DANMARKS OG GRØNLANDS GEOLOGISKE UNDERSØGELSE **RAPPORT 2021/9**

Efterforskning og kortlægning af sandressourcer i Nordsøen for Kystdirektoratet – Lønstrup fase 1a

Niels Nørgaard-Pedersen, Ole Bennike & Lars G. Rödel

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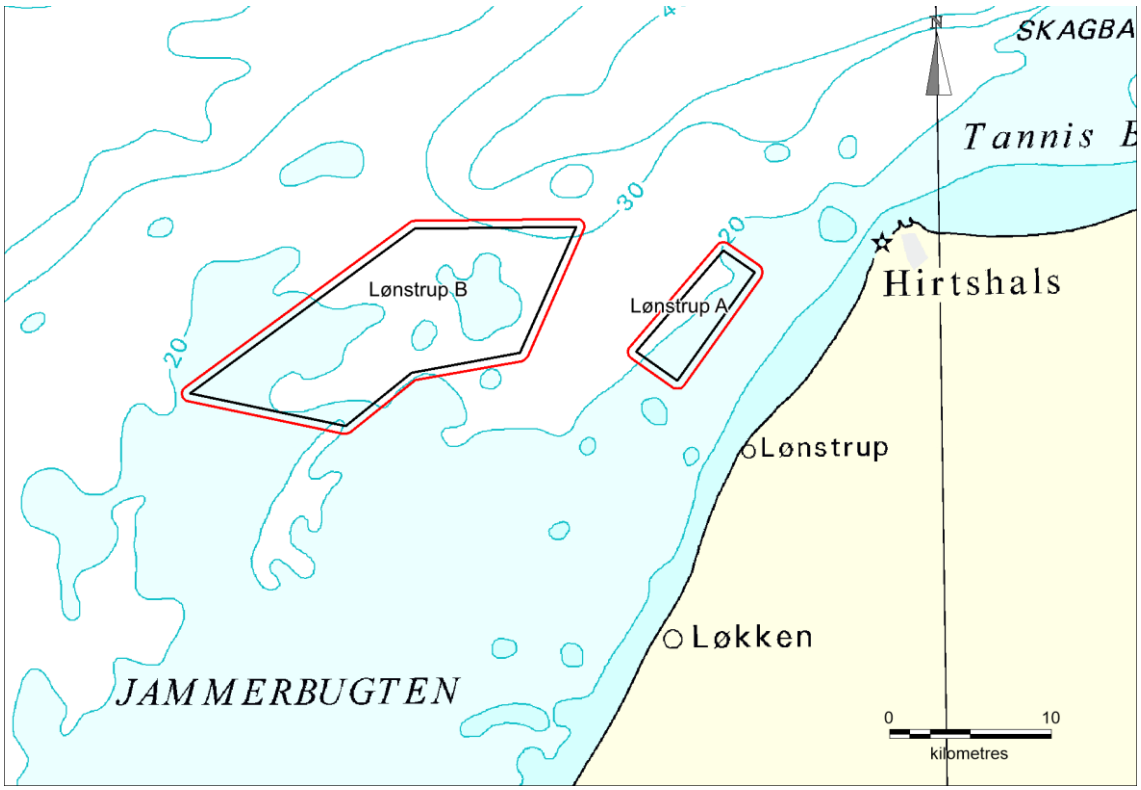
1. Introduktion

For at sikre forsyningssikkerheden af sand til kystfodringen har Kystdirektoratet (KDI) flere bygherretilladelser til råstofindvinding af sand på havet. Ved Lønstrup har KDI ikke bygherretilladelser hvorfor der skal findes nye områder her. WSP/GEUS udfører for KDI rådgivning og bistand vedrørende indhentning af fremtidige råstofindvindingstilladelser i forbindelse med KDI's fællesaftaler.

GEUS har for KDI i 2020 udført screening af eksisterende data og udpegning af efterforskningsområder i Jammerbugten ud for Lønstrup, i hvilke der skal foretages IA geofysisk kortlægning (GEUS Rapport 2020/8). Nærværende rapport omhandler geofysisk detailkortlægning, prøvetagning, og kortlægning af sandressourcer i fase IA områderne Lønstrup A og Lønstrup B udført i 2020 (Figur 1). GEUS har stået for den geofysiske kortlægning og boringer, mens WSP har udført HAPS prøvetagninger. Herudover er resultater af udvalgte boringer fra Miljøstyrelsens råstofkortlægning i Jammerbugten 2020 inddraget til tolkning af ressourcepotentialet af de to undersøgelsesområder.



Figur 1. Oversigt over undersøgelsesområderne Lønstrup A og B i Jammerbugten ud for Lønstrup.

1.1 Formål

GEUS udfører fase IA storskala seismisk kortlægning af to områder ud for Lønstrup med henblik på at identificere og beskrive potentielle sandressourceområder. De akustiske undersøgelser skal danne grundlag for udvælgelse af potentielle indvindingsområder til efterfølgende fase IB detailundersøgelser. Undersøgelserne følger Miljøstyrelsens anvisninger for fase IA kortlægning jf. Råstoflovens bekendtgørelse nr. 1680 af 17/12/2018.

Der stilles følgende krav til fase IA undersøgelser:

- Der sejles med en linjeafstand i hele efterforskningsområdet, der sikrer grundlaget for afgrænsning af et eller flere ressourceområder.
- Metodevalget i den indledende kortlægning tilpasses efterforskningens formål og de forventede geologiske og bathymetriske forhold i området.
- Undersøgelserne afsluttes med første generationskort over havbunden i hele efterforskningsområdet med beskrivelse af alle potentielle ressourceområder. Alle resultater, positioner, sejllinjer, kort og tolkninger af indsamlede data afleveres til Miljøstyrelsen.

1.2 Krav til sandkvalitet og mængder

Kystdirektoratet har oplyst følgende krav til sandkvalitet, dybder og størrelse for et potentielt indvindingsområde ud for Lønstrup:

- Kornstørrelsesmiddelværdi D50 skal være i intervallet 0,2 – 0,4 mm, og kornstørrelsesfordelingen skal være tilnærmelsesvis normalfordelt omkring det ønskede D50 interval. Indhold af fint materiale (<0,125mm) kan være op til 12 %.
- Dybden tættest mod kystlinjen, hvortil KDI vil acceptere indvinding er omkring den inderste 16 m dybdekurve (DVR90).
- Ønskede minimum indvindingsarealer er ca. 1x2 km.

Kystdirektoratets behov for fodring ved Lønstrup er oplyst til at være 204.000 m^3 årligt. Dvs. at for en 10-årige periode, skal der indhentes indvindingstilladelse på ca. 2,04 mio m^3.

1.3 Tidligere undersøgelser

Tidligere regionale råstofundersøgelser af Jammerbugtområdet har enten været af meget generel karakter uden en fokuseret rapportering og kortlægning af råstofpotentialet, eller de har været af konfidentiel karakter bl.a. med henblik på udlægning af fællesområde 580-AA Jammerbugt. Før 2020 var der ikke rapporteret boringer i efterforskningsområderne Lønstrup A og B. I 2019 påbegyndte GEUS for Miljøstyrelsen en ny regional råstofundersøgelse af hele Jammerbugt området, og der blev udført survey med Sparker, Innomar, Side scan-sonar og Multibeam i et 5x10 km gridnet. Efterfølgende blev der i juli 2020 udført et større antal vibrationsboringer, som er registreret på råstofdatabasen MARTA. De pågældende data har sideløbende med ny indsamlede data for Kystdirektoratet i nærværende projekt været benyttet til at udpege og bedømme sandkvalitet af potentielle ressourceområder.

1.4 Surveyområder

Efterforskningsområde Lønstrup A er beliggende ca. 5-10 km NV for Lønstrup og består af et potentielt indvindingsområde og en omkringliggende påvirkningszone på 500 m, i alt 34,3 km^2. Hjørnekoordinater for det potentielle indvindingsområde er angivet i Tabel 1.

Tabel 1. Hjørnekoordinater for potentielt indvindingsområde, Lønstrup A.

Y (UTM32N)	X (UTM32N)	N. Bredde N	Ø. Længde
6376073	541054	57° 31.52'	09° 41.13'
6374300	543608	57° 30.55'	09° 43.67'
6380997	548382	57° 34.13'	09° 48.53'
6382347	546442	57° 34.87'	09° 46.60'

Efterforskningsområde Lønstrup B er beliggende ca. 15-30 km VNV for Lønstrup og består af et potentielt indvindingsområde og en omkringliggende påvirkningszone på 500 m, i alt 180,6 km^2. Hjørnekoordinater for det potentielle indvindingsområde er angivet i Tabel 2.

Tabel 2. Hjørnekoordinater for potentielt indvindingsområde, Lønstrup B.

Y (UTM32N)	X (UTM32N)	N. Bredde N	Ø. Længde
6373439	513483	57° 30.20'	09° 13.50'
6382123	525195	57° 34.85'	09° 25.28'
6383847	527745	57° 35.77'	09° 27.85'
6383943	537437	57° 35.78'	09° 37.58'
6375989	533947	57° 31.51'	09° 34.01'
6374825	527187	57° 30.91'	09° 27.23'
6371479	523093	57° 29.12'	09° 23.11'

2. Survey udførelse

Mobilisering af surveyskibet *MS Anette Christina* blev udført d. 27-28 juli 2020 i Hvide Sande havn (Tabel 3). I den forbindelse blev der fastgjort stævnrør til montering af kombineret side scan sonar/multibeam (Edgetech 6205) og Innomar transducer (pinger) blev monteret på bagbords side i påsvejset beslag. GEUS' surveycontainer med optageudstyr og overvågningsmonitors blev monteret på agterdækket. Grundet udsigt til dårligt vejr flere dage frem, blev Sparker mobilisering udsat til 5-6 august i Hanstholm Havn. Sparker udstyr blev rigget til på eksisterende bom på styrbord side og magnetometer blev klargjort til udsætning fra agterstævnen.

Seismisk survey af Lønstrup A og B blev udført i perioden 6-8 august 2020. Surveyforholdene var ideelle med svag til let vind fra sydøst til syd og bølgehøjder <0,5 m.

I Lønstrup B blev der sejlet i et 2x2 km gridnet orienteret SV-NØ/NV-SØ. I forventning om at et potentielt sandressourceområde ved Lønstrup A kunne være af væsentlig mindre udstrækning, blev der sejlet i et 1x1 km gridnet, ligeledes orienteret SV-NØ/NV-SØ. Der blev sejlet med en hastighed på 4,5-4,7 knob og med Side scan sonar range indstillet til 100 m på hver side af skibet.

Datadækning og kvalitet af side scan sonar, Innomar pinger og sparker data blev checket dagligt og efter fuldførelse af hvert område.

Efter preliminær tolkning af seismikdata blev der d. 16-17 september 2020 udført 23 boringer i Lønstrup B området fra *MS Skoven* med GEUS's 6 m vibrocorer. To af boringerne blev udført som gentagne boringer på samme position, grundet lille penetration i første forsøg (Løn-06A og Løn-13A). Vejret var begge dage præget af let-frisk vind fra sydlig retning. Bølgehøjden var generelt omkring 1 m.

Tabel 3. Oversigt over survey forløb.

Dato	Arbejdsområde	Kommentar
27-28/7/2020	Hvide Sande	Mobilisering af MS Anette Christina. Montering af Sonar, Innomar sedimentekkolod, og survey container
5/8/2020	Hanstholm	Mobilisering af Sparkerudstyr
6-8/8/2020	Lønstrup	Survey af Lønstrup A B område
8/8/2020	Hanstholm	Demobilisering af seismikudstyr
14/09/2020	Hvide Sande	Mobilisering af MS Skoven for vibrationsboring

16-17/09/2020	Lønstrup IB	Vibrationsboring
16/11/2020	Hvide Sande	Demobilisering af boreudstyr

Følgende personer deltog i det akustiske survey:

- Niels Nørgaard-Pedersen, GEUS (Geolog, seniorforsker og projektleder)
- Lars Georg Rödel, GEUS (Senior Marintekniker)
- Sigurd B. Andersen, GEUS (Marintekniker)

Følgende personer deltog i boringstogtet:

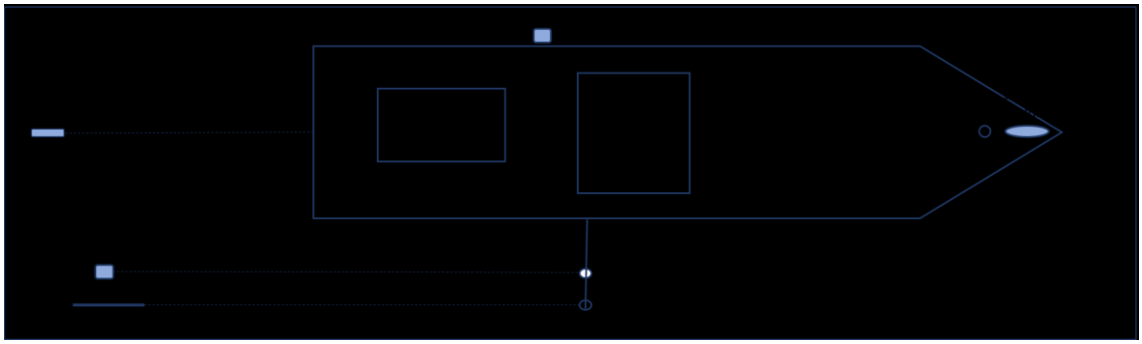
- Niels Nørgaard-Pedersen, GEUS (Geolog, seniorforsker og projektleder)
- Sigurd B. Andersen, GEUS (Marintekniker)
- Johnny Bjerregaard Jørgensen (Bjerregaard Montage Aps.) med tre medhjælpere

3. Anvendt udstyr

3.1 Opmålingsskib

Surveyskibet *MS Anette Christina* chartret gennem FOGA Aps. blev benyttet til geofysisk opmåling (Figur 2). I Figur 3 ses skitse af udstyrsopsætning.

Figur 2. Surveyskibet MS Anette Christina.



Figur 3. Surveyudstyr opsætning på MS Anette Christina.

3.2 Udstyr og software

Den geofysiske opmåling inkluderede side-scan sonar, multibeam, sedimentekkolod, sparker seismik, og magnetometer. I Tabel 4 ses oversigt over udstyrsspecifikationer.

Tabel 4. Oversigt over anvendt surveyudstyr.

Udstyr	Model	Specifikationer
GPS positionering	Applanix PosMv 5	
Integreret side scan sonar/ multi-beam	Edgetech 6205	230/550/1600kHz
Sedimentekkolod (pinger)	Innomar Medium	Primær frekevens 8 kHz
Sparker	Geo-Resources Geo-Spark 200	
Streamer	Geo-Sense 8-element	Enkelt kanal
Magnetometer	Geometrics G-882	20.000- 100.000 nT
Vibrocorer	GKG 6 m	11 cm diameter core liner

Positionering

Til positionering blev der benyttet en Applanix PosMv 5 modtager. GPS/GNSS/L modtageren benytter NTRIP korrektioner, hvor med der opnås en horisontal nøjagtighed på 0.1m og en vertikal nøjagtighed bedre end 0.3m. Dybdemåling relativt til referencepunkt (DVR90) bliver dermed automatisk tidevandskorrigeret. I forbindelse med mobilisering bliver offset fra GPS-antennen til sonar-transduceren opmålt. Under survey bliver antennepositioner og korrigerede navigationsdata fordelt på datastrengen til softwaren for de individuelle optageinstrumenter. GPS højden beregnes på basis af geoid adskillelse (DKGE-OID02).

Bathymetri

Vanddybder blev opmålt I forhold til DVR90 med Edgetech 6205 Multi phase Echosounder'en der var monteret under stævnen i en dybde af 3 meter under vandlinjen. Instrumentets 230 kHz frekvens benyttes til bathymetriopmålingen og position, højde, role/pitch/heave kompenseres af en motion sensor forbundet til Applanix PosMv 5 modtageren. Kombinationen af de to instrumenter giver en absolut nøjagtighed på 0.3 m. RTK værdier nedtages kontinuerligt under survey. Kortvarige perioder hvor internetforbindelse mistes fører dog til manglende RTK værdier. Dataopsamling foregår i Edgetech software'n Discovery, og data-filer registreres i Edgetech JSF format. I forbindelse med opmålingen blev der foretaget patchtest af sonar'en på en markant bundform. Patchtest data blev senere benyttet til kalibrering af sonar og endelig processering af dybdedata. JSF filerne blev processeret dagligt for at checke

datakvalitet. Heave og SVP (lydhastighedsprofiler) blev importeret til SonarWiz projekt for at korrigere rådata. Datasættet blev renset for 'outliers' og data blev begrænset til 140 grader interval for at ekskludere større unøjagtighed på ydre strålevifte. Det rensede datasæt blev eksporteret som Geotiff fil for at skabe et overbliksbillede og ligeledes som et ESRI grid, der kan viderebehandles med GIS software.

Side scan sonar havbundsoverflade kortlægning

EdgeTech 6205 side-scan sonar'en opererer med frekvenserne 230 og 550 kHz. Den optimale opløsning i sejlretningen er på ca. 4.5 cm. Data blev optaget i Edgetech JSF format med Sonarwiz 7 software.

Innomar højopløseligt sedimentekkolod

Der blev benyttet et Innomar SES-2000 Medium parametrisk sedimentekkolod til kortlægning af de øvre 5-10 af havbunden. Penetrationsdybden i finkornede bløde sedimenter kan være bedre end 50 m, men tilstedeværelse af hårde, stenede eller sandede lag vil typisk reducere penetrationen meget. Erfaringsmæssigt kan sandede lag med en tykkelse på op til 5-10 m registreres. Den vertikale opløsning er op til ca. 5 cm afhængigt af den benyttede puls. Alle data bliver korrigeret for roll og heave med en motionsensor (SMC), som er placeret på skibet direkte over transduceren.

Sparkerudstyr

Der blev anvendt et Geo-Spark 200 sparkersystem fra Geo-Resources samt en enkeltkanal GeoSense streamer til at dedektere dybere i havbunden i mere hårde lag. Der kan typisk opnås en dybdepenetræring på 25-150 m med sparkersystemet. Et Mini-Trace 2 optagesystem fra Georesources blev benyttet.

Magnetometer

Der blev anvendt et Geometrics G-882 magnetometer som blev slæbt ca. 20 m efter skibet med fastgøringspunkt på styrbords side 3 m fra centerlinjen. Magnetometeret var fastgjort til opdriftsbøje med 10 m line, for at forhindre magnetomeret i at tage bunden under langsom manøvrering. Rådata blev optaget med Hypack software.

Vibrocoring

GEUS' 6 m VKG Vibrocorer og MS Skoven's kran blev benyttet til kernetagning. Vibrocore'n kan tage havbundskerner af sand, mudder, ler, moræne og løst cementerede sedimenter. Der benyttes et 6 m rør af rustfrit stål, hvori der indføres en 6 m PVC coreliner med en diameter på 106 mm. Før kernetagning bliver skibet ankret op med hæk og stævnanker og placeret over den ønskede kernetagningsposition. Under kernetagning, hvor kernerøret

vibreres ned i havbunden, kan penetrationsdybde og modstand registreres og vises på en kontrolmonitor på dækket. Ved fyldt kernrør eller maksimal modstand uden videre penetration løftes kernetageren langsomt op fra havbunden. Når det fyldte kernerør er sænket ned til vandret på dækket, udtages og afsaves kernesektioner af 1 m længde. Kernesektionernes endestykker påsættes låg og der noteres kernenummer, sektionsnummer og top/bund af hvert kernestykke før det nedpakkes til hjemtransport.

4. Dataprocessering og tolkning

De seismiske data er blevet processeret, tolket og bearbejdet til kort, og resultaterne er præsenteret i GIS-programmet MapInfo. Nedenstående Tabel 5 giver en oversigt over databearbejdning og tolknings dataformater, software og slutprodukter.

Tabel 5. Oversigt over datatyper og -formater.

Datatype	Dataformat	Data- og tolkeprogram	Slutprodukt
Positionering	ASCII tekst	NaviPac, Hypack, MapInfo	Sejllinjekort
Bathymetri	ASCII tekst	Edgetech Discovery, SonarWiz 7 MapInfo Vertical Mapper	Dybdekort
Side scan	Jsf konverteret til geotiff	SonarWiz 7, Mapinfo	Havbundsedimentkort, menneskelig aktivitet
Innomar	Optaget i Raw format. Konverteret til SEGY	SesConvert64, Kingdom, Mapinfo	Havbundssedimentkort og ressourcekort
Sparker	SEGY	Geosuite AllWorks, Kingdom, Mapinfo	Ressourcekort

5. Survey resultater

Survey data er blevet processeret, tolket og bearbejdet til førstegenerationskort. På baggrund af data suppleret med boringsresultater fra Miljøstyrelsens 2020 råstofkortlægning i Jammerbugten, blev der udvalgt positioner til Vibrocoring, og HAPS prøvetagning. Efter gennemførelse af prøvetagning er analyseresultater inddraget i endelig udfærdigelse af tolkede kort, MapInfo datafiler, og databilag. Der er udarbejdet kort for sejllinjer, dybdeforhold, side scan sonar mosaik, prøvetagningspositioner, substrattyper, og ressourcemægtighed.

I det følgende beskrives analyser og tolkning af data. Analyseresultater og kortpræsentationer kan findes i bilagene til denne rapport.

5.1 Sejllinjer

I Lønstrup A blev der sejlet i et 1x1 km sejllinjegrid svarende til i alt 61,2 km sejllinjer. Linjerne er nummereret som xx_Loenstrup_A_KDI_2020 (xx = linje nr.). Sejllinjer er vist i kortbilag A1.

I Lønstrup B blev der sejlet i et 2x2 km sejllinjegrid svarende til i alt 179 km sejllinjer. Linjerne er nummereret som xx_Loenstrup_B_KDI_2020 (xx = linje nr.) Sejllinjer er vist i kortbilag B1.

5.2 Bathymetri

De processerede data fra multibeamopmålingen er eksporteret som højopløselig xyz gridfil og data er regriddded i Vertical Mapper og plottet med dybdefarvekode og 1 m konturlinjer i forhold til DVR90. Data er plottet som bånd med en bredde på ca. 150-180 m langs sejllinjer.

Lønstrup A

Dybden i Lønstrup A varierer fra ca. 10 m til ca. 30 m (Kortbilag A2). De største dybder på op til 30 m ses langs den vestlige og nordlige del af området. I den sydøstlige del af området findes to store amalgamerede rygge med dybder på kun 10-16 m. Dybden i den sydøstlige del er betydeligt mindre end minimumsdybden på ca. 15 m angivet i Geodatastyrelsens datasæt for området.

Lønstrup B

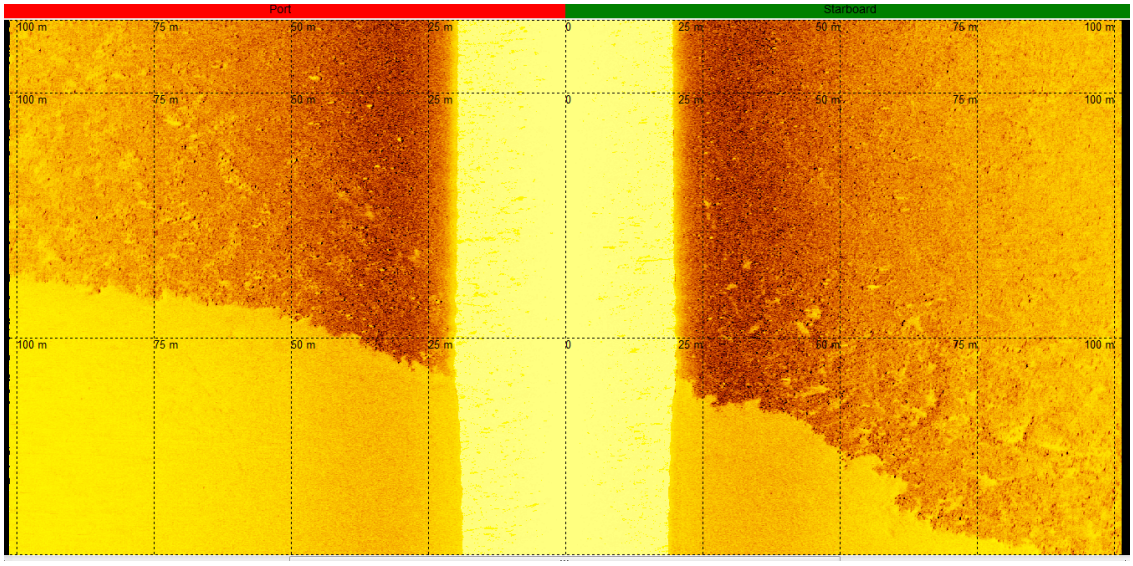
Dybden i Lønstrup B varierer fra ca. 15 m til ca. 35 m (Kortbilag B2). Der er overordnet set god overensstemmelse med søkortets 20 m konturlinje. De største dybder på op til 35 m ses langs den nordlige og nordøstlige del af området. I den øvrige del af området er dybden generelt <25 m, og mindste dybder er registreret i den sydvestlige og den centrale nordlige del af området. Markante trug og rygge af store bundformer med en højde på ca. 2-5 m præger større dele af Lønstrup B området.

5.3 Side-scan mosaik

Der er genereret højopløselige geotiff filer (tiles) af de processerede side scan sonar data og tiles er importeret og plottet i Mapinfo.

Lønstrup A

Side scan mosaikken viser to større lysere områder repræsenterende lavere reflektiv sandbund i henholdsvis den sydøstlige og den centrale del af området (Bilag A3). De sandede områder er præget af dynamiske bundformer og er sammenfaldende med de mindste vanddybder. Mørkere partier repræsenterende højere reflektiv gruset og stenbestrøet bund ses i den nordlige og den vestlige del af området, samt i et bånd i den centrale del, der adskiller de to sandede områder nævnt ovenfor (Figur 4). Der er ikke observeret trawlspor, vrag eller andre spor af menneskelig aktivitet i undersøgelsesområdet.



Figur 4. Side scan sonar billede af brat overgang mellem homogen sandbund (nederst) og bund med stenbestrøning (øverst) i Lønstrup A.

Lønstrup B

Side scan mosaikken viser klar dominans af lavere reflektiv sandbund i området (Bilag B3). Kun i den nordøstlige og den sydøstlige del af området ses markante større partier af højere reflektiv havbund, som afspejler mere gruset havbund stedvis med stenbestrøning. Den karakteristisk lavreflektive havbund er typisk afbrudt af smalle højreflektive bånd, som er sammenfaldende med trug mellem større dynamiske bundformer. Det må antages at disse bånd er af mere gruset karakter, da erkendbare sten typisk ikke kan observeres i båndene. Der er ikke observeret trawlspor, vrag eller andre spor af menneskelig aktivitet i undersøgelsesområdet.

5.4 HAPS prøvetagninger

I Lønstrup B er der af WSP foretaget HAPS prøvetagning med kornstørrelsesanalyse, tørstofindhold og glødetabsanalyse på i alt udvalgte 40 positioner. Positionerne er vist på kortbilag B4 og i Bilag D1 og D2 ses en tabellarisk oversigt over resultaterne.

Alle prøvetagninger er karakteriseret som sand, hvor af 3 af prøverne er af mere gruset karakter. De fleste af sandprøverne beskrives som relativt finkornede og velsorterede med indhold af skalfragmenter. Nogle af prøverne er dog beskrevet som mellem til grovkornede. Resultaterne af kornstørrelsesanalyserne viser en middelkornstørrelse (D50) på 0,31 mm (grusprøve 19 undtaget dette gennemsnit) i et kornstørrelsesspektrum varierende fra 0,13-0,79 mm. Finstofindholdet (<0,125 mm) er gennemsnitligt på 2,13%.

Der er ikke foretaget HAPS prøvetagning i Lønstrup A.

5.5 Substrattypekortlægning

Der er foretaget substrattypekortlægning langs side-scan spor baseret på tolkning af side-scan sonar mosaik, samt prøvetagningsresultater fra HAPS og Vibrocores.

Lønstrup A

Undersøgelsesområdet består af substrattype 1b i den sydøstlige og centrale del af området og af substrattype 2 og 3 i den nordlige og vestlige del af området (Kortbilag A4). Substrattype 1b repræsenter en dynamisk præget fast sandbund med varierende indslag af skaller og grus. Substrattype 2 består af en blanding af groft sand og grus samt enkelte småsten på

op til ca. 10 cm. Substrattype 3 består af sand, grus og småsten samt spredte større sten med en dækning på 10-25%.

Lønstrup B

Undersøgelsesområdet er klart domineret af dynamisk præget fast sandbund substrattype 1b med stedvist indslag af substrattype 2 repræsenterende delområder af mere gruset til småstenet karakter (Kortbilag B5). Langs den nordøstlige og sydøstlige margin af området er der observeret større partier af mere stenet karakter (substrattype 3 med underordnet type 4).

5.6 Vibrationsboringer

På baggrund af seismik tolkning blev der udvalgt 20 positioner til vibrationsboring i Lønstrup B. Herudover eksisterer der 5 arkivboringer i Lønstrup B og to i Lønstrup A foretaget i forbindelse med Miljøstyrelsens boringskampagne i Nordsøen i 2020.

Positionsliste, boringsbeskrivelser, fotos af boringer og kornstørrelsesdata findes i Bilag C1-C5. Se kortbilag A5 og B4 for oversigt over boringspositioner.

Lønstrup A

To eksisterende boringer fra Lønstrup A, DGU arkivnr. 570915.2 (JAM-30) og 570915.4 (JAM-65), blev oprindeligt udpeget på baggrund af seismik linje fra 2019 MST råstofsurvey i Jammerbugten. JAM-30 består af 3,8 m finkornet marint sand (D50 = 0.09 mm) overlejrende 1,4 m sort ler af senglacial oprindelse. JAM-65 består af 2 m finkornet marint sand (D50 = 0.08 mm) overlejrende 3,7 m gråt ler af senglacial oprindelse.

Lønstrup B

Boringerne påviser holocænt marint sand til en dybde af minimum 5-6 m i store dele af området. Enkelte boringer langs den østlige afgrænsning (Løn-03 og Løn-09) bekræfter at den underliggende senglaciale lagserie domineret af lagdelt ler ligger næsten helt op til havbunden. Det marine sand er overvejende af finkornet karakter, men i områdets centrale til nordlige del udviser en række borekerner en lidt grovere sammensætning i de øverste par meter af boringsprofilerne (kerne nr. 07, 11, 12, 22, JAM-50). Sigteanalyser viser en middelkornstørrelse på ca. 0.2-0.3 mm og et finstofindhold på ca. 2-10% for den øverste sandenhed i delområdet. Den nedre del af kerneprofilerne indeholder typisk finkornet sand med en middelkornstørrelse på 0.1-0.2 mm, og et meget varierende finstofindhold på 10-90%.

5.7 Seismik tolkning

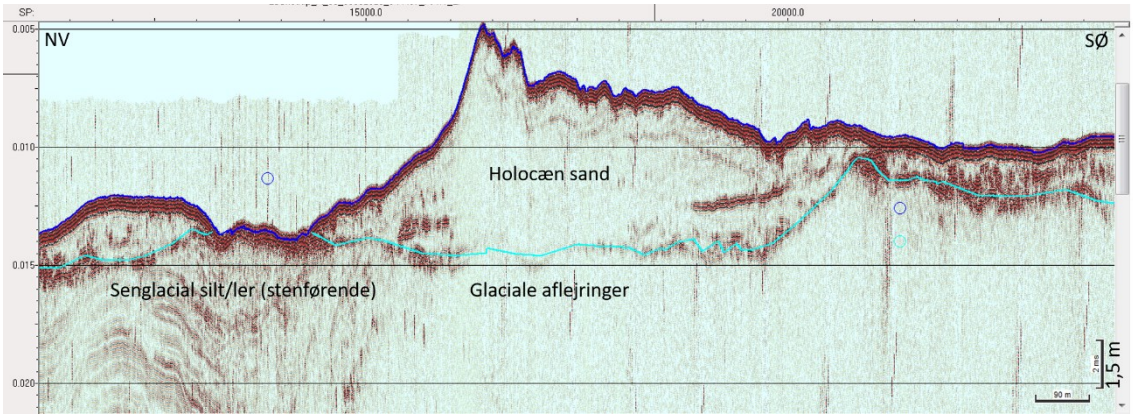
Fase Ia undersøgelser med Sparker og Innomar seismik samt boringer indikerer at de øvre geologiske enheder i området består af Weichsel glaciale aflejringer overlejret af finkornede senglaciale aflejringer (stedvist stenførende) og holocæne marine sandede aflejringer. De holocæne aflejringer kan i dele af Lønstrup B området underinddeles i en nedre finkornet til siltet enhed overlejret af en øvre mobil sandenhed (Figur 5). Det vurderes kun at de holocæne aflejringer har ressourcepotentiale.

Periode	Genetiske enheder	Lithologi
Øvre Holocæn	Marint mobilt sand, store sandbølger	Fin-mellemkornet sand
Nedre Holocæn	Marin transgression og sandudbygning mod NNØ	Finkornet sand/silt
Senglacial	Yoldiahav aflejringer (dybere vand)	Lagdelt ler/silt/sand (stedvist stenførende)
Weichsel Glacial	Glaciale aflejringer/Skærumhedehav	Moræneler/omlejret materiale

Figur 5. Oversigt over geologiske enheder og lithologi i området.

Lønstrup A

Sparker og Innomar seismik viser en tydelig erosiv grænse mellem senglaciale- glaciale aflejringer og overliggende holocæne sandede aflejringer (Figur 6). Undergrænsen af de holocæne aflejringer er tolket på basis af mere højopløselige Innomar data, og der er udarbejdet griddet mægtighedskort af den sandede holocæne enhed. Sandenheden findes hovedsageligt i den sydøstlige del af området hvor den fremtræder som en markant buet ryg. Mægtigheden er op til 5-6 m. To boringer Jam-30 og Jam-65 indikerer at sandenheden består af meget finkornet sand. Dybdemålinger viser at mægtigheden kulminerer på kritiske dybder <16 m.

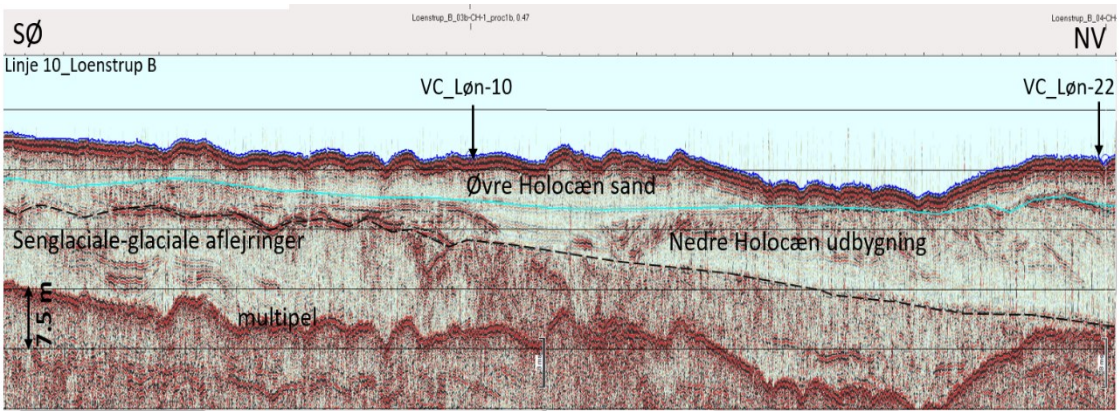


Figur 6. Lønstrup A Innomar profil af Holocænt sand overlejrende senglaciale og glaciale aflejringer.

Lønstrup B

Overfladen af de glaciale-senglaciale aflejringer kommer helt op til havbunden i den østligste del af Lønstrup B området, og falder mod dybere niveau i nordlig retning. De senglaciale aflejringer findes som udfyldninger i den glaciale flade, og både de glaciale og senglaciale aflejringer skæres erosivt af basis af de overliggende holocæne lag (Figur 7). Den holocæne lagserie består af en nedre nord-værts udbyggende marin enhed af finsand af mere eller mindre siltet karakter. Herover findes en mobil sand enhed bestående af fin-grovkornet sand som indgår i store dynamiske sandbølger, der vandrer mod NØ.

Som grundlag for foreløbig ressourceopgørelse er undergrænsen af den øvre mobile sand-enhed tolket på basis af sparker seismik kombineret med boringsresultater. Det skal bemærkes, at den højopløselige Innomar seismik i delområder viser, at den øvre holocæne sand-enhed kan opdeles i højere reflektiv øverste enhed overlejrende en lavere reflektiv nedre enhed. Kortlægning af den højere reflektive enhed kræver en tættere linjeafstand.



Figur 7. Eksempel på sparker seismik profil fra Lønstrup B gennem borepositionerne VC_Løn-10 og VC_Løn-22. Den glaciale-senglaciale overflade (stiplet linje) falder markant mod nordvest. Herover findes en enhed af udbyggende formodet nedre holocæne aflejringer. Øverst findes øvre holocænt mobilt sand som har potentielt ressourcepotentiale.

6. Ressourcekortlægning

Lønstrup A

Surveyresultaterne underbygger at kravene til sandkvalitet og dybdeforhold (jf. afsnit 1.2) ikke kan opfyldes i Lønstrup A området. To boringer påviser en middelkornstørrelse på ca. 0.1 mm af den holocæne sandenhed, og dybden er <16m hvor sandenheden har sin største mægtighed. Der er således ikke baggrund for at foretage videre fase IB detailundersøgelser af sandforekomsten i Lønstrup A.

Lønstrup B

Storskala seismisk kortlægning kombineret med boringer og HAPS prøver har påvist en stor potentiel sandressource i Lønstrup B området (Bilag B6). Ressourcen har stedvist en mægtighed på op til ca. 10 m, men over større dele af undersøgelsesområdet er mægtigheden 5 m eller mindre. Langs den østlige afgrænsning terminerer ressourcen op mod glaciale-senglaciale aflejringer blottet på havbunden (substrattype 3 og 4 områder jf. Bilag B5).

Kernelogs viser at den nedre del af den kortlagte sandforekomst generelt er finkornet sand, som ikke opfylder KDI's krav til sandkvalitet for Lønstrup. Den øvre del af forekomsten er af mere varierende kornstørrelse, og i et område i den centrale del af undersøgelsesområdet kan der i flere kerner (nr. 7, 11, 12, 16, 22 og Jam-50) i ca. 1-3 m kernedybde observeres en markant grænse mellem finkornet sand i den nedre del og mellemkornet sand i den øvre del. Det mellemkornede sand har en middelkornstørrelse på 0.2-0.3 mm, og opfylder dermed kravet til middelkornstørrelse. Højopløselig Innomar seismik indikerer, at det potentielt er muligt at kortlægge undergrænsen af den mellemkornede sandenhed. Dette vil kræve en betydelig tættere linjetæthed, idet mægtigheden af den øvre enhed i stor grad afspejler den komplekse morfologi af store vandrende sandrygge.

7. Indvindingsansøgningsområde

På baggrund af fase IA geofysiske undersøgelser understøttet med boringer er der i samråd med Kystdirektoratet udpeget et fase IB interesseområde (Bilag B7) i Lønstrup B efterforskningsområdet som potentielt indvindingsansøgningsområde for Lønstrup. Interesseområdet har et areal på 21,65 km^2 og dybden ligger i intervallet 16-28 m (Figur 8, Tabel 6).

Figur 8. Skraveret polygon viser udpeget fase IB interesseområde i Lønstrup B efterforskningsområde..

Tabel 6. Hjørnekoordinater for potentielt fase IB interesseområde i Lønstrup B.

X (UTM32N)	Y (UTM32N)	E (WGS84)	N (WGS84)
528480	6382822	009° 28.581'	57° 35.215'
529427	6381559	009° 29.522'	57° 34.531'
529605	6377137	009° 29.668'	57° 32.147'
526427	6376605	009° 26.480'	57° 31.872'
524078	6379644	009° 24.145'	57° 33.518'

8. Referencer

GEUS Rapport 2020/8: Screening af potentielle sandindvindingsområder ved Lønstrup for Kystdirektoratet – Rådgivning og bistand vedrørende indhentning af fremtidige råstofindvindingstilladelser i forbindelse med Kystdirektoratets fællesaftaler. GEUS Rapport 2020/8.

Bilag

Lønstrup A kortbilag:

A1: Sejlinjer

A2: Bathymetri baseret på multibeam opmåling

A3: Side-scan sonar mosaik

A5: Substrattypekort

A6: Kortlagt ressourcemægtighed

Lønstrup B kortbilag:

B1: Sejlinjer

B2: Bathymetri baseret på multibeam opmåling

B3: Side-scan sonar mosaik

B4: Prøvetagningpunkter (Vibrocores og HAPS)

B5: Substrattypekort

B6: Kortlagt ressourcemægtighed

B7: Potentielt Fase IB område

Lønstrup B boringer:

C1: Boringspositionsliste

C2: Boringsbeskrivelser med udvalgte analyseresultater

C3: Fotos af boringer

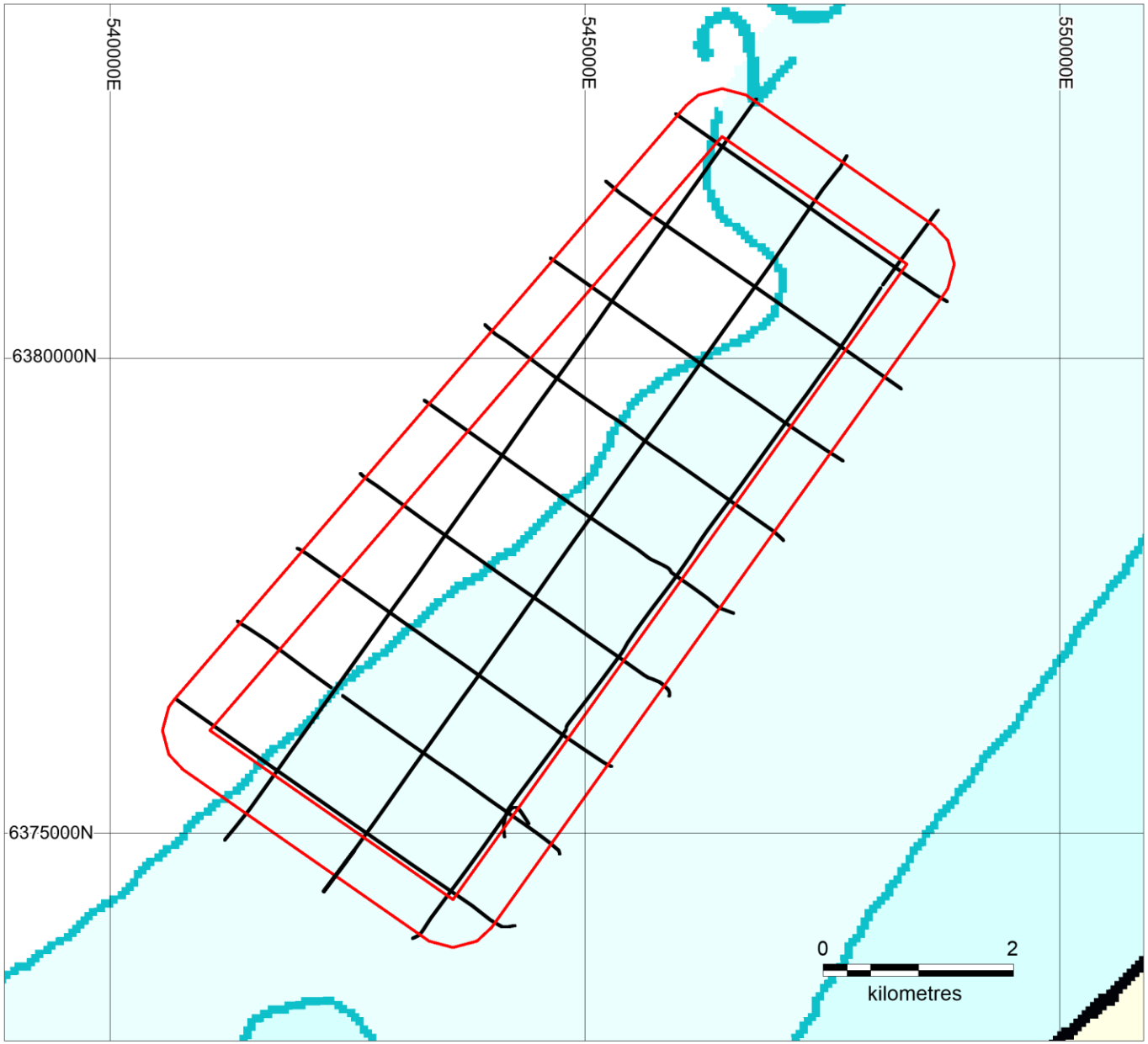
C4: Boringer: Kornstørrelse-, vandindhold-, og glødetabsanalyser (oversigt)

C5: Boringer: Kornstørrelsesdata og fordelingskurver

Lønstrup B HAPS:

D1: HAPS positioner og feltbeskrivelser (WSP survey, kortfattet oversigt)

D2: HAPS analyseresultater (WSP survey, kortfattet oversigt)



Område: Lønstrup A

Undersøgelsesfase Ia

Signaturforklaring

Undersøgelsesområde inkl. 500 m zone

Sejllinje

Datum: WGS84

Projektion: UTM 32N

Klient:

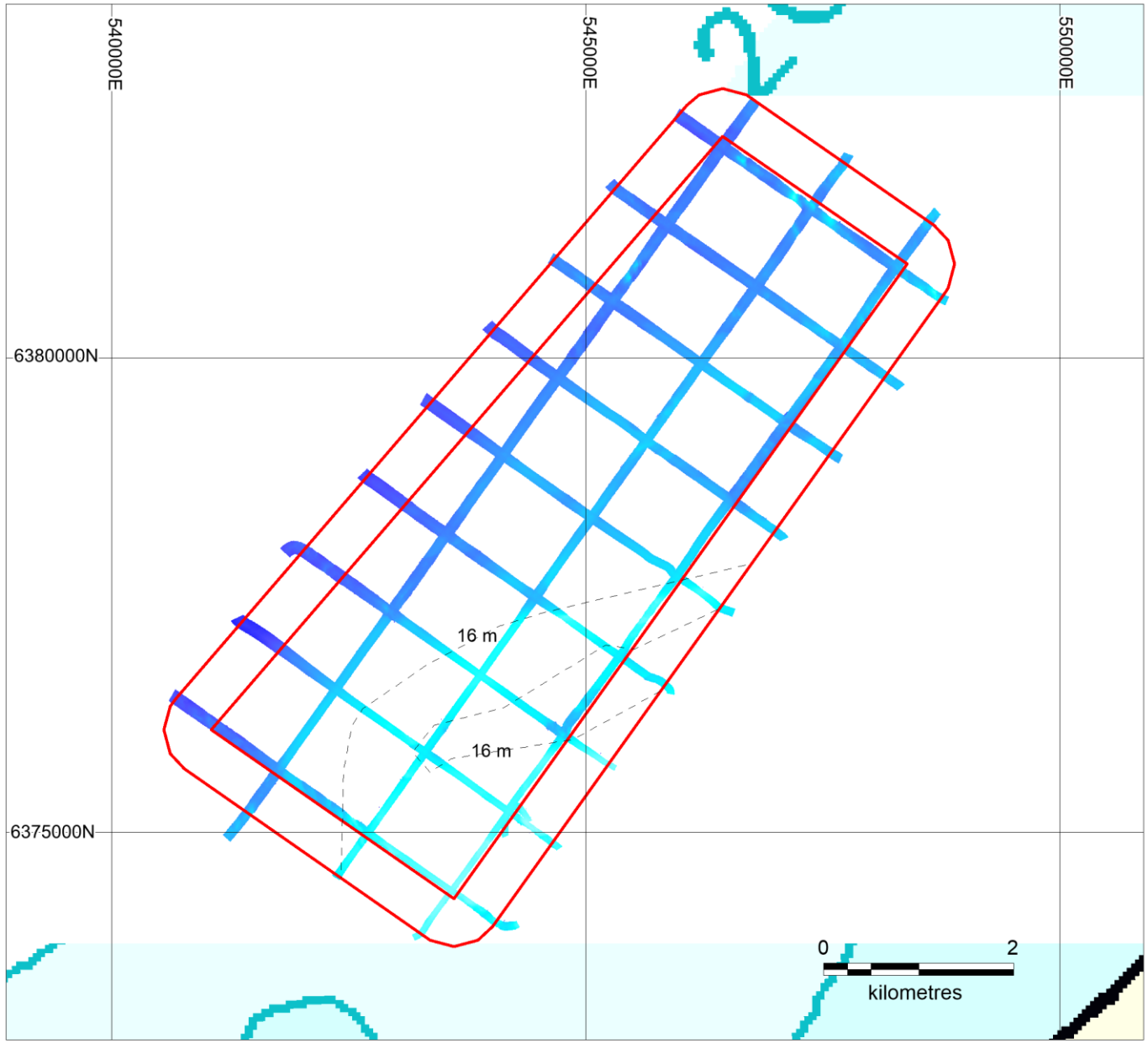
Miljø- og Fødevareministeriet
Kystdirektoratet

GEUS

wsp

Udført: NNP 24-02-2021

Bilag A1: Sejllinjer



Område: Lønstrup A

Undersøgelsesfase Ia

Signaturforklaring

Undersøgelsesområde inkl. 500 m zone

Dybde (m) DVR90

30.0
25.0
20.0
15.0
10.0

16 m dybdekontur

Datum: WGS84

Projektion: UTM 32N

Klient:

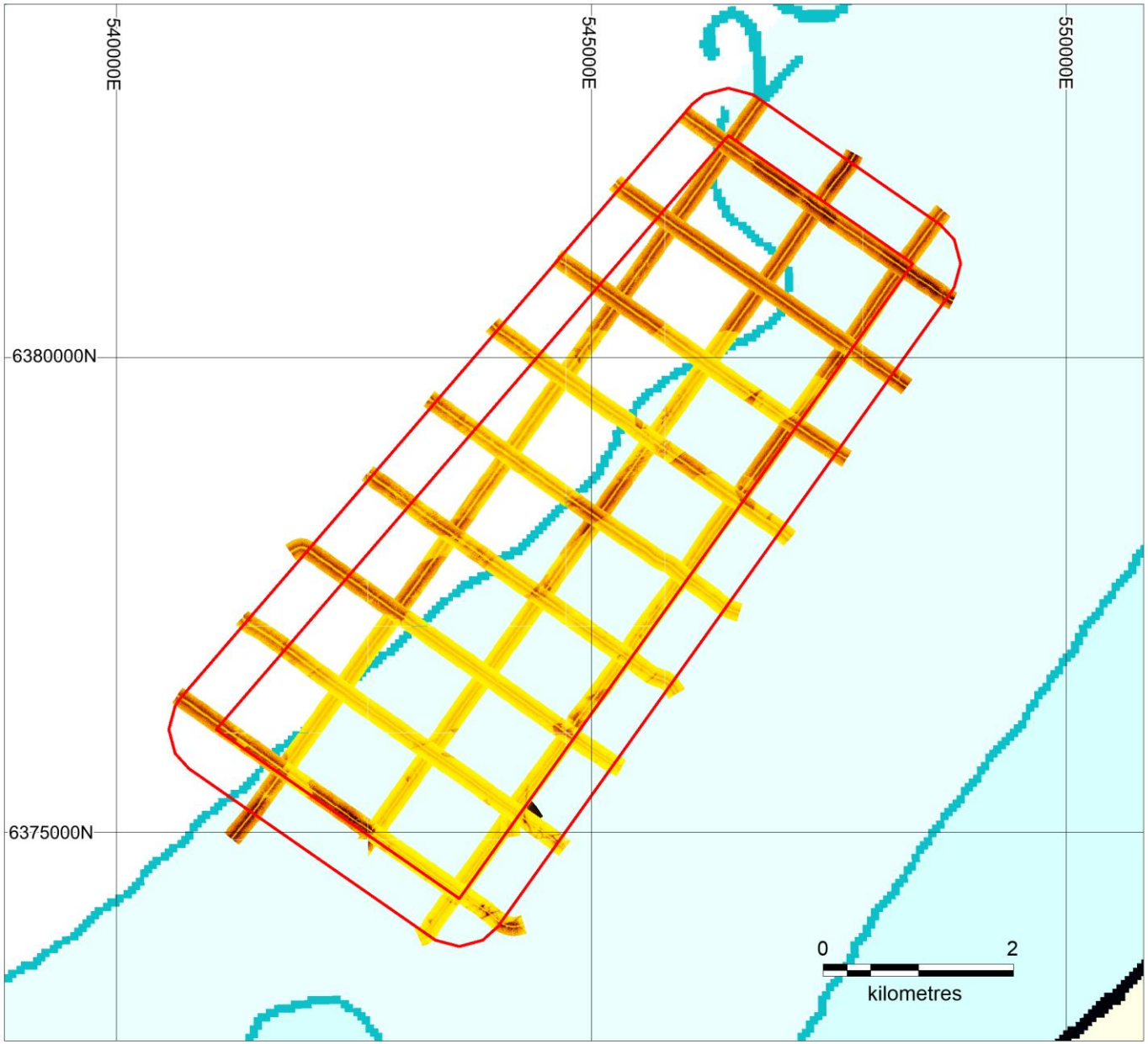
Miljø- og Fødevareministeriet
Kystdirektoratet

GEUS

wsp

Udført: NNP 24-02-2021

Bilag A2: Bathymetri



Område: Lønstrup A

Undersøgelsesfase Ia

Signaturforklaring

Undersøgelsesområde inkl. 500 m zone

Datum: WGS84

Projektion: UTM 32N

Klient:

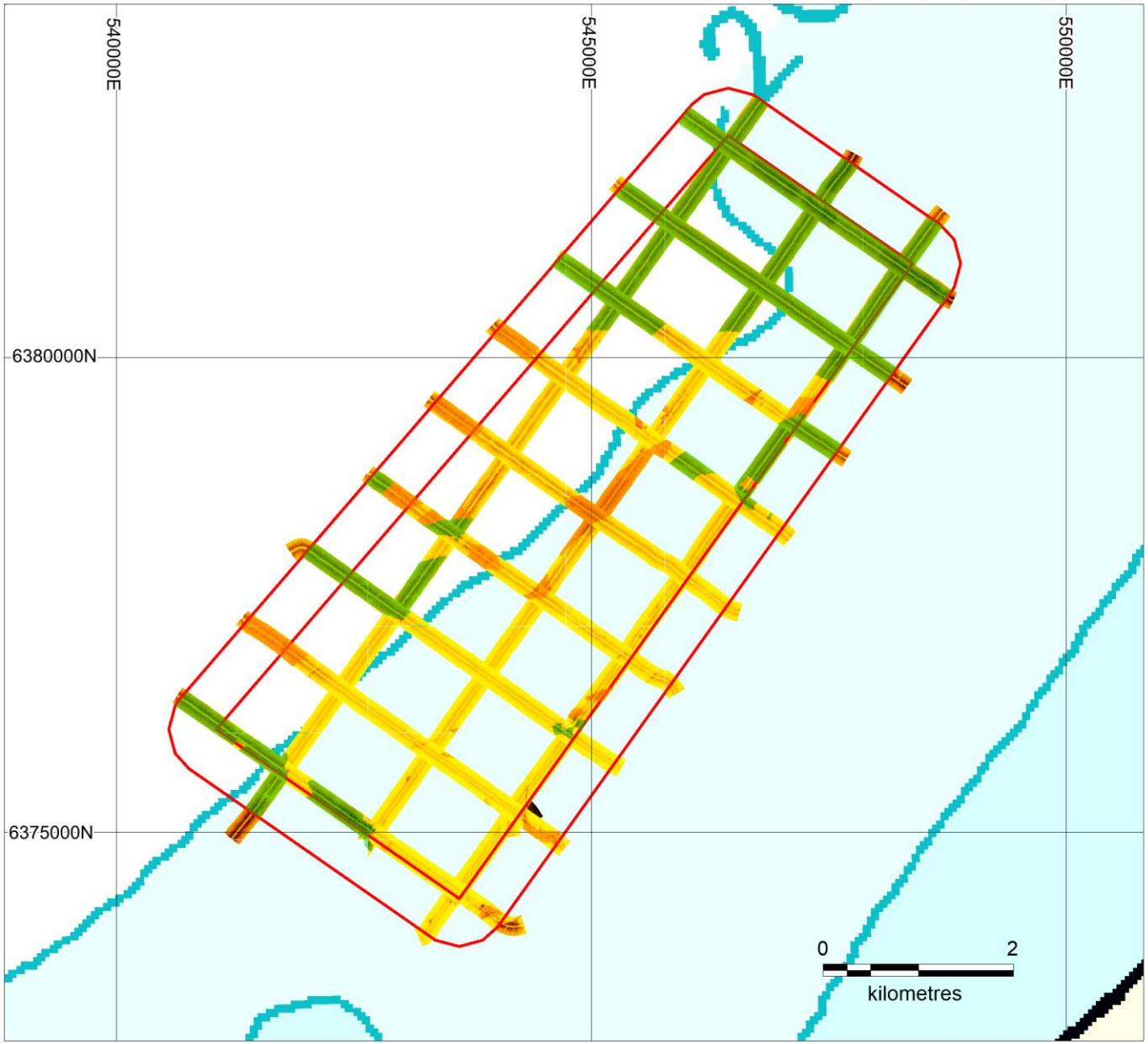
Miljø- og Fødevareministeriet
Kystdirektoratet

GEUS

wsp

Udført: NNP 23-02-2021

Bilag A3: Side-scan sonar mosaik



Område: Lønstrup A

Undersøgelsesfase Ia

Signaturforklaring

Undersøgelsesområde inkl. 500 m zone

Substrattyper:

- Type 1b
- Type 2
- Type 3

Datum: WGS84

Projektion: UTM 32N

Klient:

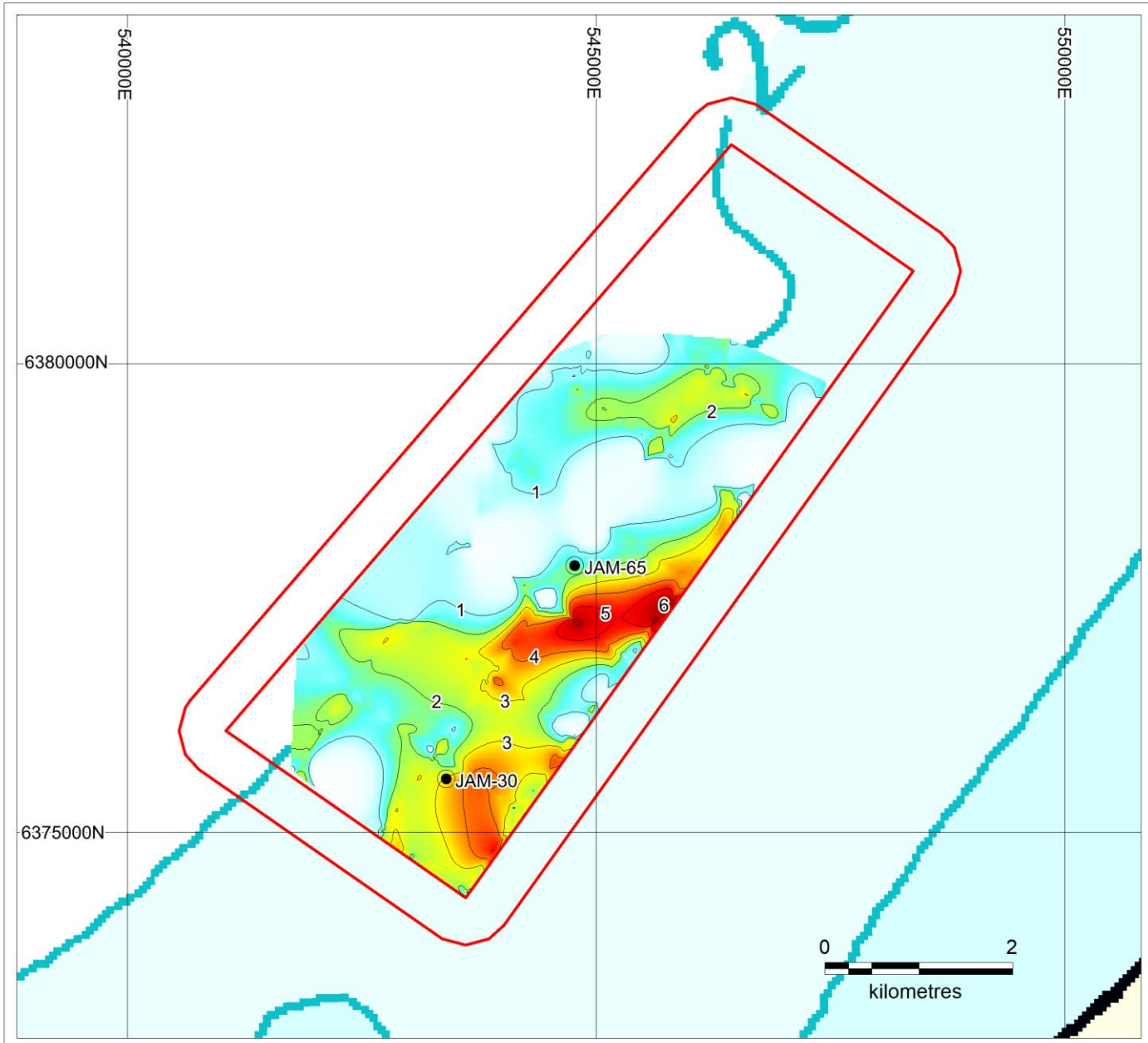
Miljø- og Fødevareministeriet
Kystdirektoratet

GEUS

wsp

Udført: NNP 23-02-2021

Bilag A4: Substrattyper lagt over side-scan sonar spor



Område: Lønstrup A

Undersøgelsesfase Ia

Signaturforklaring

Undersøgelsesområde inkl. 500 m zone

MST 2020 Vibrationsboring

Sandressource mægtighed (m)

6.0
5.0
4.0
3.0
2.0
1.0
0.0

Datum: WGS84

Projektion: UTM 32N

Klient:

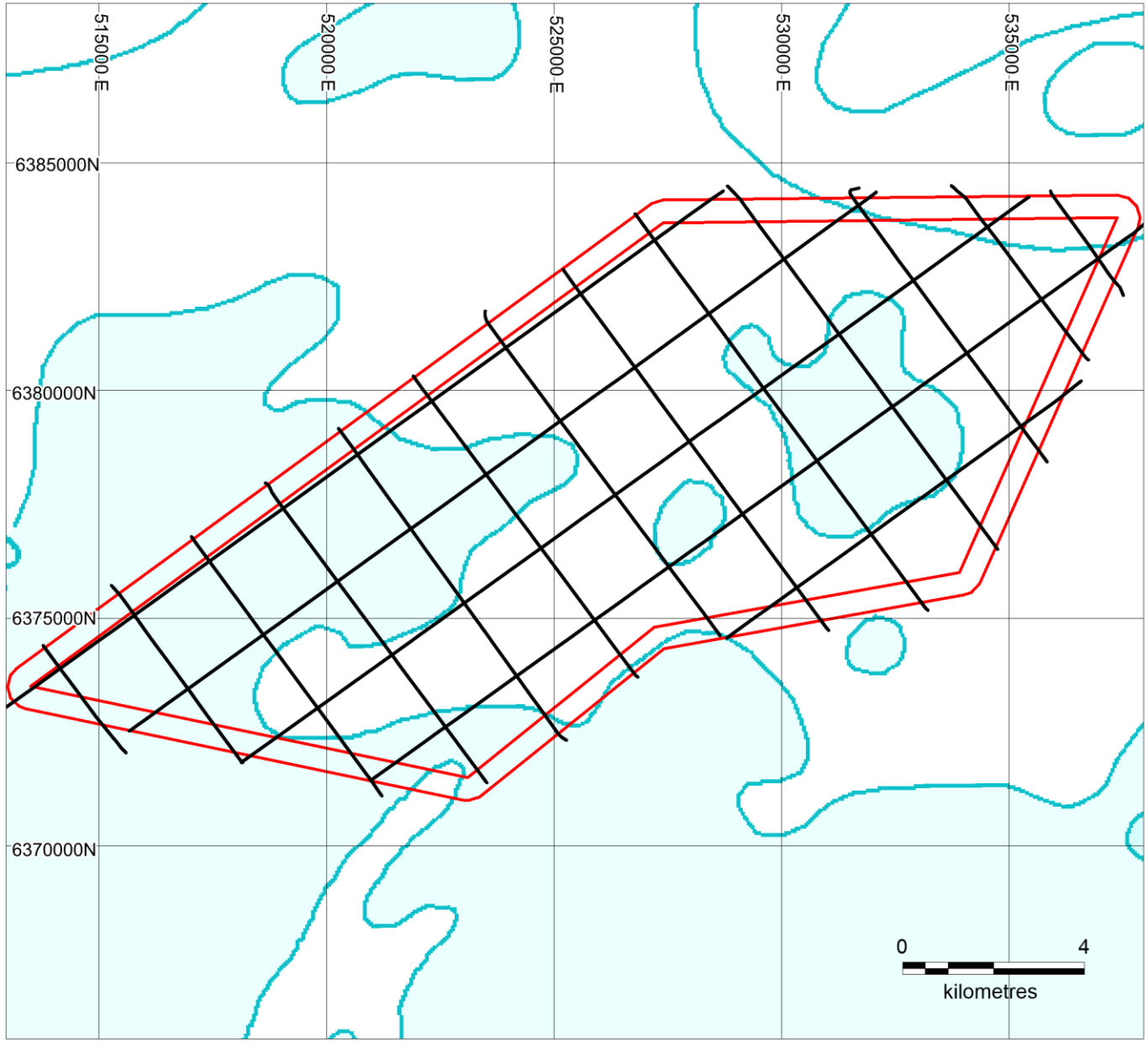
Miljø- og Fødevareministeriet
Kystdirektoratet

GEUS

wsp

Udført: NNP 23-02-2021

Bilag A5:
Potentiel ressourceforekomst



Område: Lønstrup B

Undersøgelsesfase Ia

Signaturforklaring

Undersøgelsesområde inkl. 500 m zone

Sejllinje

Datum: WGS84

Projektion: UTM 32N

Klient:

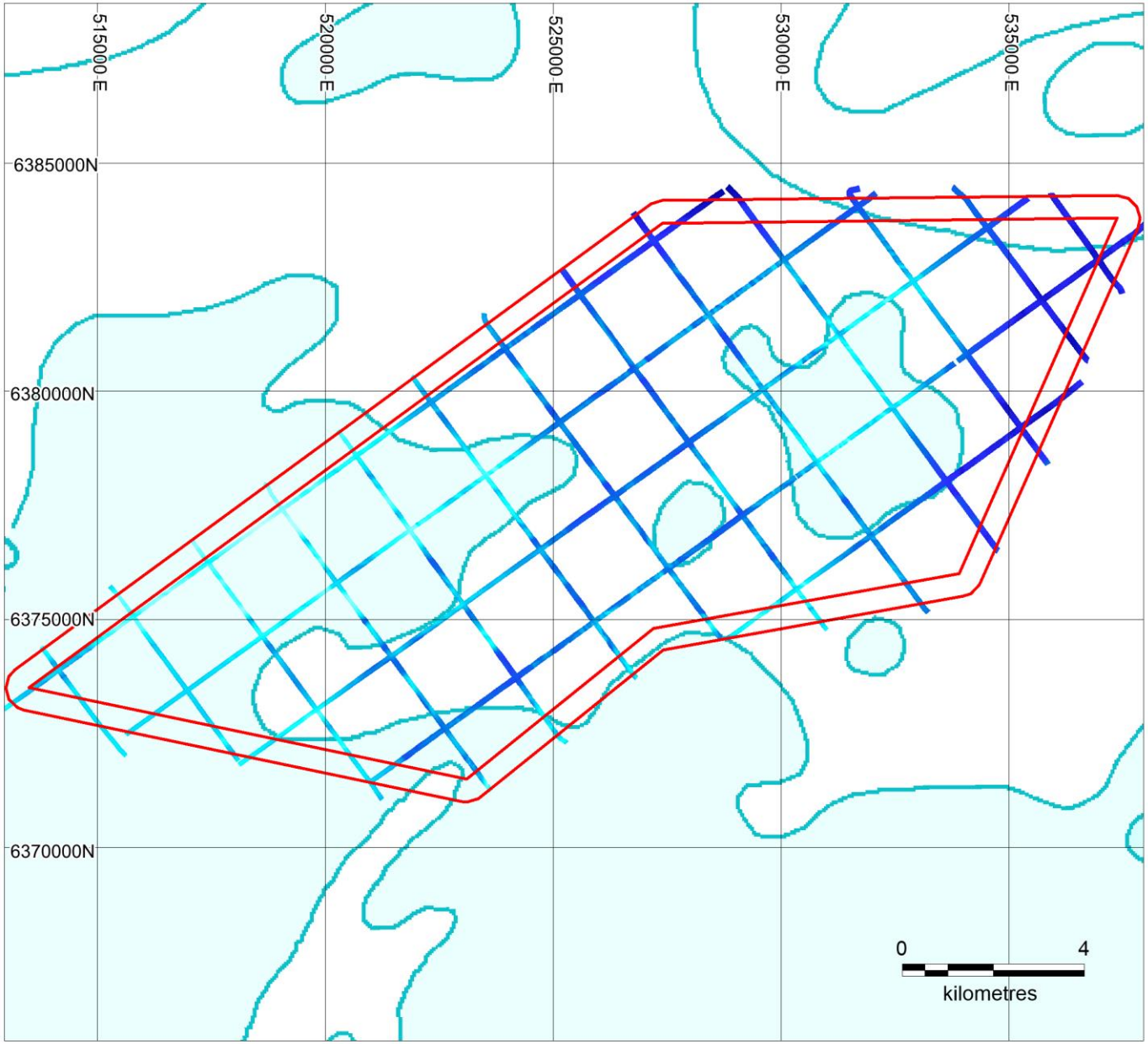
Miljø- og Fødevareministeriet
Kystdirektoratet

GEUS

wsp

Udført: NNP 23-02-2021

Bilag B1: Sejlinjer



Område: Lønstrup B

Undersøgelsesfase Ia

Signaturforklaring

Dybde (m) - DVR90

33.0
30.0
27.0
24.0
21.0
19.0
16.0
14.0

Datum: WGS84

Projektion: UTM 32N

Klient:

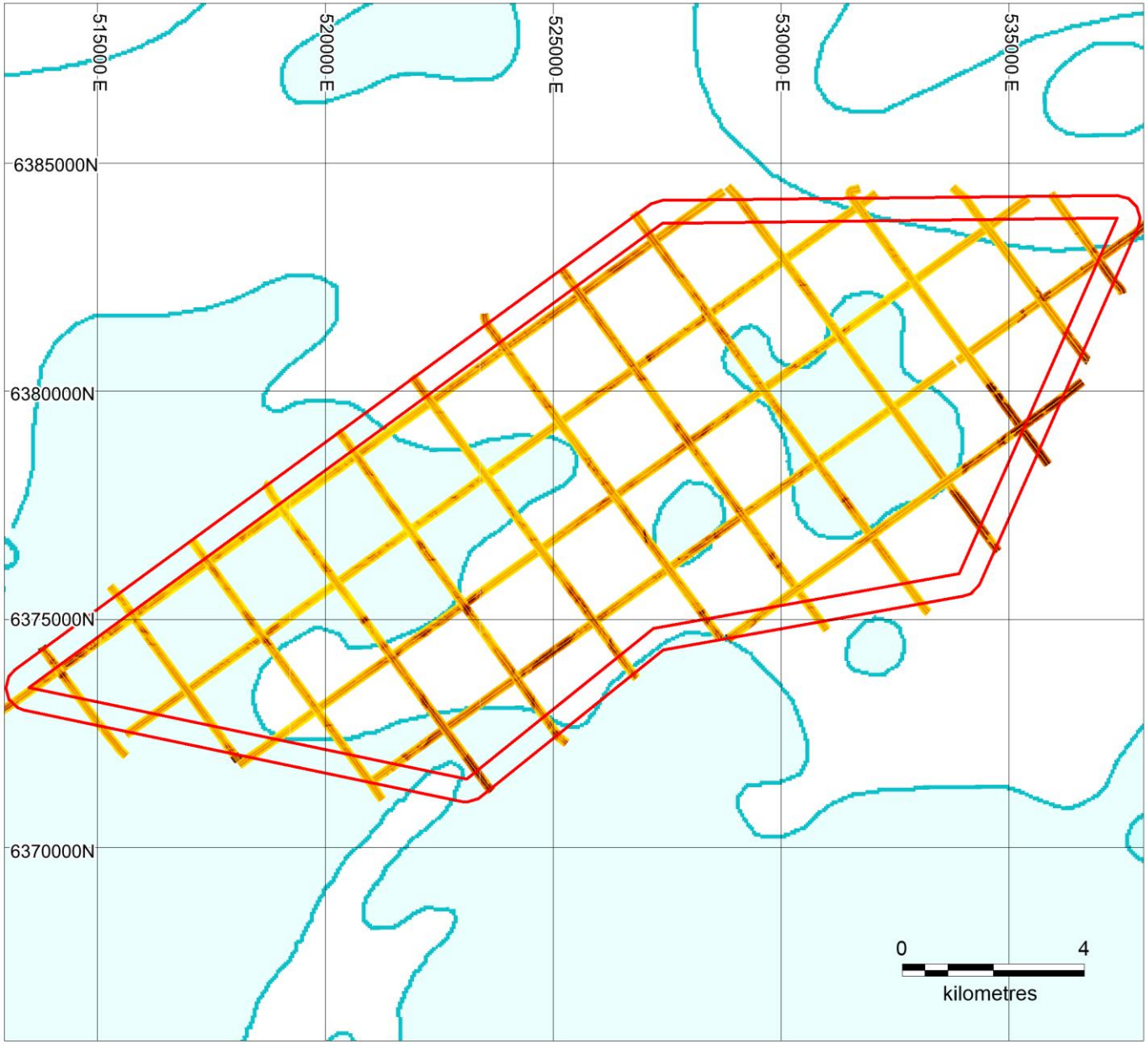
Miljø- og Fødevareministeriet
Kystdirektoratet

GEUS

wsp

Udført: NNP 23-02-2021

Bilag B2: Bathymetri langs sejlinjer



Område: Lønstrup B

Undersøgelsesfase Ia

Signaturforklaring

Undersøgelsesområde inkl. 500 m zone

Datum: WGS84

Projektion: UTM 32N

Klient:

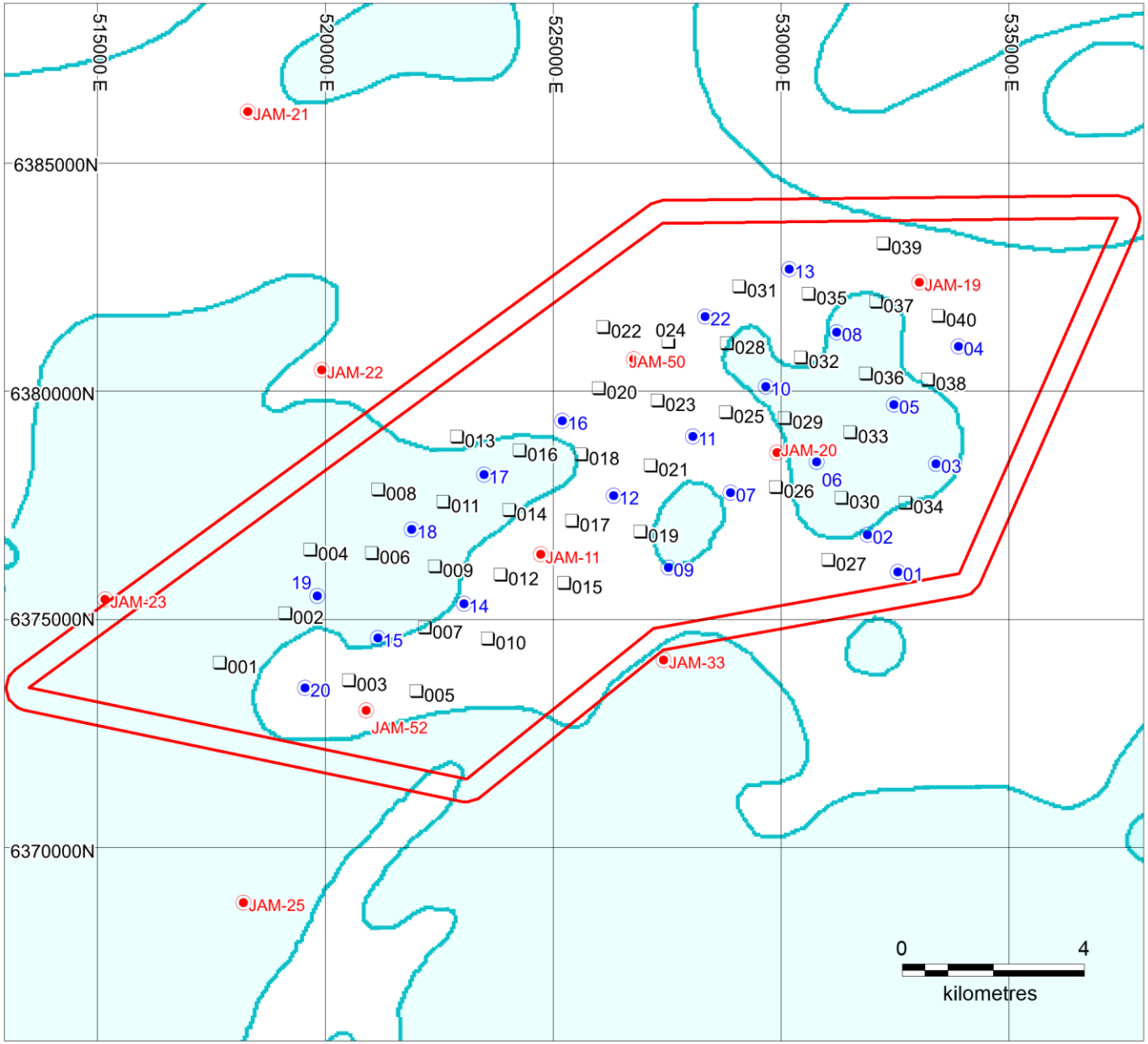
Miljø- og Fødevareministeriet
Kystdirektoratet

GEUS

wsp

Udført: NNP 23-02-2021

Bilag B3: Side-scan sonar mosaik



Område: Lønstrup B

Undersøgelsesfase Ia

Signaturforklaring

- Undersøgelsesområde inkl. 500 m zone
- HAPS prøve (fase IA)
- Vibrationsboring (fase IA)
- MST vibrationsboring 2020

Datum: WGS84

Projektion: UTM 32N

Klient:

Miljø- og Fødevareministeriet
Kystdirektoratet

GEUS

wsp

Udført: NNP 23-02-2021

Bilag B4: Vibrationsboringer og HAPS

Område: Lønstrup B

Undersøgelsesfase Ia

Signaturforklaring

Undersøgelsesområde inkl. 500 m zone

Substrattyper

- Type 1b
- Type 2
- Type 3
- Type 4

Datum: WGS84

Projektion: UTM 32N

Klient:

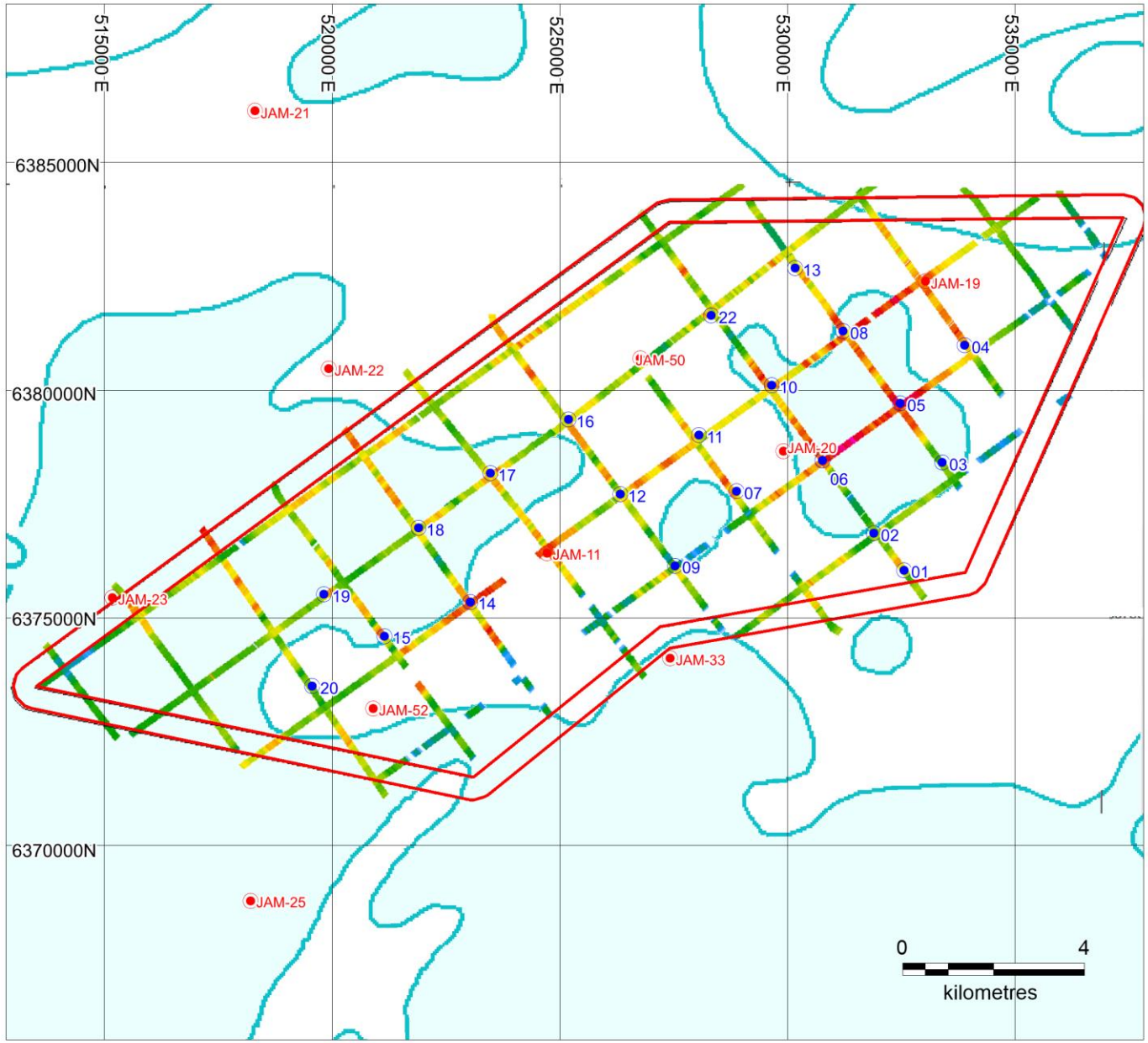
Miljø- og Fødevareministeriet
Kystdirektoratet

GEUS

wsp

Udført: NNP 23-02-2021

Bilag B5: Substrattypefordeling



Område: Lønstrup B

Undersøgelsesfase Ia

Signaturforklaring

Undersøgelsesområde inkl. 500 m zone

Vibrocore fase Ia

Vibrocore MST 2020

Mægtighed (m)

0
2
4
6
8
10

Datum: WGS84

Projektion: UTM 32N

Klient:

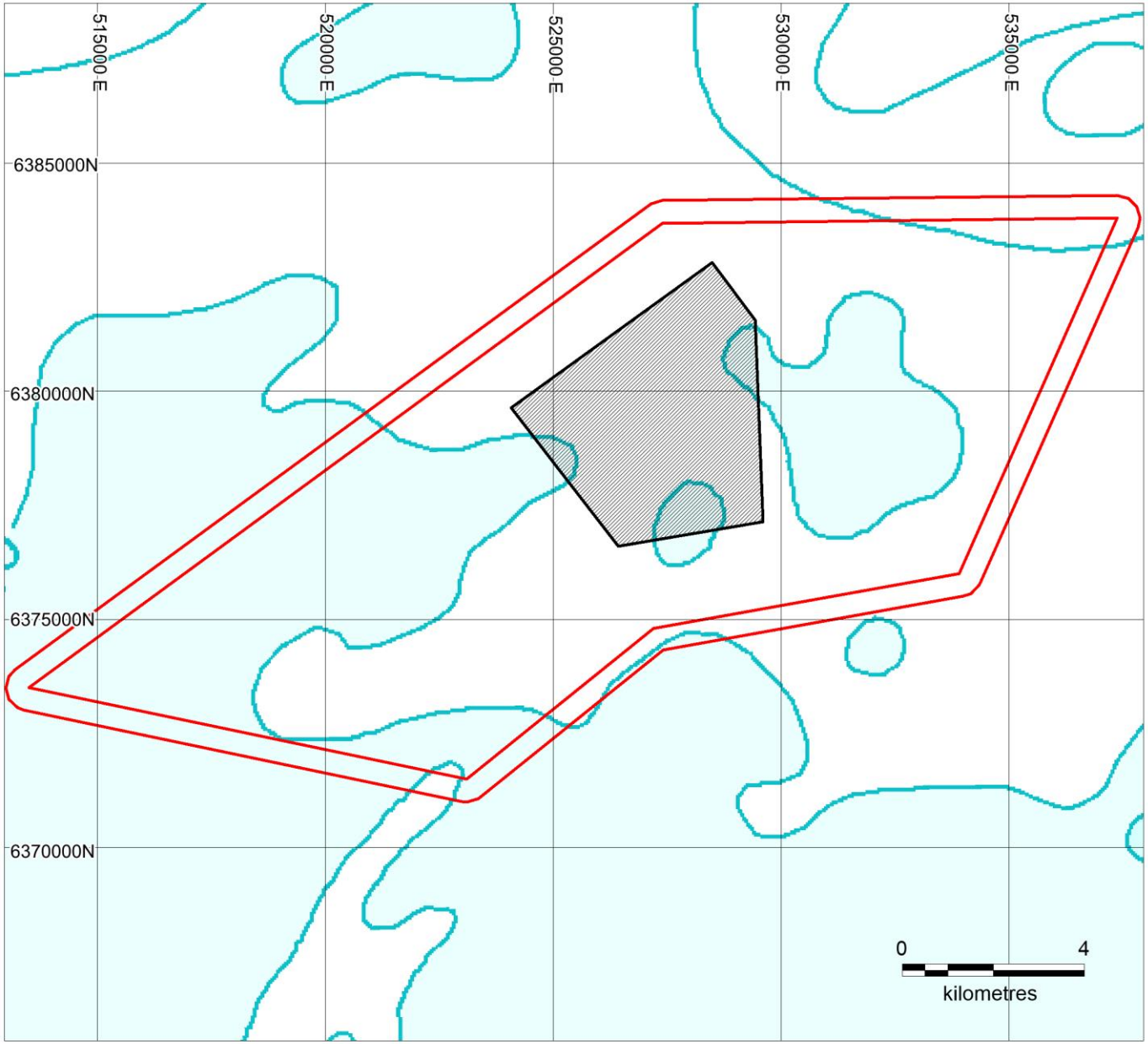
Miljø- og Fødevareministeriet
Kystdirektoratet

GEUS

wsp

Udført: NNP 23-02-2021

Bilag B6: Mægtighed af øvre Holocæn Sand



Område: Lønstrup B

Undersøgelsesfase Ia

Signaturforklaring

Undersøgelsesområde inkl. 500 m zone

Potentielt Fase IB område excl. 500 m zone

Datum: WGS84

Projektion: UTM 32N

Klient:

Miljø- og Fødevareministeriet
Kystdirektoratet

GEUS

wsp

Udført: NNP 23-02-2021

Bilag B7: Potentielt Fase IB område

Bilag C1

Boringsliste - Lønstrup B

Kerne ID	# Sektioner	Længde (cm)	Y (UTM32N)	X (UTM32N)	Grader N WGS84	Grader E WGS84	Dybde (m)
LØN-01	3	235	6376030	532563	57° 31.538'	009° 32.623'	21.6
LØN-02	3	270	6376838	531899	57° 31.977'	009° 31.965'	21.9
LØN-03	4	400	6378400	533398	57° 32.812'	009° 33.480'	24.7
LØN-04	2	120	6380974	533889	57° 34.197'	009° 33.993'	22
LØN-05	2	200	6379691	532479	57° 33.512'	009° 32.568'	18.1
LØN-06	1	100	6378441	530776	57° 32.845'	009° 30.852'	21.3
LØN-06A	4	400	6378441	530776	57° 32.845'	009° 30.852'	21.3
LØN-07	4	420	6377762	528889	57° 32.487'	009° 28.955'	19.9
LØN-08	4	370	6381280	531223	57° 34.373'	009° 31.322'	19.6
LØN-09	4	385	6376126	527530	57° 31.610'	009° 27.582'	21.7
LØN-10	5	430	6380087	529660	57° 33.737'	009° 29.745'	19.5
LØN-11	6	515	6378993	528062	57° 33.153'	009° 28.135'	22.9
LØN-12	4	400	6377695	526332	57° 32.460'	009° 26.392'	21.6
LØN-13	2	120	6382667	530176	57° 35.125'	009° 30.282'	21.7
LØN-13A	4	355	6382667	530176	57° 35.125'	009° 30.282'	21.7
LØN-14	3	245	6375331	523042	57° 31.197'	009° 23.082'	21.1
LØN-15	4	420	6374579	521155	57° 30.797'	009° 21.187'	23.3
LØN-16	6	580	6379340	525199	57° 33.350'	009° 25.267'	22
LØN-17	3	300	6378163	523482	57° 32.722'	009° 23.538'	19.8
LØN-18	4	335	6376958	521897	57° 32.077'	009° 21.943'	18.1
LØN-19	3	240	6375497	519825	57° 31.295'	009° 19.860'	19.1
LØN-20	5	450	6373482	519566	57° 30.210'	009° 19.590'	21
LØN-22	5	500	6381627	528331	57° 34.572'	009° 28.423'	25.9

Bilag C2

Vibrationskerner – beskrivelse med analyseresultater

Legend to logs

Lithology

- Mud
- Clay
- Silt
- Sand
- Heterolith with alternating layers of clay and sand
- Gravel
- Peat
- Till

Structures

- Homogenous
- Laminated/layered
- Bioturbated

Boundaries

- Gradational
- Sharp
- Erosive

Grain size scale (mm)

64	pebbles
4	granules
2	Very coarse sand
1	coarse sand
0.5	medium sand
0.250	fine sand
0.125	very fine sand
0.063	silt and clay

Holocene deposits

- FG - Lacustrine or fluvial gravel
- FS - Lacustrine or fluvial sand
- FI - Lacustrine or fluvial silt
- FL - Lacustrine or fluvial clay
- FP - Lacustrine gyttja
- FT - Peat
- HG - Marine gravel
- HS - Marine sand
- HI - Marine silt
- HL - Marine clay
- HP - Marine gyttja

Late-glacial deposits

- TS - Lacustrine or fluvial gravel
- TS -Lacustrine or fluvial sand
- TI - Lacustrine or fluvial silt
- TL - Lacustrine or fluvial clay
- YG - Marine gravel
- YS - Marine sand
- YL - Marine clay
- YP - Marine gyttja

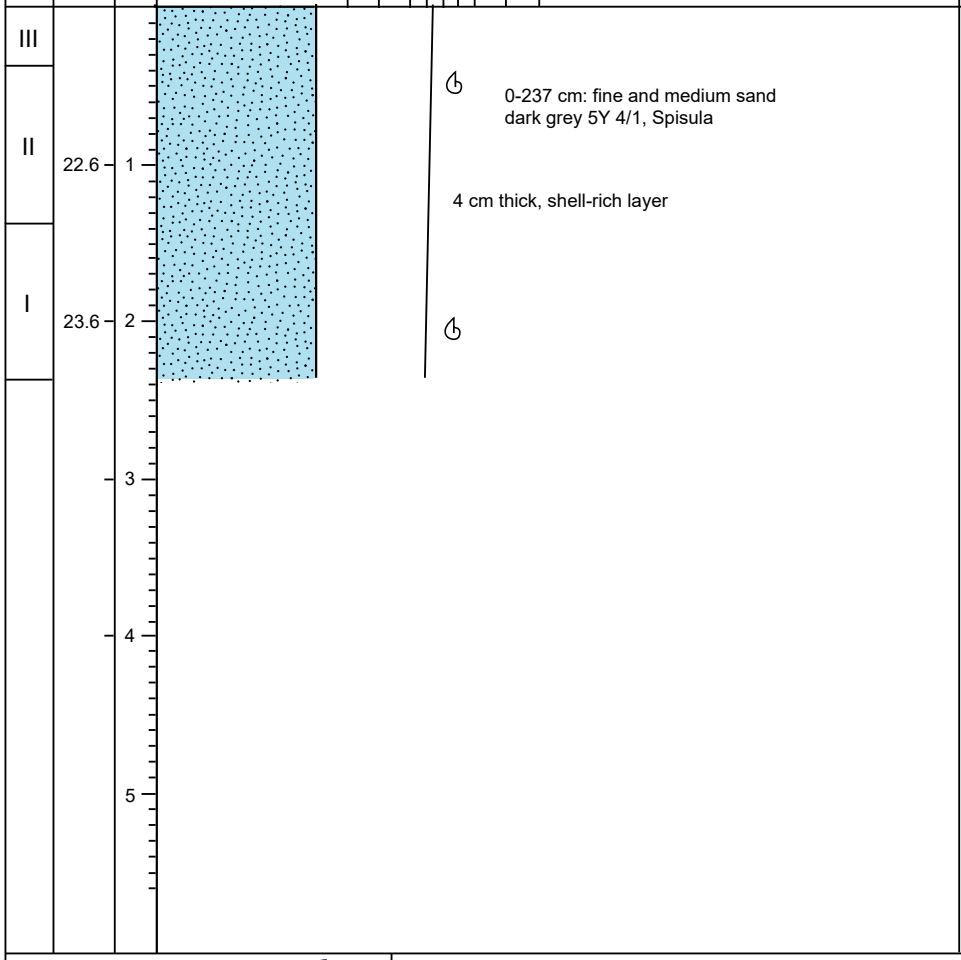
Glacial deposits

- DG - Fluvial gravel
- DS - Fluvial sand
- DI - Fluvial silt
- DL - Fluvial clay
- MG - Gravelly till
- MS - Sandy till
- ML - Clayey till

Interglacial deposits

- IT - Peat
- QG - Marine gravel
- QS - Marine sand
- QL - Marine clay

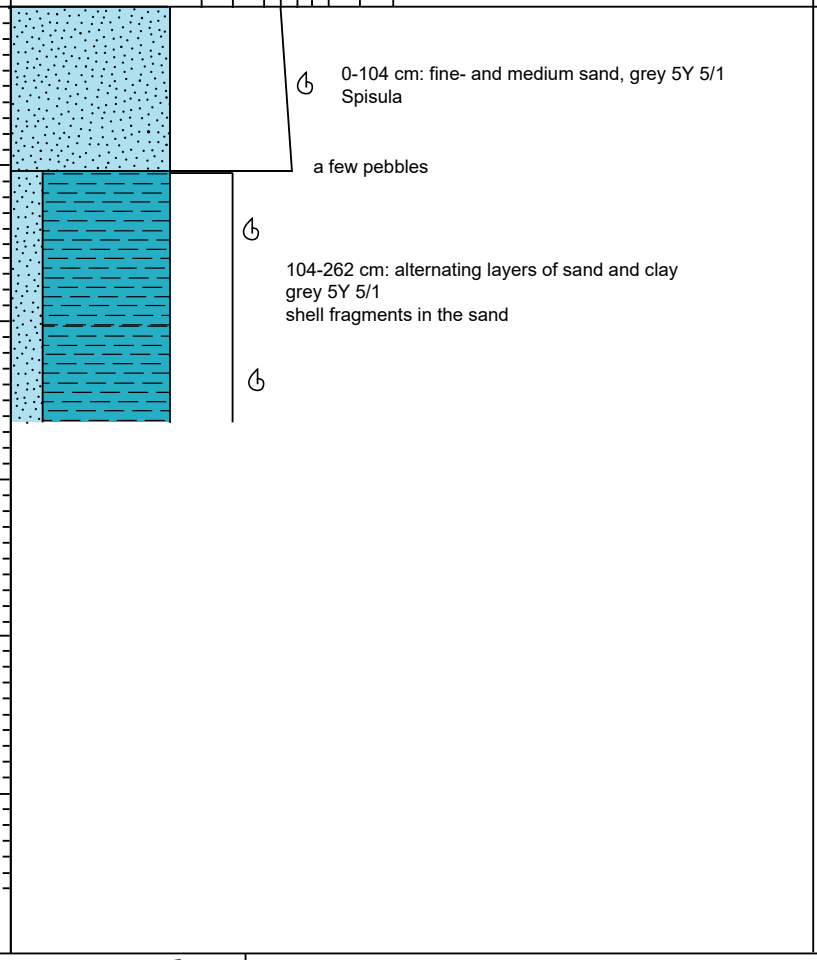
Core ID: Løn-01	Coordinates (m): E: 532562.7 N: 6376030.4	Water depth (m): 21.6	Coordinate system: UTM 32 Reference datum: WGS84
DGU no: 570915.5	Longitude: 9°32.623'E Latitude: 57°31.538'N		
Core type: Vibrocore	Core length (m): 2.37		



Core section	Depth below mean sea level (m)	Depth below sea bed (m)	Age/environment	Samples	Laboratory ID	Grain size: Mean (mm)	Grain size: Silt and clay (%)	Grain size: Fine sand (%)	Grain size: Medium sand (%)	Grain size: Coarse sand (%)	Grain size: Gravel (%)	Loss on ignition (%)	Water (%)	$CaCO_3$	Other parameters
III					200230	0.15	2.10	84.64	13.19	0.07	0	0.4	19	+	
II	22.6	1	HS		200231	0.13	2.83	84.58	11.79	0.75	0.06	0.6	18		
I	23.6	2			200232	0.13	4.19	82.52	7.47	0.98	4.84	0.8	18	+	

Geological Survey of Denmark and Greenland	Client:: Kystdirektoratet	Coring: M/S Skoven	Date: 17 September 2020
		Description: Ole Bennike	Date: 25 September 2020
		QC: Henrik Jønsson Granat	Date: 25 September 2020

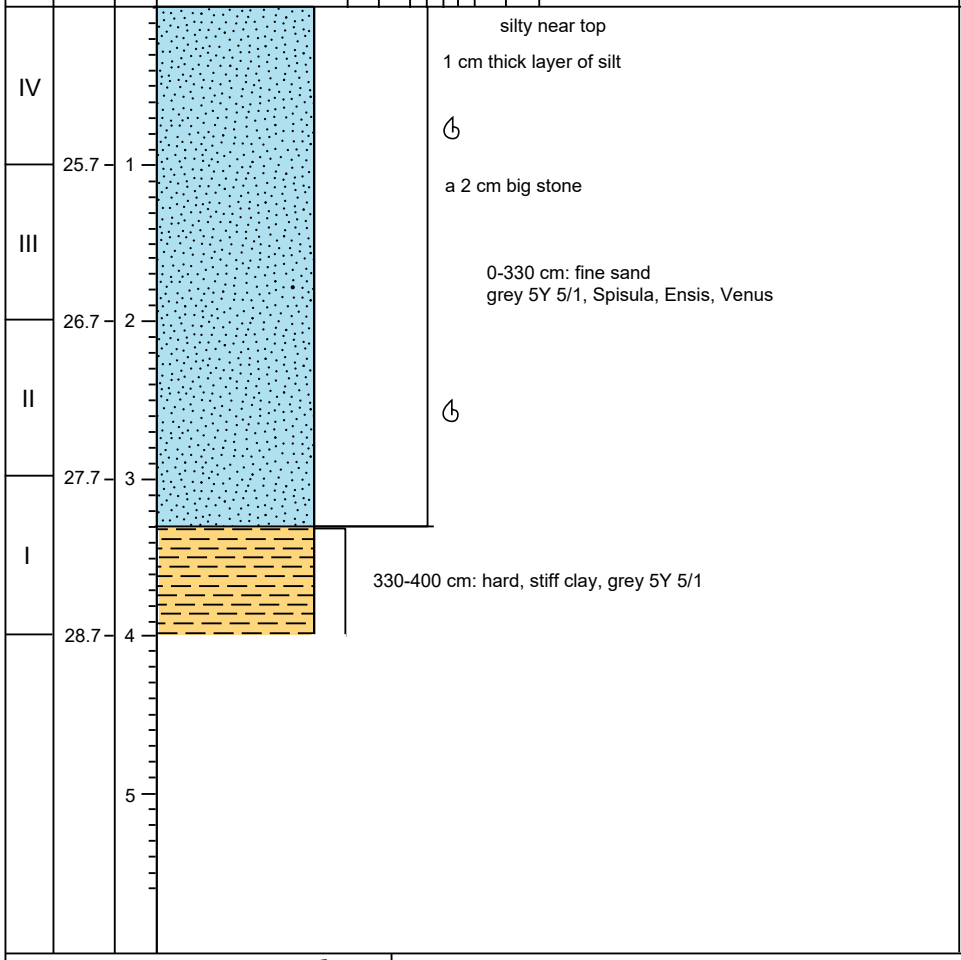
Core ID: Løn-02	Coordinates (m): E: 531899.2 N: 6376838.5	Water depth (m): 21.9	Coordinate system: UTM 32 Reference datum: WGS84
DGU no: 570915.6	Longitude: 9°31.965'E Latitude: 57°31.977'N		
Core type: Vibrocore	Core length (m): 2.62		



Core section	Depth below mean sea level (m)	Depth below sea bed (m)	Lithology	Description	Age/environment	Samples	Laboratory ID	Grain size: Mean (mm)	Grain size: Silt and clay (%)	Grain size: Fine sand (%)	Grain size: Medium sand (%)	Grain size: Coarse sand (%)	Grain size: Gravel (%)	Loss on ignition (%)	Water (%)	$CaCO_3$	Other parameters
III				0-104 cm: fine- and medium sand, grey 5Y 5/1 Spisula	HS		200233	0.13	2.30	90.00	6.98	0.58	0.16	0.7	21	+	
II	22.9	1		a few pebbles			200234	0.20	0.99	50.56	42.38	5.75	0.32	0.3	72		
I	23.9	2		104-262 cm: alternating layers of sand and clay grey 5Y 5/1 shell fragments in the sand	HV											+	
		3															
		4															
		5															

Geological Survey of Denmark and Greenland	Client:: Kystdirektoratet	Coring: M/S Skoven	Date: 17 September 2020
		Description: Ole Bennike	Date: 24 September 2020
		QC: Henrik Jønsson Granat	Date: 24 September 2020

Core ID: Løn-03	Coordinates (m): E: 533398.3 N: 6378399.9	Water depth (m): 24.7	Coordinate system: UTM 32 Reference datum: WGS84
DGU no: 570915.7	Longitude: 9°33.480'E Latitude: 57°32.812'N		
Core type: Vibrocore	Core length (m): 4.00		



Core section	Depth below mean sea level (m)	Depth below sea bed (m)	Age/environment	Samples	Laboratory ID	Grain size: Mean (mm)	Grain size: Silt and clay (%)	Grain size: Fine sand (%)	Grain size: Medium sand (%)	Grain size: Coarse sand (%)	Grain size: Gravel (%)	Loss on ignition (%)	Water (%)	$CaCO_3$	Other parameters
IV					200235	0.12	4.69	89.58	5.34	0.32	0.07	1.0	22	+	
III	25.7	1	HS		200236	0.12	5.30	87.75	5.51	0.81	0.63	0.9	18		
II	26.7	2			200237	0.10	9.64	87.79	1.95	0.38	0.24	1.2	20	+	
I	27.7	3			200238	0.10	3.65	95.50	0.70	0.15	0.00	0.7	22		
	28.7	4	TL											+	
		5													

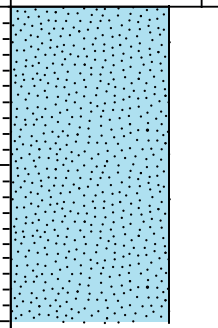
Geological Survey of Denmark and Greenland	Client:: Kystdirektoratet	Coring: M/S Skoven	Date: 17 September 2020
		Description: Ole Bennike	Date: 25 September 2020
		QC: Henrik Jønsson Granat	Date: 25 September 2020

Core ID: Løn-04	Coordinates (m): E: 533889.0 N: 6380973.8	Water depth (m): 22.0	Coordinate system: UTM 32 Reference datum: WGS84
DGU no: 570915.8	Longitude: 9°33.993'E Latitude: 57°34.197'N		
Core type: Vibrocore	Core length (m): 1.22		

Core section	Depth below mean sea level (m)	Depth below sea bed (m)	Lithology	Description	Age/environment	Samples	Laboratory ID	Grain size: Mean (mm)	Grain size: Silt and clay (%)	Grain size: Fine sand (%)	Grain size: Medium sand (%)	Grain size: Coarse sand (%)	Grain size: Gravel (%)	Loss on ignition (%)	Water (%)	$CaCO_3$	Other parameters
II																	
I	23.0	1		0-122 cm: fine sand, dark grey 5Y 4/1 Spisula	HS		200239	0.13	1.99	90.12	7.68	0.21	0.00	0.4	19	+	
							200240	0.13	1.74	90.49	7.68	0.09	0.00	0.5	18	+	
		2															
		3															
		4															
		5															

Geological Survey of Denmark and Greenland GEUS	Client:: Kystdirektoratet	Coring: M/S Skoven	Date: 17 September 2020
		Description: Ole Bennike	Date: 24 September 2020
		QC: Henrik Jønsson Granat	Date: 24 September 2020

Core ID: Løn-05	Coordinates (m): E: 532478.5 N: 6379691.3	Water depth (m): 18.1	Coordinate system: UTM 32 Reference datum: WGS84
DGU no: 570915.9	Longitude: 9°32.568'E Latitude: 57°33.512'N		
Core type: Vibrocore	Core length (m): 2.00		



Core section	Depth below mean sea level (m)	Depth below sea bed (m)	Age/environment	Samples	Laboratory ID	Grain size: Mean (mm)	Grain size: Silt and clay (%)	Grain size: Fine sand (%)	Grain size: Medium sand (%)	Grain size: Coarse sand (%)	Grain size: Gravel (%)	Loss on ignition (%)	Water (%)	$CaCO_3$	Other parameters
II			HS		200241	0.17	0.99	82.56	16.25	0.21	0.00	0.4	19	+	
	19.1	1													
I					200242	0.15	5.95	84.05	9.62	0.37	0.00	0.4	17	+	
	20.1	2			200243	0.15	1.57	89.08	9.30	0.05	0.00	0.4	19		
		3													
		4													
		5													

Lithology: Mud (clay, silt); Sand (vf, f, m, c, vc); Gravel (granules, pebbles)

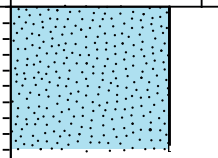
NOTES

Description

0-200 cm: fine and medium sand, dark grey 5Y 4/1
Spisula, Ensis

Geological Survey of Denmark and Greenland	Client:: Kystdirektoratet	Coring: M/S Skoven — Date: 17 September 2020
		Description: Ole Bennike — Date: 24 September 2020
		QC: Henrik Jønsson Granat — Date: 24 September 2020

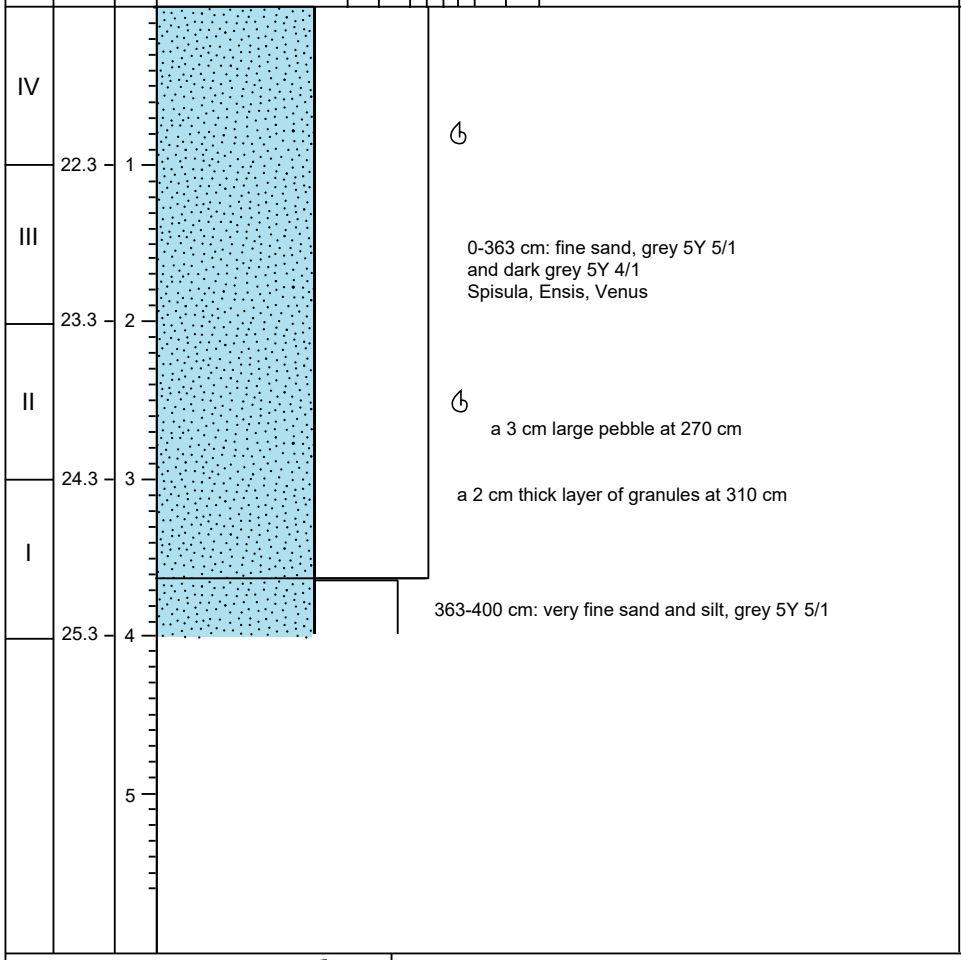
Core ID: Løn-06	Coordinates (m): E: 530776.1 N: 6378441.0	Water depth (m): 21.3	Coordinate system: UTM 32 Reference datum: WGS84
DGU no: 570915.10	Longitude: 9°30.852'E Latitude: 57°32.845'N		
Core type: Vibrocore	Core length (m): 2.62		



Core section	Depth below mean sea level (m)	Depth below sea bed (m)	Lithology	Description	Age/environment	Samples	Laboratory ID	Grain size: Mean (mm)	Grain size: Silt and clay (%)	Grain size: Fine sand (%)	Grain size: Medium sand (%)	Grain size: Coarse sand (%)	Grain size: Gravel (%)	Loss on ignition (%)	Water (%)	$CaCO_3$	Other parameters
I	22.3	1		0-90 cm: fine- and medium sand, grey 5Y 5/1 Spisula	HS		200244	0.23	1.30	38.32	58.42	1.96	0.00	0.3	17	+	
							200245	0.13	4.11	89.46	6.09	0.28	0.06	0.4	17		

Geological Survey of Denmark and Greenland GEUS	Client:: Kystdirektoratet	Coring: M/S Skoven	Date: 17 September 2020
		Description: Ole Bennike	Date: 24 September 2020
		QC: Henrik Jønsson Granat	Date: 24 September 2020

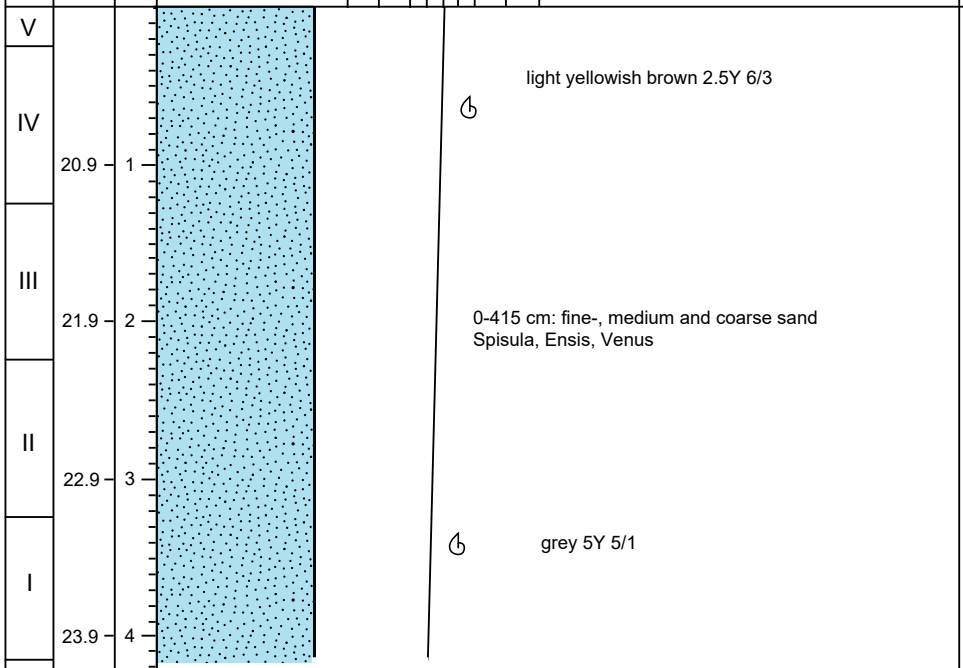
Core ID: Løn-06A	Coordinates (m): E: 530776.1 N: 6378441.0	Water depth (m): 21.3	Coordinate system: UTM 32 Reference datum: WGS84
DGU no: 570915.11	Longitude: 9°30.852'E Latitude: 57°32.845'N		
Core type: Vibrocore	Core length (m): 4.00		



Age/environment	Samples	Laboratory ID	Grain size: Mean (mm)	Grain size: Silt and clay (%)	Grain size: Fine sand (%)	Grain size: Medium sand (%)	Grain size: Coarse sand (%)	Grain size: Gravel (%)	Loss on ignition (%)	Water (%)	$CaCO_3$	Other parameters
HS	■	200246	0.22	2.20	47.73	48.84	1.08	0.15	0.4	16	+	
	■	200247	0.15	1.11	90.21	7.95	0.66	0.08	0.4	20		
	■	200248	0.18	2.21	75.66	21.44	0.49	0.21	0.4	17	+	
	■	200249	0.18	3.44	68.99	25.39	1.47	0.71	0.7	19		
TS	■	200250	0.07	45.40	54.26	0.31	0.03	0.00	1.2	20	+	

Geological Survey of Denmark and Greenland	Client:: Kystdirektoratet	Coring: M/S Skoven	Date: 17 September 2020
		Description: Ole Bennike	Date: 24 September 2020
		QC: Henrik Jønsson Granat	Date: 24 September 2020

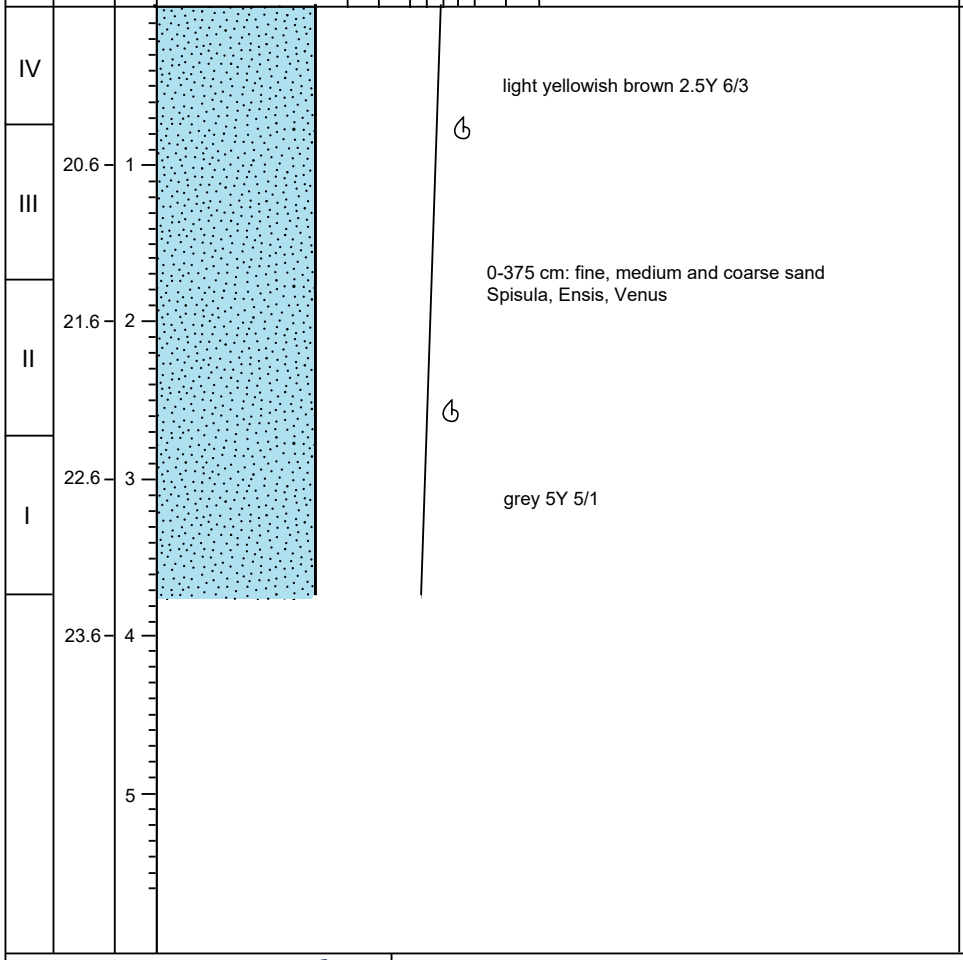
Core ID: Løn-07	Coordinates (m): E: 528888.7 N: 6377762.3	Water depth (m): 19.9	Coordinate system: UTM 32 Reference datum: WGS84
DGU no: 570914.8	Longitude: 9°28.955'E Latitude: 57°32.487'N		
Core type: Vibrocore	Core length (m): 4.15		



Core section	Depth below mean sea level (m)	Depth below sea bed (m)	Lithology	Description	Age/environment	Samples	Laboratory ID	Grain size: Mean (mm)	Grain size: Silt and clay (%)	Grain size: Fine sand (%)	Grain size: Medium sand (%)	Grain size: Coarse sand (%)	Grain size: Gravel (%)	Loss on ignition (%)	Water (%)	$CaCO_3$	Other parameters
V							200251	0.31	0.76	29.06	51.47	12.08	6.63	0.4	14		
IV	20.9	1					200252	0.27	0.96	40.84	46.98	8.30	2.92	0.4	14	+	
III	21.9	2			HS		200253	0.27	0.97	43.38	45.12	9.62	0.91	0.4	16	+	
II	22.9	3					200254	0.13	3.60	88.62	6.99	0.57	0.23	0.6	18		
I	23.9	4					200255	0.13	6.72	86.17	4.89	0.92	1.30	0.7	19	+	
		5															

Geological Survey of Denmark and Greenland	Client:: Kystdirektoratet	Coring: M/S Skoven — Date: 17 September 2020
		Description: Ole Bennike — Date: 24 September 2020
		QC: Henrik Jønsson Granat — Date: 24 September 2020

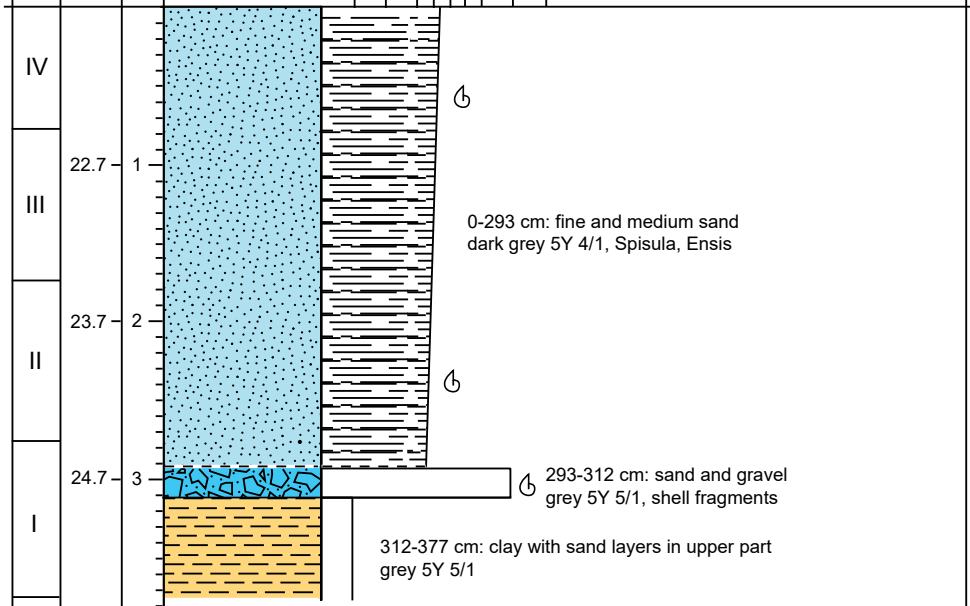
Core ID: Løn-08	Coordinates (m): E: 531223.0 N: 6381280.2	Water depth (m): 19.6	Coordinate system: UTM 32 Reference datum: WGS84
DGU no: 570915.12	Longitude: 9°31.322'E Latitude: 57°34.373'N		
Core type: Vibrocore	Core length (m): 3.75		



Core section	Depth below mean sea level (m)	Depth below sea bed (m)	Age/environment	Samples	Laboratory ID	Grain size: Mean (mm)	Grain size: Silt and clay (%)	Grain size: Fine sand (%)	Grain size: Medium sand (%)	Grain size: Coarse sand (%)	Grain size: Gravel (%)	Loss on ignition (%)	Water (%)	$CaCO_3$	Other parameters
IV					200256	0.30	0.52	35.25	44.78	16.91	2.54	0.4	13	+	
III	20.6	1			200257	0.15	1.19	85.46	12.64	0.48	0.22	0.4	16		
II	21.6	2	HS		200258	0.13	2.66	92.88	3.34	0.79	0.33	0.6	17	+	
I	22.6	3			200259	0.12	3.76	94.61	1.16	0.37	0.10	0.6	18	+	
	23.6	4			200260	0.12	4.94	93.61	1.07	0.29	0.09	0.5	19		
		5													

Geological Survey of Denmark and Greenland	Client:: Kystdirektoratet	Coring: M/S Skoven	Date: 17 September 2020
		Description: Ole Bennike	Date: 25 September 2020
		QC: Henrik Jønsson Granat	Date: 25 September 2020

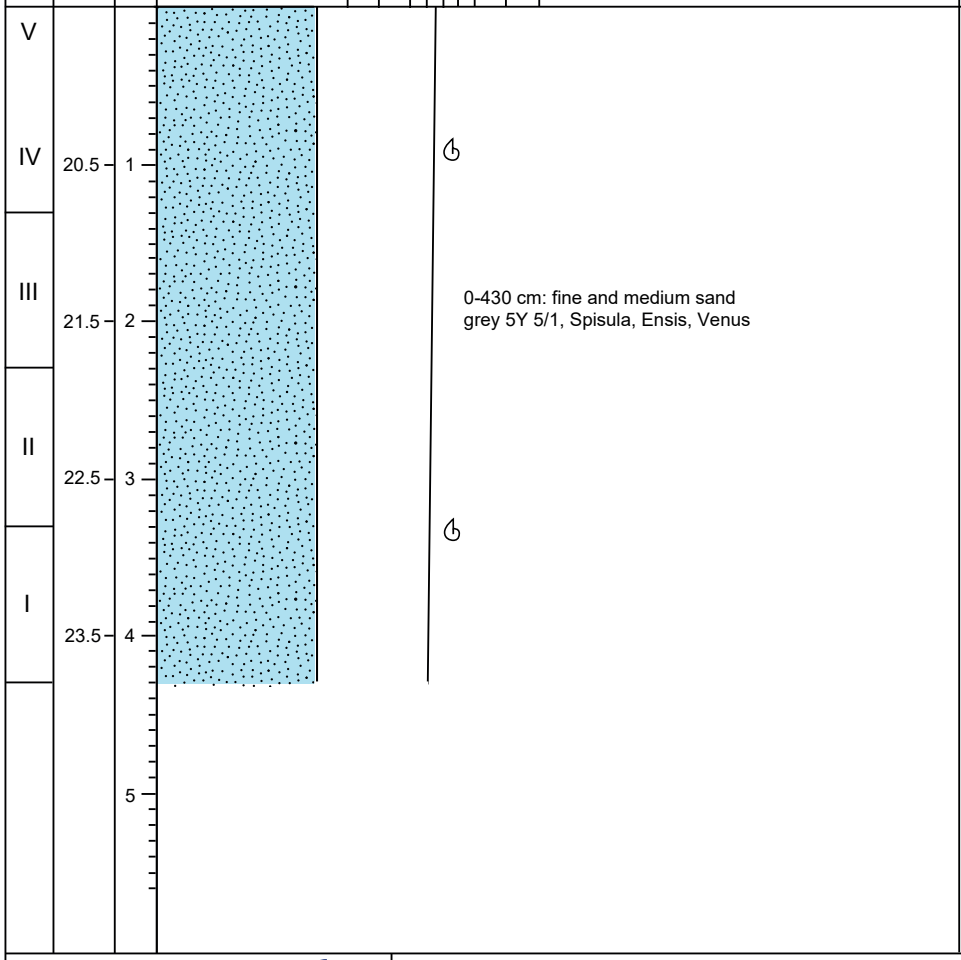
Core ID: Løn-09	Coordinates (m): E: 527529.5 N: 6376126.2	Water depth (m): 21.7	Coordinate system: UTM 32 Reference datum: WGS84
DGU no: 570914.9	Longitude: 9°27.582'E Latitude: 57°31.610'N		
Core type: Vibrocore	Core length (m): 3.77		



Core section	Depth below mean sea level (m)	Depth below sea bed (m)	Age/environment	Samples	Laboratory ID	Grain size: Mean (mm)	Grain size: Silt and clay (%)	Grain size: Fine sand (%)	Grain size: Medium sand (%)	Grain size: Coarse sand (%)	Grain size: Gravel (%)	Loss on ignition (%)	Water (%)	$CaCO_3$	Other parameters
IV					200261	0.13	1.29	90.58	7.51	0.52	0.10	0.5	20	+	
III	22.7	1	HS		200262	0.13	1.45	92.57	5.67	0.32	0.00	0.5	18		
II	23.7	2			200263	0.13	1.22	92.87	5.70	0.21	0.00	0.4	18	+	
I	24.7	3	HG		200264	0.12	3.18	95.18	1.32	0.26	0.05	0.6	19		
	25.7	4	TL											+	
		5													

Geological Survey of Denmark and Greenland	Client:: Kystdirektoratet	Coring: M/S Skoven	Date: 17 September 2020
		Description: Ole Bennike	Date: 25 September 2020
		QC: Henrik Jønsson Granat	Date: 25 September 2020

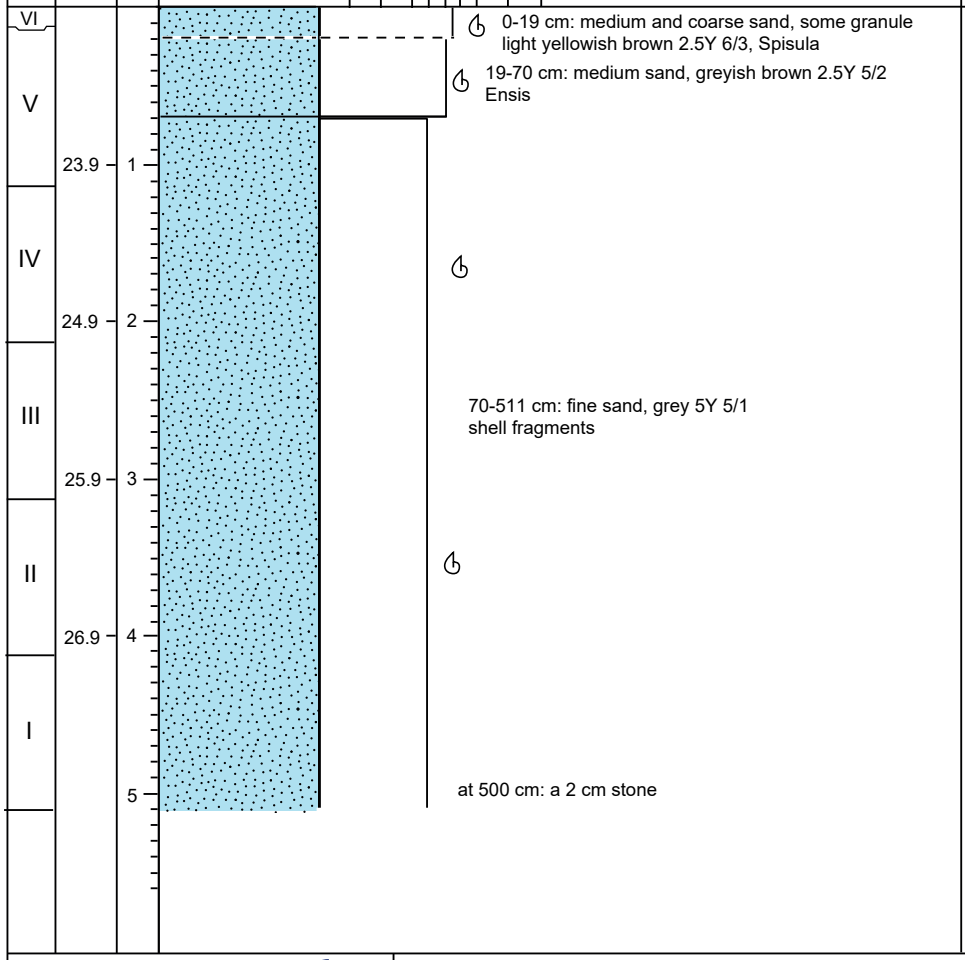
Core ID: Løn-10	Coordinates (m): E: 529660.0 N: 6380087.2	Water depth (m): 19.5	Coordinate system: UTM 32 Reference datum: WGS84
DGU no: 570914.10	Longitude: 9°29.745'E Latitude: 57°33.737'N		
Core type: Vibrocore	Core length (m): 3.75		



Core section	Depth below mean sea level (m)	Depth below sea bed (m)	Lithology	Description	Age/environment	Samples	Laboratory ID	Grain size: Mean (mm)	Grain size: Silt and clay (%)	Grain size: Fine sand (%)	Grain size: Medium sand (%)	Grain size: Coarse sand (%)	Grain size: Gravel (%)	Loss on ignition (%)	Water (%)	$CaCO_3$	Other parameters
V							200265	0.18	0.85	76.17	21.56	1.30	0.13	0.3	17	+	
IV	20.5	1					200266	0.18	0.96	71.44	27.11	0.37	0.12	0.4	16		
III	21.5	2			HS		200267	0.13	3.14	91.11	5.22	0.50	0.04	0.6	17	+	
II	22.5	3					200268	0.13	4.27	89.78	5.56	0.30	0.09	0.7	17		
I	23.5	4					200269	0.12	5.13	93.36	1.29	0.16	0.06	0.9	19	+	
		5															

Geological Survey of Denmark and Greenland	Client:: Kystdirektoratet	Coring: M/S Skoven	Date: 17 September 2020
		Description: Ole Bennike	Date: 25 September 2020
		QC: Henrik Jønsson Granat	Date: 25 September 2020

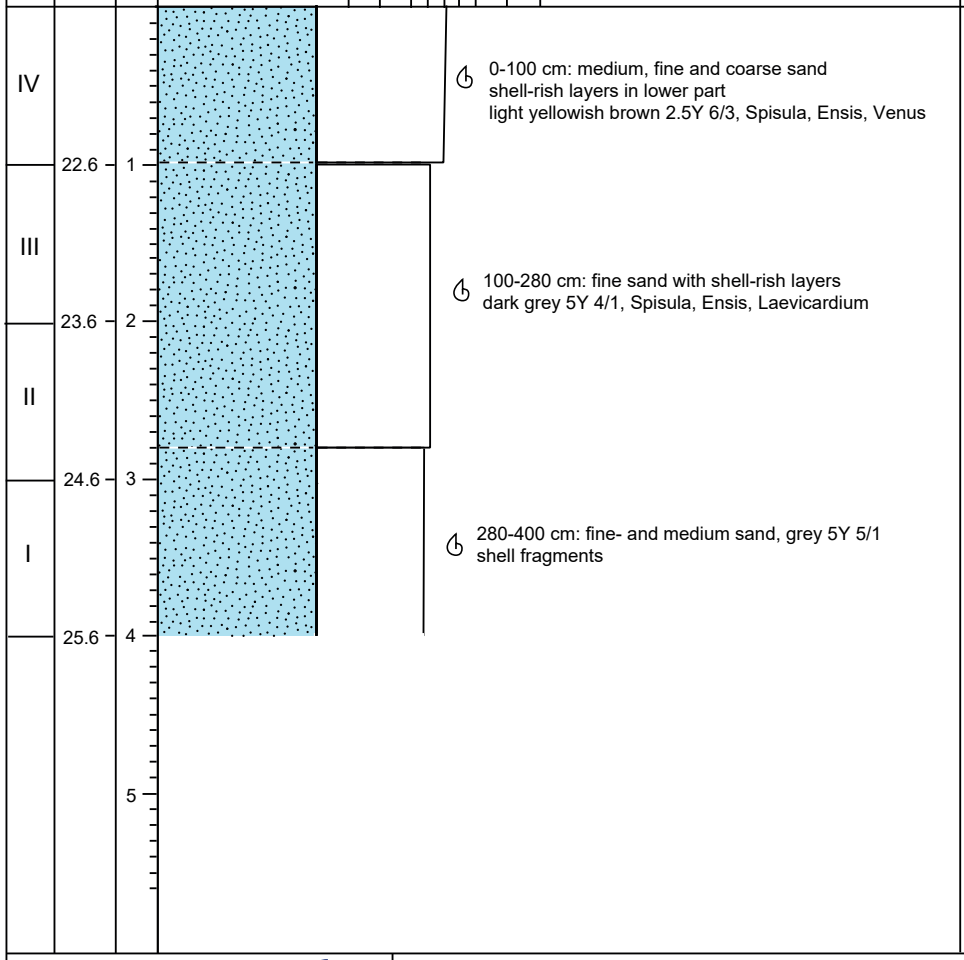
Core ID: Løn-11	Coordinates (m): E: 528062.1 N: 6378993.5	Water depth (m): 22.9	Coordinate system: UTM 32 Reference datum: WGS84
DGU no: 570914.11	Longitude: 9°28.135'E Latitude: 57°33.153'N		
Core type: Vibrocore	Core length (m): 5.11		



Core section	Age/environment	Samples	Laboratory ID	Grain size: Mean (mm)	Silt and clay (%)	Fine sand (%)	Medium sand (%)	Coarse sand (%)	Gravel (%)	Loss on ignition (%)	Water (%)	$CaCO_3$	Other parameters
VI			200270	0.58	0.65	8.40	49.86	25.81	15.28	0.4	12	+	
V			200271	0.30	0.85	20.27	66.11	11.93	0.83	0.3	16	+	
IV	HS		200272	0.12	4.23	91.63	3.62	0.48	0.05	0.8	20		
III			200273	0.10	8.37	89.71	1.59	0.11	0.22	1.1	19	+	
II			200274	0.10	8.34	91.09	0.50	0.07	0.00	1.0	20		
I			200275	0.10	7.96	91.60	0.39	0.06	0.00	1.0	20	+	
			200276	0.12	11.63	78.07	5.83	1.95	2.52	0.8	17		

Geological Survey of Denmark and Greenland	Client:: Kystdirektoratet	Coring: M/S Skoven	Date: 17 September 2020
		Description: Ole Bennike	Date: 24 September 2020
		QC: Henrik Jønsson Granat	Date: 24 September 2020

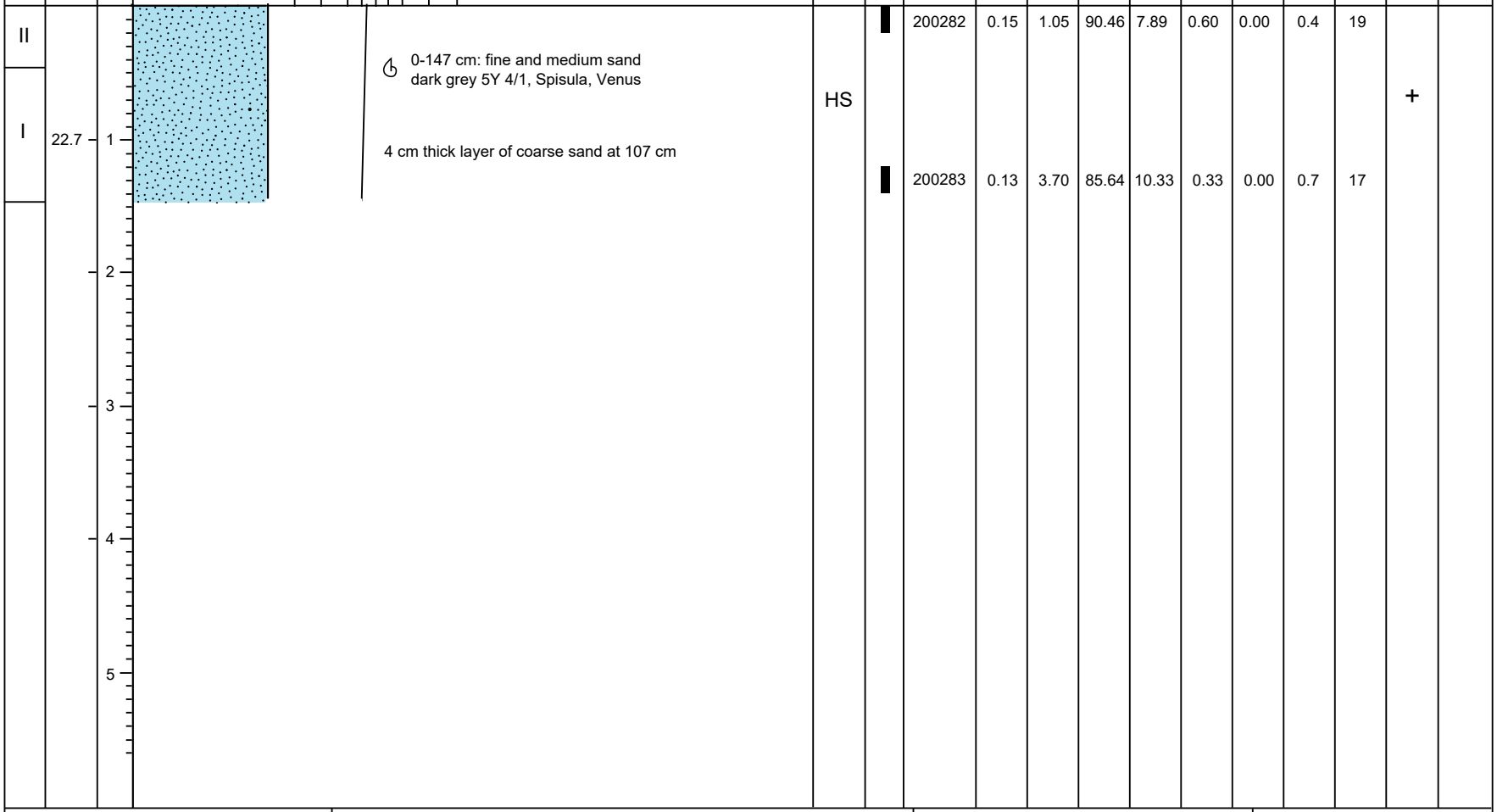
Core ID: Løn-12	Coordinates (m): E: 526331.6 N: 6377695.4	Water depth (m): 21.6	Coordinate system: UTM 32 Reference datum: WGS84
DGU no: 570914.12	Longitude: 9°26.392'E Latitude: 57°32.460'N		
Core type: Vibrocore	Core length (m): 4.00		



Core section	Depth below mean sea level (m)	Depth below sea bed (m)	Age/environment	Samples	Laboratory ID	Grain size: Mean (mm)	Grain size: Silt and clay (%)	Grain size: Fine sand (%)	Grain size: Medium sand (%)	Grain size: Coarse sand (%)	Grain size: Gravel (%)	Loss on ignition (%)	Water (%)	$CaCO_3$	Other parameters
IV			HS		200277	0.30	0.63	18.94	68.33	10.05	2.05	0.4	14	+	
III	22.6	1			200278	0.13	1.66	83.65	12.94	1.35	0.40	0.6	18	+	
II	23.6	2	HS		200279	0.15	1.06	88.88	9.92	0.10	0.04	0.4	18	+	
I	24.6	3	HS		200280	0.10	6.42	92.68	0.83	0.07	0.00	0.8	19	+	
	25.6	4			200281	0.10	0.66	91.11	0.23	0.00	0.00	0.8	20		

Geological Survey of Denmark and Greenland	Client:: Kystdirektoratet	Coring: M/S Skoven — Date: 17 September 2020
		Description: Ole Bennike — Date: 24 September 2020
		QC: Henrik Jønsson Granat — Date: 24 September 2020

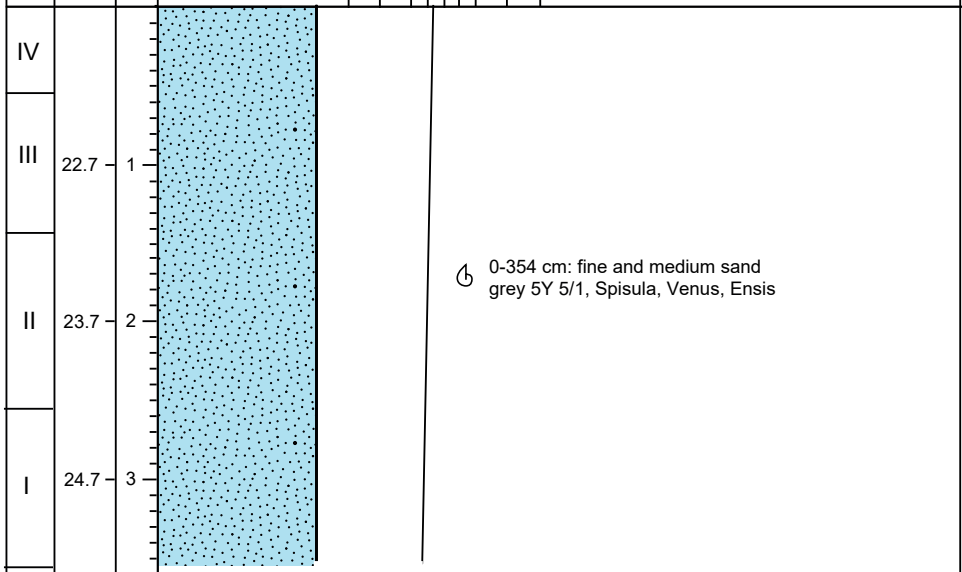
Core ID: Løn-13	Coordinates (m): E: 530175.9 N: 6382667.0	Water depth (m): 21.7	Coordinate system: UTM 32 Reference datum: WGS84
DGU no: 570914.13	Longitude: 9°30.282'E Latitude: 57°35.125'N		
Core type: Vibrocore	Core length (m): 1.47		



Age/environment	Samples	Laboratory ID	Grain size: Mean (mm)	Silt and clay (%)	Fine sand (%)	Medium sand (%)	Coarse sand (%)	Gravel (%)	Loss on ignition (%)	Water (%)	$CaCO_3$	Other parameters
HS	■	200282	0.15	1.05	90.46	7.89	0.60	0.00	0.4	19	+	
	■	200283	0.13	3.70	85.64	10.33	0.33	0.00	0.7	17		

Geological Survey of Denmark and Greenland / GEUS	Client:: Kystdirektoratet	Coring: M/S Skoven — Date: 17 September 2020
		Description: Ole Bennike — Date: 25 September 2020
		QC: Henrik Jønsson Granat — Date: 25 September 2020

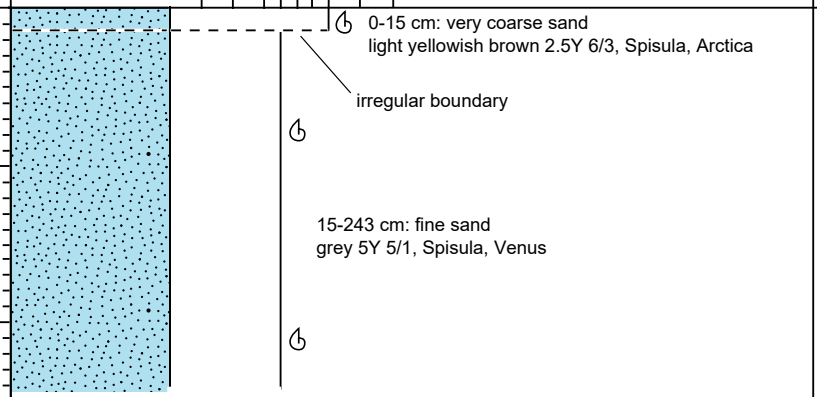
Core ID: Løn-13A	Coordinates (m): E: 530175.9 N: 6382667.0	Water depth (m): 21.7	Coordinate system: UTM 32 Reference datum: WGS84
DGU no: 570915.14	Longitude: 9°30.282'E Latitude: 57°35.125'N		
Core type: Vibrocore	Core length (m): 1.47		



Core section	Depth below mean sea level (m)	Depth below sea bed (m)	Age/environment	Samples	Laboratory ID	Grain size: Mean (mm)	Silt and clay (%)	Fine sand (%)	Medium sand (%)	Coarse sand (%)	Gravel (%)	Loss on ignition (%)	Water (%)	$CaCO_3$	Other parameters
IV															
III	22.7	1			200284	0.18	1.25	79.85	16.98	1.87	0.05	0.4	20	+	
II	23.7	2	HS		200285	0.13	2.97	84.77	11.02	1.05	0.19	0.5	17		
I	24.7	3			200286	0.12	3.46	86.58	8.35	0.89	0.73	0.5	17	+	
		4			200287	0.10	6.55	88.16	5.09	0.16	0.03	0.8	19		
		5													

Geological Survey of Denmark and Greenland	Client:: Kystdirektoratet	Coring: M/S Skoven	Date: 17 September 2020
		Description: Ole Bennike	Date: 25 September 2020
		QC: Henrik Jønsson Granat	Date: 25 September 2020

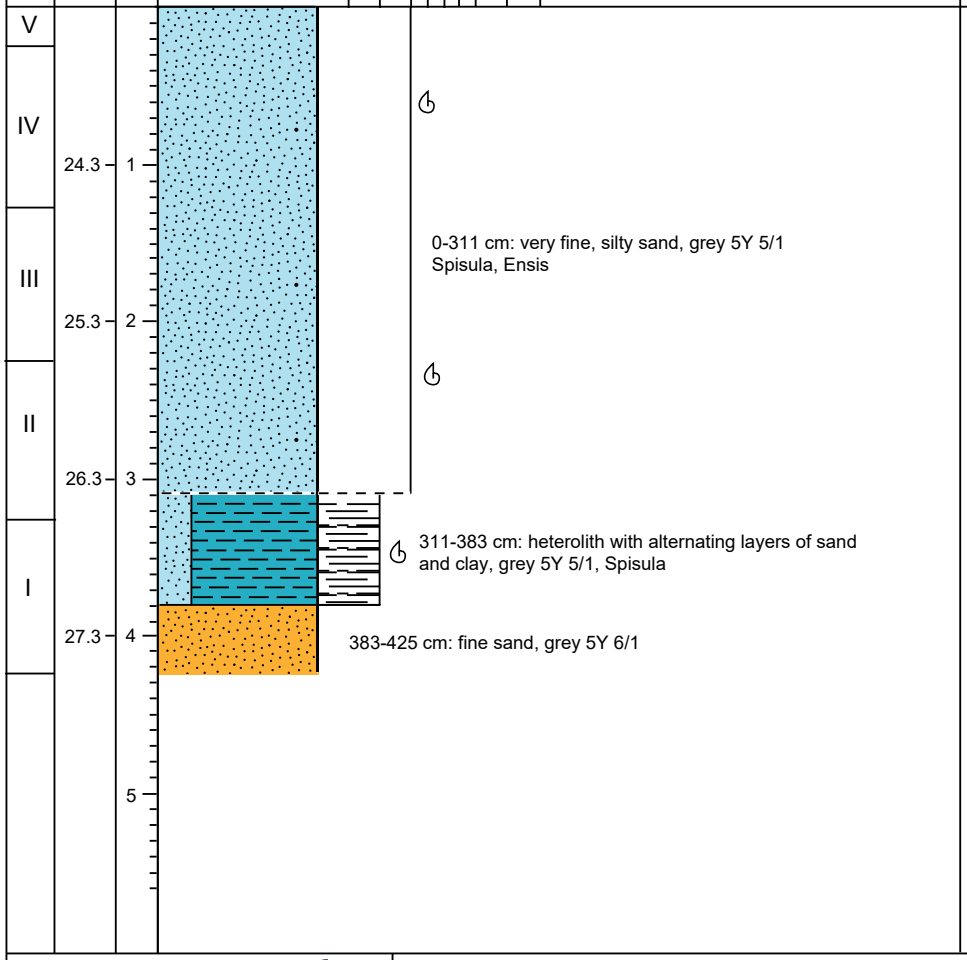
Core ID: Løn-14	Coordinates (m): E: 523042.4 N: 6375331.4	Water depth (m): 21.1	Coordinate system: UTM 32 Reference datum: WGS84
DGU no: 570914.13	Longitude: 9°23.082'E Latitude: 57°31.197'N		
Core type: Vibrocore	Core length (m): 2.40		



Core section	Depth below mean sea level (m)	Depth below sea bed (m)	Age/environment	Samples	Laboratory ID	Grain size: Mean (mm)	Grain size: Silt and clay (%)	Grain size: Fine sand (%)	Grain size: Medium sand (%)	Grain size: Coarse sand (%)	Grain size: Gravel (%)	Loss on ignition (%)	Water (%)	$CaCO_3$	Other parameters
III			HS	■	200288	0.15	1.53	92.25	5.79	0.11	0.32	0.4	18	+	
II	22.1	1		■	200289	0.13	3.55	85.80	8.90	1.08	0.67	0.5	18	+	
I	23.1	2	HS	■	200290	0.13	3.20	88.05	8.00	0.43	0.32	0.6	17	+	

Geological Survey of Denmark and Greenland / GEUS	Client:: Kystdirektoratet	Coring: M/S Skoven — Date: 16 September 2020
		Description: Ole Bennike — Date: 25 September 2020
		QC: Henrik Jønsson Granat — Date: 25 September 2020

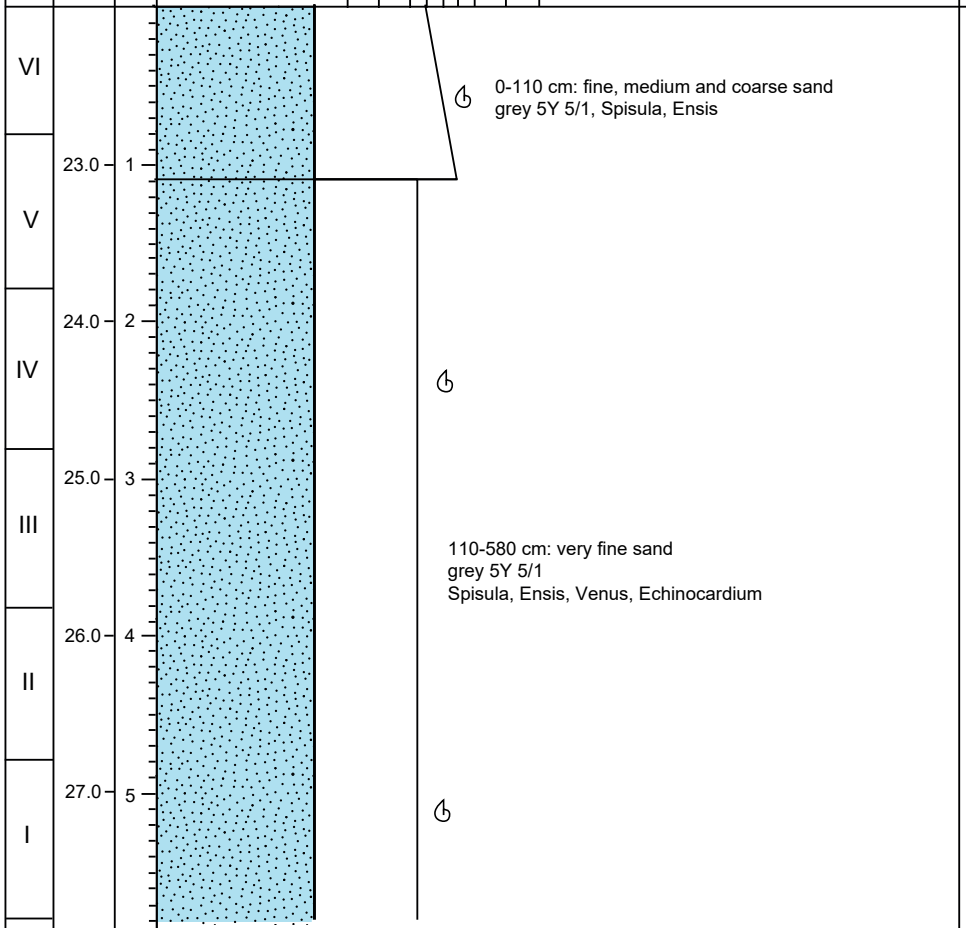
Core ID: Løn-15	Coordinates (m): E: 521154.5 N: 6374579.0	Water depth (m): 23.3	Coordinate system: UTM 32 Reference datum: WGS84
DGU no: 570914.14	Longitude: 9°21.187'E Latitude: 57°30.797'N		
Core type: Vibrocore	Core length (m): 4.25		



Age/environment	Samples	Laboratory ID	Grain size: Mean (mm)	Grain size: Silt and clay (%)	Grain size: Fine sand (%)	Grain size: Medium sand (%)	Grain size: Coarse sand (%)	Grain size: Gravel (%)	Loss on ignition (%)	Water (%)	$CaCO_3$	Other parameters
HS	■	200291	0.08	11.46	87.19	1.20	0.10	0.04	1.2	21	+	
	■	200292	0.08	14.55	82.16	2.95	0.29	0.04	1.1	21		
	■	200293	0.09	17.97	77.48	3.94	0.46	0.15	1.6	21	+	
HV	■	200294	0.08	22.29	74.84	2.35	0.43	0.09	1.9	21	+	
TS											+	

Geological Survey of Denmark and Greenland / GEUS	Client:: Kystdirektoratet	Coring: M/S Skoven — Date: 16 September 2020
		Description: Ole Bennike — Date: 25 September 2020
		QC: Henrik Jønsson Granat — Date: 25 September 2020

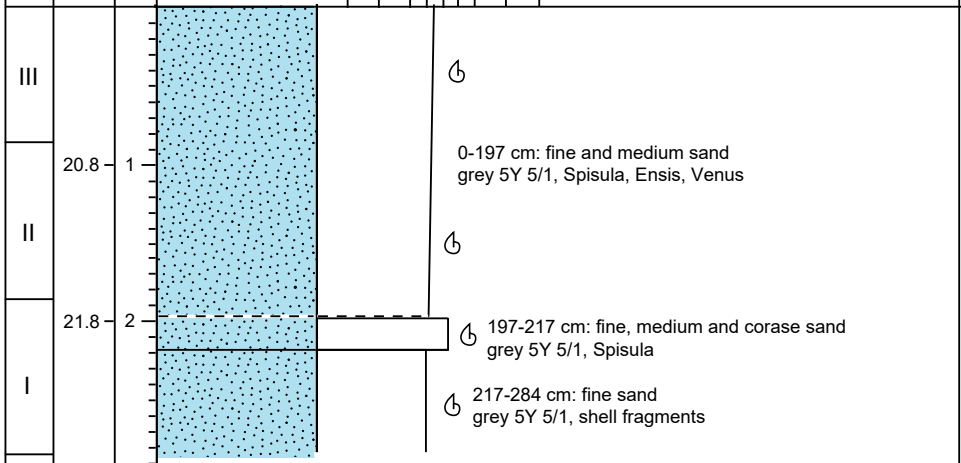
Core ID: Løn-16	Coordinates (m): E: 525198.9 N: 6379339.6	Water depth (m): 22.0	Coordinate system: UTM 32 Reference datum: WGS84
DGU no: 570914.15	Longitude: 9°25.267'E Latitude: 57°33.350'N		
Core type: Vibrocore	Core length (m): 3.77		



Core section	Depth below mean sea level (m)	Depth below sea bed (m)	Age/environment	Samples	Laboratory ID	Grain size: Mean (mm)	Grain size: Silt and clay (%)	Grain size: Fine sand (%)	Grain size: Medium sand (%)	Grain size: Coarse sand (%)	Grain size: Gravel (%)	Loss on ignition (%)	Water (%)	$CaCO_3$	Other parameters
VI			HS	■	200295	0.13	2.06	87.09	10.40	0.36	0.08	0.6	19	+	
V	23.0	1		■	200296	0.34	1.18	45.80	30.17	15.30	7.55	0.9	17		
				■	200297	0.10	6.48	90.79	2.28	0.43	0.02	0.7	19		
IV	24.0	2		■	200298	0.09	8.65	90.56	0.56	0.17	0.07	0.7	20		
III	25.0	3	HS	■	200299	0.08	10.27	89.46	0.27	0.00	0.00	1.0	24	+	
II	26.0	4		■	200300	0.08	10.62	88.24	1.05	0.09	0.00	1.2	21		
I	27.0	5		■	200301	0.10	11.05	82.61	5.56	0.78	0.00	1.3	22	+	
				■	200302	0.12	9.97	70.93	16.90	2.04	0.16	1.1	20		

Geological Survey of Denmark and Greenland	Client:: Kystdirektoratet	Coring: M/S Skoven	Date: 17 September 2020
		Description: Ole Bennike	Date: 25 September 2020
		QC: Henrik Jønsson Granat	Date: 25 September 2020

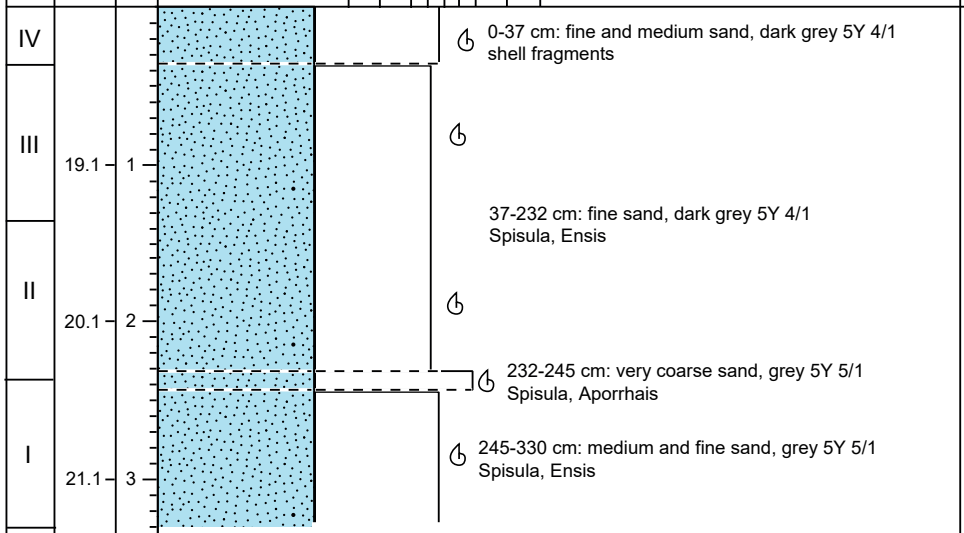
Core ID: Løn-17	Coordinates (m): E: 523482.0 N: 6378163.5	Water depth (m): 19.8	Coordinate system: UTM 32 Reference datum: WGS84
DGU no: 570914.16	Longitude: 9°23.538'E Latitude: 57°32.722'N		
Core type: Vibrocore	Core length (m): 3.77		



Core section	Depth below mean sea level (m)	Depth below sea bed (m)	Age/environment	Samples	Laboratory ID	Grain size: Mean (mm)	Grain size: Silt and clay (%)	Grain size: Fine sand (%)	Grain size: Medium sand (%)	Grain size: Coarse sand (%)	Grain size: Gravel (%)	Loss on ignition (%)	Water (%)	$CaCO_3$	Other parameters
III					200303	0.18	0.83	73.14	24.34	1.19	0.49	0.3	17		
II	20.8	1	HS		200304	0.12	3.38	91.52	4.63	0.47	0.00	0.6	18	+	
I	21.8	2			200305	0.30	1.66	36.08	39.01	18.11	5.14	0.6	13	+	
	22.8	3	HS		200306	0.12	1.92	92.63	5.10	0.32	0.03	0.7	20	+	

Geological Survey of Denmark and Greenland / GEUS	Client:: Kystdirektoratet	Coring: M/S Skoven — Date: 17 September 2020
		Description: Ole Bennike — Date: 25 September 2020
		QC: Henrik Jønsson Granat — Date: 25 September 2020

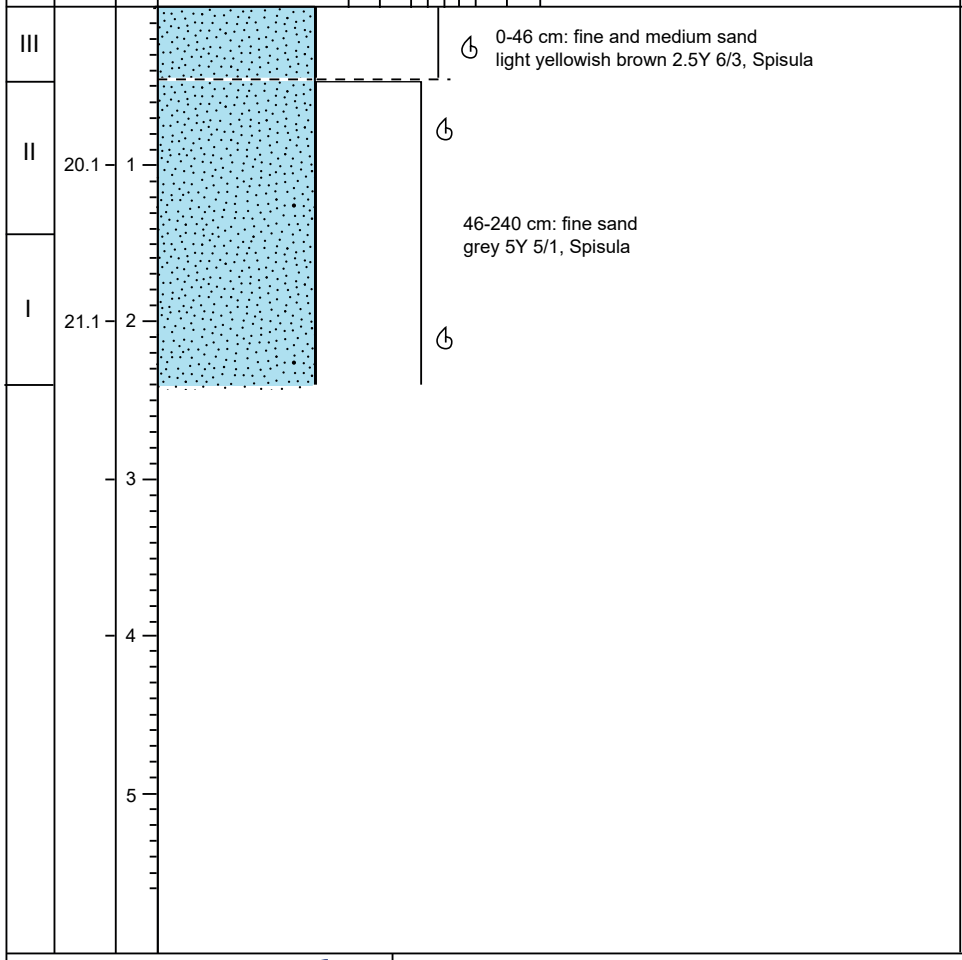
Core ID: Løn-18	Coordinates (m): E: 521897.2 N: 6376957.9	Water depth (m): 18.1	Coordinate system: UTM 32 Reference datum: WGS84
DGU no: 570914.17	Longitude: 9°21.943'E Latitude: 57°32.077'N		
Core type: Vibrocore	Core length (m): 3.30		



Core section	Depth below mean sea level (m)	Depth below sea bed (m)	Age/environment	Samples	Laboratory ID	Grain size: Mean (mm)	Grain size: Silt and clay (%)	Grain size: Fine sand (%)	Grain size: Medium sand (%)	Grain size: Coarse sand (%)	Grain size: Gravel (%)	Loss on ignition (%)	Water (%)	$CaCO_3$	Other parameters
IV			HS	■	200307	0.23	0.58	43.53	51.08	4.40	0.42	0.4	17	+	
III	19.1	1		■	200308	0.15	0.62	86.42	12.18	0.52	0.27	0.3	18		
II	20.1	2	HS	■	200309	0.15	0.84	87.77	10.55	0.84	0.00	0.3	17	+	
I	21.1	3	HS	■	200310	0.25	0.62	28.82	64.63	5.70	0.22	0.3	14	+	
		4													
		5													

Geological Survey of Denmark and Greenland	Client:: Kystdirektoratet	Coring: M/S Skoven	Date: 16 September 2020
		Description: Ole Bennike	Date: 25 September 2020
		QC: Henrik Jønsson Granat	Date: 25 September 2020

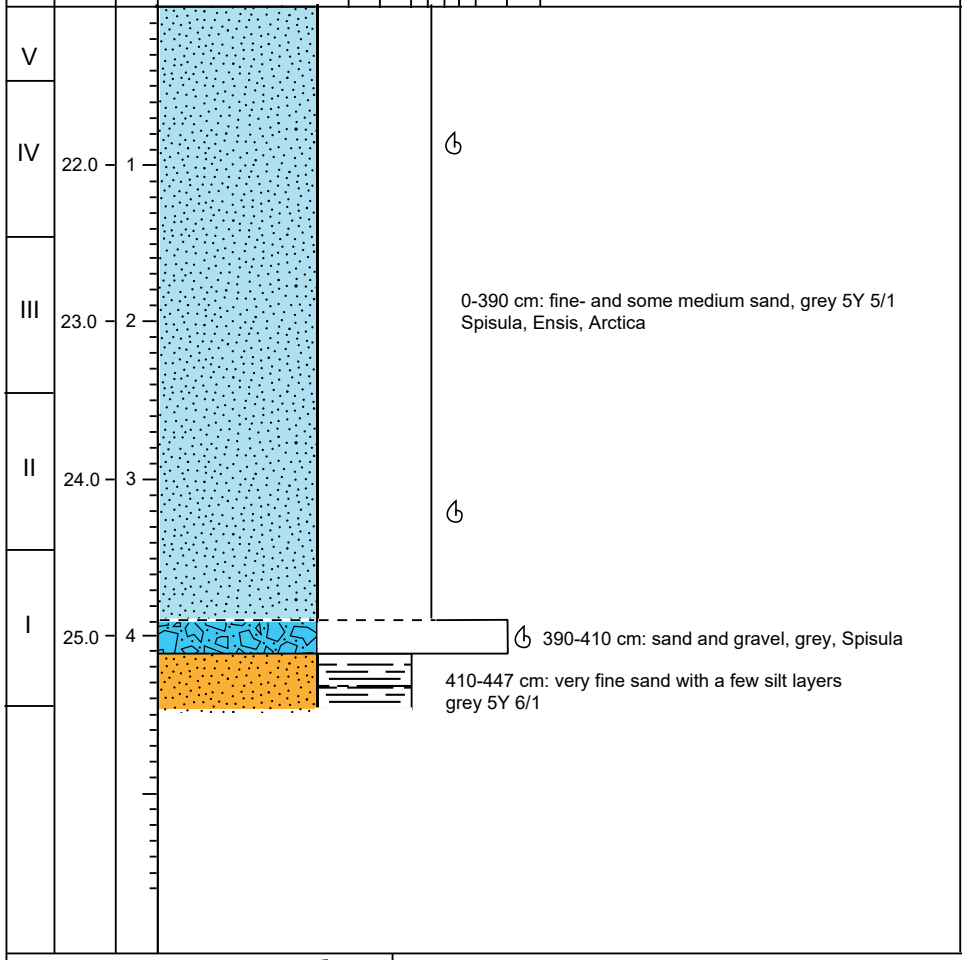
Core ID: Løn-19	Coordinates (m): E: 519825.4 N: 6375496.9	Water depth (m): 19.1	Coordinate system: UTM 32 Reference datum: WGS84
DGU no: 570914.18	Longitude: 9°19.860'E Latitude: 57°31.295'N		
Core type: Vibrocore	Core length (m): 2.40		



Core section	Depth below mean sea level (m)	Depth below sea bed (m)	Lithology	Description	Age/environment	Samples	Laboratory ID	Grain size: Mean (mm)	Grain size: Silt and clay (%)	Grain size: Fine sand (%)	Grain size: Medium sand (%)	Grain size: Coarse sand (%)	Grain size: Gravel (%)	Loss on ignition (%)	Water (%)	$CaCO_3$	Other parameters
III				0-46 cm: fine and medium sand light yellowish brown 2.5Y 6/3, Spisula	HS	■	200311	0.20	0.94	50.70	47.24	1.11	0.00	0.3	18	+	
II	20.1	1		46-240 cm: fine sand grey 5Y 5/1, Spisula		■	200312	0.13	1.56	91.96	5.65	0.53	0.31	0.5	18		
I	21.1	2			HS	■	200313	0.13	1.90	85.06	12.57	0.40	0.07	0.6	18	+	
		3															
		4															
		5															

Geological Survey of Denmark and Greenland	Client:: Kystdirektoratet	Coring: M/S Skoven	Date: 16 September 2020
		Description: Ole Bennike	Date: 25 September 2020
		QC: Henrik Jønsson Granat	Date: 25 September 2020

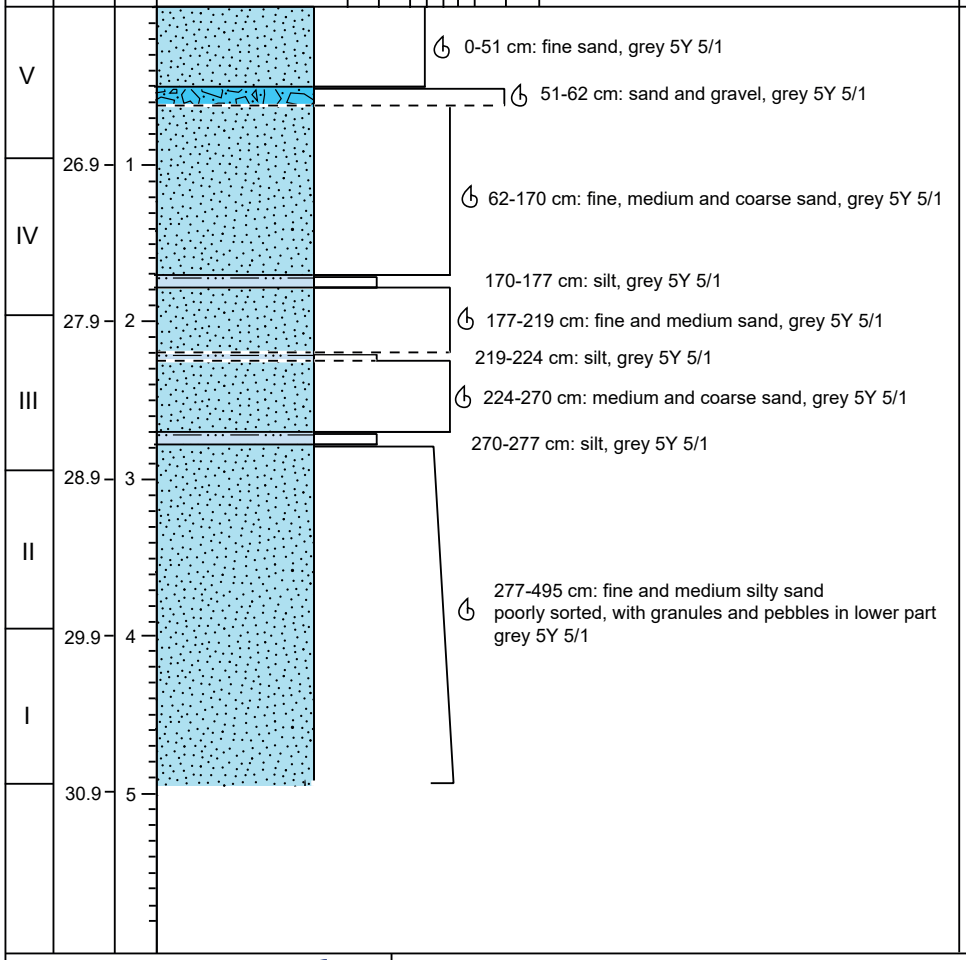
Core ID: Løn-20	Coordinates (m): E: 519565.5 N: 6373482.5	Water depth (m): 21.0	Coordinate system: UTM 32 Reference datum: WGS84
DGU no: 570914.19	Longitude: 9°19.590'E Latitude: 57°30.210'N		
Core type: Vibrocore	Core length (m): 4.47		



Age/environment	Samples	Laboratory ID	Grain size: Mean (mm)	Silt and clay (%)	Fine sand (%)	Medium sand (%)	Coarse sand (%)	Gravel (%)	Loss on ignition (%)	Water (%)	$CaCO_3$	Other parameters
		200314	0.12	4.08	93.76	1.83	0.24	0.10	0.6	19		
		200315	0.10	8.16	88.75	2.91	0.16	0.02	0.9	18	+	
HS		200316	0.14	11.05	70.08	14.96	3.07	0.85	1.2	16		
		200317	0.13	5.28	87.71	4.91	1.64	0.46	0.7	17	+	
		200318	0.13	2.53	88.25	6.26	2.65	0.30	0.6	18	+	
HG											+	
TS												

Geological Survey of Denmark and Greenland / GEUS	Client:: Kystdirektoratet	Coring: M/S Skoven	Date: 16 September 2020
		Description: Ole Bennike	Date: 24 September 2020
		QC: Henrik Jønsson Granat	Date: 24 September 2020

Core ID: Løn-22	Coordinates (m): E: 528331.3 N: 6381627.0	Water depth (m): 25.9	Coordinate system: UTM 32 Reference datum: WGS84
DGU no: 570914.20	Longitude: 9°28.423'E Latitude: 57°34.572'N		
Core type: Vibrocore	Core length (m): 4.95		



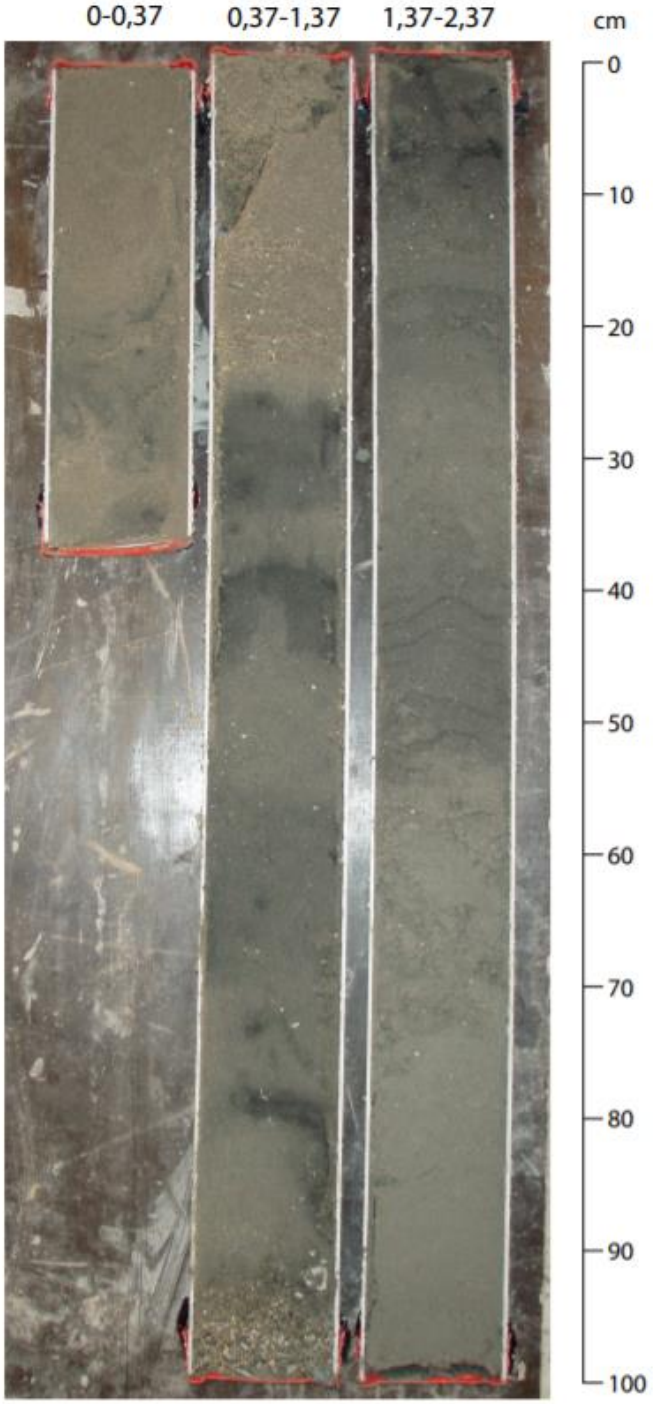
Age/environment	Samples	Laboratory ID	Grain size: Mean (mm)	Grain size: Silt and clay (%)	Grain size: Fine sand (%)	Grain size: Medium sand (%)	Grain size: Coarse sand (%)	Grain size: Gravel (%)	Loss on ignition (%)	Water (%)	$CaCO_3$	Other parameters
HS	■	200319	0.12	3.26	89.41	4.44	1.77	1.12	0.4	20		
HG											+	
HS	■	200320	0.48	1.37	20.03	40.81	19.60	18.19	0.4	12		
											+	
HI												
HI	■	200321	0.25	2.02	26.05	61.83	8.81	1.29	0.5	13		
HS												
HI											+	
	■	200322	0.16	11.47	49.75	34.34	3.55	0.89	1.2	14		
HS												
	■	200323	0.15	20.47	58.95	18.64	1.59	0.35	1.6	18	+	
	■	200324	0.31	5.53	19.03	55.55	9.93	9.95	0.6	13		

Geological Survey of Denmark and Greenland	Client:: Kystdirektoratet	Coring: M/S Skoven	Date: 17 September 2020
		Description: Ole Bennike	Date: 25 September 2020
		QC: Henrik Jønsson Granat	Date: 25 September 2020

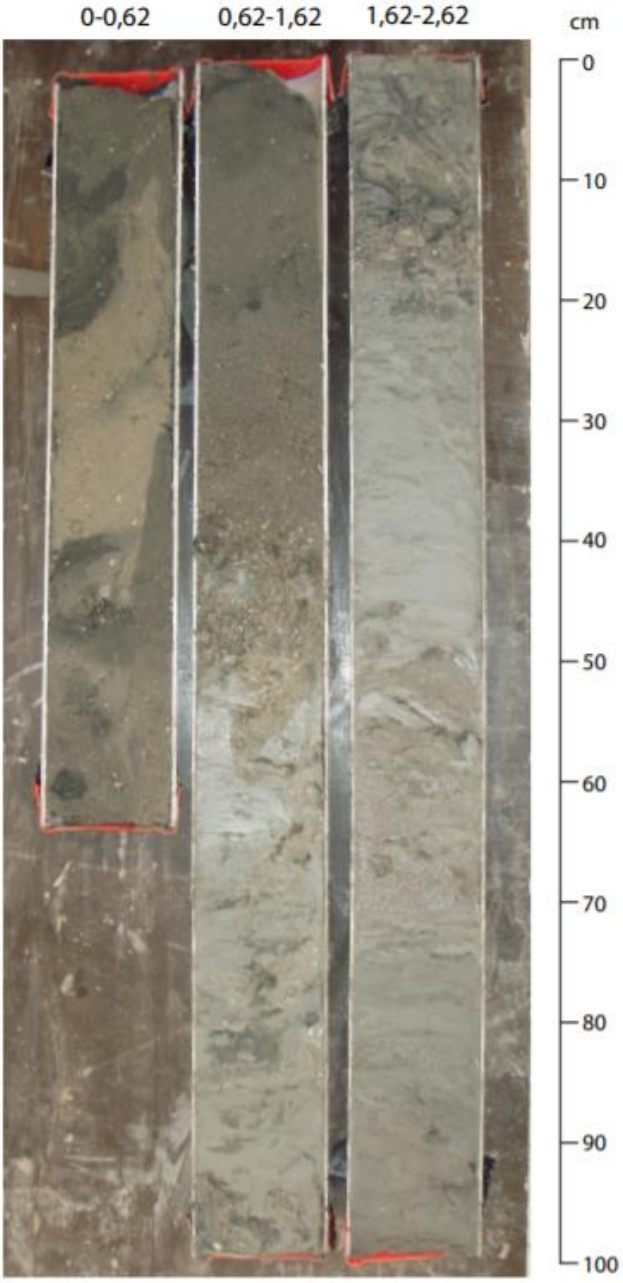
Bilag C3

- Fotos af vibrationskerner

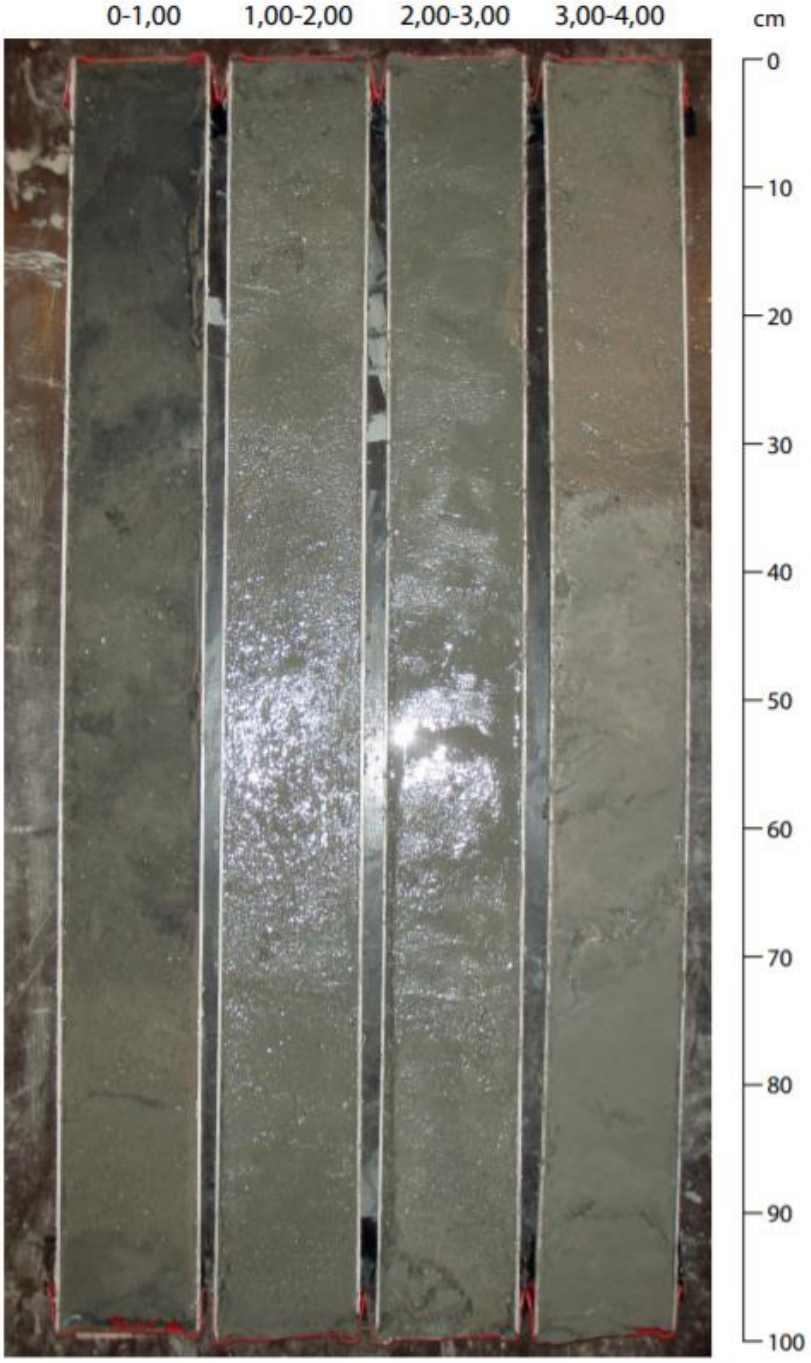
Løn-01



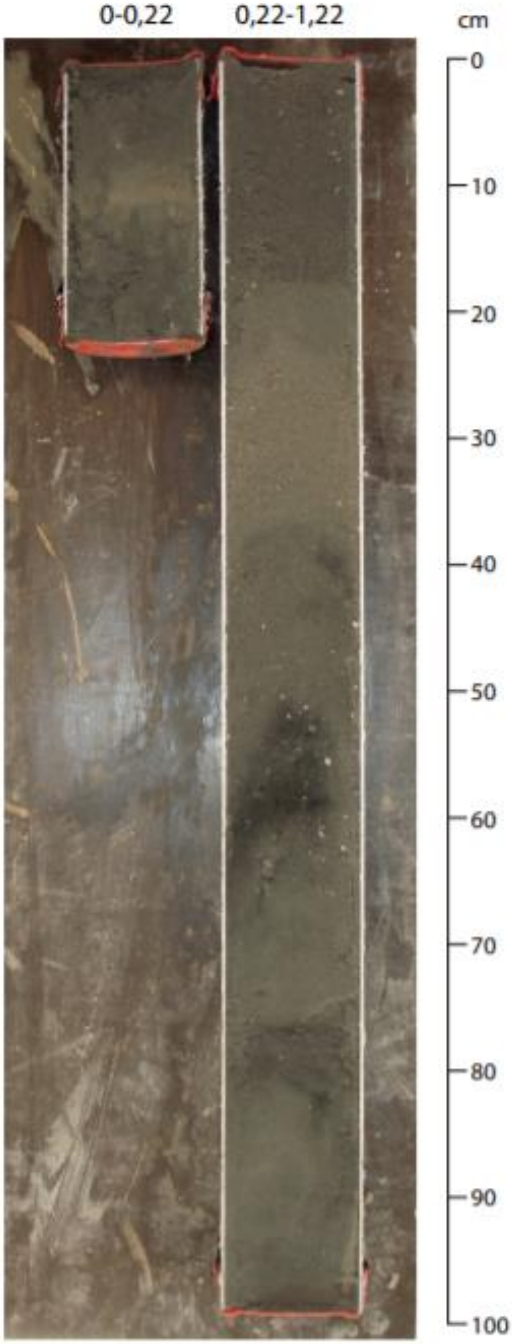
Løn-02



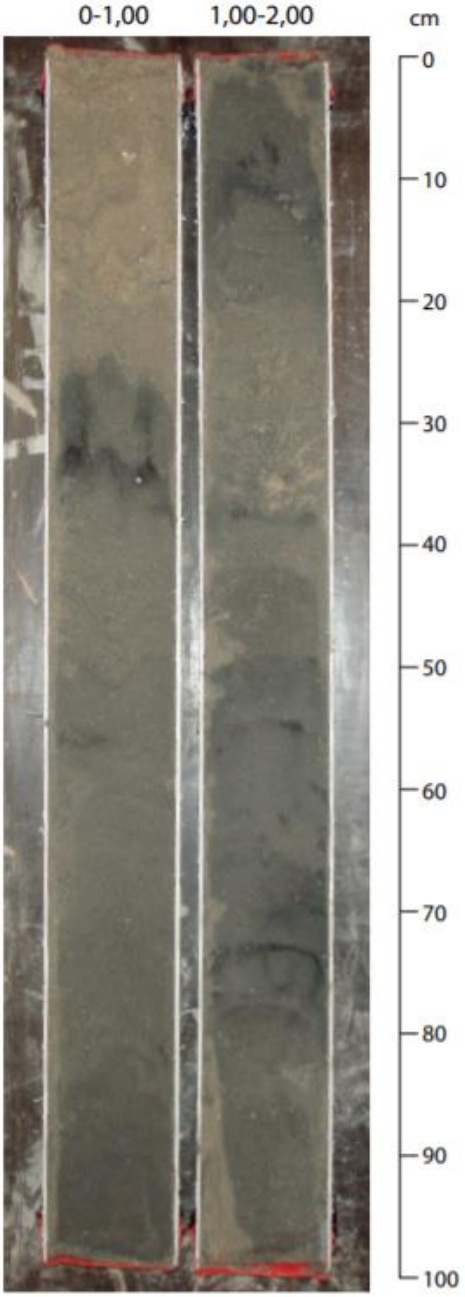
Løn-03



Løn-04



Løn-05



Løn-06

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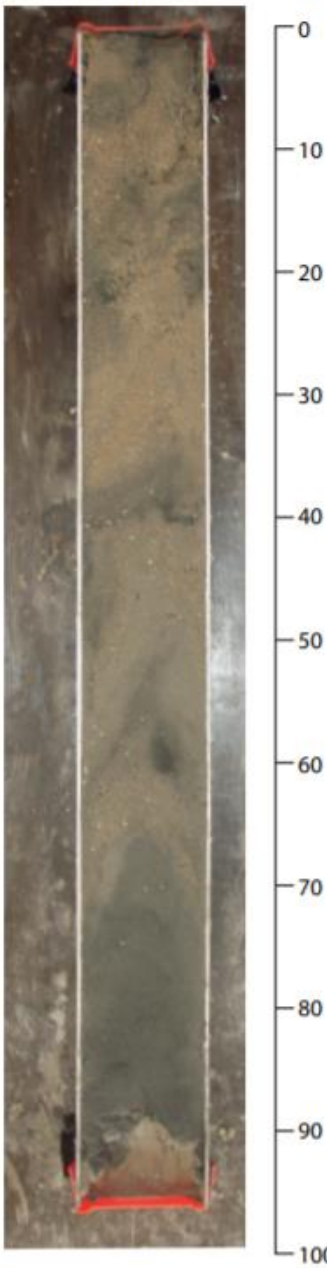
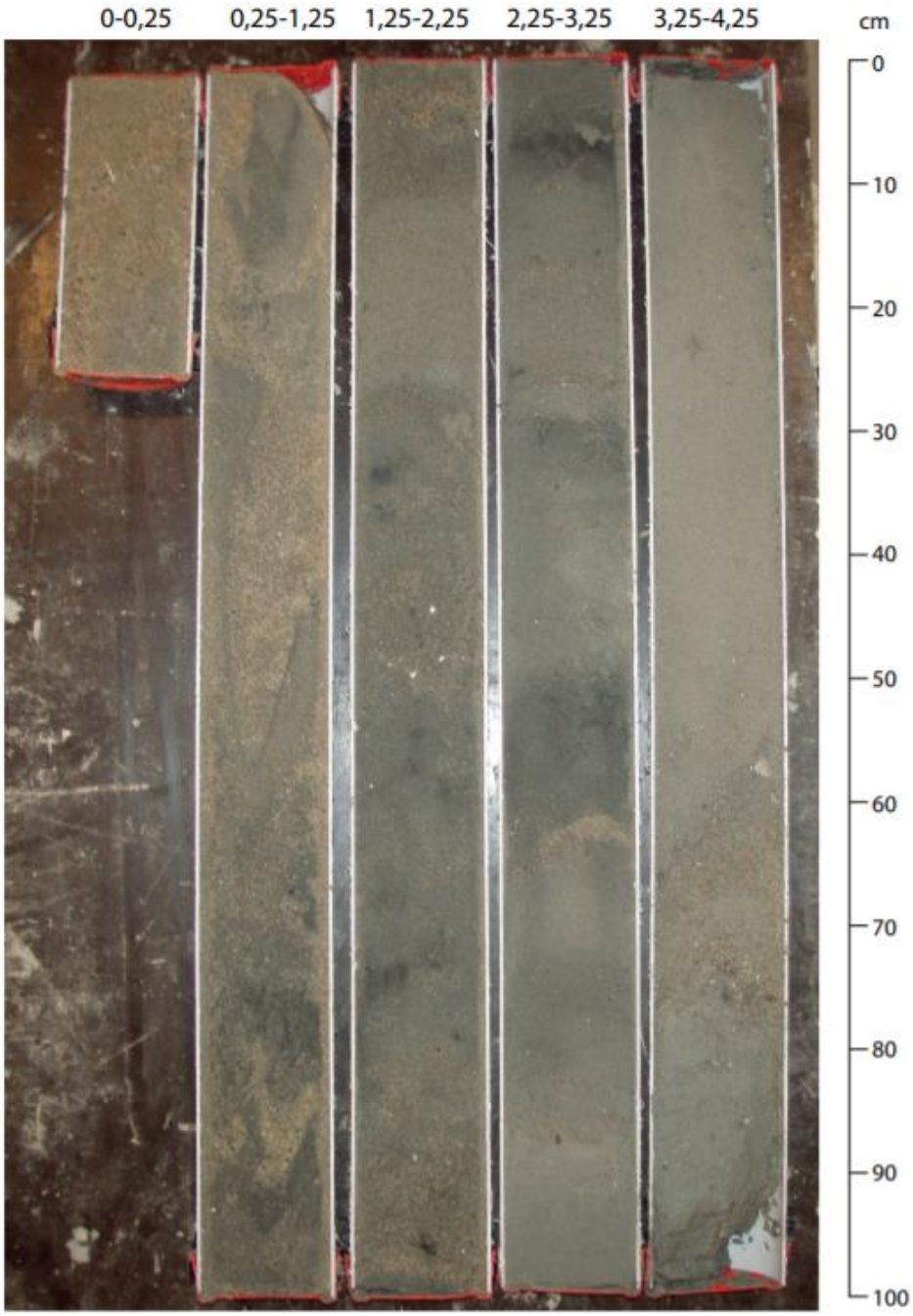


Løn-06A

0-1,00 1,00-2,00 2,00-3,00 3,00-4,00

Løn-07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0,25-1,25
1,25-2,25
2,25-3,25
3,25-4,25
cm
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10
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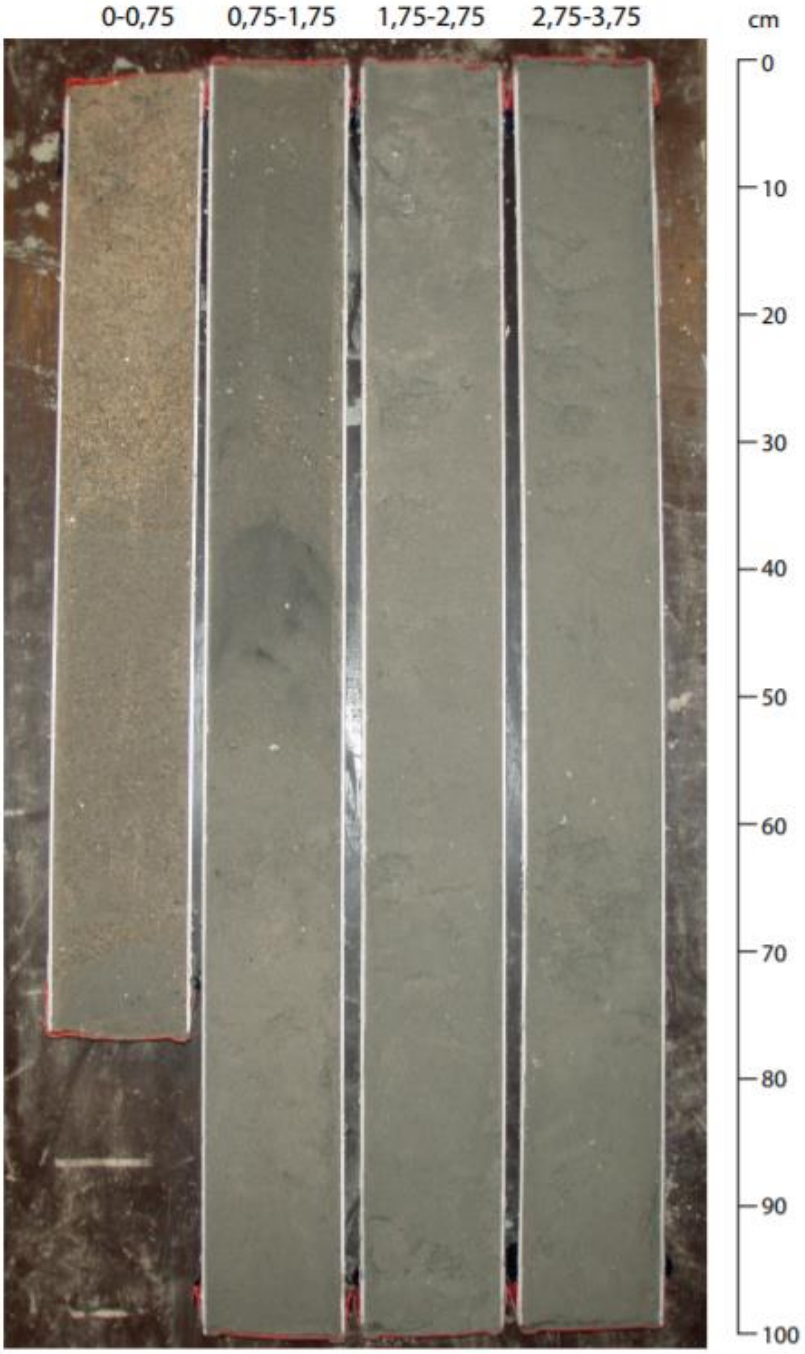
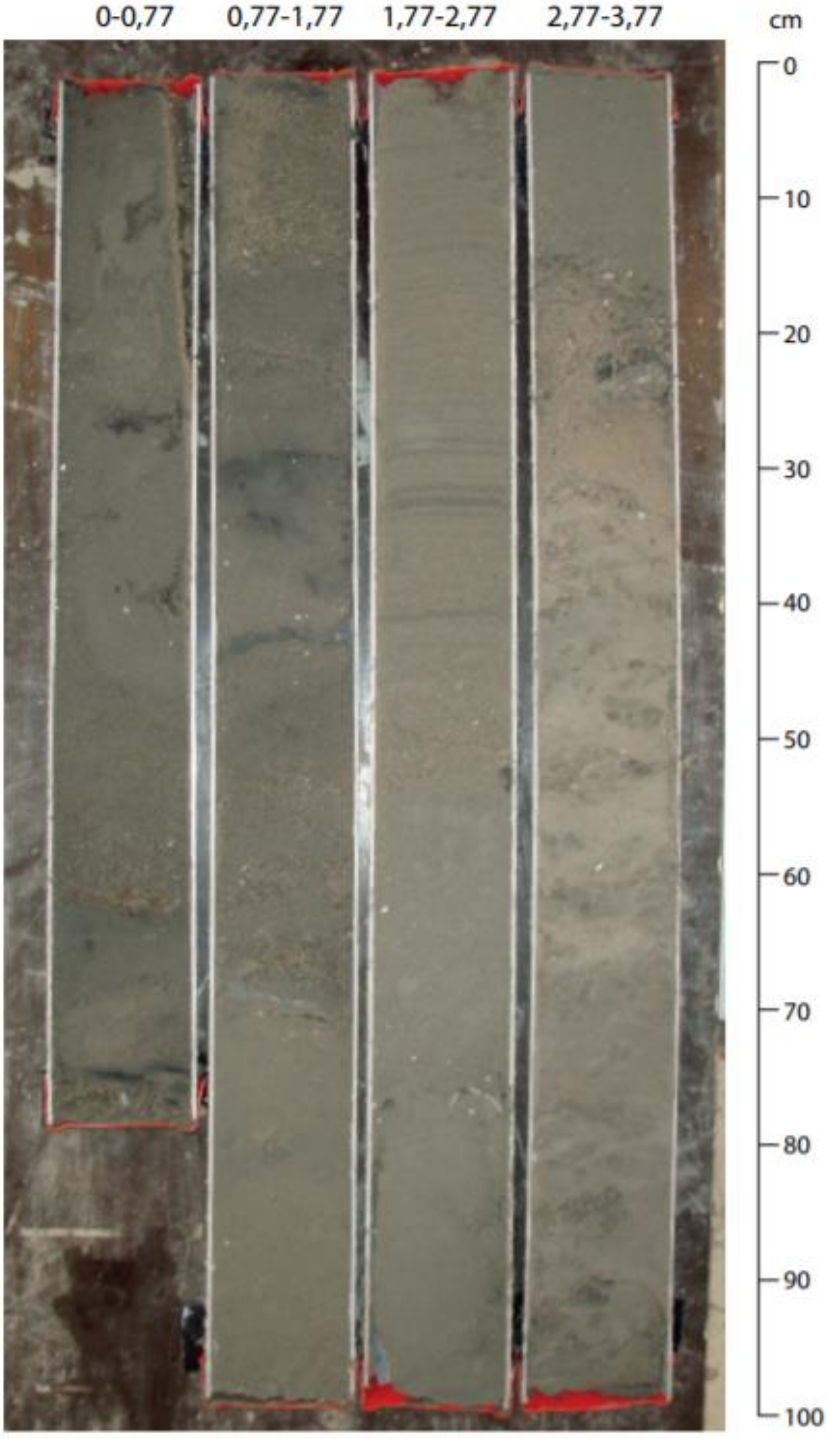
30
40
50
60
70
80
90
100

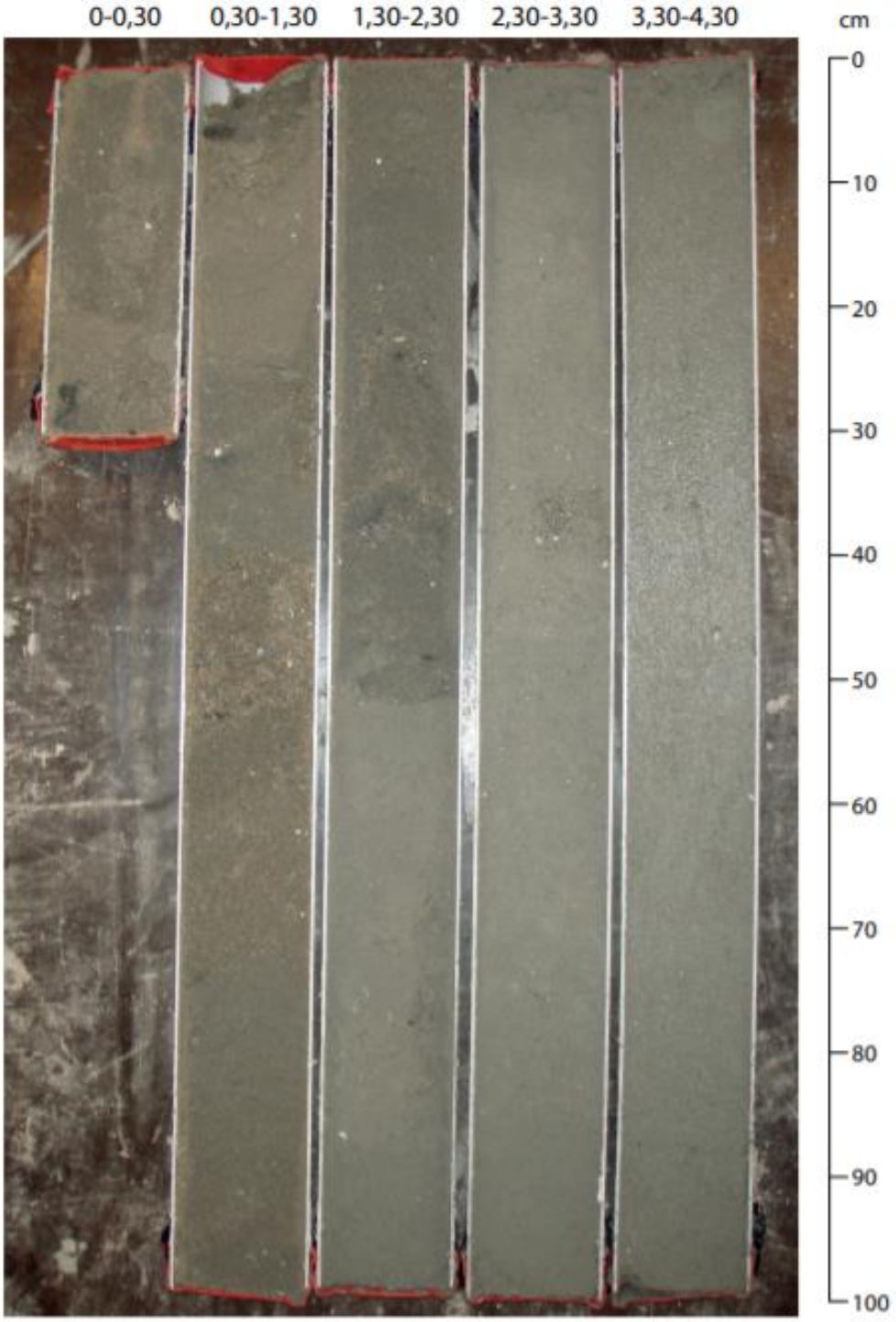
Løn-08



Løn-09



Løn-10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3,30-4,30
cm
0
10
20
30
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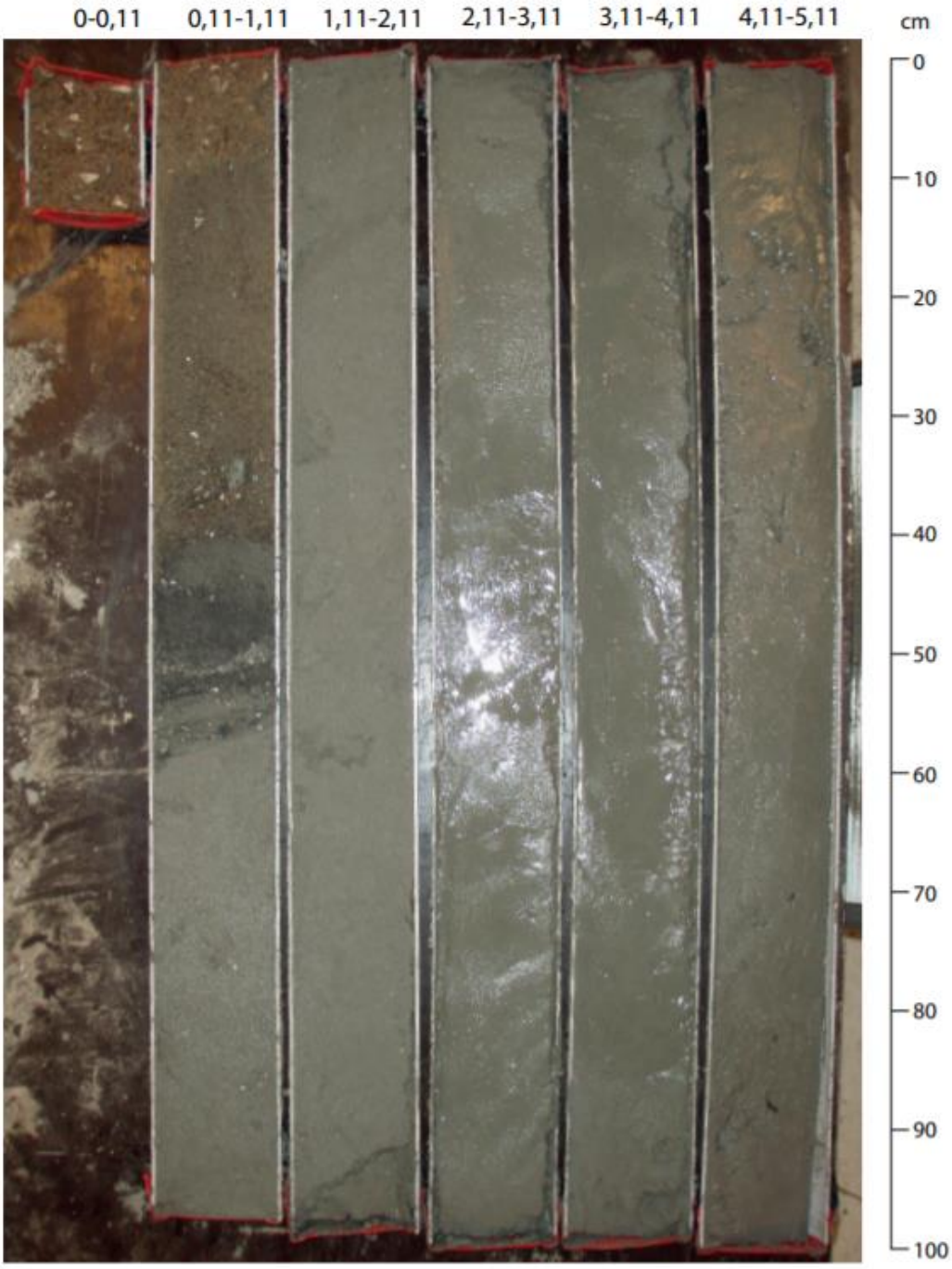
80
90
100

Løn-11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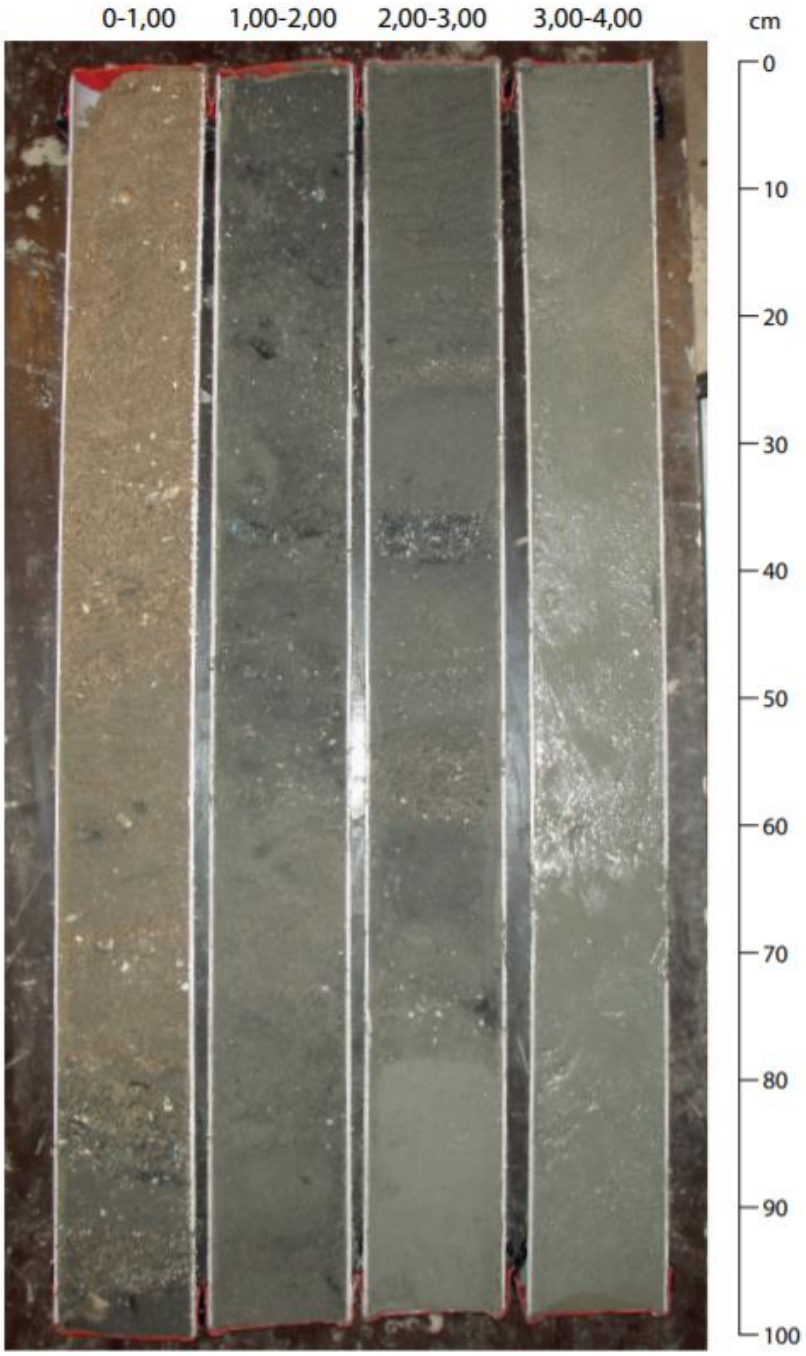
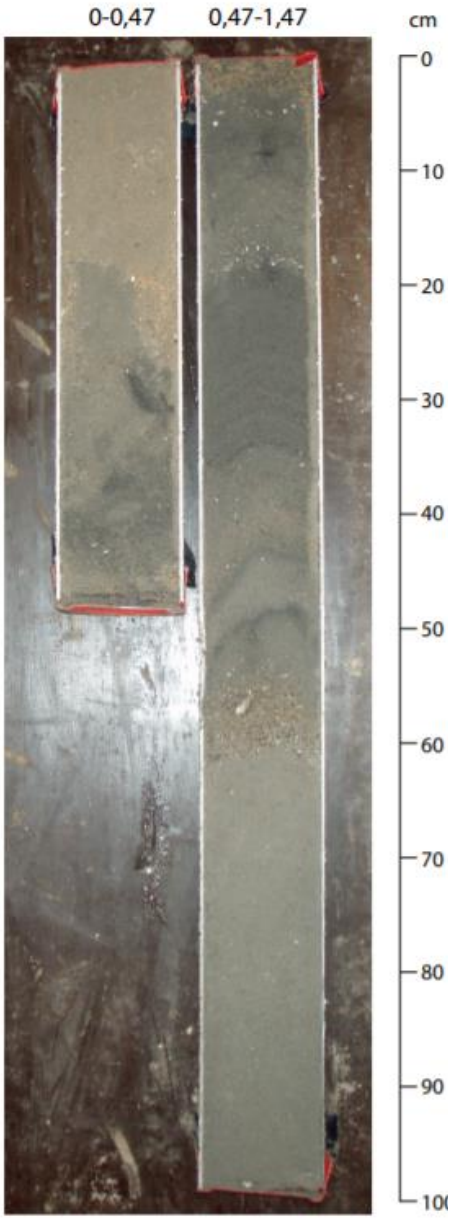
2,11-3,11
3,11-4,11
4,11-5,11
cm
0
10
20
30
40
50
60
70
80
90
100

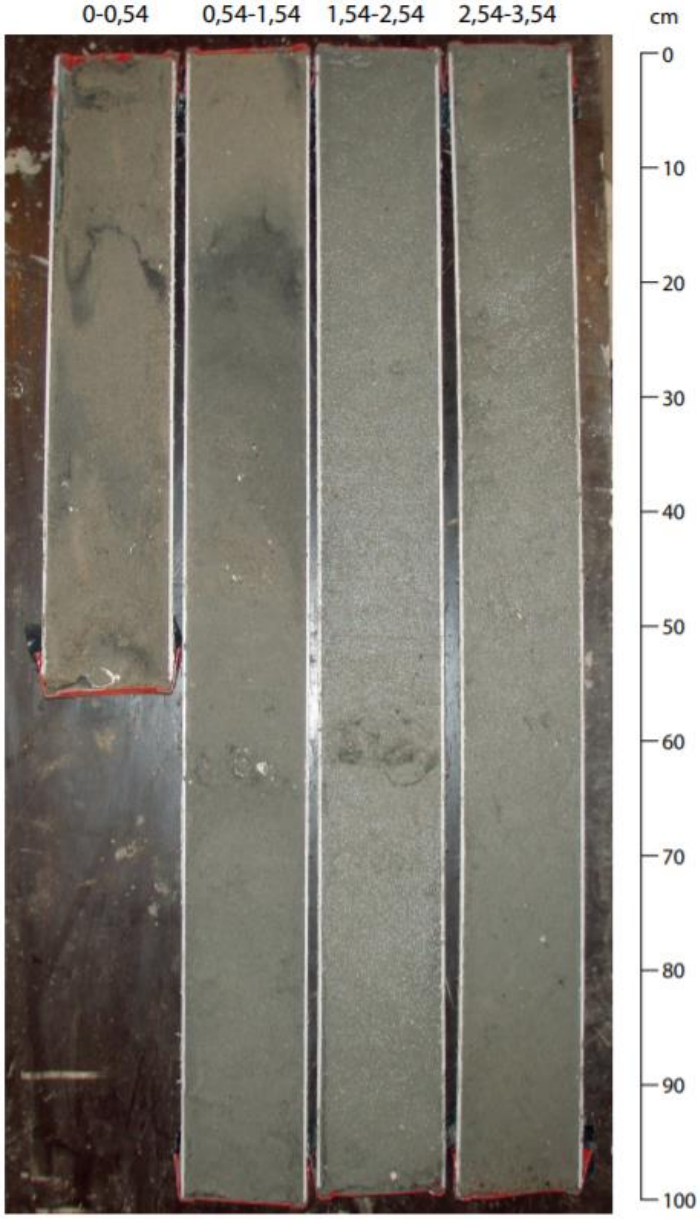
Løn-12



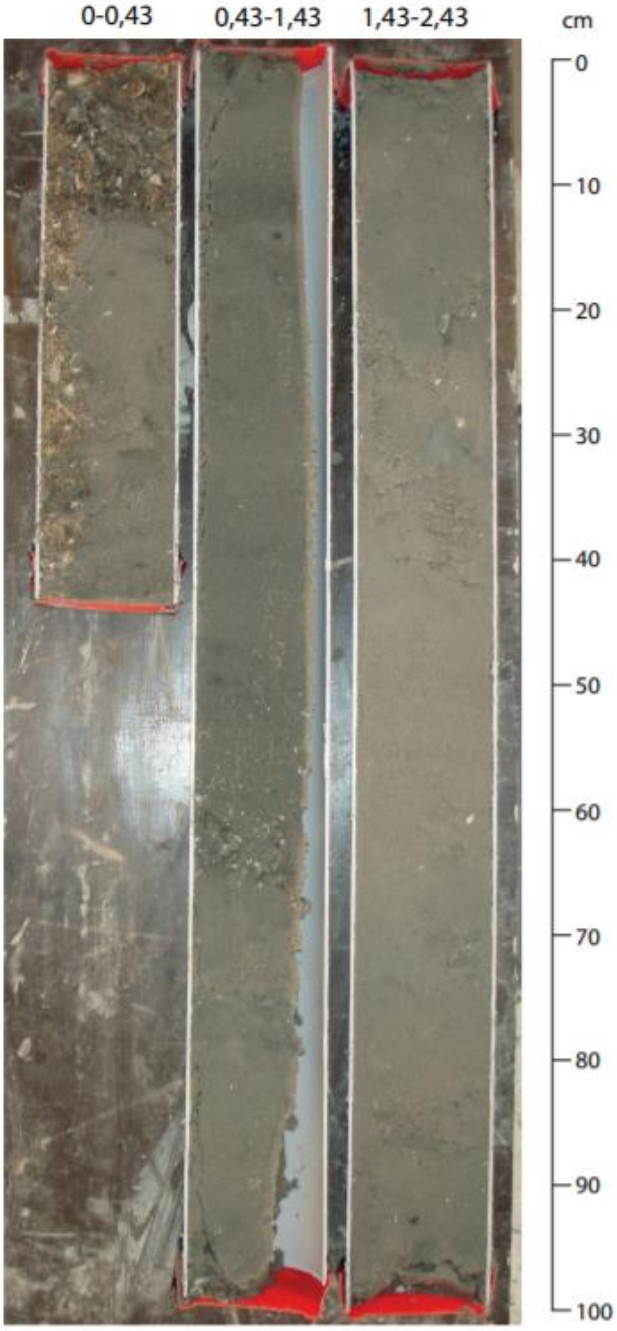
Løn-13



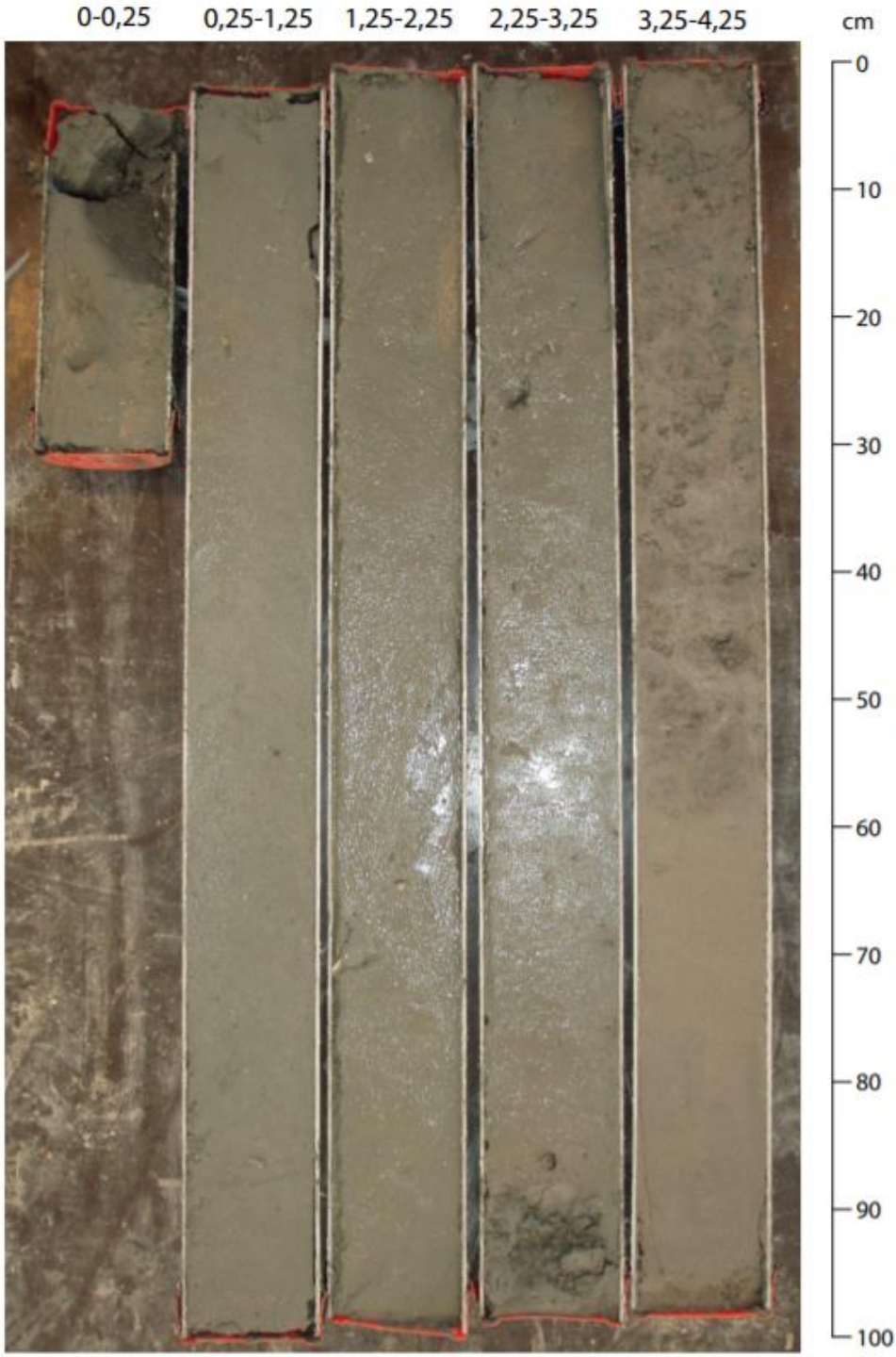
Løn-13A



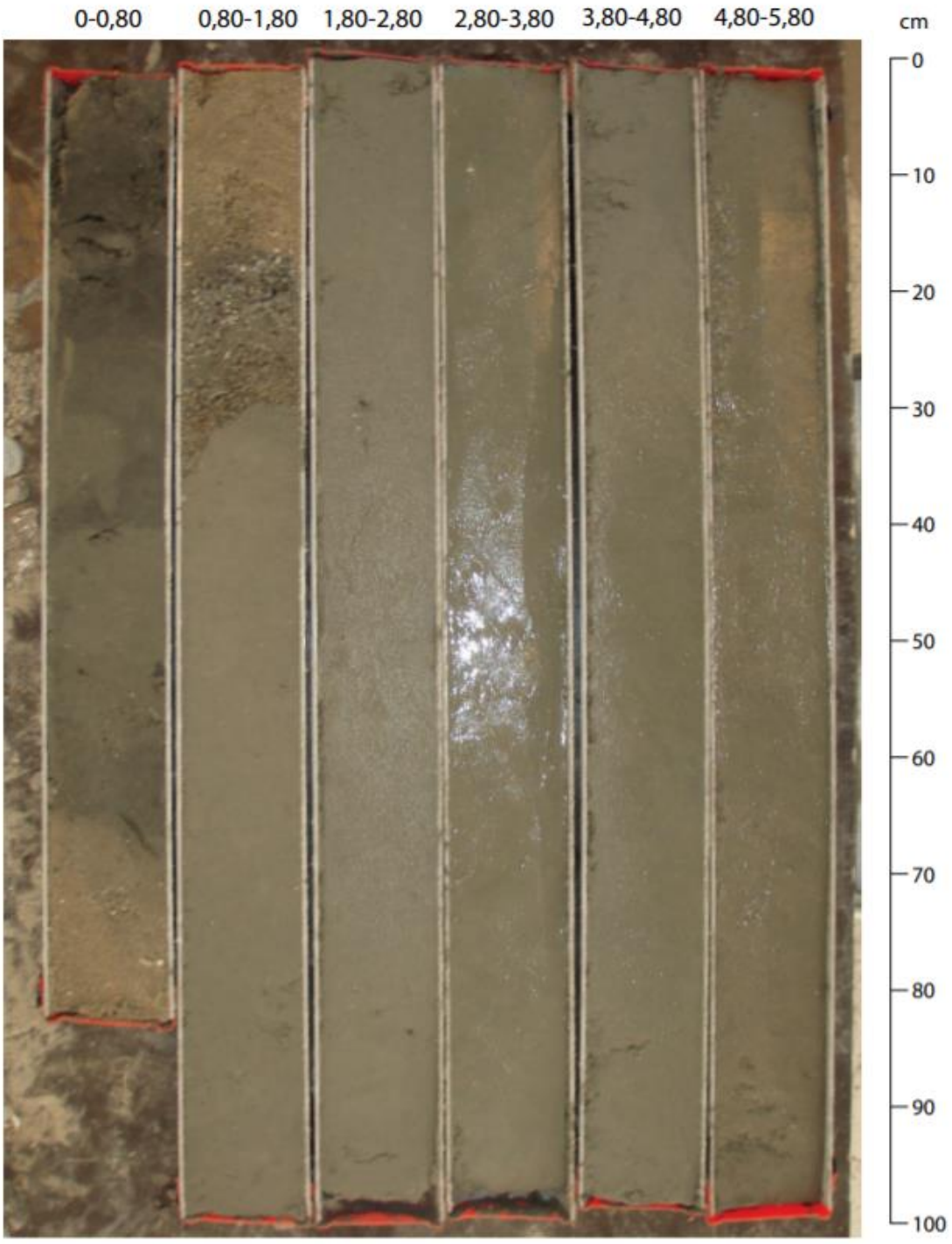
Løn-14



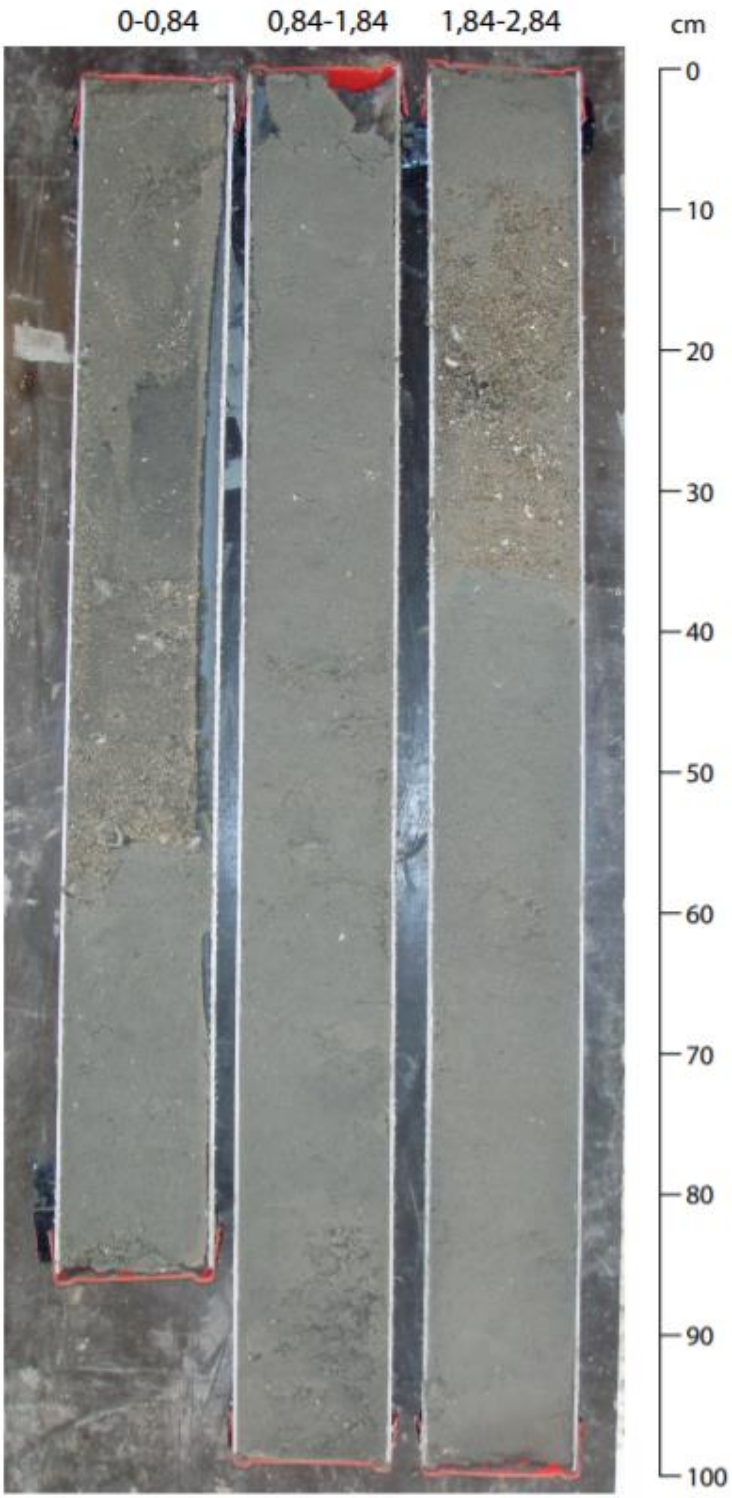
Løn-15


0-0,25
0,25-1,25
1,25-2,25
2,25-3,25
3,25-4,25
cm
0
10
20
30
40
50
60
70
80
90
100

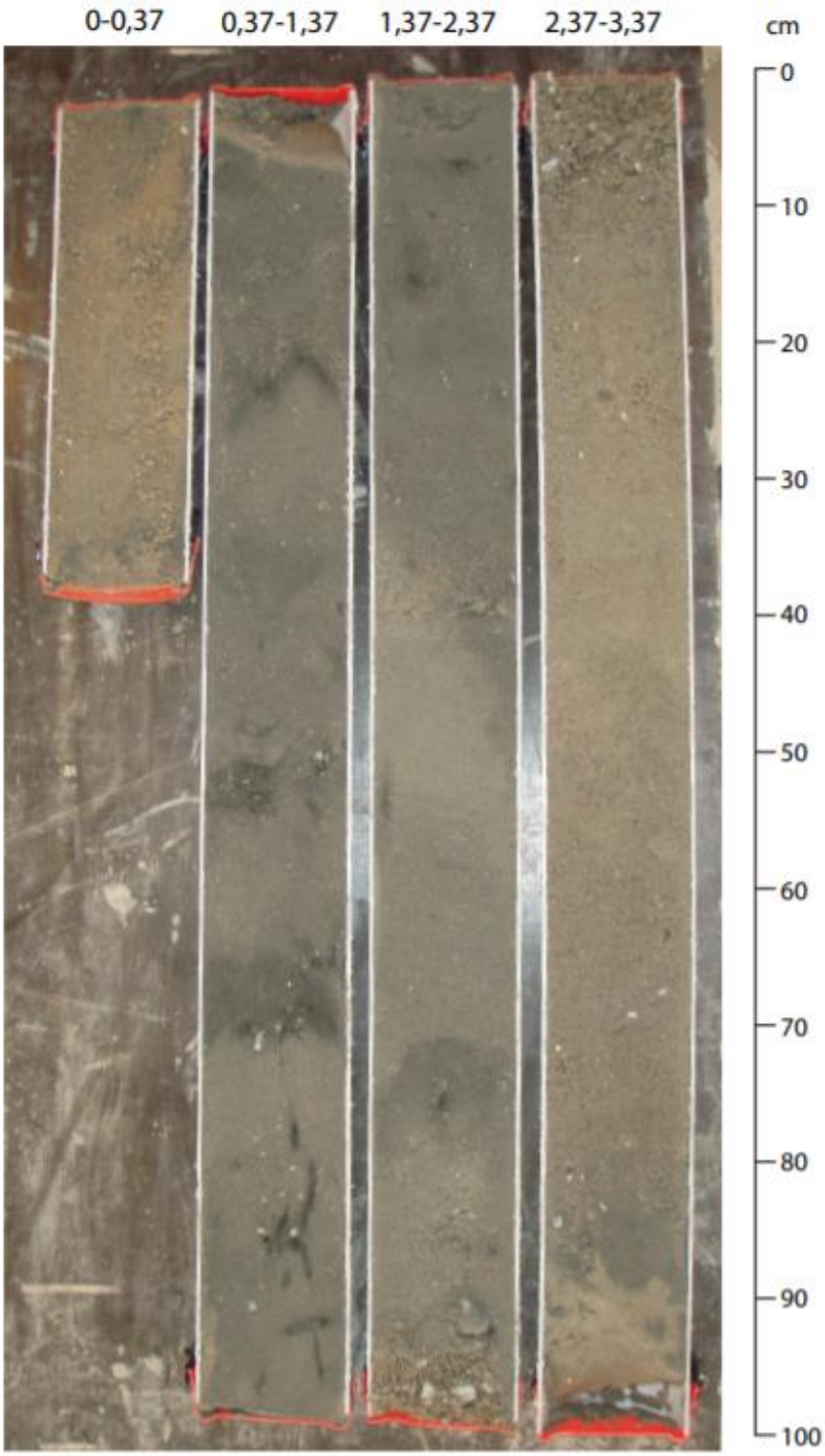
Løn-16


0-0,80
0,80-1,80
1,80-2,80
2,80-3,80
3,80-4,80
4,80-5,80
cm
0
10
20
30
40
50
60
70
80
90
100

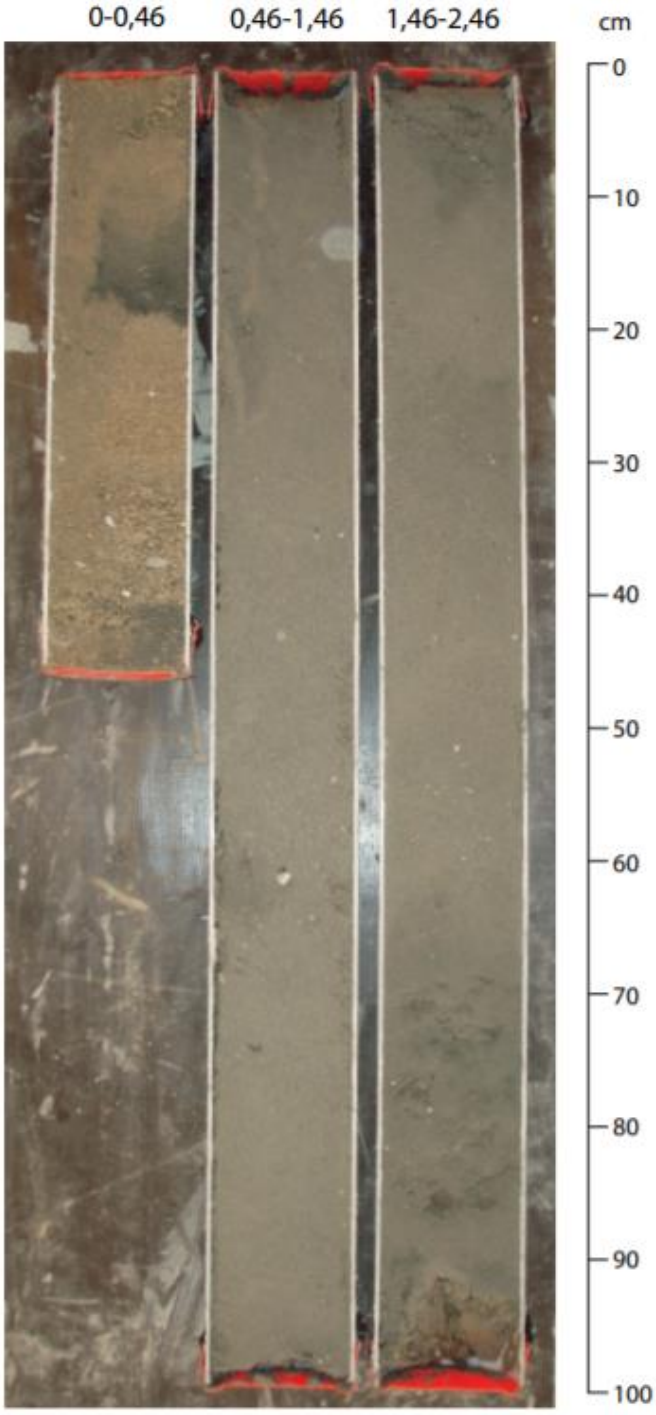
Løn-17



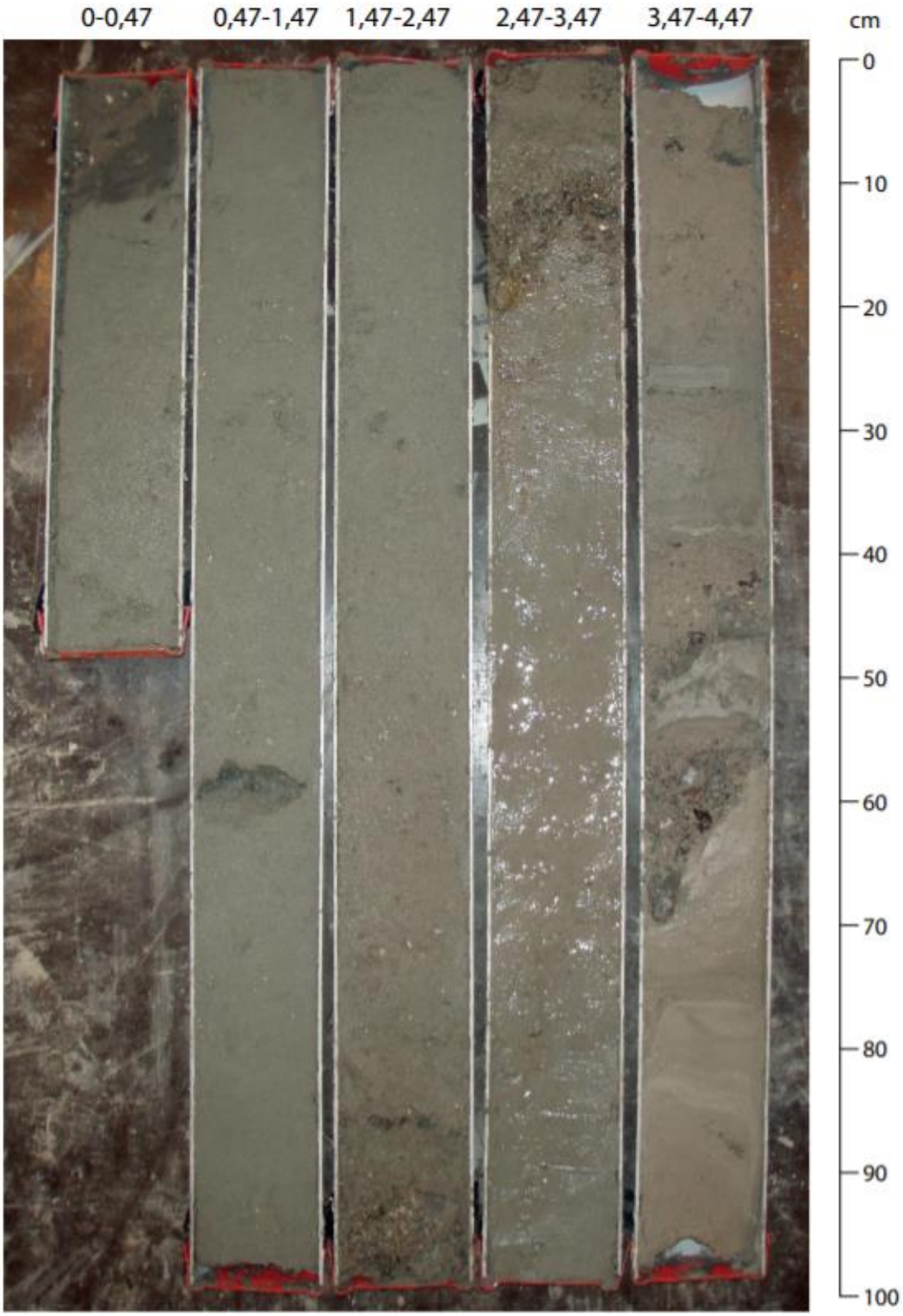
Løn-18



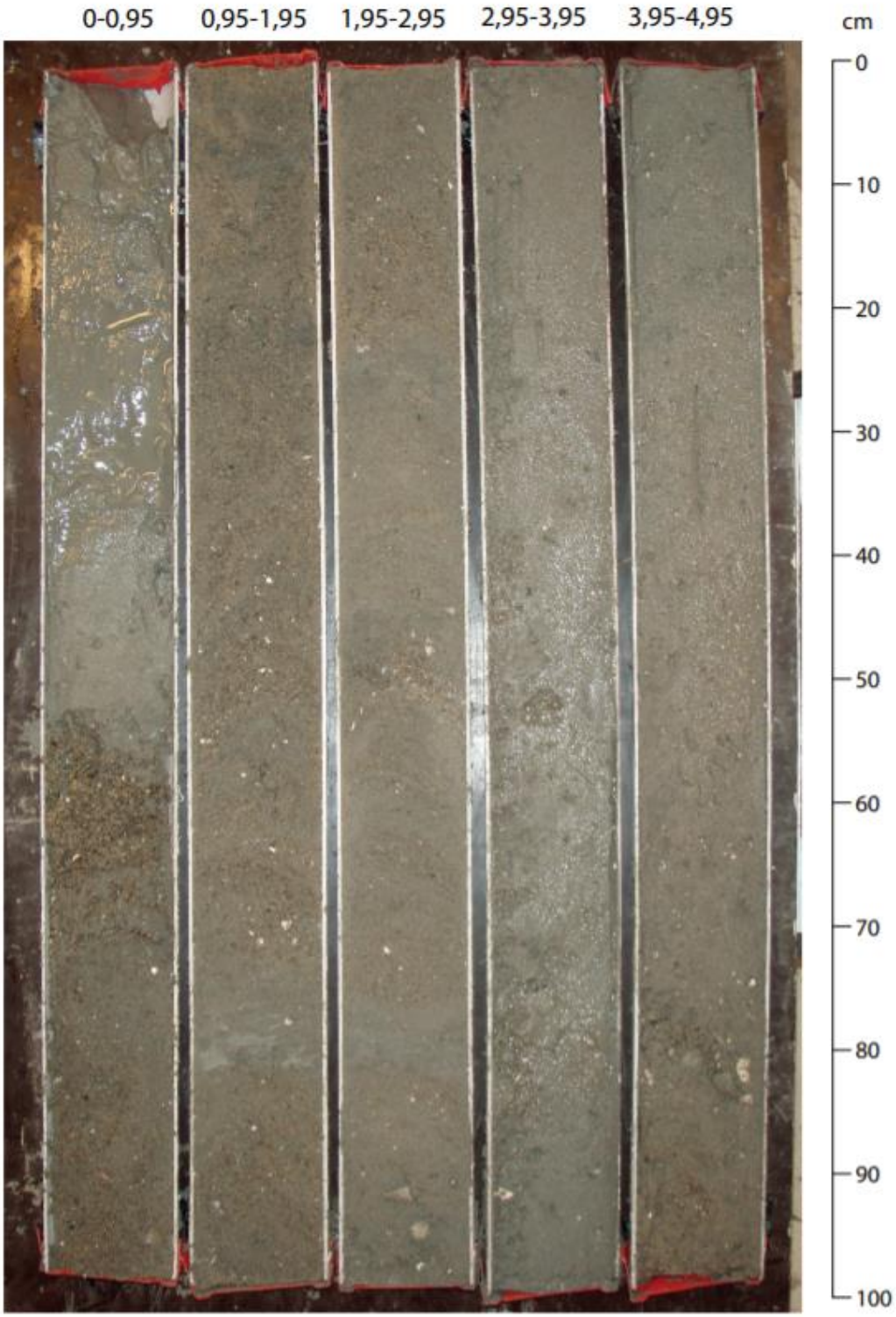
Løn-19



Løn-20


0-0,47
0,47-1,47
1,47-2,47
2,47-3,47
3,47-4,47
cm
0
10
20
30
40
50
60
70
80
90
100

Løn-22


0-0,95
0,95-1,95
1,95-2,95
2,95-3,95
3,95-4,95
cm
0
10
20
30
40
50
60
70
80
90
100

Bilag C4

Vibrationskerner - Oversigt over prøveresultater

Vibrocore no.	Sample Id.	Prøve interval (cm)	Lab. Id.	D-50 (mm)	<0,125 mm (%)	Vandindhold (%)	Glødetab (%)
Løn-01	Løn-01_0-20	0-20	200230	0.15	11.46	19	0.4
	Løn-01_100-120	100-120	200231	0.15	25.02	18	0.6
	Løn-01_200-220	200-220	200232	0.14	31.61	18	0.8
Løn-02	Løn-02_0-20	0-20	200233	0.15	22.7	21	0.7
	Løn-02_80-100	80-100	200234	0.18	7.04	17	0.3
Løn-03	Løn-03_0-20	0-20	200235	0.13	42.32	22	1.0
	Løn-03_100-120	100-120	200236	0.14	35.7	18	0.9
	Løn-03_200-220	200-220	200237	0.09	51.81	20	1.2
	Løn-03_300-320	300-320	200238	0.09	57.85	22	0.7
Løn-04	Løn-04_0-20	0-20	200239	0.15	23.23	19	0.4
	Løn-04_100-120	100-120	200240	0.15	19.11	18	0.5
Løn-05	Løn-05_0-20	0-20	200241	0.16	6.82	19	0.4
	Løn-05_100-120	100-120	200242	0.15	15.94	17	0.4
	Løn-05_180-200	180-200	200243	0.15	11.59	19	0.4
Løn-06	Løn-06_0-20	0-20	200244	0.27	4.31	17	0.3
	Løn-06_70-90	70-90	200245	0.15	22.41	17	0.7
Løn-06A	Løn-06A_0-20	0-20	200246	0.25	6.55	16	0.4
	Løn-06A_100-120	100-120	200247	0.15	13.11	20	0.4
	Løn-06A_200-220	200-220	200248	0.16	15.77	17	0.4
	Løn-06A_320-340	320-340	200249	0.16	10.69	19	0.7
	Løn-06A_380-400		200250	0.07	92.03	20	1.2
Løn-07	Løn-07_0-20	0-20	200251	0.3	2.77	14	0.4
	Løn-07_100-120	100-120	200252	0.27	5.1	14	0.4
	Løn-07_180-200	200-220	200253	0.27	9.52	16	0.4
	Løn-07_300-320	300-320	200254	0.15	20.52	18	0.6
	Løn-07_395-415	395-415	200255	0.14	30.53	19	0.7
Løn-08	Løn-08_0-20	0-20	200256	0.29	1.69	13	0.4
	Løn-08_100-120	100-120	200257	0.15	13.16	16	0.4
	Løn-08_200-220	200-220	200258	0.14	24.91	17	0.6
	Løn-08_300-320	300-320	200259	0.14	35.96	18	0.6
	Løn-08_355-3375	355-375	200260	0.13	40.65	19	0.5
Løn-09	Løn-09_0-20	0-20	200261	0.14	28.91	20	0.5
	Løn-09_100-120	100-120	200262	0.15	20.03	18	0.5
	Løn-09_200-210	200-210	200263	0.15	19.97	18	0.4
	Løn-09_270-290	270-290	200264	0.14	37.32	19	0.6
Løn-10	Løn-10_0-20	0-20	200265	0.16	10.33	17	0.3
	Løn-10_100-120	100-120	200266	0.16	8.04	16	0.4
	Løn-10_200-220	200-220	200267	0.14	29.24	17	0.6
	Løn-10_300-320	300-320	200268	0.14	33.34	17	0.7
	Løn-10_400-420	400-420	200269	0.13	45.32	19	0.9
Løn-11	Løn-11_0-20	0-20	200270	0.53	1.56	12	0.4
	Løn-11_30-50	30-50	200271	0.3	2.13	16	0.3
	Løn-11_100-120	100-120	200272	0.13	46.33	20	0.8
	Løn-11_200-220	200-220	200273	0.09	61.67	19	1.1
	Løn-11_300-320	300-320	200274	0.09	69.06	20	1.0

	Løn-11_400-420	400-420	200275	0.08	73.17	20	1.0
	Løn-11_490-510	490-510	200276	0.13	42.02	17	0.8
Løn-12	Løn-12_0-20	0-20	200277	0.3	1.69	14	0.4
	Løn-12_100-120	100-120	200278	0.15	18.1	18	0.6
	Løn-12_200-220	200-220	200279	0.15	9.24	18	0.4
	Løn-12_300-320	300-320	200280	0.09	58.78	19	0.8
	Løn-12_380-400	380-400	200281	0.08	75.68	20	0.8
Løn-13	Løn-13_0-20	0-20	200282	0.15	12.93	19	0.4
	Løn-13_120-140	120-140	200283	0.14	33.6	17	0.7
Løn-13A	Løn-13A_0-20	0-20	200284	0.16	10.72	20	0.4
	Løn-13A_100-120	100-120	200285	0.15	21.4	17	0.5
	Løn-13A_200-220	200-220	200286	0.13	41.47	17	0.5
	Løn-13A_300-320	300-320	200287	0.09	63.22	19	0.8
Løn-14	Løn-14_20-40	20-40	200288	0.15	15.13	18	0.4
	Løn-14_100-120	100-120	200289	0.15	18.61	18	0.5
	Løn-14_200-220	200-220	200290	0.15	22.52	17	0.6
Løn-15	Løn-15_0-20	0-20	200291	0.08	85.01	21	1.2
	Løn-15_100-120	100-120	200292	0.08	88.27	21	1.1
	Løn-15_200-220	200-220	200293	0.08	85.11	21	1.6
	Løn-15_290-310	290-310	200294	0.08	90.6	21	1.9
Løn-16	Løn-16_0-20	0-20	200295	0.14	28.1	19	0.6
	Løn-16_90-110	90-110	200296	0.26	3.14	17	0.9
	Løn-16_130-150	130-150	200297	0.09	67.13	19	0.7
	Løn-16_200-220	200-220	200298	0.08	81.83	20	0.7
	Løn-16_300-320	300-320	200299	0.08	86.69	24	1.0
	Løn-16_400-420	400-420	200300	0.08	91.05	21	1.2
	Løn-16_500-520	500-520	200301	0.08	79.73	22	1.3
	Løn-16_560-580	560-580	200302	0.09	63.71	20	1.1
Løn-17	Løn-17_0-20	0-20	200303	0.16	11.58	17	0.3
	Løn-17_100-120	100-120	200304	0.14	34.46	18	0.6
	Løn-17_200-220	200-220	200305	0.29	9.09	13	0.6
	Løn-17_260-280	260-280	200306	0.14	38.17	20	0.7
Løn-18	Løn-18_0-20	0-20	200307	0.26	4.21	17	0.4
	Løn-18_100-120	100-120	200308	0.15	9.35	18	0.3
	Løn-18_200-220	200-220	200309	0.15	15.62	17	0.3
	Løn-18_300-320	300-320	200310	0.29	1.76	14	0.3
Løn-19	Løn-19_0-20	0-20	200311	0.18	3.3	18	0.3
	Løn-19_100-120	100-120	200312	0.15	25.05	18	0.5
	Løn-19_200-220	200-220	200313	0.15	20.57	18	0.6
Løn-20	Løn-20_0-20	0-20	200314	0.13	45.2	19	0.6
	Løn-20_100-120	100-120	200315	0.09	61.66	18	0.9
	Løn-20_200-220	200-220	200316	0.13	45.27	16	1.2
	Løn-20_300-320	300-320	200317	0.14	31.84	17	0.7
	Løn-20_360-380	360-380	200318	0.15	24.18	18	0.6
Løn-22	Løn-22_0-20	0-20	200319	0.13	40.74	20	0.4
	Løn-22_100-120	100-120	200320	0.34	9.97	12	0.4
	Løn-22_200-220	200-220	200321	0.29	9.13	13	0.5
	Løn-22_300-320	300-320	200322	0.16	35.96	14	1.2
	Løn-22_400-420	400-420	200323	0.09	56.21	18	1.6
	Løn-22_470-490	470-490	200324	0.3	10.31	13	0.6

Bilag C5

- Kornstørrelsesanalyser af borekerner

Grain Size Distribution
Geotechnical

Sample Id: LØN 01 0-20
Lab. Id: 200230
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks:

GEUS

Total Weight 105,95 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
	8,00	-3,00	0,00	0,00	100,00
	4,00	-2,00	0,00	0,00	100,00
	2,00	-1,00	0,00	0,00	100,00
Sand	1,00	0,00	0,03	0,03	99,97
	0,500	1,00	0,09	0,08	99,89
	0,250	2,00	13,93	13,15	86,74
	0,125	3,00	79,76	75,28	11,46
	0,075	3,74	9,71	9,16	2,29
	0,063	3,99	0,21	0,20	2,10
	< 0,063	> 3,99	2,22	2,10	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	2,10
Sand, fine	(0,063 mm - 0,200 mm):	84,64
Sand, medium	(0,2 mm - 0,6 mm):	13,19
Sand, coarse	(0,6 mm - 2 mm):	0,07
Gravel	(> 2 mm):	0,00
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,32	1,66
16%	84%	0,18	2,49
25%	75%	0,17	2,54
40%	60%	0,16	2,64
Median 50%	50%	0,15	2,71
75%	25%	0,13	2,89
84%	16%	0,13	2,96
90%	10%	0,09	3,51
95%	5%	0,08	3,65

Moments Statistics

Mean	2,72
Sorting	0,42
Skewness	0,02
Kurtosis	2,36
Uniformity Coefficient	1,83

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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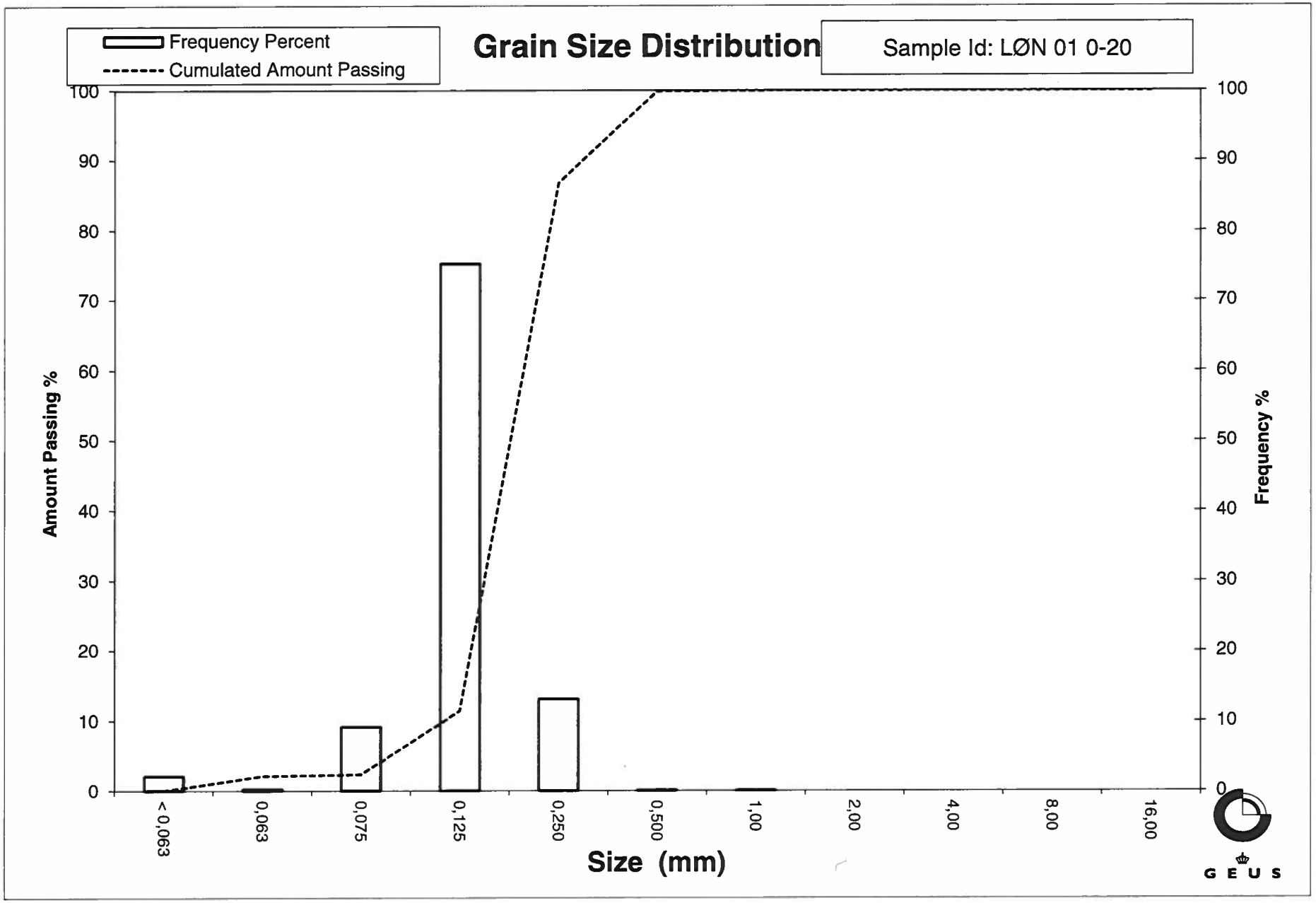
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 01 0-20
Amount Passing %
Frequency %
Size (mm)
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 01 100-120
Lab. Id: 200231
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks: >2mm består af skaller

G E U S

Total Weight 106,82 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
Gravel	8,00	-3,00	0,00	0,00	100,00
Gravel	4,00	-2,00	0,00	0,00	100,00
Gravel	2,00	-1,00	0,06	0,06	99,94
Sand	1,00	0,00	0,17	0,16	99,78
Sand	0,500	1,00	1,20	1,12	98,66
Sand	0,250	2,00	12,02	11,25	87,41
Sand	0,125	3,00	66,64	62,39	25,02
Sand	0,075	3,74	23,09	21,62	3,41
Sand	0,063	3,99	0,62	0,58	2,83
Sand	< 0,063	> 3,99	3,02	2,83	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	2,83
Sand, fine	(0,063 mm - 0,200 mm):	84,58
Sand, medium	(0,2 mm - 0,6 mm):	11,79
Sand, coarse	(0,6 mm - 2 mm):	0,75
Gravel	(> 2 mm):	0,06
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,32	1,64
16%	84%	0,18	2,50
25%	75%	0,17	2,56
40%	60%	0,16	2,68
Median 50%	50%	0,15	2,77
75%	25%	0,09	3,47
84%	16%	0,08	3,58
90%	10%	0,08	3,65
95%	5%	0,08	3,72

Moments Statistics

Mean	2,95
Sorting	0,58
Skewness	0,21
Kurtosis	0,94
Uniformity Coefficient	1,96

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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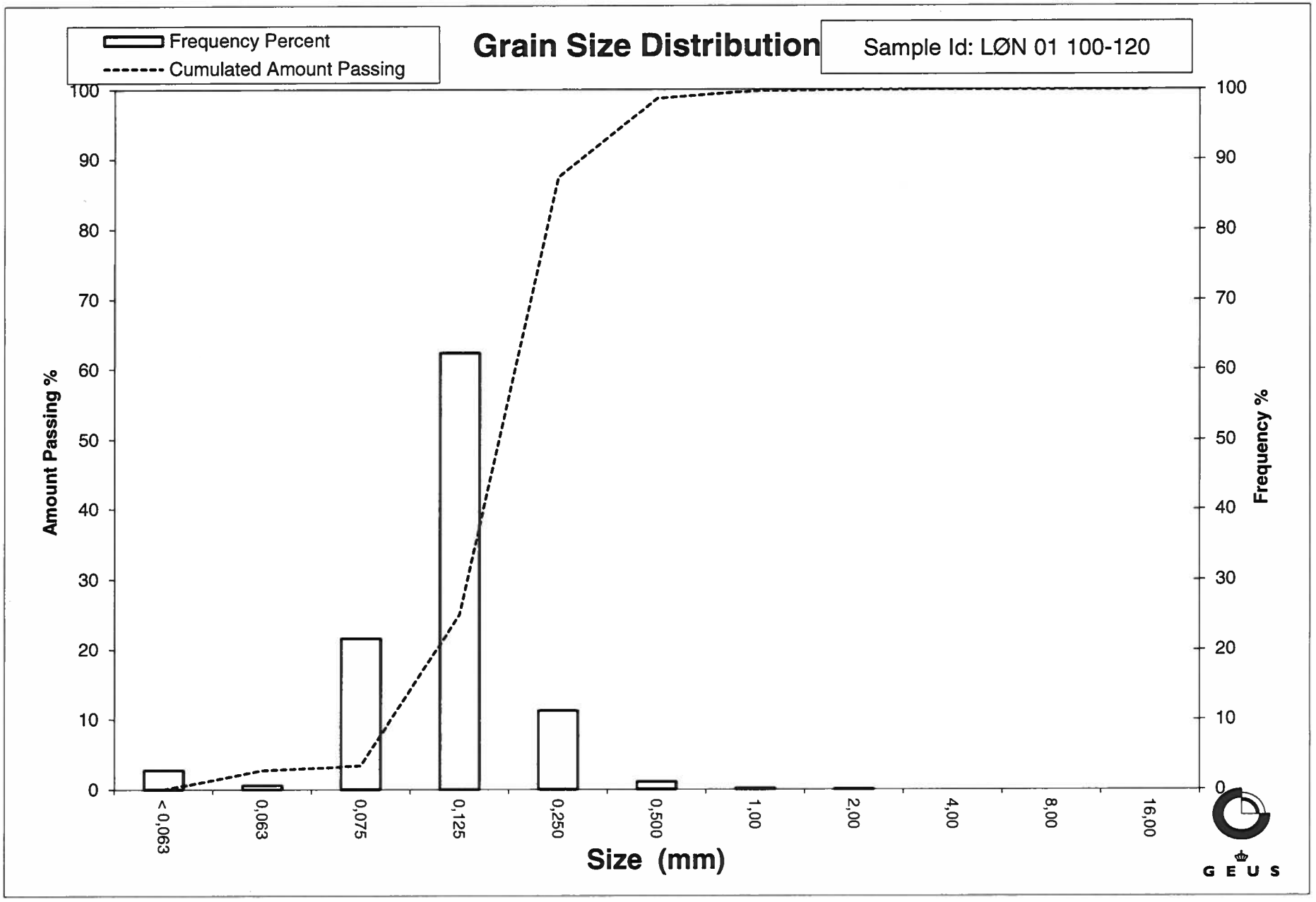
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 01 100-120
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 01 200-220
Lab. Id: 200232
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks: >8mm 0,8g skal, resten stor sten

GEUS

Total Weight 106,66 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
Gravel	8,00	-3,00	4,91	4,60	95,40
Gravel	4,00	-2,00	0,00	0,00	95,40
Sand	2,00	-1,00	0,25	0,23	95,16
Sand	1,00	0,00	0,30	0,28	94,88
Sand	0,500	1,00	1,42	1,33	93,55
Sand	0,250	2,00	7,29	6,83	86,71
Sand	0,125	3,00	58,78	55,11	31,61
Sand	0,075	3,74	28,31	26,54	5,06
Sand	0,063	3,99	0,93	0,87	4,19
Sand	< 0,063	> 3,99	4,47	4,19	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	4,19
Sand, fine	(0,063 mm - 0,200 mm):	82,52
Sand, medium	(0,2 mm - 0,6 mm):	7,47
Sand, coarse	(0,6 mm - 2 mm):	0,98
Gravel	(> 2 mm):	4,84
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	1,17	-0,23
16%	84%	0,18	2,50
25%	75%	0,17	2,57
40%	60%	0,15	2,71
Median 50%	50%	0,14	2,80
75%	25%	0,09	3,54
84%	16%	0,08	3,62
90%	10%	0,08	3,68
95%	5%	0,07	3,75

Moments Statistics

Mean	2,97
Sorting	0,88
Skewness	-0,03
Kurtosis	1,69
Uniformity Coefficient	1,97

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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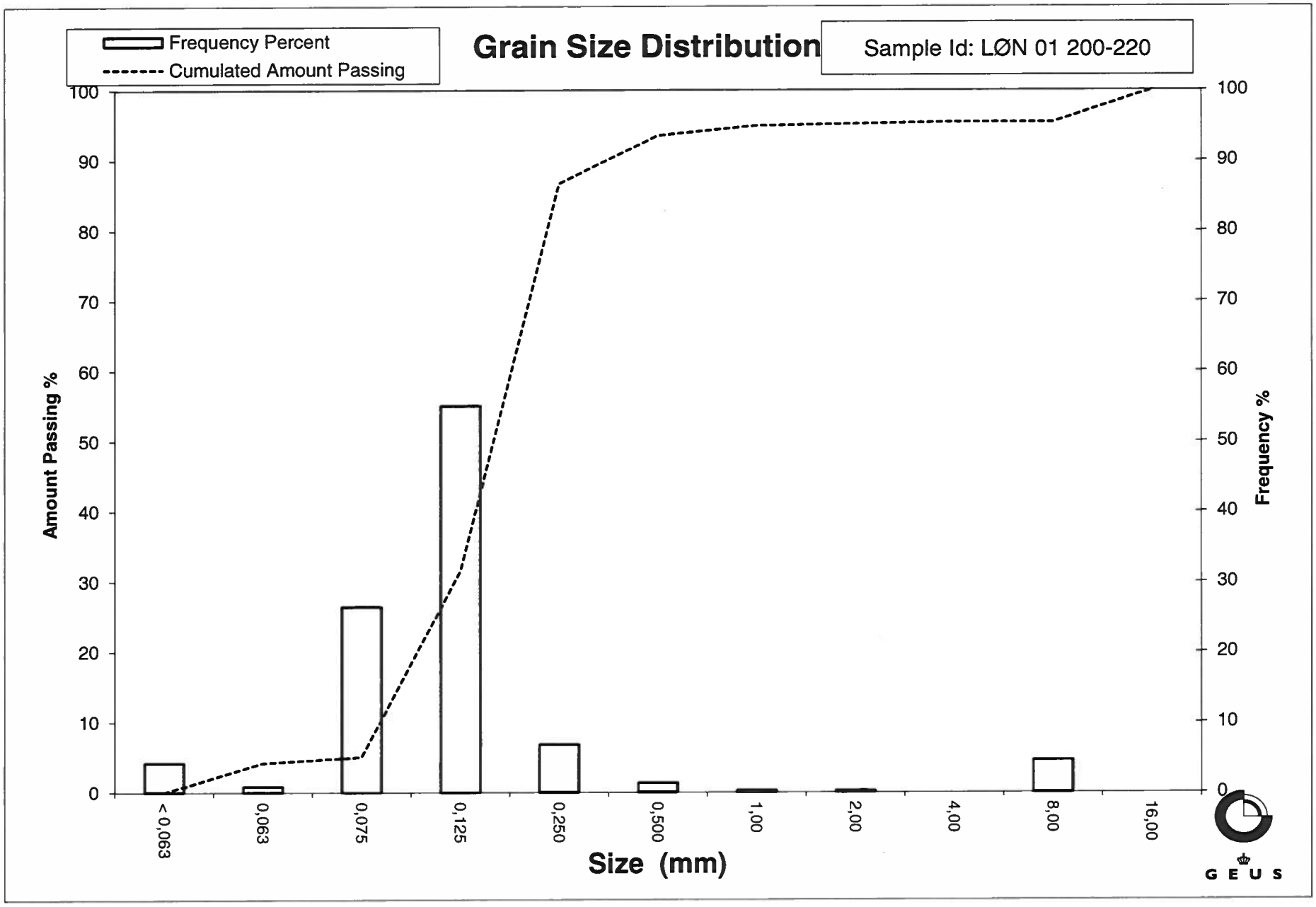
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 01 200-220
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 02 0-20
Lab. Id: 200233
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks: >4mm består af skaller

GEUS

Total Weight 102,65 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
	8,00	-3,00	0,00	0,00	100,00
	4,00	-2,00	0,03	0,03	99,97
	2,00	-1,00	0,13	0,13	99,84
Sand	1,00	0,00	0,17	0,17	99,68
	0,500	1,00	0,81	0,79	98,89
	0,250	2,00	6,76	6,59	92,30
	0,125	3,00	71,45	69,61	22,70
	0,075	3,74	20,22	19,70	3,00
	0,063	3,99	0,72	0,70	2,30
	< 0,063	> 3,99	2,36	2,30	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	2,30
Sand, fine	(0,063 mm - 0,200 mm):	90,00
Sand, medium	(0,2 mm - 0,6 mm):	6,96
Sand, coarse	(0,6 mm - 2 mm):	0,58
Gravel	(> 2 mm):	0,16
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,29	1,77
16%	84%	0,17	2,53
25%	75%	0,17	2,59
40%	60%	0,15	2,69
Median 50%	50%	0,15	2,77
75%	25%	0,13	2,98
84%	16%	0,08	3,56
90%	10%	0,08	3,64
95%	5%	0,08	3,71

Moments Statistics

Mean	2,95
Sorting	0,55
Skewness	0,25
Kurtosis	2,03
Uniformity Coefficient	1,92

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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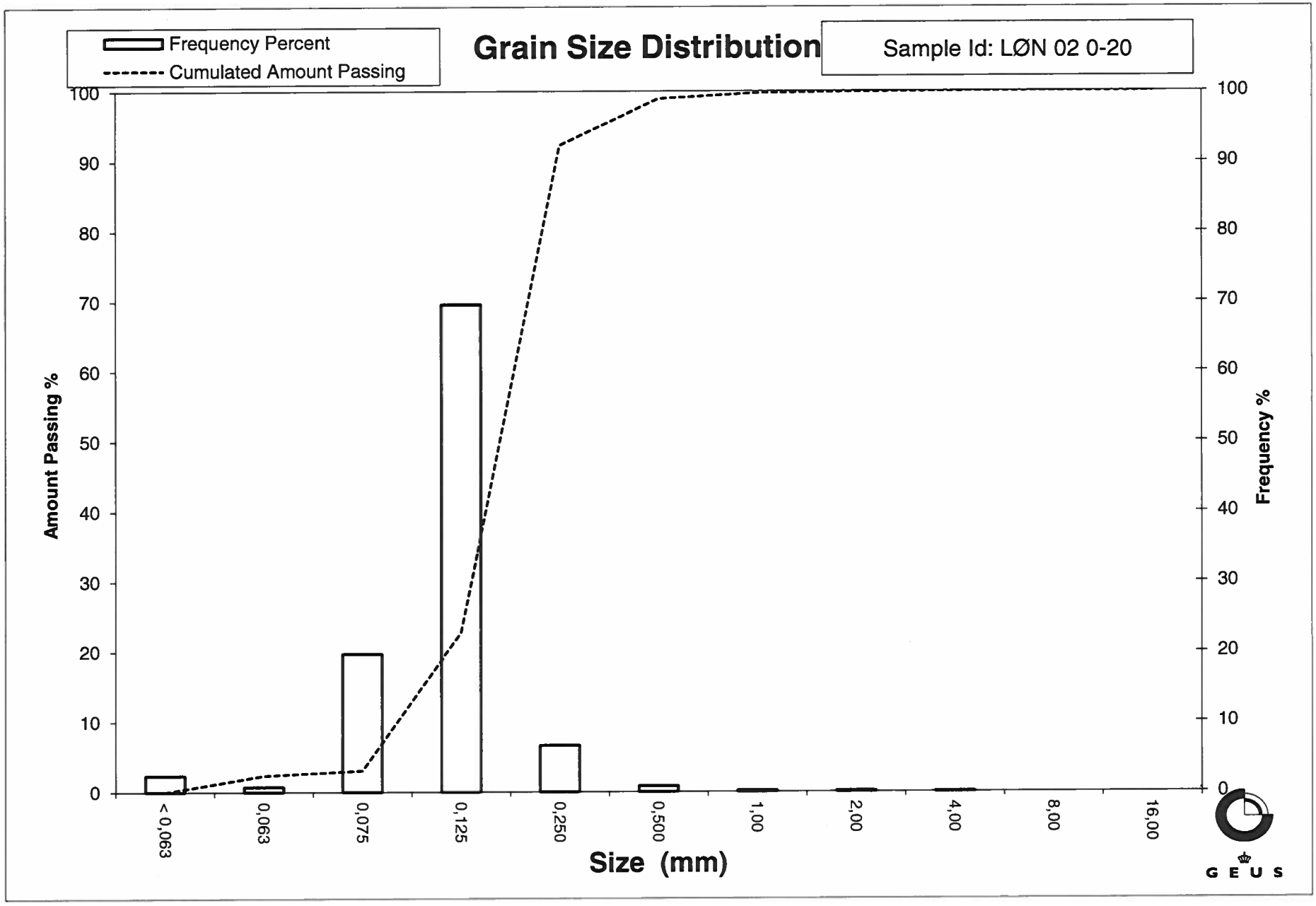
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 02 0-20
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 02 80-100
Lab. Id: 200234
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks:

GEUS

Total Weight 105,2 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
	8,00	-3,00	0,00	0,00	100,00
	4,00	-2,00	0,04	0,04	99,96
	2,00	-1,00	0,30	0,29	99,68
Sand	1,00	0,00	0,56	0,53	99,14
	0,500	1,00	10,48	9,96	89,18
	0,250	2,00	39,59	37,63	51,55
	0,125	3,00	46,82	44,51	7,04
	0,075	3,74	6,16	5,86	1,19
	0,063	3,99	0,21	0,20	0,99
	< 0,063	> 3,99	1,04	0,99	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	0,99
Sand, fine	(0,063 mm - 0,200 mm):	50,56
Sand, medium	(0,2 mm - 0,6 mm):	42,38
Sand, coarse	(0,6 mm - 2 mm):	5,75
Gravel	(> 2 mm):	0,32
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile	Percentile		
Amount in sieve	Amount passing	d(mm)	Φ
5%	95%	0,62	0,68
16%	84%	0,34	1,55
25%	75%	0,32	1,66
40%	60%	0,27	1,87
Median 50%	50%	0,18	2,49
75%	25%	0,15	2,76
84%	16%	0,14	2,88
90%	10%	0,13	2,96
95%	5%	0,08	3,56

Moments Statistics

Mean	2,31
Sorting	0,77
Skewness	-0,33
Kurtosis	1,07
Uniformity Coefficient	2,13

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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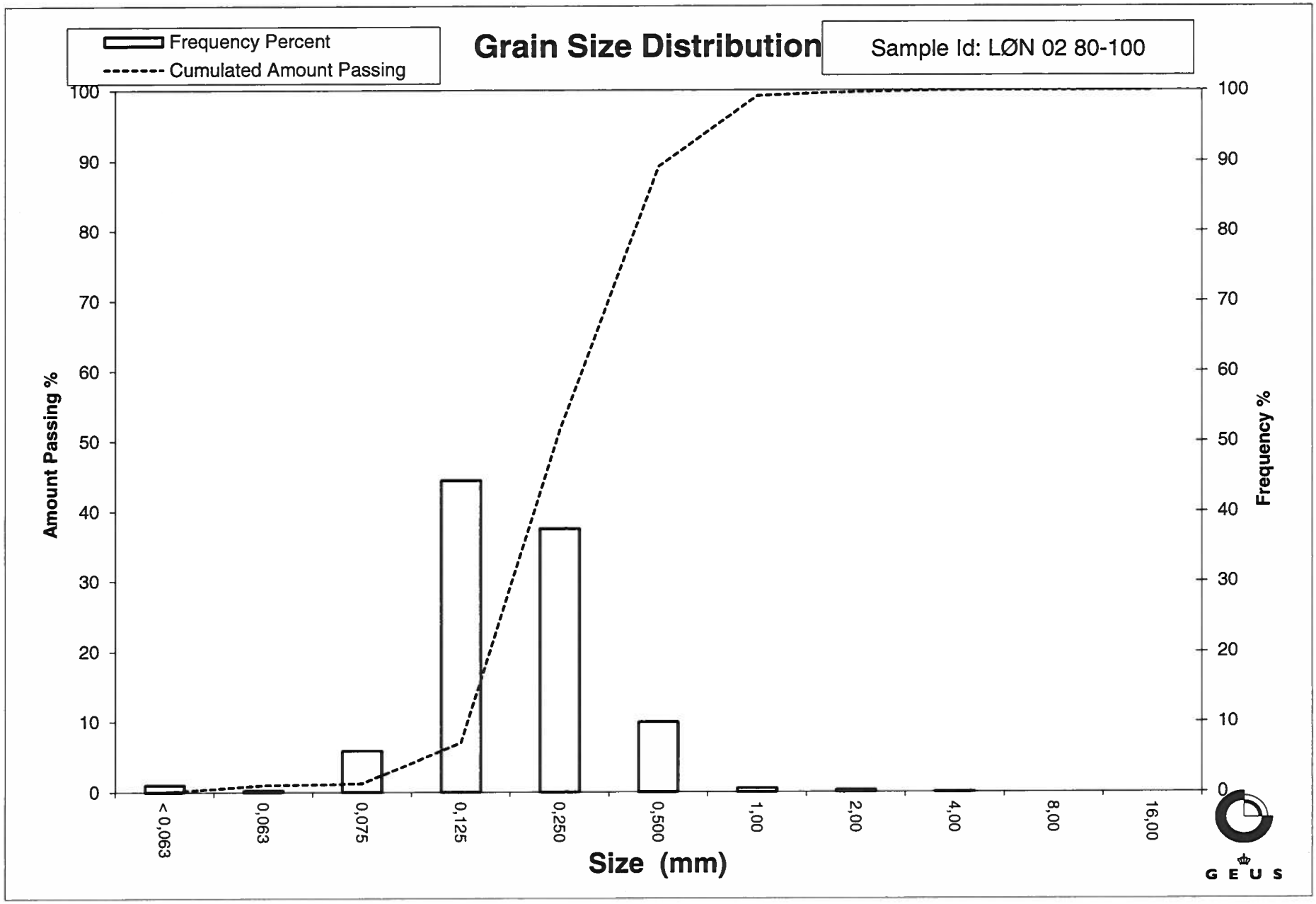
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 02 80-100
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 03 0-20
Lab. Id: 200235
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks:

GEUS

Total Weight 101,47 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
	8,00	-3,00	0,00	0,00	100,00
	4,00	-2,00	0,00	0,00	100,00
	2,00	-1,00	0,07	0,07	99,93
Sand	1,00	0,00	0,07	0,07	99,86
	0,500	1,00	0,48	0,47	99,39
	0,250	2,00	5,19	5,11	94,27
	0,125	3,00	52,72	51,96	42,32
	0,075	3,74	37,28	36,74	5,58
	0,063	3,99	0,90	0,89	4,69
	< 0,063	> 3,99	4,76	4,69	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	4,69
Sand, fine	(0,063 mm - 0,200 mm):	89,58
Sand, medium	(0,2 mm - 0,6 mm):	5,34
Sand, coarse	(0,6 mm - 2 mm):	0,32
Gravel	(> 2 mm):	0,07
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,26	1,92
16%	84%	0,17	2,56
25%	75%	0,16	2,65
40%	60%	0,14	2,80
Median 50%	50%	0,13	2,91
75%	25%	0,08	3,59
84%	16%	0,08	3,66
90%	10%	0,08	3,70
95%	5%	0,07	3,90

Moments Statistics

Mean	3,04
Sorting	0,57
Skewness	0,18
Kurtosis	0,86
Uniformity Coefficient	1,87

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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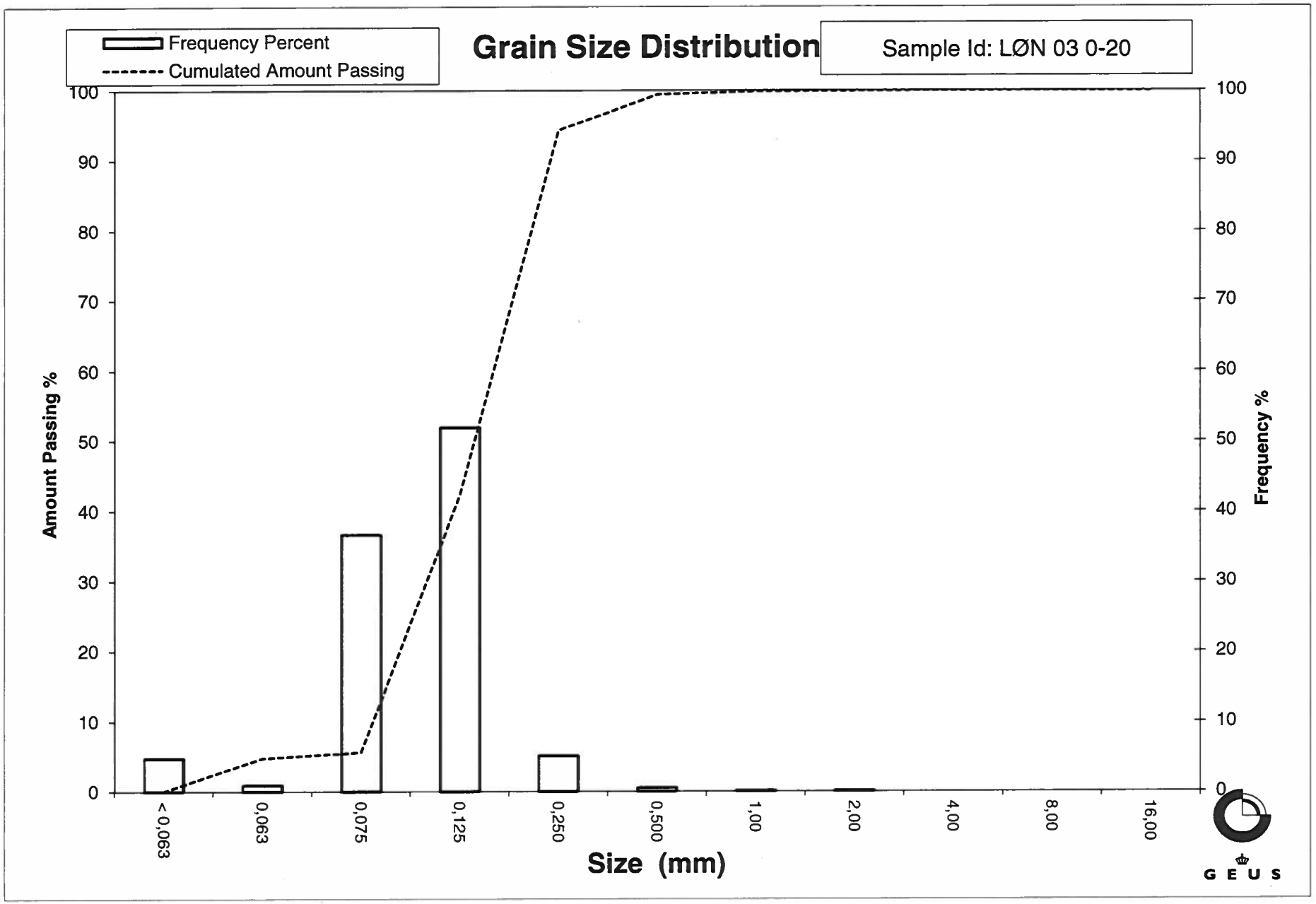
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 03 0-20
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 03 100-120
Lab. Id: 200236
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks: >2mm heraf 0,3g skaller

GEUS

Total Weight 93,2 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
Gravel	8,00	-3,00	0,00	0,00	100,00
Gravel	4,00	-2,00	0,30	0,32	99,68
Gravel	2,00	-1,00	0,29	0,31	99,37
Sand	1,00	0,00	0,24	0,26	99,11
Sand	0,500	1,00	0,98	1,05	98,06
Sand	0,250	2,00	4,67	5,01	93,05
Sand	0,125	3,00	53,45	57,35	35,70
Sand	0,075	3,74	27,02	28,99	6,71
Sand	0,063	3,99	1,31	1,41	5,30
Sand	< 0,063	> 3,99	4,94	5,30	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	5,30
Sand, fine	(0,063 mm - 0,200 mm):	87,75
Sand, medium	(0,2 mm - 0,6 mm):	5,51
Sand, coarse	(0,6 mm - 2 mm):	0,81
Gravel	(> 2 mm):	0,63
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,29	1,78
16%	84%	0,17	2,55
25%	75%	0,16	2,62
40%	60%	0,15	2,75
Median 50%	50%	0,14	2,85
75%	25%	0,08	3,57
84%	16%	0,08	3,65
90%	10%	0,08	3,70
95%	5%	-------	-------

Moments Statistics

Mean	3,01
Sorting	-------
Skewness	-------
Kurtosis	-------
Uniformity Coefficient	1,93

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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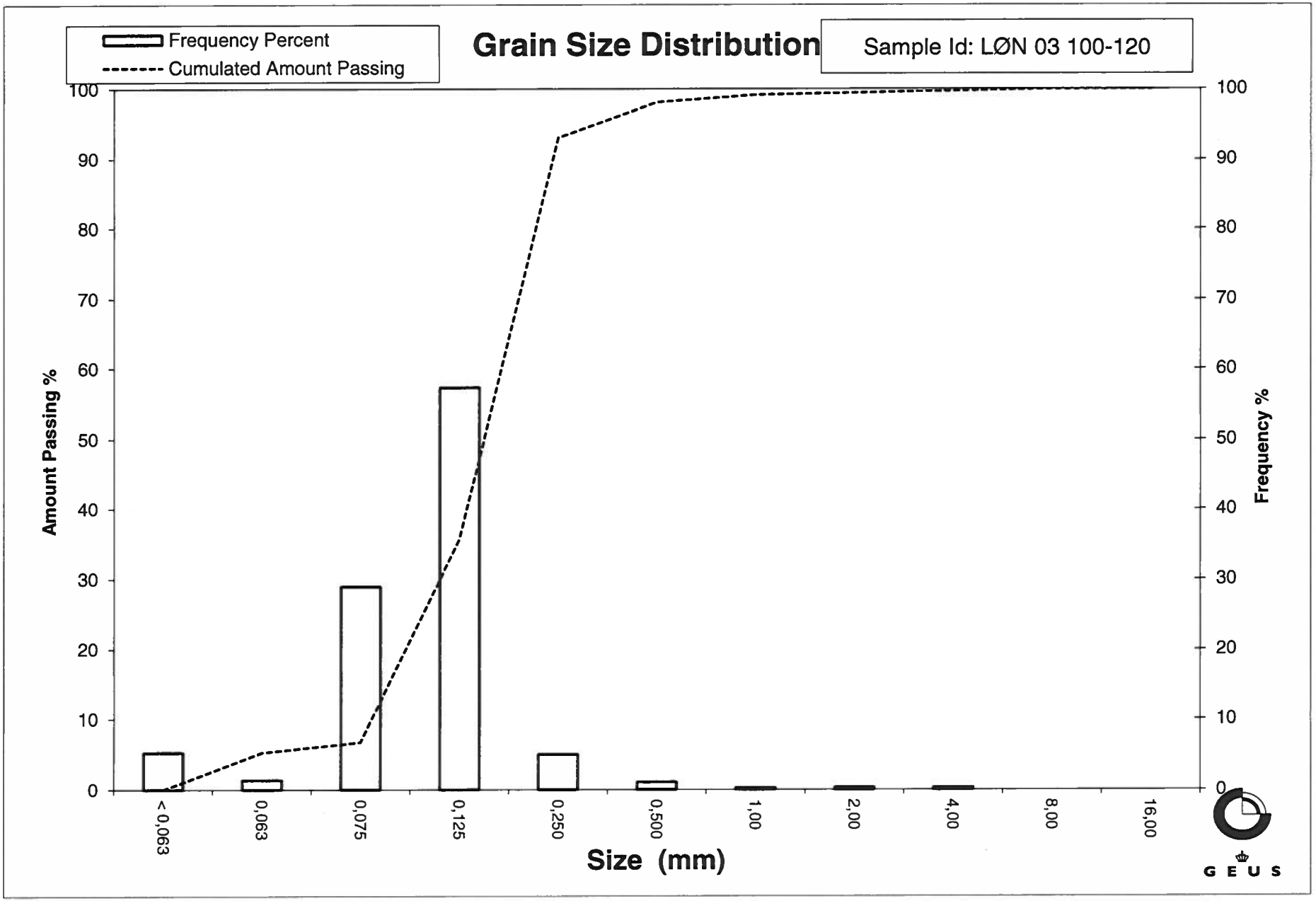
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 03 100-120
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 03 200-220
Lab. Id: 200237
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks:

GEUS

Total Weight 103,64 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
	8,00	-3,00	0,00	0,00	100,00
	4,00	-2,00	0,15	0,14	99,86
	2,00	-1,00	0,10	0,10	99,76
Sand	1,00	0,00	0,12	0,12	99,64
	0,500	1,00	0,52	0,50	99,14
	0,250	2,00	1,77	1,71	97,43
	0,125	3,00	47,28	45,62	51,81
	0,075	3,74	40,98	39,54	12,27
	0,063	3,99	2,73	2,63	9,64
	< 0,063	> 3,99	9,99	9,64	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	9,64
Sand, fine	(0,063 mm - 0,200 mm):	87,79
Sand, medium	(0,2 mm - 0,6 mm):	1,95
Sand, coarse	(0,6 mm - 2 mm):	0,38
Gravel	(> 2 mm):	0,24
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile	Percentile		
Amount in sieve	Amount passing	d(mm)	Φ
5%	95%	0,18	2,50
16%	84%	0,16	2,61
25%	75%	0,15	2,71
40%	60%	0,13	2,89
Median 50%	50%	0,09	3,49
75%	25%	0,08	3,65
84%	16%	0,08	3,71
90%	10%	0,06	3,95
95%	5%	-------	-------

Moments Statistics

Mean	3,27
Sorting	-------
Skewness	-------
Kurtosis	-------
Uniformity Coefficient	2,09

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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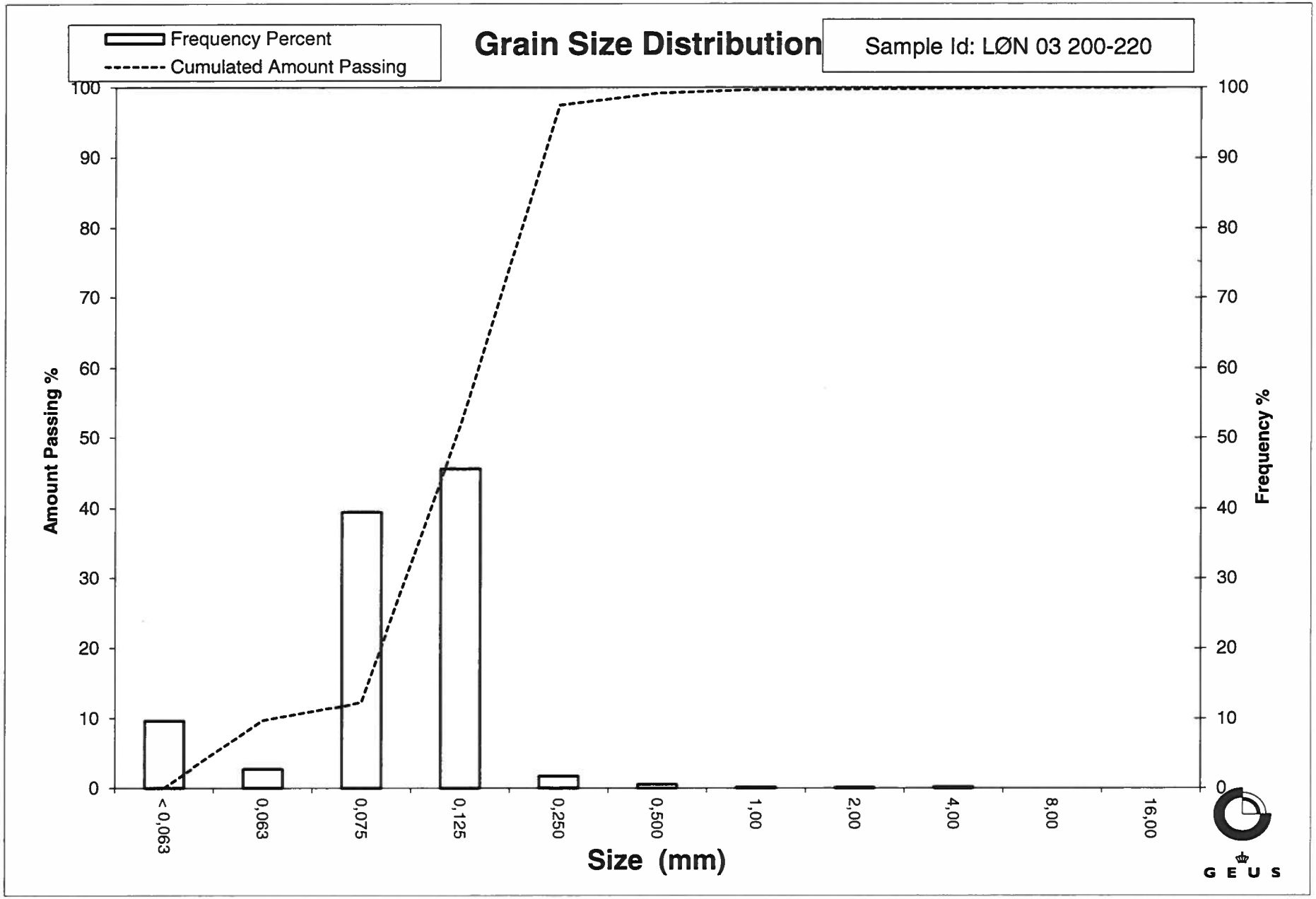
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 03 200-220
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 03 300-320
Lab. Id: 200238
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks:

GEUS

Total Weight 100,37 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
Gravel	8,00	-3,00	0,00	0,00	100,00
Gravel	4,00	-2,00	0,00	0,00	100,00
Gravel	2,00	-1,00	0,00	0,00	100,00
Sand	1,00	0,00	0,06	0,06	99,94
Sand	0,500	1,00	0,18	0,18	99,76
Sand	0,250	2,00	0,62	0,62	99,14
Sand	0,125	3,00	41,45	41,30	57,85
Sand	0,075	3,74	53,27	53,07	4,77
Sand	0,063	3,99	1,13	1,13	3,65
Sand	< 0,063	> 3,99	3,66	3,65	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	3,65
Sand, fine	(0,063 mm - 0,200 mm):	95,50
Sand, medium	(0,2 mm - 0,6 mm):	0,70
Sand, coarse	(0,6 mm - 2 mm):	0,15
Gravel	(> 2 mm):	0,00
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,17	2,52
16%	84%	0,16	2,65
25%	75%	0,15	2,76
40%	60%	0,13	2,97
Median 50%	50%	0,09	3,51
75%	25%	0,08	3,63
84%	16%	0,08	3,68
90%	10%	0,08	3,71
95%	5%	0,08	3,74

Moments Statistics

Mean	3,28
Sorting	0,44
Skewness	-0,65
Kurtosis	0,57
Uniformity Coefficient	1,67

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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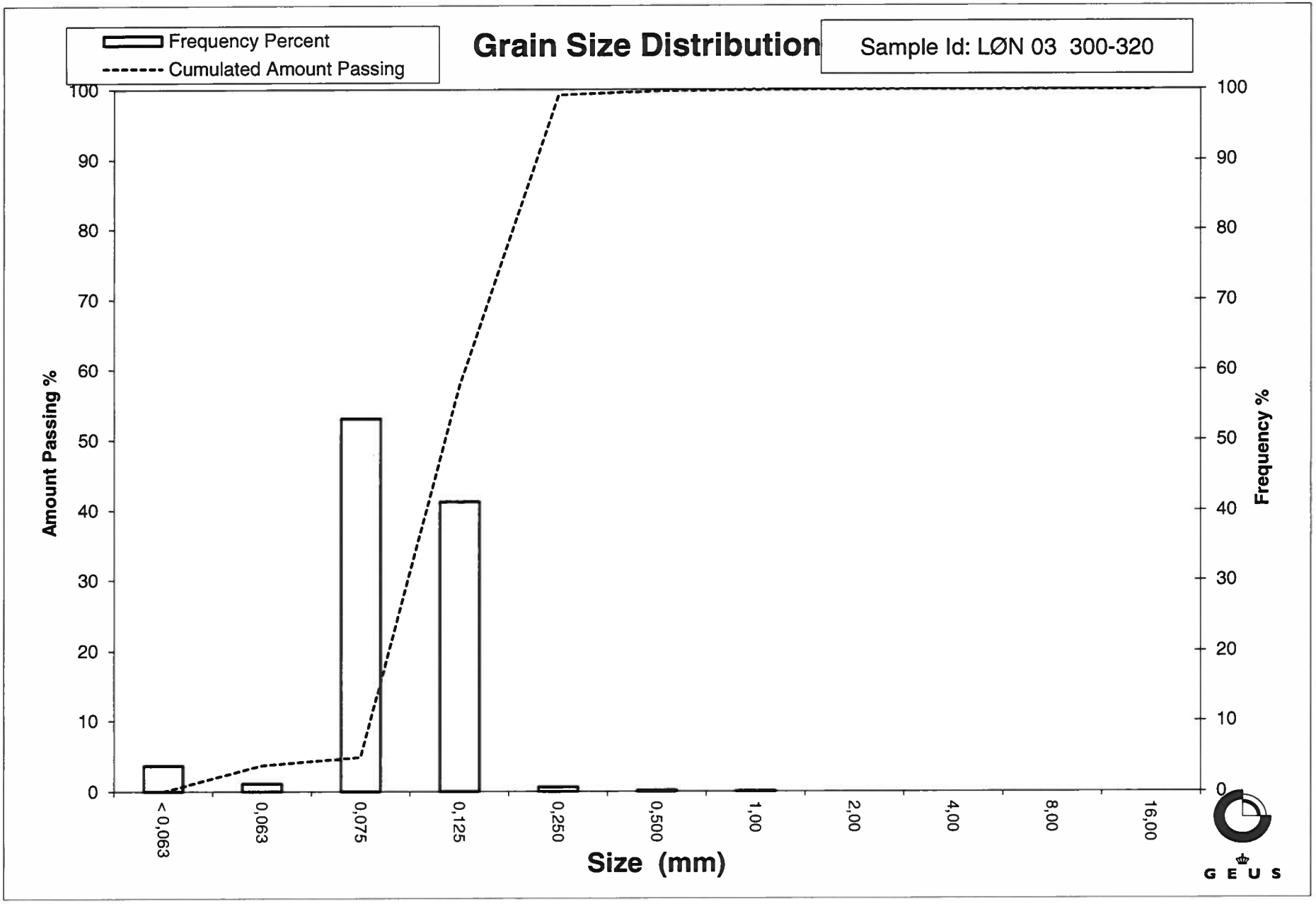
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 03 300-320
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 04 0-20
Lab. Id: 200239
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks:

Total Weight 98,2 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
Gravel	8,00	-3,00	0,00	0,00	100,00
Gravel	4,00	-2,00	0,00	0,00	100,00
Gravel	2,00	-1,00	0,00	0,00	100,00
Sand	1,00	0,00	0,05	0,05	99,95
Sand	0,500	1,00	0,30	0,31	99,64
Sand	0,250	2,00	7,40	7,54	92,11
Sand	0,125	3,00	67,64	68,88	23,23
Sand	0,075	3,74	20,36	20,73	2,49
Sand	0,063	3,99	0,50	0,51	1,99
Sand	< 0,063	> 3,99	1,95	1,99	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	1,99
Sand, fine	(0,063 mm - 0,200 mm):	90,12
Sand, medium	(0,2 mm - 0,6 mm):	7,68
Sand, coarse	(0,6 mm - 2 mm):	0,21
Gravel	(> 2 mm):	0,00
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile	Percentile		
Amount in sieve	Amount passing	d(mm)	Φ
5%	95%	0,29	1,78
16%	84%	0,17	2,53
25%	75%	0,17	2,59
40%	60%	0,15	2,70
Median 50%	50%	0,15	2,77
75%	25%	0,13	2,98
84%	16%	0,08	3,56
90%	10%	0,08	3,64
95%	5%	0,08	3,70

Moments Statistics

Mean	2,95
Sorting	0,55
Skewness	0,25
Kurtosis	1,99
Uniformity Coefficient	1,92

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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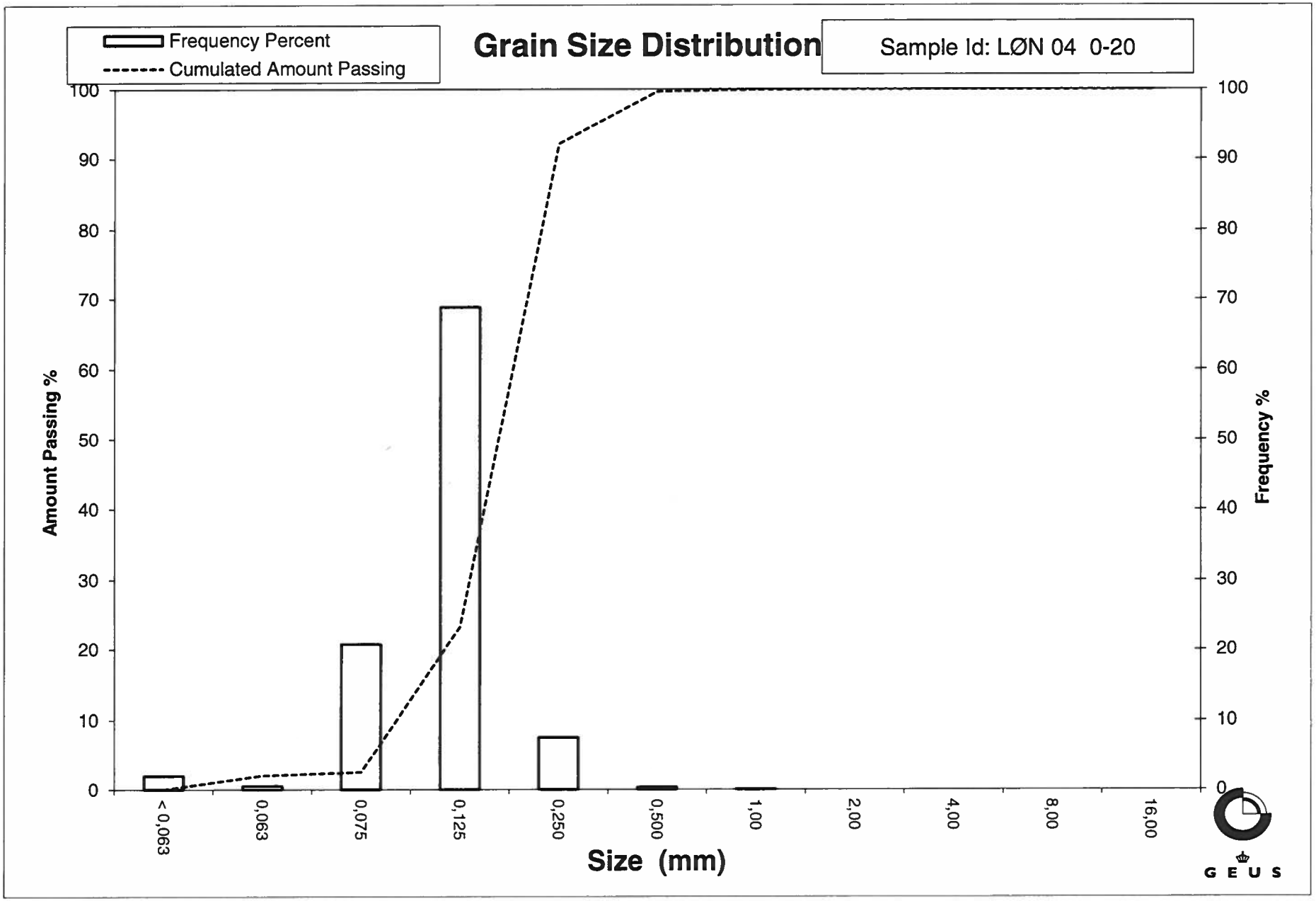
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 04 0-20
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 04 100-120
Lab. Id: 200240
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks:

GEUS

Total Weight 98,73 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
	8,00	-3,00	0,00	0,00	100,00
	4,00	-2,00	0,00	0,00	100,00
	2,00	-1,00	0,00	0,00	100,00
Sand	1,00	0,00	0,00	0,00	100,00
	0,500	1,00	0,17	0,17	99,83
	0,250	2,00	7,50	7,60	92,23
	0,125	3,00	72,19	73,12	19,11
	0,075	3,74	16,86	17,08	2,04
	0,063	3,99	0,29	0,29	1,74
	< 0,063	> 3,99	1,72	1,74	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	1,74
Sand, fine	(0,063 mm - 0,200 mm):	90,49
Sand, medium	(0,2 mm - 0,6 mm):	7,68
Sand, coarse	(0,6 mm - 2 mm):	0,09
Gravel	(> 2 mm):	0,00
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,29	1,79
16%	84%	0,17	2,52
25%	75%	0,17	2,58
40%	60%	0,16	2,68
Median 50%	50%	0,15	2,75
75%	25%	0,13	2,95
84%	16%	0,09	3,52
90%	10%	0,08	3,61
95%	5%	0,08	3,69

Moments Statistics

Mean	2,93
Sorting	0,54
Skewness	0,26
Kurtosis	2,11
Uniformity Coefficient	1,90

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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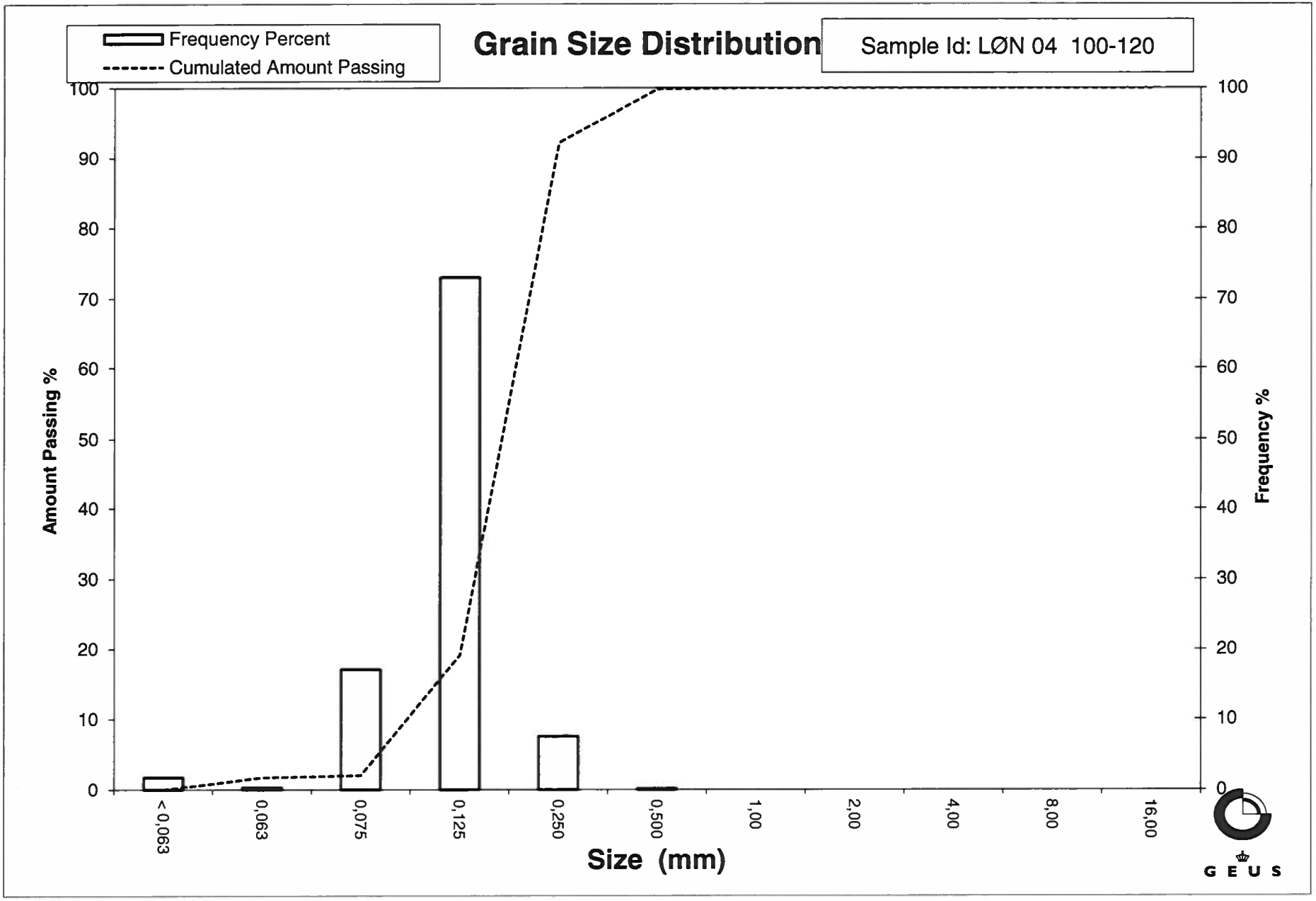
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 04 100-120
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 05 0-20
Lab. Id: 200241
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks:

G E U S

Total Weight 101,42 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
	8,00	-3,00	0,00	0,00	100,00
	4,00	-2,00	0,00	0,00	100,00
	2,00	-1,00	0,00	0,00	100,00
Sand	1,00	0,00	0,00	0,00	100,00
	0,500	1,00	0,40	0,39	99,61
	0,250	2,00	16,29	16,06	83,54
	0,125	3,00	77,81	76,72	6,82
	0,075	3,74	5,80	5,72	1,10
	0,063	3,99	0,12	0,12	0,99
	< 0,063	> 3,99	1,00	0,99	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	0,99
Sand, fine	(0,063 mm - 0,200 mm):	82,56
Sand, medium	(0,2 mm - 0,6 mm):	16,25
Sand, coarse	(0,6 mm - 2 mm):	0,21
Gravel	(> 2 mm):	0,00
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,32	1,62
16%	84%	0,25	1,98
25%	75%	0,17	2,52
40%	60%	0,16	2,62
Median 50%	50%	0,16	2,68
75%	25%	0,14	2,86
84%	16%	0,13	2,93
90%	10%	0,13	2,97
95%	5%	0,09	3,55

Moments Statistics

Mean	2,53
Sorting	0,53
Skewness	-0,29
Kurtosis	2,38
Uniformity Coefficient	1,28

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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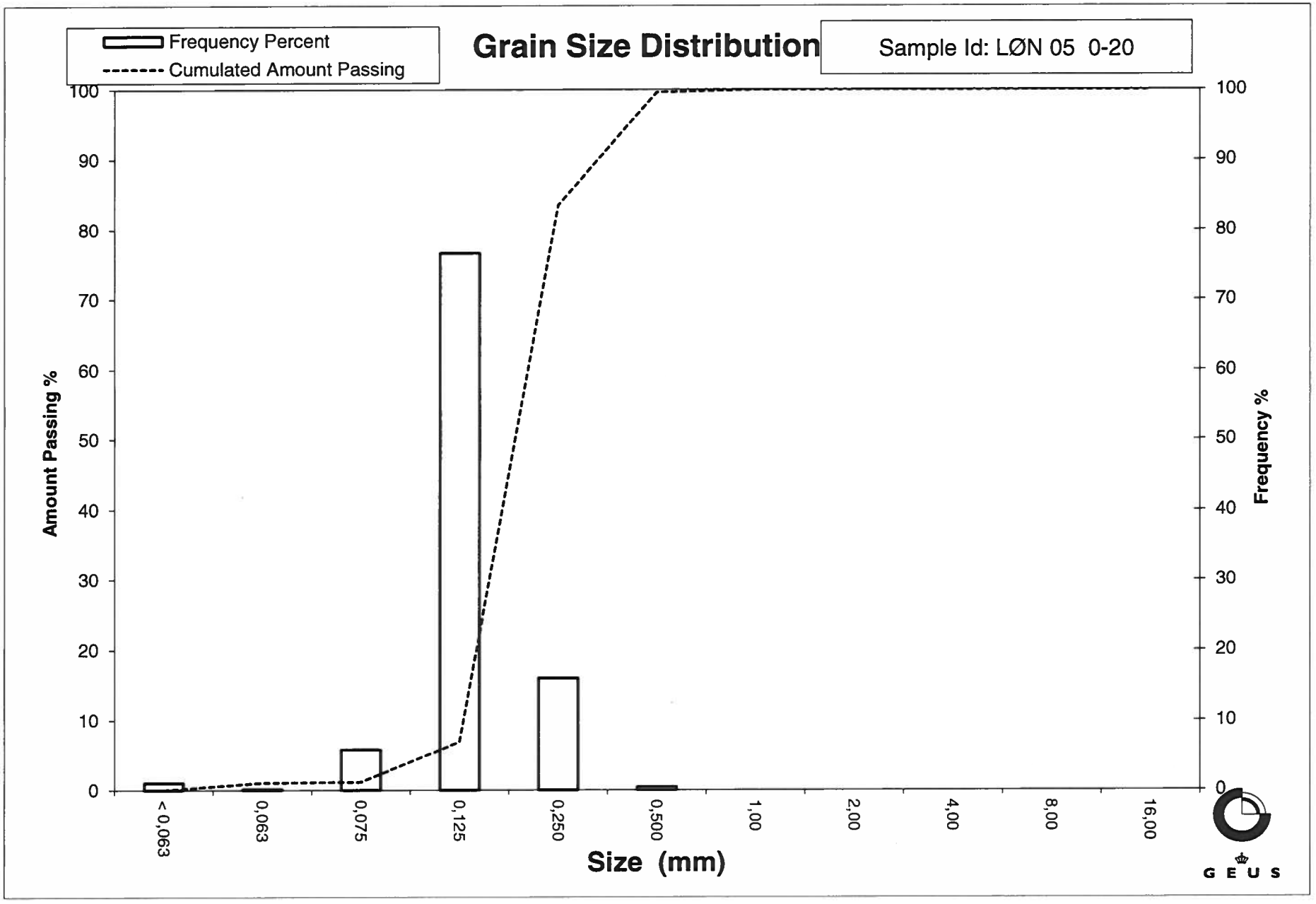
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 05 0-20
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 05 100-120
Lab. Id: 200242
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks:

GEUS

Total Weight 96,63 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
Gravel	8,00	-3,00	0,00	0,00	100,00
Gravel	4,00	-2,00	0,00	0,00	100,00
Gravel	2,00	-1,00	0,00	0,00	100,00
Sand	1,00	0,00	0,03	0,03	99,97
Sand	0,500	1,00	0,63	0,65	99,32
Sand	0,250	2,00	9,00	9,31	90,00
Sand	0,125	3,00	71,57	74,07	15,94
Sand	0,075	3,74	9,15	9,47	6,47
Sand	0,063	3,99	0,50	0,52	5,95
Sand	< 0,063	> 3,99	5,75	5,95	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	5,95
Sand, fine	(0,063 mm - 0,200 mm):	84,05
Sand, medium	(0,2 mm - 0,6 mm):	9,62
Sand, coarse	(0,6 mm - 2 mm):	0,37
Gravel	(> 2 mm):	0,00
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,31	1,71
16%	84%	0,18	2,51
25%	75%	0,17	2,57
40%	60%	0,16	2,66
Median 50%	50%	0,15	2,73
75%	25%	0,13	2,92
84%	16%	0,13	3,00
90%	10%	0,08	3,63
95%	5%	-------	-------

Moments Statistics

Mean	2,75
Sorting	-------
Skewness	-------
Kurtosis	-------
Uniformity Coefficient	1,96

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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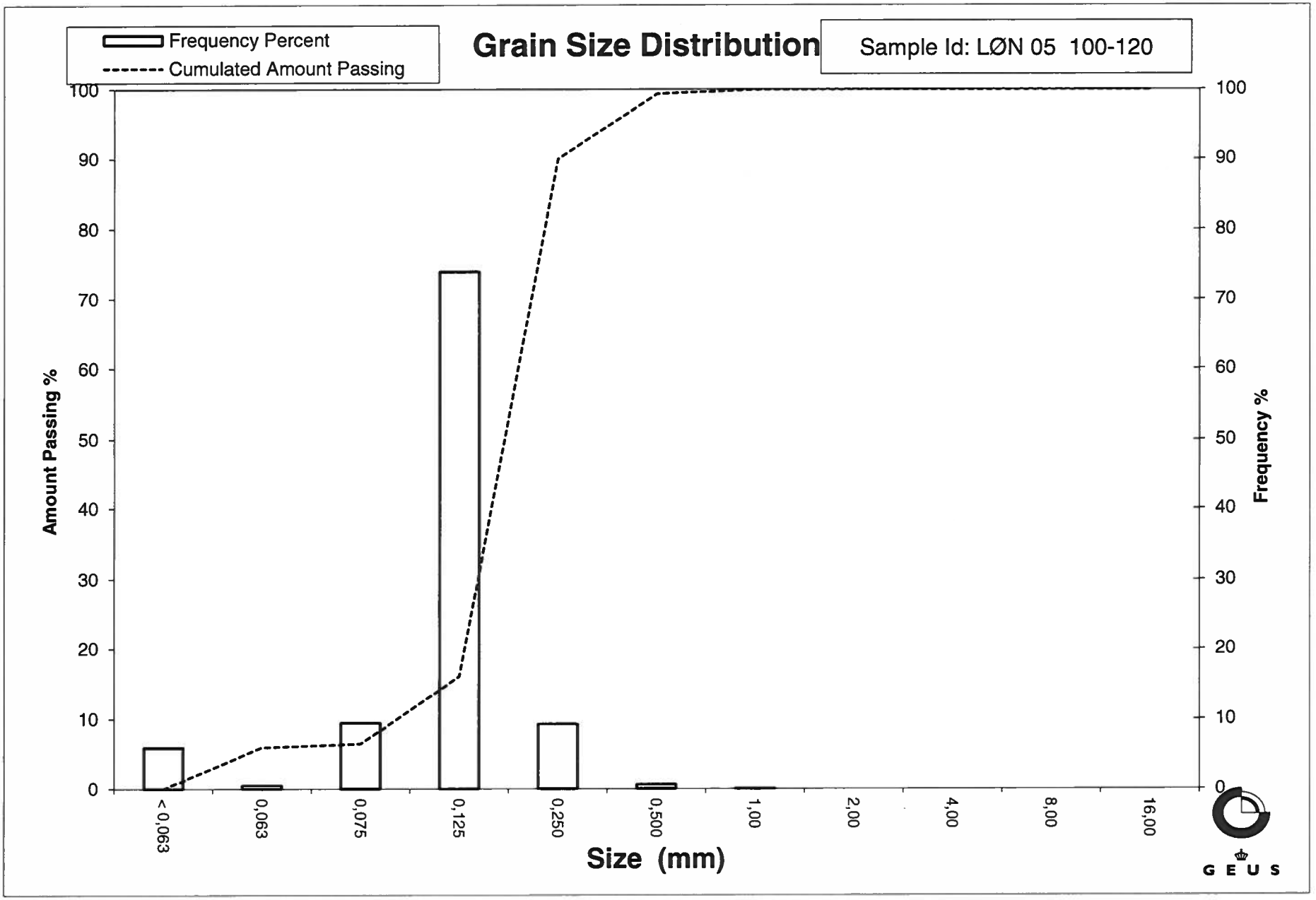
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 05 100-120
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 05 180-200
Lab. Id: 200243
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks:

G E U S

Total Weight 95,16 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
	8,00	-3,00	0,00	0,00	100,00
	4,00	-2,00	0,00	0,00	100,00
	2,00	-1,00	0,00	0,00	100,00
Sand	1,00	0,00	0,01	0,01	99,99
	0,500	1,00	0,08	0,08	99,91
	0,250	2,00	8,81	9,26	90,65
	0,125	3,00	75,23	79,06	11,59
	0,075	3,74	9,28	9,75	1,84
	0,063	3,99	0,26	0,27	1,57
	< 0,063	> 3,99	1,49	1,57	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	1,57
Sand, fine	(0,063 mm - 0,200 mm):	89,08
Sand, medium	(0,2 mm - 0,6 mm):	9,30
Sand, coarse	(0,6 mm - 2 mm):	0,05
Gravel	(> 2 mm):	0,00
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,30	1,74
16%	84%	0,18	2,51
25%	75%	0,17	2,56
40%	60%	0,16	2,66
Median 50%	50%	0,15	2,72
75%	25%	0,13	2,90
84%	16%	0,13	2,97
90%	10%	0,09	3,51
95%	5%	0,08	3,65

Moments Statistics

Mean	2,73
Sorting	0,40
Skewness	0,02
Kurtosis	2,35
Uniformity Coefficient	1,81

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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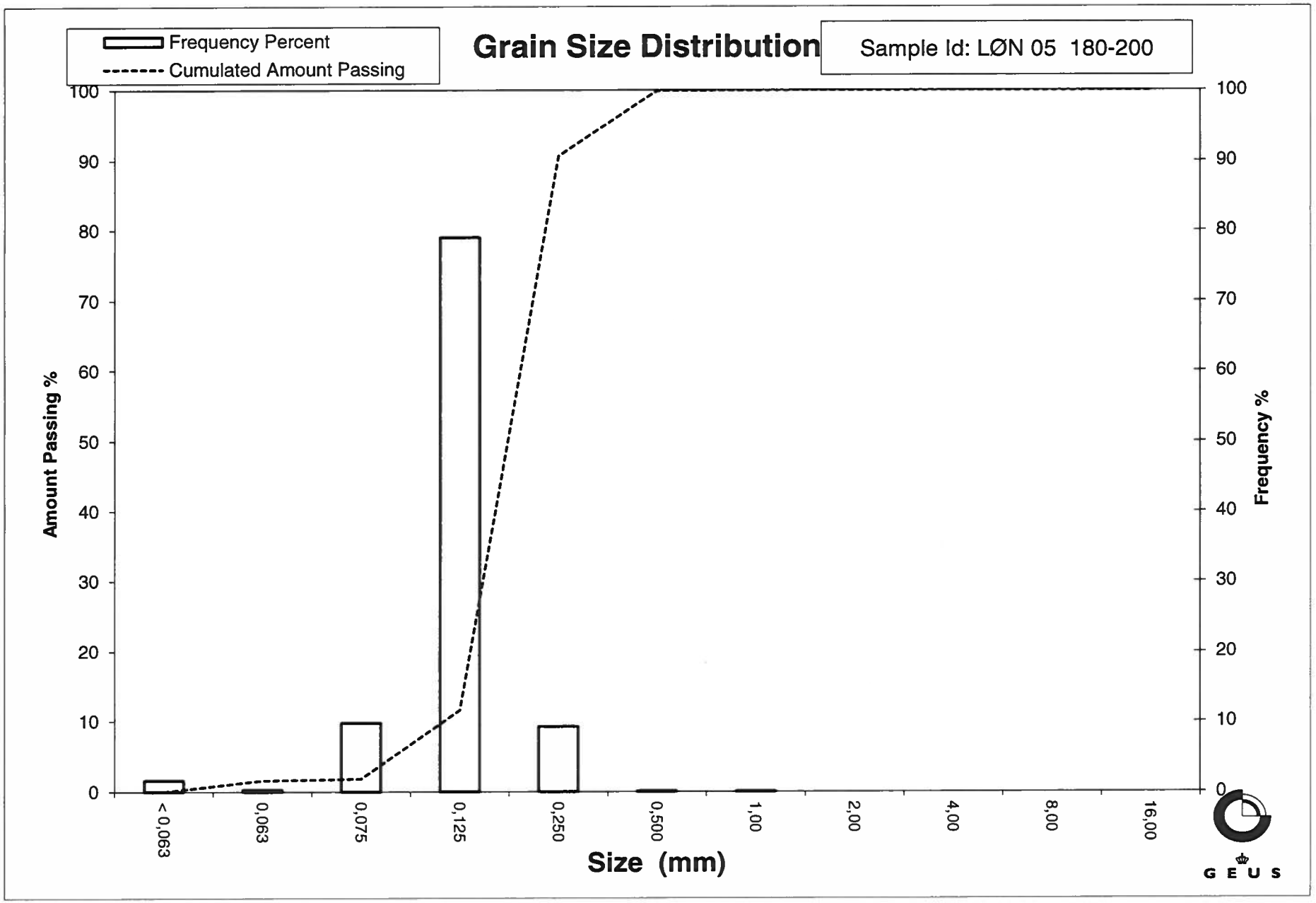
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 05 180-200
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 06 0-20
Lab. Id: 200244
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks:

G E U S

Total Weight 107,17 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
	8,00	-3,00	0,00	0,00	100,00
	4,00	-2,00	0,00	0,00	100,00
	2,00	-1,00	0,00	0,00	100,00
Sand	1,00	0,00	0,21	0,20	99,80
	0,500	1,00	3,61	3,37	96,44
	0,250	2,00	60,89	56,82	39,62
	0,125	3,00	37,84	35,31	4,31
	0,075	3,74	3,14	2,93	1,38
	0,063	3,99	0,09	0,08	1,30
	< 0,063	> 3,99	1,39	1,30	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	1,30
Sand, fine	(0,063 mm - 0,200 mm):	38,32
Sand, medium	(0,2 mm - 0,6 mm):	58,42
Sand, coarse	(0,6 mm - 2 mm):	1,96
Gravel	(> 2 mm):	0,00
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,35	1,50
16%	84%	0,33	1,59
25%	75%	0,32	1,66
40%	60%	0,29	1,80
Median 50%	50%	0,27	1,89
75%	25%	0,16	2,67
84%	16%	0,14	2,80
90%	10%	0,13	2,90
95%	5%	0,13	2,99

Moments Statistics

Mean	2,10
Sorting	0,53
Skewness	0,49
Kurtosis	0,61
Uniformity Coefficient	2,15

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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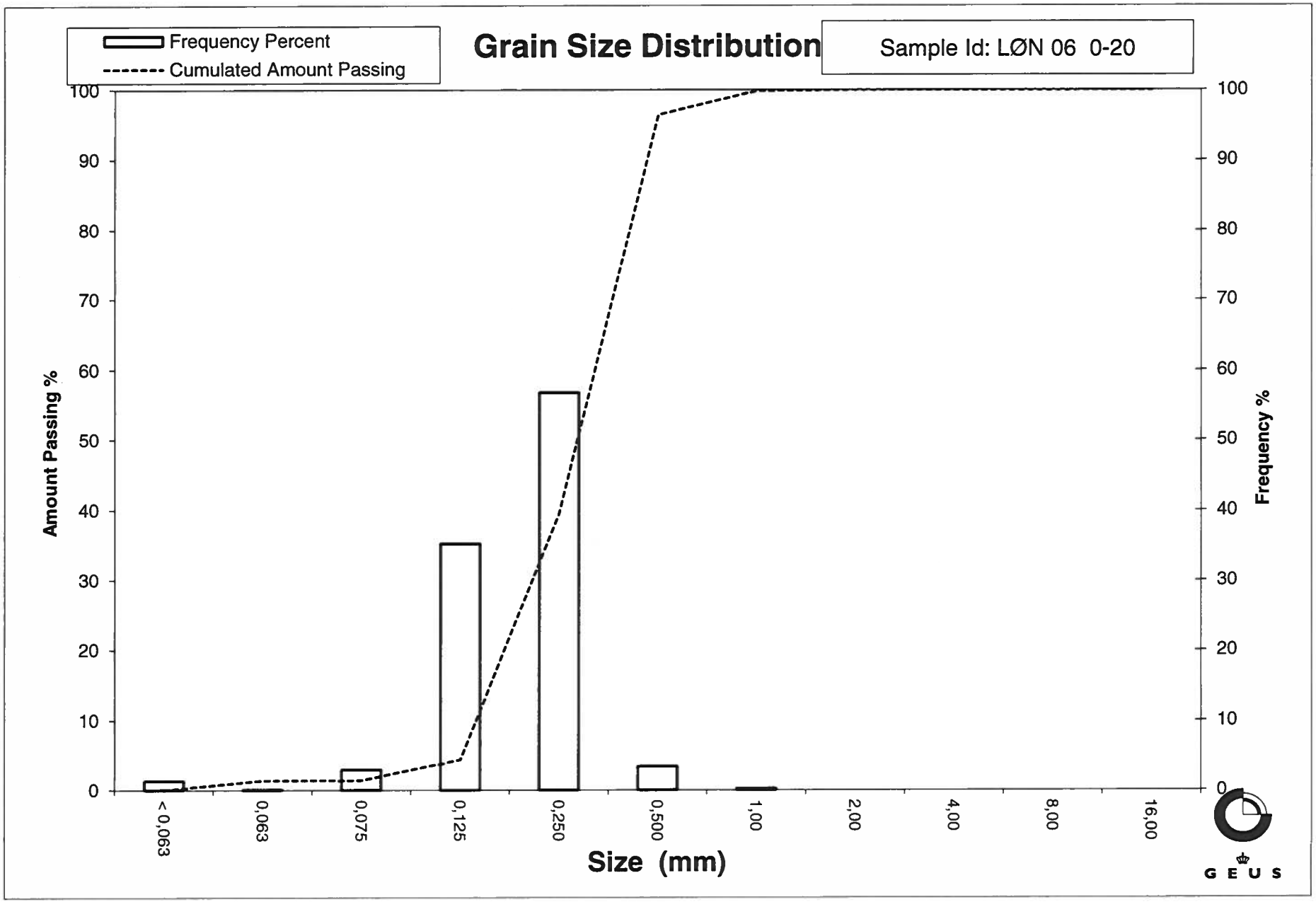
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 06 0-20
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 06 70-90
Lab. Id: 200245
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks:

Total Weight 93,74 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
Gravel	8,00	-3,00	0,00	0,00	100,00
Gravel	4,00	-2,00	0,00	0,00	100,00
Gravel	2,00	-1,00	0,06	0,06	99,94
Sand	1,00	0,00	0,08	0,09	99,85
Sand	0,500	1,00	0,34	0,36	99,49
Sand	0,250	2,00	5,55	5,92	93,57
Sand	0,125	3,00	66,89	71,36	22,21
Sand	0,075	3,74	16,38	17,47	4,74
Sand	0,063	3,99	0,59	0,63	4,11
Sand	< 0,063	> 3,99	3,85	4,11	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	4,11
Sand, fine	(0,063 mm - 0,200 mm):	89,46
Sand, medium	(0,2 mm - 0,6 mm):	6,09
Sand, coarse	(0,6 mm - 2 mm):	0,28
Gravel	(> 2 mm):	0,06
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,28	1,86
16%	84%	0,17	2,53
25%	75%	0,17	2,59
40%	60%	0,15	2,70
Median 50%	50%	0,15	2,77
75%	25%	0,13	2,98
84%	16%	0,08	3,56
90%	10%	0,08	3,65
95%	5%	0,08	3,73

Moments Statistics

Mean	2,96
Sorting	0,54
Skewness	0,28
Kurtosis	2,01
Uniformity Coefficient	1,94

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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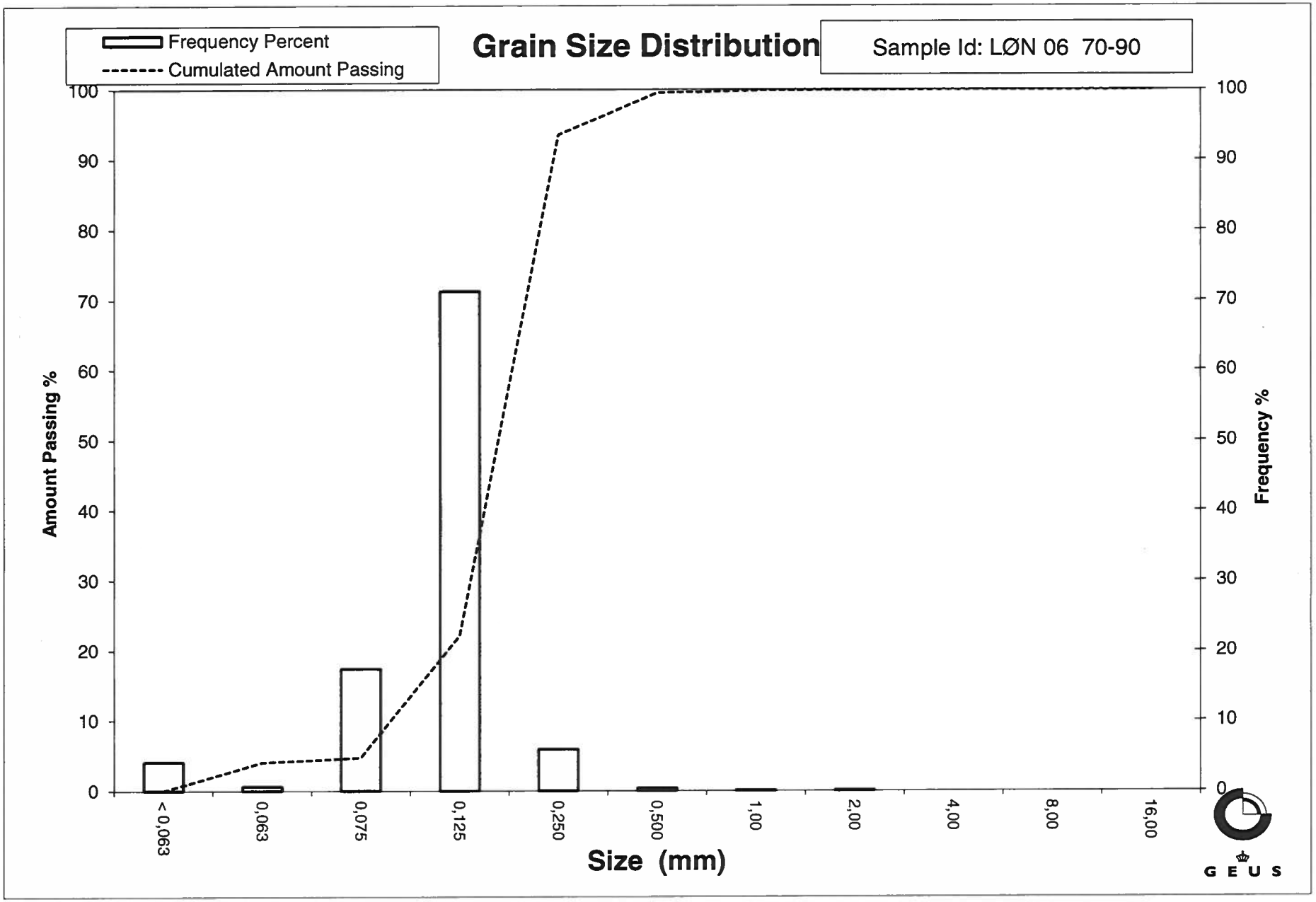
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 06 70-90
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 6A 0-20
Lab. Id: 200246
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks: >2mm består af skaller

GEUS

Total Weight 98,31 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
Gravel	8,00	-3,00	0,00	0,00	100,00
Gravel	4,00	-2,00	0,09	0,09	99,91
Sand	2,00	-1,00	0,06	0,06	99,85
Sand	1,00	0,00	0,11	0,11	99,74
Sand	0,500	1,00	1,82	1,85	97,88
Sand	0,250	2,00	47,15	47,96	49,92
Sand	0,125	3,00	42,64	43,37	6,55
Sand	0,075	3,74	4,15	4,22	2,33
Sand	0,063	3,99	0,13	0,13	2,20
Sand	< 0,063	> 3,99	2,16	2,20	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	2,20
Sand, fine	(0,063 mm - 0,200 mm):	47,73
Sand, medium	(0,2 mm - 0,6 mm):	48,84
Sand, coarse	(0,6 mm - 2 mm):	1,08
Gravel	(> 2 mm):	0,15
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,35	1,52
16%	84%	0,32	1,62
25%	75%	0,30	1,71
40%	60%	0,27	1,88
Median 50%	50%	0,25	2,00
75%	25%	0,15	2,75
84%	16%	0,14	2,87
90%	10%	0,13	2,95
95%	5%	0,08	3,57

Moments Statistics

Mean	2,16
Sorting	0,62
Skewness	0,46
Kurtosis	0,81
Uniformity Coefficient	2,10

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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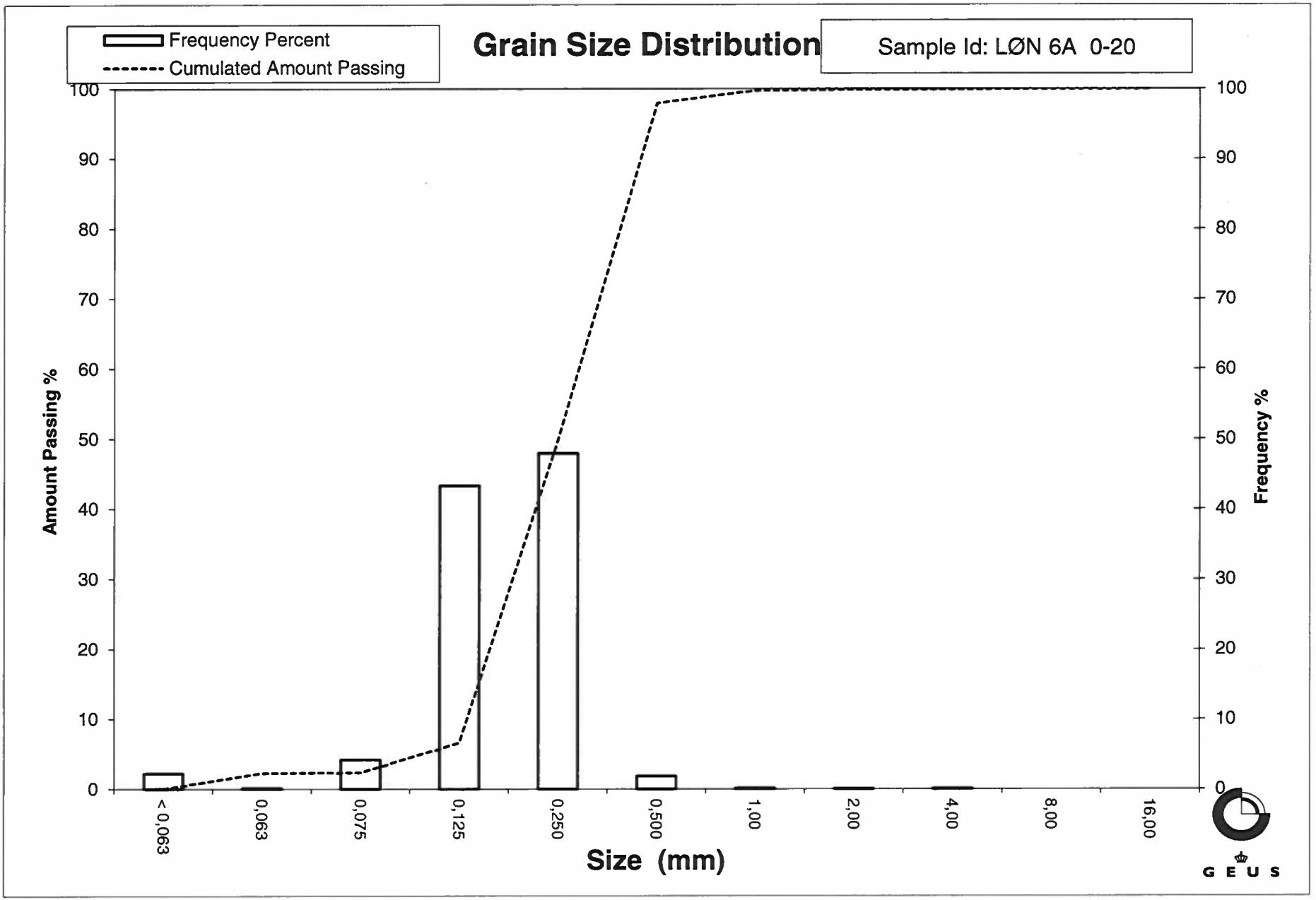
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 6A 0-20
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 6A 100-120
Lab. Id: 200247
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks:

GEUS

Total Weight 92,83 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
Gravel	8,00	-3,00	0,00	0,00	100,00
Gravel	4,00	-2,00	0,00	0,00	100,00
Gravel	2,00	-1,00	0,07	0,08	99,92
Sand	1,00	0,00	0,14	0,15	99,77
Sand	0,500	1,00	0,90	0,97	98,80
Sand	0,250	2,00	6,95	7,49	91,32
Sand	0,125	3,00	72,60	78,21	13,11
Sand	0,075	3,74	10,98	11,83	1,28
Sand	0,063	3,99	0,16	0,17	1,11
Sand	< 0,063	> 3,99	1,03	1,11	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	1,11
Sand, fine	(0,063 mm - 0,200 mm):	90,21
Sand, medium	(0,2 mm - 0,6 mm):	7,95
Sand, coarse	(0,6 mm - 2 mm):	0,66
Gravel	(> 2 mm):	0,08
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,30	1,73
16%	84%	0,17	2,52
25%	75%	0,17	2,57
40%	60%	0,16	2,66
Median 50%	50%	0,15	2,73
75%	25%	0,13	2,91
84%	16%	0,13	2,98
90%	10%	0,09	3,54
95%	5%	0,08	3,65

Moments Statistics

Mean	2,74
Sorting	0,41
Skewness	0,02
Kurtosis	2,33
Uniformity Coefficient	1,84

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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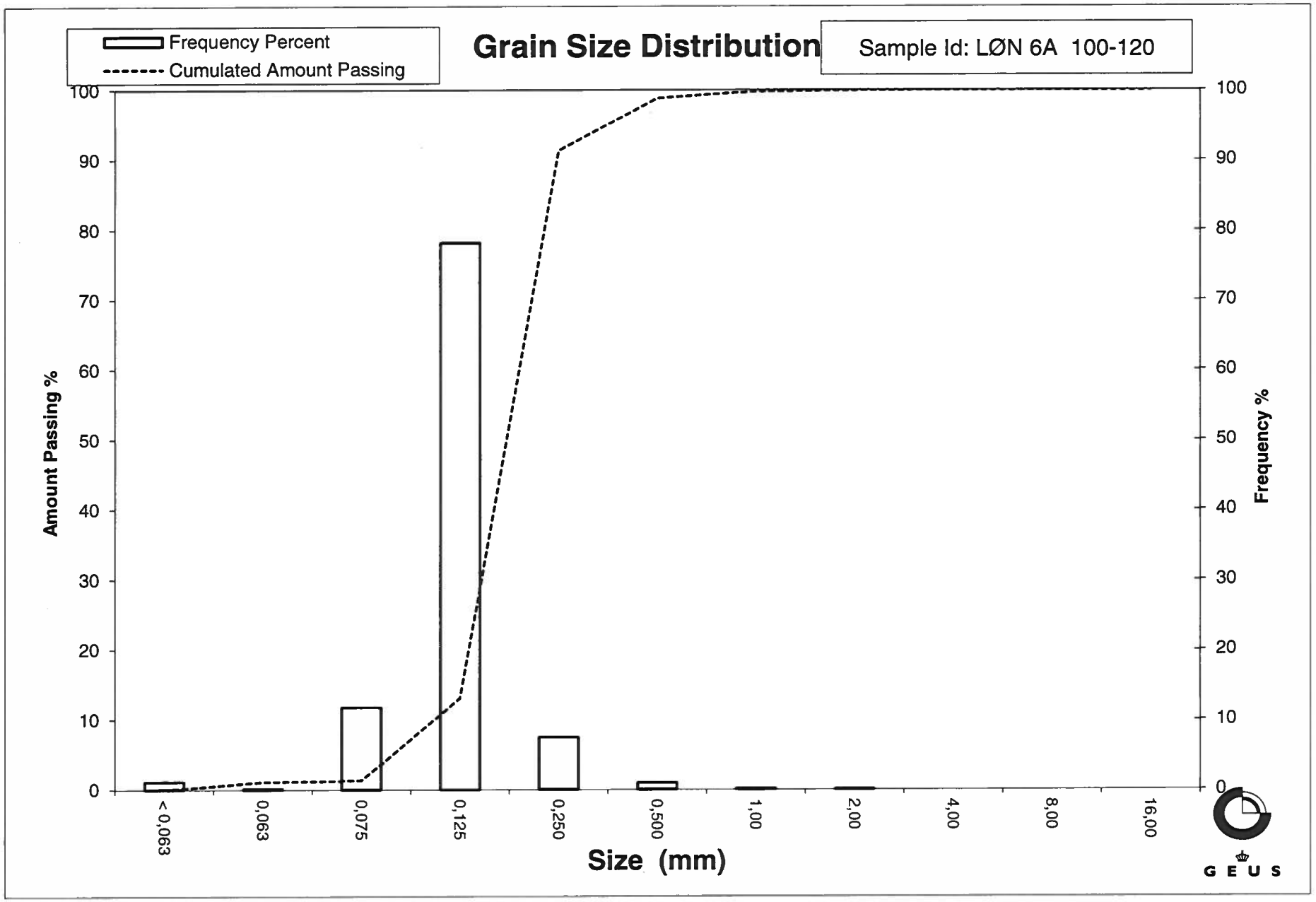
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 6A 100-120
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 6A 200-220
Lab. Id: 200248
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks:

GEUS

Total Weight 99,31 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
Gravel	8,00	-3,00	0,00	0,00	100,00
Gravel	4,00	-2,00	0,01	0,01	99,99
Gravel	2,00	-1,00	0,20	0,20	99,79
Sand	1,00	0,00	0,20	0,20	99,59
Sand	0,500	1,00	0,54	0,54	99,04
Sand	0,250	2,00	21,03	21,18	77,87
Sand	0,125	3,00	61,67	62,10	15,77
Sand	0,075	3,74	13,18	13,27	2,50
Sand	0,063	3,99	0,29	0,29	2,21
Sand	< 0,063	> 3,99	2,19	2,21	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	2,21
Sand, fine	(0,063 mm - 0,200 mm):	75,66
Sand, medium	(0,2 mm - 0,6 mm):	21,44
Sand, coarse	(0,6 mm - 2 mm):	0,49
Gravel	(> 2 mm):	0,21
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,33	1,58
16%	84%	0,28	1,83
25%	75%	0,18	2,49
40%	60%	0,16	2,61
Median 50%	50%	0,16	2,69
75%	25%	0,13	2,91
84%	16%	0,13	3,00
90%	10%	0,08	3,58
95%	5%	0,08	3,68

Moments Statistics

Mean	2,51
Sorting	0,61
Skewness	-0,26
Kurtosis	2,08
Uniformity Coefficient	1,97

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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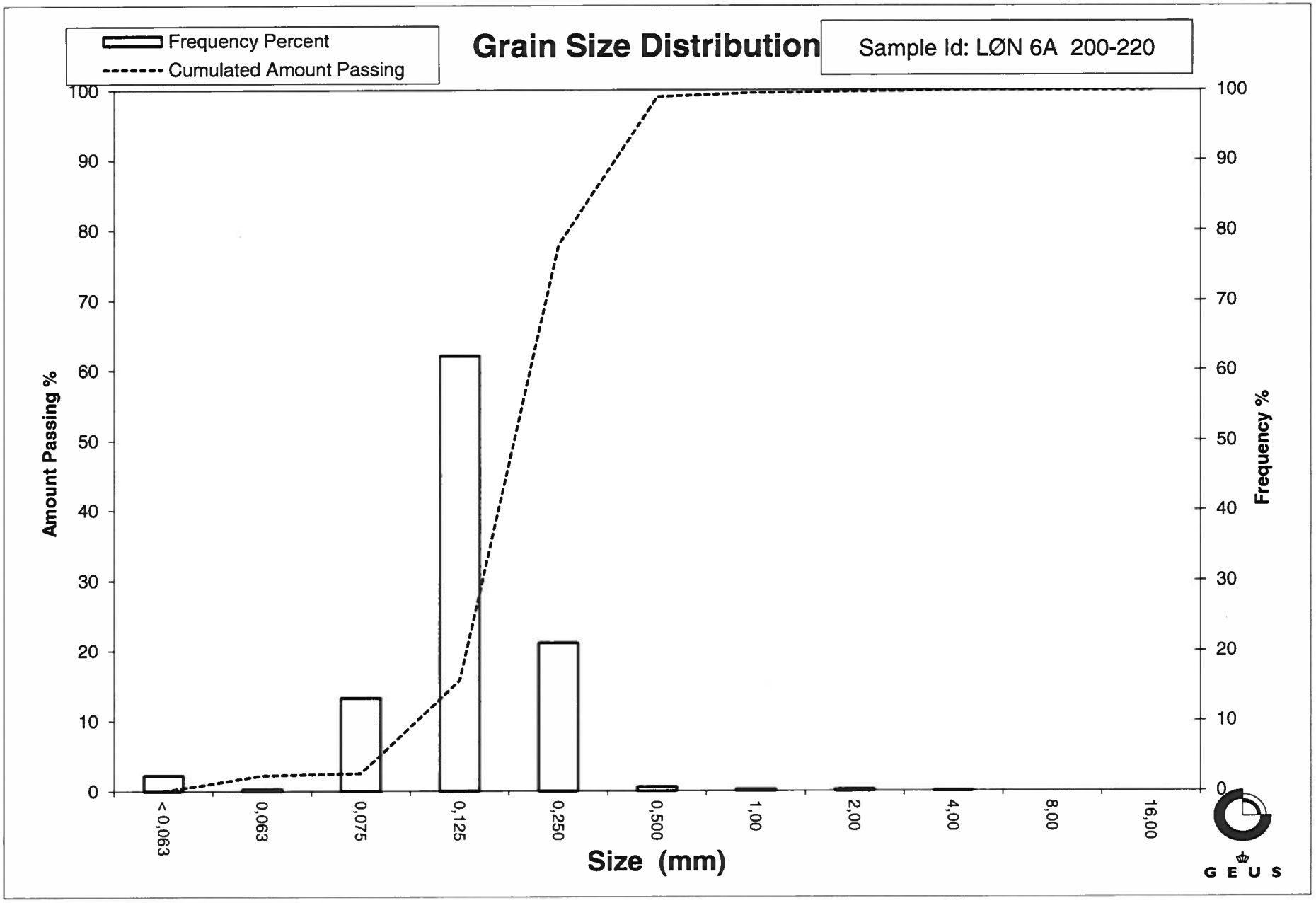
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 6A 200-220
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 6A 320-340
Lab. Id: 200249
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks: >4mm heraf 0,2g skaller

GEUS

Total Weight 98,19 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
Gravel	8,00	-3,00	0,00	0,00	100,00
Gravel	4,00	-2,00	0,26	0,26	99,74
Sand	2,00	-1,00	0,44	0,45	99,29
Sand	1,00	0,00	0,72	0,73	98,55
Sand	0,500	1,00	1,38	1,41	97,15
Sand	0,250	2,00	24,27	24,72	72,43
Sand	0,125	3,00	60,62	61,74	10,69
Sand	0,075	3,74	6,23	6,34	4,35
Sand	0,063	3,99	0,89	0,91	3,44
Sand	< 0,063	> 3,99	3,38	3,44	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	3,44
Sand, fine	(0,063 mm - 0,200 mm):	68,99
Sand, medium	(0,2 mm - 0,6 mm):	25,39
Sand, coarse	(0,6 mm - 2 mm):	1,47
Gravel	(> 2 mm):	0,71
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,35	1,53
16%	84%	0,30	1,74
25%	75%	0,26	1,94
40%	60%	0,17	2,57
Median 50%	50%	0,16	2,64
75%	25%	0,14	2,86
84%	16%	0,13	2,95
90%	10%	0,09	3,50
95%	5%	0,08	3,71

Moments Statistics

Mean	2,44
Sorting	0,63
Skewness	-0,26
Kurtosis	0,97
Uniformity Coefficient	1,91

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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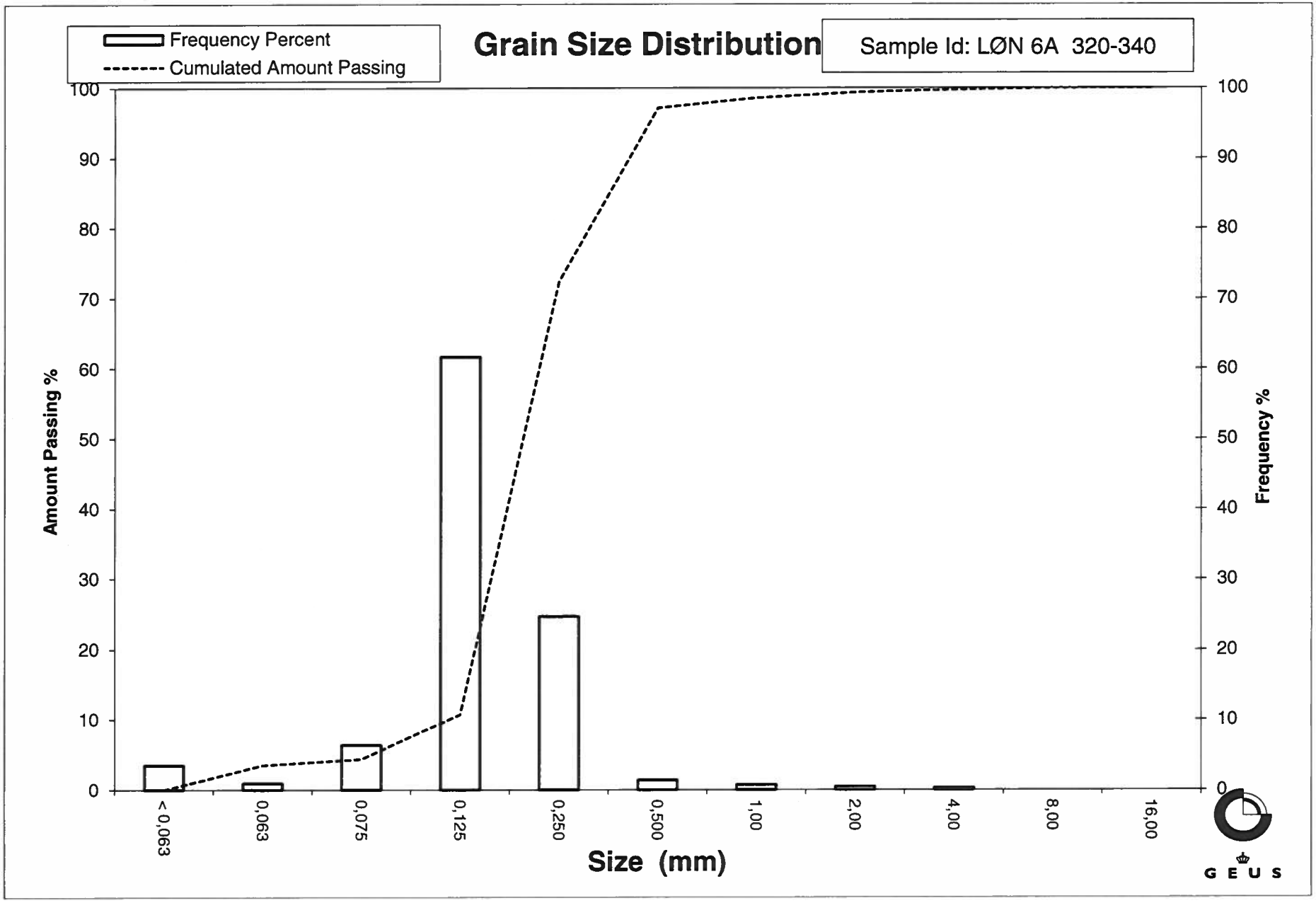
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 6A 320-340
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 06A 380-400
Lab. Id: 200250
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks:

GEUS

Total Weight 118,16 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
Gravel	8,00	-3,00	0,00	0,00	100,00
Gravel	4,00	-2,00	0,00	0,00	100,00
Gravel	2,00	-1,00	0,00	0,00	100,00
Sand	1,00	0,00	0,00	0,00	100,00
Sand	0,500	1,00	0,07	0,06	99,94
Sand	0,250	2,00	0,33	0,28	99,66
Sand	0,125	3,00	9,02	7,63	92,03
Sand	0,075	3,74	31,31	26,50	65,53
Sand	0,063	3,99	23,78	20,13	45,40
Sand	< 0,063	> 3,99	53,65	45,40	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	45,40
Sand, fine	(0,063 mm - 0,200 mm):	54,26
Sand, medium	(0,2 mm - 0,6 mm):	0,31
Sand, coarse	(0,6 mm - 2 mm):	0,03
Gravel	(> 2 mm):	0,00
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,15	2,77
16%	84%	0,09	3,55
25%	75%	0,08	3,64
40%	60%	0,07	3,80
Median 50%	50%	0,07	3,93
75%	25%	-------	-------
84%	16%	-------	-------
90%	10%	-------	-------
95%	5%	-------	-------

Moments Statistics

Mean	3,74
Sorting	-------
Skewness	-------
Kurtosis	-------
Uniformity Coefficient	-------

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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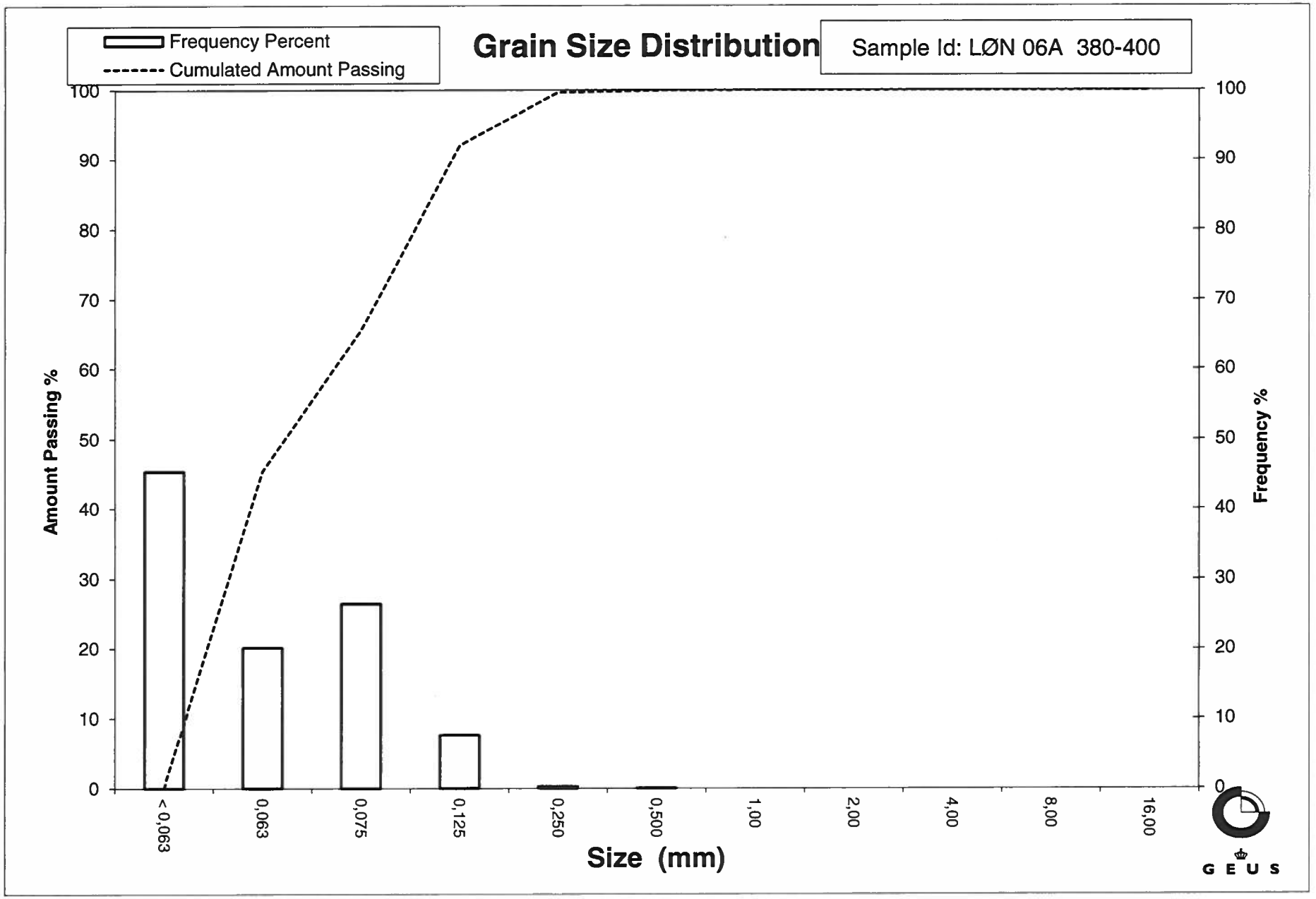
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 06A 380-400
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 07 0-20
Lab. Id: 200251
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks: >4mm heraf 0,7 g skaller

GEUS

Total Weight 127,98 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
Gravel	8,00	-3,00	1,41	1,10	98,90
Gravel	4,00	-2,00	2,55	1,99	96,91
Sand	2,00	-1,00	4,53	3,54	93,37
Sand	1,00	0,00	4,16	3,25	90,12
Sand	0,500	1,00	21,58	16,86	73,25
Sand	0,250	2,00	55,59	43,44	29,82
Sand	0,125	3,00	34,61	27,04	2,77
Sand	0,075	3,74	2,45	1,91	0,86
Sand	0,063	3,99	0,13	0,10	0,76
Sand	< 0,063	> 3,99	0,97	0,76	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	0,76
Sand, fine	(0,063 mm - 0,200 mm):	29,06
Sand, medium	(0,2 mm - 0,6 mm):	51,47
Sand, coarse	(0,6 mm - 2 mm):	12,08
Gravel	(> 2 mm):	6,63
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	2,37	-1,24
16%	84%	0,63	0,66
25%	75%	0,52	0,94
40%	60%	0,32	1,63
Median 50%	50%	0,30	1,74
75%	25%	0,17	2,55
84%	16%	0,15	2,72
90%	10%	0,14	2,84
95%	5%	0,13	2,95

Moments Statistics

Mean	1,71
Sorting	1,15
Skewness	-0,24
Kurtosis	1,06
Uniformity Coefficient	2,31

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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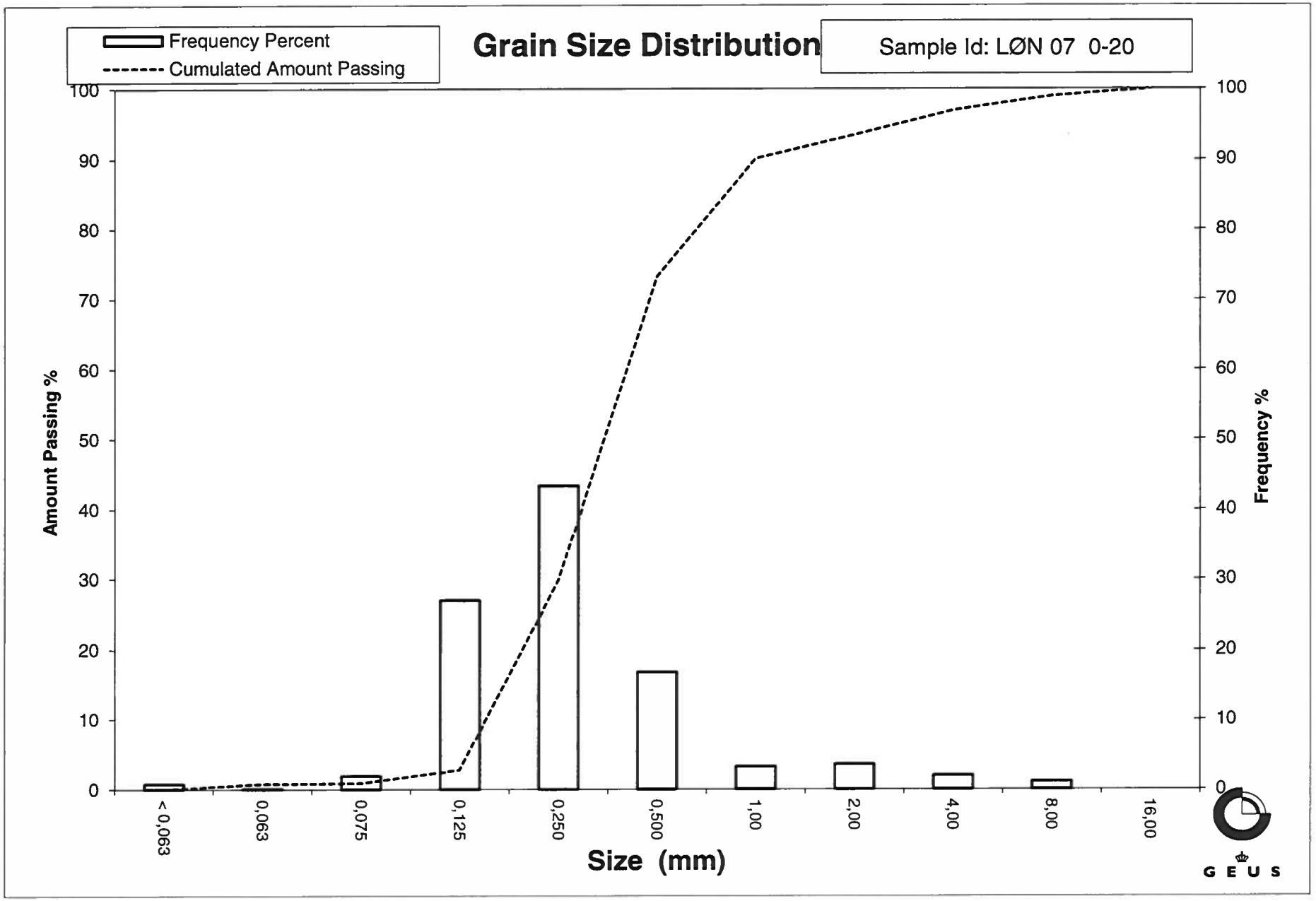
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 07 0-20
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 07 100-120
Lab. Id: 200252
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks:

GEUS

Total Weight 102,57 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
Gravel	8,00	-3,00	1,39	1,36	98,64
Gravel	4,00	-2,00	0,59	0,58	98,07
Gravel	2,00	-1,00	1,02	0,99	97,08
Sand	1,00	0,00	1,45	1,41	95,66
Sand	0,500	1,00	13,49	13,15	82,51
Sand	0,250	2,00	41,76	40,71	41,80
Sand	0,125	3,00	37,64	36,70	5,10
Sand	0,075	3,74	4,12	4,02	1,08
Sand	0,063	3,99	0,13	0,13	0,96
Sand	< 0,063	> 3,99	0,98	0,96	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	0,96
Sand, fine	(0,063 mm - 0,200 mm):	40,84
Sand, medium	(0,2 mm - 0,6 mm):	46,98
Sand, coarse	(0,6 mm - 2 mm):	8,30
Gravel	(> 2 mm):	2,92
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile	Percentile		
Amount in sieve	Amount passing	d(mm)	Φ
5%	95%	0,70	0,52
16%	84%	0,52	0,93
25%	75%	0,34	1,58
40%	60%	0,30	1,75
Median 50%	50%	0,27	1,88
75%	25%	0,15	2,69
84%	16%	0,14	2,82
90%	10%	0,13	2,92
95%	5%	0,09	3,48

Moments Statistics

Mean	1,88
Sorting	0,92
Skewness	0,04
Kurtosis	1,09
Uniformity Coefficient	2,24

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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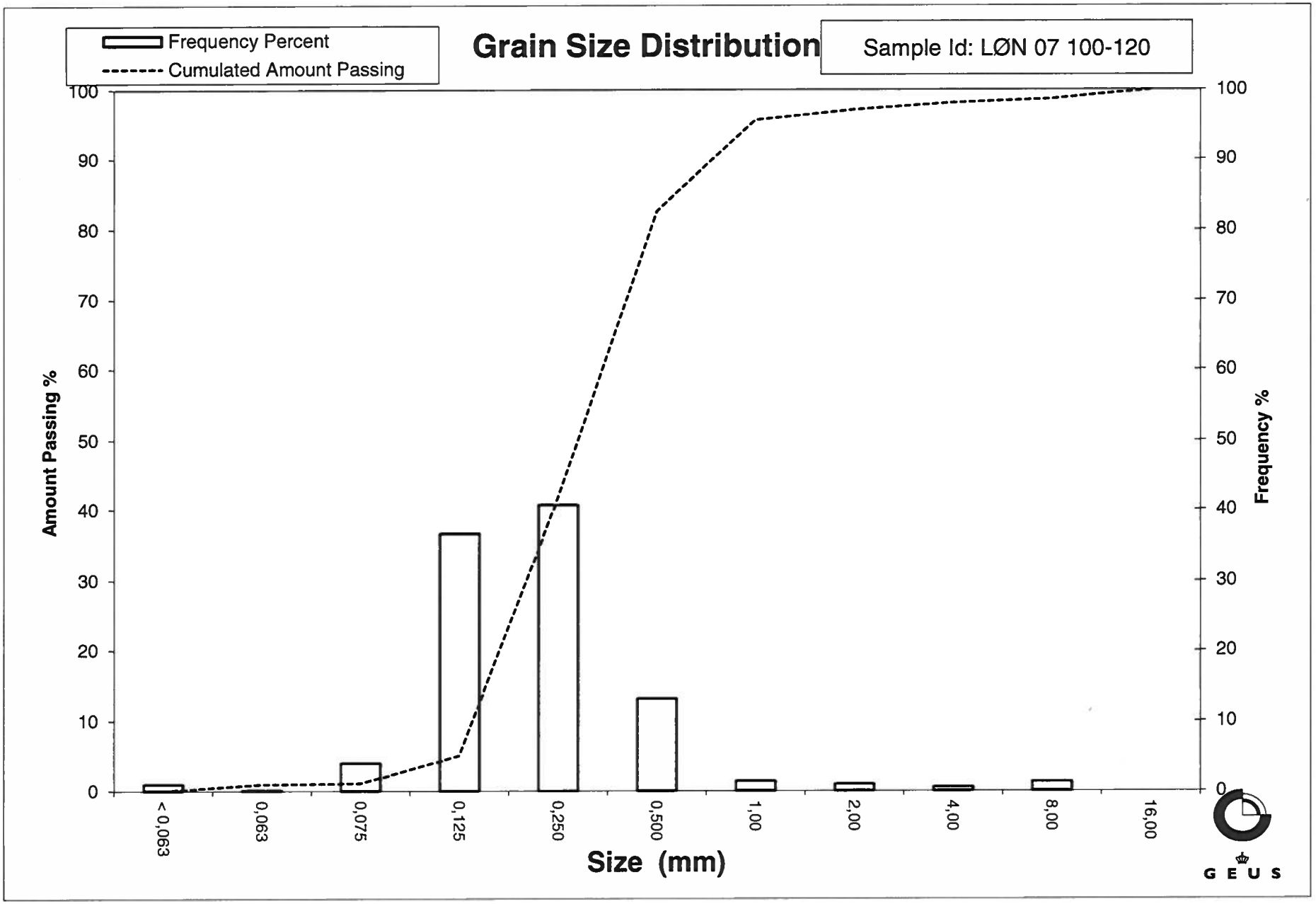
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 07 100-120
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 07 200-220
Lab. Id: 200253
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks:

GEUS

Total Weight 100,29 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
	8,00	-3,00	0,00	0,00	100,00
	4,00	-2,00	0,23	0,23	99,77
	2,00	-1,00	0,68	0,68	99,09
Sand	1,00	0,00	2,05	2,04	97,05
	0,500	1,00	14,50	14,46	82,59
	0,250	2,00	38,35	38,24	44,35
	0,125	3,00	34,93	34,83	9,52
	0,075	3,74	8,33	8,31	1,22
	0,063	3,99	0,25	0,25	0,97
	< 0,063	> 3,99	0,97	0,97	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	0,97
Sand, fine	(0,063 mm - 0,200 mm):	43,38
Sand, medium	(0,2 mm - 0,6 mm):	45,12
Sand, coarse	(0,6 mm - 2 mm):	9,62
Gravel	(> 2 mm):	0,91
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,68	0,56
16%	84%	0,52	0,94
25%	75%	0,33	1,58
40%	60%	0,29	1,77
Median 50%	50%	0,27	1,91
75%	25%	0,15	2,74
84%	16%	0,14	2,89
90%	10%	0,13	2,99
95%	5%	0,08	3,61

Moments Statistics

Mean	1,91
Sorting	0,95
Skewness	0,06
Kurtosis	1,08
Uniformity Coefficient	2,33

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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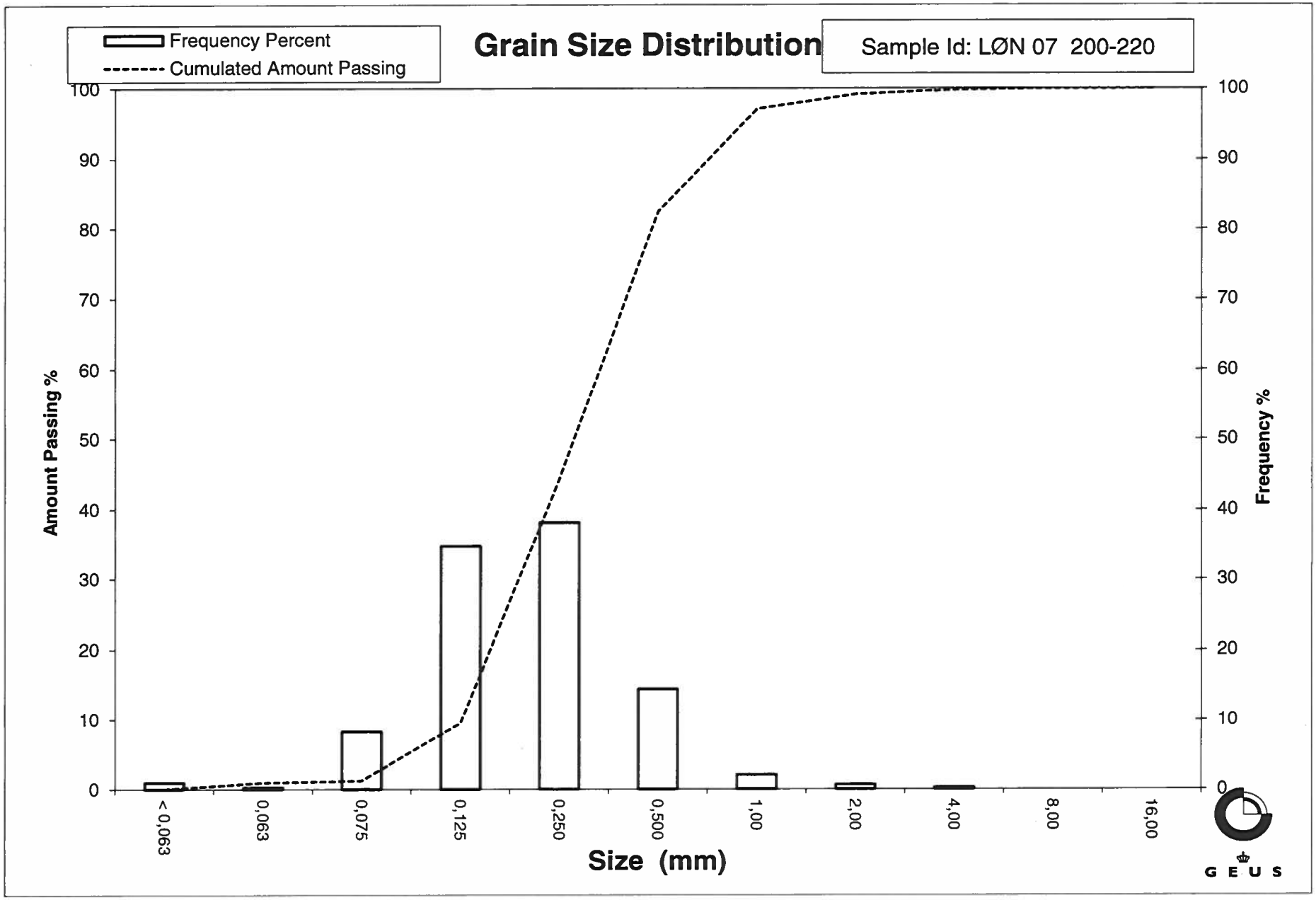
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 07 200-220
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 07 300-320
Lab. Id: 200254
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks:

GEUS

Total Weight 92,53 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
Gravel	8,00	-3,00	0,00	0,00	100,00
Gravel	4,00	-2,00	0,11	0,12	99,88
Gravel	2,00	-1,00	0,10	0,11	99,77
Sand	1,00	0,00	0,09	0,10	99,68
Sand	0,500	1,00	0,83	0,90	98,78
Sand	0,250	2,00	6,07	6,56	92,22
Sand	0,125	3,00	66,34	71,70	20,52
Sand	0,075	3,74	15,35	16,59	3,93
Sand	0,063	3,99	0,31	0,34	3,60
Sand	< 0,063	> 3,99	3,33	3,60	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	3,60
Sand, fine	(0,063 mm - 0,200 mm):	88,62
Sand, medium	(0,2 mm - 0,6 mm):	6,99
Sand, coarse	(0,6 mm - 2 mm):	0,57
Gravel	(> 2 mm):	0,23
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile	Percentile		
Amount in sieve	Amount passing	d(mm)	Φ
5%	95%	0,29	1,76
16%	84%	0,17	2,53
25%	75%	0,17	2,58
40%	60%	0,16	2,69
Median 50%	50%	0,15	2,76
75%	25%	0,13	2,96
84%	16%	0,09	3,54
90%	10%	0,08	3,64
95%	5%	0,08	3,72

Moments Statistics

Mean	2,94
Sorting	0,55
Skewness	0,26
Kurtosis	2,13
Uniformity Coefficient	1,93

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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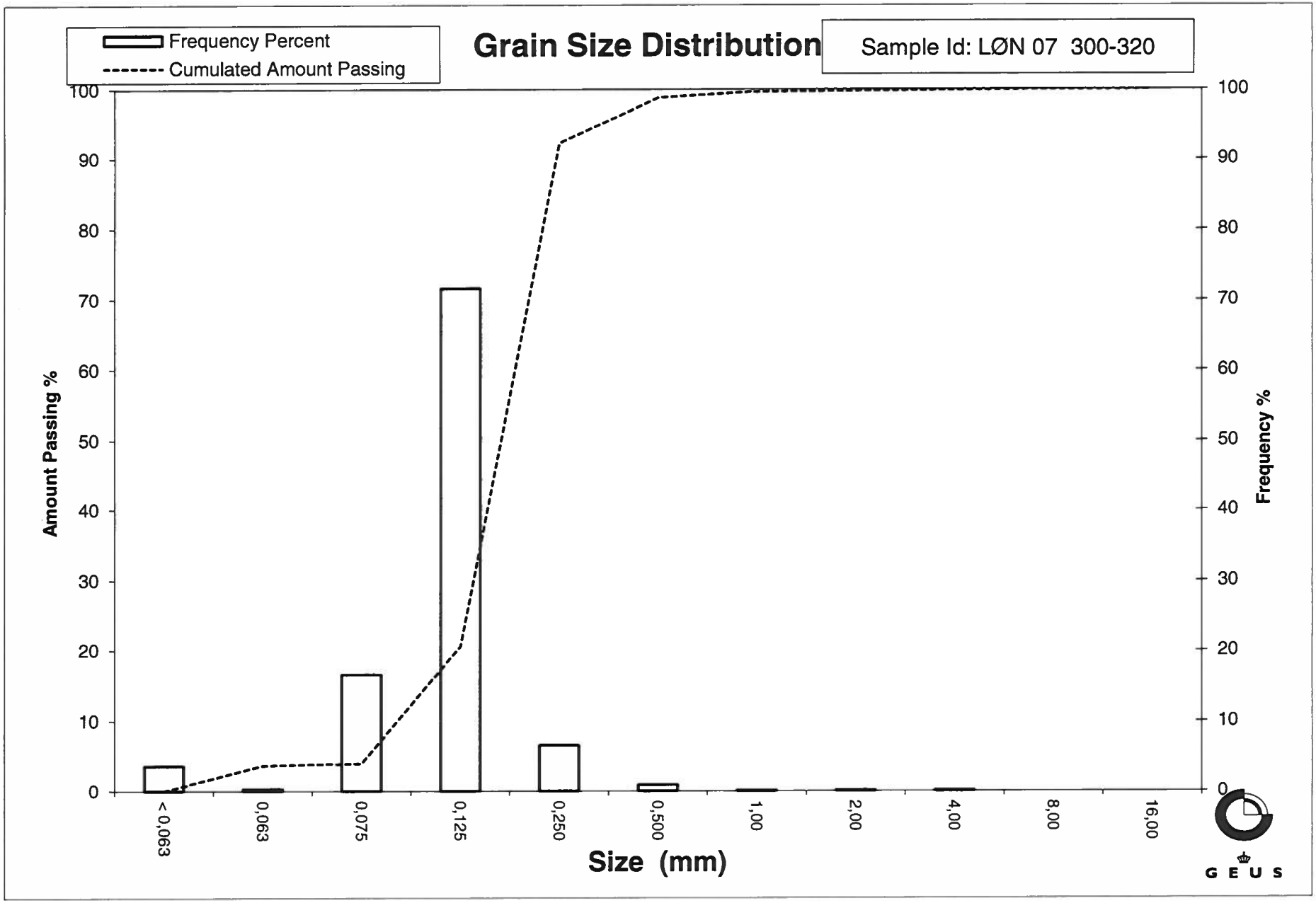
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 07 300-320
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 07 395-415
Lab. Id: 200255
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks:

Total Weight 94,67 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
Gravel	8,00	-3,00	0,00	0,00	100,00
Gravel	4,00	-2,00	0,71	0,75	99,25
Sand	2,00	-1,00	0,52	0,55	98,70
Sand	1,00	0,00	0,22	0,23	98,47
Sand	0,500	1,00	1,25	1,32	97,15
Sand	0,250	2,00	4,03	4,26	92,89
Sand	0,125	3,00	59,04	62,36	30,53
Sand	0,075	3,74	21,24	22,44	8,09
Sand	0,063	3,99	1,30	1,37	6,72
Sand	< 0,063	> 3,99	6,36	6,72	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	6,72
Sand, fine	(0,063 mm - 0,200 mm):	86,17
Sand, medium	(0,2 mm - 0,6 mm):	4,89
Sand, coarse	(0,6 mm - 2 mm):	0,92
Gravel	(> 2 mm):	1,30
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,30	1,73
16%	84%	0,17	2,54
25%	75%	0,16	2,61
40%	60%	0,15	2,73
Median 50%	50%	0,14	2,81
75%	25%	0,09	3,53
84%	16%	0,08	3,64
90%	10%	0,08	3,71
95%	5%	-------	-------

Moments Statistics

Mean	3,00
Sorting	-------
Skewness	-------
Kurtosis	-------
Uniformity Coefficient	1,98

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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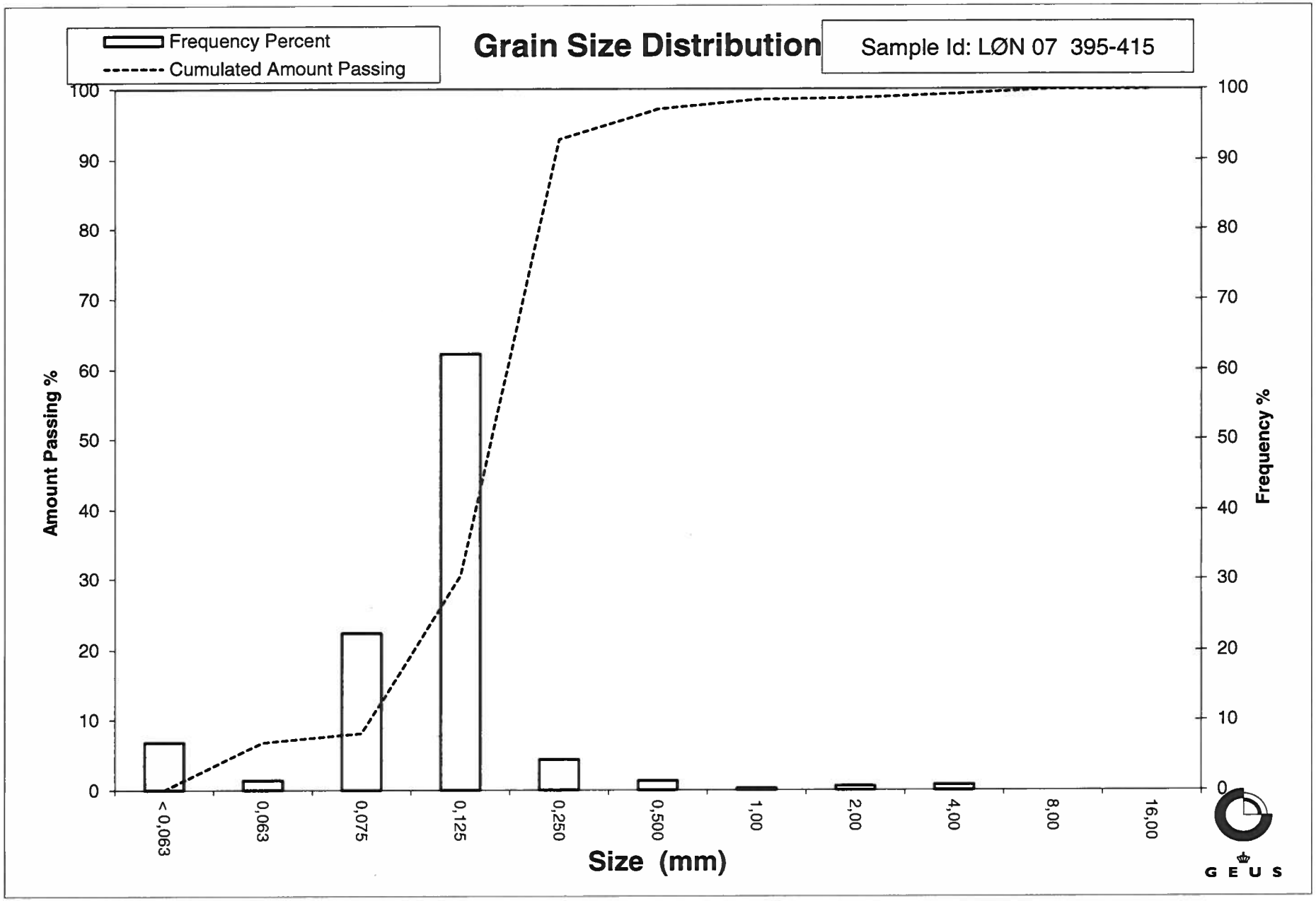
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 07 395-415
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 08 0-20
Lab. Id: 200256
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks: >4mm heraf 0,3g skaller

GEUS

Total Weight 109,24 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
	8,00	-3,00	0,00	0,00	100,00
	4,00	-2,00	0,41	0,38	99,62
	2,00	-1,00	2,36	2,16	97,46
Sand	1,00	0,00	6,88	6,30	91,17
	0,500	1,00	22,13	20,26	70,91
	0,250	2,00	38,38	35,13	35,77
	0,125	3,00	37,23	34,08	1,69
	0,075	3,74	1,25	1,14	0,55
	0,063	3,99	0,03	0,03	0,52
	< 0,063	> 3,99	0,57	0,52	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	0,52
Sand, fine	(0,063 mm - 0,200 mm):	35,25
Sand, medium	(0,2 mm - 0,6 mm):	44,78
Sand, coarse	(0,6 mm - 2 mm):	16,91
Gravel	(> 2 mm):	2,54
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile	Percentile		
Amount in sieve	Amount passing	d(mm)	Φ
5%	95%	1,24	-0,31
16%	84%	0,64	0,65
25%	75%	0,54	0,88
40%	60%	0,32	1,63
Median 50%	50%	0,29	1,77
75%	25%	0,16	2,62
84%	16%	0,15	2,76
90%	10%	0,14	2,85
95%	5%	0,13	2,94

Moments Statistics

Mean	1,73
Sorting	1,02
Skewness	-0,17
Kurtosis	0,77
Uniformity Coefficient	2,33

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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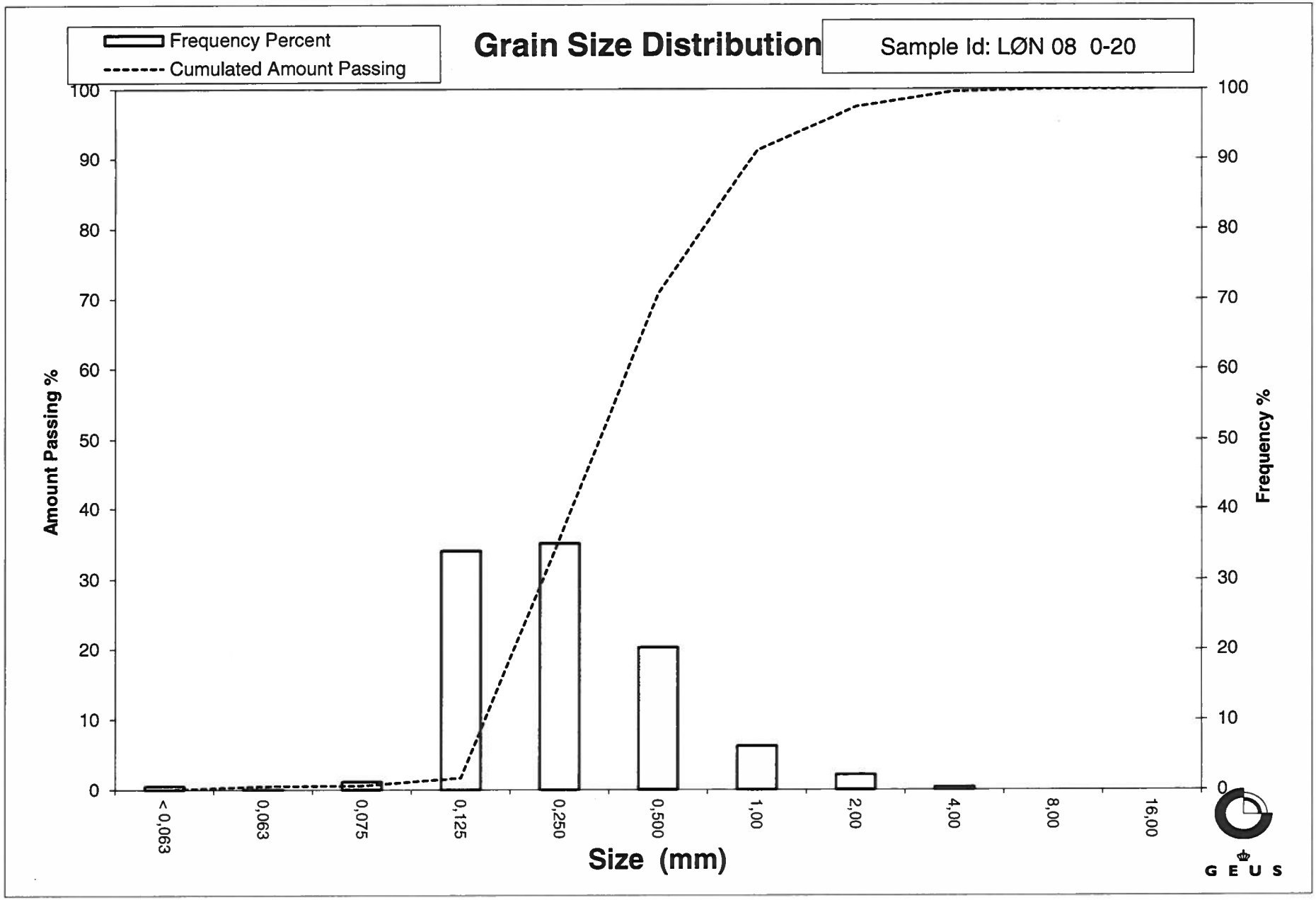
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 08 0-20
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 08 100-120
Lab. Id: 200257
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks:

GEUS

Total Weight 93,9 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
Gravel	8,00	-3,00	0,00	0,00	100,00
Gravel	4,00	-2,00	0,10	0,11	99,89
Sand	2,00	-1,00	0,11	0,12	99,78
Sand	1,00	0,00	0,13	0,14	99,64
Sand	0,500	1,00	0,61	0,65	98,99
Sand	0,250	2,00	11,58	12,33	86,66
Sand	0,125	3,00	69,01	73,49	13,16
Sand	0,075	3,74	10,92	11,63	1,53
Sand	0,063	3,99	0,32	0,34	1,19
Sand	< 0,063	> 3,99	1,12	1,19	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	1,19
Sand, fine	(0,063 mm - 0,200 mm):	85,46
Sand, medium	(0,2 mm - 0,6 mm):	12,64
Sand, coarse	(0,6 mm - 2 mm):	0,48
Gravel	(> 2 mm):	0,22
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,32	1,64
16%	84%	0,18	2,49
25%	75%	0,17	2,55
40%	60%	0,16	2,64
Median 50%	50%	0,15	2,71
75%	25%	0,13	2,90
84%	16%	0,13	2,98
90%	10%	0,09	3,54
95%	5%	0,08	3,65

Moments Statistics

Mean	2,73
Sorting	0,43
Skewness	0,01
Kurtosis	2,32
Uniformity Coefficient	1,86

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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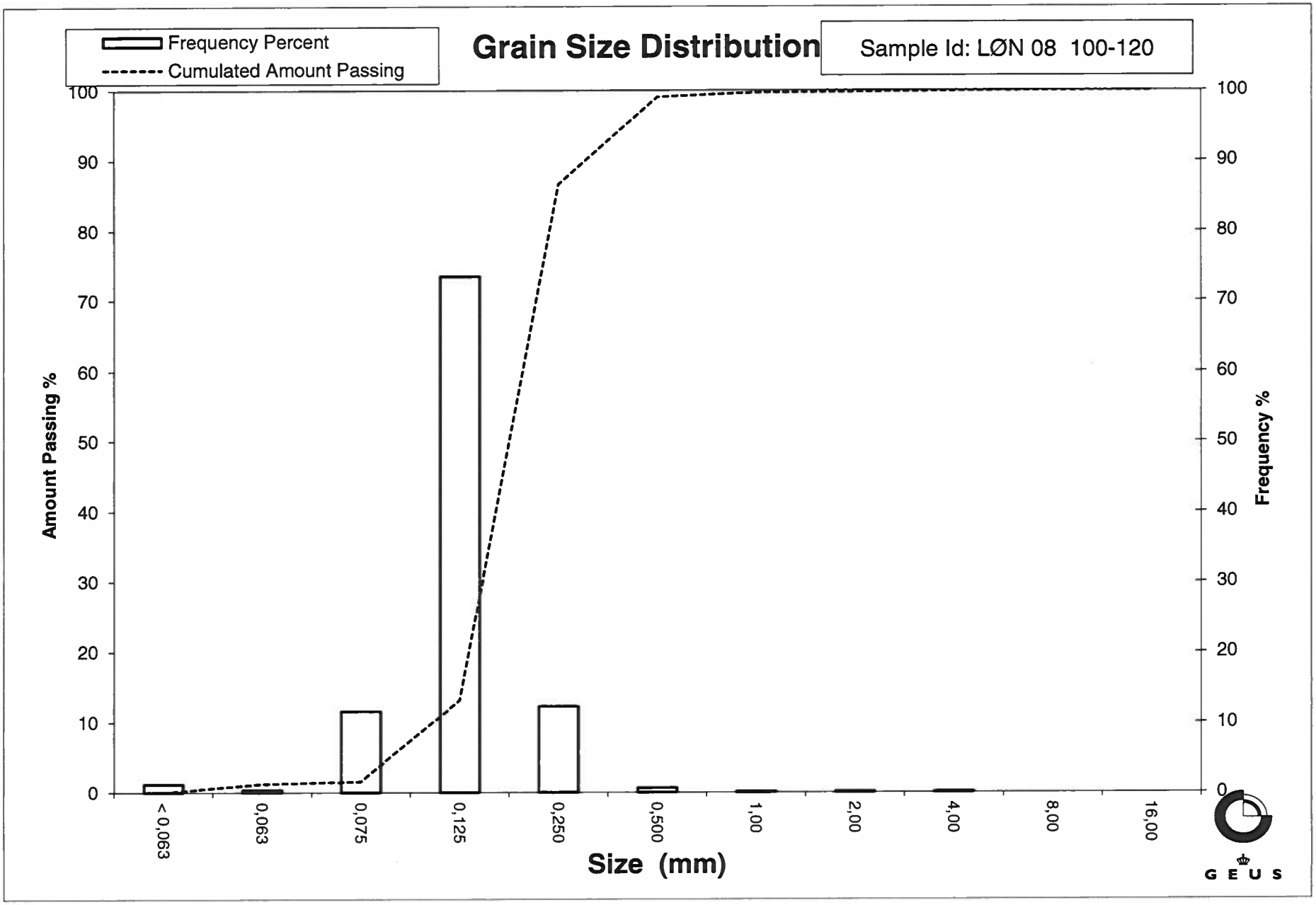
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 08 100-120
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 08 200-220
Lab. Id: 200258
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks: >4mm består af skaller

GEUS

Total Weight 92,05 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
	8,00	-3,00	0,14	0,15	99,85
	4,00	-2,00	0,02	0,02	99,83
	2,00	-1,00	0,14	0,15	99,67
Sand	1,00	0,00	0,28	0,30	99,37
	0,500	1,00	0,85	0,92	98,45
	0,250	2,00	2,67	2,90	95,55
	0,125	3,00	65,02	70,64	24,91
	0,075	3,74	19,87	21,59	3,32
	0,063	3,99	0,61	0,66	2,66
	< 0,063	> 3,99	2,45	2,66	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	2,66
Sand, fine	(0,063 mm - 0,200 mm):	92,88
Sand, medium	(0,2 mm - 0,6 mm):	3,34
Sand, coarse	(0,6 mm - 2 mm):	0,79
Gravel	(> 2 mm):	0,33
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile	Percentile		
Amount in sieve	Amount passing	d(mm)	Φ
5%	95%	0,18	2,48
16%	84%	0,17	2,55
25%	75%	0,16	2,61
40%	60%	0,15	2,71
Median 50%	50%	0,14	2,79
75%	25%	0,13	3,00
84%	16%	0,08	3,58
90%	10%	0,08	3,65
95%	5%	0,08	3,71

Moments Statistics

Mean	2,97
Sorting	0,44
Skewness	0,51
Kurtosis	1,30
Uniformity Coefficient	1,91

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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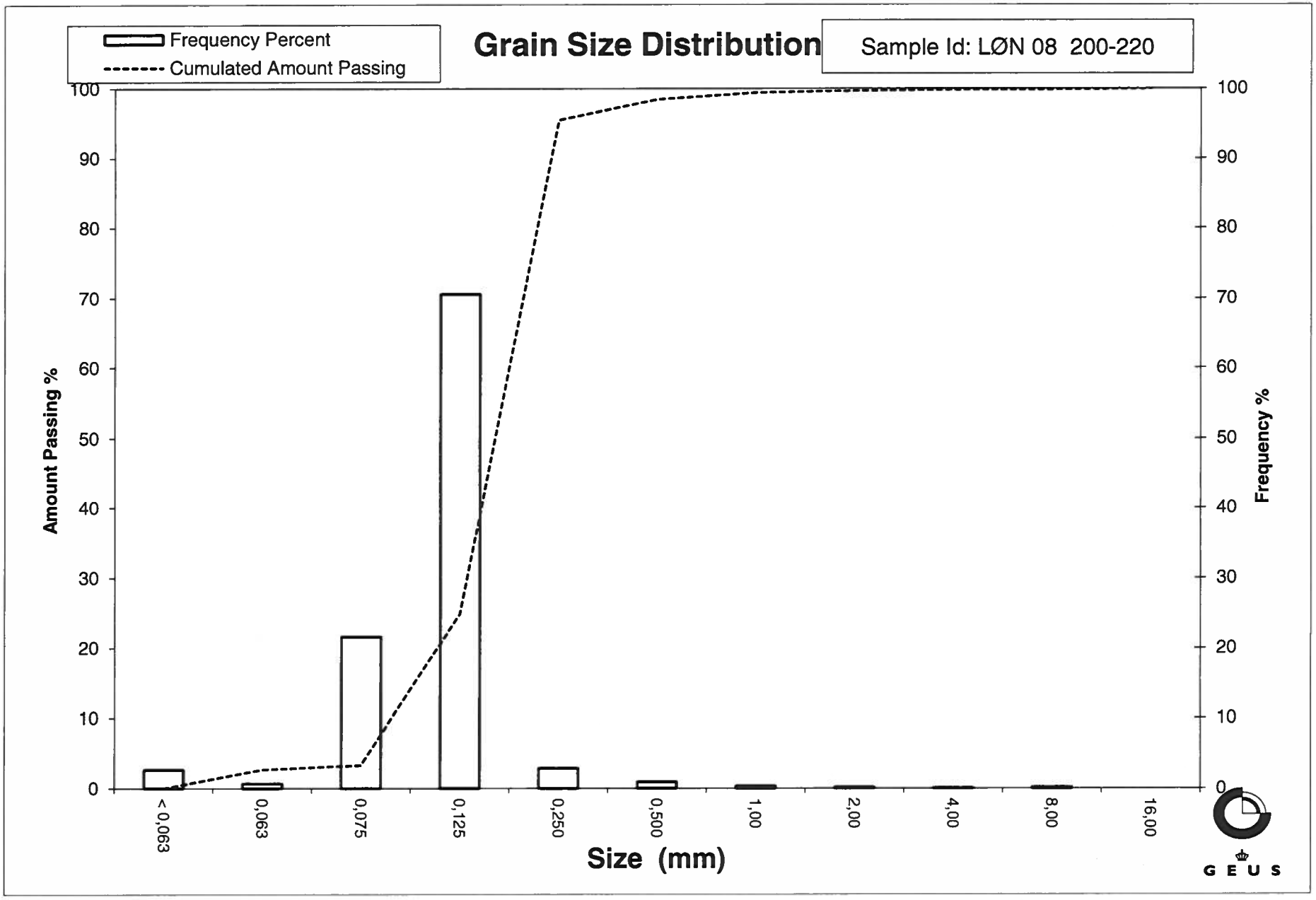
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 08 200-220
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 08 300-320
Lab. Id: 200259
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks: >2mm består af skaller

G E U S

Total Weight 90,75 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
	8,00	-3,00	0,00	0,00	100,00
	4,00	-2,00	0,01	0,01	99,99
	2,00	-1,00	0,08	0,09	99,90
Sand	1,00	0,00	0,13	0,14	99,76
	0,500	1,00	0,39	0,43	99,33
	0,250	2,00	0,87	0,96	98,37
	0,125	3,00	56,64	62,41	35,96
	0,075	3,74	28,41	31,31	4,65
	0,063	3,99	0,81	0,89	3,76
	< 0,063	> 3,99	3,41	3,76	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	3,76
Sand, fine	(0,063 mm - 0,200 mm):	94,61
Sand, medium	(0,2 mm - 0,6 mm):	1,16
Sand, coarse	(0,6 mm - 2 mm):	0,37
Gravel	(> 2 mm):	0,10
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,18	2,50
16%	84%	0,17	2,58
25%	75%	0,16	2,65
40%	60%	0,15	2,77
Median 50%	50%	0,14	2,86
75%	25%	0,08	3,56
84%	16%	0,08	3,64
90%	10%	0,08	3,69
95%	5%	0,08	3,73

Moments Statistics

Mean	3,03
Sorting	0,45
Skewness	0,43
Kurtosis	0,56
Uniformity Coefficient	1,88

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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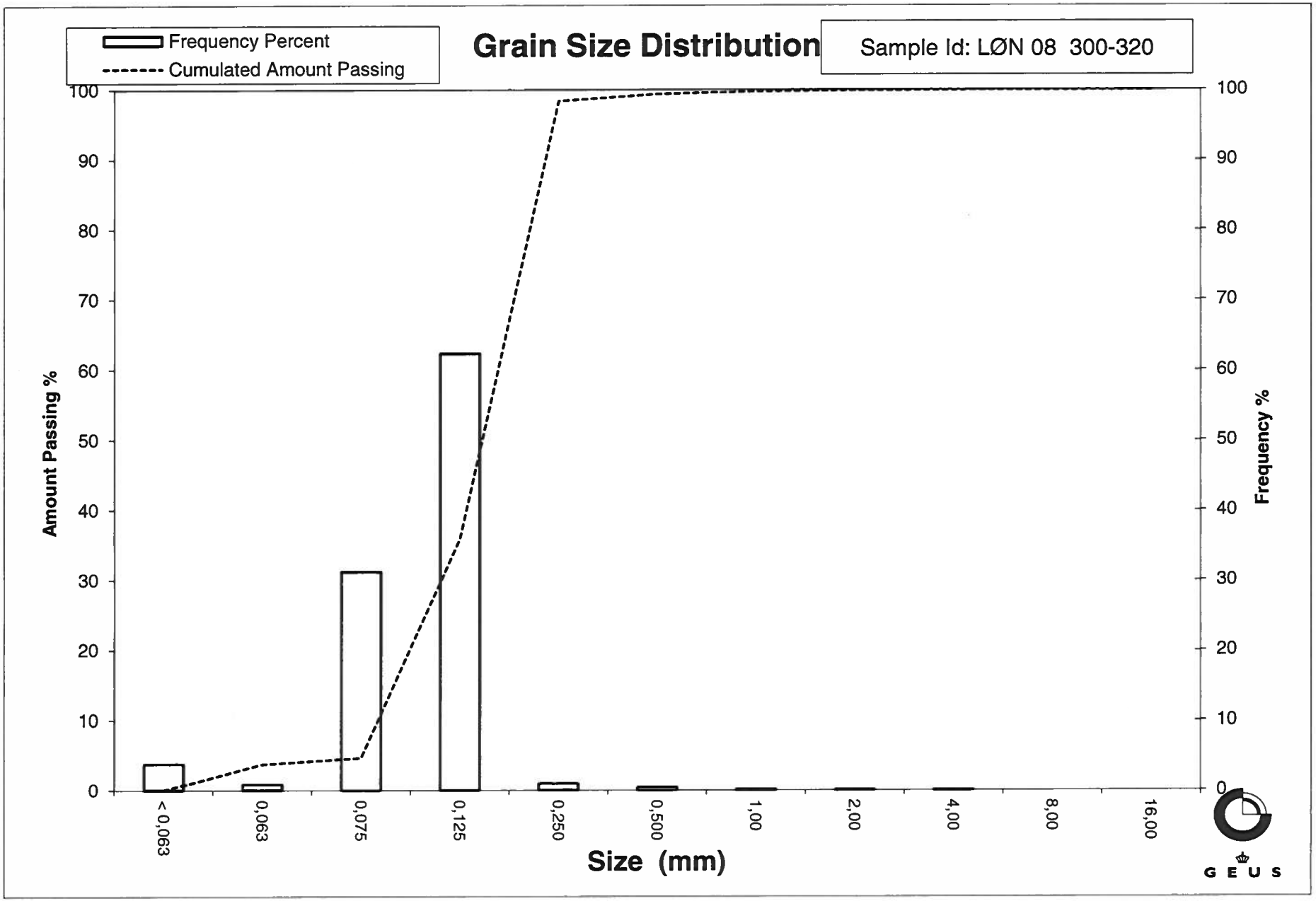
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 08 300-320
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 08 355-375
Lab. Id: 200260
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks: >2mm består af skaller

GEUS

Total Weight 88,12 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
Gravel	8,00	-3,00	0,00	0,00	100,00
Gravel	4,00	-2,00	0,00	0,00	100,00
	2,00	-1,00	0,08	0,09	99,91
Sand	1,00	0,00	0,06	0,07	99,84
Sand	0,500	1,00	0,37	0,42	99,42
Sand	0,250	2,00	0,77	0,87	98,55
Sand	0,125	3,00	51,02	57,90	40,65
Sand	0,075	3,74	30,47	34,58	6,07
Sand	0,063	3,99	1,00	1,13	4,94
Sand	< 0,063	> 3,99	4,35	4,94	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	4,94
Sand, fine	(0,063 mm - 0,200 mm):	93,61
Sand, medium	(0,2 mm - 0,6 mm):	1,07
Sand, coarse	(0,6 mm - 2 mm):	0,29
Gravel	(> 2 mm):	0,09
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,18	2,50
16%	84%	0,17	2,59
25%	75%	0,16	2,67
40%	60%	0,14	2,80
Median 50%	50%	0,13	2,90
75%	25%	0,08	3,59
84%	16%	0,08	3,66
90%	10%	0,08	3,70
95%	5%	0,06	3,97

Moments Statistics

Mean	3,05
Sorting	0,49
Skewness	0,44
Kurtosis	0,65
Uniformity Coefficient	1,87

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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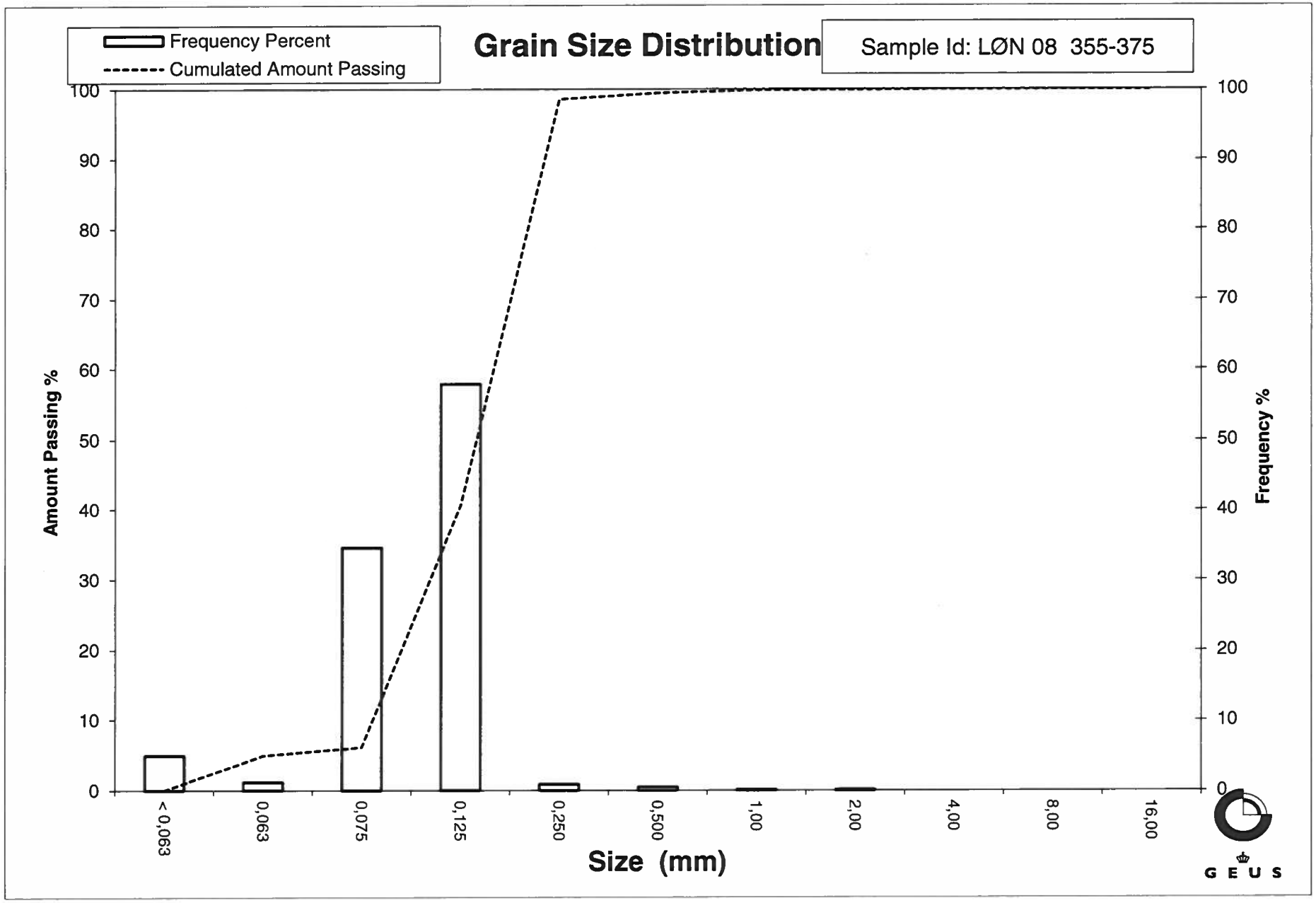
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 08 355-375
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 09 0-20
Lab. Id: 200261
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks:

GEUS

Total Weight 90,19 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
Gravel	8,00	-3,00	0,00	0,00	100,00
Gravel	4,00	-2,00	0,00	0,00	100,00
	2,00	-1,00	0,09	0,10	99,90
Sand	1,00	0,00	0,07	0,08	99,82
Sand	0,500	1,00	0,77	0,85	98,97
Sand	0,250	2,00	6,41	7,11	91,86
Sand	0,125	3,00	56,78	62,96	28,91
Sand	0,075	3,74	24,56	27,23	1,67
Sand	0,063	3,99	0,35	0,39	1,29
Sand	< 0,063	> 3,99	1,16	1,29	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	1,29
Sand, fine	(0,063 mm - 0,200 mm):	90,58
Sand, medium	(0,2 mm - 0,6 mm):	7,51
Sand, coarse	(0,6 mm - 2 mm):	0,52
Gravel	(> 2 mm):	0,10
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,30	1,75
16%	84%	0,17	2,53
25%	75%	0,17	2,60
40%	60%	0,15	2,72
Median 50%	50%	0,14	2,80
75%	25%	0,09	3,51
84%	16%	0,08	3,59
90%	10%	0,08	3,65
95%	5%	0,08	3,70

Moments Statistics

Mean	2,97
Sorting	0,56
Skewness	0,21
Kurtosis	0,88
Uniformity Coefficient	1,91

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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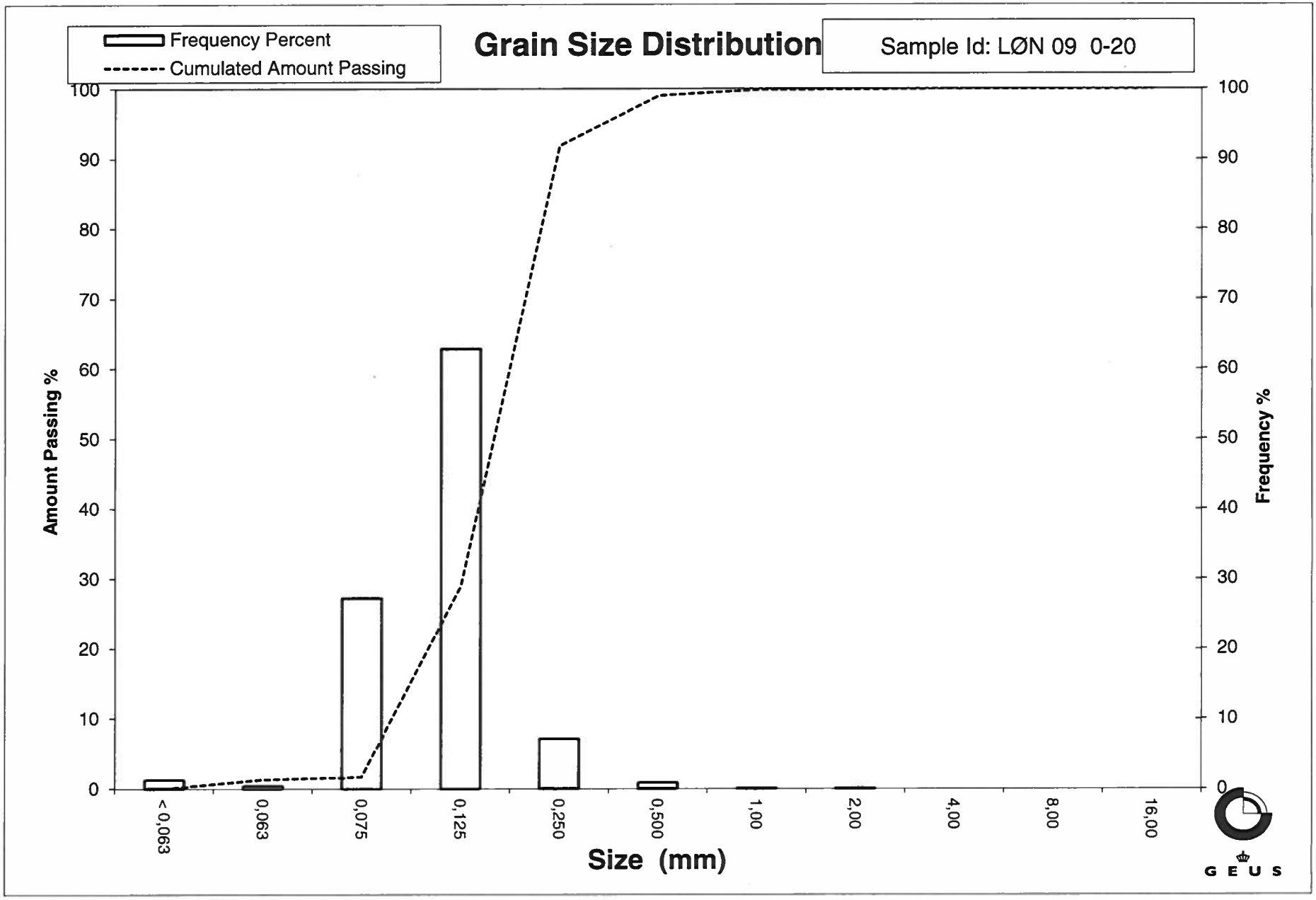
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 09 0-20
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 09 100-120
Lab. Id: 200262
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks:

GEUS

Total Weight 98,47 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
Gravel	8,00	-3,00	0,00	0,00	100,00
Gravel	4,00	-2,00	0,00	0,00	100,00
Gravel	2,00	-1,00	0,00	0,00	100,00
Sand	1,00	0,00	0,06	0,06	99,94
Sand	0,500	1,00	0,48	0,49	99,45
Sand	0,250	2,00	5,35	5,43	94,02
Sand	0,125	3,00	72,86	73,99	20,03
Sand	0,075	3,74	17,87	18,15	1,88
Sand	0,063	3,99	0,42	0,43	1,45
Sand	< 0,063	> 3,99	1,43	1,45	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	1,45
Sand, fine	(0,063 mm - 0,200 mm):	92,57
Sand, medium	(0,2 mm - 0,6 mm):	5,67
Sand, coarse	(0,6 mm - 2 mm):	0,32
Gravel	(> 2 mm):	0,00
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,27	1,89
16%	84%	0,17	2,53
25%	75%	0,17	2,59
40%	60%	0,15	2,69
Median 50%	50%	0,15	2,76
75%	25%	0,13	2,96
84%	16%	0,09	3,53
90%	10%	0,08	3,61
95%	5%	0,08	3,69

Moments Statistics

Mean	2,94
Sorting	0,52
Skewness	0,29
Kurtosis	2,01
Uniformity Coefficient	1,89

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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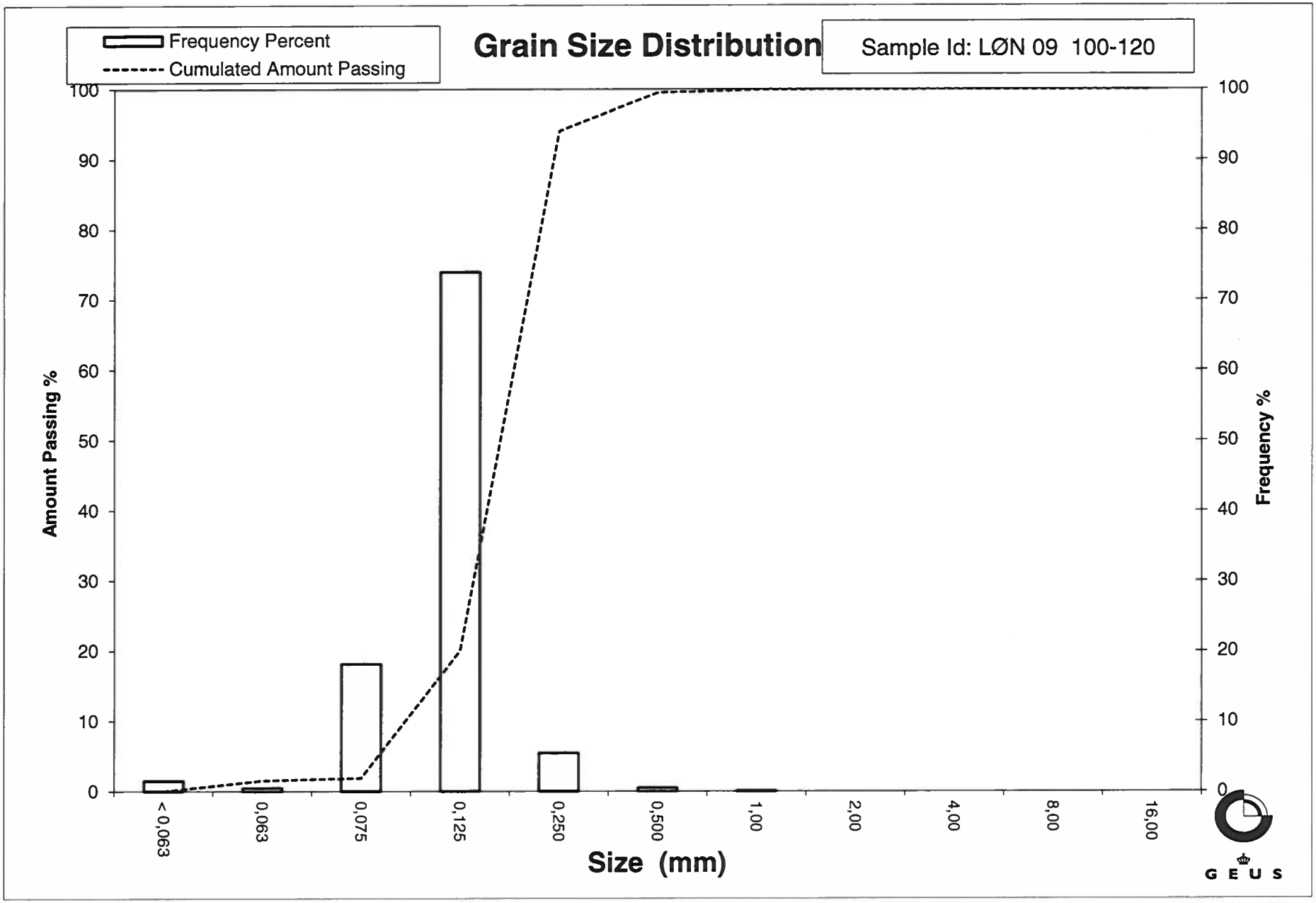
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 09 100-120
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 09 200-210
Lab. Id: 200263
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks:

GEUS

Total Weight 93,33 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
Gravel	8,00	-3,00	0,00	0,00	100,00
Gravel	4,00	-2,00	0,00	0,00	100,00
	2,00	-1,00	0,00	0,00	100,00
Sand	1,00	0,00	0,00	0,00	100,00
Sand	0,500	1,00	0,37	0,40	99,60
Sand	0,250	2,00	5,14	5,51	94,10
Sand	0,125	3,00	69,18	74,12	19,97
Sand	0,075	3,74	17,21	18,44	1,53
Sand	0,063	3,99	0,29	0,31	1,22
	< 0,063	> 3,99	1,14	1,22	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	1,22
Sand, fine	(0,063 mm - 0,200 mm):	92,87
Sand, medium	(0,2 mm - 0,6 mm):	5,70
Sand, coarse	(0,6 mm - 2 mm):	0,21
Gravel	(> 2 mm):	0,00
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,27	1,90
16%	84%	0,17	2,54
25%	75%	0,17	2,59
40%	60%	0,15	2,69
Median 50%	50%	0,15	2,76
75%	25%	0,13	2,96
84%	16%	0,09	3,53
90%	10%	0,08	3,61
95%	5%	0,08	3,68

Moments Statistics

Mean	2,94
Sorting	0,52
Skewness	0,29
Kurtosis	2,00
Uniformity Coefficient	1,89

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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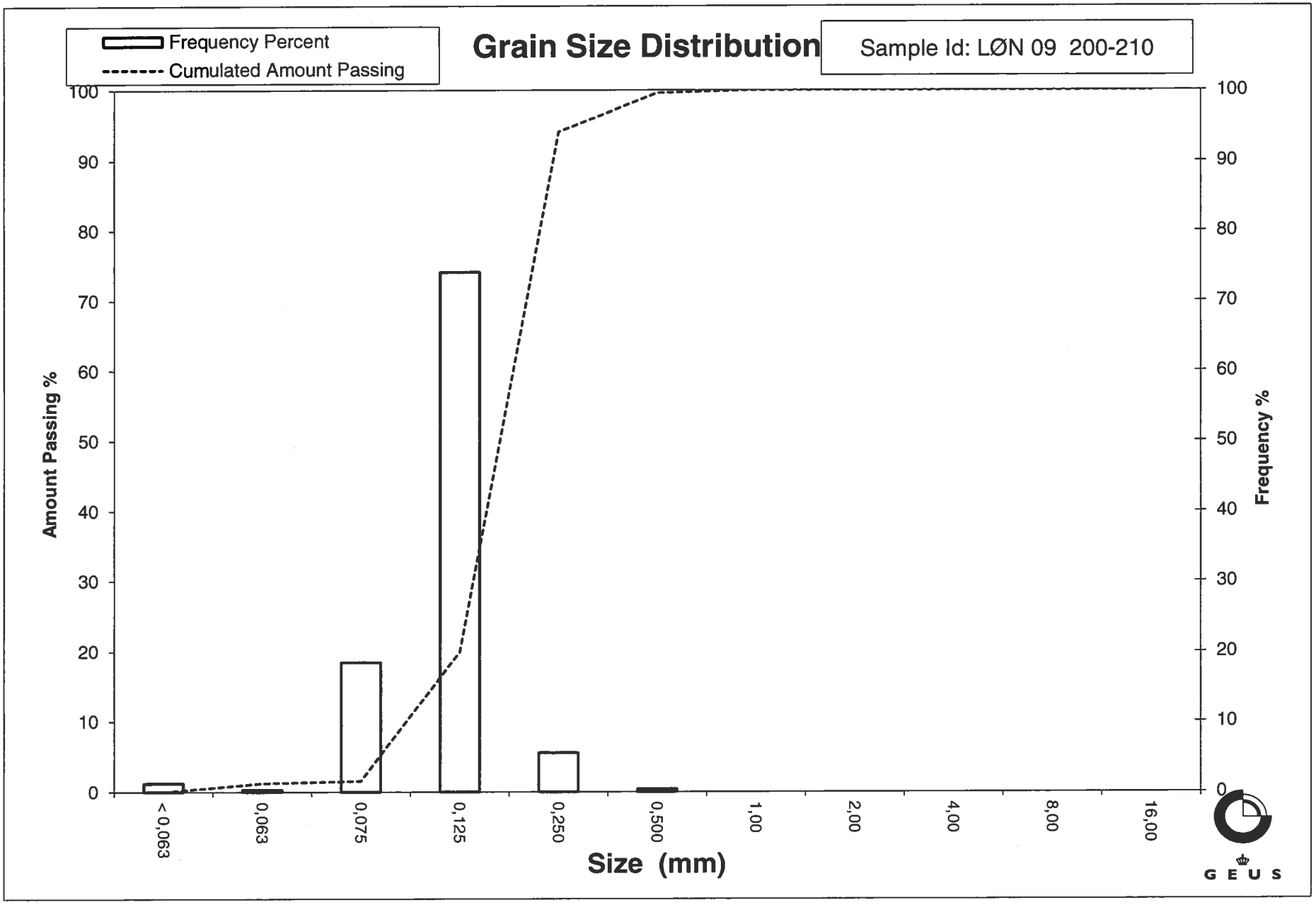
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 09 200-210
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 09 270-290
Lab. Id: 200264
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks:

Total Weight 91,42 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
	8,00	-3,00	0,00	0,00	100,00
	4,00	-2,00	0,00	0,00	100,00
	2,00	-1,00	0,05	0,05	99,95
Sand	1,00	0,00	0,12	0,13	99,81
	0,500	1,00	0,23	0,25	99,56
	0,250	2,00	1,10	1,20	98,36
	0,125	3,00	55,80	61,04	37,32
	0,075	3,74	29,34	32,09	5,23
	0,063	3,99	1,87	2,05	3,18
	< 0,063	> 3,99	2,91	3,18	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	3,18
Sand, fine	(0,063 mm - 0,200 mm):	95,18
Sand, medium	(0,2 mm - 0,6 mm):	1,32
Sand, coarse	(0,6 mm - 2 mm):	0,26
Gravel	(> 2 mm):	0,05
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,18	2,50
16%	84%	0,17	2,58
25%	75%	0,16	2,65
40%	60%	0,15	2,78
Median 50%	50%	0,14	2,87
75%	25%	0,08	3,57
84%	16%	0,08	3,64
90%	10%	0,08	3,69
95%	5%	0,07	3,76

Moments Statistics

Mean	3,03
Sorting	0,46
Skewness	0,43
Kurtosis	0,57
Uniformity Coefficient	1,88

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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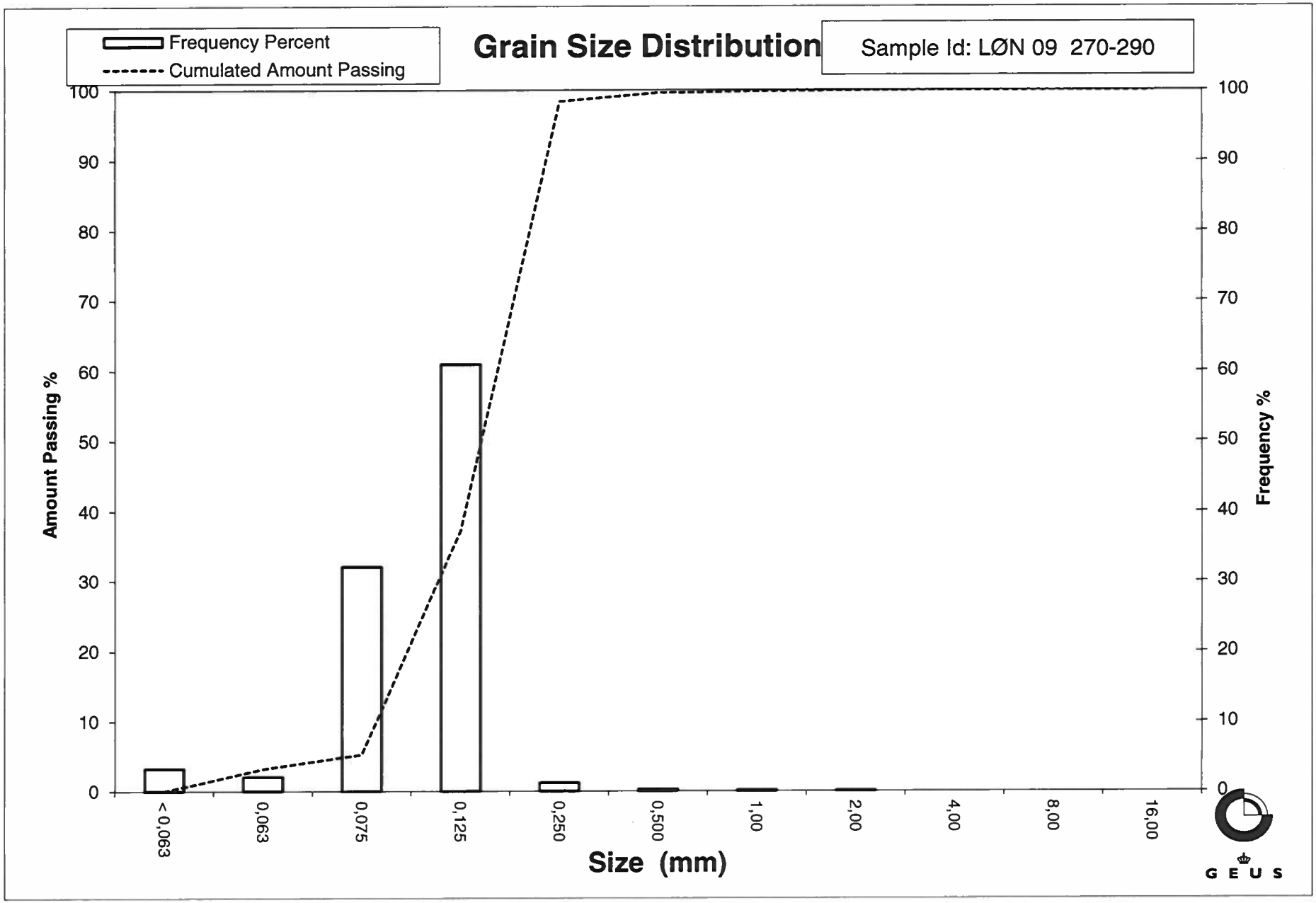
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 09 270-290
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 10 0-20
Lab. Id: 200265
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks: >2mm består af skaller

GEUS

Total Weight 95,62 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
Gravel	8,00	-3,00	0,00	0,00	100,00
Gravel	4,00	-2,00	0,05	0,05	99,95
Gravel	2,00	-1,00	0,07	0,07	99,87
Sand	1,00	0,00	0,14	0,15	99,73
Sand	0,500	1,00	2,11	2,21	97,52
Sand	0,250	2,00	19,61	20,51	77,01
Sand	0,125	3,00	63,76	66,68	10,33
Sand	0,075	3,74	8,95	9,36	0,97
Sand	0,063	3,99	0,12	0,13	0,85
Sand	< 0,063	> 3,99	0,81	0,85	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	0,85
Sand, fine	(0,063 mm - 0,200 mm):	76,17
Sand, medium	(0,2 mm - 0,6 mm):	21,56
Sand, coarse	(0,6 mm - 2 mm):	1,30
Gravel	(> 2 mm):	0,13
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,34	1,55
16%	84%	0,29	1,81
25%	75%	0,18	2,49
40%	60%	0,17	2,59
Median 50%	50%	0,16	2,66
75%	25%	0,14	2,87
84%	16%	0,13	2,95
90%	10%	0,09	3,48
95%	5%	0,08	3,62

Moments Statistics

Mean	2,47
Sorting	0,60
Skewness	-0,29
Kurtosis	2,24
Uniformity Coefficient	1,86

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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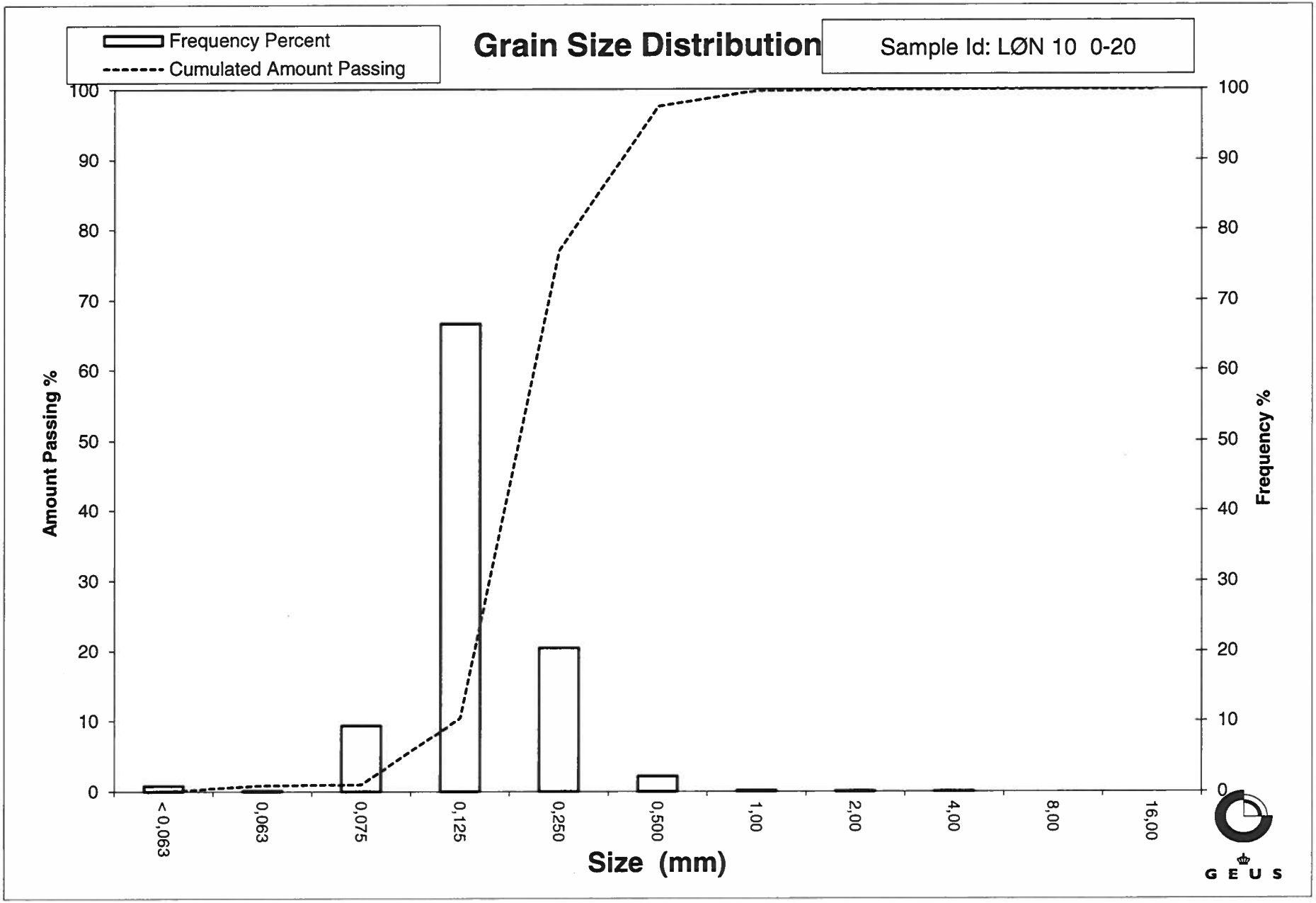
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 10 0-20
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 10 100-120
Lab. Id: 200266
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks: >2mm består af skaller

GEUS

Total Weight 94,75 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
Gravel	8,00	-3,00	0,00	0,00	100,00
Gravel	4,00	-2,00	0,07	0,07	99,93
Gravel	2,00	-1,00	0,04	0,04	99,88
Sand	1,00	0,00	0,02	0,02	99,86
Sand	0,500	1,00	0,63	0,66	99,20
Sand	0,250	2,00	25,39	26,80	72,40
Sand	0,125	3,00	60,98	64,36	8,04
Sand	0,075	3,74	6,59	6,96	1,09
Sand	0,063	3,99	0,12	0,13	0,96
Sand	< 0,063	> 3,99	0,91	0,96	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	0,96
Sand, fine	(0,063 mm - 0,200 mm):	71,44
Sand, medium	(0,2 mm - 0,6 mm):	27,11
Sand, coarse	(0,6 mm - 2 mm):	0,37
Gravel	(> 2 mm):	0,12
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,34	1,56
16%	84%	0,30	1,76
25%	75%	0,26	1,94
40%	60%	0,17	2,56
Median 50%	50%	0,16	2,64
75%	25%	0,14	2,84
84%	16%	0,13	2,92
90%	10%	0,13	2,98
95%	5%	0,08	3,58

Moments Statistics

Mean	2,44
Sorting	0,60
Skewness	-0,28
Kurtosis	0,92
Uniformity Coefficient	1,34

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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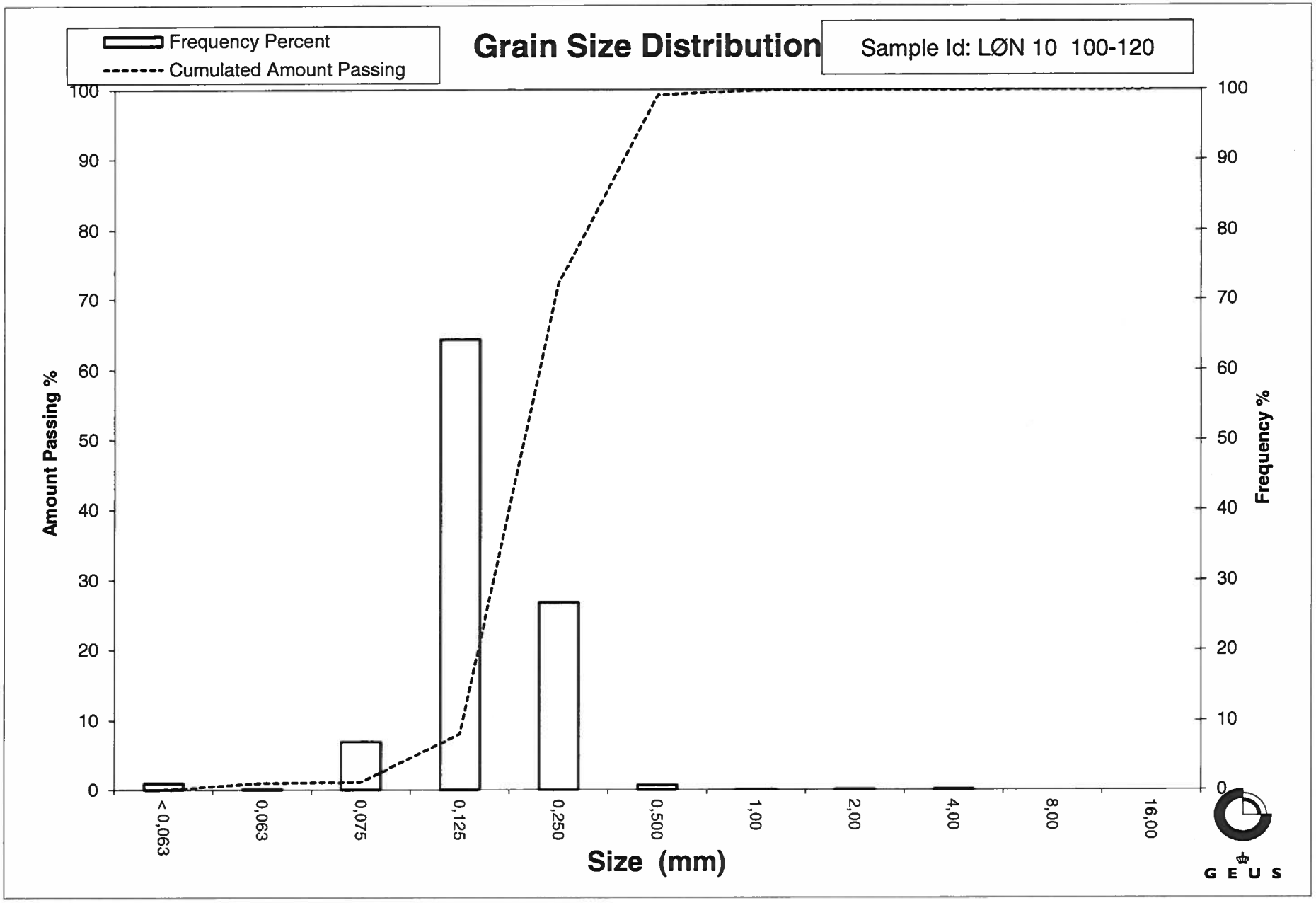
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 10 100-120
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 10 200-220
Lab. Id: 200267
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks:

Total Weight 96,14 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
	8,00	-3,00	0,00	0,00	100,00
	4,00	-2,00	0,00	0,00	100,00
	2,00	-1,00	0,04	0,04	99,96
Sand	1,00	0,00	0,12	0,12	99,83
	0,500	1,00	0,68	0,71	99,13
	0,250	2,00	4,69	4,88	94,25
	0,125	3,00	62,50	65,01	29,24
	0,075	3,74	24,39	25,37	3,87
	0,063	3,99	0,70	0,73	3,14
	< 0,063	> 3,99	3,02	3,14	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	3,14
Sand, fine	(0,063 mm - 0,200 mm):	91,11
Sand, medium	(0,2 mm - 0,6 mm):	5,22
Sand, coarse	(0,6 mm - 2 mm):	0,50
Gravel	(> 2 mm):	0,04
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,27	1,91
16%	84%	0,17	2,55
25%	75%	0,16	2,61
40%	60%	0,15	2,73
Median 50%	50%	0,14	2,81
75%	25%	0,09	3,51
84%	16%	0,08	3,61
90%	10%	0,08	3,67
95%	5%	0,08	3,72

Moments Statistics

Mean	2,99
Sorting	0,54
Skewness	0,25
Kurtosis	0,82
Uniformity Coefficient	1,92

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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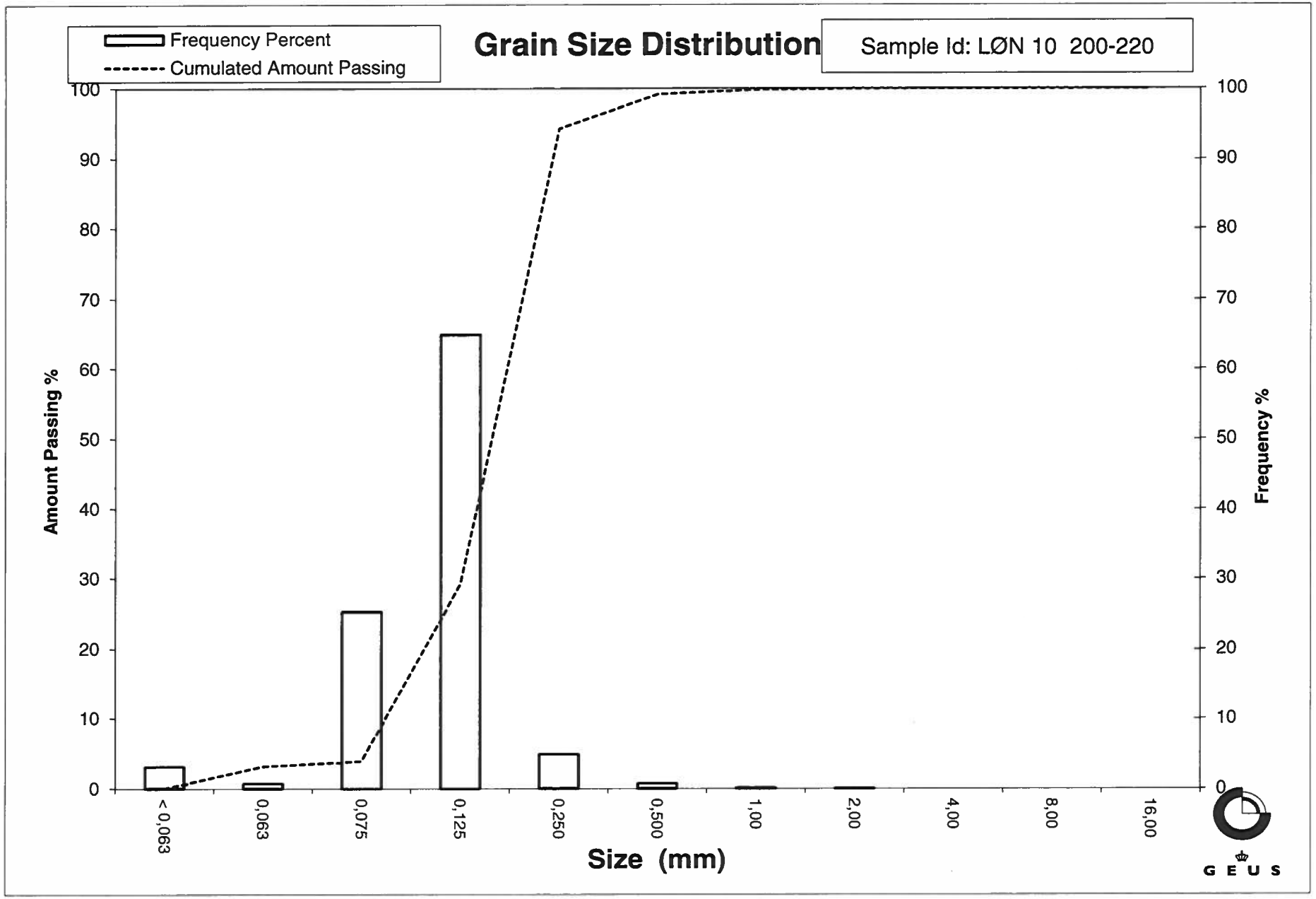
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 10 200-220
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 10 300-320
Lab. Id: 200268
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks:

GEUS

Total Weight 88,59 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
Gravel	8,00	-3,00	0,00	0,00	100,00
Gravel	4,00	-2,00	0,00	0,00	100,00
Gravel	2,00	-1,00	0,08	0,09	99,91
Sand	1,00	0,00	0,06	0,07	99,84
Sand	0,500	1,00	0,39	0,44	99,40
Sand	0,250	2,00	4,74	5,35	94,05
Sand	0,125	3,00	53,78	60,71	33,34
Sand	0,075	3,74	24,90	28,11	5,24
Sand	0,063	3,99	0,86	0,97	4,27
Sand	< 0,063	> 3,99	3,78	4,27	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	4,27
Sand, fine	(0,063 mm - 0,200 mm):	89,78
Sand, medium	(0,2 mm - 0,6 mm):	5,56
Sand, coarse	(0,6 mm - 2 mm):	0,30
Gravel	(> 2 mm):	0,09
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,27	1,90
16%	84%	0,17	2,55
25%	75%	0,16	2,62
40%	60%	0,15	2,75
Median 50%	50%	0,14	2,84
75%	25%	0,09	3,55
84%	16%	0,08	3,63
90%	10%	0,08	3,69
95%	5%	0,07	3,79

Moments Statistics

Mean	3,00
Sorting	0,56
Skewness	0,24
Kurtosis	0,84
Uniformity Coefficient	1,92

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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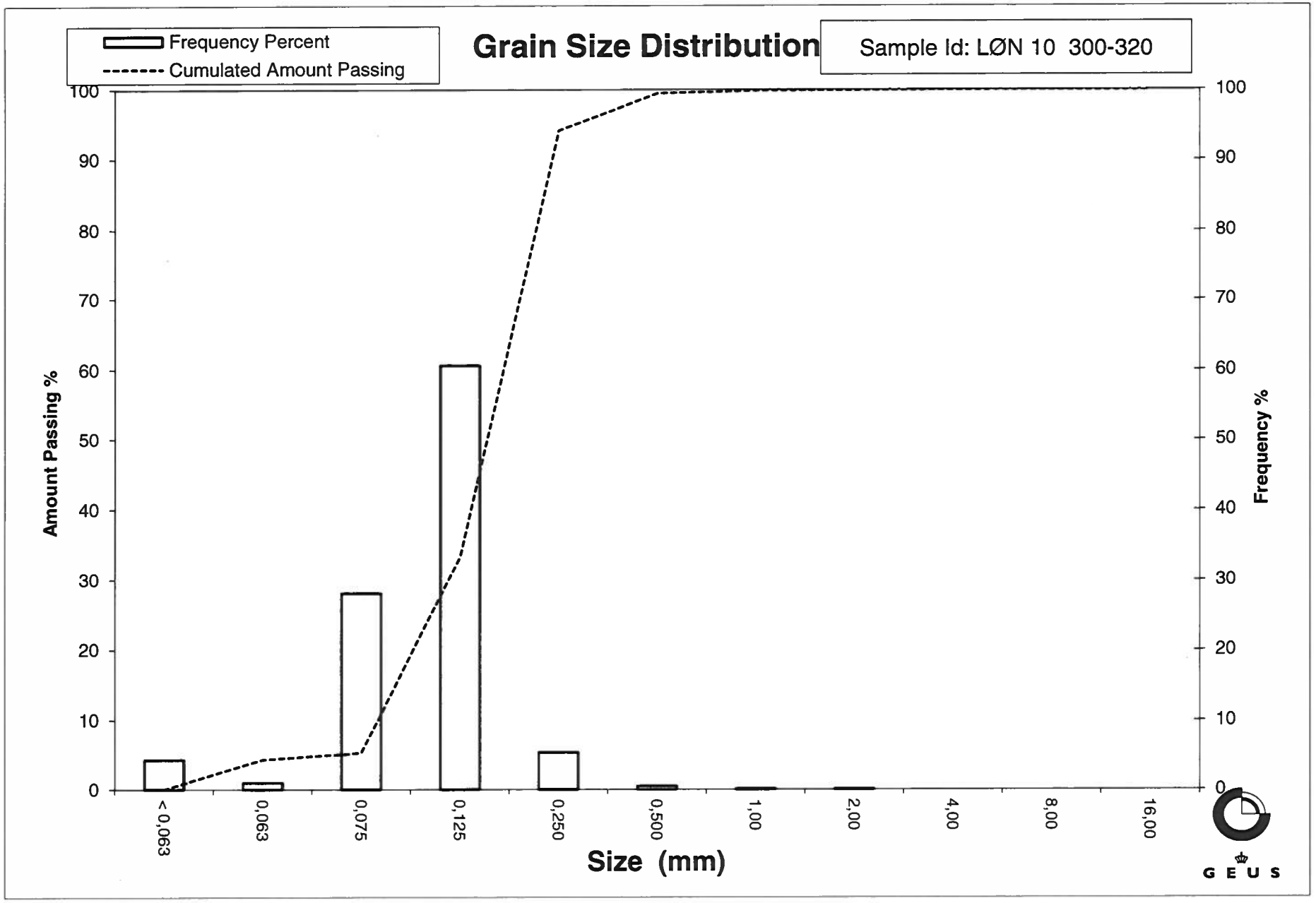
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 10 300-320
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 10 400-420
Lab. Id: 200269
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks:

Total Weight 90,11 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
	8,00	-3,00	0,00	0,00	100,00
	4,00	-2,00	0,00	0,00	100,00
	2,00	-1,00	0,05	0,06	99,94
Sand	1,00	0,00	0,01	0,01	99,93
	0,500	1,00	0,26	0,29	99,64
	0,250	2,00	1,04	1,15	98,49
	0,125	3,00	47,91	53,17	45,32
	0,075	3,74	35,20	39,06	6,26
	0,063	3,99	1,02	1,13	5,13
	< 0,063	> 3,99	4,62	5,13	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	5,13
Sand, fine	(0,063 mm - 0,200 mm):	93,36
Sand, medium	(0,2 mm - 0,6 mm):	1,29
Sand, coarse	(0,6 mm - 2 mm):	0,16
Gravel	(> 2 mm):	0,06
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,18	2,50
16%	84%	0,17	2,60
25%	75%	0,16	2,68
40%	60%	0,14	2,83
Median 50%	50%	0,13	2,95
75%	25%	0,08	3,60
84%	16%	0,08	3,67
90%	10%	0,08	3,71
95%	5%	-------	-------

Moments Statistics

Mean	3,07
Sorting	-------
Skewness	-------
Kurtosis	-------
Uniformity Coefficient	1,83

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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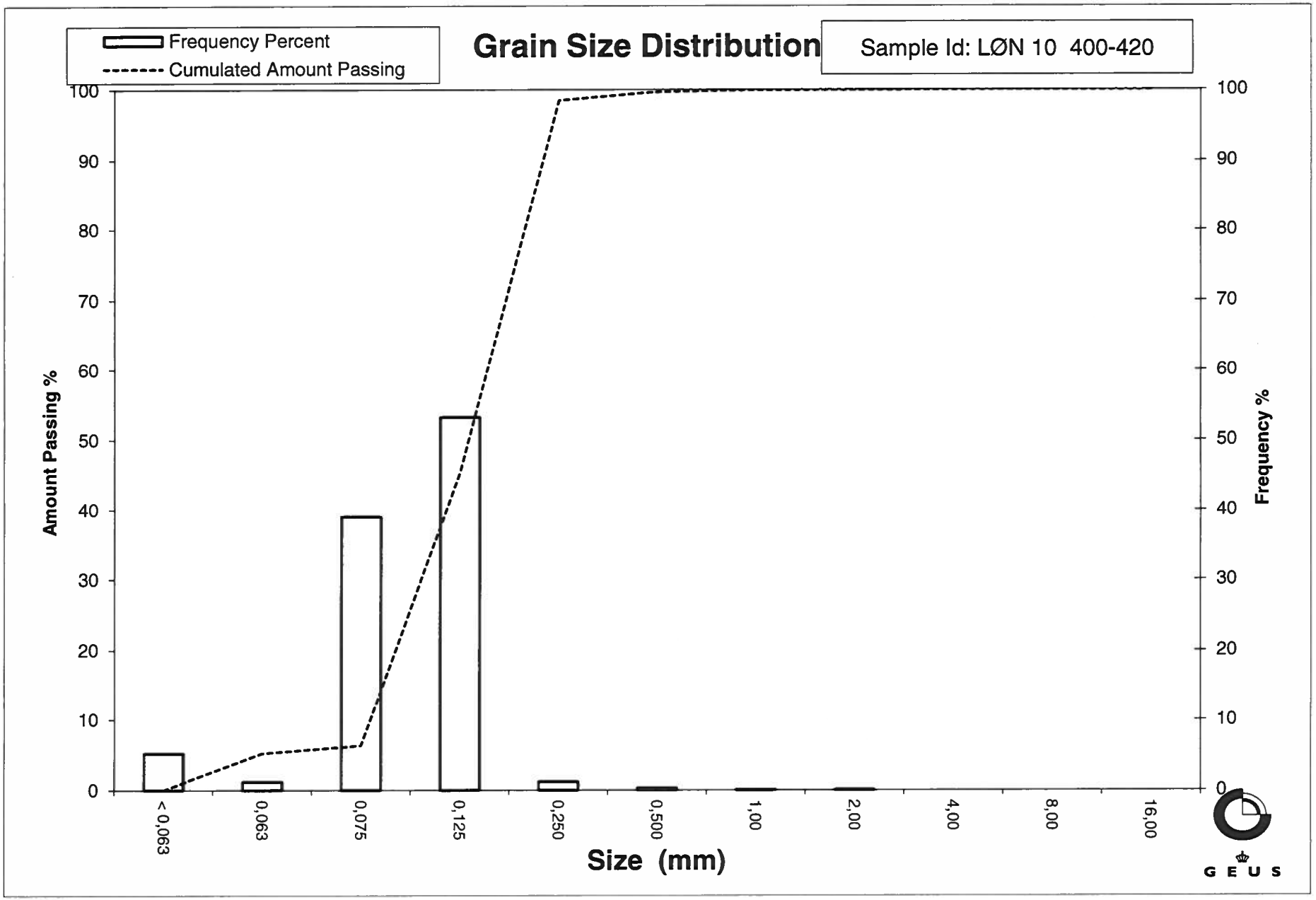
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 10 400-420
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 11 0-19
Lab. Id: 200270
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks: >4mm heraf 3,8g skaller

GEUS

Total Weight 235,68 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
Gravel	8,00	-3,00	3,51	1,49	98,51
Gravel	4,00	-2,00	12,45	5,28	93,23
Sand	2,00	-1,00	20,06	8,51	84,72
Sand	1,00	0,00	26,01	11,04	73,68
Sand	0,500	1,00	66,47	28,20	45,48
Sand	0,250	2,00	85,85	36,43	9,05
Sand	0,125	3,00	17,64	7,49	1,56
Sand	0,075	3,74	2,14	0,91	0,66
Sand	0,063	3,99	0,02	0,01	0,65
Sand	< 0,063	> 3,99	1,53	0,65	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	0,65
Sand, fine	(0,063 mm - 0,200 mm):	8,40
Sand, medium	(0,2 mm - 0,6 mm):	49,86
Sand, coarse	(0,6 mm - 2 mm):	25,81
Gravel	(> 2 mm):	15,28
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	5,34	-2,42
16%	84%	1,37	-0,46
25%	75%	1,05	-0,07
40%	60%	0,61	0,72
Median 50%	50%	0,53	0,91
75%	25%	0,30	1,76
84%	16%	0,27	1,89
90%	10%	0,25	1,98
95%	5%	0,15	2,73

Moments Statistics

Mean	0,78
Sorting	1,37
Skewness	-0,23
Kurtosis	1,16
Uniformity Coefficient	2,41

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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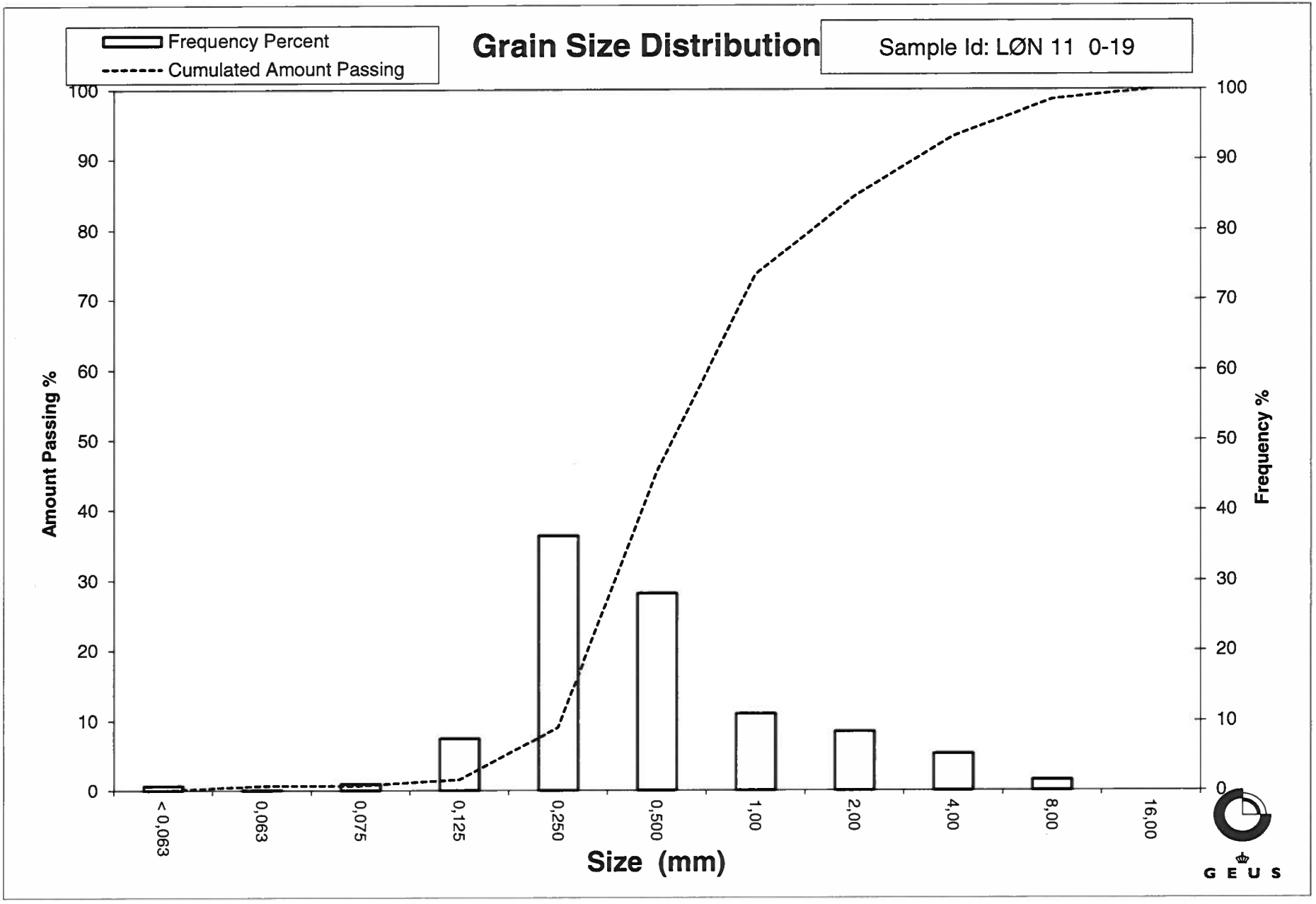
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 11 0-19
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 11 30-50
Lab. Id: 200271
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks: >2mm heraf 0,1g skaller

G E U S

Total Weight 104,52 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
Gravel	8,00	-3,00	0,17	0,16	99,84
Gravel	4,00	-2,00	0,11	0,11	99,73
Gravel	2,00	-1,00	0,59	0,56	99,17
Sand	1,00	0,00	2,32	2,22	96,95
Sand	0,500	1,00	19,38	18,54	78,41
Sand	0,250	2,00	59,87	57,28	21,13
Sand	0,125	3,00	19,85	18,99	2,13
Sand	0,075	3,74	1,29	1,23	0,90
Sand	0,063	3,99	0,05	0,05	0,85
Sand	< 0,063	> 3,99	0,89	0,85	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	0,85
Sand, fine	(0,063 mm - 0,200 mm):	20,27
Sand, medium	(0,2 mm - 0,6 mm):	66,11
Sand, coarse	(0,6 mm - 2 mm):	11,93
Gravel	(> 2 mm):	0,83
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,69	0,54
16%	84%	0,56	0,83
25%	75%	0,35	1,52
40%	60%	0,32	1,64
Median 50%	50%	0,30	1,72
75%	25%	0,26	1,96
84%	16%	0,17	2,60
90%	10%	0,15	2,76
95%	5%	0,13	2,91

Moments Statistics

Mean	1,72
Sorting	0,80
Skewness	-0,01
Kurtosis	2,21
Uniformity Coefficient	2,17

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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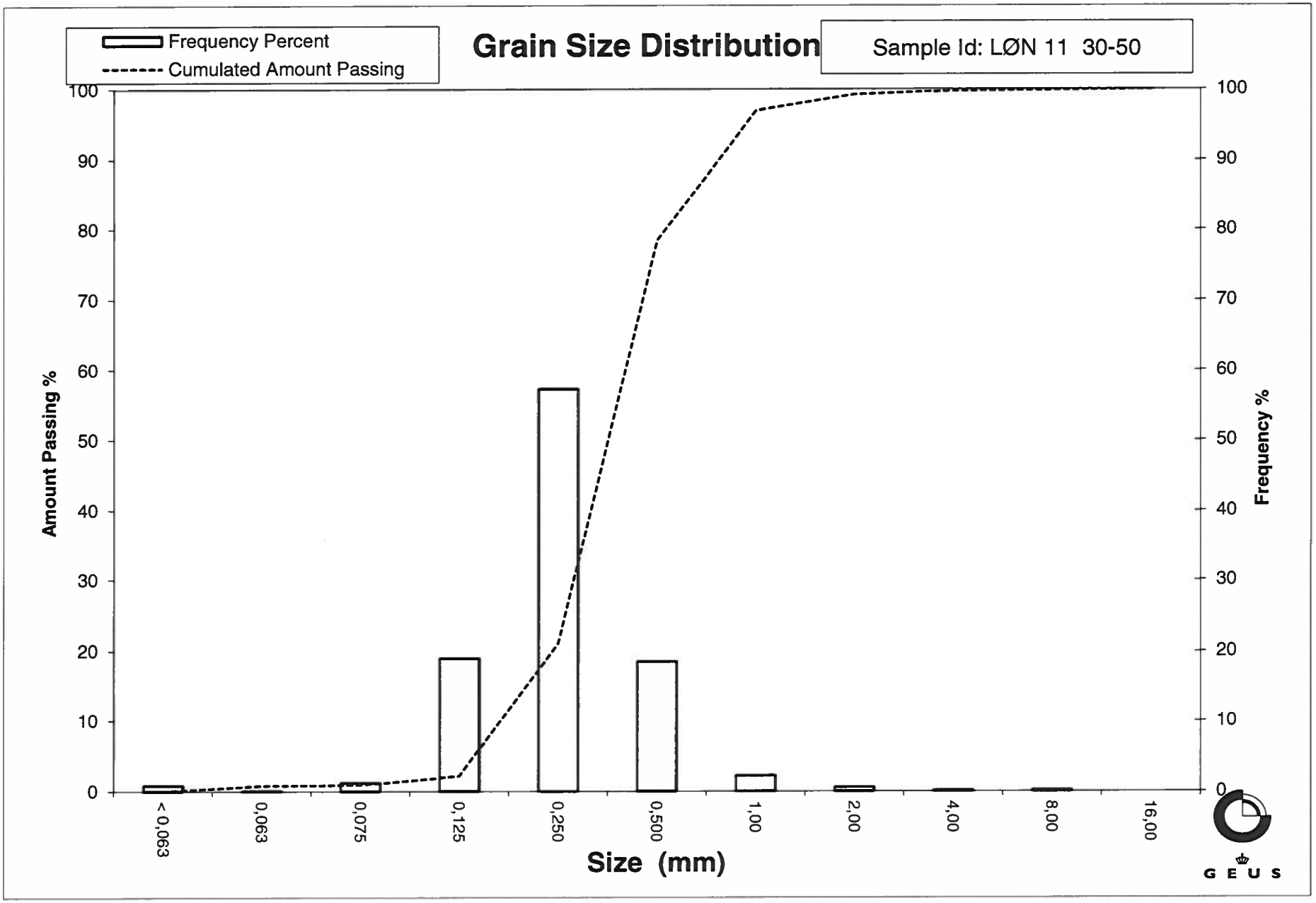
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 11 30-50
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 11 100-120
Lab. Id: 200272
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks:

GEUS

Total Weight 87,77 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
Gravel	8,00	-3,00	0,00	0,00	100,00
Gravel	4,00	-2,00	0,00	0,00	100,00
Gravel	2,00	-1,00	0,04	0,05	99,95
Sand	1,00	0,00	0,11	0,13	99,83
Sand	0,500	1,00	0,60	0,68	99,15
Sand	0,250	2,00	2,89	3,29	95,85
Sand	0,125	3,00	43,47	49,53	46,33
Sand	0,075	3,74	35,66	40,63	5,70
Sand	0,063	3,99	1,29	1,47	4,23
Sand	< 0,063	> 3,99	3,71	4,23	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	4,23
Sand, fine	(0,063 mm - 0,200 mm):	91,63
Sand, medium	(0,2 mm - 0,6 mm):	3,62
Sand, coarse	(0,6 mm - 2 mm):	0,48
Gravel	(> 2 mm):	0,05
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,18	2,48
16%	84%	0,17	2,58
25%	75%	0,16	2,67
40%	60%	0,14	2,83
Median 50%	50%	0,13	2,95
75%	25%	0,08	3,61
84%	16%	0,08	3,67
90%	10%	0,08	3,71
95%	5%	0,07	3,85

Moments Statistics

Mean	3,07
Sorting	0,48
Skewness	0,31
Kurtosis	0,60
Uniformity Coefficient	1,83

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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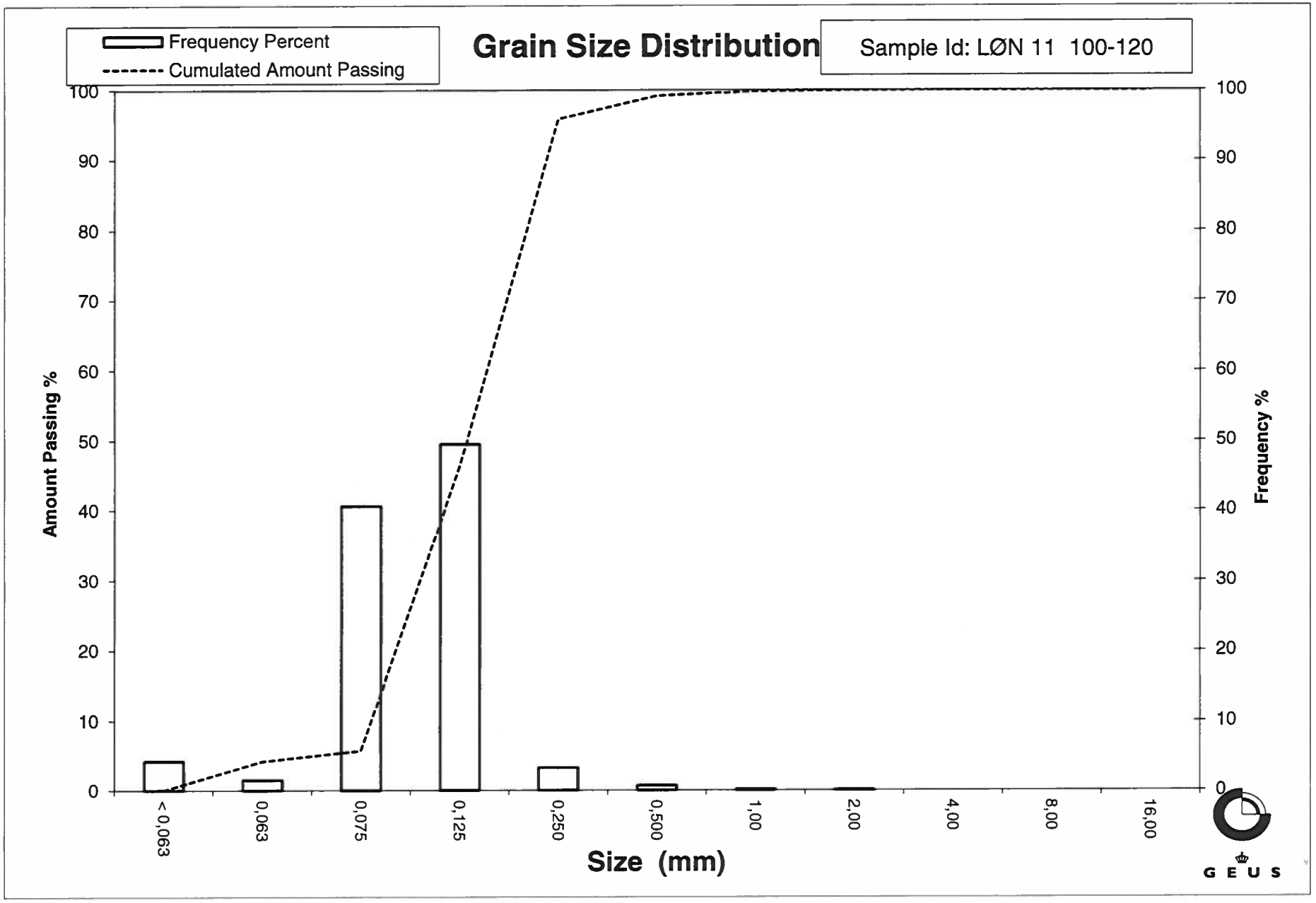
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 11 100-120
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 11 200-220
Lab. Id: 200273
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks:

GEUS

Total Weight 91,08 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
Gravel	8,00	-3,00	0,04	0,04	99,96
Gravel	4,00	-2,00	0,04	0,04	99,91
	2,00	-1,00	0,12	0,13	99,78
Sand	1,00	0,00	0,01	0,01	99,77
Sand	0,500	1,00	0,18	0,20	99,57
Sand	0,250	2,00	1,36	1,49	98,08
Sand	0,125	3,00	33,16	36,41	61,67
Sand	0,075	3,74	45,59	50,05	11,62
Sand	0,063	3,99	2,96	3,25	8,37
Sand	< 0,063	> 3,99	7,62	8,37	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	8,37
Sand, fine	(0,063 mm - 0,200 mm):	89,71
Sand, medium	(0,2 mm - 0,6 mm):	1,59
Sand, coarse	(0,6 mm - 2 mm):	0,11
Gravel	(> 2 mm):	0,22
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile	Percentile		
Amount in sieve	Amount passing	d(mm)	Φ
5%	95%	0,18	2,51
16%	84%	0,16	2,66
25%	75%	0,15	2,78
40%	60%	0,09	3,48
Median 50%	50%	0,09	3,53
75%	25%	0,08	3,66
84%	16%	0,08	3,71
90%	10%	0,07	3,86
95%	5%	-------	-------

Moments Statistics

Mean	3,30
Sorting	-------
Skewness	-------
Kurtosis	-------
Uniformity Coefficient	1,30

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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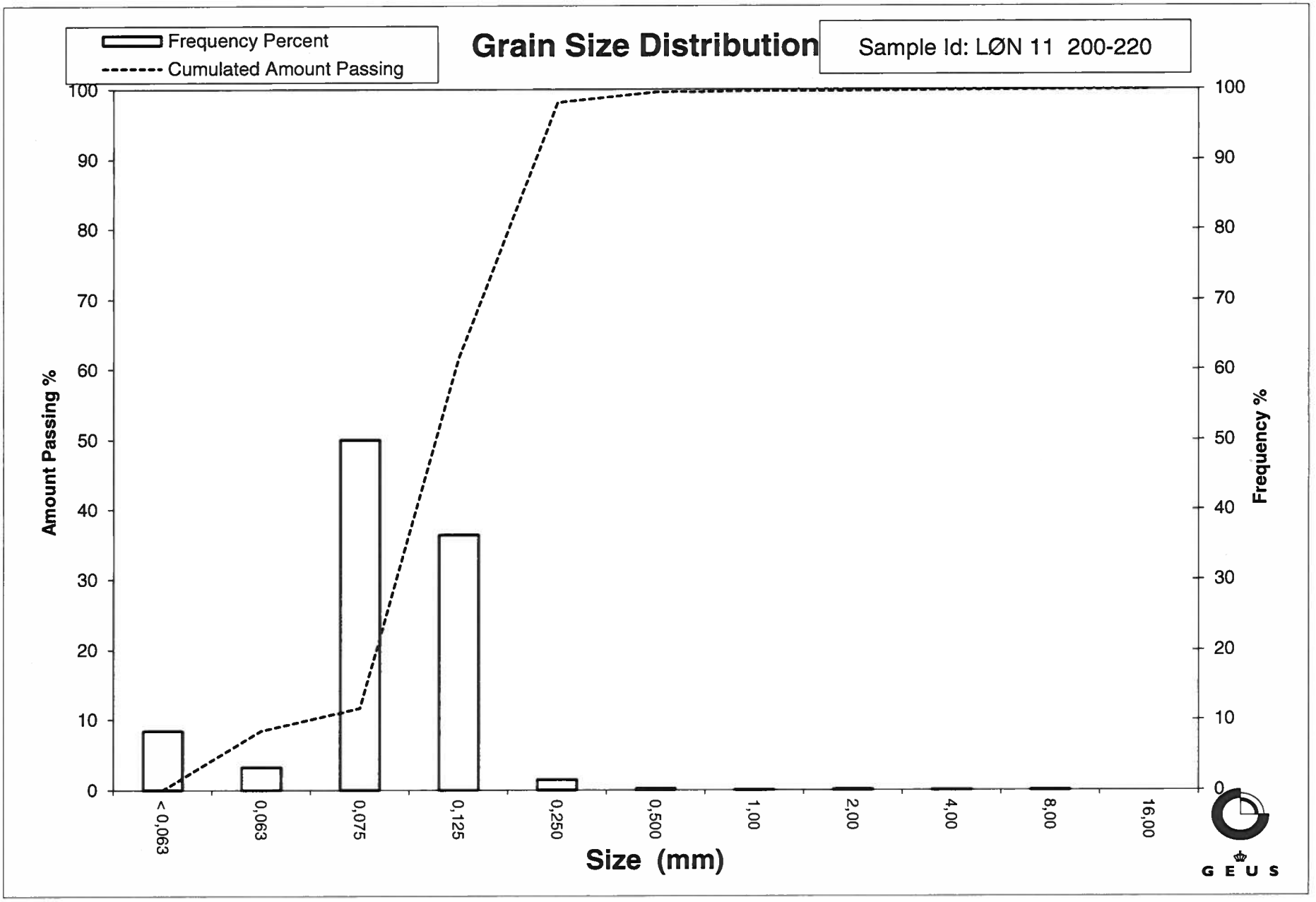
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 11 200-220
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 11 300-320
Lab. Id: 200274
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks:

GEUS

Total Weight 89,47 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
Gravel	8,00	-3,00	0,00	0,00	100,00
Gravel	4,00	-2,00	0,00	0,00	100,00
Gravel	2,00	-1,00	0,00	0,00	100,00
Sand	1,00	0,00	0,03	0,03	99,97
Sand	0,500	1,00	0,07	0,08	99,89
Sand	0,250	2,00	0,41	0,46	99,43
Sand	0,125	3,00	27,17	30,37	69,06
Sand	0,075	3,74	51,72	57,81	11,26
Sand	0,063	3,99	2,61	2,92	8,34
Sand	< 0,063	> 3,99	7,46	8,34	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	8,34
Sand, fine	(0,063 mm - 0,200 mm):	91,09
Sand, medium	(0,2 mm - 0,6 mm):	0,50
Sand, coarse	(0,6 mm - 2 mm):	0,07
Gravel	(> 2 mm):	0,00
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile	Percentile		
Amount in sieve	Amount passing	d(mm)	Φ
5%	95%	0,17	2,54
16%	84%	0,15	2,72
25%	75%	0,14	2,88
40%	60%	0,09	3,51
Median 50%	50%	0,09	3,56
75%	25%	0,08	3,67
84%	16%	0,08	3,71
90%	10%	0,07	3,84
95%	5%	-------	-------

Moments Statistics

Mean	3,33
Sorting	-------
Skewness	-------
Kurtosis	-------
Uniformity Coefficient	1,26

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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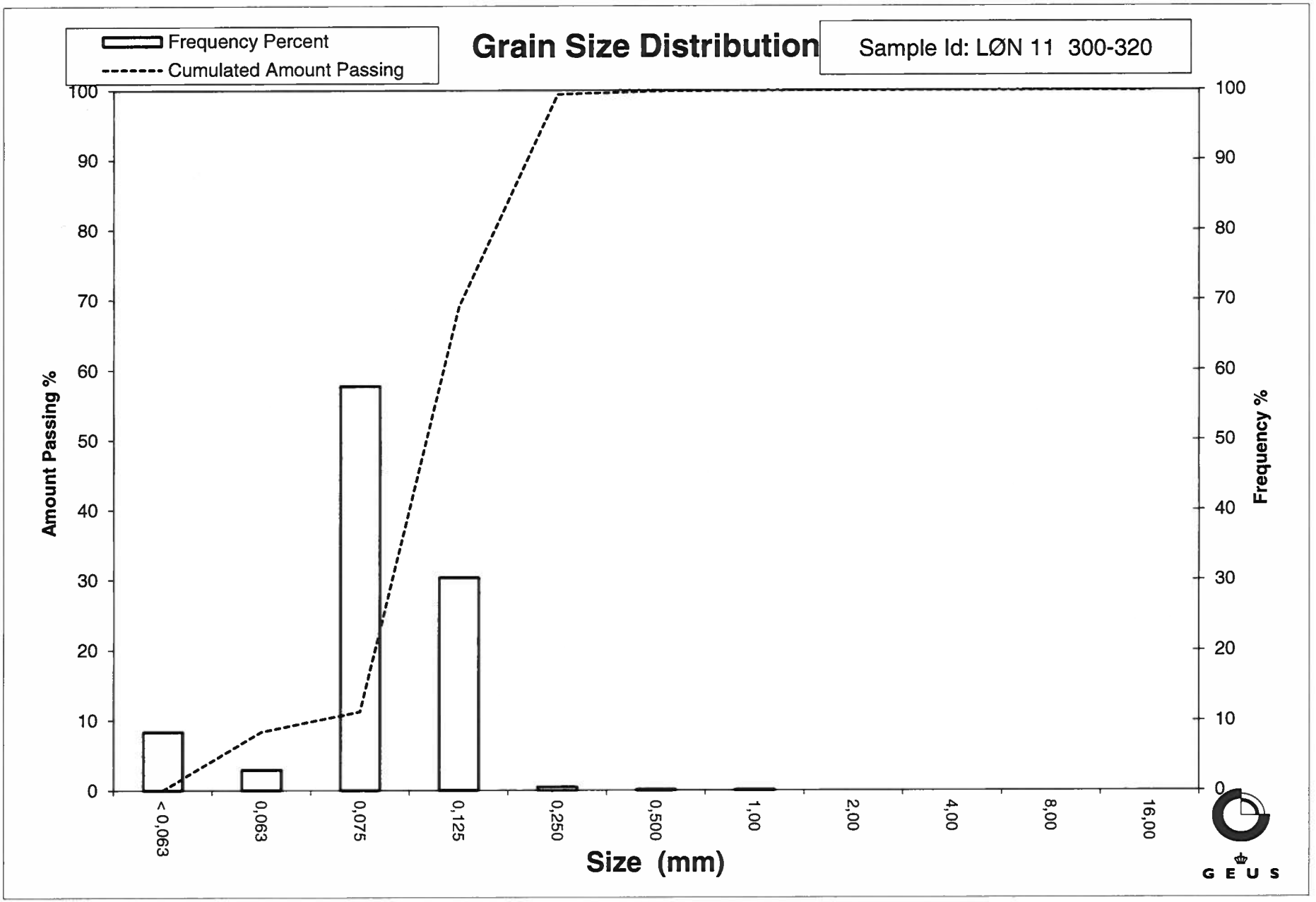
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 11 300-320
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 11 400-420
Lab. Id: 200275
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks:

GEUS

Total Weight 90,11 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
Gravel	8,00	-3,00	0,00	0,00	100,00
Gravel	4,00	-2,00	0,00	0,00	100,00
Gravel	2,00	-1,00	0,00	0,00	100,00
Sand	1,00	0,00	0,01	0,01	99,99
Sand	0,500	1,00	0,08	0,09	99,90
Sand	0,250	2,00	0,31	0,34	99,56
Sand	0,125	3,00	23,78	26,39	73,17
Sand	0,075	3,74	56,30	62,48	10,69
Sand	0,063	3,99	2,46	2,73	7,96
Sand	< 0,063	> 3,99	7,17	7,96	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	7,96
Sand, fine	(0,063 mm - 0,200 mm):	91,60
Sand, medium	(0,2 mm - 0,6 mm):	0,39
Sand, coarse	(0,6 mm - 2 mm):	0,06
Gravel	(> 2 mm):	0,00
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile	Percentile		
Amount in sieve	Amount passing	d(mm)	Φ
5%	95%	0,17	2,55
16%	84%	0,15	2,76
25%	75%	0,13	2,96
40%	60%	0,09	3,53
Median 50%	50%	0,08	3,57
75%	25%	0,08	3,67
84%	16%	0,08	3,71
90%	10%	0,07	3,80
95%	5%	-------	-------

Moments Statistics

Mean	3,35
Sorting	-------
Skewness	-------
Kurtosis	-------
Uniformity Coefficient	1,21

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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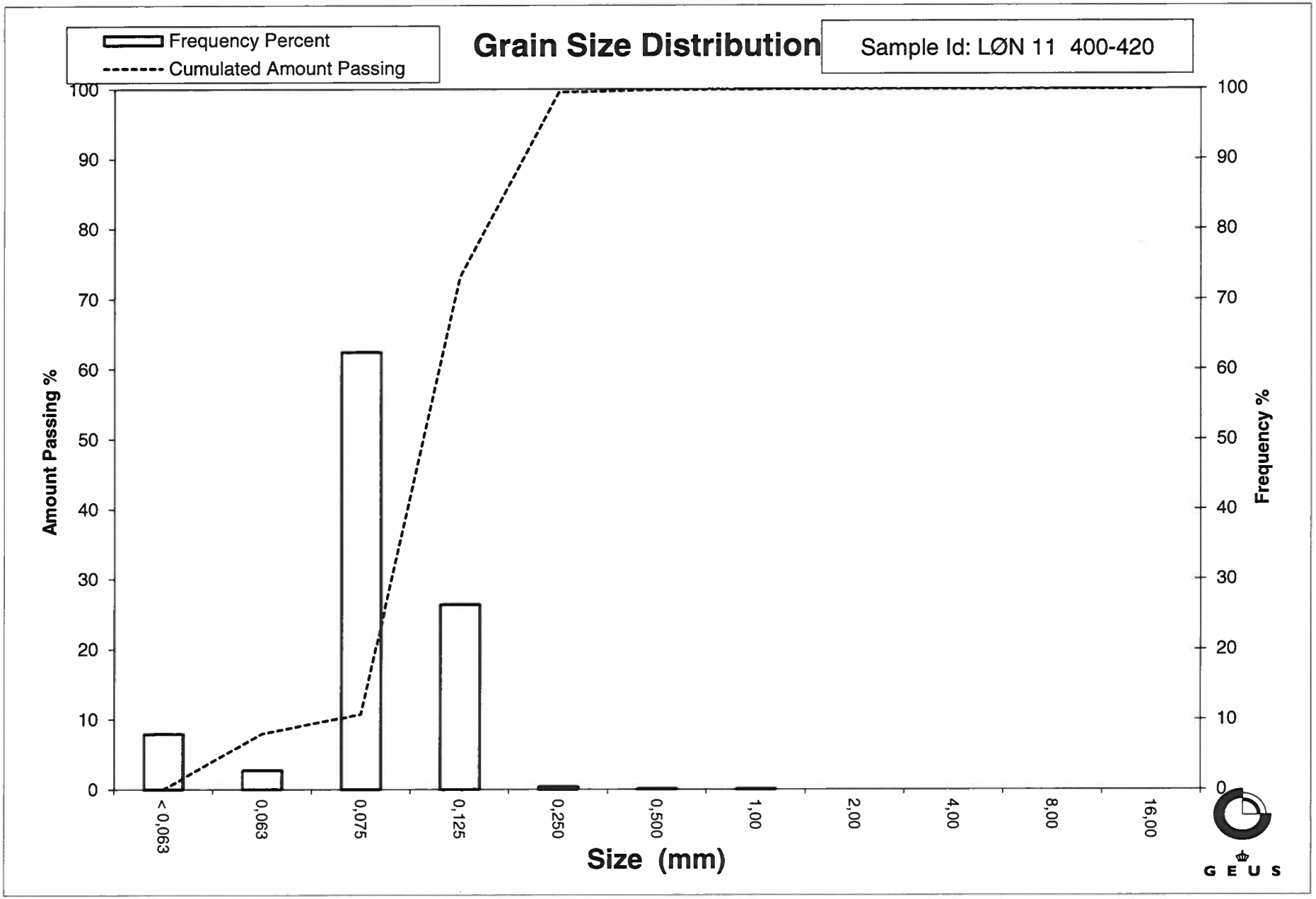
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 11 400-420
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 11 490-510
Lab. Id: 200276
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks: >2mm heraf 1,7 g skaller

GEUS

Total Weight 95,2 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
	8,00	-3,00	1,16	1,22	98,78
	4,00	-2,00	0,54	0,57	98,21
	2,00	-1,00	0,70	0,74	97,48
Sand	1,00	0,00	0,87	0,91	96,57
	0,500	1,00	1,89	1,99	94,58
	0,250	2,00	4,65	4,88	89,70
	0,125	3,00	45,39	47,68	42,02
	0,075	3,74	26,27	27,59	14,42
	0,063	3,99	2,66	2,79	11,63
	< 0,063	> 3,99	11,07	11,63	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	11,63
Sand, fine	(0,063 mm - 0,200 mm):	78,07
Sand, medium	(0,2 mm - 0,6 mm):	5,83
Sand, coarse	(0,6 mm - 2 mm):	1,95
Gravel	(> 2 mm):	2,52
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,54	0,88
16%	84%	0,17	2,53
25%	75%	0,16	2,62
40%	60%	0,15	2,78
Median 50%	50%	0,13	2,90
75%	25%	0,08	3,63
84%	16%	0,08	3,72
90%	10%	-------	-------
95%	5%	-------	-------

Moments Statistics

Mean	3,05
Sorting	-------
Skewness	-------
Kurtosis	-------
Uniformity Coefficient	-------

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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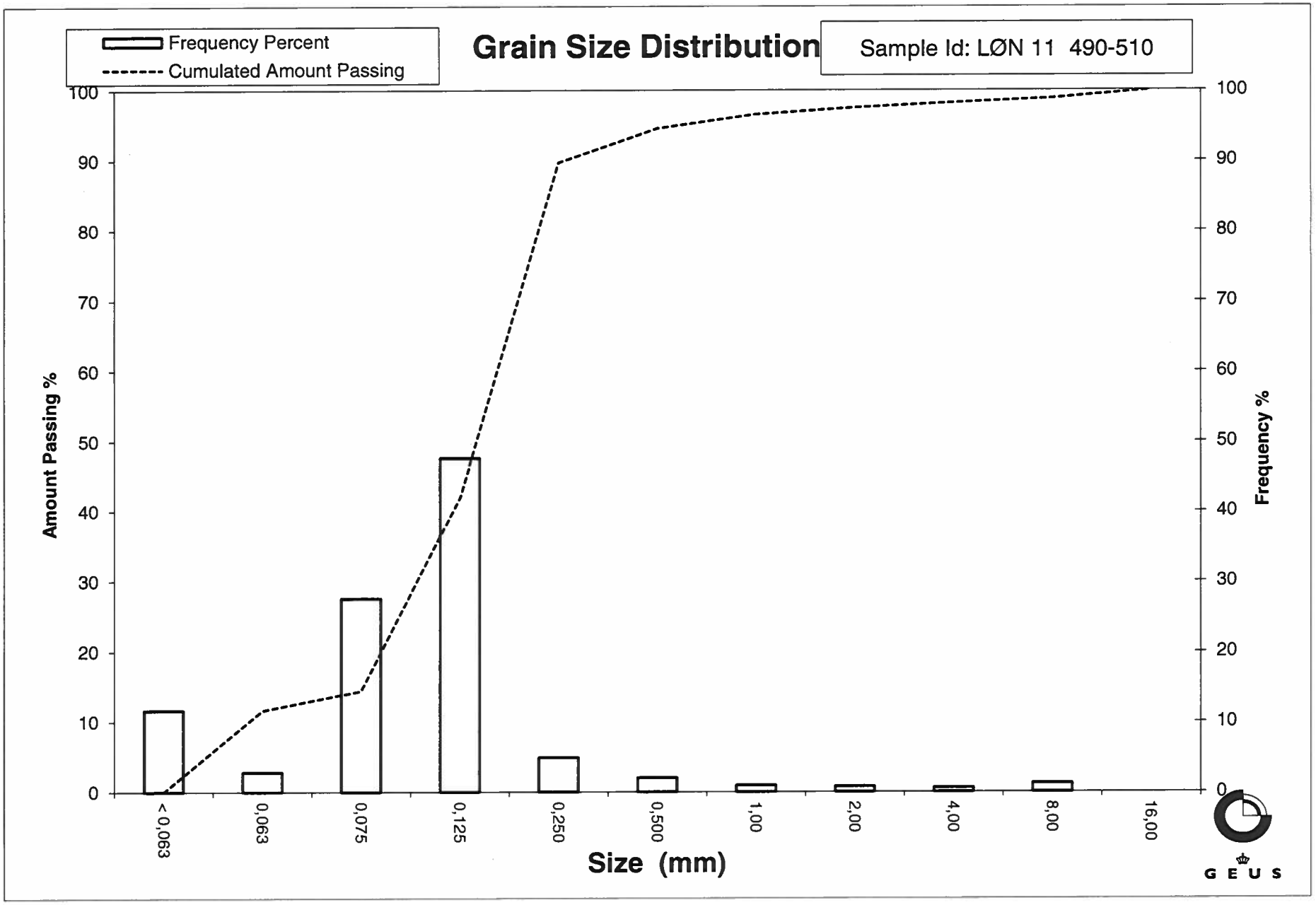
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 11 490-510
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 12 0-20
Lab. Id: 200277
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks: >2mm heraf 1,4 g skaller

GEUS

Total Weight 104,3 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
Gravel	8,00	-3,00	0,93	0,89	99,11
Gravel	4,00	-2,00	0,26	0,25	98,86
Gravel	2,00	-1,00	0,95	0,91	97,95
Sand	1,00	0,00	2,30	2,21	95,74
Sand	0,500	1,00	15,62	14,98	80,77
Sand	0,250	2,00	63,83	61,20	19,57
Sand	0,125	3,00	18,65	17,88	1,69
Sand	0,075	3,74	1,08	1,04	0,65
Sand	0,063	3,99	0,02	0,02	0,63
Sand	< 0,063	> 3,99	0,66	0,63	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	0,63
Sand, fine	(0,063 mm - 0,200 mm):	18,94
Sand, medium	(0,2 mm - 0,6 mm):	68,33
Sand, coarse	(0,6 mm - 2 mm):	10,05
Gravel	(> 2 mm):	2,05
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile	Percentile		
Amount in sieve	Amount passing	d(mm)	Φ
5%	95%	0,70	0,52
16%	84%	0,55	0,87
25%	75%	0,35	1,53
40%	60%	0,32	1,65
Median 50%	50%	0,30	1,73
75%	25%	0,26	1,95
84%	16%	0,17	2,56
90%	10%	0,15	2,73
95%	5%	0,14	2,89

Moments Statistics

Mean	1,72
Sorting	0,78
Skewness	-0,01
Kurtosis	2,36
Uniformity Coefficient	2,12

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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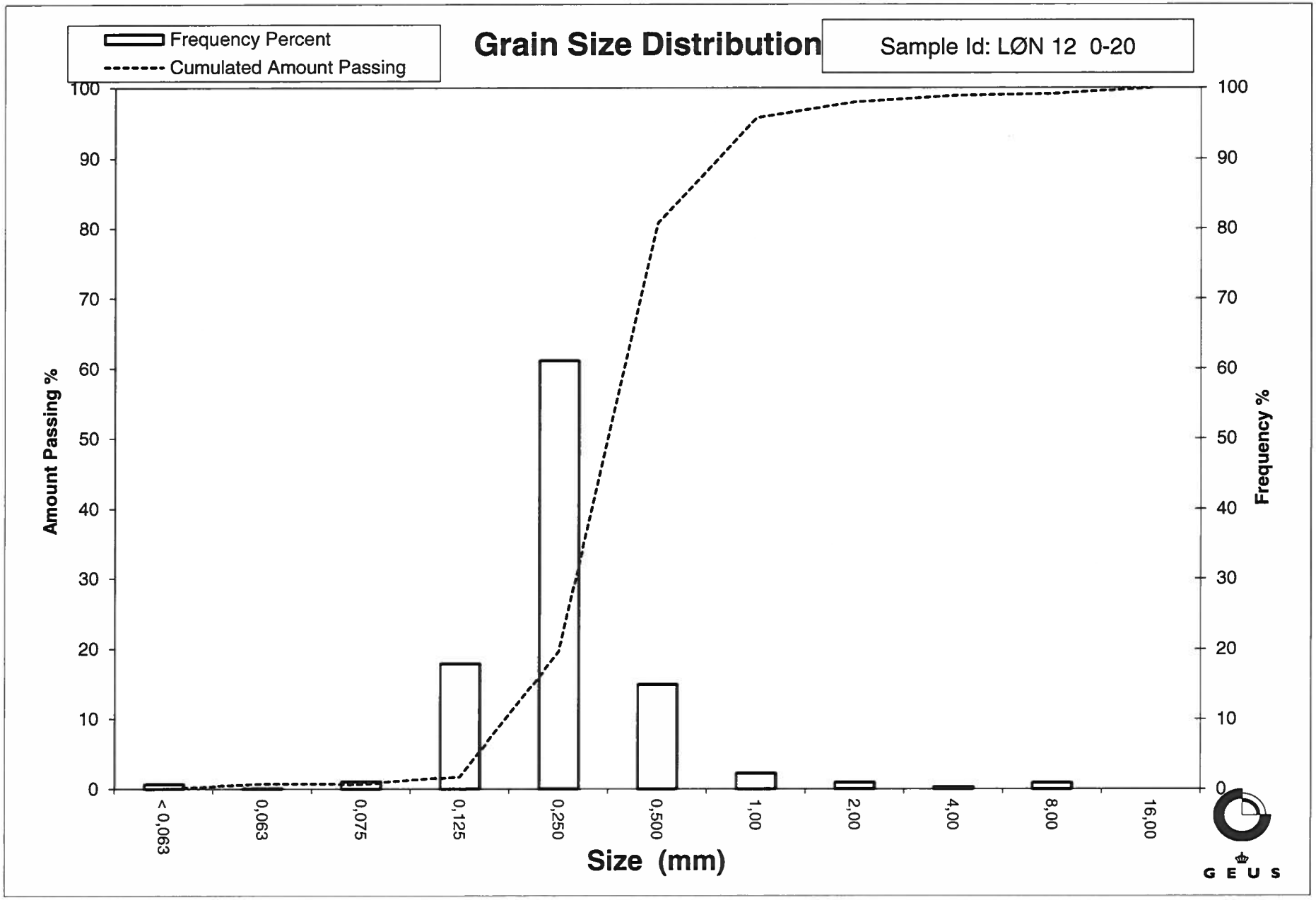
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 12 0-20
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 12 100-120
Lab. Id: 200278
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks: >2 mm består af skaller

G E U S

Total Weight 96,4 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
	8,00	-3,00	0,00	0,00	100,00
	4,00	-2,00	0,06	0,06	99,94
	2,00	-1,00	0,33	0,34	99,60
Sand	1,00	0,00	0,35	0,36	99,23
	0,500	1,00	1,81	1,88	97,35
	0,250	2,00	11,61	12,04	85,31
	0,125	3,00	64,79	67,21	18,10
	0,075	3,74	15,33	15,90	2,20
	0,063	3,99	0,52	0,54	1,66
	< 0,063	> 3,99	1,60	1,66	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	1,66
Sand, fine	(0,063 mm - 0,200 mm):	83,65
Sand, medium	(0,2 mm - 0,6 mm):	12,94
Sand, coarse	(0,6 mm - 2 mm):	1,35
Gravel	(> 2 mm):	0,40
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile	Percentile		
Amount in sieve	Amount passing	d(mm)	Φ
5%	95%	0,33	1,58
16%	84%	0,18	2,48
25%	75%	0,17	2,54
40%	60%	0,16	2,65
Median 50%	50%	0,15	2,73
75%	25%	0,13	2,94
84%	16%	0,09	3,51
90%	10%	0,08	3,60
95%	5%	0,08	3,69

Moments Statistics

Mean	2,91
Sorting	0,58
Skewness	0,22
Kurtosis	2,20
Uniformity Coefficient	1,93

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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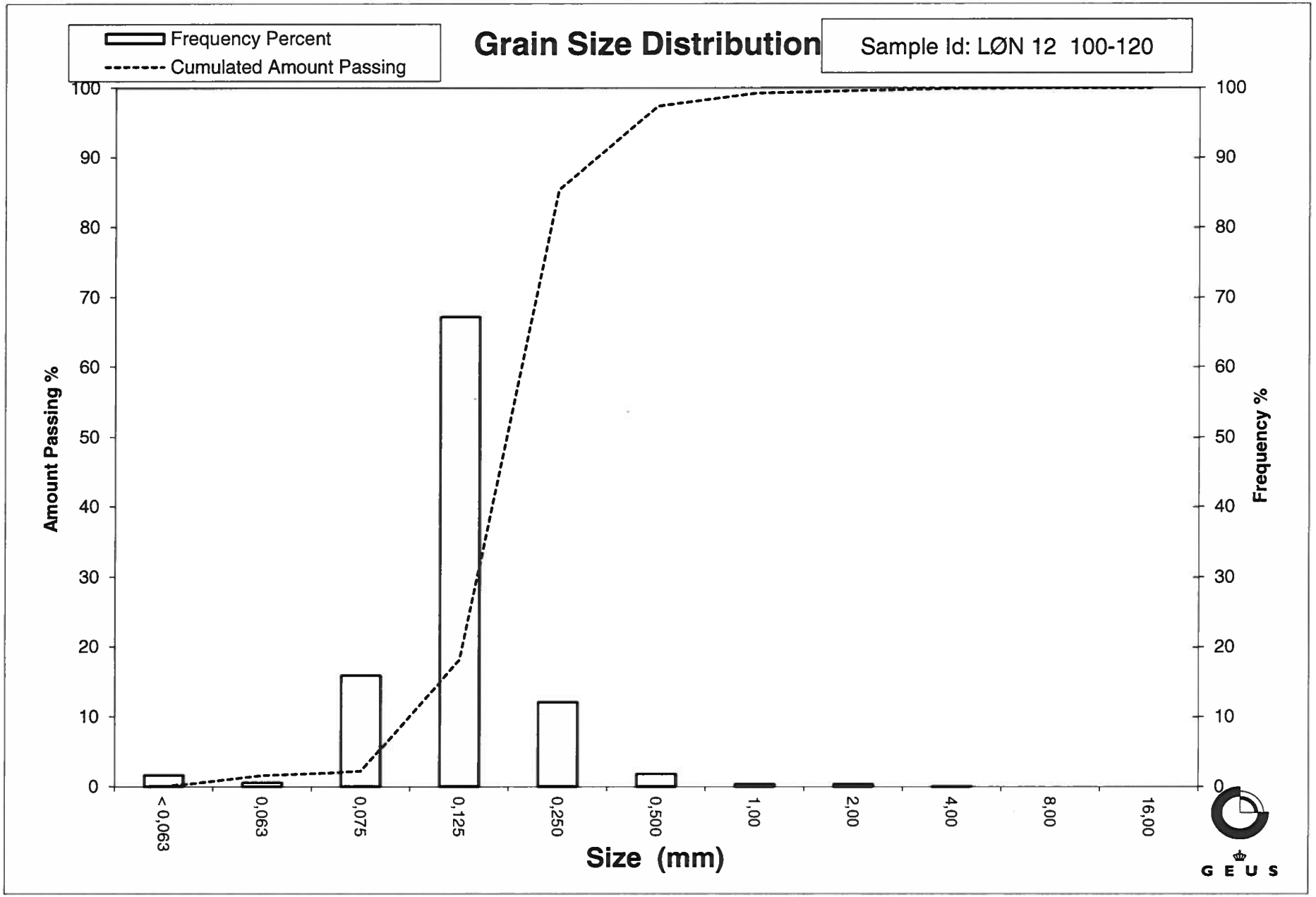
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 12 100-120
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 12 200-220
Lab. Id: 200279
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks: >2 mm består af skaller

GEUS

Total Weight 93,36 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
	8,00	-3,00	0,00	0,00	100,00
	4,00	-2,00	0,00	0,00	100,00
	2,00	-1,00	0,04	0,04	99,96
Sand	1,00	0,00	0,00	0,00	99,96
	0,500	1,00	0,17	0,18	99,78
	0,250	2,00	9,18	9,83	89,94
	0,125	3,00	75,34	80,70	9,24
	0,075	3,74	7,47	8,00	1,24
	0,063	3,99	0,17	0,18	1,06
	< 0,063	> 3,99	0,99	1,06	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	1,06
Sand, fine	(0,063 mm - 0,200 mm):	88,88
Sand, medium	(0,2 mm - 0,6 mm):	9,92
Sand, coarse	(0,6 mm - 2 mm):	0,10
Gravel	(> 2 mm):	0,04
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile	Percentile		
Amount in sieve	Amount passing	d(mm)	Φ
5%	95%	0,30	1,72
16%	84%	0,18	2,51
25%	75%	0,17	2,56
40%	60%	0,16	2,65
Median 50%	50%	0,15	2,71
75%	25%	0,14	2,88
84%	16%	0,13	2,95
90%	10%	0,13	2,99
95%	5%	0,08	3,61

Moments Statistics

Mean	2,72
Sorting	0,40
Skewness	0,01
Kurtosis	2,40
Uniformity Coefficient	1,27

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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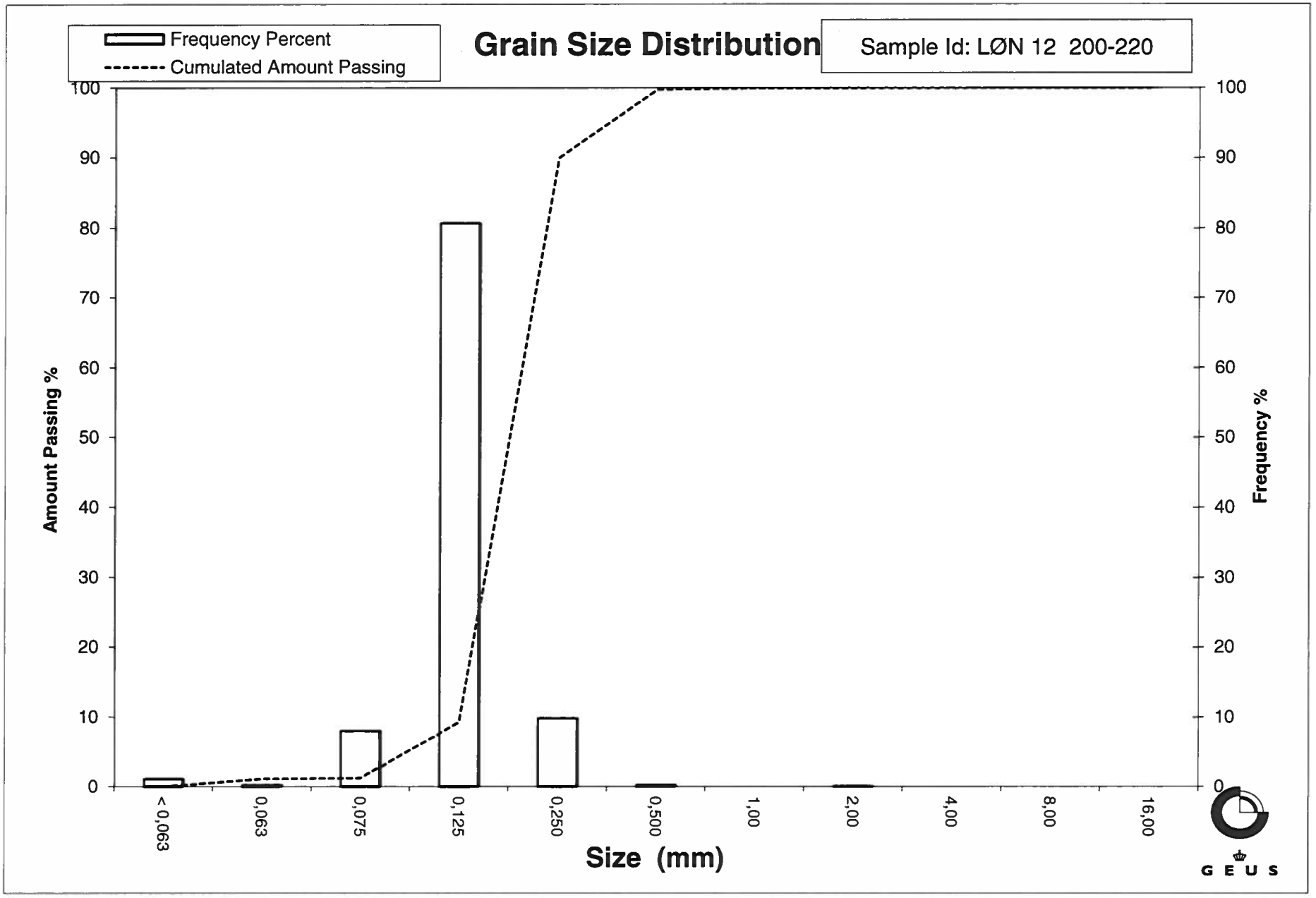
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 12 200-220
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 12 300-320
Lab. Id: 200280
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks:

GEUS

Total Weight 92,92 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
	8,00	-3,00	0,00	0,00	100,00
	4,00	-2,00	0,00	0,00	100,00
	2,00	-1,00	0,00	0,00	100,00
Sand	1,00	0,00	0,00	0,00	100,00
	0,500	1,00	0,12	0,13	99,87
	0,250	2,00	0,71	0,76	99,11
	0,125	3,00	37,47	40,33	58,78
	0,075	3,74	46,27	49,80	8,99
	0,063	3,99	2,38	2,56	6,42
	< 0,063	> 3,99	5,97	6,42	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	6,42
Sand, fine	(0,063 mm - 0,200 mm):	92,68
Sand, medium	(0,2 mm - 0,6 mm):	0,83
Sand, coarse	(0,6 mm - 2 mm):	0,07
Gravel	(> 2 mm):	0,00
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,17	2,52
16%	84%	0,16	2,65
25%	75%	0,15	2,76
40%	60%	0,13	2,98
Median 50%	50%	0,09	3,52
75%	25%	0,08	3,65
84%	16%	0,08	3,70
90%	10%	0,08	3,73
95%	5%	-------	-------

Moments Statistics

Mean	3,29
Sorting	-------
Skewness	-------
Kurtosis	-------
Uniformity Coefficient	1,68

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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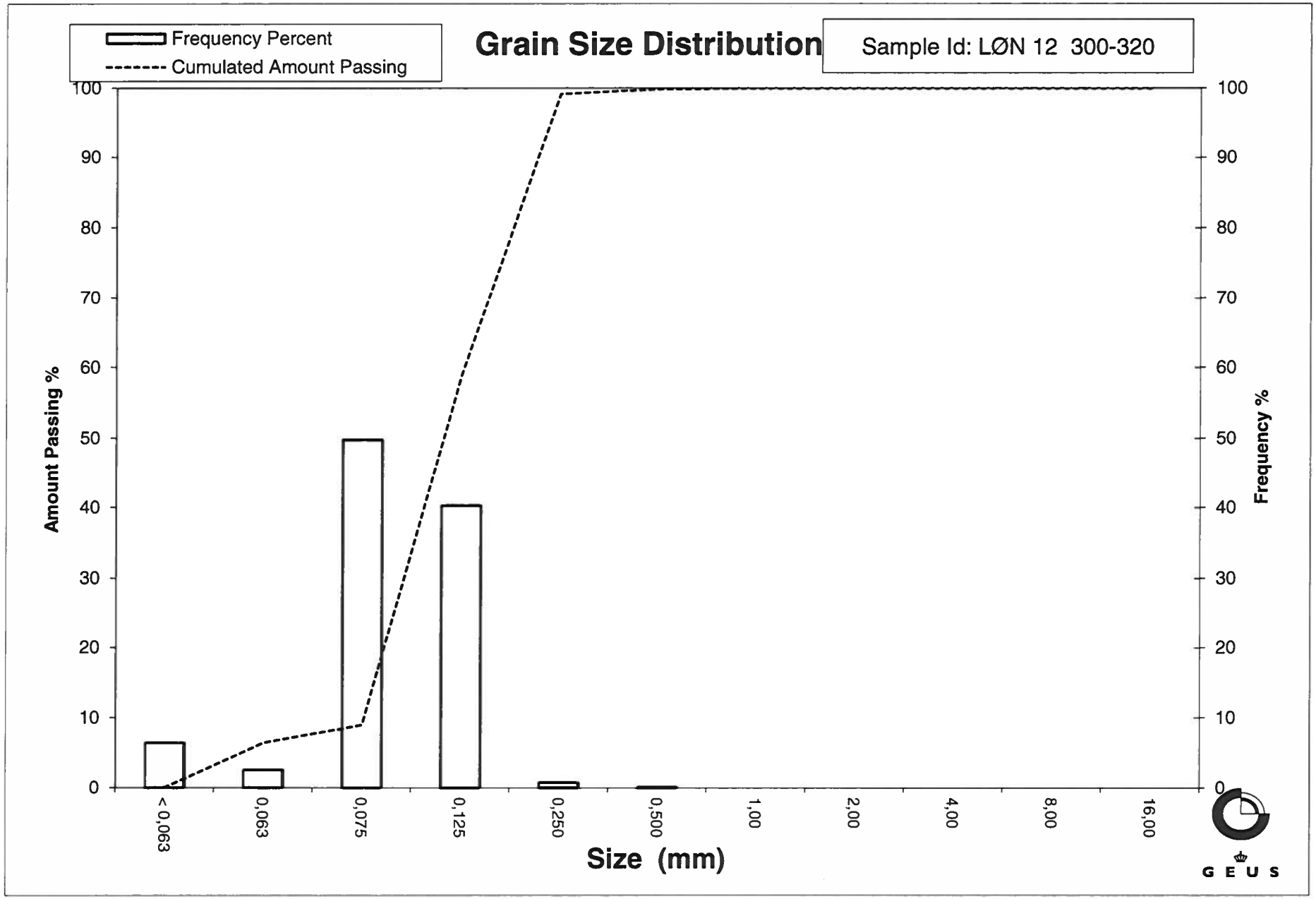
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 12 300-320
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 12 380-400
Lab. Id: 200281
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks:

GEUS

Total Weight 91,08 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
	8,00	-3,00	0,00	0,00	100,00
	4,00	-2,00	0,00	0,00	100,00
	2,00	-1,00	0,00	0,00	100,00
Sand	1,00	0,00	0,00	0,00	100,00
	0,500	1,00	0,00	0,00	100,00
	0,250	2,00	0,21	0,23	99,77
	0,125	3,00	21,94	24,09	75,68
	0,075	3,74	58,06	63,75	11,93
	0,063	3,99	2,98	3,27	8,66
	< 0,063	> 3,99	7,89	8,66	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	8,66
Sand, fine	(0,063 mm - 0,200 mm):	91,11
Sand, medium	(0,2 mm - 0,6 mm):	0,23
Sand, coarse	(0,6 mm - 2 mm):	0,00
Gravel	(> 2 mm):	0,00
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,17	2,56
16%	84%	0,14	2,80
25%	75%	0,09	3,48
40%	60%	0,09	3,53
Median 50%	50%	0,08	3,57
75%	25%	0,08	3,68
84%	16%	0,08	3,72
90%	10%	0,07	3,88
95%	5%	-------	-------

Moments Statistics

Mean	3,36
Sorting	-------
Skewness	-------
Kurtosis	-------
Uniformity Coefficient	1,27

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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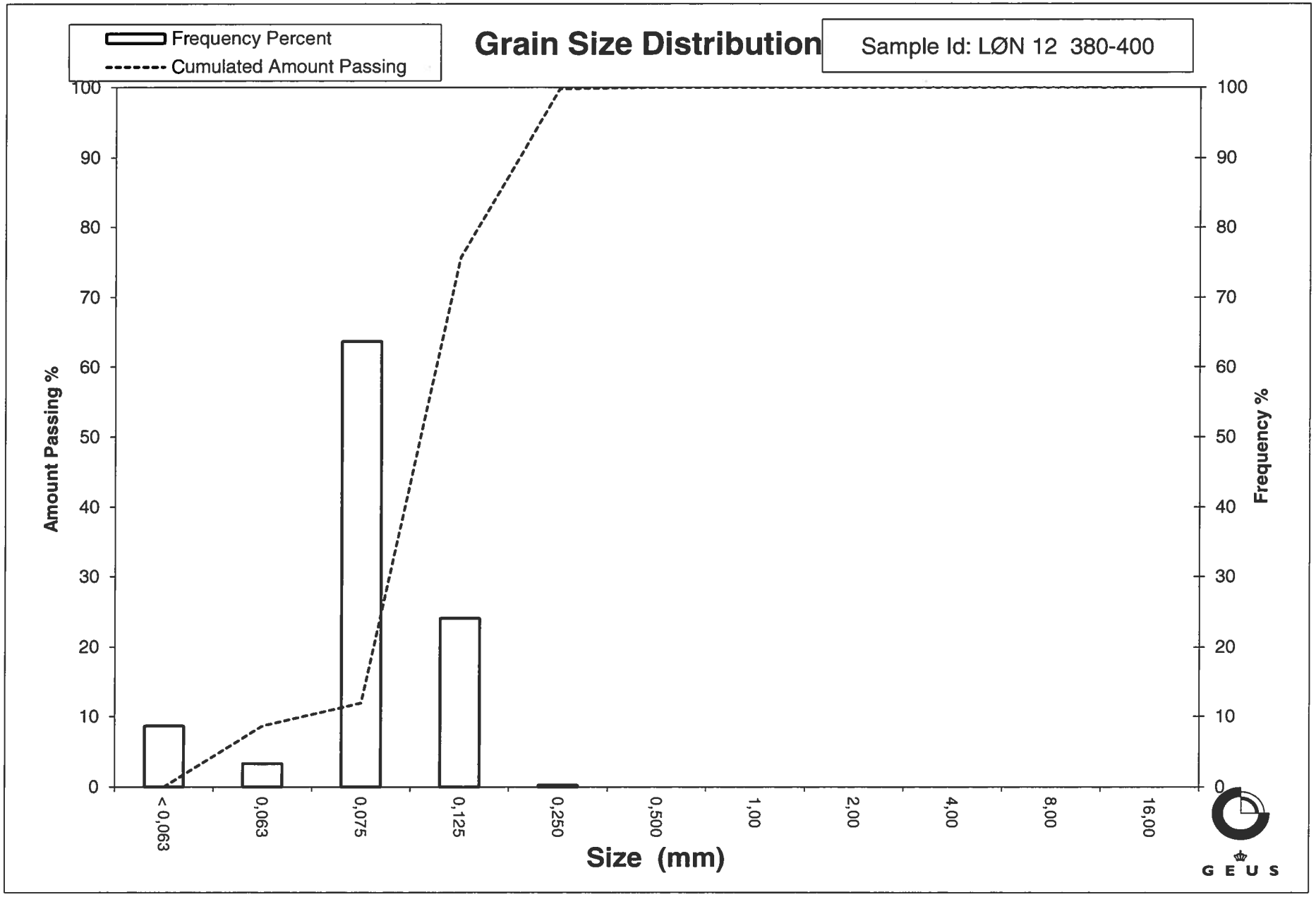
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 12 380-400
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 13 0-20
Lab. Id: 200282
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks:

GEUS

Total Weight 93,27 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
Gravel	8,00	-3,00	0,00	0,00	100,00
Gravel	4,00	-2,00	0,00	0,00	100,00
	2,00	-1,00	0,00	0,00	100,00
Sand	1,00	0,00	0,16	0,17	99,83
Sand	0,500	1,00	0,77	0,83	99,00
Sand	0,250	2,00	6,99	7,49	91,51
Sand	0,125	3,00	73,29	78,58	12,93
Sand	0,075	3,74	10,86	11,64	1,29
Sand	0,063	3,99	0,22	0,24	1,05
Sand	< 0,063	> 3,99	0,98	1,05	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	1,05
Sand, fine	(0,063 mm - 0,200 mm):	90,46
Sand, medium	(0,2 mm - 0,6 mm):	7,89
Sand, coarse	(0,6 mm - 2 mm):	0,60
Gravel	(> 2 mm):	0,00
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,30	1,74
16%	84%	0,17	2,52
25%	75%	0,17	2,57
40%	60%	0,16	2,66
Median 50%	50%	0,15	2,73
75%	25%	0,13	2,91
84%	16%	0,13	2,98
90%	10%	0,09	3,54
95%	5%	0,08	3,65

Moments Statistics

Mean	2,74
Sorting	0,40
Skewness	0,02
Kurtosis	2,32
Uniformity Coefficient	1,83

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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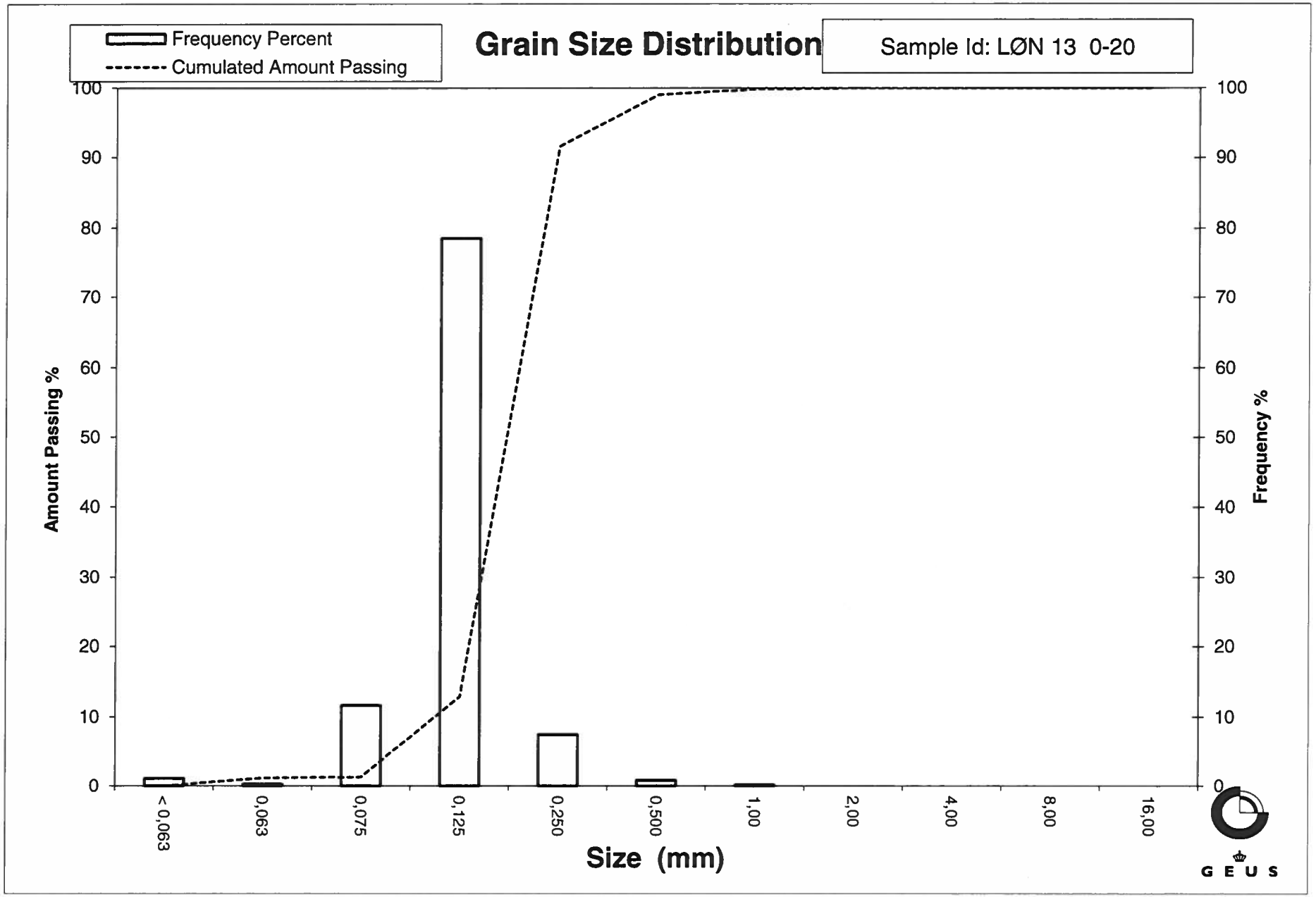
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 13 0-20
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 13 120-140
Lab. Id: 200283
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks:

GEUS

Total Weight 94,29 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
Gravel	8,00	-3,00	0,00	0,00	100,00
Gravel	4,00	-2,00	0,00	0,00	100,00
	2,00	-1,00	0,00	0,00	100,00
Sand	1,00	0,00	0,03	0,03	99,97
Sand	0,500	1,00	0,54	0,57	99,40
Sand	0,250	2,00	9,48	10,05	89,34
Sand	0,125	3,00	52,56	55,74	33,60
Sand	0,075	3,74	27,41	29,07	4,53
Sand	0,063	3,99	0,78	0,83	3,70
Sand	< 0,063	> 3,99	3,49	3,70	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	3,70
Sand, fine	(0,063 mm - 0,200 mm):	85,64
Sand, medium	(0,2 mm - 0,6 mm):	10,33
Sand, coarse	(0,6 mm - 2 mm):	0,33
Gravel	(> 2 mm):	0,00
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile	Percentile		
Amount in sieve	Amount passing	d(mm)	Φ
5%	95%	0,31	1,69
16%	84%	0,17	2,52
25%	75%	0,17	2,59
40%	60%	0,15	2,73
Median 50%	50%	0,14	2,82
75%	25%	0,09	3,55
84%	16%	0,08	3,63
90%	10%	0,08	3,68
95%	5%	0,08	3,73

Moments Statistics

Mean	2,99
Sorting	0,59
Skewness	0,17
Kurtosis	0,87
Uniformity Coefficient	1,94

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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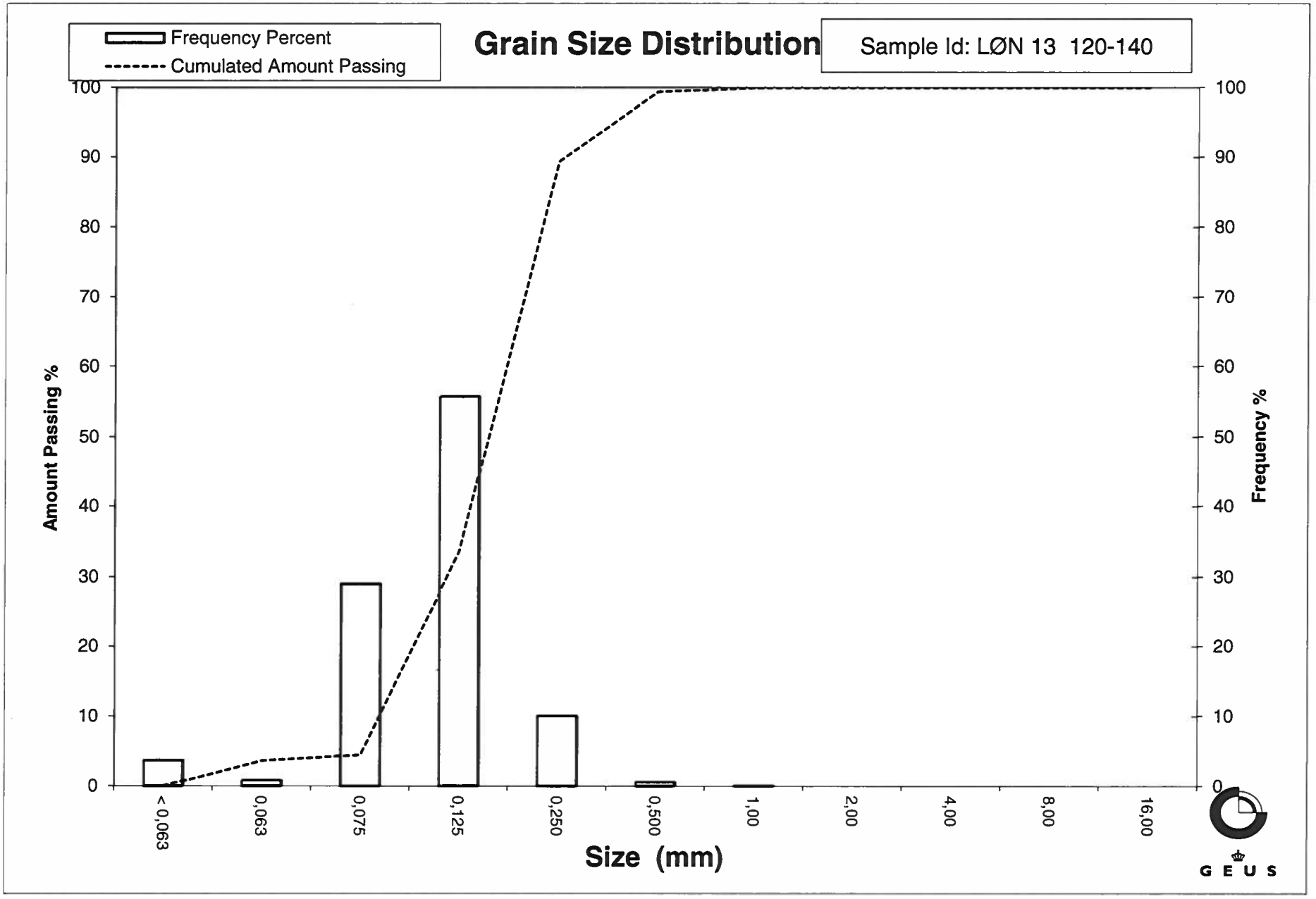
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 13 120-140
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 13A 0-20
Lab. Id: 200284
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks:

GEUS

Total Weight 95,74 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
	8,00	-3,00	0,00	0,00	100,00
	4,00	-2,00	0,00	0,00	100,00
	2,00	-1,00	0,05	0,05	99,95
Sand	1,00	0,00	0,43	0,45	99,50
	0,500	1,00	2,59	2,71	96,79
	0,250	2,00	15,02	15,69	81,11
	0,125	3,00	67,39	70,39	10,72
	0,075	3,74	8,93	9,33	1,39
	0,063	3,99	0,13	0,14	1,25
	< 0,063	> 3,99	1,20	1,25	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	1,25
Sand, fine	(0,063 mm - 0,200 mm):	79,85
Sand, medium	(0,2 mm - 0,6 mm):	16,98
Sand, coarse	(0,6 mm - 2 mm):	1,87
Gravel	(> 2 mm):	0,05
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,34	1,54
16%	84%	0,27	1,89
25%	75%	0,18	2,51
40%	60%	0,16	2,61
Median 50%	50%	0,16	2,68
75%	25%	0,14	2,88
84%	16%	0,13	2,95
90%	10%	0,09	3,49
95%	5%	0,08	3,63

Moments Statistics

Mean	2,51
Sorting	0,58
Skewness	-0,29
Kurtosis	2,35
Uniformity Coefficient	1,84

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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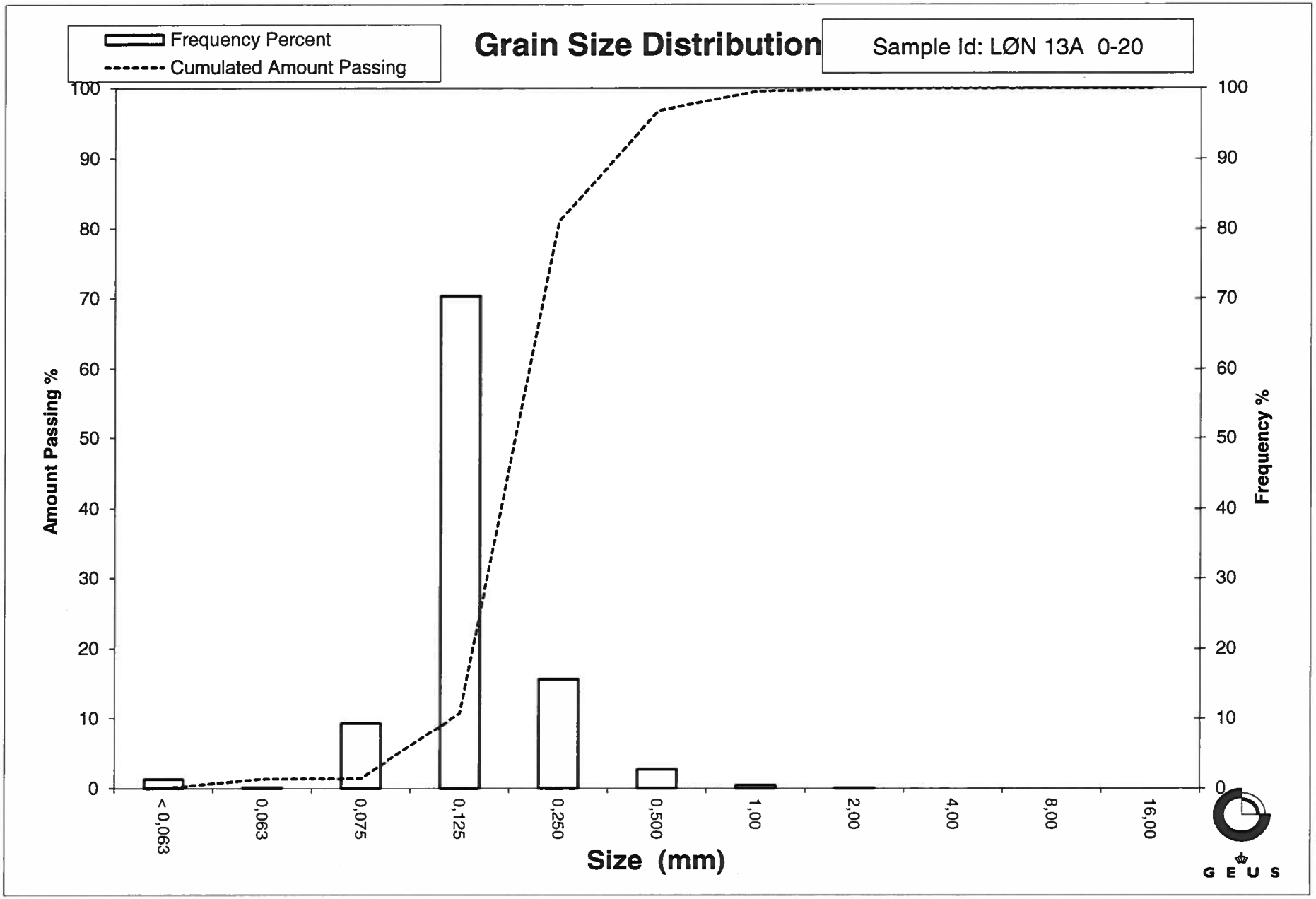
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 13A 0-20
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 13A 100-120
Lab. Id: 200285
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks: >2mm består af skaller

GEUS

Total Weight 96,28 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
Gravel	8,00	-3,00	0,00	0,00	100,00
Gravel	4,00	-2,00	0,12	0,12	99,88
Gravel	2,00	-1,00	0,06	0,06	99,81
Sand	1,00	0,00	0,34	0,35	99,46
Sand	0,500	1,00	1,28	1,33	98,13
Sand	0,250	2,00	10,00	10,39	87,74
Sand	0,125	3,00	63,88	66,35	21,40
Sand	0,075	3,74	17,16	17,82	3,57
Sand	0,063	3,99	0,58	0,60	2,97
Sand	< 0,063	> 3,99	2,86	2,97	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	2,97
Sand, fine	(0,063 mm - 0,200 mm):	84,77
Sand, medium	(0,2 mm - 0,6 mm):	11,02
Sand, coarse	(0,6 mm - 2 mm):	1,05
Gravel	(> 2 mm):	0,19
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,32	1,63
16%	84%	0,18	2,50
25%	75%	0,17	2,56
40%	60%	0,16	2,67
Median 50%	50%	0,15	2,75
75%	25%	0,13	2,97
84%	16%	0,09	3,55
90%	10%	0,08	3,64
95%	5%	0,08	3,71

Moments Statistics

Mean	2,93
Sorting	0,58
Skewness	0,22
Kurtosis	2,11
Uniformity Coefficient	1,95

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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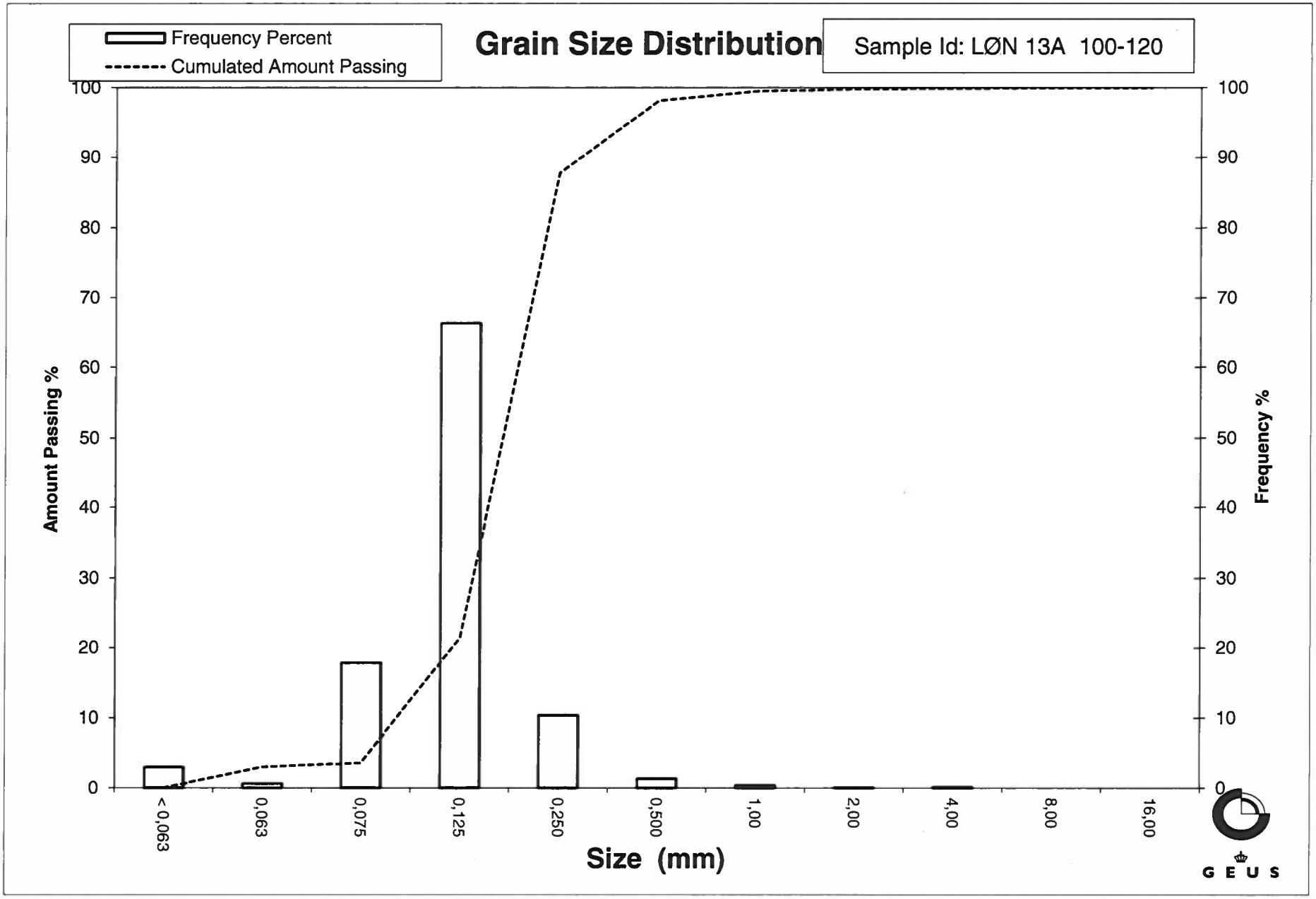
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 13A 100-120
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 13A 200-220
Lab. Id: 200286
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks: >4mm består af skaller

GEUS

Total Weight 92,27 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
Gravel	8,00	-3,00	0,00	0,00	100,00
Gravel	4,00	-2,00	0,39	0,42	99,58
	2,00	-1,00	0,28	0,30	99,27
Sand	1,00	0,00	0,32	0,35	98,93
Sand	0,500	1,00	0,95	1,03	97,90
Sand	0,250	2,00	7,25	7,86	90,04
Sand	0,125	3,00	44,82	48,57	41,47
Sand	0,075	3,74	34,33	37,21	4,26
Sand	0,063	3,99	0,74	0,80	3,46
Sand	< 0,063	> 3,99	3,19	3,46	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	3,46
Sand, fine	(0,063 mm - 0,200 mm):	86,58
Sand, medium	(0,2 mm - 0,6 mm):	8,35
Sand, coarse	(0,6 mm - 2 mm):	0,89
Gravel	(> 2 mm):	0,73
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,32	1,66
16%	84%	0,17	2,53
25%	75%	0,16	2,62
40%	60%	0,15	2,78
Median 50%	50%	0,13	2,89
75%	25%	0,08	3,58
84%	16%	0,08	3,65
90%	10%	0,08	3,69
95%	5%	0,08	3,73

Moments Statistics

Mean	3,02
Sorting	0,59
Skewness	0,08
Kurtosis	0,88
Uniformity Coefficient	1,89

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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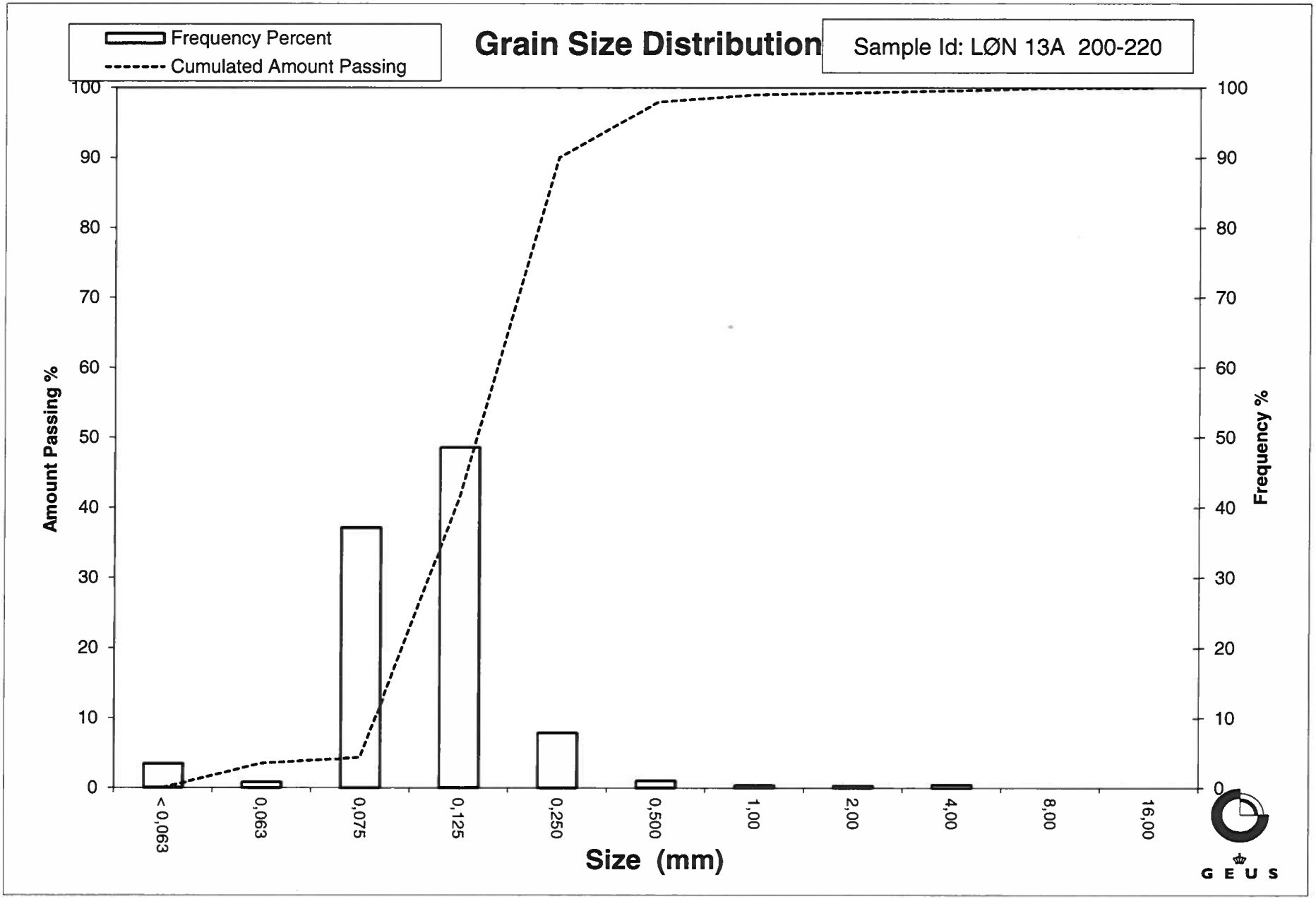
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 13A 200-220
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 13A 300-320
Lab. Id: 200287
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks: >4mm består af skaller

GEUS

Total Weight 88,18 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
	8,00	-3,00	0,00	0,00	100,00
	4,00	-2,00	0,03	0,03	99,97
	2,00	-1,00	0,00	0,00	99,97
Sand	1,00	0,00	0,04	0,05	99,92
	0,500	1,00	0,20	0,23	99,69
	0,250	2,00	4,39	4,98	94,72
	0,125	3,00	27,77	31,49	63,22
	0,075	3,74	48,34	54,82	8,40
	0,063	3,99	1,63	1,85	6,55
	< 0,063	> 3,99	5,78	6,55	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	6,55
Sand, fine	(0,063 mm - 0,200 mm):	88,16
Sand, medium	(0,2 mm - 0,6 mm):	5,09
Sand, coarse	(0,6 mm - 2 mm):	0,16
Gravel	(> 2 mm):	0,03
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,26	1,97
16%	84%	0,16	2,63
25%	75%	0,15	2,78
40%	60%	0,09	3,49
Median 50%	50%	0,09	3,53
75%	25%	0,08	3,65
84%	16%	0,08	3,70
90%	10%	0,08	3,73
95%	5%	-------	-------

Moments Statistics

Mean	3,29
Sorting	-------
Skewness	-------
Kurtosis	-------
Uniformity Coefficient	1,18

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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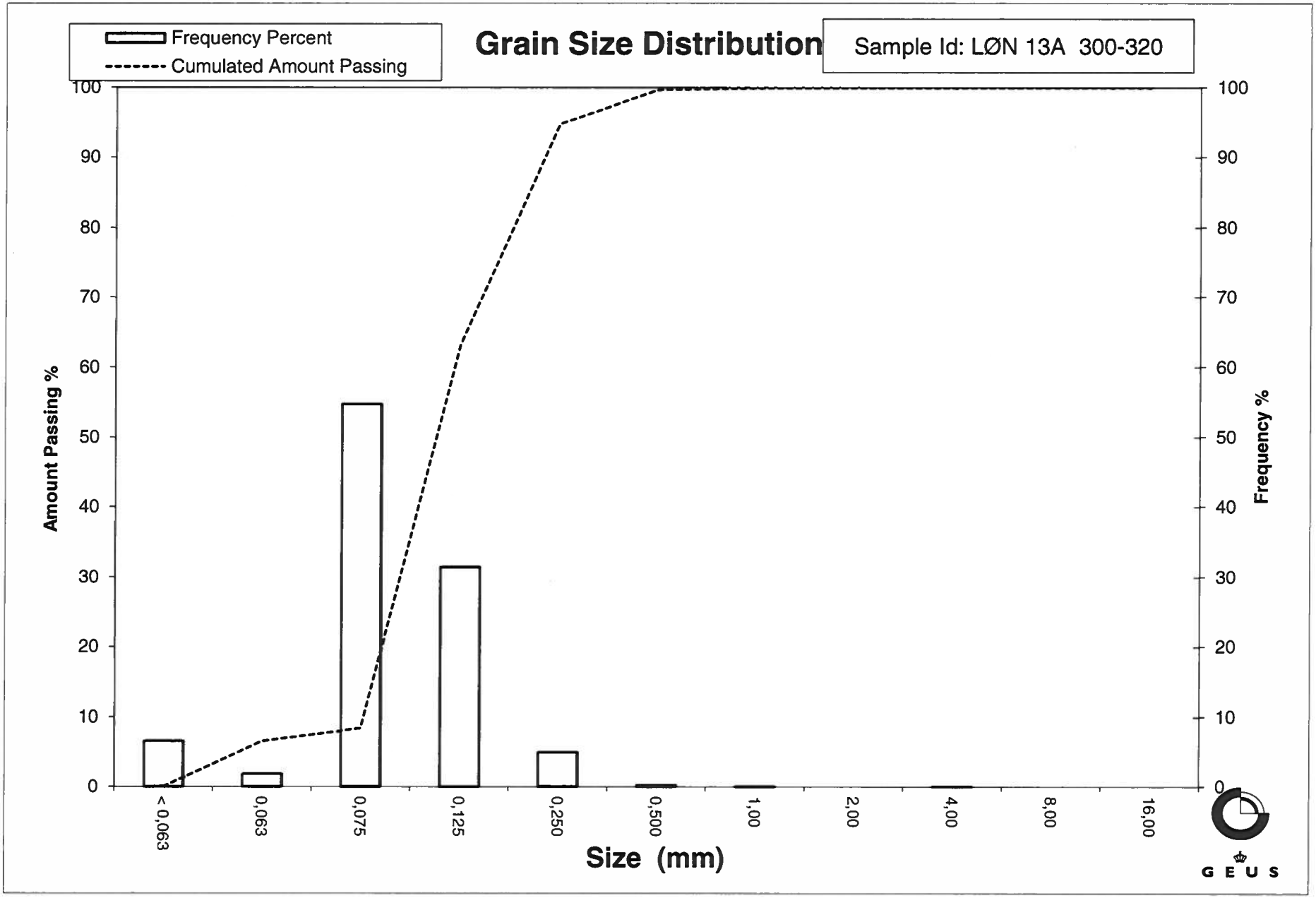
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 13A 300-320
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 14 20-40
Lab. Id: 200288
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks:

GEUS

Total Weight 98,78 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
	8,00	-3,00	0,00	0,00	100,00
	4,00	-2,00	0,27	0,27	99,73
	2,00	-1,00	0,05	0,05	99,68
Sand	1,00	0,00	0,00	0,00	99,68
	0,500	1,00	0,21	0,21	99,46
	0,250	2,00	5,62	5,69	93,77
	0,125	3,00	77,68	78,64	15,13
	0,075	3,74	13,09	13,25	1,88
	0,063	3,99	0,35	0,35	1,53
	< 0,063	> 3,99	1,51	1,53	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	1,53
Sand, fine	(0,063 mm - 0,200 mm):	92,25
Sand, medium	(0,2 mm - 0,6 mm):	5,79
Sand, coarse	(0,6 mm - 2 mm):	0,11
Gravel	(> 2 mm):	0,32
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,27	1,88
16%	84%	0,17	2,53
25%	75%	0,17	2,58
40%	60%	0,16	2,68
Median 50%	50%	0,15	2,74
75%	25%	0,13	2,92
84%	16%	0,13	2,99
90%	10%	0,08	3,57
95%	5%	0,08	3,67

Moments Statistics

Mean	2,76
Sorting	0,39
Skewness	0,06
Kurtosis	2,17
Uniformity Coefficient	1,86

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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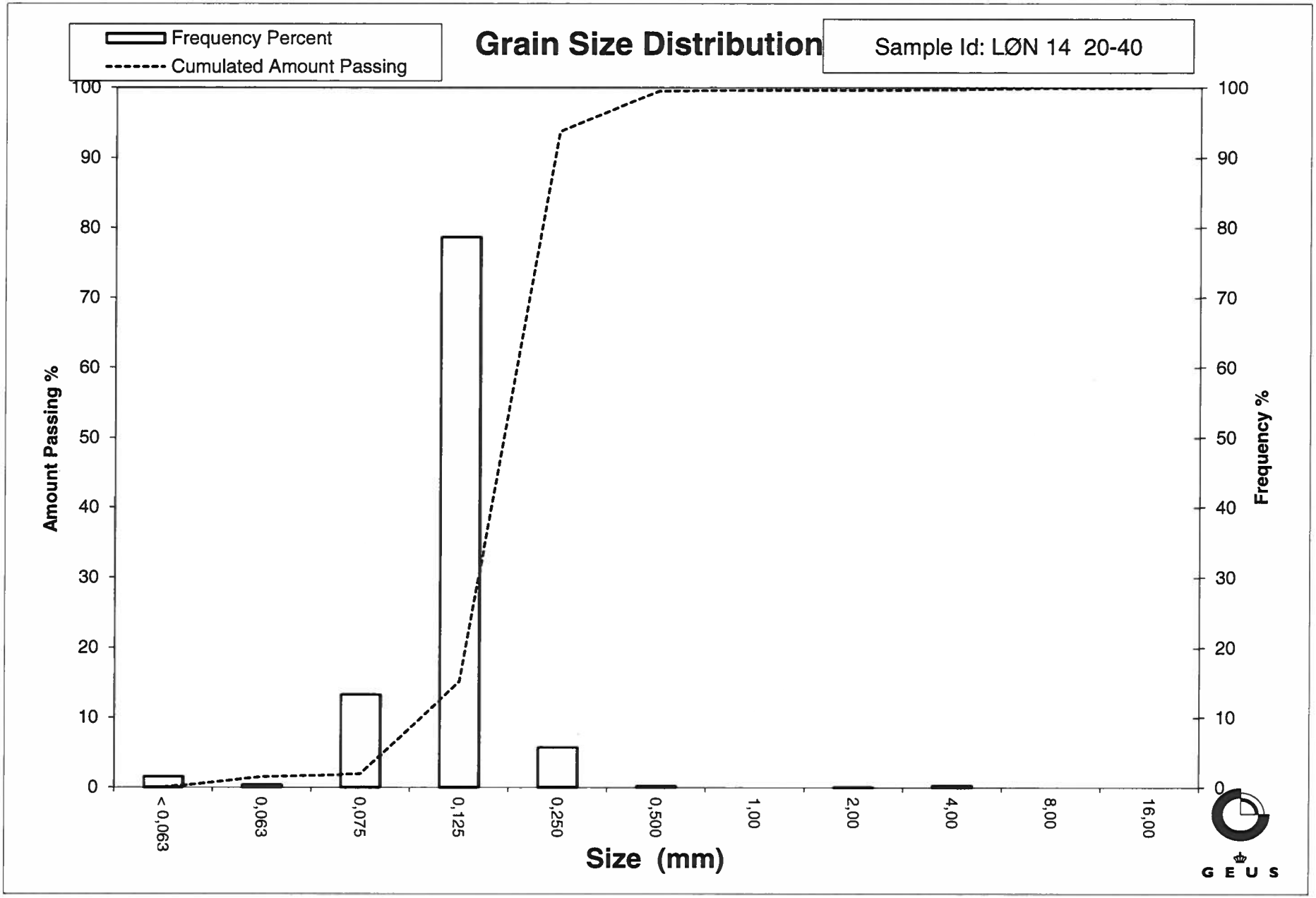
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 14 20-40
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 14 100-120
Lab. Id: 200289
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks: >2mm består af skaller

GEUS

Total Weight 91,06 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
	8,00	-3,00	0,00	0,00	100,00
	4,00	-2,00	0,28	0,31	99,69
	2,00	-1,00	0,33	0,36	99,33
Sand	1,00	0,00	0,39	0,43	98,90
	0,500	1,00	1,13	1,24	97,66
	0,250	2,00	7,57	8,31	89,35
	0,125	3,00	64,41	70,73	18,61
	0,075	3,74	13,42	14,74	3,88
	0,063	3,99	0,30	0,33	3,55
	< 0,063	> 3,99	3,23	3,55	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	3,55
Sand, fine	(0,063 mm - 0,200 mm):	85,80
Sand, medium	(0,2 mm - 0,6 mm):	8,90
Sand, coarse	(0,6 mm - 2 mm):	1,08
Gravel	(> 2 mm):	0,67
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,32	1,64
16%	84%	0,18	2,51
25%	75%	0,17	2,57
40%	60%	0,16	2,67
Median 50%	50%	0,15	2,74
75%	25%	0,13	2,94
84%	16%	0,09	3,52
90%	10%	0,08	3,62
95%	5%	0,08	3,72

Moments Statistics

Mean	2,92
Sorting	0,57
Skewness	0,24
Kurtosis	2,26
Uniformity Coefficient	1,93

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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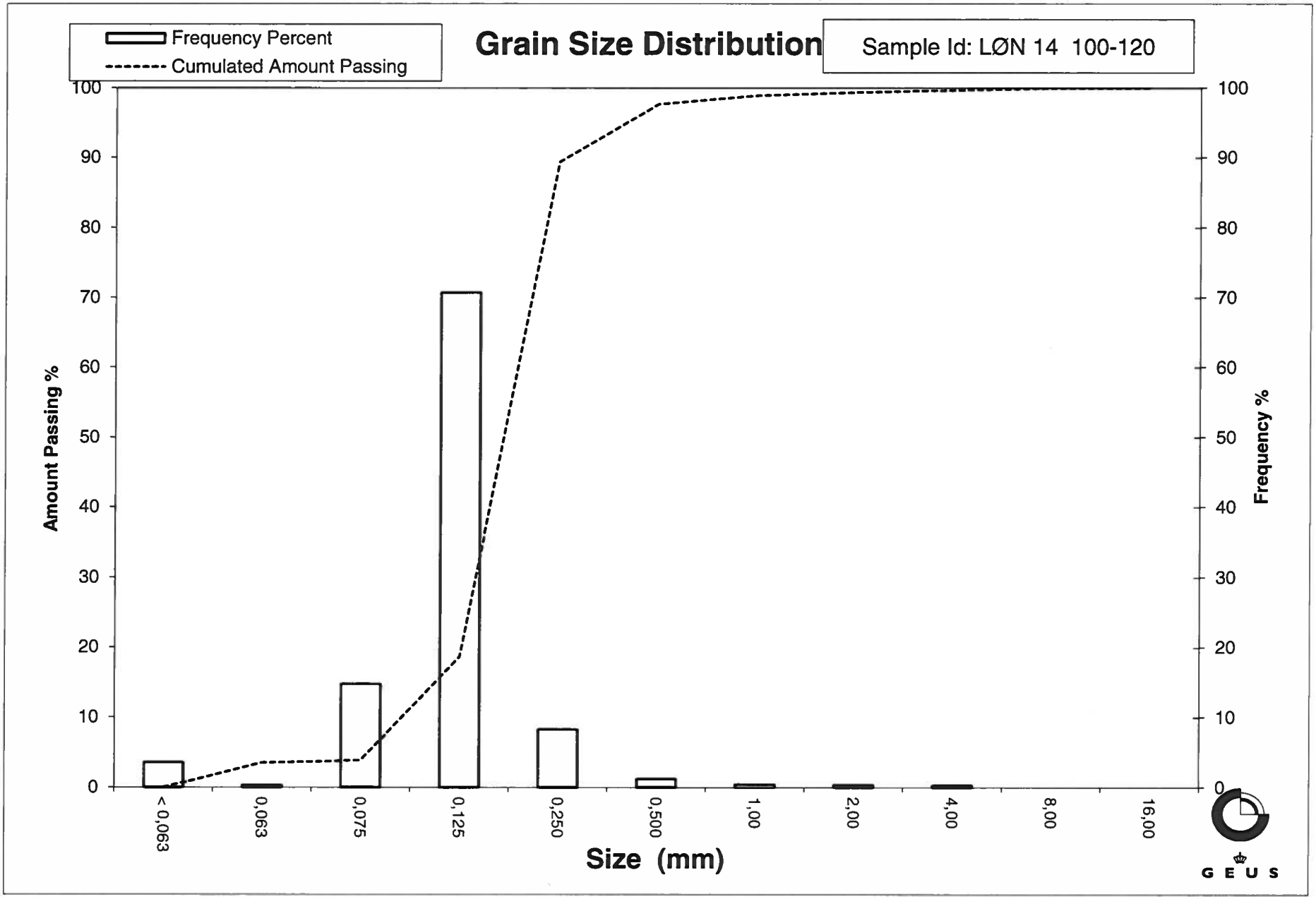
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 14 100-120
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 14 200-220
Lab. Id: 200290
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks: fraktion 2mm består af skaller

GEUS

Total Weight 91,43 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
	8,00	-3,00	0,00	0,00	100,00
	4,00	-2,00	0,27	0,30	99,70
	2,00	-1,00	0,02	0,02	99,68
Sand	1,00	0,00	0,14	0,15	99,53
	0,500	1,00	0,49	0,54	98,99
	0,250	2,00	7,08	7,74	91,25
	0,125	3,00	62,84	68,73	22,52
	0,075	3,74	16,93	18,52	4,00
	0,063	3,99	0,73	0,80	3,20
	< 0,063	> 3,99	2,93	3,20	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	3,20
Sand, fine	(0,063 mm - 0,200 mm):	88,05
Sand, medium	(0,2 mm - 0,6 mm):	8,00
Sand, coarse	(0,6 mm - 2 mm):	0,43
Gravel	(> 2 mm):	0,32
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,30	1,73
16%	84%	0,17	2,52
25%	75%	0,17	2,58
40%	60%	0,15	2,69
Median 50%	50%	0,15	2,77
75%	25%	0,13	2,98
84%	16%	0,08	3,56
90%	10%	0,08	3,65
95%	5%	0,08	3,72

Moments Statistics

Mean	2,95
Sorting	0,56
Skewness	0,24
Kurtosis	2,06
Uniformity Coefficient	1,94

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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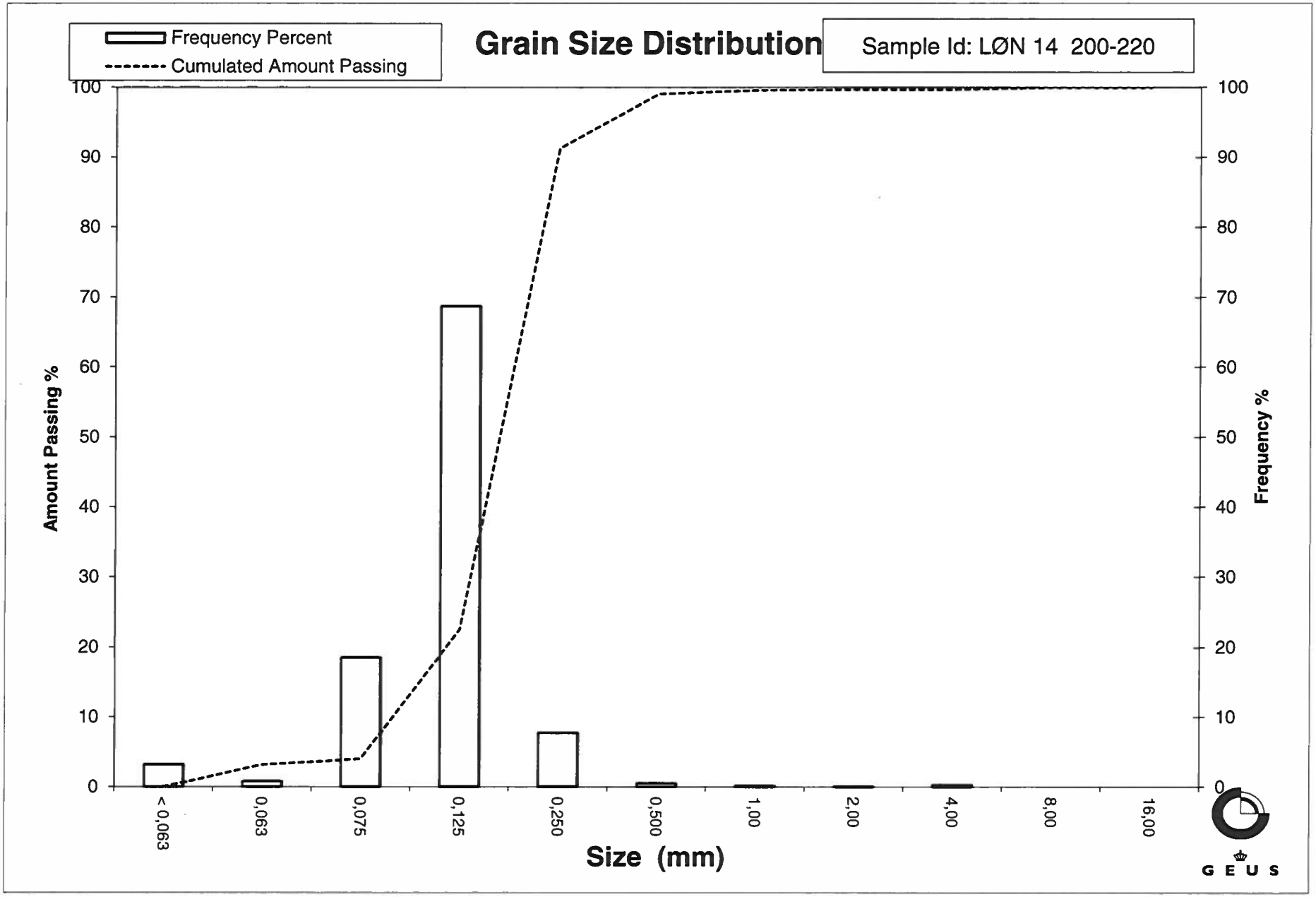
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 14 200-220
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 15 0-20
Lab. Id: 200291
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks: >1mm består af skaller

GEUS

Total Weight 89,06 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
	8,00	-3,00	0,00	0,00	100,00
	4,00	-2,00	0,00	0,00	100,00
	2,00	-1,00	0,04	0,04	99,96
Sand	1,00	0,00	0,01	0,01	99,94
	0,500	1,00	0,15	0,17	99,78
	0,250	2,00	1,00	1,12	98,65
	0,125	3,00	12,15	13,64	85,01
	0,075	3,74	61,61	69,18	15,83
	0,063	3,99	3,89	4,37	11,46
	< 0,063	> 3,99	10,21	11,46	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	11,46
Sand, fine	(0,063 mm - 0,200 mm):	87,19
Sand, medium	(0,2 mm - 0,6 mm):	1,20
Sand, coarse	(0,6 mm - 2 mm):	0,10
Gravel	(> 2 mm):	0,04
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,17	2,60
16%	84%	0,09	3,48
25%	75%	0,09	3,51
40%	60%	0,08	3,56
Median 50%	50%	0,08	3,60
75%	25%	0,08	3,70
84%	16%	0,08	3,74
90%	10%	-------	-------
95%	5%	-------	-------

Moments Statistics

Mean	3,60
Sorting	-------
Skewness	-------
Kurtosis	-------
Uniformity Coefficient	-------

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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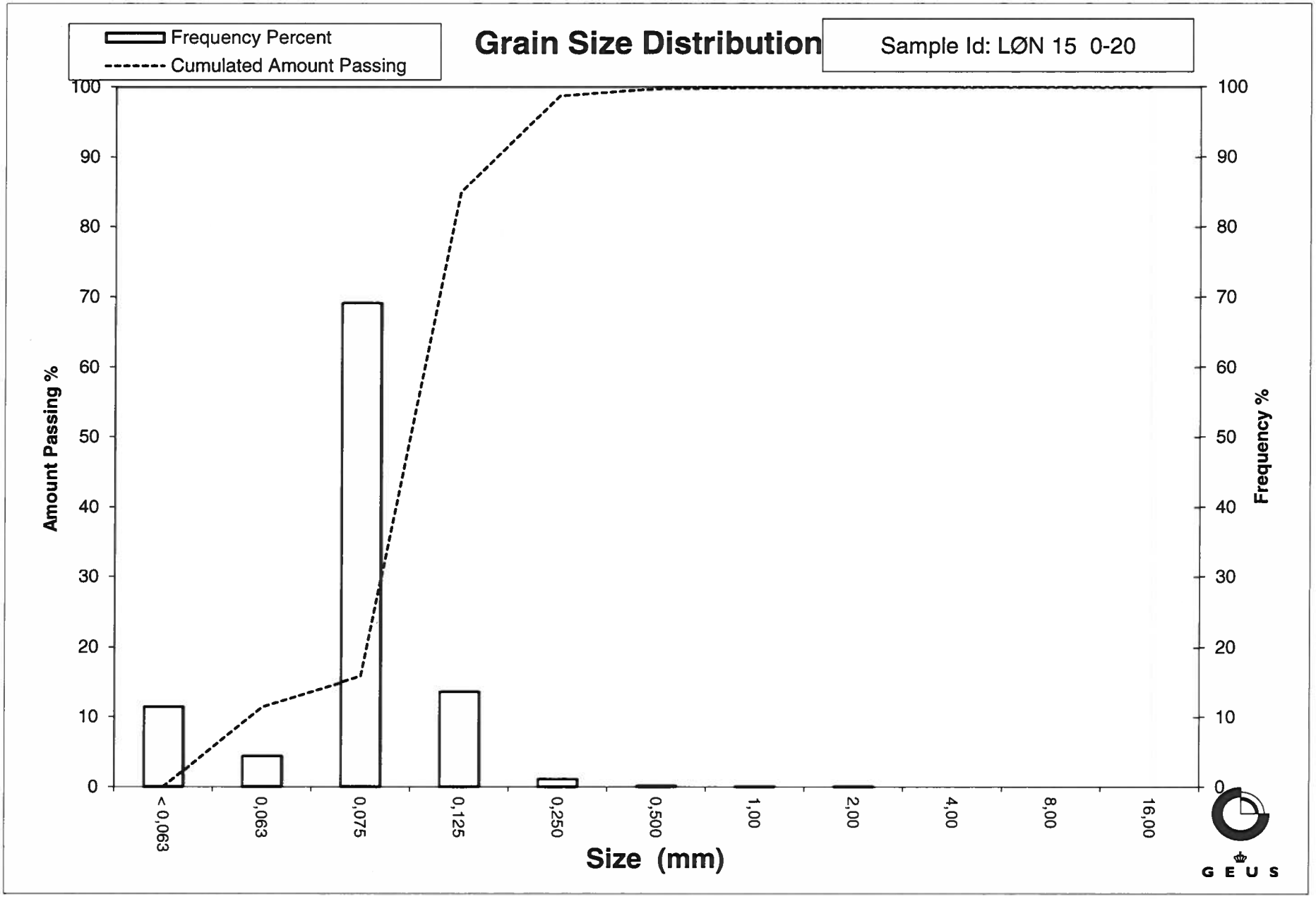
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 15 0-20
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 15 100-120
Lab. Id: 200292
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks: >2mm består af skaller

GEUS

Total Weight 93,34 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
	8,00	-3,00	0,00	0,00	100,00
	4,00	-2,00	0,00	0,00	100,00
	2,00	-1,00	0,04	0,04	99,96
Sand	1,00	0,00	0,09	0,10	99,86
	0,500	1,00	0,35	0,37	99,49
	0,250	2,00	2,59	2,77	96,71
	0,125	3,00	7,88	8,44	88,27
	0,075	3,74	62,63	67,10	21,17
	0,063	3,99	6,18	6,62	14,55
	< 0,063	> 3,99	13,58	14,55	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	14,55
Sand, fine	(0,063 mm - 0,200 mm):	82,16
Sand, medium	(0,2 mm - 0,6 mm):	2,95
Sand, coarse	(0,6 mm - 2 mm):	0,29
Gravel	(> 2 mm):	0,04
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,17	2,57
16%	84%	0,09	3,49
25%	75%	0,09	3,52
40%	60%	0,08	3,58
Median 50%	50%	0,08	3,62
75%	25%	0,08	3,72
84%	16%	0,07	3,93
90%	10%	-------	-------
95%	5%	-------	-------

Moments Statistics

Mean	3,68
Sorting	-------
Skewness	-------
Kurtosis	-------
Uniformity Coefficient	-------

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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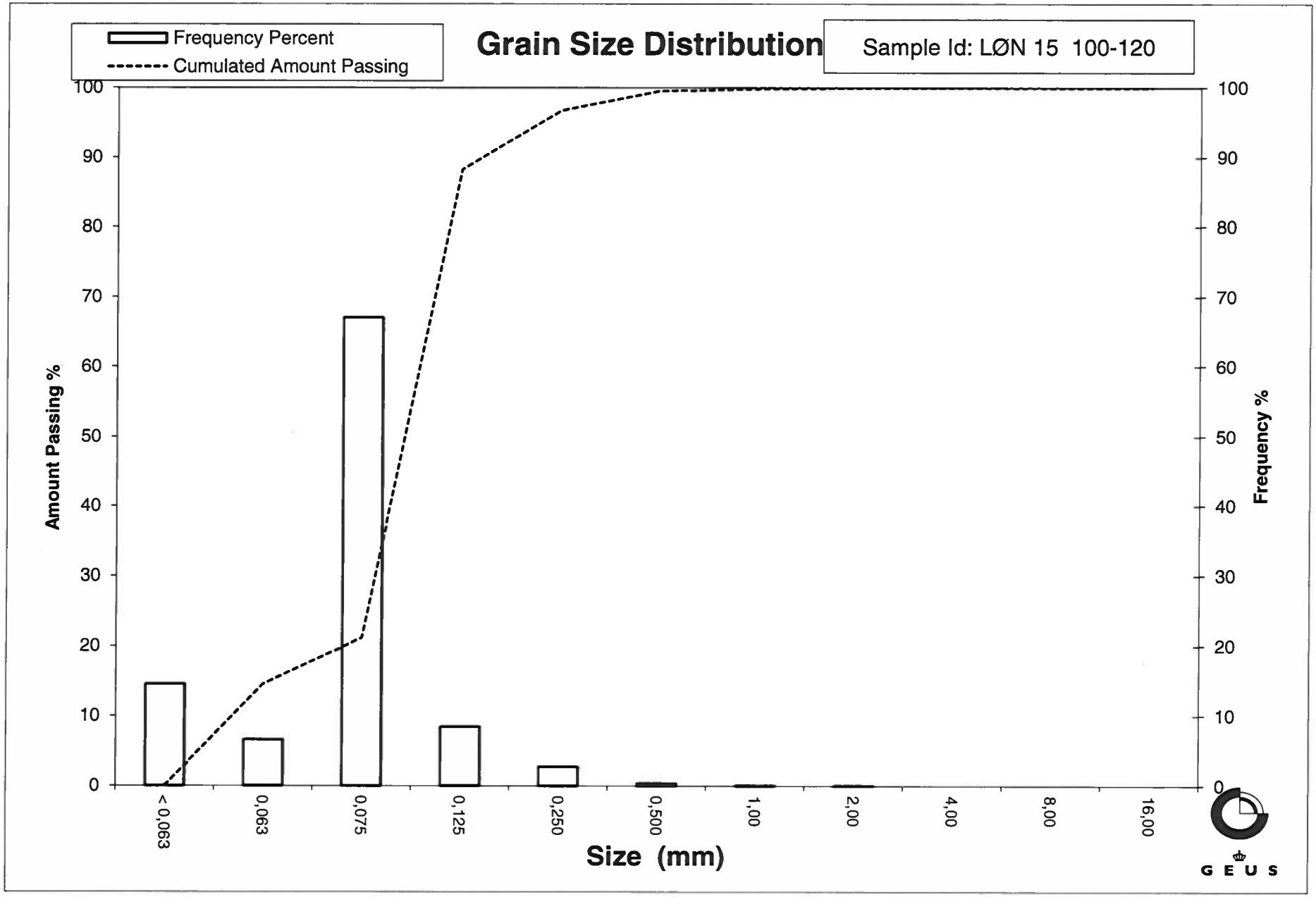
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 15 100-120
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 15 200-220
Lab. Id: 200293
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks: >1mm består af skaller

GEUS

Total Weight 86,1 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
	8,00	-3,00	0,00	0,00	100,00
	4,00	-2,00	0,00	0,00	100,00
	2,00	-1,00	0,13	0,15	99,85
Sand	1,00	0,00	0,13	0,15	99,70
	0,500	1,00	0,51	0,59	99,11
	0,250	2,00	3,15	3,66	95,45
	0,125	3,00	8,90	10,34	85,11
	0,075	3,74	52,64	61,14	23,97
	0,063	3,99	5,17	6,00	17,97
	< 0,063	> 3,99	15,47	17,97	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	17,97
Sand, fine	(0,063 mm - 0,200 mm):	77,48
Sand, medium	(0,2 mm - 0,6 mm):	3,94
Sand, coarse	(0,6 mm - 2 mm):	0,46
Gravel	(> 2 mm):	0,15
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,18	2,49
16%	84%	0,09	3,48
25%	75%	0,09	3,51
40%	60%	0,08	3,58
Median 50%	50%	0,08	3,62
75%	25%	0,08	3,73
84%	16%	-------	-------
90%	10%	-------	-------
95%	5%	-------	-------

Moments Statistics

Mean	3,55
Sorting	-------
Skewness	-------
Kurtosis	-------
Uniformity Coefficient	-------

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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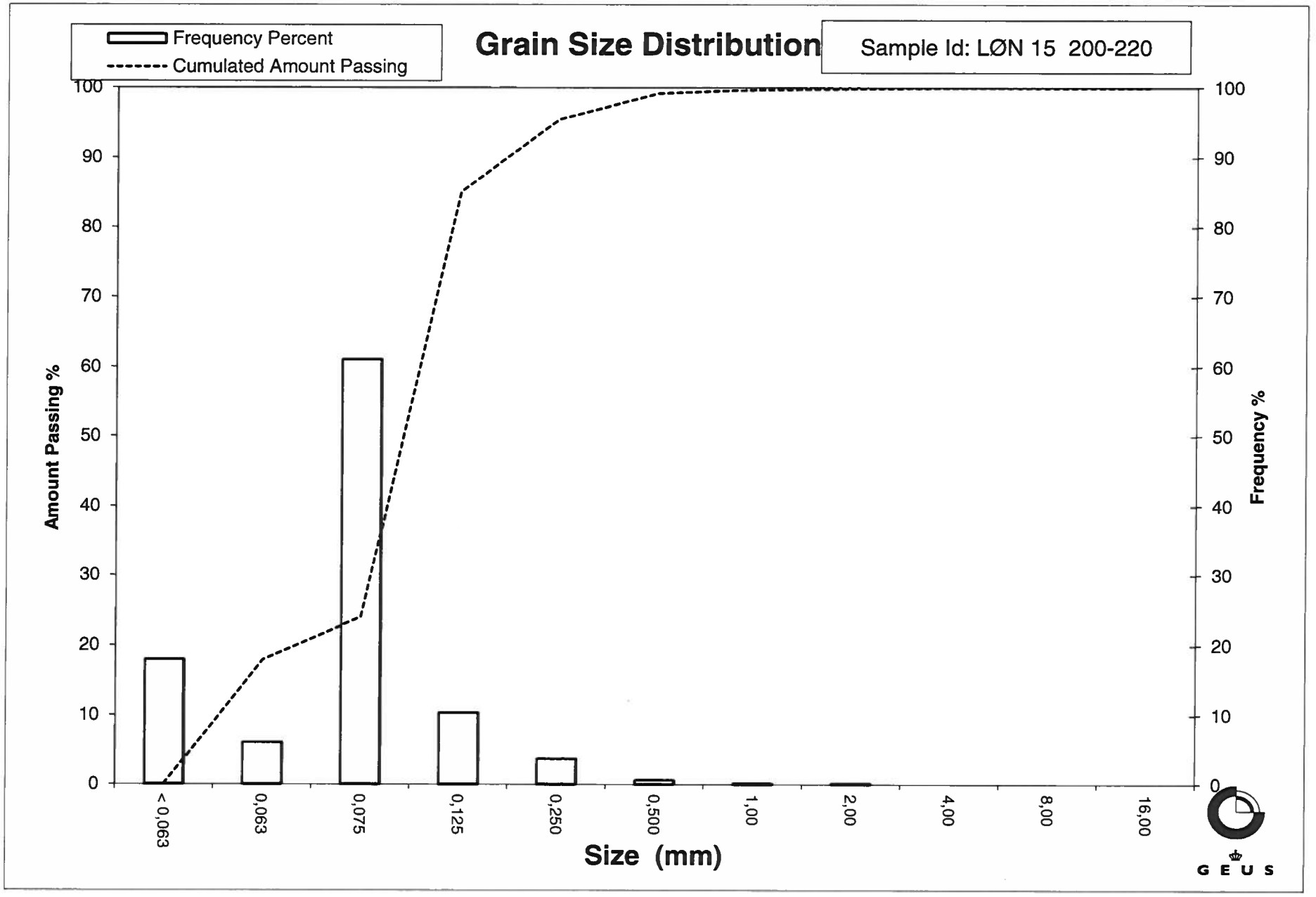
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 15 200-220
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 15 290-310
Lab. Id: 200294
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks: >4mm består af skaller

GEUS

Total Weight 87,53 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
Gravel	8,00	-3,00	0,00	0,00	100,00
Gravel	4,00	-2,00	0,01	0,01	99,99
Gravel	2,00	-1,00	0,07	0,08	99,91
Sand	1,00	0,00	0,09	0,10	99,81
Sand	0,500	1,00	0,54	0,62	99,19
Sand	0,250	2,00	1,80	2,06	97,13
Sand	0,125	3,00	5,72	6,53	90,60
Sand	0,075	3,74	50,76	57,99	32,61
Sand	0,063	3,99	9,03	10,32	22,29
Sand	< 0,063	> 3,99	19,51	22,29	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	22,29
Sand, fine	(0,063 mm - 0,200 mm):	74,84
Sand, medium	(0,2 mm - 0,6 mm):	2,35
Sand, coarse	(0,6 mm - 2 mm):	0,43
Gravel	(> 2 mm):	0,09
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,16	2,63
16%	84%	0,09	3,50
25%	75%	0,09	3,54
40%	60%	0,08	3,61
Median 50%	50%	0,08	3,65
75%	25%	0,07	3,92
84%	16%	-------	-------
90%	10%	-------	-------
95%	5%	-------	-------

Moments Statistics

Mean	3,58
Sorting	-------
Skewness	-------
Kurtosis	-------
Uniformity Coefficient	-------

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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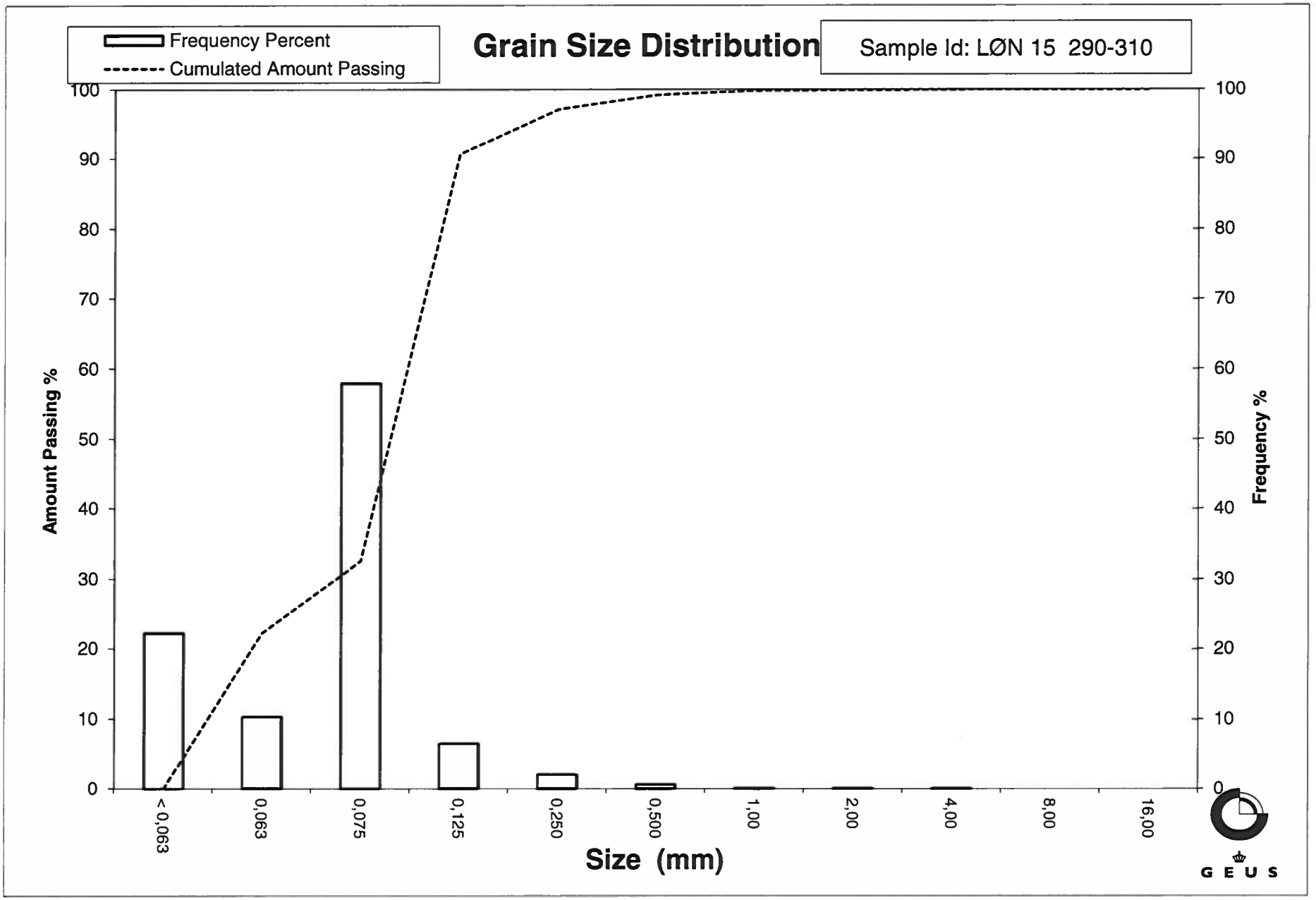
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 15 290-310
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 16 0-20
Lab. Id: 200295
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks: >2mm består af skaller

GEUS

Total Weight 94,84 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
Gravel	8,00	-3,00	0,00	0,00	100,00
Gravel	4,00	-2,00	0,00	0,00	100,00
Sand	2,00	-1,00	0,08	0,08	99,92
Sand	1,00	0,00	0,07	0,07	99,84
Sand	0,500	1,00	0,52	0,55	99,29
Sand	0,250	2,00	9,62	10,14	89,15
Sand	0,125	3,00	57,90	61,05	28,10
Sand	0,075	3,74	24,29	25,61	2,49
Sand	0,063	3,99	0,41	0,43	2,06
Sand	< 0,063	> 3,99	1,95	2,06	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	2,06
Sand, fine	(0,063 mm - 0,200 mm):	87,09
Sand, medium	(0,2 mm - 0,6 mm):	10,40
Sand, coarse	(0,6 mm - 2 mm):	0,36
Gravel	(> 2 mm):	0,08
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,31	1,69
16%	84%	0,18	2,51
25%	75%	0,17	2,58
40%	60%	0,15	2,70
Median 50%	50%	0,14	2,79
75%	25%	0,09	3,50
84%	16%	0,08	3,59
90%	10%	0,08	3,65
95%	5%	0,08	3,71

Moments Statistics

Mean	2,96
Sorting	0,58
Skewness	0,20
Kurtosis	0,90
Uniformity Coefficient	1,94

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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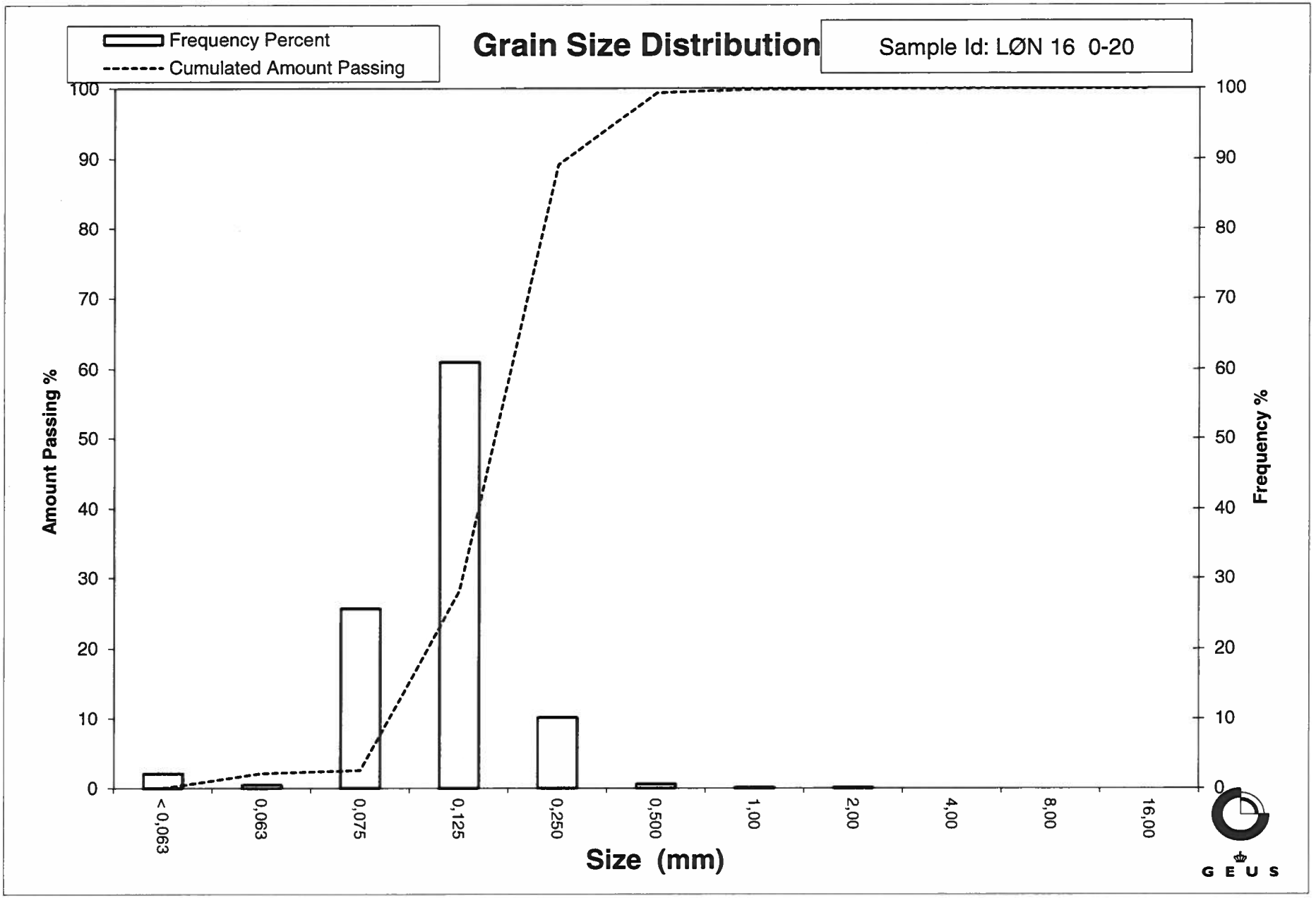
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 16 0-20
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 16 90-110
Lab. Id: 200296
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks: >2mm heraf 5g skaller

GEUS

Total Weight 122,48 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
Gravel	8,00	-3,00	0,29	0,24	99,76
Gravel	4,00	-2,00	1,97	1,61	98,15
	2,00	-1,00	6,99	5,71	92,45
Sand	1,00	0,00	11,28	9,21	83,24
Sand	0,500	1,00	14,24	11,63	71,61
Sand	0,250	2,00	30,17	24,63	46,98
Sand	0,125	3,00	53,69	43,84	3,14
Sand	0,075	3,74	2,30	1,88	1,27
Sand	0,063	3,99	0,11	0,09	1,18
Sand	< 0,063	> 3,99	1,44	1,18	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	1,18
Sand, fine	(0,063 mm - 0,200 mm):	45,80
Sand, medium	(0,2 mm - 0,6 mm):	30,17
Sand, coarse	(0,6 mm - 2 mm):	15,30
Gravel	(> 2 mm):	7,55
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile	Percentile		
Amount in sieve	Amount passing	d(mm)	Φ
5%	95%	2,36	-1,24
16%	84%	1,03	-0,05
25%	75%	0,56	0,83
40%	60%	0,31	1,71
Median 50%	50%	0,26	1,93
75%	25%	0,15	2,71
84%	16%	0,14	2,82
90%	10%	0,13	2,90
95%	5%	0,13	2,97

Moments Statistics

Mean	1,57
Sorting	1,36
Skewness	-0,44
Kurtosis	0,92
Uniformity Coefficient	2,29

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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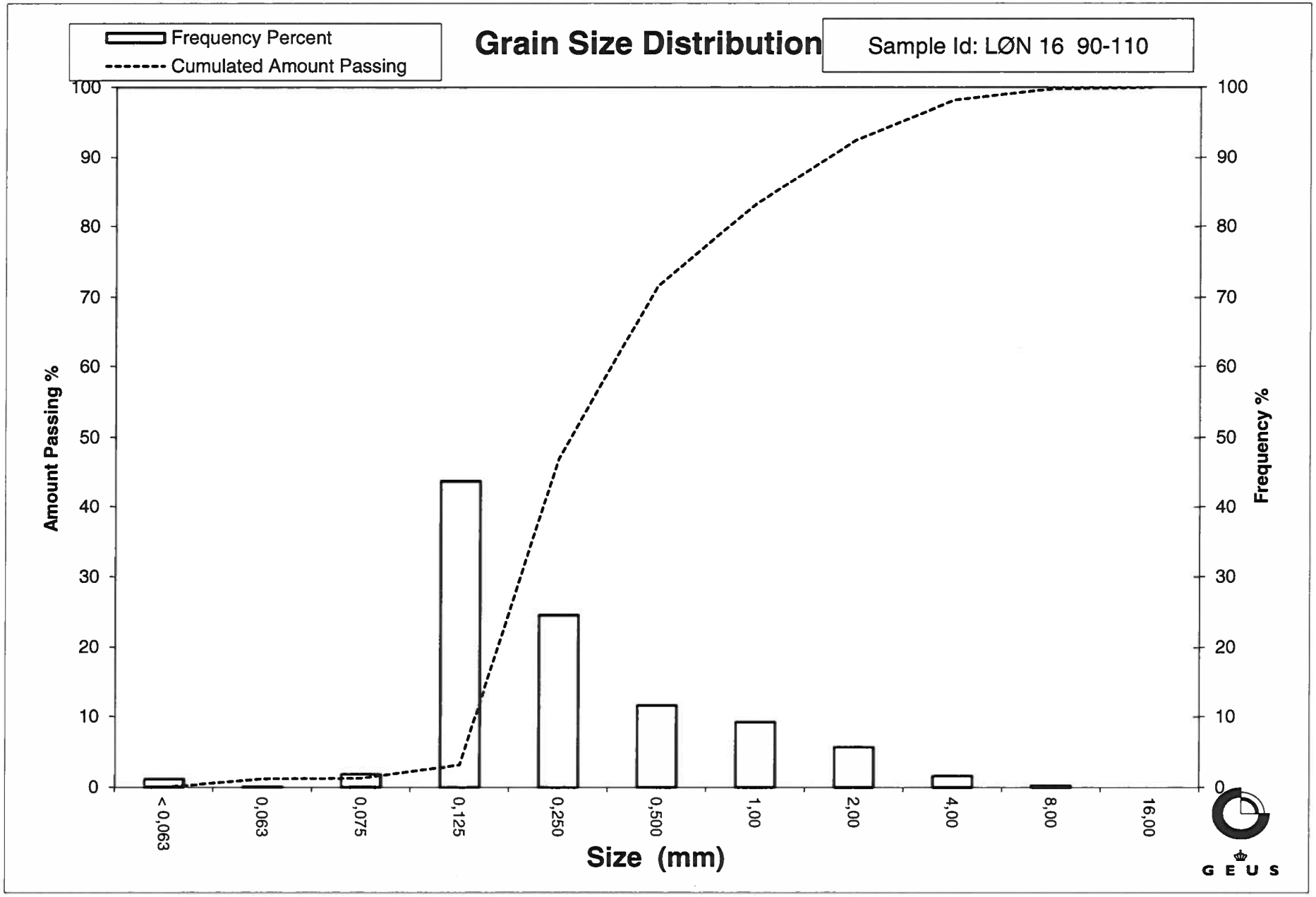
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 16 90-110
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 16 130-150
Lab. Id: 200297
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks:

GEUS

Total Weight 93,22 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
	8,00	-3,00	0,00	0,00	100,00
	4,00	-2,00	0,00	0,00	100,00
	2,00	-1,00	0,02	0,02	99,98
Sand	1,00	0,00	0,08	0,09	99,89
	0,500	1,00	0,62	0,67	99,23
	0,250	2,00	1,83	1,96	97,26
	0,125	3,00	28,09	30,13	67,13
	0,075	3,74	54,20	58,14	8,99
	0,063	3,99	2,34	2,51	6,48
	< 0,063	> 3,99	6,04	6,48	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	6,48
Sand, fine	(0,063 mm - 0,200 mm):	90,79
Sand, medium	(0,2 mm - 0,6 mm):	2,28
Sand, coarse	(0,6 mm - 2 mm):	0,43
Gravel	(> 2 mm):	0,02
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,18	2,51
16%	84%	0,16	2,68
25%	75%	0,14	2,84
40%	60%	0,09	3,50
Median 50%	50%	0,09	3,55
75%	25%	0,08	3,66
84%	16%	0,08	3,70
90%	10%	0,08	3,73
95%	5%	-------	-------

Moments Statistics

Mean	3,31
Sorting	-------
Skewness	-------
Kurtosis	-------
Uniformity Coefficient	1,17

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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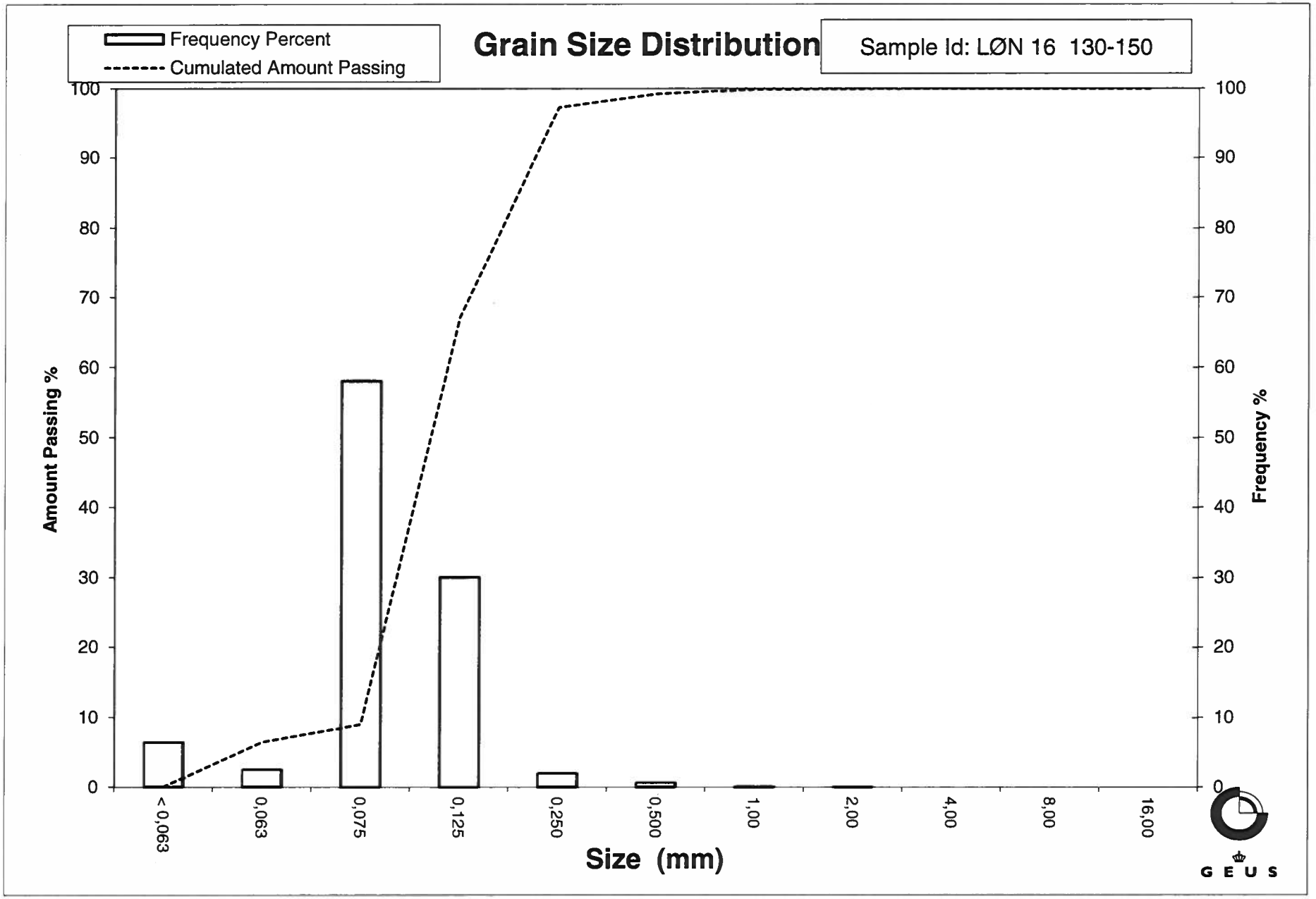
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 16 130-150
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 16 200-220
Lab. Id: 200298
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks:

GEUS

Total Weight 88,53 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
Gravel	8,00	-3,00	0,00	0,00	100,00
Gravel	4,00	-2,00	0,00	0,00	100,00
Sand	2,00	-1,00	0,06	0,07	99,93
Sand	1,00	0,00	0,07	0,08	99,85
Sand	0,500	1,00	0,15	0,17	99,68
Sand	0,250	2,00	0,42	0,47	99,21
Sand	0,125	3,00	15,39	17,38	81,83
Sand	0,075	3,74	60,21	68,01	13,81
Sand	0,063	3,99	4,57	5,16	8,65
Sand	< 0,063	> 3,99	7,66	8,65	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	8,65
Sand, fine	(0,063 mm - 0,200 mm):	90,56
Sand, medium	(0,2 mm - 0,6 mm):	0,56
Sand, coarse	(0,6 mm - 2 mm):	0,17
Gravel	(> 2 mm):	0,07
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,17	2,58
16%	84%	0,13	2,92
25%	75%	0,09	3,50
40%	60%	0,09	3,55
Median 50%	50%	0,08	3,59
75%	25%	0,08	3,69
84%	16%	0,08	3,73
90%	10%	0,07	3,92
95%	5%	-------	-------

Moments Statistics

Mean	3,41
Sorting	-------
Skewness	-------
Kurtosis	-------
Uniformity Coefficient	1,29

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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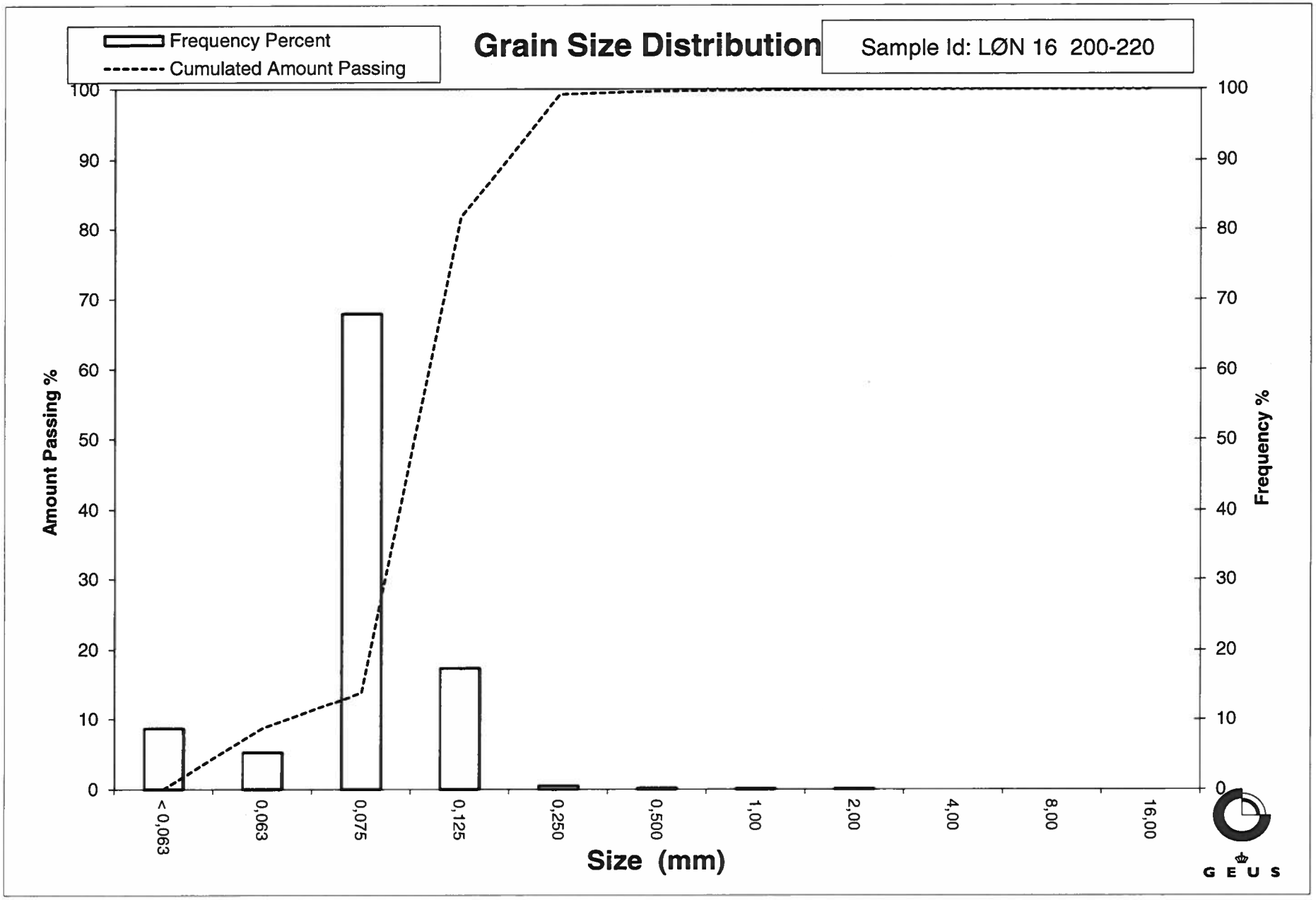
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 16 200-220
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 16 300-320
Lab. Id: 200299
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks:

Total Weight 100,76 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
	8,00	-3,00	0,00	0,00	100,00
	4,00	-2,00	0,00	0,00	100,00
	2,00	-1,00	0,00	0,00	100,00
Sand	1,00	0,00	0,00	0,00	100,00
	0,500	1,00	0,00	0,00	100,00
	0,250	2,00	0,27	0,27	99,73
	0,125	3,00	13,14	13,04	86,69
	0,075	3,74	72,06	71,52	15,17
	0,063	3,99	4,94	4,90	10,27
	< 0,063	> 3,99	10,35	10,27	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	10,27
Sand, fine	(0,063 mm - 0,200 mm):	89,46
Sand, medium	(0,2 mm - 0,6 mm):	0,27
Sand, coarse	(0,6 mm - 2 mm):	0,00
Gravel	(> 2 mm):	0,00
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile	Percentile		
Amount in sieve	Amount passing	d(mm)	Φ
5%	95%	0,16	2,64
16%	84%	0,09	3,48
25%	75%	0,09	3,51
40%	60%	0,08	3,57
Median 50%	50%	0,08	3,60
75%	25%	0,08	3,70
84%	16%	0,08	3,73
90%	10%	-------	-------
95%	5%	-------	-------

Moments Statistics

Mean	3,61
Sorting	-------
Skewness	-------
Kurtosis	-------
Uniformity Coefficient	-------

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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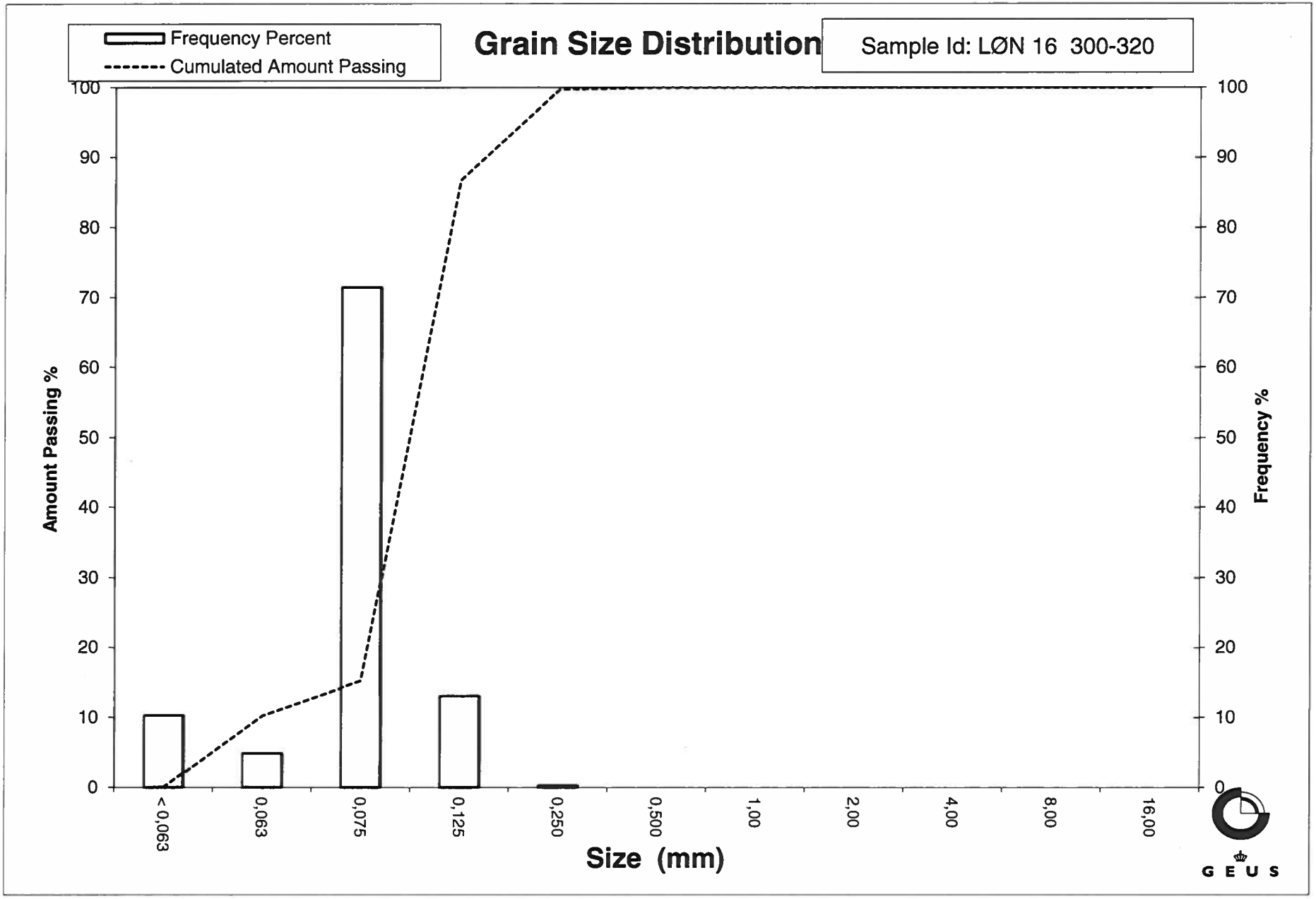
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 16 300-320
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 16 400-420
Lab. Id: 200300
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks:

GEUS

Total Weight 99,44 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
	8,00	-3,00	0,00	0,00	100,00
	4,00	-2,00	0,00	0,00	100,00
	2,00	-1,00	0,00	0,00	100,00
Sand	1,00	0,00	0,00	0,00	100,00
	0,500	1,00	0,17	0,17	99,83
	0,250	2,00	0,96	0,97	98,86
	0,125	3,00	7,77	7,81	91,05
	0,075	3,74	73,73	74,15	16,90
	0,063	3,99	6,25	6,29	10,62
	< 0,063	> 3,99	10,56	10,62	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	10,62
Sand, fine	(0,063 mm - 0,200 mm):	88,24
Sand, medium	(0,2 mm - 0,6 mm):	1,05
Sand, coarse	(0,6 mm - 2 mm):	0,09
Gravel	(> 2 mm):	0,00
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,15	2,71
16%	84%	0,09	3,50
25%	75%	0,09	3,53
40%	60%	0,08	3,58
Median 50%	50%	0,08	3,61
75%	25%	0,08	3,71
84%	16%	0,07	3,77
90%	10%	-------	-------
95%	5%	-------	-------

Moments Statistics

Mean	3,63
Sorting	-------
Skewness	-------
Kurtosis	-------
Uniformity Coefficient	-------

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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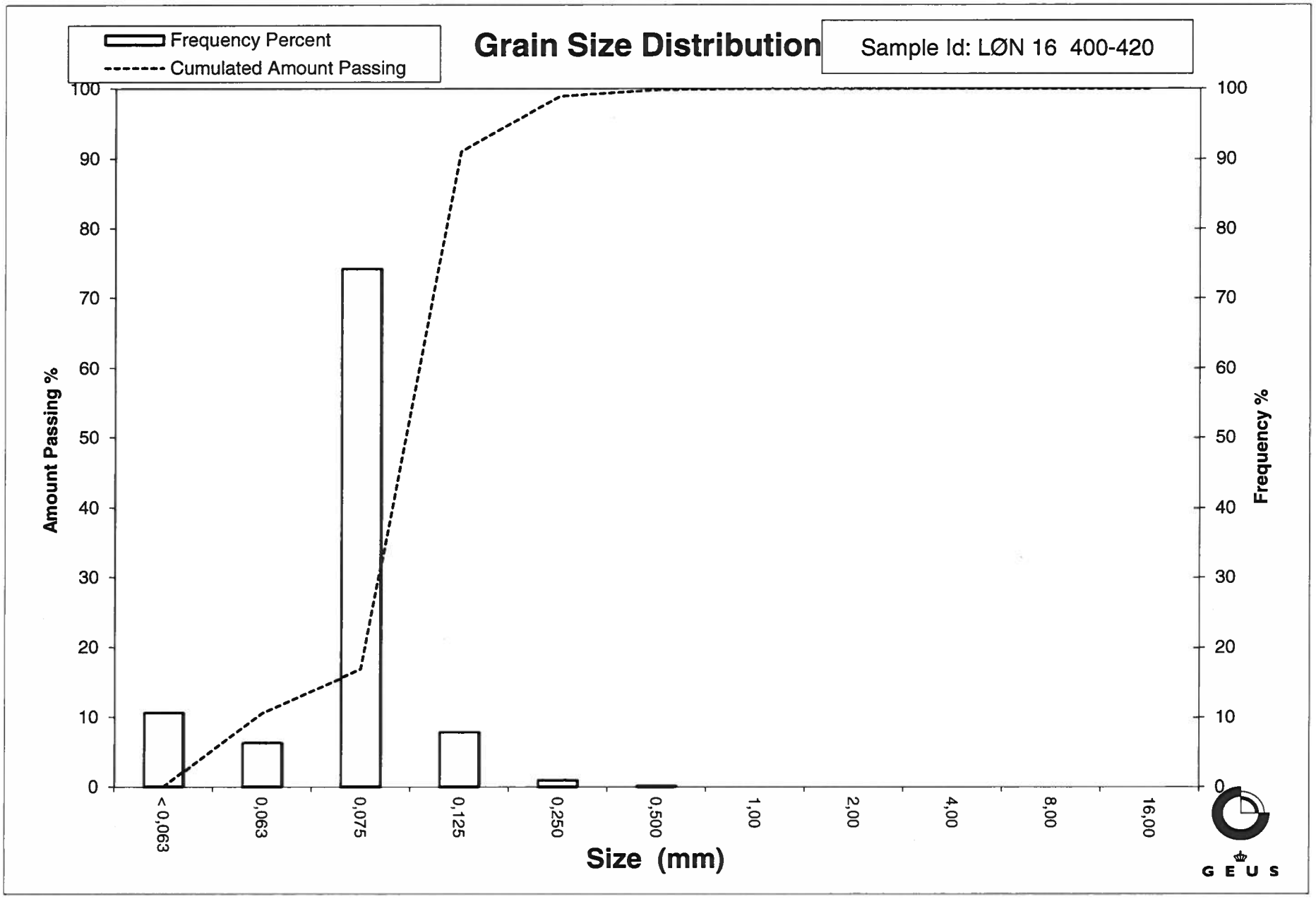
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 16 400-420
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 16 500-520
Lab. Id: 200301
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks:

GEUS

Total Weight 106,42 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
	8,00	-3,00	0,00	0,00	100,00
	4,00	-2,00	0,00	0,00	100,00
	2,00	-1,00	0,00	0,00	100,00
Sand	1,00	0,00	0,17	0,16	99,84
	0,500	1,00	1,26	1,18	98,66
	0,250	2,00	5,32	5,00	93,66
	0,125	3,00	14,82	13,93	79,73
	0,075	3,74	68,36	64,24	15,50
	0,063	3,99	4,73	4,44	11,05
	< 0,063	> 3,99	11,76	11,05	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	11,05
Sand, fine	(0,063 mm - 0,200 mm):	82,61
Sand, medium	(0,2 mm - 0,6 mm):	5,56
Sand, coarse	(0,6 mm - 2 mm):	0,78
Gravel	(> 2 mm):	0,00
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,28	1,85
16%	84%	0,14	2,82
25%	75%	0,09	3,49
40%	60%	0,09	3,55
Median 50%	50%	0,08	3,59
75%	25%	0,08	3,69
84%	16%	0,08	3,73
90%	10%	-------	-------
95%	5%	-------	-------

Moments Statistics

Mean	3,38
Sorting	-------
Skewness	-------
Kurtosis	-------
Uniformity Coefficient	-------

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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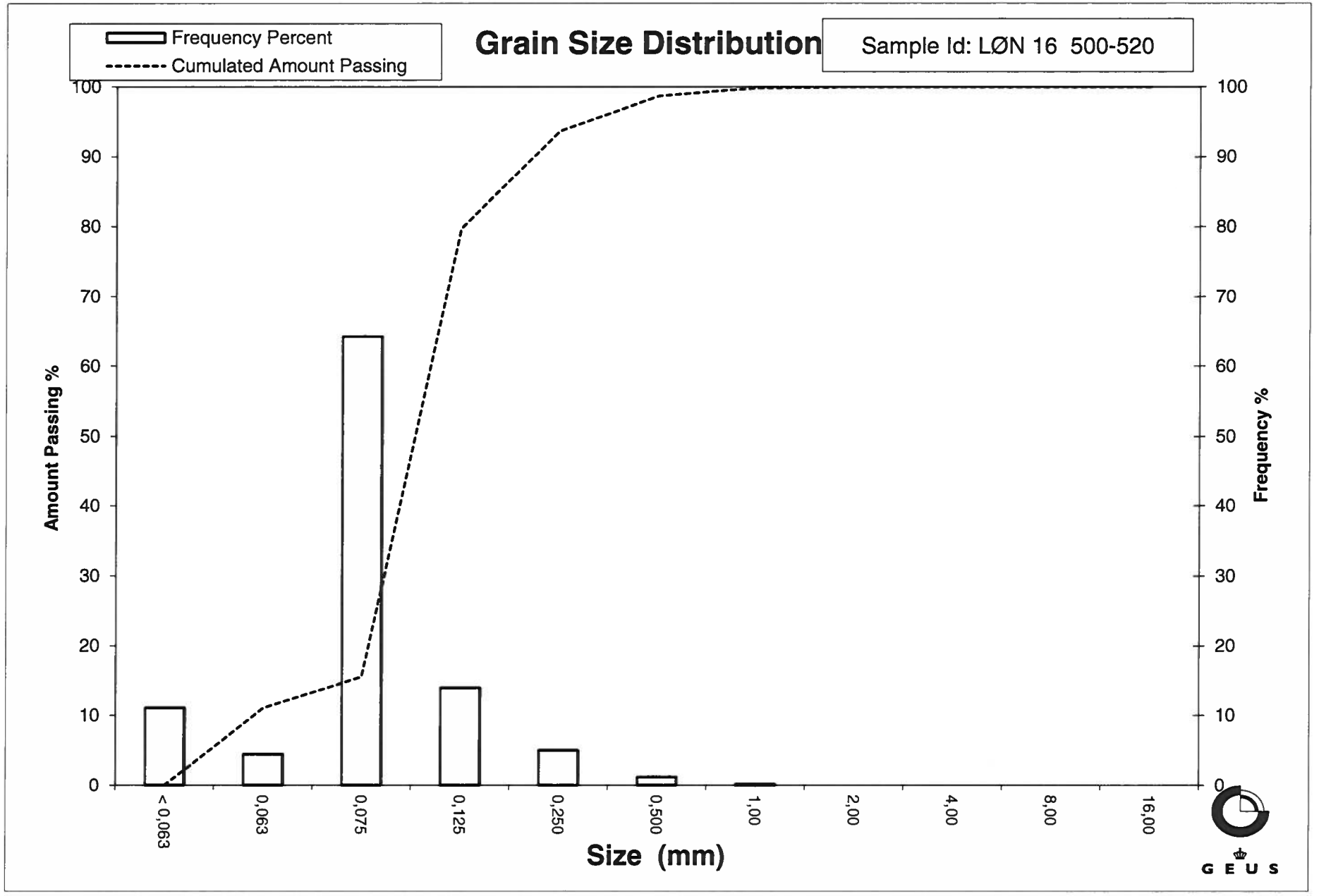
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 16 500-520
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 16 560-580
Lab. Id: 200302
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks: >2mm heraf 0,05g skaller

GEUS

Total Weight 100,96 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
Gravel	8,00	-3,00	0,00	0,00	100,00
Gravel	4,00	-2,00	0,00	0,00	100,00
	2,00	-1,00	0,16	0,16	99,84
Sand	1,00	0,00	0,39	0,39	99,46
Sand	0,500	1,00	3,19	3,16	96,30
Sand	0,250	2,00	15,54	15,39	80,90
Sand	0,125	3,00	17,36	17,19	63,71
Sand	0,075	3,74	49,14	48,67	15,04
Sand	0,063	3,99	5,11	5,06	9,97
Sand	< 0,063	> 3,99	10,07	9,97	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	9,97
Sand, fine	(0,063 mm - 0,200 mm):	70,93
Sand, medium	(0,2 mm - 0,6 mm):	16,90
Sand, coarse	(0,6 mm - 2 mm):	2,04
Gravel	(> 2 mm):	0,16
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,35	1,53
16%	84%	0,27	1,88
25%	75%	0,16	2,63
40%	60%	0,09	3,49
Median 50%	50%	0,09	3,54
75%	25%	0,08	3,68
84%	16%	0,08	3,73
90%	10%	0,06	3,99
95%	5%	-------	-------

Moments Statistics

Mean	3,05
Sorting	-------
Skewness	-------
Kurtosis	-------
Uniformity Coefficient	1,41

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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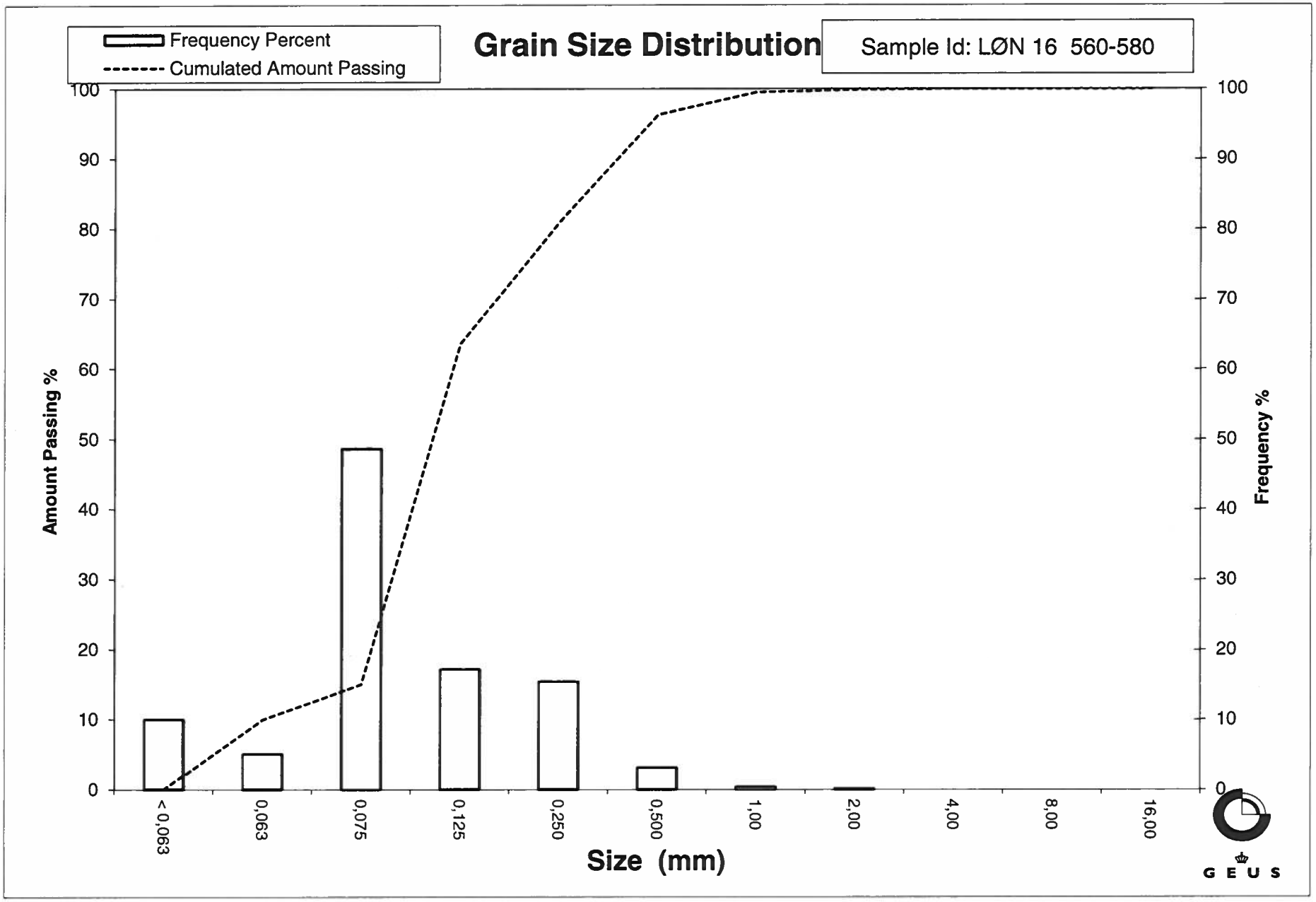
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 16 560-580
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 17 0-20
Lab. Id: 200303
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks: >2mm heraf 0,3g skaller

GEUS

Total Weight 113,87 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
	8,00	-3,00	0,00	0,00	100,00
	4,00	-2,00	0,04	0,04	99,96
	2,00	-1,00	0,52	0,46	99,51
Sand	1,00	0,00	0,39	0,34	99,17
	0,500	1,00	1,85	1,62	97,54
	0,250	2,00	26,83	23,56	73,98
	0,125	3,00	71,05	62,40	11,58
	0,075	3,74	11,92	10,47	1,12
	0,063	3,99	0,32	0,28	0,83
	< 0,063	> 3,99	0,95	0,83	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	0,83
Sand, fine	(0,063 mm - 0,200 mm):	73,14
Sand, medium	(0,2 mm - 0,6 mm):	24,34
Sand, coarse	(0,6 mm - 2 mm):	1,19
Gravel	(> 2 mm):	0,49
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,34	1,54
16%	84%	0,29	1,76
25%	75%	0,25	1,97
40%	60%	0,17	2,58
Median 50%	50%	0,16	2,65
75%	25%	0,14	2,87
84%	16%	0,13	2,96
90%	10%	0,09	3,51
95%	5%	0,08	3,63

Moments Statistics

Mean	2,46
Sorting	0,62
Skewness	-0,28
Kurtosis	0,96
Uniformity Coefficient	1,91

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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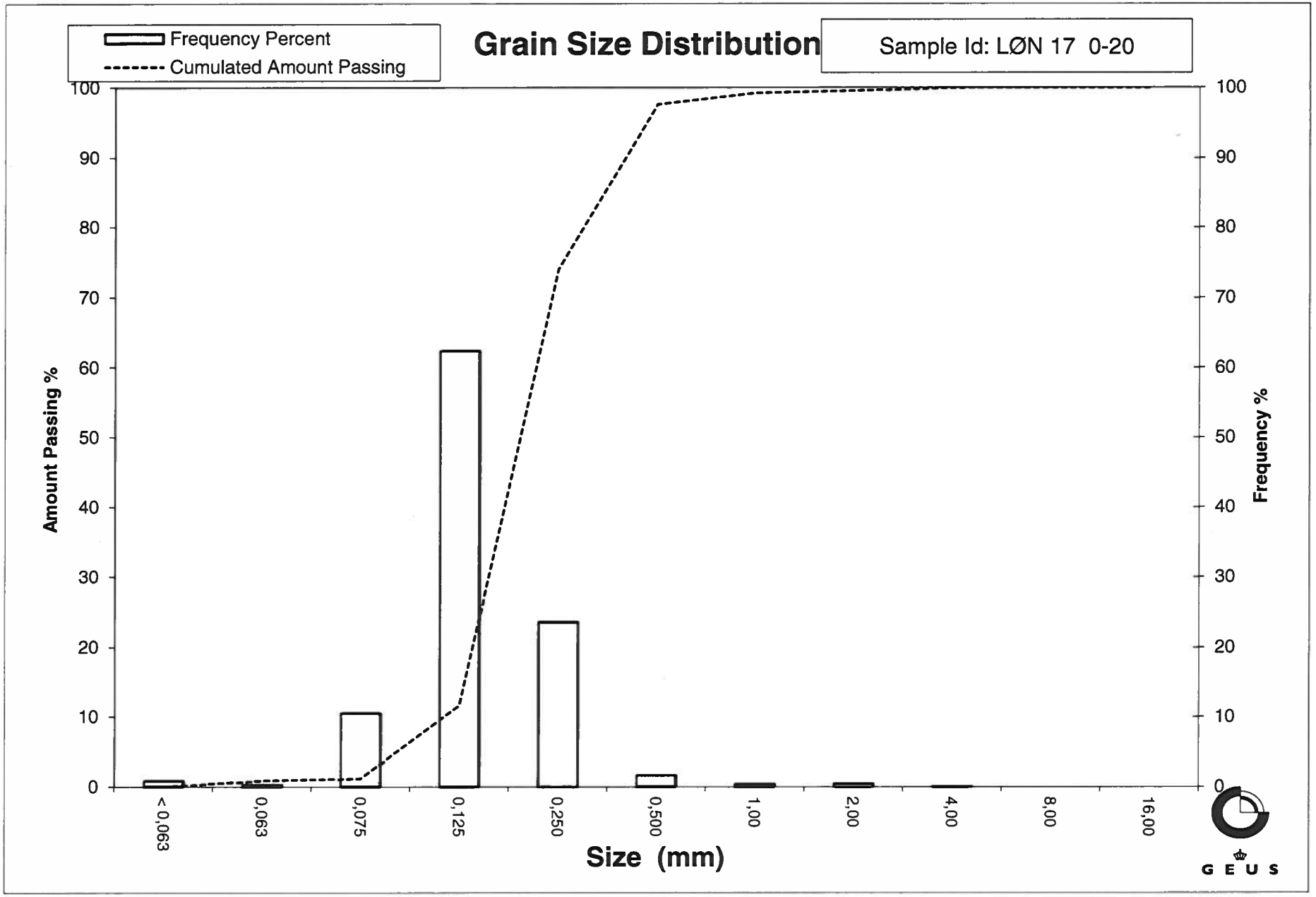
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 17 0-20
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 17 100-120
Lab. Id: 200304
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks:

GEUS

Total Weight 99,27 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
Gravel	8,00	-3,00	0,00	0,00	100,00
Gravel	4,00	-2,00	0,00	0,00	100,00
	2,00	-1,00	0,00	0,00	100,00
Sand	1,00	0,00	0,17	0,17	99,83
Sand	0,500	1,00	0,57	0,57	99,25
Sand	0,250	2,00	4,32	4,35	94,90
Sand	0,125	3,00	60,00	60,44	34,46
Sand	0,075	3,74	30,39	30,61	3,85
Sand	0,063	3,99	0,46	0,46	3,38
Sand	< 0,063	> 3,99	3,36	3,38	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	3,38
Sand, fine	(0,063 mm - 0,200 mm):	91,52
Sand, medium	(0,2 mm - 0,6 mm):	4,63
Sand, coarse	(0,6 mm - 2 mm):	0,47
Gravel	(> 2 mm):	0,00
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,25	1,99
16%	84%	0,17	2,56
25%	75%	0,16	2,63
40%	60%	0,15	2,75
Median 50%	50%	0,14	2,85
75%	25%	0,09	3,55
84%	16%	0,08	3,63
90%	10%	0,08	3,68
95%	5%	0,08	3,73

Moments Statistics

Mean	3,01
Sorting	0,53
Skewness	0,24
Kurtosis	0,77
Uniformity Coefficient	1,90

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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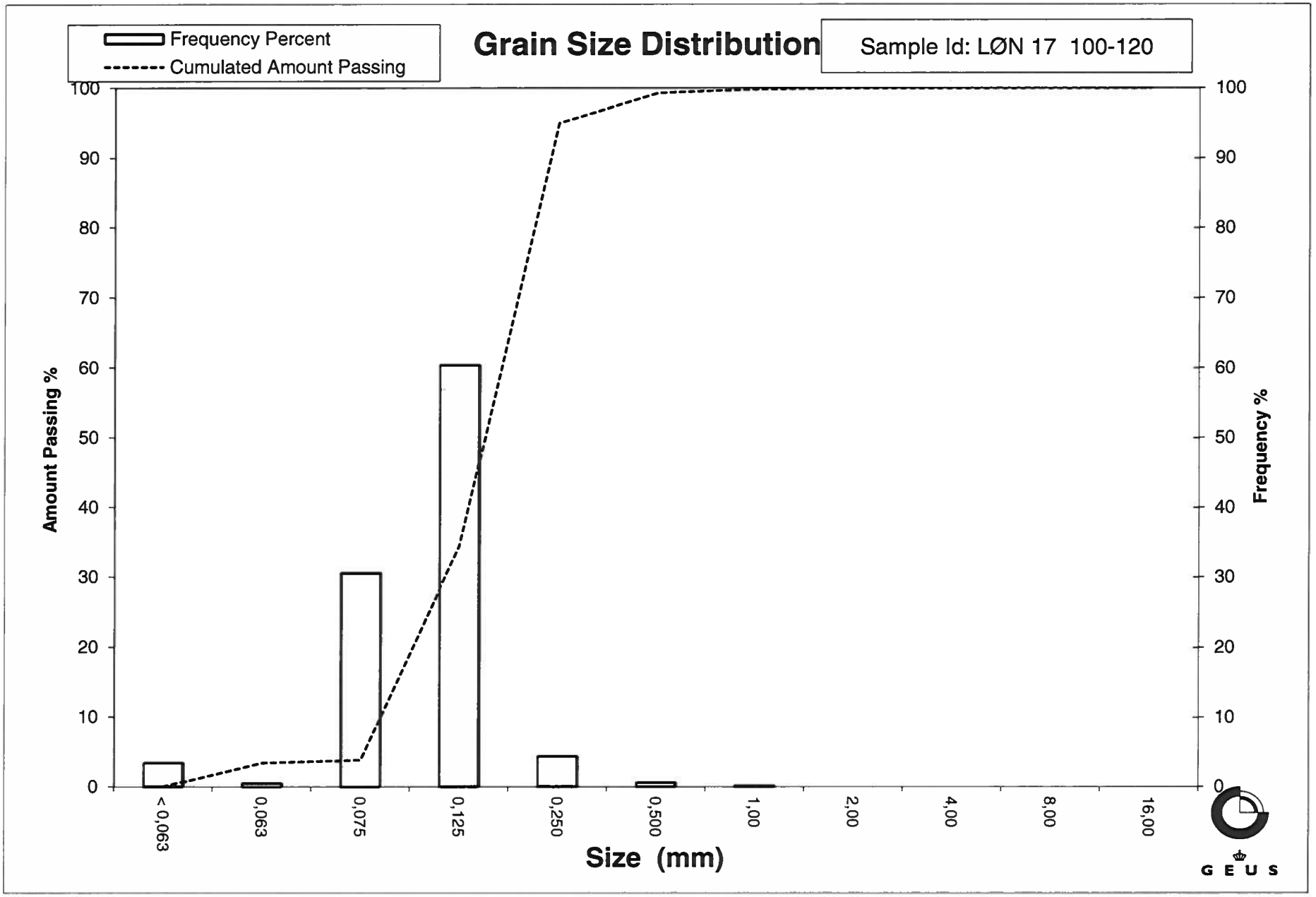
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 17 100-120
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 17 200-220
Lab. Id: 200305
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks: >2mm heraf 0,7g skaller

GEUS

Total Weight 107,39 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
	8,00	-3,00	0,44	0,41	99,59
	4,00	-2,00	0,72	0,67	98,92
	2,00	-1,00	4,36	4,06	94,86
Sand	1,00	0,00	9,17	8,54	86,32
	0,500	1,00	19,63	18,28	68,04
	0,250	2,00	32,54	30,30	37,74
	0,125	3,00	30,77	28,65	9,09
	0,075	3,74	7,76	7,23	1,86
	0,063	3,99	0,22	0,20	1,66
	< 0,063	> 3,99	1,78	1,66	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	1,66
Sand, fine	(0,063 mm - 0,200 mm):	36,08
Sand, medium	(0,2 mm - 0,6 mm):	39,01
Sand, coarse	(0,6 mm - 2 mm):	18,11
Gravel	(> 2 mm):	5,14
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile	Percentile		
Amount in sieve	Amount passing	d(mm)	Φ
5%	95%	2,03	-1,02
16%	84%	0,68	0,55
25%	75%	0,58	0,79
40%	60%	0,33	1,61
Median 50%	50%	0,29	1,77
75%	25%	0,16	2,68
84%	16%	0,14	2,85
90%	10%	0,13	2,98
95%	5%	0,08	3,62

Moments Statistics

Mean	1,73
Sorting	1,28
Skewness	-0,13
Kurtosis	1,00
Uniformity Coefficient	2,58

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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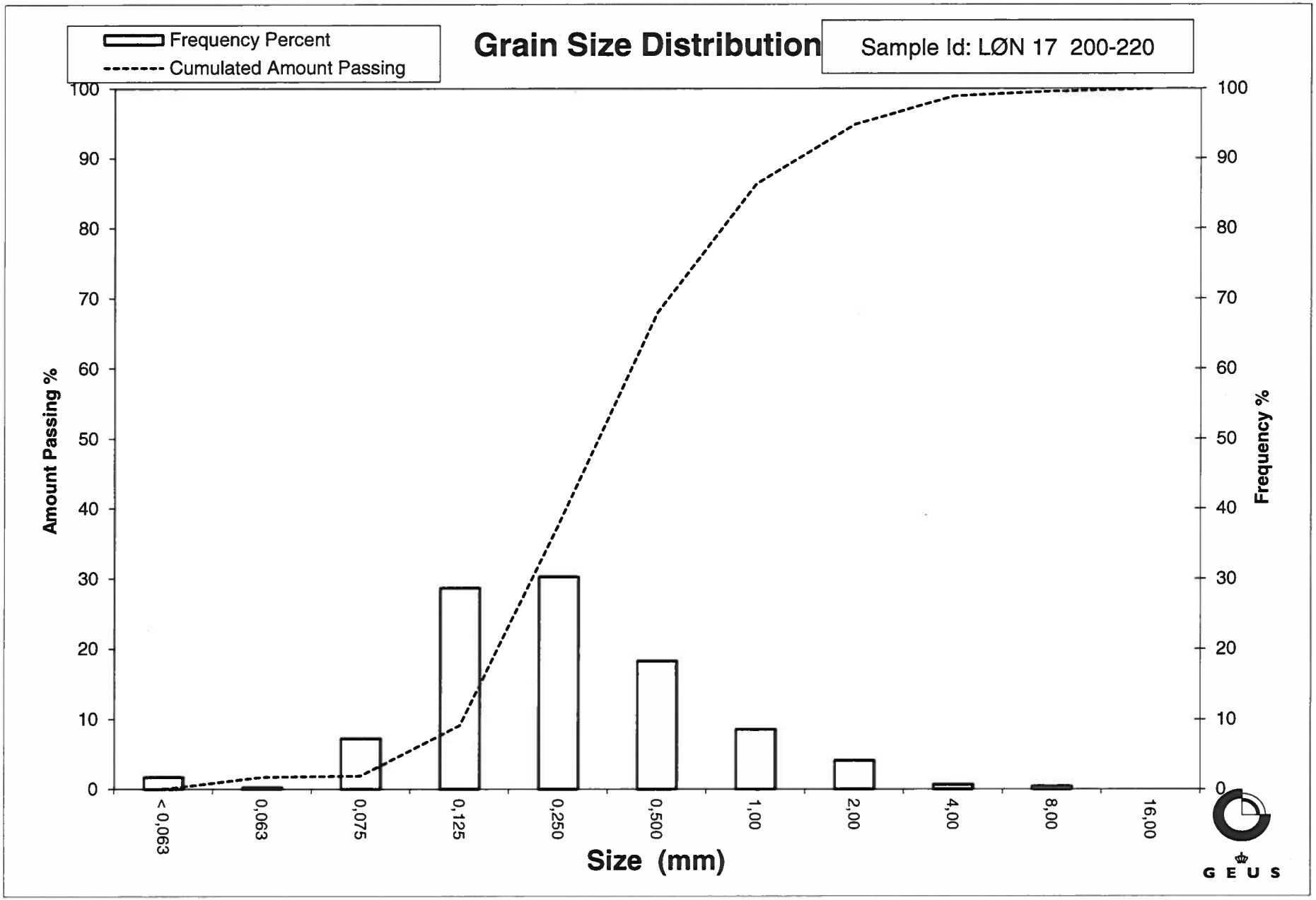
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 17 200-220
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 17 260-280
Lab. Id: 200306
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks: >4mm består af skaller

GEUS

Total Weight 96,06 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
Gravel	8,00	-3,00	0,00	0,00	100,00
Gravel	4,00	-2,00	0,03	0,03	99,97
	2,00	-1,00	0,00	0,00	99,97
Sand	1,00	0,00	0,10	0,10	99,86
Sand	0,500	1,00	0,40	0,42	99,45
Sand	0,250	2,00	4,71	4,90	94,55
Sand	0,125	3,00	54,15	56,37	38,17
Sand	0,075	3,74	34,22	35,62	2,55
Sand	0,063	3,99	0,61	0,64	1,92
Sand	< 0,063	> 3,99	1,84	1,92	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	1,92
Sand, fine	(0,063 mm - 0,200 mm):	92,63
Sand, medium	(0,2 mm - 0,6 mm):	5,10
Sand, coarse	(0,6 mm - 2 mm):	0,32
Gravel	(> 2 mm):	0,03
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,26	1,94
16%	84%	0,17	2,56
25%	75%	0,16	2,64
40%	60%	0,15	2,77
Median 50%	50%	0,14	2,87
75%	25%	0,08	3,57
84%	16%	0,08	3,63
90%	10%	0,08	3,68
95%	5%	0,08	3,72

Moments Statistics

Mean	3,02
Sorting	0,54
Skewness	0,18
Kurtosis	0,78
Uniformity Coefficient	1,87

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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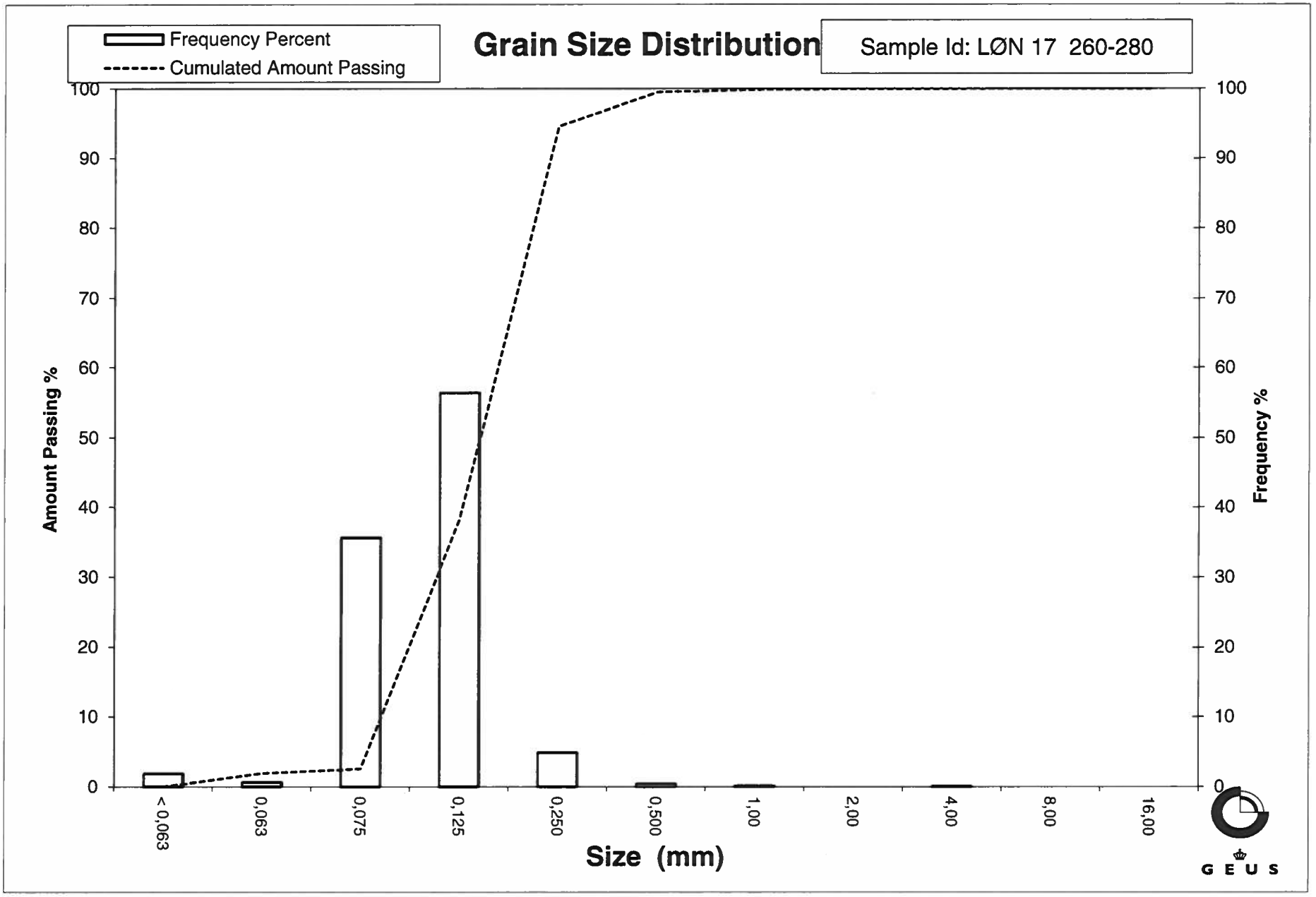
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 17 260-280
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 18 0-20
Lab. Id: 200307
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks: >2mm heraf 0,05g skaller

GEUS

Total Weight 102,51 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
	8,00	-3,00	0,00	0,00	100,00
	4,00	-2,00	0,24	0,23	99,77
	2,00	-1,00	0,19	0,19	99,58
Sand	1,00	0,00	1,18	1,15	98,43
	0,500	1,00	6,36	6,20	92,23
	0,250	2,00	49,33	48,12	44,10
	0,125	3,00	40,89	39,89	4,21
	0,075	3,74	3,66	3,57	0,64
	0,063	3,99	0,07	0,07	0,58
	< 0,063	> 3,99	0,59	0,58	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	0,58
Sand, fine	(0,063 mm - 0,200 mm):	43,53
Sand, medium	(0,2 mm - 0,6 mm):	51,08
Sand, coarse	(0,6 mm - 2 mm):	4,40
Gravel	(> 2 mm):	0,42
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,59	0,75
16%	84%	0,34	1,57
25%	75%	0,32	1,66
40%	60%	0,28	1,81
Median 50%	50%	0,26	1,93
75%	25%	0,15	2,70
84%	16%	0,14	2,82
90%	10%	0,13	2,91
95%	5%	0,13	2,99

Moments Statistics

Mean	2,11
Sorting	0,65
Skewness	0,19
Kurtosis	0,88
Uniformity Coefficient	2,14

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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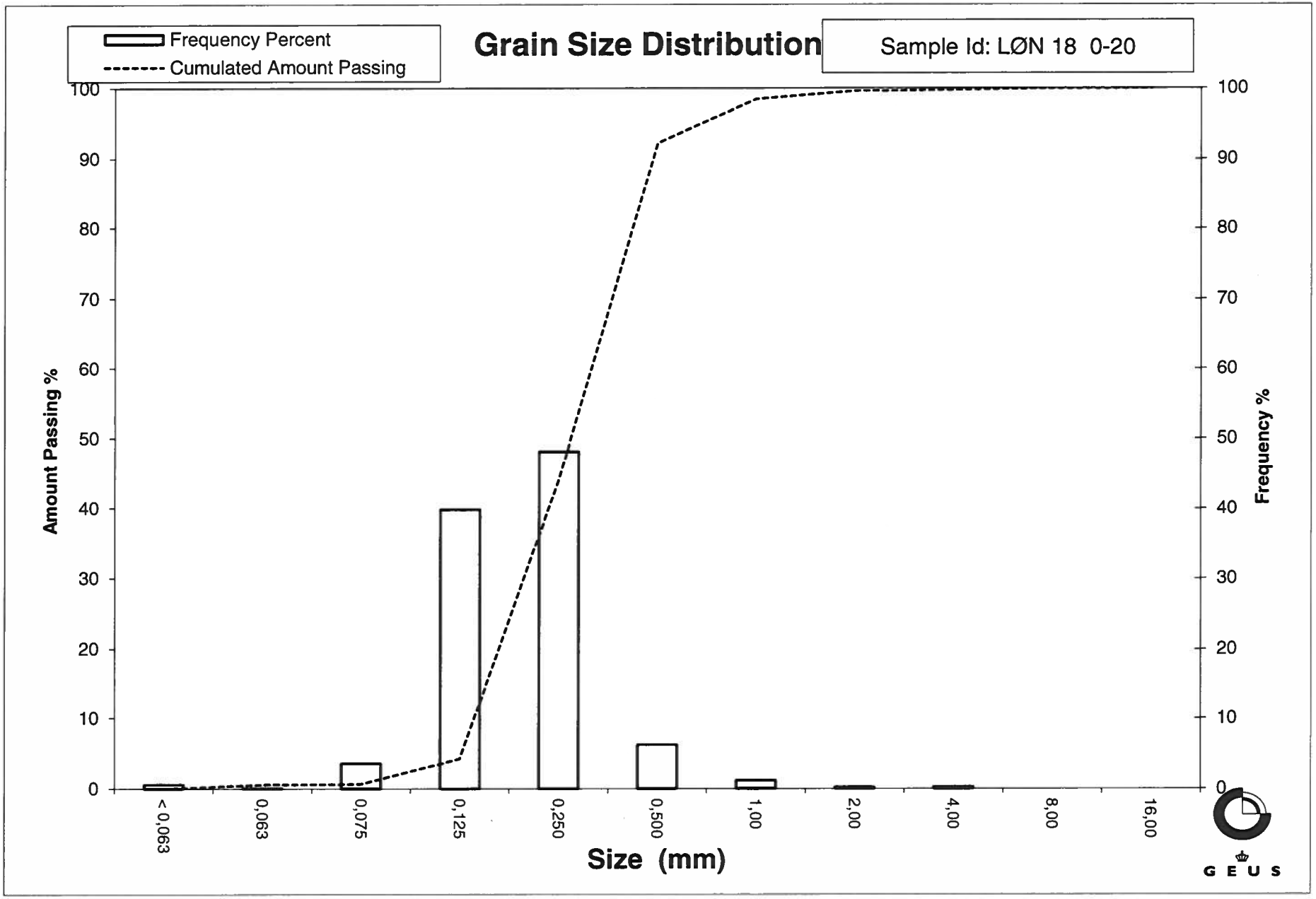
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 18 0-20
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 18 100-120
Lab. Id: 200308
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks: >2mm heraf 0,2g skaller

Total Weight 99,97 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
	8,00	-3,00	0,00	0,00	100,00
	4,00	-2,00	0,00	0,00	100,00
	2,00	-1,00	0,27	0,27	99,73
Sand	1,00	0,00	0,12	0,12	99,61
	0,500	1,00	0,76	0,76	98,85
	0,250	2,00	11,81	11,81	87,04
	0,125	3,00	77,66	77,68	9,35
	0,075	3,74	8,67	8,67	0,68
	0,063	3,99	0,06	0,06	0,62
	< 0,063	> 3,99	0,62	0,62	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	0,62
Sand, fine	(0,063 mm - 0,200 mm):	86,42
Sand, medium	(0,2 mm - 0,6 mm):	12,18
Sand, coarse	(0,6 mm - 2 mm):	0,52
Gravel	(> 2 mm):	0,27
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,32	1,64
16%	84%	0,18	2,49
25%	75%	0,17	2,54
40%	60%	0,16	2,64
Median 50%	50%	0,15	2,70
75%	25%	0,14	2,88
84%	16%	0,13	2,95
90%	10%	0,13	2,99
95%	5%	0,08	3,60

Moments Statistics

Mean	2,71
Sorting	0,41
Skewness	0,00
Kurtosis	2,41
Uniformity Coefficient	1,28

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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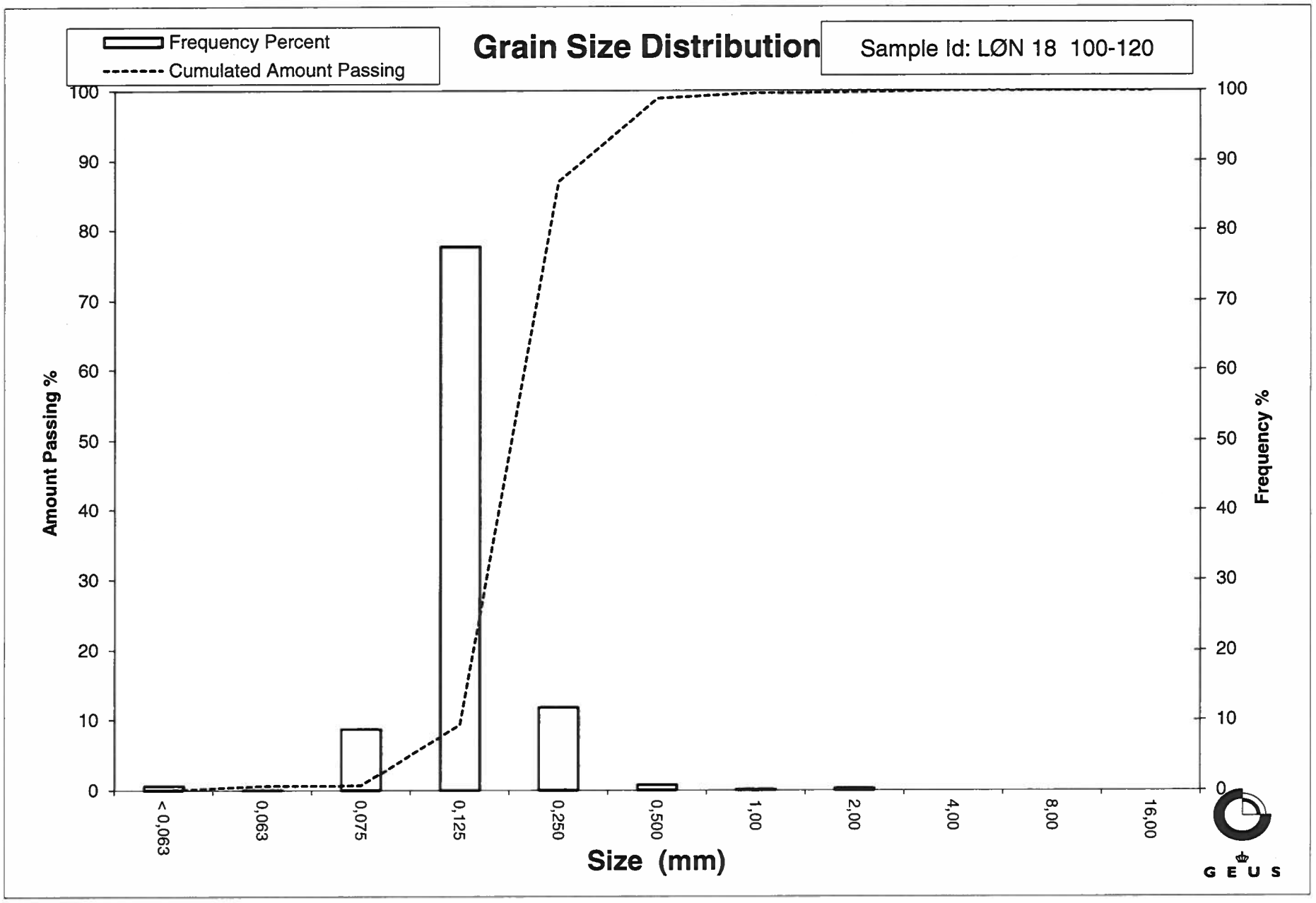
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 18 100-120
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 18 200-220
Lab. Id: 200309
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks:

Total Weight 100,88 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
	8,00	-3,00	0,00	0,00	100,00
	4,00	-2,00	0,00	0,00	100,00
	2,00	-1,00	0,00	0,00	100,00
Sand	1,00	0,00	0,19	0,19	99,81
	0,500	1,00	1,25	1,24	98,57
	0,250	2,00	10,05	9,96	88,61
	0,125	3,00	73,63	72,99	15,62
	0,075	3,74	14,73	14,60	1,02
	0,063	3,99	0,18	0,18	0,84
	< 0,063	> 3,99	0,85	0,84	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	0,84
Sand, fine	(0,063 mm - 0,200 mm):	87,77
Sand, medium	(0,2 mm - 0,6 mm):	10,55
Sand, coarse	(0,6 mm - 2 mm):	0,84
Gravel	(> 2 mm):	0,00
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile	Percentile		
Amount in sieve	Amount passing	d(mm)	Φ
5%	95%	0,32	1,66
16%	84%	0,18	2,50
25%	75%	0,17	2,56
40%	60%	0,16	2,66
Median 50%	50%	0,15	2,73
75%	25%	0,13	2,92
84%	16%	0,13	3,00
90%	10%	0,08	3,57
95%	5%	0,08	3,66

Moments Statistics

Mean	2,74
Sorting	0,43
Skewness	0,01
Kurtosis	2,27
Uniformity Coefficient	1,88

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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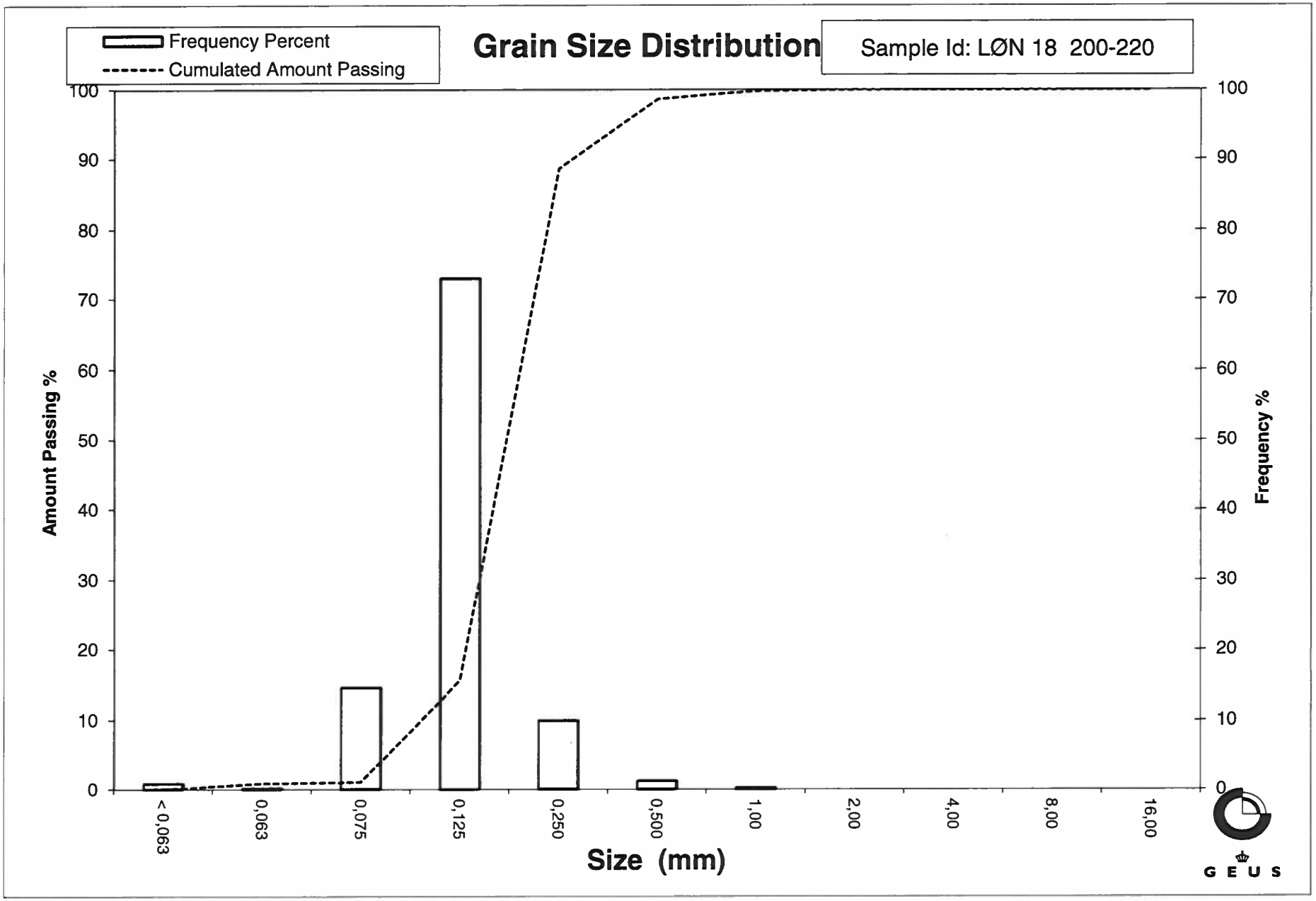
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 18 200-220
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 18 300-320
Lab. Id: 200310
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks: >2mm heraf 0,1g skaller

Total Weight 108,93 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
	8,00	-3,00	0,00	0,00	100,00
	4,00	-2,00	0,00	0,00	100,00
	2,00	-1,00	0,24	0,22	99,78
Sand	1,00	0,00	0,86	0,79	98,99
	0,500	1,00	10,22	9,38	89,61
	0,250	2,00	65,54	60,17	29,44
	0,125	3,00	30,15	27,68	1,76
	0,075	3,74	1,20	1,10	0,66
	0,063	3,99	0,04	0,04	0,62
	< 0,063	> 3,99	0,68	0,62	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	0,62
Sand, fine	(0,063 mm - 0,200 mm):	28,82
Sand, medium	(0,2 mm - 0,6 mm):	64,63
Sand, coarse	(0,6 mm - 2 mm):	5,70
Gravel	(> 2 mm):	0,22
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile	Percentile		
Amount in sieve	Amount passing	d(mm)	Φ
5%	95%	0,62	0,69
16%	84%	0,35	1,53
25%	75%	0,33	1,60
40%	60%	0,30	1,72
Median 50%	50%	0,29	1,81
75%	25%	0,17	2,55
84%	16%	0,15	2,71
90%	10%	0,14	2,82
95%	5%	0,13	2,93

Moments Statistics

Mean	2,02
Sorting	0,63
Skewness	0,27
Kurtosis	0,97
Uniformity Coefficient	2,15

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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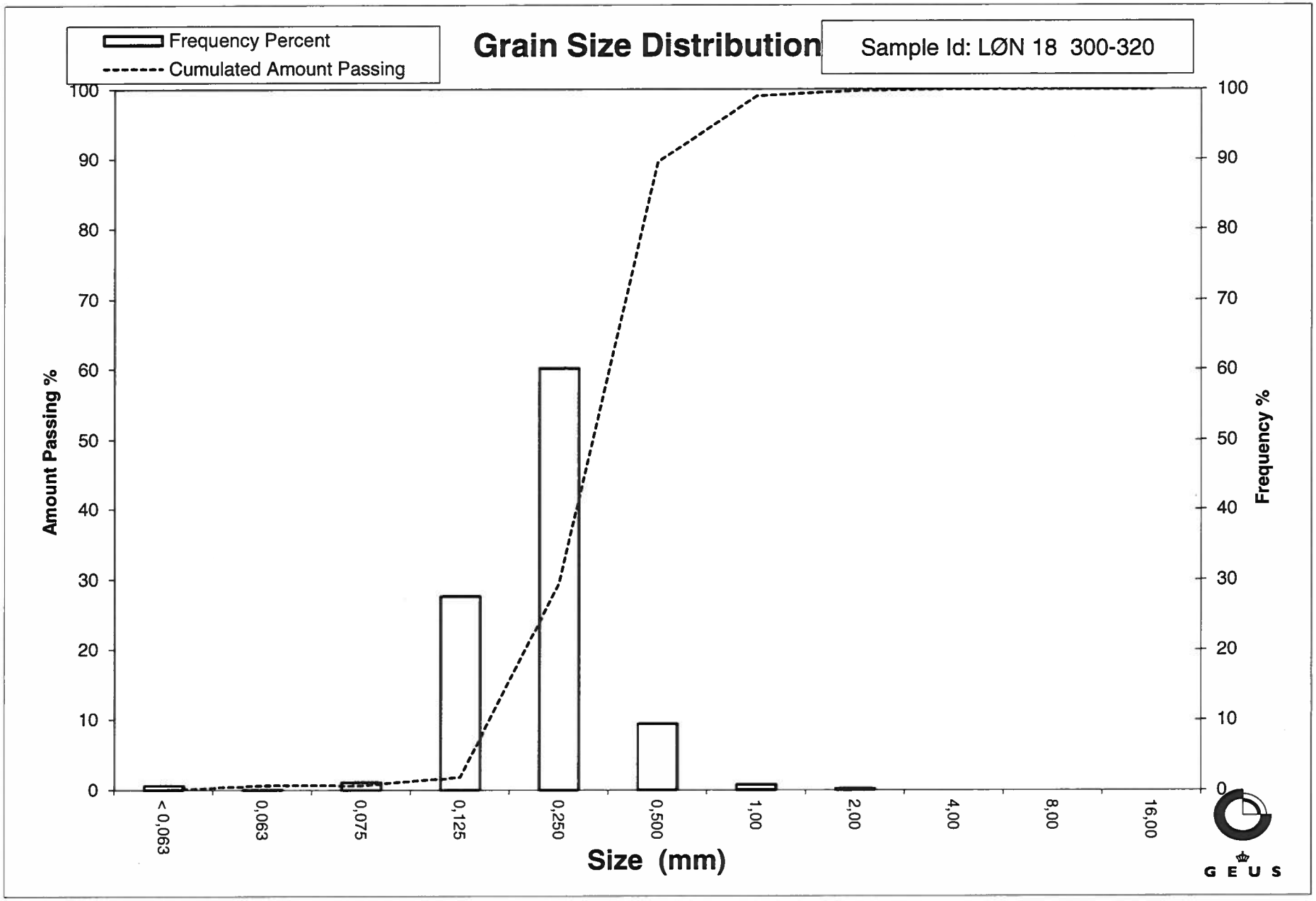
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 18 300-320
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 19 0-20
Lab. Id: 200311
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks:

GEUS

Total Weight 103,9 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
	8,00	-3,00	0,00	0,00	100,00
	4,00	-2,00	0,00	0,00	100,00
	2,00	-1,00	0,00	0,00	100,00
Sand	1,00	0,00	0,12	0,12	99,88
	0,500	1,00	1,98	1,91	97,98
	0,250	2,00	48,14	46,33	51,65
	0,125	3,00	50,23	48,34	3,30
	0,075	3,74	2,32	2,23	1,07
	0,063	3,99	0,13	0,13	0,94
	< 0,063	> 3,99	0,98	0,94	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	0,94
Sand, fine	(0,063 mm - 0,200 mm):	50,70
Sand, medium	(0,2 mm - 0,6 mm):	47,24
Sand, coarse	(0,6 mm - 2 mm):	1,11
Gravel	(> 2 mm):	0,00
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,35	1,52
16%	84%	0,32	1,63
25%	75%	0,30	1,72
40%	60%	0,27	1,89
Median 50%	50%	0,18	2,49
75%	25%	0,15	2,74
84%	16%	0,14	2,84
90%	10%	0,13	2,91
95%	5%	0,13	2,98

Moments Statistics

Mean	2,32
Sorting	0,52
Skewness	-0,37
Kurtosis	0,59
Uniformity Coefficient	2,03

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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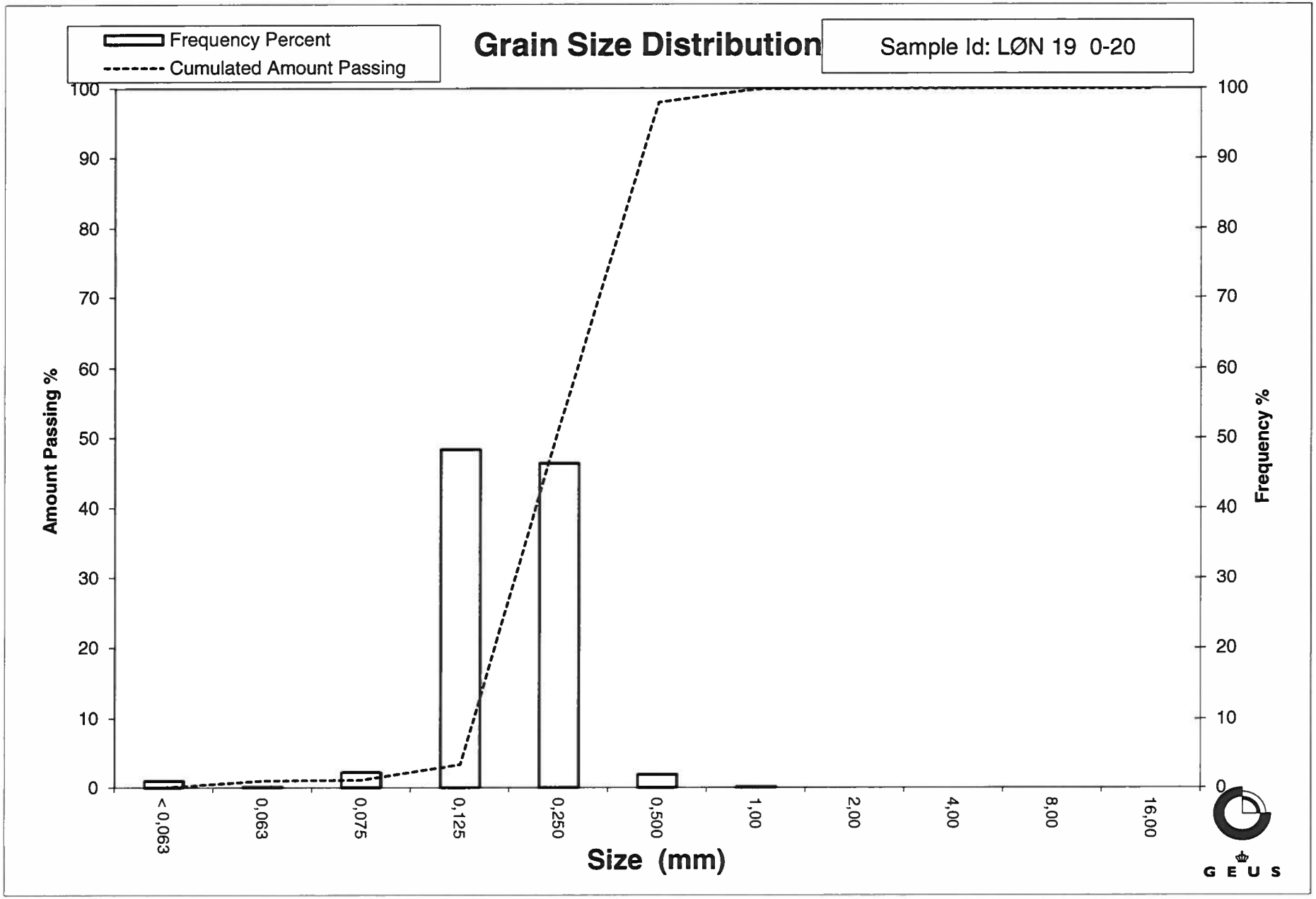
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 19 0-20
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 19 100-120
Lab. Id: 200312
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks: >2mm heraf 0,1g skaller

Total Weight 97,96 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
	8,00	-3,00	0,00	0,00	100,00
	4,00	-2,00	0,24	0,24	99,76
	2,00	-1,00	0,06	0,06	99,69
Sand	1,00	0,00	0,20	0,20	99,49
	0,500	1,00	0,61	0,62	98,87
	0,250	2,00	5,24	5,35	93,52
	0,125	3,00	67,07	68,47	25,05
	0,075	3,74	22,60	23,07	1,98
	0,063	3,99	0,41	0,42	1,56
	< 0,063	> 3,99	1,53	1,56	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	1,56
Sand, fine	(0,063 mm - 0,200 mm):	91,96
Sand, medium	(0,2 mm - 0,6 mm):	5,65
Sand, coarse	(0,6 mm - 2 mm):	0,53
Gravel	(> 2 mm):	0,31
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,28	1,84
16%	84%	0,17	2,54
25%	75%	0,17	2,60
40%	60%	0,15	2,71
Median 50%	50%	0,15	2,79
75%	25%	0,09	3,47
84%	16%	0,08	3,57
90%	10%	0,08	3,64
95%	5%	0,08	3,70

Moments Statistics

Mean	2,96
Sorting	0,54
Skewness	0,25
Kurtosis	0,87
Uniformity Coefficient	1,91

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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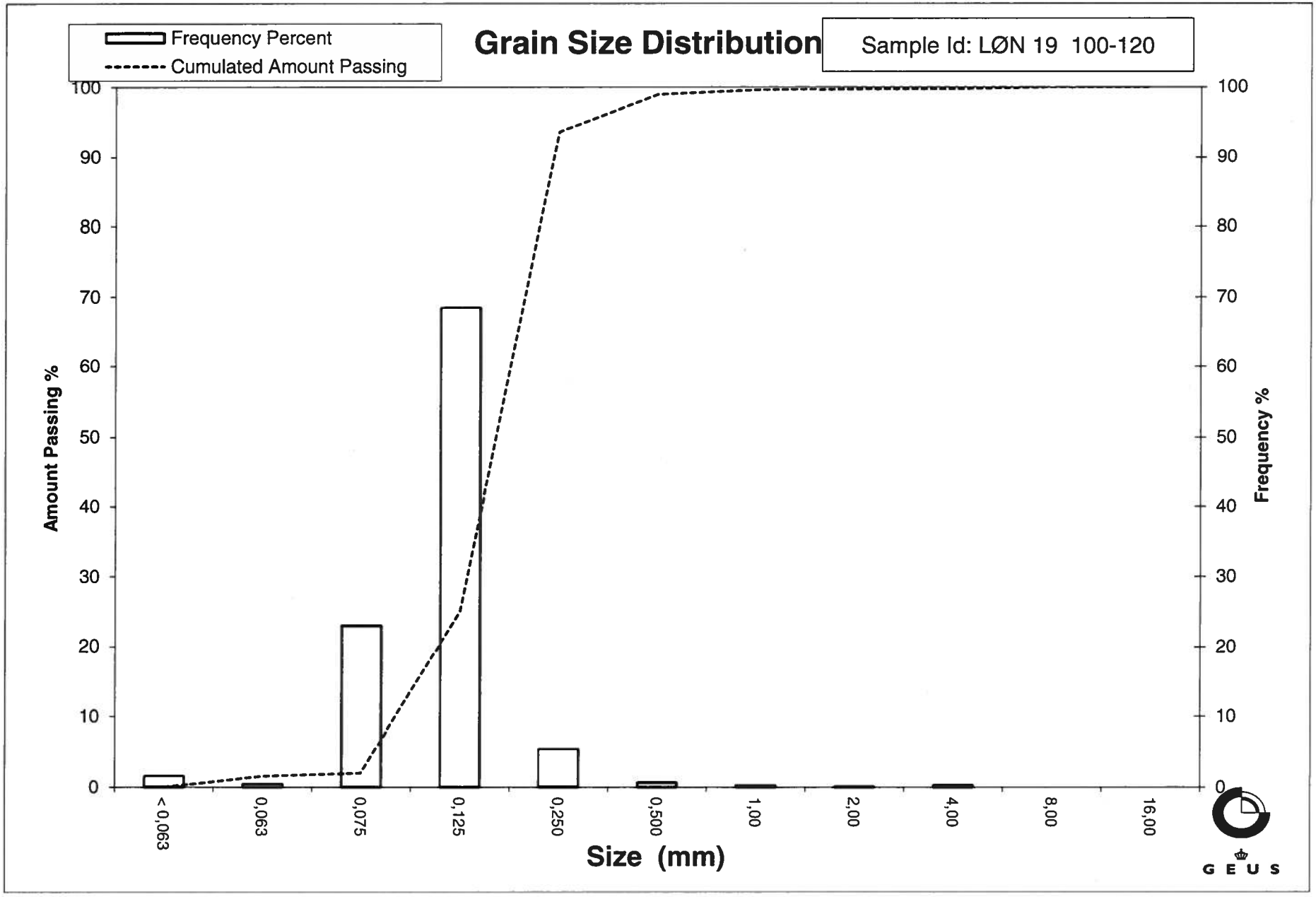
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 19 100-120
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 19 200-220
Lab. Id: 200313
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks: >2mm heraf 0,1g skaller

GEUS

Total Weight 100,34 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
Gravel	8,00	-3,00	0,00	0,00	100,00
Gravel	4,00	-2,00	0,00	0,00	100,00
	2,00	-1,00	0,07	0,07	99,93
Sand	1,00	0,00	0,11	0,11	99,82
Sand	0,500	1,00	0,55	0,55	99,27
Sand	0,250	2,00	12,35	12,31	86,96
Sand	0,125	3,00	66,62	66,39	20,57
Sand	0,075	3,74	18,37	18,31	2,26
Sand	0,063	3,99	0,36	0,36	1,90
Sand	< 0,063	> 3,99	1,91	1,90	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	1,90
Sand, fine	(0,063 mm - 0,200 mm):	85,06
Sand, medium	(0,2 mm - 0,6 mm):	12,57
Sand, coarse	(0,6 mm - 2 mm):	0,40
Gravel	(> 2 mm):	0,07
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,32	1,65
16%	84%	0,18	2,49
25%	75%	0,17	2,56
40%	60%	0,16	2,67
Median 50%	50%	0,15	2,74
75%	25%	0,13	2,96
84%	16%	0,09	3,54
90%	10%	0,08	3,62
95%	5%	0,08	3,69

Moments Statistics

Mean	2,92
Sorting	0,57
Skewness	0,23
Kurtosis	2,08
Uniformity Coefficient	1,94

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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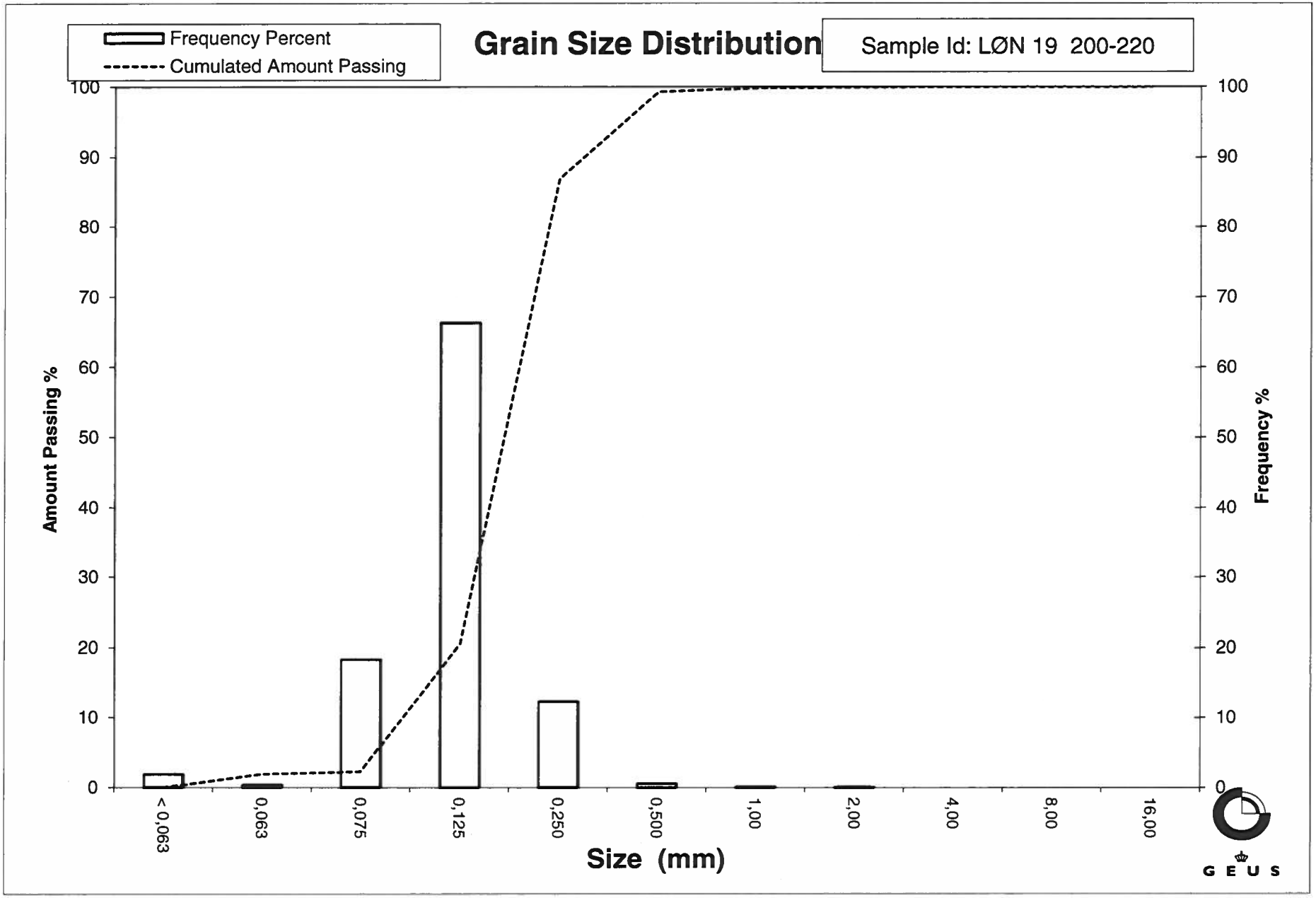
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 19 200-220
Amount Passing %
Frequency %
Size (mm)
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 20 0-20
Lab. Id: 200314
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks:

GEUS

Total Weight 101,53 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
Gravel	8,00	-3,00	0,00	0,00	100,00
Gravel	4,00	-2,00	0,00	0,00	100,00
Sand	2,00	-1,00	0,10	0,10	99,90
Sand	1,00	0,00	0,12	0,12	99,78
Sand	0,500	1,00	0,23	0,23	99,56
Sand	0,250	2,00	1,75	1,72	97,83
Sand	0,125	3,00	53,44	52,63	45,20
Sand	0,075	3,74	39,53	38,93	6,26
Sand	0,063	3,99	2,22	2,19	4,08
Sand	< 0,063	> 3,99	4,14	4,08	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	4,08
Sand, fine	(0,063 mm - 0,200 mm):	93,76
Sand, medium	(0,2 mm - 0,6 mm):	1,83
Sand, coarse	(0,6 mm - 2 mm):	0,24
Gravel	(> 2 mm):	0,10
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,18	2,50
16%	84%	0,17	2,59
25%	75%	0,16	2,68
40%	60%	0,14	2,83
Median 50%	50%	0,13	2,94
75%	25%	0,08	3,60
84%	16%	0,08	3,67
90%	10%	0,08	3,71
95%	5%	0,07	3,88

Moments Statistics

Mean	3,07
Sorting	0,48
Skewness	0,35
Kurtosis	0,61
Uniformity Coefficient	1,84

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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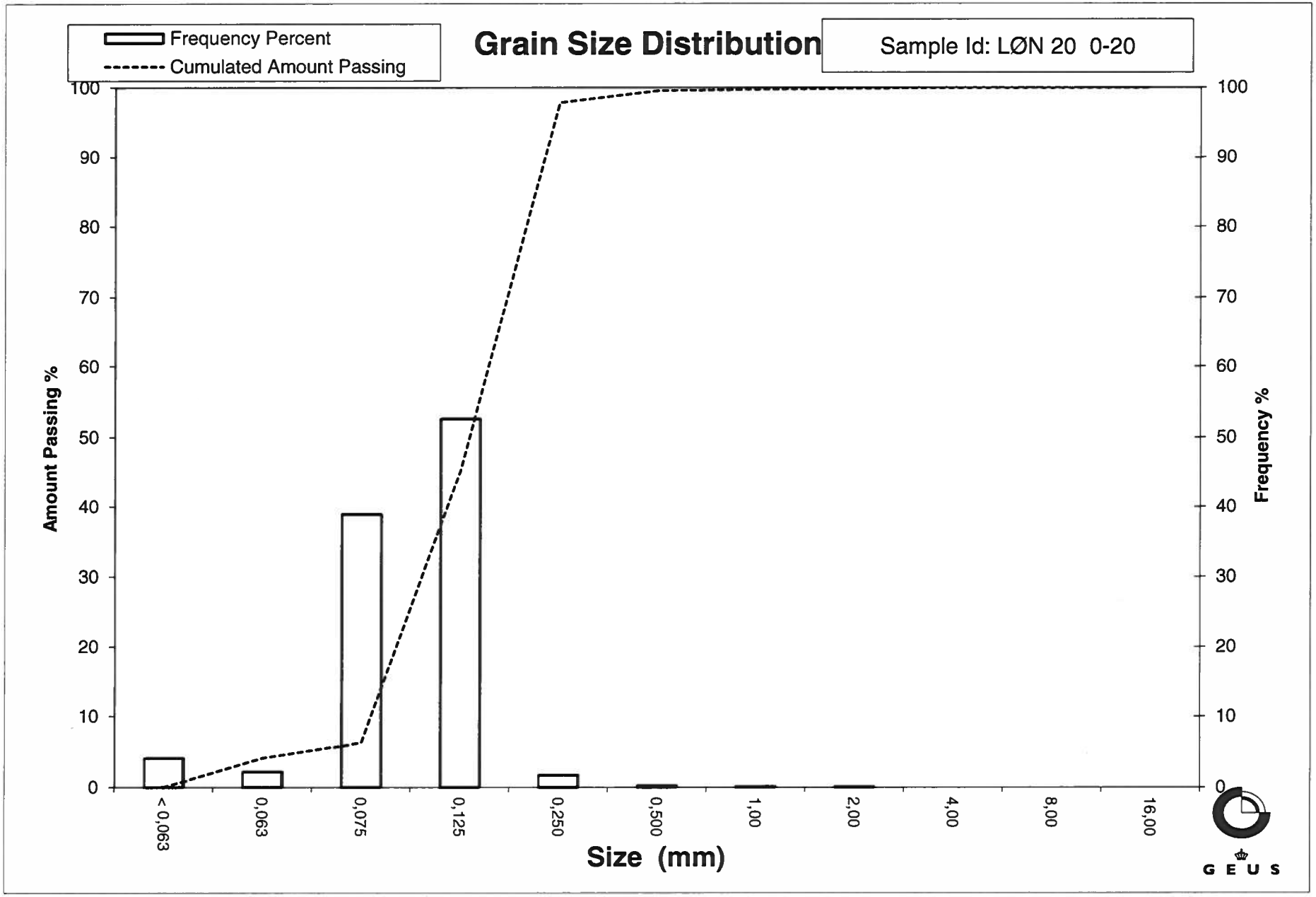
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 20 0-20
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 20 100-120
Lab. Id: 200315
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks: >2mm består af skaller

Total Weight 93,14 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
	8,00	-3,00	0,00	0,00	100,00
	4,00	-2,00	0,00	0,00	100,00
	2,00	-1,00	0,02	0,02	99,98
Sand	1,00	0,00	0,00	0,00	99,98
	0,500	1,00	0,28	0,30	99,68
	0,250	2,00	2,58	2,77	96,91
	0,125	3,00	32,83	35,25	61,66
	0,075	3,74	46,54	49,97	11,69
	0,063	3,99	3,29	3,53	8,16
	< 0,063	> 3,99	7,60	8,16	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	8,16
Sand, fine	(0,063 mm - 0,200 mm):	88,75
Sand, medium	(0,2 mm - 0,6 mm):	2,91
Sand, coarse	(0,6 mm - 2 mm):	0,16
Gravel	(> 2 mm):	0,02
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,18	2,50
16%	84%	0,16	2,65
25%	75%	0,15	2,78
40%	60%	0,09	3,48
Median 50%	50%	0,09	3,53
75%	25%	0,08	3,66
84%	16%	0,08	3,71
90%	10%	0,07	3,85
95%	5%	-------	-------

Moments Statistics

Mean	3,30
Sorting	-------
Skewness	-------
Kurtosis	-------
Uniformity Coefficient	1,29

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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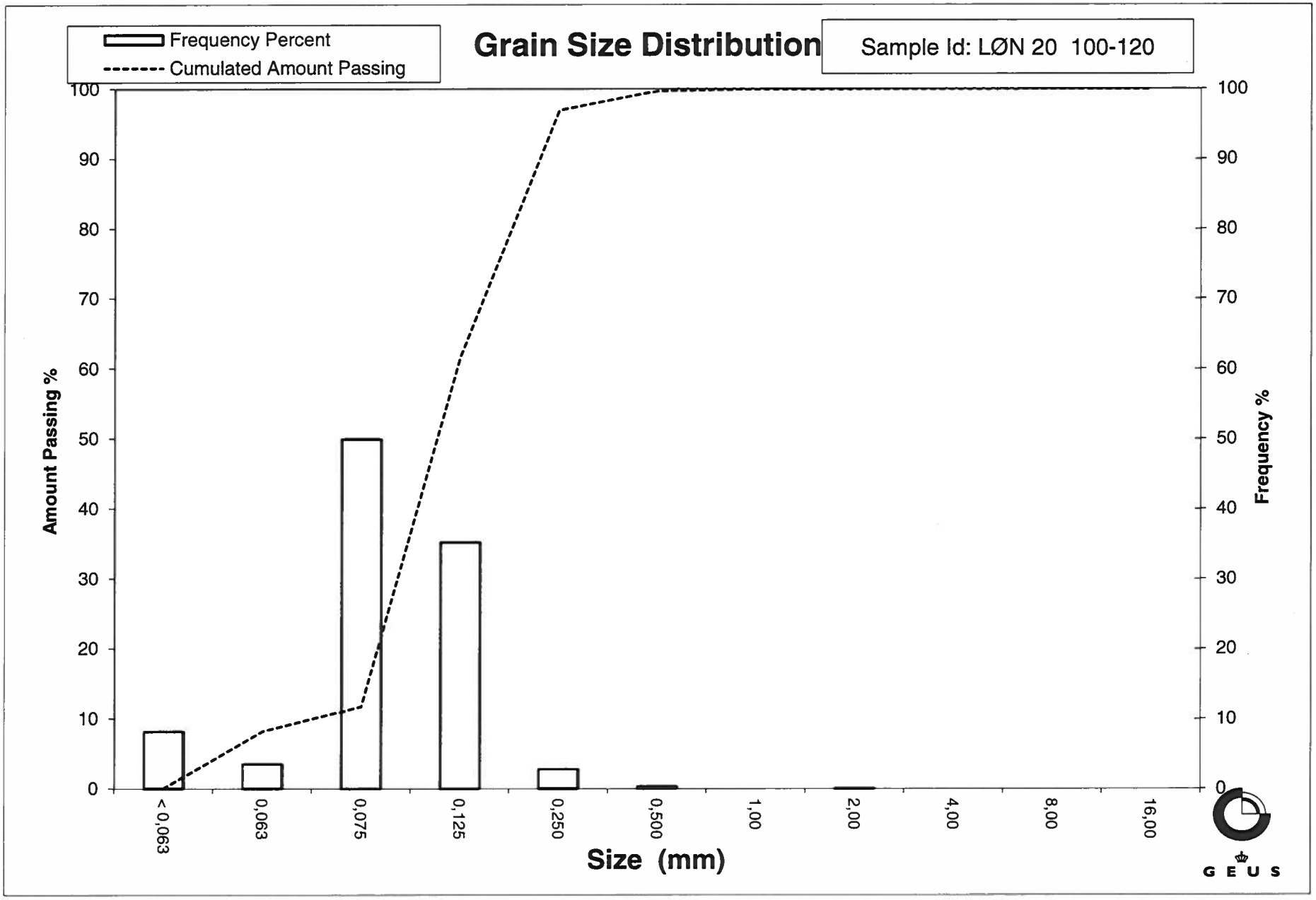
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 20 100-120
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 20 200-220
Lab. Id: 200316
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks: >2mm heraf 0,2g skaller

GEUS

Total Weight 104,03 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
	8,00	-3,00	0,00	0,00	100,00
	4,00	-2,00	0,33	0,32	99,68
	2,00	-1,00	0,55	0,53	99,15
Sand	1,00	0,00	1,12	1,08	98,08
	0,500	1,00	3,95	3,80	94,28
	0,250	2,00	13,68	13,15	81,13
	0,125	3,00	37,31	35,86	45,27
	0,075	3,74	32,48	31,22	14,04
	0,063	3,99	3,11	2,99	11,05
	< 0,063	> 3,99	11,50	11,05	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	11,05
Sand, fine	(0,063 mm - 0,200 mm):	70,08
Sand, medium	(0,2 mm - 0,6 mm):	14,96
Sand, coarse	(0,6 mm - 2 mm):	3,07
Gravel	(> 2 mm):	0,85
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,54	0,89
16%	84%	0,27	1,87
25%	75%	0,17	2,55
40%	60%	0,15	2,76
Median 50%	50%	0,13	2,92
75%	25%	0,08	3,64
84%	16%	0,08	3,72
90%	10%	-------	-------
95%	5%	-------	-------

Moments Statistics

Mean	2,84
Sorting	-------
Skewness	-------
Kurtosis	-------
Uniformity Coefficient	-------

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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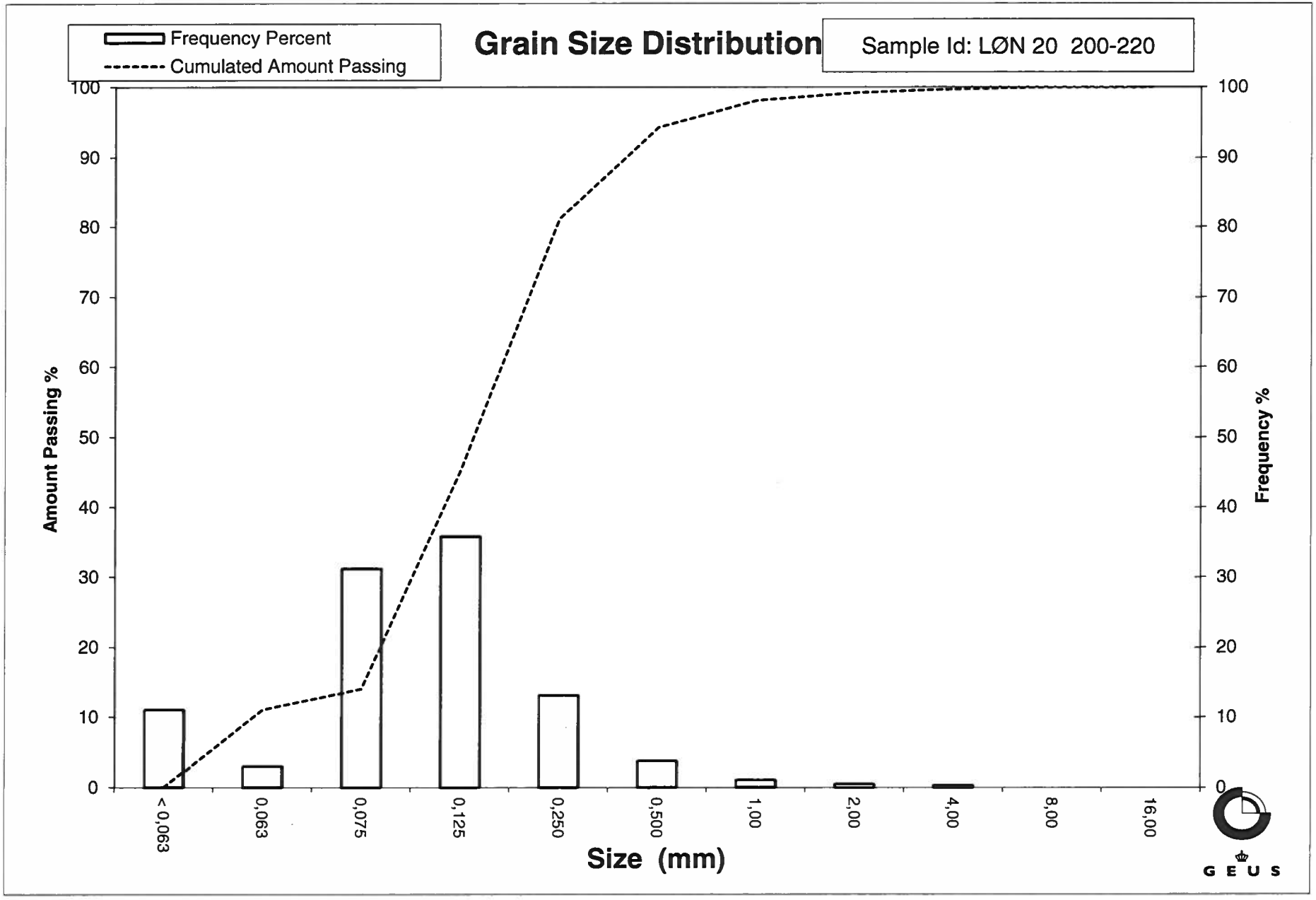
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 20 200-220
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 20 300-320
Lab. Id: 200317
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks:

GEUS

Total Weight 96,32 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
	8,00	-3,00	0,00	0,00	100,00
	4,00	-2,00	0,00	0,00	100,00
	2,00	-1,00	0,44	0,46	99,54
Sand	1,00	0,00	0,46	0,48	99,07
	0,500	1,00	2,14	2,22	96,84
	0,250	2,00	3,71	3,85	92,99
	0,125	3,00	58,90	61,15	31,84
	0,075	3,74	23,26	24,15	7,69
	0,063	3,99	2,32	2,41	5,28
	< 0,063	> 3,99	5,09	5,28	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	5,28
Sand, fine	(0,063 mm - 0,200 mm):	87,71
Sand, medium	(0,2 mm - 0,6 mm):	4,91
Sand, coarse	(0,6 mm - 2 mm):	1,64
Gravel	(> 2 mm):	0,46
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,30	1,71
16%	84%	0,17	2,54
25%	75%	0,16	2,61
40%	60%	0,15	2,73
Median 50%	50%	0,14	2,82
75%	25%	0,09	3,54
84%	16%	0,08	3,64
90%	10%	0,08	3,71
95%	5%	-------	-------

Moments Statistics

Mean	3,00
Sorting	-------
Skewness	-------
Kurtosis	-------
Uniformity Coefficient	1,97

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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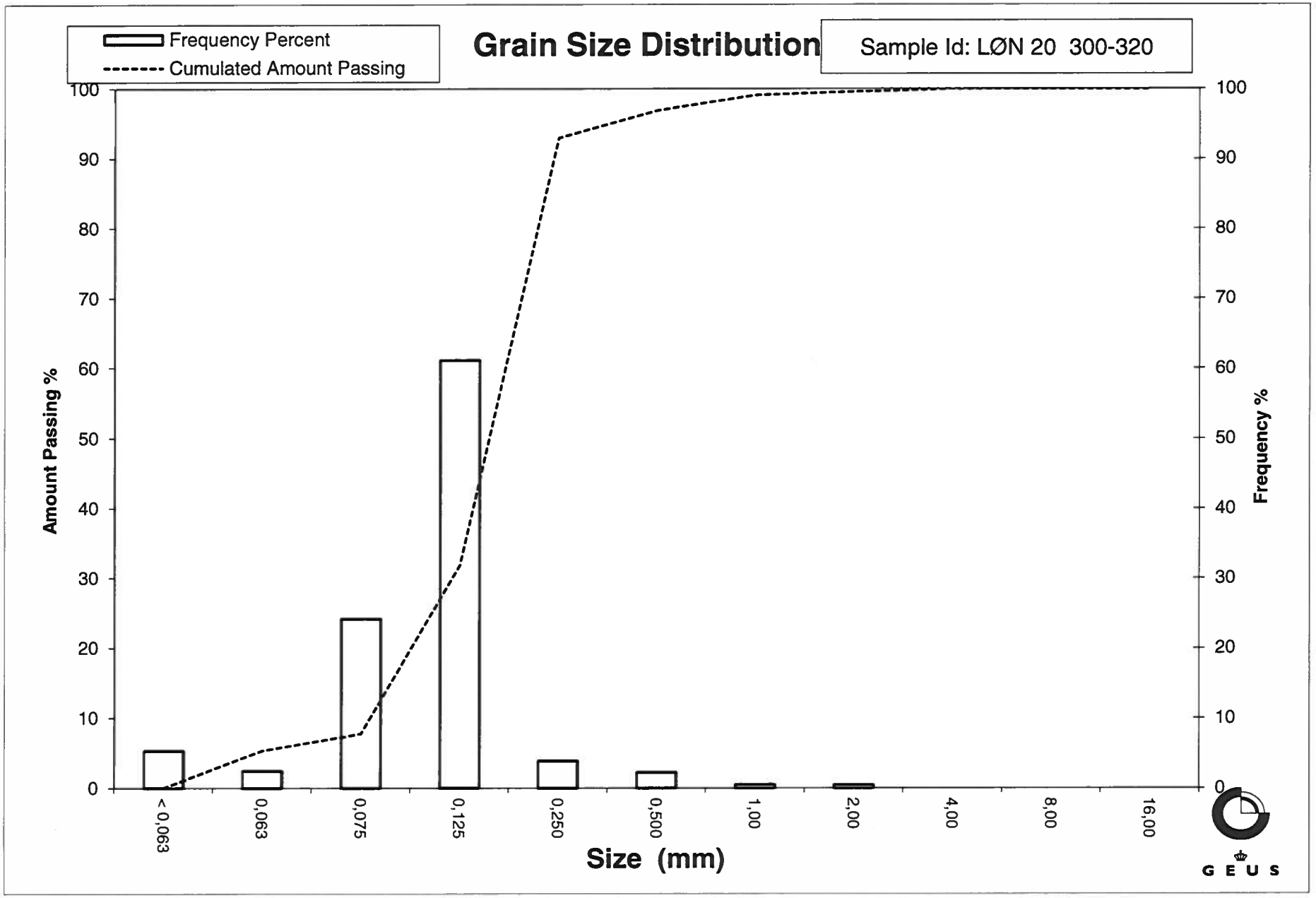
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 20 300-320
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 20 360-380
Lab. Id: 200318
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks: >2mm heraf 0,2g skaller

GEUS

Total Weight 102,58 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
Gravel	8,00	-3,00	0,00	0,00	100,00
Gravel	4,00	-2,00	0,00	0,00	100,00
	2,00	-1,00	0,31	0,30	99,70
Sand	1,00	0,00	0,76	0,74	98,96
Sand	0,500	1,00	3,73	3,64	95,32
Sand	0,250	2,00	4,65	4,53	90,79
Sand	0,125	3,00	68,33	66,61	24,18
Sand	0,075	3,74	20,75	20,23	3,95
Sand	0,063	3,99	1,45	1,41	2,53
Sand	< 0,063	> 3,99	2,60	2,53	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	2,53
Sand, fine	(0,063 mm - 0,200 mm):	88,25
Sand, medium	(0,2 mm - 0,6 mm):	6,26
Sand, coarse	(0,6 mm - 2 mm):	2,65
Gravel	(> 2 mm):	0,30
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,35	1,52
16%	84%	0,17	2,52
25%	75%	0,17	2,58
40%	60%	0,15	2,69
Median 50%	50%	0,15	2,77
75%	25%	0,13	2,99
84%	16%	0,08	3,57
90%	10%	0,08	3,65
95%	5%	0,08	3,72

Moments Statistics

Mean	2,96
Sorting	0,60
Skewness	0,19
Kurtosis	2,20
Uniformity Coefficient	1,94

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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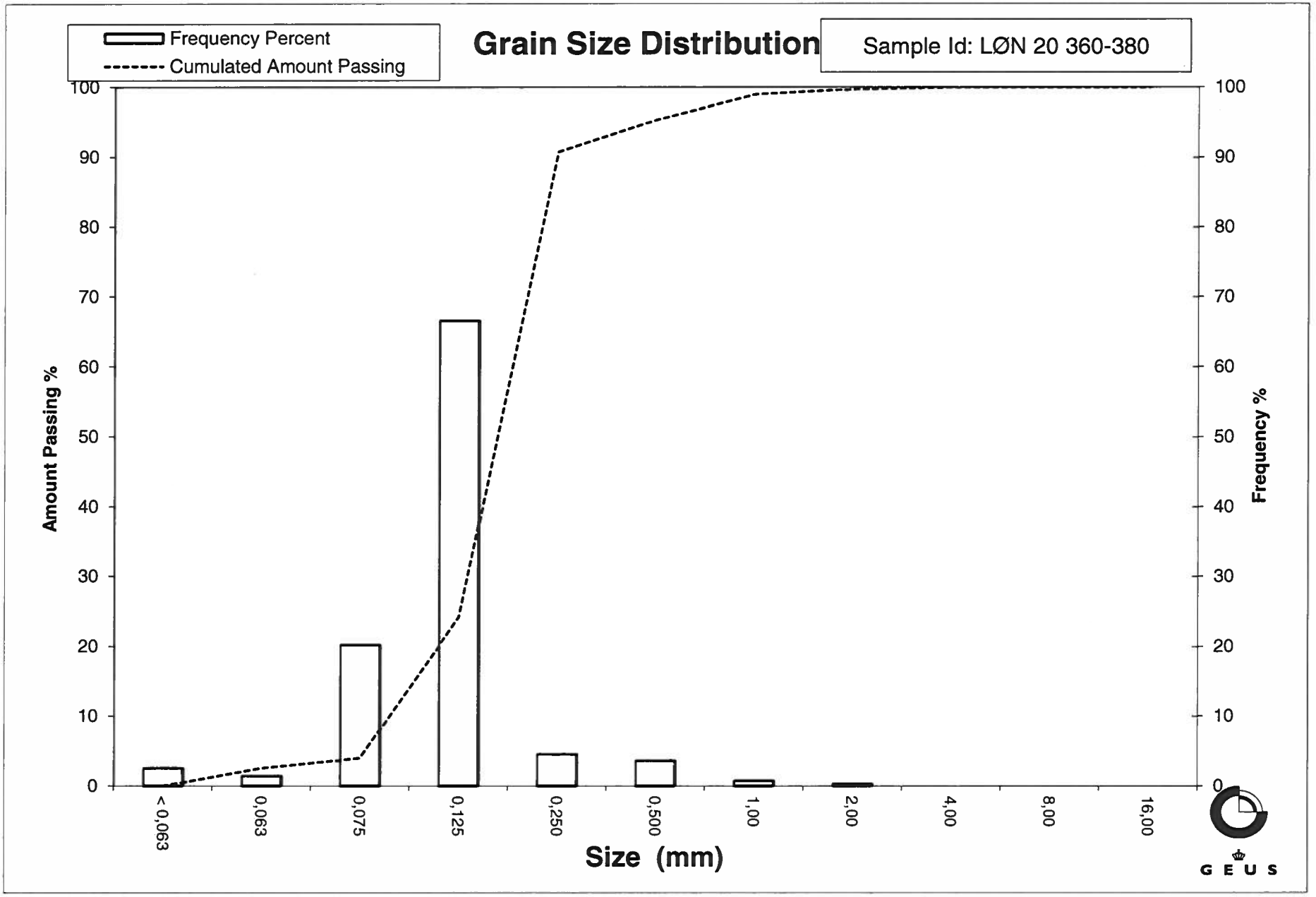
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 20 360-380
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 22 0-20
Lab. Id: 200319
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks: >4mm heraf 0,3g skaller

GEUS

Total Weight 95,18 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
	8,00	-3,00	0,21	0,22	99,78
	4,00	-2,00	0,44	0,46	99,32
	2,00	-1,00	0,42	0,44	98,88
Sand	1,00	0,00	0,86	0,90	97,97
	0,500	1,00	1,57	1,65	96,32
	0,250	2,00	3,48	3,66	92,67
	0,125	3,00	49,42	51,92	40,74
	0,075	3,74	35,03	36,80	3,94
	0,063	3,99	0,65	0,68	3,26
	< 0,063	> 3,99	3,10	3,26	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	3,26
Sand, fine	(0,063 mm - 0,200 mm):	89,41
Sand, medium	(0,2 mm - 0,6 mm):	4,44
Sand, coarse	(0,6 mm - 2 mm):	1,77
Gravel	(> 2 mm):	1,12
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,32	1,66
16%	84%	0,17	2,55
25%	75%	0,16	2,63
40%	60%	0,15	2,78
Median 50%	50%	0,13	2,89
75%	25%	0,08	3,58
84%	16%	0,08	3,65
90%	10%	0,08	3,69
95%	5%	0,08	3,73

Moments Statistics

Mean	3,03
Sorting	0,59
Skewness	0,09
Kurtosis	0,90
Uniformity Coefficient	1,88

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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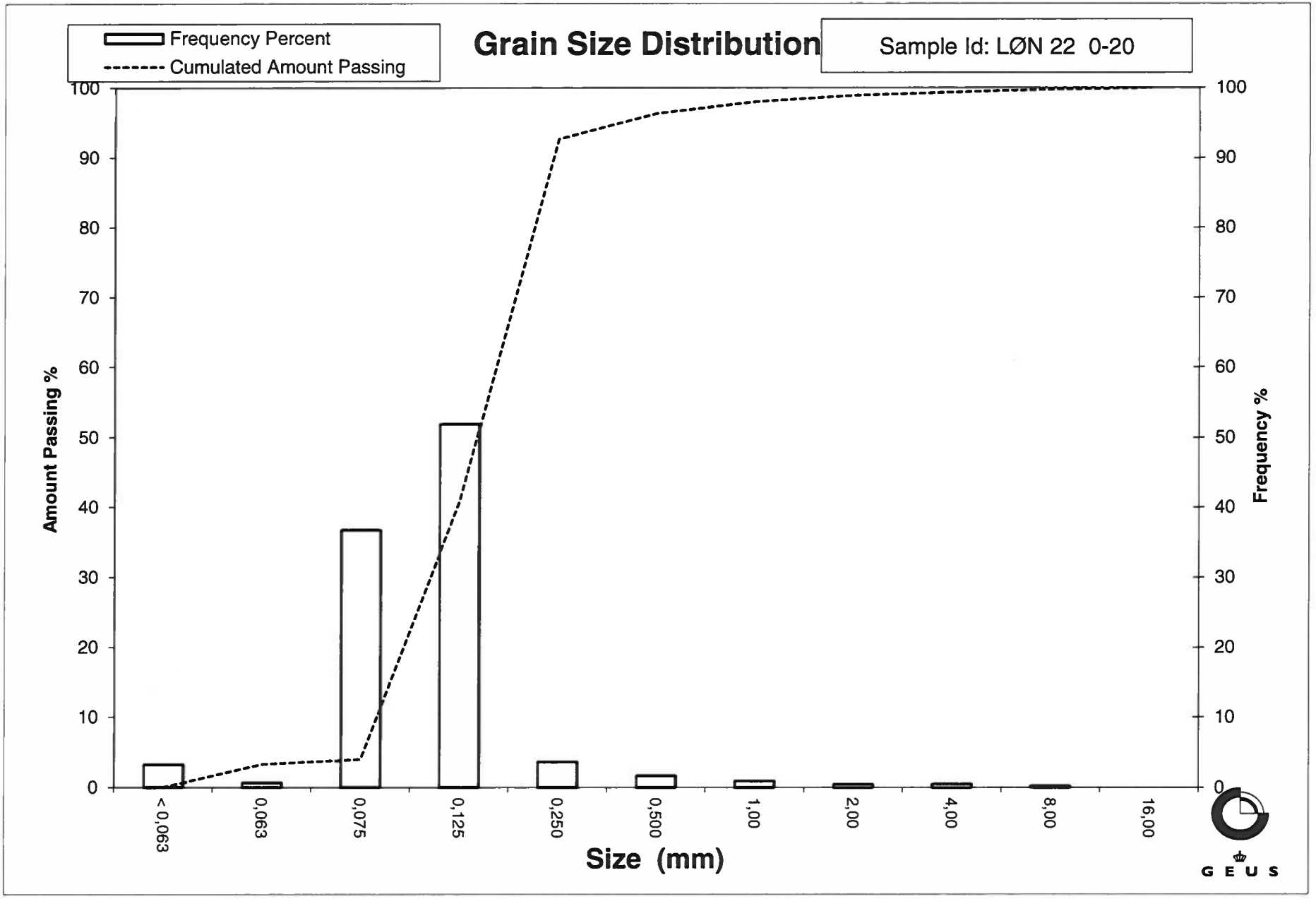
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 22 0-20
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 22 100-120
Lab. Id: 200320
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks: >4mm heraf 0,5g skaller

GEUS

Total Weight 223,01 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
	8,00	-3,00	6,63	2,97	97,03
	4,00	-2,00	11,37	5,10	91,93
	2,00	-1,00	22,57	10,12	81,81
Sand	1,00	0,00	26,19	11,74	70,06
	0,500	1,00	33,43	14,99	55,07
	0,250	2,00	75,09	33,67	21,40
	0,125	3,00	25,50	11,43	9,97
	0,075	3,74	18,51	8,30	1,67
	0,063	3,99	0,65	0,29	1,37
	< 0,063	> 3,99	3,07	1,37	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	1,37
Sand, fine	(0,063 mm - 0,200 mm):	20,03
Sand, medium	(0,2 mm - 0,6 mm):	40,81
Sand, coarse	(0,6 mm - 2 mm):	19,60
Gravel	(> 2 mm):	18,19
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	6,41	-2,68
16%	84%	2,17	-1,12
25%	75%	1,17	-0,22
40%	60%	0,57	0,81
Median 50%	50%	0,34	1,56
75%	25%	0,26	1,94
84%	16%	0,15	2,70
90%	10%	0,13	3,00
95%	5%	0,08	3,63

Moments Statistics

Mean	1,05
Sorting	1,91
Skewness	-0,37
Kurtosis	1,20
Uniformity Coefficient	4,55

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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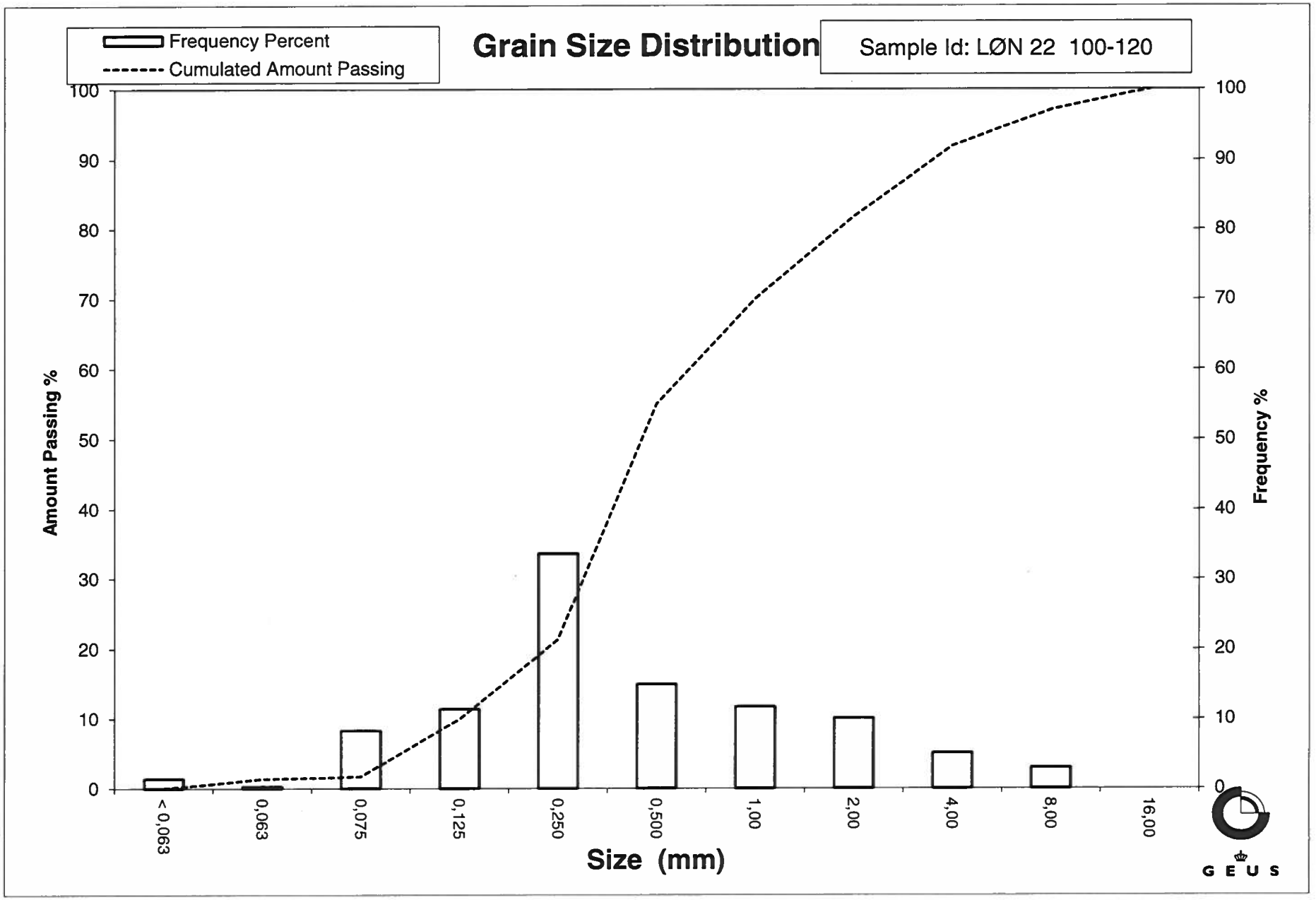
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 22 100-120
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 22 200-220
Lab. Id: 200321
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks:

G E U S

Total Weight 115,14 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
	8,00	-3,00	0,00	0,00	100,00
	4,00	-2,00	0,00	0,00	100,00
	2,00	-1,00	1,49	1,29	98,71
Sand	1,00	0,00	4,04	3,51	95,20
	0,500	1,00	11,65	10,12	85,08
	0,250	2,00	65,64	57,01	28,07
	0,125	3,00	21,81	18,94	9,13
	0,075	3,74	7,12	6,18	2,94
	0,063	3,99	1,06	0,92	2,02
	< 0,063	> 3,99	2,33	2,02	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	2,02
Sand, fine	(0,063 mm - 0,200 mm):	26,05
Sand, medium	(0,2 mm - 0,6 mm):	61,83
Sand, coarse	(0,6 mm - 2 mm):	8,81
Gravel	(> 2 mm):	1,29
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile	Percentile		
Amount in sieve	Amount passing	d(mm)	Φ
5%	95%	0,71	0,50
16%	84%	0,35	1,50
25%	75%	0,34	1,57
40%	60%	0,31	1,70
Median 50%	50%	0,29	1,78
75%	25%	0,17	2,55
84%	16%	0,14	2,79
90%	10%	0,13	2,97
95%	5%	0,08	3,64

Moments Statistics

Mean	2,02
Sorting	0,80
Skewness	0,37
Kurtosis	1,32
Uniformity Coefficient	2,42

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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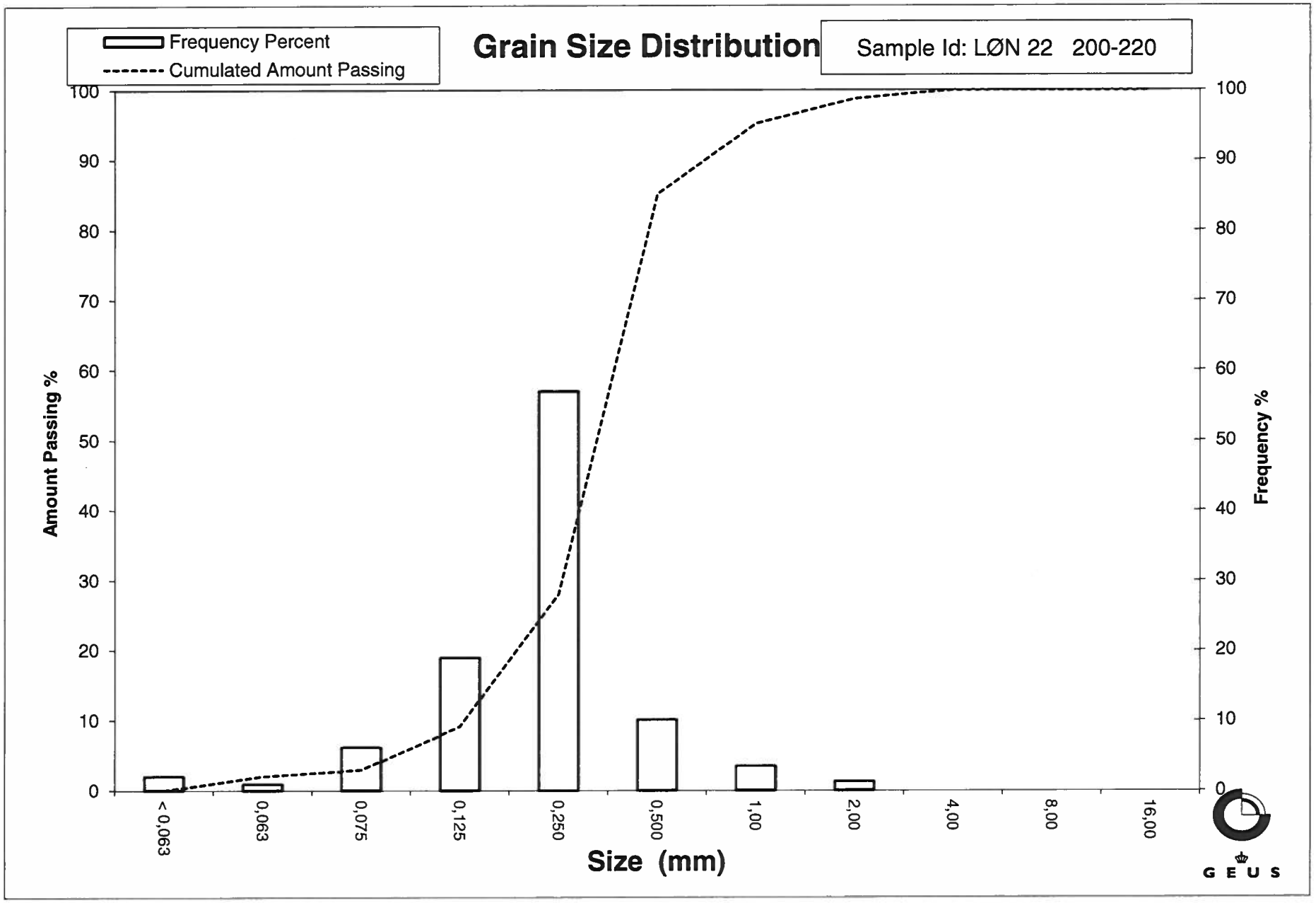
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 22 200-220
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 22 300-320
Lab. Id: 200322
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks: >2mm heraf 0,6g skaller

G E U S

Total Weight 105,21 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
	8,00	-3,00	0,00	0,00	100,00
	4,00	-2,00	0,51	0,48	99,52
	2,00	-1,00	0,43	0,41	99,11
Sand	1,00	0,00	1,53	1,45	97,65
	0,500	1,00	4,21	4,00	93,65
	0,250	2,00	34,12	32,43	61,22
	0,125	3,00	26,58	25,26	35,96
	0,075	3,74	22,36	21,25	14,70
	0,063	3,99	3,40	3,23	11,47
	< 0,063	> 3,99	12,07	11,47	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	11,47
Sand, fine	(0,063 mm - 0,200 mm):	49,75
Sand, medium	(0,2 mm - 0,6 mm):	34,34
Sand, coarse	(0,6 mm - 2 mm):	3,55
Gravel	(> 2 mm):	0,89
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,57	0,81
16%	84%	0,32	1,63
25%	75%	0,29	1,76
40%	60%	0,18	2,50
Median 50%	50%	0,16	2,68
75%	25%	0,08	3,60
84%	16%	0,08	3,72
90%	10%	-------	-------
95%	5%	-------	-------

Moments Statistics

Mean	2,68
Sorting	-------
Skewness	-------
Kurtosis	-------
Uniformity Coefficient	-------

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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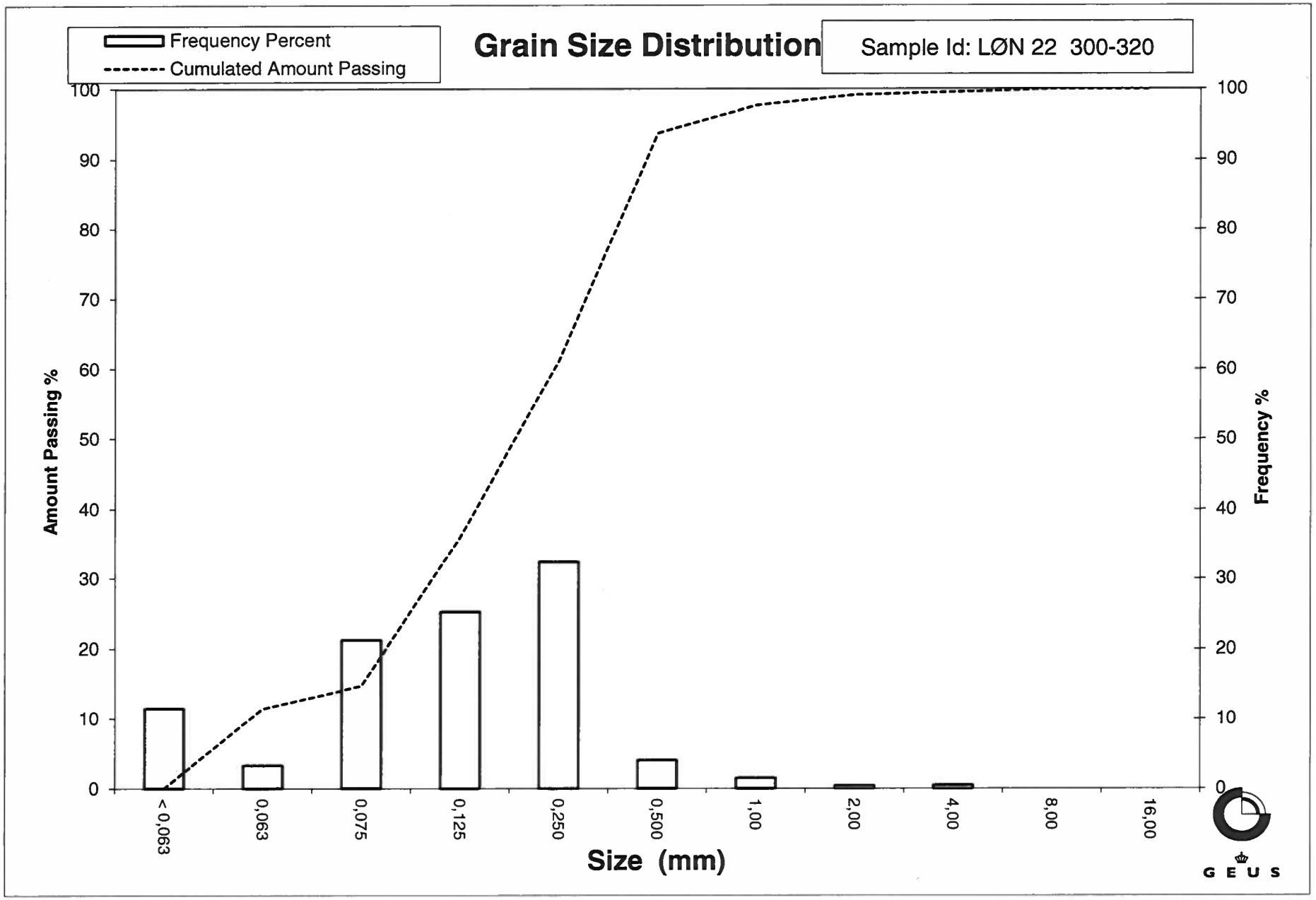
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 22 300-320
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 22 400-420
Lab. Id: 200323
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks: >2mm heraf 0,1g skaller

GEUS

Total Weight 103,52 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
Gravel	8,00	-3,00	0,00	0,00	100,00
Gravel	4,00	-2,00	0,05	0,05	99,95
Gravel	2,00	-1,00	0,31	0,30	99,65
Sand	1,00	0,00	0,79	0,76	98,89
Sand	0,500	1,00	1,64	1,58	97,30
Sand	0,250	2,00	18,52	17,89	79,41
Sand	0,125	3,00	24,02	23,20	56,21
Sand	0,075	3,74	29,98	28,96	27,25
Sand	0,063	3,99	7,02	6,78	20,47
Sand	< 0,063	> 3,99	21,19	20,47	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	20,47
Sand, fine	(0,063 mm - 0,200 mm):	58,95
Sand, medium	(0,2 mm - 0,6 mm):	18,64
Sand, coarse	(0,6 mm - 2 mm):	1,59
Gravel	(> 2 mm):	0,35
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,34	1,55
16%	84%	0,28	1,85
25%	75%	0,17	2,56
40%	60%	0,13	2,90
Median 50%	50%	0,09	3,53
75%	25%	0,07	3,82
84%	16%	-------	-------
90%	10%	-------	-------
95%	5%	-------	-------

Moments Statistics

Mean	2,69
Sorting	-------
Skewness	-------
Kurtosis	-------
Uniformity Coefficient	-------

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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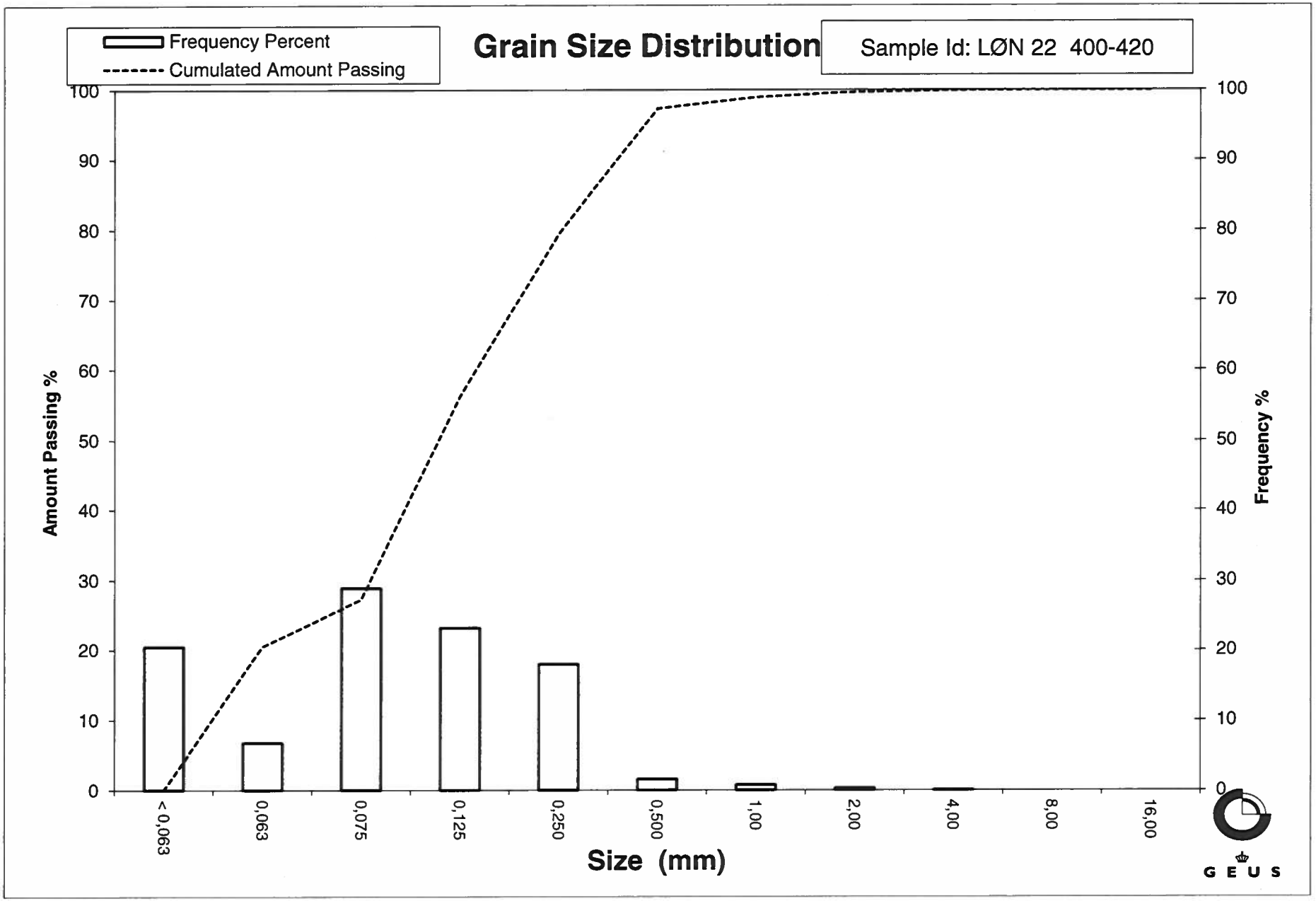
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 22 400-420
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 22 470-490
Lab. Id: 200324
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks: >2mm heraf 0,7g skaller

GEUS

Total Weight 129,03 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
	8,00	-3,00	2,30	1,78	98,22
	4,00	-2,00	4,14	3,21	95,01
	2,00	-1,00	6,40	4,96	90,05
Sand	1,00	0,00	6,10	4,73	85,32
	0,500	1,00	12,82	9,94	75,39
	0,250	2,00	65,57	50,82	24,57
	0,125	3,00	18,40	14,26	10,31
	0,075	3,74	5,18	4,01	6,29
	0,063	3,99	0,98	0,76	5,53
	< 0,063	> 3,99	7,14	5,53	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	5,53
Sand, fine	(0,063 mm - 0,200 mm):	19,03
Sand, medium	(0,2 mm - 0,6 mm):	55,55
Sand, coarse	(0,6 mm - 2 mm):	9,93
Gravel	(> 2 mm):	9,95
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	2,80	-1,48
16%	84%	0,68	0,55
25%	75%	0,35	1,50
40%	60%	0,32	1,63
Median 50%	50%	0,30	1,72
75%	25%	0,25	1,99
84%	16%	0,15	2,77
90%	10%	0,09	3,49
95%	5%	-------	-------

Moments Statistics

Mean	1,68
Sorting	-------
Skewness	-------
Kurtosis	-------
Uniformity Coefficient	3,64

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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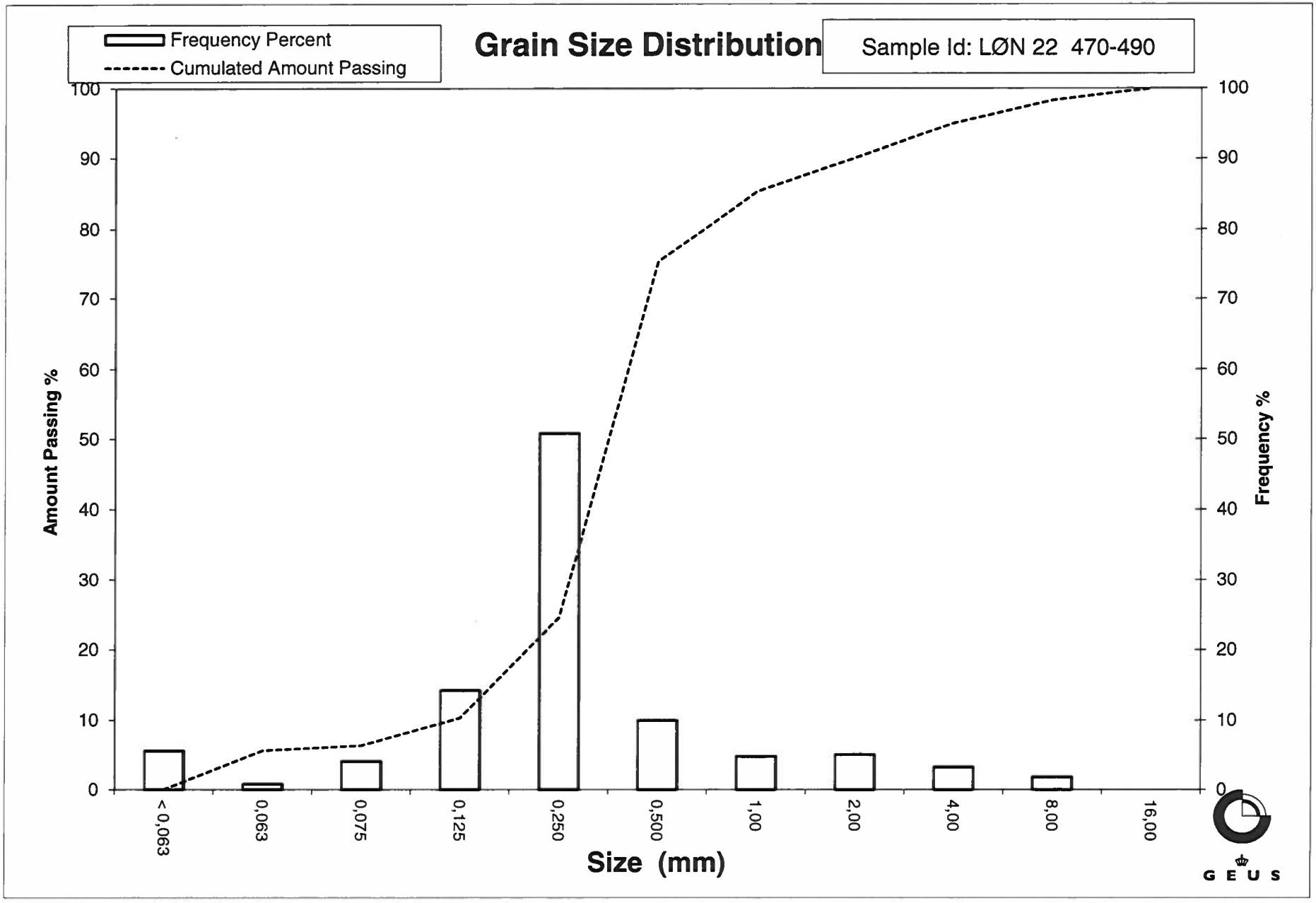
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 22 470-490
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 34 HL
Lab. Id: 200325
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks: >2mm heraf 1,6g skaller

GEUS

Total Weight 284,74 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
	8,00	-3,00	0,67	0,24	99,76
	4,00	-2,00	0,33	0,12	99,65
	2,00	-1,00	0,61	0,21	99,43
Sand	1,00	0,00	0,63	0,22	99,21
	0,500	1,00	0,63	0,22	98,99
	0,250	2,00	0,79	0,28	98,71
	0,125	3,00	1,72	0,60	98,11
	0,075	3,74	15,16	5,32	92,79
	0,063	3,99	7,55	2,65	90,13
	< 0,063	> 3,99	256,65	90,13	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	90,13
Sand, fine	(0,063 mm - 0,200 mm):	8,58
Sand, medium	(0,2 mm - 0,6 mm):	0,38
Sand, coarse	(0,6 mm - 2 mm):	0,34
Gravel	(> 2 mm):	0,57
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,08	3,62
16%	84%	-------	-------
25%	75%	-------	-------
40%	60%	-------	-------
Median 50%	50%	-------	-------
75%	25%	-------	-------
84%	16%	-------	-------
90%	10%	-------	-------
95%	5%	-------	-------

Moments Statistics

Mean	-------
Sorting	-------
Skewness	-------
Kurtosis	-------
Uniformity Coefficient	-------

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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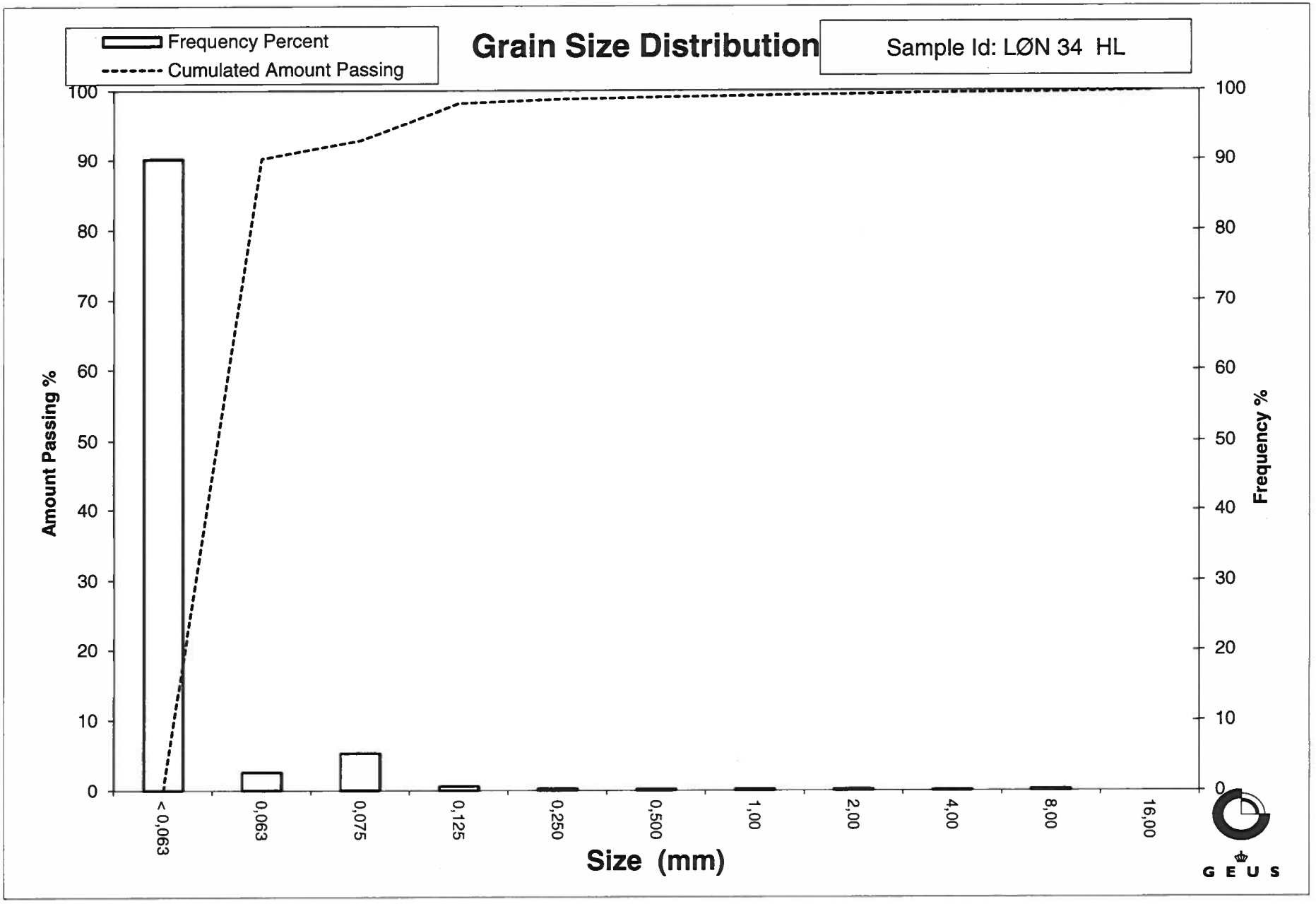
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 34 HL
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 34 50 cm
Lab. Id: 200326
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks: >2mm heraf 0,3g skaller

G E U S

Total Weight 98,63 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
	8,00	-3,00	0,00	0,00	100,00
	4,00	-2,00	0,01	0,01	99,99
	2,00	-1,00	0,32	0,32	99,67
Sand	1,00	0,00	0,12	0,12	99,54
	0,500	1,00	1,57	1,59	97,95
	0,250	2,00	4,59	4,65	93,30
	0,125	3,00	18,18	18,43	74,87
	0,075	3,74	66,49	67,41	7,45
	0,063	3,99	2,32	2,35	5,10
	< 0,063	> 3,99	5,03	5,10	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	5,10
Sand, fine	(0,063 mm - 0,200 mm):	88,20
Sand, medium	(0,2 mm - 0,6 mm):	5,41
Sand, coarse	(0,6 mm - 2 mm):	0,96
Gravel	(> 2 mm):	0,33
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,29	1,79
16%	84%	0,15	2,72
25%	75%	0,13	3,00
40%	60%	0,09	3,53
Median 50%	50%	0,08	3,57
75%	25%	0,08	3,66
84%	16%	0,08	3,70
90%	10%	0,08	3,73
95%	5%	-------	-------

Moments Statistics

Mean	3,33
Sorting	-------
Skewness	-------
Kurtosis	-------
Uniformity Coefficient	1,15

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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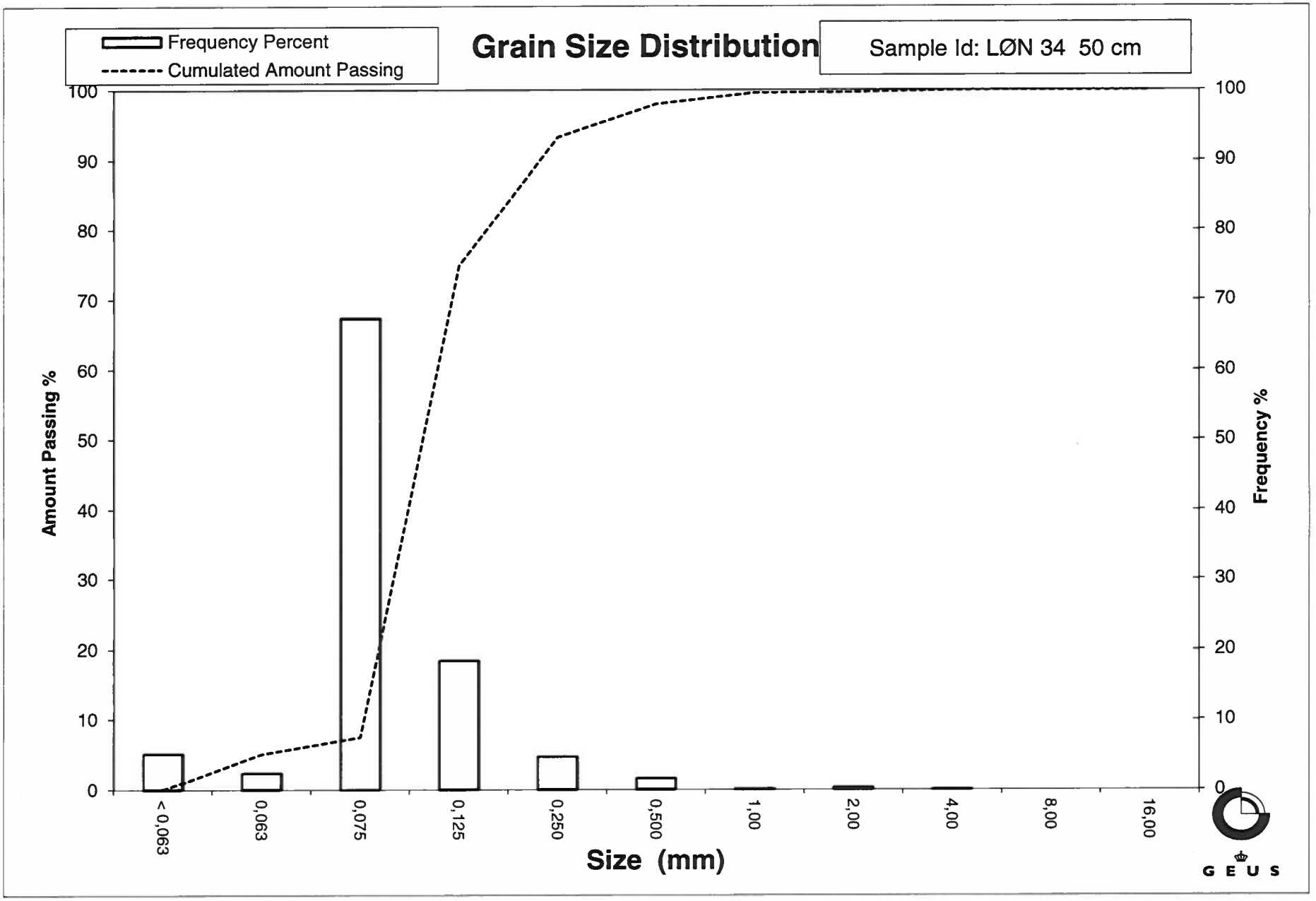
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 34 50 cm
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 34 100 cm
Lab. Id: 200327
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks: >4mm består af skaller

GEUS

Total Weight 119,24 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	10,01	8,39	91,61
	8,00	-3,00	1,35	1,13	90,47
	4,00	-2,00	0,34	0,29	90,19
	2,00	-1,00	0,32	0,27	89,92
Sand	1,00	0,00	1,06	0,89	89,03
	0,500	1,00	25,00	20,97	68,06
	0,250	2,00	35,59	29,85	38,22
	0,125	3,00	7,58	6,36	31,86
	0,075	3,74	34,37	28,82	3,04
	0,063	3,99	1,35	1,13	1,90
	< 0,063	> 3,99	2,27	1,90	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	1,90
Sand, fine	(0,063 mm - 0,200 mm):	36,31
Sand, medium	(0,2 mm - 0,6 mm):	39,83
Sand, coarse	(0,6 mm - 2 mm):	11,87
Gravel	(> 2 mm):	10,08
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	-------	-------
16%	84%	0,66	0,60
25%	75%	0,57	0,81
40%	60%	0,33	1,61
Median 50%	50%	0,29	1,78
75%	25%	0,09	3,53
84%	16%	0,08	3,61
90%	10%	0,08	3,67
95%	5%	0,08	3,72

Moments Statistics

Mean	2,00
Sorting	-------
Skewness	-------
Kurtosis	-------
Uniformity Coefficient	4,15

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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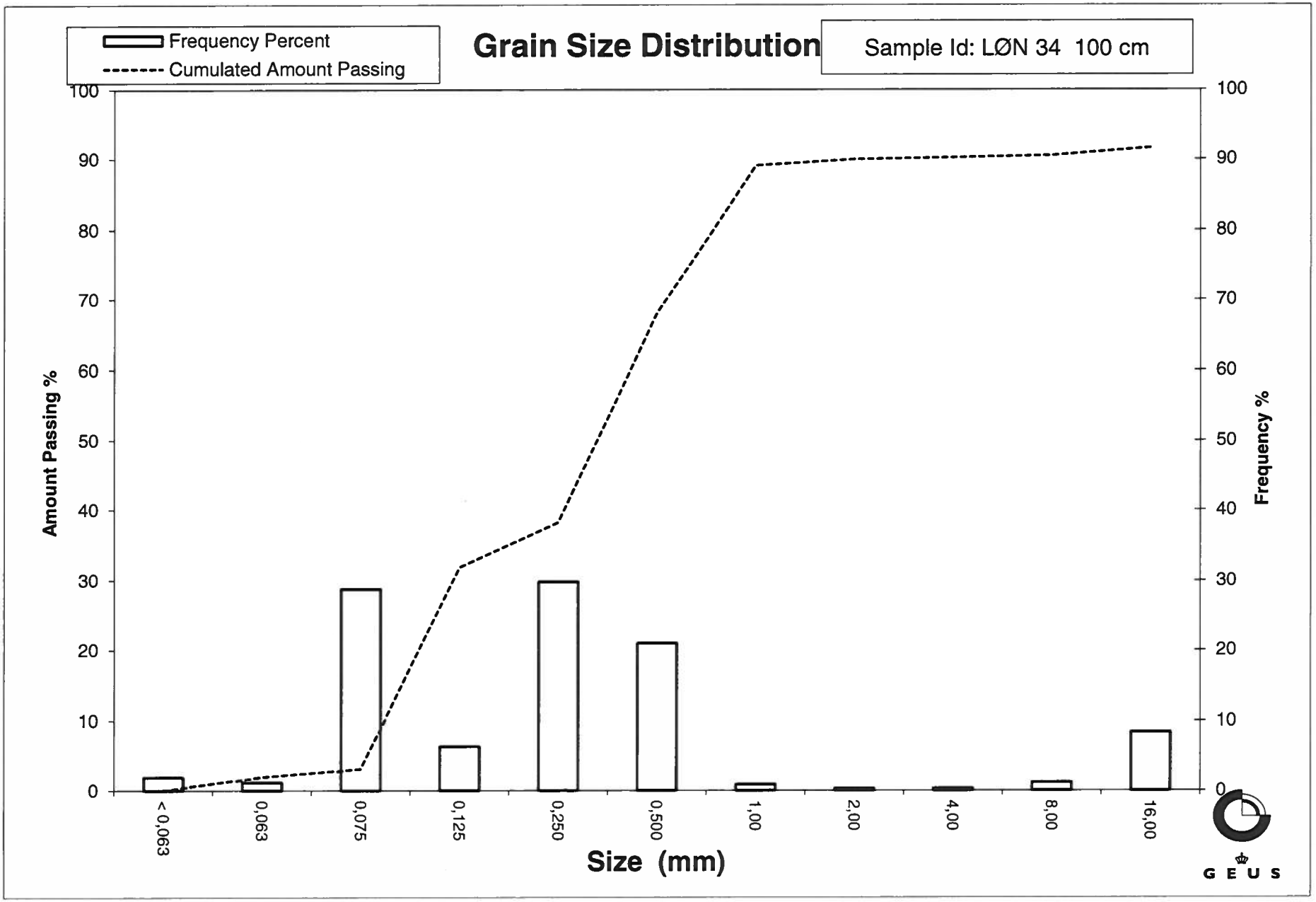
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 34 100 cm
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Grain Size Distribution
Geotechnical

Sample Id: LØN 34 150 cm
Lab. Id: 200328
Projekt Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks: >1mm består af skaller

G E U S

Total Weight 112,37 g

Size Fractions

Sieve Analysis

	Size	Size	Weight	Weight	Cumulated amount passing
	mm	Φ	g	%	%
Gravel	16,00	-4,00	0,00	0,00	100,00
	8,00	-3,00	0,15	0,13	99,87
	4,00	-2,00	0,81	0,72	99,15
	2,00	-1,00	0,84	0,75	98,40
Sand	1,00	0,00	0,98	0,87	97,53
	0,500	1,00	0,76	0,68	96,85
	0,250	2,00	1,94	1,73	95,12
	0,125	3,00	52,46	46,69	48,44
	0,075	3,74	37,93	33,75	14,68
	0,063	3,99	3,89	3,46	11,22
	< 0,063	> 3,99	12,61	11,22	0,00

Size Classes (DGF-Bulletin 1 1988)

		Weight %
Silt and clay	(< 0,063 mm):	11,22
Sand, fine	(0,063 mm - 0,200 mm):	83,90
Sand, medium	(0,2 mm - 0,6 mm):	2,05
Sand, coarse	(0,6 mm - 2 mm):	1,23
Gravel	(> 2 mm):	1,60
Sum:		100,00

Moments Measures (Folk and Wards)

Percentile Amount in sieve	Percentile Amount passing	d(mm)	Φ
5%	95%	0,18	2,48
16%	84%	0,17	2,58
25%	75%	0,16	2,68
40%	60%	0,14	2,85
Median 50%	50%	0,13	2,98
75%	25%	0,08	3,65
84%	16%	0,08	3,73
90%	10%	-------	-------
95%	5%	-------	-------

Moments Statistics

Mean	3,10
Sorting	-------
Skewness	-------
Kurtosis	-------
Uniformity Coefficient	-------

The analysis is executed according to DS 405.9

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean (ϕ16%+ϕ84%+ϕ50%) / 3 (Folk and Ward 1957)
Sorting (ϕ84%-ϕ16%) / 4 + (ϕ95%-ϕ5%) / 6,6 (Folk and Ward 1957)
Kurtosis (ϕ95% - ϕ5%) / (2,44 * (ϕ75% - ϕ25%)) (Folk and Ward 1957)
Skewness (ϕ16%+ϕ84% - 2*ϕ50%) / (2*(ϕ84%-ϕ16%)) + (ϕ5%+ϕ95% - 2*ϕ50%) / (2*(ϕ95%-ϕ5%)) (Folk and Ward 1957)
Uniformity Coefficient (d60% / d10%) (dgf-Bulletin 1988)

Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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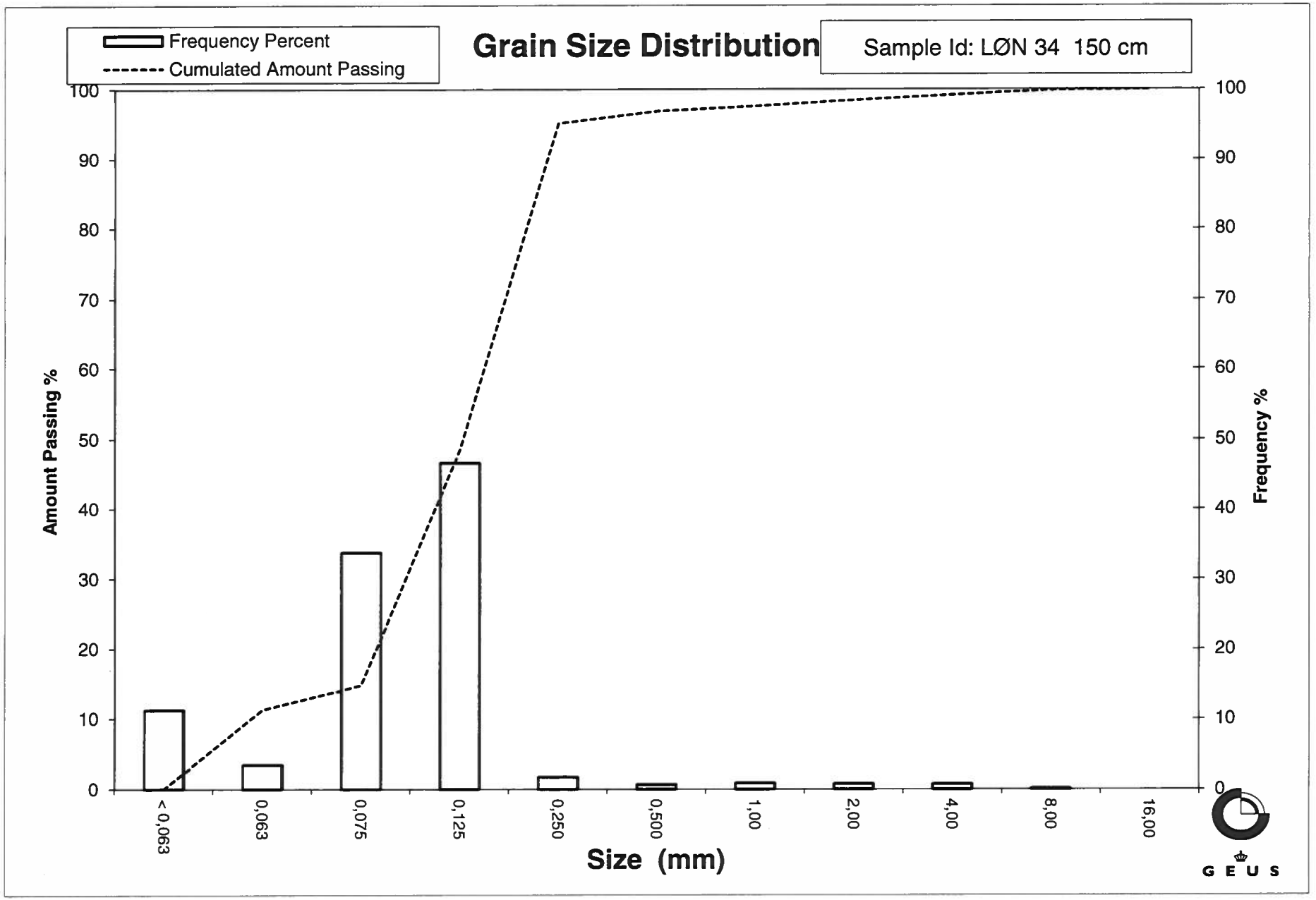
Frequency Percent
Cumulated Amount Passing
Grain Size Distribution
Sample Id: LØN 34 150 cm
Amount Passing %
Frequency %
100
90
80
70
60
50
40
30
20
10
0
< 0,063
0,063
0,075
0,125
0,250
0,500
1,00
2,00
4,00
8,00
16,00
Size (mm)
GEUS

Bilag D1

HAPS Feltprøvebeskrivelse (WSP)

HAPS site	Y (UTM32N)	X (UTM32N)	HAPS_Lat _DDD	HAPS_Lon_ DDD	Dybde (m)	Beskrivelse
Løn_IA_HAPS_01	6374003	517751	57.50825	9.29626	18	SAND, fint, velsorteret, skalfragmenter, mørkegråt. Taget i 2. forsøg
Løn_IA_HAPS_02	6375079	519182	57.51786	9.32023	18.2	SAND, fint, velsorteret, skalfragmenter, gråt
Løn_IA_HAPS_03	6373611	520585	57.50461	9.34352	18.9	SAND, fint, sv. Gruset, sorteret, skalfragmenter, gråt
Løn_IA_HAPS_04	6376472	519733	57.53034	9.32953	16.8	SAND, ml.-groft, sorteret, få skaller, gråt
Løn_IA_HAPS_05	6373376	522063	57.50243	9.36817	17.4	SAND, ml-groft, sorteret, skalfragmenter, gråt
Løn_IA_HAPS_06	6376404	521086	57.52967	9.35213	16.4	SAND, ml., velsorteret, få skalfragmenter, gråt
Løn_IA_HAPS_07	6374766	522248	57.51490	9.37138	17.8	SAND, ml.-groft, sv. Gruset, mange skaller, gråt
Løn_IA_HAPS_08	6377790	521226	57.54212	9.35458	14.3	SAND, fint, velsorteret, få skalfragmenter, gråbrunt
Løn_IA_HAPS_09	6376107	522468	57.52694	9.37517	20.4	SAND, meget fint - fint, sorteret, sv. Organisk, skalfragmenter, mørkegråt
Løn_IA_HAPS_10	6374529	523622	57.51271	9.39429	15.8	SAND, meget fint - fint, velsorteret, få skaller, gråt
Løn_IA_HAPS_11	6377531	522653	57.53972	9.37840	16.3	SAND, fint, velsorteret, få skalfragmenter, gråbrunt
Løn_IA_HAPS_12	6375932	523906	57.52529	9.39917	17.8	SAND, fint, sorteret, meget sv. Organisk, skalfragmenter, mørkegråt-gråt
Løn_IA_HAPS_13	6378959	522949	57.55253	9.38348	17	SAND, fint, velsorteret, skalfragmenter, meget sv. Organisk, gråt
Løn_IA_HAPS_14	6377346	524093	57.53799	9.40244	15.3	SAND, ml.-groft, sorteret, skalfragmenter, gråbrunt
Løn_IA_HAPS_15	6375751	525301	57.52360	9.42244	20.8	SAND, ml.-groft, velsorteret, skalfragmenter, gråbrunt
Løn_IA_HAPS_16	6378655	524322	57.54973	9.40639	16.4	SAND, fint, velsorteret, gråt
Løn_IA_HAPS_17	6377110	525473	57.53579	9.42546	22.1	SAND, fint, sorteret, organisk materiale, skalfragmenter, mørkegråt
Løn_IA_HAPS_18	6378569	525679	57.54889	9.42906	21	SAND, fint-ml., velsorteret, skalfragmenter, gråt
Løn_IA_HAPS_19	6376871	526969	57.53356	9.45041	21.3	GRUS, fint, st. sandet, skaller
Løn_IA_HAPS_20	6380020	526066	57.56189	9.43567	21.6	SAND, ml.-groft, sv. Gruset, usorteret, mange skalfragmenter, gråbrunt
Løn_IA_HAPS_21	6378324	527201	57.54659	9.45445	20.5	SAND, fint, velsorteret, skalfragmenter, gråt
Løn_IA_HAPS_22	6381356	526161	57.57389	9.43741	19.9	SAND, ml., sv. Gruset, skalfragmenter, gråt
Løn_IA_HAPS_23	6379749	527344	57.55938	9.45700	21.9	SAND, fint, velsorteret, sv. Organisk, skalfragmenter, mørkegråt-gråt
Løn_IA_HAPS_24	6381029	527585	57.57087	9.46117	18.4	SAND, ml.-groft, sv. Gruset, skalfragmenter, gråbrun
Løn_IA_HAPS_25	6379495	528846	57.55701	9.48207	17.9	SAND, ml.-groft, sorteret, skaller, gråbrunt
Løn_IA_HAPS_26	6377854	529944	57.54220	9.50023	18.3	SAND, ml.-groft, sorteret, skalfragmenter, gråbrunt
Løn_IA_HAPS_27	6376248	531095	57.52770	9.51925	18.4	SAND, fint, velsorteret, sv. Organisk, skalfragmenter, mørkegråt-gråt
Løn_IA_HAPS_28	6381001	528875	57.57054	9.48274	22.1	SAND, fint-ml., sorteret, skalfragmenter, gråt

Løn_IA_HAPS_29	6379365	530132	57.55576	9.50355	19.1	SAND, fint, velsorteret, få skalfragmenter, gråt
Løn_IA_HAPS_30	6377612	531378	57.53993	9.52414	21.4	SAND, st. gruset, usorteret, skalfragmenter, gråt
Løn_IA_HAPS_31	6382247	529142	57.58171	9.48735	18.4	SAND, fint-ml., sorteret, skalfragmenter, gråbrunt
Løn_IA_HAPS_32	6380694	530493	57.56768	9.50975	19.4	SAND, fint, velsorteret, skalfragmenter, gråt
Løn_IA_HAPS_33	6379045	531575	57.55279	9.52763	17.3	SAND, fint, velsorteret, knivmusling, gråt
Løn_IA_HAPS_34	6377504	532787	57.53886	9.54767	20	SAND, fint, velsorteret, skalfragmenter, gråt
Løn_IA_HAPS_35	6382084	530659	57.58015	9.51271	19.3	SAND, fint, velsorteret, skalfragmenter, gråt
Løn_IA_HAPS_36	6380342	531921	57.56441	9.53358	17	SAND, fint, velsorteret, få skalfragmenter, gråt
Løn_IA_HAPS_37	6381912	532137	57.57850	9.53739	16.9	SAND, fint, velsorteret, skalfragmenter, gråt
Løn_IA_HAPS_38	6380209	533282	57.56312	9.55631	17	SAND, fint, let siltet, organisk, få skalfragmenter, mørkegråt
Løn_IA_HAPS_39	6383192	532307	57.58999	9.54041	18.3	SAND, fint, velsorteret, få skalfragmenter, svovllugt, gråt-sort
Løn_IA_HAPS_40	6381601	533509	57.57561	9.56029	21.2	SAND, fint, velsorteret, få skalfragmenter, gråt

Bilag D2

HAPS kornstørrelsesanalyser (oversigt)

Sample label	Lab. ID	HAPS ID	Y (UTM32N)	X (UTM32N)	D10 [mm]	D50 [mm]	D60 [mm]	U=D60/ D10	Finstof <0.125 mm (%)
205123/20	001	Løn_IA_HAPS_01	6374003	517751	0.14	0.19	0.21	1.53	2.7
205124/20	002	Løn_IA_HAPS_02	6375079	519182	0.20	0.35	0.38	1.95	1.5
205125/20	003	Løn_IA_HAPS_03	6373611	520585	0.13	0.20	0.21	1.60	4.5
205126/20	004	Løn_IA_HAPS_04	6376472	519733	0.31	0.79	0.89	2.89	0.6
205127/20	005	Løn_IA_HAPS_05	6373376	522063	0.20	0.40	0.44	2.19	1.7
205128/20	006	Løn_IA_HAPS_06	6376404	521086	0.18	0.36	0.39	2.13	1.6
205129/20	007	Løn_IA_HAPS_07	6374766	522248	0.20	0.43	0.49	2.50	0.8
205130/20	008	Løn_IA_HAPS_08	6377790	521226	0.14	0.23	0.26	1.82	1.8
205131/20	009	Løn_IA_HAPS_09	6376107	522468	0.13	0.20	0.21	1.60	4.6
205132/20	010	Løn_IA_HAPS_10	6374529	523622	0.15	0.24	0.29	1.99	1.7
205133/20	011	Løn_IA_HAPS_11	6377531	522653	0.14	0.20	0.22	1.64	4.2
205134/20	012	Løn_IA_HAPS_12	6375932	523906	0.15	0.28	0.33	2.27	3.2
205135/20	013	Løn_IA_HAPS_13	6378959	522949	0.14	0.23	0.27	1.88	2.9
205136/20	014	Løn_IA_HAPS_14	6377346	524093	0.19	0.38	0.41	2.16	0.7
205137/20	015	Løn_IA_HAPS_15	6375751	525301	0.26	0.43	0.47	1.82	1.1
205138/20	016	Løn_IA_HAPS_16	6378655	524322	0.13	0.20	0.21	1.57	3.5
205139/20	017	Løn_IA_HAPS_17	6377110	525473	0.14	0.23	0.25	1.77	3.3
205140/20	018	Løn_IA_HAPS_18	6378569	525679	0.15	0.29	0.34	2.28	3.1
205141/20	019	Løn_IA_HAPS_19	6376871	526969	0.23	4.81	6.38	28.32	1.7
205142/20	020	Løn_IA_HAPS_20	6380020	526066	0.28	0.59	0.73	2.60	0.6
205143/20	021	Løn_IA_HAPS_21	6378324	527201	0.14	0.23	0.26	1.82	1.4
205144/20	022	Løn_IA_HAPS_22	6381356	526161	0.19	0.38	0.42	2.15	1.6
205145/20	023	Løn_IA_HAPS_23	6379749	527344	0.14	0.20	0.22	1.61	3.5
205146/20	024	Løn_IA_HAPS_24	6381029	527585	0.26	0.42	0.46	1.72	1.1
205147/20	025	Løn_IA_HAPS_25	6379495	528846	0.27	0.58	0.68	2.49	0.9
205148/20	026	Løn_IA_HAPS_26	6377854	529944	0.23	0.39	0.42	1.80	0.8
205149/20	027	Løn_IA_HAPS_27	6376248	531095	0.16	0.34	0.38	2.38	2.3
205150/20	028	Løn_IA_HAPS_28	6381001	528875	0.15	0.32	0.36	2.45	5.5
205151/20	029	Løn_IA_HAPS_29	6379365	530132	0.14	0.21	0.23	1.62	1.3
205152/20	030	Løn_IA_HAPS_30	6377612	531378	0.18	0.73	0.90	5.10	3.1
205153/20	031	Løn_IA_HAPS_31	6382247	529142	0.16	0.32	0.36	2.22	0.8
205154/20	032	Løn_IA_HAPS_32	6380694	530493	0.14	0.25	0.30	2.06	2.3
205155/20	033	Løn_IA_HAPS_33	6379045	531575	0.14	0.22	0.24	1.67	1.0
205156/20	034	Løn_IA_HAPS_34	6377504	532787	0.14	0.22	0.25	1.75	2.6
205157/20	035	Løn_IA_HAPS_35	6382084	530659	0.14	0.20	0.21	1.55	1.6
205158/20	036	Løn_IA_HAPS_36	6380342	531921	0.14	0.20	0.21	1.54	1.4
205159/20	037	Løn_IA_HAPS_37	6381912	532137	0.14	0.19	0.21	1.53	1.6
205160/20	038	Løn_IA_HAPS_38	6380209	533282	0.14	0.20	0.22	1.60	3.5
205161/20	039	Løn_IA_HAPS_39	6383192	532307	0.14	0.19	0.21	1.53	1.9
205162/20	040	Løn_IA_HAPS_40	6381601	533509	0.14	0.20	0.21	1.54	1.6