

"SP6"

465 Δh

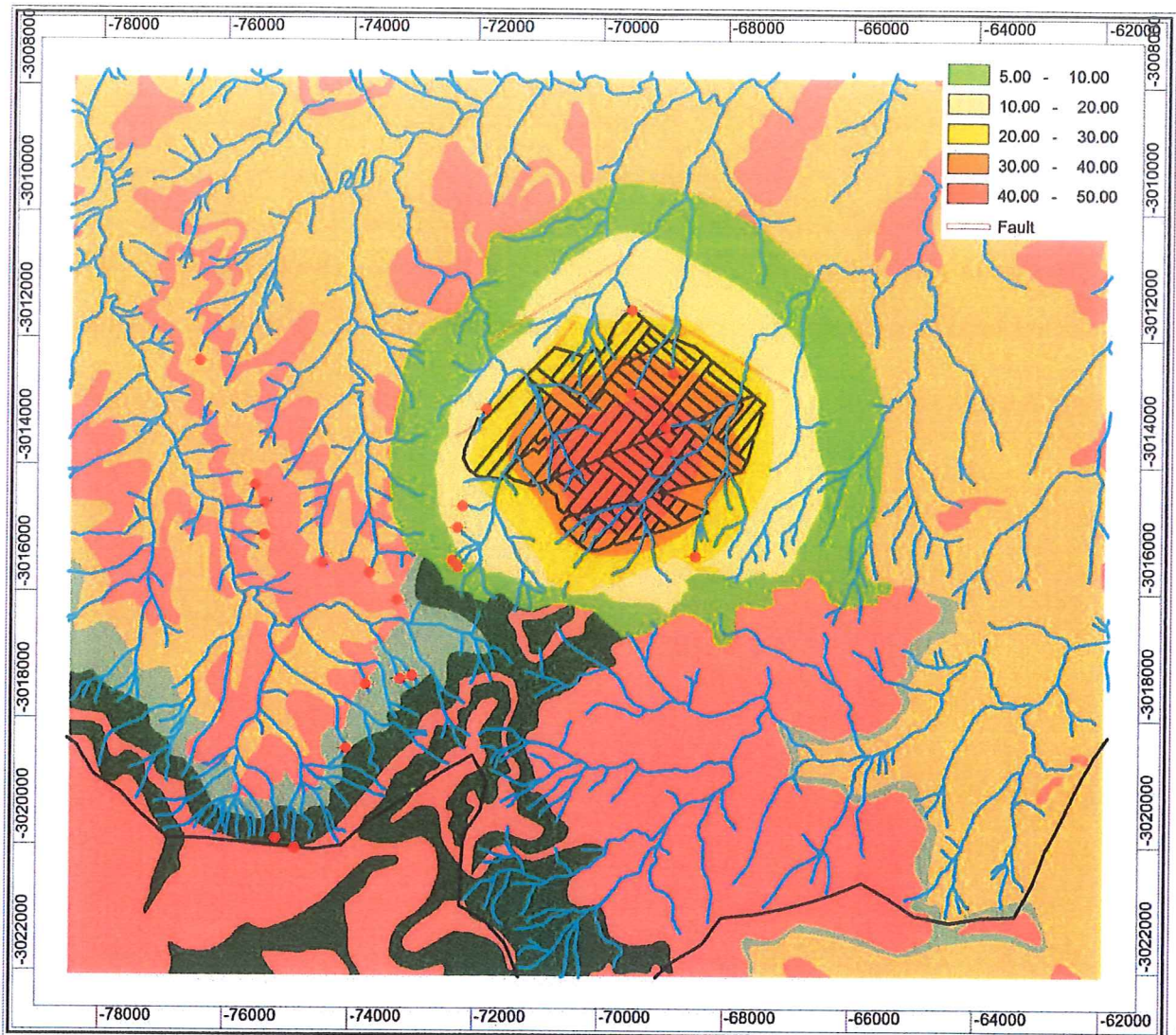


Figure 8.3: Simulated groundwater table drawdown in the deep fractured Karoo aquifer (mapped springs indicated in red).

It must be emphasised that the simulated steady-state cones of dewatering due to inflows into the final mine voids present an unlikely worst case scenario, as a steady-state cone of dewatering develops only after numerous years to decades of unimpeded groundwater inflows into the mine. The currently foreseen 15 years of life of mine are therefore likely to be exceeded before a steady-state drawdown is established, by which time the mine is no longer actively dewatered and the water table at least partially likely to recover (though not to pre-mining levels).

Groundwater dependant eco-systems and yields of (water supply) springs located within the significant zone of dewatering of the shallow aquifer, limited to the site boundaries, could be negatively impacted and some may dry up during the life of mine. Springs located within the cone of dewatering of the deeper fractured aquifer, also limited to the site boundaries, are on the other hand unlikely to be impacted upon due to the limited hydraulic connection of the shallow and deep aquifer systems.