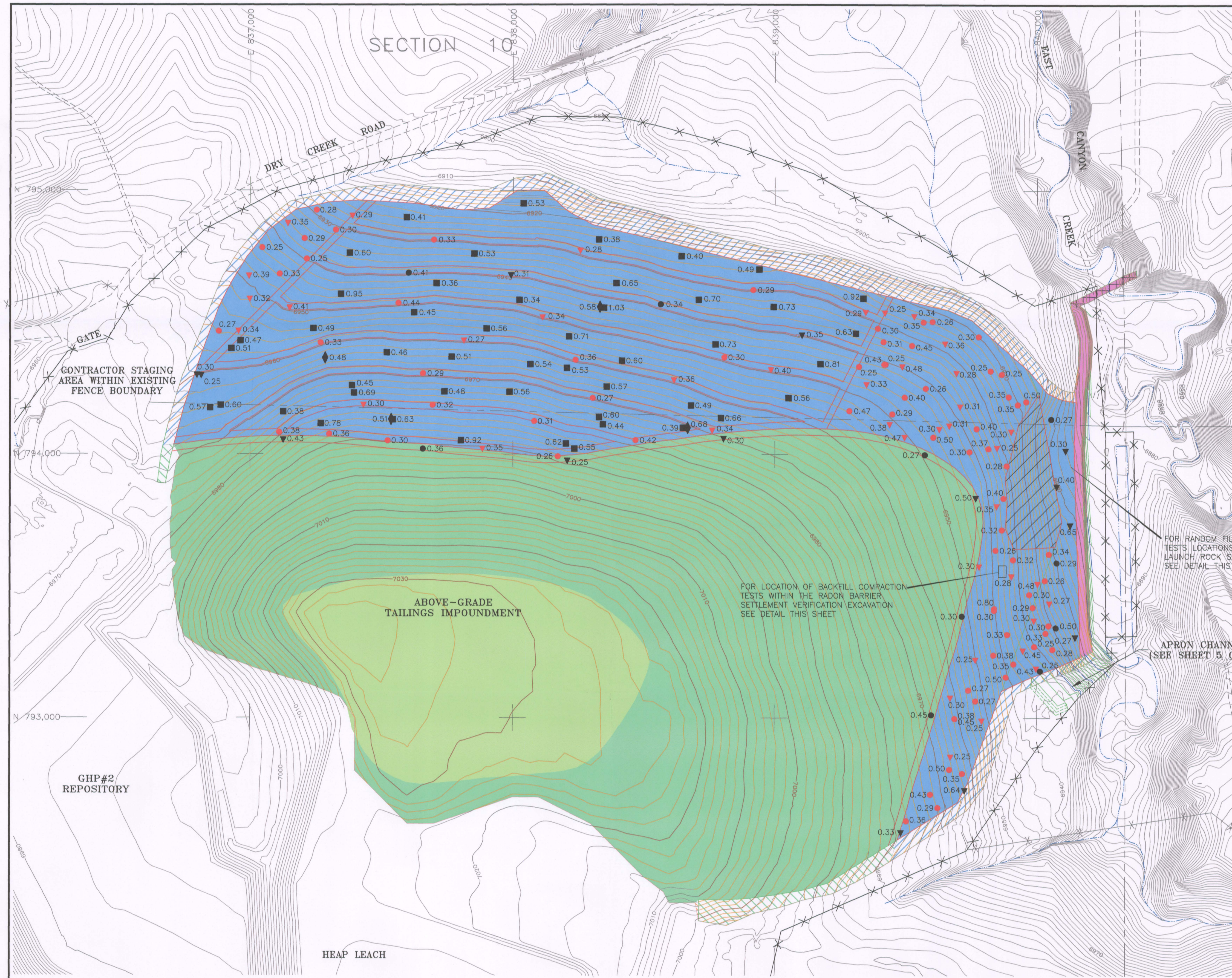
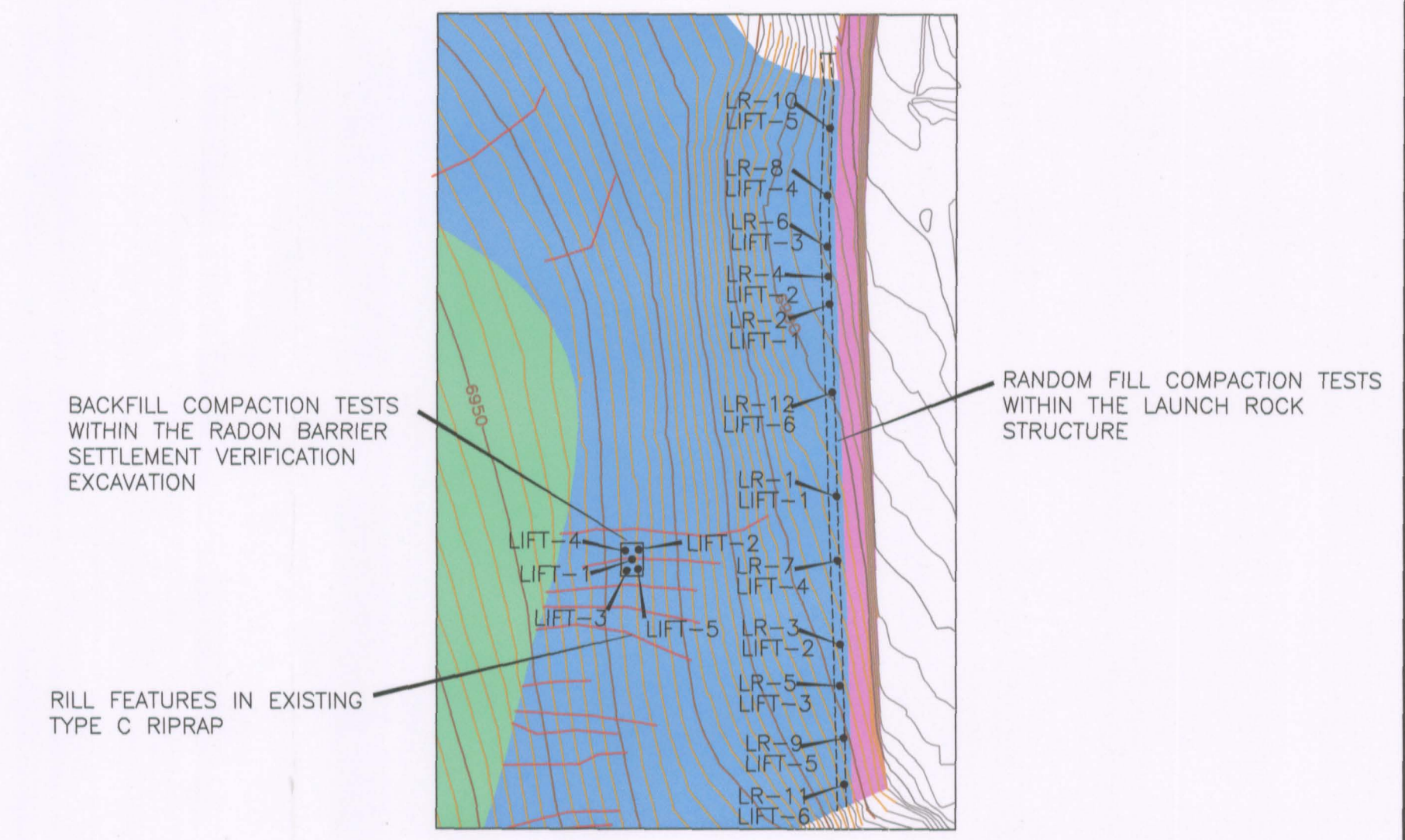




- LEGEND:**
- 2000 AERIAL TOPOGRAPHY
UPDATED WITH 2006 SURVEYS
 - DRAINAGE PATH/PONDED WATER
 - UNPAVED ROADS
 - UMETCO 1000' SITE GRID
 - FINISH GRADE TOPOGRAPHY
 - ABOVE-GRADE TAILINGS IMPOUNDMENT
 - RIPRAP AND TOE APRON BACKFILL
 - EXISTING RESTRICTED AREA FENCE
 - RILL FEATURES IN EXISTING TYPE "C" RIPRAP
 - NEW DESIGN CONTOURS
 - 6 INCHES OF TYPE A RIPRAP
D₅₀ = 1.0 INCH
 - 6 INCHES OF TYPE B RIPRAP
D₅₀ = 3.0 INCH
 - 6 INCHES OF TYPE B RIPRAP
BELOW GRADE TOE APRON
 - 12 INCHES OF TYPE C RIPRAP
D₅₀ = 6.0 INCH
 - 12 INCHES OF TYPE C RIPRAP
BELOW GRADE TOE APRON
 - LAUNCHED STONE EMBANKMENT
TYPE "E" D₅₀ = 30.0 INCH
 - SCOUR APRON (22' WIDE & 6' DEEP)
TYPE "E" D₅₀ = 30.0 INCH
 - 12-INCHES OF TYPE C RIPRAP
ON 3-INCHES TYPE A BEDDING
 - REPAIR METHOD 1:
IN-PLACE DEPTH VERIFICATION CHECK
TYPE A BEDDING MATERIAL, LAYER DEPTH IN FEET (0.25)
30/70 BLEND BEDDING MATERIAL, LAYER DEPTH IN FEET (0.25)
 - REPAIR METHOD 1:
IN-PLACE GRADATION TEST AND DEPTH VERIFICATION CHECK
TYPE A BEDDING MATERIAL, LAYER DEPTH IN FEET (0.25)
30/70 BLEND BEDDING MATERIAL, LAYER DEPTH IN FEET (0.25)
 - REPAIR METHOD 2:
IN-PLACE DEPTH VERIFICATION CHECK
30/70 BLEND BEDDING MATERIAL, LAYER DEPTH IN FEET (0.33)
 - REPAIR METHOD 2:
IN-PLACE GRADATION TEST AND DEPTH VERIFICATION CHECK
30/70 BLEND BEDDING MATERIAL, LAYER DEPTH IN FEET (0.33)

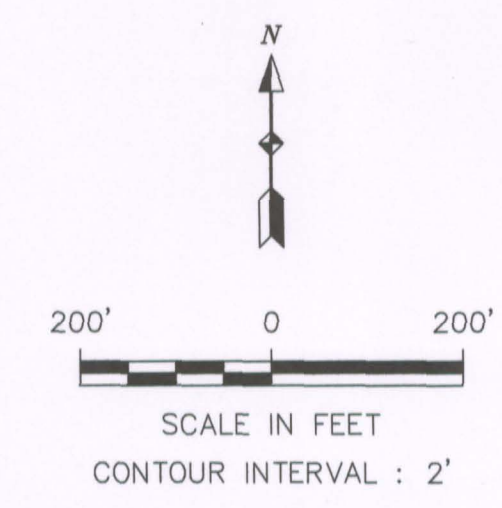
METHOD 1 BEDDING PLACEMENT			
TOTAL AREA:	31.2	ACRES	
TOTAL NUMBER OF IN-PLACE GRADATIONS/DEPTH CHECKS:	54	TESTS	
NUMBER OF DEPTH CHECKS ONLY:	82	TESTS	
TOTAL NUMBER OF DEPTH CHECKS:	136	TESTS	
IN-PLACE GRADATION FREQUENCY:	1.7	TESTS PER ACRE	
DEPTH CHECK FREQUENCY:	4.4	TESTS PER ACRE	
AVERAGE DEPTH MEASURED (IN FEET):	0.34		

METHOD 2 BEDDING PLACEMENT			
TOTAL AREA:	34.0	ACRES	
TOTAL NUMBER OF IN-PLACE GRADATIONS/DEPTH CHECKS:	49	TESTS	
NUMBER OF DEPTH CHECKS ONLY:	3	TESTS	
TOTAL NUMBER OF DEPTH CHECKS:	52	TESTS	
IN-PLACE GRADATION FREQUENCY:	1.4	TESTS PER ACRE	
DEPTH CHECK FREQUENCY:	1.5	TESTS PER ACRE	
AVERAGE DEPTH MEASURED (IN FEET):	0.58		



ABOVE-GRADE TAILINGS IMPOUNDMENT
COMPACTION TESTS LOCATIONS

AS-BUILT



ABOVE-GRADE TAILINGS IMPOUNDMENT
RILL REPAIR PLAN

Umetco Minerals Corporation 2754 COMPASS DRIVE, SUITE 280, GRAND JUNCTION, CO 81506		
GAS HILLS, WYOMING		
ABOVE-GRADE TAILINGS IMPOUNDMENT DESIGN ENHANCEMENT IN-PLACE GRADATION AND DEPTH VERIFICATION CHECK LOCATIONS		
DESIGN: JHH	DRAWN: JHH	SHEET 4 OF 7
CHECKED BY:	DATE: 12-8-2010	
ENGINEERING APPROVAL:	HS & EA APPROVAL:	

1	1-2012	AS-BUILT	R.W.G.
NO.	DATE	REVISION - DESCRIPTION	BY
			DWG: GH-AG-REPAIR-12-11-AB-D04