

BENWELL COLLIERY JOURNAL
20th Feb. 1801 to 10th. Sept. 1811

Bud-40

	[1]	
	House -- 3.. --	
	Coals -- 1.. 4.. --	
	£ 4.. 4.. 0	
8/.	416 --	<u>20..16..</u>
		25.. 0..0
	18	
	<u>2[]</u>	
	36	
	<u>90</u>	
	<u>9[0]16[1]</u>	46. []
	46 --	6
		40
		3
Lo[]gs		
	6	20 16
	4. 10	16 4
	/ 90 / 7	
[Lo]rd Bolingbroke's Letters on the []it of Patriotism, on the idea of [] Parriot King.		
[Page 2 is Blank]		
[Bud-40]		

	[3]
The First Engine lifts from the Benwell main Coal only 17 Fath ^s . to the Delivery Drift Depth of Pit from the Surface to main Coal 27 Fath ^s . – The En: works two 16½ In. Sets of Pumps Aubone Pit ^<Engine> lifts the Water from the Beaumont Seam and delivers it into the main Coal to the other Engine – Works a 15 In. Set Pumps the Lift 35 Fath ^s . Coal Pits now in Work The Delaval Pit [1]6 F ^s . To the The Charlotte – 95 F ^s . Beau ^t . Seam The Benwell main Coal is	

	[4]
Coarse Coal -- 0.. 4 Good Coal --- 2.. 5 Band ----- 0.. 3 Coal ----- <u>0..10</u> <u>3..10</u>	
The Section of the Seam is nearly the same in the Deleval It except in some Places where the Band is entirely out, and it never exceeds 3½ in Thickness – The Charlotte Pit Workings are E. of the Shaft & are working West up. – 20 Winnings North & 14 th . South of the Mothergate – 14 Pillars of Coal to work the N. Side	

	[6]
but only two on the S ^o . Side till a fresh winning will be wanted. – are working 30Ten P. Day at this Pit. 6 Waggon Horses put 30 Scores 400 yards – The Shaft 10 Feet Diam: with	

	[7]
28 feet rise Trouble to the North which is now in Hands, settg. over, in order to win out a Sheth of Boards to the North are working 24 Scores P. Day in the Pit. Depth of Beaumont Seam	

	[8]
Winnings all thro' the Colly. except in the Charlotte Pit which are 11 Yards, are 10 Yards 6 Wall 4 Boards, Walls holed at 27 yd ^s . Putting Price 9 ^d . P. Score under 60 Yd ^s . 10 ^d . P. D ^o . at 60 & 1 ^d . P. Score	

a Brattice down the Middle
Delaval Pit
The Workings are only 4 Pillars
W. of Shaft yet, with 23 S^o. Winng.
and 10 to the North. The S^o.
Winning Headss^{es}. are Stopped
by Water at present, and
the Workings are up to a

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56 Fath^s.
Both the Charlotte and
Delaval are single Pits, and
Air then relies by a Brattice
The proportion of London Coal
wro^t.[^]<produced> out of the Whole Workings
is 12 out of 20 –
Present Workings amo^t. to
about [] Keels P. Day –

for every 20 Yards further

[9]

Benwell 21st. Aug^t. 1801
Coals drawn from the Glebe at the
Charlotte Pit from Aug^t. 5th. 1800 to &
with xx. Co.
Feb. 20th. 1801 ---- 199.. 0
Mar. 6th. ----- 179.. 0
 20th. ----- 151.. 5
Ap. 3^d. ----- 187.. 3
 17 ----- 212..16
May 1 ----- 182..10
 15 ----- 195..17
 29 ----- 152..17
June 12 ----- 171..19
 26 ----- 164..10
July 10 ----- 134..17
 24 ----- 1[59].. 6
Aug 7 ----- 82.. 9
 18
Allow 120 Tens for Colly.
Consumption –

[10]

Dimensions of the loweing
down Machine at the Charlotte
Pit.
Dim. of Waggⁿ. Rope Wheel 10 Feet
feet In
increases to 20 .. 6 with a 4 In. Rope
Balance Roll 8 Feet Diam.
Length of Way 830 Yards
Depth of Counterbalance Pit
82 Fa^s. 5½ Feet of 19 Revolutions
of the Barrel
Spur Wheel upon the End of
the Counterbalance Roll 8 Feet
Diam. wro^t. by a 3 Feet Nut
upon the End of the Wagg.
Rope Wheel Shaft. –
Revolutions of the Waggⁿ. Rope
Wheel about 51 –
Weight of Counterbal^{ce}. 18 Cwt.

[11]

Sep. 1st. 1801
Prices in Benwell Colliery viz
Stated upon an Average –
Hewing (18 Peck Corf) ----- 0 .. 3 .. 6
Putting ----- 0 .. 1 .. 4
Ditto by Waggons exclusive }
of Wagg: & Way ----- } 0 .. 1 .. 1¼
Overman ship, viz }
Finding, Oil, Candles, Onsetter }
at Shaft & Onsetters at Cranes }
Craneman, Deputies, holg. } 0 .. 1 .. 3
Walls, Stick Odds, Lamp- }
keeper & Overmanship ----- }
Wastemen ----- 0 .. 0 .. 2¼
Housekeeping ----- 0 .. 0 .. 1
Waggon Way Keeper ----- 0 .. 0 .. 1
Props ----- 0 .. 0 .. 2
Barrow Way ----- 0 .. 0 .. 1
Brattice ----- 0 .. 0 .. 10½
Nails ----- 0 .. 0 .. 1
Furnace Keeping ----- 0 .. 0 .. 2
Stopping ----- 0 .. 0 .. 1¼
Shift Work ----- 0 .. 0 .. 4¼
Taking down Stone for }
the Waggⁿ. Roads & Puttg. } 2 .. 0 .. 2
over Trouble... of and ----- }

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[12]	
Brought forward	£0 .. 9 .. 6½
Corving	0 .. 0 .. 3½
Rope	0 .. 0 .. 5
Banking 2½ ^d . Brakg – 1¼ ^d .	0 .. 0 .. 4¾
Working the Engine	0 .. 0 .. 1¼
Engineman	0 .. 0 .. 0
Upholding, underg ^d . Wagg ^s . Trams, Shovls, Mauls and Wedges, Pit Chains shoeing undg ^d . Horses and Heap Lamps	} 0 .. 0 .. 4½ 2¼
Wright W ^k . 7½, Smith 20 ^d . P. Ten of 440 Bolls = P. Score	}
Drift Work, Levels, Winng Heads ^s . Narrow Board, wet	0 .. 0 .. 4
Double Working	}
Cutting thro' Hitches, wet and Double Working	} – 0 .. 0 .. 3
Trapping	0 .. 0 .. 1¾
Sledge Horses	0 .. 0 .. 2½
<Brattice in Shaft>	
Upholding underg. W. Way [^]	0 .. 0 .. [0]
Forward	£0 .. 11 .. 9¾

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[13]	
Engine Keeping	
Two main Engines are wro ^t . for Wages only – £6..1..0 P.	
Fortnight –	
Oil P. Ann ^m .	
Leather D ^o . –	
Timber –	
Iron –	
Leading Coals from the Charlotte Pit 3½ P. Ch. and pay the Brakeman 12/- P. Week	
Preparation of Coals out of 30 Ch ^s . – 18 Laidon @ 22/- 5 Small @ 6/- 7 Glasshouse @ 11/-	
The fittage to be taken off the London Coals which is 1 ^s / 9¼ ^d . P. Chald ^r .	

[14]	
Mason Work P. Fortnight	---- / £4..8..0
Smiths	-----
Wrights	----- / 3..0..0
Labourage P. Ann ^m . includg Creasers, Cartmen, Offputters Person who sells the Landsale / Coals, & Horserkeeper, and Staith Assistants	} 400..0..0
Waggon Wright	----- 39..0..0
Smith Work exclusive of the Tentale	} / 120..0..0

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Benwell Sep. 1 : 1801
The S^o. Winning Headwayses
to the E. of the Charlotte Pit
are just begun to win the
Coal between the Extremity
of the S^o. Workings and the

[16]	
Estimate of Expençe	
of workg. P. Score bro ^t . forw ^d .	} 0..11..9¾
Short in Waggon Way Keepg. being only a 1 ^d .	0.. 0..0
Sawing	0.. 0..1½
Wailing	0.. 0..2

[17]

Benwell 28th. April 1802
The Delaval Pit Machine having
failed, the Pit has been laid off for
some Time till a new Wheel could be
built, but will be ready for work again
by Monday next. – The Workings in

Dyke, which will be about Boards. – The Band is much thinner in this Quarter of the Pit than to the North. – The Patent Ropes upon this Pit wear from 25 to 28 Weeks The Common Ropes seldom wro^t. Longer than 14 or 16 Weeks. –

[Bud-40]

Fatherance for Putters – – – – 0.. 0..2
 Upholding the Machines }
 with Labour exclusive } 0.. 0..0½
 of Materials – – – – – }
 £0..12..4¼

If 45 : 12..4 :: 24

12
 148
24
 592
296
 3552 / 78¾^d. Say 79^d. or 6..7
402
 42
4
 168/ 3

this Pit, between the 28 Feet Trouble and the River, which is in the South Boundary are cutting off very fast, from the Intersection of the Trouble and Boundary to the West.

The 28 Feet Trouble which is an upcast to the North has been set over and the Headwayses advanced 260 Yards into the Whole; they dipped rose for about 30 Yards beyond this Trouble to the Height 8 feet, then

[18]

for about 90 Yards dipped 23 Feet and the Remainder of the 260 yds. was nearly Level, when a Rise Trouble of 15 Feet was met with. After setting up this Trouble, the Coal was met with in Perfection and continued nearly Level for 2 yds. when it began to dip at the Rate of 1 in 7, the Seam thinning regularly at the same Time, 'till at 22 Yards in, the Coal Drift is now set in, a Stone Drift is now set in, to discover the Coal again

To supply the Delaval Pit Workings, during the Time she

[Bud-40]

[19]

is off Work, the Charlotte Pith as set on double Shift, and is working from 26 to 28 Scores P. Shift.

The Workings in the Charlotte Pit are principally to the S. East of the Shaft, in Stumple Wood; they are going both East and West from the South winning Heads^s. the East Boards are cutting off at the Rate of two Boards every Pillar, against Elswick Boundary, and the West Board, are limited by the even on North winning Headwayses, upon the Whole there will be Coal in this Quarter

[20]

to supply the Pits Workings for 18 Months or 2 Years

The even on the North winning Headwayses have been advanced 21 Winnings and may in all probability have to go 70 or more further, the Coal along the whole Extent of those Headwayses, so far as they are already advanced is very good and somewhat harder than the general Run of the Seam.

The Seam in the Heads^s. is 3 feet 5 In. Thick, and the Band so thin as only to be like a Parting. – From the gradual

[21]
 and regular Rise of those Heads^s.
 the Situation will be excellent for
 the Application of Cast Iron Rail
 Way, which must be introduced as
 soon as it becomes Necessary to
 work Coals in that Part of the
 Pit. They are now in Hands
 with making Height for the Rail
 Road, by blowing down Two Shot
 thick of Stone from the Roof, which
 including the cutting of the Sleeper
 Holes, and stowing the Rubbage
 only cost from 2/ 9 to 3/- P. Yard
 [Bud-40]

[22] [Table In Transverse] Vend of the several Kinds of Coal from Benwell						
Colliery – In	Adairs Ch.	Oversea Cha ^s .	H. House Cha ^s .	Sonall Cha ^s .	L. Sale Cha ^s .	Total Cha ^s .
1804	13,395	3677	7,714	832	5116..4	30,734..4
5	11,241	3,458	7,140	1,719	3,533..20	27,091..20
6	12,125	3,638	3,791	2,746	2,851..4	25,151..4
7	10,831	1,816	4,972	2,677	3,421..8	23,717..8

[23] [Table In Transverse]						
In	Amount of Sales	Working Charge	Profit	Average selling Price P. Ch.	Average working Price P. Ch.	
1804	26781.. 8.. 0		6,619..15..9¾	17/ 5	12/ 10½	
5	24683..11..3½		5143.. 2..6¼	18/ 2½	14/ 5	
6	22812..13..10½		3000..17..4½	17/ 11¾	15/ 6	
7	20178..11..11¼		2648.. 3..3½	17/-	14/ 9½	

[24]
 Prices of Materials in
1804 1807
 Timber, mun. – 2/ 8 P. Foot – 3/- P. Foot
 D^o. – Norway 2/- P. D^o. – 2/ 2 P. d^o.
 Iron – P. Cw. – 35/- P. Cw.
 Ropes – 80/- P. Cw. – 88/- P. Cw.
 Beech Rails – 7½^d P. Yd. – 10^d. P. Yd.
 Hay – 60/- P. Ton – 63/- P. Ton
 Oats – 6/- P. Boll – 8/- P. Boll

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 Selling Price of Coals in
1804 1807
 Oversea – 15/ 3, 18/ 3 – 16/ 3
 G. House – 13/-, 14/-, 15/- – 11/-, 13/-
 Small – 8/-, 10/-, 12/- – 7/-
 L. Sale – 16/ 6, 18/- – 21/-
 The above prices are exclusive of
 the Fittage which is 1/ 9¼ P. Ch.

[26]
 Heads of working charges at
 Benwell Colliery viz
 1807. xx. £
 Charlotte Workings 8148 – 16 P.C. 3349..17..11
 Delaval D^o. – 7851 – 3510..10..2½
 Total – 15999
 Waste & Shift Work on the }
 above – 940.. 9..11
 Smiths, Iron & Workmanship – 343..14.. 4
 D^o. Iron found by owners – – – – –
 D^o. for Sinking – 109..17.. –
 Corving – 323.. 4.. 5
 Tentale for Trams – 52..16..7½
 Carpenters – 107.. 9.. 9
 Masons – 226.. 6.. 2
 Keeping Engines – 181..14.. 5

[Bud-40]

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Sawing Timber, &c. -----	117.. 1.. 2
Labourage work &c. -----	601..17.. 9
Staith Charges, Leading	} --- 773..12.. -
Coals Waggon & Wagg: -----	
Way Wrights -----	
Sinking -----	261.. 9.. 6

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Poor Rate -----	54.. 7.. 6
Hay -----	497.. 8.. -
Oats &c. -----	701.. 5.. 5
House Rents -----	86.. 0.. 6
Damage Gro ^d . -----	39.. 2.. 7
Agency -----	215.. 4.. 6
* Farm & quarry Rent -----	85..10.. 0
Purchase of Horses -----	85..10.. 0
Binding Pitmen -----	180..19.. 6
Law expences, Property	} - 706..10.. 4
Tax, &c. &c. -----	
B[runs] [Scriber] -----	92.. - .. -
From the amount of the above, is to be deducted the money rec ^d . of the Overman for Oil, &c.	- <u>122..15.. -</u>
* Farm <u>60 Acres</u>	
[Bud-40]	

[28]	
Over & above the foregoing Charges the following will also come upon the years expences viz.	
Colliery Rent -----	£1880.. - .. -
Timber -----	885.. 8.. 5
Iron -----	38..14.. 2
Cast d ^o . -----	377.. 3.. 6
Surgery -----	28.. 7.. -
D ^o . for Enoculat ⁿ . <u>8..16..</u>	-- 27.. 3.. -
Farriery -----	9..13.. -
Repairing High Ways -----	10..14.. 9
Clarking & Burgess Agency -	50.. - .. -
Abatements & Discot ^s . -----	320.. 9.. -
Candles & Tallow <u>165..17..6</u>	165..17.. 9
Oil -----	142..11.. 6
Oakham & Paper -----	6..11.. -
Props & Planks -----	182.. 5.. 5
Ropes -----	308.. 4..7½
Saddlery -----	37.. 9.. 1
Flannel -----	35..15.. 8
Drugs -----	<u>7.. 9.. 4</u>

[29]	
Nails -----	89..15.. -
Gunpowder -----	77.. - .. -
Bricks -----	173..19.. 4
Leather -----	107.. 6.. 9
Plumer Work -----	45.. 8.. 4
Limestone -----	19 .. 4.. -
Mill Wright Work -----	167.. 8.. 5

[30]	
1807	
Total amo ^t . of Tradesmens Bills -----	5840..13.. 4¾
Working Charge - <u>13912..12..10</u>	
	<u>£19753.. 6.. 2¾</u>

[31]	
1808 aut. Sep: 27 th . 1808	
N ^o . 19. Adair's -----	10,122
Oversea -----	1796
G. House -----	2359
Small -----	1922

[32]	
Oct ^r . 18 th . 1808 -	
Down the Delaval Pit with M ^r . Th. Heppell - The present Sheth of Boards consist of 23 Bd ^s .] is to the N.W. of the Shaft. The	

July 5th. 1808

Benwell Vend up to this

Day – viz.

Adair's -main -- 7,031

Oversea ---- 1,202

Glasshouse -- 1,645

Small ----- 1,344

Landsale ---- 1,779..8

Total – 13001..8

L. sale ----- 2157..8

Total – 18356..8

Oct^r. 11 : 1808

N^o. 20. Adair's ----- 10,549

Oversea ----- 1836

G. House ----- 2498

Small ----- 1979

L. sale ----- 2277..12

Total – £19,139..12

Seam is thinner than usual being only 34 Inches in several places. These are also in a great number of the Wet Threads runng. through the Boards which make the Coals work very wet

– Tuesdy. Oct^r. 25 : 1808 –

Down the Charlotte Pit; the workings in which are confined to a small tract of Coal in the N.E. Way; bounde[rd]

[Bud-40]

[33]

to the N. and S^o. by the former Workings and to the East by an upcast Trouble of 14 Feet. As this sheth consists only of 11 East & 9 W. Boards it is necessary to prepare another Sheth as soon as possible, I therefore ordered 2 ^<cart> Boards to be pushed away with 8 men 'till they get the up cast Trouble, which must be set up, and a pair of N. winning head^s. set away on its rise, or E. Side. This will win the small Tracy of Coal lying

[Bud-40]

[34]

between the Trouble and the N.E. Boundary of the Colliery – All the Boards in the Delaval Pit continue to dip to the W. and are very wet Ordered corner Boxes to be made to lay down the Bd^s. to carry the water off by laving. As I suspect a Trouble at no great distance from the Face of these Boards, ordered two of them viz. The Motherg^t. g the B^o. North of her to be pushed away as past as possible

[35]

to explore the field of Coal in advance. The Seam in the Charlotte Pit is 3 feet thick, and is wro^t. with 12 yd. Winng^s. viz 8 Wall, 4 B^d. the Walls h^d. at 26 yds. – Walls 2 yds. wide. Then the produce P. Acre will be
$$\frac{26 \times 4 + 8 \times 2}{26 \times 12} = \frac{120}{312}$$
$$= \frac{10}{26} = \frac{5}{13}$$
Then 4840 yds. P. acre ⁵/₁₀ of which is 1861 yds. And $\frac{1861}{3} = 620$ Ch. P. Acre
Suppose the ann^l. Vend

[36]

to be 25,000 Ch. thus $\frac{25000}{620} = 40.33$ Acres

[37]

Oct^r. 25th. 1808

Binding Charge – viz Hewers, Bindg. mg. --- 75..11.. –

[38]

Price
8 Horses in D, Pit
9 Ditto – in C, Pit

wrough yearly. –
N^o. 20. Oct^r. 25th. 1808
Vend – up to the end of this
Pay – viz

Adair's -----	11,245
Oversea -----	1928
G. House -----	2695
Small -----	2061
Landsale -----	<u>2453..16</u>
Total –	<u>£20382..16</u>

[Bud-40]

Headsman -----	20..10.. –
Half marrows -----	26.. – .. –
Foals -----	3..12.. –
Rolly Drivers -----	12..13.. –
Trappers -----	1.. 4.. –
23 half Barrels of Ale 27/-	<u>31.. 1.. –</u>
	<u>£170..11.. 0</u>

Complete Trams bound

this year.

10 Trams on in the Delaval, no
Hewers putting
6 Trams on in the Charlotte,
7 Hewers putting. – Each
Hewer has 1/- P. Day for putting
his own work, over the putting

5 Waggon
3 Sledge
4 Cart
1 Saddle
<u>4 Sinking</u>
<u>34</u>
Weekly consumption of Oats 37
<u>Bolls.</u>
<u>2 Cart Horses</u> wanted –
323 Bolls Oats on hand, say
10 Week's Stock. –

[39]

Nov: 22 : 1808 – Tuesdy.

Examined the line of the intended new W. Way from the Sinking Pit to the head of the inclined Plane at the Charlotte Pit.

From this examination it Appears to me that it will be the best plan to bring the way due E. from the new Pit in the first place as far as the E. side of the Stack yard at the Quaker's House where it will gain the summit level of the hill, and then in a southern

[Bud-40]

[40]

direction to the brow of the hill on the S^o.Side of the turnpike from whence an inclined plain (provided the fall is sufficient) will convey join it to the Charlotte Pit Branch. –

– Tuesdy. 6th. Dec: 1808 –

Large Feeders of Water continue to be got almost daily in the Delaval Workings to the Westward.

– Dec: 20th. 1808 –

The Water from the W. Way in the Delaval Pit found a passage through the Thill into the Cut, and rose so rapidly

[41]

as to stop the Air Course. It therefore became necessary to procure 7 Rag Wheel Pumps from Heaton, W. end Wellington, &c. will all possible speed to pump it out. This was a most troublesome and expensive business

– Dec. 31 . 1808 –

Laid Troughs to carry the Water over the Thill in the Delaval Pit from the workings to the Water Course, to prevent its passing thro' the Thill into the Cut – The Feeders still continue to increase in the W. Workings. –

[42]

– Tuesdy. 17th. Jany. 1809 –
Through the Delaval Pit's work^s.
The Seam in the W. way is in
great perfection, being 3..8 and
F. In.
3..10 high and of excellent quality
but the Feeders of Water from
both Roof and Thill, still con-
tinue to increase
Down the Sinking Pit and
gave directions respecting the
Wedging, &c. M^r. Ord
walked over the Line of the
W. Way from the new Pit with
me.
Having met with several
Blowers and bad Coal in the
Charlotte Pit E. workings as
[Bud-40]

[43]

they approached the Trouble. Ordered
the men to be removed into the
W. Way until the mothergate
Drifts can be pushed beyond the
Trouble, as far as may be tho^t.
necessary for winning out the
Sheth of Boards again
– Tuesday 31st. Jany. 1809 –
The Feeders of Water have increased
so alarmingly in the Delaval
Pit, that it seems to me impru-
dent to continue the Workings any
longer in that direction, until it
is ascertained whether they proceed
from a permanent source or
not. I therefore ordered the
men to be removed to the low

[44]

Coal Way as soon as possible
Vend of Coals in the year 1808
Sea, Adairs & Oversea – 15310
River Sale – ----- 6056
Land Sale – ----- 3067
Total – 24433
It appears by this years acco^{ts}.
that a Score of Coals produces
1.64 Ch. of all sorts. There-
fore the consumption, and waste
is 0.64 of a Boll P. Score
Benwell Colliery is put upon a
Basis of 25,000 Sea Vend in
the Regulation, and supposing
1000 on the Basis to give 850
actual Vend, the Vend from
Benwell, will in that case be

[45]

By Sea ----- 21250
River and Landsale }
as at present --- } 9000
Total 30,250
The present powers of working
xx.
are, the Charlotte Pit 380 P. Fort^t.
Delaval -- 260
640
26
3840
1280
16640 P. Ann.
Produce P. Score as }
P. last Page ----- } 1.64 Ch.

[46]

M^r. Ch. Bedlingtons informatⁿ.
respecting the old Engine Pit
This Pit was sunk to within 9
Fa. of the Beaumont Seam
when a large Feeder of Water
was met with. This Feeder was
supposed to come from the Tyne
as at low Water, the Engine
with a 22½ In. Pump could
strike the Water down but at
High Water the Engine was
completely beaten –
A Bie Pit was sunk to
the main Coal, at about 60 yards
to the North of the Engine out

[47]

from the bottom of this Pit to
the Beaumont Seam
The Depth to the Beaum^t.
Seam Fathoms.
– Tuesday 27th. Feb: 1809 –
Set out the Foundation for the
Machine at the new Pit –
Found the Surface of the Pond
to be 15 feet below the level
of the ground where the mache.
is to stand, and allowing the
Pond to be 3 feet deep, it
will require the Cold Water
Stapp. To be sunk 18 feet
Levelled from the top of

Total Pro: of Work^s. 27,289.60
 Unless some aid can be procured
 from the new Pit towards the
 latter part of the Colly.
 must fall about 3000Ch. Short
 of her quantity upon the Basis
 [Bud-40]

of which the Engine Coals were
 wro^t. – A boring was made

[48]

the Hill in Front of the And^w.
 Oliver's House, and found the Fall
 to the Charlotte Pit to be 88.7
 and the distance 36.06 yds.
 The Fall is therefore 1 in 12.54
 and is sufficient, I think for
 a descending plane, for the
 full Waggon to draw up the
 empty ones.
 – Tuesday 18th. July 1809 –
 Depth of the Edw^d. Pit – 100½
 Outset ----- 2
102½
 Section Seam
 Top Coal ---
 Band -----
 Gro^d. -----

[Page 49 Diagram of Pit?]

[50]

Expencc of working the year
 1808 –
 Timber & Deals ----- £825.. 5.. 3
 Maleable Iron ----- 346.. 4.. 2
 Cast ditto ----- 273..10..10
 Candles Tallow & Grease – 212..14.. 0
 Oakum ----- 9.. 2.. –
 Oil ----- 152.. 7..10
 Beech Board, Rails }
 Props, &c. ----- } ---- 331.. 0.. 3
 Cordage ----- 457.. 2..10
 Saddlery ----- 50..16.. 3
 Flannel &c. ----- 34..16.. 1
 Drugs ----- 3..12.. 7
 Nails ----- 99.. 7.. 7
 Gunpowder ----- 66.. 0.. 0
 Bricks & Tyles ----- 171.. 8..10
 Leather ----- 79.. 5..11
 Plumbers work ----- 8..11.. 5
 Lime Stone ----- 5..18.. 6
 Brown Paper ----- 2..14.. 0
 Stationary ----- 8..13.. 6
 Boring Pumps ----- 15..15.. 8
 Bacly Braus &c. ----- 48.. – .. –
 Surgery ----- 34.. 7.. –
 Tythe ----- 4..10.. –
 Waterage ----- 2.. 5..10
 Forw^d. -- £3243..10.. 4

[51]

Bro^t. forward ----- £3243..10.. 4
 Colly. Rent ----- 1800.. 5.. 6
 Farm Ditto. ----- 165.. – .. –
 Property Tax ----- 290..14.. 0
 Working Charges -----12850.. 5.. 6
 Abatements made by Fitter 123..12.. 0
 Clark & Burgess ----- 50.. 0.. 0
 Insurance ----- 92..15.. 7
 Decrease in Value of }
 Stock ----- } - 1126..11.. 8
 24,483 Ch. Corf £19,743.. 1.. 1
 Sold for ----- £21,214.. – ..10
 Profit ----- £1,471..19.. 9
 Sold for -- 0..17..4¼
 Cost --- 0..16..1½
 Profit £0.. 1..2¾ P. Ch.

[Bud-40]

[52]

– Sep. 12 : 1809 –

Begun to lay the cast Iron Wagg. Way to the Edw^d. Pit begun at the bottom of the inclined Plain near the Charlotte Pit.

– Mondy. Sep. 18th. 1809 –

Begun to lay the Iron way from the Edw^d. Pit – started at the Branches

– Friday 22^d. Sep: 1809 –

Taylor came from the Butterly Compy. To put up the Edw^d. Pit Machine –

The Beaumont Pit ran in at the Top from the Timber giving way – fixed to wall

[Bud-40]

[53]

her from the Stone head with Bricks.

– Tuesday 7th. Nov: 1809 –

Down the Delaval Pit where the feeders of water in the W. way are materially diminished which I attribute to the stemming of the Bore hole. – The Coal in the middle way is exceedingly irregular being 9 feet thick in some of the Boards, and only 2 ½ in others – it is of tolerable quality altho' it does not look well. – As this way is of limited extent (being between two Dykes) and cannot supply the

[54]

workings long – the west way must therefore be prepared for work again lbs.

Weighed 6 Wagg: Way Rails 164

6) 164

27.33 each Rail lbs.

6 Pedestals 47 = 7.83 ea

6

Then 1 yard of way 27.33

2

54.66 +

7.83 X 2 = 15.66

Total weight P. yd. – 70.32 lbs.

Cost say

54¾ lbs – @ 12/- P. Cw. £0.5..10½

15¾ lbs – @ 12/ 6 P. [] – 0..1.. 9

£0..7.. 7½

70 ½ lbs – @ 12/ 6 Cw. £0..7..10½

[55]

– Tuesday 21st. Nov 1809 –

Finished the walling of the Beaumont Pit Shaft where the Top was run in – A Gin must be put upon the Pit as soon as possible for the purpose of repairing and cleaning out the Shafts.

The Band in the Charlotte Pit E. way is 18 In. thick

The Machine on the Edw^d. Pit will be ready to run ro^d. in about a Fortnight.

– Tuesday 19th. Dec: 1809 –

[56]

Lenth. of new Inclined Plain from Head to join the Charlotte Pit Plain – – 2250 Links

22

44

44

11

495 yards

247½ Fathoms

Ordered a Pope of Mess^{rs}. Hood & C^o. for the Plain 250 Fa. 3½ [F]

The Wagg. Way on the Plain will be completed in a few days when the Rollers must be fixed.

[57]

Dec : 31 : 1809

Ch. s d s d

25,321 cast £22,914..10..6 ½ = 18/ 1¼

25,321 Sold for 23,774..13..10 = 18/ 9¼

Profit £860..3..3

Estimate of the Produce of the Beaumont Seam Benwell Colly.

The average thickness of the Seam

3..4 –

4840

538

5378

1792 Total Ch. P. Acre

Winnings 12 yards 8 Way^d. 4 B^d.

Started the new rotative Engine at the Edward Pit – The Engine made an excellent start

[Bud-40]

Hole Walls at 27 yards
 $108 + 16 = 124 = 31$ obtained by
 324 224 56

First Working $\frac{25}{56}$ = left in Pill.

Work out of Pill. $\frac{7}{25}$ of $\frac{25}{56}$ =

$\frac{25}{292}$ = Then Total Produce, $\frac{31}{56} + \frac{25}{392}$
 $= \frac{217 + 25}{292} = \frac{242}{392} = \frac{121}{196}$

[58]

Total Pro: P. acre 1792
 $\frac{31}{56}$ of 1792 = 992 – 1st. Workg.
 Remains in Pill.
 $\frac{25}{392}$ of 1792 = 114 – 2^d. ditto

Total 1106 P. Acre

48 Acres of Pillars in Delaval Pit in the far N.E. Way @ 114	Ch. 5472
Whole Mine and Pillars in C, Pit far N.E. way 11 acres @ 1100 Ch. P.	12100
Whole Mine & Pillars in <15 acres > C. Pit W. way ^@ 1100 Pillars in Ditto 38 Acres @ 114 Ch. -----	16500
	<u>4332</u>
Total -----	<u>38404</u>

[59]

Particulars of the Cost of the Aubone Pit Engine Beam – viz.

Head ^s ---	Cw. qr. lb 59..3..18	-@ 21/-	£62..18.. 1½
Gudgeon & Chair ---	15..3..11	-@ 18/ 8	14..15..10
Brace Head ^s .	6..1.. 8	-@21/-	6..12.. 9
Foot Caps	1..2..24	-@22/-	1..16.. 0
Beam Chair	4..1.. 0	-@ 18/ 8	3..19.. 4
A Cap ---	0..3..10	-@21/-	0..17.. 7½
2 ditto ---	6..0..18	-@21/-	6.. 9.. 4½
A Cap ---	0..3..10	-@21/-	0..17.. 7½
			£98.. 6.. 8
Smith Work at Colly -----			4.. 0.. 0
Dudgeon for Patterns and Workmanship -----			85..13.. 4
W ^m . Reay for Timber -----			44..11.. 0
Sorsbie for Forged Iron viz			
	Cw. qr. lb		
Braces (6) -	17..3.. 0		
Flap -----	0..1..21		
	18..0..21	-@36/-	32..14.. 9
Colliery Wrights -----			6.. 0.. 0

[60]

Feb. 13th. 1810
 Examined the Aubone^<Pit> main En: Beam which is completely sprung on the upper Side of the outer end – The under Baulks are doing the whole business, it therefore becomes necessary to repair it without delay. – The best and cheapest plan of repairing this Beam is to lay 2 Pieces of Oak along its Top.
 The Beam is 24 feet long & 22 In. broad – and as the Oak piece cannot be less than 10 In. thick it will require 48 feet of Timber 48 feet of Timber @ 7/ 6 £18..0..0
 Iron Work & Labour – – 20..0..0
£38..0..0

[Bud-40]	Dudgeon's men -----	3..16.. 0
	Cartage -----	1.. 5.. 0
		<u>£276.. 6.. 9</u>

[61]
 – Feb. 27th. 1810 –
 the repairs of the Aubone Pit Engine Beam are finished, but it still springs very much notwithstanding the strength of the Oak Beams laid upon it.
 – Mar. 13 : 1810 –
 The Edward Pit begun to work Landsale Coals – The new machine answers exceedingly well Getting very well forward in the working of the Pillars in the Delaval Pit
 The Stowing of the Barrier is in a state of forwardness

[Bud-40]

[62]
 – Mar. 27th. 1810 –
 As the whole Coal to the N.E. of the Charlotte is of limited extent and the Roof not very good I think it will expedient to lessen the Winnings & take as much Coal in the 1st. working as the usual proportion obtained by both 1st. & 2nd. workings
 The Proportion obtained by 1st. & 2nd. Working in the usual way by 12 yard Winnings is $\frac{121}{196}$
 or 0.6178
 I propose to work the dis-

[63]
 trict in question by 10 yard Winning viz 5½ Board & 4½ Wall – the Walls to be holed at 22 yards, 2 yards wide.

22	4½
<u>5½</u>	<u>2</u>
110	9
<u>11</u>	
121	

$\frac{121 \times 9}{220} = \frac{130}{220} = \frac{65}{110} = \frac{13}{22}$
 or 0.59
 Yet by 1st. & 2nd. Working 0.6178
 D^o. by proposed method 0.59
 Less by proposed method 0.0278
 The Tract in question is so limited, that I expect it may be wrought off, as proposed without incurring the risk of a Creep.

[64]
 – April 10th. 1810 –
 Employed in repairing the Aubone Pit Shaft near the Top.
 Are working all the Landsale at the Edward Pit.
 The working Barrels in the Aubone Pit, are getting very bad – It therefore becomes necessary to consider the expediency

[64a]
 [On Blotting Paper]

22,656	<u>22,656</u>
	755
14306	
5,611	
<u>2,739</u>	/ _____
<u>22,056</u>	
22656 = 8,350 = 1050	
<u>1050</u>	

[65]
 April 24th. 1810

Vend – Adairs -----	4170
Oversea -----	264
Glass House –	1369
Small -----	920
Land Sale ---	<u>913..4</u>
Total –	<u>7,636..4</u>
Balance in Fitter's hand	
	<u>£2364..14..8</u>

of ordering new ones – One of the Boilers is also very bad and must be repaired.

417500
83500
 8767500 / 386½
67968
 197070
101240
 157220
135936
11284

Workings
 Delaval 342 xx. – 8/ 1½ P. xx.
 Charlotte 345 xx. – 9/ 9 P. xx.
 Edward – 97 xx. – 8/ 11
 Total 784
 The working of the Pillars in the Delaval Pit is going on very well.

[Bud-40]

[66]

– May 8th. 1810 –

The lowering down Plain from the top of the Hill to the Charlotte Pit answers very well. – The Waggon will descend low enough to join the head of the Charlotte Pit Plain. None of the Cast Iron Rails upon the Plain have broken with the weight of the laden Waggon. –

It would be very advantageous to lay the Bye-way from the Staith to the bottom of the Charlotte Pit Plain with cast Iron.

[Bud-40]

[67]

July 17th. 1810

Vend up to this day –

Adairs – – – – 8,019
 Oversea – – – – 403
 G. House – – – – 2538
 Small – – – – – 1528
 L. Sale – – – – 1344..12
 Total – 13,832..12

Aug^t. 8th. 1810 –

Supposing the Waggon Way from the intended new Pit, to be joined to the Delaval way, it will require along the Bottom of yards the Hill – – – – – 550
 Inclined Plain – – – – – 704
 Length of new wa req^d. 1254
 But supposing the Branch from the intended new Pit, to be joined

[68]

to the Charlotte Pit Branch, near the Bridge, in the Benwell Lane it will require 1364 yards of Way.

Should the latter line of way be found eligible, the Charlotte Pit inclined Plain, and machinery may be made to answer the Purpose. And will serve for all the Pits.

[69]

The main Engine Boilers – viz 4 – feet Boilers consume from 1170 to 1180 Ch. a year 150 Dwelling Houses, including agents Houses, consume 600 Ch.

[70]

Dec: 31 : 1810 – Vend this year viz

Adairs-main – 16.210
 Oversea – – – – 1.193
 Glass-house – 4.832

[71]

Dec: 31 : 1810
 Supposing the Vend of the ensuing year, including River, and Landsale to be – – 26,500
 Home Consumptⁿ.

of Coal in the year. or 12 Fath.
P. House.
– Sep. 11th. 1810 –
Putting charge in the different
Pits viz.
Charlotte Pit – 1/ 9¼ P. xx.
Delaval – – – 1/ 4½
Edward – – – 2/ 2

[Bud-40]

Small – – – – – 3.022
Land Sale – – 22.402
Total – 27.929

A M – – 1156
G. House 25
Small – – 50
1231 B[ro^t.]ing

Workmen – – – – 531
Lamps – – – – – 144
First Engines – – 570
A Pit ditto – – – – 650
Machine
Lamp Fires – – – 525
Smiths – – – – – 79
Tubes & Furnaces 429 2928
29428
Resting on Staith – – – – 1000
Total to be wro^t. – 28428
One Score of 16 Peck Corves
= 40 Bolls, or 1.666 Chald^s.
Then 28428 = 17062 nearly

[72]

and 17064 = $656\frac{8}{26}$ or 657
26 P. Fortn^t.
This will be 328 ½ xx. P. Shift
for two Pits, and supposing
them to work 10 Days P. Fort^t.
xx. c
will be 32..10 P. day for each
A Hewer will do the work
as the gain by working the
Pillars may be fairly ^<set> against
Sickness &c.
In this case we shall
have the full establishment
of one Shift to part with
that is a Bankman
Brakeman
Engineman
Overman
3 Deputies

[Bud-40]

[73]

6 underg^d. Horses
1 Sledge Ditto
3 Waggon Ditto.
Have at present – – – – – 80
Want for the ensug. Yrs – 54
To Spare – – 26
Jany. 21st. 1811
Numbers bound
Hewers – – – – – 60
Headsmen – – – – – 22
Foles – – – – – 11
Halfmarrows – – – – – 10
Waggon Drivers – – – – 24
Overmen, Deputies – – }
Wastemen and Shifters } 29
Horsekeepers, Bank^r. }
&c. &c. – – – – – }

[74]

1810
27956 Sold for – £26479..10..[4]
Or P. Chald^r. 18/ 11¼
Cost 16/ 7 P. Ch.
March 12th. 1811 –
Length of Charlotte Pit Inclined
Plain &c. –
From Centre of Rope wheel } yards
to Head of Plain – – – – – } 68½
– Ditto to Foot – – – – – 785
– Tuesday 26th. Mar. 1811 –
M. Dunn lined the Edward
Pit. M^r. Fenwick down
the Edw^d. Pit Solicited him
for leave to thin the N.E.
Barrier which is reserved in
the Lease to be 60 yards thick

[75]

– May 21 : 1811 –

N^o. 10. ~~Workings~~ Vend up to the end
of this Pay – Ch.

Adairs-main – 5112

Oversea – – – – 257

Glasshouse – 1975

Small – – – – – 838

Land Sale – – 1485..12

Total – 29,667..12

Charlotte Pit 350 – £162..11.. 1 = 9/ 3¼

Edward – d^o. 300 – 132..17..10 = 8/ 10¼

July 30th. 1811

Adairs-main – 8,238

Oversea – – – – 401

Glasshouse – 2567

Small – – – – – 1103

Land Sale – – 1847

Total – 14,156

58 P. Cent Adairs Sea Vend

42 P. Ditto Glasshouse &c.

21 P. Ditto Oversea & Glasshouse

[Bud-40]

[76]

Small nearly 8 P. Cent.

Scores drawn by Charlotte Pit

Ropes xx. Cw q lb

S^o. Rope – 973 – 5 .. 1 ..20

N^o. d^o. – – 842 – 6 .. 1 .. –

1815 11 .. 2 ..20

Cw q lb

11 .. 2 ..20 – @ 104/- £60..14..7

= 8^d. P. xx.

Aug^t. 13 : 1811

The thickness of the Barrier
adjoining Fenham and Kenton

as reserved by the Lease is

60 yards – The Length of

this Barrier is 11100 Links

and supposing Leve could be

obtained to work 225 Lin. Off

it which would reduce it to

about 10 yards, would give

an addition of 25 Acres nearly

[77]

Supposing this part of the Barrier
to be wro^t. with 12 yard Win^s.

4 B^{ds}. 8 Wall) the proportion

of the Seam to be obtained will

be 0.6178

The Seam is 3¹/₉ feet thick
and Contains 1793 Ch. P. acre

0.6178 of which is about 1100 Ch.

to be wro^t. – And 25 Acres

1100

To be obtained out 27500 Ch.
of Barrier

= 1500 Tens.

N^o. 18. Sep^t. 10th. 1811 – Vend up
to the end of this Pay – viz

Adairs-main – 10,927

Oversea – – – – 497

Glasshouse – 2,921

Small – – – – – 1270

Land Sale – – 2051..20

Total – 17,666..20