

As stated above, mine drainage to the Trapper pits has not been as large as expected. In some instances, inflow to pits has however been large enough to utilize continuous mine dewatering installations. Continuous dewatering wells were installed in Derringer and Flintlock pits with the intent of gradually pumping pit water and consequently reducing the erosion potential in surface drainage downstream. Dewatering wells in both Derringer and Flintlock pits were deactivated in 1998. Several small dewatering wells have been installed and continue to be operated in areas around the backfilled Gatling pit and in the N pit area. Yields from these wells have been minimal (typically 2 - 4 gpm) and typically the wells have been operated in advance of pit development.

Historically, the northern end of the Ashmore Pit produced the most water, and during peak water production periods was normally pumped 16-20 hours after it had been open for approximately one week. A large pump was used to remove the water and the quantity of water pumped indicated the average yield from the aquifer was in the range of 70 gpm. Yield from the East Ashmore pit aquifers was considerably less.

Derringer Pit remained dry in the southern portion but normally yielded water at the northern end. Pumping from Derringer pit averaged around 30 gpm and fell to 0 as mining operations were completed in this pit.

Drawdown in the coal aquifers will be large adjacent to the open pits. The gradient of the piezometric surface should be steep in the coal aquifers, because they contain low transmissivities. A large percentage of the water yield to a pit is from the non-confining portion of the aquifer. The aquifer will be in unconfined conditions near the pit and therefore, mainly the unconfined properties govern drainage to the pit and drawdowns from that drainage. Drawdowns near the Ashmore Pit are predicted to be a few tens of feet at 1,000 feet from the pit wall after a year or more. Drawdowns of perhaps a few feet are predicted at one mile beyond the pit walls approximately four years after mining. The following calculations illustrate these predictions.

#### Drawdown calculation near Ashmore Pit

For: Drawdown estimate at one year and 1,000 feet from pit.

Transmissivity (T)	= 250 gal/day/ft
Specific yield (S)	= 0.01
Distance from pit's edge (r)	= 1,000 ft
Time since start of pumping	= 365 days