

Figure 5.1 Drain hydraulic conductivity versus drain flux

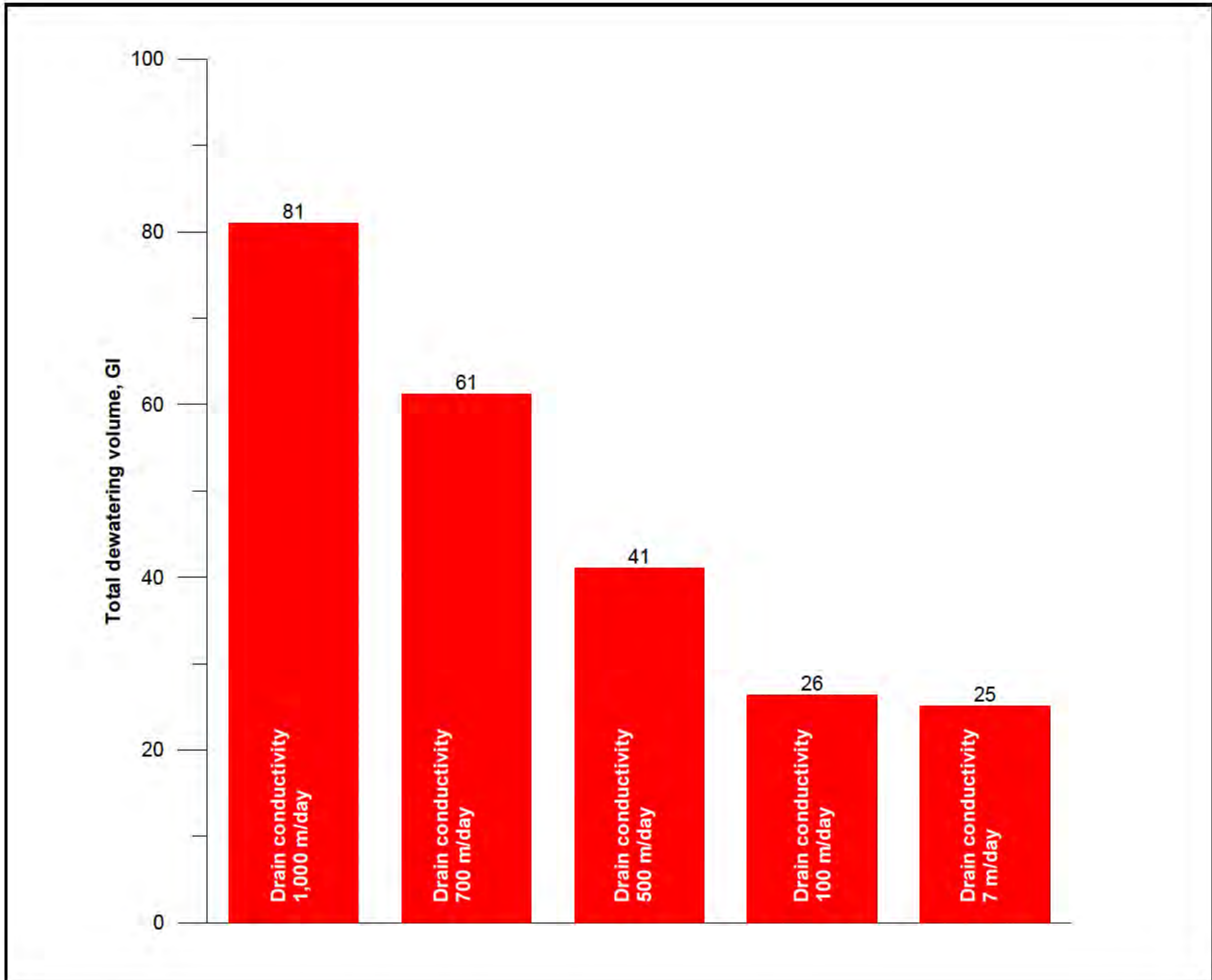


Figure 5.2 Total volume dewatering water as function of drain hydraulic conductivity

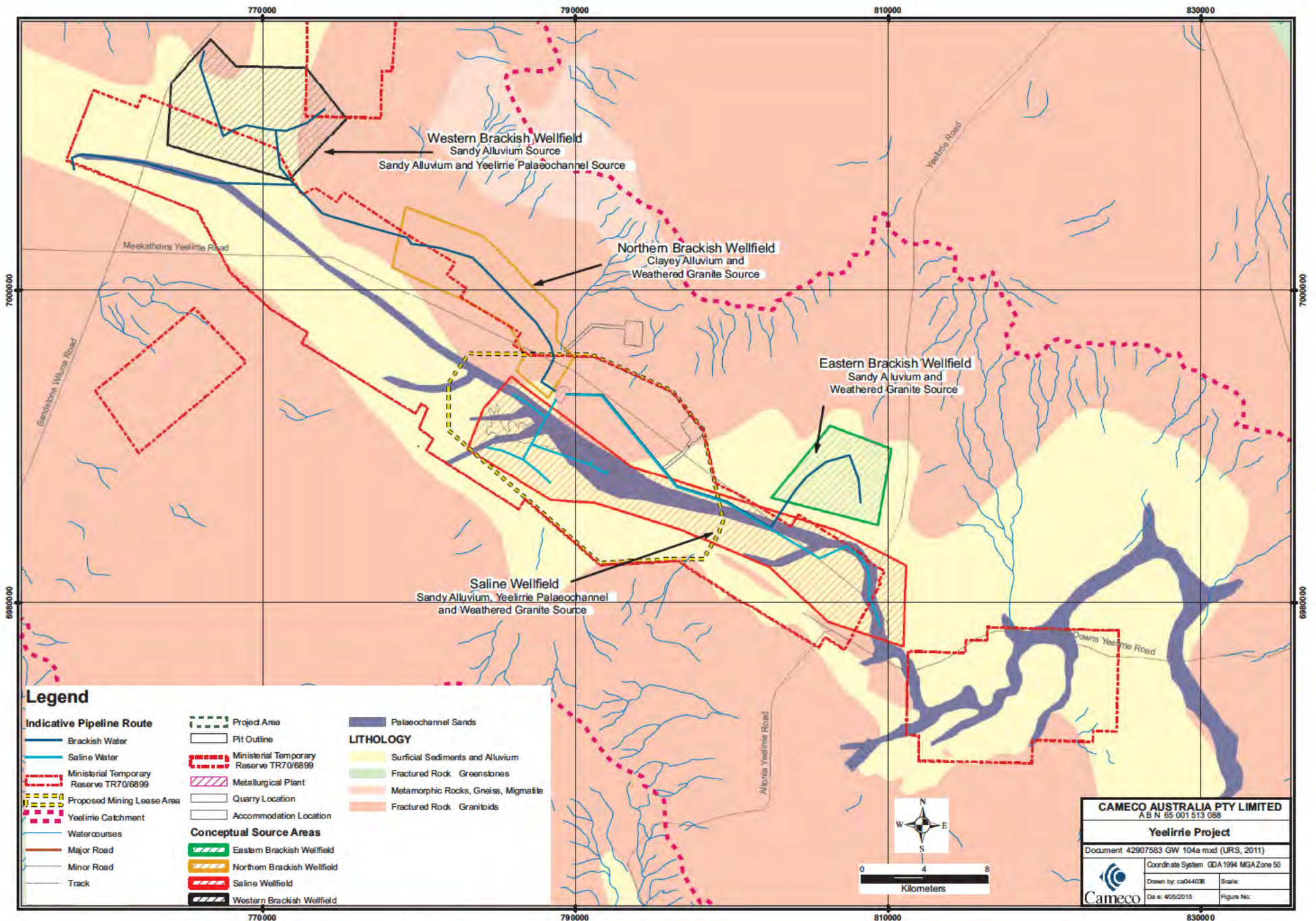


Figure 5.3 Proposed groundwater source areas

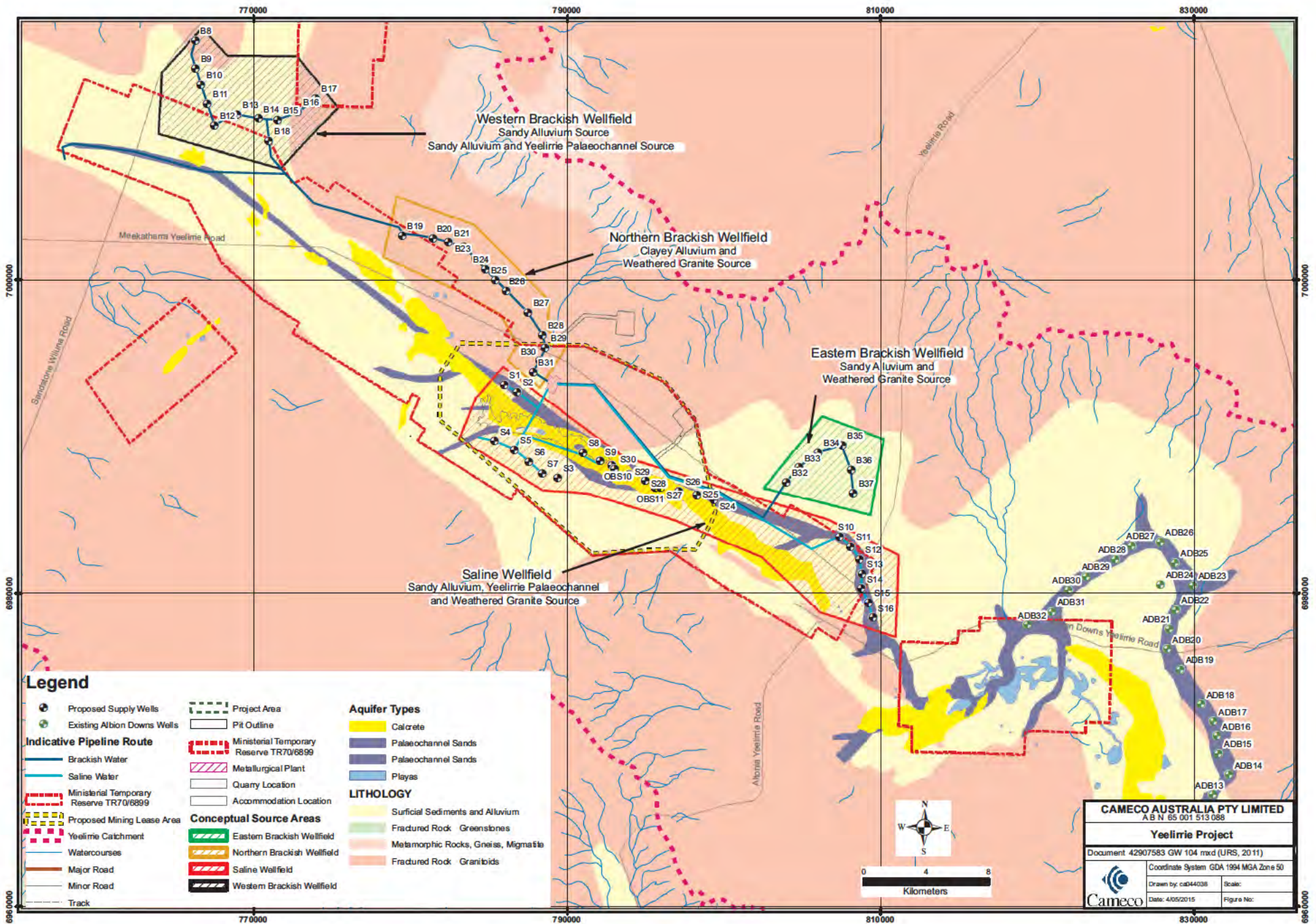


Figure 5.4 Locations of proposed groundwater supply wells

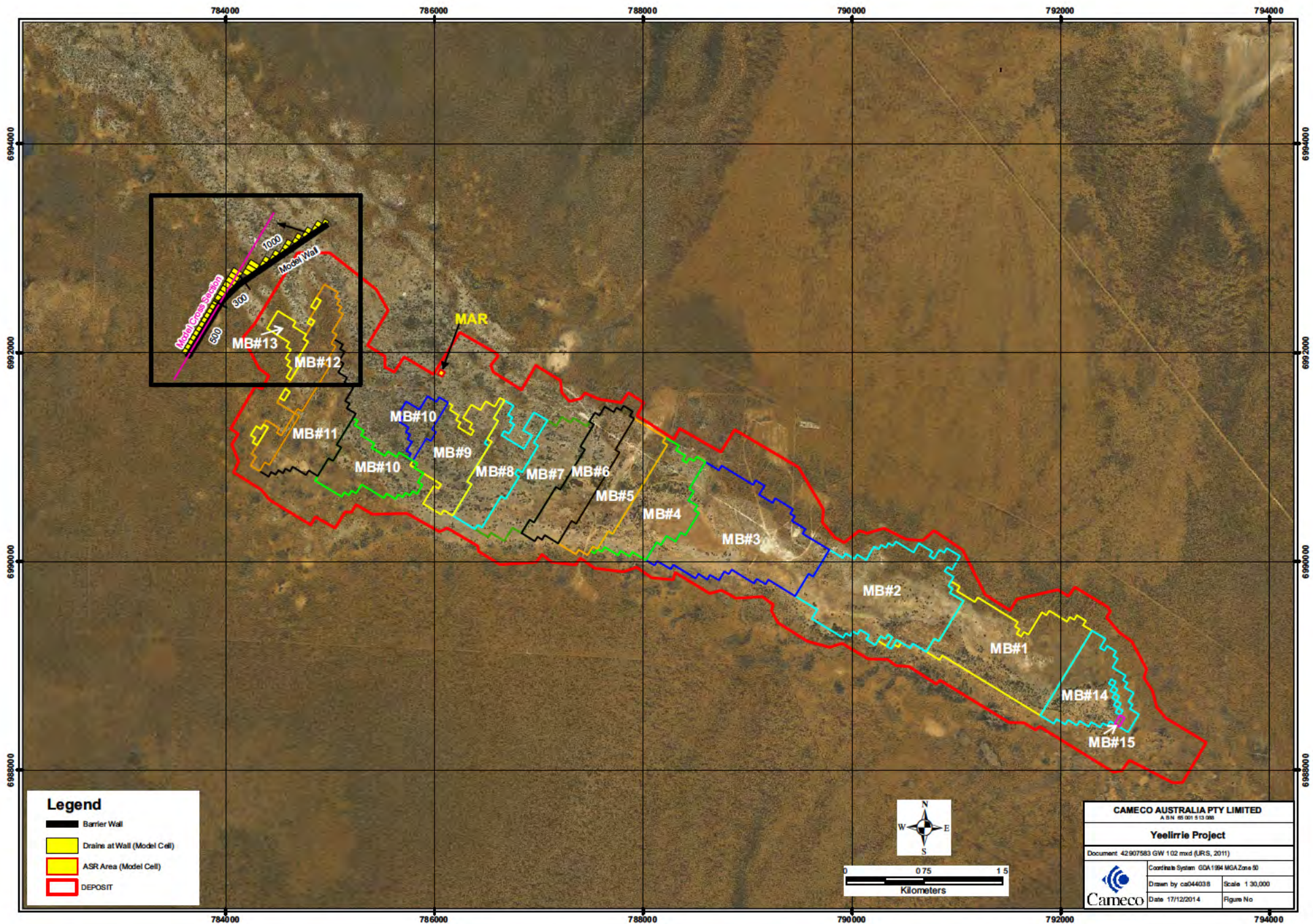


Figure 5.5 Conceptual location of MAR system and barrier wall

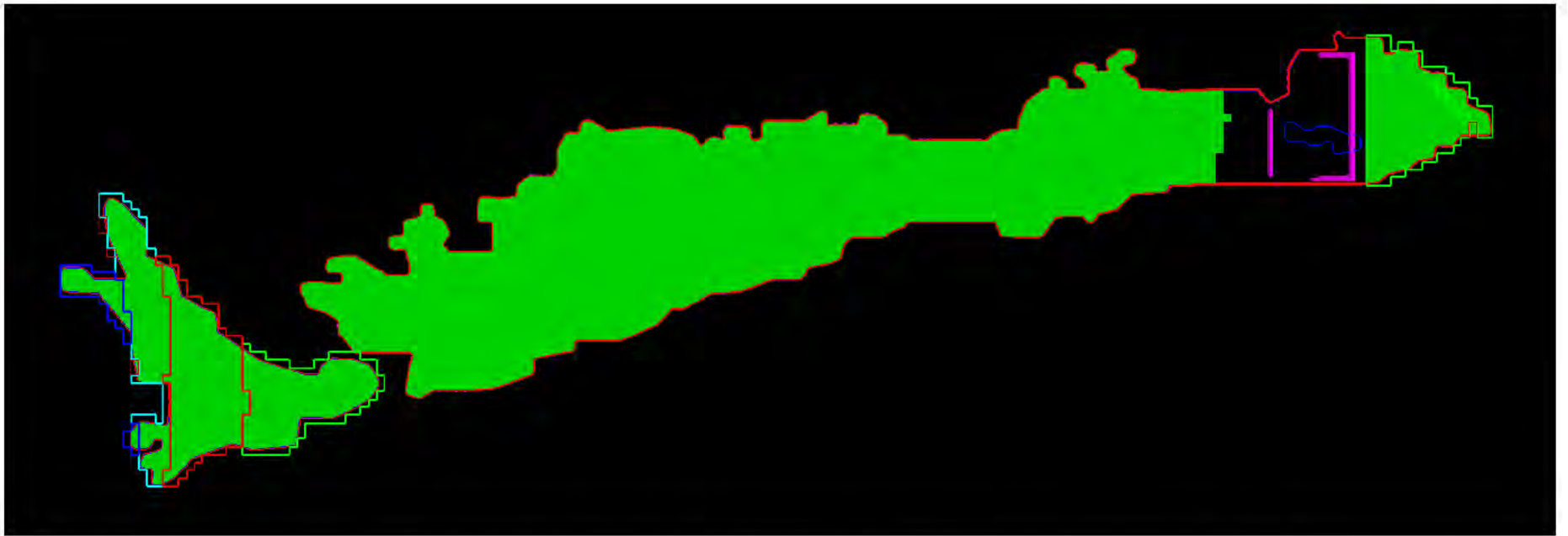


Figure 5.6a Sequence of mining, tailings deposition and mine pit backfilling at Year 1 mining (green area is to be mined)



Figure 5.6b Sequence of mining, tailings deposition and mine pit backfilling at Year 2 Mining



Figure 5.6c Sequence of mining, tailings deposition and mine pit backfilling at year 3 mining (year 3 is the first year of tailings deposited. Tailings in light brown.)



Figure 5.6d Sequence of mining, tailings deposition (in greenish yellow) and mine pit backfilling at year 4 (tailings deposition in its 2nd year)



Figure 5.6e Sequence of mining, tailings deposition and mine pit backfilling at Year 5 (tailings deposition in its 3rd year)

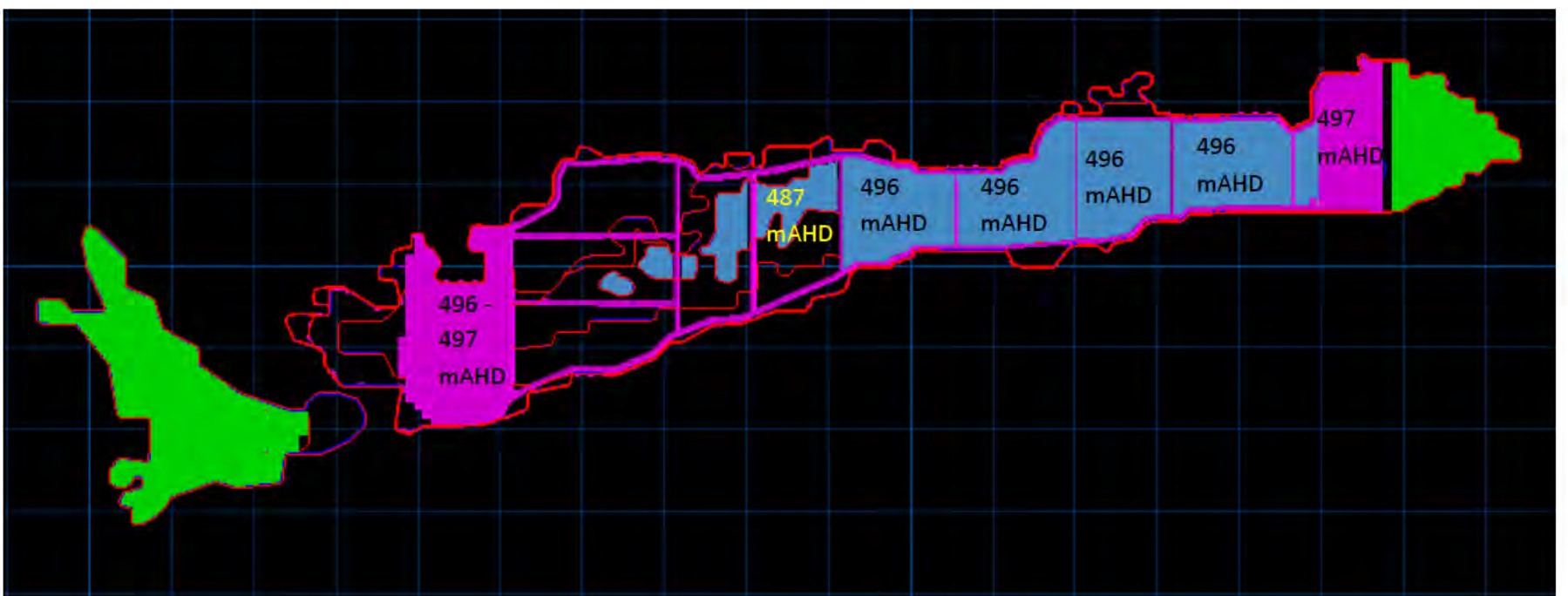


Figure 5.6f Sequence of mining, tailings deposition and mine pit backfilling at the end of year 10. Pink shows waste backfill into pit or tailings cover.

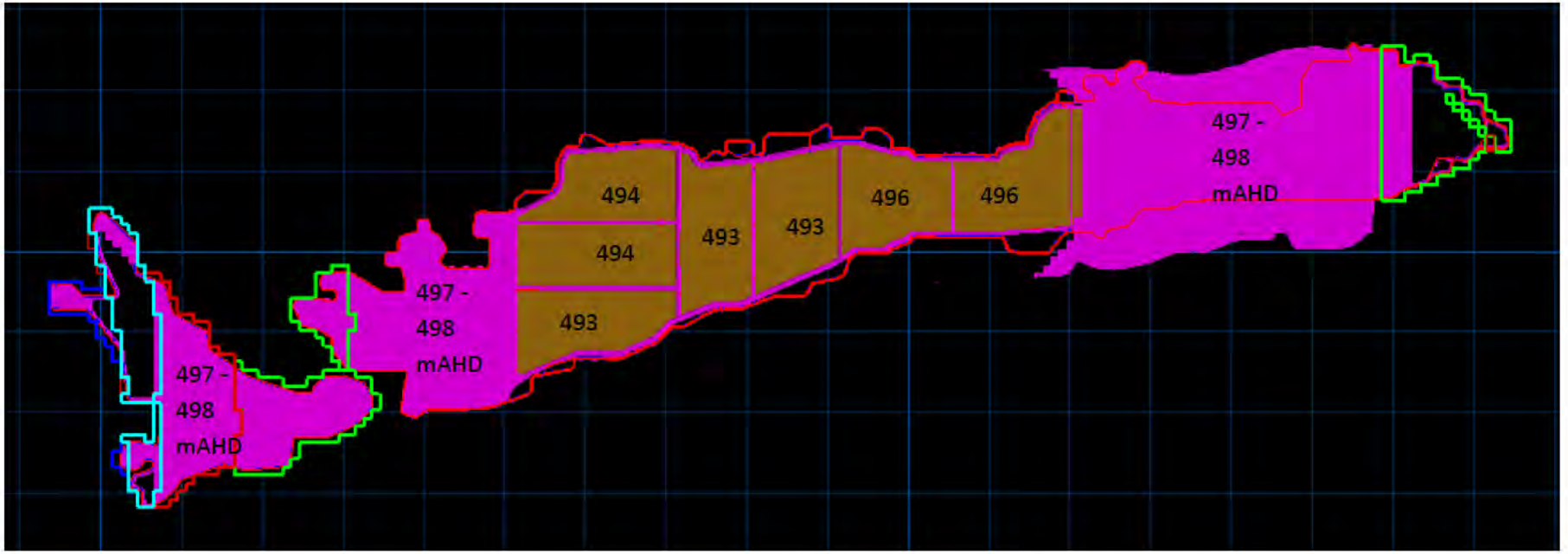


Figure 5.6g Sequence of mining, tailings deposition and mine pit backfilling at mining year 15 (Mining Complete – milling on going - green shows waste backfill into the pit) (green and blue lines showing outlines of mining in years 10 to 15)

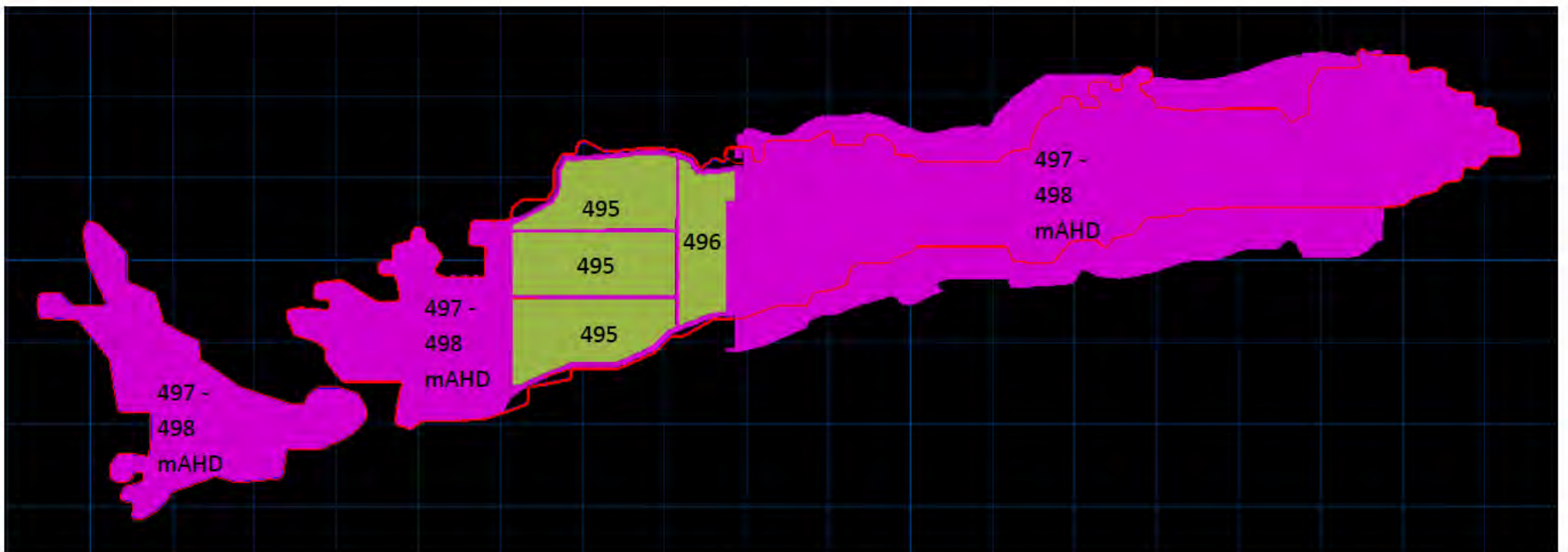


Figure 5.6h Sequence of mining, tailings deposition and mine pit backfilling at Year 20 (Milling completed around years 17 /18 and mining completed around yr 15 – Tailings deposition concluded with milling. Waste into pit voids and covering tailings ongoing)

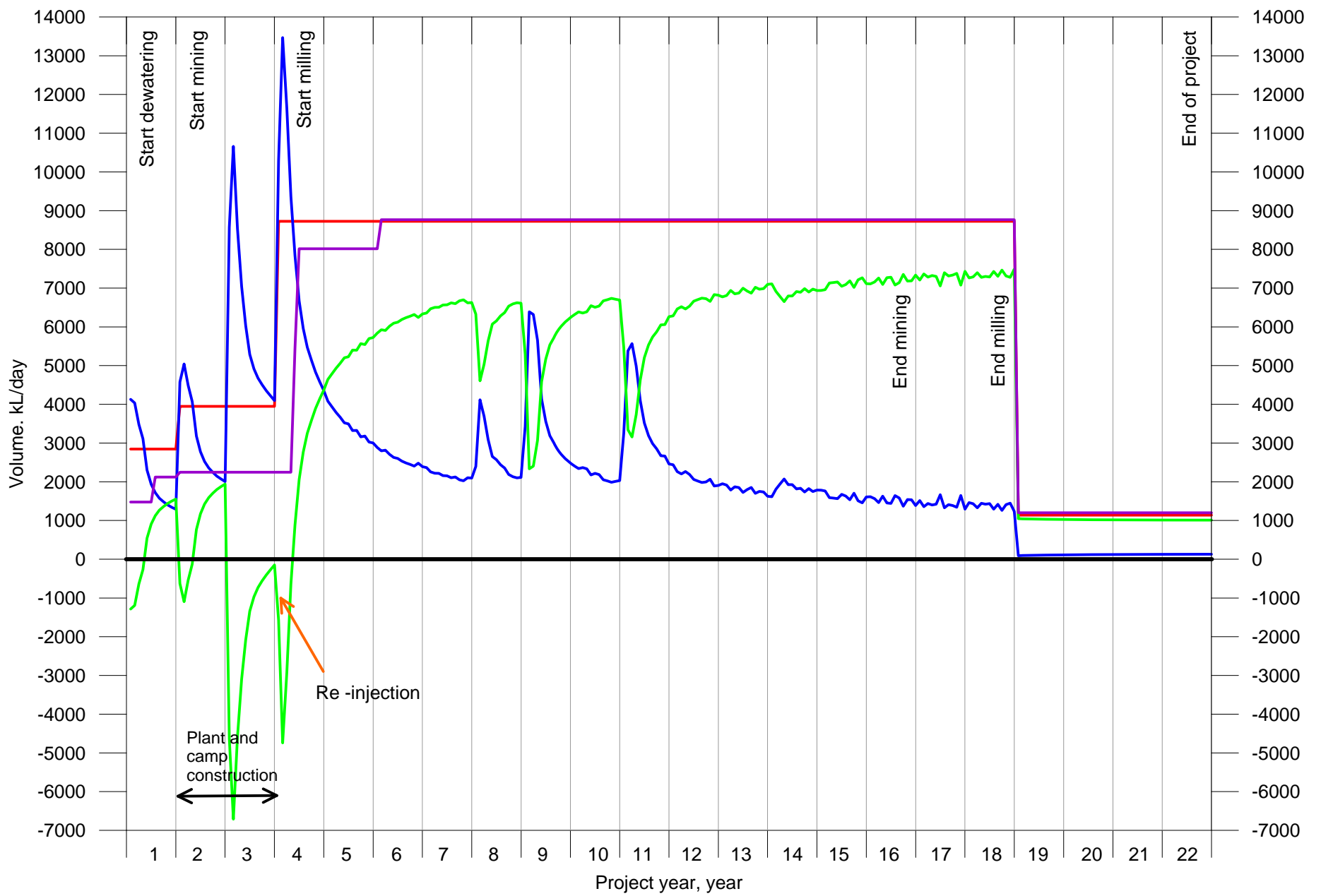


Figure 5.7 Simulated demands and supply over time

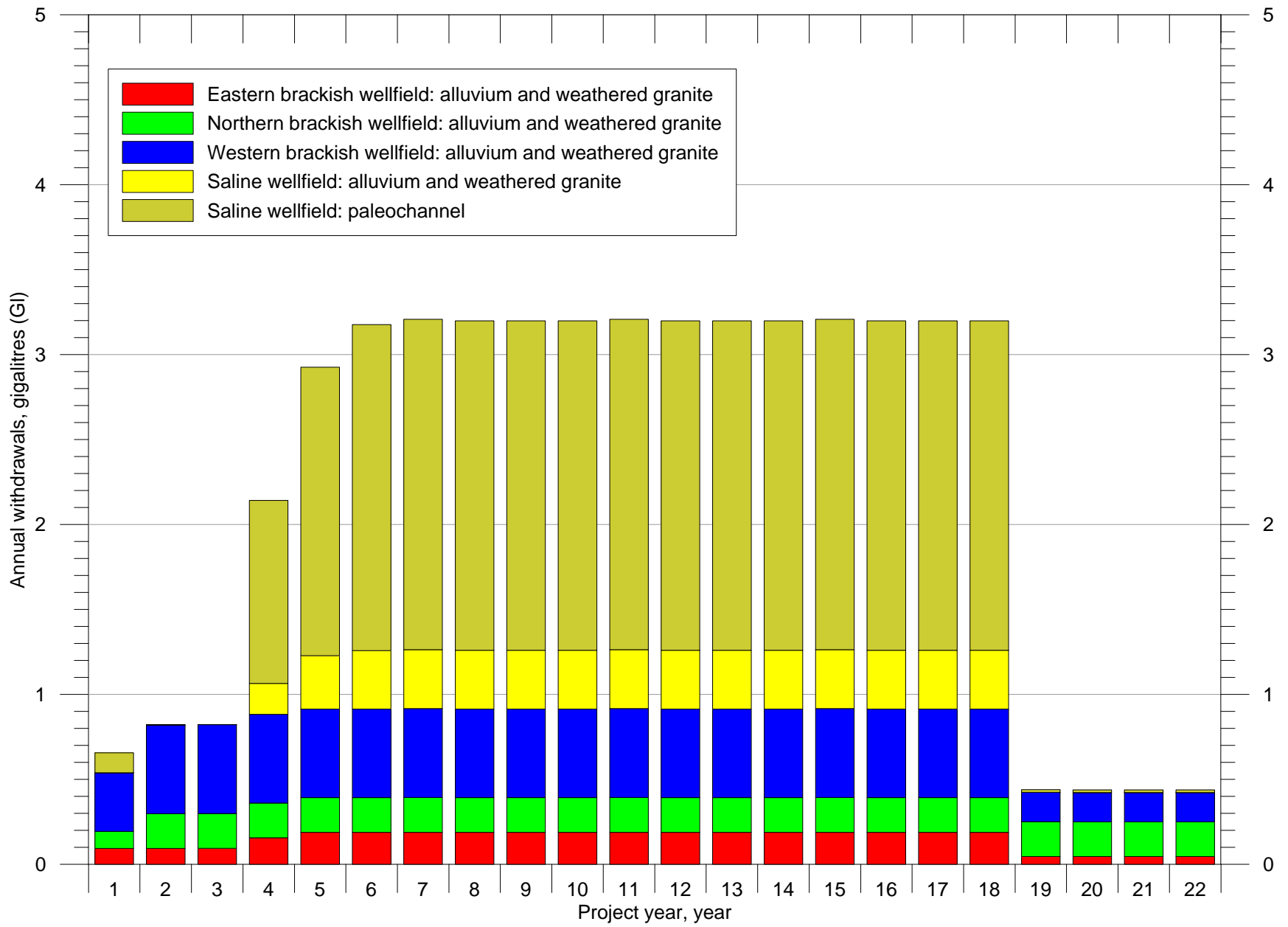


Figure 5.8 Modelled annual withdrawals by wellfield

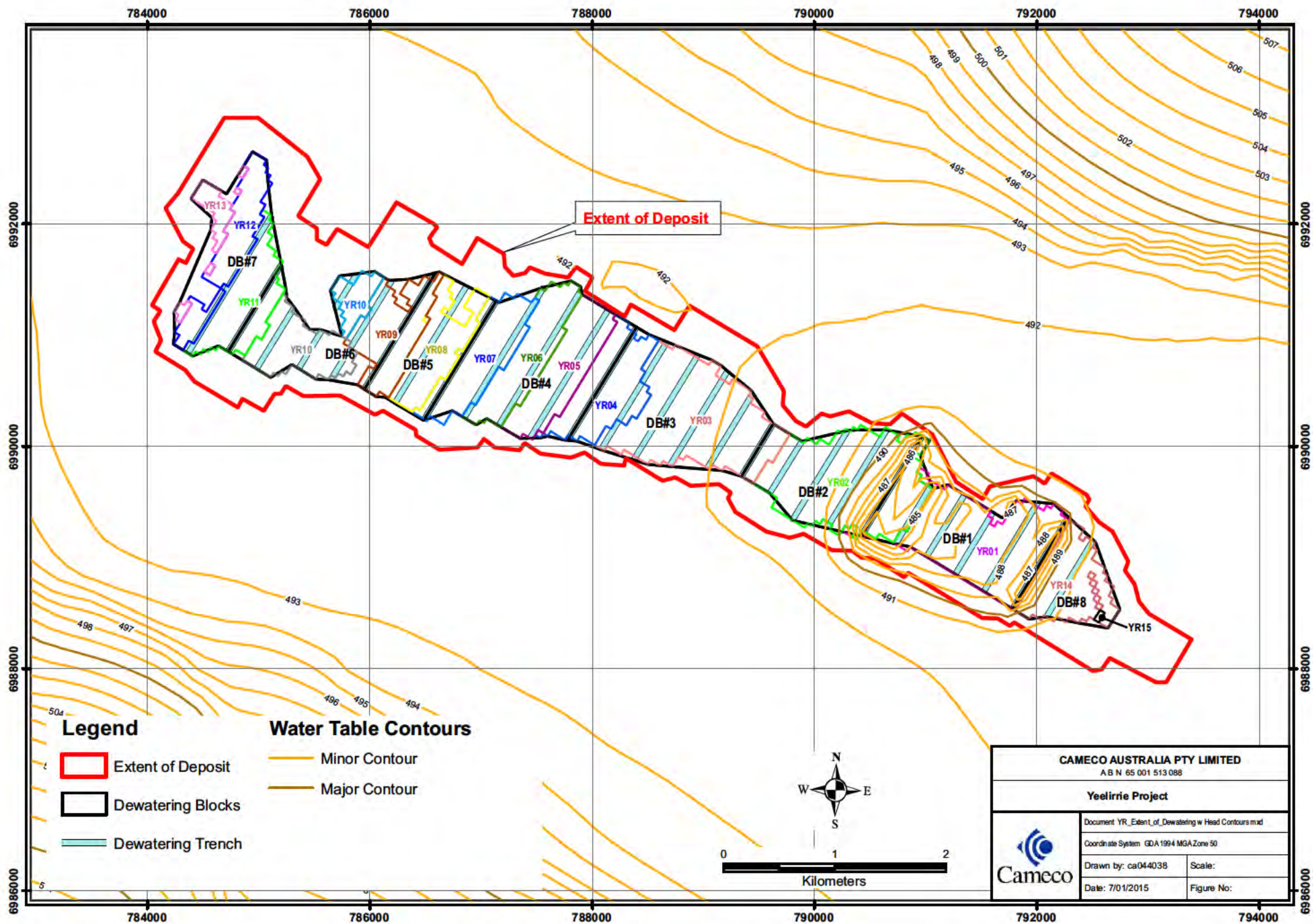


Figure 5.9a Water table elevation in pit area after dewatering DB#1

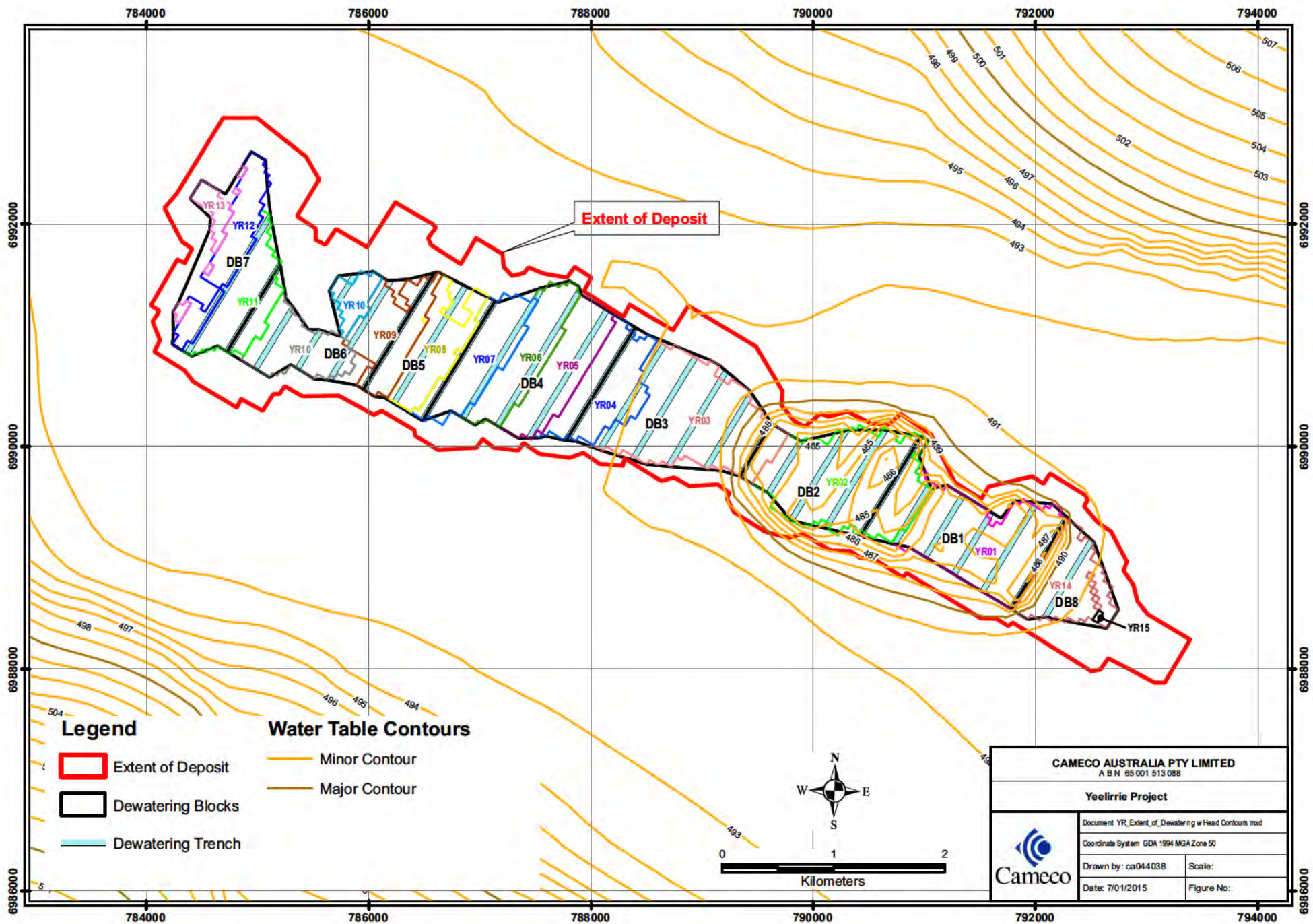


Figure 5.9b Water table elevation in pit area after dewatering DB#2

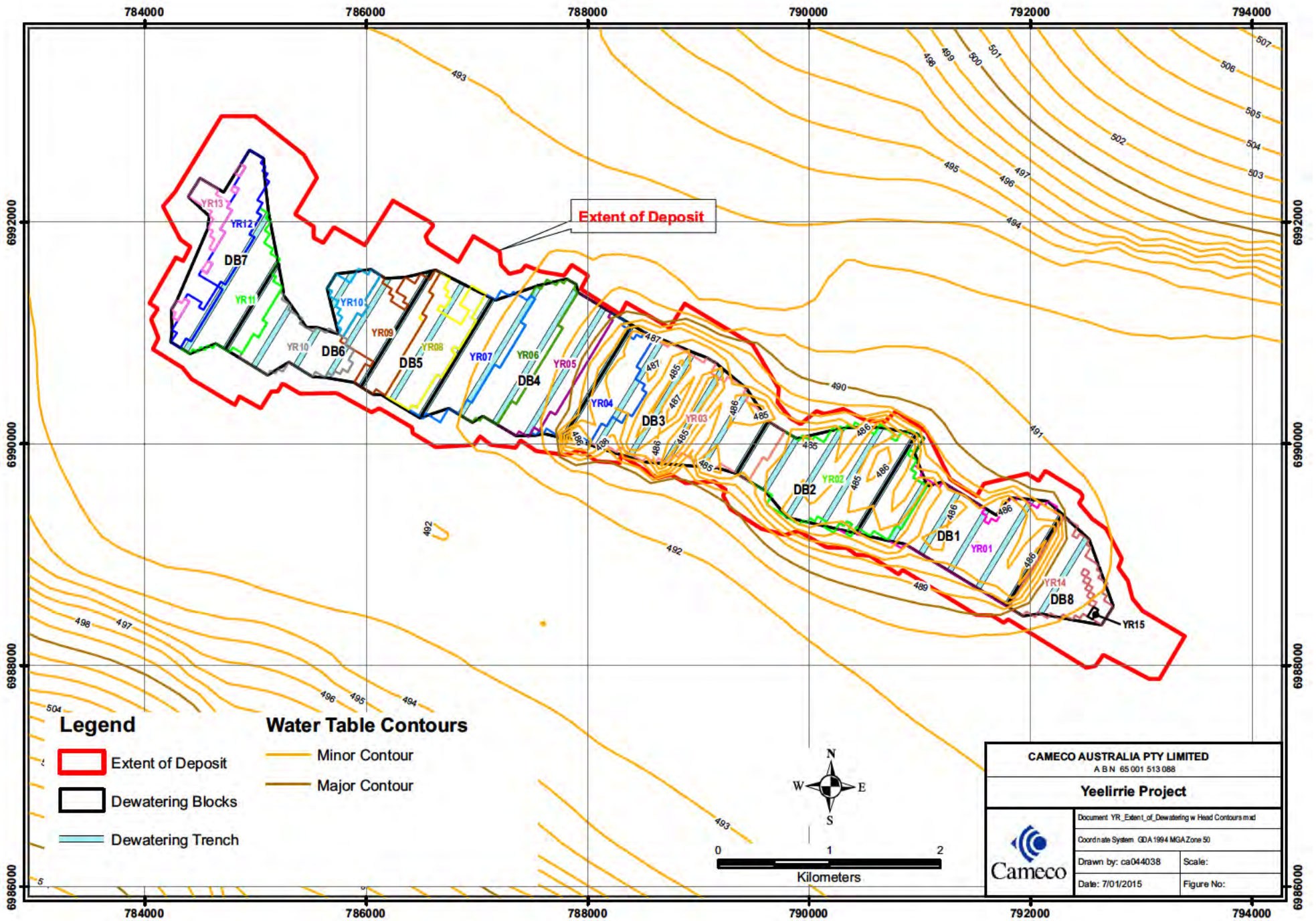


Figure 5.9c Water table elevation in pit area after dewatering DB#3

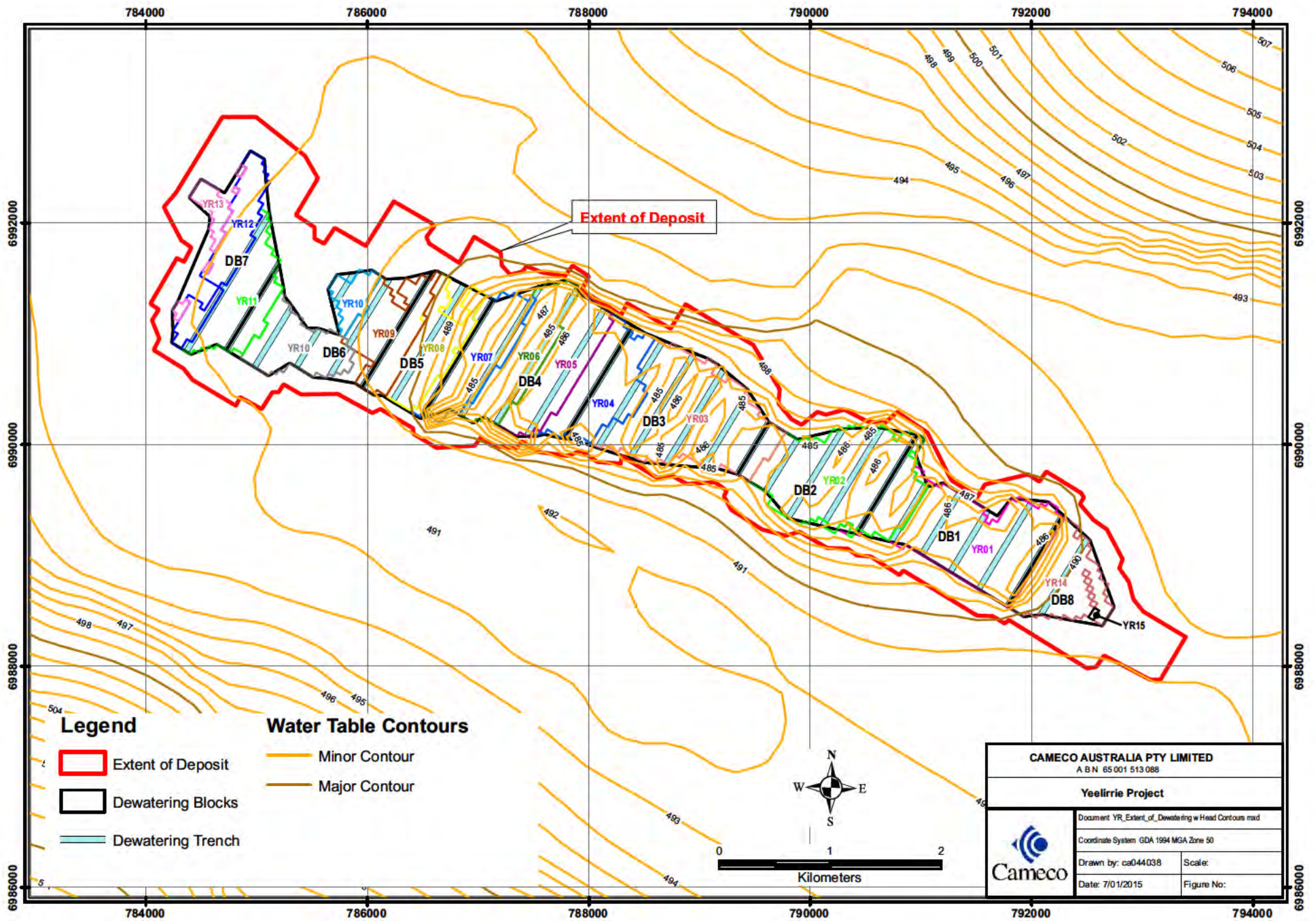


Figure 5.9d Water table elevation in pit area after dewatering DB#4

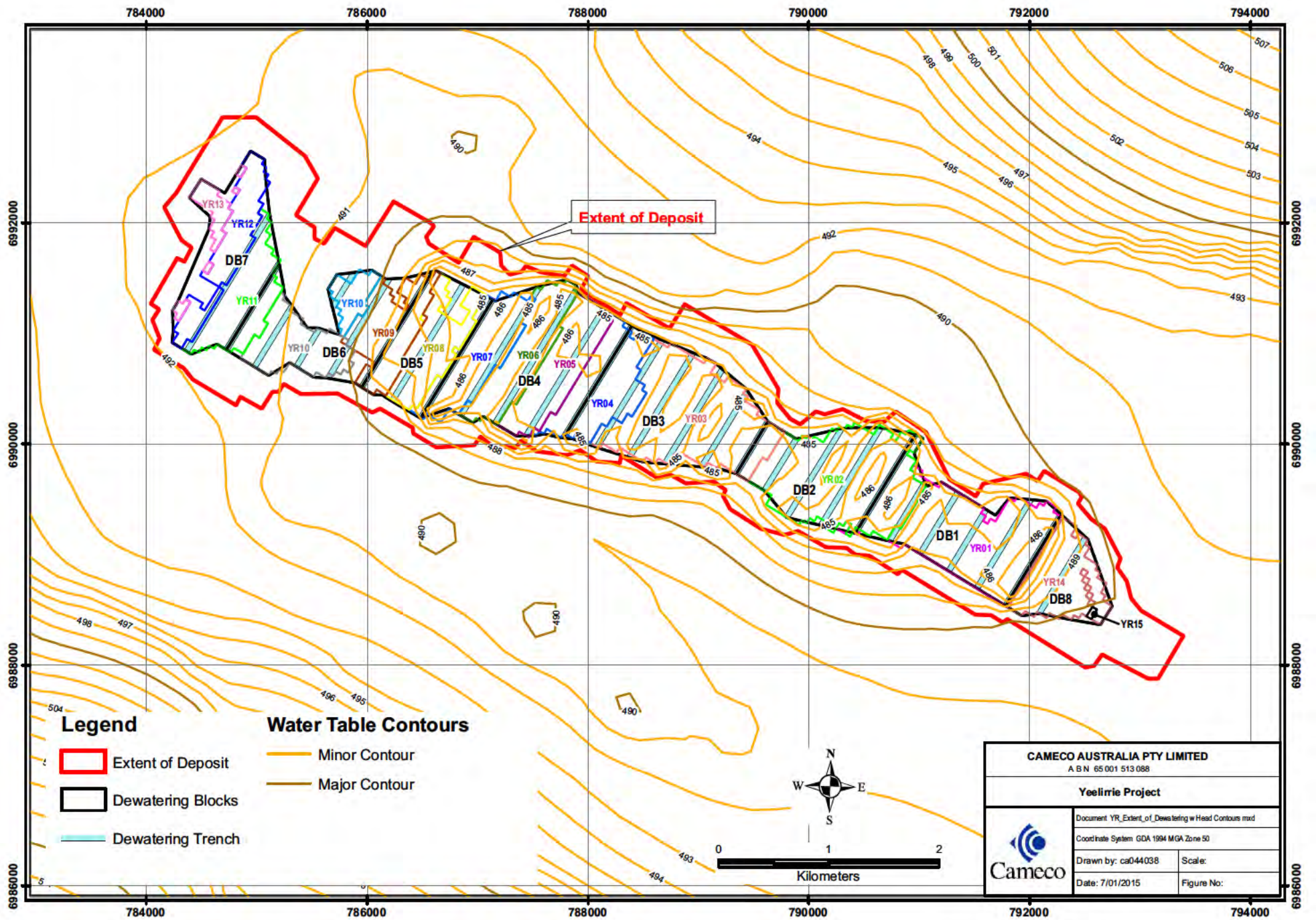


Figure 5.9e Water table elevation in pit area after dewatering DB#5

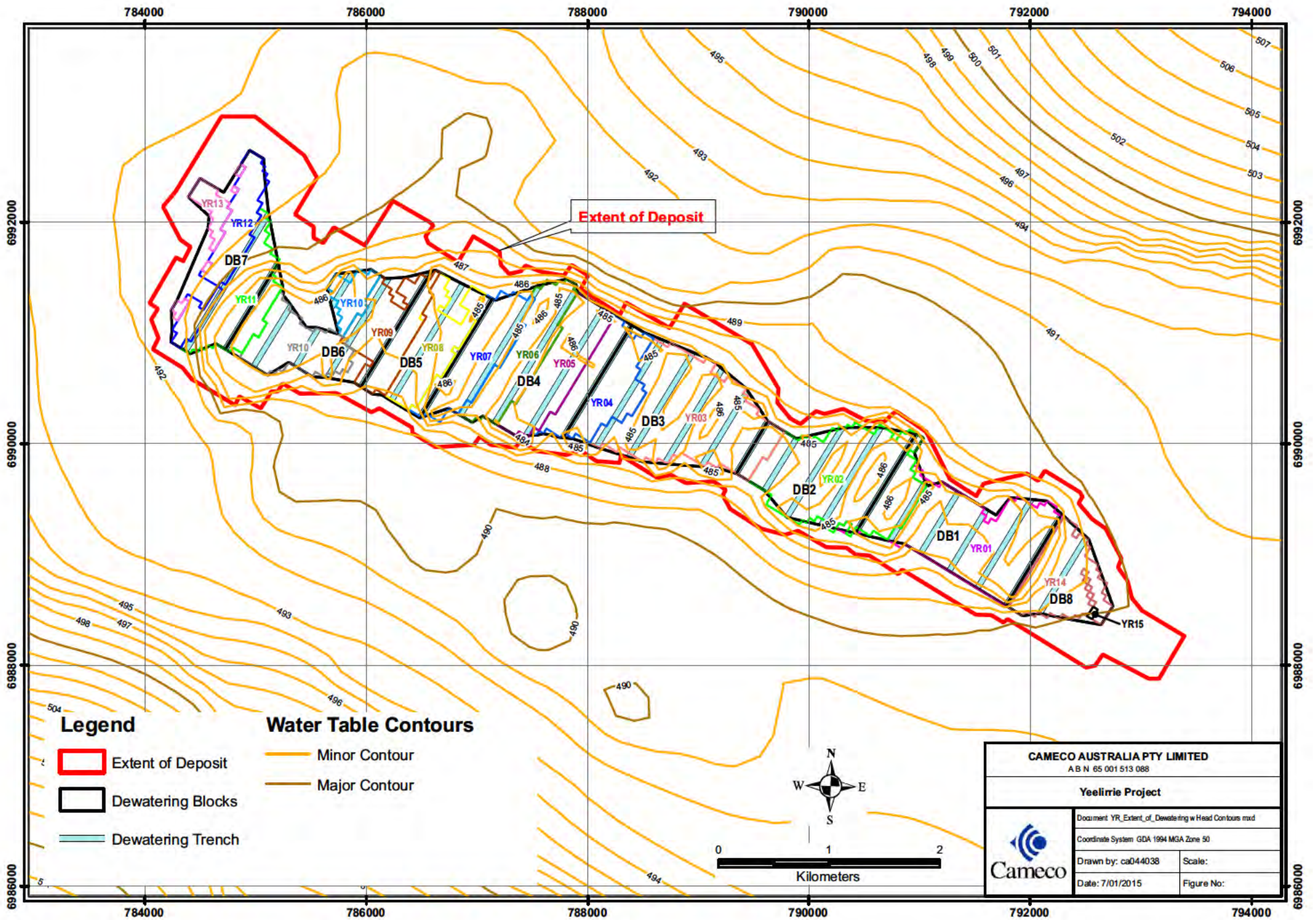


Figure 5.9f Water table elevation in pit area after dewatering DB#6

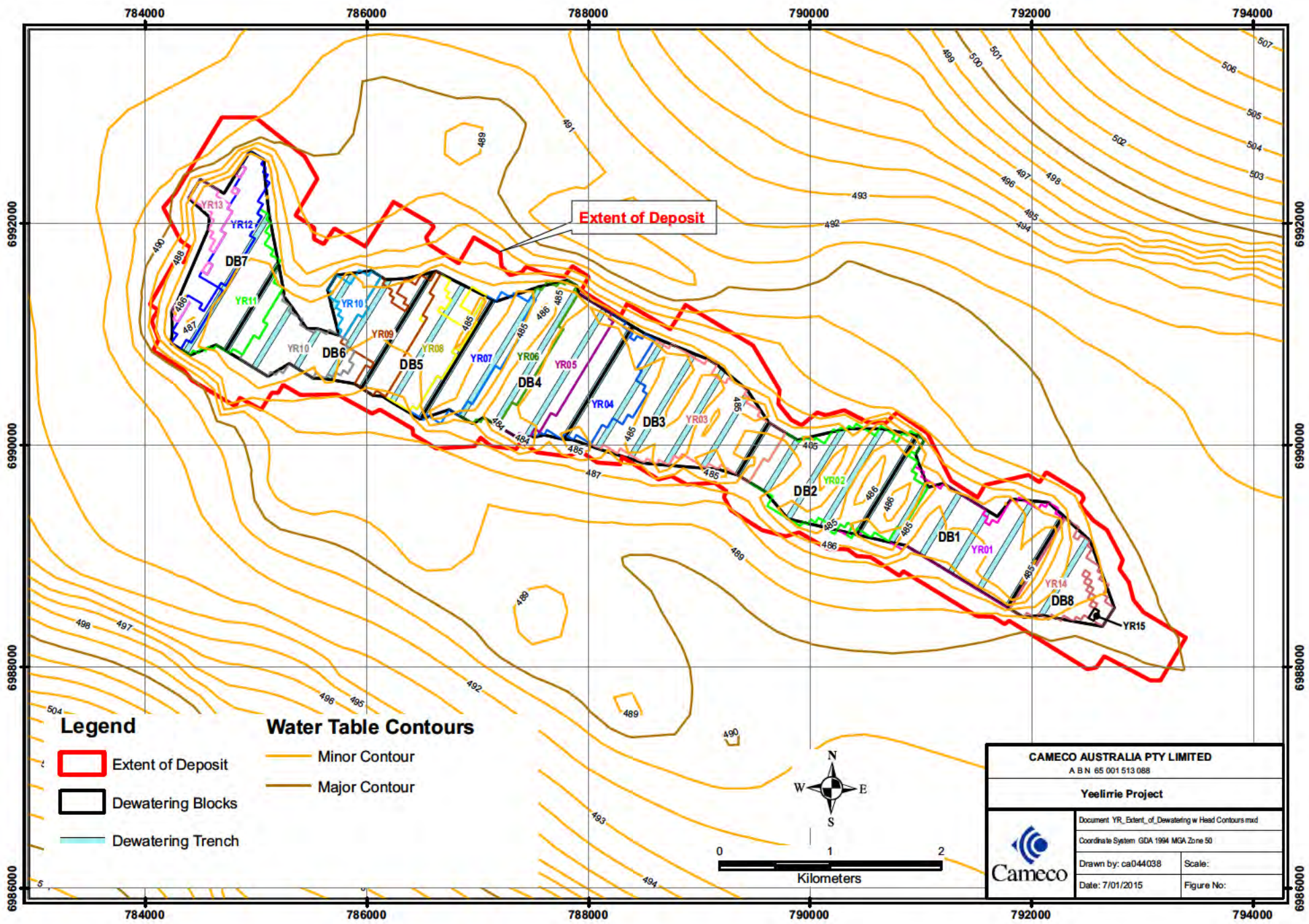


Figure 5.11g Water table elevation in pit area after dewatering DB#7

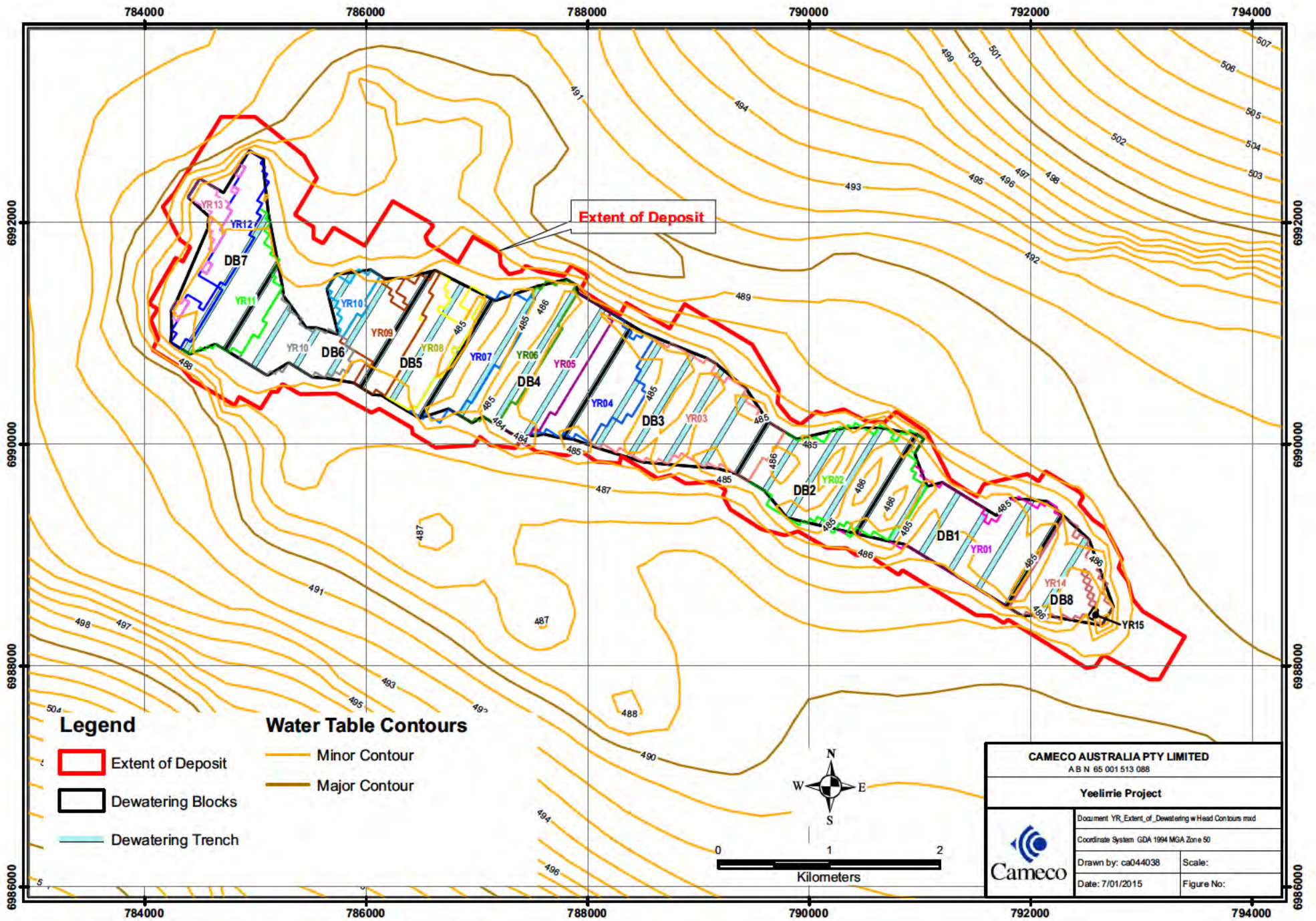


Figure 5.9h Water table elevation in pit area after dewatering DB#8

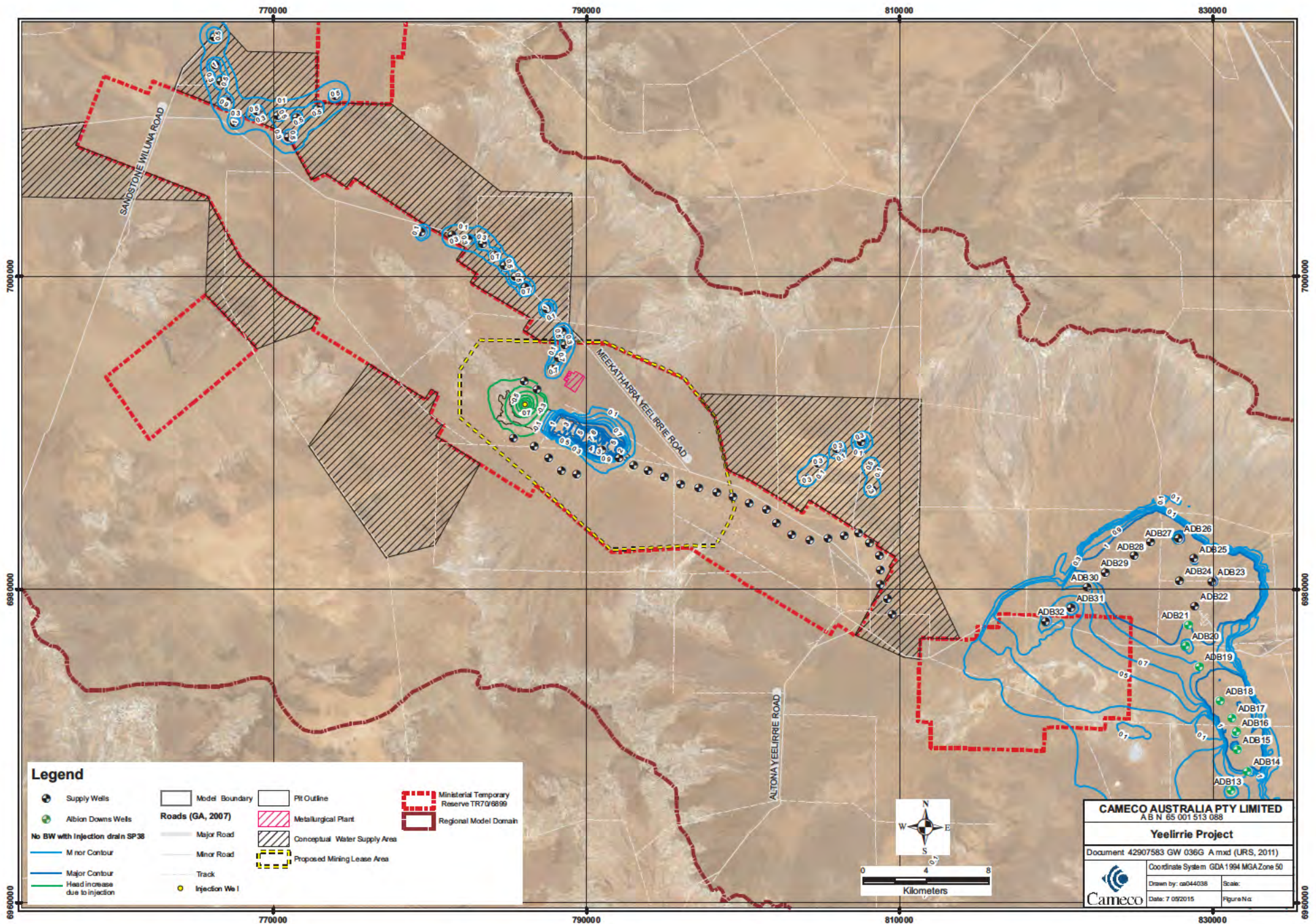


Figure 5.10a Predicted water table drawdown early in project year 3

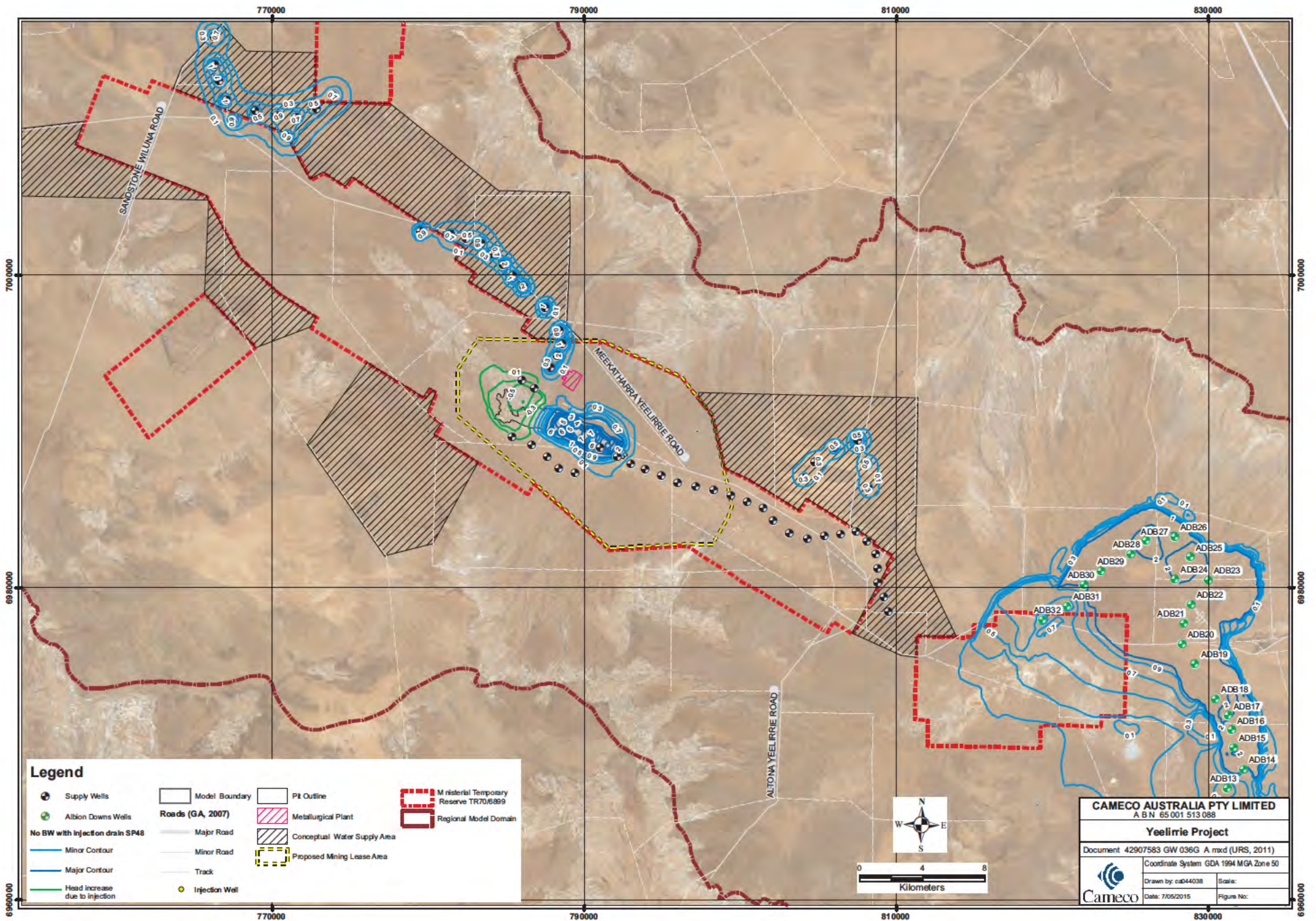


Figure 5.10b Predicted water table drawdown at end of project year 3

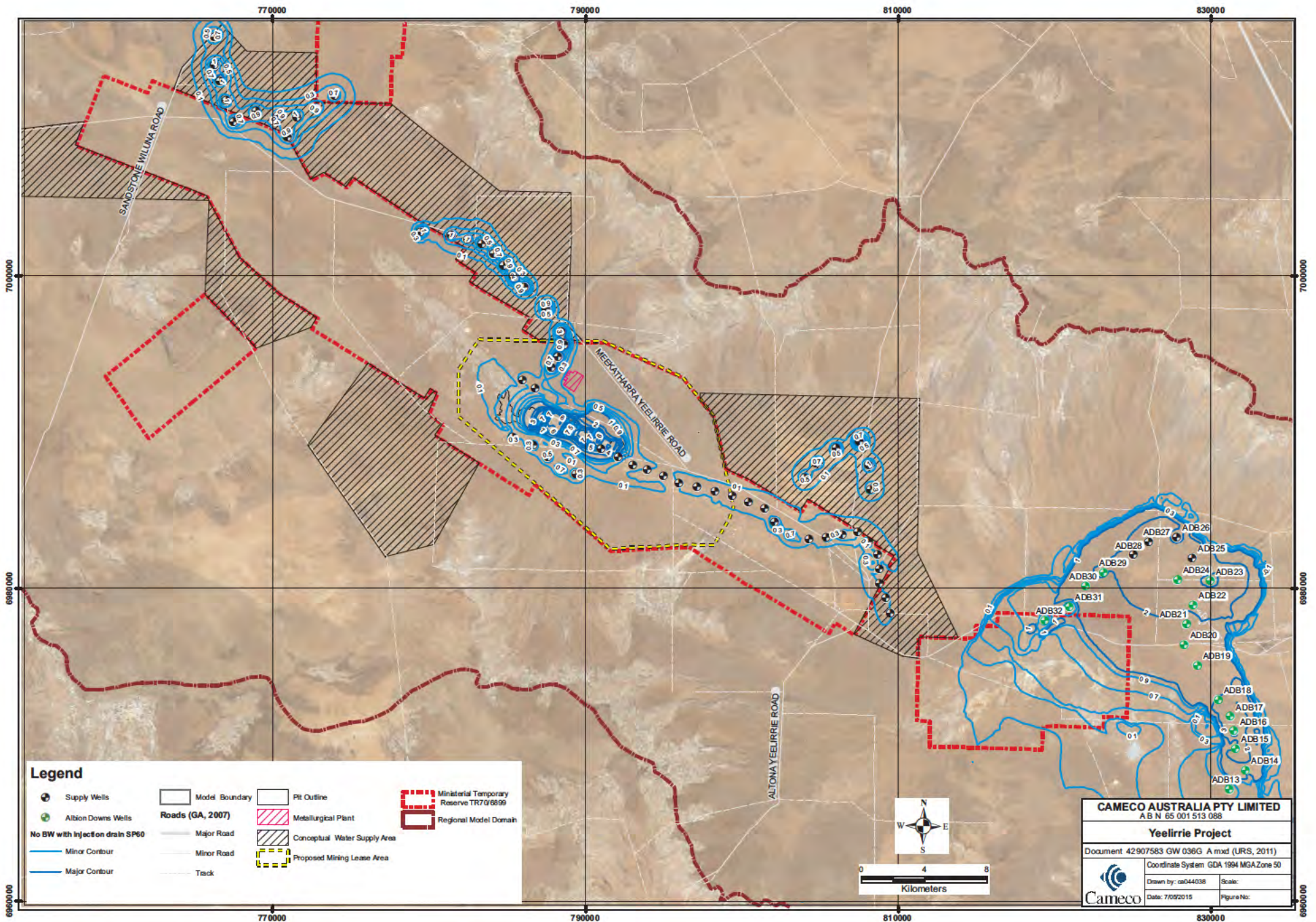


Figure 5.10c Predicted water table drawdown at end of project year 4

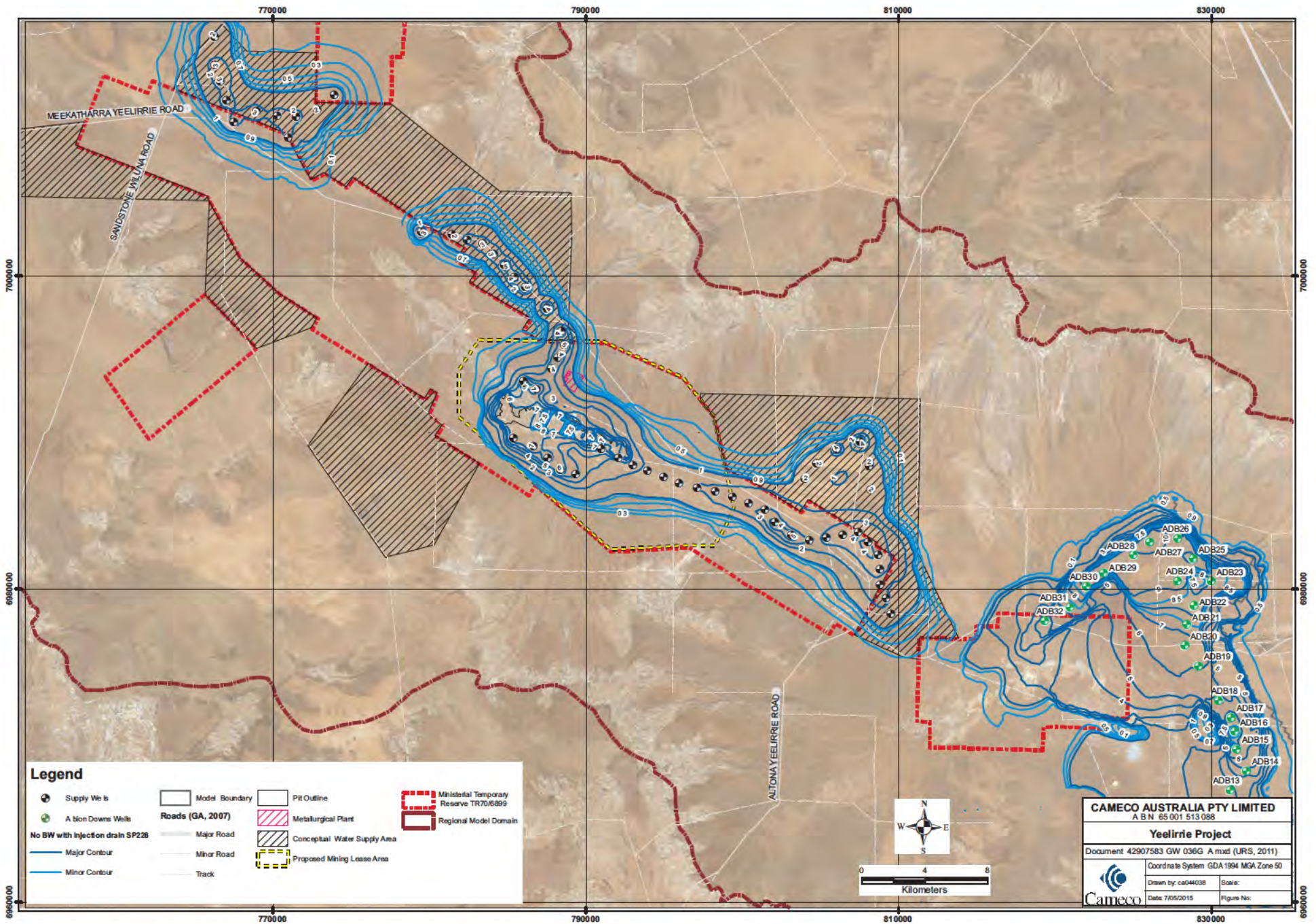


Fig 5.10d Predicted water table drawdown at end of milling (end project year 18)

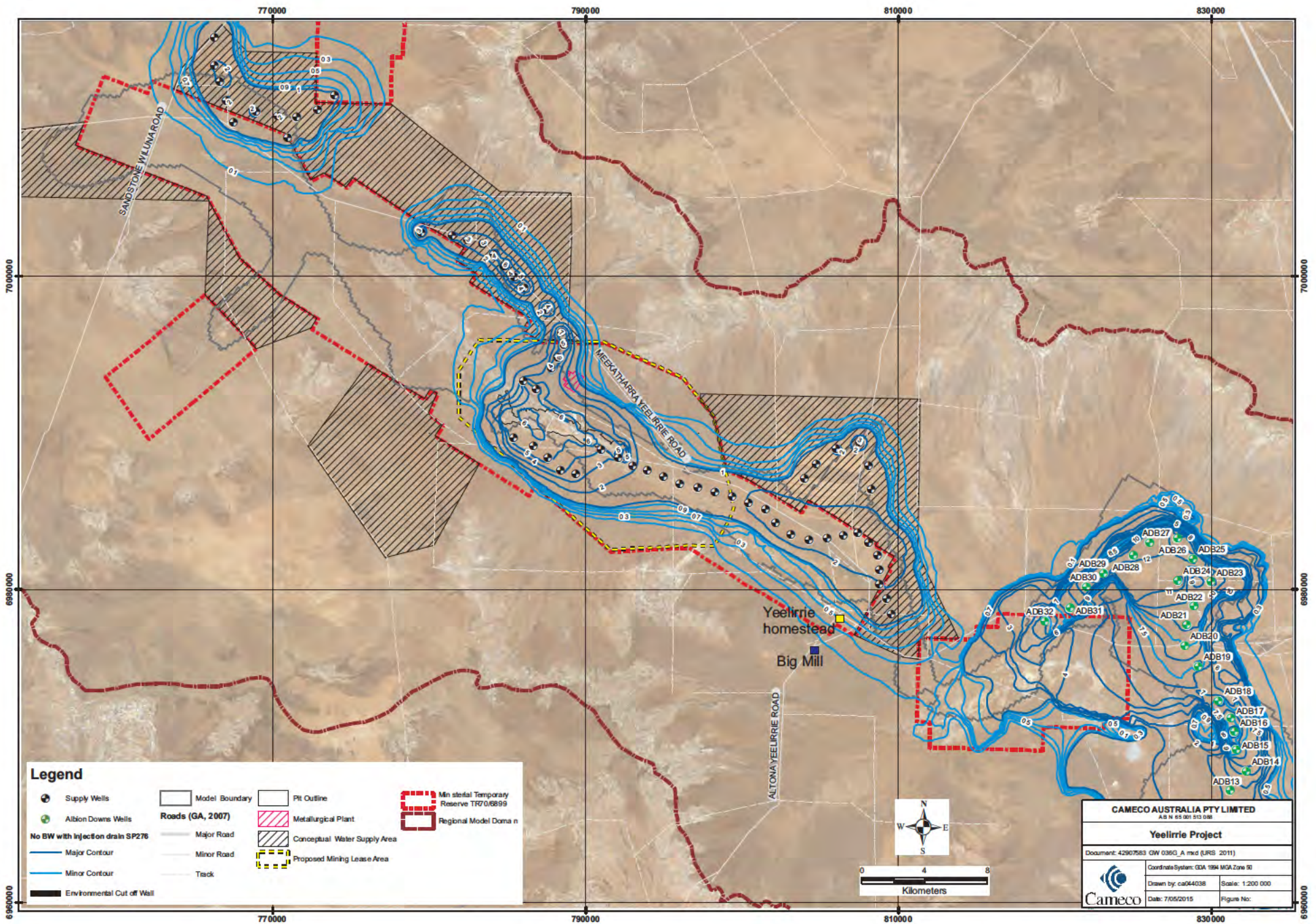


Figure 5.10e Predicted water table drawdown at end of project (end project year 22)

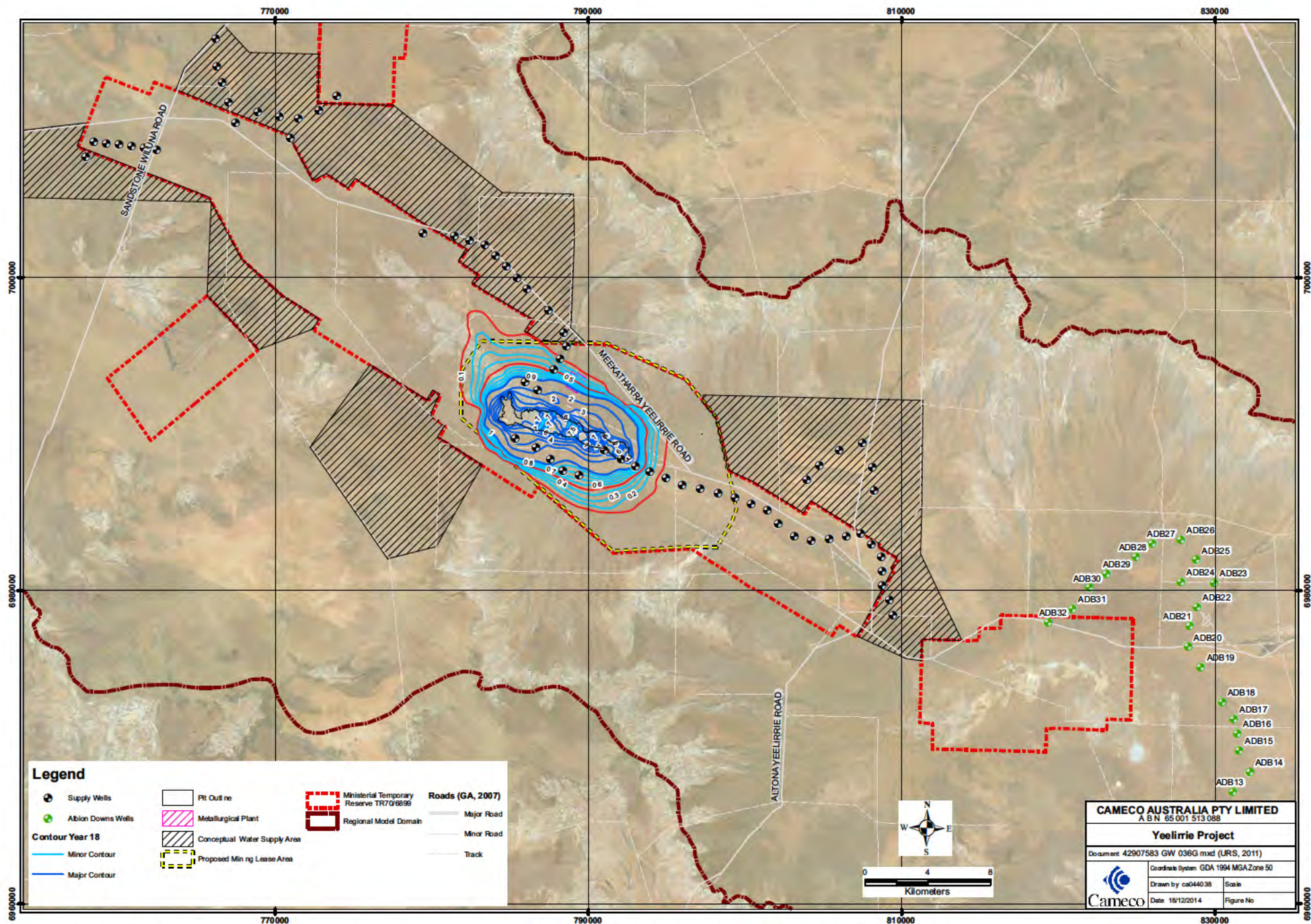


Figure 5.11a Predicted drawdown caused by pit dewatering only, at end of milling (project year 18)

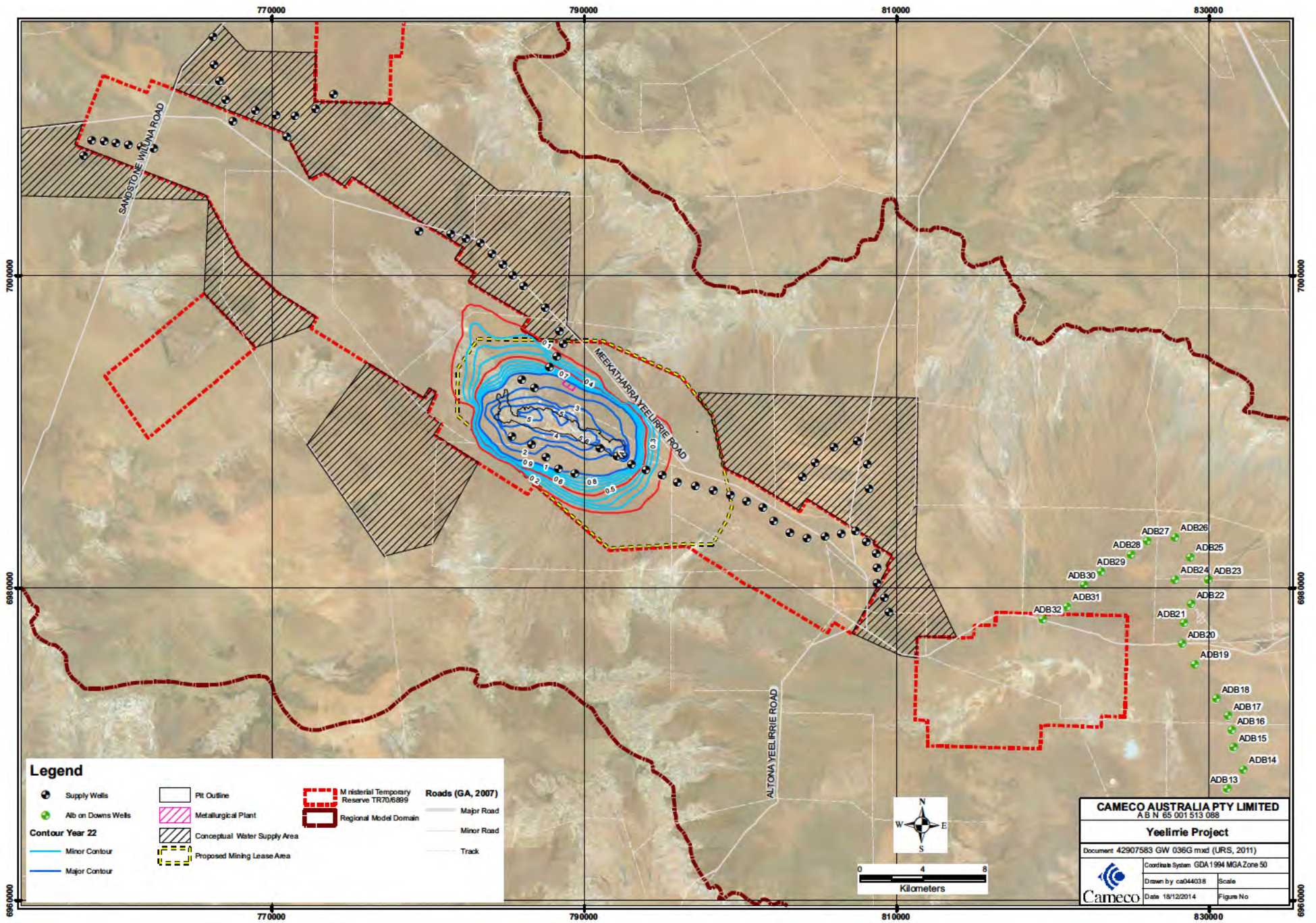


Figure 5.11b Predicted drawdown caused by pit dewatering only, at end of project (end project year 22)

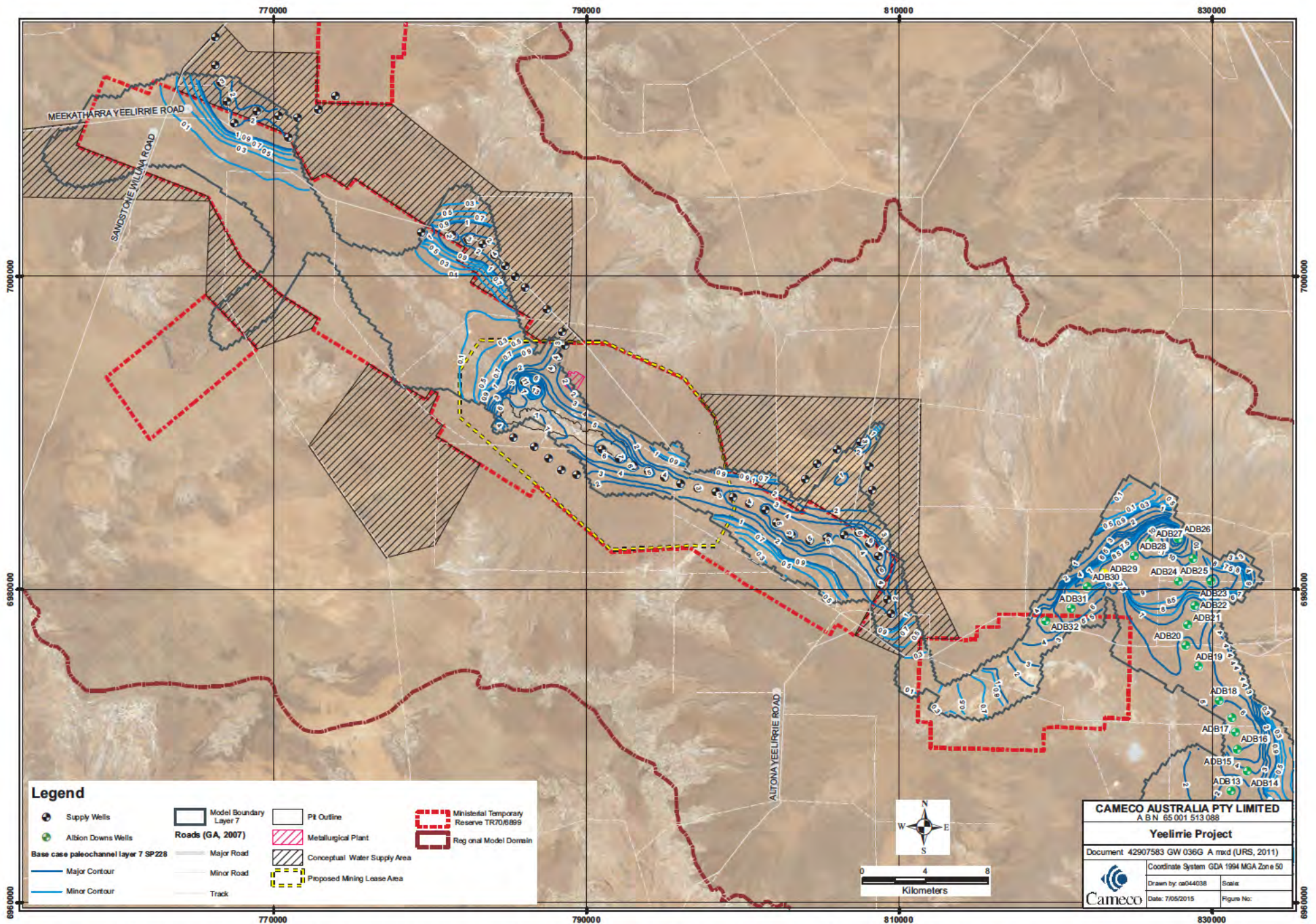
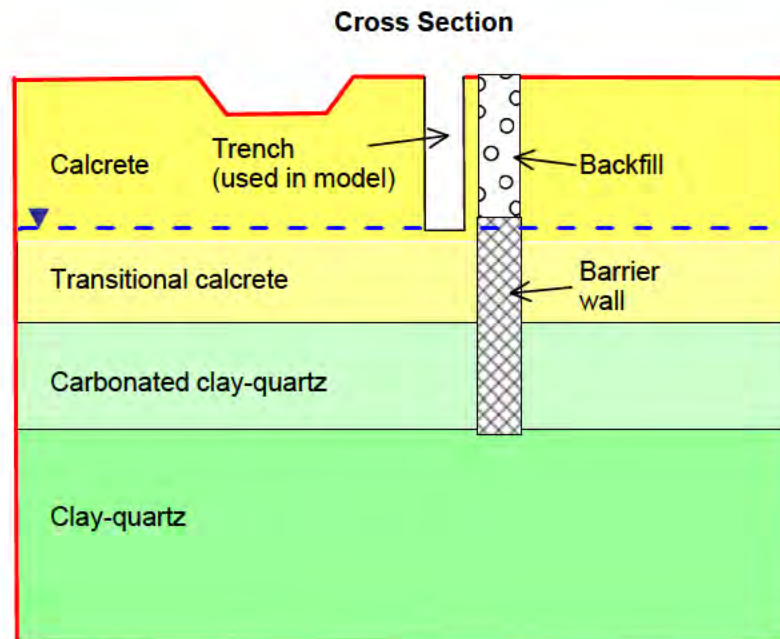
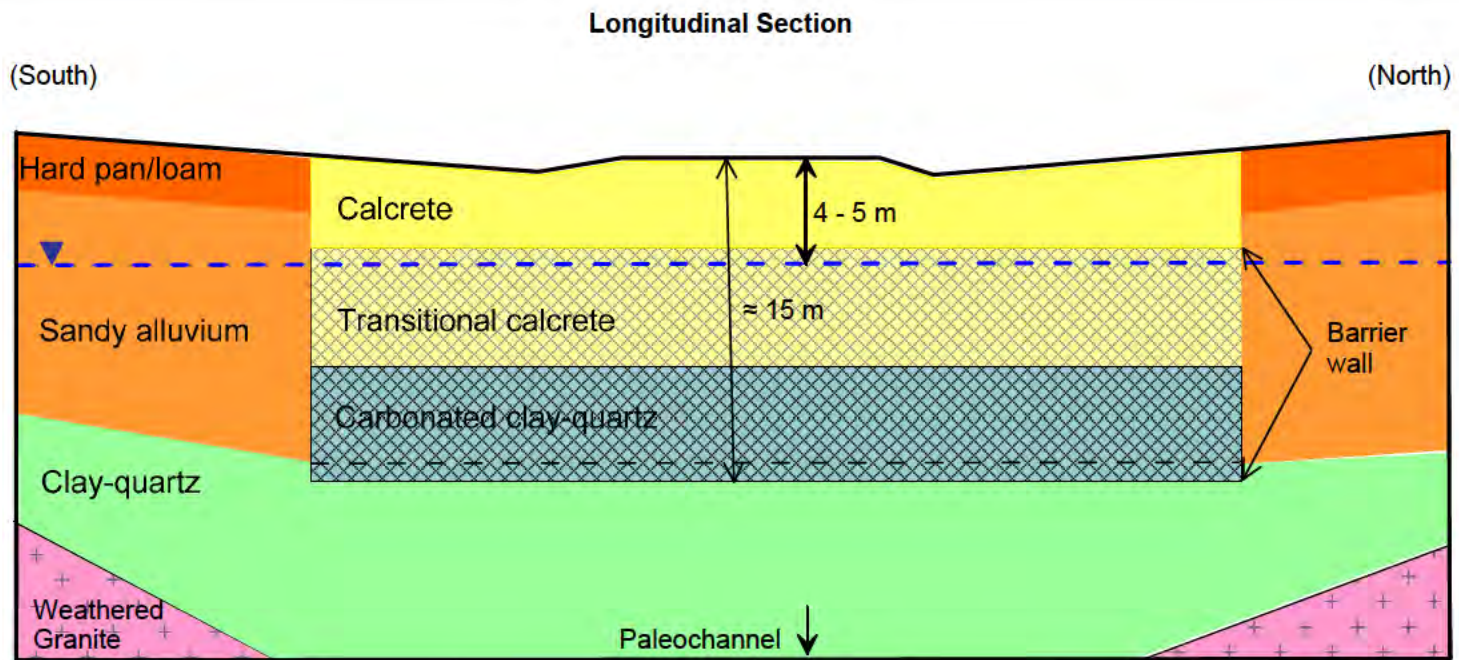


Figure 5.12 Predicted water level drawdown in paleochannel aquifer (model layer 7), after end of milling



(after URS, 2011)

Figure 5.13 Schematic illustration of conceptual barrier wall design

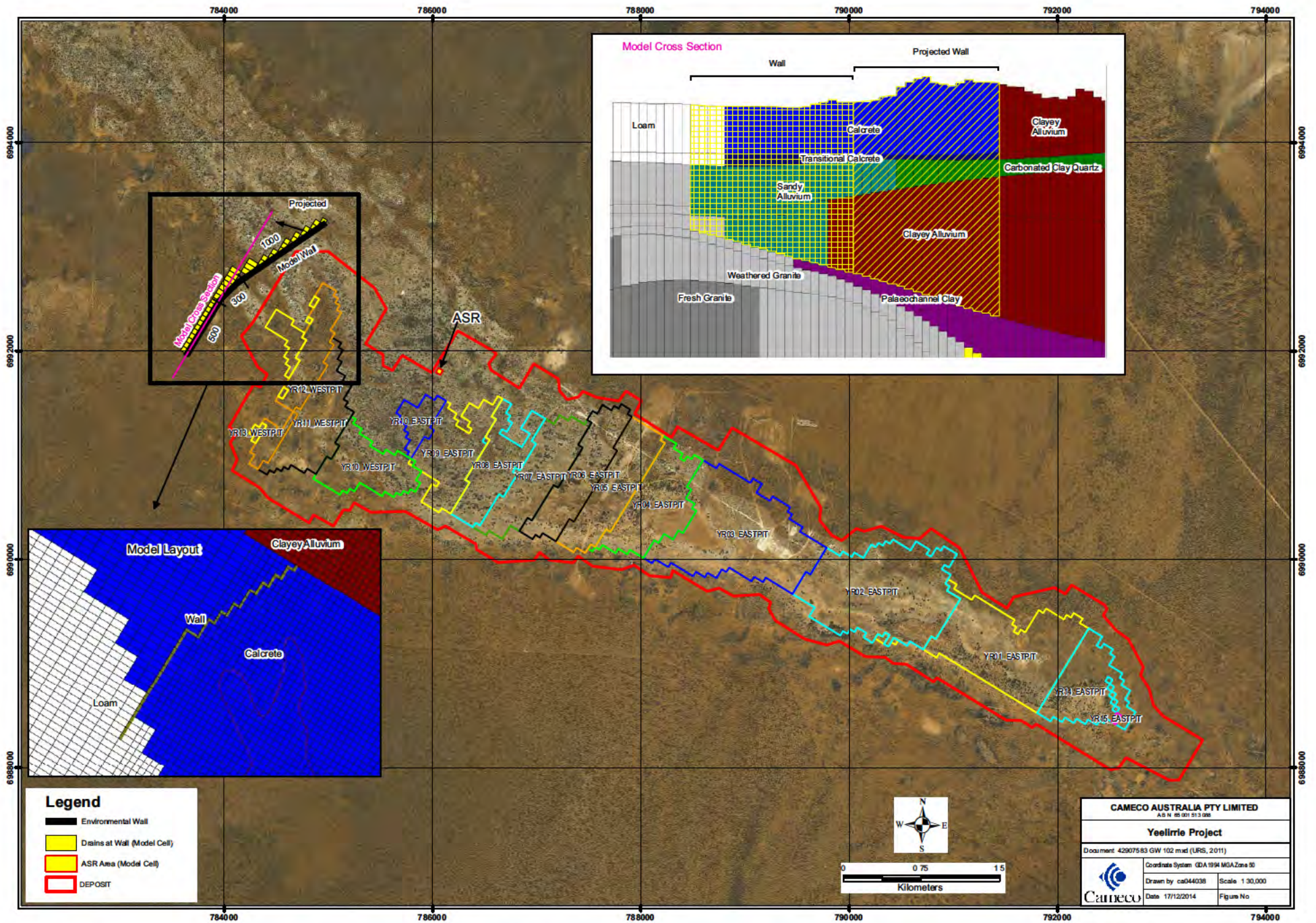


Figure 5.14 Illustration of representation of barrier wall in flow model

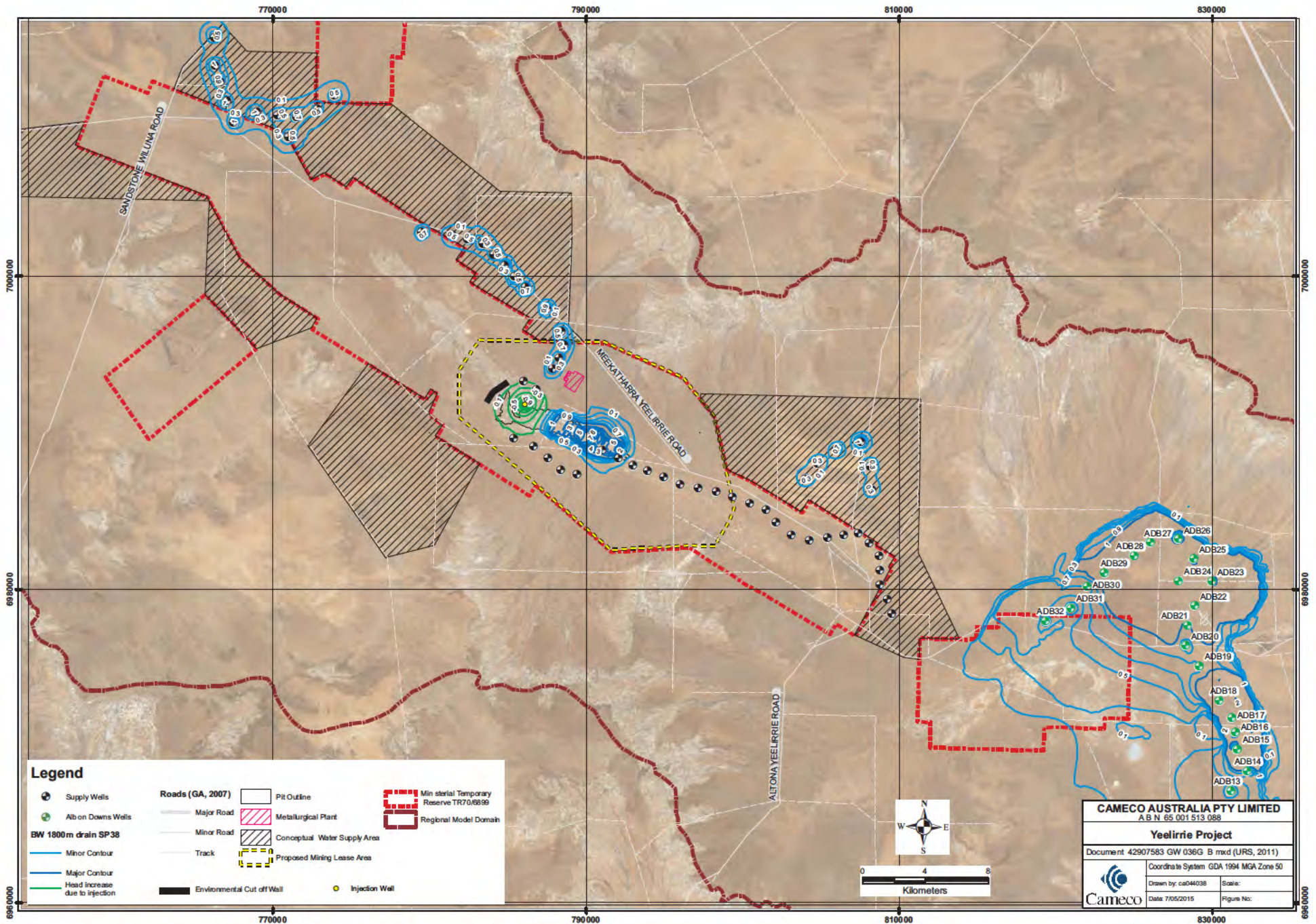


Figure 5.15a Predicted drawdown early in project year 3, with barrier

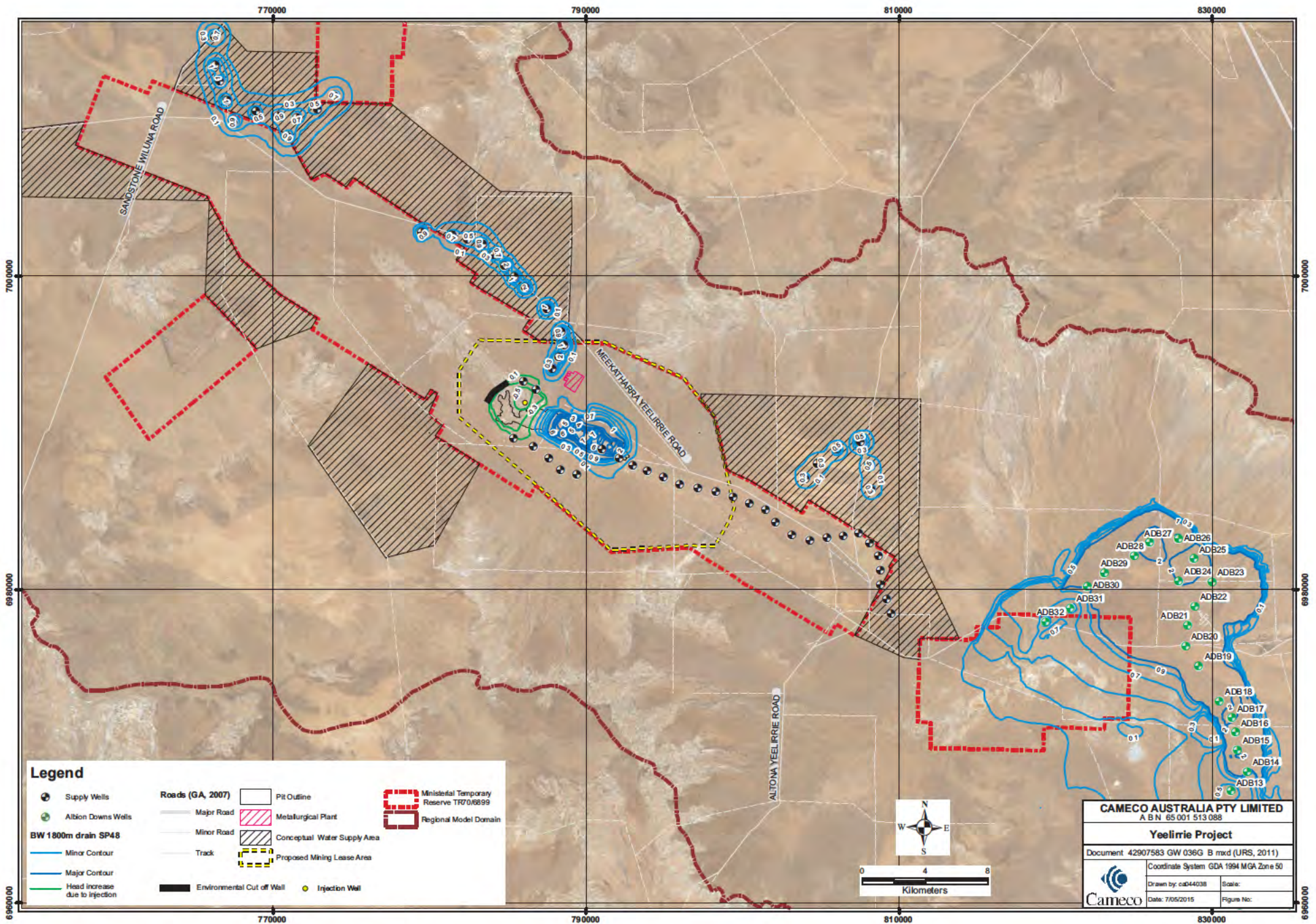


Figure 5.15b Predicted drawdown at end of project year 3, with barrier

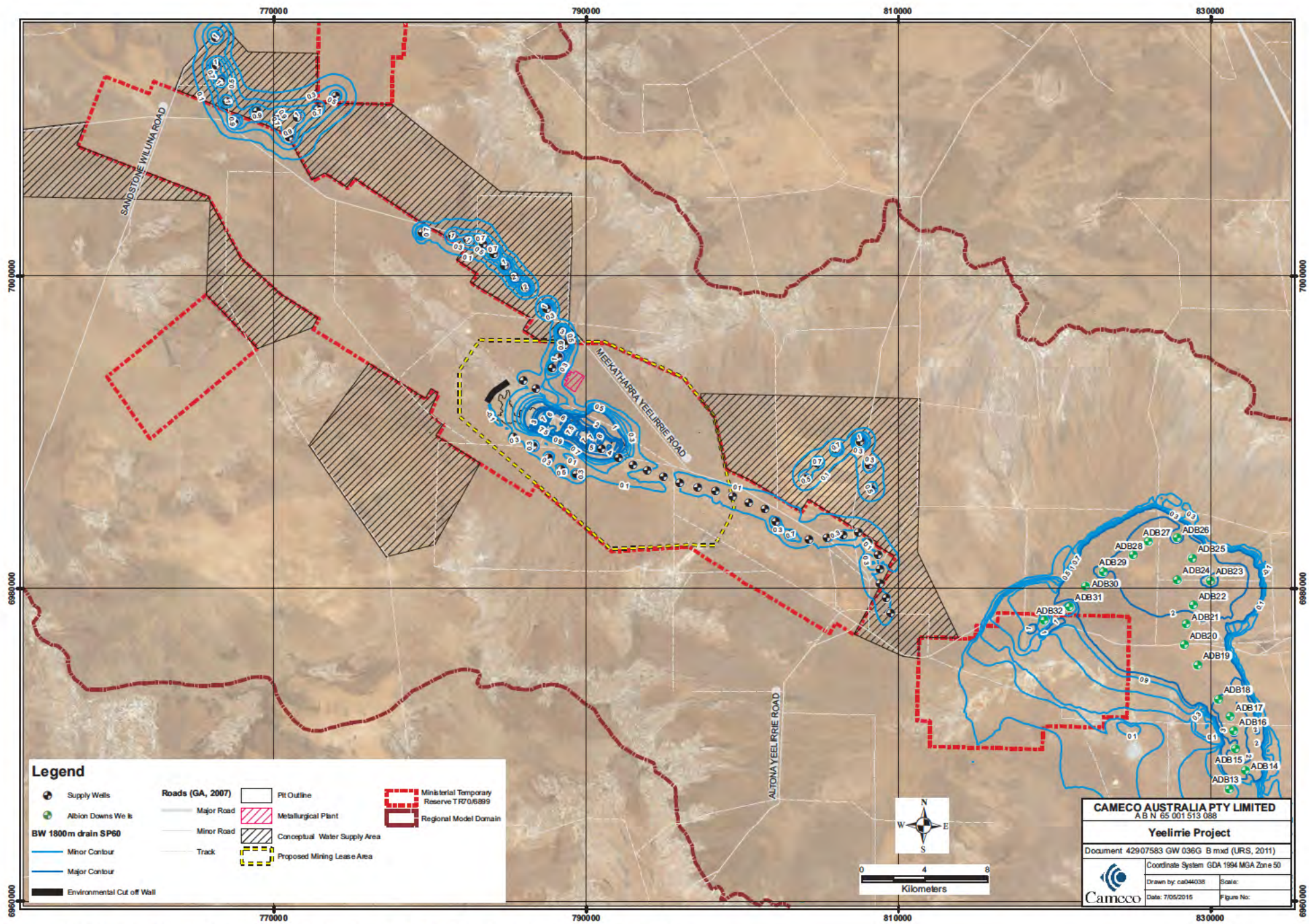


Figure 5.15c Predicted drawdown at end of project year 4, with barrier

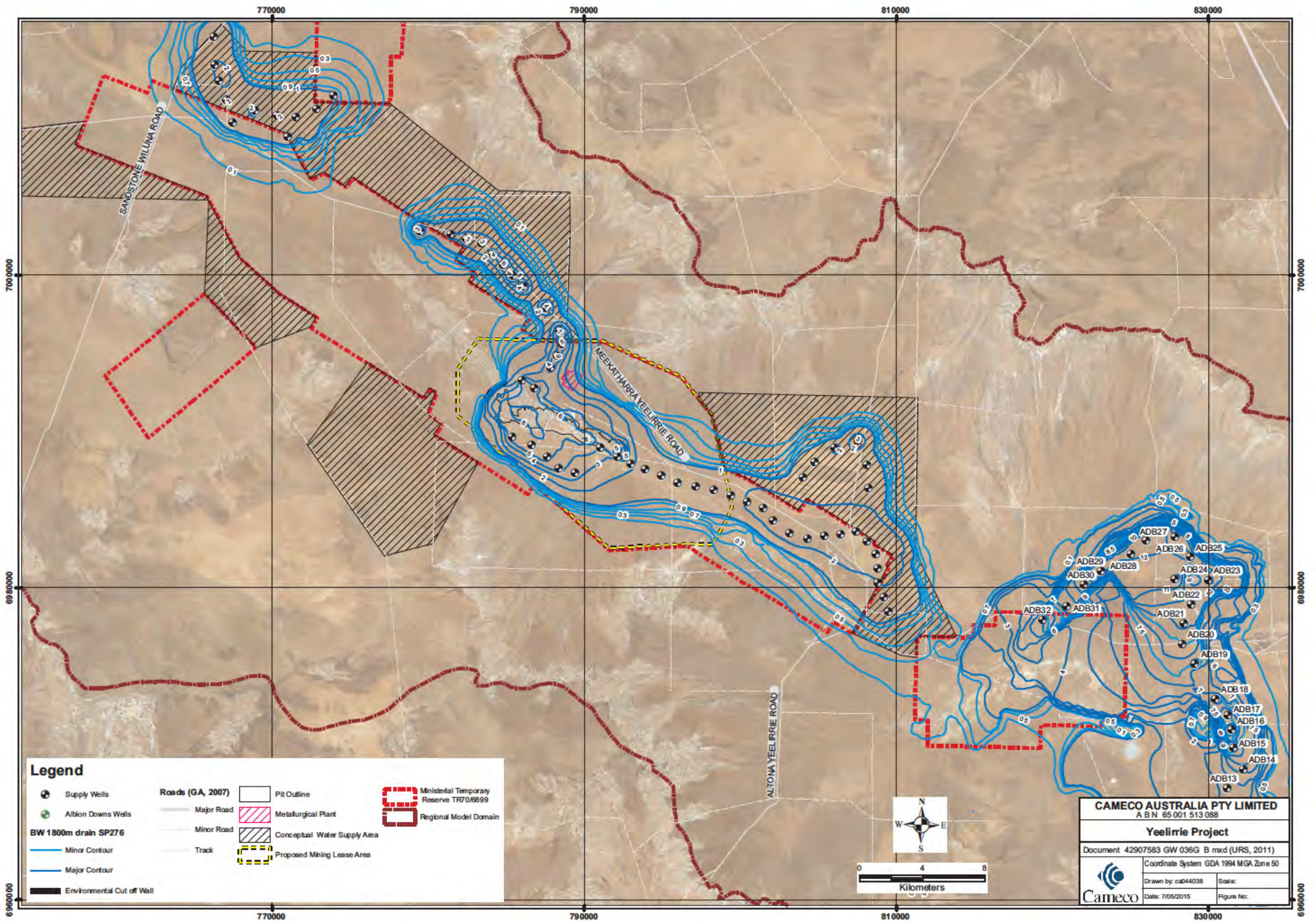


Figure 5.15e Predicted groundwater drawdown at end of project (end project year 22), with barrier

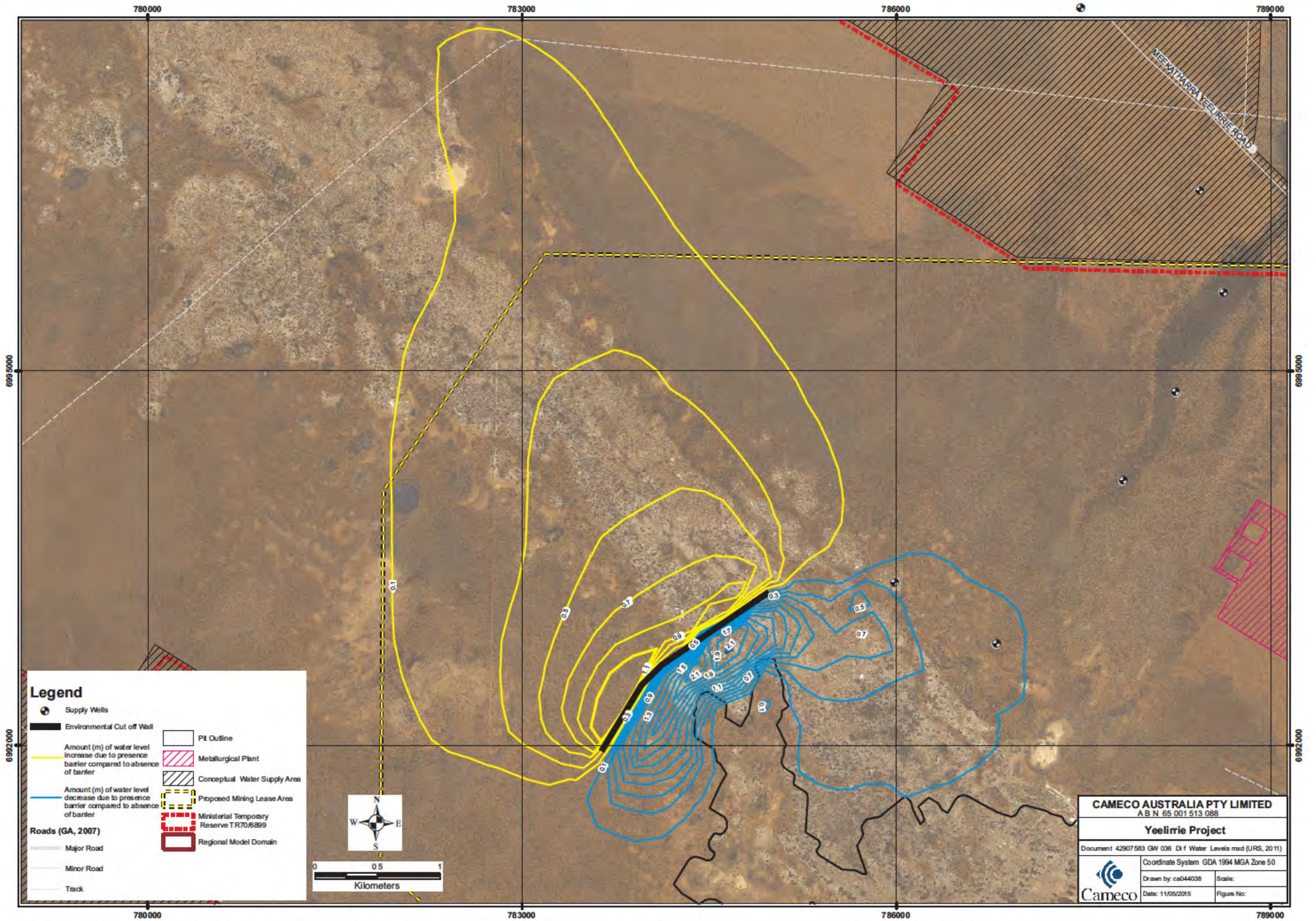


Figure 5.16 Head difference between operational model without and with barrier, at end of project year 18

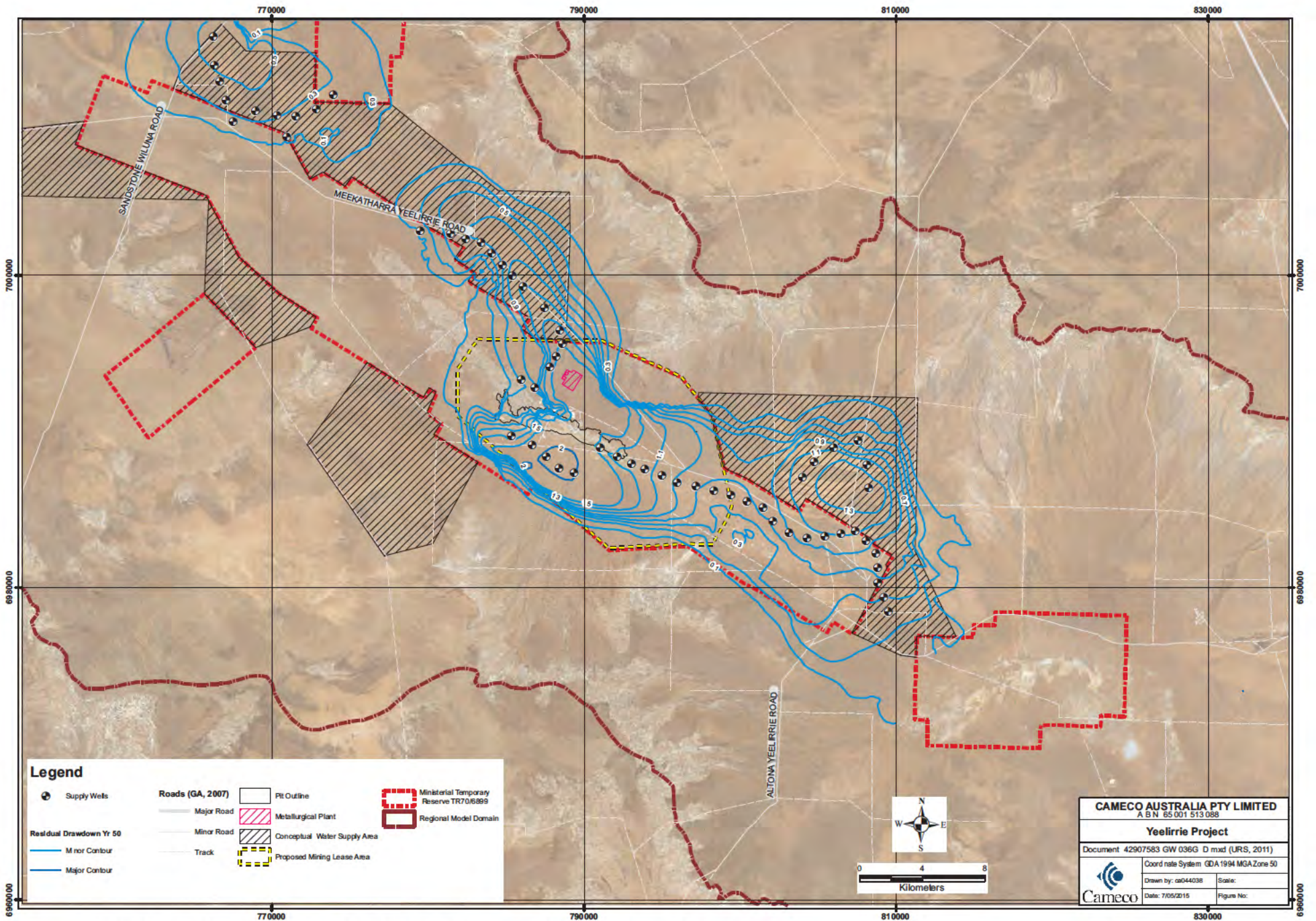


Figure 6.1a Predicted residual water table drawdown after 50 years of recovery

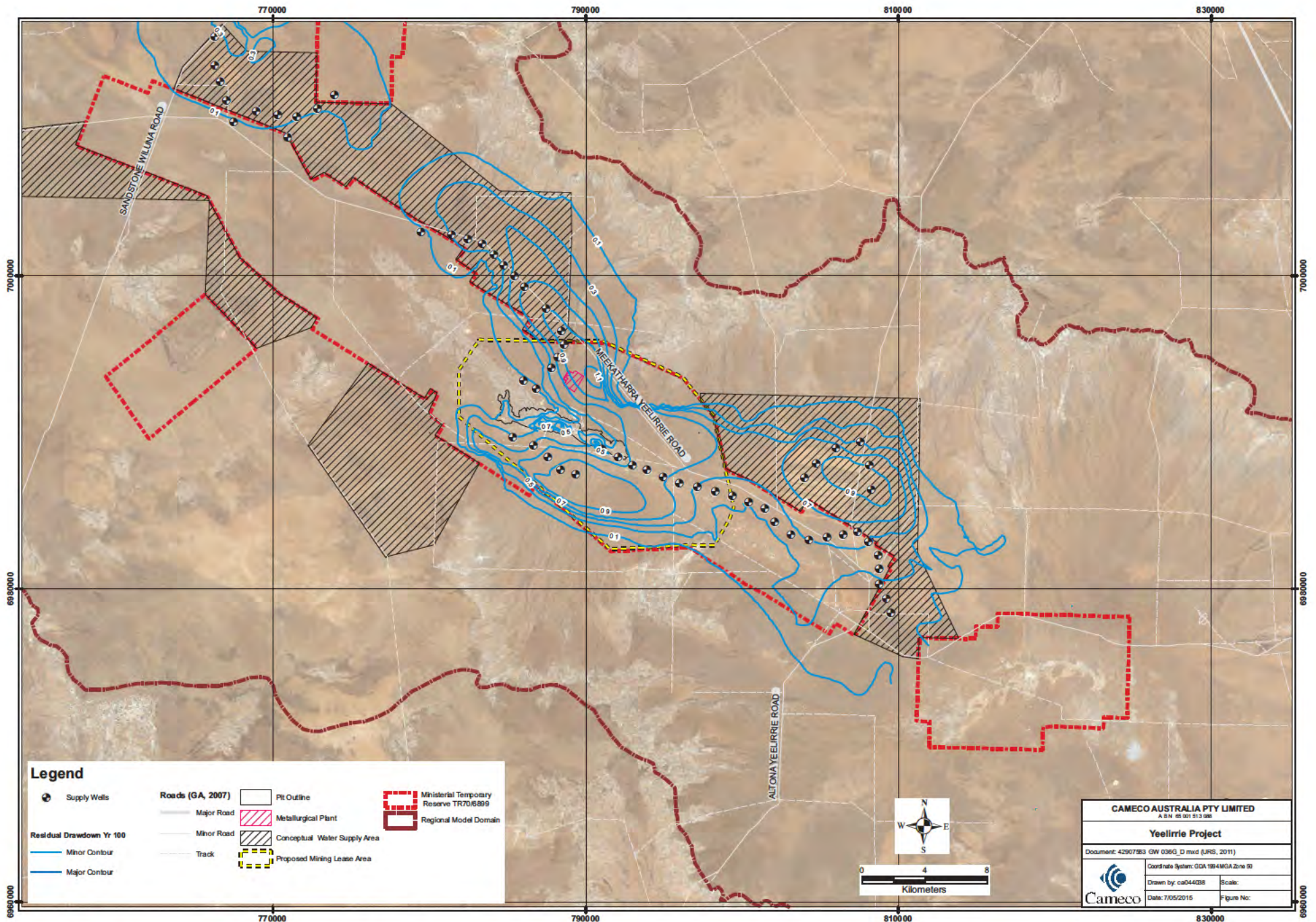


Figure 6.1b Predicted residual water table drawdown after 100 years of recovery

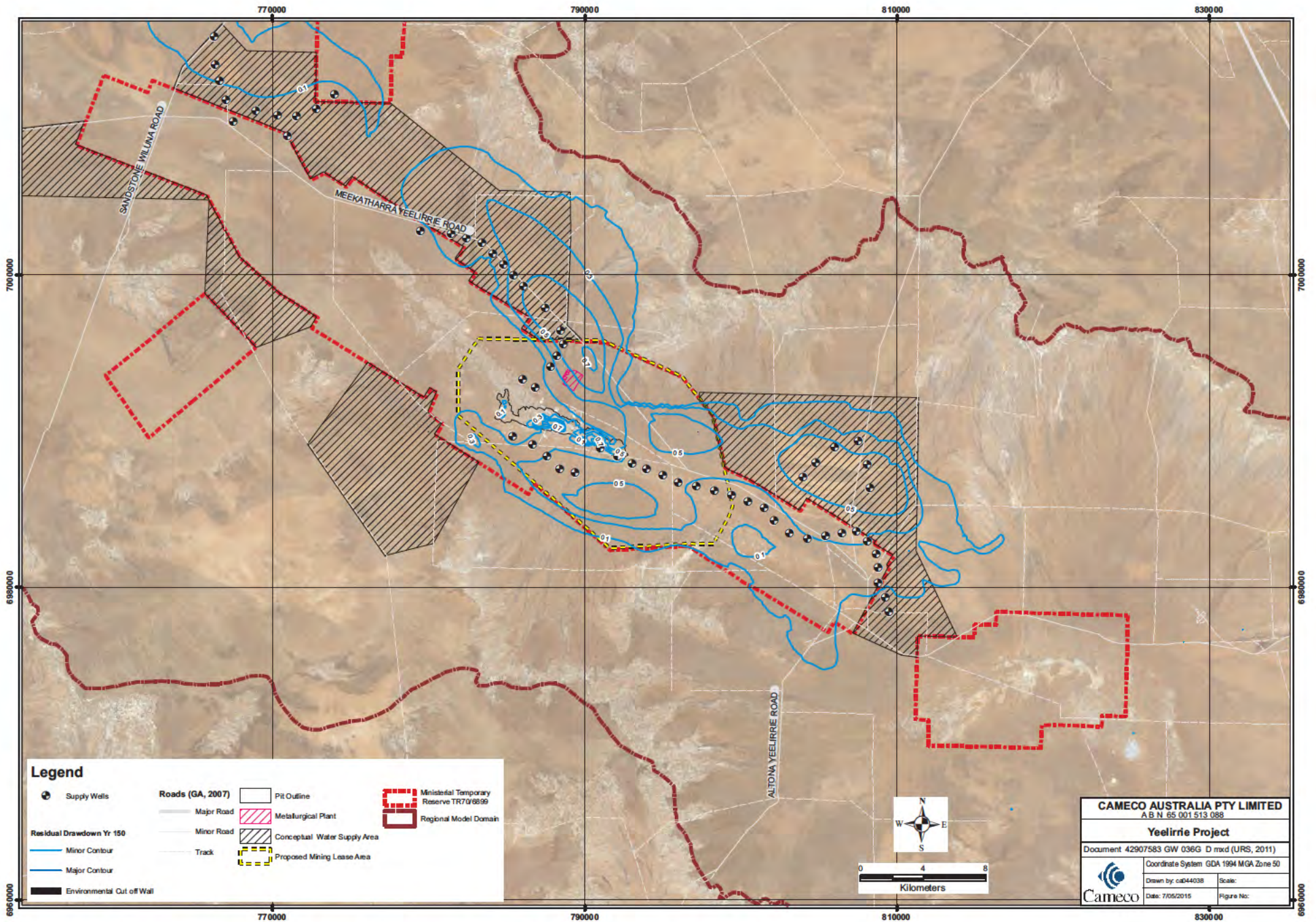


Figure 6.1c Predicted residual water table drawdown after 150 years of recovery

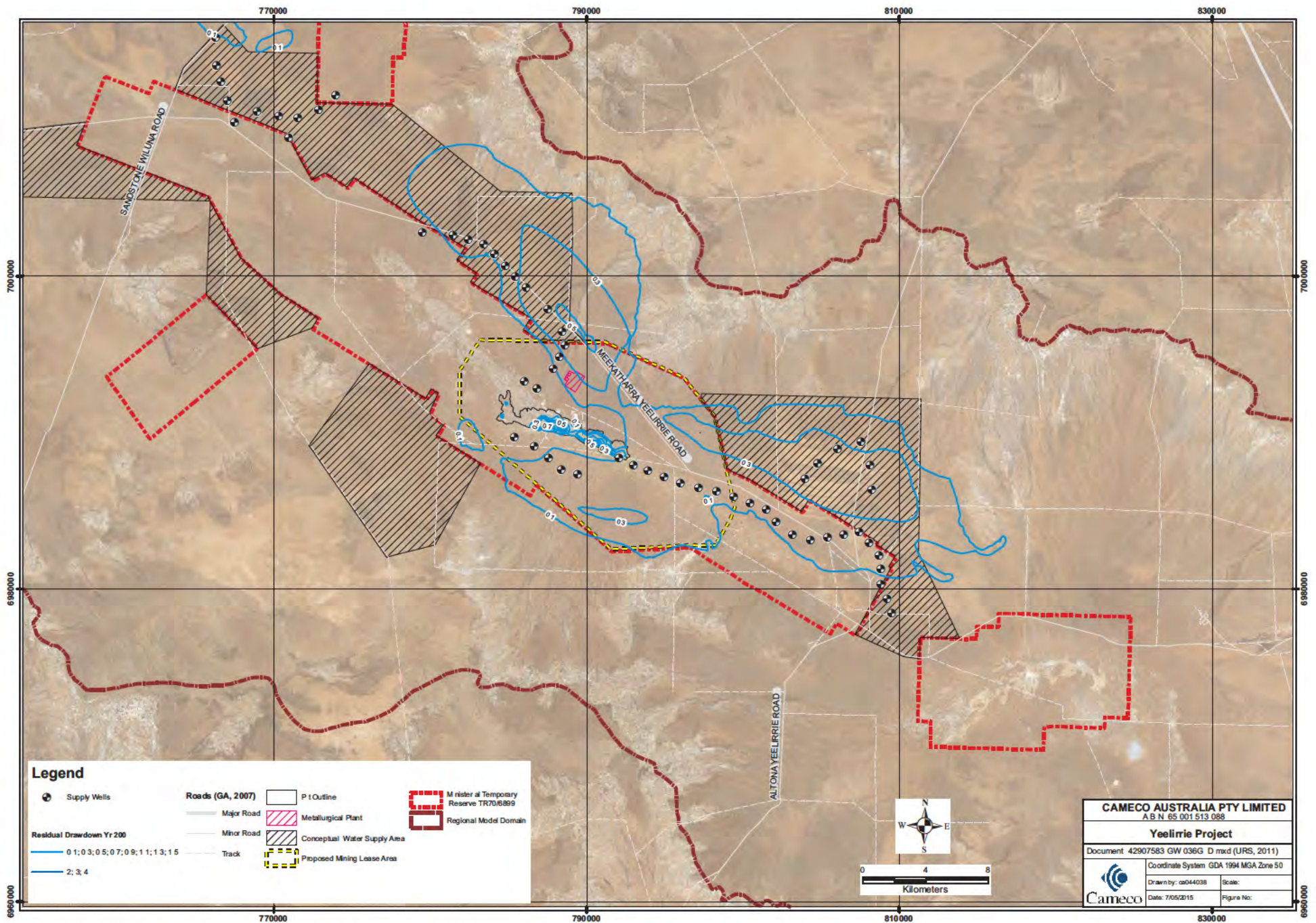


Figure 6.1d Predicted residual water table drawdown after 200 years of recovery

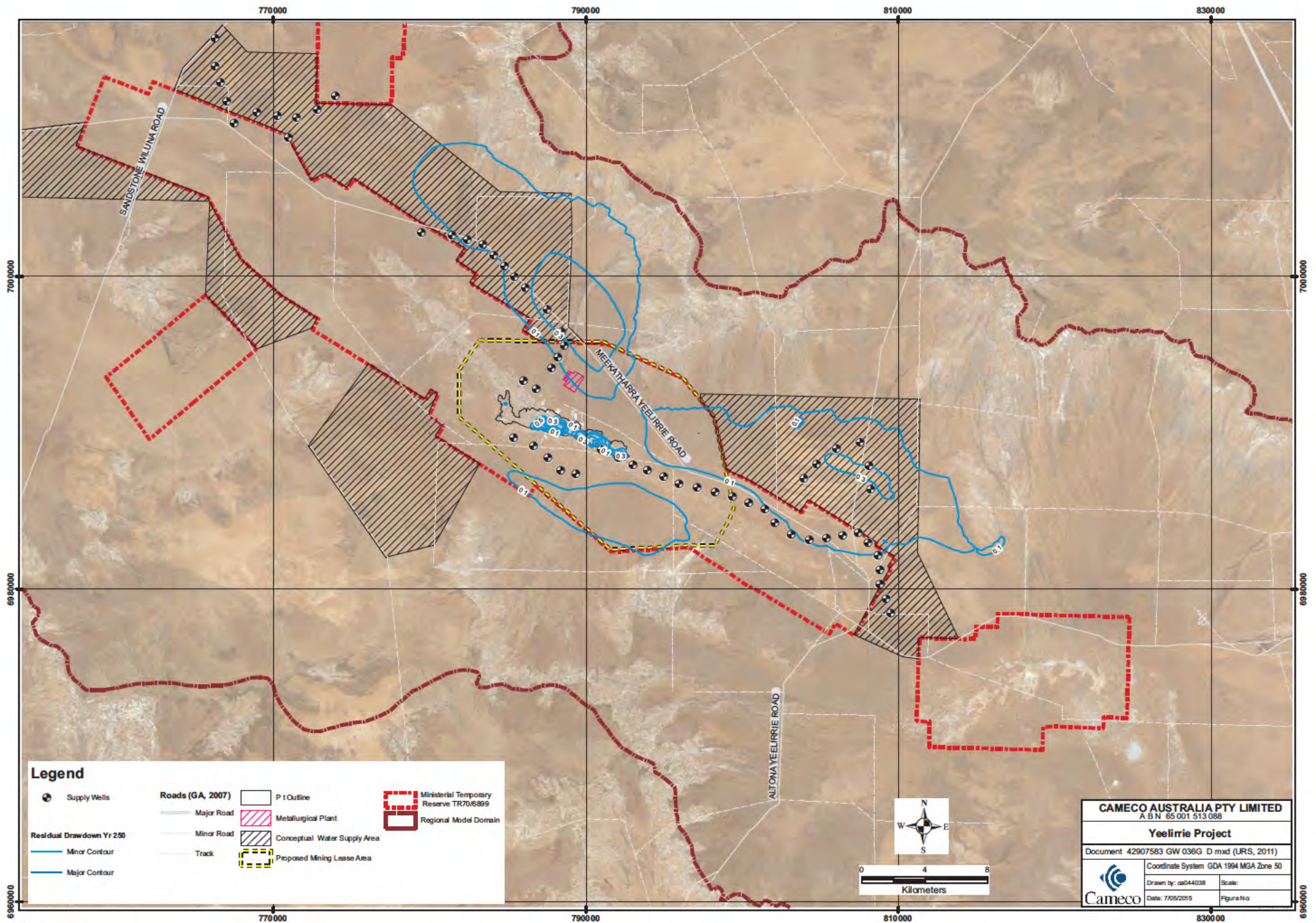


Figure 6.1e Predicted residual water table drawdown after 250 years of recovery

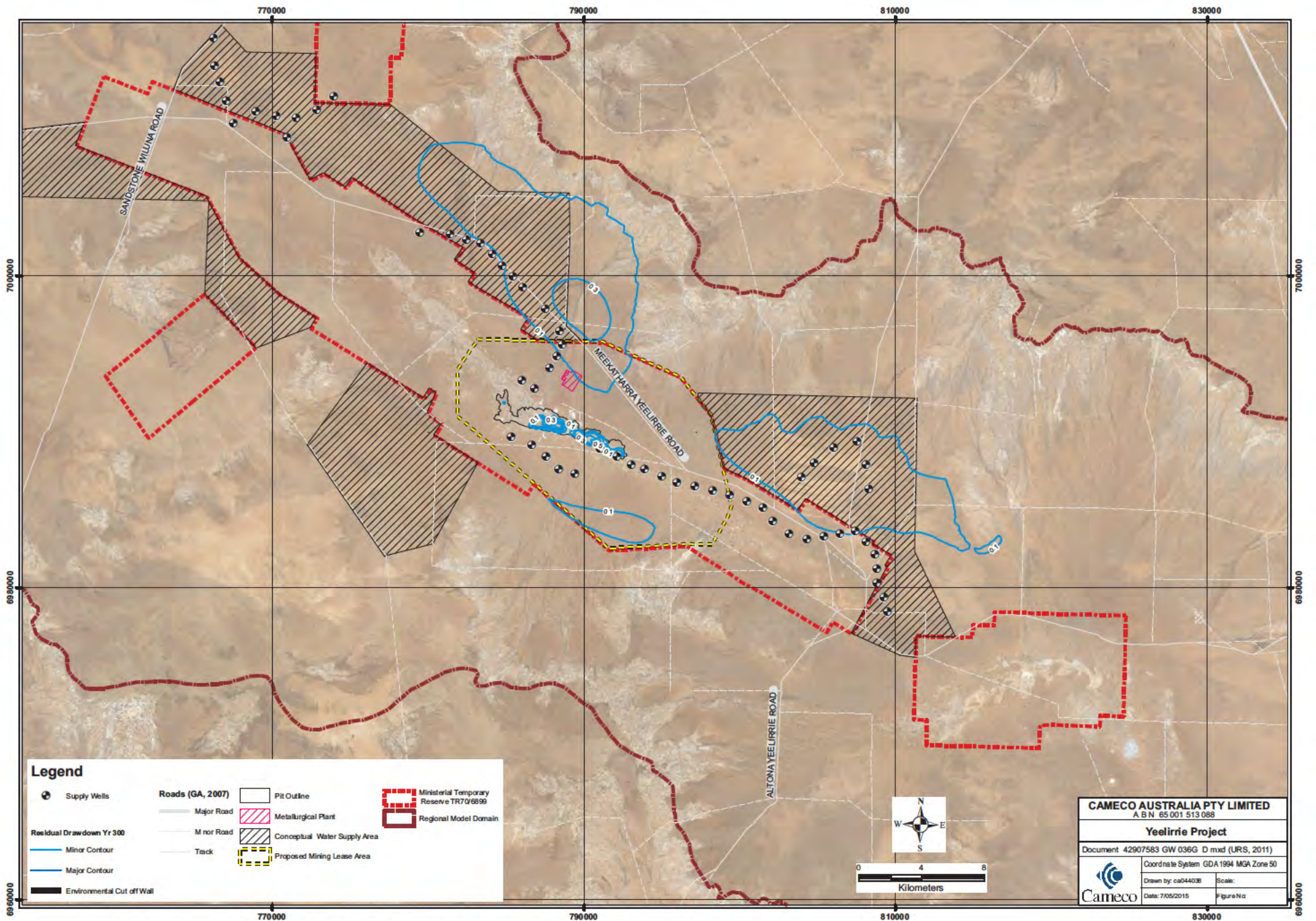


Figure 6.1f Predicted residual water table drawdown after 300 years of recovery

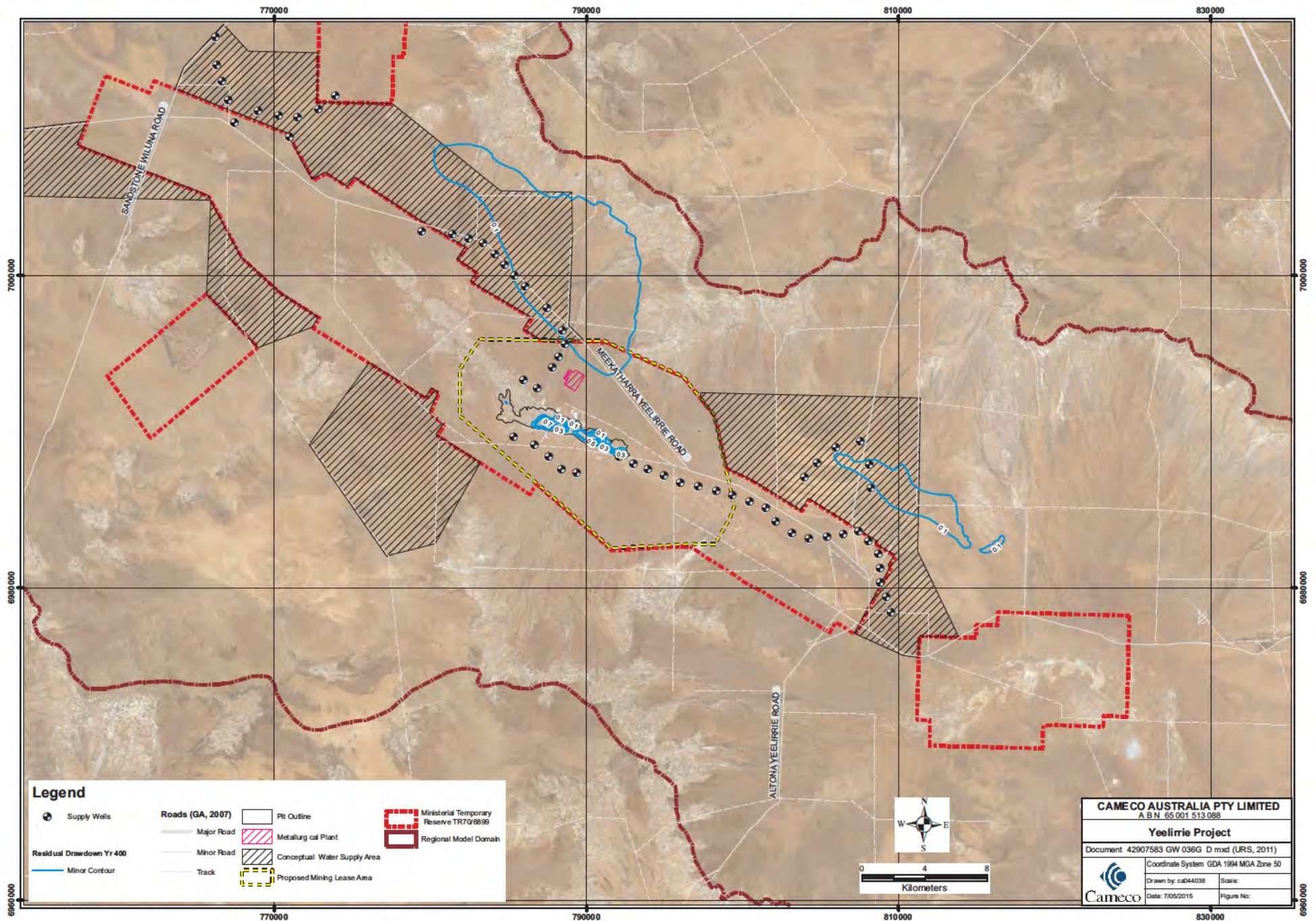


Figure 6.1g Predicted residual water table drawdown after 400 years of recovery

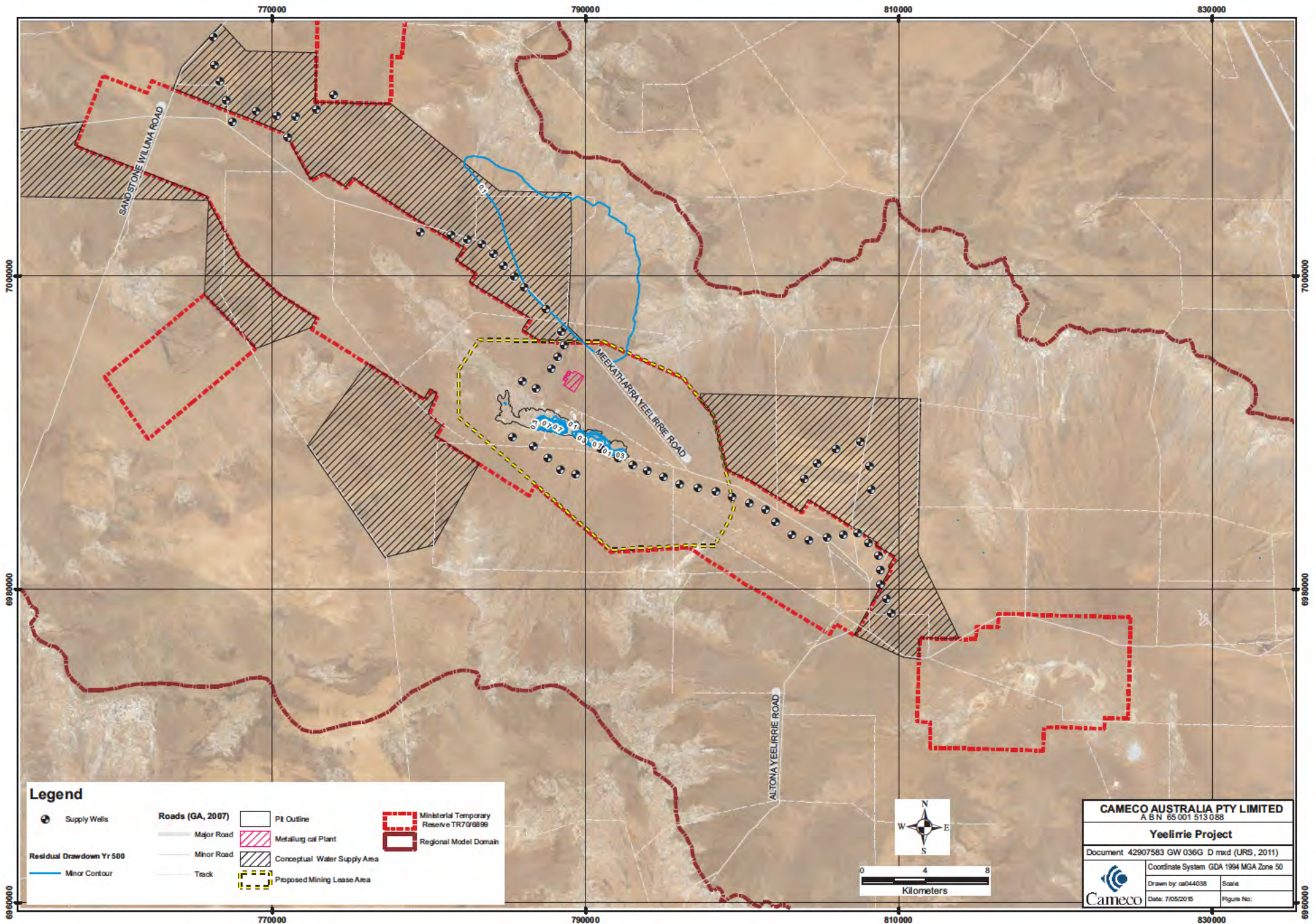


Figure 6.1h Predicted residual water table drawdown after 500 years of recovery