

**REFERRAL FOR PROPOSED ACTION  
RANGER 3 DEEPS UNDERGROUND MINE  
FIGURES 1 – 20**



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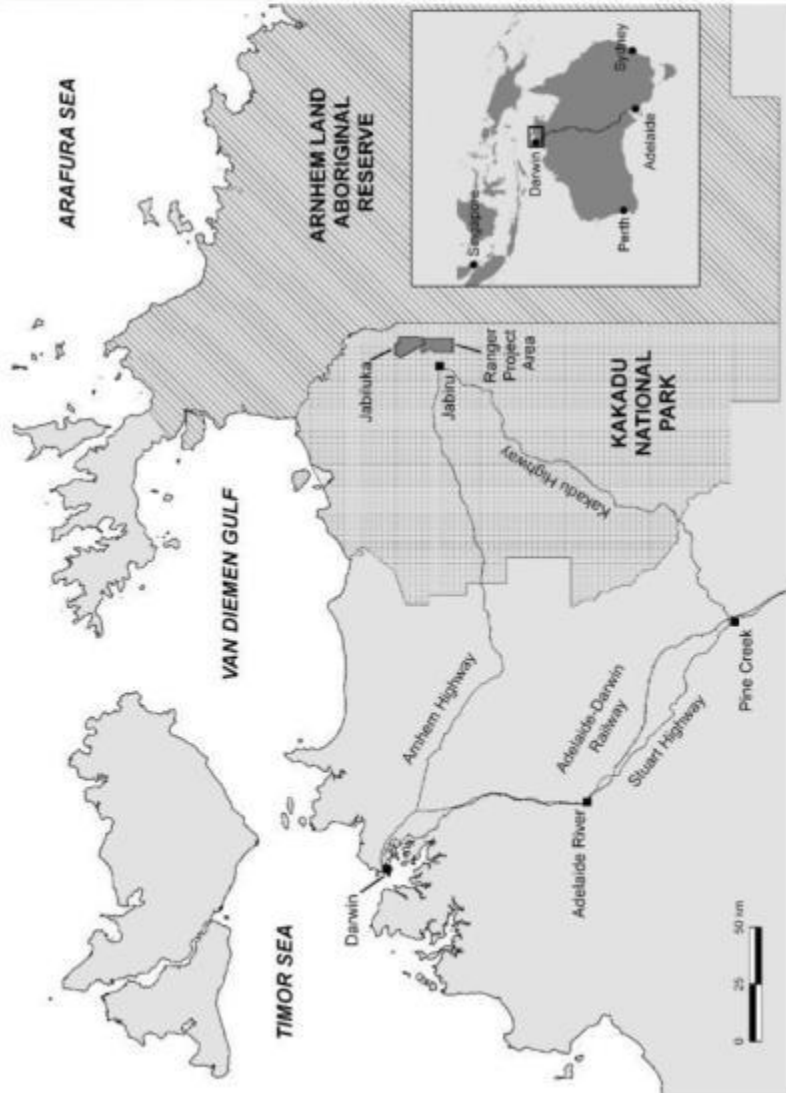


Figure 1: Location of the Ranger Project Area



Figure 2: Contextual overview of the Ranger 3 Deeps mineral resource and indicative footprint of key infrastructure within the Ranger Project Area, including matters of national environmental significance (MNES) search coordinates. See Figure 11 for an enlargement of the immediate area of the proposed action. (NB: stockpiles, pond and portal are existing infrastructure constructed for the Ranger 3 Deeps Exploration Decline project.)

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Figure 3: Indicative location of the proposed action infrastructure in relation to existing infrastructure

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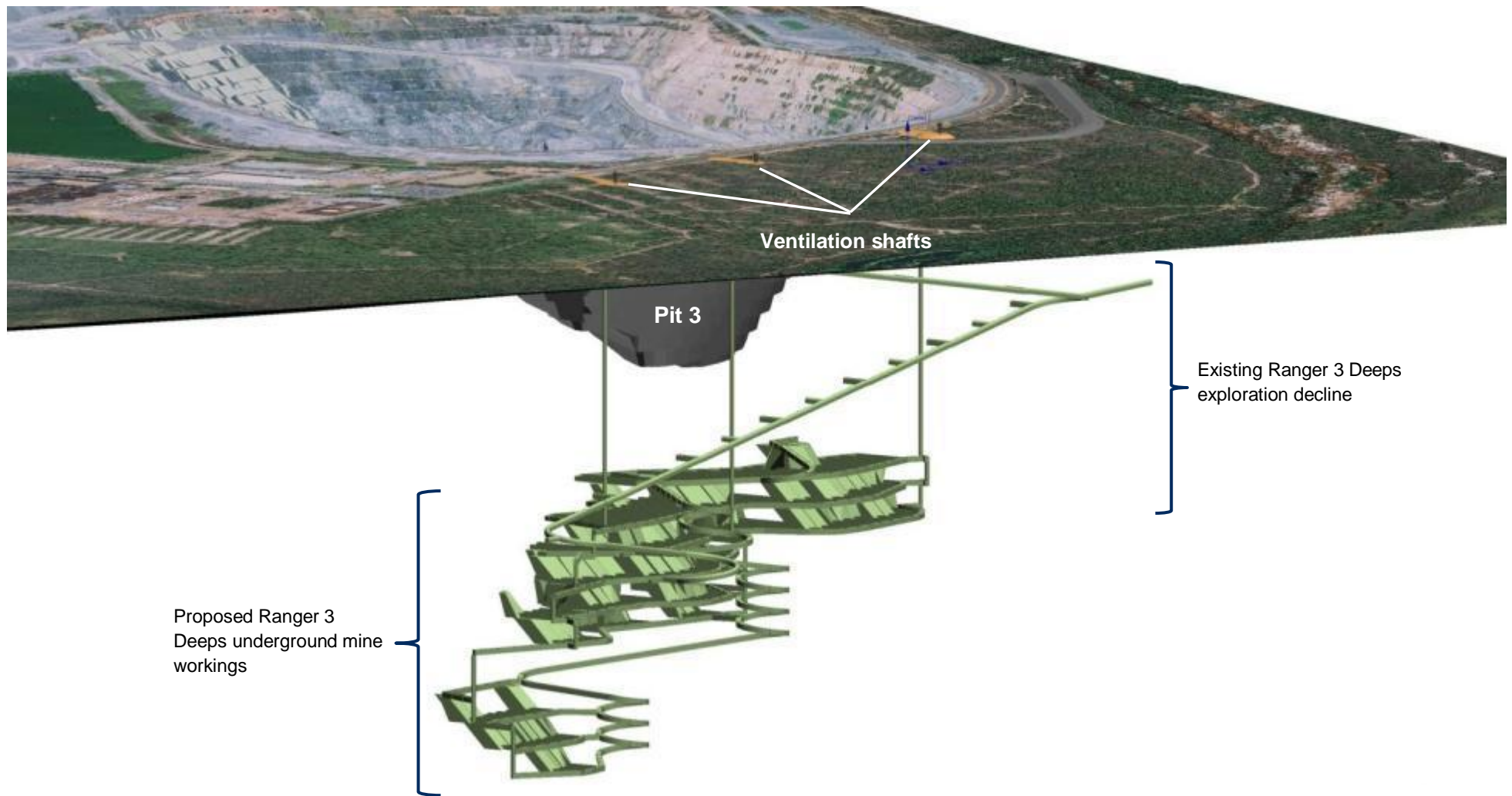


Figure 4: Provisional layout: Potential mining areas, plan view showing the extent of mineralisation relative to Pit 3

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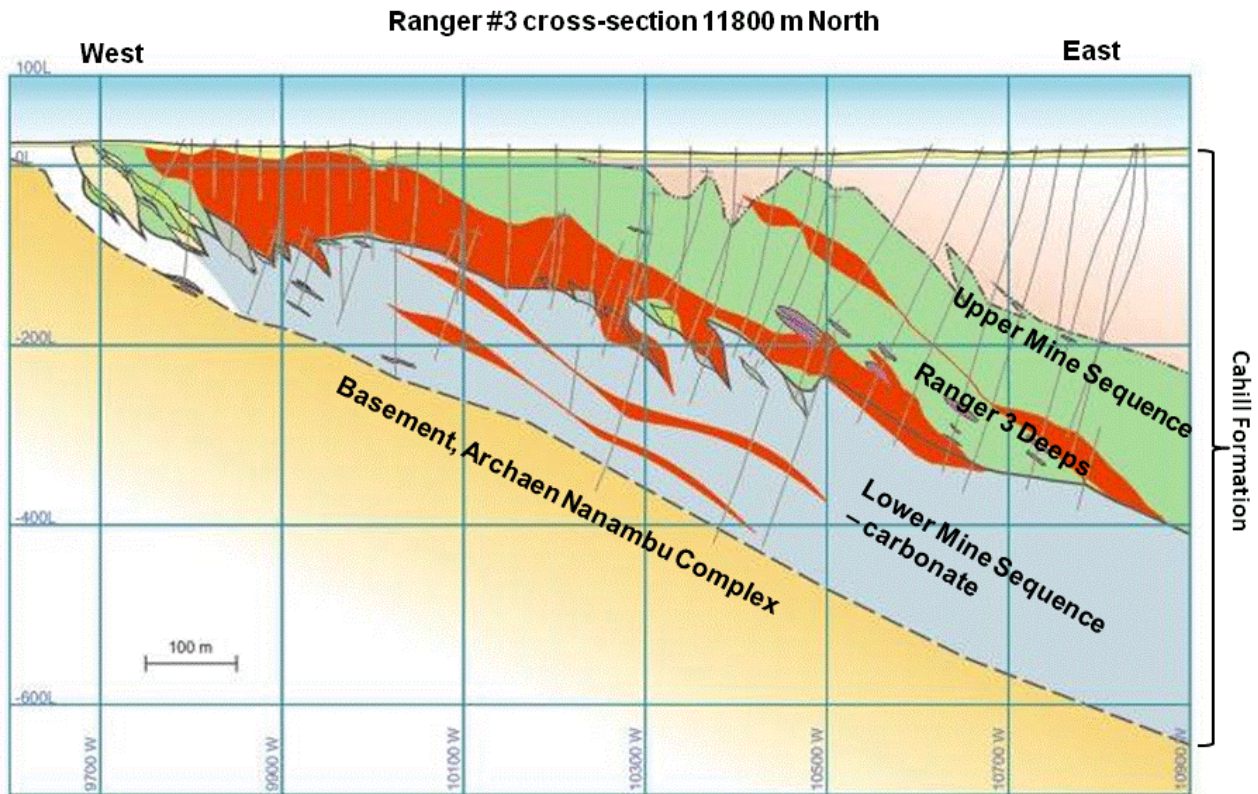


Figure 5: Schematic cross-section through the Ranger 3 Deeps area

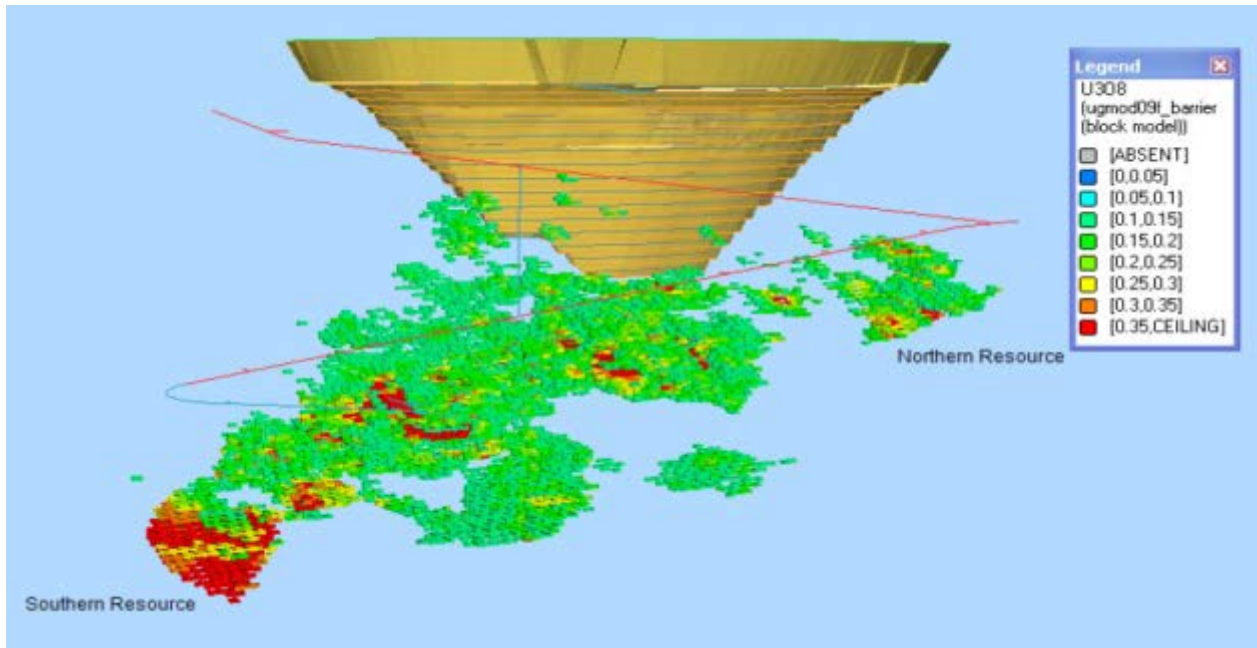


Figure 6: Geology block model – small block Ordinary Kriging (OK) – 10 m x 10 m x 5 m block size

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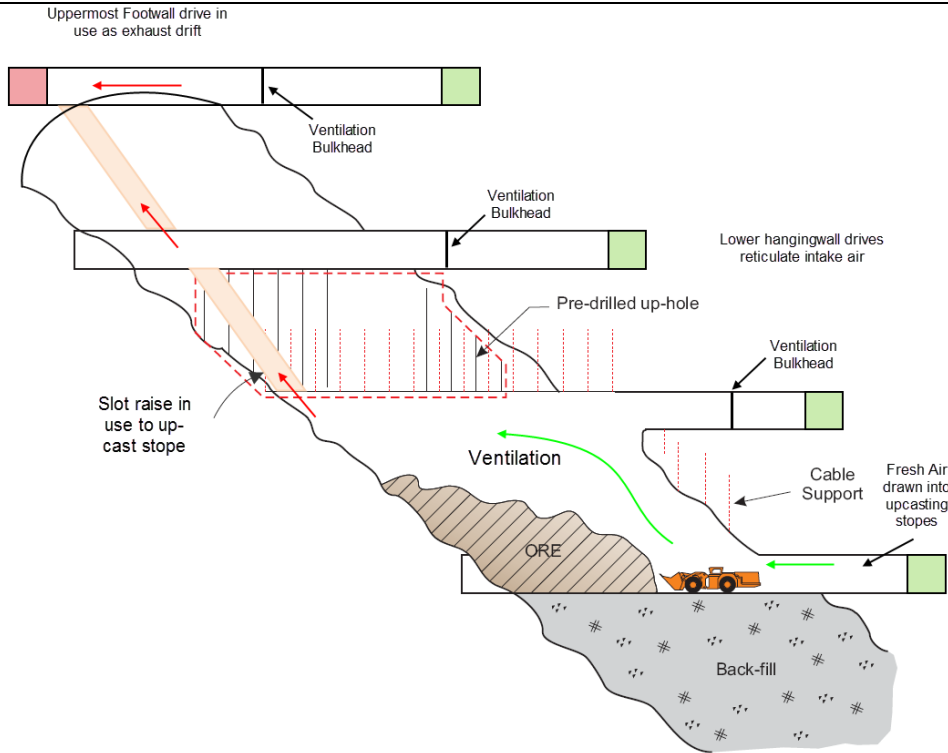


Figure 7: Cross section of stoping layout

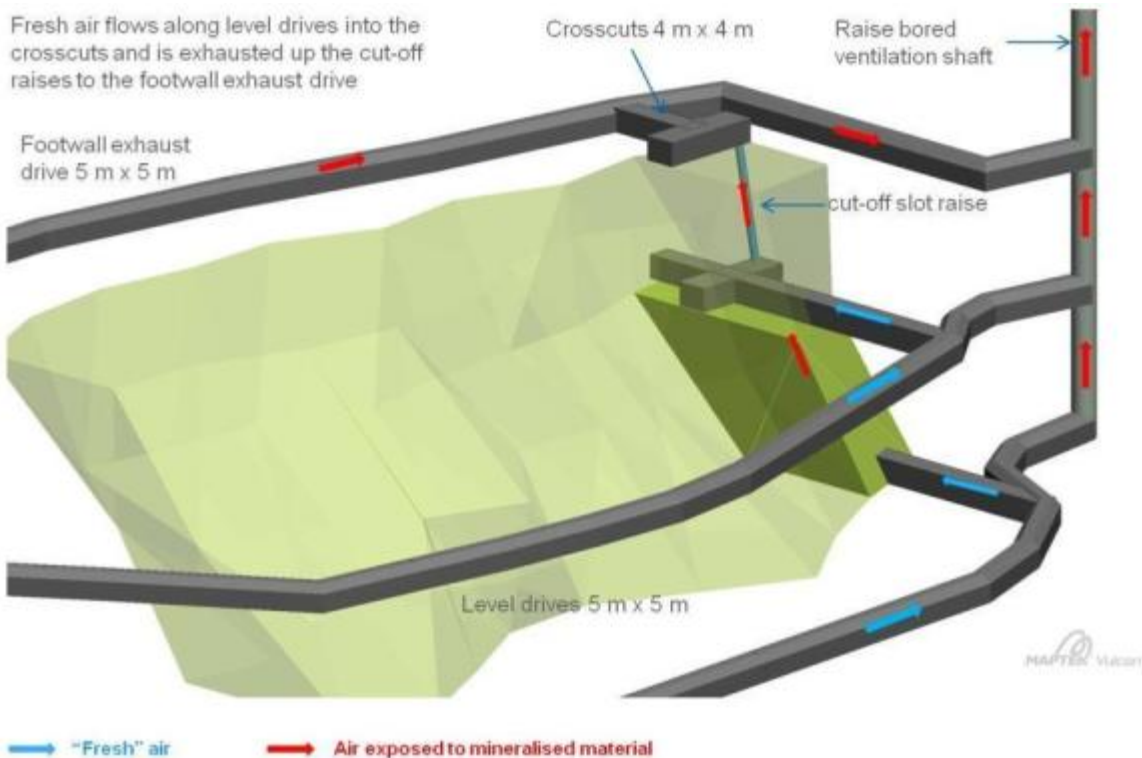


Figure 8: Generic arrangement of drives, cross-cuts, stope development and ventilation system. The orebody slopes from the top left to the bottom right. All drives and the vent shaft are constructed prior to the cross-cuts into the mineralised material.

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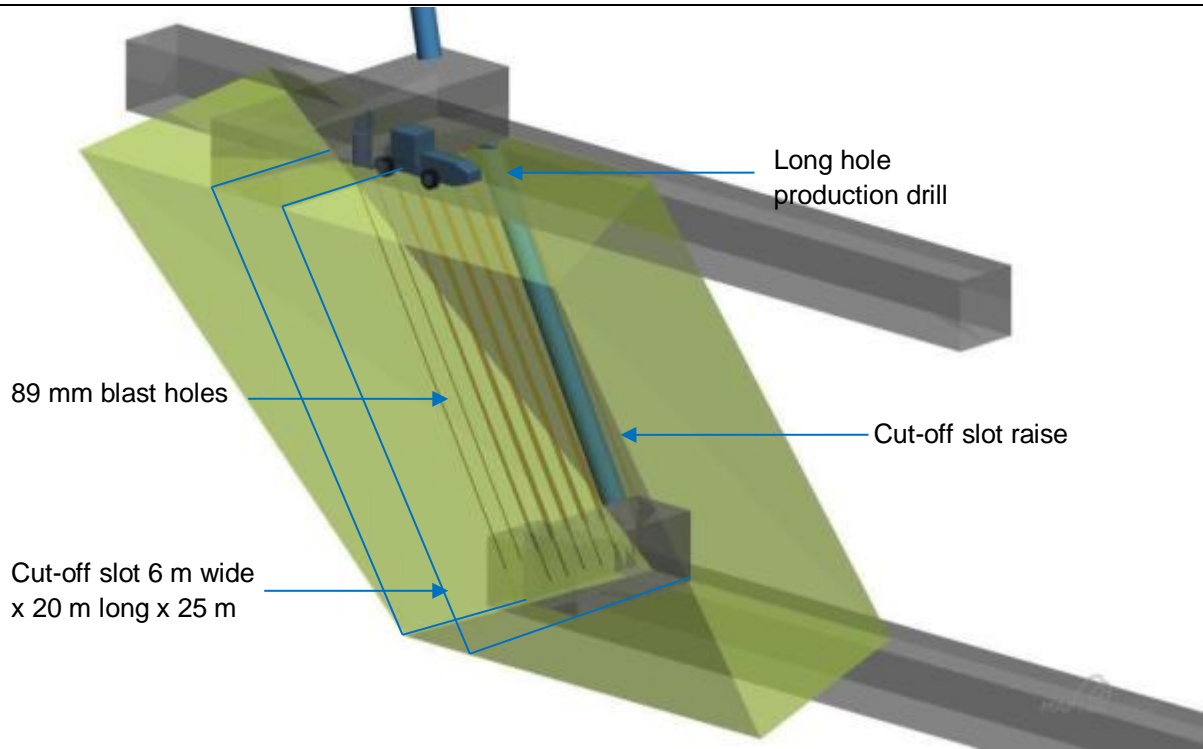


Figure 9a: Stopping – blast hole drilling of cut-off slot (stope dimensions: width of ore body 20 to 40 m x 25 m high x 20 m along strike)

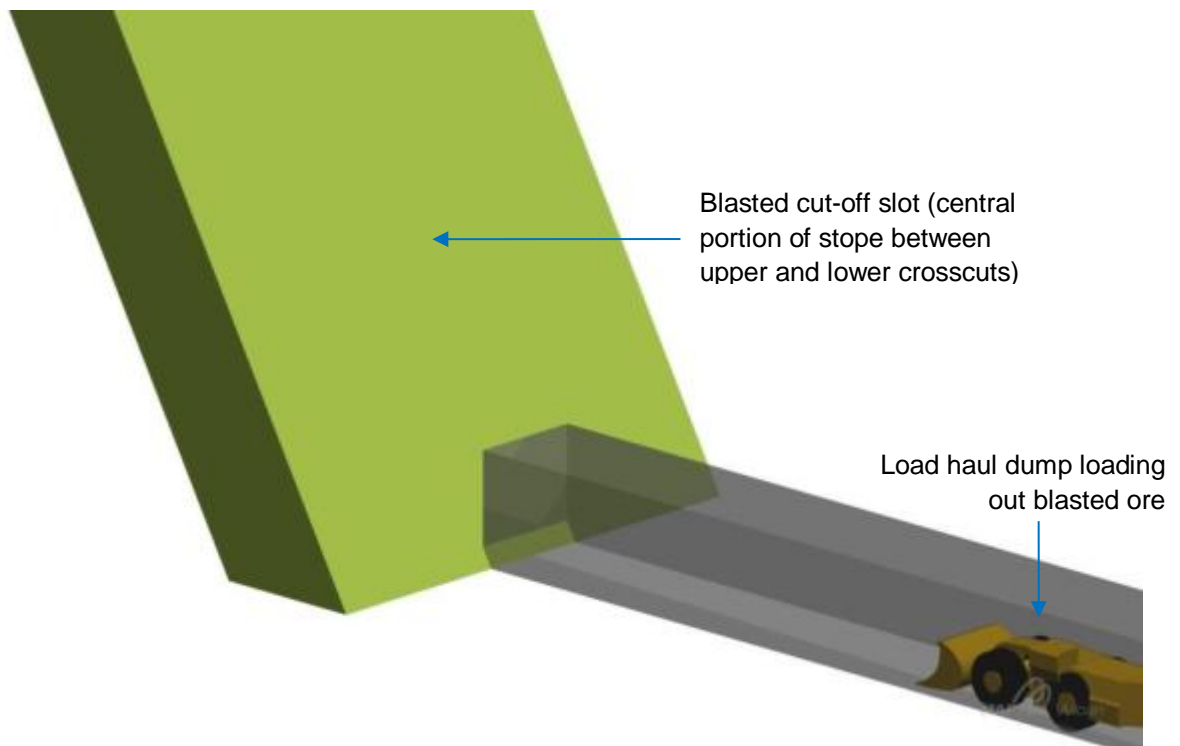


Figure 9b: Cut-off is blasted and loaded out

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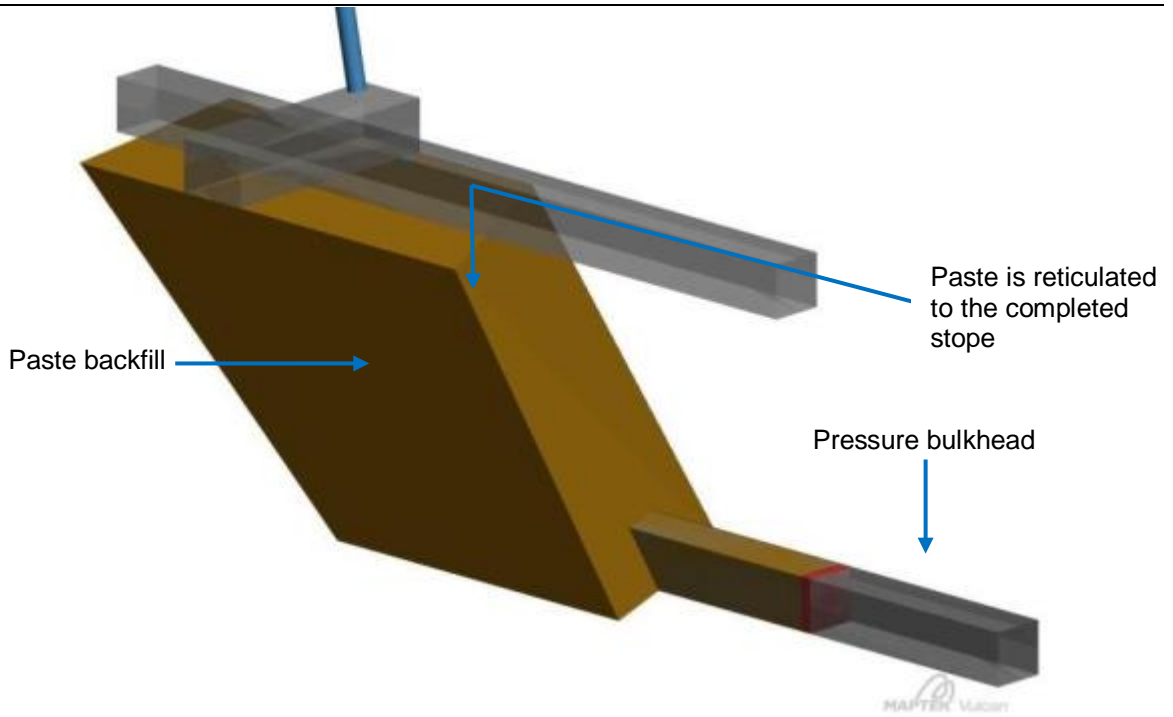


Figure 10: Paste backfilling

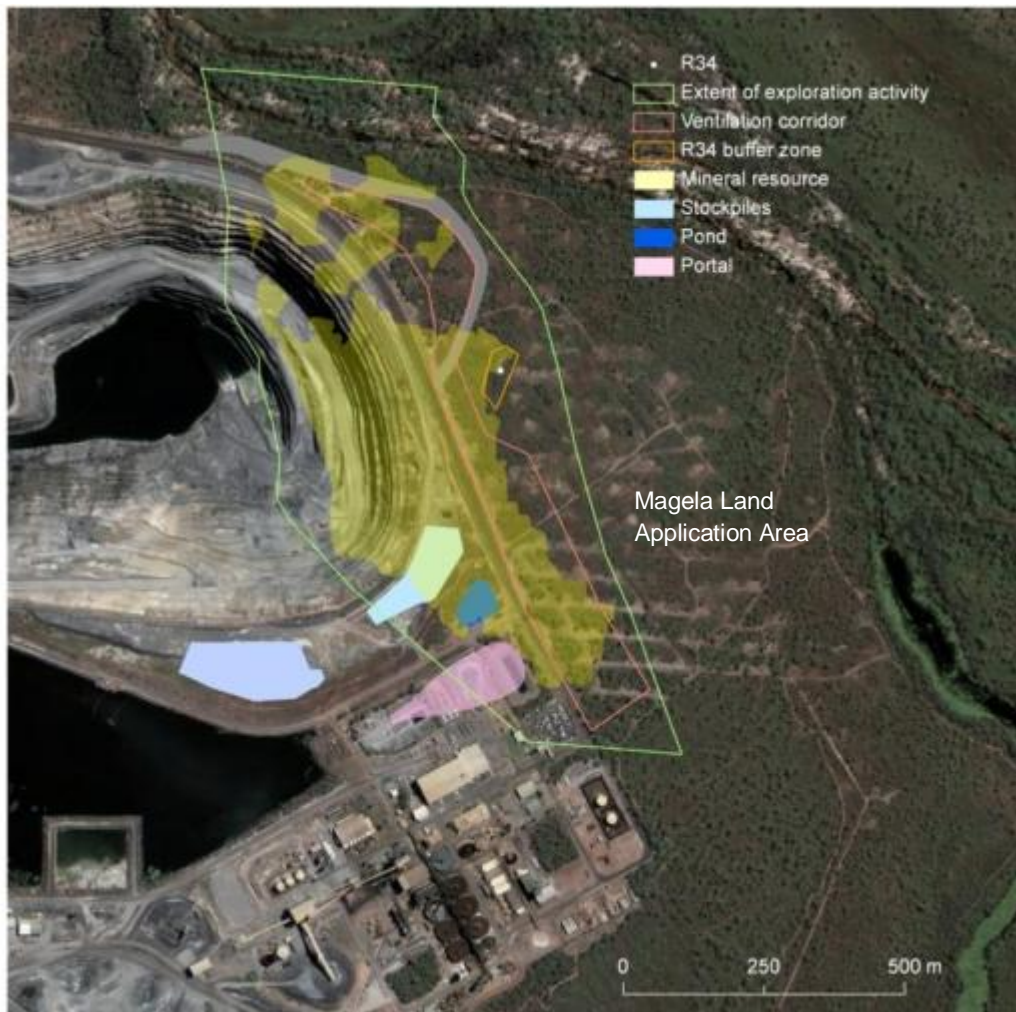


Figure 11: Ranger 3 Deeps (including primary infrastructure) relative to the location of the R34 cultural heritage site

Date: 16 January 2013



Figure 12: Noise and vibration modelling nearest sensitive receptors

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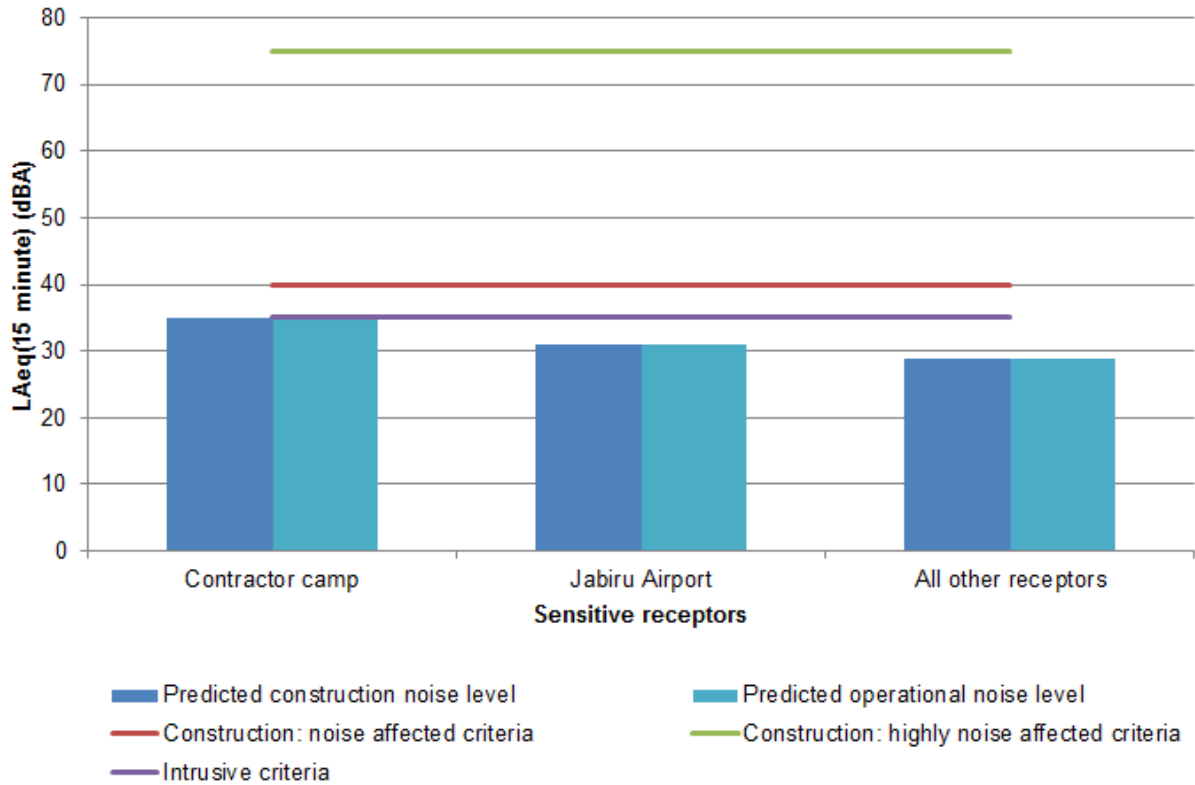


Figure 13: Cumulative noise levels from existing operations and the proposed action, relative to New South Wales industrial noise criteria

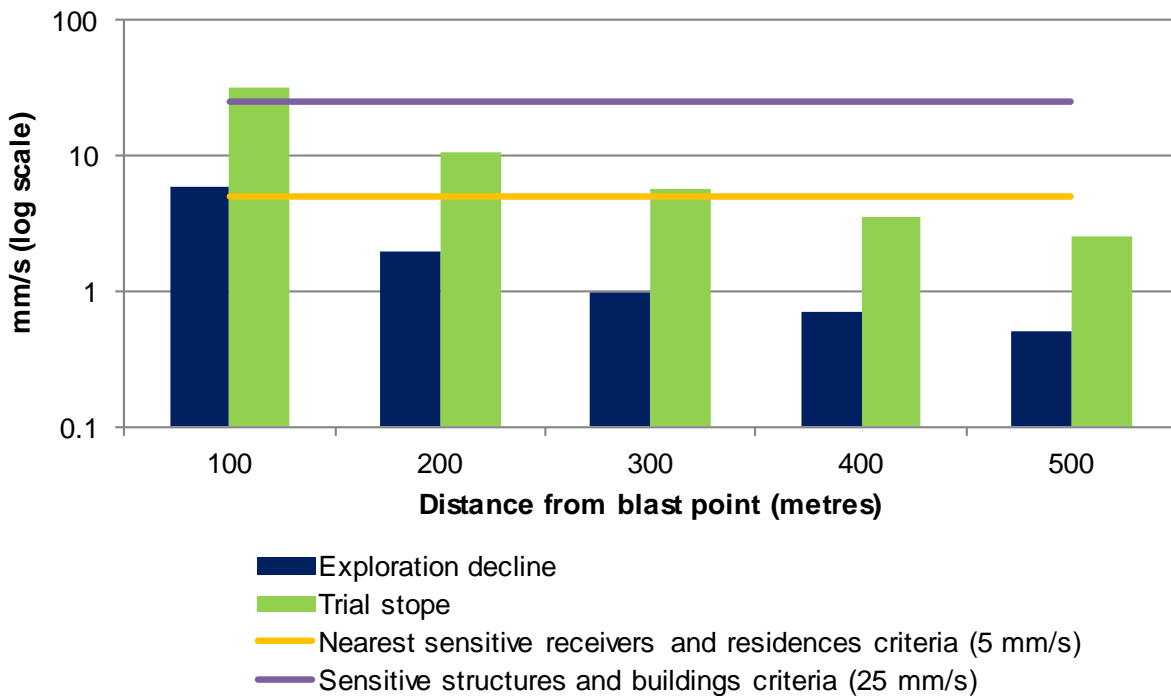


Figure 14: Relationship between distance, blast source and resultant vibration. (Note: all development for the proposed action is at a depth of greater than 300 m and the nearest sensitive receptor is approximately 2 km from the blast point.)

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Figure 15: Typical surface backfill plant

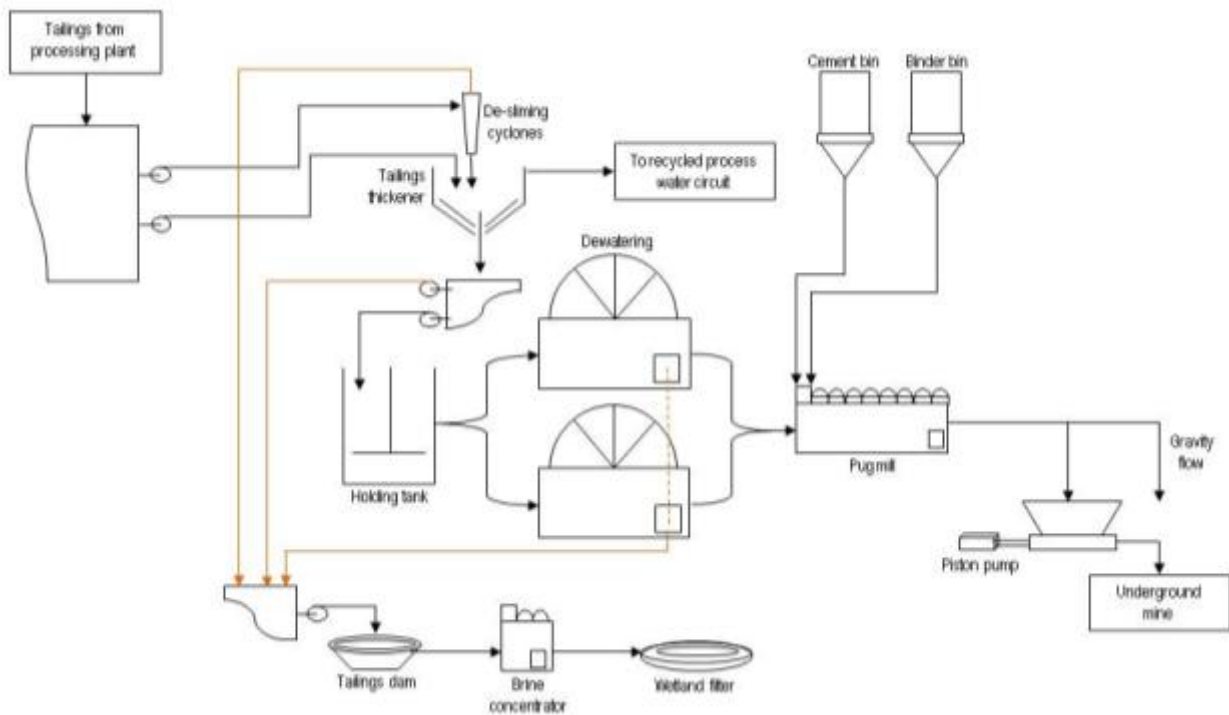


Figure 16: Generic paste backfill flowsheet

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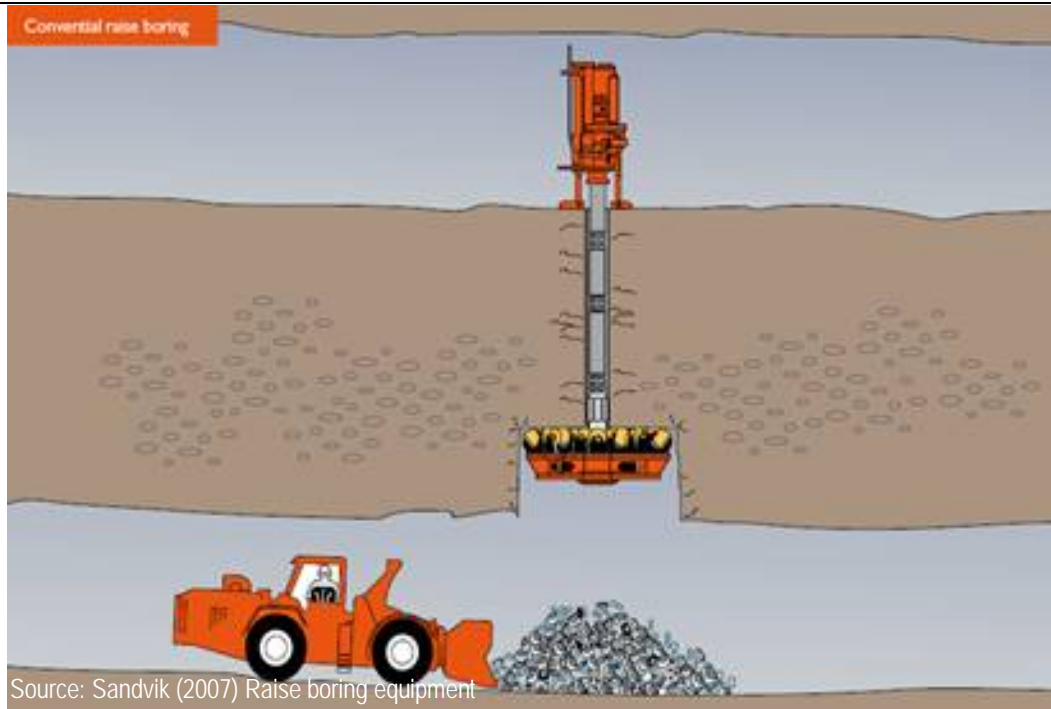


Figure 17: Schematic showing concept of "raise bore" ventilation shaft construction

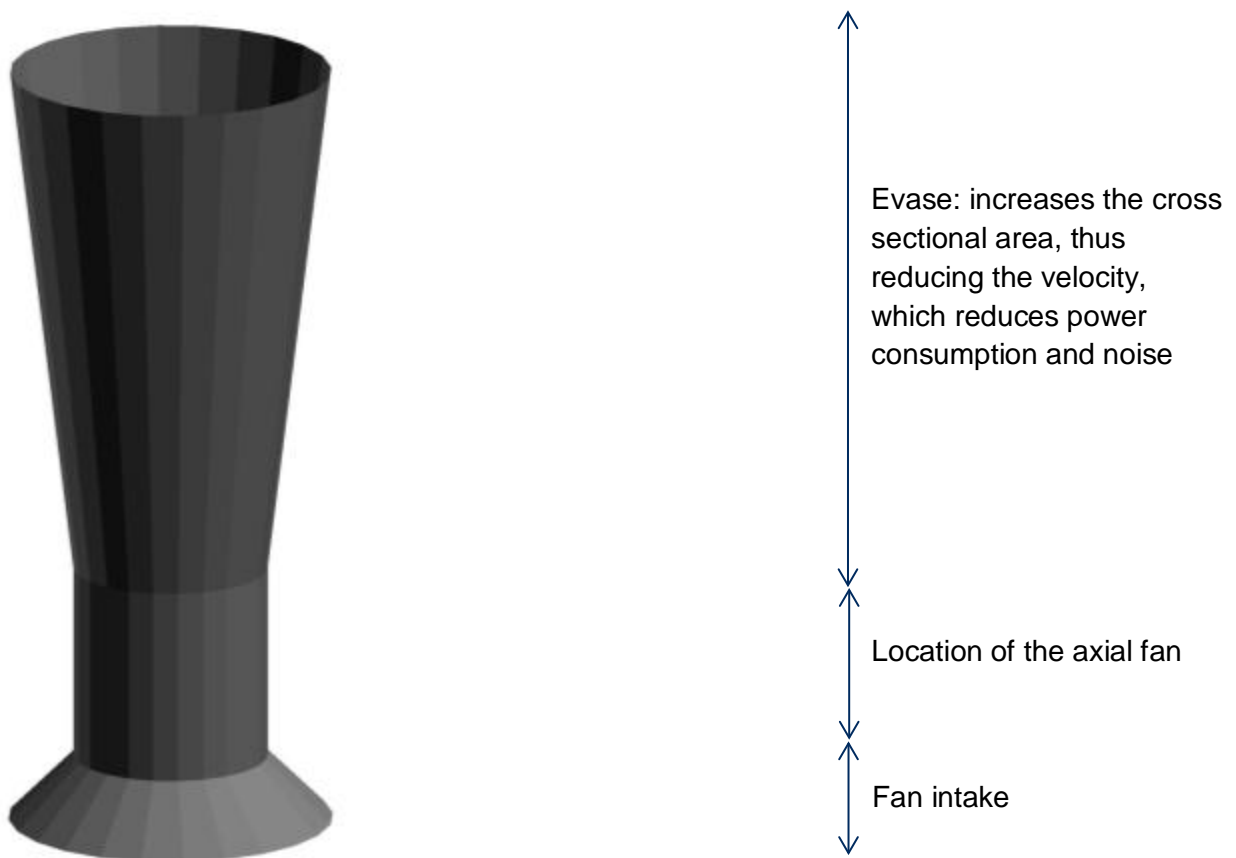


Figure 18: Vent raise schematic

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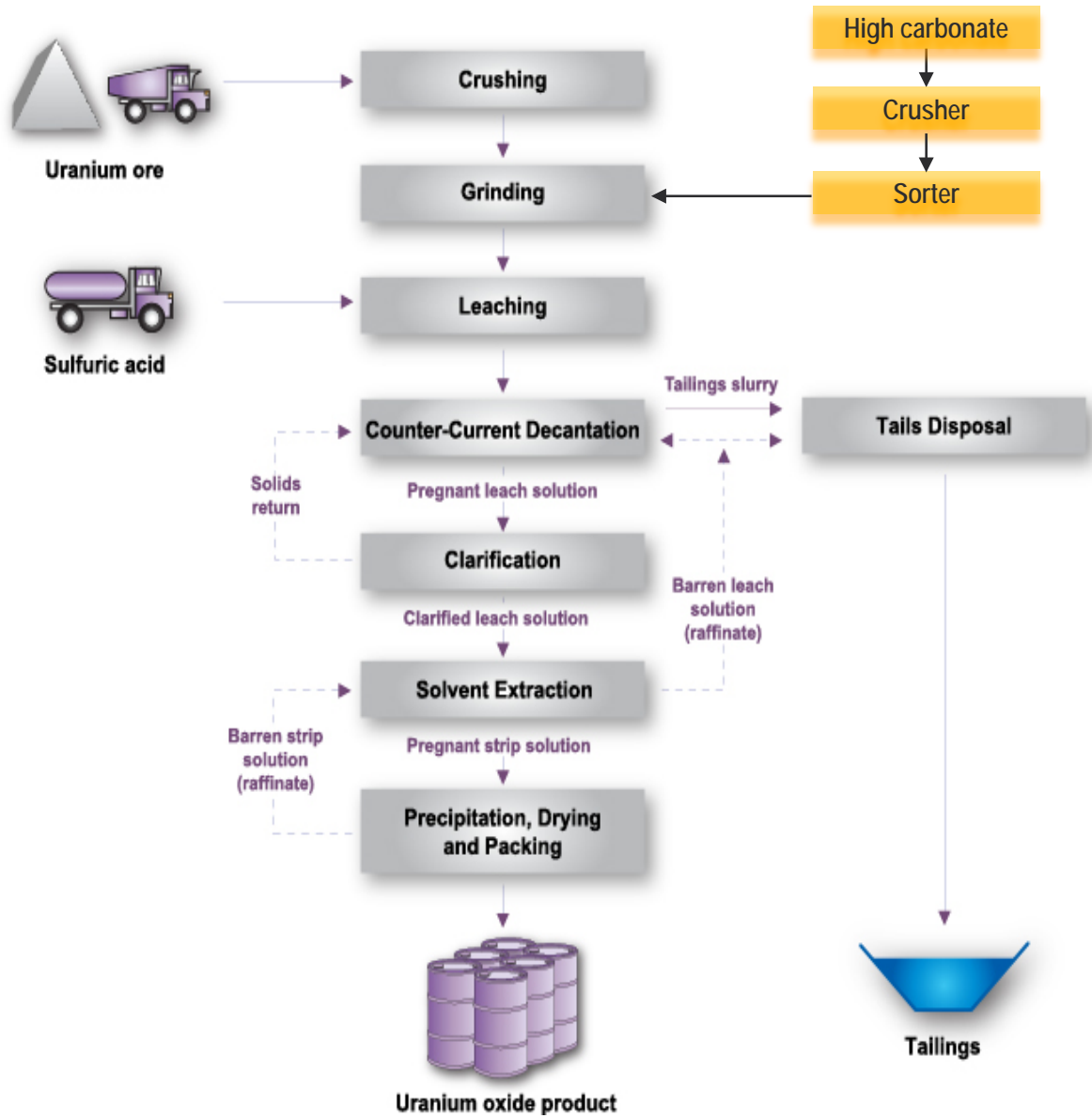


Figure 19: Existing processing circuit showing the pathway for beneficiated ore to enter the circuit

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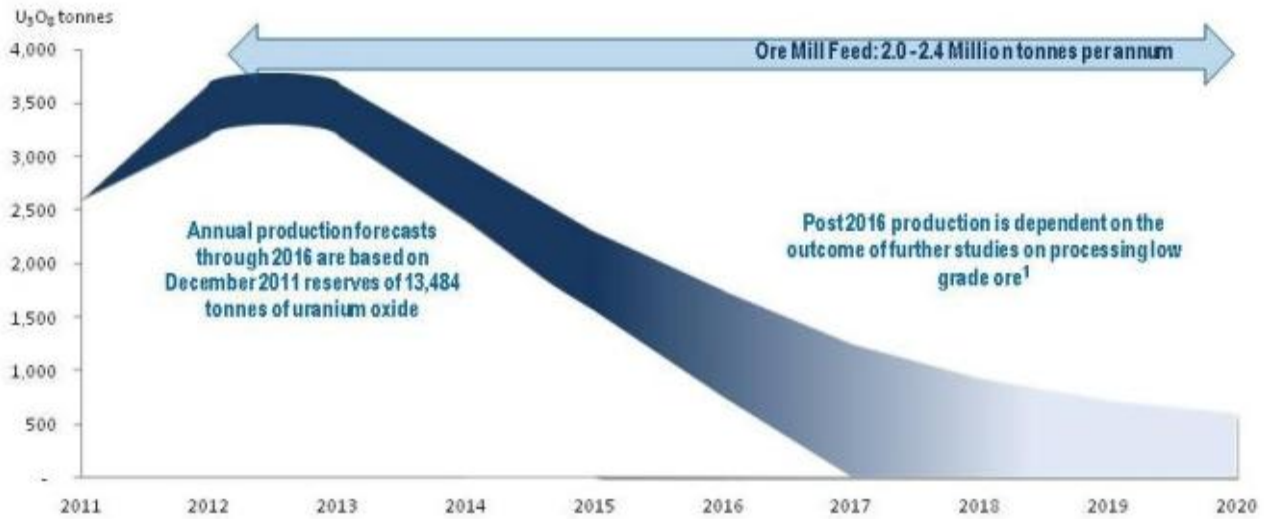


Figure 20: Ranger production forecast to 2020, in the absence of the proposed action