

Appendix D:

Pebble Count

PEBBLE COUNT

The pebble count is a measure of stream substrate composition. Substrate (the base on which an organism lives, in this case the stream bottom) is one of the most important factors which controls the community of macroinvertebrates. Large gravel to large cobble are the ideal substrates for macroinvertebrates, giving them places to live and reproduce. The worst substrate is that dominated by silt and sand because these substrates do not provide pockets between particles for the insects to live. Over a period of time, the natural substrate may be greatly altered by the discharge of organic matter. The location and expanse of various substrate types may also change due to normal variations in hydraulic factors such as volume of flow.

Substrate types

Silt/Clay – any particle less than .062 mm across

Sand – any particle .062 mm to 2.0 mm across

Gravel – any particle 2.0 mm to 64 mm across

Cobble – any particle 64 mm to 256 mm across

Boulder – any particle 256 mm to 2048 mm across

Bedrock – any particle greater than 2048 mm across

Sediment is one of the most significant pollutants that is generated by development activities and is subsequently transported by stormwater runoff. Sediments are mainly composed of materials such as soil which may be eroded from uplands and are capable of transporting toxins and trace metals that may lead to increased turbidity and reduced light penetration. These particulates are capable of altering the composition of the benthic macroinvertebrate communities by accumulating on the stream bed between cobbles and stones thus reducing habitat quality and the overall aesthetic and biological importance of the water body.

The following information is provided to facilitate an understanding of the pebble counts between different years. The reported numerical portion corresponds to the D-50, which represents the average particle size within the streambed. If the data results in a change which decreases the average particle size, that corresponds to an increase in deposition. If the change results in an increased particle size, that would correspond to movement of the stream bottom. The MCPC is currently working to refine the information collected and implementing new strategies by marking sites for consistent data collection. Please note that the county has undergone three years of flooding events which contribute to scouring and gravel bar creation thus influencing the pebble count results. The final determination is ambiguous as to why these sites have experienced this high level of fluctuation. Future work must be preformed with individual site analysis to interpret these results.

Site #	2005	2006	Change	Result
AQUACR09	73.5	42.6	-30.9	Deposition
AQUACR10	80.8	50.2	-30.6	Deposition
BRODCR01	68.2	57.3	-10.6	Deposition
BRODCR12	66.5	85.5	19	Movement
BRODCR13	98.7	29.8	-68.9	Deposition
BRODCR14	*	81	*	*
BRODCR15	*	43.9	*	*
BUCKCR01	74.7	26.5	-48.2	Deposition
BUSHCR07	138.9	78.2	-60.7	Deposition
BUTZRU01	33.7	38.5	4.8	Movement
CHERCRI1	*	62.8	*	*
CRANCR01	*	99.5	*	*
CRCRPA01	56	56.1	0.1	
CRCRPA03	*	109.7	*	*
DEHOOCR04	45	78.9	33.9	Movement
DRSARU01	90	141.1	51.1	Movement
FOHIRU01	64	49.9	-14.1	Deposition
FOHIRU06	*	39.8	*	*
FOHIRU09	144.9	83.1	-61.8	Deposition
HAWKRU02	74.6	22	-52.6	Deposition
INDIRU01	61.7	66.5	4.8	Movement
JONASCR01	*	65.8	*	*
LEHIRI01	*	128	*	*
LEHIRI02	*	83.8	*	*
MARSCR08	73.8	57.7	-16.1	Deposition
MARSCR09	95.7	51	-44.7	Deposition
MCMICR21	40.2	85	44.8	Movement

Site #	2005	2006	Change	Result
PARACR01	141.1	174	32.9	Movement
PARACR03	43.7	61.5	17.8	Movement
PARACR04	42	51.8	9.8	Movement
POCOCR14	42	68.8	-26.8	Deposition
POCOCR15	129.8	111.9	-17.9	Deposition
POCOCR16	41	56.9	15.9	Movement
POCOCR17	58.3	81.3	23	Movement
POCOCR18	42.5	53.7	11.2	Movement
POCOCR19	76.7	122.1	45.4	Movement
POCOCR20	66.2	100.5	34.3	Movement
POCOCR22	73.4	131.4	58	Movement
POHOOCR06	53.7	42.4	-11.3	Deposition
POHOOCR08	*	70.8	*	*
REDRU03	0.3	0.2	-0.1	*
SAMBCR10	106.4	97.3	-9.1	Deposition
SCOTCR04	52.8	47.3	-5.5	Deposition
SWIFCR02	95.1	78.1	-17	Deposition
SWIFCR03	105.6	54.1	-51.5	Deposition
SWIFCR05	68.7	36.9	-31.8	Deposition
SWIFCR06	105.6	77.8	-27.8	Deposition
SWIFCR07	75.3	69	-6.3	Deposition
TOBYCR01	92.2	96.6	-4.4	Deposition
TOBYCR14	81.1	81.4	-0.3	Deposition
TROUCR03	*	81	*	*
TUNKCR03	74.8	96.9	22.1	Movement
TUNKCR06	*	*	*	*
WEIRCR02	*	16	*	*

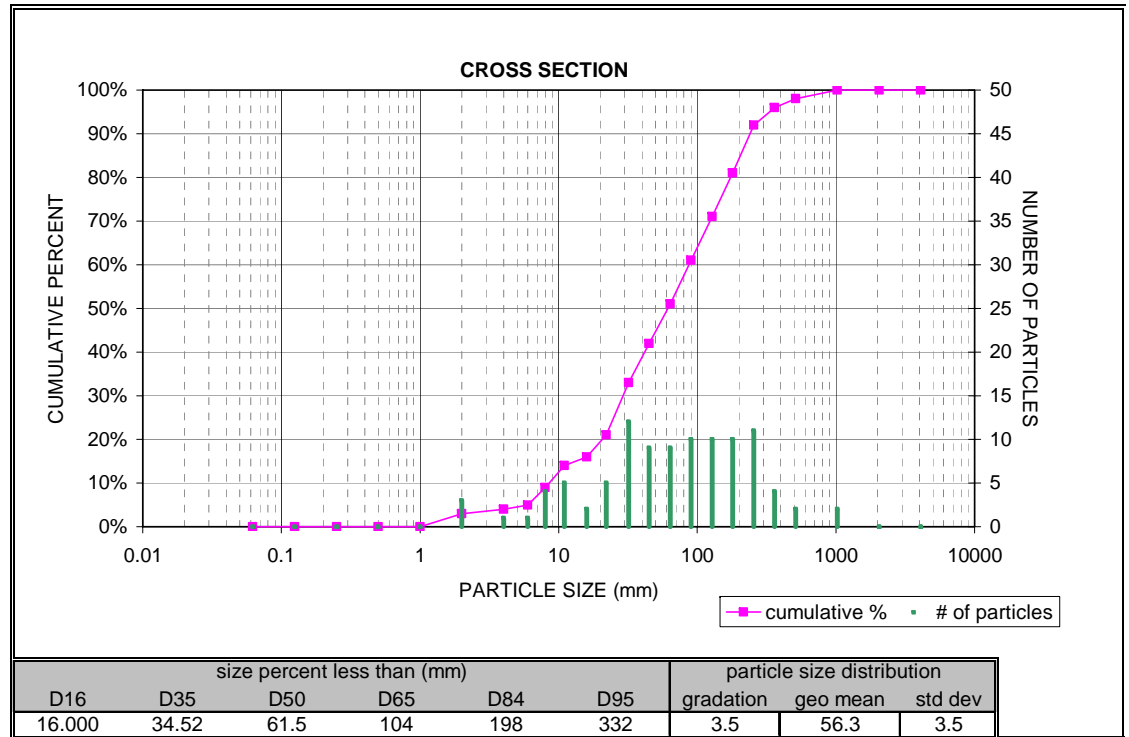
MCMICR28	37.9	65.1	27.2	Movement
MCMICR30	92.3	62.3	-30	Deposition

*No Data The following pages contain the pebble count data for the 2006 sampling sites.

Pebble Count (Cross Section)

SITE ID: PARACR03

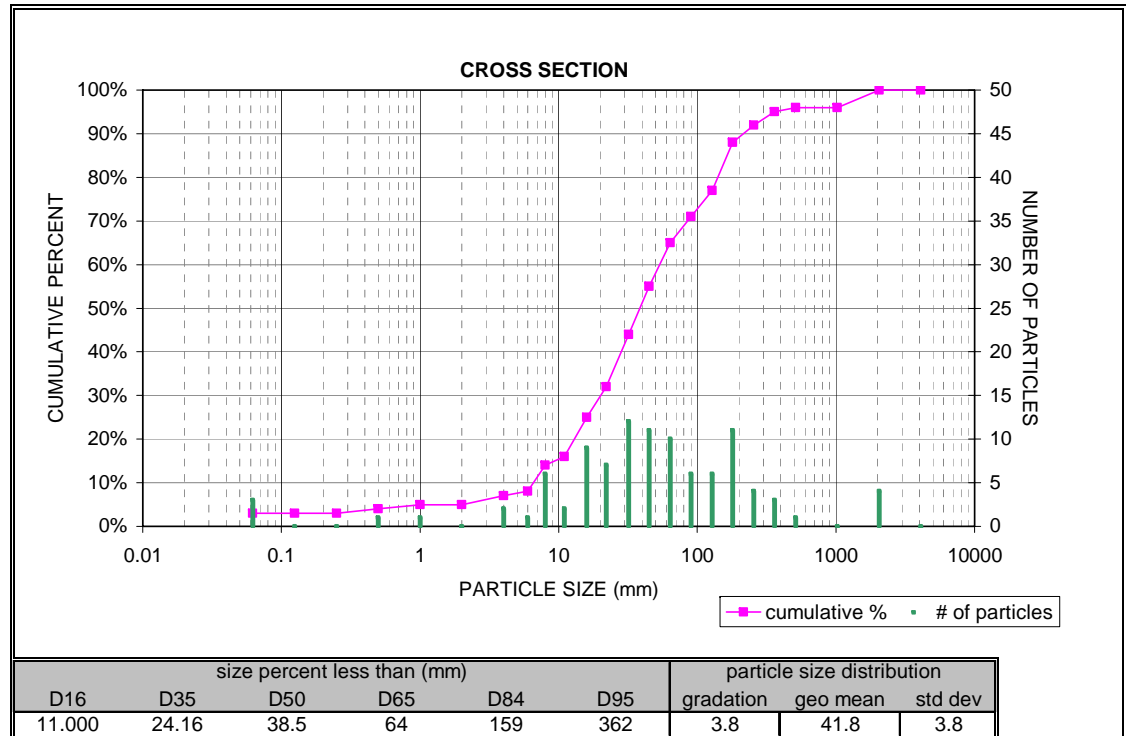
Material	Size Range (mm)		Particle Count	Cumulative Percent
	Lower	Upper		
silt/clay	0	0.062	0	0%
very fine sand	0.062	0.13	0	0%
fine sand	0.13	0.25	0	0%
medium sand	0.25	0.5	0	0%
coarse sand	0.5	1	0	0%
very coarse sand	1	2	3	3%
very fine gravel	2	4	1	4%
fine gravel	4	6	1	5%
fine gravel	6	8	4	9%
medium gravel	8	11	5	14%
medium gravel	11	16	2	16%
coarse gravel	16	22	5	21%
coarse gravel	22	32	12	33%
very coarse gravel	32	45	9	42%
very coarse gravel	45	64	9	51%
small cobble	64	90	10	61%
medium cobble	90	128	10	71%
large cobble	128	180	10	81%
very large cobble	180	256	11	92%
small boulder	256	362	4	96%
small boulder	362	512	2	98%
medium boulder	512	1024	2	100%
large - very large boulder	1024	2048	0	100%
bedrock	2048	4096	0	100%
Total Particle Count:			100	



Pebble Count (Cross Section)

SITE ID: BUTZRU01

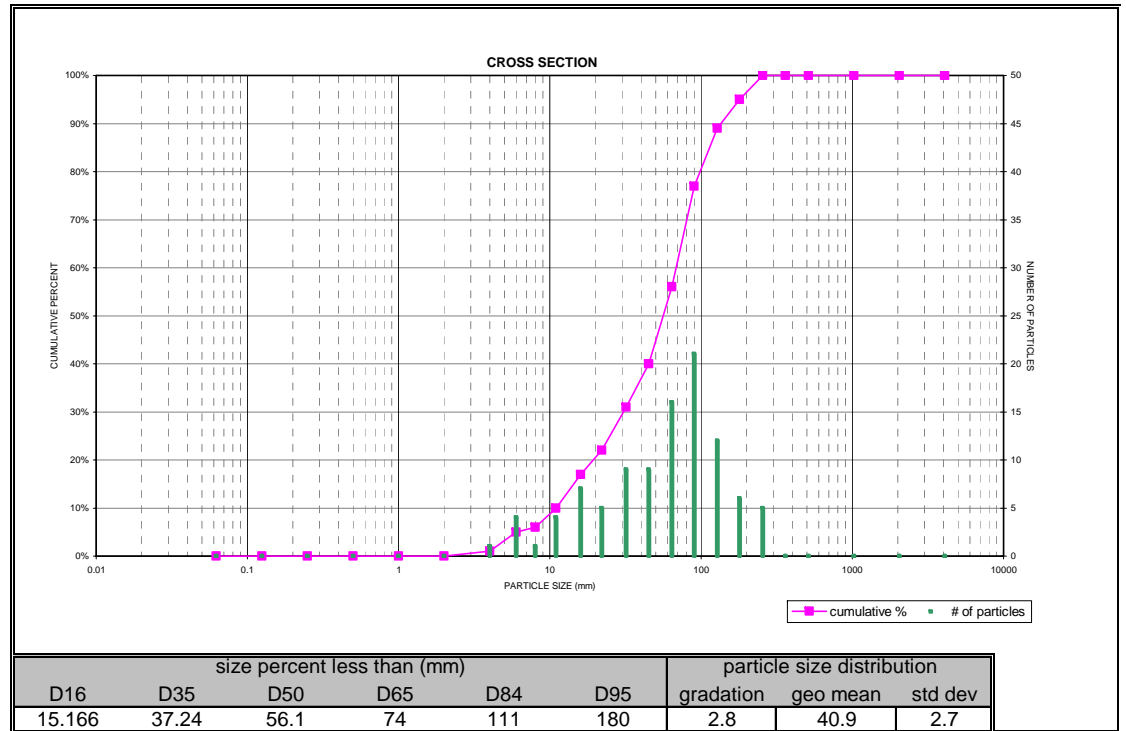
Material	Size Range (mm)		Particle Count	Cumulative Percent
	Lower	Upper		
silt/clay	0	0.062	3	3%
very fine sand	0.062	0.13	0	3%
fine sand	0.13	0.25	0	3%
medium sand	0.25	0.5	1	4%
coarse sand	0.5	1	1	5%
very coarse sand	1	2	0	5%
very fine gravel	2	4	2	7%
fine gravel	4	6	1	8%
fine gravel	6	8	6	14%
medium gravel	8	11	2	16%
medium gravel	11	16	9	25%
coarse gravel	16	22	7	32%
coarse gravel	22	32	12	44%
very coarse gravel	32	45	11	55%
very coarse gravel	45	64	10	65%
small cobble	64	90	6	71%
medium cobble	90	128	6	77%
large cobble	128	180	11	88%
very large cobble	180	256	4	92%
small boulder	256	362	3	95%
small boulder	362	512	1	96%
medium boulder	512	1024	0	96%
large - very large boulder	1024	2048	4	100%
bedrock	2048	4096	0	100%
Total Particle Count:			100	



Pebble Count (Cross Section)

SITE ID: CRCRPA01

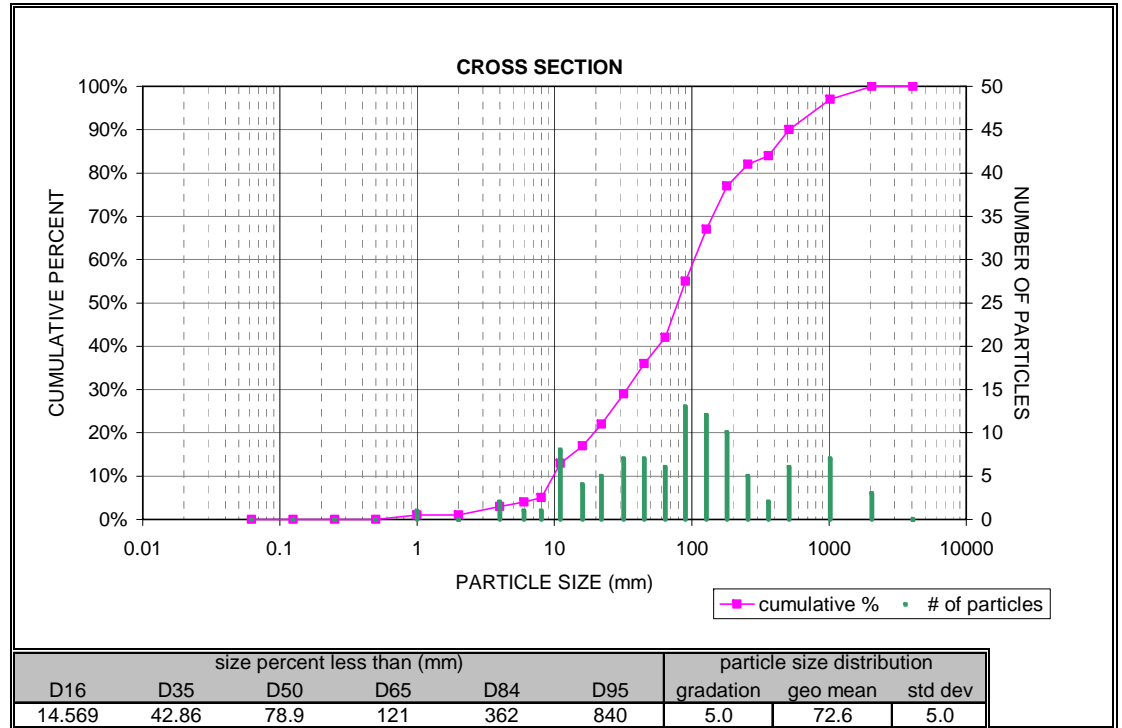
Material	Size Range (mm)		Particle Count	Cumulative Percent
silt/clay	0	0.062	0	0%
very fine sand	0.062	0.13	0	0%
fine sand	0.13	0.25	0	0%
medium sand	0.25	0.5	0	0%
coarse sand	0.5	1	0	0%
very coarse sand	1	2	0	0%
very fine gravel	2	4	1	1%
fine gravel	4	6	4	5%
fine gravel	6	8	1	6%
medium gravel	8	11	4	10%
medium gravel	11	16	7	17%
coarse gravel	16	22	5	22%
coarse gravel	22	32	9	31%
very coarse gravel	32	45	9	40%
very coarse gravel	45	64	16	56%
small cobble	64	90	21	77%
medium cobble	90	128	12	89%
large cobble	128	180	6	95%
very large cobble	180	256	5	100%
small boulder	256	362	0	100%
small boulder	362	512	0	100%
medium boulder	512	1024	0	100%
large - very large boulder	1024	2048	0	100%
bedrock	2048	4096	0	100%
Total Particle Count:			100	



Pebble Count (Cross Section)

SITE ID: DEHOCR04

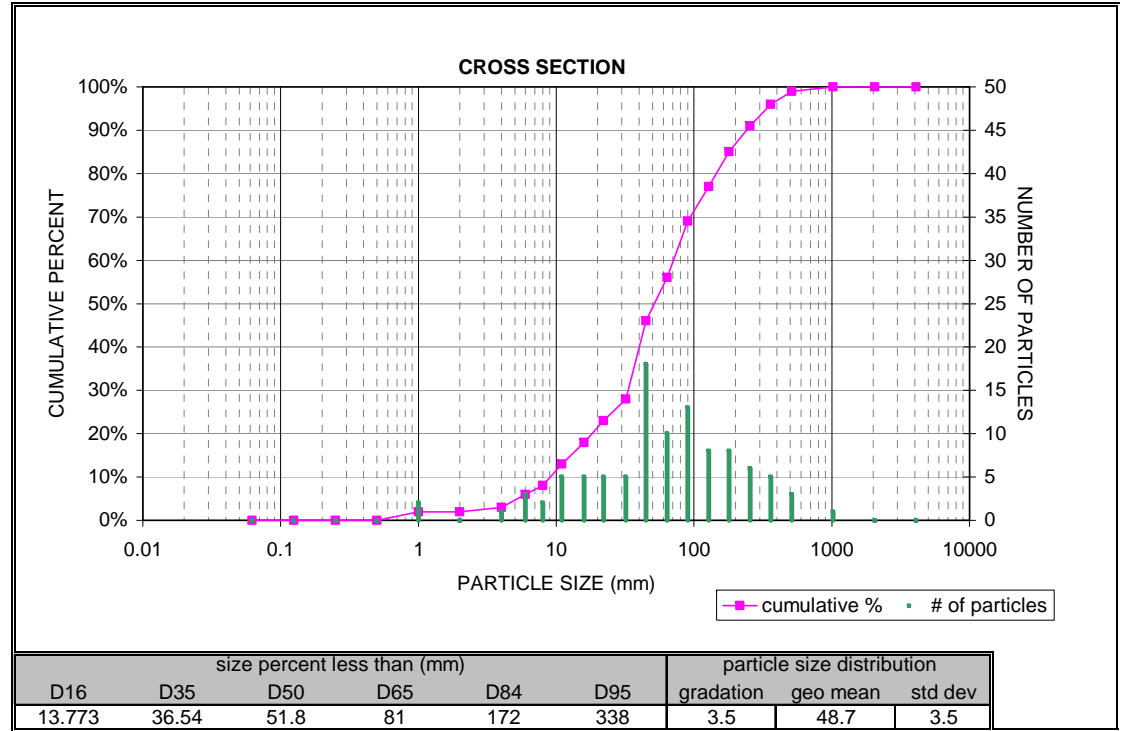
Material	Size Range (mm)		Particle Count	Cumulative Percent
silt/clay	0	0.062	0	0%
very fine sand	0.062	0.13	0	0%
fine sand	0.13	0.25	0	0%
medium sand	0.25	0.5	0	0%
coarse sand	0.5	1	1	1%
very coarse sand	1	2	0	1%
very fine gravel	2	4	2	3%
fine gravel	4	6	1	4%
fine gravel	6	8	1	5%
medium gravel	8	11	8	13%
medium gravel	11	16	4	17%
coarse gravel	16	22	5	22%
coarse gravel	22	32	7	29%
very coarse gravel	32	45	7	36%
very coarse gravel	45	64	6	42%
small cobble	64	90	13	55%
medium cobble	90	128	12	67%
large cobble	128	180	10	77%
very large cobble	180	256	5	82%
small boulder	256	362	2	84%
small boulder	362	512	6	90%
medium boulder	512	1024	7	97%
large - very large boulder	1024	2048	3	100%
bedrock	2048	4096	0	100%
Total Particle Count:			100	



Pebble Count (Cross Section)

SITE ID: PARACR04

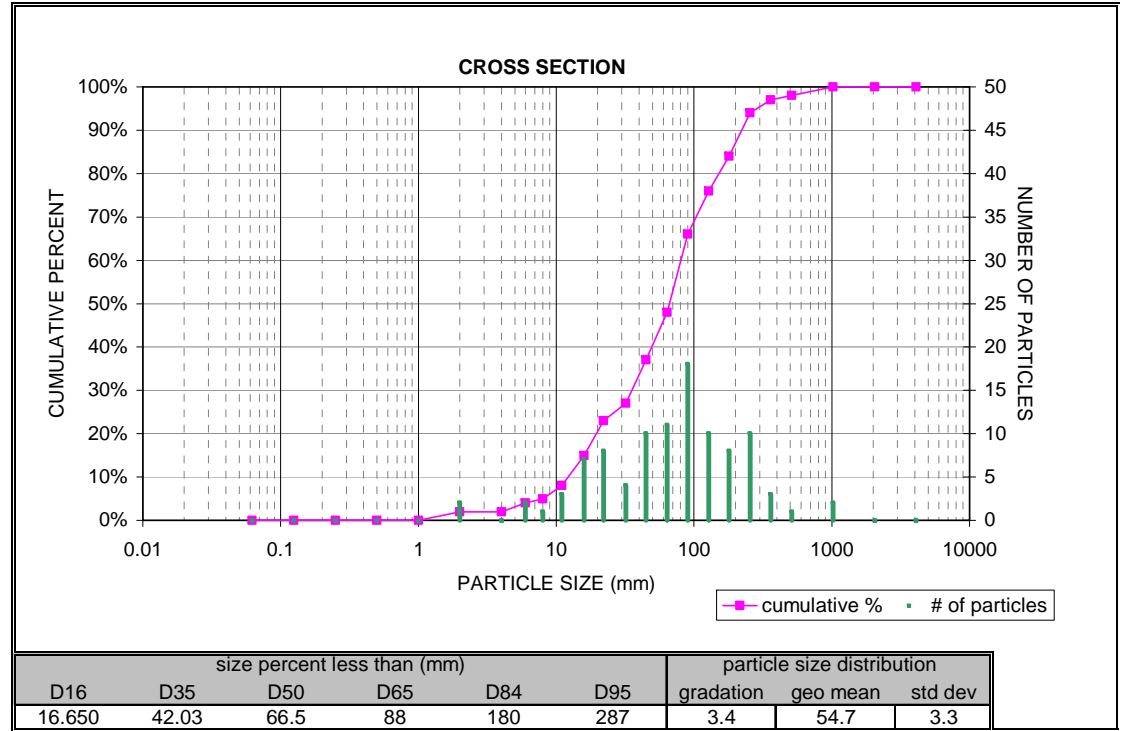
Material	Size Range (mm)		Particle Count	Cumulative Percent
silt/clay	0	0.062	0	0%
very fine sand	0.062	0.13	0	0%
fine sand	0.13	0.25	0	0%
medium sand	0.25	0.5	0	0%
coarse sand	0.5	1	2	2%
very coarse sand	1	2	0	2%
very fine gravel	2	4	1	3%
fine gravel	4	6	3	6%
fine gravel	6	8	2	8%
medium gravel	8	11	5	13%
medium gravel	11	16	5	18%
coarse gravel	16	22	5	23%
coarse gravel	22	32	5	28%
very coarse gravel	32	45	18	46%
very coarse gravel	45	64	10	56%
small cobble	64	90	13	69%
medium cobble	90	128	8	77%
large cobble	128	180	8	85%
very large cobble	180	256	6	91%
small boulder	256	362	5	96%
small boulder	362	512	3	99%
medium boulder	512	1024	1	100%
large - very large boulder	1024	2048	0	100%
bedrock	2048	4096	0	100%
Total Particle Count:			100	



Pebble Count (Cross Section)

SITE ID: INDIRU01

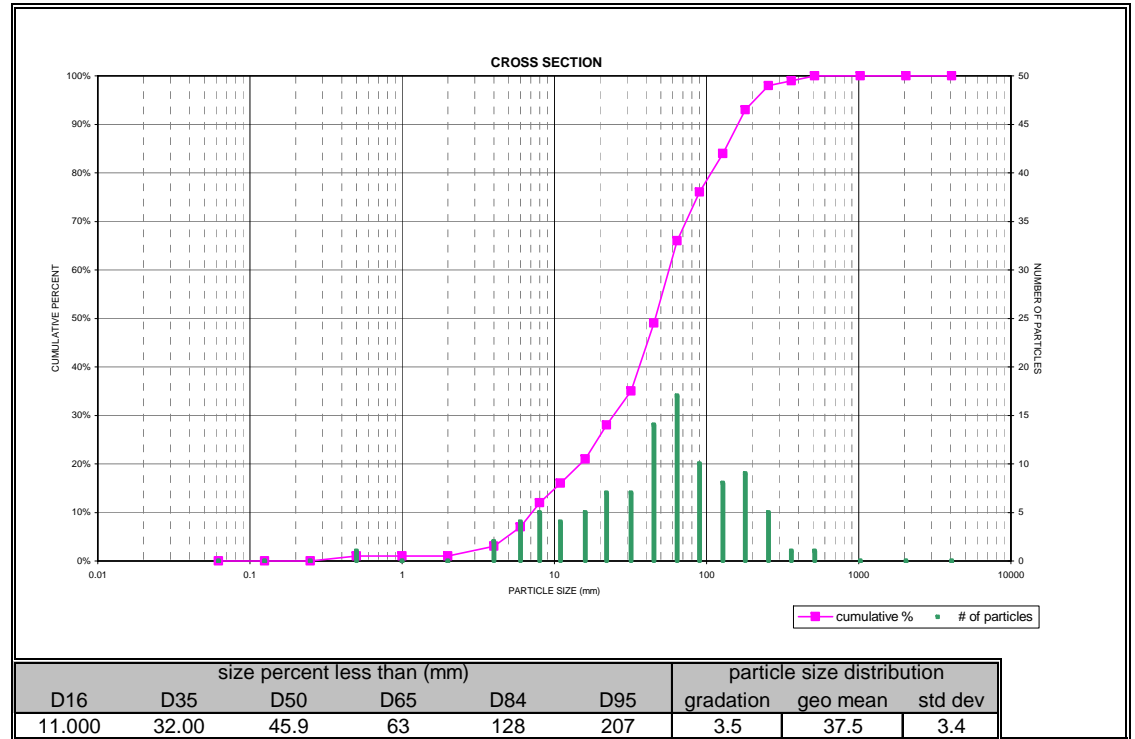
Material	Size Range (mm)		Particle Count	Cumulative Percent
silt/clay	0	0.062	0	0%
very fine sand	0.062	0.13	0	0%
fine sand	0.13	0.25	0	0%
medium sand	0.25	0.5	0	0%
coarse sand	0.5	1	0	0%
very coarse sand	1	2	2	2%
very fine gravel	2	4	0	2%
fine gravel	4	6	2	4%
fine gravel	6	8	1	5%
medium gravel	8	11	3	8%
medium gravel	11	16	7	15%
coarse gravel	16	22	8	23%
coarse gravel	22	32	4	27%
very coarse gravel	32	45	10	37%
very coarse gravel	45	64	11	48%
small cobble	64	90	18	66%
medium cobble	90	128	10	76%
large cobble	128	180	8	84%
very large cobble	180	256	10	94%
small boulder	256	362	3	97%
small boulder	362	512	1	98%
medium boulder	512	1024	2	100%
large - very large boulder	1024	2048	0	100%
bedrock	2048	4096	0	100%
Total Particle Count:			100	



Pebble Count (Cross Section)

SITE ID: FOHIRU01

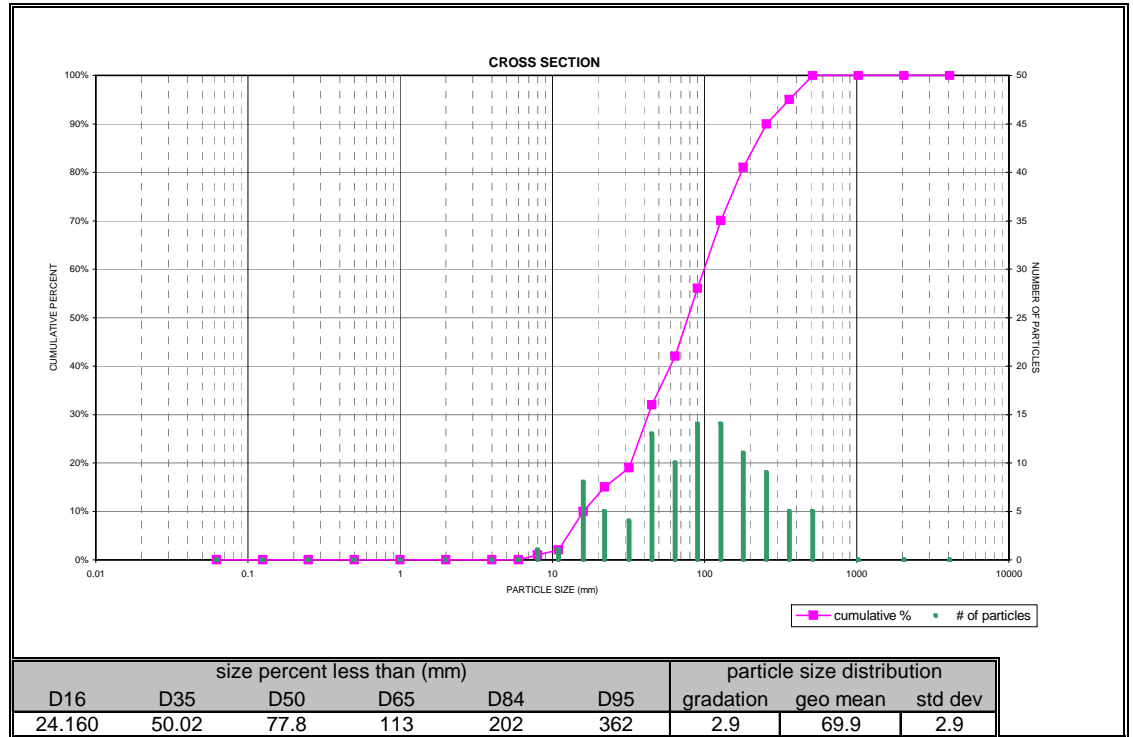
Material	Size Range (mm)		Particle Count	Cumulative Percent
silt/clay	0	0.062	0	0%
very fine sand	0.062	0.13	0	0%
fine sand	0.13	0.25	0	0%
medium sand	0.25	0.5	1	1%
coarse sand	0.5	1	0	1%
very coarse sand	1	2	0	1%
very fine gravel	2	4	2	3%
fine gravel	4	6	4	7%
fine gravel	6	8	5	12%
medium gravel	8	11	4	16%
medium gravel	11	16	5	21%
coarse gravel	16	22	7	28%
coarse gravel	22	32	7	35%
very coarse gravel	32	45	14	49%
very coarse gravel	45	64	17	66%
small cobble	64	90	10	76%
medium cobble	90	128	8	84%
large cobble	128	180	9	93%
very large cobble	180	256	5	98%
small boulder	256	362	1	99%
small boulder	362	512	1	100%
medium boulder	512	1024	0	100%
large - very large boulder	1024	2048	0	100%
bedrock	2048	4096	0	100%
Total Particle Count:			100	



Pebble Count (Cross Section)

SITE ID: SWIFCR06

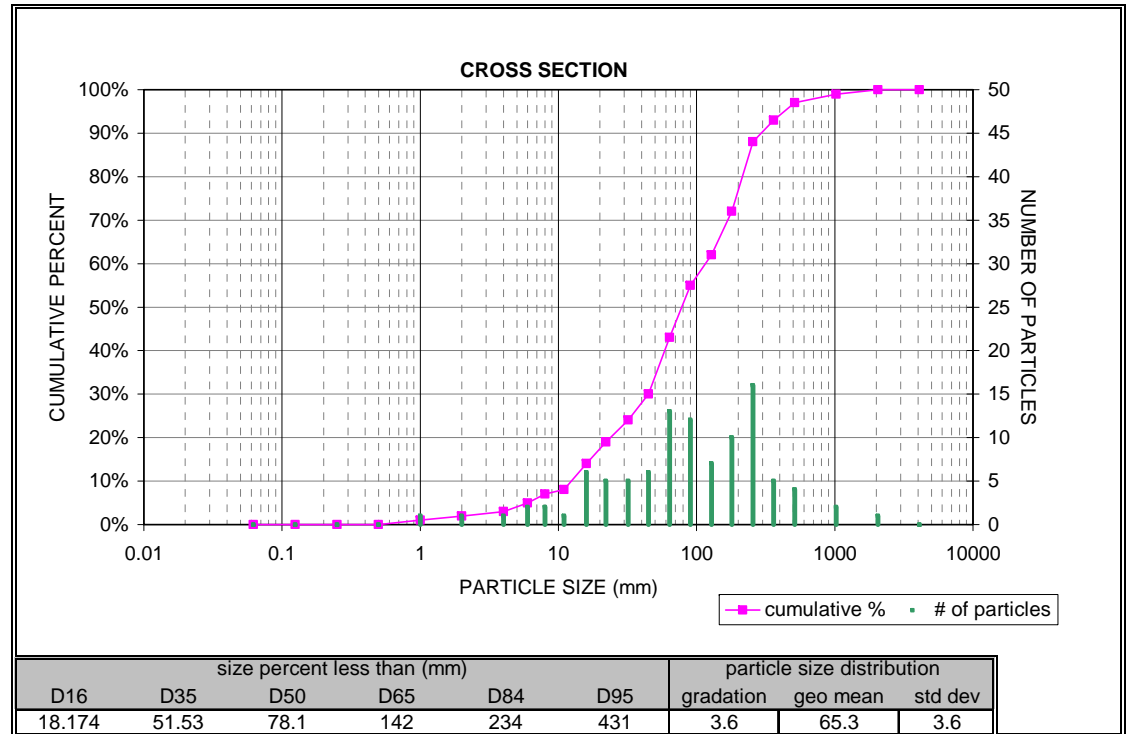
Material	Size Range (mm)		Particle Count	Cumulative Percent
silt/clay	0	0.062	0	0%
very fine sand	0.062	0.13	0	0%
fine sand	0.13	0.25	0	0%
medium sand	0.25	0.5	0	0%
coarse sand	0.5	1	0	0%
very coarse sand	1	2	0	0%
very fine gravel	2	4	0	0%
fine gravel	4	6	0	0%
fine gravel	6	8	1	1%
medium gravel	8	11	1	2%
medium gravel	11	16	8	10%
coarse gravel	16	22	5	15%
coarse gravel	22	32	4	19%
very coarse gravel	32	45	13	32%
very coarse gravel	45	64	10	42%
small cobble	64	90	14	56%
medium cobble	90	128	14	70%
large cobble	128	180	11	81%
very large cobble	180	256	9	90%
small boulder	256	362	5	95%
small boulder	362	512	5	100%
medium boulder	512	1024	0	100%
large - very large boulder	1024	2048	0	100%
bedrock	2048	4096	0	100%
Total Particle Count:			100	



Pebble Count (Cross Section)

SITE ID: SWIFCR02

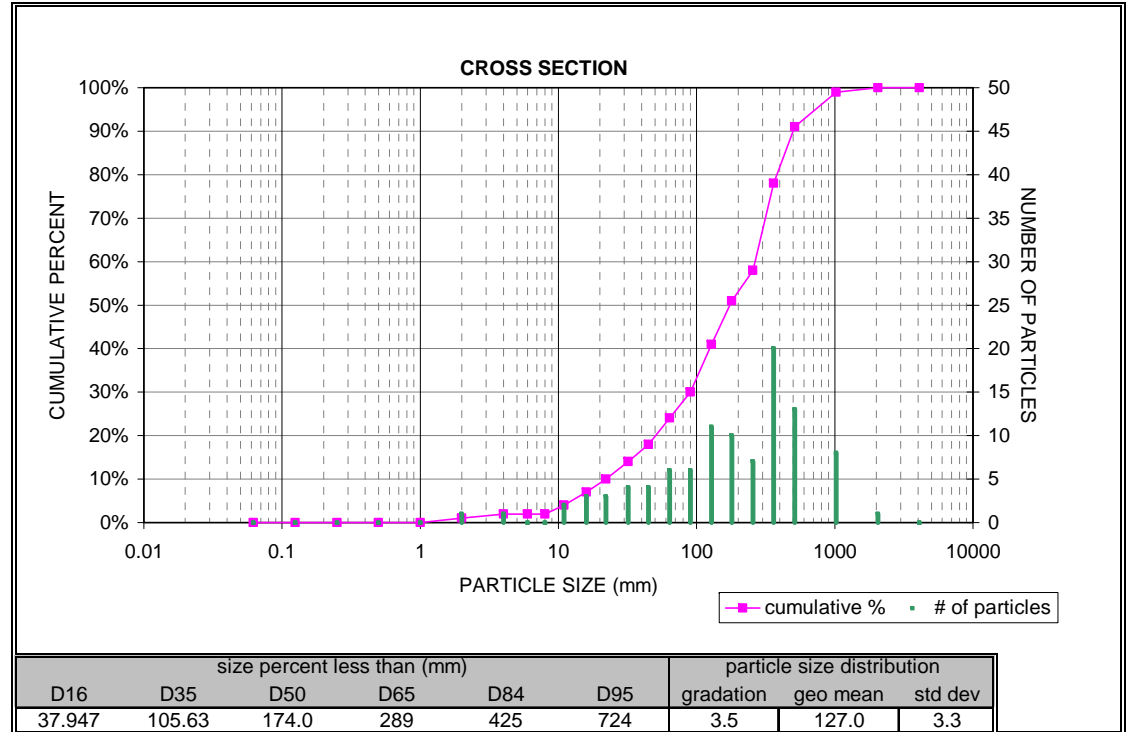
Material	Size Range (mm)		Particle Count	Cumulative Percent
silt/clay	0	0.062	0	0%
very fine sand	0.062	0.13	0	0%
fine sand	0.13	0.25	0	0%
medium sand	0.25	0.5	0	0%
coarse sand	0.5	1	1	1%
very coarse sand	1	2	1	2%
very fine gravel	2	4	1	3%
fine gravel	4	6	2	5%
fine gravel	6	8	2	7%
medium gravel	8	11	1	8%
medium gravel	11	16	6	14%
coarse gravel	16	22	5	19%
coarse gravel	22	32	5	24%
very coarse gravel	32	45	6	30%
very coarse gravel	45	64	13	43%
small cobble	64	90	12	55%
medium cobble	90	128	7	62%
large cobble	128	180	10	72%
very large cobble	180	256	16	88%
small boulder	256	362	5	93%
small boulder	362	512	4	97%
medium boulder	512	1024	2	99%
large - very large boulder	1024	2048	1	100%
bedrock	2048	4096	0	100%
Total Particle Count:			100	



Pebble Count (Cross Section)

SITE ID:PARACR01

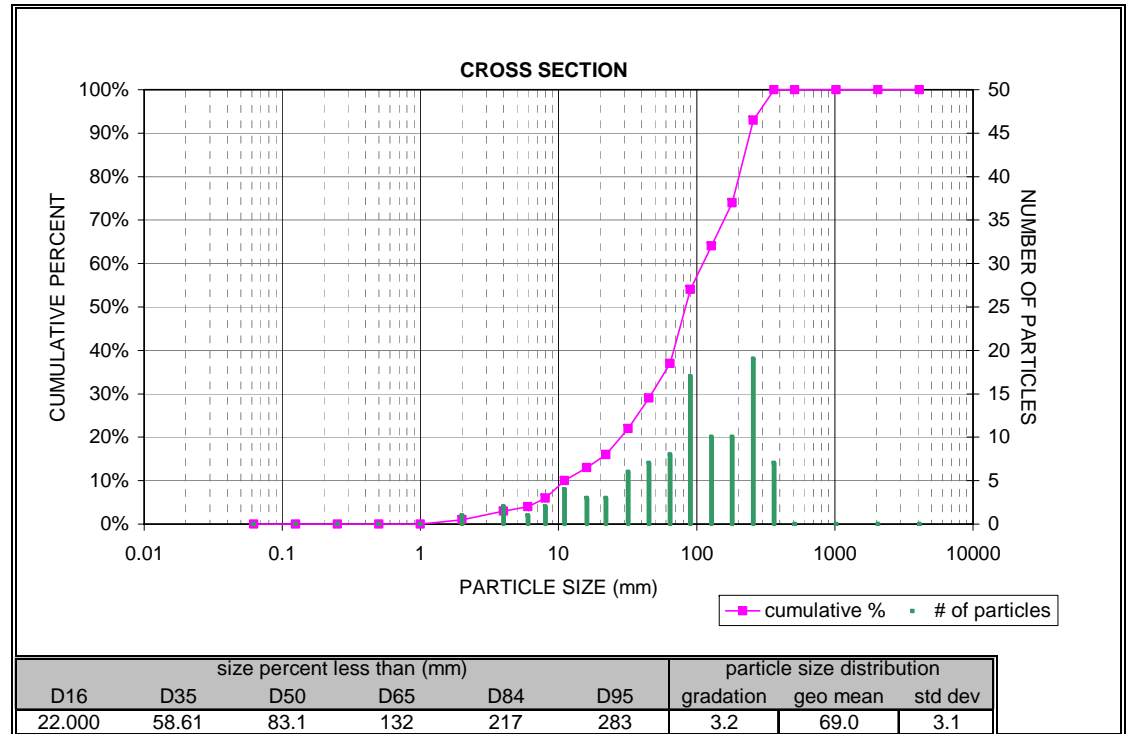
Material	Size Range (mm)		Particle Count	Cumulative Percent
silt/clay	0	0.062	0	0%
very fine sand	0.062	0.13	0	0%
fine sand	0.13	0.25	0	0%
medium sand	0.25	0.5	0	0%
coarse sand	0.5	1	0	0%
very coarse sand	1	2	1	1%
very fine gravel	2	4	1	2%
fine gravel	4	6	0	2%
fine gravel	6	8	0	2%
medium gravel	8	11	2	4%
medium gravel	11	16	3	7%
coarse gravel	16	22	3	10%
coarse gravel	22	32	4	14%
very coarse gravel	32	45	4	18%
very coarse gravel	45	64	6	24%
small cobble	64	90	6	30%
medium cobble	90	128	11	41%
large cobble	128	180	10	51%
very large cobble	180	256	7	58%
small boulder	256	362	20	78%
small boulder	362	512	13	91%
medium boulder	512	1024	8	99%
large - very large boulder	1024	2048	1	100%
bedrock	2048	4096	0	100%
Total Particle Count:			100	



Pebble Count (Cross Section)

SITE ID:FOHIRU09

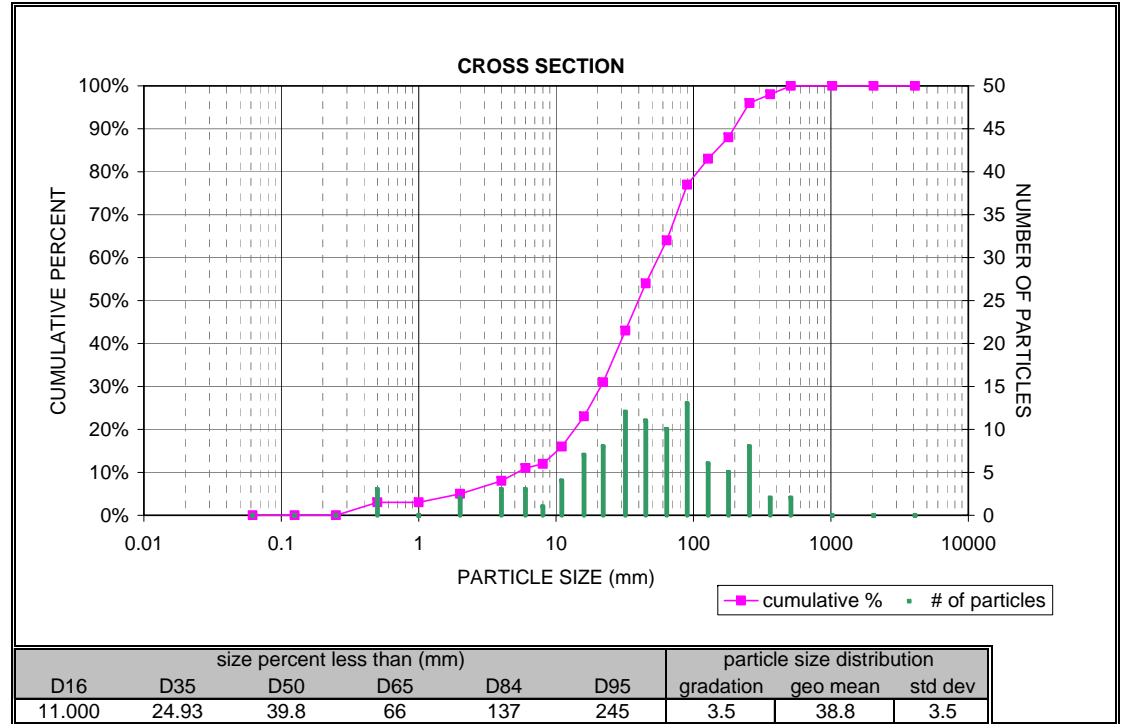
Material	Size Range (mm)		Particle Count	Cumulative Percent
silt/clay	0	0.062	0	0%
very fine sand	0.062	0.13	0	0%
fine sand	0.13	0.25	0	0%
medium sand	0.25	0.5	0	0%
coarse sand	0.5	1	0	0%
very coarse sand	1	2	1	1%
very fine gravel	2	4	2	3%
fine gravel	4	6	1	4%
fine gravel	6	8	2	6%
medium gravel	8	11	4	10%
medium gravel	11	16	3	13%
coarse gravel	16	22	3	16%
coarse gravel	22	32	6	22%
very coarse gravel	32	45	7	29%
very coarse gravel	45	64	8	37%
small cobble	64	90	17	54%
medium cobble	90	128	10	64%
large cobble	128	180	10	74%
very large cobble	180	256	19	93%
small boulder	256	362	7	100%
small boulder	362	512	0	100%
medium boulder	512	1024	0	100%
large - very large boulder	1024	2048	0	100%
bedrock	2048	4096	0	100%
Total Particle Count:			100	



Pebble Count (Cross Section)

SITE ID:FOHIRU06

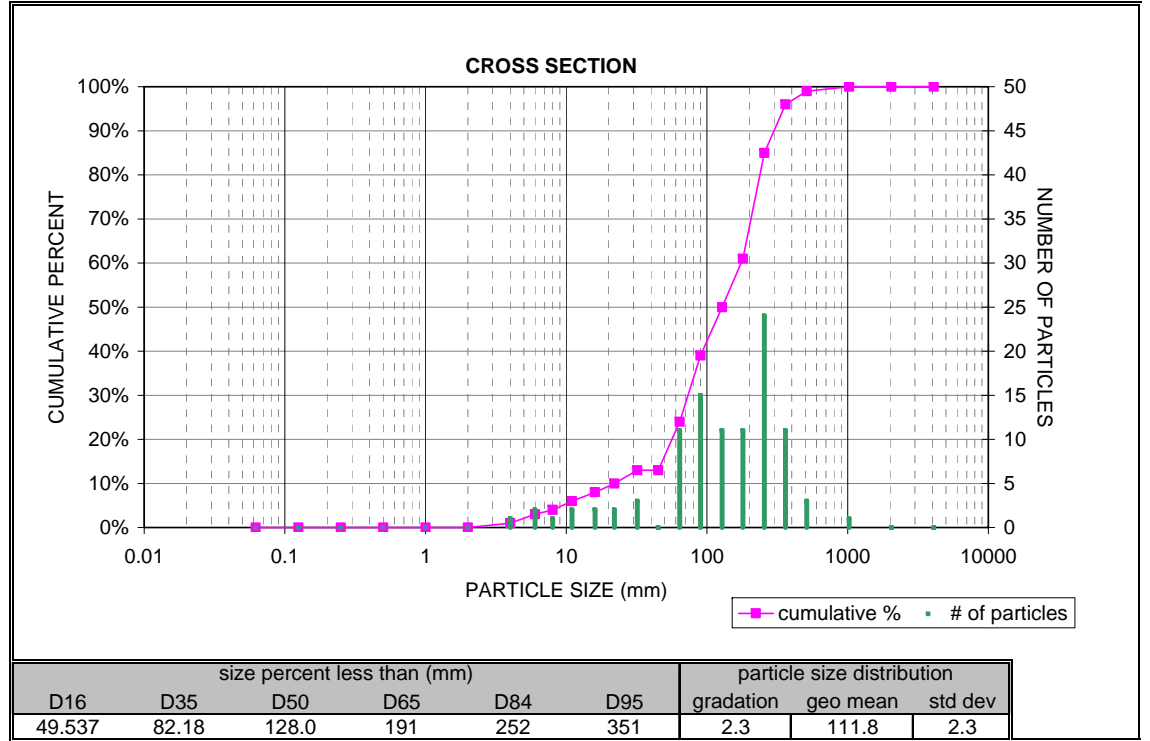
Material	Size Range (mm)		Particle Count	Cumulative Percent
silt/clay	0	0.062	0	0%
very fine sand	0.062	0.13	0	0%
fine sand	0.13	0.25	0	0%
medium sand	0.25	0.5	3	3%
coarse sand	0.5	1	0	3%
very coarse sand	1	2	2	5%
very fine gravel	2	4	3	8%
fine gravel	4	6	3	11%
fine gravel	6	8	1	12%
medium gravel	8	11	4	16%
medium gravel	11	16	7	23%
coarse gravel	16	22	8	31%
coarse gravel	22	32	12	43%
very coarse gravel	32	45	11	54%
very coarse gravel	45	64	10	64%
small cobble	64	90	13	77%
medium cobble	90	128	6	83%
large cobble	128	180	5	88%
very large cobble	180	256	8	96%
small boulder	256	362	2	98%
small boulder	362	512	2	100%
medium boulder	512	1024	0	100%
large - very large boulder	1024	2048	0	100%
bedrock	2048	4096	0	100%
Total Particle Count:			100	



Pebble Count (Cross Section)

SITE ID:LEHIRI01

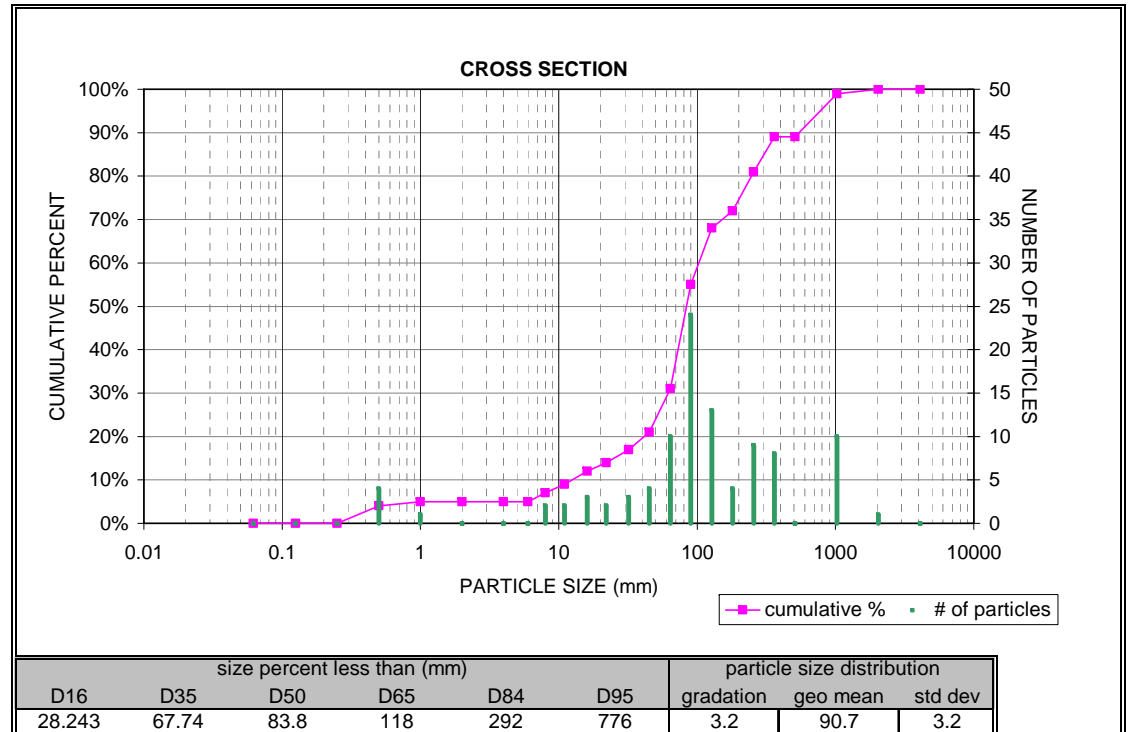
Material	Size Range (mm)		Particle Count	Cumulative Percent
silt/clay	0	0.062	0	0%
very fine sand	0.062	0.13	0	0%
fine sand	0.13	0.25	0	0%
medium sand	0.25	0.5	0	0%
coarse sand	0.5	1	0	0%
very coarse sand	1	2	0	0%
very fine gravel	2	4	1	1%
fine gravel	4	6	2	3%
fine gravel	6	8	1	4%
medium gravel	8	11	2	6%
medium gravel	11	16	2	8%
coarse gravel	16	22	2	10%
coarse gravel	22	32	3	13%
very coarse gravel	32	45	0	13%
very coarse gravel	45	64	11	24%
small cobble	64	90	15	39%
medium cobble	90	128	11	50%
large cobble	128	180	11	61%
very large cobble	180	256	24	85%
small boulder	256	362	11	96%
small boulder	362	512	3	99%
medium boulder	512	1024	1	100%
large - very large boulder	1024	2048	0	100%
bedrock	2048	4096	0	100%
Total Particle Count:			100	



Pebble Count (Cross Section)

SITE ID:LEHIRI02

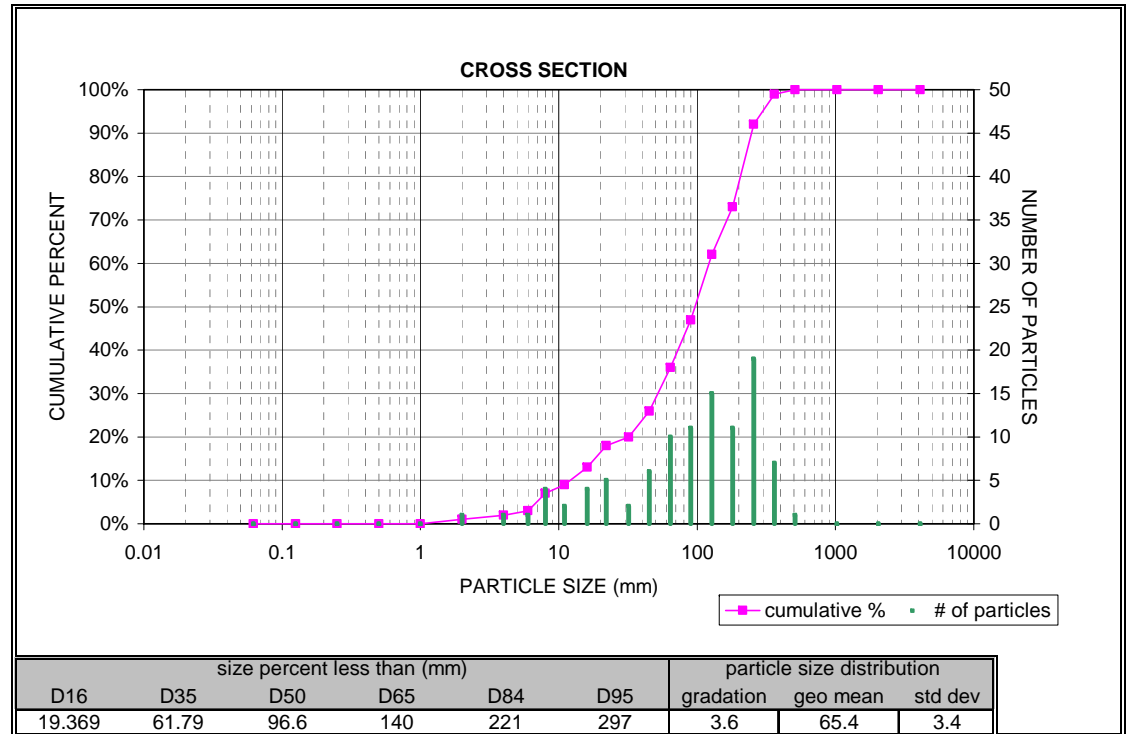
Material	Size Range (mm)		Particle Count	Cumulative Percent
	Lower	Upper		
silt/clay	0	0.062	0	0%
very fine sand	0.062	0.13	0	0%
fine sand	0.13	0.25	0	0%
medium sand	0.25	0.5	4	4%
coarse sand	0.5	1	1	5%
very coarse sand	1	2	0	5%
very fine gravel	2	4	0	5%
fine gravel	4	6	0	5%
fine gravel	6	8	2	7%
medium gravel	8	11	2	9%
medium gravel	11	16	3	12%
coarse gravel	16	22	2	14%
coarse gravel	22	32	3	17%
very coarse gravel	32	45	4	21%
very coarse gravel	45	64	10	31%
small cobble	64	90	24	55%
medium cobble	90	128	13	68%
large cobble	128	180	4	72%
very large cobble	180	256	9	81%
small boulder	256	362	8	89%
small boulder	362	512	0	89%
medium boulder	512	1024	10	99%
large - very large boulder	1024	2048	1	100%
bedrock	2048	4096	0	100%
Total Particle Count:			100	



Pebble Count (Cross Section)

SITE ID:TOBYCR01

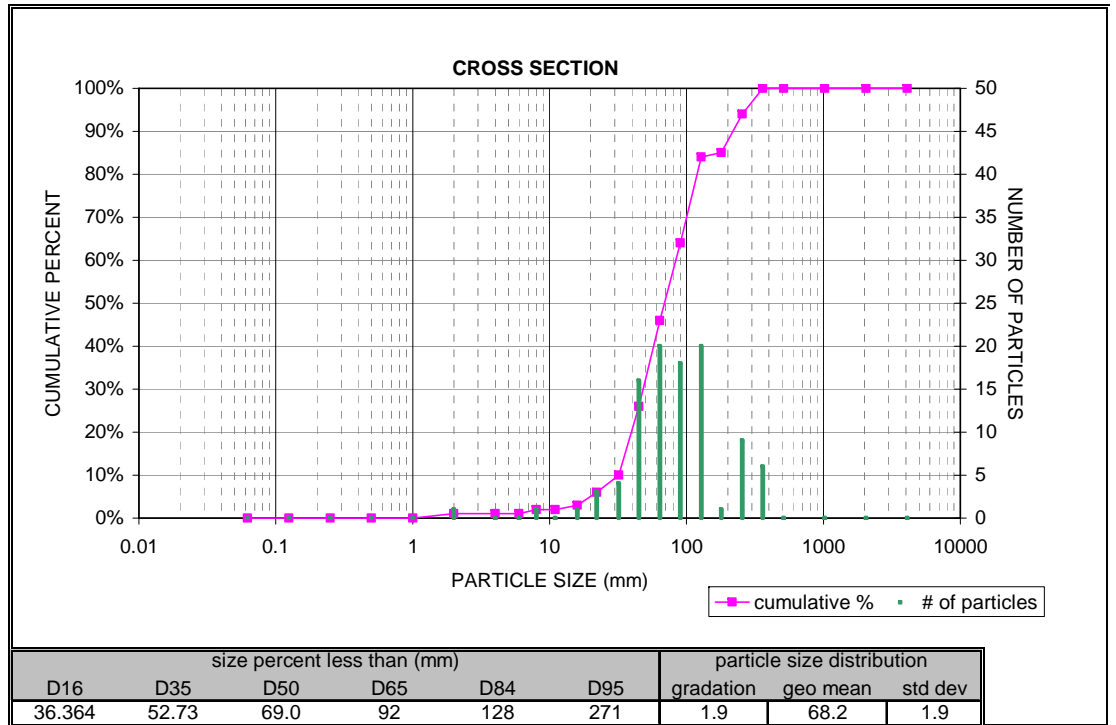
Material	Size Range (mm)		Particle Count	Cumulative Percent
silt/clay	0	0.062	0	0%
very fine sand	0.062	0.13	0	0%
fine sand	0.13	0.25	0	0%
medium sand	0.25	0.5	0	0%
coarse sand	0.5	1	0	0%
very coarse sand	1	2	1	1%
very fine gravel	2	4	1	2%
fine gravel	4	6	1	3%
fine gravel	6	8	4	7%
medium gravel	8	11	2	9%
medium gravel	11	16	4	13%
coarse gravel	16	22	5	18%
coarse gravel	22	32	2	20%
very coarse gravel	32	45	6	26%
very coarse gravel	45	64	10	36%
small cobble	64	90	11	47%
medium cobble	90	128	15	62%
large cobble	128	180	11	73%
very large cobble	180	256	19	92%
small boulder	256	362	7	99%
small boulder	362	512	1	100%
medium boulder	512	1024	0	100%
large - very large boulder	1024	2048	0	100%
bedrock	2048	4096	0	100%
Total Particle Count:			100	



Pebble Count (Cross Section)

SITE ID: SWIFCR07

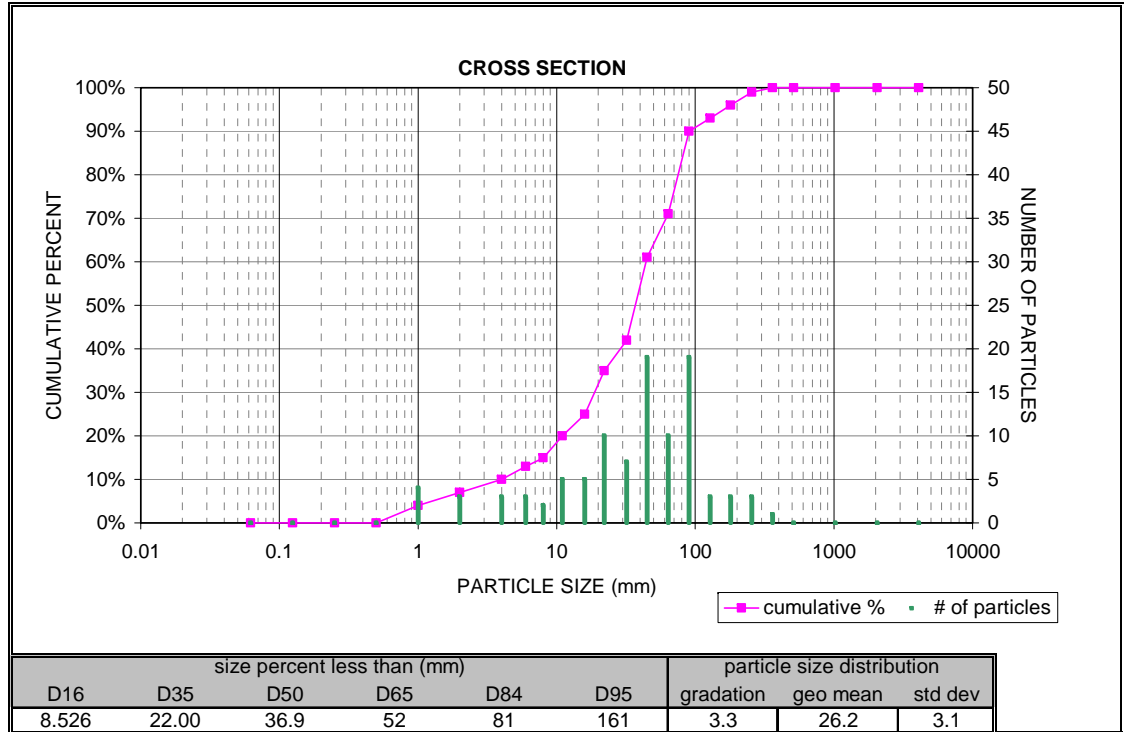
Material	Size Range (mm)		Particle Count	Cumulative Percent
silt/clay	0	0.062	0	0%
very fine sand	0.062	0.13	0	0%
fine sand	0.13	0.25	0	0%
medium sand	0.25	0.5	0	0%
coarse sand	0.5	1	0	0%
very coarse sand	1	2	1	1%
very fine gravel	2	4	0	1%
fine gravel	4	6	0	1%
fine gravel	6	8	1	2%
medium gravel	8	11	0	2%
medium gravel	11	16	1	3%
coarse gravel	16	22	3	6%
coarse gravel	22	32	4	10%
very coarse gravel	32	45	16	26%
very coarse gravel	45	64	20	46%
small cobble	64	90	18	64%
medium cobble	90	128	20	84%
large cobble	128	180	1	85%
very large cobble	180	256	9	94%
small boulder	256	362	6	100%
small boulder	362	512	0	100%
medium boulder	512	1024	0	100%
large - very large boulder	1024	2048	0	100%
bedrock	2048	4096	0	100%
Total Particle Count:			100	



Pebble Count (Cross Section)

SITE ID: SWIFCR05

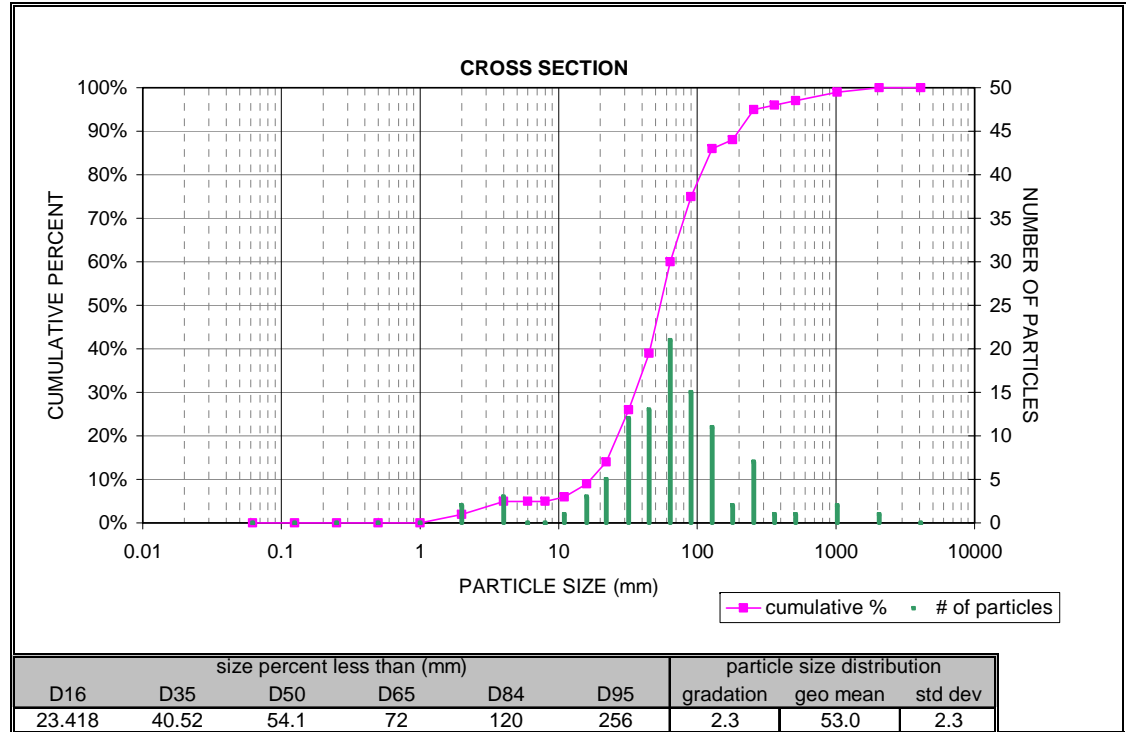
Material	Size Range (mm)		Particle Count	Cumulative Percent
silt/clay	0	0.062	0	0%
very fine sand	0.062	0.13	0	0%
fine sand	0.13	0.25	0	0%
medium sand	0.25	0.5	0	0%
coarse sand	0.5	1	4	4%
very coarse sand	1	2	3	7%
very fine gravel	2	4	3	10%
fine gravel	4	6	3	13%
fine gravel	6	8	2	15%
medium gravel	8	11	5	20%
medium gravel	11	16	5	25%
coarse gravel	16	22	10	35%
coarse gravel	22	32	7	42%
very coarse gravel	32	45	19	61%
very coarse gravel	45	64	10	71%
small cobble	64	90	19	90%
medium cobble	90	128	3	93%
large cobble	128	180	3	96%
very large cobble	180	256	3	99%
small boulder	256	362	1	100%
small boulder	362	512	0	100%
medium boulder	512	1024	0	100%
large - very large boulder	1024	2048	0	100%
bedrock	2048	4096	0	100%
Total Particle Count:			100	



Pebble Count (Cross Section)

SITE ID:SWIFCR03

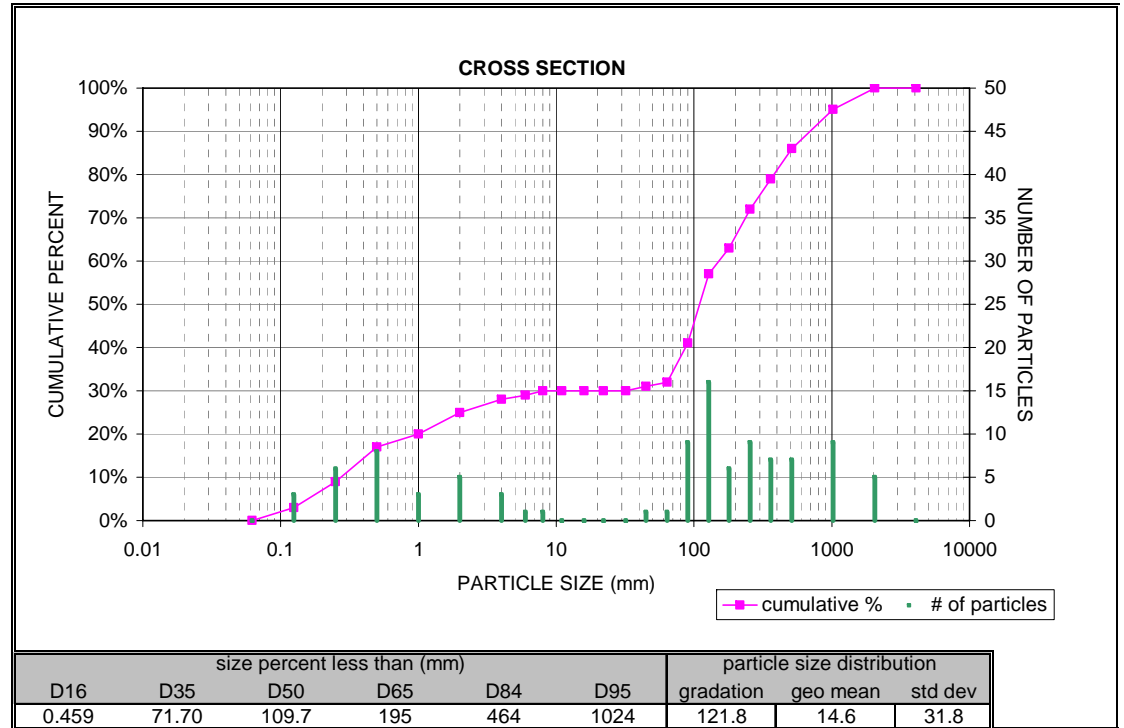
Material	Size Range (mm)		Particle Count	Cumulative Percent
silt/clay	0	0.062	0	0%
very fine sand	0.062	0.13	0	0%
fine sand	0.13	0.25	0	0%
medium sand	0.25	0.5	0	0%
coarse sand	0.5	1	0	0%
very coarse sand	1	2	2	2%
very fine gravel	2	4	3	5%
fine gravel	4	6	0	5%
fine gravel	6	8	0	5%
medium gravel	8	11	1	6%
medium gravel	11	16	3	9%
coarse gravel	16	22	5	14%
coarse gravel	22	32	12	26%
very coarse gravel	32	45	13	39%
very coarse gravel	45	64	21	60%
small cobble	64	90	15	75%
medium cobble	90	128	11	86%
large cobble	128	180	2	88%
very large cobble	180	256	7	95%
small boulder	256	362	1	96%
small boulder	362	512	1	97%
medium boulder	512	1024	2	99%
large - very large boulder	1024	2048	1	100%
bedrock	2048	4096	0	100%
Total Particle Count:			100	



Pebble Count (Cross Section)

SITE ID: CRCRPA03

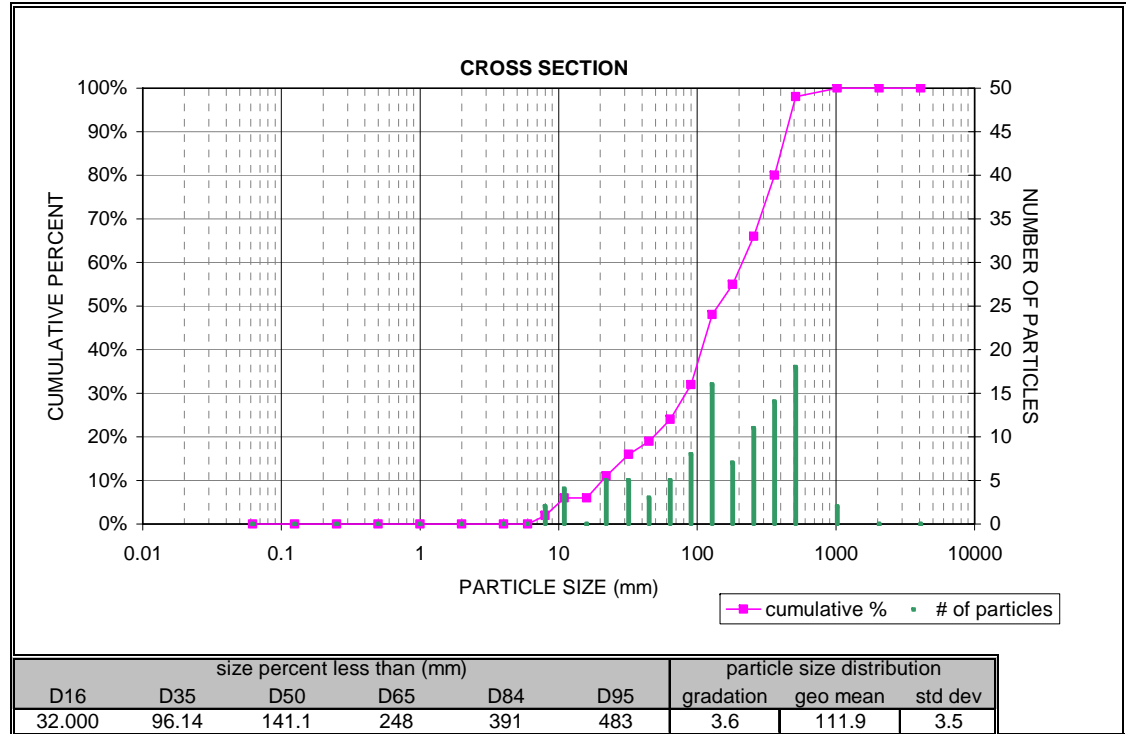
Material	Size Range (mm)		Particle Count	Cumulative Percent
silt/clay	0	0.062	0	0%
very fine sand	0.062	0.13	3	3%
fine sand	0.13	0.25	6	9%
medium sand	0.25	0.5	8	17%
coarse sand	0.5	1	3	20%
very coarse sand	1	2	5	25%
very fine gravel	2	4	3	28%
fine gravel	4	6	1	29%
fine gravel	6	8	1	30%
medium gravel	8	11	0	30%
medium gravel	11	16	0	30%
coarse gravel	16	22	0	30%
coarse gravel	22	32	0	30%
very coarse gravel	32	45	1	31%
very coarse gravel	45	64	1	32%
small cobble	64	90	9	41%
medium cobble	90	128	16	57%
large cobble	128	180	6	63%
very large cobble	180	256	9	72%
small boulder	256	362	7	79%
small boulder	362	512	7	86%
medium boulder	512	1024	9	95%
large - very large boulder	1024	2048	5	100%
bedrock	2048	4096	0	100%
Total Particle Count:			100	



Pebble Count (Cross Section)

SITE ID: DRSARU01

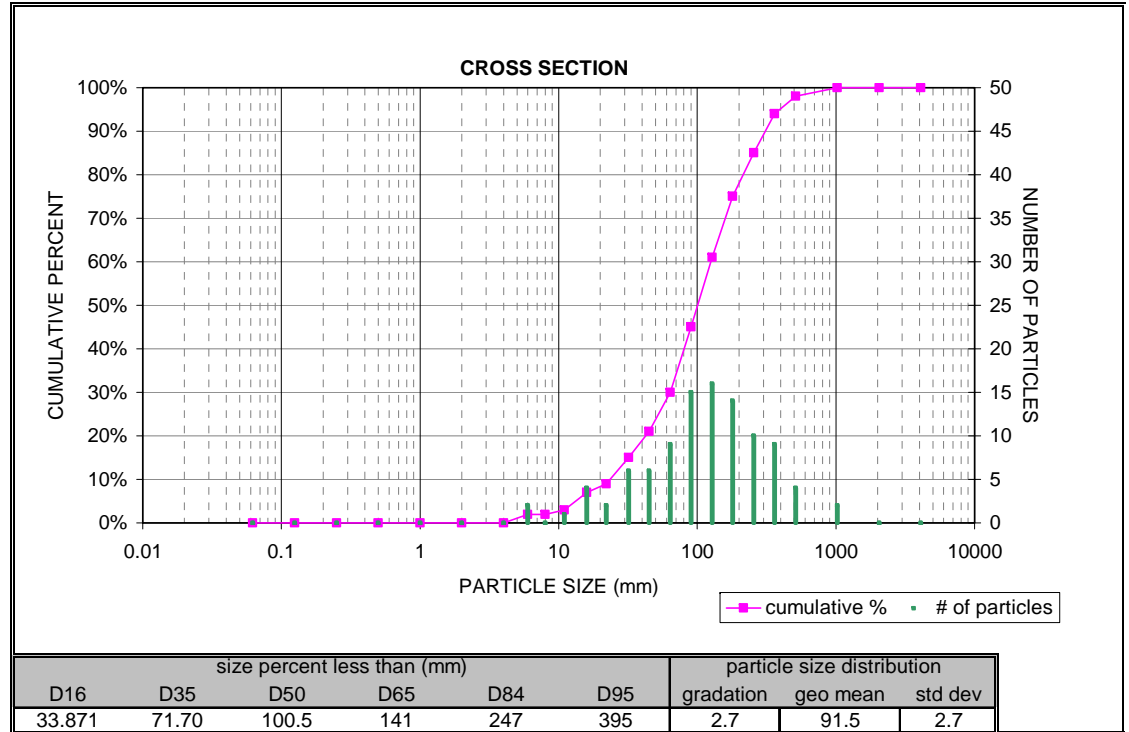
Material	Size Range (mm)		Particle Count	Cumulative Percent
	Lower	Upper		
silt/clay	0	0.062	0	0%
very fine sand	0.062	0.13	0	0%
fine sand	0.13	0.25	0	0%
medium sand	0.25	0.5	0	0%
coarse sand	0.5	1	0	0%
very coarse sand	1	2	0	0%
very fine gravel	2	4	0	0%
fine gravel	4	6	0	0%
fine gravel	6	8	2	2%
medium gravel	8	11	4	6%
medium gravel	11	16	0	6%
coarse gravel	16	22	5	11%
coarse gravel	22	32	5	16%
very coarse gravel	32	45	3	19%
very coarse gravel	45	64	5	24%
small cobble	64	90	8	32%
medium cobble	90	128	16	48%
large cobble	128	180	7	55%
very large cobble	180	256	11	66%
small boulder	256	362	14	80%
small boulder	362	512	18	98%
medium boulder	512	1024	2	100%
large - very large boulder	1024	2048	0	100%
bedrock	2048	4096	0	100%
Total Particle Count:			100	



Pebble Count (Cross Section)

SITE ID: POCOCR20

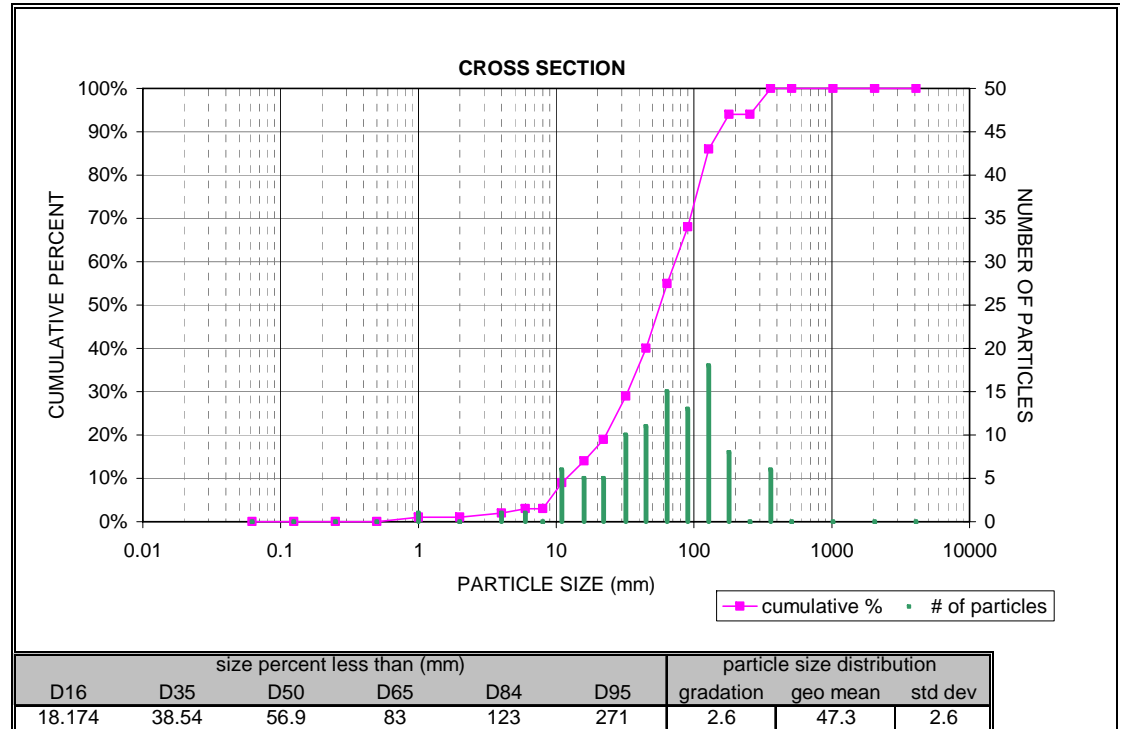
Material	Size Range (mm)		Particle Count	Cumulative Percent
silt/clay	0	0.062	0	0%
very fine sand	0.062	0.13	0	0%
fine sand	0.13	0.25	0	0%
medium sand	0.25	0.5	0	0%
coarse sand	0.5	1	0	0%
very coarse sand	1	2	0	0%
very fine gravel	2	4	0	0%
fine gravel	4	6	2	2%
fine gravel	6	8	0	2%
medium gravel	8	11	1	3%
medium gravel	11	16	4	7%
coarse gravel	16	22	2	9%
coarse gravel	22	32	6	15%
very coarse gravel	32	45	6	21%
very coarse gravel	45	64	9	30%
small cobble	64	90	15	45%
medium cobble	90	128	16	61%
large cobble	128	180	14	75%
very large cobble	180	256	10	85%
small boulder	256	362	9	94%
small boulder	362	512	4	98%
medium boulder	512	1024	2	100%
large - very large boulder	1024	2048	0	100%
bedrock	2048	4096	0	100%
Total Particle Count:			100	



Pebble Count (Cross Section)

SITE ID:POCOCR16

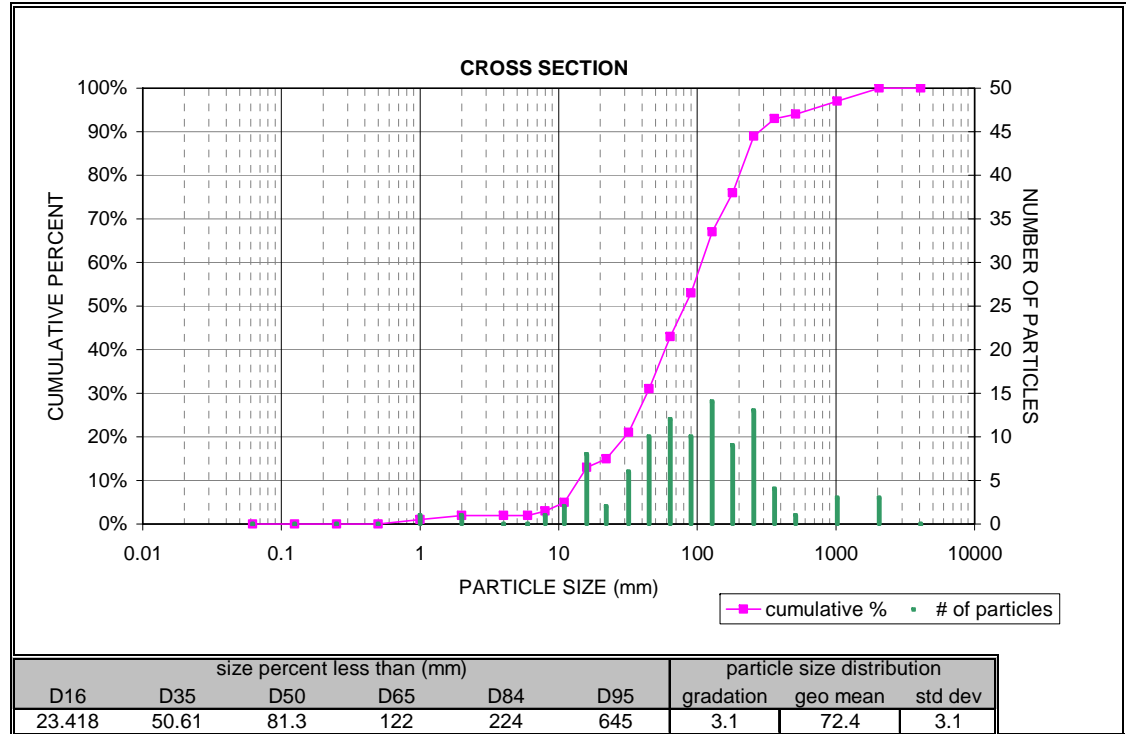
Material	Size Range (mm)		Particle Count	Cumulative Percent
silt/clay	0	0.062	0	0%
very fine sand	0.062	0.13	0	0%
fine sand	0.13	0.25	0	0%
medium sand	0.25	0.5	0	0%
coarse sand	0.5	1	1	1%
very coarse sand	1	2	0	1%
very fine gravel	2	4	1	2%
fine gravel	4	6	1	3%
fine gravel	6	8	0	3%
medium gravel	8	11	6	9%
medium gravel	11	16	5	14%
coarse gravel	16	22	5	19%
coarse gravel	22	32	10	29%
very coarse gravel	32	45	11	40%
very coarse gravel	45	64	15	55%
small cobble	64	90	13	68%
medium cobble	90	128	18	86%
large cobble	128	180	8	94%
very large cobble	180	256	0	94%
small boulder	256	362	6	100%
small boulder	362	512	0	100%
medium boulder	512	1024	0	100%
large - very large boulder	1024	2048	0	100%
bedrock	2048	4096	0	100%
Total Particle Count:			100	



Pebble Count (Cross Section)

SITE ID: POCOCR17

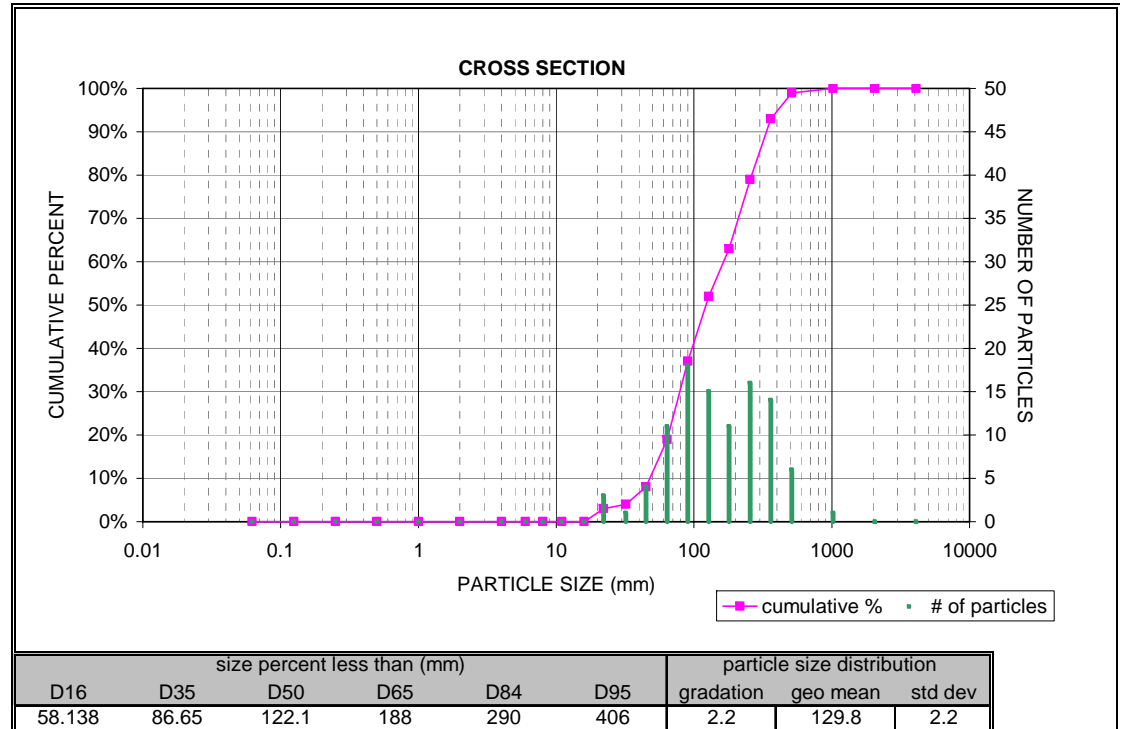
Material	Size Range (mm)		Particle Count	Cumulative Percent
silt/clay	0	0.062	0	0%
very fine sand	0.062	0.13	0	0%
fine sand	0.13	0.25	0	0%
medium sand	0.25	0.5	0	0%
coarse sand	0.5	1	1	1%
very coarse sand	1	2	1	2%
very fine gravel	2	4	0	2%
fine gravel	4	6	0	2%
fine gravel	6	8	1	3%
medium gravel	8	11	2	5%
medium gravel	11	16	8	13%
coarse gravel	16	22	2	15%
coarse gravel	22	32	6	21%
very coarse gravel	32	45	10	31%
very coarse gravel	45	64	12	43%
small cobble	64	90	10	53%
medium cobble	90	128	14	67%
large cobble	128	180	9	76%
very large cobble	180	256	13	89%
small boulder	256	362	4	93%
small boulder	362	512	1	94%
medium boulder	512	1024	3	97%
large - very large boulder	1024	2048	3	100%
bedrock	2048	4096	0	100%
Total Particle Count:			100	



Pebble Count (Cross Section)

SITE ID: POCOCR19

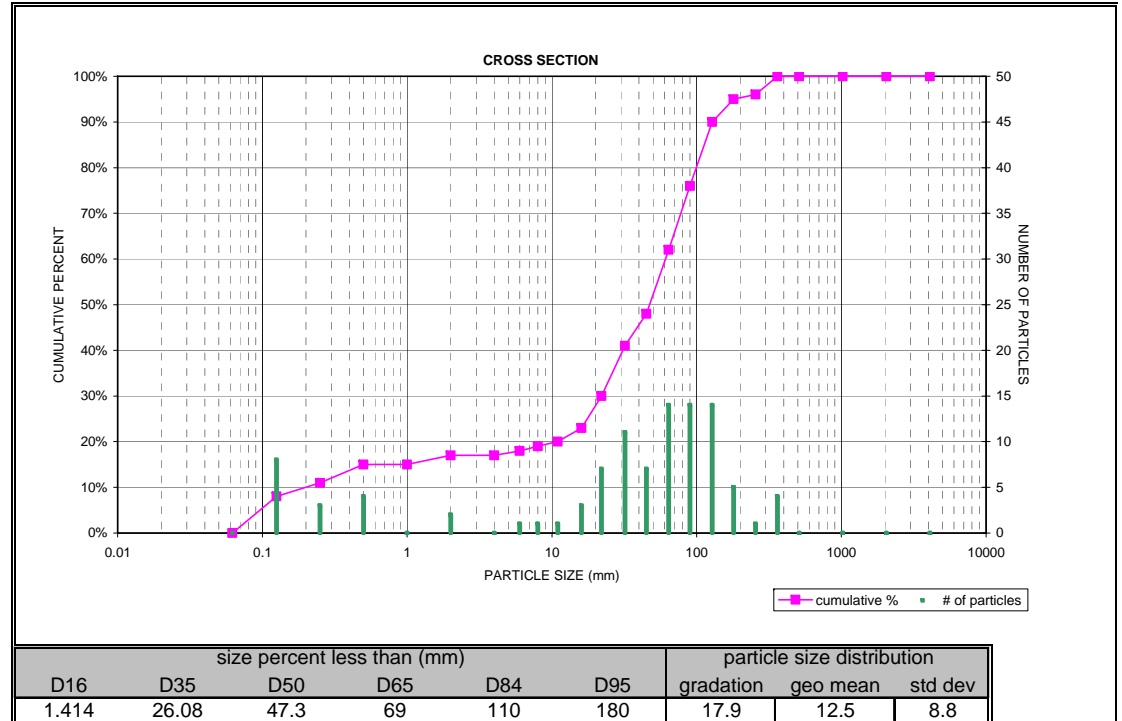
Material	Size Range (mm)		Particle Count	Cumulative Percent
silt/clay	0	0.062	0	0%
very fine sand	0.062	0.13	0	0%
fine sand	0.13	0.25	0	0%
medium sand	0.25	0.5	0	0%
coarse sand	0.5	1	0	0%
very coarse sand	1	2	0	0%
very fine gravel	2	4	0	0%
fine gravel	4	6	0	0%
fine gravel	6	8	0	0%
medium gravel	8	11	0	0%
medium gravel	11	16	0	0%
coarse gravel	16	22	3	3%
coarse gravel	22	32	1	4%
very coarse gravel	32	45	4	8%
very coarse gravel	45	64	11	19%
small cobble	64	90	18	37%
medium cobble	90	128	15	52%
large cobble	128	180	11	63%
very large cobble	180	256	16	79%
small boulder	256	362	14	93%
small boulder	362	512	6	99%
medium boulder	512	1024	1	100%
large - very large boulder	1024	2048	0	100%
bedrock	2048	4096	0	100%
Total Particle Count:			100	



Pebble Count (Cross Section)

SITE ID: SCOTCR04

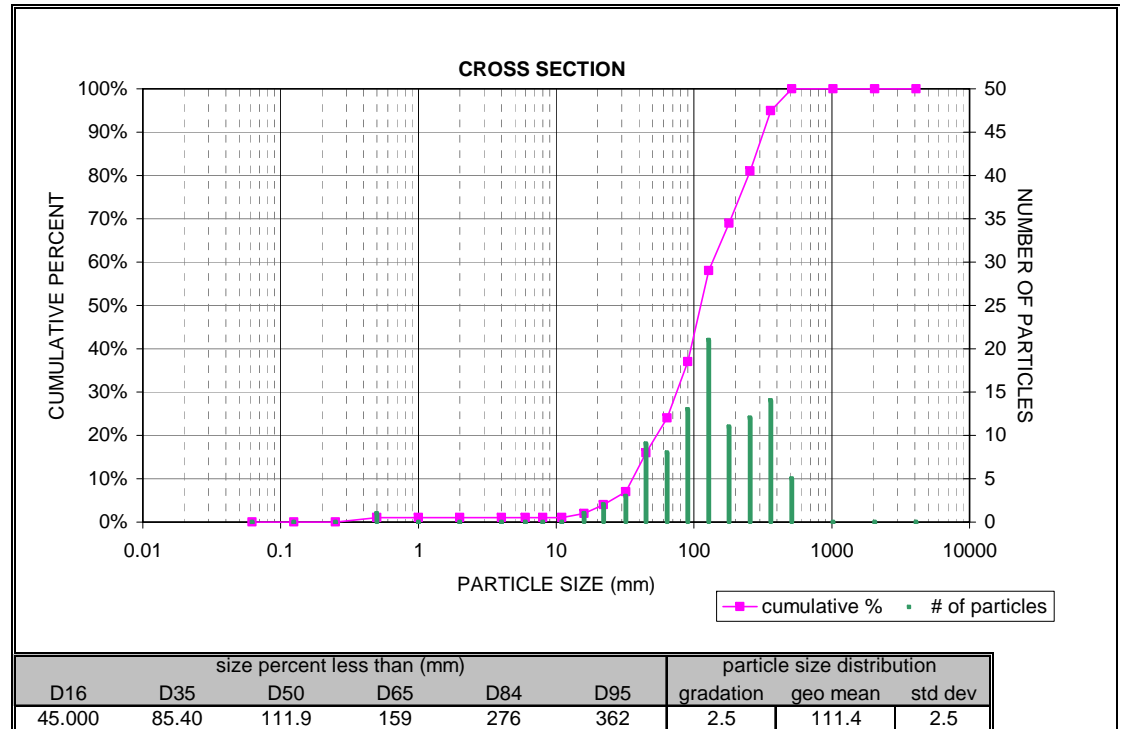
Material	Size Range (mm)		Particle Count	Cumulative Percent
silt/clay	0	0.062	0	0%
very fine sand	0.062	0.13	8	8%
fine sand	0.13	0.25	3	11%
medium sand	0.25	0.5	4	15%
coarse sand	0.5	1	0	15%
very coarse sand	1	2	2	17%
very fine gravel	2	4	0	17%
fine gravel	4	6	1	18%
fine gravel	6	8	1	19%
medium gravel	8	11	1	20%
medium gravel	11	16	3	23%
coarse gravel	16	22	7	30%
coarse gravel	22	32	11	41%
very coarse gravel	32	45	7	48%
very coarse gravel	45	64	14	62%
small cobble	64	90	14	76%
medium cobble	90	128	14	90%
large cobble	128	180	5	95%
very large cobble	180	256	1	96%
small boulder	256	362	4	100%
small boulder	362	512	0	100%
medium boulder	512	1024	0	100%
large - very large boulder	1024	2048	0	100%
bedrock	2048	4096	0	100%
Total Particle Count:			100	



Pebble Count (Cross Section)

SITE ID: POCOCR15

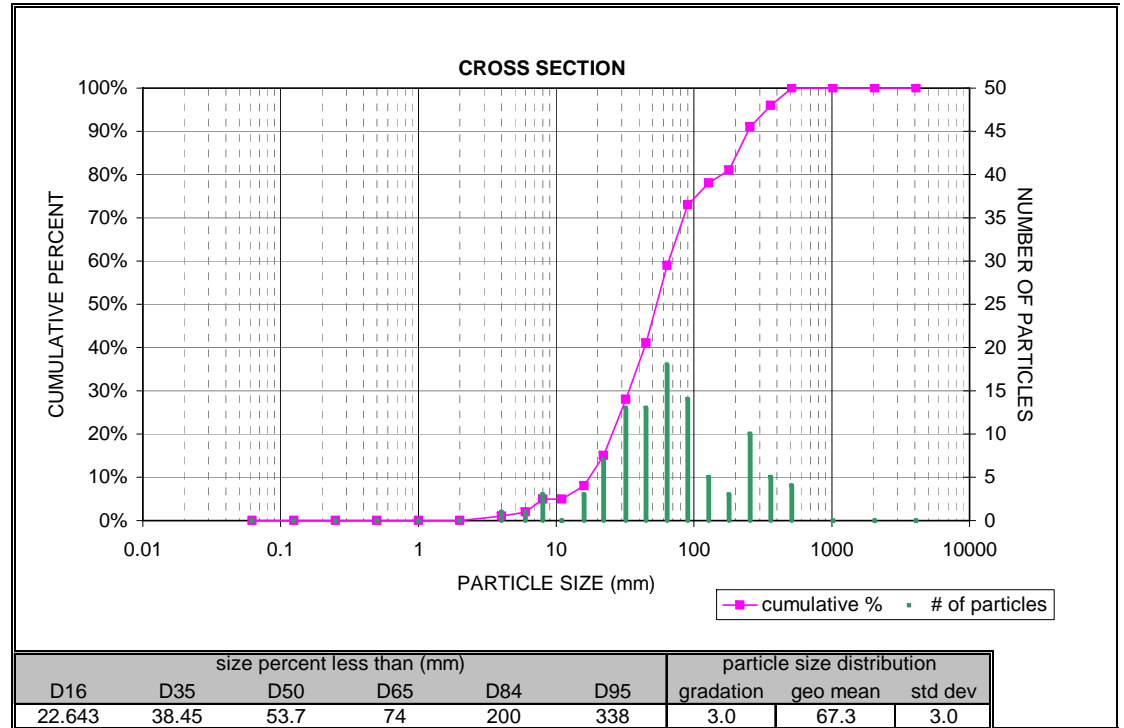
Material	Size Range (mm)		Particle Count	Cumulative Percent
silt/clay	0	0.062	0	0%
very fine sand	0.062	0.13	0	0%
fine sand	0.13	0.25	0	0%
medium sand	0.25	0.5	1	1%
coarse sand	0.5	1	0	1%
very coarse sand	1	2	0	1%
very fine gravel	2	4	0	1%
fine gravel	4	6	0	1%
fine gravel	6	8	0	1%
medium gravel	8	11	0	1%
medium gravel	11	16	1	2%
coarse gravel	16	22	2	4%
coarse gravel	22	32	3	7%
very coarse gravel	32	45	9	16%
very coarse gravel	45	64	8	24%
small cobble	64	90	13	37%
medium cobble	90	128	21	58%
large cobble	128	180	11	69%
very large cobble	180	256	12	81%
small boulder	256	362	14	95%
small boulder	362	512	5	100%
medium boulder	512	1024	0	100%
large - very large boulder	1024	2048	0	100%
bedrock	2048	4096	0	100%
Total Particle Count:			100	



Pebble Count (Cross Section)

SITE ID: POCOCR18

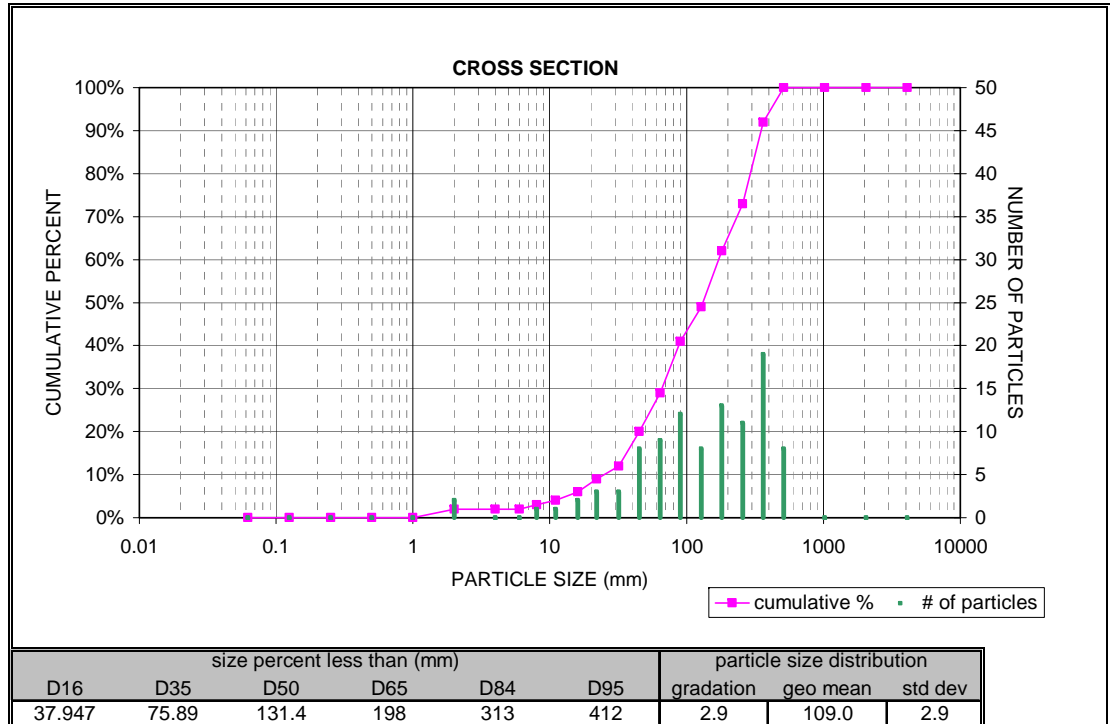
Material	Size Range (mm)		Particle Count	Cumulative Percent
silt/clay	0	0.062	0	0%
very fine sand	0.062	0.13	0	0%
fine sand	0.13	0.25	0	0%
medium sand	0.25	0.5	0	0%
coarse sand	0.5	1	0	0%
very coarse sand	1	2	0	0%
very fine gravel	2	4	1	1%
fine gravel	4	6	1	2%
fine gravel	6	8	3	5%
medium gravel	8	11	0	5%
medium gravel	11	16	3	8%
coarse gravel	16	22	7	15%
coarse gravel	22	32	13	28%
very coarse gravel	32	45	13	41%
very coarse gravel	45	64	18	59%
small cobble	64	90	14	73%
medium cobble	90	128	5	78%
large cobble	128	180	3	81%
very large cobble	180	256	10	91%
small boulder	256	362	5	96%
small boulder	362	512	4	100%
medium boulder	512	1024	0	100%
large - very large boulder	1024	2048	0	100%
bedrock	2048	4096	0	100%
Total Particle Count:			100	



Pebble Count (Cross Section)

SITE ID: POCOCR22

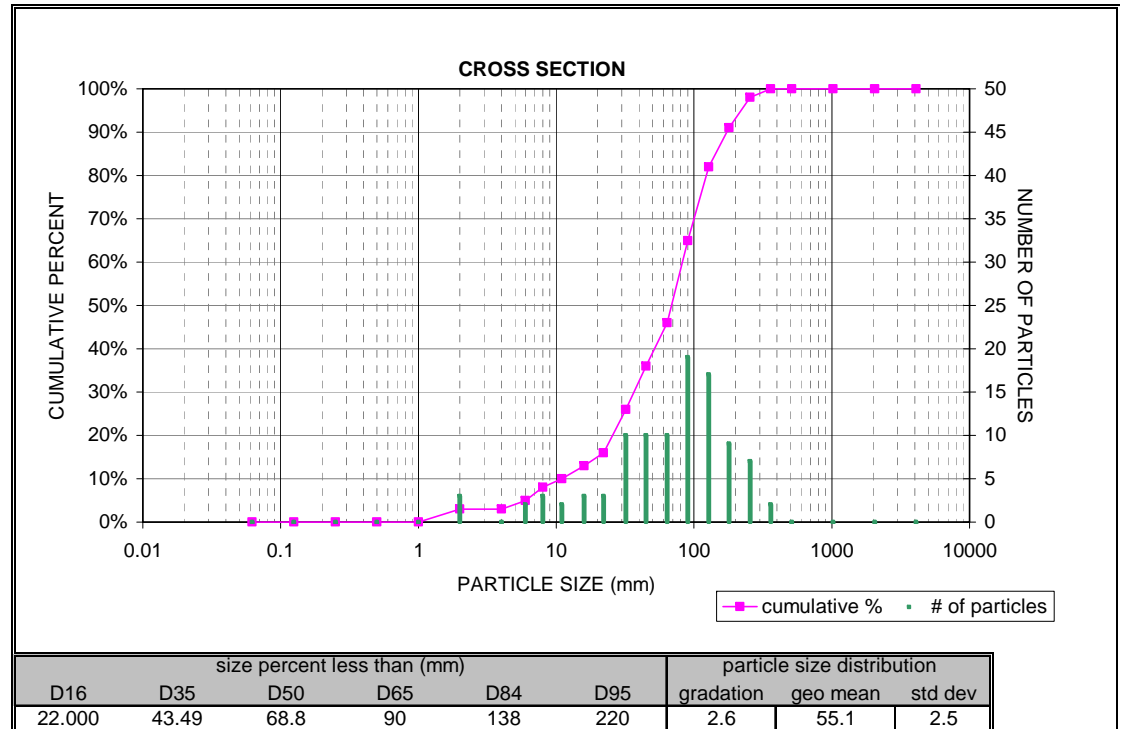
Material	Size Range (mm)		Particle Count	Cumulative Percent
silt/clay	0	0.062	0	0%
very fine sand	0.062	0.13	0	0%
fine sand	0.13	0.25	0	0%
medium sand	0.25	0.5	0	0%
coarse sand	0.5	1	0	0%
very coarse sand	1	2	2	2%
very fine gravel	2	4	0	2%
fine gravel	4	6	0	2%
fine gravel	6	8	1	3%
medium gravel	8	11	1	4%
medium gravel	11	16	2	6%
coarse gravel	16	22	3	9%
coarse gravel	22	32	3	12%
very coarse gravel	32	45	8	20%
very coarse gravel	45	64	9	29%
small cobble	64	90	12	41%
medium cobble	90	128	8	49%
large cobble	128	180	13	62%
very large cobble	180	256	11	73%
small boulder	256	362	19	92%
small boulder	362	512	8	100%
medium boulder	512	1024	0	100%
large - very large boulder	1024	2048	0	100%
bedrock	2048	4096	0	100%
Total Particle Count:			100	



Pebble Count (Cross Section)

SITE ID: POCOCR14

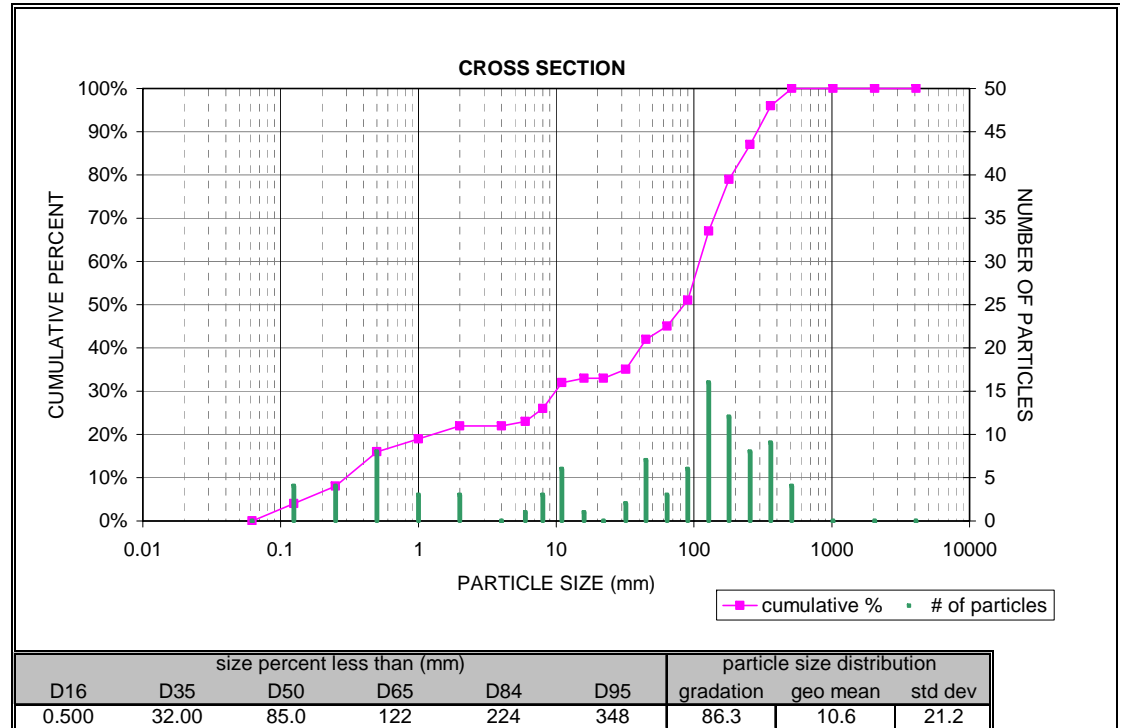
Material	Size Range (mm)		Particle Count	Cumulative Percent
silt/clay	0	0.062	0	0%
very fine sand	0.062	0.13	0	0%
fine sand	0.13	0.25	0	0%
medium sand	0.25	0.5	0	0%
coarse sand	0.5	1	0	0%
very coarse sand	1	2	3	3%
very fine gravel	2	4	0	3%
fine gravel	4	6	2	5%
fine gravel	6	8	3	8%
medium gravel	8	11	2	10%
medium gravel	11	16	3	13%
coarse gravel	16	22	3	16%
coarse gravel	22	32	10	26%
very coarse gravel	32	45	10	36%
very coarse gravel	45	64	10	46%
small cobble	64	90	19	65%
medium cobble	90	128	17	82%
large cobble	128	180	9	91%
very large cobble	180	256	7	98%
small boulder	256	362	2	100%
small boulder	362	512	0	100%
medium boulder	512	1024	0	100%
large - very large boulder	1024	2048	0	100%
bedrock	2048	4096	0	100%
Total Particle Count:			100	



Pebble Count (Cross Section)

SITE ID: MCMICR21

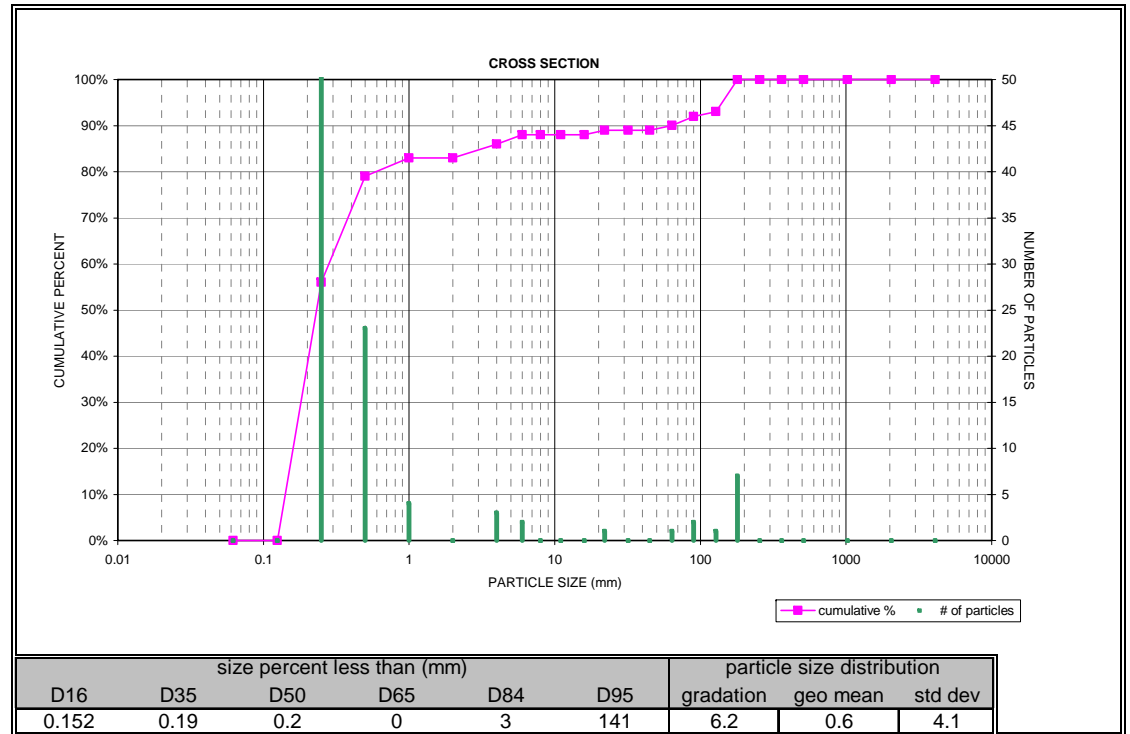
Material	Size Range (mm)		Particle Count	Cumulative Percent
silt/clay	0	0.062	0	0%
very fine sand	0.062	0.13	4	4%
fine sand	0.13	0.25	4	8%
medium sand	0.25	0.5	8	16%
coarse sand	0.5	1	3	19%
very coarse sand	1	2	3	22%
very fine gravel	2	4	0	22%
fine gravel	4	6	1	23%
fine gravel	6	8	3	26%
medium gravel	8	11	6	32%
medium gravel	11	16	1	33%
coarse gravel	16	22	0	33%
coarse gravel	22	32	2	35%
very coarse gravel	32	45	7	42%
very coarse gravel	45	64	3	45%
small cobble	64	90	6	51%
medium cobble	90	128	16	67%
large cobble	128	180	12	79%
very large cobble	180	256	8	87%
small boulder	256	362	9	96%
small boulder	362	512	4	100%
medium boulder	512	1024	0	100%
large - very large boulder	1024	2048	0	100%
bedrock	2048	4096	0	100%
Total Particle Count:			100	



Pebble Count (Cross Section)

SITE ID: REDRU03

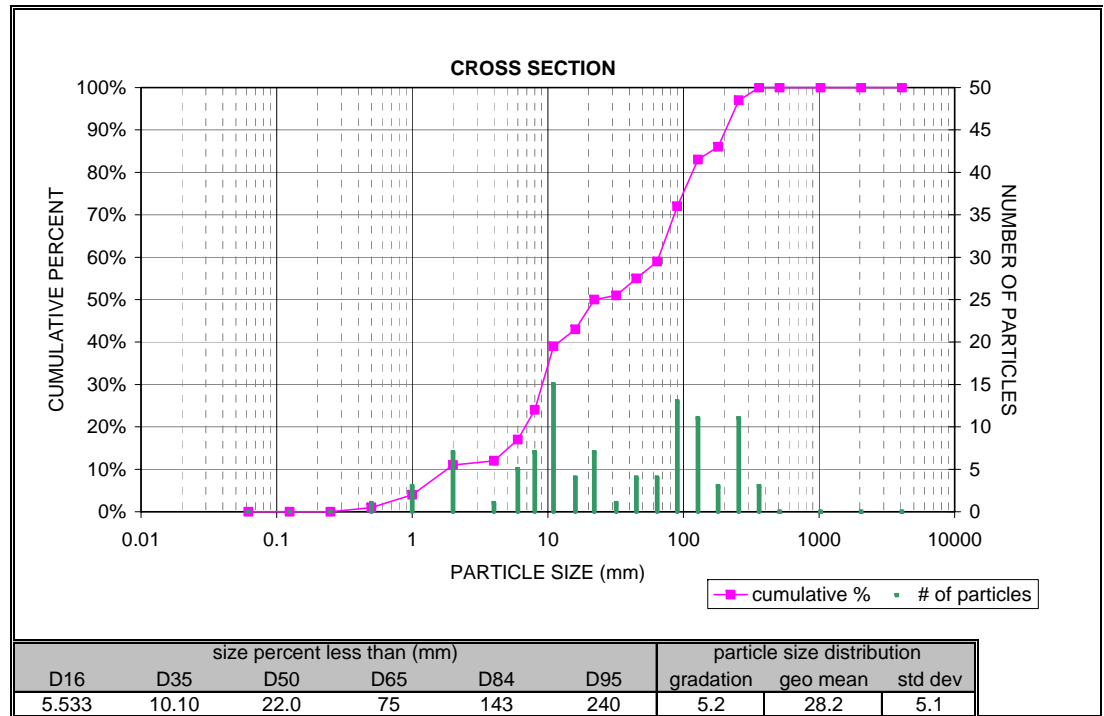
Material	Size Range (mm)		Particle Count	Cumulative Percent
silt/clay	0	0.062	0	0%
very fine sand	0.062	0.13	0	0%
fine sand	0.13	0.25	56	56%
medium sand	0.25	0.5	23	79%
coarse sand	0.5	1	4	83%
very coarse sand	1	2	0	83%
very fine gravel	2	4	3	86%
fine gravel	4	6	2	88%
fine gravel	6	8	0	88%
medium gravel	8	11	0	88%
medium gravel	11	16	0	88%
coarse gravel	16	22	1	89%
coarse gravel	22	32	0	89%
very coarse gravel	32	45	0	89%
very coarse gravel	45	64	1	90%
small cobble	64	90	2	92%
medium cobble	90	128	1	93%
large cobble	128	180	7	100%
very large cobble	180	256	0	100%
small boulder	256	362	0	100%
small boulder	362	512	0	100%
medium boulder	512	1024	0	100%
large - very large boulder	1024	2048	0	100%
bedrock	2048	4096	0	100%
Total Particle Count:			100	



Pebble Count (Cross Section)

SITE ID: HAWKRU02

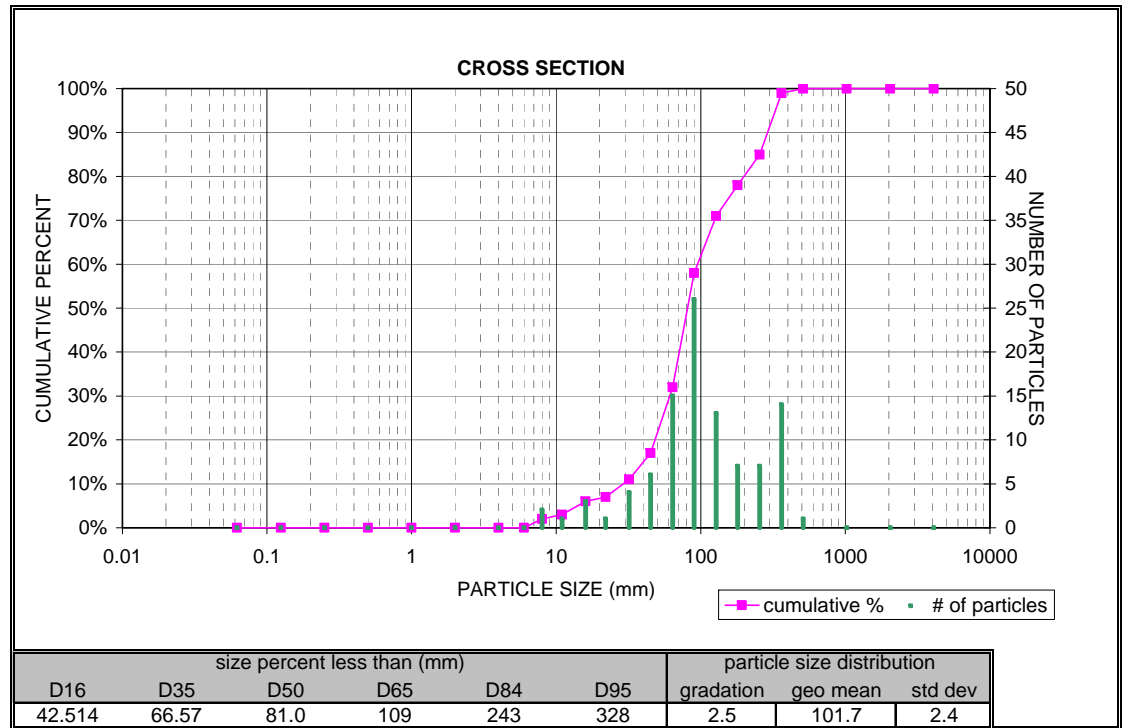
Material	Size Range (mm)		Particle Count	Cumulative Percent
silt/clay	0	0.062	0	0%
very fine sand	0.062	0.13	0	0%
fine sand	0.13	0.25	0	0%
medium sand	0.25	0.5	1	1%
coarse sand	0.5	1	3	4%
very coarse sand	1	2	7	11%
very fine gravel	2	4	1	12%
fine gravel	4	6	5	17%
fine gravel	6	8	7	24%
medium gravel	8	11	15	39%
medium gravel	11	16	4	43%
coarse gravel	16	22	7	50%
coarse gravel	22	32	1	51%
very coarse gravel	32	45	4	55%
very coarse gravel	45	64	4	59%
small cobble	64	90	13	72%
medium cobble	90	128	11	83%
large cobble	128	180	3	86%
very large cobble	180	256	11	97%
small boulder	256	362	3	100%
small boulder	362	512	0	100%
medium boulder	512	1024	0	100%
large - very large boulder	1024	2048	0	100%
bedrock	2048	4096	0	100%
Total Particle Count:			100	



Pebble Count (Cross Section)

SITE ID:TROUCR03

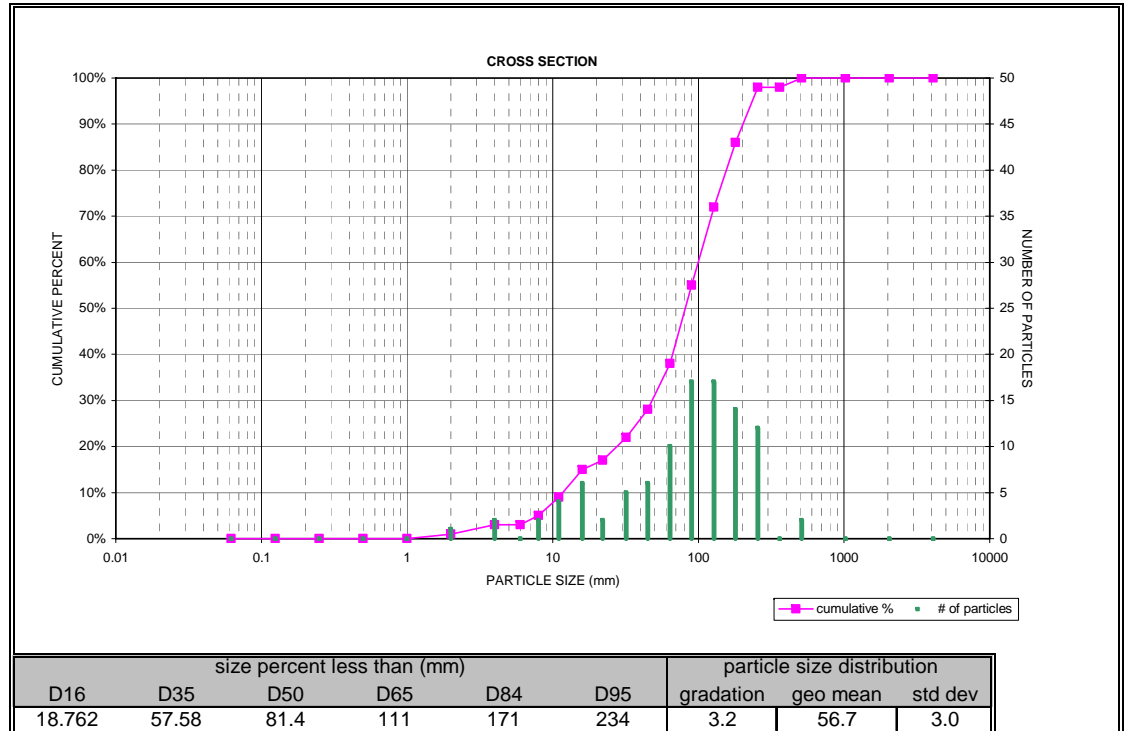
Material	Size Range (mm)		Particle Count	Cumulative Percent
silt/clay	0	0.062	0	0%
very fine sand	0.062	0.13	0	0%
fine sand	0.13	0.25	0	0%
medium sand	0.25	0.5	0	0%
coarse sand	0.5	1	0	0%
very coarse sand	1	2	0	0%
very fine gravel	2	4	0	0%
fine gravel	4	6	0	0%
fine gravel	6	8	2	2%
medium gravel	8	11	1	3%
medium gravel	11	16	3	6%
coarse gravel	16	22	1	7%
coarse gravel	22	32	4	11%
very coarse gravel	32	45	6	17%
very coarse gravel	45	64	15	32%
small cobble	64	90	26	58%
medium cobble	90	128	13	71%
large cobble	128	180	7	78%
very large cobble	180	256	7	85%
small boulder	256	362	14	99%
small boulder	362	512	1	100%
medium boulder	512	1024	0	100%
large - very large boulder	1024	2048	0	100%
bedrock	2048	4096	0	100%
Total Particle Count:			100	



Pebble Count (Cross Section)

SITE ID: TOBYCR14

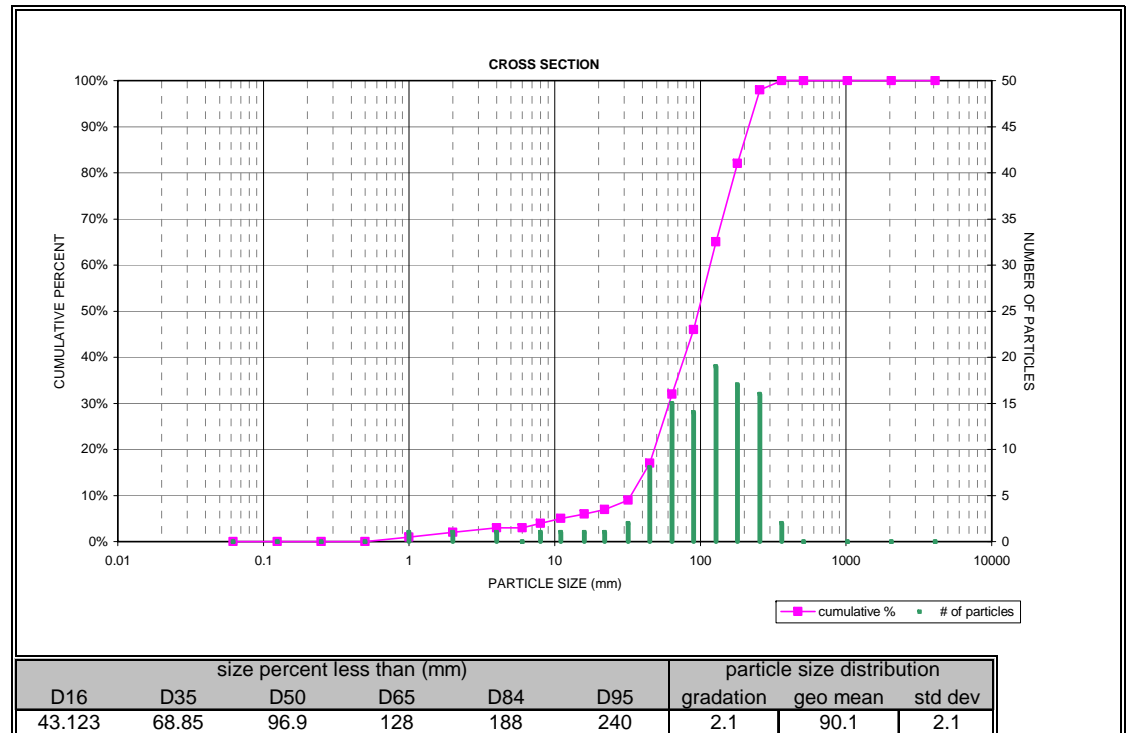
Material	Size Range (mm)		Particle Count	Cumulative Percent
silt/clay	0	0.062	0	0%
very fine sand	0.062	0.13	0	0%
fine sand	0.13	0.25	0	0%
medium sand	0.25	0.5	0	0%
coarse sand	0.5	1	0	0%
very coarse sand	1	2	1	1%
very fine gravel	2	4	2	3%
fine gravel	4	6	0	3%
fine gravel	6	8	2	5%
medium gravel	8	11	4	9%
medium gravel	11	16	6	15%
coarse gravel	16	22	2	17%
coarse gravel	22	32	5	22%
very coarse gravel	32	45	6	28%
very coarse gravel	45	64	10	38%
small cobble	64	90	17	55%
medium cobble	90	128	17	72%
large cobble	128	180	14	86%
very large cobble	180	256	12	98%
small boulder	256	362	0	98%
small boulder	362	512	2	100%
medium boulder	512	1024	0	100%
large - very large boulder	1024	2048	0	100%
bedrock	2048	4096	0	100%
Total Particle Count:			100	



Pebble Count (Cross Section)

SITE ID: TUNKCR03

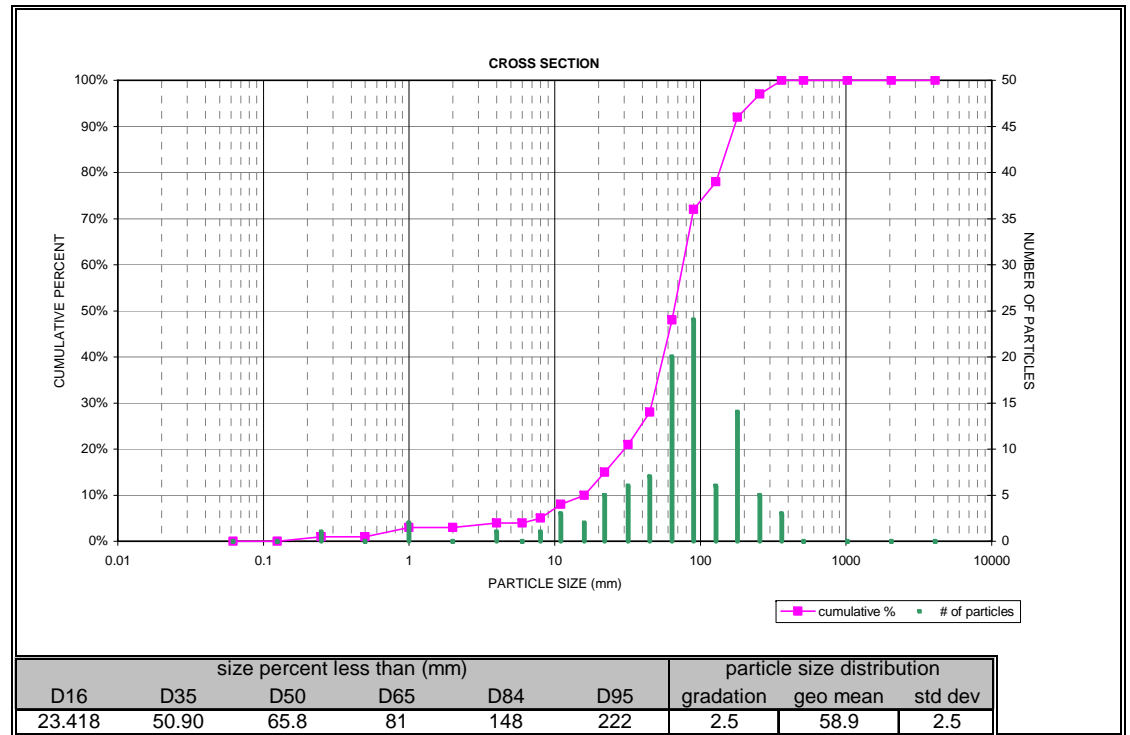
Material	Size Range (mm)		Particle Count	Cumulative Percent
silt/clay	0	0.062	0	0%
very fine sand	0.062	0.13	0	0%
fine sand	0.13	0.25	0	0%
medium sand	0.25	0.5	0	0%
coarse sand	0.5	1	1	1%
very coarse sand	1	2	1	2%
very fine gravel	2	4	1	3%
fine gravel	4	6	0	3%
fine gravel	6	8	1	4%
medium gravel	8	11	1	5%
medium gravel	11	16	1	6%
coarse gravel	16	22	1	7%
coarse gravel	22	32	2	9%
very coarse gravel	32	45	8	17%
very coarse gravel	45	64	15	32%
small cobble	64	90	14	46%
medium cobble	90	128	19	65%
large cobble	128	180	17	82%
very large cobble	180	256	16	98%
small boulder	256	362	2	100%
small boulder	362	512	0	100%
medium boulder	512	1024	0	100%
large - very large boulder	1024	2048	0	100%
bedrock	2048	4096	0	100%
Total Particle Count:			100	



Pebble Count (Cross Section)

SITE ID: JONASCR01

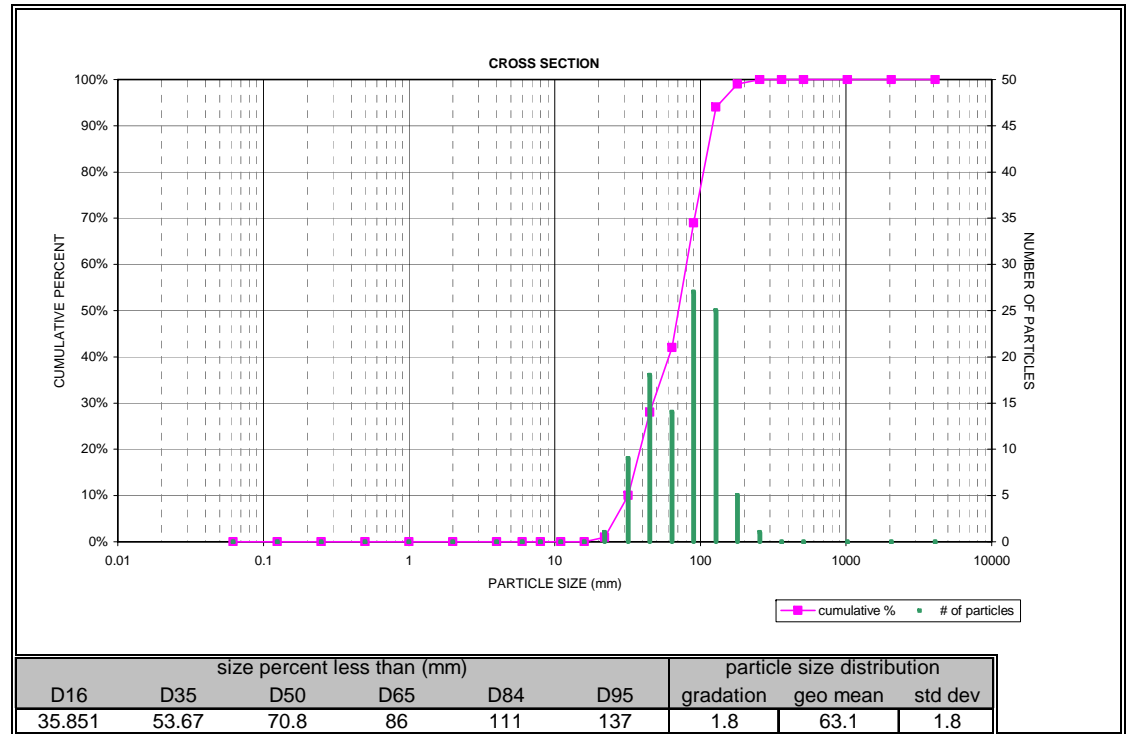
Material	Size Range (mm)		Particle Count	Cumulative Percent
silt/clay	0	0.062	0	0%
very fine sand	0.062	0.13	0	0%
fine sand	0.13	0.25	1	1%
medium sand	0.25	0.5	0	1%
coarse sand	0.5	1	2	3%
very coarse sand	1	2	0	3%
very fine gravel	2	4	1	4%
fine gravel	4	6	0	4%
fine gravel	6	8	1	5%
medium gravel	8	11	3	8%
medium gravel	11	16	2	10%
coarse gravel	16	22	5	15%
coarse gravel	22	32	6	21%
very coarse gravel	32	45	7	28%
very coarse gravel	45	64	20	48%
small cobble	64	90	24	72%
medium cobble	90	128	6	78%
large cobble	128	180	14	92%
very large cobble	180	256	5	97%
small boulder	256	362	3	100%
small boulder	362	512	0	100%
medium boulder	512	1024	0	100%
large - very large boulder	1024	2048	0	100%
bedrock	2048	4096	0	100%
Total Particle Count:			100	



Pebble Count (Cross Section)

SITE ID:POHOCR08

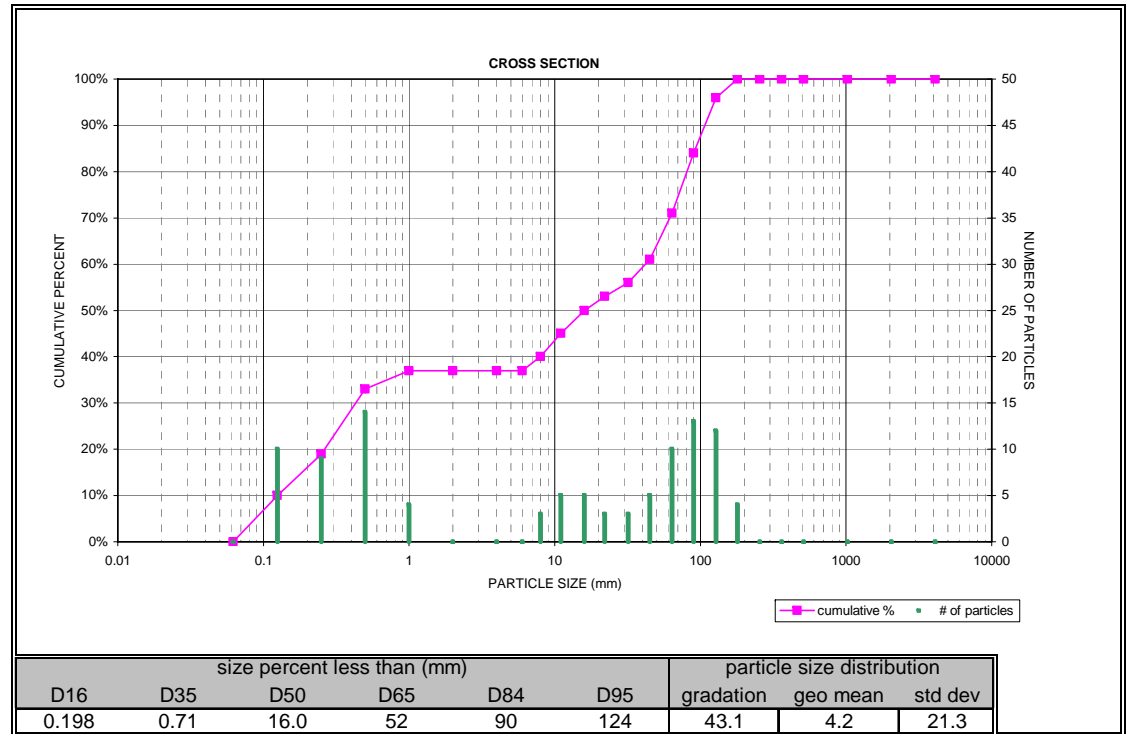
Material	Size Range (mm)		Particle Count	Cumulative Percent
silt/clay	0	0.062	0	0%
very fine sand	0.062	0.13	0	0%
fine sand	0.13	0.25	0	0%
medium sand	0.25	0.5	0	0%
coarse sand	0.5	1	0	0%
very coarse sand	1	2	0	0%
very fine gravel	2	4	0	0%
fine gravel	4	6	0	0%
fine gravel	6	8	0	0%
medium gravel	8	11	0	0%
medium gravel	11	16	0	0%
coarse gravel	16	22	1	1%
coarse gravel	22	32	9	10%
very coarse gravel	32	45	18	28%
very coarse gravel	45	64	14	42%
small cobble	64	90	27	69%
medium cobble	90	128	25	94%
large cobble	128	180	5	99%
very large cobble	180	256	1	100%
small boulder	256	362	0	100%
small boulder	362	512	0	100%
medium boulder	512	1024	0	100%
large - very large boulder	1024	2048	0	100%
bedrock	2048	4096	0	100%
Total Particle Count:			100	



Pebble Count (Cross Section)

SITE ID:WEIRCR02

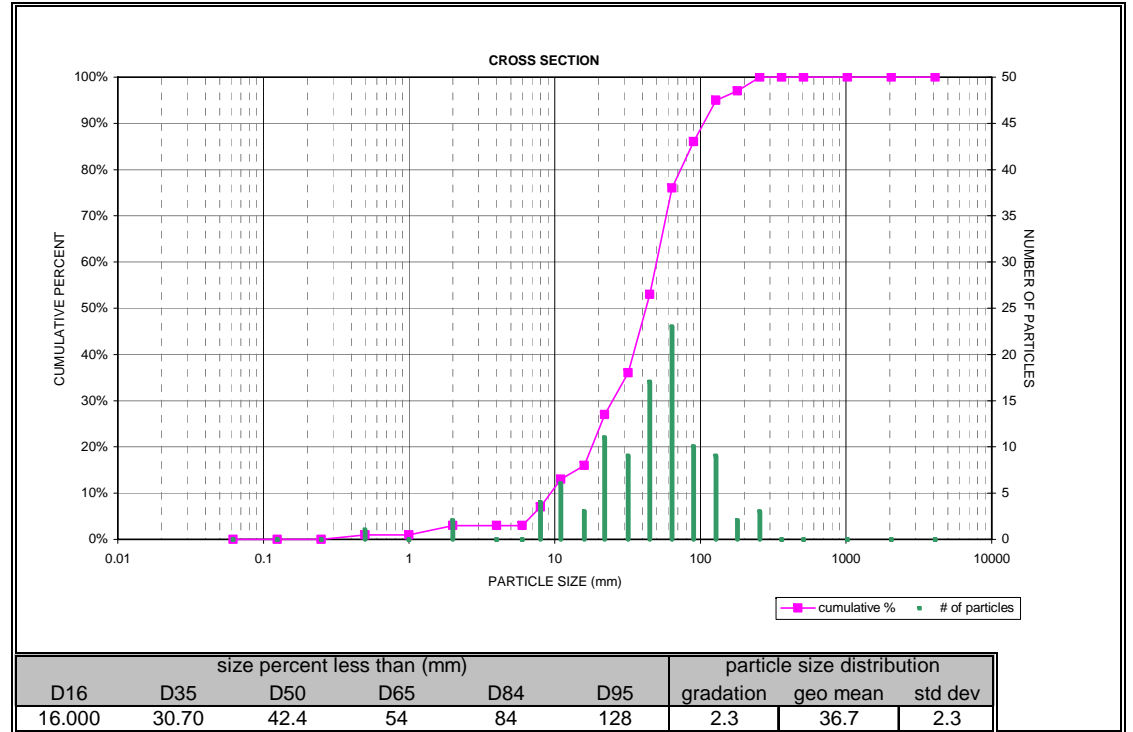
Material	Size Range (mm)		Particle Count	Cumulative Percent
silt/clay	0	0.062	0	0%
very fine sand	0.062	0.13	10	10%
fine sand	0.13	0.25	9	19%
medium sand	0.25	0.5	14	33%
coarse sand	0.5	1	4	37%
very coarse sand	1	2	0	37%
very fine gravel	2	4	0	37%
fine gravel	4	6	0	37%
fine gravel	6	8	3	40%
medium gravel	8	11	5	45%
medium gravel	11	16	5	50%
coarse gravel	16	22	3	53%
coarse gravel	22	32	3	56%
very coarse gravel	32	45	5	61%
very coarse gravel	45	64	10	71%
small cobble	64	90	13	84%
medium cobble	90	128	12	96%
large cobble	128	180	4	100%
very large cobble	180	256	0	100%
small boulder	256	362	0	100%
small boulder	362	512	0	100%
medium boulder	512	1024	0	100%
large - very large boulder	1024	2048	0	100%
bedrock	2048	4096	0	100%
Total Particle Count:			100	



Pebble Count (Cross Section)

SITE ID: POHOCR06

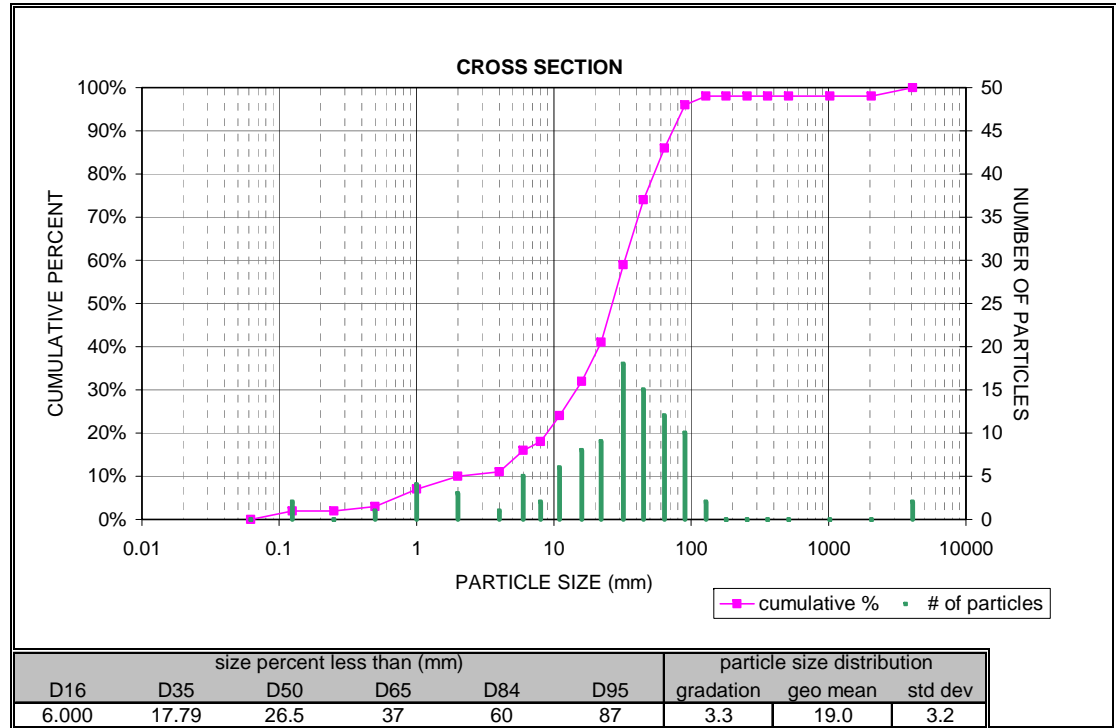
Material	Size Range (mm)		Particle Count	Cumulative Percent
silt/clay	0	0.062	0	0%
very fine sand	0.062	0.13	0	0%
fine sand	0.13	0.25	0	0%
medium sand	0.25	0.5	1	1%
coarse sand	0.5	1	0	1%
very coarse sand	1	2	2	3%
very fine gravel	2	4	0	3%
fine gravel	4	6	0	3%
fine gravel	6	8	4	7%
medium gravel	8	11	6	13%
medium gravel	11	16	3	16%
coarse gravel	16	22	11	27%
coarse gravel	22	32	9	36%
very coarse gravel	32	45	17	53%
very coarse gravel	45	64	23	76%
small cobble	64	90	10	86%
medium cobble	90	128	9	95%
large cobble	128	180	2	97%
very large cobble	180	256	3	100%
small boulder	256	362	0	100%
small boulder	362	512	0	100%
medium boulder	512	1024	0	100%
large - very large boulder	1024	2048	0	100%
bedrock	2048	4096	0	100%
Total Particle Count:			100	



Pebble Count (Cross Section)

SITE ID:BUCKCR01

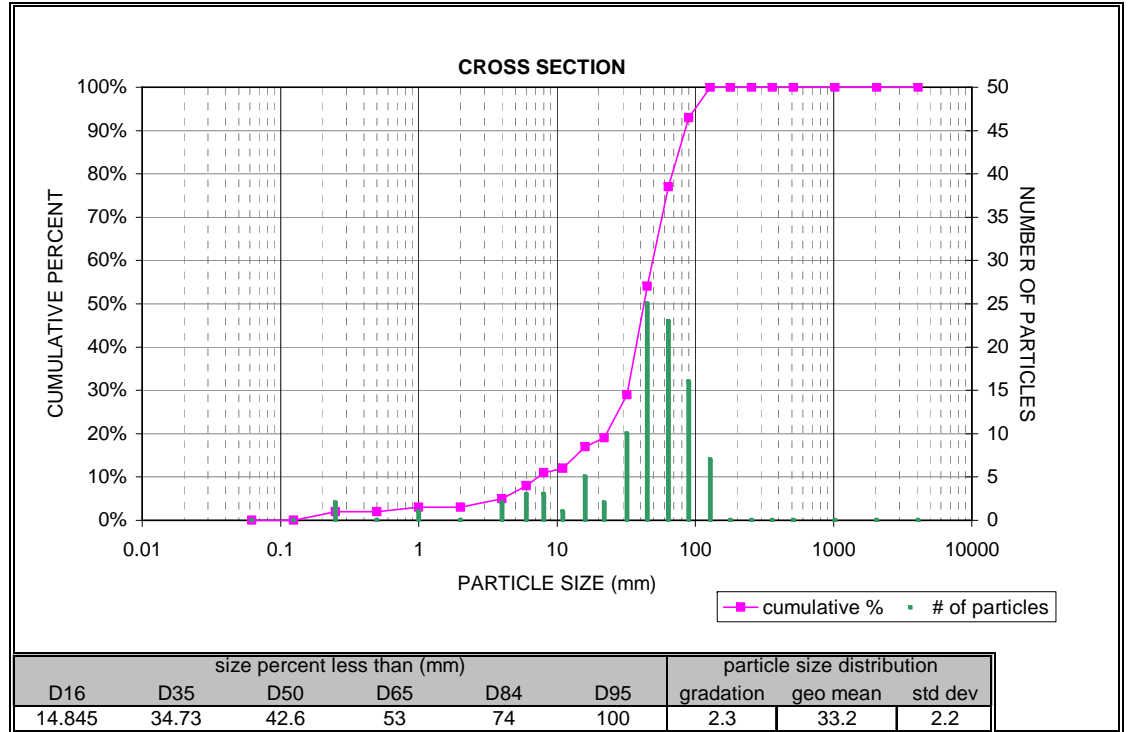
Material	Size Range (mm)		Particle Count	Cumulative Percent
silt/clay	0	0.062	0	0%
very fine sand	0.062	0.13	2	2%
fine sand	0.13	0.25	0	2%
medium sand	0.25	0.5	1	3%
coarse sand	0.5	1	4	7%
very coarse sand	1	2	3	10%
very fine gravel	2	4	1	11%
fine gravel	4	6	5	16%
fine gravel	6	8	2	18%
medium gravel	8	11	6	24%
medium gravel	11	16	8	32%
coarse gravel	16	22	9	41%
coarse gravel	22	32	18	59%
very coarse gravel	32	45	15	74%
very coarse gravel	45	64	12	86%
small cobble	64	90	10	96%
medium cobble	90	128	2	98%
large cobble	128	180	0	98%
very large cobble	180	256	0	98%
small boulder	256	362	0	98%
small boulder	362	512	0	98%
medium boulder	512	1024	0	98%
large - very large boulder	1024	2048	0	98%
bedrock	2048	4096	2	100%
Total Particle Count:			100	



Pebble Count (Cross Section)

SITE ID:AQUACR09

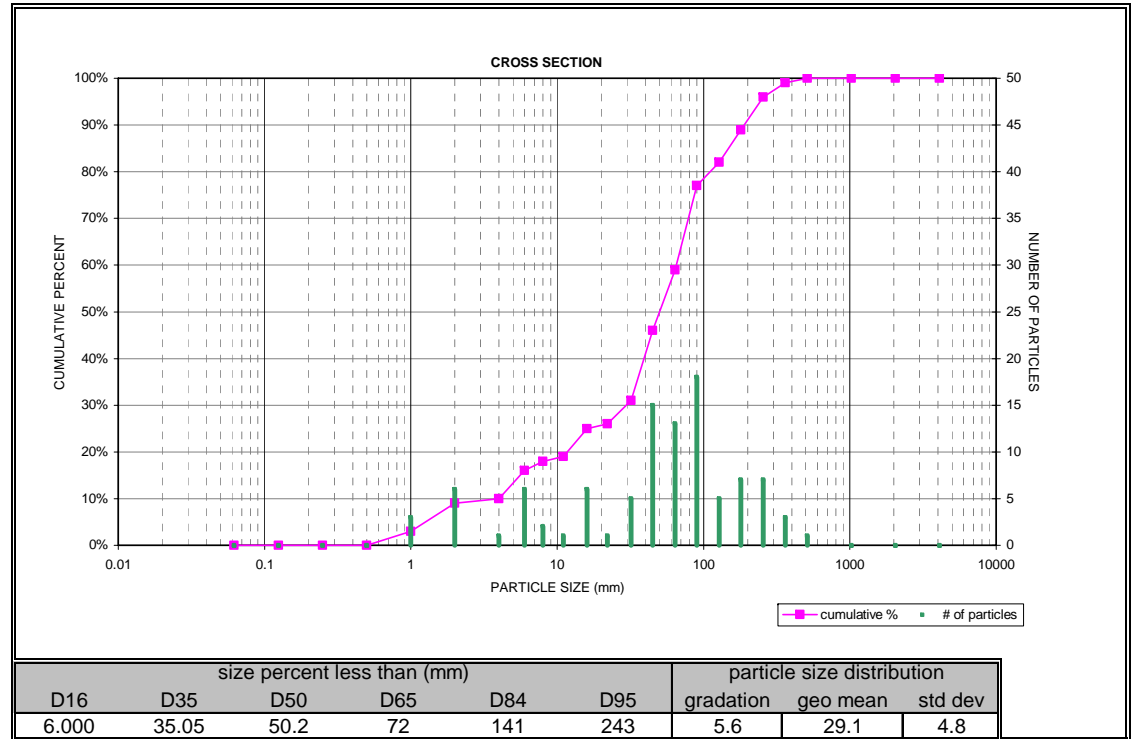
Material	Size Range (mm)		Particle Count	Cumulative Percent
	Lower	Upper		
silt/clay	0	0.062	0	0%
very fine sand	0.062	0.13	0	0%
fine sand	0.13	0.25	2	2%
medium sand	0.25	0.5	0	2%
coarse sand	0.5	1	1	3%
very coarse sand	1	2	0	3%
very fine gravel	2	4	2	5%
fine gravel	4	6	3	8%
fine gravel	6	8	3	11%
medium gravel	8	11	1	12%
medium gravel	11	16	5	17%
coarse gravel	16	22	2	19%
coarse gravel	22	32	10	29%
very coarse gravel	32	45	25	54%
very coarse gravel	45	64	23	77%
small cobble	64	90	16	93%
medium cobble	90	128	7	100%
large cobble	128	180	0	100%
very large cobble	180	256	0	100%
small boulder	256	362	0	100%
small boulder	362	512	0	100%
medium boulder	512	1024	0	100%
large - very large boulder	1024	2048	0	100%
bedrock	2048	4096	0	100%
Total Particle Count:			100	



Pebble Count (Cross Section)

SITE ID:AQUACR10

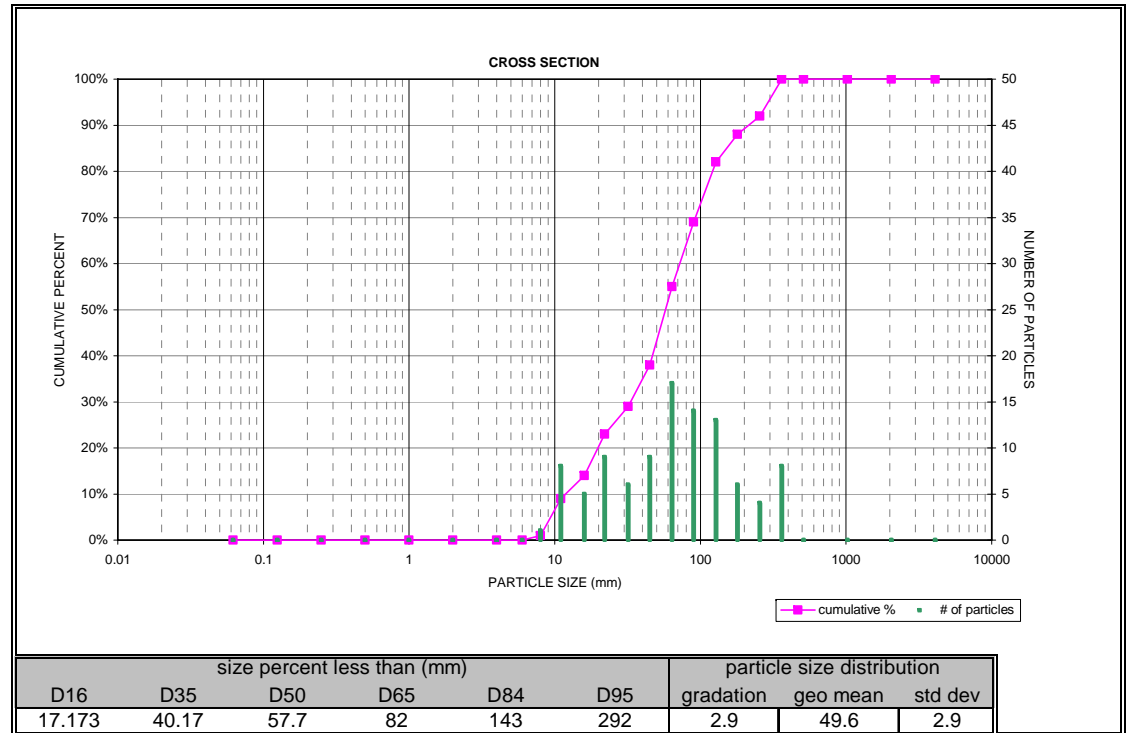
Material	Size Range (mm)		Particle Count	Cumulative Percent
silt/clay	0	0.062	0	0%
very fine sand	0.062	0.13	0	0%
fine sand	0.13	0.25	0	0%
medium sand	0.25	0.5	0	0%
coarse sand	0.5	1	3	3%
very coarse sand	1	2	6	9%
very fine gravel	2	4	1	10%
fine gravel	4	6	6	16%
fine gravel	6	8	2	18%
medium gravel	8	11	1	19%
medium gravel	11	16	6	25%
coarse gravel	16	22	1	26%
coarse gravel	22	32	5	31%
very coarse gravel	32	45	15	46%
very coarse gravel	45	64	13	59%
small cobble	64	90	18	77%
medium cobble	90	128	5	82%
large cobble	128	180	7	89%
very large cobble	180	256	7	96%
small boulder	256	362	3	99%
small boulder	362	512	1	100%
medium boulder	512	1024	0	100%
large - very large boulder	1024	2048	0	100%
bedrock	2048	4096	0	100%
Total Particle Count:			100	



Pebble Count (Cross Section)

SITE ID: MARSCR08

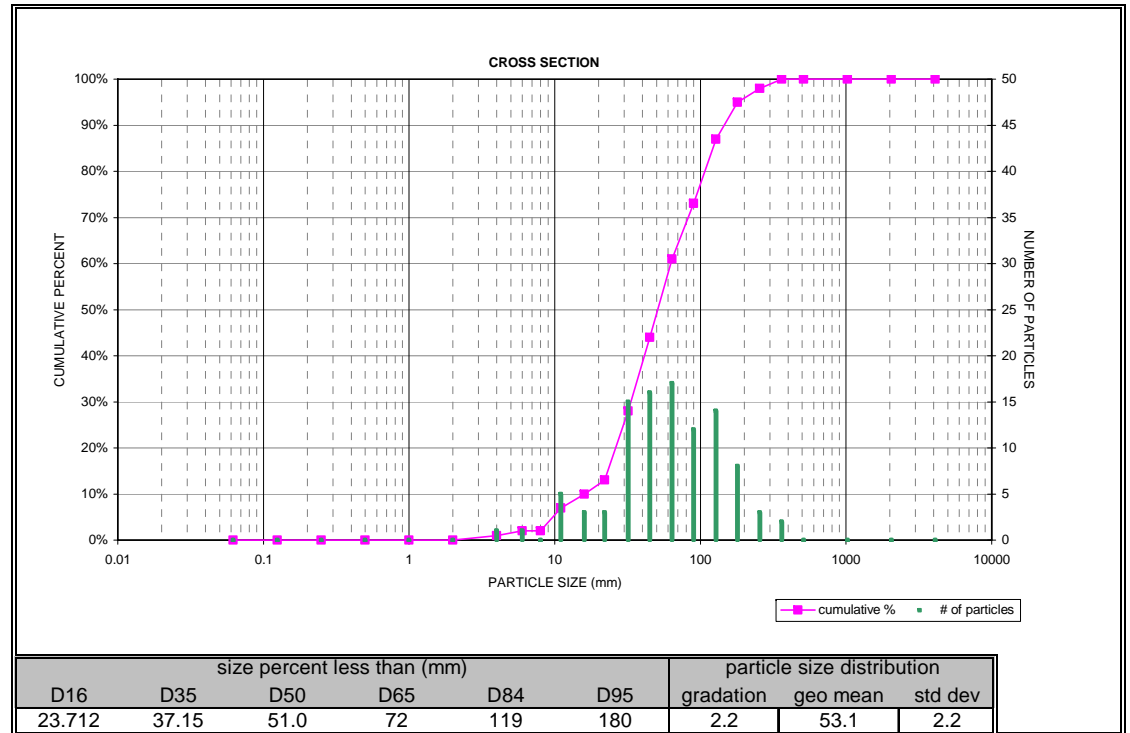
Material	Size Range (mm)		Particle Count	Cumulative Percent
silt/clay	0	0.062	0	0%
very fine sand	0.062	0.13	0	0%
fine sand	0.13	0.25	0	0%
medium sand	0.25	0.5	0	0%
coarse sand	0.5	1	0	0%
very coarse sand	1	2	0	0%
very fine gravel	2	4	0	0%
fine gravel	4	6	0	0%
fine gravel	6	8	1	1%
medium gravel	8	11	8	9%
medium gravel	11	16	5	14%
coarse gravel	16	22	9	23%
coarse gravel	22	32	6	29%
very coarse gravel	32	45	9	38%
very coarse gravel	45	64	17	55%
small cobble	64	90	14	69%
medium cobble	90	128	13	82%
large cobble	128	180	6	88%
very large cobble	180	256	4	92%
small boulder	256	362	8	100%
small boulder	362	512	0	100%
medium boulder	512	1024	0	100%
large - very large boulder	1024	2048	0	100%
bedrock	2048	4096	0	100%
Total Particle Count:			100	



Pebble Count (Cross Section)

SITE ID: MARSCR09

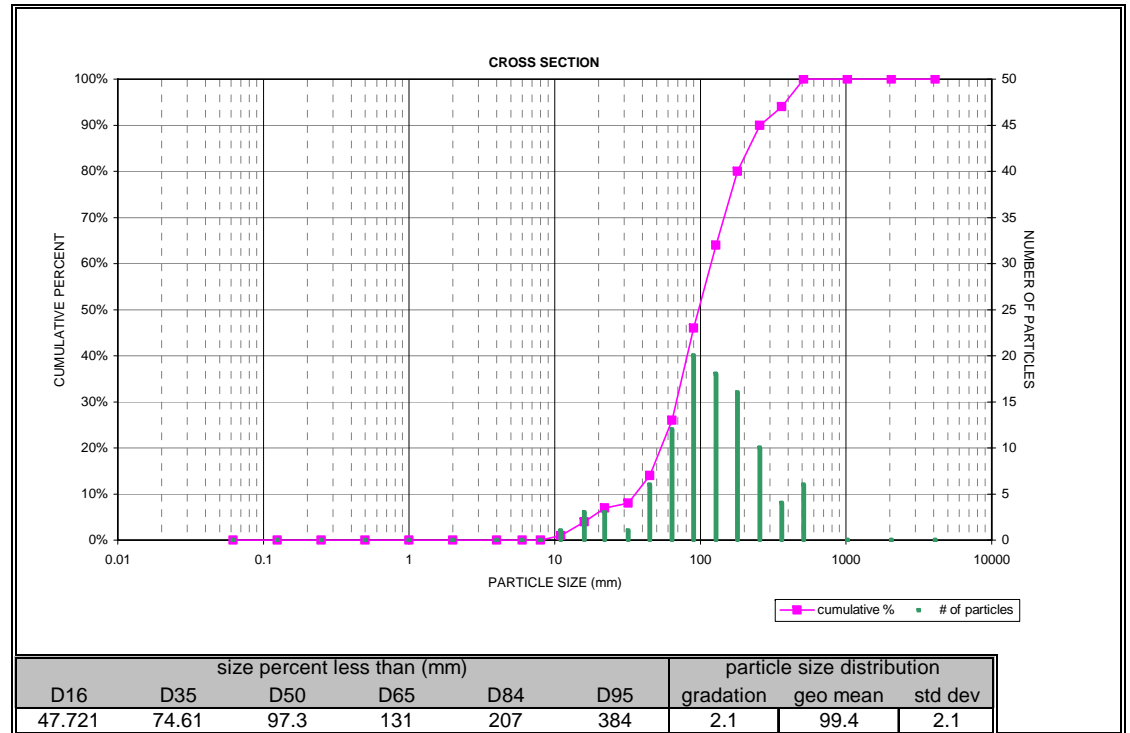
Material	Size Range (mm)		Particle Count	Cumulative Percent
silt/clay	0	0.062	0	0%
very fine sand	0.062	0.13	0	0%
fine sand	0.13	0.25	0	0%
medium sand	0.25	0.5	0	0%
coarse sand	0.5	1	0	0%
very coarse sand	1	2	0	0%
very fine gravel	2	4	1	1%
fine gravel	4	6	1	2%
fine gravel	6	8	0	2%
medium gravel	8	11	5	7%
medium gravel	11	16	3	10%
coarse gravel	16	22	3	13%
coarse gravel	22	32	15	28%
very coarse gravel	32	45	16	44%
very coarse gravel	45	64	17	61%
small cobble	64	90	12	73%
medium cobble	90	128	14	87%
large cobble	128	180	8	95%
very large cobble	180	256	3	98%
small boulder	256	362	2	100%
small boulder	362	512	0	100%
medium boulder	512	1024	0	100%
large - very large boulder	1024	2048	0	100%
bedrock	2048	4096	0	100%
Total Particle Count:			100	



Pebble Count (Cross Section)

SITE ID: SAMBCR10

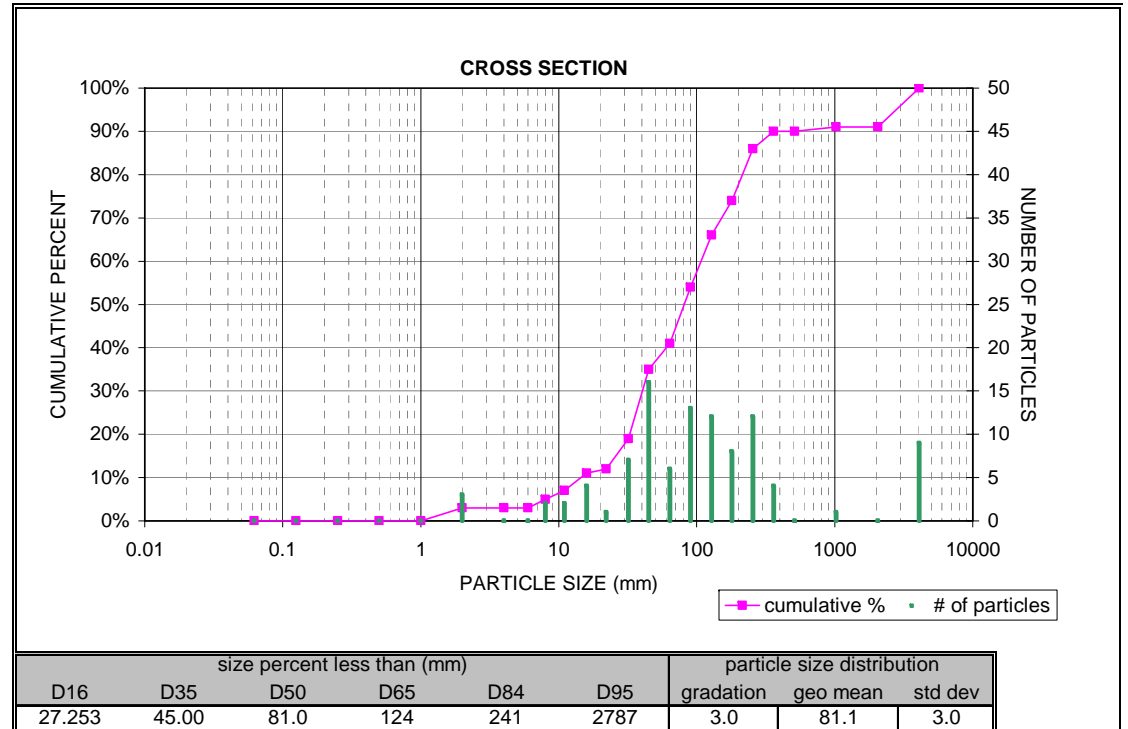
Material	Size Range (mm)		Particle Count	Cumulative Percent
silt/clay	0	0.062	0	0%
very fine sand	0.062	0.13	0	0%
fine sand	0.13	0.25	0	0%
medium sand	0.25	0.5	0	0%
coarse sand	0.5	1	0	0%
very coarse sand	1	2	0	0%
very fine gravel	2	4	0	0%
fine gravel	4	6	0	0%
fine gravel	6	8	0	0%
medium gravel	8	11	1	1%
medium gravel	11	16	3	4%
coarse gravel	16	22	3	7%
coarse gravel	22	32	1	8%
very coarse gravel	32	45	6	14%
very coarse gravel	45	64	12	26%
small cobble	64	90	20	46%
medium cobble	90	128	18	64%
large cobble	128	180	16	80%
very large cobble	180	256	10	90%
small boulder	256	362	4	94%
small boulder	362	512	6	100%
medium boulder	512	1024	0	100%
large - very large boulder	1024	2048	0	100%
bedrock	2048	4096	0	100%
Total Particle Count:			100	



Pebble Count (Cross Section)

SITE ID: BRODCR14

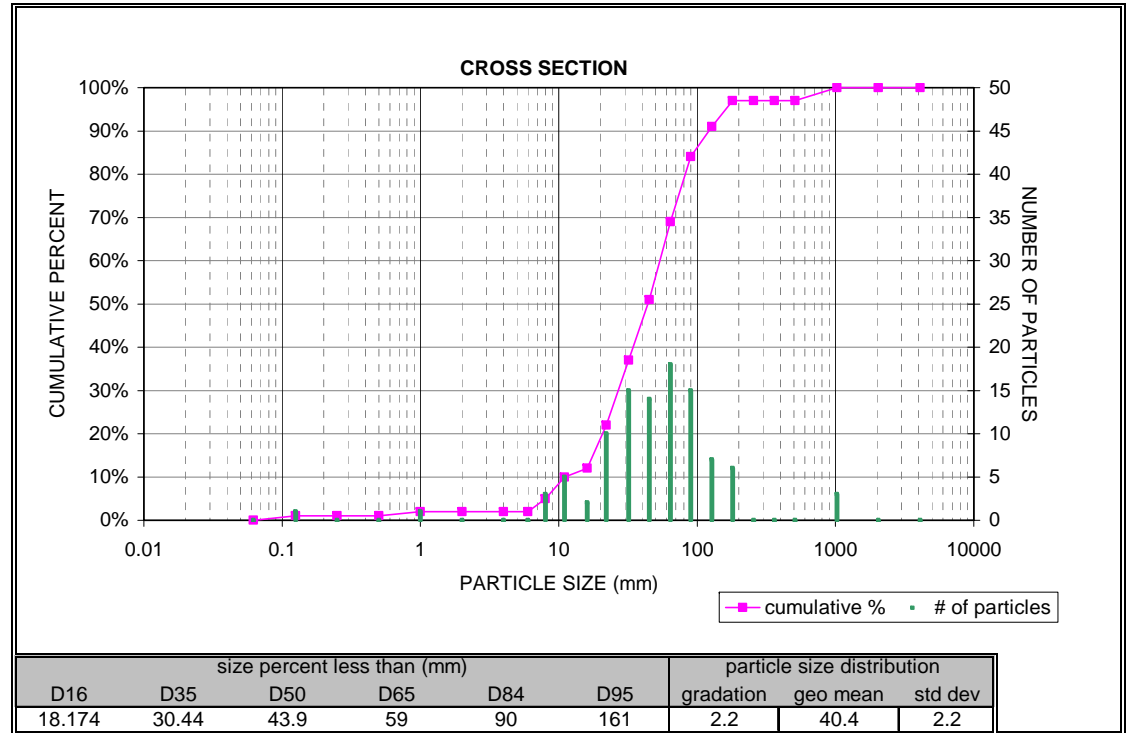
Material	Size Range (mm)		Particle Count	Cumulative Percent
silt/clay	0	0.062	0	0%
very fine sand	0.062	0.13	0	0%
fine sand	0.13	0.25	0	0%
medium sand	0.25	0.5	0	0%
coarse sand	0.5	1	0	0%
very coarse sand	1	2	3	3%
very fine gravel	2	4	0	3%
fine gravel	4	6	0	3%
fine gravel	6	8	2	5%
medium gravel	8	11	2	7%
medium gravel	11	16	4	11%
coarse gravel	16	22	1	12%
coarse gravel	22	32	7	19%
very coarse gravel	32	45	16	35%
very coarse gravel	45	64	6	41%
small cobble	64	90	13	54%
medium cobble	90	128	12	66%
large cobble	128	180	8	74%
very large cobble	180	256	12	86%
small boulder	256	362	4	90%
small boulder	362	512	0	90%
medium boulder	512	1024	1	91%
large - very large boulder	1024	2048	0	91%
bedrock	2048	4096	9	100%
Total Particle Count:			100	



Pebble Count (Cross Section)

SITE ID: BRODCR15

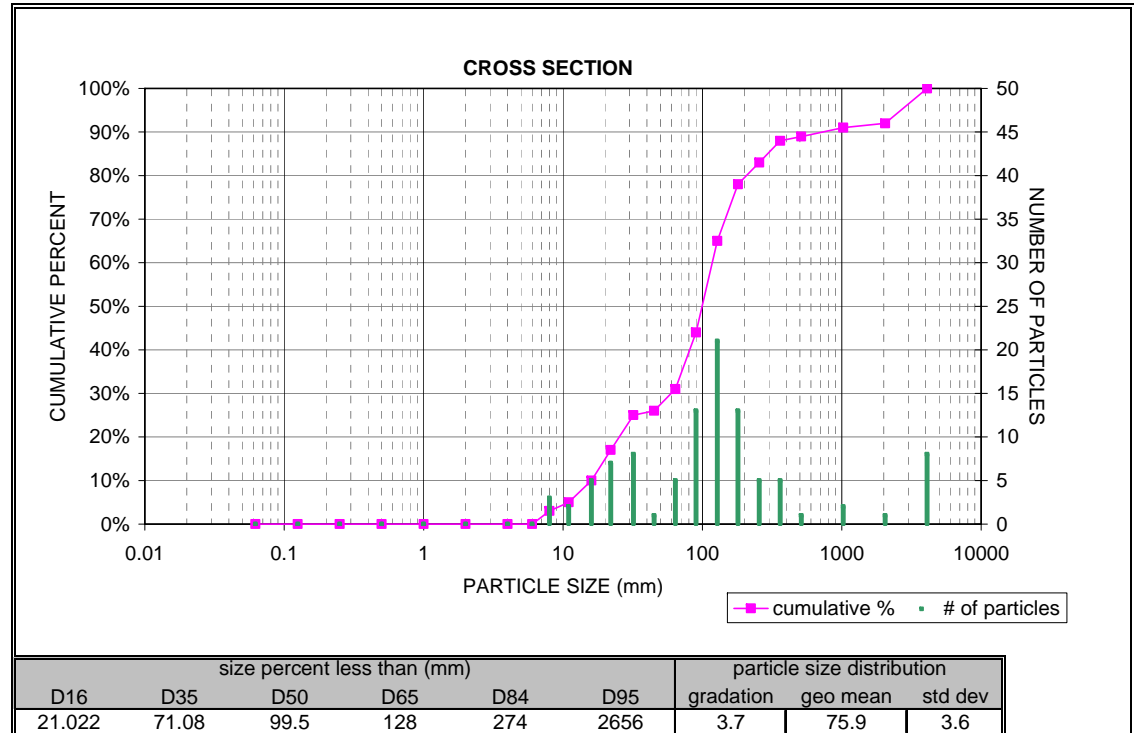
Material	Size Range (mm)		Particle Count	Cumulative Percent
silt/clay	0	0.062	0	0%
very fine sand	0.062	0.13	1	1%
fine sand	0.13	0.25	0	1%
medium sand	0.25	0.5	0	1%
coarse sand	0.5	1	1	2%
very coarse sand	1	2	0	2%
very fine gravel	2	4	0	2%
fine gravel	4	6	0	2%
fine gravel	6	8	3	5%
medium gravel	8	11	5	10%
medium gravel	11	16	2	12%
coarse gravel	16	22	10	22%
coarse gravel	22	32	15	37%
very coarse gravel	32	45	14	51%
very coarse gravel	45	64	18	69%
small cobble	64	90	15	84%
medium cobble	90	128	7	91%
large cobble	128	180	6	97%
very large cobble	180	256	0	97%
small boulder	256	362	0	97%
small boulder	362	512	0	97%
medium boulder	512	1024	3	100%
large - very large boulder	1024	2048	0	100%
bedrock	2048	4096	0	100%
Total Particle Count:			100	



Pebble Count (Cross Section)

SITE ID:CRANCR01

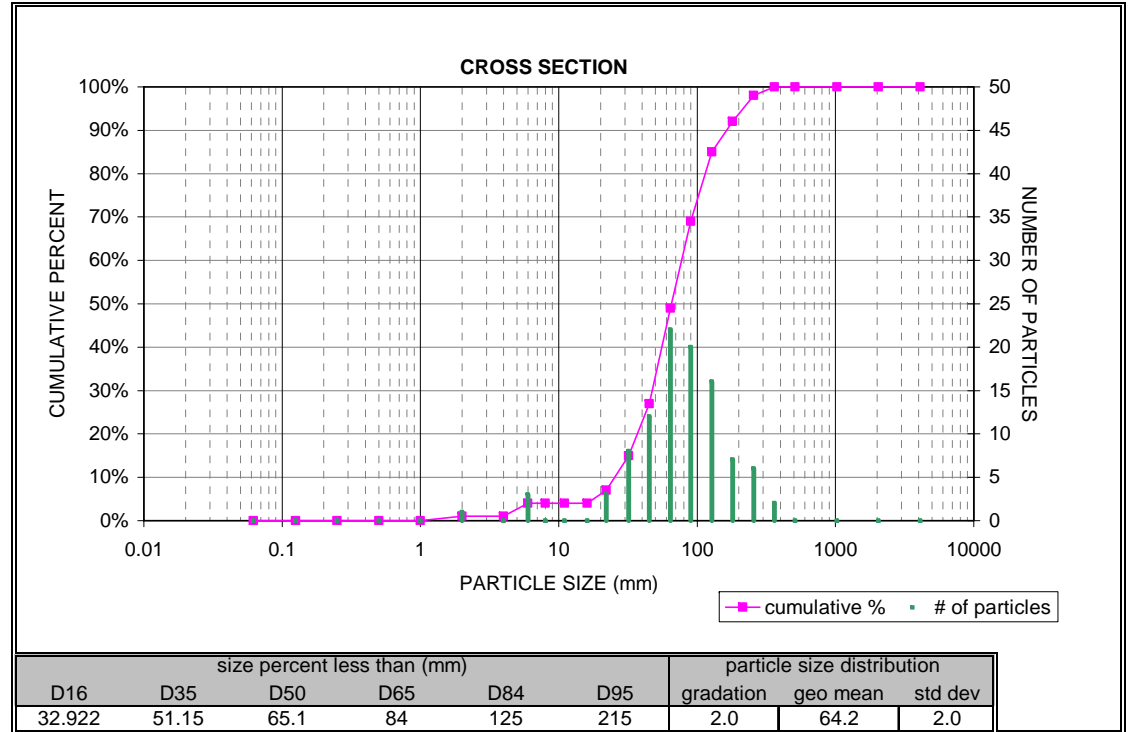
Material	Size Range (mm)		Particle Count	Cumulative Percent
silt/clay	0	0.062	0	0%
very fine sand	0.062	0.13	0	0%
fine sand	0.13	0.25	0	0%
medium sand	0.25	0.5	0	0%
coarse sand	0.5	1	0	0%
very coarse sand	1	2	0	0%
very fine gravel	2	4	0	0%
fine gravel	4	6	0	0%
fine gravel	6	8	3	3%
medium gravel	8	11	2	5%
medium gravel	11	16	5	10%
coarse gravel	16	22	7	17%
coarse gravel	22	32	8	25%
very coarse gravel	32	45	1	26%
very coarse gravel	45	64	5	31%
small cobble	64	90	13	44%
medium cobble	90	128	21	65%
large cobble	128	180	13	78%
very large cobble	180	256	5	83%
small boulder	256	362	5	88%
small boulder	362	512	1	89%
medium boulder	512	1024	2	91%
large - very large boulder	1024	2048	1	92%
bedrock	2048	4096	8	100%
Total Particle Count:			100	



Pebble Count (Cross Section)

SITE ID: MCMICR28

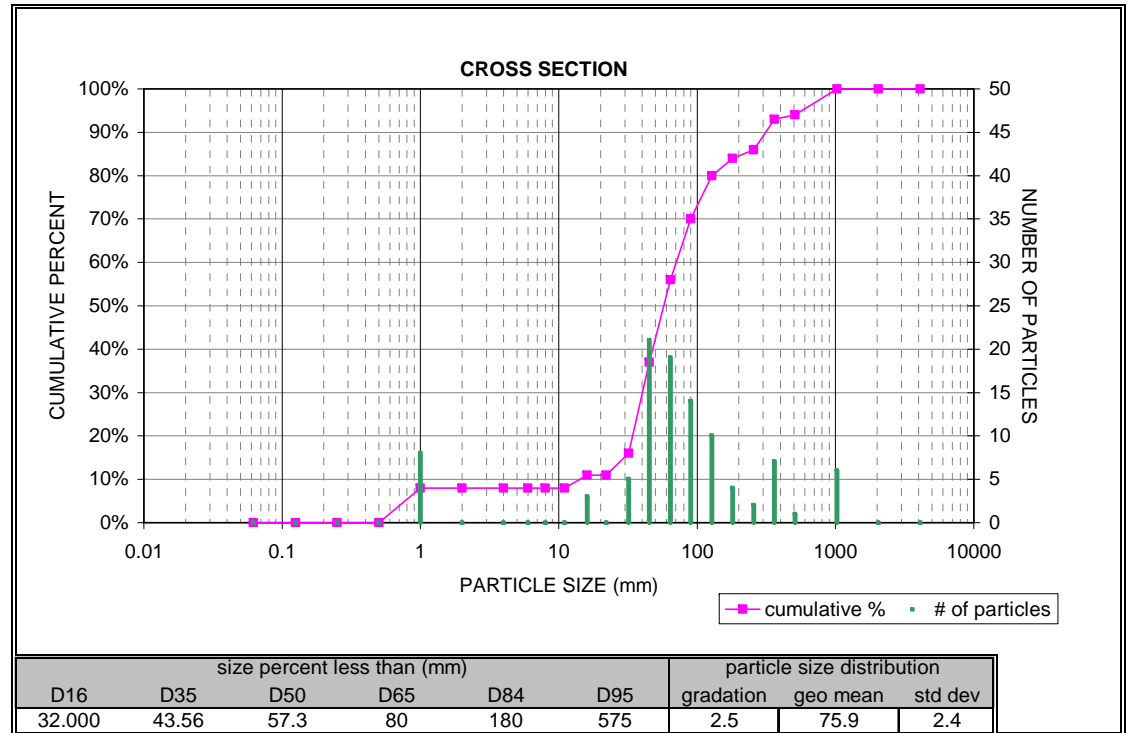
Material	Size Range (mm)		Particle Count	Cumulative Percent
silt/clay	0	0.062	0	0%
very fine sand	0.062	0.13	0	0%
fine sand	0.13	0.25	0	0%
medium sand	0.25	0.5	0	0%
coarse sand	0.5	1	0	0%
very coarse sand	1	2	1	1%
very fine gravel	2	4	0	1%
fine gravel	4	6	3	4%
fine gravel	6	8	0	4%
medium gravel	8	11	0	4%
medium gravel	11	16	0	4%
coarse gravel	16	22	3	7%
coarse gravel	22	32	8	15%
very coarse gravel	32	45	12	27%
very coarse gravel	45	64	22	49%
small cobble	64	90	20	69%
medium cobble	90	128	16	85%
large cobble	128	180	7	92%
very large cobble	180	256	6	98%
small boulder	256	362	2	100%
small boulder	362	512	0	100%
medium boulder	512	1024	0	100%
large - very large boulder	1024	2048	0	100%
bedrock	2048	4096	0	100%
Total Particle Count:			100	



Pebble Count (Cross Section)

SITE ID: BRODCR01

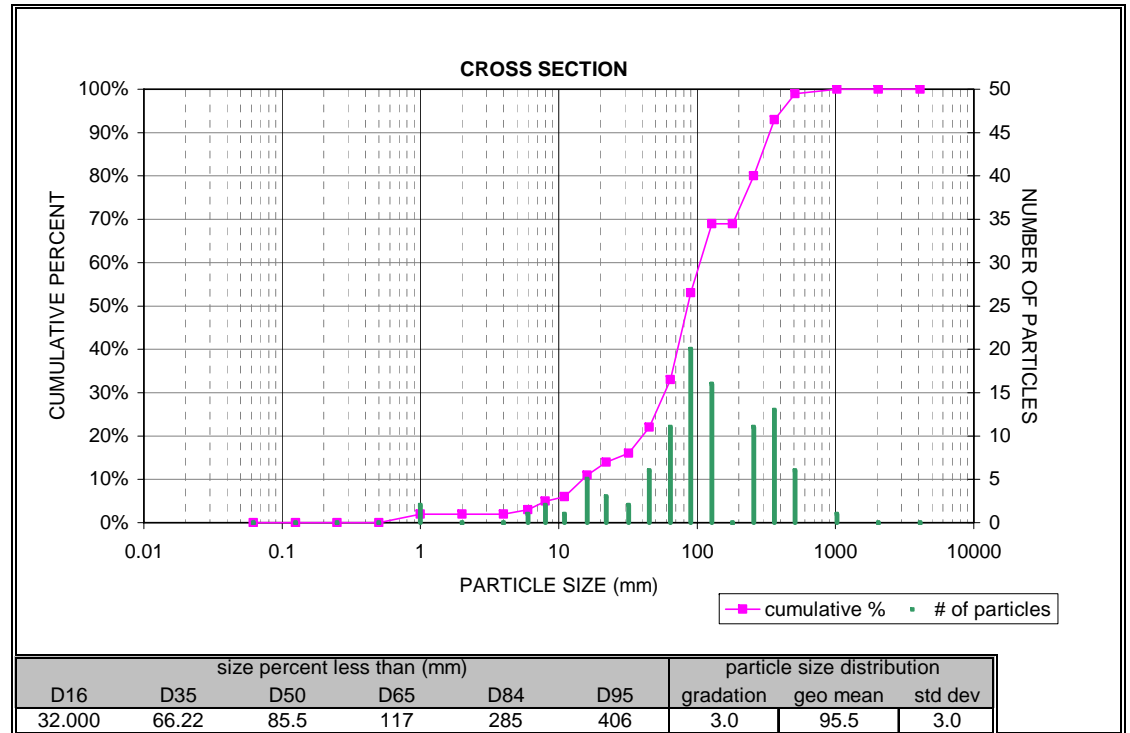
Material	Size Range (mm)		Particle Count	Cumulative Percent
silt/clay	0	0.062	0	0%
very fine sand	0.062	0.13	0	0%
fine sand	0.13	0.25	0	0%
medium sand	0.25	0.5	0	0%
coarse sand	0.5	1	8	8%
very coarse sand	1	2	0	8%
very fine gravel	2	4	0	8%
fine gravel	4	6	0	8%
fine gravel	6	8	0	8%
medium gravel	8	11	0	8%
medium gravel	11	16	3	11%
coarse gravel	16	22	0	11%
coarse gravel	22	32	5	16%
very coarse gravel	32	45	21	37%
very coarse gravel	45	64	19	56%
small cobble	64	90	14	70%
medium cobble	90	128	10	80%
large cobble	128	180	4	84%
very large cobble	180	256	2	86%
small boulder	256	362	7	93%
small boulder	362	512	1	94%
medium boulder	512	1024	6	100%
large - very large boulder	1024	2048	0	100%
bedrock	2048	4096	0	100%
Total Particle Count:			100	



Pebble Count (Cross Section)

SITE ID: BRODCR12

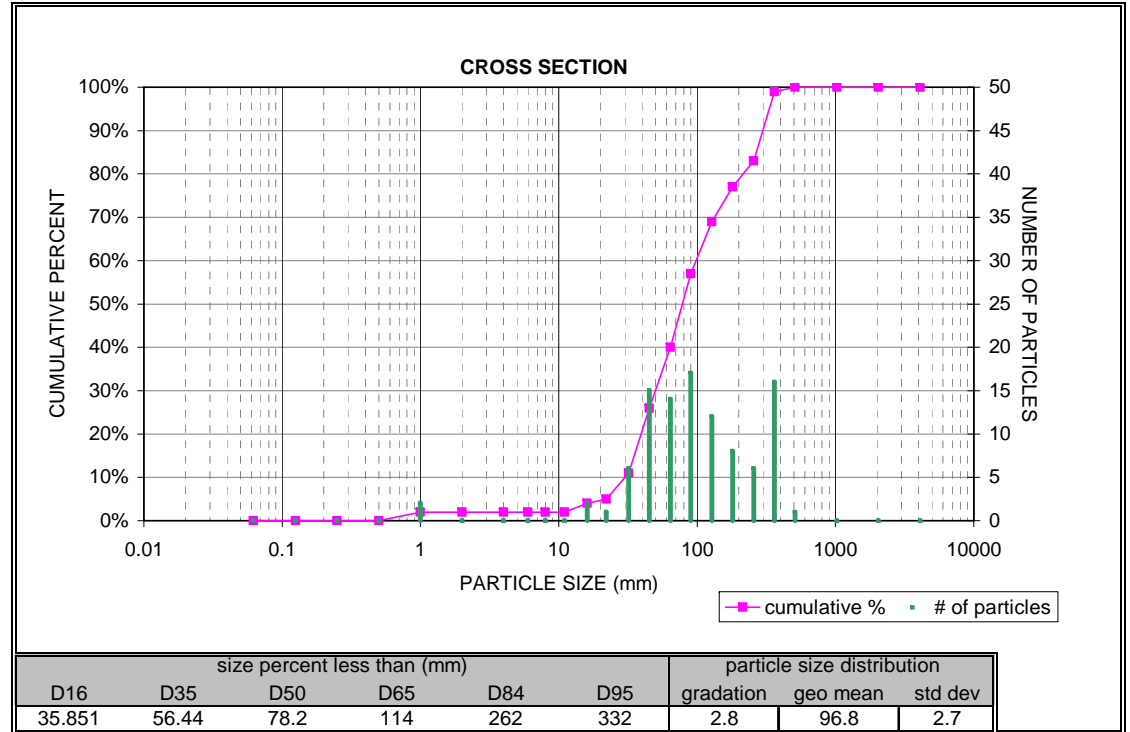
Material	Size Range (mm)		Particle Count	Cumulative Percent
silt/clay	0	0.062	0	0%
very fine sand	0.062	0.13	0	0%
fine sand	0.13	0.25	0	0%
medium sand	0.25	0.5	0	0%
coarse sand	0.5	1	2	2%
very coarse sand	1	2	0	2%
very fine gravel	2	4	0	2%
fine gravel	4	6	1	3%
fine gravel	6	8	2	5%
medium gravel	8	11	1	6%
medium gravel	11	16	5	11%
coarse gravel	16	22	3	14%
coarse gravel	22	32	2	16%
very coarse gravel	32	45	6	22%
very coarse gravel	45	64	11	33%
small cobble	64	90	20	53%
medium cobble	90	128	16	69%
large cobble	128	180	0	69%
very large cobble	180	256	11	80%
small boulder	256	362	13	93%
small boulder	362	512	6	99%
medium boulder	512	1024	1	100%
large - very large boulder	1024	2048	0	100%
bedrock	2048	4096	0	100%
Total Particle Count:			100	



Pebble Count (Cross Section)

SITE ID: BUSHCR07

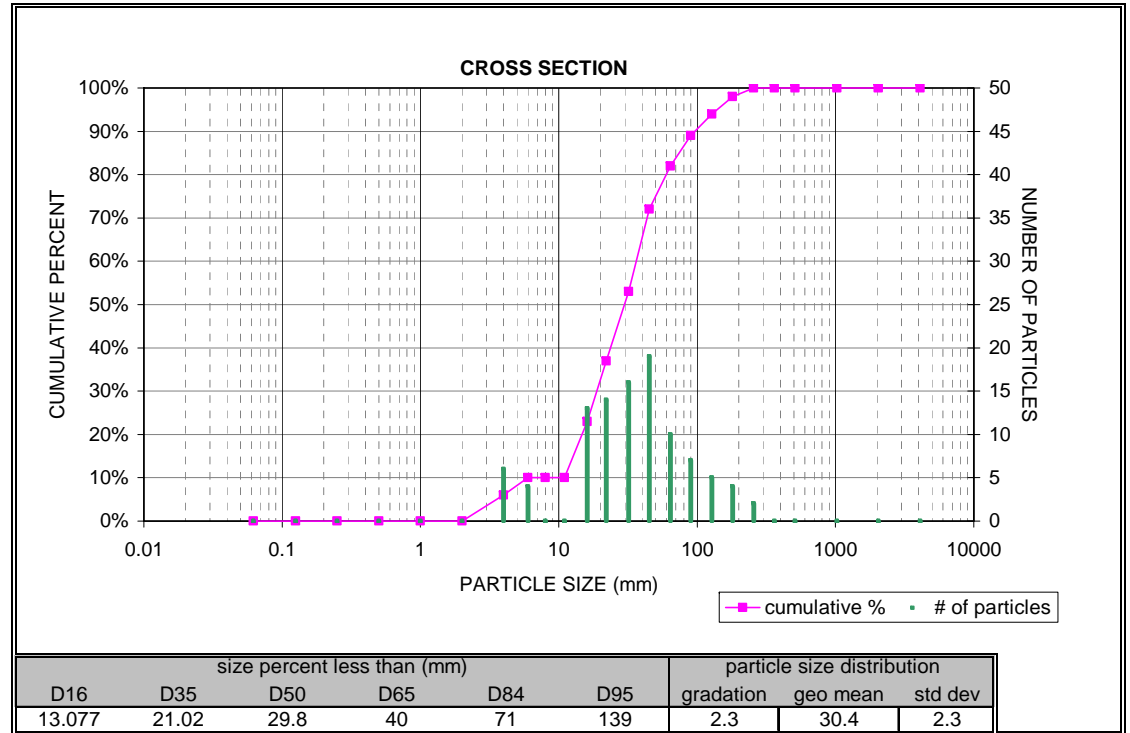
Material	Size Range (mm)		Particle Count	Cumulative Percent
	Lower	Upper		
silt/clay	0	0.062	0	0%
very fine sand	0.062	0.13	0	0%
fine sand	0.13	0.25	0	0%
medium sand	0.25	0.5	0	0%
coarse sand	0.5	1	2	2%
very coarse sand	1	2	0	2%
very fine gravel	2	4	0	2%
fine gravel	4	6	0	2%
fine gravel	6	8	0	2%
medium gravel	8	11	0	2%
medium gravel	11	16	2	4%
coarse gravel	16	22	1	5%
coarse gravel	22	32	6	11%
very coarse gravel	32	45	15	26%
very coarse gravel	45	64	14	40%
small cobble	64	90	17	57%
medium cobble	90	128	12	69%
large cobble	128	180	8	77%
very large cobble	180	256	6	83%
small boulder	256	362	16	99%
small boulder	362	512	1	100%
medium boulder	512	1024	0	100%
large - very large boulder	1024	2048	0	100%
bedrock	2048	4096	0	100%
Total Particle Count:			100	



Pebble Count (Cross Section)

SITE ID: BRODCR13

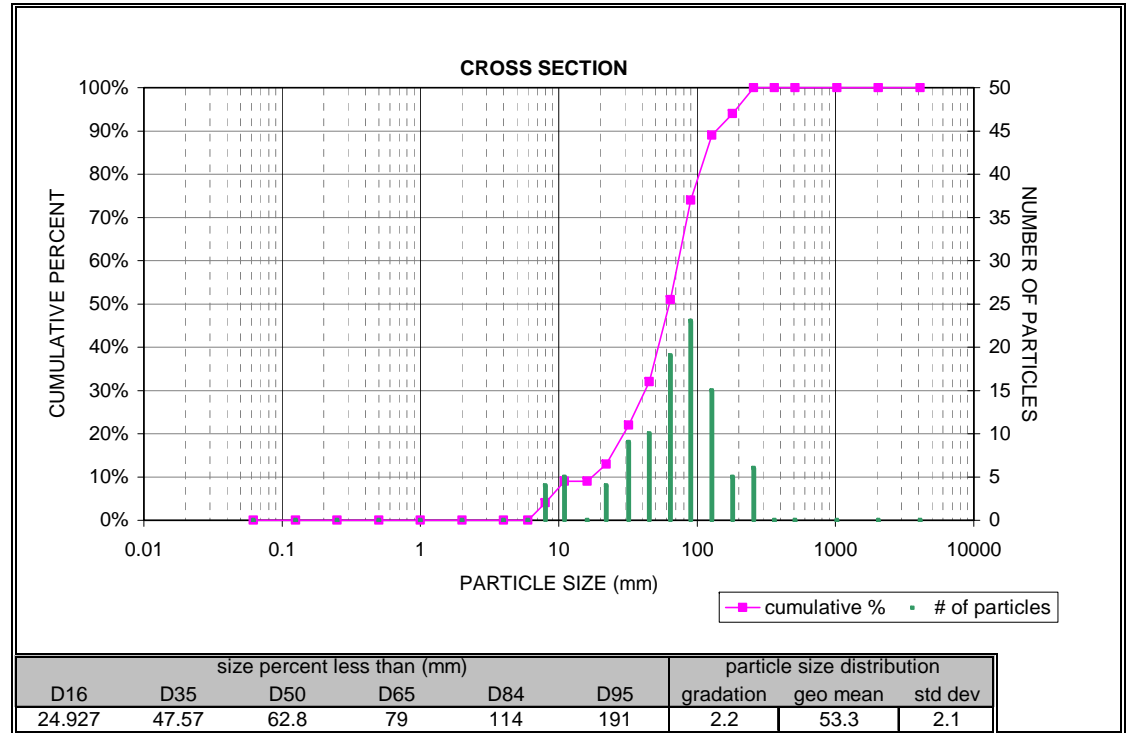
Material	Size Range (mm)		Particle Count	Cumulative Percent
silt/clay	0	0.062	0	0%
very fine sand	0.062	0.13	0	0%
fine sand	0.13	0.25	0	0%
medium sand	0.25	0.5	0	0%
coarse sand	0.5	1	0	0%
very coarse sand	1	2	0	0%
very fine gravel	2	4	6	6%
fine gravel	4	6	4	10%
fine gravel	6	8	0	10%
medium gravel	8	11	0	10%
medium gravel	11	16	13	23%
coarse gravel	16	22	14	37%
coarse gravel	22	32	16	53%
very coarse gravel	32	45	19	72%
very coarse gravel	45	64	10	82%
small cobble	64	90	7	89%
medium cobble	90	128	5	94%
large cobble	128	180	4	98%
very large cobble	180	256	2	100%
small boulder	256	362	0	100%
small boulder	362	512	0	100%
medium boulder	512	1024	0	100%
large - very large boulder	1024	2048	0	100%
bedrock	2048	4096	0	100%
Total Particle Count:			100	



Pebble Count (Cross Section)

SITE ID:CHERCR11

Material	Size Range (mm)		Particle Count	Cumulative Percent
silt/clay	0	0.062	0	0%
very fine sand	0.062	0.13	0	0%
fine sand	0.13	0.25	0	0%
medium sand	0.25	0.5	0	0%
coarse sand	0.5	1	0	0%
very coarse sand	1	2	0	0%
very fine gravel	2	4	0	0%
fine gravel	4	6	0	0%
fine gravel	6	8	4	4%
medium gravel	8	11	5	9%
medium gravel	11	16	0	9%
coarse gravel	16	22	4	13%
coarse gravel	22	32	9	22%
very coarse gravel	32	45	10	32%
very coarse gravel	45	64	19	51%
small cobble	64	90	23	74%
medium cobble	90	128	15	89%
large cobble	128	180	5	94%
very large cobble	180	256	6	100%
small boulder	256	362	0	100%
small boulder	362	512	0	100%
medium boulder	512	1024	0	100%
large - very large boulder	1024	2048	0	100%
bedrock	2048	4096	0	100%
Total Particle Count:			100	



Pebble Count (Cross Section)

SITE ID:MCMICR30

Material	Size Range (mm)		Particle Count	Cumulative Percent
silt/clay	0	0.062	0	0%
very fine sand	0.062	0.13	0	0%
fine sand	0.13	0.25	0	0%
medium sand	0.25	0.5	0	0%
coarse sand	0.5	1	0	0%
very coarse sand	1	2	0	0%
very fine gravel	2	4	0	0%
fine gravel	4	6	0	0%
fine gravel	6	8	0	0%
medium gravel	8	11	0	0%
medium gravel	11	16	6	6%
coarse gravel	16	22	6	12%
coarse gravel	22	32	14	26%
very coarse gravel	32	45	12	38%
very coarse gravel	45	64	13	51%
small cobble	64	90	19	70%
medium cobble	90	128	11	81%
large cobble	128	180	7	88%
very large cobble	180	256	9	97%
small boulder	256	362	3	100%
small boulder	362	512	0	100%
medium boulder	512	1024	0	100%
large - very large boulder	1024	2048	0	100%
bedrock	2048	4096	0	100%
Total Particle Count:			100	

