

Client: Westinghouse Electric Company  
 Location: Hematite, MO  
 Project: Hematite Remedial Investigation  
 Date Started: 07/01/04  
 Date Finished: 08/10/04  
 Geologist: J. Bostwick  
 Drilling Contractor: Geotechnology

# Boring: BR-7-JC

Drilling Method: Rotary  
 Surf. Elev.: 476.76  
 Northing: 864147.10  
 Easting: 829606.27  
 Total Depth of Boring: 150.0 feet  
 Top of Casing: 479.27  
 Total Depth of Well: 150.0 feet

Elevation (ft)	Depth (ft)	Core Recovery (Pen/Rec)	RQD	Fracture Frequency	Lithology	Lithology Description	Well Construction	Well Construction Desc.
50								
425						DOLOMITE: gray, very hard, turbid, cherty		
						DOLOMITE: gray, very hard, micritic		
55								High Solids Bentonite Grout (Tremied)
420						DOLOMITE: gray, very hard, sandy, cherty		
						DOLOMITE: gray, hard, micritic		
60						DOLOMITE: gray, very hard, sandy, crystalline, cherty, vuggy		
415								
65						DOLOMITE: gray, very hard, micritic w/occasional wavy green shale laminae		
410								
70								
405								
75								
400								
80								
395						DOLOMITE: gray, very hard, micritic w/wavy black shale laminae		
85								
390						DOLOMITE: gray, very hard, sandy, crystalline		
90						DOLOMITE: gray, very hard, fine-grained turbid 97.6-98.7'		High Solids Bentonite Grout (Tremied)
385								
95								
380								
100								



**Westinghouse**

Westinghouse Electric Company  
 Hematite Facility  
 3300 State Road P  
 Festus, MO 63028



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

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 Project: Hematite Remedial Investigation  
 Location: Hematite, MO  
 Borehole: BR-7-JC  
 Sheet: 2 of 3

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Elevation (ft)	Depth (ft)	Core Recovery (Pen/Rec)	RQD	Fracture Frequency	Lithology	Lithology Description	Well Construction	Well Construction Desc.
100						DOLOMITE: gray, very hard, sandy, cherty w/black shale laminae		
375								
105						DOLOMITE: gray, very hard, silty, crystalline		
370								
110						DOLOMITE: gray, very hard, sandy, crystalline		High Solids Bentonite Grout (Tremied)
365								
115						DOLOMITE: gray/brown, hard, micritic to sandy, slightly weathered		
360						DOLOMITE: gray, very hard, fine-grained w/wavy black shale laminae		
120								
355						DOLOMITE: gray, very hard, sandy, crystalline		0.25" Bentonite Pellets
125						DOLOMITE: gray, very hard, fine-grained, w/gray shale laminae		
350								Secondary Filter Pack (100 Mesh)
130						DOLOMITE: gray, very hard, sandy, crystalline		Primary Filter Pack (10/20 Mesh)
345						DOLOMITE: gray, hard, fine-grained w/occasional green/gray shale laminae		2" Sch. 80 PVC Screen, 0.010" Slot
135								
340						DOLOMITE: gray, very hard, sandy, crystalline		
140						DOLOMITE: gray, very hard, micritic		
335						DOLOMITE: gray, very hard, micritic to silty, sandy, crystalline		
145						DOLOMITE: gray, very hard, micritic to silty with occasional gray shale laminae		
330								
150						Bottom of Hole 150.0'		



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Client: Westinghouse Electric Company  
 Location: Hematite, MO  
 Project: Hematite Remedial Investigation  
 Date Started: 06/23/04  
 Date Finished: 06/29/04  
 Geologist: T. Calhoun  
 Drilling Contractor: Geotechnology

# Boring: BR-8-JC

Drilling Method: Rotary  
 Surf. Elev.: 418.58  
 Northing: 864793.17  
 Easting: 828597.78  
 Total Depth of Boring: 55.3 feet  
 Top of Casing: 421.55  
 Total Depth of Well: 54.9 feet

Elevation (ft)	Depth (ft)	Core Recovery (Pen/Rec)	RQD	Fracture Frequency	Lithology	Lithology Description	Well Construction	Well Construction Desc.
420	0					Drilled w/o sampling OVERBURDEN		Protective Casing (4") 2.0' x 2.0' x 0.5' Concrete Pad 2" Sch 80 PVC Riser
415	5							6" Steel Isolation Casing
410	10							High Solids Bentonite Grout (Tremied)
405	15							Portland Cement
400	20							High Solids Bentonite Grout (Tremied)
395	25					Top of Bedrock 24.5' NO SAMPLE: 10" air rotary		0.25" Bentonite Pellets
390	30							Secondary Filter Pack (100 Mesh)
385	35	3.3/3.3	91	0		DOLOMITE: gray, very hard, sandy w/shale streaks broken shale 38.3-39.1'		Primary Filter Pack (10/20 Mesh)
380	40	5.0/5.0	50	2		DOLOMITE: light gray, very hard, fine-grained, crystalline, cherty broken shale 39.8-39.9' vertical fracture 42.7-43.1'		2" Sch. 80 PVC Screen, 0.010" Slot
375	45	5.0/4.0	58	2		DOLOMITE: gray, very hard, med. grained, crystalline, sandy, turbid, slightly weathered, shale lense at 46.4', weathered below 48.0'		
370	50							



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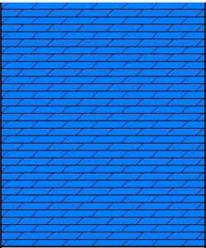
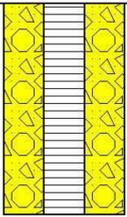
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 Borehole: BR-8-JC  
 Sheet: 1 of 2

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 Total Depth of Well: 54.9 feet

Elevation (ft)	Depth (ft)	Core Recovery (Pen/Rec)	RQD	Fracture Frequency	Lithology	Lithology Description	Well Construction	Well Construction Desc.
50						DOLOMITE: light brown to gray, hard, micritic to sandy in zones, slightly weathered to weathered to 51.0' then weathered along bedding planes to 52.4'		
365		2.0/2.0	80	0		DOLOMITE: dark gray, hard to very hard, fine-grained w/shale stringers and partings		
55						Bottom of Hole 55.3'	Bottom of Well 54.9'	
360								
60								
355								
65								
350								
70								
345								
75								
340								
80								
335								
85								
330								
90								
325								
95								
320								
100								



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Client: Westinghouse Electric Company  
 Location: Hematite, MO  
 Project: Hematite Remedial Investigation  
 Date Started: 07/19/04  
 Date Finished: 07/28/04  
 Geologist: T. Calhoun  
 Drilling Contractor: Geotechnology

# Boring: BR-9-JC

Drilling Method: Rotary  
 Surf. Elev.: 420.39  
 Northing: 865335.21  
 Easting: 828731.74  
 Total Depth of Boring: 88.1 feet  
 Top of Casing: 423.02  
 Total Depth of Well: 89.2 feet

Elevation (ft)	Depth (ft)	Core Recovery (Pen/Rec)	RQD	Fracture Frequency	Lithology	Lithology Description	Well Construction	Well Construction Desc.
420	0				DGA			Protective Casing (4") 2.0' x 2.0' x 0.5' Concrete Pad
415	5	2.0/1.2			SILTY CLAY w/SAND, brown, slightly plastic, damp to moist, w/gravels up to 1/4", chert nodules, manganese and limonite mottling, sand increasing w/depth			2" Sch 80 PVC Riser
		2.0/1.8						
		2.0/2.0						
410	10	2.0/2.0			SANDY GRAVELLY CLAY: brown, slightly plastic, wet, soft, w/gravels up to 1/4"			6" Steel Isolation Casing
		2.0/2.0						
405	15	2.0/1.8			SANDY CLAY: brown, plastic, wet, medium			High Solids Bentonite Grout (Tremied)
		2.0/2.0			SANDY CLAY: gray, plastic, wet, medium			
		2.0/1.5			CLAYEY SAND: gray, plastic, wet, compact, medium grained			
		2.0/1.3			SANDY GRAVEL: gray, wet, compact, gravels up to 3/4"			
400	20	2.0/1.3				Top of Bedrock 24.1'		
395	25	3.9/3.4	10	3	DOLOMITE: brown, hard, weathered, fractured throughout, void 27.9-29.0'	29.2-31.7 (possible clay seam)		
390	30	2.7/2.5	42	1	DOLOMITE: gray, very hard, micritic, w/shale stringers			
385	35	5.0/2.5	94	1	DOLOMITE: gray, very hard, sandy, vuggy, w/chert bands and green shale laminae, vertical fractures and broken zones 38.3-43.0'			
380	40	5.0/5.0	40	3				High Solids Bentonite Grout (Tremied)
375	45	1.0/1.0	100	0	NO SAMPLE: 6" air rotary			
		1.9/1.9	100	0	DOLOMITE: gray, hard to very hard, micritic w/sandy lenses, green and gray shale laminae	vertical fractures 49.0-49.1', 51.1-51.4'		
						gray clay seam 50.8-50.9', shale lense at 55.4'		



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