

INTERVAL (ft) BELOW GRADE	#8	LITHOLOGIC DESCRIPTION	REMARKS
0.0 – 0.5		TAILINGS: SILT with sand, light-orange-brown; very thin (0.1) white layer at surface. Soft, slightly moist.	
0.5 – 3.5		SAND with silt, medium to coarse, moist, dark-brown.	
3.5 – 8.0		Clayey silty SAND, fine to coarse, soft, plastic, very moist, dark-gray/brown to black.	
8.0 – 9.0		Small COBBLES/GRAVEL.	
9.0 – 13.0		SAND, fine to very coarse with silt, minor clay and gravel, likely stratified, wet, dark gray.	Zone producing water.
13.0		Bottom of hole.	

INTERVAL (ft) BELOW GRADE	#6	LITHOLOGIC DESCRIPTION	REMARKS
0.0 – 0.1		TAILINGS: silty SAND, fine, light-yellow-brown to olive-gray.	
0.1 – 1.4		Organic rich SILT, black, slightly moist, soft.	
1.4 – 6.5		Clayey SAND with silt, yellow-brown, soft, moist to very moist, fine to coarse, plastic to slightly plastic.	
6.5 – 8.0		GRAVEL.	
7.0 – 8.0'		Boulder —granite.	Hard drilling.
8.0 – 9.0		Silty SAND with clay, brown, soft, slightly moist, medium to coarse, slightly plastic to plastic.	Spit spoon—Very hard, clayey sand with gravel, possible weathered bedrock.
9.0 – 10.0		Weathered BEDROCK.	Very hard drilling at 10'.
10.0		Bottom of hole.	

INTERVAL (ft) BELOW GRADE	#2	LITHOLOGIC DESCRIPTION	REMARKS
0.0 – 3.0		TAILINGS: very silty SAND, fine to medium, tan to olive-gray to gold, slightly moist.	
3.0 – 3.5		TOPSOIL/SILTY LOAM, Very clayey, black, moist.	
3.5 – 6.0		Very sandy CLAY, silty, with occasional gravels to approximately ½" diameter, gold-brown, slightly moist.	
6.0 – 8.0		Very silty SAND, fine to medium, gray-brown, medium moist.	
8.0 – 22.0		Sandy silty CLAY, tan mottled with a gold color, moist, iron-stained.	
10'		= very clayey gravel seam, sandy, medium moist, gold-brown.	
12'		= increased percentage sand with depth, occasional small gravels.	
13'		= gray, slightly moist.	
16'		= sand is fine to medium.	No observed gravel in spoils.
17'		= occasional gravels to 1" diameter, very sandy, sand is fine to coarse, moderately moist, gray.	17.5' – 18.5' = Very hard drilling, possible boulder.
18.5'		= Very clayey, very gravelly, subangled gravels, gray.	18.5' = 18" drive/soil sample.
22.0 – 24.8		Poorly graded GRAVEL. Very sandy. Sand and gravels are subrounded to slightly angular, coarse.	
24.8		Bottom of hole.	

INTERVAL (ft) BELOW GRADE	#1	LITHOLOGIC DESCRIPTION	REMARKS
0.0 – 0.8		TOPSOIL/SILTY LOAM. Silty clay, very sandy, black, moist.	Dense root zone.
0.8 – 8.0		Silty SAND, clayey, iron staining, dark brown mottled with gold-brown, wet, sand is fine to medium.	Ground water at approximately 3' below grade. Mica in spoils.
5.0'		= sand is coarser with depth, occasional small gravels, slightly clayey, brown.	
8.0 – 10.8		Sandy CLAY, possibly very weathered granitic bedrock; sand fraction is medium to coarse, orange-gold to olive-gray.	Quartz and mica in spoils.
10.8		Bottom of hole.	Spoils on auger gold colored.

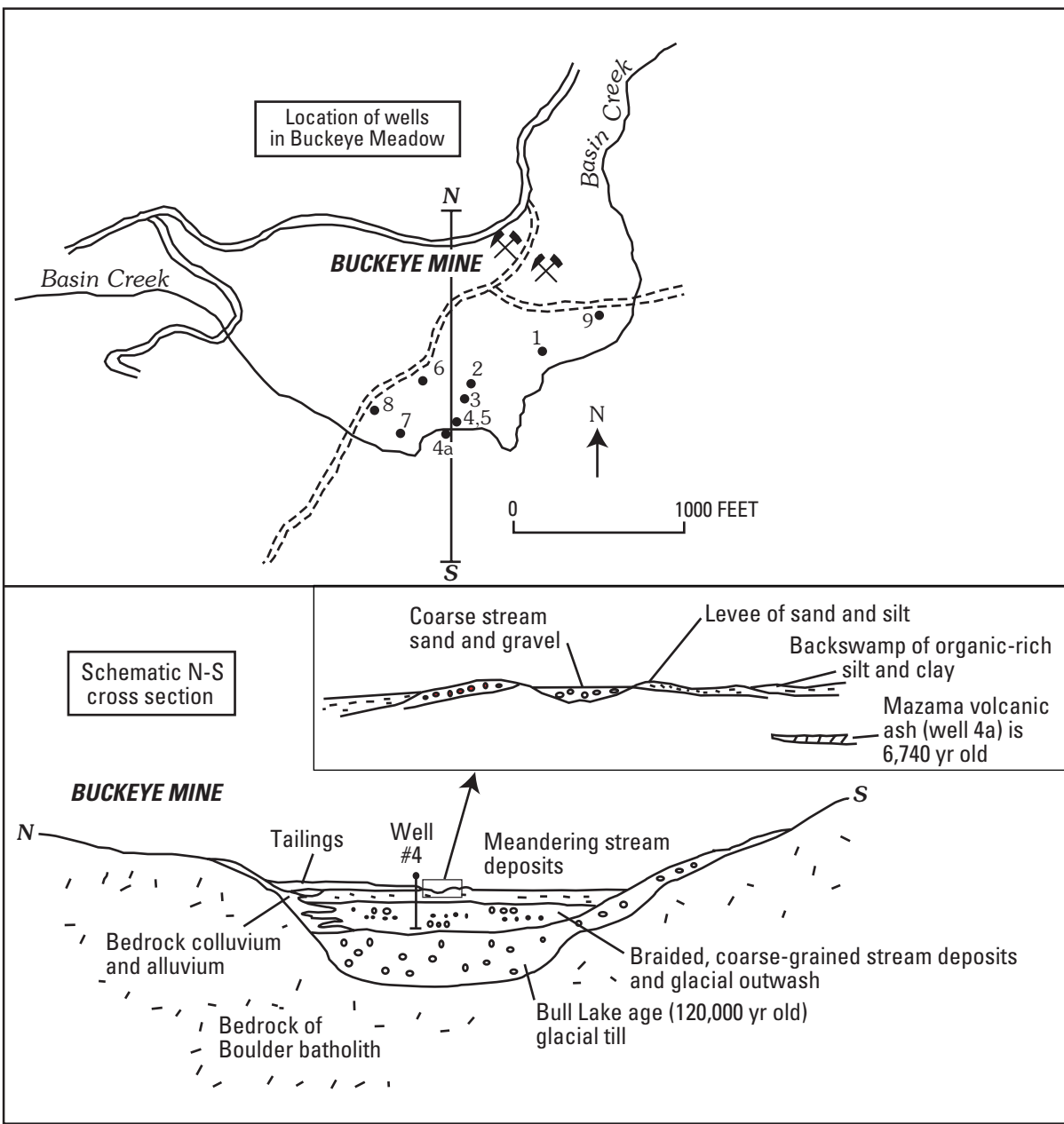
INTERVAL (ft) BELOW GRADE	#3	LITHOLOGIC DESCRIPTION	REMARKS
0.0 – 0.9		TAILINGS: very silty. Sand, fine, tan to olive-gray.	
0.9 – 1.5		TOPSOIL/ SILTY LOAM. Very clayey, black, moist.	Mica in spoils.
1.5 – 5.0		Sandy CLAY, silty, very moist, gray mottled with a gold color.	Wet at 3 feet.
5.0 – 7.0		Very silty. Clay to SILT, clayey, sandy, tan, wet.	
7.0 – 10.0		Sandy SILT, clayey, fine to medium sand, slightly plastic, dark-brown to black.	
10.0 – 11.0		Very sandy SILT to SAND, fine to medium, dark-brown-black.	
11.0		Bottom of hole.	

INTERVAL (ft) BELOW GRADE	#5	LITHOLOGIC DESCRIPTION	REMARKS
0.0 – 0.2		TAILINGS: very silty SAND, fine, moderately moist, tan to olive-gray.	
0.2 – 1.2		TOPSOIL/ SILTY LOAM. Very clayey, moist, black.	
1.2 – 2.2		Sandy CLAY, silty, very moist, tan to gray/ brown mottled with a gold color.	
2.2 – 4.5		Silty SAND, fine to coarse grained, wet, yellow-brown.	
4.5 – 7.0		Sandy CLAY, silty, gray.	
7.0 – 8.5		Silty SAND, fine to coarse grained, angular to subangular, wet, brown.	
8.5		Bottom of hole.	

INTERVAL (ft) BELOW GRADE	#4	LITHOLOGIC DESCRIPTION	REMARKS
0.0 – 0.4		TAILINGS: very silty SAND, fine, tan to olive-gray.	
0.4 – 1.2		TOPSOIL/SILTY LOAM. Very clayey to clay, moist, black.	
1.2 – 6.0		Sandy CLAY, silty, very moist, gray-brown mottled with a gold color.	
6.0 – 27.0		Silty SAND with small gravels, fine to coarse, angular to subangular, brown.	11' – 13' = possible boulder, hard drilling.
18'		= Clayey, possible clay zones mixed/intervoven with sand, light gray.	
27.0 – 31.0		Sandy CLAY, gray, sand fine to coarse.	Pilot auger/bit spoils upon removal.
31.0		Bottom of hole.	

INTERVAL (ft) BELOW GRADE	#4a	LITHOLOGIC DESCRIPTION	REMARKS
0.0 – 1.0		Sandy loam soil, brown.	
1.0 – 1.7		Sand, fine to medium, silty, clayey, micaceous.	
1.7 – 1.9		Clay, silty, dark-brown, mottled.	
1.9 – 3.0		Sand, medium to coarse, micaceous.	
3.0 – 3.6		Clay and silt, dark-brown, mottled.	
3.6 – 4.0		Volcanic ash, light-gray, wet.	
4.0 – 4.8		Interbedded coarse sand and clayey silt; clayey silt is dark brown to black with much organic material, saturated.	
4.8 – 5.0		Sandy till, light-gray, saturated.	
5.0		Bottom of hole. Rock, unable to penetrate.	

INTERVAL (ft) BELOW GRADE	#7	LITHOLOGIC DESCRIPTION	REMARKS
0.0 – 0.4		TAILINGS: SILT with sand, white to light-yellow-brown and orange; with brown sandy silt, slightly moist, thin laminations.	
0.4 – 3.0		SAND, orange to orange-brown, slightly moist to moist, medium to coarse.	
3.0 – 4.0		Organic rich SILT, black, very moist.	
4.0 – 10.0		SAND with silt and clay, dark-gray to black, saturated. Medium to very coarse, angular.	Producing considerable water.
10.0 – 11.0		Silty SAND with clay, dark-gray, very moist, soft, medium to very coarse, angular. Fines are plastic.	
11.0		Bottom of hole.	



Interpretation of Quaternary deposits at Buckeye Meadow, Basin Creek

Well logs #1–#9 from Maxim Technologies, Inc. of Helena, Mont.
Well log #4a from M. Cannon, U.S. Geological Survey, Helena, Mont.

FENCE DIAGRAM SHOWING CORRELATION OF QUATERNARY DEPOSITS IN BUCKEYE MEADOW, BASIN CREEK DRAINAGE, JEFFERSON COUNTY, MONTANA

By
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