The development of the surface water arrangements at Snailbeach

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Water was an essential commodity for all working mines, it was needed often as a source of power, for dressing ore and for the steam engine boilers (house-water). On a mine surface there was rarely sufficient of it and Snailbeach Mine was just such a case. The earliest plan of 1766 shows a line of shafts beneath the present large tip. These shafts have every appearance of being construction shafts on an early drainage level which might also have been used to supply water to a small plant in the area of the present calcspar dressing site. Later plans e.g. 1882 SRO 4743/25 show a pond in this area and a water course and "spring" immediately to the north (on modern OS Maps).

There are two principal reservoirs at Snailbeach Mine, an old one and the 1872 construction. The old reservoir is shown on nearly all maps found including the 1864 Longleat Plan, its shape varies slightly and later plans show "boggy" areas where the water area has gradually receded. Until recently the old reservoir still held water but it is now drained and at present being filled with spoil. The water seems to have been collected from the area of Snailbeach Coppice to the north. A conveniently positioned boundary, almost certainly a ditch, can be seen on the 1882 OS Map, and even today, although the area has been replanted, what appears to be a water course can be seen adjoining Plot 268. Further up the coppiced hill its line cannot be followed for sure although there are some ditches and small ponds present. There is also a cut-off drain or footpath on a contour in the Coppice stretching from Plot 268 to Plot 275 but this is believed to be of much more recent date. This has
been used as a water supply route in living memory. The old reservoir supply seems to have been affected by the construction of the new reservoir but the new supply route can be followed as a ditch from the new reservoir sluice, past the valve house, under the track and in the thick undergrowth. The inlet to the old reservoir is shown on the 1872 Longleat plan as being at the north east corner. No indication has been found as to how the water got from the old reservoir to the dressing floors under the present tip but the 1872 Plan shows a water wheel here (obviously used for powering the dressing plant) and a further water wheel immediately north west of the plant (near present Halvans Engine House). The 1864 Longleat Plan shows a 'pond' alongside the Snailbeach road close to here with an outfall to the north. The purpose of this wheel and pond is not known. It is said locally that the old reservoir was, in later years, used for cooling the water from the steam engines but no evidence for this has been found although the pond behind the 1872 Engine House was certainly used for this purpose. Non-pumping engines and boilers need a constant supply of water for "house" use and so a pond is necessary. Pumping engines can replenish their stocks by pumping a small supply of "housewater".

There was always a shortage of water for use in boiler feed and mineral dressing prior to the construction of the new reservoir in 1872. This new reservoir and valvehouse was constructed by Henry Dennis and was fed from a stream "rising to the south-east by means of a leat". The course of this supply can still be followed for a distance of about half a mile. Plans No 4743/26 and 4743/29 in Shropshire County Records Office show that the reservoir was fed by pipes from a collecting 'tank' on the hill near Chapel Shaft chimney. A 6in pipe seems to have carried the water like an inverted syphon across the valley, past the Lords Hill Chapel (where there was a valve) to the approach road to Lordshill Farm. From here it crossed the field close to the present road collapse, a ditch can be seen alongside the present footpath. There is also a concrete, slab-covered chamber slightly off the likely route but its purpose has not been identified. After crossing the Lords Hill road the supply obviously followed the south side of the middle or sloping track leading down to the Magazine. Its route is clearly visible, but about halfway along this track it cuts abruptly down the slope to a small fenced enclosure adjoining the lower track. The supply passes beneath the track and pipework can still be seen near the Roberts Level dressing plant. The supply route passed through the disturbed ground near this plant and entered the reservoir at the south east corner. From the tank near the Chapel Shaft chimney a southerly branch can still be followed as an open drain. This collects from the area of Yew Tree Level and is easily identifiable. An easterly branch leaves the tank, first as an open drain and, where it passes under the large field (Plot 308) can be seen to be piped in 9in earthenware pipes. The pipe can be seen again where it crosses
a track (at which point it is an iron pipe) and once again becomes an open ditch following the contours. This is clearly identifiable for a further quarter-mile or so.

Immediately below the reservoir dam there is a half-buried valve house complete with valves. The 1882 Plan SRO 4743/25 shows a pipe running direct from the reservoir bottom to the valve house but the 1883 Plan SRO 4743/26 shows a "flange" pipe bypassing the valve house. Since this second plan shows the pipe also leaving the top of the dam it does not appear to be correct as an outflow but it could be an inflow pipe as described later. An open cutting leads from the overflow sluice to a leat which is joined by a further leat from the valve house and this goes to the old reservoir as described previously. The flange pipe however goes through the mine's principal working area to the pond behind the 1872 winding engine house. Plan No 4743/26 shows also a pipe leaving the main pumping engine house and dividing into two, an easterly and a westerly branch. The westerly branch goes to the 1872 winding house pond to join the "flange" pipe from the reservoir. This is obviously the supply for this engine, it possibly carried the hot water from the pumping engine. The easterly branch goes directly to the flanged pipe, at which point there is a valve. Considering this and the positioning of the flange pipe at the top of the new reservoir dam it seems almost certain that the pumping engine was used as an additional supply to the reservoir. This is borne out by local tradition that water had to be pumped into the reservoir in dry times. According to the late Mr Hewitt, a former engine man at the mine, the Lords Hill Pumping Engine pumped "to Surface" using 5 ram pumps and 2 bucket pumps set at intervals up the shaft. The bucket pumps were normally the lowest two lifts. Mr Hewitt when interviewed by the writer on 28th March 1970 was 91 years of age. He was 31 years of age when pumping was stopped in 1912.

It is not known when the valve house ceased to be used, even in the 1960s it was maintained in good condition. It is known however that the level of water in the reservoir has fluctuated wildly over the years and although low at present it is still higher than it has been at some times in the past. For example the present writer's diary records that on 17th July 1960 "Reservoir at Lords Hill dry"). There have been other attempts to obtain a water supply in recent years. For example the supply for the Roberts Level dressing floor was originally taken from a branch at the fenced off area where the new reservoir supply crosses beneath the road. When the long leat and tank system failed to operate connections seem to have been made to various springs and adits up the sloping middle track from the Magazine. A careful study of the ground at the top of this sloping track indicates that a ditch may have been continued towards the open barytes working on the hill and further water obtained from there. Water has also been obtained in recent years by blocking up the adit near Roberts Level leaving a pipe through the blockage. This supply was also used, and may still be used, by the local cottagers. There are also a number
of other reservoirs or ponds shown on maps of the high ground above the mine. For example, there is a reservoir near Lords Hill Farm and a leat is known to have crossed the fields from here and along the high ridge to a position close to the Lords Hill road collapse, on Lords Hill. It is also thought at some time to have doubled back along the contours from this point towards the Pumping Engine but then partway along dropped abruptly to the new reservoir.

Other possible water sources exist, Mr Ken Lock, for example, believes that water was at one time pumped back up to the reservoir from a point near Snailbeach Farm. As can be seen from the above there is still much to be learned about the water supply system at Snailbeach Mine. Excavation and dye tests might however provide substantiation of many of the views and rumours given to the writer by the residents and others with an interest in the site.

References

Plan of 1766 (SR152/l) Shrops C.C.Record Office.

Plan of 1864 Longleat Collection No 69.

Plan of 1872 Longleat Collection No 75.

Plan of 1882 Ordnance Survey (SR4743/25).

Plan No 4743/26 on 25 in. base showing Reservoir, Water Leat and Pipes (1883).

Plan No 4743/29 pipes laid near Chapel Shaft 1875.

1839/41 Tithe Map Minsterley.

1847 Tithe Map Worthen.