

Client: Westinghouse Electric Company  
 Location: Hematite, MO  
 Project: Hematite Remedial Investigation  
 Date Started: 07/02/04  
 Date Finished: 07/16/04  
 Geologist: T. Calhoun  
 Drilling Contractor: Geotechnology

# Boring: BR-6-RB

Drilling Method: Rotary  
 Surf. Elev.: 422.49  
 Northing: 863687.72  
 Easting: 827468.15  
 Total Depth of Boring: 80.0 feet  
 Top of Casing: 425.72  
 Total Depth of Well: 79.3 feet

Elevation (ft)	Depth (ft)	Core Recovery (Pen/Rec)	RQD	Fracture Frequency	Lithology	Lithology Description	Well Construction	Well Construction Desc.
425	0							Protective Casing (4") 2.0' x 2.0' x 0.5' Concrete Pad
						OVERBURDEN		2" Sch 80 PVC Riser
420	5							6" Steel Isolation Casing
415	10							Portland Cement
410	15							
405	20							
400	25					Top of Bedrock 26.0'		
395	30	4.2/4.2	57	2.0		DOLOMITE: light brown to gray, hard, sandy, vuggy, crystalline broken zone at 33.8'		High Solids Bentonite Grout (Tremied)
390	35	5.0/5.0	52	1.0		DOLOMITE: gray, very hard, fine grained, crystalline, w/wavy green shale laminae, cherty		
385	40	4.9/4.9	82	0.0		DOLOMITE: gray, very hard, sandy, crystalline, vuggy broken zone 42.1-42.2', 44.8-45.3' gray chert 42.3-42.4' vertical fracture at 49.0-49.3'		
380	45	4.7/4.7	49	1.0				
375	50	4.5/4.5	56	2.0				
	50	1.0/1.0	0	2.0				



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 Hematite Facility  
 3300 State Road P  
 Festus, MO 63028



SAIC  
 8421 St. John Industrial Drive  
 St. Louis, Missouri

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 Sheet: 1 of 2

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50								
370	5.0	5.0	70	1.0		DOLOMITE: gray, very hard, fine grained, sandy, crystalline gray chert 53.3-53.5'		High Solids Bentonite Grout (Tremied)
55								0.25" Bentonite Pellets
365	5.0	5.0	54	1.0		DOLOMITE: gray, hard, sandy/wuggy bedding plane 58.0'		Secondary Filter Pack (100 Mesh)
60								Primary Filter Pack (10/20 Mesh)
360	4.7	4.7	40	1.0		DOLOMITE: gray, very hard, fine grained, sandy gray chert 61.2-61.3' wavy green shale laminae 61.6-62.7' burrowed 68.4-69.4'		
65								
355	5.0	5.0	84	0.0				2" Sch. 80 PVC Screen, 0.010" Slot
70						SANDSTONE: light brown/tan, medium grained, crystalline, very hard, calcareous		
350	5.0	5.0	96	0.0				
75						SHALE: gray/green, hard, laminated, broken, calcareous		
345	5.0	5.0	60	3.0		DOLOMITE: gray, very hard, fine grained, w/green shale laminae		
80						Bottom of Hole 80.0'	Bottom of Well 79.3'	
340								
85								
335								
90								
330								
95								
325								
100								



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 Date Started: 07/01/04  
 Date Finished: 08/04/04  
 Geologist: J. Bostwick  
 Drilling Contractor: Geotechnology

## Boring: BR-7-RB

Drilling Method: Rotary  
 Surf. Elev.: 476.48  
 Northing: 864152.42  
 Easting: 829600.86  
 Total Depth of Boring: 265.0 feet  
 Top of Casing: 478.74  
 Total Depth of Well: 265.3 feet

Elevation (ft)	Depth (ft)	Core Recovery (Pen/Rec)	RQD	Fracture Frequency	Lithology	Lithology Description	Well Construction	Well Construction Desc.
475	0				DGA			Protective Casing (4") 2.0' x 2.0' x 0.5' Concrete Pad
						Top of Bedrock 3.0'		2" Sch 80 PVC Riser
470	5	6.0/5.3	54	2	DOLOMITE	DOLOMITE: brown, hard, micritic, weathered		
					DOLOMITE	DOLOMITE: gray/brown, hard, sandy, slightly weathered		
465	10				DOLOMITE	DOLOMITE: brown/gray, hard, micritic, slightly weathered, w/wavy black shale laminae		6" Steel Isolation Casing
460	15	10.0/10.0	77	1				
455	20				SANDSTONE	SANDSTONE: brown/gray, hard, crystalline, slightly weathered chert 24.7-25.0'		Portland Cement
450	25	9.8/10.0	86	0	DOLOMITE	DOLOMITE: brown/gray, very hard, sandy, slightly weathered		
445	30	6.0/6.0	94	0	DOLOMITE	DOLOMITE: brown/gray, hard, micritic, slightly weathered		High Solids Bentonite Grout (Tremied)
440	35				DOLOMITE	DOLOMITE: brown/gray, very hard, sandy		
435	40	10.0/10.0	96	0				
430	45							
50	50							



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50								
425		9.8/10.0	98	0		DOLOMITE: gray, very hard, turbid, cherty DOLOMITE: gray, very hard, micritic		
55								
420						DOLOMITE: gray, very hard, sandy, cherty		
						DOLOMITE: gray, hard, micritic		
60		10.0/10.0	88	0		DOLOMITE: gray, very hard, sandy, crystalline, cherty, vuggy		
415								
65								
410						DOLOMITE: gray, very hard, micritic, w/occasional wavy green shale laminae		
70		10.0/10.0	99	0				
405								
75								High Solids Bentonite Grout (Tremied)
400								
80		10.0/10.0	100	0				
395						DOLOMITE: gray, very hard, micritic, w/wavy black shale laminae		
85								
390						DOLOMITE: gray, very hard, sandy, crystalline		
90		10.0/10.0	94	0		DOLOMITE: gray, very hard, fine-grained turbid 97.6-98.7'		
385								
95								
380								
100								



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100						DOLOMITE: gray, very hard, sandy, cherty, w/black shale laminae		
375	10.0/10.0	96	96	0				
105						DOLOMITE: gray, very hard, silty, crystalline		
370								
110	10.0/10.0	83	83	1		DOLOMITE: gray, very hard, sandy, crystalline		
365						DOLOMITE: gray/brown, hard, micritic to sandy, slightly weathered		
115						DOLOMITE: gray, very hard, fine-grained, w/wavy black shale laminae		
360								
120	10.0/10.0	96	96	0		DOLOMITE: gray, very hard, sandy, crystalline		
355						DOLOMITE: gray, very hard, fine-grained, w/gray shale laminae		
125						DOLOMITE: gray, very hard, sandy, crystalline		
350						DOLOMITE: gray, very hard, sandy, crystalline		
130	10.0/10.0	87	87	1		DOLOMITE: gray, hard, fine-grained, w/occasional green/gray shale laminae		High Solids Bentonite Grout (Tremied)
345								
135						DOLOMITE: gray, very hard, sandy, crystalline		
340						DOLOMITE: gray, very hard, micritic		
140	10.0/10.0	N/A	N/A	0		DOLOMITE: gray, very hard, sandy, crystalline		
335						DOLOMITE: gray, very hard, micritic		
145						DOLOMITE: gray, very hard, sandy, crystalline		
330						DOLOMITE: gray, very hard, micritic to silty, with occasional gray shale laminae		
150								



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