

APPENDIX P: TAILINGS STUDY

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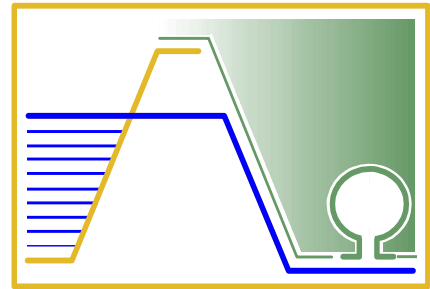
CONCEPTUAL PLANNING AND DESIGN OF TAILINGS STORAGE FACILITIES FOR STAGE 3

Prepared for

LANGER HEINRICH URANIUM PTY LTD

**PROJECT NO. 336-001
REPORT NO. 2/09**

AUGUST 2009



metago
*Environmental Engineers
(Australia) Pty Ltd*

- * *Tailings dam engineering and management*
- * *Municipal and industrial waste management*
- * *Risk based environmental control*
- * *Environmental Management Systems*
- * *Acid mine drainage*
- * *Environmental impact assessment*

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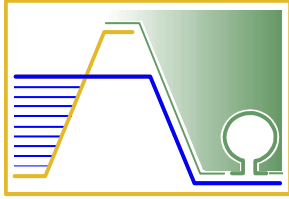
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Environmental Engineers (Australia) Pty Ltd

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1 INTRODUCTION

It is a requirement of the current EIA for Langer Heinrich Uranium Mine (LHU) that tailings be stored below ground surface within mined out pits. To achieve this, however, it is necessary to have completed mining in at least one pit. Since processing of the ore mined from the first pit needs to be stored permission has been obtained for the provision of a temporary tailings storage facility, TSF1, which is located on the edge of the Gawib river flood plain immediately upstream of the processing plant and the first pit, Pit A. Experience, since the commencement of mining in 2007, has shown that to ensure that mining retains sufficient flexibility to accommodate market and grade fluctuations it will be necessary to operate concurrently within two pits with two mining teams. Furthermore, to ensure that this flexibility does not disrupt the development of in-pit tailings facilities it will be essential to have a buffer of at least one mined out pit between an operating pit and the operating tailings facility.

Mining in Pit A, the first pit to have been mined at LHU has been completed. This pit is currently being retained as a control structure for the storage of floodwater coming down the Gawib River and as such it isolates the plant and mining downstream from Pits A from flood disruption.

Presently Pits B, C and D are being mined with mining in Pit B scheduled to be complete by the end of the third quarter of 2009 and mining in Pit D scheduled to be complete by the end of the first quarter of 2010.

Figure 1 shows the relative locations of the pits.

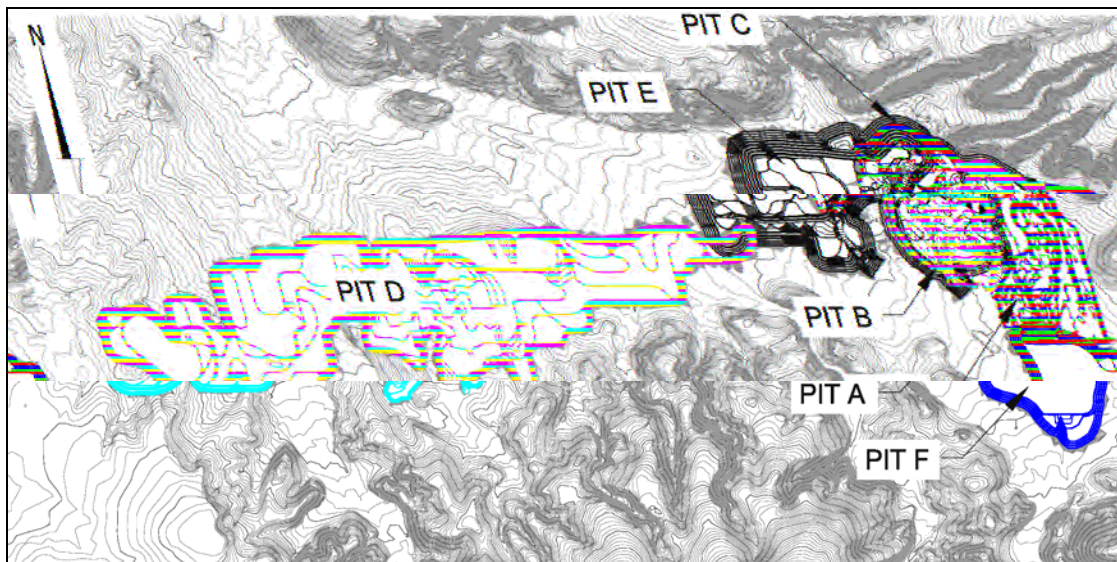


Figure 1: Langer Heinrich Pit Location Plan

Metago Environmental Engineers (Australia) Pty Ltd (Metago) has been retained since February 2008 to assist with the design and construction management of the tailings facilities. The current operating facility is the temporary Tailings Storage Facility 1 (TSF1). In order to be able to preserve Pit A for flood control it has been necessary to both raise as well as extend Temporary TSF1. Together the raise and the extension of TSF1 will provide tailings storage capacity to the end of the third quarter of 2011. There is no scope to increase this capacity further.

It is the intention that Pits A and B be developed to receive tailings as soon as a replacement flood control pit, designated Pit F and located immediately upstream of Pit A, is mined out. This is scheduled for mid 2011.

Notwithstanding the additional capacity provided by the raise and extension of TSF1 an additional Tailings Storage Facility (TSF2) will be required prior to tailings deposition commencing in Pits A and B. Various locations for this facility have been identified and investigated and are documented in this report.

On completion of TSF2, deposition in Pits A and B will commence and will be referred to as Tailings Storage Facility 3 (TSF3). The conceptual designs for TSF2 and TSF3 are described in this report.

Additional investigations are being carried out on the tailings material in an endeavour to:

- Maximise the storage capacity within the tailings storage facilities,
- Reduce the volume of supernatant water produced and

- Reduce seepage of supernatant water into the surrounding natural environment.

These objectives can be achieved if the tailings slurry is thickened to a consistency referred to as High Density Thickened (HDT) tailings since:

- The final tailings profile is convex, while conventional tailings profile is concave which results in greater storage volume.
- The tailings is transported at a water content close to the interstitial water content which means there is less water available to become supernatant. Reduced supernatant volumes lead to lower water losses by evaporation as well as lower seepage potential.

It is important to note that the designs and details set out in this report are conceptual and subject to detailed engineering which may necessitate changes to the details indicated. The design principles will, however, remain unchanged.

2 TERMS OF REFERENCE

The terms of reference for this report are as follows:

- Determine the approximate tailings storage volumes required based on the information determined from the tailings characteristics investigation.
- Determine the appropriate tailings management procedures to:
 - Maximise tailings storage
 - Minimise supernatant water production
 - Reduce seepage potential from future facilities
 - Ensure that residual landforms will be in keeping with the current landscape and will sustain current land use as a National Park.
- Investigate alternative locations for TSF2 and identify its preferred location.
- Carry out a conceptual design for TSF2 and TSF3
- Document the above in a report.

3 AVAILABLE INFORMATION

The following information was made available for the planning and design of the tailings facilities.

- Detailed survey information of the natural ground surface (April 2008 survey data), supplied by LHU,
- Detailed pit planning information and predicted pit geometries (June/July 2009 information), supplied by LHU,
- Draft hydro-geological report (June 2009), supplied by Bittner Water Consult.

4 DESIGN LIMITATIONS

The following limitations should be noted in respect of the design details set out in this report:

- All conceptual designs carried out have been based on the predicted pit basement geometry data supplied by the mine and elevations and geometries are likely to change on completion of pit mining.
- Work on the hydro-geological studies is on-going at the time of writing. These studies take into account tailings designs through numerical modelling but development of the models is still in progress. The model results may necessitate modifications to the design details prior to construction.
- Detailed testing of the tailings to determine geotechnical and depositional characteristics is in progress at the time of writing. The results of this testing may necessitate modifications to the design details prior to construction and operation.

5 TAILINGS VOLUMES

The current tailings production rate is estimated to be 63,500t/month at a plant availability of 87.4%. The mine plans to increase leach throughput during a Stage 1 expansion which will increase tailings production to approximately 128,000t/month at the same plant availability. This increase in production is envisaged to commence at the start of August 2009. On completion of Stage 3 the tailings production rate is expected to increase to approximately 154,000t/month at 87.4% plant availability and this is likely to occur in October 2010. At that stage uranium production will be 5.2million pounds per annum.

There is potential to increase the annual production rate to 10million pounds per annum. TSF2 and TSF3 as well as future in-pit facilities are able to accommodate higher production rates subject to appropriate design.

6 TAILINGS CHARACTERISATION

Detailed testing of the tailings material is currently being undertaken, the results of which will only be made available after submission of this report. The current tailings particle size distribution has been obtained from LHU and is graphically depicted in Figure 2 below.

It is envisaged that the tailings material will be pumped to the tailings facilities at an approximate density of 1.6t/m³ and the tailings are likely to settle out at a similar density. This density has been applied to all tailings storage volume calculations.

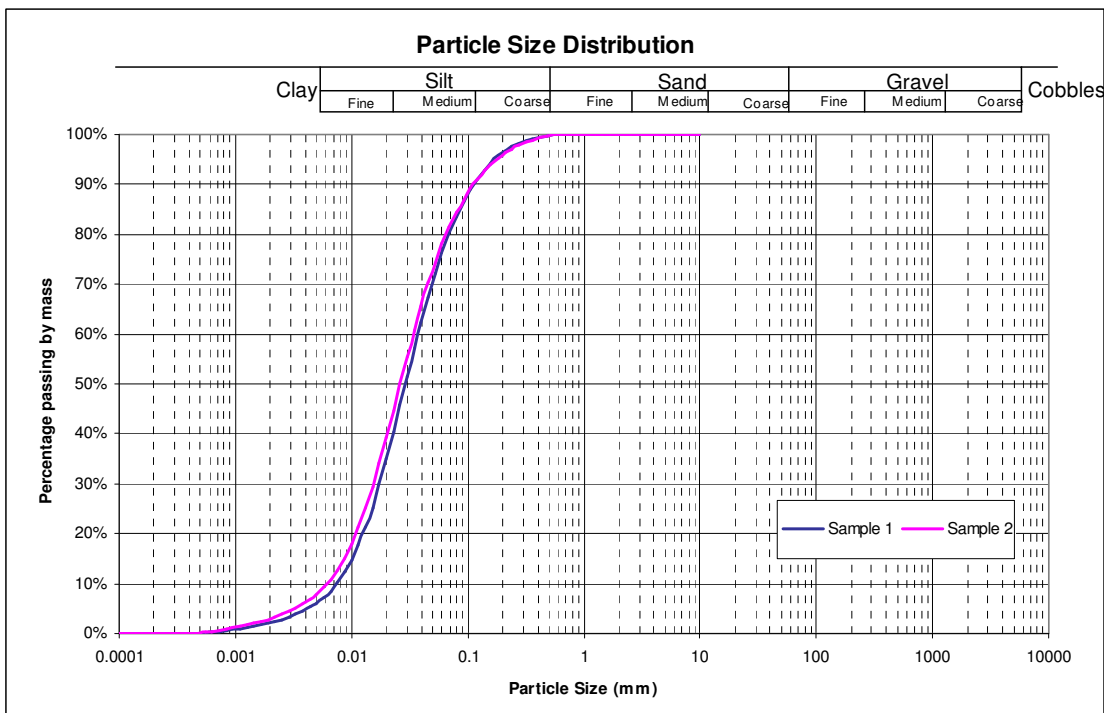


Figure 2: Tailings Particle Size Distribution (PSD)

7 TAILINGS MANAGEMENT

Tailings design and management is currently focused on the generation of high density thickened (HDT) tailings. There are numerous advantages and disadvantages to be highlighted regarding HDT tailings deposition.

The advantages are:

- Water and reagent losses are lower for high density operations.

- Seepage volumes and seepage rates would be lower.
- Capital and operating costs of the facility itself (i.e. excluding the mechanicals) would be lower.

Work is presently underway to design a thickening circuit capable of delivering the high density tailings to the deposition site. Due to the anticipated difficulty of pumping the HDT it is proposed that final thickening will be carried out within the TSF and the water recovered from the thickener will be pumped back to the processing plant.

8 CURRENT FACILITIES

8.1 Tailings Storage Facility 1 (TSF1)

TSF1, a temporary tailings storage facility, is located to the east of Pit A. The embankment elevations are currently RL649.0m¹. Construction work has commenced to raise the embankments to RL658.0m and should be complete by the end of August 2009. The final area of the facility will be approximately 304,200m² with a final estimated total storage capacity of 2.1Mm³. Figure 3 and Figure 4 graphically depict the location of the facility and the typical geometry of the confining embankments. The facility is likely to reach full capacity by October 2010.

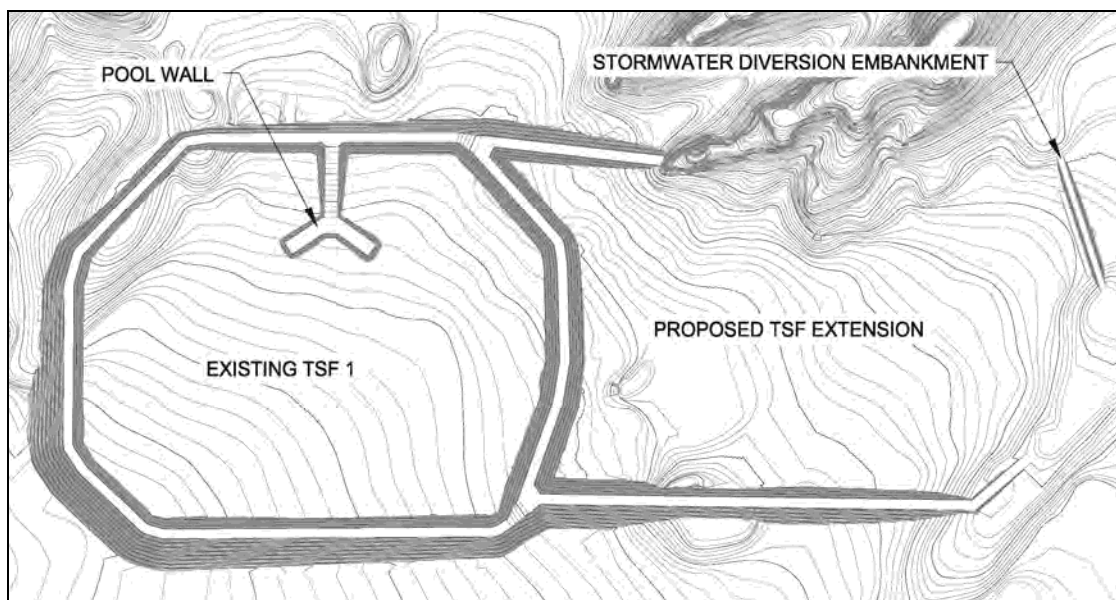


Figure 3: Location of Tailings Storage Facility 1 (TSF1)

¹ RL = Reduced Level and refers to the elevation above mean sea level (amsl).

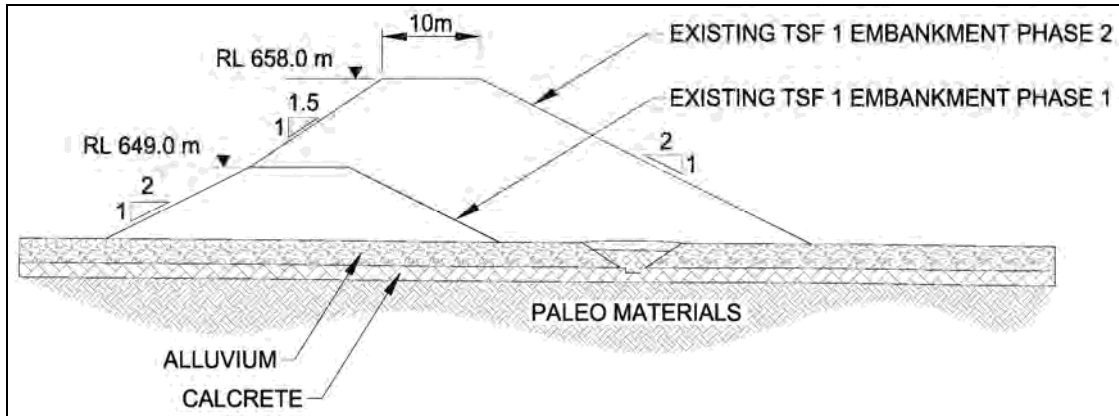


Figure 4: Typical Section through TSF1 Embankment

As stated above, TSF1 is considered a temporary facility as it has been constructed over a proposed future pit; hence all tailings material will be removed and stored within the excavated pits.

Additional storage volume will be required as TSF1 will not have the capacity to store tailings until development of an in-pit facility. To provide further capacity additional storage has been proposed to the east of TSF1 and has been named TSF1 Extension.

8.2 Tailings Storage Facility 1 Extension (TSF1 Ext)

TSF1 Ext is indicated on Figure 5. The embankment elevations are to be constructed to RL661.0m. The final area of the facility will be approximately 261,650m² with a final estimated storage capacity of 1.2Mm³. The facility is likely to reach full capacity within 12 to 14 months from the start of deposition.

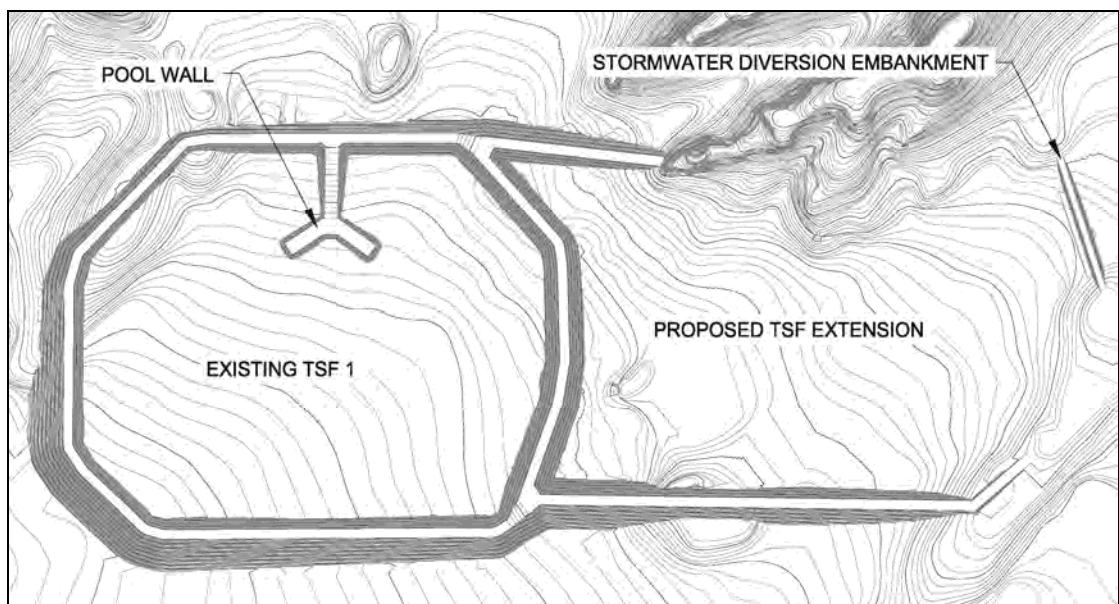


Figure 5: Location of TSF1 Ext.

Figure 6 shows a typical section through the confining embankment of the facility.

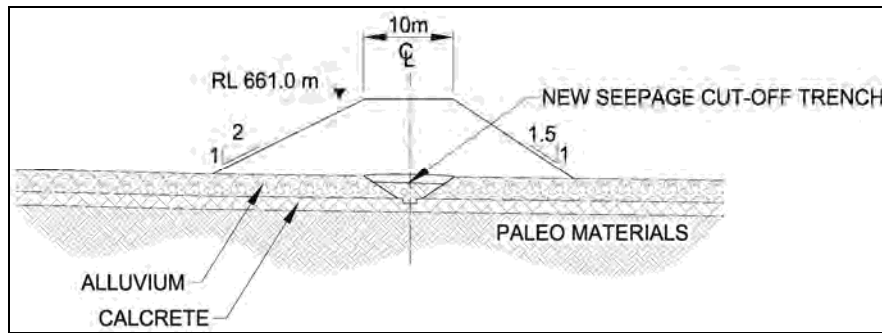


Figure 6: Typical Section through TSF1 Ext. Embankment

As in the case of TSF1, TSF1 Extension is to be re-mined and stored in an in-pit facility at an appropriate juncture.

9 NEW AND FUTURE FACILITIES

Regulator approval has previously been obtained for an above ground facility that would be located up-contour of and within Pit D. Approval has also been obtained for in-pit facilities located within pits formed in the course of mining the paleochannel.

In respect of TSF2 three potential layouts have been evaluated and are documented elsewhere within the Environmental Impact Assessment report. These layouts differ with respect to the use, or protection of, Reid Wash and are indicated in Figure 7.

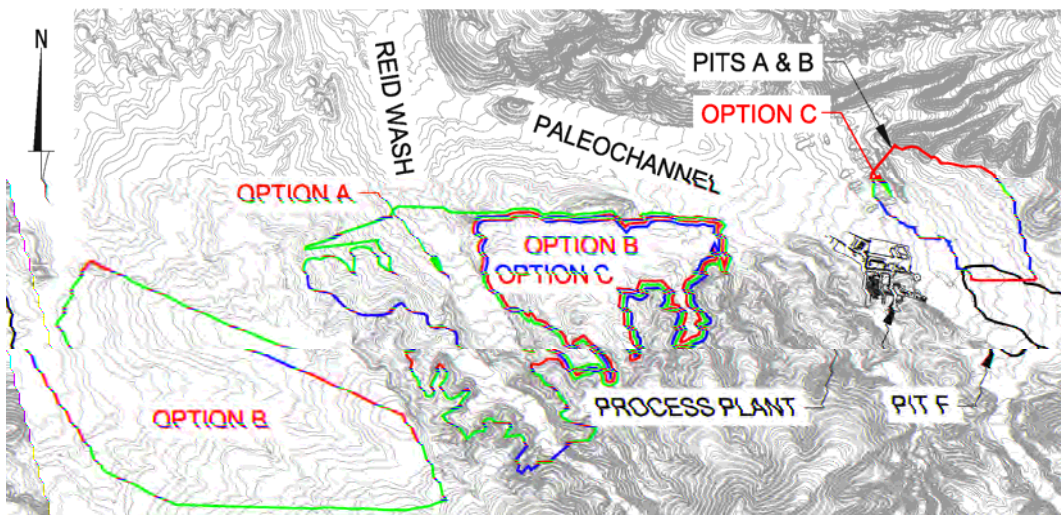


Figure 7: Locations of Options A, B and C

Option A entails constructing an embankment across Reid Wash and filling the wash valley area with tailings. This produces a tailings storage capacity of some 15million m³.

Option B has a similar capacity to Option A but entails developing a separate TSF on the western bank of Reid Wash thereby leaving the wash intact. The capacity of TSF2 reduces to some 5 million m³ with the balance being made up of the separate TSF

Option C is the same as Option B except that instead of developing a separate facility on the west bank of Reid Wash tailings storage is moved to TSF3 that would be located within Pits A and B. This option is only viable if mining is scheduled such that Pit F which is located immediately upstream of Pits A and B is mined out and is able to replace Pits A and B as the Flood control facility. This has been evaluated by LHU mine planners who have indicated that Pit F will be available from the end of 2010 following which TSF3 could be developed. A storage capacity of 5 million m³ in TSF2 will be sufficient to see operations through to 2013 which means that Option C is indeed viable.

9.1 Design Considerations

Several considerations have been identified and used to guide the design for the new tailings facilities. The design considerations are as follows:

- No construction should take place within Reid Wash which is a natural drainage course that traverses the paleochannel to the west of the processing plant.
- No seepage from the deposited tailings should reach the upper alluvial aquifer in the paleochannel.
- Minimal seepage should be allowed to enter the deep aquifer.
- Both the upper and lower aquifer should be reinstated once mining has been completed.
- Closure design of the facilities should be such that minimal erosion should take place and the mined pits should, as far as practical, appear as they did before mining commenced.
- The tailings storage facilities should be in relatively close proximity to the plant.

9.2 Design approach

To address the above design considerations the following design features will be incorporated into all new facilities:

- The top elevation of the tailings will be terminated up to 5m below the original ground surface in the paleochannel. This will allow scope for re-placement of calcrete layers to the base of the alluvial aquifer which will be reinstated. Limitation of the tailings levels will prevent the tailings draining into the upper alluvial aquifer.
- The base and sides of the TSF's will be lined predominantly with selected fine grained compacted calcrete which has been shown in laboratory testing to have low permeability suitable for liner applications. Where necessary the compacted calcrete will be supplemented with a geomembrane liner to form a composite liner.
- The deeper aquifer will be reinstated where this has been mined. Calcrete materials will be backfilled at an appropriate density and to appropriate dimensions to allow re-establishment of pre-mining flow rates and conditions as far as practicable.
- The river section will be reinstated to pre-mining dimensions as far as practicable in order to minimise long term erosion within the paleochannel. Where this is not feasible the residual landform will be at gentle slopes contiguous with the natural ground levels.

9.3 Conceptual Design of TSF2

TSF2 has been conceptually designed as an in-pit tailings facility and in keeping with the environmental requirement to minimise seepage into the natural environment, the design has made allowance for a compacted calcrete layer (up to 2m thick) to be placed within the boundaries of the facility and, where necessary for this layer to be supplemented with a geomembrane liner to form a composite liner. Geotechnical testing on the calcrete materials excavated from the pit indicate that finer grained materials can be compacted to achieve permeabilities as low as $1 \times 10^{-8} \text{m/s}$. This, in combination with HDT and filter drainage in the lower areas will ensure all seepage and the limited volume of supernatant water released by the HDT tailings will be contained within the facility. In order to remove storm water as well as any supernatant water and pump these to the processing plant for re-use, a network of drainage pipework within a 50m sand filter blanket constructed along the upstream toe of the confining embankments has been provided for.

The drainage pipework will direct all accumulated supernatant water to a centrally located sump as indicated in Figure 8.

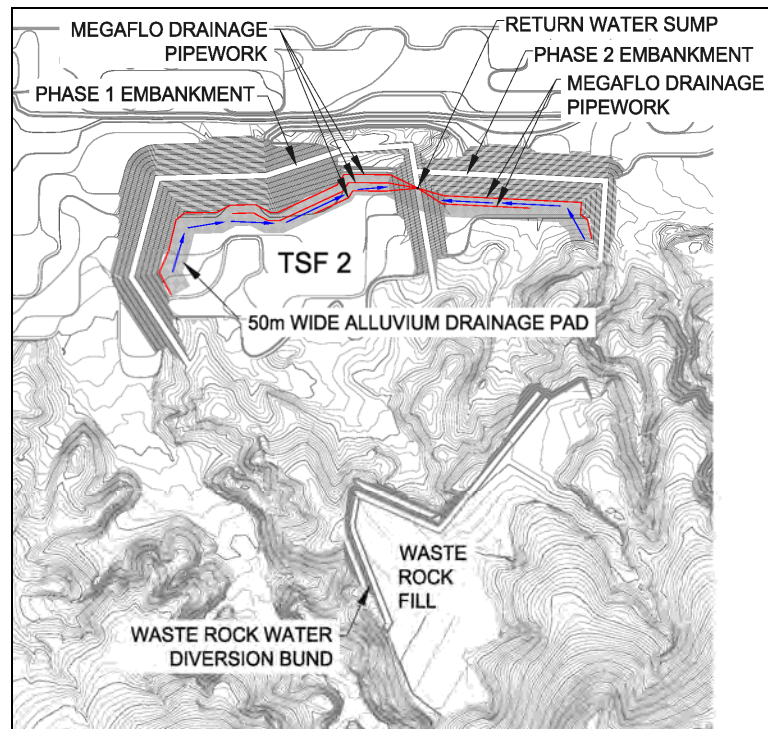


Figure 8: TSF2 Geometry

Figure 8 also shows the geometry of waste rock dumps to be formed behind TSF2 on the high ground such that these will direct stormwater around TSF2 to the pits in the paleochannel where it will be accumulated and used in the processing plant.

The embankments for TSF2 have been divided into three categories, namely:

- Containment embankments separating pits,
- Containment embankments separating pits and natural environment and
- Permeable embankment separating deposition phases.

Figure 9 details a typical section through the confining embankment, separating pits.

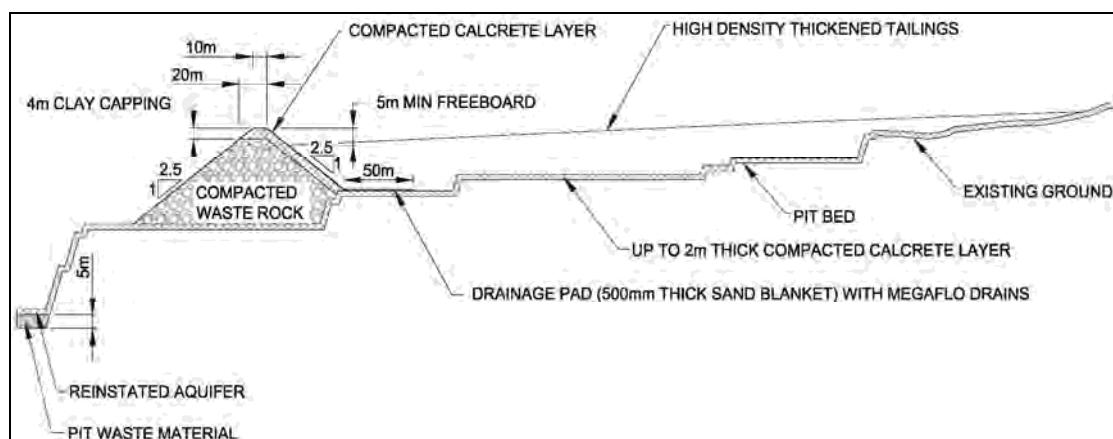


Figure 9: Typical Section through TSF2 Confining Embankment Type 1

Notable features of the embankment are as follows:

- An upstream 10m wide compacted calcrete facing has been proposed to contain supernatant water within the facility
- A compacted calcrete layer (up to 2.0m thick) has been indicated to reduce seepage within the basement of the facility
- TSF2 seepage will be isolated from the in-pit disposal that is proposed within the main river pit excavation.

Figure 10 depicts a typical section through the confining embankments of TSF2, separating the facility from the natural environment.

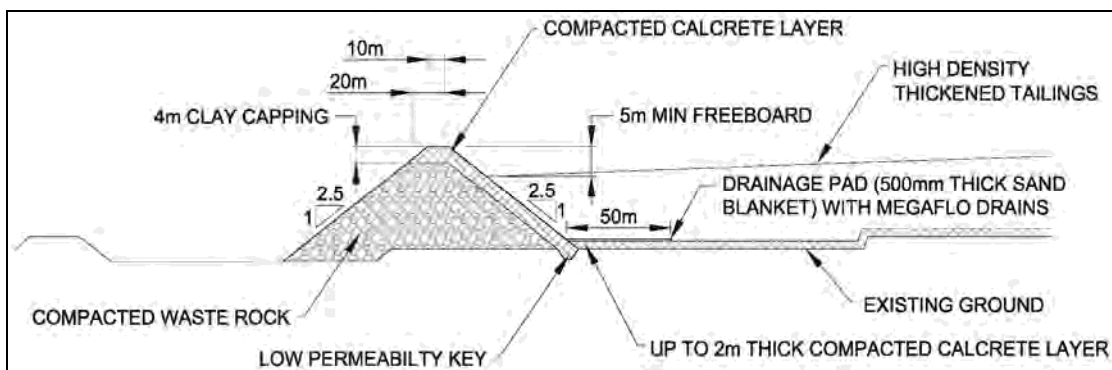


Figure 10: Typical Section through TSF2 Confining Embankment Type 2

An upstream calcrete facing (approximately 10m wide), including a low permeability key has been incorporated into the design to minimise seepage into the surrounding environment.

Figure 11 depicts a typical section through the permeable embankment, separating the deposition phases.

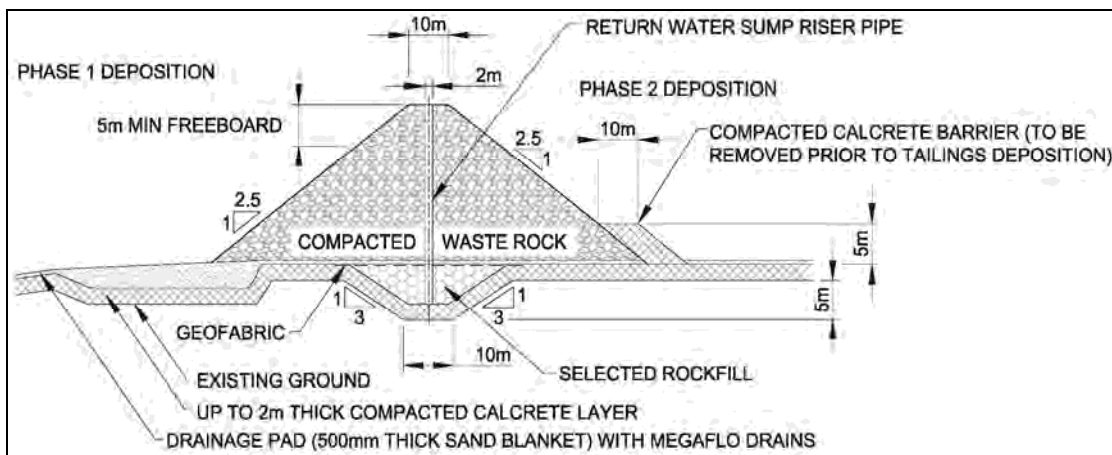


Figure 11: Typical Section through Permeable Embankment

Noteworthy features of the embankment are as follows:

- A localised depression has been included in the design to allow pumping of the supernatant water via a return water riser pipe.
- An upstream temporary calcrete facing has been included on the phase 2 side of the embankment for containment purposes while phase 1 deposition takes place. The containment facing should be removed prior to the commencement of tailings deposition in phase 2.

9.4 Conceptual Design of TSF3 and Beyond

The long-term plan is to place tailings material in the mined pits (i.e. in-pit disposal). The first of these proposed facilities would be referred to as Tailings Storage Facility 3 (TSF3). Tailings deposition into the facility would commence from Pit A and progress towards the west into B and continue as pits are completed (see Figure 12 for TSF3 location).

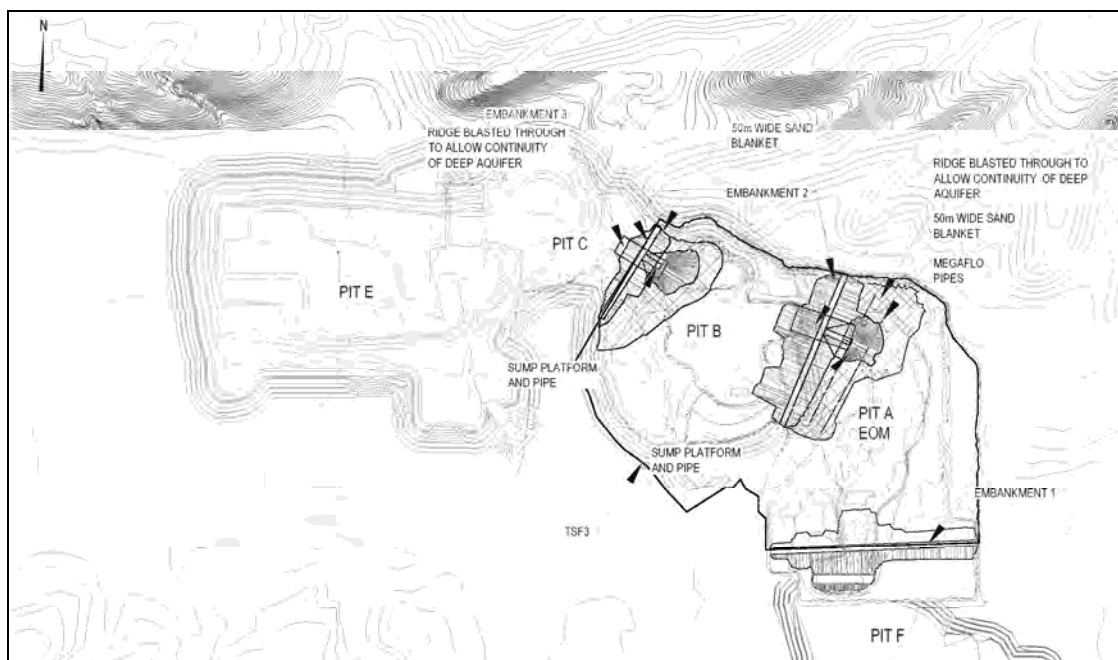


Figure 12: Conceptual layout of TSF3

It is important to note that Pit F, located to the south of the proposed TSF3 facility, will replace Pit A, the flood control facility.

As part of the regulator and environmental requirements, both the upper and the deep aquifer will be re-instated on completion of mining works. It is proposed that the excavated calcrete material be used below and above the tailings material to create a low permeability barrier that would simulate the natural conditions and thereby retaining both aquifers. If required, a composite liner (HDPE plastic liner with compacted calcrete) may be required in certain areas where hydraulic gradients may

be elevated. Figure 13 details a long section through the mined pits identifying the preferred drainage route for the deep aquifer.

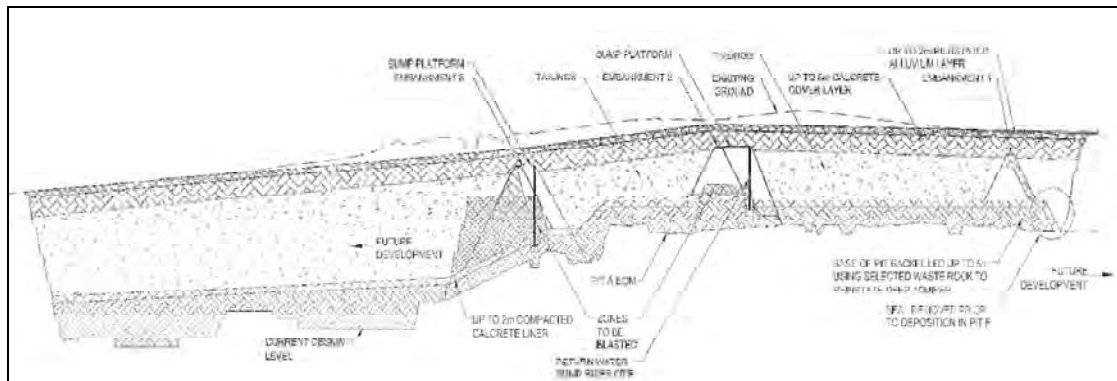


Figure 13: Long Section through Excavated Pit Detailing Proposed Layer works

Noteworthy features are as follows:

- Future pit development will take place on either side of the proposed TSF3 (on eastern and western ends),
- Two zones have been identified for blasting to remove localised high points to enable unobstructed flow of the deep aquifer. These will be set at elevations that will ensure that the calcrete liner placed over the aquifer material will, as far as practicable, act as a confining layer to the aquifer so that hydraulic gradients are through the liner from the tailings are minimised or even reversed.
- An allowance of 5.0m depth has been incorporated into the design for reinstatement of the deep aquifer.
- Calcrete layer works above and below the proposed tailings deposition zone,
- 3 embankments have been proposed, two, the outer confining embankments, are to be equipped with a calcrete facing to confine any seepage to within the facility,

Figure 14 details the confining embankment separating the TSF3 from Pit 7 (proposed stormwater storage dam during storm events).

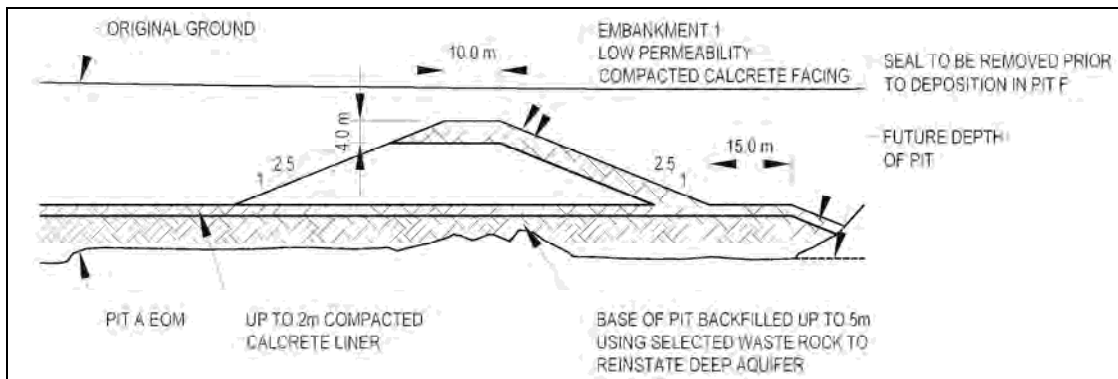


Figure 14: Typical Section through Embankment 1 of TSF3

Provision has been made for a 10m wide calcrete facing to be constructed on the inner side of the embankment.

To limit the transfer of water into the aquifer from Pit F if this should fill with flood water a temporary seal of 10m width of compacted calcrete has been included on the upstream face of the aquifer reinstatement layer.

Figure 15 details the permeable dividing embankment. A sump will be incorporated upstream of the embankment to assist in the removal of supernatant water from the eastern portion of the facility.

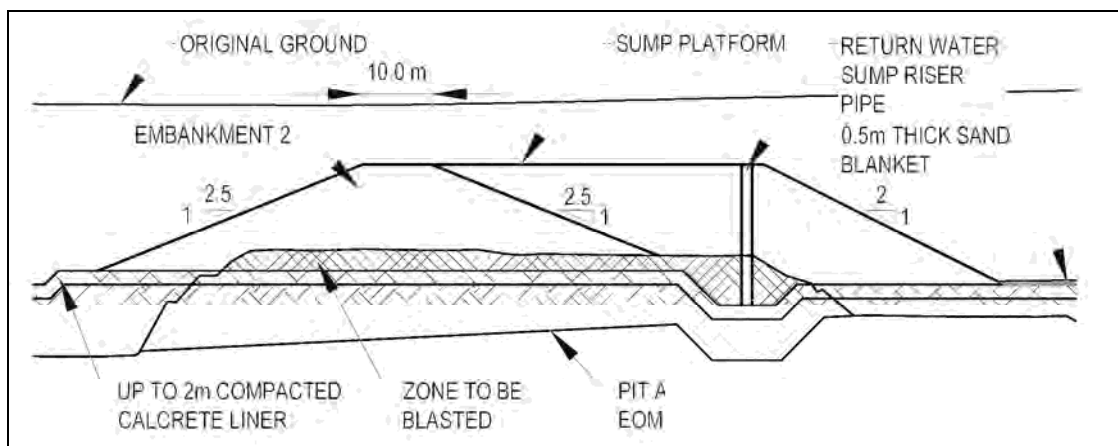


Figure 15: Typical Section through Embankment 2 of TSF3

Noteworthy points in respect of Embankment 2 are as follows:

- The embankment is constructed on high ground to minimise the volume of material required for construction,
- A 30m wide blast zone has been indicated to allow for a depression in the calcrete layer works that will act as a drainage sump as well as allow sufficient width for reinstatement of the deep aquifer.

Figure 16 details the western confining embankment that separates TSF3 from the proposed future mining pits.

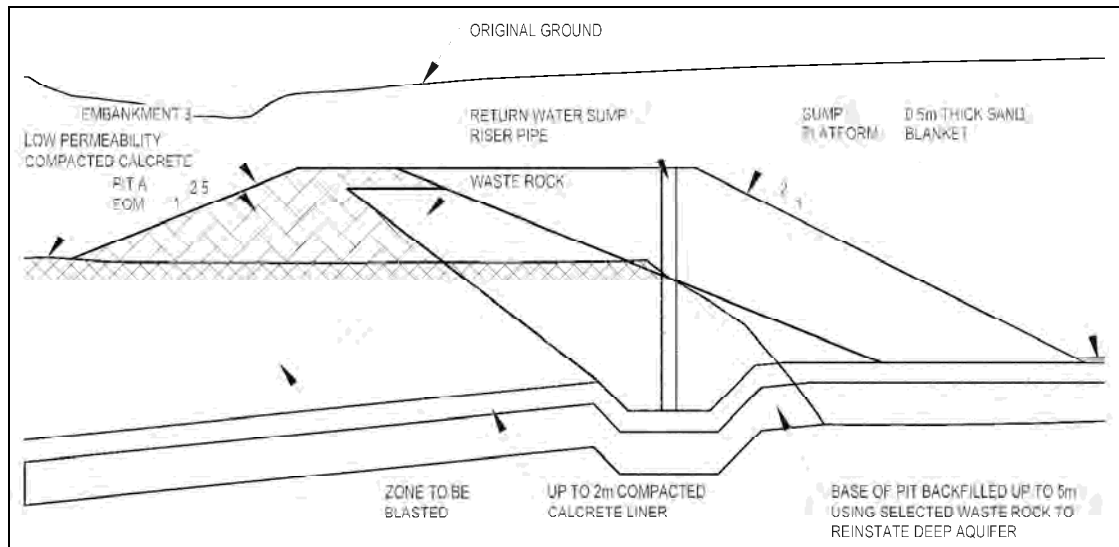


Figure 16: Typical Section through Embankment 3 of TSF3

Noteworthy points in respect of Embankment 3 are as follows:

- The embankment comprises a low permeability compacted calcrete downstream zone with a rock fill upstream zone that accommodates the drainage sump.
- The embankment is constructed on high ground to minimise the volume of material required for construction,
- A 20m wide blast zone has been included in to the design to ensure the free flow of the deep aquifer.

The approximate volume of construction material required for the TSF3 embankments is 429,950m³. The concept design for TSF3 allows for an approximate tailings storage volume of 3.4Mm³.

10 PREPARATION OF HIGH DENSITY TAILINGS FOR TSF2 AND TSF3

It is proposed to locate a thickening unit at TSF2 such that the distances over which it will be necessary to pump the tailings will be as short as possible. The location is indicated in Figure 17

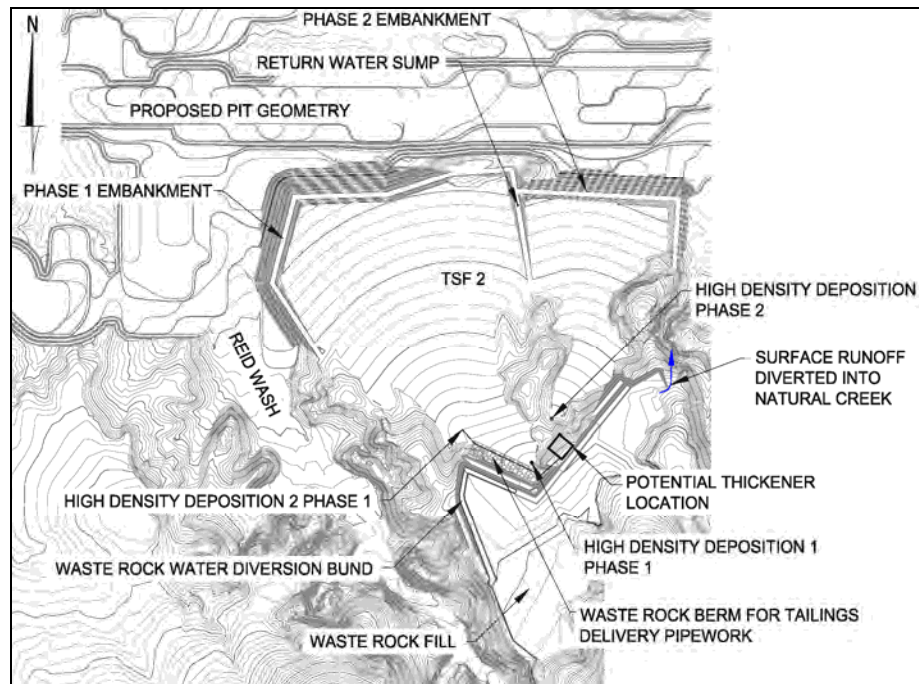


Figure 17: Location of thickener and discharge points for TSF2

On completion of deposition in TSF2 it is proposed to re-locate the thickener from TSF2 to within the confines of TSF3 to facilitate deposition of tailings from the embankments. This will enable filling of TSF3 to optimal levels.

11 CLOSURE PROPOSALS

11.1 TSF2

As pit tailings facilities are developed down the paleochannel in the manner of TSF3 it is proposed to integrate TSF2 with the pit facilities such that these will form a contiguous landform gently sloping at the HDT tailings beach angle from the south to the north. The tailings on TSF2 will be covered with waste rock and topped off with topsoil materials stockpiled prior to mining of Pit D and construction of TSF2. The landform will be shaped to blend in with the surrounding area. This is illustrated in Figure 18.

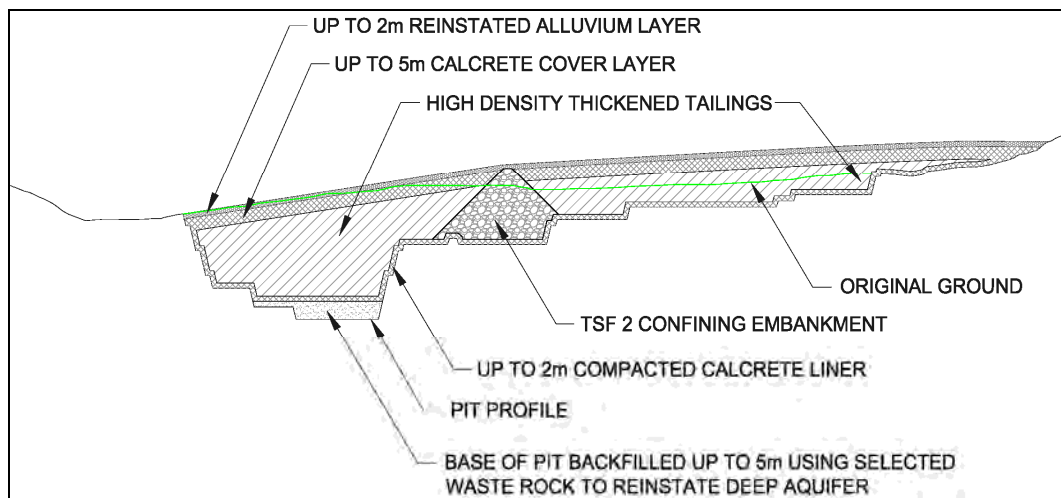


Figure 18: Typical Section of Final Landform

11.2 TSF3 AND BEYOND

In respect of TSF3 and further in-pit facilities the proposed closure measures will entail:

- Placement of cover materials to the tailings surface so as to seal off the tailings while at the same time providing an erosion resistant cover.
- Reinstatement of alluvial materials.
- Reinstatement of the natural river profile far as practicable.

The closure design entails placing a compacted calcrete zone of the order of 5.0m in thickness over the tailings material and replacement of the existing alluvial material.

12 SUMMARY AND CONCLUSIONS

This report has documented conceptual tailings dam planning and design for new tailings storage facilities (TSFs) at LHU. The history of TSF development to date has been summarised and future storage requirements have been set out. It is evident from these that:

- The temporary surface storage facility, TSF1 together with its extension, TSF1 Extension will reach maximum capacity by the end of 2011. At that stage tailings operations will be transferred to TSF2.
- TSF2 will be developed without impact on Reid Wash and will provide tailings storage capacity until 2013 at which stage tailings operations will be transferred to

TSF3 which is located within Pits A and B. This timing will allow open pit mining to move ahead of in-pit TSF development such that there is at least one mined-out pit between the operational pit and the operating TSF..

- Design considerations have been incorporated into the design details of TSF2 and TSF3 that will isolate Reid Wash from tailings influences, ensure zero seepage in the shallow alluvial aquifer in the paleochannel, minimise seepage into the deep aquifer in the paleochannel as well as provide for reinstatement of the deep aquifer.
- Closure design proposals will ensure that as far as practicable the original river elevations will be reinstated and that any residual landforms will be contiguous with the surrounding topography and of low erodability.

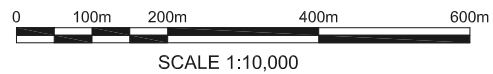
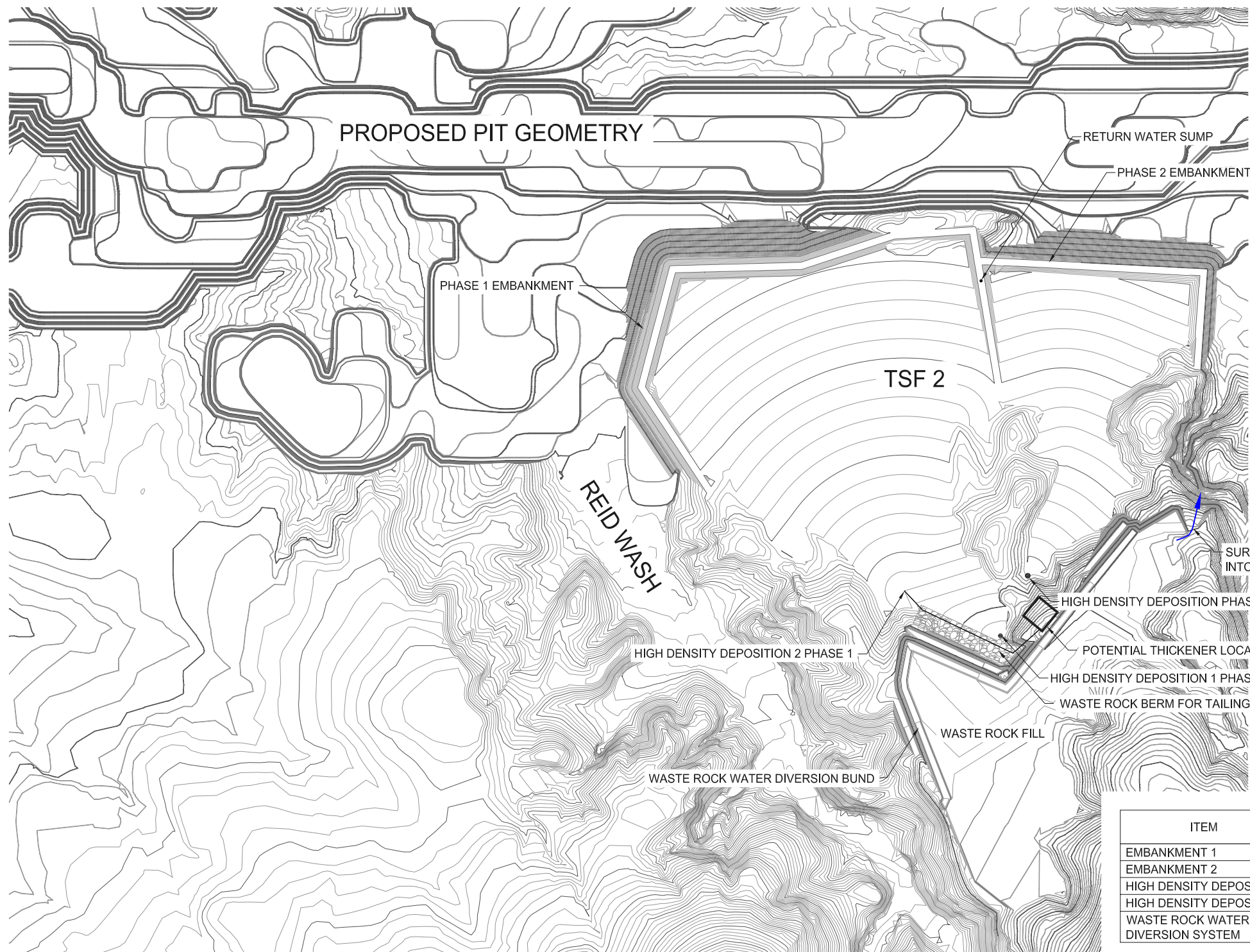
Dr G I McPHAIL PrEng MIEAust CPEng

A van Koersveld

For and on behalf of

Metago Environmental Engineers (Australia) Pty Ltd

Appendix 1: TSF2 Concept Design Drawings

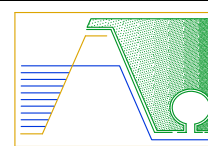


ITEM	VOLUME, m ³
EMBANKMENT 1	2,287,294
EMBANKMENT 2	692,332
HIGH DENSITY DEPOSITION PHASE 1	4,261,230
HIGH DENSITY DEPOSITION PHASE 2	815,036
WASTE ROCK WATER DIVERSION SYSTEM	1,632,007

ITEM	COORDINATES		
	EASTING	NORTHING	ELEVATION
HIGH DENSITY DEPOSITION 1 PHASE 1	32,268	-90,718	637.0
HIGH DENSITY DEPOSITION 2 PHASE 1	32,070	-90,625	632.0
HIGH DENSITY DEPOSITION PHASE 2	32,324	-90,594	631.0
THICKENER LOCATION (CENTRE)	32,350	-90,673	648.0

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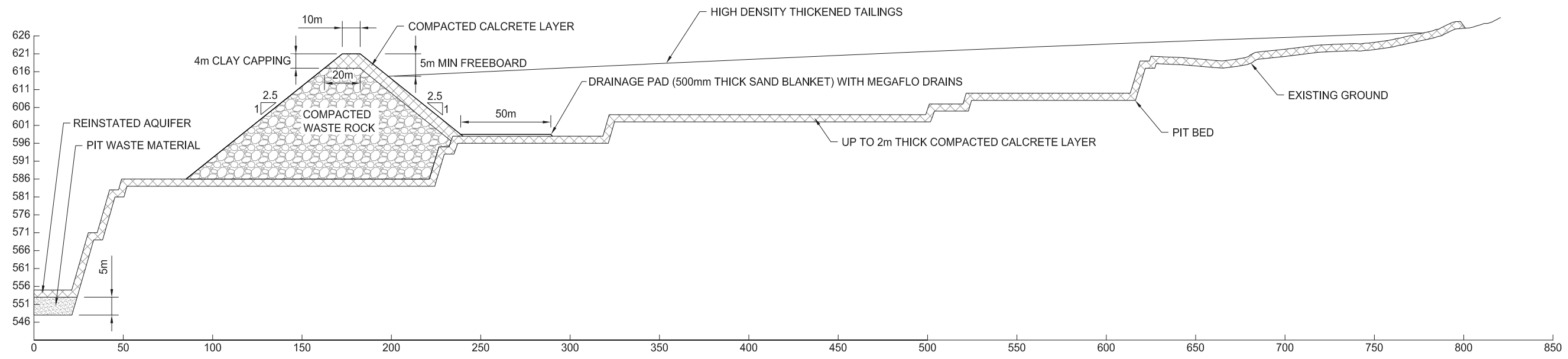
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DEPT.	DATE	SIGN
Civil		
Engineering		
Production		
PROJ.ENG.		
PROJ.MNG.		
	DATE	NAME
DRAWN BY:	July '09	N.N
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APPROVED:	July '09	G.M

LANGER HEINRICH MINE		
TSF 2 HIGH DENSITY DEPOSITION		
OPTION 1B HIGH DENSITY DEPOSITIONS POTENTIAL THICKENER LOCATIONS		
PROJECT NUMBER:	336 - 001	DRAWING NUMBER:
200 - 101	REV:	0

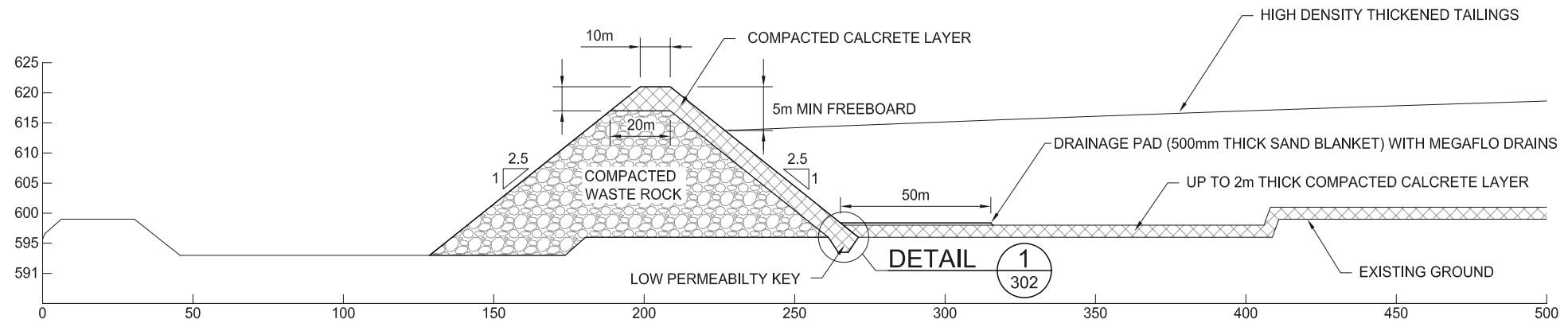
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SHEET
1 OF 1

A3

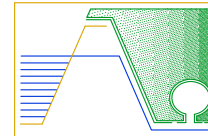


SECTION A
 TYPICAL SECTION THROUGH NORTHERN SIDE OF PHASE 1 EMBANKMENT
 SCALE
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 Vertical 1:500

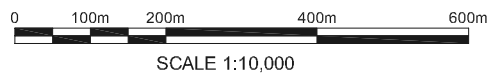
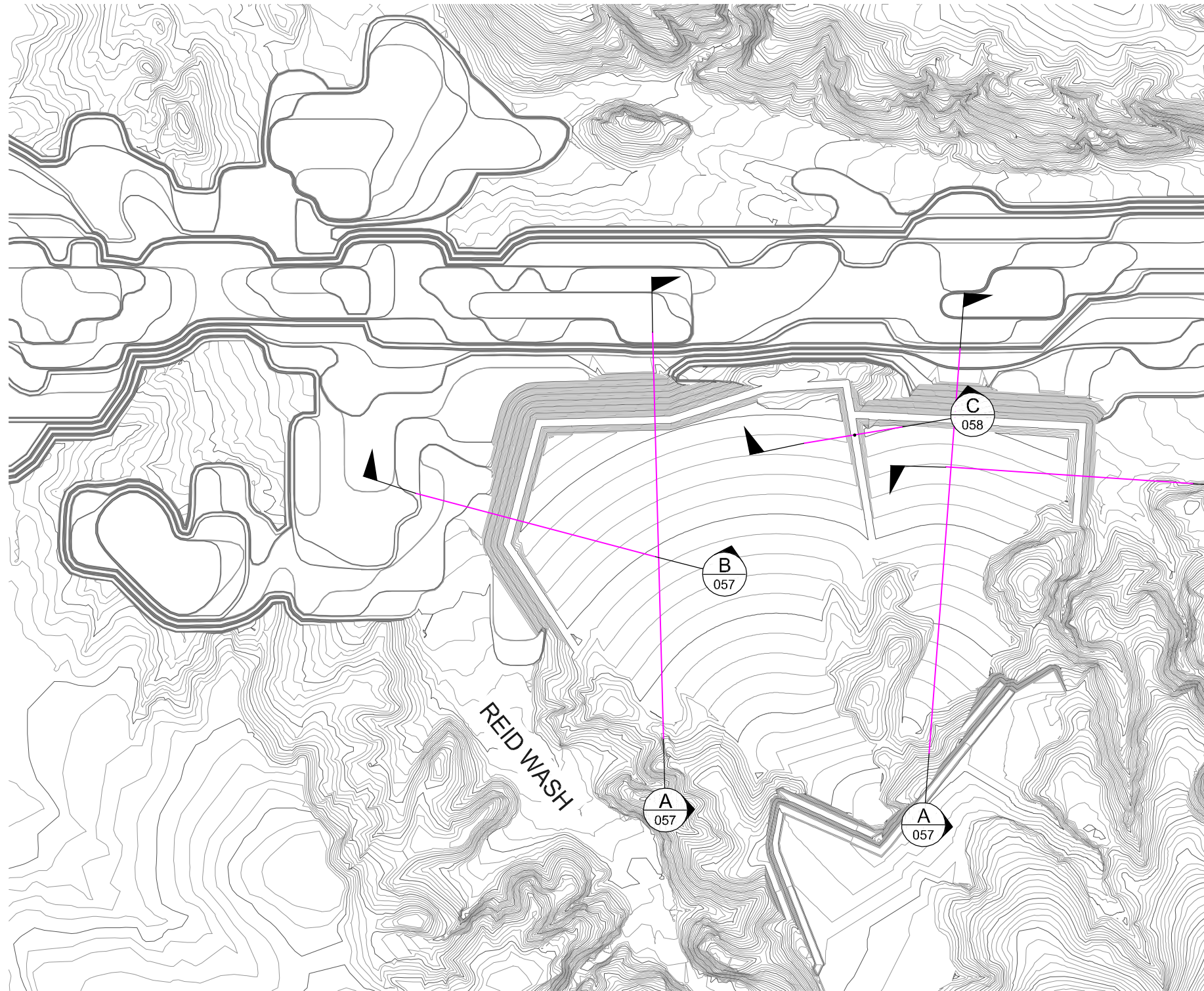


SECTION B
 TYPICAL SECTION THROUGH WESTERN SIDE OF PHASE 1 EMBANKMENT
 SCALE
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 Vertical 1:400

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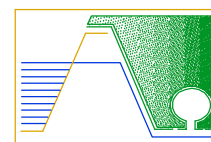
REFERENCE	DRG. NUMBER	TITLE	REV.	DATE	DESCRIPTION	BY	CHKD	 Metago Environmental Engineers (Australia) Pty Ltd Consulting Engineers & Scientists Lvl 2, 14 Ventnor Ave West Perth 6005 Western Australia Tel : +61 8 9366 4811 Fax +61 8 9366 4899 email : general@metago.com.au	APPROVED			LANGER HEINRICH MINE		SCALE
									DEPT.	DATE	SIGN	AS SHOWN		
									Civil				SHEET 1 OF 1	
									Engineering				A3	
									Production				PROJECT NUMBER: 336 - 001	
							PROJ.ENG.				DRAWING NUMBER: 200 - 301			
							PROJ.MNG.				REV: 0			
								DATE	NAME		TYPICAL EMBANKMENT SECTIONS			
								July '09	N.N		PROJECT NUMBER: 336 - 001			
								July '09	A.V.K		DRAWING NUMBER: 200 - 301			
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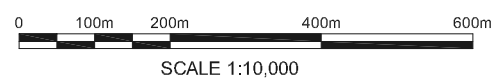
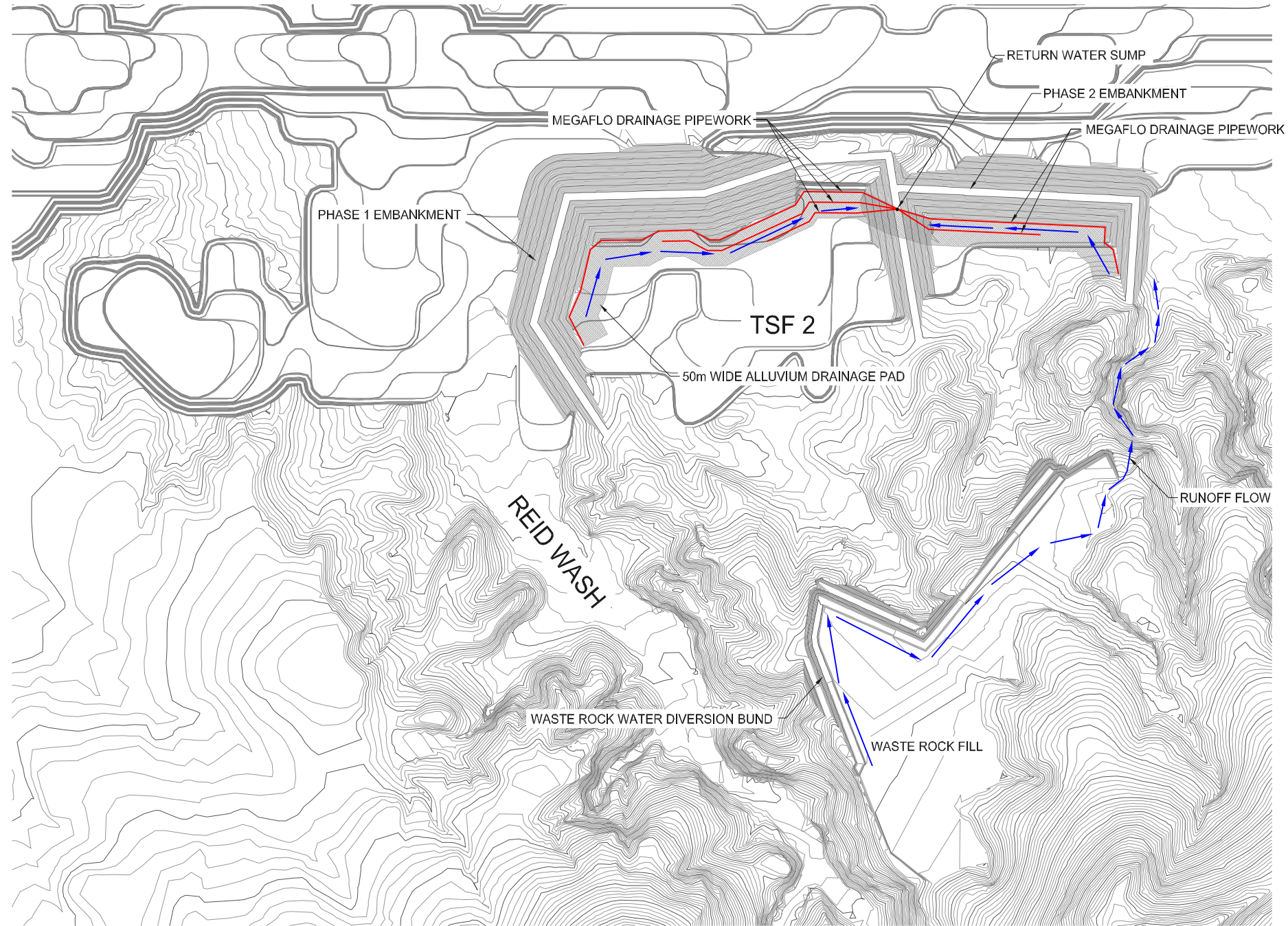
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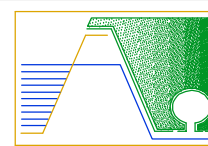
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Engineering		
Production		
PROJ.MNG.		
PROJ.MNG.		
	DATE	NAME
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LANGER HEINRICH MINE		SCALE
TSF 2 HIGH DENSITY DEPOSITION		1:10000
TSF2 LAYOUT PHASE 1 AND 2 EMBANKMENTS SECTION LOCATIONS		SHEET 1 OF 1
PROJECT NUMBER: 336 - 001		A3
DRAWING NUMBER: 200 - 103	REV: 0	



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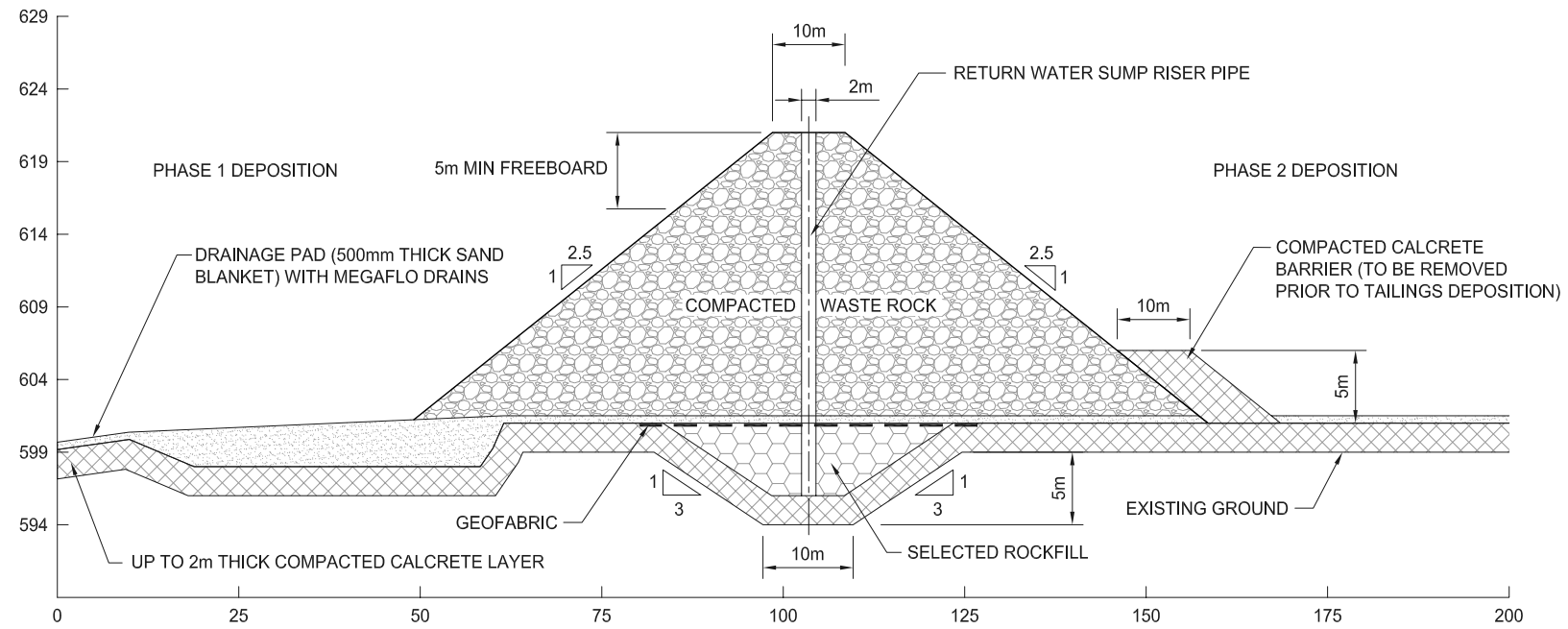
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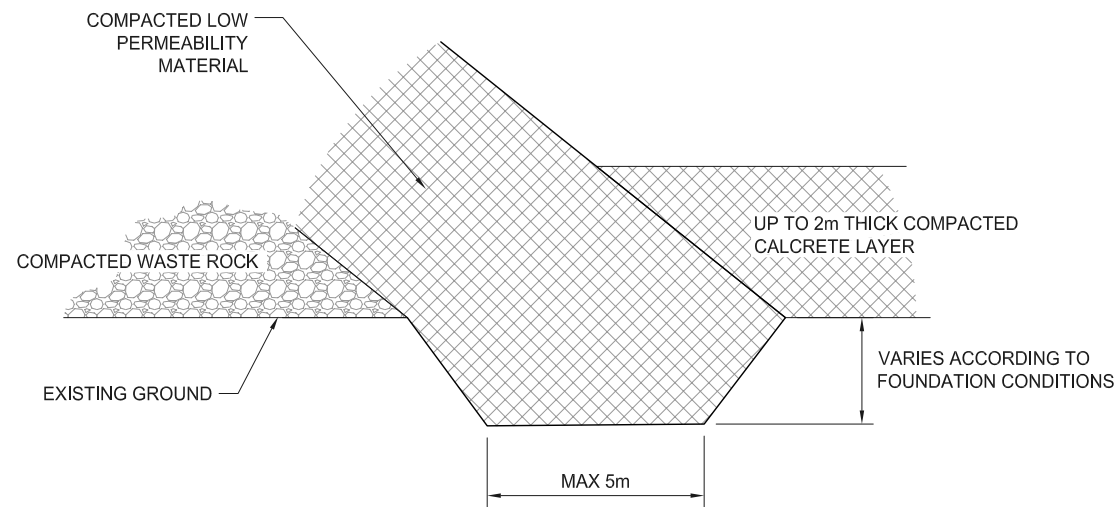
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Civil		
Engineering		
Production		
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PROJ.MNG.		
	DATE	NAME
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APPROVED:	July '09	G.M

LANGER HEINRICH MINE		SCALE
TSF 2 HIGH DENSITY DEPOSITION		1:10000
TSF2 LAYOUT WATER FLOW PATTERN ON RESHAPED BED OF TSF2		SHEET 1 OF 1
PROJECT NUMBER: 336 - 001		DRAWING NUMBER: 200 - 102
DRAWING NUMBER: 200 - 102		REV: 0

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SHEET	1 OF 1
A3	
REV:	0



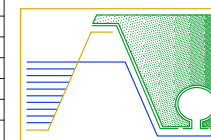
SECTION C TYPICAL SECTION THROUGH EASTERN SIDE OF PHASE 1 EMBANKMENT
 SCALE
 Horizontal 1:2000
 Vertical 1:400



DETAIL 1 DETAIL OF LOW PERMEABILITY KEY
 SCALE NTS

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												AS SHOWN	
											TSF 2 HIGH DENSITY DEPOSITION		
											TSF2 LAYOUT TYPICAL PHASE 1 EMBANKMENT SECTION C AND DETAIL 1	SHEET 1 OF 1	
												A3	
											PROJECT NUMBER: 336 - 001	DRAWING NUMBER: 200 - 302	REV: 0

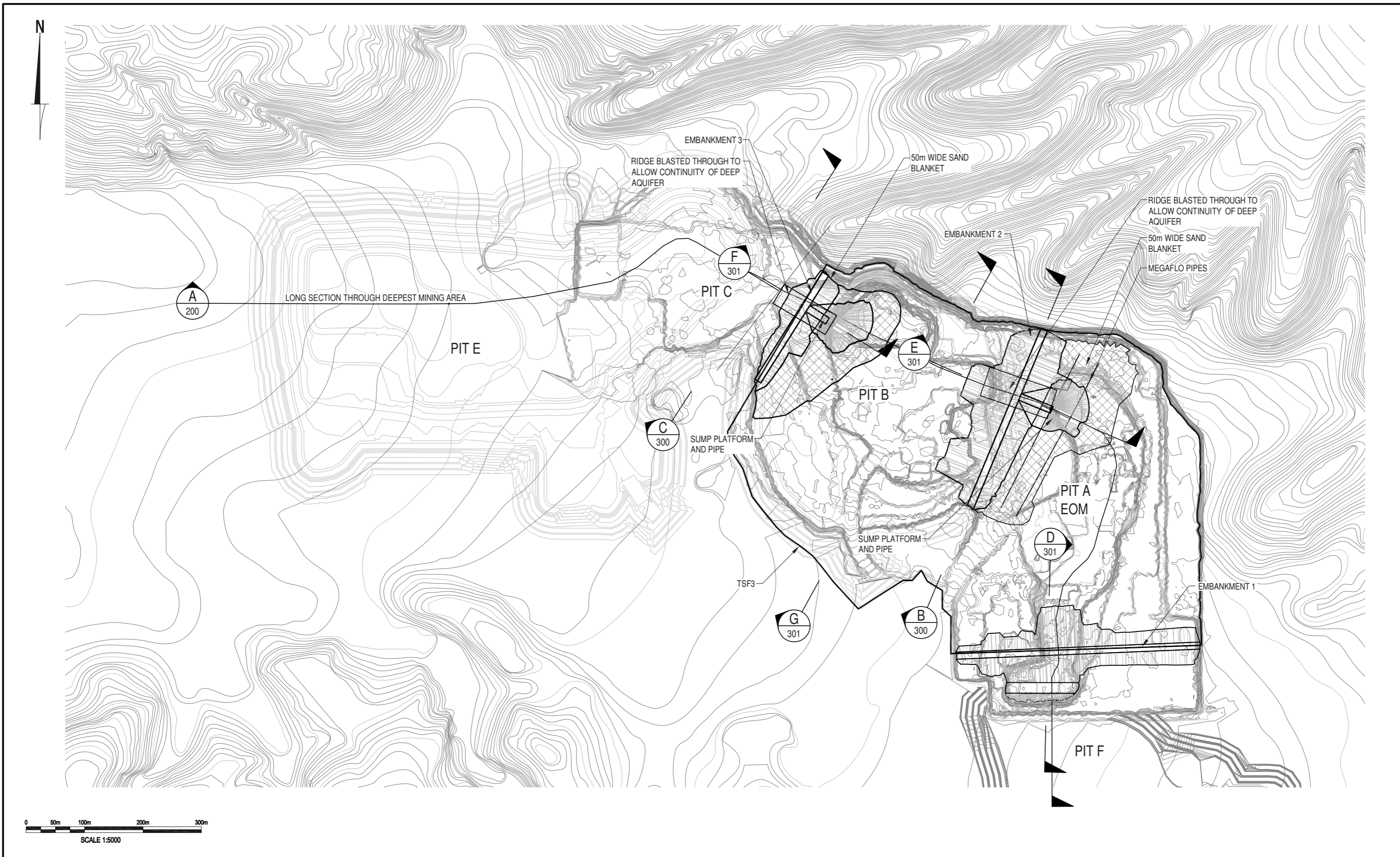


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Appendix 2: TSF3 Concept Design Drawings



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DEPT.	DATE	SIGN

LANGER HEINRICH URANIUM LTD

IN PIT TAILINGS FACILITY
 TSF3

GENERAL ARRANGEMENT

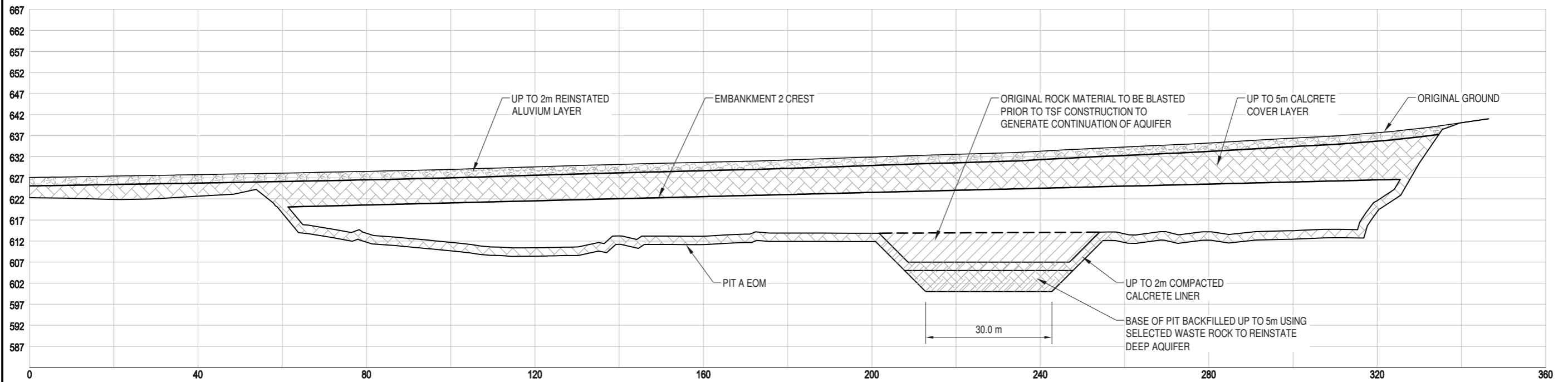
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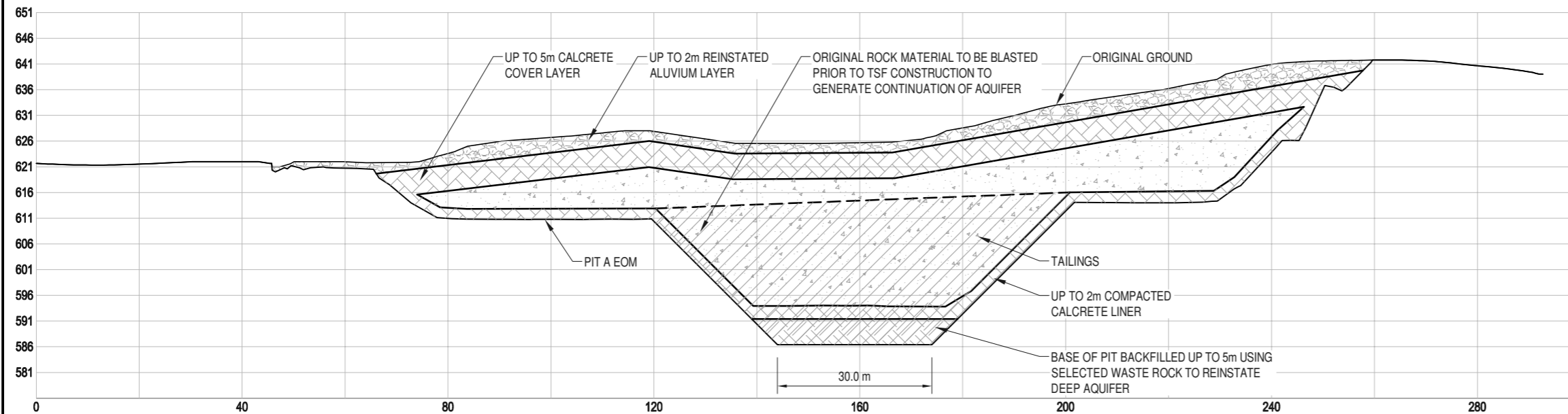
SHEET 1 OF 1

A3

REV : 0



SECTION B CROSS SECTION THROUGH PIT A HIGH GROUND FOR BLASTING
SCALE 1:1,000



SECTION C CROSS SECTION THROUGH PIT A HIGH GROUND FOR BLASTING
SCALE 1:1,000

DRG. NUMBER	TITLE	REV.	DATE	DESCRIPTION	BY	CHKD

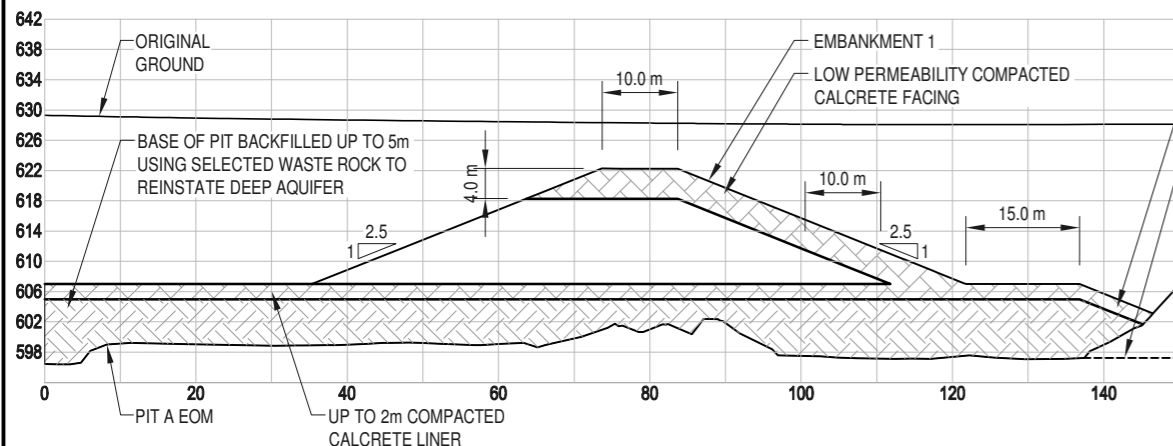
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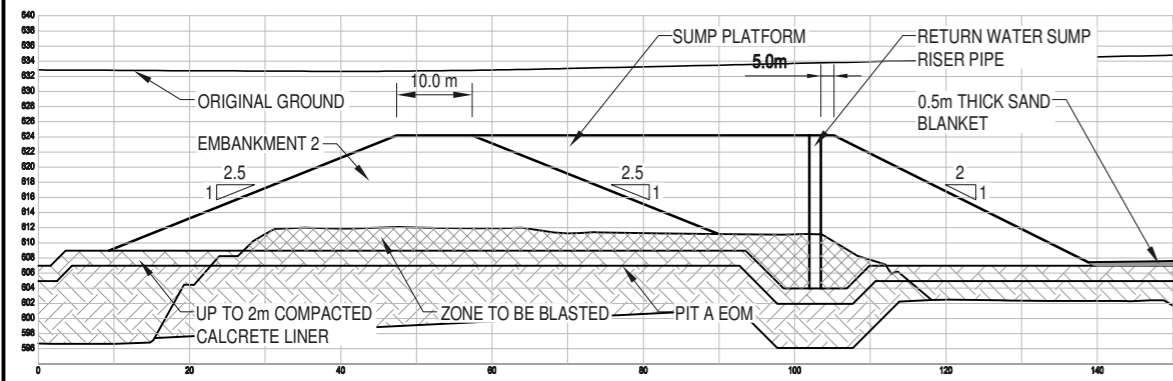
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DEPT.	DATE	SIGN

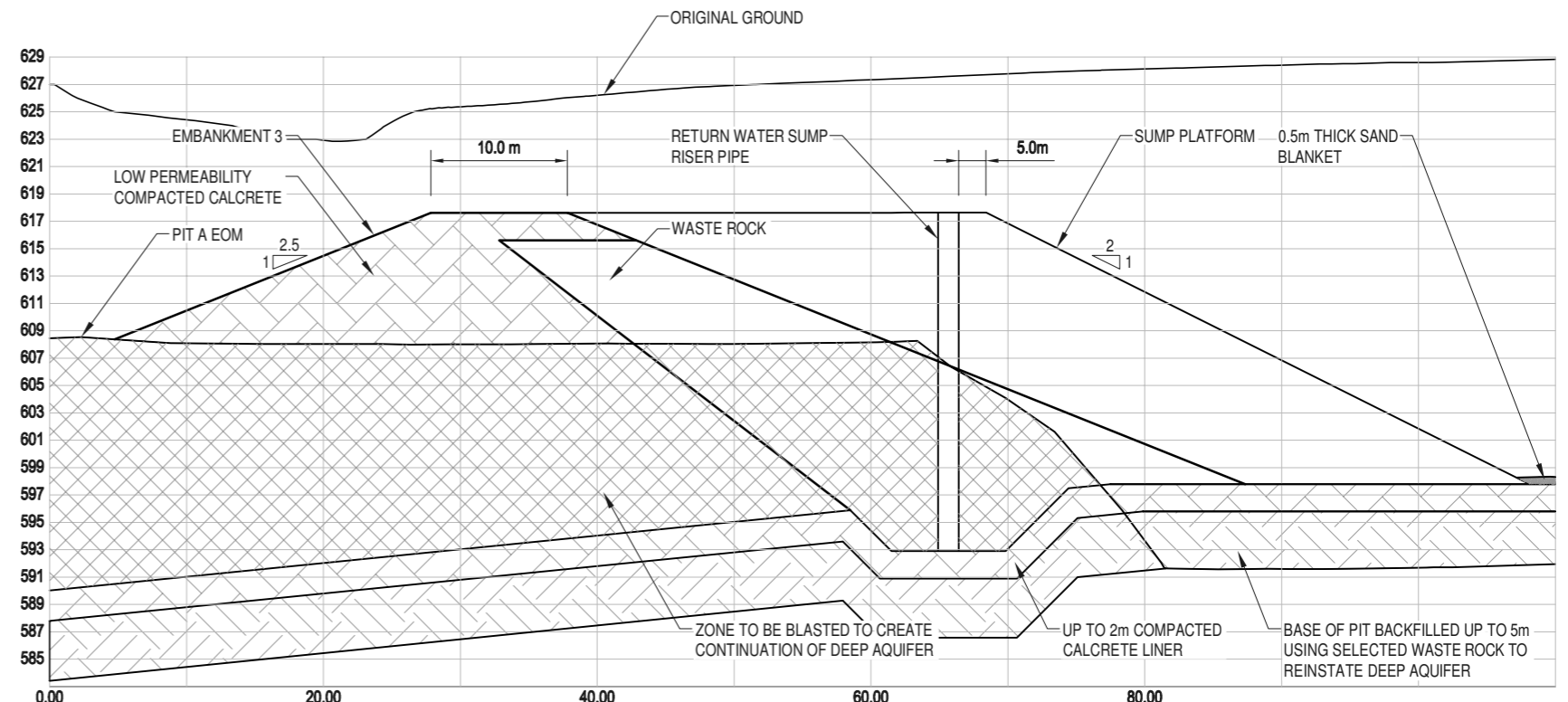
LANGER HEINRICH URANIUM LTD		SCALE
IN PIT TAILINGS FACILITY TSF3		AS SHOWN
CROSS SECTIONS		SHEET
		1 OF 1
		A3
PROJECT NUMBER :	336 - 001	DRAWING NUMBER :
		300 - 300
		REV :
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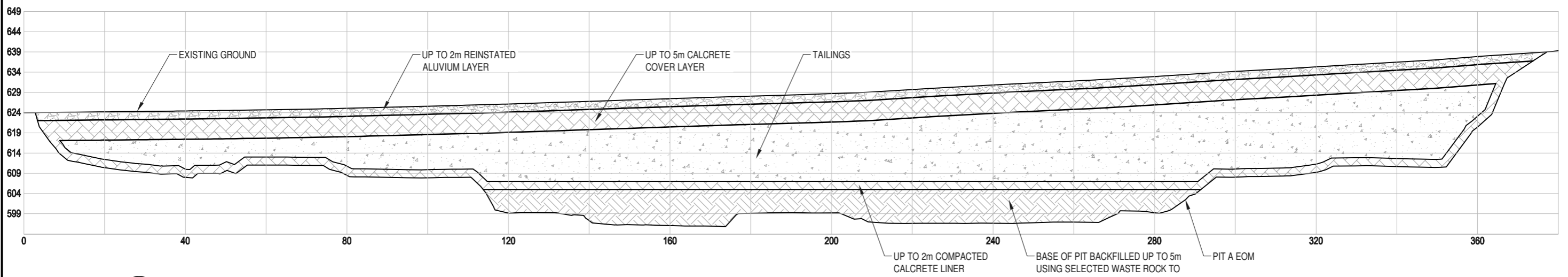
SECTION D CROSS SECTION THROUGH EMBAKMENT 1 PRIOR TO TAILINGS DEPOSITION
SCALE 1:1,000



SECTION E CROSS SECTION THROUGH EMBAKMENT 2 PRIOR TO TAILINGS DEPOSITION
SCALE 1:1,000



SECTION F CROSS SECTION THROUGH EMBAKMENT 3
SCALE 1:500



SECTION G CROSS SECTION THROUGH PIT A EOM LAYER WORKS
SCALE 1:1,000

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LANGER HEINRICH URANIUM LTD

IN PIT TAILINGS FACILITY
TSF3

CROSS SECTIONS

PROJECT NUMBER : 336 - 001 DRAWING NUMBER : 300 - 301

SCALE	AS SHOWN
SHEET	1 OF 1
A3	
REV :	0

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