



# EARTHWORK SURVEY OF LEAD MINING REMAINS AT NEW VENTURE MINE, BRADWELL, DERBYSHIRE

James Brightman

*During March 2009 Archaeological Research Services Ltd undertook an earthwork survey of extant lead mining remains of likely post-medieval date at New Venture Mine, near Bradwell, Derbyshire. In addition to providing an accurate measured record of the remains, the survey corroborated previous observations made by the Peak District Mines Historical Society and identified a belland wall, visible on the early edition Ordnance Survey maps but later lost, which bounds the dewpond and water control ponds to the south of the main rake.*

## INTRODUCTION AND BACKGROUND

Due to its rich mineral resources, the Carboniferous Limestone of the Peak District has been a focus of mining since prehistoric times, and a known focus of lead mining through the Roman and into the medieval periods. Lead mining in the Peak District reached its peak during the 17th and 18th centuries, when lead was an important resource, but collapsed in the 19th century (Barnatt and Penny 2004, 2.7).

New Venture Mine is situated on one of the principal rakes on Bradwell Moor a mile to the west of Bradwell, Derbyshire (SK 1540 8102). The survey work described in this paper was undertaken in March 2009 by Archaeological Research Services Ltd (ARS Ltd) for Lafarge Cement UK Ltd as a condition of the working of the nearby Hope Quarry, in order that the impact of blasting can be monitored on the archaeological features. The site was heavily overgrown with tussock grass, and whilst the time of year during which the survey was undertaken ensured that the undergrowth was not high, the length of time that the site has been left without clearance meant that many features were partially obscured.

## Previous Work

The remains at New Venture Mine have been classified using criteria set out in 'The Lead Legacy' (Barnatt and Penny 2004, 57), which catalogues the

resource of historic lead mines in the Peak District and puts forward a research and conservation agenda. New Venture Mine's remains are described as:

- Hillocks – Good/average condition but of moderate or small extent.
- Common surface features – Relatively common features in reasonably good condition, including common (and rare) features that collectively comprise relatively intact mine complexes.
- Rare or special surface features – All extant examples including rare features that collectively comprise relatively intact mine complexes. [In this case this relates to the ore washing ponds, belland wall, dew pond and 'bingstead']
- Underground features [beyond the scope of this work] – Accessible workings of extensive or special character.

The site was subject to consolidation work by Peak District Mines Historical Society (PDMHS) during the mid-1990's, particularly in relation to capping open shafts and rebuilding of the small coe in the centre of the extant earthworks (Heathcote 1997; 1997a; 1998). The majority of surface features on the site were catalogued during this work, and the key features of the New Venture Mine were noted by Ford and Rieuwerts as being: "walled-up vein exposures, shafts, two natural potholes, a water-storage



Figure 1 Location of New Venture Mine and area of survey.

pond, buddle dam and a bingstead” (2000, 81).

The aim of the project was to provide an accurate measured drawn survey of the remaining earthworks relating to the lead mining activity on site.

## SURVEY RESULTS

A catalogue of all key features surveyed is presented in Table 1 below. The numbering system follows that employed by Heathcote in the catalogue of consolidation works undertaken by PDMHS (1997; 1997a; 1998). Where there are adjunct features not mentioned by Heathcote, principally around the dewpond (13) and other water control features, these have been added as ‘a’, ‘b’ etc. The reason for maintaining this system is to allow for ease of cross-

referencing between any works relating to the New Venture site. The features are shown on Fig. 2.

The earthworks at New Venture Mine are typical of the above-ground remains associated with 18th-19th century lead mining in the Peak District. The key remains noted are: a number of open stopes along the line of the rake, a small ‘bingstead’ or ore-house, a number of capped shafts and a large expanse of spoil and ore-processing and washing ponds south of the bingstead bounded by a belland wall.

A new feature observed as part of this survey is the belland wall (13c) which extends round the southern edge of the dewpond and associated other washing ponds. This feature is shown as the boundary of the workings on the early edition Ordnance Survey maps and denotes the extent of the original belland yard.

Feature No.	Comments
1	Shaft capped with a metal grille. Roughly circular, c. 900mm in diameter. Partially blocked with run heading along the rake (NE). Ginging evident to a depth of 1.2m on north side and 1.8m on south side with a slab across the vein at that depth.
2	Depression along the line of the vein with upcast on both the north and south sides. Now backfilled.
3	Roughly circular/oval shaft measuring 1m north-south and 1.1m east-west. Ginging on north and south sides extends to a depth of 1.1m and 2.2m along the line of the vein east-west.
4	Small length of wall which partly makes up the eastern side of ginging related to the nearby shaft (3). The wall is visible for 1.5m between the 2 sides of the vein and is 800mm high from the base of the open vein working.
5	Large elliptical open vein working now backfilled.
6	Very small shaft covered with a metal grille – probably a ‘climbing shaft’. Dimensions at the shaft head are 700mm north-south and 960mm east-west which then funnels down to c.550mm north-south and 700mm east-west at a depth of 600mm. Ginging exists to this depth on the south, east and west sides, with the north side formed by the solid rock of the vein side.
7	Small wall 600mm high and 1200mm wide within the open vein working and associated with shaft (6).
7a	Large infilled vein working.
8	Shaft capped with metal grille. Shaft measures 830mm east-west and 960mm north-south. Observable ginging extends to a depth of 1.5m below the surface.
8a	Small coursed stone wall largely hidden by undergrowth which appears to return across the rake.
9	Deep open stope within a large area of working along the line of the vein. Stope is c.0.75m wide on average with a maximum width of 1.1m.
10	Vertical-sided open stope with an average width of c.600mm.
11	Collapse on the vein adjacent to open stope (10).
12	Small stone structure comprising 5 courses of rough limestone blocks in three joining walls leaving the eastern face open. Rebuilt as part of the stabilisation and consolidation work undertaken by PDMHS (Heathcote 1997). In this work it was referred to as a ‘bingstead’ though it is not stated why this interpretation was used.



Figure 2 Earthwork survey of the New Venture Mine remains with feature numbers.

13	Large depression within an area of mounding and depressions, measuring c.5m in diameter and potentially bounded by a low wall. It is possible that this may be a dew pond lying within the boundaries of the possible belland wall (13c).
13a	Series of 3 adjacent depressions or possible ponds. If these are ponds then they will relate to the on-site treatment of the mineral, and can be classified most probably as 'ore-washing' ponds.
13b	A series of raised mounds of waste material from the lead mining activities on site. At least one of the mounds has been subject to a period of probable 20th century 'sparring', as there are large mechanical scoops evident in the southern face closest to the modern road.
13c	Portions of wall which are visible around the southern extent of the area of mounding. This is likely to be the original belland wall around the southern extent of the belland yard, as it is displayed on the early edition Ordnance Survey maps of the site.
14	Collapse in the infilled stope along the line of the rake.
14a	Collapse in the infilled stope along the line of the rake.
15	Rectangular shaft capped with a metal grille, measuring 1150mm east-west and 600mm north-south. Ginging is observable below the surface to a depth of 500mm on the north side, 200mm on the south side, 3m on the east side and the ginging disappears from sight on the west side of the shaft.
15a	Collapse on the vein just to the east of rectangular shaft (15).
16	Large open stope working
17	Large open stope working no observable evidence to show it had a winding device for a shaft.
18	Large open stope working. Vertical and narrow-sided – possible that this is a natural pothole within the working which has been mined
19	Roughly circular shaft measuring 850mm east-west and 750mm north-south. Remaining ginging on all four sides – 400mm deep on south side below which it has collapsed into the stope, 1m deep on the north side. On the east side the ginging extends to 1.3m deep and to 1.4m on the west, where it is supported by a large block of limestone which bridges across the stope.
20	An open stope with stone walling on the north side and metal bars sealing the opening.
21	A large stope possibly representing a natural pothole within the rake. During this survey there was no observable evidence of mining against the sides of the stope which may indicate that at least this portion of the rake contained soft glacial material.
22	Tiny shaft measuring 550mm east-west and 450mm north-south. Ginging was observed to a depth of 1.1m in the north, south and west sides, and to 1.6m on the east side at which point it rested on a stone which bridged the vein.
22a	Shaft adjacent to (22) though larger in dimensions measuring 1.6m east-west and 1m north-south. Ginging was observed on all four sides with an average depth of 1m.
22b	Small trial stope containing some hard mineral. Noticeably different to the larger, possibly natural, stopes further to the west which may have contained soft mineral-bearing material (18, 21).
23	Shallow depression along the line of the rake.
24	Shallow depression along the line of the rake.

Table 1 Features identified during the earthwork survey.

## ACKNOWLEDGEMENTS

First and foremost the author would like to thank Terry Worthington who provided expert guidance in interpretation of the remains and also overseeing the rope safety required on site. In addition to this, Terry also provided input and comment on the archive report which formed the basis of this paper. Thanks are also due to John McGough, then of Lafarge Cement UK Ltd, who acted as our contact through the fieldwork, and also to Sarah Whiteley and John Barnatt of the Peak District National Park Authority who provided guidance and advice and monitored the fieldwork.

## REFERENCES

- Barnatt, J. and Penny, R. 2004. *The Lead Legacy. The Prospects for the Peak District's Lead Mining Heritage*. Bakewell, Peak District National Park Authority.
- Ford, T.D. and Rieuwerts, J.H. (eds) 2000. *Lead Mining in the Peak District*. Ashbourne, Landmark.
- Heathcote, C. 1997. Surface Remains of the New Venture Lead Mine, Bradwell, Derbyshire. *Mining History: The Bulletin of the Peak District Mines Historical Society* Vol. 13 (3): 53-56.
- Heathcote, C. 1997a. Surface Remains of the New Venture Lead Mine, Bradwell, Derbyshire (Part Two). *Mining History: The Bulletin of the Peak District Mines Historical Society* Vol. 13 (4): 51-54.
- Heathcote, C. 1998. Surface Remains of the New Venture Lead Mine, Bradwell, Derbyshire (Part Three). *Mining History: The Bulletin of the Peak District Mines Historical Society* Vol. 13 (6): 23-24.