20s/7 ½	£ 5,756. 5. 0	
10,000 Chaldrons Ditto Park-main Coals	at 16s/7 ½	8,312. 10. 0	13,468. 15. 0

Annual Profit to be made on Coals vended to the Wear, exclusive of Property Tax £ 281. 5. 0

Profit on Coals vended from Tyne	£ 5371. 17. 0
Ditto ---------- Wear	281. 5. 0
Total annual Profit, exclusive of Property Tax	£ 5653. 2. 6

NEIMME/BUD/3/142

NB. We are informed, that Messrs. Harrison, Cook [?] are liable to pay, an Annuity, of £1100, to Mr Teareth for Chatershaugh Colliery (which is now abandoned) and a Certain Annual Rent, of £250, to the Representatives of the late William Henry Lambton Esq. which will reduce the above Profit to £4928. 2. 6; but which it is presumed, they will be able to get quit of in May 1811.

We must observe that the above Profit of £5653. 2. 6 a year, will only continue for 3 Years and 4 Months, unless the intended new winning of the Hutton Seam be completed, in the meantime, which we suppose will cost £5000 exclusive of the Materials, now upon the Premises. After the intended Winning of the Hutton Seam is accomplished, by the expenditure of this Sum, we presume that the Colliery will then be put into a state to supply a Vend, which will afford an annual Profit equal to that above stated.

We have further to observe, that unless considerably more than 17,500 Chaldrons can be vended from the River Wear, that one of the Lines of Waggon Road, to Barnston, may be dispensed with, which will lessen the Charge of delivering the Coals there, to the full amount of Way-leave, and cost of keeping and upholding the extra Way. And indeed, unless more that the above quantity of 17500 Chaldrons can be vended Yearly, from the Wear, we are inclined to think, that it would be for the interest of the Concern to abandon the Wear Way, and send the whole of the Coals to the Tyne.

John Buddle. Thomas Fenwick

NEIMME/BUD/3/143

South Heaton Colliery

As far as we can form an opinion, this Colliery does not hold out any reasonable prospect of producing more than about 3600 Chaldrons of High-main Coal; the Cost of working which, and the value of the same, when wrought, will be according to our ideas, as follows:-

Working and Leading 3600 Chaldrons including the Expense		
of Drifting and Boring against the old Waste, at 18/-	---------	£3240. 0. 0
Messrs Hargrave and Ibbotson, 8Years certain Way Leave		
Rent, from May last, at £600	---------	4800. 0. 0
Colliery Rent, to Sir John Lawson Bart. 2 Years (certain)		
from May last at £300	---------	600. 0. 0
Amount of Charges	----------	£8640. 0. 0

Value of Coals

	£. s. d	
3,600 Chaldrons of Coals at 33/- per Chaldron		
after deducting 1/- for Fittage …..	5940. 0. 0	
Supposing 2000 Chaldrons loaded by the Spout at 6d	50. 0. 0	5990. 0. 0
Apparent Loss		£ 2650. 0. 0

NEIMME/BUD/3/144

If the Machinery and Materials, were sold off after working the quantity of Coal, above stated, we presume that the amount would cover the apparent Loss as above stated; but considering the risk attending the working of the Colliery, owing to the proximity of the drowned Waste, and other circumstances, we do not feel justified in advising it to be carried on.

John Buddle Thomas Fenwick

Memorandum. We have not calculated any advantage to result from the Farms, which are attached to the Collieries; not having had opportunity to ascertain, whether they may be beneficial or not

.

NEIMME/BUD/3/145

August 1810

Report on Washington new Colliery

Washington New Colliery contains four workable Seams of Coals.

1. The High, or upper – main Seam.
2. The Maudlin's Seam.
3. The Low – main Seam.
4. The Hutton's Seam.

Those Seams, lie at various depths and their respective thickness vary a little, also, in different Parts of the Colliery; but their average Depths, from the Surface, and thicknesses of Merchantable Coal, are as follows;-

	Fathoms.	Ft.	In.	Thickness of Seams. Ft.	In.
From the Surface to the High – main	72.	3.	0	7.	1 ¾
High – main to the Maudlin	10.	5.	8	5.	3
Maudlin to the Low – main	13.	2.	2	4.	4
Low – main to the Hatton	8.	2.	8	5.	2 ½
	105.	1.	6		

NEIMME/BUD/3/146

The SECTIONS of the several SEAMS are as under

High - main

	Ft In	Ft In
Top Coal ----------		2 1¼
.....		
Middle Band	0.9	_,,_
Coarse Gray Coal		0.4
Band	0.2	
The Kerving Coal		1.1
Band	0.2 ½	
Bottom or Ground Coal		2.6
Merchantable Coal		6 0¼
Stone & Refuse		1.1 ½
Total Thickness		7.1 ¾

Best Part of the Seam

Varies in thickness from 6 to 40 Inches
Of bad quality and unsaleable

Very Tender

Quality rather coarse

Maudlin Seam

	F In	F In
Top Coal		2.6 ½
.....		
Splint	0.5 ½	
Ground Coal	_,,_	1.3
.....		
Band	0.5	_,,_
.....		
Bottom Coal	_,,_	0.7
Merchantable Coal		4.4 ½
Stone and Refuse Coal		0.10 ½
Total Thickness		5.3

Best Part of Seam
Coarse Gray Splint with Foul Coal towards the Bottom.

Nearly of the same Quality as the Top Coal.

Hard coarse Coal burns to White Ashes.

Low – main Seam

	F In	F In
Coal	_,,_	3.6
Band	0.1	
Coal		0.4
Band	0.2 ½	
Coal		0.3 ½
Merchantable Coal		4.0 ½
Band		0.3 ½
Total Thickness		4.4

Good Coal
Splint 3 to 4 Inches.

Good Coal
Rather Splinty
Ditto.
NB. After taking the Splint & Band, out of the Seam, its average thickness will not be more than 3 Ft 4 In

Hutton Seam

	F In	F In
Coarse Splint	0.1	
Good Coal		3.8
Band	0.7	
Ground coal		0.10 ½
Merchantable Coal		4 .6 ½
Splint & Band		0. 8
Total Thickness		5.2 ½

Good in Quality, but very tender, and consequently works small.

Frequently so coarse as not to be saleable.

NEIMME/BUD/3/147

All that Part of the High – main Seam which is accessible from the present working Pits, was wrought off some Years ago, and the remainder, which lies in the N East Part of the Colliery, is so much deteriorated, by the thickness of the middle Band, as not to be workable.

The quantities of Coal remaining unwrought in the Maudlin's, Low-main, and Hutton Seams on the 31st December 18009, are stated in the Synopsis of the number of Acres of whole Mine and Pillars etc. delivered to Mr Musgrave some time ago.

After the Merchantable Part of the High-main Seam was wrought off, as stated above, the working of the Maudlin, Low-main and Hutton Seams, commences, in regular Succession, agreeable to the most approved method of working Collieries, in the Newcastle District, and have since supplied the Vend, although, I believe, for little Profit to the Lessee.

The working of the above Seams, has at all times, to my certain knowledge, been conducted in the most regular manner, and the System upon which it is established, is well calculated to obviate the effects of Creeps and Thrusts, and to obtain with safety the greatest possible produce of the Mine.

The outlines of this System are:

NEIMME/BUD/3/148

1st. To work the Colliery in Districts, or Divisions, separated by Barriers of Coal, sufficiently strong, to prevent any Creep that may eventually take place in one Division from extending to another, and

2nd. In the first working of the Coal, out of each Division, to leave the Pillars sufficiently strong to ensure a good second working.

By this System, the Pillars may be wrought out of the different Divisions in detail, and the Creeps, which must in consequence take place, will be prevented from injuring the Pillars in the other Divisions of the Colliery by the Barriers of Coal left for that purpose.

One of the principal Arcana in Coal mining, is to proportion the Pillar and Excavation in the working of a Seam of Coal, in such a manner under all the circumstances of Depth from the Surface, hardness of the Coal, number and texture of Bands, contained in the Seams etc. as to obtain the greatest quantity of Coal.

This is sometimes accomplished by leaving there Pillars, barely sufficient, in the first instance to support the Roof, without any intention of working them afterward, which is called a second Working, but more generally by leaving strong Pillars, which will admit of a second Working.

In New Washington Colliery, the latter

NEIMME/BUD/3/149

Plan is pursued for the following Reasons.

1st. As both the Maudlin and Low-main Seams are of inferior quality, they would not be saleable without a mixture of the Hutton Seam. It is therefore necessary to work the Hutton Seam conjointly with the Maudlin and Low-main.

2nd. It is necessary to leave the Pillars, sufficiently strong, in the Low-main and Hutton Seams to support the incumbent Strata without Creeping; as in all probability if a Creep should take place in the Low-main Seam, it would destroy the Maudlin Seam; but if the Hutton Seam should Creep, it would risk the destruction of both the Maudlin and Low-main. Hence, the necessity of leaving the Pillars in the Hutton Seam, and Low-main Seam of ample strength.

From the above observations it is obvious that, to obtain the greatest quantity of merchantable Coal from the different Seams, the Pillars in each must be wrought in regular Succession downwards, and which I believe is fully in the contemplation of the Lessees.

The Lessees are so fully aware of the advantages, which will ultimately result, from leaving the Pillars in all the Seams of adequate Strength, in the first

NEIMME/BUD/3/150

instance, that for a great Number of Years past, indeed, ever since the Maudlin, Low-main and Hutton Seams were opened, to my certain knowledge, the utmost attention has been paid to this point, as well as to the regular working of the Colliery, in every respect, although attended with a considerable increase in the Expense of working.

It is impossible to lay down any precise Rule for proportioning the Excavation, and Pillar in Collieries; as much depends not only upon the weight, or depth, of incumbent Strata, but also upon the texture, density and thickness etc of the several Seams of Coal to be wrought, likewise upon the nature of the Thill, or Stratum of undurated Clay, upon which the Seam of Coal repose.

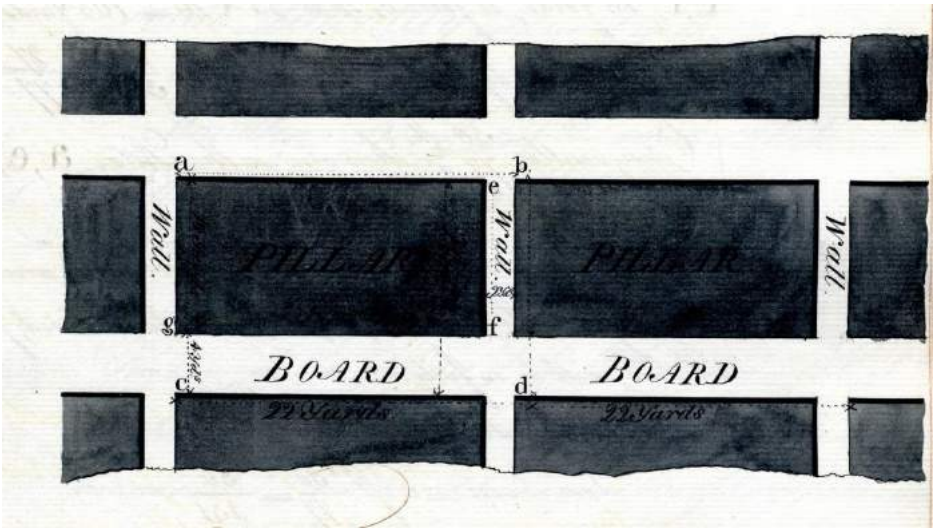
The quantity of Water met with in a Seam of Coal, and the degree of obliquity, at which it lies from the Horizon, have also considerable influence in determining the dimensions of the Pillars. All those circumstances must therefore be duly weighed by the judicious Miner, who must frame his Plan according to the nature of the case.

In New Washington Colliery the Seams of Coal do not deviate much from a horizontal position, and are tolerably free from Water, and being of pretty uniform texture; it has been agreed that the dimensions of

NEIMME/BUD/3/151

Pillar and Excavation, as described below, are the best calculated to obtain the largest proportion of Merchantable Coals, by a first and second Working.

SKETCH to elucidate the proportion of COAL wrought and left in PILLARS.



The Workings of a Coal Pit form a Succession of Parallelograms, as represented in the annexed Sketch, each of which from **a,** to **c**, is called a Winning, and from **a**, to **b,** a Pillar. The Excavation **e,f,** is called a Wall, and the Excavation **c,d,** is called a Board.

In New Washington Colliery the Winnings are 14 Yards, and the Pillars 22 Yards, consequently the Area of the Parallelogram, **a,b,c,d,** is 14X22 = 308 Yards.

NEIMME/BUD/3/152

The Excavation or Board**, c,d,** is 22 Yards long and 4 wide, consequently its area is 22X4 = 88 Yards.

The Excavation **e,f,** is 10 Yards long and 2 Wide, its Area is therefore 10X2 = 20 Yards.

Now, as the Area of the Parallelogram**, a,b,c,d**, is 308 Yards, that of the Excavation, **c,d,** 88 Yards, and **e,f,** 20 Yards, it follows that 88 +20 = 108 Yards, out of 308 is obtained by the first Working, or 108/308 = 27/77 ths.

Consequently 50/77ths Remain in the Pillar **a,e,f,g.**

It is presumed that when the proper Time arrives for working the Pillars, the proportion to be obtained from the Pillars will be as follows.

Maudlin ½ of 50/77th = 25/77

Low-main 1/3 of 50/77 = 50/231

Hutton ¼ of 50/77 = 25/154

This will make the Total Produce of the

	First Working		From Pillars		Total Proportion
Maudlin	27/77	+	25/77	=	52/77
Low-main	27/77	+	50/231	=	131/231
Hutton	27/77	+	25/154	=	79/154

NEIMME/BUD/3/153

Then the Thickness of Merchantable Coal in the

	Ft Ins		Tons per Acre
Maudlin being	4. 4 ½	it contains	127
Low-main …….	3. 2	ditto …….	92.8
Hutton……	4. 7	ditto …….	132

Total Quantity contained in the

	Tons		Tons per Acre	
Maudlin	127 of which	52/77	or 85 ½	will be obtained
Low-main	92.8 --------	131/231	52 ½	Ditto
Hutton	132 ----------	79/154	68	Ditto

From viewing the Workings of this Colliery every month, I can speak with certainty, as to the regularity with which they are conducted; but with regard to the quantity of Coals to be vended, it is impossible to form a correct idea, as it depends in a great measure, upon fortuitous Circumstances, over which the Lessees have no control. At present, the want of our usual intercourse with the Continent, more especially with the Baltic, renders the Vending of Coals of inferior quality more difficult and uncertain, than when we had a free export Trade; and as a considerable proportion of Washington Coals are of inferior quality the difficulty of vending them, from the Cause above stated, is felt in a greater degree than by other Collieries which do not produce so large a proportion

NEIMME/BUD/3/154

of inferior Coals. I am however, satisfied that the Lessees make every exertion in their power to obtain a large Vend; indeed, it is so much their interest to sell a large quantity, that they need no other Stimulus, having found by experience that unless they work, and sell, as many Coals at least as the average of the last Seven Years vend; they must lose considerable by carrying on the Colliery which has been the case so some Years past.

John Buddle

Wallsend, 14th August 1810

D.W.Smith Esqr.

Alnwick,

Sir,

I have at last received through the medium of Mr Hugh Taylor, a communication from Wm. Robinson, descriptive of the Situation and Circumstances, of Snoker Colliery. Robinson's Account, so far as I can judge, from the appearance of the Surface and the Race of old Pits, seems correct. He states that the Colliery contains two workable Seams of Coal of pretty good quality; the uppermost of which is 2 feet and the lower one 3 feet thick. They are 5 ½ Fathoms asunder, and have a regular dip towards the South East.

The Colliery was originally won by a Day-Level Drift, from the South East part of the Royalty towards

NEIMME/BUD/3/155

Dipton House; but the regular working of the Colliery by this Winning was interrupted by an upcast Dyke to the North West. In course of time however, this Dyke was set over, and the Coal being found good on its rise, or North West side, the Colliery continued working, in a N.W. direction, for several years when a downcast Dyke was met with, at which the Seams of Coal appeared to terminate; as all the attempts which have been subsequently made to find them have proved abortive.

It does not however appear, that in Robinson's opinion, the attempts which were made to find the Seams of Coal beyond this Dyke had been effectual or satisfactory; as he is disposed to risk the Expense of a Boring, in hopes of finding them. And indeed there is no reason to suppose that this downcast Dyke would destroy the Seams; but that it would merely depress them to a lower level, that extent of which yet remains to be explored.

Neither my own observations, nor Robinson's account of the former Workings, furnish sufficient data to enable me to point out what I might conceive to be the most eligible Situation, or mode for re-winning this Colliery; the description of the old Workings, being much too general, for grounding an opinion upon; without incurring the most imminent risk of being led into Error.

Under all the Circumstances of the Case, particularly from Robinson's local knowledge of the premises in question, I submit that the following Terms may be granted him on the part of His Grace.

NEIMME/BUD/3/156

1. To be allowed say, Six Months from Lammas, to make Borings, to explore the Colliery, and to expend £50 in making the same.
2. To have a Lease of 21 Years granted from, and after, the expiration of the Six Months allowed for making the necessary Borings.
3. The Certain Annual Rent to be £20 for 800 Fothers, and to leave the Rent for all Coals wrought over and above that quantity, to be fixed and determined by the Colliery Board.

I am Sir,

Your most obedient humble Servant,

John Buddle

NEIMME/BUD/3/157

Newcastle 10th September1810

Messrs Fenwick, Buddle and Watson,

Gentlemen,

Sir John Lawson granted a Lease of this Coal under Byker Estate, and also his Moiety of the Coal under Red Barns Estate, to Messrs Harrison, Cook & Co. who have opened out Lawson main Pit and explored the whole Coal in the High main Seam, which will be fully explained to you by their Viewer, you will therefore be so good as to View the Colliery and ascertain the situation of the High and Low main Coal as near as circumstances will admit, and the most eligible Mode and Plan of Winning the Low-main Coal; if it is or will be practicable wither by leaving or working the present whole Coal at Byker, and to recommend to Sir John Lawson the most prudent and eligible mode of settling with the present Lessees who have become Bankrupt. Should the Lessees or their Assignees work the whole Coal at Byker what prospect or probability is there of the Low-main Coal being got at or to warrant a Winning for that purpose.

Sir John Lawson's Viewer will attend you and give you all the Information he can.

I am Gentlemen,

Your obedient servant,

Signed John Bainbridge

NEIMME/BUD/3/158

Newcastle 14th September 1810

In consequence of Mr Bainbridge's Letter of the 10th Inst. requesting us to give our opinion on sundry matters relative to Sir John Lawson Bart's Colliery under Byker Estate, as also his Moiety of the Coal under Red Barns Estate. We descended the Pit at Byker, lately opened out by Messrs Harrison & Co. and find that they have opened out a passage through the former workings of the Colliery, to the Red Lane Barrier. They have also drifted in this Barrier, in a West and Northern direction, and have made several perforations through it by boring into the Old drowned Waste of Byker, as described on the Sketch which accompanies this Report.

We find it necessary to observe that this Barrier, called the Red Lane Barrier, was left by the late Alderman Ridley for the protection of the Eastern Part of the Colliery from the drowned Waste formed by the former Workings on its Western side, and may be considered as dividing the Colliery into two distinct districts, which for the sake of distinction, we shall call the East and West divisions of the Colliery.

The object of the present Lessees in gaining access to the Barrier seems to have been to ascertain the quantity of Coal which it contains, and to endeavour to discharge the Water from the Western division of the Colliery

NEIMME/BUD/3/159

through the Frame Dams in the Eastern Division into the Collieries lying to the Dip of Byker. The result of their proceedings is that they have ascertained the Barrier to contain about 4 Acres of Coal,

but they have completely failed in their attempt to discharge the Water from the Western Division into the Dip Collieries, as the Frame Dams between Walker and this Colliery have resisted it.

As the main object of the Lessees viz. the draining of the Western Division of the Old Waste has failed, and as the quantity of Coal contained in the Red Lane Barrier is so very limited, we are decidedly of opinion that little advantage can result to them by working it, but that the injury which may eventually arise to the Lessor from that measure is incalculable.

We are led to this conviction from what we have observed of the general Situation of the Colliery, and more particularly in reference to the lower Seams, the sole Value of which we conceive depends upon the protection given to them by the Barrier in question, as it forms the only point of access (see **Z** on the Plan) within Sir John Lawson's own Liberty by which those Seams can, with any reasonable prospect of success, be won and wrought. We therefore give it as our decided opinion that the Lessees should be immediately discharged from working any more Coal out of the Red Lane Barrier, as such working must weaken the same, and incur the most imminent Risk of letting in the Water from the Western Division, and thereby destroy the only remaining

NEIMME/BUD/3/160

point of access to the lower Seams as above stated, notwithstanding the Workings of the Lowmain Coal Seam approach the point in Question so nearly. We presume that the following Clause in the Lease empowers the Lessor to discharge the Lessees from working the Coal in Question.

" that the said Wm. Harrison etc,etc, shall not do, or commit, or suffer to be done or committed any neglect, or wilful act, or thing, whereby the said Collieries or Coalmines hereby demised, or any part thereof shall be dammified, drowned or overburthened with Water or Styth"

Besides the above, the Lessees covenant to work the Colliery according to the opinion of skilful persons employed as Viewers in the Coal Trade. And also not to sell, let or assign their Interest in the Mine without the Licence of the Lessor.

With respect to the Red Barns, the Collieries are so unconnected, that we do not think the proceedings at either of them can materially affect the other.

Signed John Buddle

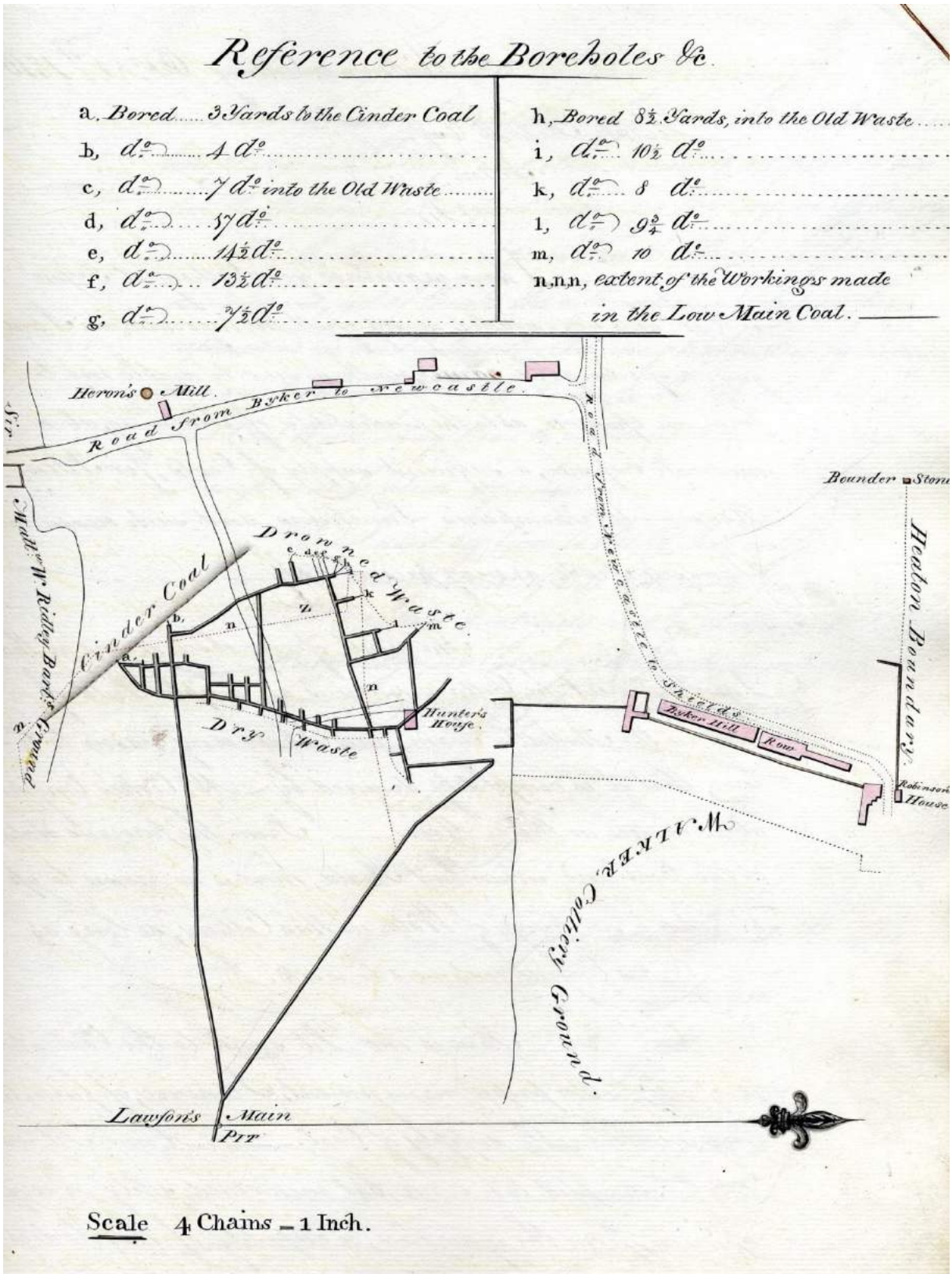
John Watson

I had not an opportunity of going down the Pit, but have examined the Plan, and entered into all the discussions on this subject with Messrs. Buddle and Watson, and concur with them in opinion as above.

Signed Thomas Femwick

NB. In order to prevent any mistake hereafter, as to the exact situation the Plot of Coal lies in, which is referred to in the above Report, we advise that it should be carefully Surveyed, and that a Stone be fixed upon the Surface, in the Situation of the Letter **Z**, as marked on the Plan.

NEIMME/BUD/3/161



NEIMME/BUD/3/162

Walls End Colliery October 1st 1810

Ralph Riddell Esqr.

Felton,

Sir,

I have examined your Colliery at Felton Moor, and have availed myself of all the information I could gain respecting the same, with a view to enable me to form an opinion, as to the practicability of obtaining, at a moderate Expense, a sufficient supply of Coals for Felton House. Mr Thompson's Limekilns, and such occasional Landsale Trade, as may present itself.

The Result of my observations is that I am satisfied the Colliery contains an ample Field of Coal in the Shilbottle Seam, and I have every reason to believe that it is completely drained by Mr Cooke's engine at Newton in the Moor. From the previous nature of the Coal and incumbent Strata, there is no reason to apprehend a surcharge of Water in this Colliery, so long as Mr Cooke's Engine continues to work.

There is one Pit sunk to the Coal, which is capable, under proper management, I conceive of furnishing a considerable supply of Coal. A new Pit was lately attempted to be sunk, but miscarried, solely in my opinion, from the ignorance or cupidity of the Parties to whom the management was entrusted.

NEIMME/BUD/3/163

The sole impediment to immediately resuming Coal Work seems to be the want of Ventilation in the Pit. Air Boxes have been placed in the Shaft, and other measures adopted to ventilate the Workings, but without answering the purpose effectually. Although the Air Boxes at present in the Shaft are of too small dimensions, yet I think the difficulties, which have been experienced in ventilating the Pit may be obviated by applying an Exhausting Air Pump to the top of the Boxes, and Coal Work may then be resumed. The cost of an Air Pump will be about 4 Guineas.

I must beg leave to observe, that unless the management of this Colliery be given to a Man of integrity and of competent knowledge in Colliery Business, it will not succeed, and will only be a source of vexation and expense.

I am Sir,

Your most Obedient Humble Servant

John Buddle

NEIMME/BUD/3/164

Alnwick 27th September 1810

Dear Sir,

We beg to know when it will be convenient for you to make a thorough examination of Shilbottle Colliery, which Mr John Taylor tells us he cannot keep without an abatement,

We are Yours truly,

William Smith

Copy Captain Buddle D.W.Smith } Commissioners

Colliery Viewer

Walls End Colliery 13th October 1810

W & D.W.Smith Esqrs. Com.

Alnwick,

Gentlemen,

In compliance with your request of the 27th September, I have viewed Shilbottle Colliery and as my attention was not requested to any particular object, it has of course been directed to the general management, and economy of the Mine.

I find that the new Winning has been completed, agreeable to the original design, and that one Coal Pit, as well as the Engine Pit, has been sunk, and the Workings carried on regularly and orderly. I have therefor little to observe in the interior of the Mine; but as Mr Taylor, the Lessee, informs me that he has given notice to quit, on account of the Rent being too high, I have made the annexed estimate of the expense of working the Colliery, with a view to aid your judgement as to the Revenue, which it is capable of producing.

I am, Gentlemen,

Yours etc. John Buddle

NEIMME/BUD/3/165

Amount Sales, Appendix No 1. ..... £ 4393.18.9

Deduct Working Charges etc 4061.13.3

Leaves for Interest of Money expended,

bad Debts, Sinking Pits, Agency and Lessees Profits £ 332.5.6

Errors excepted. John Buddle

NB. The expense of Sinking new Pits, is not charged in the above Estimate, but which after the sinking of the next new Pit will cost about £60 a Year. The next new Pit will apparently be required in about Eighteen Months, and may cost from £300 to £400 including the expense of removing the present Machine. After which only one new Pit in about every Six Years (at the rate of working above estimated) will be required.

NEIMME/BUD/3/166

Estimate of the Expense of Working Shilbottle Colliery on an annual Vend of 200,000 Cwt. of Coals, as stated in the Appendix No.1

Appendix		
No.II	Hewing and Putting ……	£888. 17. 6
	Narrow Work, setting through Troubles etc Underground ….	87. 15. 0
III	Craining and Onsetting at Shaft ……..	78. 0. 0
IV	Driving Underground, Horsekeeping, and Feeding Horses …..	144. 6. 0
V	Candles and Grease ……..	65. 0. 0
VI	Props ……	52. 0. 0
VII	Overmanship ……	64. 3. 0
VIII	Making Rolly Way Height, & Preparing Rolly Way plates	42.10. 0
	Keeping Fire Lamp Underground, Labour and Coals ……..	20. 0. 0
	Fire Coal to Sundry Workmen, not Colliers ……	10. 0. 0
IX	Banking out the Coals, Working the Machine find & Ropes, and Iron for repairing Machine etc. ……	178. 5. 0
X	Cartage for all Colliery Purposes ……	63.14.0
XI	Carpenter and Smith Work, Labour only ……	105. 6. 0
XII	Corving ……..	35. 0. 0
XIII	Making Tubs ……..	9. 0. 0
XIV	Binding Colliers ……..	38. 8. 0
XV	Repairing Workmen's Houses ……..	4.12. 0
XVI	Working and Keeping the Engines in Repair ……	291. 4. 0
XVII	Colliery Rent, Poor's Rate etc. ……	1279. 2. 9
XVIII	Leading Coals etc. to Alnwick ……..	536.10. 0
	£. s. d	
	Timber for all Colliery Purposes ……. 40.0.0	
	Stationary …….. 8.0.0	
	.Expenses -------Collecting Money …… 20.0.0	68. 0. 0
		£ 4061.13. 3

NEIMME/BUD/3/167

Appendix

No.I. Statement of the annual Vend of Coals.

		Cwt.
In 1808, the quantity of Coals sold was ……		113644½
1809,	Ditto ……	167304½
1810,	Ditto, up to the 3rd October ……..	156129

The latter is at the rate of 208172 Cwt, for the whole Year. But owing to the interference of Whittle Colliery, and Newton in the Moor, perhaps 200,000 Cwt may be as much as we can with propriety state, as the average annual vend from Shilbottle.

Of the above quantity, we may assume

100,000 Cwt. to be sold at Alnwick, at 6d		£ 2500.0.0
100,000 Cwt. to be sold at the Pit at 5d	£2083.6.8	
Deduct 1/11th lost by selling at the Pit, by Measure	189.7.10½	1893.18.9½
Amount Sales ……		£ 4393.18.9½

No.II. Hewing and Putting.

A Tub of Coals weighs 2¼ Cwt. and 25 Tubs or 56¼ cwt. are a Darg, or Days work, for which the Colliers are paid 5/- for hewing and putting.

Then 200000/56¼ = 3555½ Dargs, to be wrought in a Year to supply the Vend, which at 5/- per Day amounts to £888.17.6

NEIMME/BUD/3/168

No.III. Craining and Onsetting viz.

Fitting the Corves from the Tubs, and hooking on the Corves, at the Bottom of the Pit.

1 Craneman 15s/- per Week. 1 Onsetter 15/- per Ditto £ 78 per Year.

No. IV. Driving the Horses, Underground and keeping and maintaining the Horses.

1 Driver at 11/- per Week. 1 Ditto at 4/6d Ditto. } per Year ……£40. 6. 0

Housekeeper 1/- per Week …… 2.12.0

Maintaining 3 Ponies, including Shoeing, Trapping etc. at 13/- per Week each ……. 101. 8.0

£144. 6. 0

No. V. Candles and Grease.

Candles for Barrowing, 2½lbs per day or 15 lbs per Week at 1/- …….. £ 0. 15. 0

Ditto for 16 Putters ½lb each at 1/- …… 0. 8. 0

Grease for Rollies and Trams …… 0. 2. 0

£ 65 per year £ 1. 5. 0

No. VI. Props.

1 Cartload of Props, per Week …… £ 0.10. 0

Leading …… 0.10. 0

£ 52 per Year £ 1. 0. 0

NEIMME/BUD/3/169

No. VII. Overmanship.

1 Man …… at 23/- per week £ 1. 3. 0

1 Boy …….. Per Ditto 0. 6. 0

Or per year …… £ 75.9. 0

Deduct value of Overman's work, hewing Coals, 42 Tubs per Fortnight, on the

Average or 1092 in the Year, say 45 Dargs, at 5/- …….. 11.5. 0

£ 64.3. 0

No. VIII. Making Horse Height in Rolly Ways and upholding Rolly Way Plates.

150 Yards of Horse height , to be made for Rolley way every Year…… at 5/-….	£ 37.10. 0
Replacing, and laying broken Plates ……	5. 0. 0
	£ 42.10. 0

No. IX. Banking, working Machine & Ropes.

1 Bankman at 21/- per Week per Year ……..	£ 54.12. 0
Working the Machine, finding Grease, Oil, and Leather, at 24/- per week ……..	62..8. 0
125 Fothers of Coals. ……at 5/- …….	31. 5. 0
Iron for repairing Boiler, etc. ……..	5. 0. 0
	£ 153. 5. 0
Ropes ……..	25. 0. 0
	£ 178. 5. 0

No. X. Cartage.

1 Single Horse Cart employed for all Colliery purposes ……..at 24/- per Week

52 Weeks £ 63.14. 0

NEIMME/BUD/3/170

No.XI. Carpenter and Smith Work.

1 Enginewright……. at 21/- per Week}

1 Smith ……. at 19/6d per Ditto } £105. 6. 0

No.XII. Corving

Corf Rods per Year ……	£ 5. 0. 0
Leading ……	5. 0. 0

A Man occasionally …….. 25. 0. 0

£35. 0. 0

No. XIII. Making Tubs.

40 Tubs in the Year, for which the Cooper charges 1s/- each……. £ 2. 0. 0

Wood …….. 7. 0. 0

£ 9. 0. 0

No. XIV. Binding Pitmen.

Supposing the Pit, to work 290 Days in the Year, then each Tub weighing 2 ¼ Cwt, the Number of Dargs to be wrought daily, must be 200000/290x25x2 ¼ = 12 ¼ nearly. This will require 16 Colliers, and Boys for 16 Teams making due Allowance for Sickness etc.

The Binding Money of a Collier is …….. £ 1. 1. 0

Earnest …….. 0. 1. 0

£ 1. 2. 0

The Binding Money for each Tram …….. £ 0.10. 6

Earnest …….. 0. 1. 0

£ 0.11. 6

Then 16 Colliers ……at 22s/- …… £ 17. 12. 0

And 16 Trams ……at 11/6 …… 9. 4. 0

Shovel Money for 16 Men ……at 2s/- …… 1. 12. 0

Extra Binding Money to Young Men in lieu of Houses …….. 3. 0. 0

Expenses attending the removal of Pitmen …….. 5. 0. 0

Expenses attending the Binding Drink etc. …….. 2. 0. 0

£ 38. 0. 0

No. XV. Repairing Workmen's Houses.

1 Mason 12 Days ..... at 3s/6d.....	£ 2. 2. 0
1 Labourer 12 Days ..... at 2s/6d.....	1.10.0
4 Fothers of Lime ..... at 5s/-	1. 0. 0
	£ 4.12. 0

No. XVI. Working the Engine etc.

2 Men each at 21s/- per Week	£ 2. 2. 0
Grease and Oil	1. 0. 0
Hemp for Packing	0. 1. 0
Leather	0. 6. 0
Coals, expense of working only	1. 5. 0
Ropes and Candles	0. 5. 0
Assistance when changing Buckets	0. 1. 0
Iron for Repairing Boilers etc.	0. 12. 0
Per Year £ 291.4.0	£ 5. 12. 0

No. XVII. Colliery Rent, Poor's Rate etc.

Colliery Rent	£ 1125. 0. 0
Poor's rate on Ditto at 1/20th per pound	93. 15. 0
County Cesses	22. 5. 3
High Way Cess at 6d per pound	28. 2. 6
Horse Tax	10. 0. 0
	£ 1279. 2. 9

No. XVIII. Leading Coals etc to Alnwick.

4 Men ..... at 16s/- per Week each. Per Year	£ 166. 8. 0

4 Horses ……. At 20s/- Ditto ……		208. 0. 0
Damage of Ground by Waggon Way and Pits,		
including fencing and Gates ……..		26. 10. 0
Repairing Waggon & Cart Roads …….		55. 0. 0
Staithmen …….21s/- per Week …….	£ 54. 12. 0	
Boy ……..10s/- per Ditto ……	26. 0. 0	80. 12. 0
		£ 536. 10. 0

NEIMME/BUD/3/172

Report on Hitton Estate 17th October 1810

I have examined this Estate for the purpose of giving my opinion, as to the probability of its containing Coal and also to point out, the most proper situation to bore in search of the same.

The Stratification is nowhere visible, except in the Banks of the River Wear, on the Southern boundary of the Estate; and here it is sufficiently exposed in Galley's Quarry, Gilbert Reay's Quarry, Dakers's Quarry, Grecians Quarry and in the High Wood, to exhibit a very perfect Section, to a considerable Depth.

The whole of the Stratification throughout the extent, above described, as also at the Western extremity of the Estate, where it is visible in the Bed of the River, is most decidedly of Coal Formation, and no doubt remains in my mind, of the existence of Seams of Coal.

I must however, observe that the alteration of the Strata , is in my mind indicative of thin Seams of Coal, laying at a considerable Depth, and if I were to hazard an opinion, it would be that no Seam worth working will be met with at a less depth than from 130 to 145 Fathoms from the Surface. I must also observe that the Stratification is considerable deranged in two or three places, as between Galleys and Daker's Quarry and a little to the Westward of Grecian's Quarry. A Dyke is likewise visible in the White Heugh, on the South side of the River which runs in a Northerly direction, into Hitton and

NEIMME/BUD/3/173

throws down the Strata a few feet to the Eastward. This derangement of the Stratification it must be observed, is favourable to Coal mining, although in this case it would not materially impede the working of any Seam of Coal that may be met with.

The general dip of the Stratification is towards the North East, and should it be deemed expedient to bore in search of Coal, which can alone ascertain the fact of the existence of workable Seams, and their Depth from the Surface. The most eligible Situation for an effectual Boring of this description, is I conceive, in the high wood on the flat by the River side, at about 100 Yards above the Point.

John Buddle

NEIMME/BUD/3/174

Hartley Colliery 18th October 1810

In compliance with a request from Mr Thomas, that we should state our opinion on the propriety of allowing the Lessees of this Colliery to work a certain part of the Pillars of the Main Coal Seam, in the Nightingale Pit. We this descended the said Nightingale Pit and viewed and examined, the present Workings, and also the Pillars etc, in the Main Coal Seam, and gained such other information as we found necessary, to govern our judgement on the question submitted to our consideration.

We find that the Seam has been wrought by Winnings of 13 ½ Yards – viz. 9 to the Wall and 4 ½ to the Board – the Walls holed at 26 Yards – 2 Yards wide, consequently 5/13ths of the Seam are obtained by the first working and 8/13ths are left in Pillars to support the Roof.

On examining the texture of the Coal, together with the Shill, Roof, and other concomitants of the Seam, we are of opinion that the strength of each Pillar is considerably more than equal to the support of its share of the weight of the incumbent Strata; and therefore, that any individual Pillar, or any Number of Pillars, may be entirely removed and the Roof allowed to fall, as the adjoining Pillars are sufficiently strong to resist any partial pressure, that may be occasioned, by the removal of such Pillars.

Under this conviction we cannot see

NEIMME/BUD/3/175

the least impropriety in allowing the Lessees to make a general working of the Pillars in the North East division, of the Nightingale Pits Workings. By a general working we mean, that each individual Wall should be wrought clean off, in succession, beginning at either the North East, or North West, extremity of the District hereinafter described; by this mode of procedure we anticipate that each goaf will Thrust in succession, as its corresponding Pillar is wrought off, and thus prevent the bad effects of general pressure.

The extent of the District of Pillars in question is as follows, viz.

From the tail of the Water in the dip, or North West Workings, to the Eastern limit of the Pits Workings, adjoining the Chatham Pits Workings, about 40 Winnings in breadth.

And from the Northern extremity of the Workings, 35 Pillars North from the Shaft back to the first upcast Trouble, which is 16 Pillars from the Shaft.

To guard against any injury that might arise, to the Yard Coal Seam, by working the Pillars in the Main Coal, as above stated, we advise that the Lessees should push away a pair of North narrow Boards to the extremity of the District, where the working of the Pillars in the Main Coal Seam is to commence.

The Sheth of Boards must then be fore won and wrought

NEIMME/BUD/3/176

back towards the Pit, according to the usual mode of working this Seam.

Signed John Buddle

John Watson

Newcastle 20th October 1810

Gentlemen,

On considering the nature of your application, for leave to work the Pillars in the N East division of the Nightingale Pits Workings, in the Main Coal Seam, Hartley Colliery. We are of opinion, under all the circumstances of the Case, that you may make a general Working of the above Pillars, without injuring the Colliery. We beg leave however, to recommend, that the North Narrow Boards in the Yard Coal Seam, may be pushed forward without delay, to the intended limit of the Pits Workings, in that direction in order that the Yard Coal Seam may be wrought off in a retrograde manner, as to correspond with the working of the Main Coal Pillars below, as nearly as circumstances will permit.

We are, Gentlemen,

Etc.

Owners of Hartley Colliery John Buddle

John Watson

NEIMME/BUD/3/176a

Newcastle 18th Feb 1811

Sir,

We beg leave to state for your information, that it is our decided opinion, that Hartley Colliery cannot be injured by the Lessees being allowed to work the Pillars in the Nightingale Pit, agreeable to the plan stated in our Report of the 18th October last, but on the contrary, that its immediate adoption will be highly advantageous to the interest of the Lessor.

L. Huthwaite Esq.

Seaton Delaval.

NEIMME/BUD/3/177

Fishwick Mains 24 September 1810

I have examined this Estate, with a view to enable me to form an opinion as to the probability of its containing Coal, as also, to point out the most eligible Situation to search for the same.

From Walcot Cove, passing up the Bourn, nearly to the Mill, the Stratification is completely exposed at intervals, and exhibits a very good Section of the several Metals, to a considerable Depth. From a little below the Mill to Weatherdales little of the substrata is to be seen, but here in the Bed of the Bourn, they are sufficiently exposed to show their alternation to some depth, and also to show that there the Stratification has reached its summit Level, as after interval of no great extent in which the Metals have a confused appearance, it assumes a uniform dip towards the South West.

Through the whole extent above described the Stratification is most regular, and uniform as no Break or Dyke is visible until it arrives at its summit level as above described.

The Stratification, excepting the Masses of Freestone in Walcot Cove, consists of a regular alternation of

Sandstone _____darkish Grey.

Ditto _____of Reddish hue

Metal Stone _____ Blue

Metal _____ Black

Ditto _____ or Marle of a greenish tinge.

One Rock of Sand Stone is exhibited a little below the Bridge.

The Metal Stone Strata predominate, and alternate with thin Strata, or Girdles, of Sandstone, more or less indurated. I consider the whole of the Stratification in question to be of Coal Formation, or Coal bearing Strata, and therefore there is a strong probability of its containing Seams of Coal, but from the uniformity of alternation, without the intervention of any thick Strata of White Sandstone, I should suspect the Coal to lie at a considerable depth, and the appearance of the several Strata of Sand Stone etc are indicative of thin Seams.

Besides the predominant Strata being favourable to the presence of Coal, some of the actual Concomitants of Coal, such as Thill, Black Metal containing Nodules of Pyrites, and Black Metal with Threads or Pipes of Coal, have been met with.

I therefore think under all circumstances that the prospect of finding Coal in Fishwick Mains is such as to warrant the expense of an effectual Boring, and the most eligible situation for such Boring I conceive to be in Weatherdale's Field, so far to the West, or South West, of the Dyke or Summit Level, as where the Strata have obtained their regular strick or dip towards the South West. To ascertain which, I would advise the top of the Ridge to be bared for a few Yards on either side of the Bourn that may be most convenient, which will point out its line of direction, when the proper situation of the Borehole may be easily fixed upon. I prefer the West side of the Dyke, as the most

perfect Coal Formations, viz Coal Pipes, or Cron Coal, and white Sandstone have been found in that direction.

John Buddle.

Newcastle, 6 October 1810

Sir,

Enclosed is my Report on Fishwick Mains, which an unexpected press of business has prevented me from sending sooner.

I have stated the prospect of finding Coal in as favourable a point of view as facts would support me in doing, but if you would wish it appear in any other shape, I can easily alter the Form, without misrepresenting the Facts, as I have stated nothing more than my real opinion. I however feel it necessary to state candidly to yourself that I scarcely think the prospect of finding Coal so favourable (that is a workable Seam) as to justify me in advising you to bore at your own expense, to such a depth, as would be necessary to set the question at rest, as I think the Cost would be too great for an individual, unless the prospect of remuneration rested on safer ground.

I am etc.

Burnet Greive Esq. John Buddle

NEIMME/BUD/3/180

Backworth Colliery, 12 October 1810

We the undersigned met here this Morning to consult on the best mode of effecting the intended new Winning of the Main Coal Seam on the dip or North side of the Main Dyke.

After examining the plan of the present, and ancient Workings, on the rise, or South side, of the Dyke, and investigating the three several Borings that have been made to various depths, on the North Side of the Dyke, we conceive that we have Sufficient Grounds for establishing the following Points, as data for our government, in pointing out the most eligible Situation for the intended new Winning.

1. The main Dyke seems to divide into two branches, near its entrance into Backworth Royalty, from Killingworth. The northern Branch running No 80 East, the Southern Branch about South 80 East.
2. The Boring No 1 on the Plan, found the High Main Coal Seam, at the Depth of 29 Fathoms with all its usual Concomitants.
3. The Boring No 2. Was bored to the depth of 37 Fathoms and from the Strata passed through, leaves no doubt in our minds, of its being left off in the main Part, within a short distance of the Coal.
4. The present Boring No 3 now at the depth of 32 Fathoms we conceive to be in the 70 Fathoms Post

NEIMME/BUD/3/181

which lies from 30 to 35 Fathoms above the Main Coal Seam.

From a due consideration of the above circumstances, we are of opinion that the point marked A upon the Plan, is the most eligible situation for the intended new Winning; as it is nearly to the full dip of Colliery, and embraces the advantage of an offtake Drift being extended to it, from the present Workings on the South side of the Dykes. This offtake Drift will be 450 Yards in length, and will reduce the lift of Water 20 or 25 Fathoms.

Notwithstanding our conviction of the situation above pointed out, being the most eligible for the new Winning, we think it prudent to recommend a Boring to be made without delay to a sufficient depth to ascertain the existence of the 70 Fathom Post, and Three Quarter Coal, and the depth of the same. When if they are found to be regular within 40 to 50 Fathoms of the Surface, we conceive that the Winning may be immediately commenced, as the main Coal will in that case lie at the depth of 70 to 80 Fathoms from the Surface. While the boring above recommended is going forward we advise that a Stone Drift should be extended due North through the Dyke, from the Face of the present N, West Workings, towards the Point A on the Plan, which will save the double purpose of an

NEIMME/BUD/3/182

exploring Drift to ascertain whether the Coal is workable between the Branches of the Dyke, as also for the offtake, or Water Course Drift, from the new Winning.

We feel so confident of the place above pointed out, being the most eligible for the New Winning, as to induce us to recommend that the Pit should be sunk to the depth of 5 or 10 Fathoms if not prevented by Water, which will greatly facilitate the Boring.

John Buddle

Ralph Dodd

Thomas Taylor

NEIMME/BUD/3/183

Alnwick , 27 October 1810

Dear Sir,

Your report upon Shilbottle Colliery has been laid before the Duke, by which it appears that according to your Calculations there is a balance in the Tenants favour of £ 332.5.6 ½.for interest of Money expended, bad debts, Sinking Pits, Agency & Lessees Profit. Under the perception of reducing the Rent from £1125 to £800, there would have to be added to the above £332.5.6 ½ the Sum of £325 making £657.5.6 ½ and as this would also lessen the Taxes, suppose £42.14.5 ½ more. Then the Lessees Profit would be £700 instead of £332.5.6 ½.

The Duke requests you will favour us with your unreserved opinion on this deduction; its competency, or insufficiency – and referring to your former report, wherein you apprehend the

lapse of some little time before the best Coal was come to – now nearly perhaps at hand – we beg to know whether you would recommend as fair between Landlord and Tenant, that this deduction of Rent should be for the whole period of the Lease, or only for a term, and what term – whether the quantity for the vend should remain as at present, or be reduced in proportion to the Rent – neither of which Mr Taylor thinks should be done, contending that the reduced rent should be for the whole time, and the vend remain at its present limitation. Mr Taylor is about £15000 in Arrear, which he proposes

NEIMME/BUD/3/184

to pay off instalments at £300 per Annum. His Lease began the 1st of Jan 1808, and under the depreciation of rent looked for we suppose you would not recommend that the Lease should be extended beyond 21 Years from that Time.

We should be glad to have your answer on Wednesday Evening – and if you noticed the Waggon Way, should be glad to have your opinion upon it – the actual vend which was laid before you could not be fairly averaged upon, as for some time at first the Colliery was not worked, and the indifferent Coal working through first would have some effect upon it – added, possibly, to the management of the Tenant, the better to answer his purpose of obtaining a reduction of Rent.

We are Dear Sir,

Yours obediently

Copy

John Buddle Esquire

Wallsend Colliery

William Smith

D.W.Smith

NEIMME/BUD/3/184a

(see copy transcribed by John Buddle NEIMME/BUD/3/183-184)

Tenant, the better to answer his purpose, of obtaining a reduction of Rent —

We are dear Sir

Yours obediently

Js. Smith & Cond.

D Smith

John Buddle Esq

Colliery Office

(Copied)

Alnwick. 27 Oct. 1810 — p184a

Dear Sir

Your report upon Shilbottle Colliery has been laid before the Duke, by which it appears that, according to your calculations there is a balance in the Tenants favor of £322-5-6½ for interest of Money expended, bad debts, sinking pits, agency, & Lessees Profit — under the perception of reducing the rent from £1125 to £1000, there would have to be added to the above £332.5.6½ the sum of £325 — making £657-5-6½, and as this would also lessen the Taxes, suppose £42.14-6½ more — then the Lessees profit would be £700 — instead of £332.5.6½.

The Duke requests you will favour us, with your unreserved opinion on this deduction; its competency, or insufficiency — and referring to

NEIMME/BUD/3/184b

your former report, wherein you apprehend, the lapse of some little time, before the best Coal was come to — now nearly perhaps at hand — we beg to know whether you would recommend as fair between Landlord & tenant, that this deduction of rent should be for the whole period of the Lease, or only for a term, & what term — whether the Quantity for the rent should remain as it now is, or be reduced in proportion to the rent — neither of which Mr Taylor thinks should be done, contending that the reduced rent should be for the whole term, & the vend remain at its present limitations — Mr Taylor is about £1500 in Arrear, which he proposes to pay

p184b

off by instalments of £300 Annually — His Lease began the 1st of Jany. 1808 — & under the depreciation of rent looked for, we suppose you would not recommend, that the Lease should be extended beyond 21 years from that time —

We should be glad to have your answer on Wednesday Evening — & if you noticed the Waggon way, should be glad to have your opinion upon it — the actual vend which was laid before you, could not be fairly averaged upon, as for some time at first the Colliery was not worked, & the indifferent Coal working through first would have some effect upon it — added, possibly, to the Management of the

NEIMME/BUD/3/185

Wallsend Colliery 4th November 1810

William & D.W.Smith Esquires

Alnwick,

Gentlemen,

In consequence of your Letter of the 27 October I have entered fully into the circumstances respecting Shilbottle Colliery, submitted to my consideration, and think the proposed abatement of rent fair and reasonable.

Under all the circumstances of the case I think, that the Term of the Lease should remain as originally agreed upon, viz. 21 Years from the 1st January 1808, and that the reduction of Rent should be for the whole period of the Lease, without any diminution of the stipulated quantity of Coals. In this case the cerain Rent will be £800 for 12000 tons and 1s/4d per Ton for surplus workings.

My principal reason for recommending the above terms as fair, between the Landlord and Tenant in this case, is, that as long as Whittle Colliery and Newton in the Moor, continue to rival Shilbottle, I am of opinion that under the proposed reduction of Rent, there is hardly a possibility of Mr Taylor working more than an aggregate profit of £700 a year to cover Interest of Money, Agency etc. and which I do not consider exorbitant. In the event however

NEIMME/BUD/3/186

of one or both of those Collieries ceasing to work, and no other Collieries opening to interfere with Shilbottle, I have not the least doubt but Taylor would be able, both to increase his vend, and advance his price, at least 2d per Cwt, or 3s/4d per Ton, and as this would increase his Profit beyond all reasonable bounds, I think the Duke should participate in such advance. I therefore submit that Mr Taylor should enter into an Agreement (in case the Duke should consent to the terms above stated) to pay an additional Rent of 10d per Ton, on all Coals sold at 7d per Cwt, at the Pit, and 8d per Cwt. at Alnwick, which is 2d per Cwt more than the present selling Price, and so in proportion for whatever further additional Price he may at any time put upon the Coals, during the term of his Lease.

I am aware that this mode of imposing a Colliery Rent is novel, and perhaps unprecedented, but under the peculiar circumstances of Shilbottle Colliery, particularly with respect to the operation of the rival Collieries in the event of their ceasing to work, or entering into combinations to raise the price of Coals, I scarcely see any other mode of securing to the Duke, that but which the local situation of Shilbottle may eventually entitle him to.

NEIMME/BUD/3/187

You will observe that I have not stated the annual Vend of 200,000 Cwt. as an average of the <u>actual Vend</u> laid before me, but as the Vend, which I think, from the best information I could get, Mr Taylor may be likely to obtain – the Vend ion 1808 and 1809 was much below that quantity.

The construction of the Cast Iron Rails and Waggons is not objectionable. I did not examine the line of the Road, but from the circumstance of an Horse taking no more than two Tons at once, I should imagine that there is some defect in the fall or rise of the descents or ascents, as an horse ought to

take 3 Tons at least; I apprehend that Taylor may not have been able to make the line of Rail Way so complete as he might have done, owing to pecuniary embarrassment.

The Colliery workings appear to me to have now passed the region of inferior Coal, it has not therefore influenced my opinion at all on this occasion.

I am, Gentlemen,

Your most obedient and humble servant

John Buddle

NEIMME/BUD/3/188

Durham, 27th November 1810

Dear Sir,

On the other side I send you a rough Eye Sketch of Elvet Colliery, and also the Situation of my Freehold Field, containing A8.R0.P0. – the present Workings are going up the Bellasis, on the North side of it, and I understand are continued nearly opposite where they mean to sink their new working Pit. I also understand that Mr Flintoff's old Wastes to the East of my Field are drowned, which prevents them from getting to Elvet Moor, that way consequently must come through my field of course. Mr Boulby pays at present 1s/- per Score.

Any charge that you make for your opinion, upon the subject, shall be thankfully paid by :-

Dear Sir,

Your obliged humble Servant,

Mr Woodifield.

NEIMME/BUD/3/189

NEIMME/BUD/3/190

Walls End Colliery, December 1810

Dear Sir,

I have taken the situation and circumstances of your Field at Elvet into consideration, and observe that [it] is completely insulated by the Dean and Chapter's and Mr Smailse's Royalty.* I do not think you can ask him more rent for your Coal, than he pays to the Dean & Chapter for theirs; deduction the outstroke Rent which he may be obliged to pay them for the privilege of working it. But if Mr Boulby should not be able to make a communication from Bellasis to his intended New Pit, through Mr Smailse's Field, or through the Lane or Plantations, between the South East end of your Field and Flintoff's old Waste, he must I imagine go through your Field. In this Case, I conceive that the liberty of passage through your Field must afford him great accommodation and facilities in working the Coal out of the Bellasis; In this event I think that he ought to pay the same Rent for your Coal as he pays the Dean & Chapter, and as the accommodation is mutual between yourself and the Dean and Chapter, you ought to allow Mr Boulby to work the same quantity of Coal out of the Bellasis by virtue of Instroke and Outstroke through your Field, as he may work out of your Field and draw

*On the supposition that Mr Boulby gain access to the Bellasis through Mr Smailse's Field from his New Pit.

at any Pit in the Dean & Chapter's Liberty. After you have allowed Mr Boulby an equivalent in this way, I think that he should pay you an outstroke Rent of 2/6 or 3/- per Ton for all Coals, which he may win and work, over and above such equivalent quantity by virtue of such Instroke and Outstroke, and liberty of passage and Water Course.

The Score at Elvet Colliery consists of 21_10 Peck Corves I believe – consequently the outstroke Rent of 3s/- per Ton of 430 Bolls, is equal to 2 ¼ d per Score.

Should you wish any further information on this subject in my power to afford, I beg that you may not be backward in coming forward to ask it, but command me freely as I assure you that it would give me the utmost satisfaction to be of use however trifling on the occasion.

I am, Dear Sir,

Yours Etc.

John Buddle

Mr Woodifield Esquire

Durham

NEIMME/BUD/3/192

Wallsend Colliery, 1st December 1810.

Thomas Wilkinson Esquire

Dinsdale near Darlington,

Sir,

I have now the pleasure of handing you my Report on the Lambton Collieries which has been much longer delayed by several unexpected circumstances than was intended. Should this Report not embrace all the points which you could wish, or not be sufficiently explicit, I shall feel exceedingly obliged by your candid remarks upon it, and will have the greatest pleasure in making any alteration, or addition that your better judgment may suggest.

In future I submit that it may be advisable to make a yearly Report, on the state of the Colllieries, such report to notice all the material measures which have been adopted, and the changes which may have taken place during the year, together with the causes and effect of the same. And I feel infinite satisfaction in adding that I entertain the most sanguine expectation, that the present year will be much more auspicious for the commencement of such annual Report, than any of the preceding years since I knew anything of the Lambton Collieries.

I am Sir,

Your most obedient and humble Servant

John Buddle

NEIMME/BUD/3/193

October 1810

Report on Lambton Collieries, To Thomas Wilkinson Esquire

When a Trade of any kind becomes less profitable than usual, it naturally occurs to those concerned in it, that there must be some cause for the same; and that an investigation is necessary to ascertain, at least, how such diminution is occasioned, even if it should not be attended with a more favourable result. This observation unfortunately applies to the Colliery Concerns of the Lambton Family, and the object of this Report, is, to endeavour to account for the, comparatively small, Profits which the Lambton Collieries have produced for several years past.

When Lambton Collieries were in their most flourishing state, the supply of Coals was obtained from the High main Coal Seam, almost exclusively. This Seam, besides possessing the advantage of being at a moderate depth from the surface, was 6 feet thick, of superior quality, and easy to work, as appears by the Colliery Books at that period. Besides combining all the above advantages, the sale of Coals from this Seam, was almost unlimited, as there were not then so many rival Collieries in the Trade, and of course fewer competitors to contend

NEIMME/BUD/3/194

The facility with which the Coals from this Seam were obtained and sold, naturally occasioned its being wrought, in large quantities, while the lower Seams were in a great measure overlooked, and neglected; and it does not appear, ever to have been in the contemplation of the Parties, that it was necessary to work a due proportion of the lower Seams conjointly with the High-main, in order to render the Revenue to be derived from the Collieries more permanent; but, as was then too generally the case in the Coal Trade, they had preferred present profit, to the future welfare of the concerns.

This inordinate working of the High-main Coal continued, until, with the exception of Ponshor, it was nearly exhausted in all the Lambton Collieries. To supply the usual Vend of Coals from these Collieries, and to enable the late General and Mr Lambton, to support the character of the first Coal Owner on the River Wear, which they then held, the winnings of the * lower Seams became indispensable. * Maudlin, Lowmain & Hutton.

The winning of the lower Seams was accordingly carried into effect at Haraton Colliery, and afterwards at the other Collieries successfully, and the quantity of Coal wrought from them, increased progressively, as the High-main Seam became exhausted, till in the end nearly the whole vend was supplied by them.

For some time after the whole Vend was supplied by the lower Seams, the want of the High-main in point of profit, was not materially felt, as the Pits were wrought comparatively cheap, from the Putting Charge

NEIMME/BUD/3/195

or conveyance of the Coals underground being moderate, owing to the Pits being sunk in a whole Field of Coal, and of course the Coals only to lead a short distance. In course of time, however, as the workings became extended, the putting charge became serious, and the Sinking of New Pits became still more expensive, owing to the increased depth to the lower Seams, and the difficulty of passing through the old Workings of the High-main Seam, which in many places were filled with Water. Besides the increased expense and difficulty of working the lower Seams, the Coals which they produced were not so saleable as the High-main Coals, and that preference which was necessary to enable the Lambton Collieries to obtain their accustomed Vend, could with difficulty be maintained, owing in a considerable degree to the supply of Coals of similar quality, as well as High Main Coals, which was furnished by other Collieries on the River Wear.

The above considerations induced the Winning of New Penshor Colliery. This Winning was undertaken with a view to obtain a further supply of High-main Coal; but owing to the great dip or inclination of the Seam, which makes it expensive to work, and the Coal not being of the best quality, that advantage, which was expected to result from the undertaking, particularly since the Rise Coal was wrought off, has not been realised.

The High-main Coal having been prematurely wrought off as above stated, is not, however, the sole cause

NEIMME/BUD/3/196

of that defalcation of Revenue, which has for some Years past been experienced in the Lambton Collieries. The immense increase in Price, on every Article of Colliery consumption, as well as on the Price of Labour, has contributed in an eminent degree, to produce that effect. This is clearly shown by the following Table of Prices.

Prices in the Year	1780	1790	1800	1809
Timber per foot [?] Memel	1s/1d	1s/- & 1s/3d	2s/6d	6/-
Norway	11d	10d & 11d	1s/9d	4s/-
Iron per Cwt……..		22/-	30/-	26/-29/ & 33/
Cordage per Cwt……..	36/-	36/-	68/ to 90/-	120/ to 150/-
Tallow per Cwt……		41/- to 43/-	55/-	90/- to 100/-
Oats per Boll……	3/-	3/9d & 4/-	11/-	7/9 ½d
Hay per Ton ……	34/-	40/- to 45/-	120/-	70/-
Average Price Underground				
Horses 14 to 14 ½ hands	£5	£7	£12	£24
12 to 12 ½ ditto	£3	£4.4.0	£5	£10.10.0
Waggon Horses ……			£21	£30 to £40
Average Earning of Hewers p/day	1/- & 2/-	2/3d	3/-	4/-
Ditto Drivers	10d & 12d	12d	14,16 & 18d	2/- & 2/3d

The foregoing general observations embrace a period of Time many Years prior to my knowing anything of the Lambton Collieries, as I did not become acquainted with them until the Year 1800, when my late Father was employed by the Trustees to inspect the Collieries. Since that time I can speak with more precision

on the subject of this Report.

Before I enter into a narrative of such proceedings, as fall within my department, of Colliery Viewer, since I became acquainted with the Collieries in the Year 1800, it is necessary to observe, that the custom has been to let the working of the Coals, at so much per Chaldron to Undertakers. * The price to be paid such Undertakers, to be ascertained and fixed every Year, according to the Rates of Colliery Materials, and the Price of Labour. But this merely applies to the working of Coals, and keeping and upholding Waggon Ways and Waggons. They have nothing to do with the sinking of Pits, Building of Houses, etc. nor any Winning Charges, and whenever the average Price of Oats, exceeds 20s/- per Quarter, New Hay £3 and old hay £5 per ton the extra Price is paid by the

*The first Undertaking took place 31st December 1784

Term …… 8

Ended December 31st 1792

The second Ditto …… 7

Ended December 31st 1799

Both Undertakings	Featherstonhaugh & Co
Prices 1st Undertaking	Lambton 8/9, Second 8/8
----------,,----------	Harraton 8/- _____ 7/8
----------,,----------	Bownmoor7/8 _____ 7/6
----------,,----------	Lumley 7/9 _____ 7/6
----------,,----------	Pensher 1796 _____ 10/6

NEIMME/BUD/3/198

In the Year 1800 the average working and leading Charge as ascertained from the actual Expenditure was 11/8 per Chaldron. This was the price paid to the Undertakers. But beside the Price paid the Undertakers, for working and leading the Coals, the following Sums were paid for extra Work Etc. which of course lessened the apparent Profit of the Year.

	£
Building a large Pumping Engine of Boulton and Watts construction for drawing the Water out of the old Workings of Murton Colliery in the Five Quarter and High-main Seams, preparatory to winning the lower Seams …….	2376.11.8
Sinking a New Pit, in the New Winning of the lower Seams in Murton Colliery …….	594.11.11
Extra Charge for Oats, above 20/- per Quarter the average Market Price paid being 44/1½ p.q.	4089.18.3
Loss by supplying the Workmen with Bread Corn.	3284.5.6
Building New Houses for Pitmen ……	1475.0.0
Extra Charge for Binding Pitmen ……	3730.9.3
Staple and Drifts from Beany Field to Houghton Gate Pit ……	612.14.9
Ponsher Water Level Drift …….	233.19.0
Stone Drift in Lumley Colliery & Hutton Seam …	768.14.0
New Waggon Way to Houghton Gate Pit …….	350.0.0
	£ 17516.4.4

Note. In this Year we perceive several, heavy and unusual Charges, arising from the peculiar circum-

NEIMME/BUD/3/199

-stances of the times. The extra Binding Charges, the high Price of Oats, and the allowance for Workmen's Bread Corn, are almost unprecedented. The building of the New Engine was essential to the New Winning of the lower Seams in Murton Colliery.

In 1801 the working and leading Price paid the Undertakers was 12/3 per Chaldron and the extra Charges for the Year were as follows:

£. s. d

Erecting Etc. Murton New Pumping Engine …….	1733.10.3
Sinking Engine Pit and Drifting ……..	395.2.6
Extra Expense of Oats above 20/- per Quarter ….	2877.0.3
Ditto of hay above £4 per Ton for New, and £5 per ton for old ……..	1573.13.4
Loss by supplying the Workmen with Rye ……	1249.1.8
Building New Houses for Pitmen ……..	369.12.0
Enlarging the Power of the D Pit Pumping Engine	759.19.7
Frame Dam at Ponsher, in the Water level Stone Drift, to stop the communication with Sir Henry Vane's Colliery ……..	259.11.6
	£ 9217.11.1

The principal extra Charges this Year, are the Prices of Oats, Hay and Rye.

In 1802, the Price paid to the Undertakers was 12/- and the extra Charges were as below.

	£. s. d
Working Murton Engine ……	857.11.4
Sinking the Engine Pit and Drifting ……	1061.5.0
Ditto a New Coal Pit ……..	579.4.6
Building New Houses for Pitmen ……	364.8.0
Widening the Row Pit Shaft Harraton ……	785.17.0
Building a Coal Machine & Engine on Ditto ……	2743.8.7
Building a Coal Draw & Machine at Houghton gate ……..	1454.13.6
	£ 7846.7.11

NEIMME/BUD/3/200

The above Charges may be considered as Money laid out in an increase of Stock.

In 1803, the price paid to the Undertakers was 12/6 per Chaldron - the extra Charges as below----

	£. s. d
Working Murton Engine……	425.7.1 ½
Sinking New Pit ……..	1970.11.11 ½
Do. Engine Pit and Drifting ……..	64.6.1
Opening a Water Course from the Row Pit, Harraton, to Lambton old Engine……	1253.7.5
Extra Binding Charge at Moiety ……..	507.11.1
Moiety of the Valuation of Colliery Stock ……..	242.8.6
Building New Houses for Pitmen ……..	200.18.0
Proportion of Binding Money for Lumley Colliery, paid the late Undertakers ……..	149.6.8
	4813.16.10

Mem. Messrs. Featherstonehaugh & Co. declined the Undertaking and Messrs. Fenwick & Co. took it this Year.

In 1804, the price paid the Undertakers was 13/- per Chaldron – the Extra Charges as below ------

	£. s. d
Working Murton Engine ……..	388.2.3
Sinking a New Pit in Murton Colliery ……	1632.19.9
Extra Charge of Binding Pitmen ……	6895.9.4
Building New Houses for Pitmen ……..	1540.5.9
Interest on Colliery Stock due to the late Undertakers, Messrs. Featherstonehaugh & Co. ……..	1816.13.5
Paid Mr Featherstonehaugh, in Part for his Balance of Stock .	2000.0.0
Extra Charge for Oats, above 20/- per Quarter ……..	652.0.0
Income Tax ……..…	360.0.0
	£ 15285.10.6

NEIMME/BUD/3/201

NB. The extra Charge of Binding Pitmen this Year is enormous. The Interest paid Featherstonehaugh & Co, for Stock, and the Sum paid Mr Featherstonehaugh on Account of Stock, increase the extra Charge of the Year very considerably. It is to be observed, that during the Term of Featherstonehaugh & Co.'s Undertaking, the Use of Machinery for drawing Coals was generally adopted, and the great Number of Machines erected, for that purpose on the Lambton Collieries, by the Undertakers, occasioned a large accumulation of Stock, at the expiration of their Term.

In 1805 the Price paid the Undertakers was 13s/10d and the extra Charges of the Year were as follows.-

	£. s. d
Working Murton Engine ……	345.4.7
Sinking a New Pit in Murton Colliery ……..	567.11.9
Do. at Pensher to win the dip part of the Colliery in the High main Seam ……..	1609.8.10
Extra Binding Charge ……	1629.7.5
Building New Houses for Pitmen ……..	1503.14.0
Extra Price of Oats ……..	947.6.6
Paid Featherstonehaugh & Co. on Account of Colliery Stock	12,134.0.6
Interest on Ditto. ……..	855.9.2
Property Tax ……	347.8.0
Restoring Mill Race damaged by D Pit ……..	84.18.6
	£ 20,024. 9. 3

The Payment to Featherstonehaugh & Co. for Stock reduces the apparent Profit of this Year very materially. It must however be considered that this Sum as well as the

NEIMME/BUD/3/202

Charge of Sinking the New Pits and building new Houses for Pitmen is not Money sunk; but is so much more Capital involved in Stock.

The new or dip Winning of Pensher Colliery commenced this Year. The principal motive for the commencement of this Winning was to obtain a more ample, and permanent supply of High-main Coal, a due mixture of that Coal being deemed indispensable for supporting the character of Bourn Moor Coals.

In 1806, the Price paid the Undertakers was 13s/8d per Chaldron, and the extra Charges were as follows.

	£. s. d
Mr Featherstonehaugh for Stock ……..	1251.2.0
Ditto …… for Interest …….	12.17.0
George Fenwick ……. for Ditto ……	391.16.0
Ditto …….. for Ditto ……	189.19.0
Building new Houses for Pitmen ……..	647.7.0
Working Murton Engine ……..	356.4.4
Sinking West Pit in Murton Colliery ……	36.19.4
Sinking Charges at Pensher Colliery New Winning ……..	5663.16.9
Waggon Way Bridge from Lumley ……	350.10.2
Expenses on Acct. of Keelmen's Hospital ……	138.11.0
Extra Price of Oats above 20/- per Quarter ……..	1373.5.10
Discount on Bills paid this Year ……..	286.12.3
Property Tax, Lambton & Harraton ……	329.0.10
	£ 11,028.1.6

The Payment to Mr Featherstonehaugh for Stock, the Sinking at Pensher New Winning and the extra

NEIMME/BUD/3/203

Price of Oats, constitute the heaviest Payments of this Year, but the latter only can be considered as an extra Charge, the former being involved in Stock, and ought in strictness to be carried to the credit of Profit and Loss Account.

In 1807, the Price paid the Undertakers was 14/3 and the extra Charges were as follows. Viz.

	£. s. d
Working Murton Engine ……..	363.5.7
Sinking Pensher New Engine Pit ……..	8459.5.10
Extra Price of Oats above 20/- per Quarter ……	1408.0.5
New Houses for Pitmen ……	497.2.0
Mr Fenwick for Interest on £8442.11.4¾ at 5%, deducting Property Tax ……..	379.18.0
Discount this Year ……..	316.10.9
Property Tax ……..	734.19.11
	£ 12,159.2.6

The Principal Charge this Year is the Money expended in Sinking the New Engine Pit at Pensher, which must be considered as Stock, being expended with a view to increase the future Profit of the Colliery.

The Profits of this Year were materially lessened by a reduction of 4s/- per Chaldron on the Price of Coals which took place on the 24th October. It was found necessary to resort to this measure to procure a vend of Coals, which could not be otherwise obtained on account of the illicit practices of several Coal Owners on the River Wear, in the sale of their Coals. The quantity

NEIMME/BUD/3/204

vended this Year was also less than usual.

In 1808, the Price paid the Undertakers was 14s/1½d per Chaldron and the other extra Charges were as follows.

	£. s. d.
Working Murton Engines ……..	558.2.2
Sinking the New Engine Pit at Pensher ……..	793.17.5
Extra Price for Oats above 20/- per Quarter ……	1778.7.3
Paid for a large Steam Engine for Pensher New Pit ……	2515.18.6
Fitting up the Winding Machine at Ditto ……	25.12.9
New Houses for Pitmen ……..	174.15.1
Mr Fenwick Interest, after deducting Property Tax ……..	379.18.0
Discount this Year ……..	700.19.9
Property Tax ……	528.9.6
	£7456.0.5

Deduct.

	£. s. d	
Cash received of Sundries for old cast iron	182.6.8	
Ditto ……Owners of Newbottle Colliery for a Boiler ……	229.13.6	
Ditto …….Fenwick & Co. for old Timber	60. 6.0	472.6.1
		£6983.14.4

The principal sum expended this Year above the Price the Undertakers, was the Cost of the New Pumping Engine, for the New Winning at Pensher. But the greatest drawback upon the Profit was the low Price at which the Coals sold during all this

NEIMME/BUD/3/205

Year, being from 3/- to 4/- per Chaldron less than the former selling Price. The very bad state of the Trade this Year rendered it inconvenient to pursue the New Winning of Pensher Colliery, which was therefore suspended in hopes of the Trade improving, when it may be resumed.

In 1809 the Price paid the Undertakers was 14s/10d per Chaldron and the extra Charges were as follows.

	£. s. d
Working Murton Engine ……..	647.10.10
Pensher Sinking Charges, to put the Pit in a proper Situation, to stand still for some time and to be resumed with facility ..	160.2.1
Extra Price of Oats above 20/- per Quarter …….	2124.1.7
New Houses for Pitmen …….	72.10.0
Mr Fenwick, Interest after deducting Property Tax ……..	379.18.0
Discount this Year …….	757.9.10
Repairing the Waggon Way Bridge from Lumley Colliery ……	49.9.8
Property Tax …….	480.0.0
	£ 4671.2.0

Deduct,

Cash received of Fenwick & Co. for a Gin	£22.12.0	
Ditto ……Ditto……Timber	83. 9.6	
Ditto …… R. Weatherburn Lead	90. 0.0	
Ditto ……. Sundries Timber	340. 5.3	536.6.9
		£ 4134.15.3

NEIMME/BUD/3/206

The extra Price of Oats this Year is more than usual, but the low Price of Coals which continued until the 1st of March affected the Profit most materially. The Working of Murton Engine, for the effectual Winning of that Colliery was suspended this Year, for the same reasons a led to the suspension of Pensher new Winning last Year.

Recapitulation of the Expenditure			
1800	£17516	4	4
1801	9217	11	1
1802	7846	7	11
1803	4813	16	10
1804	15285	10	6
1805	20024	9	3
1806	11028	1	6
1807	12159	2	6
1808	6983	14	4
1809	4134	15	3
	£109,009	13	6

NEIMME/BUD/3/207

Thus in Ten Years the extra Expenditure of Money, over and above the Sums paid the Undertakers, for working the Coals, amounts to £109,009.13.6. But of this Sum £ 65,110.14.11 may fairly be

considered as involved in Stock, and in extending the Colliery Concerns of the Family, for it is clear that if the new Winnings of Murton and Pensher had not been commenced, nor the additional Number of Pitmen's Houses built, the Collieries would have divided the Sum which has been expended, in those erections; but it must be admitted that although the Money has not been divided yet the Property is improved in Value to the full amount of the Capital expended.

The manner of estimating the Price to be paid the Undertakers is shown by the Schedule A which accompanies this Report.

John Buddle

NEIMME/BUD/3/208

December 31st 1810

Valuation of certain Shares of the undermentioned Collieries, belonging to the late Wm.Leareth Esqr., considered as having been made, at the Time of his Death in August 1810.

Hebburn Colliery

	£. s. d
Value of the Mine ……	22000. 0. 0
Machinery, Waggons, Staith etc. and dead Stock of every description ……..	15,000. 0. 0
	£37000. 0. 0
Live Stock of every description, at the Colliery and Farm, including Hay and Corn, and Farming Implements. ……..	3700. 0. 0
Total Value ----------	40700. 0. 0
	£. s. d
Mr Leareth's ¼th Share	10175. 0. 0

NEIMME/BUD/3/209

Urpeth Colliery

Let to William Harrison & Co. from the 7th July 1808 for 14 Years, at the Rent of £1500 for the 1st 7 Years, and £2000 for the remaining Years of the Term.

Considering the Rent paid by Wm. Harrison & Co. as an Annuity to continue during their Term, and stating 2 Years & 1 Month to have elapsed at the Time of Mr Leareth's Death, we shall have:-

1st Value of an Annuity of £1500 which after deducting the Property Tax leaves £1350 clear for 4 Years 11 Months, being the residue of the first 7 Years, and allowing a Purchaser 5 per cent per Annum, and his Capital to be redeemed, is worth 4.24 years Purchase -----or……. £5724. 0s. 0d

2nd Value in Reversion of an Annuity of £2000 which after deducting the Property Tax leaves £1800 clear, to commence at the end of 4 Years 11 Months for 7 Years allowing a Purchaser 5 per cent for his Capital, is worth 4.553 Years Purchase ----------or……. £8195. 8. 0

Forward £13919. 8. 0

NEIMME/BUD/3/210

Brought Forward £13919. 8. 0

3. Assuming that the Colliery may make a Yearly Profit of £2000, from the termination of Harrison & Co's Term, to the expiration of the original Lease, and considering the Profit as an Annuity in reversion, to commence at the end of 11 Years 11 Months, it is worth, allowing a Purchaser 15 per Cent 0.9 year Purchase. ---------- 1800. 0. 0

4. Value of the resting Colliery Stock to be returned at the End of Harrison & Cos Term 11 Years 11 Months £ 6290

Purchaser 5 per cent for advance of Capital is ---------- 3505. 7. 0

£ 19224. 15. 0

NEIMME/BUD/3/211

Lee Field Colliery

Let to William Harrison & Co. from 7th July 1808, for the same Term as Urpeth Colliery,at £400 rent for the first 7 Years, and £550 for the remaining Years of the Term.

Then at the Time of Mr Learith's death, 4 Years 11 Months of the first 7 Years remained unexpired. And an Annuity of £400 (£360 after deducting the Property Tax) allowing a Purchaser 5 per cent is for that time worth 4.24 Years Purchase, or …….£1536. 8s. 0d

Value in reversion of an Annuity of £550 (£495 after deducting the Property Tax) to commence at the End of 4 Years 11 Months, being the residue of the first 7 Years of the Term, and to continue for 5 Years 1 Month, is worth 3.482 Years Purchase, or 1723. 11. 0

Forward £3249. 19. 0

NEIMME/BUD/3/212

Brought Forward £ 3249. 19. 0

Full Value of Colliery £ 3249.19. 0

One Third of which is ---------- £ 1083. 6. 4

Value of 1/3rd of the resting Stock (£1350) to be returned at the end

Of Wm Harrison & Co's Term (11 Years 11 Months) allowing a

Puchaser 5 per cent for advance of Capital ---------- 752. 6. 10

Net Value of Mr Peareth's Share £ 1835. 13. 2

Value of 5/9ths of the Maudlin Seam – 201 Tons of this Seam remain

unwrought it is let at 45/- per Ton, and will be wrought out in 10 Years.

The Total Value is therefore, allowing a Purchaser 5 per cent - £349. 4. 6

5/9ths of which 194. 0. 3

Total Value £ 2029. 13. 5

NEIMME/BUD/3/213

Under the peculiar circumstances of Walker and Harraton Collieries, no other Value can be put upon them, than the Amount of Stock now on the respective Premises, which is stated at Walker to be, exclusive of the Cast Iron Tub in the King Pit Shaft, which I do not consider an object of Valuation ---------- £ 15176. 8s. 8d.

Mr Leareth's 1/4th Share £ 3794. 2s. 2d

Harraton Stock £ 31600. 0. 0

Recapitulation

	£. s. d
1/4th of Hebburn Colliery ……	10175. 0. 0
The whole of Urpeth Colliery ……	19224.15. 0

1/3rd of Leefield Ditto, including 5/9ths of the Fee absolute, value of the Maudlin Seam _____	2029. 13. 5
1/4th of Walker Colliery ……	3794. 2. 2
The whole of Harraton Ditto ……	3160. 0. 0
	£ 38,383. 10. 7

Signed John Buddle

NEIMME/BUD/3/214

Temple Main Colliery

January 14th 1811

To Messrs. King, Stobart, Steel, Buddle, King & Johnson,

Gentlemen,

You are requested by the Lessee of this Colliery to take a General Survey of the present state, and situation of the same, and give your opinion and answers to the following Questions. In doing which you will take into your mature consideration the very exhausted state of the whole Mine, which is now available at this Colliery, from the present Winning, either in Jarrow, Corporation or other Liberties.

Question1. Would you recommend that the Coal under Jarrow Slake, should immediately be won by putting down a Pit near the Edge of the Slake; and are you clearly of opinion that we are fully warranted in doing so, from the information we are at present in possession of, as to the thickness, quality and other circumstances of the Seam, in that Quarter, so as to justify the attempt; if not, will you point out any other Mode that can be adopted, so as to have it more satisfactorily ascertained, before such proceeding takes place. But if you are disposed to think it advisable that the Winning might immediately be proceeded with

NEIMME/BUD/3/215

Will you please to point out the properest place, and the mode you would advise to be taken in making the same. And what time will it require to accomplish the same.

Newcastle 21 January 1811

We the undersigned, have in compliance with the above requisition, taken a general Survey of Temples main Colliery and availed ourselves of every other source of information in our power, to enable us to answer the Questions, submitted to our consideration.

Answer. In reply to the first Question, we must observe that the Mine to the Eastward of the Pit, has not been so effectually explored by the East Stone Drift, as to give a distinct or satisfactory Idea, of the situation and circumstances of the Seam in that direction; but we must at the same time observe, that this Stone Drift, has so far explored the Mine, as to prove beyond doubt, that the Seam is not workable for a distance of 270 Yards East from the 13 feet rise Trouble.

Should the general prospect of the Colliery in this direction even warrant us in determining on the Sinking of a New Pit, near the Edge of Jarrow Slake, we could not with propriety point out the situation of such Pit, until the East exploring Stone Drift is first extended 50 to 100 Yards in a South East direction from the last Borehole, in the Face of the Drift. But as the gaining of

NEIMME/BUD/3/216

time, in the present exhausted state of the Colliery is of the utmost importance, and considering that the extension of the Stone Drift as above stated might require from 5 to 8 or 9 Months, after which the sinking of the Pit would require 3 Years more, making the whole time necessary for establishing a New Pit in work, 3 ½ to 3 ¾ Years more, we are induced to abandon the Idea of Sinking a New Pit, and to substitute another mode of winning the East Coal, under the Slake, which we presume may be effected in a shorter time, and at much less expense.

As the Boring at the Face of the East Stone Drift has proved the Seam there to be 16 Fathoms below the Level of the Seam at the Shaft, and assuming it to have reached its extreme dip at that point, it is evident that a Stone Drift from the bottom of the deep Pit which is sunk 17 Fathoms below the Seam at the Shaft would cut the Coal at the Level of the Bore Hole, in the face of Stone Drift, leaving a descent of 1 Fathom to facilitate the putting of the Coals, and to allow the Water to come freely home to the Engine Pump.

We are therefore decidedly of opinion that the most convenient and expeditious mode of Winning the Tract of Coal in Question is to drive a Stone Drift from the Bottom of the deep Pit, with such an ascent as to cut the Seam at the Level of the Borehole, in the Face of the East Stone Drift.

NEIMME/BUD/3/217

The length of this Drift will be about 630 Yards, and with the facilities afforded by the East working, and Stone Drift, already driven, may be accomplished in a Year and a half.

This Drift must be driven of a sufficient size for a Rolley Road, and the Water course may either be made in the same Drift, or in a collateral Drift, as circumstances may point out, when the work has commenced. Assuming that the latter mode may be adopted, which on account of the two Drifts, must necessarily be the most expensive, we estimate the Cost of completing the same, including the charge of securing the Drifts, at £6000.

Question 2nd. You will on examination see the very exhausted state of the whole Coal, in the Corporation Way; you will therefore be pleased to calculate the produce that will be got therefrom, so as to enable you to form your opinion so, as to state its probable duration, supposing that 48 Score of 20 Peck Corves, be got per day from the same.

Answer. On measuring the extent of the whole mine remaining unwrought in the Corporation Coal, we find it to be 10 Acres, and calculating the aggregate Produce by the first working at 610 Scores per Acre, is 6100 Scores in all; and allowing the Pit to work 10 days per fortnight, at 48 Scores per Day, <u>double Shift</u>, will supple the workings for 6 Months or thereabouts.

NEIMME/BUD/3/218

Question 3. After considering the foregoing Question, are you of opinion that we should immediately begin the working of the Pillars in the Glebe Coal (the whole Coal you will observe has already been wrought off) while the remaining Tract of whole coal in the Corporation Way is in working. Or you would advise them to be wrought after that is done; In whichever way you should advise, you will please point out the most advisable Way we should pursue, in order to obtain the greatest quantity of Mine from the same.

Answer. Having considered this Question in its fullest extent, we advise that all the whole Coal in the Corporation Liberty should be wrought off, before any working of the Pillars takes place.

Question 4th. You will point out where the Pillars ought to be wrought in succession, to those above alluded to, and how the districts ought to be laid out; for the greatest security of preserving the Walls from Creeps, that will unavoidably take place, stating the necessary thickness of Barriers you would advise to be made by means of stowing up the Board rooms. You will also please to extend your observations on this head to the working of the Pillars, on the Dip side of the Trouble to the South from the present Shaft, and point out in a similar Manner, the order of working those Walls, if you do not think the further prosecution of the Whole Coal in that Quarter of the Colliery is advisable.

In short you will give your opinion without reserve as to the best and most advisable mode to be pursued in working this Colliery, so as to secure the working

NEIMME/BUD/3/219

40,000 Chaldrons annually during the continuance of the same.

Answer. We consider that the Pillars, in the Corporation and Glebe Coal, may be most advantageously wrought in four directions, to be designated, and wrought off in the following succession.

1st. Division. All the Pillars in the Corporation Liberty, North of the 7 feet, 3 feet, 1 foot and 6 feet rise Troubles.

2nd Ditto. All the Pillars on the South side of the above Hitches, as far [out ?] as the 18th Board from the same.

3rd Ditto. All the Pillars in the Glebe.

4th Ditto. All the remaining Pillars in the Corporation Liberty.

All the stowing and pillaring which we conceive to be necessary in the working of the above divisions, is the stowing and pillaring of the 18,19 and 20th Boards South of the before mentioned 7 feet, 3 feet 1 foot and 6 feet Troubles, in the Corporation Liberty. Those Boards to be completely stowed and pillared from the East, to the West Coal Barrier.

In considering the state of the Mine below the 17 Fathom Dyke to the South of the Pit, we are decidedly of opinion that a further prosecution of the Workings in the whole Mine, cannot be advantageous; we therefore recommend the Pillars to be wrought off without delay.

In working the Pillars in this Part of the Colliery we do not think it necessary to pillar and stow any Barrier as the whole tract is not more than sufficient

NEIMME/BUD/3/220

for one district or division.

Neither can we point out any specific Mode of Working the Walls, as they must be either judded or jenkened, as existing circumstances may point out, from time to time, during the course of working them. We do not however think that more than one fourth of the remaining Walls can with propriety be removed by a second Working, in this Part of the Colliery, nor more than 5/19ths in the Corporation and Glebe Liberty.

It is scarcely necessary to detail the Manner of working the Pillars in the Corporation and Glebe Liberty, as it must be done in the usual Way, as practised in the Neighbouring Collieries, under similar circumstances.

With regard to the best mode of working the Colliery so as to produce 40,000 Chaldrons Annually, during its Existence, we think the best and least expensive mode of approximating to such annual Quantity, is by working two Shifts, out of the Corporation and Glebe Royalties, and One Shift out of the deep Pit on the South side of the 17 Fathom Dyke. We say the best mode of approximating to such Annual Quantity because for want of Pit room before the Winning of the Coal under Jarrow Slake, can be effected any accident or disaster taking place while working the Pillars may occasion considerable embarrassments and delay.

Question 5th. Are you of opinion that the Tract of Walls

NEIMME/BUD/3/221

now drowned up to the East of the present Pit, will, if attempted to be wrought, warrant the Expense in doing so, as a considerable expense ,must inevitable be incurred, by pumping out the Water in order to lay them dry.

Answer. We are of opinion that the quantity of Coal to be obtained from the Tract of Walls in Question, will amply repay the expense of pumping the Water out of the Waste, to render them accessible.

Question 6th. You will please to bestow some attention on the Metal Coal Seam, which already has in a partial manner been wrought in this Colliery, and state whether in your opinion it can be wrought to profit, either now or any other period, during the continuance of the Colliery, in the High Main Coal Seam; or at any time previous to the abandonment of the Colliery. You will also give your opinion as to the probability of the Low-main, or other intermediate Seams, existing in a workable state in this Colliery. Should any doubt remain in your minds, on that head, would you recommend a trial to be made to ascertain the same, and what means would you recommend to be taken for that purpose.

Answer. We have examined the Metal Coal Seam, and considered all the circumstances respecting the same, which are involved in this Question. The result of our Investigation on this head, is that we think the Metal Coal Seam may be wrought to Profit

and that the proper time for working it will be immediately after the Main Coal Pillars, on the dip side of the 17 Fathom Dyke are wrought off.

With regard to the lower Seams, we are inclined to think that they may be in tolerable perfection, but cannot venture to pronounce them workable; as their being sufficientl y explored by boring or sinking, can alone furnish Grounds for deciding that point. Whenever it may come necessary to decide this point, we think that the necessary information will be best obtained by a boring from the bottom of the Pit in the Metal Coal Seam.

Question. 7th. Is it in your opinion advisable to make further Stowing near the Shaft, in order to give additional strength so as to form such a Barrier as will give perfect security against Creeps injuring the same, if so, be pleased to point where it may be necessary and to what extent.

Should anything for the advantage of the Colliery come to you, which the foregoing Questions do not embrace, you will have the goodness to give your opinion thereon candidly and without restraint.

Answer. We do not think it necessary at this time to stow and pillar any more for the protection of the Shaft. The working of the Pillars in the immediate vicinity of the Shaft can alone render such a measure necessary and as this appears to us to be a remote object, we would not

advise any more stowing to be done, until the occasion requiring such measure may occur.

In reply to the concluding observation, we do not see room to point out any change of measures that may be productive of advantage, in the general Management of the Mine; but we should prefer Barrowmen to Horses for putting the Coals on the Dip side of the 17 Fathoms Dyke in working the Pillars.

Signed William King

William Stobart

John Buddle

Thomas King

George Johnson

Edward Steel

Manor Walls-End Colliery

January 14th 1811

To Messrs King, Stobart, Steel, Buddle, King and Johnson,

Gentlemen,

The Lessees of this Colliery request you will examine into the State & Situation of the same, and give your opinion thereon, in Answers to the following Questions.

Question 1st. Do you think the Colliery Workings are properly ventilated, and carried forward regularly and safely.

Newcastle 18th January 1811.

We have viewed this Colliery in compliance with the above request and Answer the several Questions submitted to our consideration as follows.

Answer 1. We do think that the Colliery Workings are properly ventilated and carried forward as regularly and safely as the situation of the Mine will admit at present. When the Workings are more extended, the means of ventilation may be proportionately increased without difficulty.

NEIMME/BUD/3/225

Question 2nd. What mode would you recommend to Win the Field of Coal to the dip of the Shaft, to such distance as where you conceive the Bands may not have increased beyond 4 feet thick. Should you advise it to be won by a Stone Drift, to be drove from the bottom of the Shaft, what depth do you think it advisable that the Shaft should be put down, for the purpose of setting out the same, to Win the Coal in Question 2.

Answer. We think the most eligible mode of winning the Field of Coal to the dip of the Shaft, is by sinking the Pit, to the depth of 10 Fathoms below the level of the Seam at the Shaft, and to extend a Stone Drift from thence, till it cuts the Coal at the full Dip of Colliery, which we think will be at the point where the Bands will have increased to about 4 Feet thick. In this case we submit the propriety of driving the Stone Drift of such a size as to admit of being used as a Rolley Road, should subsequent circumstances render such a measure advisable. In contemplation of this event, we should also recommend the Drift to be driven with a gentle ascent from the Shaft, to allow the Water to come freely home to the Engine, and to facilitate the putting of the Coals.

Question 3rd. Do you think the Colliery is in a Situation capable to raise an Annual Working of 40,000 Chaldrons, if not, what further proceedings are necessary to be done, and what additional powers may be wanted at this Winning so as to ensure the raising of the above Quantity.

NEIMME/BUD/3/226

Answer. We do not think the present situation of the Colliery such as to admit of the Working of 40,000 Chaldrons of Ship Coals Annually. The Powers of the Machinery are in our opinion fully equal to the Working of the above Quantity, was the Mine in a situation to supply the same, but this we conceive it will not be capable of doing with any certainty, unless a partial Winning of the Coal is made to the North West of the Shaft. This partial Winning may be effected we presume by extending

a pair of Crosscut Water Level Drifts in the Seam, from the tail Level of the Engine Standage, in a North West direction.

We merely recommend this partial Winning as a temporary expedient to obtain an addition to the daily Workings, until the effectual Winning of the whole Field of dip Coal can be accomplished, by the sinking of the Pit, and Stone Drift, as recommended in the Answer to the preceding Question. Previously to Jetting away the above Crosscut Drifts, we recommend the whole of the present spare Level to be brought up, out of the Engine Sump.

Qustion 4th. Would you think it advisable to prosecute the exploring Drifts in order to ascertain the perfection of the Seam and in what direction would you advise such Drifts to be driven, so as to ascertain a proper situation for a second Pit, which probably you will think advisable to sink, as soon as circumstances will admit of the same.

NEIMME/BUD/3/227

Answer. Under the present circumstances and prospects of the Colliery, we think it absolutely necessary to explore the Field of Coal to the Eastward, to ascertain the quality of the Mine in that direction, as also the most eligible situation for a New Pit.

This we are of opinion will be best done by pushing away the 7th and 8th North East Boards, in advance with all convenient speed, until they gain sufficient distance, to furnish the information required.

Question 5th. Any other matter relative to the Welfare in the future carrying on, and Working the Colliery, which you would think advisable to be adopted you will have the goodness to point them out with freedom.

Answer. We do not think that we can point out any other matter relative to the carrying on of the Colliery, which the foregoing Questions and Answers do not embrace.

Signed. William King

William Stobart

John Buddle

Edward Steel

Thomas King

George Johnson

NEIMME/BUD/3/228

Hebburn Colliery

January 23rd 1811

To Messrs. Watson, Thomas King and Hill,

Gentlemen,

The exhausted state of the whole mine in the C Pit, has induced the proprietors of this Colliery to submit the following Queries, to your consideration.

Query 1st. Considering the situation of the adjoining drowned Wastes of Walker Colliery, and the thickness of the Barriers of Coal left against the same, are you of opinion that the Barriers are sufficient, in themselves, without any pillaring and stowing, for the protection of Hebburn Colliery, in the event of the Pillars being wrought off, in the N.W. and S. West Ways of the C Pit, which must inevitable produce a Creep, in that part of the Mine. In case you should be of opinion that the Coal Barriers are not sufficiently strong, you are requested to point out such measures for adding additional support and strength to them as you may deem necessary, for giving the utmost security to the colliery, in contemplation of working the Pillars and a subsequent Creep.

2. You are requested to View the state of the Pillars in the

NEIMME/BUD/3/229

N.W. and S.West Ways and to point out, what in your opinion may be the best, and the most economical mode of working the Pillars therein.

Query 3rd. Having paid due attention to the nature and texture of the seam, as also the Roof and Thill of the same, together with the depth, or weight of the incumbent Strata, you will please to state, what proportion of the Pillars ought to be wrought in the first instance, so as to produce ultimately therefrom, the largest quantity of Ship Coals.

4th The number of Boards in the N. West way, being now so much reduced, as not to admit of employing so many men, as to raise a sufficient Quantity of Work per Shift; do you think it advisable, to work a few Juds off in the N West Way, in order to supply the daily workings fully during the time that the remainder of the whole Coal is working out in that quarter, and until the Walls are made ready for working in the South West Way.

5th. Taking into consideration the different changes which may be made in the Ventilation, of this Pit's workings, you are requested to point out the order in which the different Divisions of the same should be wrought in the Pillars, so as to combine the safety of the Workmen, with the Interest of the Owners.

NEIMME/BUD/3/230

Newcastle 28th January 1811

Answer 1st. We have no doubt that the Barrier of coal left against the adjoining Wastes of Walker, and South Hebburn Collieries, together with that left by the Lessees of those Collieries , are amply sufficient for the protection of Hebburn Colliery, without having recourse to any stowing to increase their strength.

2. We have examined generally the state of the Pillars of Coal, lying on the West side of the C Pit Shaft, and can have no hesitation in recommending that the usual mode of working Pillars in deep

Collieries be adopted in this instance; which is by reducing every other Wall only, thus leaving the stopping Walls entire; and preserving the ventilation of the Mine.

3. After considering very maturely this Query, and examining the nature of the Seam itself, and its accompanying Strata, we advise that an attempt be made to open the five walls to 12 Yards, thereby obtaining 1/4th of the Pillars; and this proportion we have the most confident expectations may be got with safety. Where Single Courses occur, and the ordinary mode of working the Walls cannot be adopted, we recommend that a Jud, or Board, be driven in one of the stopping Walls adjoining the same, for such a distance as will yield the same proportion of Coal, as would have been got, had the Boards been coursed in the regular way, or two together.

NEIMME/BUD/3/231

Answer 4th. Under the present circumstances of the Colliery, we do not see the impropriety of taking a few Yards off the end of as many of the free Walls as may be found necessary, at the Western extremity of North West division of the Waste; but would not at present recommend such walls to be opened to more than 10 Yards, nor such workings to be continued longer than during the time that may be required to prepare for Coal work the South West division, which appears to us the most proper part for commencing a regular working of the Pillars.

5th. We have stated above that we think the southern extremity of the C Pit West Waste presents itself as the most proper to attempt a general reduction of the Pillars. We therefore recommend this as the fittest Point to begin at, and that a regular working to be made from this point Northward as far as the West Coal Barrier, which will complete the reduction of all the Pillars of the South West division. However as no attempt has been made to work any of the Pillars of this Colliery, the first trial must be considered in the Way of an experiment; we therefore think it advisabl3e to insulate as far as possible the tract of Pillars which it is intended to work in the first instance, and for this purpose we recommend that the Coal Barrier marked A, upon the Colliery Plan, running in an East and West direction, be made complete, by stowing up the Board driven therein towards its western extremity, this we

NEIMME/BUD/3/232

think will form an effectual Barrier, and completely protect the Pillars on its North side from the effects of any Creep, that may originate to the South. After the South West Pillars are wrought off, of course the North West division must be proceeded with, and it appears to us that the beginning to work those pillars, ought to be made either at the Western or Northern extremity of the Waste. We think it immaterial which is preferred, and therefore recommend the beginning to be made at that point which may be found most suitable to the Course of the Air.

In the ventilation of the various divisions of this Waste, it will of course be necessary so to conduct the Air that the Current proceeding from those parts where the pillars have been wrought shall be so disposed of as never afterwards in the Lease to interfere with the Workmen.

Signed John Watson

Thomas King

George Hill

NEIMME/BUD/3/233

Valuation of the Lessors Interest

Collingwood-main Colliery.

March 18th 1811

The Royalty of this Mine is an undivided Property, and belongs to the undermentioned Proprietors, in the following Shares:

Jn. Collingwood Esq.……8/16 ths

Jos. Liddell Esq. ……6/16ths

M. Montague Esq……..1/16ths

Representatives of the

Late Jn. Burdon Esq…….1/16th

It is demised to Messrs Bells & Co. for a Term of 31 Years from 22 November 1806, at the certain annual Rent of £1000, for which the Lessees are allowed to work 666 2/3 Tons, and to pay 30/- per Ton for surplus Workings.

The Lessees are allowed to have liberty to make up short Workings during any Year of the Term.

NEIMME/BUD/3/234

A Barrier of 40 Yards to be left, against all adjoining Collieries.

Lessees not to pay Rent for Coals consumed by the pumping Engine and to be allowed 40 Tons per Annum for Workmen's Fire Coal.

Lessees to have general liberty of outstroke, for paying 5/- per Ton.

In this Estimate we have not attached any Value to the lower Seams, being of opinion that the period for working them is so remote, that we do not think their revertionary Value worth notice at this time. Neither have we attached any Value to the Rent to be derived from the privilege of Outstroke, not being aware that the Lessees can ever avail themselves of such privilege, and that of course it cannot be calculated upon, as a source of Revenue to the Lessees.

On measuring the Field of Coal on the Colliery Plan, we find about 234 Tons of whole Mine in the High-main Coal remaining unwrought, exclusive of Barriers and about 40 Tons of Pillars.

We estimate the produce of the whole Mine at 2000 Ch. of saleable Coals per Acre; and that of the Pillars at 800 Chaldrons per Acre.

NEIMME/BUD/3/235

		Chaldrons
Then 234 Acres of whole Mine at 2000 Chaldrons ----------		468,000
And 40 Acres of Pillars …… at 800 Ditto ……..		32,000
		500,000
Deduct for 31 Acres of Pillars to be left		
under Milburn Place….. at 800…….	24800	
Loss by Dykes and Troubles …….	19200	44,000
Neat Produce of saleable Coals		456,000

The Yearly Vend and Consumption, we assume to be as follows. Viz.

	Chaldrons
To be Vended by Sea, River and Landsale ……	25,000
Engine Consumption…….	2000
Machines ……..	500
Heap Fires ……	300
Workmen ……	1000
Aggregate Yearly Working,	28,800

Then 456,000 /28,800 = 16 1/3 Years but say 16 Years, the duration of the Colliery.

But of the 28,800 Chaldrons to be wrought yearly, not more than 26,000 Ch. or 1300 Tons will be chargeable with Rent; the Yearly Rent, will therefore be 1300 Tons at 30s/- = £1950.

Now considering this Rent as an Annuity for 16 Years, and allowing a Purchaser 8% per Annum,

NEIMME/BUD/3/236

and his Capital redeemed it is worth 8.85 Years Purchase or £17257.10.0.

But if the Purchase is allowed the Property Tax, it will reduce the Annuity to £1755, which at 8.85 Years purchase as above, make the Value £ 15531.15.0.

The Value of the several Proprietors Shares will be on £17257.10.0 as follows:

John Collingwood Esq…….	£ 8628.15.0
Jos Liddell Esq……..	6471.11.3

M Montague Esq. ……. 1078.11.10½

Representatives of the late John Burdon Esq. 1078.11.10½

£ 17257.10.0

And on £15531.15.0

John Collingwood Esq……. £7765.17.6

Jos Liddell Esq…….. 5824. 8.1½

M Montague Esq. ……. 970.14.8¼

Representatives of the late John Burdon Esq. 970.14.8¼

£ 15531.15.0

Signed John Buddle

Thomas Easton.

NEIMME/BUD/3/237

Newcastle 30th March 1811

To Messrs Fenwick, Buddle and Watson,

Gentlemen,

On behalf of myself, and my Coassignees of the Estate and Effects of Harrison, Cooke & Co, I have to request that you will immediately proceed to view, and examine, the Collieries, Wayleaves and Farms belonging to their Estates, in the Counties of Northumberland and Durham; and to report to the Assignees thereon; as to their present Value, the expediency of carrying on, or abandoning the whole, or any part thereof; or of offering the same, or any part thereof, for Sale or Lease; in order that your Report may be laid before the Creditors. of the Estate, to be convened together for that Purpose. In making this Investigation, you will be attended by Mr William Harrison, Mr S Cooke, Mr Easton and the Clerks and Servants of the concern. And you are requested to be extremely particular in your Enquiries of Mr Harrison and Mr Cooke, as to their opinion of the advantage of carrying on, the Collieries, and the principle upon which they found such opinion, and I have also to request, that you will add such observations to your Report, as you may think most likely to contribute to the Assignees and Creditors, forming a right Judgement as to the Management, or Disposal of the Property.

I am Gentlemen,

Your obedient Servant

Signed William Marsh.

NEIMME/BUD/3/238

In compliance with the annexed request, we lost no time in viewing, to such extent as we deemed necessary, the Colliery Concerns, belonging to the Estate and Effects of Harrison, Cooke & Co. in the Counties of Northumberland and Durham.

The only Colliery belonging to the Estate in Northumberland is South Heaton. In the County of Durham, are Urpeth, Leefield and Chatershaugh Collieries.

During our investigation of those Concerns, we have availed ourselves of such information as Mr William Harrison Junr. And Mr S Cook could supply. The information of the former Gentleman relates principally to the probable Vend, which may be obtained from the Collieries, and that of the latter was of a general nature. We must however observe, that the information obtained from these Gentlemen was in a great measure hypothetical, and of course appreciated by us accordingly.

The principal questions put to Mr W Harrison Junr. And Mr Cooke, were in writing and together with their answers accompany this Report.

Urpeth Colliery being of the greatest

NEIMME/BUD/3/239

importance, became the first object of our attention; and we therefore ascertained the extent of the Mine, which, according to the best of our judgement, will be as follows.

1st. The Five Quarter Seam, contains 65557 Chaldrons, but the quality of the Coal is so inferior as not to be merchantable at this time, on either the Tyne or Wear. We cannot therefore, consider it as a source of Revenue to the Estate.

2nd. The High-main Coal Seam.

The quantity of Merchantable Coal remaining unwrought in this Seam, we estimate to be about 87888 Chaldrons.

This Seam contains a much larger quantity of Coal than we have stated above, but from its approaching the Surface in the North and West part of the Boundary, the quality of the Coal is so much deteriorated, and the Roof so bad, that we do not conceive the Seam can be wrought to Profit there; and that of course no more Coal than the quantity which we have stated above can be calculated upon certainly.

3. The Low-main Seam.

This Seam we estimate to contain 630,000 Chaldrons of Coals. As this Seam is not won we cannot speak to its quality with any degree of certainty; but in the nearest adjoining Collieries, where

NEIMME/BUD/3/240

It has been explored, it is so variable in quality that we cannot venture to attach any present Value to it.

4. The Hutton Seam.

Contains, in our opinion about 615,600 Chaldrons of Merchantable Coal.

The Winning of this Seam, is not yet effected, but is in progress and may be accomplished in four or five Months; We therefore taking the adjoining Colliery of Ouston, as our Standard of comparison, for its quality.

Having ascertained the quantity of Mine accordingly to the best of our judgement as above set forth; our next consideration was the quantum of Vend to be obtained yearly from the Colliery; and after weighing the subject most maturely, combining the facility of vending from the two Rivers, with the quality of the Coals, we are decidedly of opinion, that we cannot state the aggregate Vend, at more than 35,000 Chaldrons, a moiety of which to be vended from each River.

The selling Price of the Bewicke-main Coals on the Tyne is 24/- per Chaldron, and we presume that they may class with the best Coals on the Wear, and sell at 22/- per Chaldron at Sunderland.

NEIMME/BUD/3/241

The Annual amount Sales will therefore be as below,

17500 Chaldrons to the Tyne…….. @ 24s/-		£21000
5000 of which supposed to be vended by Spout..@ 6d. ……		125
Total to the Tyne ……..		21125
17500 Chaldrons to Wear……..@ 22s/-	£ 19250	
Supposed Profit on Fittage as stated by Mr Harrison 17500 Chas ' 2s/-	1750	
Total to the Wear ……..	21,000	21,000
Aggregate amount Sales ……		£ 421125

The Expense of working, leading, and delivering the Coals, on the Rivers Tyne and Wear, we estimate as follows:

Charge to Tyne.

Charge of working, and laying Bewicke-main Coals upon Bank……..	£ 0.12.6½
Leading the same from Colliery to Tyne, at Moody's Quay ……..	0. 5. 6
Expense of upholding Waggons ……..	0. 0. 2¾
Staith Expense ……..	0. 0. 5½
Moiety of Mr Peareth's Annuity ……..	0. 0.10¼
	£ 0.19.7
Fitting Charges ……..	0. 0. 9

Net Cost to Tyne _____ £ 1. 0. 4

NEIMME/BUD/3/242

Charge to Wear

Charge of laying Bewicke Main Coals on Bank ..... £ 0.12.6½

Leading the same from Colliery to Staith at Barnston 0. 6. 0¼

Expense of upholding Waggons 0. 0. 2¾

Staith Expense including River Duty 0. 0. 8¼

Moiety of Mr Peareth's Annuity 0. 0.10¾

Net Charge to Wear ..... £ 1. 0. 4

Amount Sales to Tyne _____ £ 21125.0.0

Deduct Expense of working, leading etc. 17500 Chaldrons .....at 20s/4d..... 17791.13.4

Annual Profit, on the Vend to Tyne _____ £ 3333.6.8

Amount Sales to Wear £21000.0. 0

Deduct Expense of working, leading etc. 17500 Chaldrons @ 20/4 17791.13.4

Annual Profit on Vend of Wear 3208.6.8

Aggregate Yearly Profit on Bewicke's –main Coals _____ £ 6541.13.4

NEIMME/BUD/3/243

Note. The above Estimate applies to the High Main Coal Seam or Bewick's-main only, which will not supply the Annual Vend of 35000 Chaldrons, for more than 2 ½ Years.

Now as the Bewicke's-main Seam will not supply the Vend of 35000 Chaldrons for more than two Years, and a half, it will be necessary to finish the winning of the Hutton Seam, with all convenient speed, in order to continue that supply, should it be deemed expedient to continue the working of the Colliery.

This winning is already in progress, and we calculate that £3500, in addition to the sum already expended, will be sufficient to complete the same.

After this Winning is completed, and the working of the Hutton Seam fairly established, admitting the Coal to be of the same quality as Wear Walls-end, agreeable to our former assumption, the expense of working , the amount Sales, and profit to be derived from the same will be as under.

We assume that after the Bewicke-main Seam is exhausted, the same quantity viz. 17500 Chaldrons will be vended annually to each River, that the selling Price on the Tyne will be 24/- per Chaldron, and on the Wear 21/- per Chaldron.

NEIMME/BUD/3/244

The amount Sales from the Tyne spoutage included,

will therefore be on 17500 Chaldrons £ 21125.0.0

We estimate the Cost of working, leading etc. at 21/2½ per Chaldron

And 17500 Chaldrons @ 21s/2½ is 18557.5.10

Annual Profit on the Vend to the Tyne _____ £ 2567.14.2

_____

The amount Sales from the Wear

will be 17500 Chaldrons …… 21/- £ 18375.0.0

Profit on Fittage according to Mr Wm Harrison's acct. @ 2/- per Ch. 1750.0.0

£20125.0.0

Expense of working, Leading etc on 17500 Chaldrons @ 21/2½ 18557.5.10

Annual Profit on Vend to Wear £ 1567.14.2

Aggregate yearly Profit on the Hutton Seam Coals £ 4135.8.4

Note. The Hutton Seam will supply an Annual Working of 35000 Chaldrons for 17½ Years

Lease dated July 8th 1808

Term…… 14

1822

1811

Years to go 11¼

_____

NEIMME/BUD/3/245

Then from the foregoing premises we estimate the Value of the Colliery as follows, presuming that the Estate of Harrison, Cooke and Co. cannot possess an Interest beyond the Term unexpired in the Colliery Lease, viz. 11¼ Years.

	£. s. d
Considering the annual Profit of £6541.13.4 to be mad on Bewicke-main Coals,	
as an Annuity for 2½ Years, allowing a Purchaser 15% is worth 1.95 Years Purchase	12756. 4. 0
Supposing the Hutton Seam to supply the Vend, after the Bewicke-main Seam is	
Exhausted, at the expiration of 2½ Years, and considering it as an Annuity in	
Reversion, of £ 4135.8.4 for the residue of the unexpired Term of the Lease, being	13853.11. 0
8¾ Years, it is worth 3.35 years purchase.	_____
	£26609.15. 0
Deduct the Expense of completing the Winning of the Hutton Seam ----------	3500. 0. 0
Net Value of Colliery exclusive of Live and Dead Stock …….	£23109.15. 0

The above is the Value of the Colliery, calculated upon a Vend of 35000 Chaldrons Annually, to both rivers, which we consider the extreme quantity, that

can be vended, if sold at the full prices stated in our Estimate. But, were it profitable to vend 50,000 Chaldrons yearly viz. 25000 Chaldrons to each River, as stated by Mr Wm. Harrison, the Colliery might eventually produce a Profit of £8500 per annum, but in this case it would be necessary to confirm the new agreement for Way-leave to the Wear.

In our investigation respecting Urpeth Colliery, we have not failed to bestow due attention on Kibblesworth Royalty, but do not think that confirming the engagements entered into by Messrs. Harrison & Cooke relative thereto, could possibly be attended with advantage to the Creditors of the Estate.

With regard to Leefield and Chaters-haugh Collieries, we are of opinion that they cannot be carried on with advantage to the Estate, and should therefore be relinquished without delay, provided no legal impediment may operate as a Bar to their abandonment.

In South Heaton Colliery the utmost quantity of merchantable Coal to be obtained from the High-main Seam, will not in our opinion exceed 4000 Chaldrons without incurring the risk of letting in the Water from Byker drowned Waste; but it may be considerably less – and the information which we possess respecting the lower Seams, does not warrant us in attaching any Value to them.

NEIMME/BUD/3/247

We have only therefore to observe, that if an immediate Sale of this Colliery cannot be effected; we should recommend all the available Coal in the High-main Seam to be wrought off, with as little delay as possible, and the Colliery to be abandoned, and the Materials sold.

We have not during the course of our investigation put any abstract Value on the Farms, but consider them, with the exception of the Wind Mill Farm, as useful appendages to Urpeth Colliery, and in the event of carrying on the Colliery, or even of selling it, do not advise that they should be given up.

By the requisition submitted to us, we are desired to state our opinion "as to their present Value, the expediency of carrying on, or abandoning the whole or any part thereof, or offering the same, or any part thereof for sale or Lease. " In the foregoing part of this Report, we think that we have as far as we can, given our opinion on these heads, in respect to Leefield, Chaters-haugh and South Heaton Collieries. It therefore only remains with us, to give our relative opinion to Urpeth on these points. The fact is that we really cannot give our opinion in this case satisfactory to our minds, as much depends upon circumstances over which the occupiers of the Colliery can

NEIMME/BUD/3/248

have no control; but we submit with great difference that the most prudent line of conduct for the assignees of the Estate to pursue, will be to offer the concern for sale, without pressing it unduly, and to carry on the Colliery in the most economical manner possible, while they are endeavouring to effect a Sale to the best advantage.

Signed, Thomas Fenwick

John Buddle

John Watson

NEIMME/BUD/3/249

April 4th 1811. Queries submitted to Mr William Harrison Junior by Messrs Fenwick, Buddle and Watson, relative to Bewicke-main Colliery.

Queries	Answers
1. What Quantity of Bewicke-main Coals do you think can be vended from the Tyne and Wear annually, and what proportion of that quantity do you think may be vended from each River?	Twenty Five Thousand Chaldrons to each River.
2. What will be the equivalent price of Bewicke-main Coals on the River Wear, when selling @ 24/- per Ch. on the Tyne?	Combining the Coal Owner and Fitter, the Coals would leave 24/- per Chaldron to the Wear.
3. Do you think the Five Quarter Coals vendable on either the Tyne or Wear? If so what Quantity do you suppose may be vended to both, or	I do not think the 5/4 Coal a vendable Coal, at either River or at all rates to advantage, or in any Quantity.

either River, and at what Price. 4. Supposing the Hutton Seam in Urpeth, to be of similar quality to Wear Walls End, what quantity in your opinion, may be vended yearly to one or both Rivers and at what Price per Chaldron?	Provided the Hutton Seam is equal to Wear Walls End, I am of opinion that 25000 Chaldrons to each River may be vended, at 1s/- per Ch. less than the Bewicke-main at the Wear, maintaining the same Price at Tyne; as I consider the Bewicke-main Coal much under rated on the Tyne.

NEIMME/BUD/3/250

Query 5th. After the Bewicke main Seam is exhausted, what annual Quantity of Hutton Seam Coals, do you think may be vended from either or both Rivers?	Answered by 4th provided the quality is equal to Wear Walls End.
6th. What <u>certain annual</u> quantity of Bewicke – main & Hutton Seam Coals could you engage to vend from both or either River, if free from your present embarrassment, and what clear price to the Colliery? Signed Thomas Fenwick John Buddle John Watson	If I found myself in a situation to engage in the Fitting Business, I should have no hesitation in undertaking the Vend on the Wear, of the Bewicke Main Coals, any quantity the Colliery could supply, at 22s/- from the Staith and of the Hutton Seam, if of equal quality, with Wear Walls End, at least 20,000 Chaldrons, at 21s/- per Ch. from the Staith, as to the Tyne, I refer you to the subjoined Note. Note. I ground my Opinion for the Vend to the Wear, on the quality of the Coal, and the general connection I have along the coast. The mode in which the Bewicke Main Coals have been hitherto disposed of, on the Tyne, has been the means of depreciating their Value, at the London Market, having been sent by large freighted Ships, and not a regular succession; instead of which, I would recommend their being introduced into the various Markets, where Coals of their Class in general find a Sale. Viz. Leith, Dundee, Aberdeen, Perth, Yarmouth, Ipswich, Chatham, Portsmouth, Pymouth & places with the exception of Yarmouth where they are not overknown.
* Some of the Ships belonging to the Estate should trade constantly to London, to keep Bewicke Main upon the List. Signed Wm Harrison.	

NEIMME/BUD/3/251

April 5th Queries put to Mr Cooke by Messrs Fenwick, Buddle & Watson, and answered by him.

<u>Queries</u>	<u>Answers</u>
1. Mr C States that the usual mode of working Collieries, is to leave one half the first time over, and in working the 2nd time over the whole, can be taken away. How does Mr C make this appear, and is the	This was merely Mr Cooke's own idea, given at the request of Messrs. Marsh, Sibbald 7 Stracey, without being informed on the subject by any Documents then in his possession.

Case at Urpeth, to which Colliery his observations allude; or can he name any Colliery where such has been the practice?	
2. In Mr Cooke's Estimate of the 18 July 1810 he states the Five Quarter Seam to be 45 In. thick and to contain 540 Acres. Now the Seam is only 38 In. thick including 4 In. of Splint, so that the neat thickness of the Coal is only 34 In. Why is the thickness of this Seam overrated, and why is it stated to contain 540 Acres while the Main Coal is only stated to contain 440 Acres? Allowing 5 Cubic Yards to a Ch. of Ship Coals, to be obtained from the Mine, according to Mr Cooke's estimate. The Total quantity will be 653400 Messrs. F. B. & W. 73000 Diff. 580,400	Mr Cooke, always understood from this Seam being called the Five Quarter Seam, that it really was Five Quarters of a Yard thick or 45 In. and assumed that it extended over the greatest Part of the Estate. The quantity of Coal to be obtained from the Mine is according to Mr Cooke's own ideas, as stated in Answer to Query first.

NEIMME/BUD/3/252

Query 3. Why is Bewicke-Main Seam stated to be 5 feet thick, and to contain 440 Acres? Its average thickness of clean Coal is no more than 4½ feet, and there is no certainty of more than 56 Acres of Whole Coal, and 65 Acres of Pillars, Merchantable Coals being obtained. According to Mr Cooke's mode of estimating the Seam, would produce of Ship Coals 709,866 Messrs. F. B. & B……. 100,306 Difference ……. 609,560	Mr Cooke always understood this Seam to be 5 feet thick and took the Number of Acres from the Plan of the Surface.
4. How comes the extent of the Low-main Seam, to be stated at 940 Acres, when the whole of Urpeth Estate, does not contain more than 730 Acres? According to Mr Cooke's estimate this Seam will yield Chasubles 909,920 Messrs. F.B.&.W. 630,000 Difference 279,920	Mr Cooke includes in the 940 Acres, as much of Kibblesworth Estate, as he conceives will contain workable Coal.
5. The Hutton Seam is also stated at 940 Acres, and will contain according to Mr Cooke's Estimation ……..1516533 Chs. Messrs F.B. & W. 615,600 Difference 900,933	Answered in the above.

NEIMME/BUD/3/253

6. Mr C. states the main Coal, and Hutton Seams to contain …… Chaldrons 1113199 Messrs. F. B. & W. Main Coal 40008 Hutton Seam 444600 484,608	The difference arises from the Seam being takenat 5 feet thick, and to extend over the whole of the Estate as stated in reply to the 3rd Query.

Difference …… 628,591 How are the above differences to be reconciled? 7. What is Mr Cooke's opinion as to the Advantage of carrying on the Collieries viz. Urpeth Chater'shaugh Leefield South Heaton On what principle does Mr Cooke found such opinion?	Cannot enter into particulars not having the necessary Documents in possession, but believes them to be good concerns it attended to. Chater's haugh, and Leefield excepted.
9. From what source of information did Mr C. ground his opinion as to the quantity of whole Coal and Pillars, to be obtained from South Heaton Colliery?	Combined with the above. Mr C. collected all the information he could from the most intelligent Workmen & formed his Plan, and Estimate, accordingly. And at the time of making the Plan, June 12th 1810, Mr Cooke did, to the best of his judgment and belief, conceive that the Colliery contained the quantity of Mine therein represented

NEIMME/BUD/3/254

Query 10. In estimating the extra 30,000 Vend from Urpeth, why does Mr C. omit the Way leave which must be paid, on all surplus Leadings, over the stipulated Quantities?	Answer. Way Leave Rents on the surplus Leadings are omitted in the Estimate.

After answering the Queries as above, Mr Cooke begged to add the following observation.

From the hasty manner Mr C. was called upon to furnish his Estimate, he thought it right to state at the time he delivered such Estimate to Messrs. Marsh & Co. that he had formed it entirely from memory, and having done so, he trusted that it would not be laid before any professional Gentlemen, until he had better informed himself of the particulars on that subject.

NEIMME/BUD/3/255

Walls End Colliery 15th April 1811

Thomas Brown Esqr.

Sir,

In consequence of an application made to me on your Acct. by Mr Watson, to give my opinion on the Value of Manor Walls-end Colliery, I have examined the measurement of the Mine, made by Messrs Fenwick, Watson and Thomas King, and also their calculations of the expense of working the Colliery, as well as every other Data, on which those Gentlemen founded their Valuation of the Mine, dated 30th March 1811.

I have likewise examined the Coals, and compared their burning with Bells and Brown's Wallsend, and have also ascertained their relative Value in the London Market, from the Coal Lists.

With regard to the quantity of Coal to be obtained from the Mine, and the price of working the same, I am of opinion that the Estimate is as correct as the nature of the case will allow; but with respect to the quality of the Coal, which is the principal criterion on which to establish the Value of the Mine, I am sorry to differ with them in opinion.

A manifest determination in the quality of the Coal is visible, which no change in the mode of

NEIMME/BUD/3/256

working, nor any sacrifice, in taking out Small can compensate. The only improvement of which the Coals are capable is, in the Condition, in which they may be sent to Market, and consists in keeping them free, from Wet, Slate, or Refuse of every description; and of Small to a proper extent.

I am apprehensive, that on the proportion of small Coals, estimated to be taken out, by Messrs. Fenwick, Watson and King, that the Coals cannot be vended to the extent of 30,000 Chaldrons by Sea Annually, at the full Price of 30/- per Chaldron, and therefore, if kept at that Price, the vend must either be less than that quantity, or the Coals must be vended by Freighting; which will inevitable reduce the Price below 30s/-. I am therefore of opinion, that there is no alternative but either to take out a larger proportion of Small, or to reduce the Price.

Even admitting that any advance in the price of Coals may take place in the course of 8 or 9 Years, I could not venture to estimate the selling Price of the two classes of Manor Walls end Colliery Coals, within 1s/- per ~Chaldron at least of the Price stated by Messrs. Fenwick, Watson and King viz. 30/- and 28/- per Chaldron, or what amounts to same thing, if they sell at these Prices, they will colst 1s/- per Chaldron more laying on Ship Board, on Account of the additional Quantity of Small to be taken out, to make them sufficiently good.

NEIMME/BUD/3/257

I should therefore estimate the extreme Value of the Colliery as under viz.

Amount of Gain as stated by Messrs. Fenwick, Watson & King _____		£ 124027.16. 6
Deduct 1/- per Chaldron, on the undermentioned Quantities of Coals, for the		
extra quantity of small to be taken out, Loss by occasional Freighting etc.	Chaldrons.	
From the whole mine, in the Dip or best Part of the Colliery _____	162623	
From the Pillars in Ditto ……..	66600	
From the Whole Mine in the Rise, or most inferior Part of the Colliery __	268601	
From the Pillars in Ditto ……..	81000	
	578,824 @ 1/- 28941.4.0	
Aggregate Gain _____		£ 95086.12. 6

The aggregate Gain £95,086.12.6 Divided by 19 Years the Duration of the

Colliery, give a Yearly Profit of £5004.12.2¾, but say …….. £ 5000.0.0

Spoutage on 30000 Chaldrons @ 6d ……. 750.0.0

Neat Yearly Profit _____ £ 5750.0.0

NEIMME/BUD/3/258

Now as the Engine is fully occupied in drawing the Water, which, until a New Pit is established in Work, may subject the Colliery to occasional interruptions, and as a liberal allowance ought to be made for Casualties of every description in Collieries of this kind, I could not, considering the above yearly Profit as an Annuity, calculate the interest to be allowed a Purchaser at less than 15% which makes the Value £ 35,638.

But as the interest to be made by purchasing Annuities is merely matter of opinion, especially in the purchase of Mines; as it depends entirely on the Purchasers own ideas of the Risk and Prospects of the Concern, I state the above rate of 15 per Cent in the present instance, with great difference, as my own idea; and therefore subjoin the Value of the Colliery at different Rates per Cent which will enable Mr Brown to judge for himself and draw his own conclusions.

Stating the Yearly Profit as above it is worth		£
as an Annuity at _____	14 per Cent	37,662
" …….	12 " ……	42,377
" _____	10 " _____	48,098
" …….	8 " …….	55,200
" _____	6 " _____	64,158
" …….	5 " ……	69,488
" _____	4 " _____	72,520
" ……	3 " …….	82,363
" _____	2 " _____	90,148

NEIMME/BUD/3/259

I have not deducted the Property Tax from the Yearly Profit, because, I consider that in whatever way the purchase Money might be employed, or invested, it would be chargeable with the Property Tax, and that of course it should not be deducted from the Yearly Profits, and therefore there can be no good reason in this Case why the Vendor should make the Purchaser a present of the Property Tax.

In this Valuation no account whatever is taken of the Colliery Stock, which must amount to a considerable Sum.

I am Sir,

Your most obedient Humble Servant

John Buddle

NEIMME/BUD/3/260

Valuation of Jarrow & Manor Walls-End Colliery, begun 24th April 1811.

1. Jarrow Colliery. _____-

This Colliery will in our opinion yield a Profit of £7500 for 2 Years, after defraying the Expense of winning the Tract of Mine lying under Jarrow Lake. When this is accomplished we conceive it will yield £12000 for 10 Years being the Period which the Mine from that quarter will supply the Vend.

The Value will therefore be as follows, including the advantage arising from the Farms.

£7500 per Annum for 2 Years, considered as an Annuity is worth, allowing a Purchaser £

14 per Cent. 12349.10. 0

£12000 per Annum for 10 Years to commence, at the end of two Years allowing

A Purchaser at the same Rate as above is worth 48164 .8. 0

Forward £ 60513.18. 0

NEIMME/BUD/3/261

£. s. d

Brought Forward 60513.18. 0

Stock

£. s. d

Horses …… 2850. 6. 0

Hay & Corn, Sundries in Storehouse, Ropes etc _____ 4092. 6. 6½

Iron, and Iron Materials …… 1805. 3. 3

Timber and iron Materials about the Engines, Machines,

Storehouses and Raff Yard ……. 6100. 2. 6 14847. 18. 3½

£ 75361. 16. 3½

Resting Coals on 1st May

600 Chaldrons Best Coals ……..@ 30/- £900. 0. 0

1500 Small Ditto _____ @ 2/6 187.10 0 1087. 10. 0

Total of Jarrow _____ £ 76449. 6. 3 ½

2 Manor Walls-End Colliery

We estimate this Colliery to continue for 19 Years, at the Yearly Profit of £4328.0.0 the present Value which considered as an Annuity at 14 per Cent.

Amounts to £ 28350. 0. 0

Value of the interest in the Farm for the above Period _____ 1033.10. 0

Forward £ 29383.10. 0

NEIMME/BUD/3/262

Brought Forward £ 29383.10. 0

Stock

Horses ……. £ 1271. 1. 0

Hay and Corn, Sundries in the Store House, Ropes etc. __ 1249. 7. 4

Wrought Iron, & Iron Materials ……. 930.12. 8

Timber and Iron Materials about the Engines, Machines,

Store Houses and Raff Yards. _____ 4054. 3. 10 7505. 4 10

£ 36888.14.10

Resting Coals on 22nd May

4260 Chaldrons Best Coals @ 26/- £ 5538. 0. 0

2017 Ditto Small Ditto @ 3/- 302.11. 0 5840.11. 0

Total of Manor Walls-end £ 42729. 5.10

Jarrow Brought Forward 76449. 6. 3

Total _____ £ 119178.12. 1

Signed William Stobart

John Buddle

I approve of the above William Thomas

NEIMME/BUD/3/263

Walls-end Colliery 26 June 1811

To Messrs Fenwick, Thomas Smith, Watson, Hill & Steel,

Gentlemen,

I have to request on the part of William Russell Esq & Co, that you may descend the E Pit of this Colliery, and examine the exploring Drifts now driving through the Creep from the Shaft, towards the North Boundary.

You are requested to examine the above Drifts, in order to enable you to answer the following Queries.

Query 1st. You will please to pay particular attention to the state of the Coal in the middle of the Pillars through which the exploring Drifts have passes; and state whether you think in case the working of those Pillars can be effected that the Coals to be produces therefrom will be merchantable at the present selling Price of Walls-end Coals, or at what price do you think they may be vended?

Answer. We have examined the exploring Drift in the E Pit North Workings, and have also paid particular attention to the State of the Coal in the middle of the Pillars through which these Drifts have passed, and are of opinion after a due proportion (probably 1/5th) is taken out by screening, that the remaining part may be sold at the present selling price of Walls-end Coals.

NEIMME/BUD/3/264

Query 2nd. What price per Chaldron would the Coals cost working exclusive of Colliery Rent, and how may Chaldrons per Acre, do you think those Pillars would yield?

3rd. What mode of ventilation would you advise as best calculated to ensure the safe working of those Pillars, and likewise to obtain the greatest quantity of Coal?

Answer. We are of opinion that the Coals will cost 18s/- per Chaldron exclusive of Colliery Rent and preparing; and we estimate that from 700 to 750 Chaldrons of merchantable Coals may be produced per Acre by those Pillars.
Answer. We have no hesitation in saying, that the plan already adopted in preparing the Pillars to the North of the E Pit Shaft, and that proposed in regard to the future working, are in our opinion the best that can be pursued in the

4th. Do you think that forming an Air communication with the C Pit would contribute essentially to the safe working of those Pillars, and are you of opinion that the probable quantity of Coals to be obtained, will warrant the expense of making such communication with the C Pit/

present state of that part of the Mine.
Answer. We think that forming an Air communication with the C Pit, will contribute essentially to the safe working of those Pillars; and we further think, that the quantity of Coal likely to be obtained will warrant the expense of making such communication.

NEIMME/BUD/3/265

Query 5th. You will observe that the district of Pillars (18 to 20 Acres) through which the exploring Drifts are now passing, had not been wrought in the broken previous to its being overrun by the Creep.
Can you therefore from analogy form an opinion whether that part of the Colliery out of which the usual proportion of Pillars viz. 1/4th has been already wrought and has subsequently crept may be wrought over again in a similar manner to the Pillars now under your observation; or can you point out any other method more applicable to the particular state of those Pillars?

6th. Should you think the second Working of these Pillars

Answer 5. We would certainly recommend an attempt to be made to reduce still further the Pillars already partially wrought, at the same time it is quite out of our power to say positively what may be the result; but we think there is ground to hope from the strength of the Pillars left after the first working, that notwithstanding the expense likely to be incurred in the preparations a sufficient quantity of Coal may be got to warrant that Expense. In regard to the method of working those Pillars we recommend that that proposed to be pursued in the Waste to the North of E Pit be adopted generally throughout the Colliery in future Workings.
Answer. With respect to the practicability of working the

NEIMME/BUD/3/266

practicable or likely to be so, in what part of the Colliery should the first attempt be made, and what quantity of Coals per Acre do you think they may yield?

Signed
John Buddle.

Pillars a second time we think we have sufficiently explained our sentiments in the answer to the preceding question; the poi nt of making such attempt we apprehend must be decided upon by Mr Buddle; and we think there is no danger of falling short of from 400 to 500 Chaldrons per Acre.

Signed
Thomas Fenwick
Thomas Smith
John Watson
George Hill
Edward Steel

NEIMME/BUD/3/267

Hartley Colliery 17th August 1811

To Messrs Buddle & Watson,

Gentlemen,

You are requested to Answer the following Questions, relative to the working of the Chatham Pit.

Question 1st. In working the Pillars in the North East District, what proportion of Coal, would it be advisable to take off so as to prevent her creeping and falling to any extent.

Answer. We conceive that one third of the Coal remaining in the Pillars of the North East District of the Chatham Pit's Workings, may be removed or wrought off, without producing a Creep.

Question 2nd. Which would be the most proper manner to take off the above proportion?

Answer. The best way of Working the Pillars, in Question, will in our opinion, be to take away one third of each individual Wall or Pillar, by judding, from the Headways Courses; observing at the same time not to take two Judds abreast, but alternately on the opposite side of each Headways Course; That is, for example, to take the Judd off the first Wall, from the Eastr side of the Heasways Course, and so on through the whole Succession of Walls in each Headways Course.

NEIMME/BUD/3/268

Question 3rd. How far would it be advisable to make a general working of the Pillars, after the Coal between the Troubles at the North East extremity is taken off?

Answer. We think it may be advisable to make a general working of the Pillars in the Chatham Pit, after the partial working of the Pillars, in the North East District has been effected, as described in the foregoing Answers. But we advise that a course of Walls should be left, untouched, as a Barrier against the Trouble which forms the Western Boundary or Limit of the North East district, named in the first Query.

Question 4th. Which would be the best Way to proceed with respect to Winning the whole Coal to the East of the Shaft, lying between the present Workings and Hartley Old Waste?

Answer. We advise that the Whole Coal to the East of the Shaft, lying between the present Workings and Hartley Old Waste; should be Won and wrought in the same manner as the Coal in the Chatham Pit has been won and wrought; leaving a Barrier of 60 Yards against the Old Waste; such Barrier to be found, by extending Bounder Drifts in front of the new Workings.

John Buddle

John Watson

NEIMME/BUD/3/269

July 1811

Valuation of the Lessee's Interest in Murton Colliery, assuming the Annual Vend of Ship Coals at 12,000 Chaldrons

---

To yield 12000 Chaldrons of Ship Coals, it will require, according to the present produce of the Mine 16,366 Chaldrons to be wrought, and which will be disposed of as follows viz.

Chaldrons	
12000	To Sea.
100	Heap Fires.
790	Consumed by the Engine.
500	Ditto Machines.
2976	Ditto by workmen, Landsale and Wasted.
16366	

The above will require about 9700 Scores to be wrought.

The cost of working and laying the Coals at Bank, including Materials and the

Expense of sinking new Pits, I estimate at per Chaldron 0.10. 8

Carried Forward £ 0.10. 8

NEIMME/BUD/3/270

Brought Forward _____ £ 0. 10. 8

Upperground Charges of every description including Colliery Rent, Cesses and

Taxes, Damage of Ground, Leading the Coals, to the Staith, Binding, Pitmen,

Working the Engine, Agency etc. etc. …… 0. 6. 1½

Neat Cost of delivering the Coals at the Staith, exclusive of Fittage …….. £ 0. 16. 9½

Out of the whole quantity wrought the quantity of saleable Coals, and the amount Sales, will be as follows.

12000 Chaldrons Ship Coals ……..@ 24/-		£ 14400. 0. 0
400 Chaldrons Coarse, and Small Land and River Sale	@ 6/-	120. 0. 0
		£ 14520. 0. 0

Deduct Working charges.

12000 Best Coals delivering at the Staith ……..	@ 16s/9½d	£10075. 0. 0
240 Small Ditto ……	@ 16s/9½d	201. 10. 0

160 Landsale …….. @ 16s/9½d 124. 6. 8

3966 Consumed by the Workmen, Engines etc and wasted@ 13/10¾ 2747. 5. 7½ 13148. 2. 3½

Yearly Profit £ 1371.17. 8½

From which deduct the Fitting Charges 210. 0. 0

Neat Yearly Profit arising from the Colliery ……. 1161.17.8½

Carried Forward

NEIMME/BUD/3/271

Brought Forward 1161.17.8½

Add the Profit arising from the Farm, the Colliery being charged in the Estimate

of the working Price, with all the Produce of Hay etc as if purchased of the Farm. 200. 0. 0

Full Yearly Profit _____ £ 1361.17.8½

But as some benefit will arise from working the Iron Stone I will state the Yearly Profit at £ 1500.

The Yard Coal Seam will supply the Vend for about 9 Years, after which it must be supplied by the Five Feet Seam. This Seam will supply the Vend for many Years, it is presumed, and as it is also to be presumed that a renewal of the Lease may be obtained on fair Terms; I shall calculate in this Estimate on the full Term of Twenty One Years.

It is not likely that the Coals from the Five Feet Seam will vend at so good a Price as the Three Feet Seam, but as it will work at a less expense, I shall assume, that the saving in the working Charge will amount to an equivalent to the reduction in the Selling Price of the Coals. The annual Profit may therefore

NEIMME/BUD/3/272

be stated at £1500 for the Term of Twenty One Years.

Then the Value of a Yearly Profit of £1500 for 21 Years allowing a Purchaser £. s . d

14 per Cant, and the redemption of his Capital is 10030. 10. 0

Stock

Horses, Hay & Corn, and every other part of the Stock, which may be

considered as worth ready Money ……. 2060. 2. 1½

Dead Stock and Materials of every Description, as worth to be sold, at the

end of the Term £ 3910.0.0 which is worth in present Money, allowing a

Purchaser 5 per Cent per Annum for advance of Capital ……	1401. 1. 8
Total Value	£ 13,491. 13. 9½

Signed John Buddle

[END]