

Water Management of Mount Morgan Mine Site

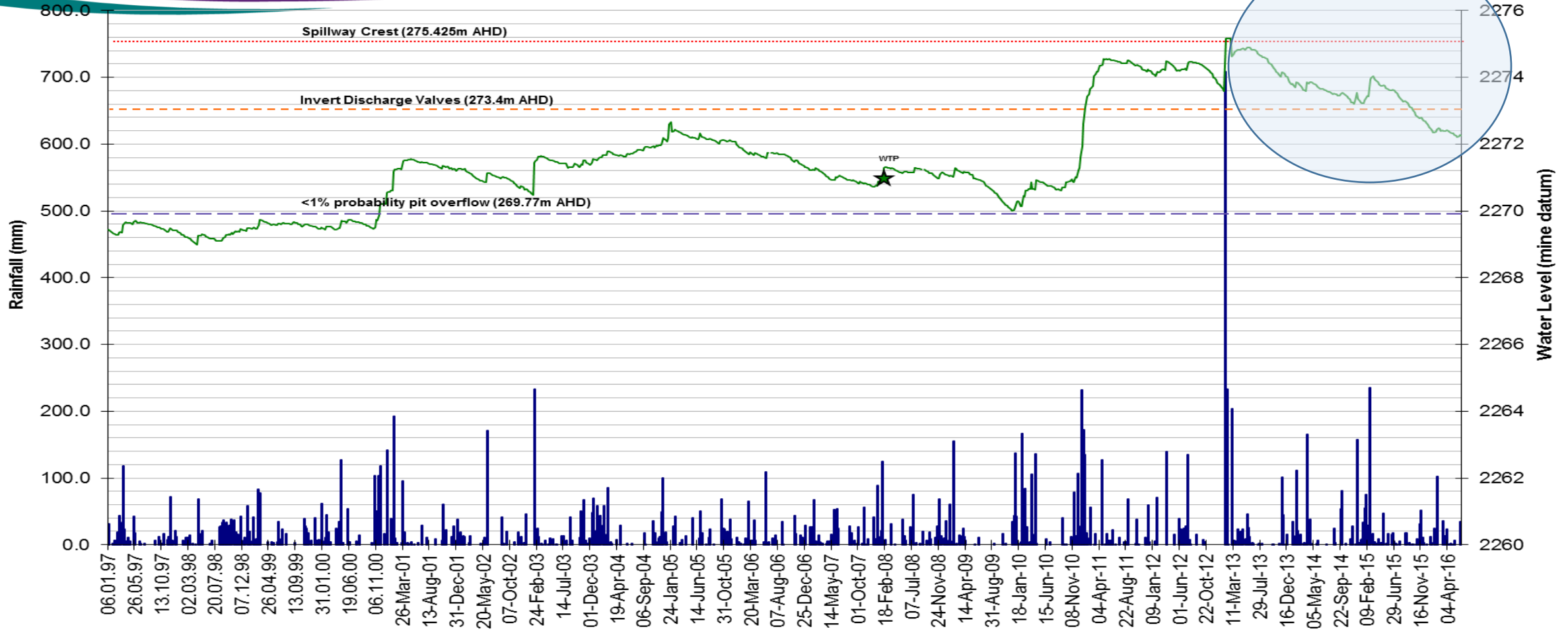
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Mount Morgan Rainfall Summary 2014/2015

- Three major rainfall events occurred over this year – in Dec 2014, Jan 2015 and Feb 2015 (TC Marcia).
- These resulted in Dee River flows of approx. 5000 ML/day in Dec 2014 & Jan 2015; and approx. 280,000 ML/day in Feb 2015
- There was a deterioration of downstream water quality (pH <6 at Wura ~20km d/s of mine). Recoveries took between 1 and 6 days.
- None of the events resulted in pH < 5.
- Tropical Cyclone Marcia (20/02/2015) dropped 200mm rain & generated a peak flow of 272,281 ML/d at Wura.
- In comparison, for the two major events in 2013/2014:
 - Peak flows were considerably less (max ~ 1500 ML/d)
 - pH dropped to less than 5 and Electrical Conductivity rose above 7254 $\mu\text{S}/\text{cm}$.
 - Recoveries took between 9 and 12 days.

Open Cut Pit Performance

Mount Morgan Mine site
Open Cut Pit WL v Rainfall



- As of 13/06/2016 the OCP level is 2.91 m below the spillway, giving a containment capacity of about 1450 mm rainfall.

Mount Morgan Water Management Improvements

- Outsourcing of operation of WTP to Carbine Resources Ltd
- Benefits include installation of water polishing circuit to eliminate need for freshwater and improved efficiency;
- Improved resilience of electrical infrastructure and power supply;
- Continued improvements to the Seepage Interception System; operation of Evaporators;
- 911 ML of seepage pumped back to the OCP 2014/15
- Dam 8 main pump is now on a floating pontoon, with a 2nd pump on standby - increased site resilience through ability to return Dam 8 to safe level within 14 days instead of 3 months

Communication- Stakeholders

- **REVIEW**
- There has been ongoing improvement to systems resilience at Mount Morgan, and we have managed to reduce the water level to almost 3m under the spillway since Jan 2013
- Dee River Alerts continue and the system has been improved (emails/text messages)
- 2014 saw additional monitoring/gauging station installed at Dululu able to provide more accurate and timely information to d/s landholders.
- Note the next Annual Stakeholder meeting will be in December 2015

For more information go to the Abandoned Mines Web site –

<http://www.qld.gov.au/environment/land/abandoned-mines/projects/mt-morgan/>

Or contact the Abandoned Mines Unit Central Region Team:

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