

## **Burtree Pasture Mine**

H Wilkinson (sparty\_lea@yahoo.co.uk)

Burtree Pasture Mine is on the Sedling Burn near the village of Cowshill in Weardale. The workings are principally on the Burtree Pasture Vein to the east of the burn and produced, between 1818 and 1890, about 175,000 tons of lead concentrates (the mine was worked much earlier than this but statistics are unavailable). The workings are connected to those of Breckonsyke Mine. The mine was reopened as a prospect for fluorspar in the 1970's and finally closed by 1981.

The Burtree Pasture Vein has been worked for lead from very early times, it has been hushed and worked from surface shafts from where it crosses the Sedling Burn for about 600 metres to the northeast.

In 1791 it was sold along with Breckonsyke and Greenfield Mines to Sir T. Blackett. By 1818 the workings had proceeded as far as the Great Cross Vein and ore was being produced from the Quarry Hazle. Although the vein was initially said to be poor east of the Great Cross Vein, persistence soon rewarded them with good ore-producing ground in the Great Limestone. The mine was extensive and productive and by 1825 134 men were employed raising ore. The vein was tested in all the likely ore producing beds and while the Scar Limestone was disappointing, both the Four fathom and Great Limestones held good oreshoots. As the mine was deepened drainage and ventilation were ever present problems. A water Level was driven from the side of the burn by the Bridge at Cowshill just below the Quarry Hazle, once connected this dewatered the Great Limestone, drainage of the deeper levels was achieved by pumping using underground water wheels.

To assist with ventilation a shaft was sunk high on the fell at Middlehopehead and a furnace built at the top to help draw air through the workings.

The mine continued to produce ore throughout the 1860's and 70's with over 200 men employed below ground and was the WB Lead Company's largest Mine in the Weardale district at that time.

Mining in Weardale once more became an economic prospect with the increasing demand for the industrial mineral fluorite.

In the 1960's the management of the Weardale Lead Co came to the conclusion that the Burtree Pasture Mine might be a good prospect for Fluorspar. The size of the mine dump in relation to the known extent of the workings led to the supposition that much of the fluorite gangue was either left in situ in the vein or was backfilled into the old stopes. It was also expected that the vein might be productive in sections unworked for lead, especially in the deepest part of the mine at the horizon of the whin sill.

Rehabilitation of the mine began in 1971, new buildings were put up and the old horse level was enlarged and straightened, the plan was to access the deeper levels of the mine by reopening the Level Head Engine Shaft, an underground shaft sunk from the Horse Level. A large new winding chamber was made at the head of the shaft. The shaft itself was flooded and the contract for rehabilitating it was awarded to an Italian company, Foraky Ltd.

The job proved far more difficult than had been anticipated, there were several blockages in the shaft, it was skewed and the make of water was greater than expected. It took 18 months just to get down 105 m to Kellet's Level. In 1974 there was a change of management at WLC and a change of plan, they abandoned the idea of getting any deeper in the shaft and instead concentrated on reopening the Gargett's Level at 74m deep. The going was initially in very poor ground but eventually they reached good open level with old stopes originally excavated between 1800-1830. There was some spar in the backfill but also a significant width of fluorspar on the cheek of the vein. The ground was difficult to work and needed highly skilled labour, it soon became apparent that taking into account the need to upgrade the shaft for increased production and the necessity to provide a second exit from the working, Gargett's could not be mined economically.

In 1977 SAMUK took over the mine and they pulled out of Gargett's, allowing the shaft to flood. They concentrated on reopening more of the Horse Level and sank an internal decline to the northeast from the Horse Level in the vicinity of the Engine Shaft. From this they worked the vein in the Great Limestone, producing 47,000 tons of spar but by 1981 the mine was finally closed.

**Account of Strata sunk through in the Level Head Engine Shaft, Burtree Pasture Mine**

Geology encountered	Thickness			Depth	
	ft.	in.		ft.	in.
Fire-stone	31	6	-	31	6
Plate	35	6	-	67	0
Pattinson's Sill	7	0	-	74	0
Plate	12	0	-	86	0
Little Limestone	9	3	-	95	3
Hazle	1	6	-	96	9
Plate	19	6	-	116	3
High Coal Sill	9	6	-	125	9
Plate	11	6	-	137	3
COAL	0	6	-	137	9
Low Coal Sill	5	0	-	142	9
Plate	8	6	-	151	3
Great Limestone	62	0	-	213	3
Tuft	9	0	-	222	3
Plate	12	0	-	234	3
Quarry Hazle	16	3	-	250	6
Grey beds	6	0	-	256	6
Plate	39	6	-	296	0
Four Fathoms Lst	18	3	-	314	3
Till bed	3	0	-	317	3
Nattrass Gill Hazle	36	0	-	353	3
Plate	51	0	-	404	3
Three Yards Limestone	10	0	-	414	3
Till bed	3	0	-	417	3
Six Fathoms Hazle	28	0	-	445	3
Plate	17	0	-	462	3
Five Yards Limestone	15	0	-	477	3
Plate	1	0	-	478	3
Hazle	6	0	-	484	3
Plate	11	6	-	495	9
Hazle	6	6	-	502	3
COAL	0	3	-	502	6
Grey beds	4	0	-	506	6
Hazle	5	6	-	512	0
Plate	28	6	-	540	6
Scar Limestone	34	0	-	574	6
Plate	1	0	-	575	6
Hazle	2	0	-	577	6
Plate	11	6	-	589	0
Hazle	5	6	-	594	6
Plate	1	0	-	595	6
Hazle	14	6	-	610	0
Grey beds	1	3	-	611	3
Plate	7	0	-	618	3
Hazle	8	0	-	626	3
Grey beds	3	0	-	629	3
Cockle-shell Limestone	1	0	-	630	3
Hazle	6	6	-	636	9
Plate	2	3	-	639	0
Hazle	3	3	-	642	3
Tyne Bottom Limestone	4	0	-	646	3
Whetstone	46	0	-	692	3
Whin Sill (Basalt)	238	6	-	930	9
Whetstone Bed	30	0	-	960	9
Jew Limestone bed	4	0	-	964	9