

Attachment D

Present Day (2003) Financial Assurance Cost Estimate for  
the No. 1 Tailing Reclamation Project

## Project Completion Facts

Project Name: **1 Dam Tailing Reclamation**

Construction/Activity Start Date: April 2007

Construction/Activity Completion Date: Substantial completion as of December 2008. Some seeding remains to be completed and is scheduled to be complete before July 1, 2009.

Acres Completed/Affected: 402/453 (tailing area)/(tailing area + other disturbed areas)

Volume/Tonnage of Regrading: 1,221,000 cubic yards

Volume/Tonnage of Fill and Cover Material: 3,263,000 cubic yards

Linear Feet of Stormwater Conveyance Completed: 57,000 linear feet

Description of Work Completed: The top surface of the tailing impoundment was regraded to meet permit grade requirements. A series of channels were constructed to convey water from the top surface of the impoundment across the top of the 1X tailing impoundment and into Whitewater Canyon.

The side slopes were regraded to a slope of 3:1 (horizontal: vertical) with benches approximately every 100 feet of slope length. Cover material was placed over the regraded slopes and channels constructed on each bench. Sideslope channels are at a 2% grade and discharge to three downdrains. The downdrains discharge into Mangas Wash.

The top surface and outslopes were covered with a minimum of two feet of cover material consisting of Gila Conglomerate soils from local borrow areas. Cover material was placed as thick as 10 feet to meet grade requirements and to form the outslope channels.

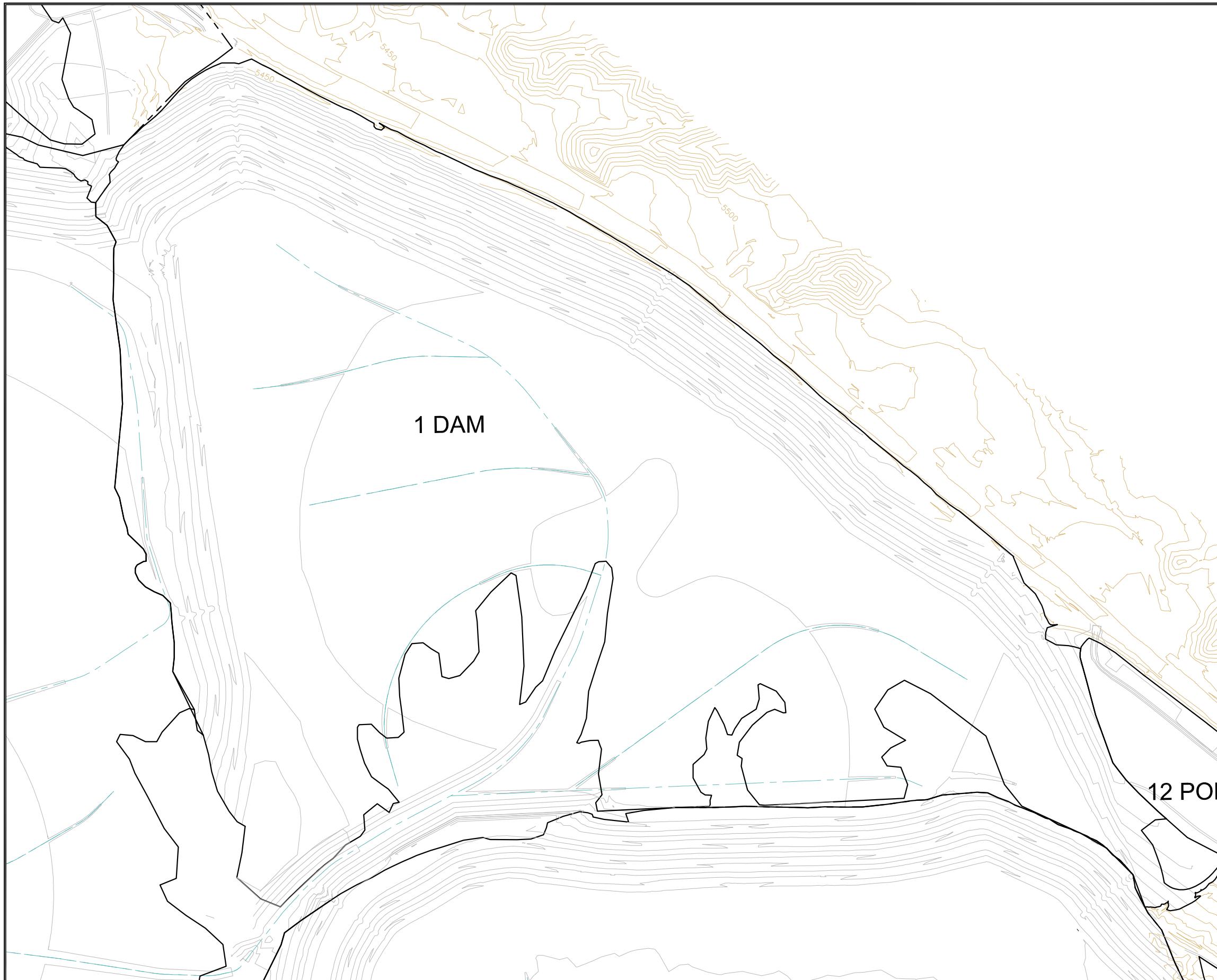
The 12 Pond, located to the east of the 1 Dam Tailing Impoundment was regraded to meet the permit requirements and covered with a minimum of three feet of Gila Conglomerate material. A series of channels were constructed to convey the water from the 12 Pond to Mangas Wash.

Evaluation of post construction survey data shows that 77% of Dam 1 is covered by three feet or greater of cover material as shown on attached drawing.






**Dam 1 as of December 11, 2008**





**LEGEND**

-  EXISTING TOPOGRAPHY
-  DESIGN TOPOGRAPHY
-  APPROXIMATE LIMIT OF IMPACTED MATERIAL

1 DAM

12 PON

ISSUE/REV	DESCRIPTION	TECH	ENG	DATE


**DISCLAIMER:**  
 THIS DRAWING WAS DEVELOPED THROUGH THE APPLICATION OF PROFESSIONAL ENGINEERING SKILL AND PROPRIETARY METHODOLOGIES, PROCESSES, AND KNOW HOW OF MWH AS AUTHOR, ALL PURSUANT TO THE TERMS OF A CONTRACTUAL SCOPE OF WORK COVERING ITS PREPARATION. THIS DRAWING MAY NOT BE USED OR MODIFIED OTHER THAN IN STRICT ACCORDANCE WITH THE TERMS OF THE GOVERNING CONTRACT AND SCOPE OF WORK OR OTHERWISE ABSENT THE INVOLVEMENT AND CONSENT OF THE AUTHOR. ANY ALTERATION OR ADAPTATION OF THIS DRAWING SHALL BE CONSISTENT WITH THE AUTHOR'S CONTRACTUAL AND PROPRIETARY RIGHTS AND BE AT USER'S SOLE RISK AND WITHOUT ANY LIABILITY OR LEGAL RESPONSIBILITY OF MWH.

**DRAWING REFERENCE(S):**

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PROJECT MANAGER	
CLIENT APPROVAL	
CLIENT REFERENCE NO.	



PROJECT LOCATION	TYRONE, NEW MEXICO
PROJECT	1SERIES TAILING IMPOUNDMENTS
TITLE	1 DAM DESIGN



**MWH**

1 of 1

FILE NAME: 1SERIES AREAS WITH LESS THAN 3 COVER



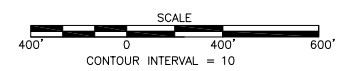
**LEGEND**

EXISTING TOPOGRAPHY  
 DESIGN TOPOGRAPHY  
 APPROXIMATE LIMIT OF IMPACTED MATERIAL

AREAS WITH LESS THAN 3'

DAM 1 COVER THICKNESS SUMMARY			
Facility		Impacted Area (ac)	Area >3' Cover (ac)
Dam 1	Top	254	237
	Outslope	104	28
12 Ponds	Top	44	44
Total		402	309

**PLAN**



ISSUE	REV	DESCRIPTION	TECH	ENG	DATE

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PROJECT LOCATION	TYRONE, NEW MEXICO
PROJECT	1SERIES TAILING IMPOUNDMENTS
TITLE	1 DAM WITH AREAS WITH LESS THAN 3' COVER

1 of 1  
 REVISION  
 FILE NAME: 1SERIES AREAS WITH LESS THAN 3' COVER

Attachment D - Table 1. Cost Calculation Summary for Completed Work on 1 Tailing Impoundment

Calculation of Financial Assurance Amount Corresponding to Completed Scope in 2003 Dollars  
for Work Completed as of December 23, 2008 on: **No. 1 Tailing Dam**

The following calculations and explanations are provided to show how the appropriate amount was calculated as a reduction for the Financial Assurance calculations

The table below summarizes the costs from the financial assurance (FA) cost estimate (Attachment B) that correspond to the scope of work described in this attachment.

The source of these cost numbers is linked by the color coding shown in Attachment B to the exact cells from the FA cost estimate. The color coding in Attachment B links the Table below (same as table on the tab labeled "2008 FA Release Calc") to the original State cost estimate (see tabs labeled "13...Earthsum" and "15...Other"). These are direct costs, so the indirect cost multiplier of 1.396 is used to include indirect costs in the calculation. Other multipliers are used as shown in the table below because NMED and MMD personnel required some FA to be left in place to cover contingencies for addressing work that may need to be completed at the facility in the future. These contingencies are also explained in the table below.

Scope Item	Cost from FA Calculation	Multiplier	Reason for Multiplier
Pushdown existing outslopes	\$0		
Grade Existing Surface	\$3,938		
Grade GC Material	\$8,155	0.885	Previous approved FA reductions allowed 50% reduction in FA for cover activities leaving a contingency for an additional 1 foot of cover placement. Because Tyrone placed 3 feet or greater cover over 77% of this dam, Tyrone requests additional credit be given by using this multiplier which was calculated by taking the usual 50% credit and adding to it 77% of the remaining dollars (77% is the area with equal to or greater than 3 feet of cover). Since Tyrone has met the permit condition for 3 feet of cover in these areas, Tyrone requests additional financial assurance be released than previously allowed.
Rip Existing Surface	\$58,486		
Load GC Material on trucks (A)	\$6,470	0.885	same as above
Haul GC Material 2	\$9,465	0.885	same as above
Scraper assist w/ dozer	\$1,016,206	0.885	same as above
Haul GC Material w/ scrapers	\$1,416,760	0.885	same as above
Revegetation 100% (plow, apply fertilizer, seed mix, mulch and crimp mulch)			No reduction allowed at this time because the agency wants to monitor revegetation success longer before granting partial release.



Attachment D - Table 1. Cost Calculation Summary for Completed Work on 1 Tailing Impoundment

Scope Item	Cost from FA Calculation	Multiplier	Reason for Multiplier
Other			
Fencing, TP perimeter 3	\$44,946		
Screening plant for rip rap prod.	\$95,793	0.9	Agencies required some contingency for rip-rap to provide a contingency for unknowns related to placing another foot of cover and how much of the rip-rap in channels would have to be reconstructed due to these activities. The previous typical multiplier was 0.7. Tyrone requests an additional 0.2 multiplier (total multiplier of 0.9) to account for areas that already have greater than 3 feet of cover.
Outslope ditch, 100'horiz. Int.	\$370,971		
Outslope ditch rip rap, haul	\$189,947	0.9	same as rip-rap above
Outslope ditch rip rap, backfill	\$44,572	0.9	same as rip-rap above
Channels	\$1,768,819		
Spillways & Stilling Basins	\$890,233		
Redesign of the Break Area	\$0		
Direct Cost Sum	\$5,924,761	NA	
Indirect Sum 39.6%			
Indirect Cost Sum	\$2,346,205.29	NA	
Total =	\$8,270,966		

Note: This is the total cost that should be subtracted from the remaining work for this project in Attachment C "current cost" tab. See last tab of Attachment C to match total above.

Attachment D - Summary of Remaining Financial Assurance Amount for Project Scope

Summary of Remaining Financial Assurance

This summary calculates the financial assurance \$ remaining

for the following project:

**No. 1 Tailing Dam**

if the requested reduction is granted by State agencies.

The total cost in financial assurance for the project area described in this attachment is

**\$9,470,618** (see Attachment B - tab labeled "17...Itemized Bond Sum")

The amount of reduction requested in current dollars is:

**\$8,270,966** (see Table 1 of this attachment)

The difference or amount to remain in financial assurance is:

**\$1,199,652**

This remaining amount was calculated in 2003 dollars by State agencies to cover costs for all remaining scope items for this project area.

Furthermore, the contingencies explained on the preceding table provide additional \$ to address costs if additional work is needed at the site.