

October 10, 1999

COSSACK LEVEL "COMPRESSOR BUILDING"

As one drives up the "Mine Hill" road, passing remnants of the aerial tramway towers, the first major structure encountered is what's left of the "**compressor building**". It's located there on the left side of the road at what is referred to as the "Cossack" or 1600 foot level, along with some smaller metal clad buildings and remnants of a wooden cabin type structure almost hidden by the trees. This compressor station, constructed there in 1917-1918, in conjunction with erection of the aerial tramway and a 50 ton extraction mill, was part of expansion efforts by the Empire Copper Co. anxious to increase production and profits of its mining operation.

According to accounts in the Mackay Miner Newspaper, by December of 1915, crews had penetrated the Cossack tunnel to 4400 feet and by mid 1916 to over a mile, some 1400 feet below the surface. New management of the Empire Copper Co. made extensive plans to increase production including exploiting ore finds in the "Cossack" tunnel and connecting it with "raises" to the Davis level and on to the Alberta level. This would allow ore, from throughout most of the company's maze of tunnels and shafts, to be delivered to a tramway loading station to be built at the Alberta level. From this headhouse ore would move on down the mountain on an aerial tramway system to be constructed all the way down to the smelter site along the river. This system would replace the "Shay" railroad that had operated since 1905.

Their plan also included building of a new, large capacity compressor facility. Most of the mining done early on had been accomplished without benefit of other than manual equipment; slow and tedious work even for the most experienced. As air or steam powered equipment became available, came the need for a source of power for these tools. Small inefficient compressor plants at the Cossack and Alberta levels established early on were very inadequate for large scale mining operations and significant mining continued to be done by manual means. For most, this would change considerably when the new "**compressor station**" was built at the Cossack and came on the line in 1917.

It was early in 1917 when (2) B&W 227 horsepower tubular boilers were set up at the new compressor building to supply the steam for operation of the new compressors installed later that spring. (See photo showing compressor/operators) Once on line, the compressed air was distributed throughout the labyrinth of tunnels and shafts by pipes and hoses and on to miners' drills and jack hammers. These large capacity compressors would deliver all the compressed air necessary for the equipment required by the expanded level of operations. But the boilers at the compressor station needed both water and coal. Old timers say the *water* was delivered through piping from Cliff Creek and that a certain series of blasts from the boilers steam whistle signaled when water was needed. They also said the boiler's whistle was used to signal the 12 noon hour each day, and that folks in town could set their watch by it.

The source of boiler *coal* was the newly built aerial tram system. Many of the loaded, uphill tram buckets contained supplies, especially coal, much of which was used at this *compressor building*. The tram system leveled out between support towers there at the compressor building site just before

it elevated sharply up to the Alberta level and the headhouse. Directly underneath this level section, at the base of the forward tower, was the location of the boiler's coal bins. As up-hill ore buckets, loaded with coal from the smelter site, reached this level section they were dumped into the storage bins below. A first hand account says this was done manually and *while the buckets were moving*, working from a parallel platform only about 25 feet in length and some 30 feet up over the bins. As the moving, coal loaded, buckets reached the downhill end of the platform the coal dumper would release the latching mechanism dumping its contents as he moved along with the bucket. At a tram speed of up to 500 feet/min., he had only a few seconds to get this done before he reached the other end of his platform. He had to be quick and on his toes when the tram was operating near capacity. The close proximity of the coal bins to the boilers allowed for a minimum of handling to the boilers' firebox doors where it was shoveled in. It is very likely that during peak mining periods, when 2 shifts were going strong, at least two men were needed to run this compressor station, in addition to the coal dumper. One, likely a machinist who tended to oiling and tending the compressors, and the other a boiler tender who shoveled coal and maintained a head of steam. In slack periods, probably just one man took care of all these chores.

The smaller metal clad buildings still on location at the Compressor site likely include onetime bunkhouse, storage and maintenance buildings. The small wooden structure was likely used early on to house mules used to pull cars of "muck" or ore from the tunnel.

It is believed the compressor plant continued its vital role in mining operations on the "Hill" through the 1940's, following furious periods of boom and idle periods of bust.. All that remains now of this once important mining structure is a shell of the original 3 story building. Part of its roof has fallen in and much of the metal siding has fallen off, but the concrete foundations of the compressors and some boiler remnants still remain to testify to its purpose. And gone are the tramway towers, coal bins and platforms, with little evidence as to their exact locations. But a visit to the site is still interesting and with only a little imagination a person can visualize how it may have looked in an earlier time.

References; Personal interviews Ivan Taylor, Joe Ausich, and Clint Whitney

Mackay Miner issues Nov. 22, 1916; Feb. 21, Apr. 11, 1917; June 20, 1917; May 11, AUG. 31, 1944

If you find the mining history of Mackay interesting or have more information or pictures about it, please join with the South Custer Historical Society in documenting it for future generations. Please call 588-3148. We would love to hear from you.