Mount Veteran Mill
Transitional Environmental Program
Interim Report
November 2014

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Prepared for:	MGT Mining Ltd
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1.0 BACKGROUND - INTRODUCTION

On 7th November 2014, the Department of Environment and Heritage Protection (EHP) made a decision to approve MGT Mining's application for a Transitional Environmental Program (TEP) (decision notice CA31535-MAN18680). EHP imposed three conditions on the approval:

1. A progress report must be submitted to the administering authority by 15th November 2014
2. A final / close out report must be submitted to the administering authority by 15th December 2014
3. Design, construction, operation and maintenance of the catch drain and water return system must be in accordance with accepted engineering standards and undertaken / supervised by a suitably qualified and experienced person.

This report is the progress report as required in Condition 1.

The TEP relates to conditions B1, B2, B4, B5 and B7 of the Environmental Authority EPVL00864413 which authorise and specify the requirements for release of contaminants to waters on Mining Leases ML4349 and ML20547. Specifically the TEP includes sealing the Tailings Storage Facility (TSF) with polymer to stop the seepage and pumping the water from the Mill Pond into the Fresh Water Dam (FWD) (refer Appendix 1).

2.0 TEP IMPLEMENTATION PROGRESS

The key work completed to date is the application of the sealer to the downstream dam wall of the FWD and the TSF. The application of the sealant to the FWD wall was completed on 9th October, and the application to the TSF wall was completed on 31st October.

Table 1 is an updated version of the summary of works contained within the TEP application.

Objective	Action	Action Description	Performance Indicator	Target Date of Completion
Seal the FWD with polymer to stop inflow from FWD to TSF	1.Obtain permission from landowner	Request written permission from landowner of FWD to allow MGT Mining to pump water from the Mill Pond into the FWD	Written permission obtained (refer Appendix F)	Completed.
	2. Complete toxicity testing	An investigation and report on the potential toxicity of the sealant polymer was undertaken by CDM Smith. The report concluded that the polymer is highly insoluble in water and as such is unlikely to be carried as a dissolved phase. Hazardous decomposition products from degradation of the polymer are unlikely to occur in the dam to which it will be applied. If decomposition products do result from unusual conditions, it is unlikely to be present at significant concentrations to cause environmental concern.	Written report from expert (refer Appendix E)	Completed
	3.Obtain permission from EHP to spread polymer	Dannielle Tela, a representative of EHP, confirmed in writing that EHP had no objection to the commencement of spread of the polymer in the FWD and TSF.	Written permission obtained	Completed
	4. Spread polymer in FWD	The polymer was spread onto the surface of the water of the FWD by hand from a boat in October 2014. The movement of the water drew the polymer into the dam wall and expanded, effectively sealing any cracks through which water had been seeping.	Polymer spread into FWD	Completed
	5. Evaluation and further targeted application of polymer	The water level in the Mill Pond (the receiving dam for the leak from the FWD) decreased after the application of the polymer. Areas of the dam wall that had green vegetation are drying out and dying off. A second targeted round of sealant was applied using the same method and concentrating on the areas of the dam wall that still had green vegetation.	Reduction in water level in FWD	Completed
Undertake earthworks to make the dam wall between the Mill Pond and the TSF impermeable.	1. Seal pipe between Mill Pond and TSF.	Pipe was manually capped.	Visual	Completed
	2. Earthworks to	Earthworks undertaken to ensure no flow between the Mill Pond and the TSF.	Visual	Completed

	improve the impervious quality of the dam wall			
Seal the TSF dam wall to stop the seepage into the receiving environment.	1. Install v-notch weir downstream to measure rate of seepage.	V-notch weir installed downstream of the TSF and the immediate wet receiving environment (refer Appendix D). All seepage from the broad toe of the TSF collects from the wet area and passes through the culvert under the main entrance road to the Mt Veteran Mill site. The flow at this point is considered representative of the seepage flow rate	V-notch weir installed and flow rates recorded daily.	Installation completed, flow rate records ongoing.
	2. Broadcast sealant into TSF	The polymer is being spread onto the surface of the water of the TSF by hand from a boat in October 2014. The movement of the water will draw the polymer into the dam wall and expand, effectively sealing any cracks through which water had been seeping.	Rate of flow at v-notch weir	Completed
	3. Evaluation and further targeted application of polymer if required.	The rate of flow at the v-notch weir will be representative of the flow from the toe of the TSF dam wall together with the indirect effects of the pooling of water in the wet area between the dam wall and the v-notch weir. After the polymer is applied, the rate of flow at the v-notch weir is expected to decrease. Visual analysis of vegetation growth patterns on the downstream dam wall will assist in establishing areas that may require a second round of polymer application.	Rate of flow at v-notch weir and visual records of vegetation growth patterns	Ongoing
Empty water from Mill Pond	1. Water quality testing on Mill Pond water	Two water samples will be taken from the Mill Pond and tested in a NATA accredited laboratory immediately before pumping of the water will begin. The results will be compared against the contaminant limits for released water in the EA Schedule B.	All water samples will return contaminant levels within release limits (with the exception of pH which must be pH8 or less).	Completed
	2. Pump water from Mill Pond to FWD	Water will be pumped from the Mill Pond to the FWD over the dam wall using a series of pipes with pumps. Pumping will continue until the water fails to comply with contaminant release limits or the Mill Pond is empty (whichever is sooner). This is expected to take approximately 2 weeks.	Visual	Commenced 15th November 2014
Transfer water from TSF to Mill Pond	1. Release water from TSF into Mill Pond	The pipe between the TSF and the Mill Pond will be uncapped, allowing the water to flow from the TSF to the Mill Pond and the levels in both dams to stabilise. A siphon hose or a pump will be used to complete the transfer of water to the Mill Pond from the TSF. This process is expected to take approximately 2 days.	Water levels stabilise between TSF and Mill Pond	Estimated 25th November

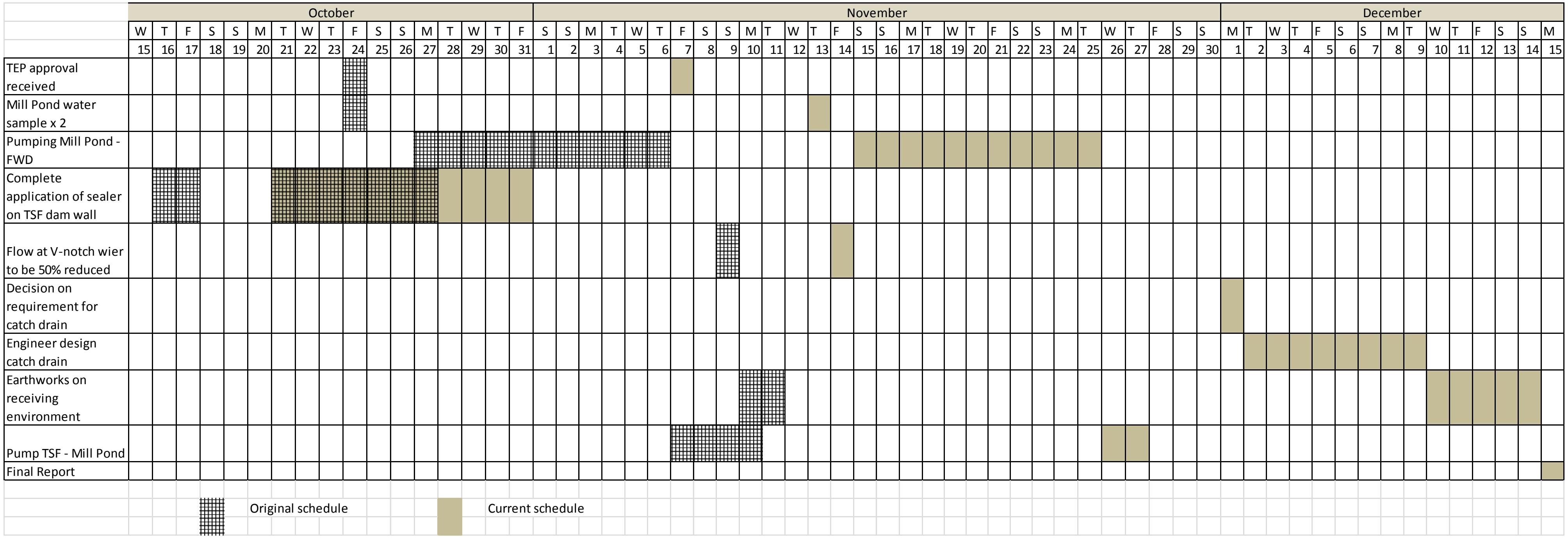
Catch Drain and water return system	1. Design and location	The exact location of the catch drain will be dependent on the ground conditions encountered during construction, however it will be located as close as possible to the downstream toe of the TSF dam wall to minimise the runoff during the wet season. The catch drain will direct the water to a ponding area where the water will be collected and then pumped back upstream into the TSF.	Any changes to the location of the catch drain will be reported to EHP before construction is finalised.	
	2. Construction	Fitzgerald's Earthworks Contractors have been engaged to undertake the construction of the catch drain. They are able to mobilise to site to undertake works with 2-3 days' notice.	Construction of catch drain to design specifications	Estimated 10th December if required
Water Quality Monitoring	1. Water quality before pumping from Mill Pond to FWD	Two water samples from the Mill Pond will be tested before the water is pumped into the FWD.	Water will not be transferred to the FWD unless it is compliant with the EA specified release limits (with the exception of pH that may be pH 8 or less).	Completed
	2. Water quality whilst pumping between Mill Pond and FWD.	Water samples undertaken at SW6 on a weekly basis during pumping and analysed at a NATA accredited laboratory for all contaminants recognised in the site EA Water testing of pH, EC and turbidity to be undertaken on a daily basis using a portable water meter. Should any water samples return contaminants outside of the release limits in Schedule B of the site EA, pumping will cease immediately and the result would be reported to EHP within 24 hours.	Pumping will stop if any results show contaminant limits that breach the release limits in the site EA (with the exception of pH that may be pH 8 or less).	Ongoing
	3. Report of water quality results	The results of the water quality testing at the Mill Pond and the FWD will be presented in a short report within 2 weeks of the completion of the exercise	Water quality report to be presented within 2 weeks or completion	15th December (Condition 1 of TEP decision notice)
Seepage Monitoring	Flow monitoring	The rate of seepage from the TSF will be monitored using the v-notch weir at the culvert under the main access road. Photographs of the v-notch weir will be	>50% reduction in flow at v-notch weir	Completed

		taken for 2 weeks after the polymer has been applied. A photographic log and report will be provided to EHP after 2 weeks.	within 2 weeks of application of sealer to TSF dam wall.	
Monthly reporting	1. A monitoring report will be submitted to EHP on a monthly basis from the time of approval of the TEP	The monthly monitoring report will provide reports on the carrying out of the actions, whether or not the objectives are being achieved, the required timeframes are being met, and progress of the implementation of the TEP	Monthly progress report submitted to EHP	Interim Report and close out report only required (Conditions 1 & 2 of TEP decision notice)
Close out report	1. A close out report will be submitted to EHP at the end of the TEP period.	The close out report will provide the outcome of the actions undertaken and assess if the objectives of the TEP have been achieved.	Report provided to EHP	15th December (Condition 2 of TEP decision notice)
	Ongoing monitoring	Any seepage will be recorded at the v-notch weir on a weekly basis. Water levels in the TSF and in the Mill Pond will be monitored on an ongoing basis using a permanent depth stick.	An increase in water depth for any reason except for rainfall will be reported to EHP	Ongoing

3.0 TIMETABLE

The schedule of works proposed in the TEP application has not been adhered to due to poor weather conditions delaying the application of the sealer to the TSF. The extremely windy conditions on site during October meant that the application of the sealer was not feasible as the sealer had to be broadcast onto the surface of the water and then be drawn to the dam wall through the pressure of water in the dam. The wind conditions meant that the sealer was blown away from the dam wall before it could land on the water surface. The timeframe for the submission of the draft TEP and the receipt of the decision notice from EHP was also longer than expected.

An indication of the proposed schedule as set out in the TEP application (shown as cross hatching), and the current expected schedule is shown below (completed works have been removed):


October
November
December
TEP approval received
Mill Pond water sample x 2
Pumping Mill Pond - FWD
Complete application of sealer on TSF dam wall
Flow at V-notch wier to be 50% reduced
Decision on requirement for catch drain
Engineer design catch drain
Earthworks on receiving environment
Pump TSF - Mill Pond
Final Report
Original schedule
Current schedule

4.0 RESULTS AND RECOMMENDATIONS

4.1 Seepage from TSF

As proposed in the TEP application, daily monitoring has been undertaken at the v-notch weir downstream of the TSF dam and the soakage area. A compilation of daily photographs of the water level at the v-notch weir is shown in Appendix 2.

The photographs show that the flow at the v-notch weir has decreased from 3.2cm to 2cm. It should be noted that the area downstream of the TSF is visibly becoming drier and depth measuring is commencing across this area to record the decrease in standing water. However the reduction in flow at the v-notch weir does not comply with the requirements of the TEP that the flow is reduced by 50% within 2 weeks of completion of the application of sealant to the downstream TSF dam wall.

Based on this result, it is considered highly unlikely that the flow from the TSF will cease by 1st December (or first wet season rains). MGT will engage a suitably qualified engineer within one week of this report date to commence the design specification for the catch drain and water return system.

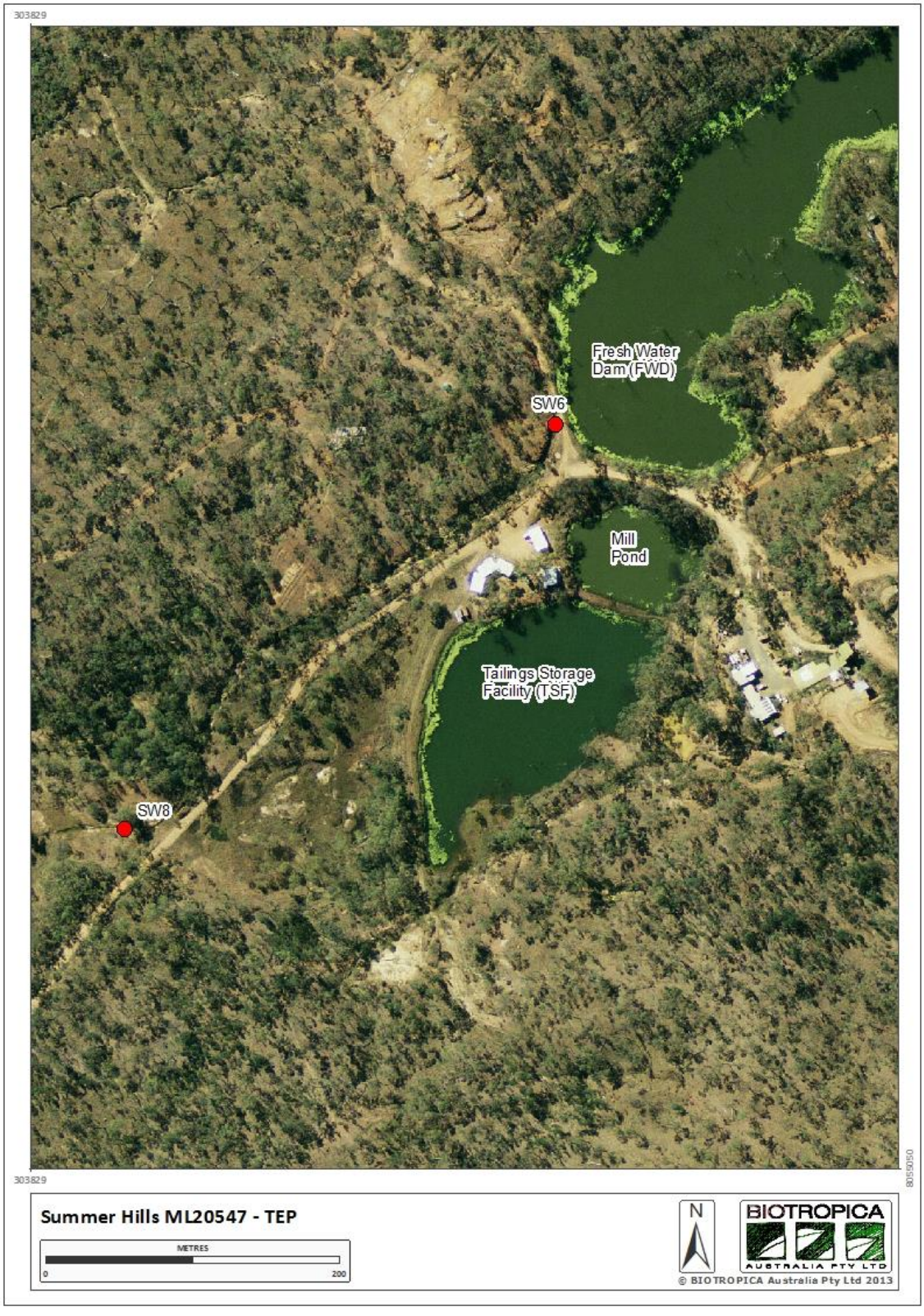
4.2 Water quality at Mill Pond

As proposed in the TEP application, two samples were taken from the Mill Pond on 13th November 2014 and sent to a NATA accredited laboratory for testing. The results showed that the water was compliant with the release limits set out in the TEP (refer Appendix 3).

The pumping of the water from the Mill Pond to the FWD will commence on 15th November and daily water quality samples will be taken from the Mill Pond using a portable water quality testing machine for the duration of the pumping.

A sample will be taken at point SW6 in the FWD (refer Appendix 1) on 21st November 2014 and sent to a NATA accredited laboratory for testing off all contaminant parameters listed in Schedule B Table 2 of the EA.

APPENDIX 1: SITE MAP



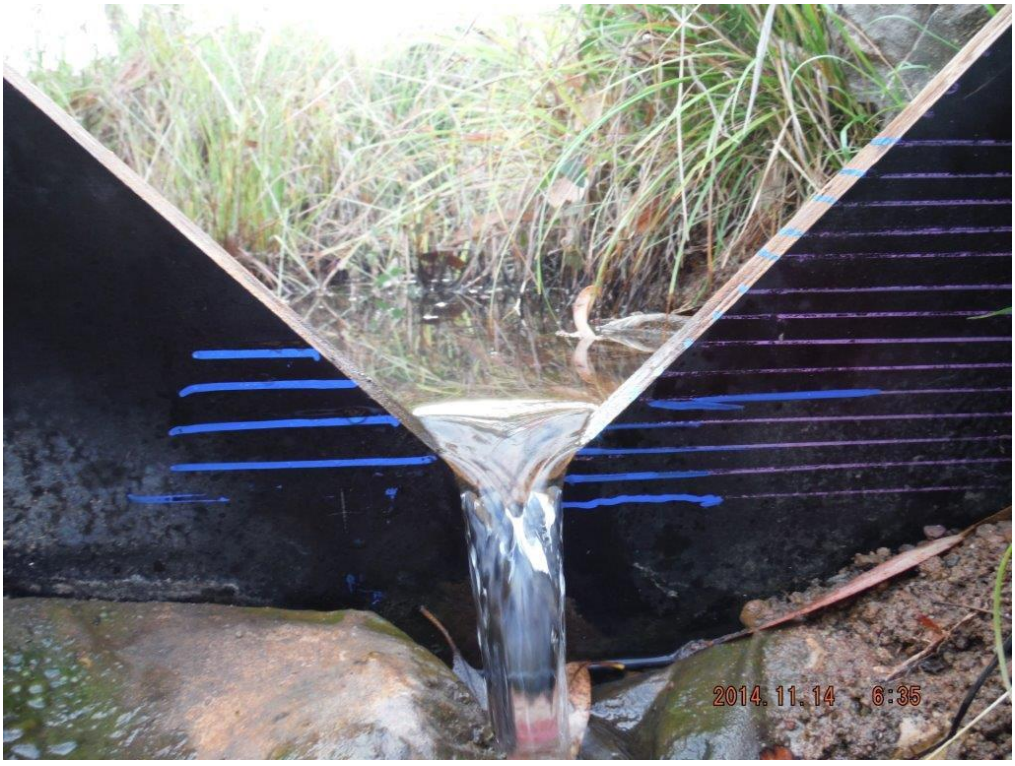
APPENDIX 2: PHOTOGRAPHIC LOG OF FLOW AT V-NOTCH WEIR

Photograph of v-notch weir at 15th September 2014

Photograph of v-notch weir at 1st November 2014

Photograph of v-notch weir at 8th November 2014

Photograph of v-notch weir at 14th November 2014



APPENDIX 3: WATER SAMPLE TEST RESULTS

Please note that:

- These reports are sent as a separate document due to the file security level of the NATA accredited laboratory.
- Two separate laboratory reports are required as the pH was re-tested and reported separately.