

Quarrying Black Marble at Ashford – Supplementary Information

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The following information, comprising catalogues of features identified during survey at Rookery Mine and Arrock Mine, and plans to identify their locations, are provided on the PDMHS website to supplement the paper ‘Quarrying Black Marble at Ashford’ published in Mining History 20.3, pp. 13-45. Anyone wanting copies of any of the figures or plates used in the publication should contact John Barnatt via email at john.barnatt@btinternet.com.

Rookery Mine – Catalogue of Features

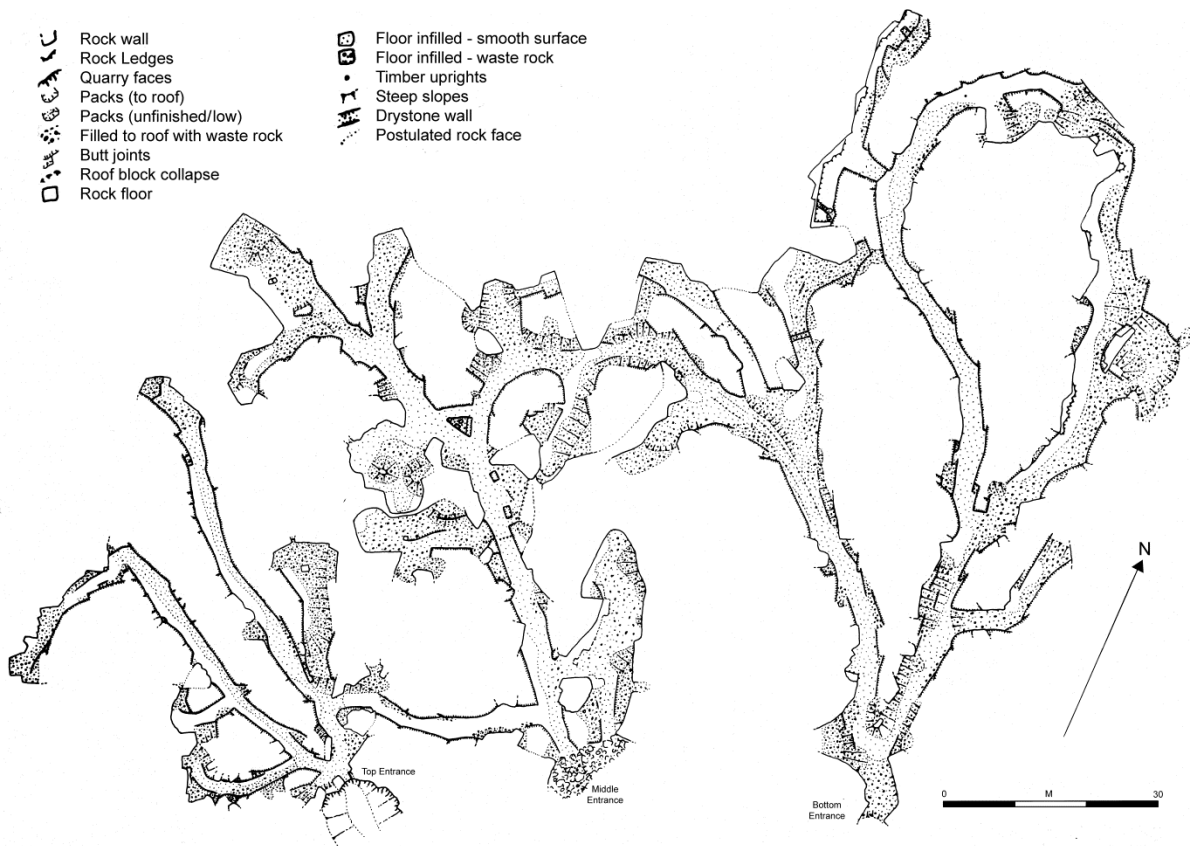


Figure 1: The Rookery Mine passages

1. Floor Wear

A long length of this bedrock roadway floor intermittently has slight multiple striations in a band up to c.30cm wide running parallel to the passage side. These can be interpreted as possibly being wear from a sled for moving cut stone blocks, created by the updip sled runner, with the other running on the clay/gravel floor on the downdip side of the passage.



Figure 2: The Rookery Mine features – western and central passages

2. Wedge Slot

One bed in the upper part of the face has a vertical crack, with pick of chisel marks to the sides where a small wedge slot has been cut.

3. Floor

In contrast with Feature 1 two passages running up dip at right angles to the main roadway have smooth rock floors with no striations.

4. Drill Hole

One small stone high in the packing material at the passage side has a drill hole scar, with only about a third of the circumference present; with a rough diameter of c. 25mm diameter (certainly 22mm+).

5. Undercut

A fine example of a stone working undercut; the last area of working on this part of the face, abandoned before extraction was completed. The bottom two beds have been worked, with one large rectangular block from the upper of these two beds left on the floor. The beds in the top half of the face had not yet been touched at the time extraction stopped.

6. Drill Hole

Drill hole stub in face near corner, driven in direction of entrances; c. 25mm diameter.

7. Drill Hole

A short butt end of a small drill hole, driven straight into a rock; diameter 20-23mm.

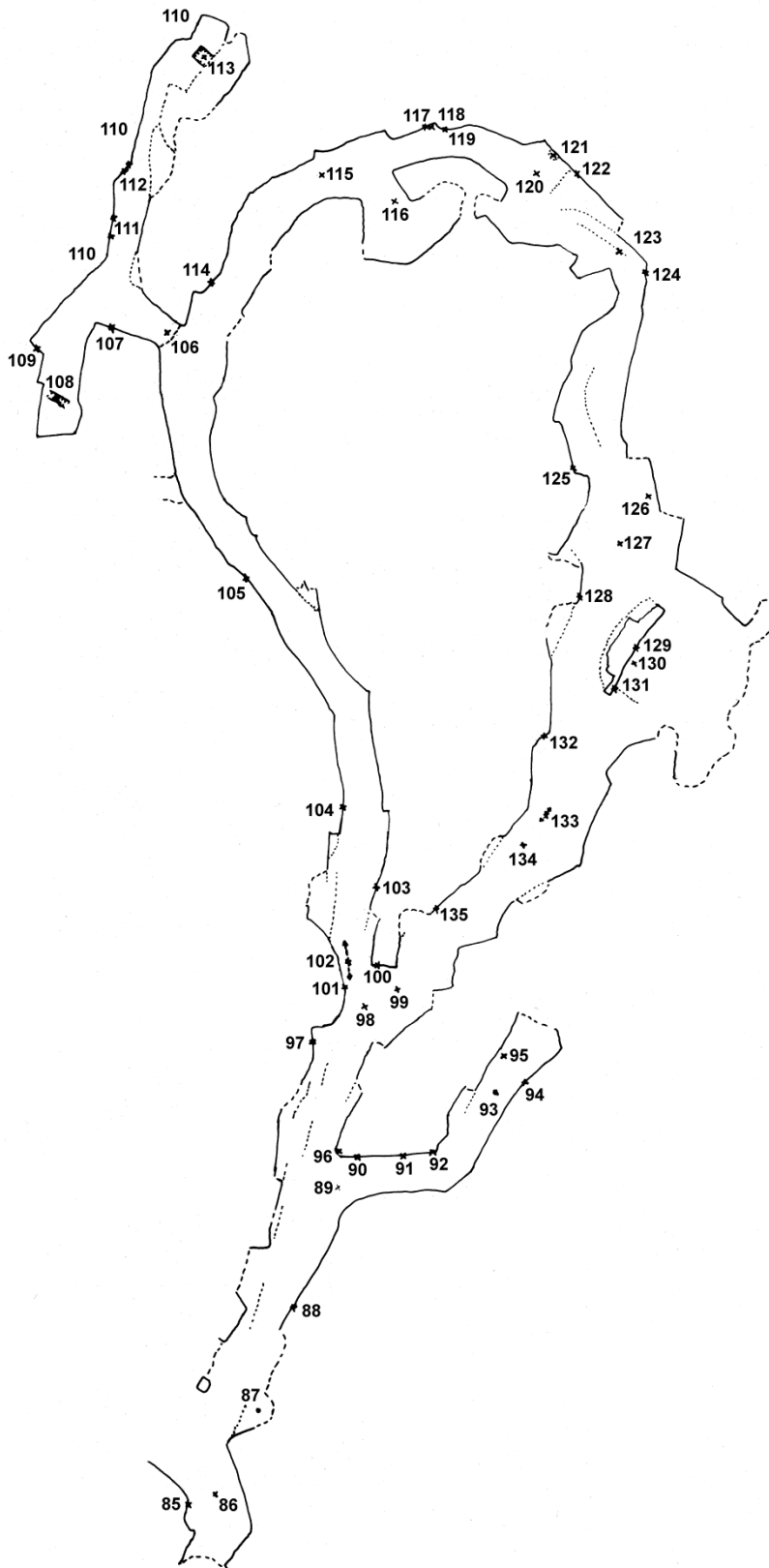


Figure 3: The Rookery Mine features – eastern passages

8. Floor Wear

A short length of this bedrock roadway floor has slight multiple striations in a narrow band running parallel to the passage side. These can be interpreted as possibly being wear from a sled for moving cut stone blocks, created by the up-dip sled runner, with the other running on the clay/gravel floor on the down-dip side of the passage.

9. Drill Holes

Near the floor a large block in the pack wall has two drill holes spaced along its length in what is now its upper side. These are both triangular in cross-section, about 25-23mm diameter, and 110mm long. They almost certainly were for plug and feather splitting.

10. Stone Pillar

This wide passage has a pillar of bedrock is small in its lower half but above it widens to twice the size, thus increasing the support to the roof.

11. Floor

As feature 3.

12. Graffiti

Crudely carved 'R' on a block in the wall pack – may well be modern.

13. Passage Stratigraphy

The steep floor slope and pile of material here shows the gallery to the down-slope was out of use when the roadway to further reaches was still in use.

14. Drill Hole

Short drill hole in the face, of c. 25-30mm diameter; probably for plug and feather work.

15. Pickwork

A short length of short/slight pick scars at the top corner of a bed in the face, presumably done to split block off.

16. Drill Hole

Short drill hole in a large block at the base of a wall of deads, of c. 25mm diameter, hand drilled and triangular in cross-section; probably for plug and feather work.

17. Wedge Slot

Near the roof is a horizontal wedge slot at the top bed to be removed.

18. Ledge

This vertical ledge across the passage floor is up to 0.15m deep – blocks on sleds could easily pass out to entrance, and light empty sled could be 'lifted' on the way back in.

19. Drill Holes

Two short sections of drill holes in blocks in a wall of deads, both of c. 25mm diameter.

20. Vertical Timber Roof Support

A rotten timber prop, resting on a block which is part of the basal course of an unfinished pack, rising to passage roof. Probably an unmodified tree trunk with an original diameter of c. 0.2m.

21. Deads

The deads in this small opening have a vertical face and have been placed here from the other side in an area now fully backfilled, before the rock in the open gallery was removed to create the hole.

22. Drill Hole

Long drill hole in the face, of c. 25mm diameter and driven horizontally, probably for powder, with what appears to be a 'tension' crack.

23. Shothole

Long shothole of c. 20mm diameter, with stemming.

24. Shothole

Long shothole in face, driven diagonally downwards, of c. 20mm diameter, with stemming.

25. Drill Hole

Short section of a drill hole in a small block amongst deads on the floor, of c. 25mm diameter.

26. Artefacts

Two iron bucket handles and a galvanized hoop (now badly bent). One handle is a plain loop with a fastening loop at either end. The other handle is a loop with hanging U-shaped loop at the centre for hanging. There is a fastening loop at either end, with adjacent spur to keep the handle in place. Each loop has a metal ring with flat where it was fastened to the wooden bucket side. The hoop at least post-dates the mining.

27. Possible Drill Hole

Short possible drill hole in a floor bed at the face, driven downwards and of c. 30mm diameter; if real, probably for plug and feather work.

28. Undercut

A small undercut in the lower half of the extraction beds; the last working in this gallery. The beds in the top half of the face had not yet been touched at the time extraction stopped.

29. Deads

The deads in this small opening have a vertical face and have been placed here from the other side in an area now fully backfilled, before the rock in the open gallery was removed to create the hole.

30. Extraction Damage

This part of the face has extensive damage of the top parts of a bed half way up the face, as if bars or other tools have been driven in to the shale parting to start an undercut, then the bed removed as a horizontal slot, damaging the furthest extent of this undercut. Beds below would be easier to remove and once the undercut was complete then the upper beds would be dropped.

31. Wedge Slots

Two well-shaped small wedge slots running horizontally in a bedding plane with shale parting, in upper part of face.

32. Drill Hole

Long drill hole in a block in the wall pack, of *c.* 23mm diameter. Given the proximity of Feature 34 may be for powder.

33. Drill Hole

Drill hole in a block in the wall pack, of *c.* 23mm diameter. Given the proximity of Feature 34 may be for powder.

34. Shotholes

Two shotholes in the top half of the face, both driven outwards and diagonally downwards, both *c.* 23mm diameter and one with stemming, with a short powder charge that was only *c.* 100mm long.

35. Extraction Damage

This part of the face has extensive damage of the top parts of a bed half way up the face, as if bars or other tools have been driven in to the shale parting to start an undercut, then the bed removed as a horizontal slot, damaging the furthest extent of this undercut. Beds below would be easier to remove and once the undercut was complete then the upper beds would be dropped.

36. Possible Loading Platform

A stone made ledge with one face, about 0.3m high, is either made in preparation for building a pack, or it is a crude loading bay for putting blocks on sleds.

37. Drill Hole

A large block on the floor has a short drill hole of *c.* 30mm diameter; probably for plug and feather work.

38. Deads

The pile of deads here must have been brought updip and placed against the face once this had been abandoned.

39. Stone Pillar

A roof-support pillar of stone blocks from floor to roof.

40. Deads

The pile of deads here is the last working dump made in this area of the mine, placed here by face workers but never removed into a pack.

41. Pack Robbing

The pack here looks to have had its face robbed.

42. Deads

This pile of deads has been placed here after the pack at 41 had been altered.

43. Deads

The deads in this small opening have a vertical face and may have been placed here from the other side in an area now fully backfilled. Alternatively, it may have had its face robbed.

44. Clay-Rich Deads

These deads have a significant amount of clay mixed with the stone – this may be explained by then having been robbed from elsewhere and including material that had once been on a passage floor.

45. Face Inspection Passage

This narrow passage has been left to allow ongoing face inspection.

46. Clay-Rich Deads

These deads have a significant amount of clay mixed with the stone – this may be explained by then having been robbed from elsewhere and including material that had once been on a passage floor.

47. Pack Robbing

This long stretch of roadway-side pack appears to have had its face pulled down.

48. Graffiti

A part legible inscription in chalk reading:

..... Ro.....
.....
1904

49. Clay-Rich Deads

These deads have a significant amount of clay mixed with the stone – this may be explained by then having been robbed from elsewhere and including material that had once been on a passage floor.

50. Clay-Rich Deads

These deads have a significant amount of clay mixed with the stone – this may be explained by then having been robbed from elsewhere and including material that had once been on a passage floor.

51. Wedge Slots

At the base of the top two beds, which have not been fully removed, there are the upper halves of 4-5 crudely-picked wedge slots placed at regular intervals along the bedding plane.

52. Drill Hole

Short drill hole in the face, of c. 25mm diameter, hand drilled diagonally downwards; clean and no sign of stemming - probably for plug and feather work.

53. Deads

The deads in this opening have a vertical face and have been placed here from the other side in an area now fully backfilled, before the rock in the open gallery was removed to create the hole.

54. Graffiti

An inscription in chalk on the face reading:

H Roberts
was here
April 2
1904

55. Floor Wear

A small patch of exposed bedrock roadway floor has well-defined multiple striations running parallel to the passage side. These can be interpreted as possibly being wear from a sled for moving cut stone blocks, created by sled runners.

56. Pack Robbing

This long stretch of roadway-side pack appears to have had its face pulled down.

57. Drill Hole

Short section of drill hole in a small rock in a pile of deads, of *c.* 20mm diameter and hand-drilled.

58. Drill Hole

Drill hole in face, drilled horizontally, of *c.* 20mm diameter, hand drilled; remaining 140mm section shows no clear sign of powder blasting.

59. Wedge Slot

A poorly defined wedge slot in clay at base of third bed down the face.

60. Floor Bed Blocks

Work on the basal bed in the face has been abandoned, as seen elsewhere, but in this case leaving five blocks nearby. Was this bed of a poor quality stone and moved out of way, or only extracted for used in packs, to form large block construction at their base?

61. Sled Route Wear and Embanked Floor

A clearly defined sled route, with slight wear hollow for two sled grooves and foot traffic between. Width *c.* 1m for sleds of *c.* 0.75m. In addition, the downslope side through chamber is embanked to create the haulage route with sloping side up to *c.* 0.3m high, similarly, on the other side near the bottom end there is a routeway edge that is *c.* 0.1m high. The sled route is on a floor which was in use at a time when the passages to the side were not, as shown by its embanked floor.

62. Drill Hole

200mm long section of drill hole in a small stone in wall pack, of *c.* 20mm diameter, hand drilled and triangular in cross-section; no clear sign of powder blasting.

63. Graffiti

A partially-legible inscription in chalk on a large block in base of wall pack, reading:

.....
April 2
1904

64. Artefact

A bent bucket handle made of round-sectioned wire.

65. Artefact

9+ sherds, some large, of an earthenware puncheon with bulbous bead rim and plain tapered sides and flat base. The outer face is plain and has an unglazed red-brown colour, while the interior has a glossy black glaze. Coating this is what appears to be a thin layer of white limewash.

66. Charcoal

A small heap of charcoal, with relatively large lumps, on the passage floor to the side.

67. Artefact

Two small pieces of a cast-iron pot, with plain tapering side and a plain bulbous rim.

68. Floor

The passage here has a smooth ridge across the passage formed by an undulation in the bedding; the clean rock floor has no evidence of wear grooves,

69. Drill Hole

Short drill hole in face, driven horizontally in third bed down, of *c.* 25mm diameter, hand drilled and triangular in cross-section; , 120mm long and no clear sign of use of powder.

70. Undercut

The face here over a long stretch has had the top two beds left in place with undercut beneath. This face here also has floor beds partially in place and it may have been abandoned because the number of good quality stone was reducing (to 2-4?)

71. Drill Hole

Beginning of aborted drill hole in face (or a drill bit testing), no more than 10mm long, of *c.* 30mm diameter, hand drilled with borer scars at end.

72. Floor

This area of clean rock floor has no evidence of wear grooves.

73. Artefacts

Two small iron wedges placed on a ledge at the face. Both have a used, spread, hammering end and taper to the other end. One is 100mm long and 40mm broad and 30mm wide at the hammering end. The other is 115mm long and 35mm broad and 20mm wide at the hammering end.

74. Drill Hole

Short drill hole in face over half way down, driven vertically downwards, of *c.* 30mm diameter and *c.* 150mm long, hand drilled and triangular in cross-section; probably for plug and feather work.

75. Wall

A wall across the passage, now breached to one half, but with piles of rubble to either side strongly suggesting the wall once completely sealed the passage but has subsequently been knocked through to re-explore what lay behind. Why the wall was built is unclear –

ventilation control or ownership division seem unlikely, thus it may be that it was designed to hide the face to the north.

76. Drill Holes

Two short drill holes in face, driven vertically downwards, of *c.* 25mm and 20mm+ diameter, hand drilled and triangular in cross-section; probably for plug and feather work.

77. Deads

A pile of deads which is the last heap made when the face was being worked to the west, which had not been removed for pack building at the time when this face was abandoned.

78. Shothole

Shothole in the face, driven horizontally, of *c.* 20mm diameter and *c.* 260mm full length. With stemming and a tension crack, with a powder charge that was *c.* 140mm long.

79. Shothole

Shothole in the face, driven horizontally, of *c.* 20mm diameter and *c.* 210mm+ length. With stemming and a powder charge that was *c.* 110mm long.

80. Sled Route Wear

A slight hollow/rock-clear area may indicate a second sled route branching from 61, but with the latest use at 6 coning later and overlying the end of 80.

81. Drill Hole

Drill hole in face near floor, driven near-vertically downwards, of *c.* 20mm diameter and 165mm long, hand drilled and triangular in cross-section; no clear sign of powder work.

82. Rope Marks

Three small ledges at the face, in lower part of passage, have multiple rope impressions in clay. These are not from winch haulage under tension as they miss-align with each other, but are from a loose rope being dragged.

83. Graffiti

Part-legible chalk graffiti on flat areas of face. Three inscriptions:

H Robert
was here
April 2 1904

. STRO.A
was here April
2 1904

.....W
was here
April 2
1904

84. Face Damage

Half way up the face one bed is badly bashed as if damaged when an undercut was created.

85. Drill Holes

Three short drill holes in face, all on same bed low in face and driven vertically downwards, of *c.* 30mm diameter and 80mm deep, hand drilled and triangular in cross-section; probably for plug and feather work.

86. Artefacts

A small number of artefacts have been recently collected and placed on a stone; these are presumably from the passage backfill nearby which blocks the lower entrance. Objects include a boot sole with iron studs, a broken Keiller-type marmalade jar, and part of a broken cast-iron cooking pot.

87. Vertical Timber Roof Support

The top end of a vertically placed timber roof support protruding from deads that largely block the backfilled passage here. The timber has rotted and no longer reaches the roof; originally it had a round cross-section and was *c.* 150mm in diameter.

88. Shothole

Shothole in a wall-pack block, of *c.* 25mm diameter, with stemming.

89. Passage Stratigraphy

The floor here shows a flat sledway route coming from the updip passage to the north, which was in use after the way to the downdip passage to the north-east, where the floor drops away more steeply and is stony/irregular.

90. Shothole

Shothole in a wall-pack block, of *c.* 20mm diameter and *c.* 120mm+ long, with stemming.

91. Drill Hole

Stub end of drill hole half way up the face, of *c.* 25mm diameter; no clear sign of powder blasting.

92. Drill Hole

Short drill hole in face over half way down, driven vertically downwards, of *c.* 30mm diameter and *c.* 180mm long, hand drilled and triangular in cross-section; probably for plug and feather work.

93. Floor Wear

A short length of visible bedrock on the roadway floor has slight multiple striations in a band running parallel to the passage side. These can be interpreted as possibly being wear from a sled for moving cut stone blocks, created by the updip sled runner, with the other running on the clay/gravel floor on the downdip side of the passage.

94. Shotholes

Three shotholes in small wall-pack blocks, of *c.* 20mm diameter and *c.* 100-120mm+ long, two with stemming.

95. Heap of Coal

A small heap of partially burnt coal on the floor by the passage side, placed here whilst hot and burning clay on the floor, butted against a stone of the passage-end backfill. Perhaps from a brazier used for boiling water or keeping warm.

96. Artefact

On a ledge is a broken tip of a very small iron wedge, which is 45mm long by 15mmx10mm,

97. Drill Hole

160mm long section of drill hole in upper half of face, driven diagonally downwards, of *c.* 25mm diameter, hand drilled and triangular in cross-section; no clear sign of powder blasting.

98. Embanked Floor

The floor here shows a flat sledway route, with embanked downdip side, coming from the updip passage to the north, which was in use after the way to the downdip passage to the north-east, where the floor drops away more steeply and is stony/irregular.

99. Artefact

A single large rimsherd on the passage floor from an earthenware puncheon with bulbous bead rim and plain tapered sides and flat base. The outer face is plain and has an unglazed red-brown colour, while the interior has a glossy dark-brown glaze. Coating this is what appears to be a thin layer of white limewash. Similar in character to the vessel at 65 and possibly the same pot.

100. Drill Hole

260mm long section of drill hole in a stone in wall pack, of *c.* 20mm+ diameter, hand drilled and triangular in cross-section; no clear sign of powder blasting.

101. Artefacts

Two body sherds from the same vessel as 99, on the passage floor against the wall.

102. Sled Route Wear

A clearly defined sled route wear hollow made by one side of a sled, which is *c.* 100-150mm wide and *c.* 30mm deep.

103. Shothole

One of the wall pack stones has a shothole scar on one corner, of unknown diameter, with traces of stemming.

104. Drill Hole

The face here has drill hole driven horizontally, which has a diameter of *c.* 25mm.

105. Graffiti

At one small area of wall pack, various stone have a repeat of the same inscription in chalk:

C. Furniss 1894

Both the name and date are repeated four times, and there is an adjacent inscription with three smeared illegible names and 1894.

106. Loading Platform

The entrance to the face passage here has a low 'platform' made of blocks, presumably for loadings blocks onto sleds, with a face on the main passage side that is c. 0.25m high.

107. Graffiti

One of the wall pack blocks has chalk graffiti that reads, with uncertainly transcribed information in red:

..SO..
April 14
1909

108. Wall

A crude drystone wall between the lower face and two moved large blocks, with faced sides, up to c. 0.6m high.

109. Graffiti

This example in chalk on the uppermost two beds of the face reads, with uncertainly transcribed information in red:

Boys be men & fight
for your flag freedom
& king & queen
God save the king

Many of these (are past)
grow some (a..ng) now midst
misery & woes None thought
as boys as had (lives)
would (not)
men (be)

Nearby there is:

Walter
Pursglove
April 2 1904

R Wilson

G Hallows
Old Cock

HR

1904 HR

G. Garratt
1931

G Garratt
G. Garratt

G Garrat
1950 Born 19/3/

110. Graffiti

Much of the face in this side passage has graffiti of a variety of ages, from late-19th century to modern, mostly in chalk but some scratched into the rock. Uncertainly transcribed information is given in red.

Of those that pre-date the mid-20th century, mostly on the uppermost two beds, the following significant examples have been recorded, in approximate order from south to north:

H Roberts

J Hallows
Hawly

Hawley

W^m Green

In yellow chalk:

J Penney
1908

H Pheasy was here on
19th

J Fitzgeorge

William
Lees

Bob Lees
Lottie

In a small finely inscribed script:

John Pheasy
Was here on
January 12th
1894

R Wils
on

Gooseberry
S Clarke
March
1890
HS

Old Cock
M Bar**mo**
 well

Harol.
 Hole

Bob Lees

G Whibb
 ..ly

Scratched into rock/clay:
Joseph Oldfield
was here on January 12th
the 12th 1894

R Wilson
coo... called called
Goosberry

In a small finely inscribed script:
John **Wilson**
John Doxey
Edward Sheldon (*with S reversed*)
George Whil.e.ley
Joseph **Olor...nll** (*with S reversed*)
F. William **S....**
December 9th 1879

R. Fitzgeorge
takes fiches
Donkeys Breath

J Fitzgeorge

1873
R Fitzgeorge
Nov^r 27th

R Lowe
1907 C Furniss

H Sheldon
1877

W^{ll} Wildgoose 1872

R Fitzgeorge

J H...

J Bonsall

Bob Lees

1872

1873

R. Fitzgeorge

G. Hallows Bob

R. Wilson Lees

Roader as got the pox

Edward

Wibberley

Walter Pursglove

Goosebe...

G Hallows

Old Cock

John Lee.

Sam

Hayward

In the third to fifth beds at the mid-section of the face, in approximate order from south to north, there are:

In isolation:

Donald

Frankl

1930

Then after a gap (in a smeared script which appears to read):

T. Hawley

Then after another gap:

TH

Lee

John

Lees

John Lees

John L

John Lees

William Green
T Hawley

H Kitson

CH

G Hallows

Bob Lees
W **Himi**

T Hawlie
W **Kine**

1881

. Kine
March **1890**
1890

W. **Kine**

T Hawley

J Fitzgeorge
Adam
Smith

R Fitzgeorge

H Sheldon

W Wilson
H Whibber**ley**

E Oldfield

J Sheldon
Joseph Lees
T Hawley

Fitzgeorge
th..gh
would like
to fuck over
Smith tell her
send water out
of her cunt

Pot Ash
H. Moore

William
Fitzgeorge
fuck marther
to

At the northern end of the passages there is also chalk graffiti on waste-blocks to the east side, mostly undated names or initials, but including, in an upside position and clearly moved:

John Wilson
July 19
1887

Also:

W. Kime

Upside down -
W Kime
1890

111. Drill Holes

Two drill holes in half way up the face, one driven horizontally and the other slightly diagonally downwards, *c.* 190 and 135mm long and of *c.* 25-27mm diameter, hand drilled and triangular in cross-section; no clear sign of powder blasting.

112. Drill Holes

Two drill holes in half way up the face, one driven near-horizontally and the other near vertically downwards, *c.* 250 and 220mm long and of 32mm and 27mm diameter, hand drilled and triangular in cross-section; no clear sign of powder blasting.

113. Wall

A crude drystone wall or pack, with faced sides and doorway gap at rock-face end, up to *c.* 1.3m high.

114. Graffiti

On the face there is a partially legible inscription in chalk which reads:

W Wilk.....
March 15th
1894

115. Floor Notch

The sloping rock floor has a prominent notch cut with pick or chisel, with tooling scars throughout, which measures *c.* 140mm across and is *c.* 50mm deep. The character of the feature and its position near the top of the slop suggests it was for a spragged timber used to support a block and tackle or pulley used for moving stone-haulage sleds.

116. Shothole

Shothole in a block amongst deads, of *c.* 22mm diameter and *c.* 150mm+ long, with stemming.

117. Shothole

Shothole fragment in a deads- block, of *c.* 20mm diameter with white crushed-calcite stemming.

118. Artefact

On the floor against the wall is a large sherd from an earthenware pantile with lug, with two more sherds a short distance down dip and again against the wall.

119. Drill Hole

160mm long section of drill hole in a stone in wall pack, of *c.* 25mm diameter, hand drilled and triangular in cross-section; no clear sign of powder blasting.

120. Stone Bank

The passage here has a low bank of deads placed across it, as if it was to be blocked at this point, signifying it was disused and/or perhaps a boundary between work gang areas.

121. Stone Pillar

Against the face there is a vertical sided pillar of several placed blocks, one per course, set against the rock face, perhaps because of worry over the roof stability here as the face is at a joint. Alternatively it could mark a division between working areas (see last entry).

122. Drill Hole

Short drill hole in face near floor, driven vertically downwards, of *c.* 25mm diameter and *c.* 120mm long, hand drilled and triangular in cross-section; probably for plug and feather work.

123. Drill Hole

240mm long section of drill hole in a stone in wall pack, of *c.* 20-25mm diameter, hand drilled and triangular in cross-section; no clear sign of powder blasting.

124. Shothole

Shothole in a wall-pack block, of *c.* 25mm diameter and *c.* 140mm+ long, with stemming.

125. Drill Hole

Drill hole stub in face, driven diagonally downwards, of *c.* 25mm diameter; no clear sign of powder blasting.

126. Drill Hole

Short drill hole in block in deads, of *c.* 25mm diameter and *c.* 120mm long, hand drilled and triangular in cross-section; probably for plug and feather work.

127. Bed Discard

Much of the face along this roadway has not had all the bottom bed removed; some blocks that have been prized off have been rolled to the other side of the roadway and discarded, suggesting the stone was inferior quality.

128. Drill Holes

Two short drill holes same block in passage wall pack, of *c.* 25mm and 28mm diameter, hand drilled and triangular in cross-section; probably for plug and feather work.

129. Shothole

Shothole in face, driven diagonally downwards, of *c.* 25mm diameter and *c.* 90mm+ long.

130. Shotholes

Shothole in a deads- block, of *c.* 20mm diameter and *c.* 170mm+ long, with white crushed-calcite stemming. There is the *c.* 20mm diameter stub of another in another block nearby.

131. Drill Hole

Drill hole stub in face, driven diagonally downwards, of *c.* 20mm diameter, hand drilled and triangular in cross-section; no clear sign of powder blasting.

132. Wedge Slots

A protruding corner of a bed in the face, just above the bottom bed, had two horizontal wedge slots, created where wedges have been hammered into a shale parting, one to either side of the corner; this failed to remove the stone. Each wedge was *c.* 30mm wide.

133. Possible Floor Wear

Visible bedrock on the roadway floor has short groove, up to *c.* 10mm deep, either fortuitous or can be interpreted as possibly being wear from a sled for moving cut stone blocks, created by the updip sled runner.

134. Possible Floor Notch

The slightly sloping rock floor has a slight notch which measures *c.* 80mm across and is *c.* 10mm deep. It may have been for a spragged timber but is more likely to be fortuitous.

135. Shothole

Shothole in a wall-pack block, of *c.* 20mm diameter and *c.* 280mm+ long, with stemming.

Arrock Mine – Catalogue of Features

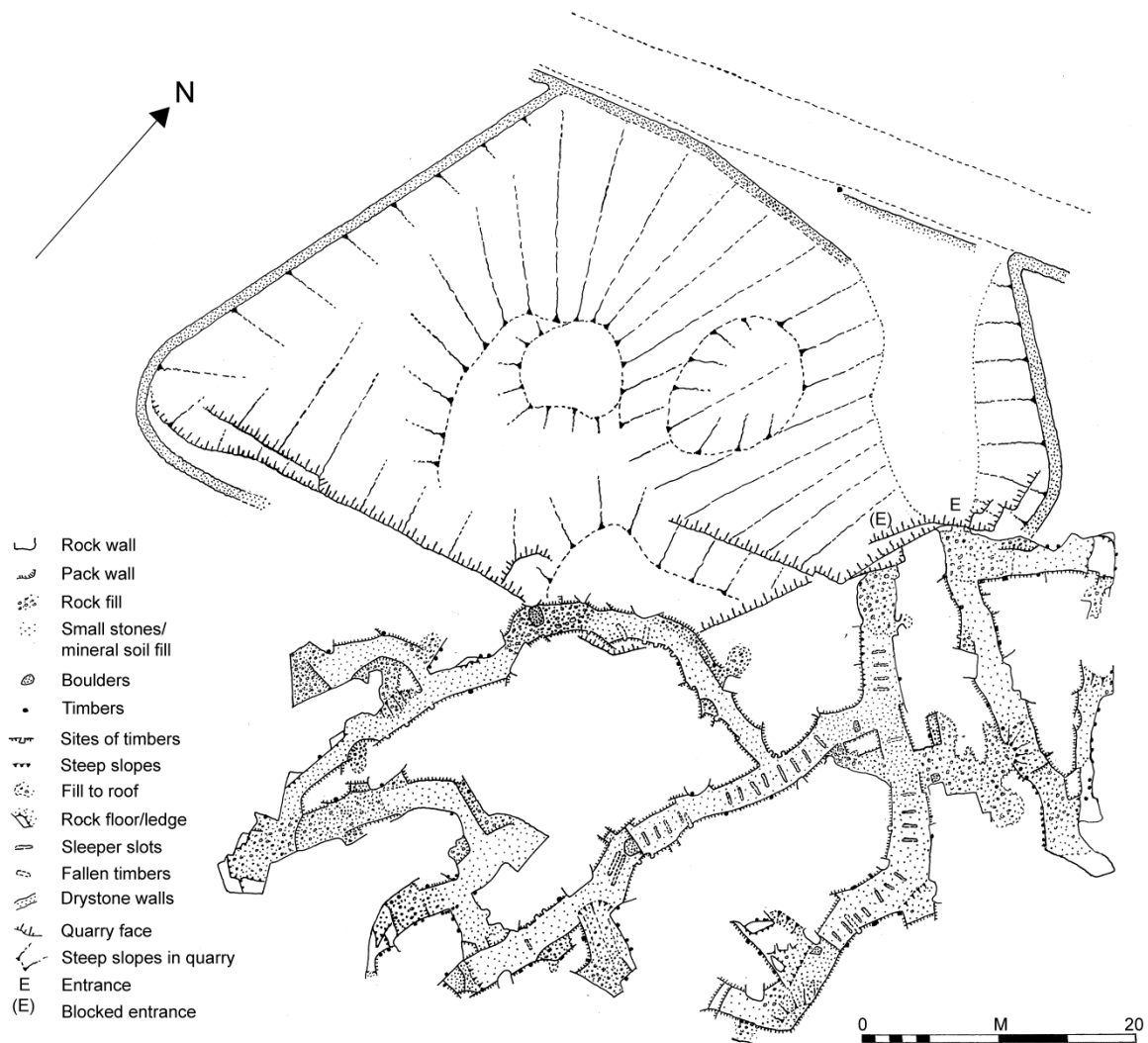


Figure 4: The Arrock Mine passages

1. Backfill

The slope inside the entrance is backfill introduced from outside when the quarry floor was partially covered.

2. Vertical Timber Roof Support

Rectangular sleeper – set in wall from 0.5m above floor to roof.

3. Horizontal Timber Roof Support

Circular – one end rotted and not reaching other side wall – now sawn off as health and safety measure.

4. Vertical Timber Roof Support

Rectangular sleeper – set in wall from 0.5m above floor to roof.

5. Unfinished Pack

Pack against bedrock wall – up to shoulder height.

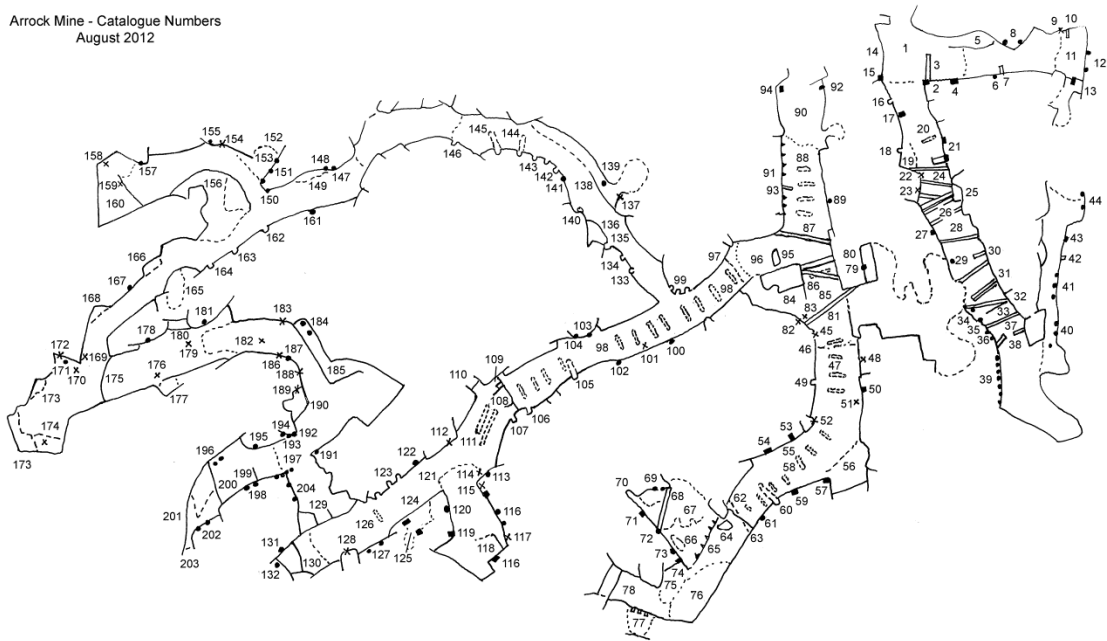


Figure 5: The Arrock Mine features

6. Vertical Timber Roof Support

Circular – set in wall from half way up wall to roof.

7. Horizontal Timber Roof Support

Thick board – rectangular (300x90mm) – only 0.5m long – most gone.

8. Vertical Timber Roof Supports

Two split-sleepers – set on rock ledge at base of top beds to roof.

9. Drill Holes

A small area of rock passage wall where there is no rock joint but the rock has been removed. Here there are three drill holes, all drilled downwards from shoulder height to floor, triangular and 40mm diameter, only up to 170mm long, with no tension cracks, as if for plug and feather work.

10. Horizontal Timber Roof Support

Circular – rotted – only 0.6m long – most gone.

11. Unfinished Cut

Rock floor now approximately flush with backfilled floor of rest of passage. At the downdip wall of the passage the uncut rock rises to the base of the top beds but in part has had a pack placed here. Behind, the backfill of deads does not reach the roof leaving a roof void.

12. Vertical Timber Roof Support

Two split-sleepers – set on rock ledge at base of top beds to roof.

13. Vertical Timber Roof Support

Rectangular sleepers – set on rock ledge at base of top beds to roof.

14. Drill Holes

The first stretch of rock passage wall has three drill holes, all drilled diagonally downwards in the down-dip direction, all in mid-height section of passage, triangular and 40mm diameter. There are no tension cracks and it is unclear if these were for powder or plug and feather work.

15. Vertical Timber Roof Support

Split-sleeper set in wall in top part of passage to roof.

16. Vertical Timber Roof Support (Site of)

Circular – set in wall from floor to roof – now mostly gone with rotted fragment remaining.

17. Vertical Timber Roof Support

Split-sleeper set outside wall face from floor to roof. With two downward-pointing right-angled iron hinge pins, with the timber reused upside down.

18. Vertical Timber Roof Support (Site of)

Slot in pack wall, from floor to roof, for now-missing timber of uncertain cross-section shape.

19. Unfinished Pack

Small pack in corner between bedrock wall and a finished pack to roof – up to chest height against bedrock wall.

20. Vertical and Horizontal Timber Roof Supports

Rectangular sleeper, set in wall, from floor to roof. Gap at roof for horizontal roof support, part of which remains on the floor nearby.

21. Vertical and Horizontal Timber Roof Supports

Rectangular sleeper, set in wall, from floor to roof. Horizontal rectangular sleeper at top, only a short part of which remains.

22. Drill Hole

The corner of the rock passage wall has one drill hole, drilled diagonally downwards in the down-dip direction, but not far off horizontal, in the mid-height section of passage, triangular and 30mm diameter. There are no tension cracks and it is unclear if these were for powder or plug and feather work.

23. Drill Hole, Iron Bar and Iron Feather or Shim

The face of the rock passage wall has one drill hole, drilled straight inwards, in the upper part of passage, and 30mm diameter. This is filled with a broken 'iron' bar, now flush with face. On a small ledge below is a broken piece from a thin feather or shim.

24. Horizontal Timber Roof Supports

Three circular cross-sectioned roof timbers running across passage from rock wall to wall pack.

25. Unfinished Pack

Small pack in a corner at bedrock wall – a small area is up roof height.

26. Horizontal Timber Roof Supports

Three rectangular sleepers running across passage from rock wall to wall pack, two placed close together.

27. Vertical Timber Roof Support

Split sleeper – set in wall from half way up wall to roof.

28. Horizontal Timber Roof Support

Circular cross-sectioned roof timber running across passage from wall pack to wall pack, with three chock timbers above.

29. Vertical Timber Roof Support

Circular cross-sectioned timber set outside wall face from floor to roof, with chock timber at roof.

30. Horizontal Timber Roof Supports

Two rectangular sleepers running across passage from pack wall to collapsed pack wall. One now slipped downwards at the collapse end, the other sawn off as a health and safety measure.

31. Horizontal Timber Roof Support

Two rectangular sleepers, on their sides and bolted together, running across passage from pack wall to collapsed pack wall but now hanging in air.

32. Horizontal Timber Roof Support

A rectangular sleeper, on its side, running across passage from pack wall to pack wall.

33. Unfinished Blocking Pack

A crude drystone wall runs across the passage leaving a gap of about 1.10m to the roof. Behind it is rubble running down dip for some distance and the whole is unfinished passage blocking with material from later working up dip. In front of the wall, and partially burying it, is rubble from the collapsed passage wall pack.

34. Vertical Timber Roof Support

Split sleeper – set in front of wall from floor (collapse surface) to roof.

35. Vertical Timber Roof Support

Rectangular sleeper – set in wall at a corner - from floor (collapse surface) to roof.

36. Vertical Timber Roof Supports

Two timbers – up dip a split sleeper, down dip circular – set in wall from floor (backfill surface) to roof.

37. Horizontal Timber Roof Support

A rectangular sleeper running across passage from wall pack to wall pack.

38. Horizontal Timber Roof Support

A plank, of c. 200x70mm section, running across passage from wall pack to wall pack, with chocking timbers above. The plank broken and central part gone, and one side twisted out of alignment.

39. Vertical Timber Roof Supports

Seven timbers – four circular, three split sleepers (from updip – 2nd, 5th, 6th) – set on rock ledge at base of top beds to roof (height c. 50cm).

40. Vertical Timber Roof Supports

Three timbers – all circular – set on rock ledge at base of top beds to roof (height c. 50-70cm).

41. Vertical Timber Roof Supports

Three timbers – all circular – set on rock ledge at base of top beds to roof (height c. 60-80cm).

42. Horizontal Timber Roof Support (Site of)

A small slot in the clay/shale rock just below the roof at the rock wall side, with traces of rotted horizontal timber. At the pack wall opposite has a ledge.

43. Vertical Timber Roof Support

Rectangular-sectioned plank (270x130mm) – set on rock ledge at base of top beds to roof (height c. 50cm).

44. Vertical Timber Roof Supports

Two rotted timbers – both circular – set on rock ledge at base of top beds to roof (height c. 50cm).

45. Horizontal Support Timber

A support timber placed horizontally in the passage wall under a large block to prevent in falling.

46. Vertical Face

A vertical rock wall in the roof, with a step down to the passage down dip of over 2m which marks the edge of an area where there has been a roof fall to a shale bed at the current roof.

47. Sleeper Slots

Four poorly defined sleeper slots for the tramway down the main incline.

48. Iron Strip

In a void in the wall pack is a thin iron strip, about 100mm long. Several similar examples have been found in the quarry and they appear to be 'offcuts' brought into the workings for reuse as feathers, shims or tightening wedges.

49. Vertical Timber Support (Site of)

Sub-circular cavity in the pack wall at the site of a vertical support that ran from below present floor level up to about 0.60m up the presently-visible passage side.

50. Vertical Timber Roof Support

Circular timber – set on rock ledge at base of top beds to roof (height c. 40cm), with a gap at the top for a now missing chock timber.

51. Sherd

A body-sherd of a vertical-sided stoneware bottle of 19th or early-20th century type.

52. Rope Wear and Iron Strip

On the sharp corner of the bedrock pillar there is a short stretch of rope wear, with 2-3 conjoined grooves at about chest height, one a little further down and one near the floor, where hauling ‘ropes’ have caught on the side; the height above the floor shows the ‘winch’ was some distance updip (perhaps outside).

On a ledge above is a thin ‘iron’ strip. Several similar examples have been found in the quarry and they appear to be ‘offcuts’ brought into the workings for reuse as feathers, shims or tightening wedges.

53. Vertical Timber Roof Support

Rectangular sleeper – set with short edge visible in a recess in the wall pack – from pack wall at 2.00m below roof to roof.

54. Vertical Timber Roof Support

Rectangular sleeper – set in a recess in the wall pack – from pack wall at 2.00m below roof to roof.

55. Drill Holes

The wall pack here has two short partially-complete drill holes visible on the wall blocks

56. Tramway Bed

A curved break of slope marks where the passage floor was raised when the tramway bed was taken around the corner.

57. Vertical Timber Roof Support

Rectangular sleeper – set at the pack corner on a rock ledge at the present floor level (height c. 1.80m).

58. Sleeper Slots

Seven sleeper slots for the tramway at the cross-cut level at the bottom of the main incline.

59. Vertical Timber Roof Support

Rectangular sleeper – set in a recess in the wall pack - floor to roof.

60. Vertical Timber Roof Support

Rectangular sleeper, now fallen, set in a recess in the wall pack – from present floor to roof.

61. Vertical Timber Roof Support

Split sleeper - set in a recess in the wall pack – from half way passage side, up 1.00m to roof.

62. Horizontal Timber Roof Support

A circular-sectioned timber running across passage from wall pack to wall pack. Now broken into three pieces, with only the stub on the updip side remaining in-situ. The other two pieces lie on the floor.

63. Loading Platform

A 0.40m high drystone wall runs across the passage and the area behind has been backfilled to form a raised, flat-topped, loading platform. This is the correct height for sliding stone slabs straight onto flat-bed tramway wagons. At the centre of the wall there is horizontal timber part-way up with a threaded bolt protruding vertically from near one end; there is a hole for a matching bolt at the other end; this may be the remains of a support for a buffer.

64. Stone Block

A single large block of limestone, brought from the unfinished cut as product ready for removal via the tramway.

65. Floor Removal

A vertical sided cut where the platform make up has been dug out to a depth of 0.40m, to re-expose the unfinished cut just described.

66. Stone Block

One of the unfinished blocks in the removed cut – detached from the rest and the next to be taken out. On one of the long sides there is a 50mm drill hole, which may have been made to take one side of a lifting ‘clamp’.

67. Unfinished Cut

This unfinished cut was probably worked in two phases. The first comprised taking the bulk of the stone down to below the loading platform height. To one side is the face slot (see below) indicating the removal of the rock to this side took place as part of planned pillar robbing, whereas the deads to the other side are earlier.

68. Horizontal Timber Roof Support

A rectangular-sectioned timber plank running across passage from rock wall to wall pack.

69. Vertical Timber Roof Supports

Four timbers – all probably split sleepers – set on rock ledge at base of top beds to roof (height c. 40-60cm). Three placed together under the horizontal roof timber.

70. Face Slot

The remaining end of a narrow slot between the back of the inbye pack and the removed ‘pillar’ at the unfinished cut. It seems likely that this slot was planned so that the pack supported the roof while the pillar was taken.

71. Vertical Timber Roof Support

Circular timber - set in a recess in the wall pack – from half way passage side, up 1.20m to roof.

72. Vertical Timber Roof Support

Circular timber - set in a recess in the wall pack – from half way passage side up to roof. Pack built from other side and timber now mostly buried in pack wall except a small visible section near its base.

73. Vertical Timber Roof Support

Split sleeper - set in a recess in the wall pack – from half way passage side, up 1.20m to roof.

74. Vertical Timber Roof Supports

Circular timber (but badly rotted) - set in a recess in the wall pack at its corner – from part-way passage side, up 1.50m to roof.

75. Deads

A small pile of deads of small-boulder size downwards, which are interpreted as the waste created when the unfinished cut started to be reworked in phase 2.

76. Waste Heap

This heap, which comes relatively close to the roof at the back, comprised a mixture of silty-clay and stones of various sizes. This is interpreted as the removed floor of the phase 1 unfinished cut nearby

77. Unfinished Pack

The wall pack here is not quite finished, presumably because of the lack of enough suitable material when it was being built. A short length near the roof, between 0.40m and 0.25m high, has a void going back at one point to what may be a face. At the line of the pack wall three small stone pillars between its top and the roof have been built to give some ‘temporary’ support.

78. Unfinished Blocking Pack

This distinctive pack blocks the main cross-level at its end, made as part of a retreat from this part of the workings. It is unfinished with a 0.50m void from its top to the roof. It is purposefully only narrow so that it can be carefully backfilled fully to the roof, rather than back parts being out of reach.

79. Vertical Timber Roof Support

Circular – set on pack top to roof (height c. 1.20m).

80. Unfinished Pack

Small narrow pack against a completed passage side, rising to about half passage height (but with some infill on adjacent floor).

81. Horizontal Timber Roof Support

A long circular-sectioned timber running across passage from rock wall to wall pack.

82. Drill Hole for Wall Pin

The rock wall has a horizontal drill hole at about 0.60m below the roof. A conjoined relieving hole shows that the main hole contained a heavy-duty iron pin which was purposefully removed. The pin was presumably for hauling or lifting.

83. Iron Strip

On the floor is a thin iron strip, about 280mm long. Several similar examples have been found in the quarry and they appear to be 'offcuts' brought into the workings for reuse as feathers, shims or tightening wedges.

84. Vertical Timber Roof Support (Site of) and Unfinished Pack

Roughly circular hole in floor infill, 0.70m deep, where there was a timber that has now rotted. This lies on the line of a pack wall which is only partially present low in the passage; the area behind has only been partially filled, with deads being introduced from the main incline side, but not reaching the roof even at the back.

85. Floor Infill

In this area the floor infill drops more steeply than elsewhere in the incline, suggesting the floor is riding over a thicker area of backfill/collapse. Modification may have included importation of material derived from the floor removal nearby to the updip side.

86. Possible Sleeper Slot

A possible poorly defined sleeper slot for the tramway down the main incline, in the floor infill here.

87. Horizontal Timber Roof Supports

Downdip there are two rectangular sleepers running across passage from wall pack to wall pack, one at a diagonal angle. Updip there is a long circular-sectioned timber running across passage from wall pack to wall pack.

88. Sleeper Slots

Four poorly defined sleeper slots for the tramway down the main incline.

89. Vertical Timber Roof Support

Split sleeper – set on rock ledge at base of top beds to roof (height c. 25cm).

90. Backfill and Unfinished Pack

The slope inside the entrance is backfill introduced from outside when the quarry floor was partially covered. To one side there is a largely buried small unfinished pack against the rock wall.

91. Vertical Timber Roof Support

Split sleeper – set in front of wall in upper half of passage from ledge to roof (height c. 0.80m).

92. Horizontal Timber Roof Support

At the pack wall top there is the stub of a rotted horizontal timber, with a slot in the opposite rock wall, for a roof timber that was set at a diagonal angle.

93. Floor Removal

The wall pack here sits on a cut face that is up to 0.50m high, showing that the floor backfill has been cut away, presumably when the tramway was placed down the passage. At the downdip end the cut floor ends abruptly at the pack butt joint; the downdip pack runs down to the present floor rather than sitting on a higher floor deposit.

94. Vertical Timber Roof Support

Rectangular sleeper – set in front of wall from floor (backfill surface) to roof.

95. Stone Block

A chunky placed stone block in the passage, put here after the tramway was last-used/taken up; why this was done is not clear.

96. Floor Infill

At the inner part of this area the floor infill drops more steeply than elsewhere in the cross-level, suggesting the importation of material derived from the floor removal nearby in the main incline around the corner to the updip side.

97. Vertical Face

A vertical rock wall in the roof, with a step down to the passage down dip of c. 2.10m which marks the edge of an area where there has been a roof fall to a shale bed at the current roof.

98. Sleeper Slots

Twelve sleeper slots, some poorly defined, for the tramway at the cross-cut level part-way down the main incline.

99. Vertical Timber Roof Supports (Sites of)

Three slots in pack wall, from floor to roof, for now-missing timbers of uncertain cross-section shape. The central one has a hole in the floor backfill which is 0.95m deep.

100. Vertical Timber Roof Support

Circular timber - set in a recess in the wall pack – from present floor to roof.

101. Latch Plate

A flat 'iron' bar bent at the centre to form a rectangular space to hold a latch, with the two flat end parts of the plate both having two hand-made nails. All four remain, with bent ends, and show the fitting was once attached to a sturdy timber.

102. Vertical Timber Roof Support

Circular timber - set in a recess in the wall pack – from present floor to roof.

103. Shotholes

The rock face here has two drill holes of relatively small diameter, both driven diagonally downwards and 330mm and 270mm long. These are probably shotholes given their angle and length, but this cannot be conclusively demonstrated as there are no tension cracks.

104. Vertical Timber Roof Support

A timber set on rock ledge at base of top beds to roof (height c. 50cm).

105. Vertical Timber Roof Support

Circular timber - set in a recess in the wall pack – from present floor to roof. Now rotted and fallen. The hole in the floor backfill is 0.85m deep.

106. Vertical Timber Roof Support (Site of)

A recess in the wall pack – from present floor to roof – for a timber of uncertain cross-section which has now rotted away.

107. Vertical Timber Roof Support (Site of)

A recess in the wall pack – from present floor to roof – for a timber of uncertain cross-section which has now rotted away.

108. Loading Platform

A 0.40m high flat-topped slab with drystone walls to the sides, runs across the passage and the area behind has been backfilled to form a raised, flat-topped, loading platform. This is the correct height for sliding stone slabs straight onto flat-bed tramway wagons. The slab has a worn top-edge resulting from use of the platform. To one side of the slab is a step catalogued separately.

109. Step

A simple step, made from a stone block, half way up the height of the loading platform, recessed into this, making it easier to negotiate the rise in level.

110. Alcove

A small alcove in the pack walls with a horizontally-placed slab a short distance above floor level and suitable for a seat or ‘dry’ storage area.

111. Floor Beams

The floor behind the loading platform has long parallel slots where two beams, the correct dimensions for reused long railway sleepers, were recessed into the raised floor. These may well have been placed to facilitate sliding large slabs of stone from the quarry area to the adjacent loading platform.

112. Shot Holes

Three shotholes in the rock face, at between about 1.00m and 1.50m below the roof. Two are driven nearly vertically down wards, while one is at a slight diagonal downwards from a horizontal line. At least two of these are too long to be for use with plug and feathers.

113. Vertical Timber Roof Support

Circular timber set on rock ledge at base of top beds to roof, with wooden wedge at top to make up the height and a wire nail hammered into post horizontally, presumably as a ‘hook’.

114. Iron Strip

A tapered ‘iron’ strip which is 450mm long on the passage floor. Several similar examples have been found in the quarry and they appear to be ‘offcuts’ brought into the workings for reuse as feathers, shims or tightening wedges.

115. Iron Wedges

Two similar iron quarrying wedges, both broken and placed on a high ledge in the face. These have a rectangular cross section near the breaks, becoming square-sectioned to the hammering end where there is a lip. They are 130mm and 120mm long.

116. Vertical Timber Roof Supports

Four timbers set on rock ledge at base of top beds to roof, two of circular cross-section, the other two split sleepers.

117. Iron Strip

A tapered 'iron' strip which is 350mm long and 70mm wide on a ledge in the face. Several similar examples have been found in the quarry and they appear to be 'offcuts' brought into the workings for reuse as feathers, shims or tightening wedges.

118. Face Slot and Unfinished Pack

This forefield area had been abandoned and backfill had started to be introduced. This is piled against one end and a side pack. To the opposite side a pack wall stands up to 1.30m high, leaving a narrow slot against the rock face, to allow this to be later removed, with the adjacent pack once finished providing roof support.

119. Vertical Timber Roof Support

Spilt sleeper – set in pack wall from a ledge, rising 2.00m to the roof.

120. Vertical Timber Roof Support

Large circular timber of 0.20m diameter – set in pack wall from a ledge, rising 2.30m to the roof.

121. Floor Removal

A steep-sided cut where the passage floor make up has been dug out to a depth of c. 0.50m, as part of re-working the adjacent forefield face.

122. Vertical Timber Roof Supports

Circular timber set in pack wall from stone slot-base in the pack 1.20m up to the roof.

123. Vertical Timber Roof Supports (Site of)

Three slots in pack wall for now-rotted timber that went from stone slot-bases in the pack 1.20m up to the roof. Only the central one has a slot the whole way, while the other two end well before the roof and the timbers may well have come somewhat-diagonally out into the passage.

124. Unfinished Pack

The wall pack here is not finished, presumably because of the lack of enough suitable material when it was being built. It comes to about 1.00m from the roof and has a void going back to an earlier pack to the roof.

125. Vertical Timber Roof Supports

Two rectangular sleepers – set in wall/pack, at least one from floor to roof, the other part-buried.

126. Possible Sleeper Slot

A poorly defined shallow slot in the floor which may once have held a sleeper. However, as it is on its own, this interpretation should be treated with caution.

127. Vertical Timber Roof Supports

Two timbers in pack wall that went from stone slot-bases in the pack high in pack up to the roof.

128. Iron Strip and Nails

A tapered 'iron' strip which is 550mm long and 40mm wide on a ledge in the face. Several similar examples have been found in the quarry and they appear to be 'offcuts' brought into the workings for reuse as feathers, shims or tightening wedges. On the same ledge this is a pile of 12 machine-made wire nails of 2.5inch length.

129. Blocking Packs

The packs here were completed to the roof from the downdip side, leaving a ragged edge on the upslope side except at one end which was faced. A narrow are between two face running back at right-angles to the passage side, had it upper part removed to re-establish a route to the passages updip that avoided a dangerous passage with an unstable roof collapse.

130. Floor Robbing and Unfinished Blocking Pack

A crude drystone wall runs across the passage with a slope of mixed rubble and 'soil' sloping up to the earlier pack behind. In front of the wall, and running under it, is a floor deposit of the same material as in the pack, with a sharp robber face at the front edge. It is the robbed material that has been placed in the pack behind. Thus, the whole represents a secondary minor clearance of the passage, but it is not clear why the old floor level in front needed to be re-established.

131. Vertical Timber Roof Support

0.14m diameter circular timber set on rock ledge at base of top beds to roof (0.60m long).

132. Vertical Timber Roof Support

Mainly buried vertical timber, visible at roof level, but below within pack.

133. Vertical Timber Roof Support (Site of)

Slot in pack wall, from floor to roof, for now-missing timber of circular cross-section shape. Hole in floor shows timber extended 1.00m+ downwards.

134. Vertical Timber Roof Support (Site of)

Slot in pack wall, from floor to roof, for now-missing timber of circular cross-section shape.

135. Vertical Timber Roof Support (Site of)

Slot in pack wall, from floor to roof, for now-missing timber of circular cross-section shape.

136. Unfinished Pack

Small pack against a completed passage side, rising to within 0.6m of the roof, infilling a small wider part of the pre-existing passage.

137. Drill Hole

A short section of drill hole in the rock face on the corner.

138. Unfinished Packs

A long narrow pack against a completed passage side, rising to with 0.4m of the roof in part, but at one end left as only a low heap of rubble. The pack infills a wider part of the pre-existing passage. At the more-completed end, the pack behind also has a gap between rubble and the roof.

139. Vertical Timber Roof Support

Circular cross-sectioned timber set outside wall face from floor to roof, now partially buried within Pack 6.

140. Vertical Timber Roof Support (Site of)

Slot in pack wall, from floor to roof, for now-missing timber of circular cross-section shape.

141. Vertical Timber Roof Support

Circular – set in wall from floor to roof – rotted but with 0.12m diameter piece remaining.

142. Vertical Timber Roof Support (Site of)

Slot in pack wall, from floor to roof, for now-missing timber of circular cross-section shape. This ran from a stone in the pack wall, up 1.70m to the roof.

143. Vertical Timber Roof Supports (Site of)

Two slots in pack wall, from floor to roof, for now-missing timbers of circular cross-section shape.

144. Vertical Timber Roof Support

Slot in pack wall, from floor to roof, for now-fallen timber of circular 0.20m diameter cross-section shape.

145. Vertical Timber Roof Support

Slot in pack wall, from floor to roof, for now-fallen timber of circular 0.25m diameter cross-section shape.

146. Vertical Timber Roof Support (Site of)

Slot in pack wall, from floor to roof, for now-missing timber of circular cross-section shape.

147. Timber Roof Support

Circular-sectioned timber set at a diagonal angle from a wall ledge to an unstable roof.

148. Vertical Timber Roof Support

Circular-sectioned timber set vertically from a wall ledge up 0.85m to an unstable roof.

149. Unfinished Cut

The small ledge here at the passage side has been left where the face has not been fully removed, stopping a short distance above the current part-backfilled passage floor.

150. Drill Hole

A drill hole in the rock face, near the present floor, driven nearly vertically downwards. Better preserved examples in similar contexts have been used for powder.

151. Vertical Timber Roof Supports

Three timbers – all circular and 0.08-0.10m diameter – set on rock ledge at base of top beds to roof.

152. Unfinished Pack

The pack against the rock pillar appears unfinished, with a space between rubble and roof extending a short way back. In front of the pack face is further rubble, either placed here later, or more probably when the pack wall behind was taken down to explore for the presence or absence of buried rock pillars.

153. Drill Hole

A drill hole in a pack stone.

154. Drill Hole

A drill hole in a pack stone.

155. Vertical Timber Roof Support

Circular – set in wall from floor to roof – of 0.12m diameter.

156. Unfinished Pack

Pack infilling a corner between two passages, with the end here to the roof but the area behind not reaching the roof, with a gap of 1.00m+. One edge has a drystone pack wall, but in the opposite side the pack ends in a steep slope of rubble with no retaining wall.

157. Vertical Timber Roof Support

0.15m diameter circular timber set on rock ledge at base of top beds to roof.

158. Shot Hole

A shothole in the top bed with remains of limestone-dust stemming.

159. Drill Hole

A drill hole in a pack stone.

160. Unfinished Pack

The forefield area has been started to be backfilled, with a broad pack up to about 1m high.

161. Vertical Timber Roof Support

Circular – set in wall from floor to roof – of 0.14m diameter - now rotted.

162. Vertical Timber Roof Support (Site of)

Slot in pack wall, from floor to roof, for now-missing timber of circular cross-section shape.

163. Vertical Timber Roof Support (Site of)

Slot in pack wall, from floor to roof, for now-missing timber of circular cross-section shape.

164. Vertical Timber Roof Support (Site of)

Slot in pack wall, from floor to roof, for now-missing timber of circular cross-section shape. A large plank has been used to make up the height at the roof; this is 1.00m long and 260mm by 70mm in cross section.

165. Unfinished Pack

The pack here is not quite finished, leaving a gap between the rubble behind and the roof.

166. Unfinished Cut

The small ledge here at the passage side has been left where the face has not been fully removed, stopping a short distance above the current part-backfilled passage floor.

167. Vertical Timber Roof Support

0.10m diameter circular timber set on rock ledge at base of top beds to roof.

168. Unfinished Cut

The small ledge here at the passage side has been left where the face has not been fully removed, stopping a short distance above the current part-backfilled passage floor.

169. Iron Plate

A broken 'iron' plate, now purposefully broken into two equal-length halves, of tapered shape that was 220mm long and 100mm wide at its widest end. There is a bolt hole on the central axis. It appears to be brought into the workings for reuse as for example as tightening wedges.

170. Shot Hole

A shothole in the top bed with tension crack and remains of limestone-dust stemming.

171. Vertical Timber Roof Support

Circular timber set on rock ledge at base of top beds to roof.

172. Feathers or Shims

A pile of six simple feathers or shims on a ledge, made from the 'offcut metal strips found elsewhere in the workings.

173. Top Cut and Unfinished Cut

The various ledges here at the forefield passage have been left at the point when workings in the part of the quarry were abandoned, leaving the face not fully removed. In part work stopping a short distance above the current passage floor, while adjacent part of the original top cut remains.

174. Broken Rail Shoes and Bolts with Nut

On the working floor in a discrete small area there are two halves of broken medium-duty rail chairs for strip rail, from two different chairs, and two large coach bolts. Each chair-half comprises the flat base with single fastening hole and bevelled outer edge, and simple side plate for securing the rail, with a curving-sectioned top edge. The two bolts each have a domed head, square shank and screw thread at the other end. One has a square nut attached. As with other objects found, these may have been brought into the workings for re-use (in an unclear way) rather than necessarily indicating the types of rail used underground.

175. Unfinished Blocking Pack

The passage here was abandoned and a blocking pack wall started across its entrance. Rubble was being introduced behind as part of the process, but the whole was abandoned when the pack was about 1.00m from the roof

176. Drill Hole and Shim

A short drill hole in the roof, hand drilled with triangular cross-section. Within this, firmly wedged in, is a simple shim of strip 'iron'. There is not enough space remaining to use this in conjunction with plug and feather work. This in turn suggests the hole had a secondary function, used to hold something like a hook or lifting eye.

177. Unfinished Pack

A narrow linear pack against bedrock wall for most of its length reaches the roof, but at one end it is unfinished.

178. Vertical Timber Roof Support

Circular – set in wall from floor to roof – 0.12m diameter.

179. Drill Hole

A drill hole end in the roof.

180. Unfinished Pack

Small pack against a completed passage side, rising to about 1.00m high. Infilling a small 'alcove' in the pre-existing passage.

181. Vertical Timber Roof Support

Circular-sectioned 0.12m diameter timber set vertically from a wall ledge up 1.00m to the roof.

182. Drill Holes

Two short drill holes in the roof.

183. Iron Plate

Two pieces of 'iron' plate which are 200mm and 190mm long and 60mm and 50mm wide respectively, both together on the floor at the passage side. The larger of the two is a short piece of worn strip rail. They appear to be brought into the workings for reuse as for example tightening wedges.

184. Vertical Timber Roof Supports

Two circular cross-sectioned timber set outside wall face from floor to roof, now with lower parts buried within pack 48.

185. Unfinished Pack

Linear pack against the bedrock wall, in part up to about 0.6m from the roof and more elsewhere.

186. Shot Holes

Two shotholes in the rock face, near the present floor, both driven nearly vertically downwards. Both are too long to be for use with plug and feathers.

187. Timber Roof Support

Circular-sectioned timber set at a diagonal angle from a wall ledge up 1.10m to roof.

188. Shot Holes

Two shotholes in the rock face, at about present waist height, both driven nearly vertically down wards. Both are too long to be for use with plug and feathers.

189. Iron Strips

Two small narrow 'iron' strips on the floor. Several similar examples have been found in the quarry and they appear to be 'offcuts' brought into the workings for reuse as feathers, shims or tightening wedges.

190. Unfinished Pack

Small pack in a corner between bedrock walls – up to 1.30m high.

191. Timber Roof Support

Circular-sectioned 0.14m diameter timber set at a diagonal angle from a wall ledge up 1.40m to an unstable roof.

192. Timber Roof Support

Circular-sectioned 0.15m diameter timber from a wall ledge up 0.70m to an unstable roof.

193. Timber Roof Support

Circular-sectioned 0.14m diameter timber from a wall ledge up 1.40m to an unstable roof.

194. Timber Roof Support

Circular-sectioned 0.15m diameter timber from a wall ledge up 1.30m to an unstable roof.

195. Timber Roof Support

Circular-sectioned timber set at a diagonal angle from a pack ledge to an unstable roof, largely buried in pack wall.

196. Timber Roof Supports

Two circular-sectioned timbers set at a diagonal angle to an unstable roof, bot part-buried in the blocking pack.

197. Timber Roof Supports

Four closed-spaced small circular-sectioned timbers set at a diagonal angle from a wall ledge up 0.50m to an unstable roof. To one side there is a circular-sectioned 0.17m diameter timber set at a diagonal angle from a wall ledge up 1.80m to the roof.

198. Timber Roof Supports

Two timbers – both circular – set on rock ledge at base of top beds to roof.

199. Unfinished Blocking Pack

This distinctive unfinished pack blocks the cross-level just short of its end, made as part of a retreat from this part of the workings. It is unfinished and largely buried by rubble. It is the front face of a broad pack, the back face of which in part reaches the roof and is catalogued separately.

200. Unfinished Blocking Pack

This distinctive unfinished pack blocks the cross-level just short of its end, made as part of a retreat from this part of the workings. Behind is a small deep triangular area which is abandoned and effectively sealed from the rest of the workings. It is unfinished allowing a view of the area behind. The bulk of the pack wall was built from the other side, except for the top 0.50m which was crudely built from the back to seal the area behind; to one side this was not completed and rubble to the roof across the broad pack. The unfinished front wall of the pack is catalogued separately.

201. Unfinished Cut

The two ledges here have been left where the face has not been fully removed, stopping a short distance above the passage floor.

202. Vertical Timber Roof Supports

Two circular timbers – set in pack wall in top part to roof.

203. Face Slot

A narrow face slot between the rock wall and a pack to the roof, now choked with rubble a short way in. Presumably built in this way so that the rock face could be removed at a future date with the pack supporting the roof.

204. Vertical Timber Roof Supports

Two 0.14m diameter circular timbers set on rock ledge at base of top beds to roof (0.60m long).