

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

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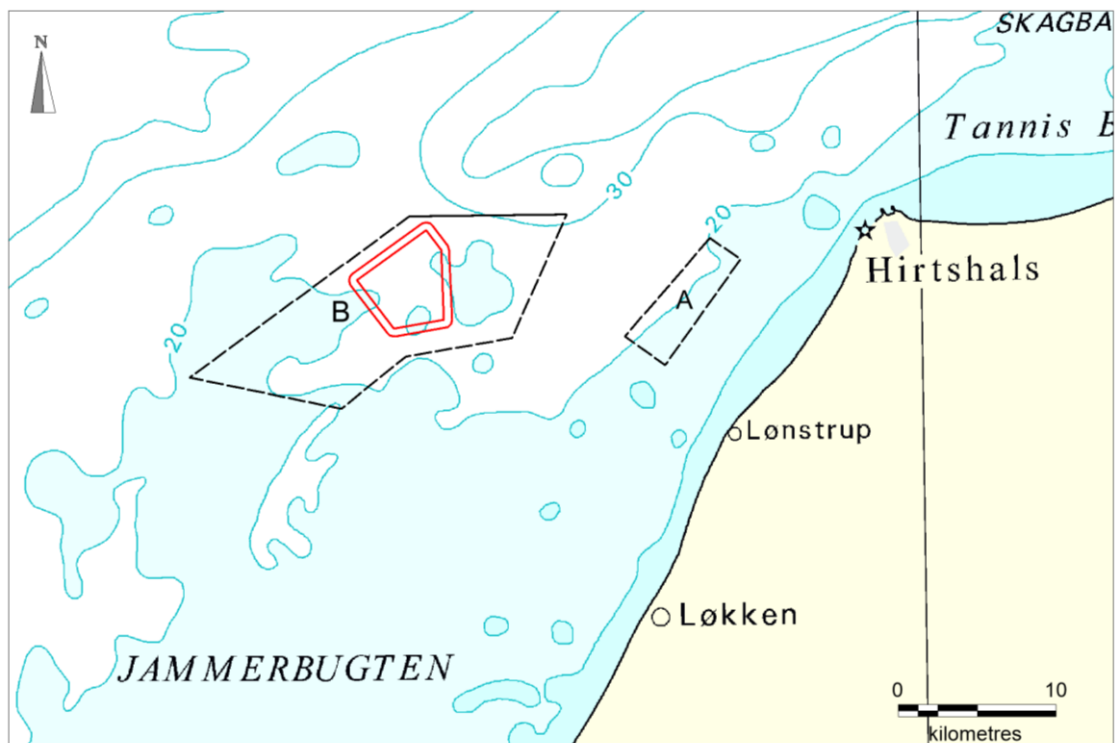
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1. Introduktion

For at sikre forsyningssikkerheden af sand til kystfodringen har Kystdirektoratet (KDI) flere bygherretilladelser til råstofindvinding af sand på havet. Ved Lønstrup har Kystdirektoratet ikke bygherretilladelser hvorfor der skal findes nye områder her. WSP/GEUS udfører for Kystdirektoratet rådgivning og bistand vedrørende indhentning af fremtidige råstofindvindingstilladelser i forbindelse med Kystdirektoratets 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). Efter gennemførelse af fase IA efterforskning i områderne Lønstrup A og Lønstrup B, blev det besluttet at fokusere videre fase IB undersøgelser i udvalgt fase IB område ca. 20 km VNV for Lønstrup B (Figur 1). Nærværende rapport omhandler geofysisk detailkortlægning, prøvetagning, og kortlægning af sandressourcer i fase IB området. GEUS har stået for den geofysiske kortlægning og borerer, mens WSP har udført HAPS prøvetagninger og ROV verifikationer.



Figur 1. Oversigt over undersøgelsesområderne A og B i Jammerbugten ud for Lønstrup. Fase IB detail undersøgelsesområdet er markeret med rød polygon.

1.1 Formål

GEUS udfører fase IB detailkortlægning af et potentielt indvindingsområde, som på basis af forudgående fase IA storskalakortlægning har påvist mulighed for et sammenhængende ressourceområde med kvaliteter og mængder af ønsket omfang. Undersøgelserne følger Miljøstyrelsens anvisninger for fase IB kortlægning jf. Råstoflovens bekendtgørelse nr. 1680 af 17/12/2018.

Fase IB (detailkortlægning) er en detaljeret kortlægning af ressourceområdet eller -områderne med henblik på den endelige afgrænsning samt beskrivelse og vurdering af ressourcen i det eller de områder, der bliver omfattet af en ansøgning om indvinding. Fase IB omfatter jf. Råstoflovens bekendtgørelse detailkortlægning af et eller flere af de under IA identificerede ressourceområder med henblik på at kunne afgrænse ressourceområdet og beskrive og vurdere selve råstofforekomstens udstrækning, mængde, kvalitet og sammensætning i det ansøgte område.

Der udføres seismiske undersøgelser med metoder, der kan honorere kravene til udarbejdelse af de korttyper, der er anført i nedenstående afsnit. Der skal udover det seismiske udstyr også sejles med følgende undersøgelsesudstyr:

a) Side scan sonar med en range på maksimalt 100 m og transducerens højde over havbunden max 0,05 til 0,1 x range, samt optagelse i både høj- og lavfrekvensområde. Der sejles med en maksimal linjetæthed på 80 m for vanddybder mindre end 10 m, og en maksimal linjetæthed på 100 m for vanddybder større end 10 m.

b) Magnetometer

Detailkortlægning kan desuden omfatte:

a) Sedimentprøver på op til 50 liter

b) Prøveboringer.

Der skal udarbejdes beskrivelse af råstofressourcens geologiske opbygning bilagt:

a) Kort over råstofressourcens udbredelse.

b) Kort over råstofressourcens volumen.

c) Kort over områdets bathymetri (se Fase IIA).

d) Kort over overfladesedimentets sammensætning (se Fase IIA).

i) Med arealmæssig angivelse af de identificerede substrattyper, jf. nedenfor.

ii) Med angivelse af eventuelle overjordstykkelser.

iii) Med angivelse af, om overfladen formodes påvirket af menneskelig aktivitet, samt billed-dokumentation over den påvirkede overflade.

iv) Med angivelse af naturlig omlejring af sedimentet.

e) Analyseresultater af sedimentprøver.

Alle resultater, positioner, sejllinjer, kort og tolkninger af indsamlede data afleveres til Miljøstyrelsen i form af råstof rapport med MapInfo GIS lag.

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 D 50 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.

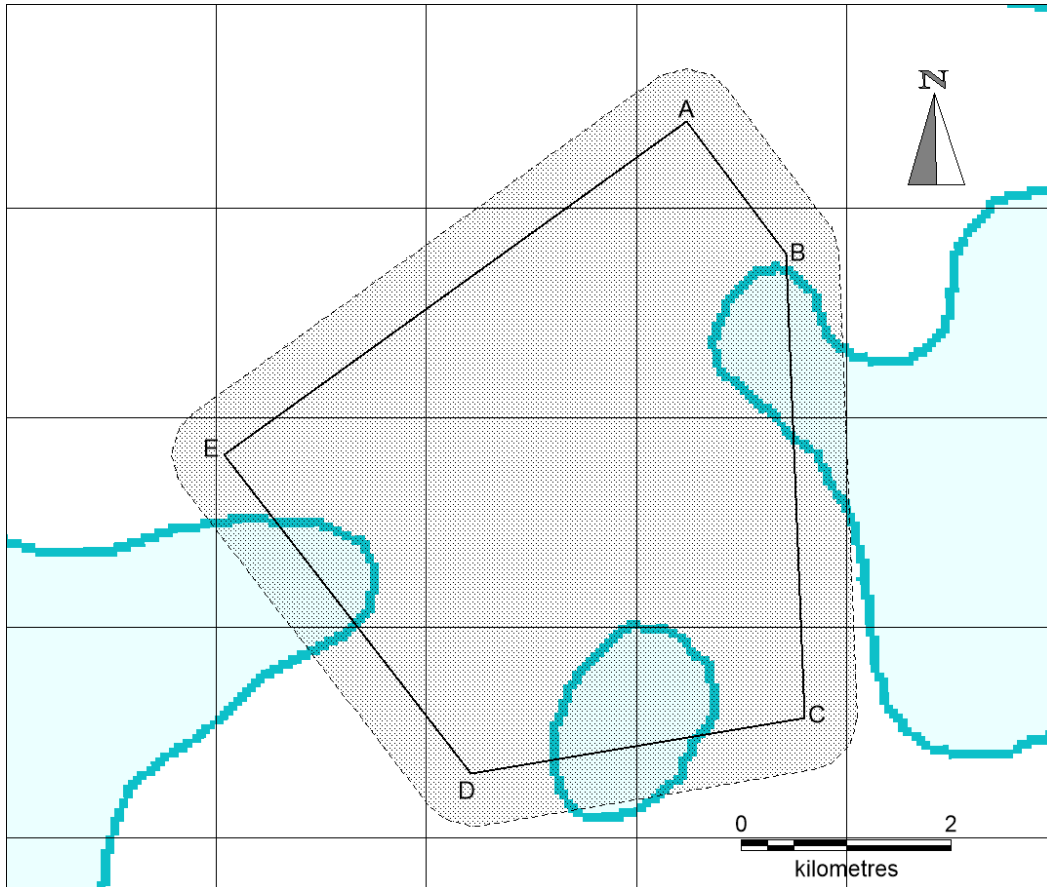
Kystdirektoratets behov for fodring ved Lønstrup er oplyst til at være 204.000 m³ årligt. Dvs. at for en 10-årige periode skal der indhentes indvindingstilladelse på ca. 2,04 mio m³.

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 råstofdatabase MARTA. De pågældende data har sideløbende med ny indsamlede data for Kystdirektoratet i nærværende projekt været benyttet til at udpege fase IB undersøgelsesområdet.

1.4 Surveyområde

Surveyområdet er beliggende ca. 20 km VNV for Lønstrup og består af interesseområde på 21,65 km² plus en 500 m omkringliggende påvirkningszone, i alt 31,63 km² (Figur 2). Hjørnekoordinater for Interesseområde er angivet i Tabel 1.



Figur 2. Fase IB Surveyområde bestående af interesseområde med omkringliggende 500 m påvirkningszone.

Tabel 1. Hjørnepunkter for interesseområde.

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

2. Survey udførelse

Mobilisering af surveyskibet *MS Skoven* blev udført d. 19-20 oktober 2020 i Hvide Sande havn. I den forbindelse blev der fastgjort stævnør til montering af kombineret side scan sonar/multibeam (Edgetech 6205). Innomar transducer (pinger) blev monteret på bagbords side i eksisterende beslag. Sparker udstyr blev rigget til på eksisterende bom på bagbord agter side. Magnetometer blev klargjort til udsætning fra styrbord side af agterstævnen. GEUS' surveycontainer med optageudstyr og overvågningsmonitors blev monteret på for-dækket.

Seismisk survey af Lønstrup fase IB området blev udført i perioden 25-26 oktober 2020 i forlængelse af tilsvarende survey af to fase IB områder ud for Lodbjerg (Tabel 2). Vejr og sø var d. 25/10 præget af frisk vind omkring 10 m/s fra sydlig retning og en bølgehøjde på lidt over 1 m. Den 26/10 tiltog vinden til frisk til hård vind fra syd på 10-15 m/s og en bølgehøjde på ca. 1,5 m.

Efter udsætning af sparker udstyr om morgenen d. 25/10 blev det konstateret at udgangssignalet fra sparkeren var fraværende. Udstyret blev taget ombord igen, forsøgt repareret og udsat igen til test. Det måtte konstateres at der var sket et større kabelbrud og efter kontakt med WSP projektleder, blev det besluttet at survey kunne fortsættes alene med Innomar seismikudstyr. Dette var begrundet med resultater af Innomar- og sparkerdata sammenholdt med boringsdata efter foregående fase IA survey i Lønstrup B området.

Der blev sejlet med en linjeafstand på 100 m og surveyhastigheden blev holdt på ca. 7 knob. Side scan sonar range var indstillet til 100 m, hvilket medfører tæt på 100% overlap mellem linjerne. Datadækning og kvalitet af side scan sonar og Innomar pinger data blev checket dagligt og efter fuldførelse af området.

Efter preliminær tolkning af Innomar seismikdata blev der d. 14-15 november 2020 udført 20 boringer fra *MS Skoven* med GEUS's 6 m vibrocører. Vejret var begge dage præget af let-frisk vind fra sydlig retning. Bølgehøjden var generelt omkring 1 m.

Tabel 2. Oversigt over survey forløb

| Dato | Arbejdsområde | Kommentar |
|---------------|-----------------------------|---|
| 19-20/10/2020 | Hvide Sande | Mobilisering af MS Skoven. Montering af Sonar, Innomar sedimentekkolod, og survey container |
| 25/10/2020 | Transit Lodbjerg - Lønstrup | Forlægning fra Lodbjerg surveyområde. Test af udstyr og forsøg på reparation af Sparker |
| 25-26/10/2020 | Lønstrup IB | Survey af Lønstrup IB område |
| 26-27/10/2020 | Forlægning | Afslutning af survey og retur til Hvide Sande |
| 27/10/2020 | Hvide Sande | Demobilisering af seismikudstyr |
| 12/11/2020 | Hvide Sande | Mobilisering af MVSSkoven for vibrationsboring |
| 14-15/11/2020 | 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:

- Henrik Granat, GEUS (Geolog)
- Sigurd B. Andersen, GEUS (Marintekniker)
- Johnny Bjerregaard Jørgensen (Bjerregaard Montage Aps.) med to medhjælpere

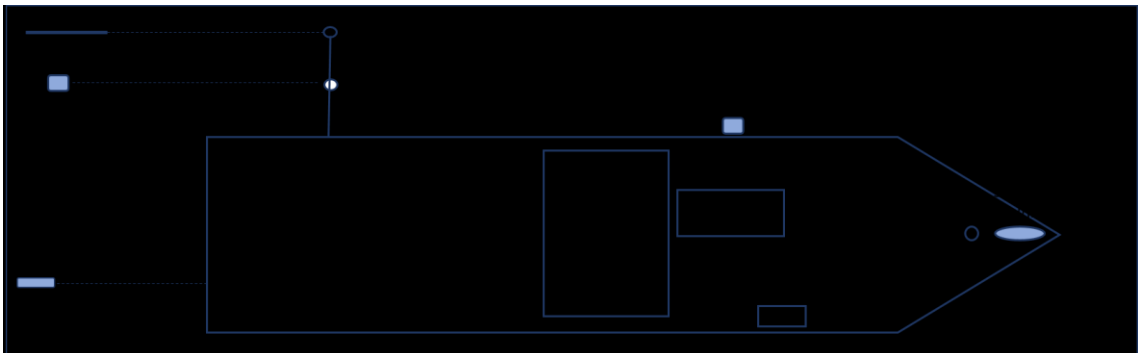
3. Anvendt udstyr

3.1 Opmålings-skib

Surveyskibet *MS Skoven* chartret gennem FOGA Aps. blev benyttet til geofysisk opmåling, vibrationsboring, HAPS prøvetagning og ROV dyk (Figur 3). I Figur 4 ses skitse af udstyrsopsætning.



Figur 3. Surveyskibet MS Skoven.



Figur 4. Surveyudstyr opsætning på MS Skoven.

3.2 Udstyr og software

Den geofysiske opmåling inkluderede side-scan sonar, multibeam, sedimentekkolod, sparker seismik, og magnetometer. I Tabel 3 ses oversigt over udstyrsspecifikationer.

Tabel 3. Oversigt over anvendt surveyudstyr.

| Udstyr | Model | Specifikationer |
|--|--------------------------------|---------------------------|
| GPS positionering | Applanix PosMv 5 | |
| Integreret side scan sonar/ multibeam | Edgetech 6205 | 230/550/1600kHz |
| Sedimentekkolod (pinger) | Innomar Medium | Primær frekvens 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 bliver dermed automatisk tidevandskorrigeret. I forbindelse med mobilisering bliver offset fra GPS-antennen til sonar-transducere 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, roll/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 dybde data. JSF filerne blev processeret dagligt for at checke

datakvalitet. Heave og SVP (lydhastighedsprofiler) blev importeret til SonarWiz projekt for at korrigere rådata. Datasættet blev rensset 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 sejlrretningen er på ca. 4.5 cm. Data blev optaget i Edgetech JSF format med Sonarwiz 7 software. Der blev benyttet en range på 100 m til hver side af skibet. Ved en sejllinje afstand på 100 m på dybder i intervallet 15-30 m betyder det, at der er tæt på 100% overlap mellem sejllinjerne.

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 typisk 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 streamer til at penetrere dybere i havbunden i mere hårde lag. Der kan typisk opnås en dybdepenetrering på 25-150 m med sparkersystemet. Et Mini-Trace 2 optagesystem fra Georesources blev benyttet. Som følge af brud på kabel til sparkersystem opstået i forbindelse med bjærgning af systemet i andet surveyområde dagen forud for påbegyndelse af survey ud for Lønstrup, måtte det efter flere testforsøg opgives at optage sparkerdata i Lønstrup-lb surveyområdet. I den forbindelse blev det sikret at de mere højopløselige Innomardata kunne trace bund af den potentielle ressourceenhed.

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 magnetometeret 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 (Figur 5). Vibrocore'n kan tage havbundskerner af sand, mudder, ler, moræne og løst lithificerede 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 kerntageren 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, sektionnummer og top/bund af hvert kernestykke før det nedpakkes til hjemtransport.



Figur 5. Vibrocorer udsættes over skibssiden på MS Skoven.

3.3 Dataprocessering og tolkning

De seismiske data er blevet processeret, tolket og bearbejdet til kort, og resultaterne er præsenteret i GIS-programmet MapInfo. Nedenstående Tabel 4 giver en oversigt over databearbejdning og tolknings dataformater, software og slutprodukter.

Tabel 4. 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 | Havbunds sedimentkort, menneskelig aktivitet |
| Innomar | Optaget i Raw format. Konverteret til SEG Y med SesConvert64 | Kingdom, Innomar, Mapinfo | Havbundssedimentkort og ressourcekort |
| Sparker | SEG Y | Geosuite AllWorks, Kingdom, Mapinfo | Ressourcekort |

4. Survey resultater

Survey data er blevet processeret, tolket og bearbejdet til førstegenerationskort. På baggrund af data inkl. efterforskningsfase IA data fra Lønstrup B området blev der udvalgt positioner til Vibrocoring, HAPS prøvetagning og ROV dyk på verifikationspunkter. Efter gennemførelse af prøvetagning og ROV dyk 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.

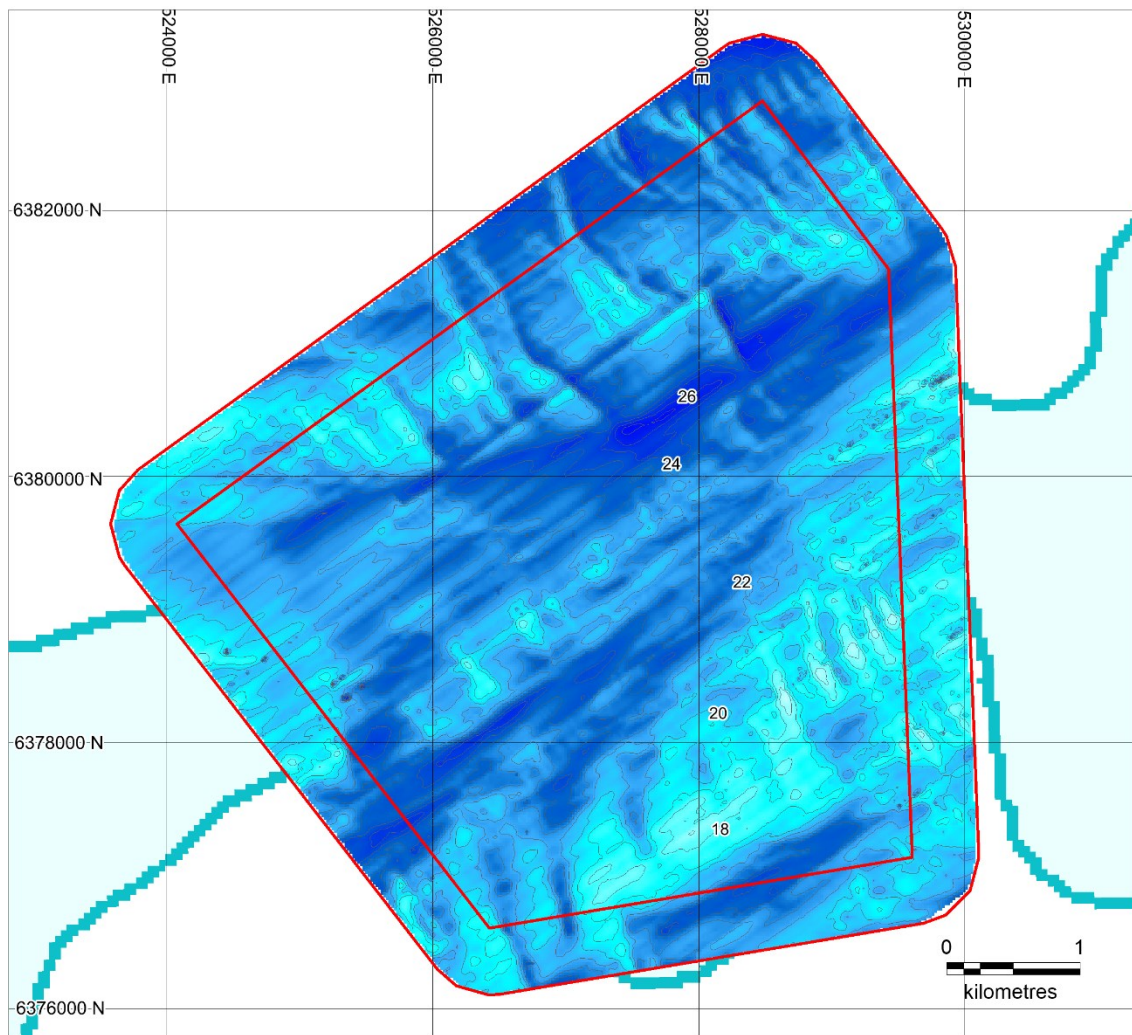
4.1 Sejllinjer

Der blev sejlet i alt 63 linjer svarende til ca. 290 linjekm over Lønstrup IB surveyområdet. Linjerne blev sejlet med en indbyrdes afstand på 100 m og med en NØ-SV retning. Linjerne er nummereret Loen_IB_xx fra nordvest (Loen_IB_01) til sydøst (Loen_IB_63). Sejllinjer er vist i kortbilag A1.

4.2 Bathymetri

De processerede data fra multibeamopmålingen er eksporteret som højopløselig xyz gridfil og data er regriddet i Vertical Mapper og plottet med dybdefarvekode og 1 m konturlinjer i forhold til DVR90 (Figur 6, Bilag A2). Dybdedata viser at dybden i området varierer fra ca. 16 m til ca. 28 m. Der er overordnet set god overensstemmelse med søkortets 20 m konturlinje.

Dybdekortet viser fremtrædende asymmetriske rygge orienteret NV-SØ, med den stejle side vendt mod NØ. Side scan sonar data og prøvetagning underbygger at ryggene repræsenterer store sandbølger med en højde på 2-5 m, og en indbyrdes afstand på flere hundrede m. Sandbølgerne er mest fremtrædende i den sydlige og den nordlige del af området, hvor de danner en samlet forhøjelse af havbunden, og hvor de mindste dybder på 16-20 m findes. Den centrale del af området, hvor sandbølgerne ikke er så fremtrædende, er generelt dybereliggende, og maksimale dybder på 26-27 m ses i en rendelignende struktur orienteret VSV-ØNØ i den nordlige centrale del af området.



Figur 6. Kortlagt bathymetri af undersøgelsesområdet. Konturlinjer er angivet med 1 m interval. Se også Kortbilag A2.

4.3 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 (Figur 7, Bilag A3). Side scan mosaikken viser dominerende lysere områder repræsenterende lavere reflektiv sandbund, vekslede med mørkere partier repræsenterende højere reflektiv let gruset og mere grovsandet havbund. Nærstudier af de enkelte side scan sonar filer viser kun enkelte sten >10 cm i et mindre område omkring ROV verifikationspunkt R02 i 500 m zonen i den sydlige del af området.

Der er ikke observeret trawlspor, vrug eller andre spor af menneskelig aktivitet i undersøgelsesområdet. Hele undersøgelsesområdet er præget af dynamiske bundformer, dels mindre

bølgeribber og dels strømgenererede bundformer i flere størrelsesordner (titals til hundreder m bølgelængde).

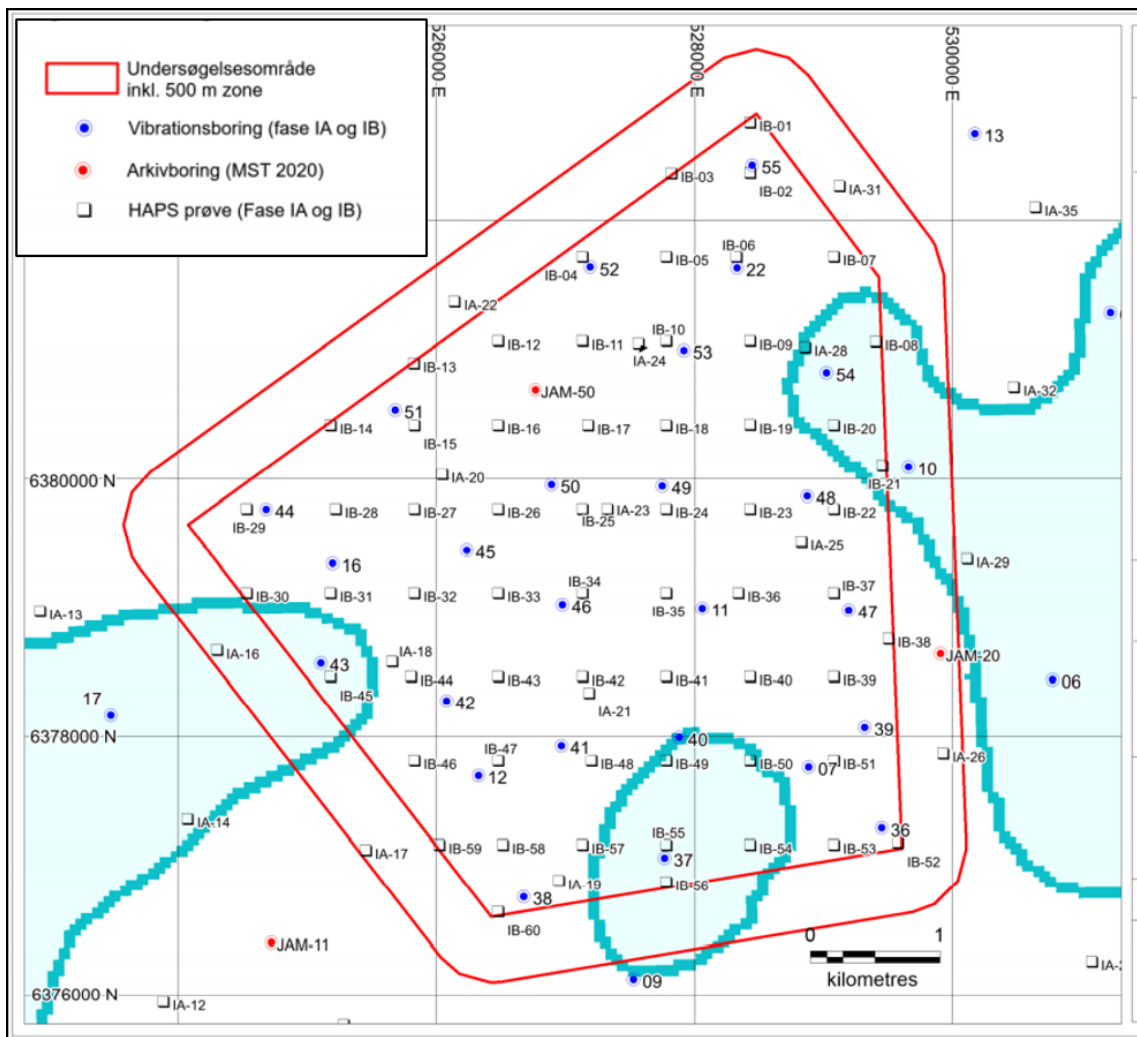


Figur 7. Side-scan sonar mosaik af undersøgelsesområdet. Mørkere partier fremhæver trug imellem store vandrende bundformer.

4.4 HAPS prøvetagninger

Der foretaget i alt 73 HAPS prøvetagninger af WSP i undersøgelsesområdet. Heraf er 13 prøvetagninger foretaget i forbindelse med fase IA og 60 prøvetagninger er foretaget i forbindelse med fase IB. Positionerne er vist på Figur 8 (kortbilag A4) og i Bilag C1 og C2 ses en tabellarisk oversigt over resultaterne. På nær en position, hvor der er konstateret grus og groft sand (LON_B_S28) kan alle øvrige prøvetagninger karakteriseres som sand. Kornstørrelsen varierer idet nogle HAPS prøvetagninger består af fint-mellemkornet sand, mens andre består af mellem-grovkornet sand. På en del af positionerne er der konstateret en nedad

grovende kornstørrelse i HAPS-prøven. Der er tendens til at områderne med mere ensartet bathymetri uden store bundformer er domineret af fin-mellemkornet sand, mens områder præget af meget store bundformer har mere variable sandkornstørrelser. Dette kan forklares med systematisk variation af kornstørrelser på tværs af de store bundformer, som bl.a. også underbygges af side scan sonar resultater. Det må således antages at grovere og til tider let gruset sand med skaller præger trugene mellem bundformerne, mens fin-mellemkornet sand fortrinsvis findes på stødside og kam af bundformerne. Gennemsnitlig D50 kornstørrelse er på 0,42 mm, finstofindhold er på 1,1%, tørstofindhold er på 84,3%, og glødetab er på 0,36%.



Figur 8. Kort med positioner af HAPS og Vibrocore prøvetagninger fra fase IA og IB i undersøgelsesområdet.

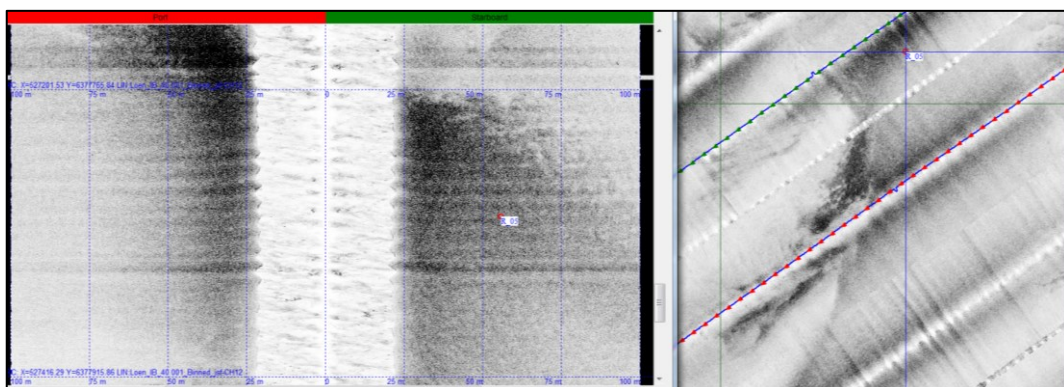
4.5 ROV verifikationsdyk

Der er af WSP foretaget 20 ROV verifikationsdyk, som er udvalgt på baggrund af side-scan sonar tolkning. Positioner er vist på kortbilag A5 og i Bilag D1 ses en tabellarisk oversigt over resultaterne. ROV punktverifikationerne viser at på 17 af positionerne er der observeret en dynamisk præget sandbund (fint-groft sand), ofte med bølgeribber og med lidt grus og skaller i trugene. På tre af positionerne er der konstateret en gruset sandbund med spredte mindre sten (R01, R02, R14). På R02, der er beliggende i 500 m zonen, er der ligeledes konstateret sekundære mindre partier af mere stenet substrat (type 3).

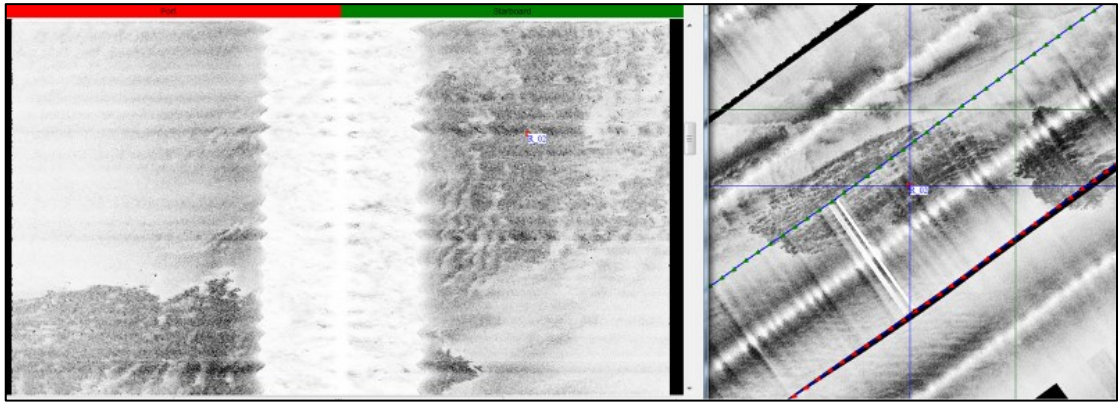
4.6 Substrattypekortlægning

Der er foretaget substrattypekortlægning baseret på tolkning af side scan sonar mosaik, gennemgang af hver enkelt side-scan linje, ROV dyk video verifikation af udvalgte positioner, samt prøvetagningsresultater fra HAPS og Vibrocores.

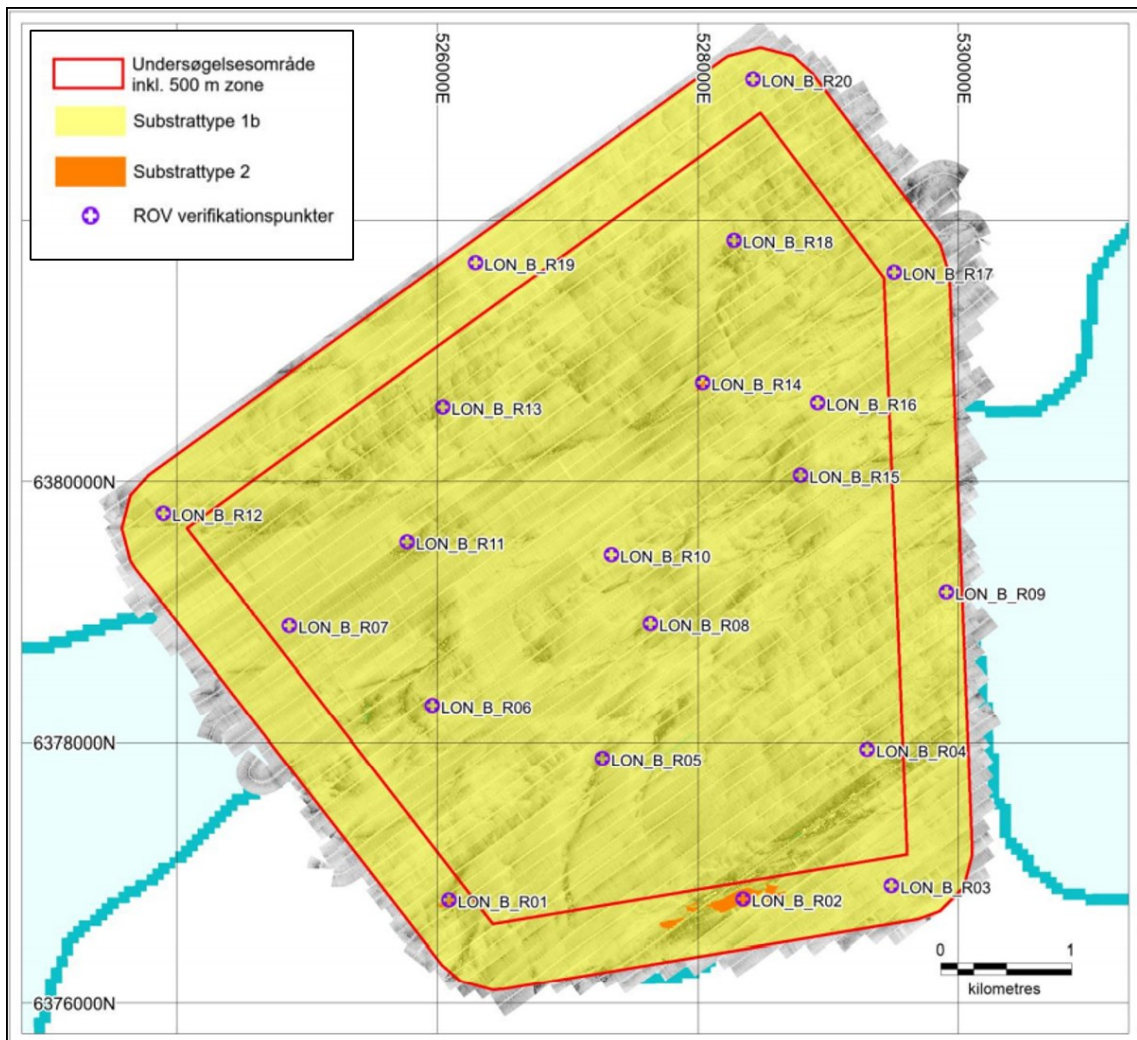
Undersøgelsesområdet er helt domineret af substrattype 1b, repræsenterende en dynamisk præget fast sandbund med varierende indslag af skaller og grus (Figur 9). Substrattype 2 bestående af en blanding af groft sand og grus samt enkelte småsten på op til ca. 10 cm findes kun i et ca. 1000 m langstrakt område omkring ROV verifikationspunkt R02 i 500 m zonen i den sydlige del af området, samt i et meget lille område omkring ROV verifikationspunkt R14 i den nordlige centrale del af området (Figur 10). Substrattype 1b varierer fra mere homogent rent sand (lyse partier på side-scan mosaik) til gruset og mere grovkornet sand (mørke partier på side-scan mosaik). Substrattype 2 udgør kun 0,22% af det samlede undersøgelsesområde Figur 11. Heraf befinder sig 96,5% af substrattype 2 sig i 500 m påvirkningszonen.



Figur 9. Side scan sonar billede (tv) og mosaik (th) af Substrattype 1b præget af gruset sand (mørkere parti) i trug mellem store sandbundformer. ROV verifikationspunkt R05 ses på billederne. Afstand mellem rød-grøn markering af linjeforløb er 200 m.



Figur 10. Side scan sonar billede (tv) og tilsvarende mosaik udsnit (th) af Substrattype 2 præget af grus og sand med enkelte sten større end 10 cm (mørkere parti). ROV verifikationspunkt R02 ses på billederne. Afstand mellem rød-grøn markering af linjeforløb er 200 m.



Figur 11. Substrattypefordeling og ROV verifikationspunkter.

4.7 Vibrationsboringer

På baggrund af seismik tolkning og resultater fra fase IA boringskampagne blev der foretaget 20 fase IB vibrationsboringer (nr. 36-55). Herudover eksisterer der inden for fase IB området 5 boringer foretaget i undersøgelsesfase IA (nr. 7, 11, 12, 16, 22) og en arkivboring (Jam-50/DGU nr. 570914.7) fra Miljøstyrelsens boringskampagne i Nordsøen i 2020. Positionsliste, boringsbeskrivelser, fotos af boringer og kornstørrelsesdata findes i Bilag B1-B5. Se Figur 8 (kortbilag A4) for oversigt over boringspositioner.

Boringerne påviser marint sand til en dybde af mere end 5-6 m i området. Enkelte boreprofiler indeholder få dm tykke indslag af grus og småsten (boring nr. 22, 36, 38). Sandet er typisk mellemkornet i de øvre 0,5-2,0 m af boreprofiler, mens de underliggende dele af kerneprofilene ofte er af mere finsandet karakter. Denne tendens er mest markant i områdets sydlige og nordlige del hvor større bundformer er mest fremtrædende. Der kan ofte observeres en markant grænse i kerneprofilene mellem det øvre grovere sand og det nedre mere finkornede sand (Figur 12). Denne grænse svarer til fladen mellem den øvre højere reflektive sandenhed og den lavere reflektive sandenhed, som kan registreres i Innomar profiler.

Der er foretaget kornstørrelsesanalyser for ca. hver 100 cm ned gennem boringsprofilerne. For de øvre 0.5-2.0 m af kerneprofilene påviser kornstørrelsesanalyserne typisk velsorteret sand med en D50 værdi på 0.2-0.3 mm. Indholdet af finstof <125 µm er på ca. 4-10% og glødetab er på gennemsnitligt 0.61% (max. 1.3%). Den nedre del af kerneprofilene indeholder typisk finkornet sand med en D50 værdi på ca. 0.1-0.2 mm, og et meget varierende finstofindhold på 10-80%.

| Core ID: Len_B_IB_41 | | Coordinates (m): E: 526972 N: 6377926 | | Water depth (m): 25.5 | Coordinate system: UTM 32 Reference datum: WGS84 | | | | | | | | | | |
|----------------------|--------------------------------|--|---|-----------------------|--|------------|-------------------|---------------|-----------------|-----------------|------------|----------------------|-----------|-------------------|------------------|
| DGU no: 570914.26 | | Longitude: 9°27.035'E Latitude: 57°32.582'N | | | | | | | | | | | | | |
| Core type: Vibrocore | | Core length (m): 4.31 | | | | | | | | | | | | | |
| Core section | Depth below mean sea level (m) | Lithology | Mud clay silt vf m vc granules pebbles | Sand | Gravel | Grain size | | | | | | | | | |
| | | | | | | Mean (mm) | Silt and clay (%) | Fine sand (%) | Medium sand (%) | Coarse sand (%) | Gravel (%) | Loss on ignition (%) | Water (%) | CaCO ₃ | Other parameters |
| V | 26.5 | [Lithology diagram showing a transition from medium sand to fine sand at 144 cm depth] | | | | 200621 | 0.22 | 0.98 | 43.87 | 50.26 | 4.63 | 0.25 | 0.5 | 17 | + |
| IV | 26.5 - 1 | | | | | 200622 | 0.25 | 0.87 | 38.41 | 52.43 | 7.59 | 0.70 | 0.5 | 19 | + |
| III | 27.5 - 2 | | | | | 200623 | 0.13 | 7.17 | 85.52 | 7.16 | 0.15 | 0.00 | 1.0 | 19 | |
| II | 28.5 - 3 | | | | | 200624 | 0.11 | 9.13 | 89.40 | 1.39 | 0.08 | 0.00 | 1.0 | 23 | + |
| I | 29.5 - 4 | | | | | 200625 | 0.10 | 14.14 | 83.79 | 1.31 | 0.38 | 0.38 | 1.1 | 24 | + |

Figur 12. Eksempel på boring hvor en markant grænse ved 144 cm adskiller en øvre mellemkornet sandenhed (D50 Mean=0,22-0,25mm) fra en nedre finkornet sandenhed (D50 Mean=0,10-0,13mm).

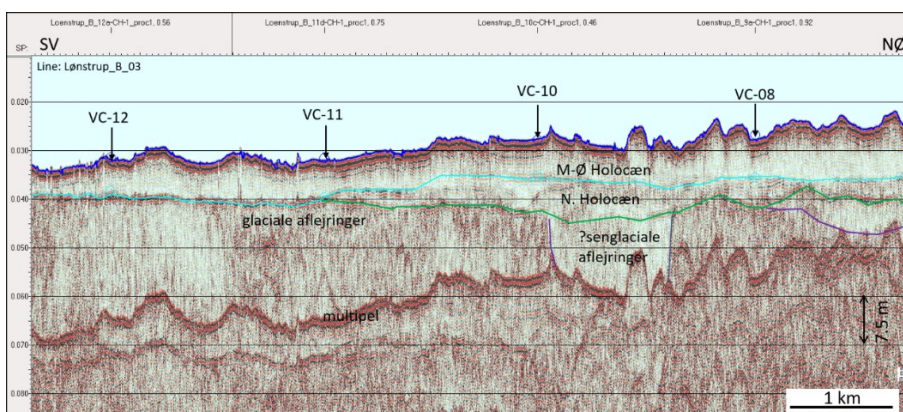
4.8 Seismik tolkning

Fase Ia undersøgelser med Sparker og Innomar seismik samt boringer har påvist at de øvre geologiske enheder i området består af Weichsel glaciale aflejringer overlejret af finkornede senglaciale marine aflejringer og holocæne marine sandede aflejringer (Figur 14). Det er karakteristisk for området at overfladen af de glaciale aflejringer, som kommer helt op til havbunden øst for undersøgelsesområdet, 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 den overliggende holocæne lagserie. Den holocæne lagserie består af en nedre nord-værts udbyggende marin enhed af finsand af mere eller mindre siltet karakter. Herover findes en finkornet marin sandenhed, som typisk er opbygget af store lentikulære underenheder. Øverst findes fin-grovkornet sand som indgår i store dynamiske sandbølger der vandrer mod NØ. Afgrensning af den øverste enhed kan typisk kun erkendes i højopløselige Innomar profiler (Figur 15).

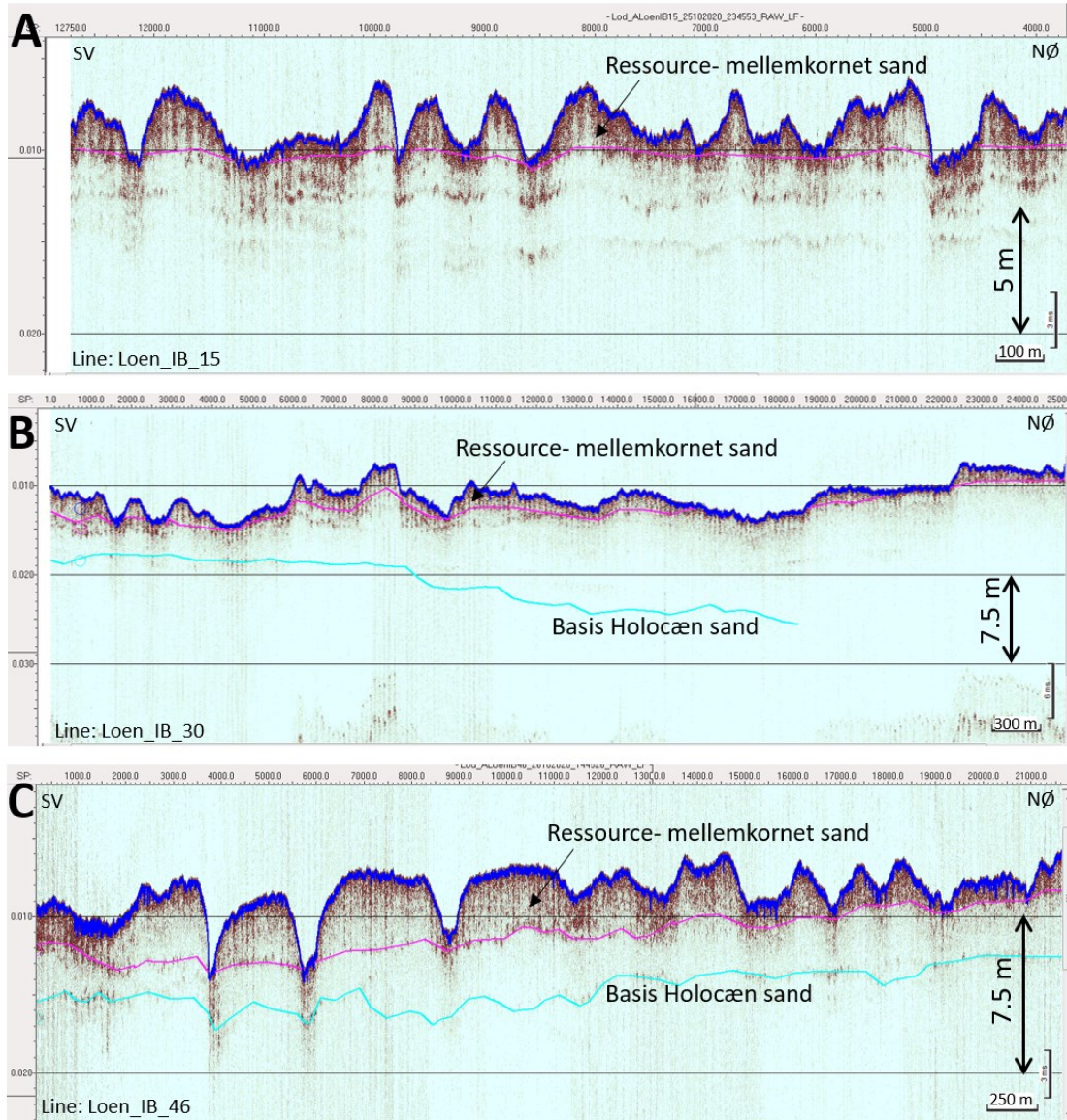
| Periode | Genetiske enheder | Lithologi |
|------------------|--|------------------------------|
| Øvre Holocæn | Marint mobilt sand, store sandbølger | Mellemkornet sand |
| Nedre Holocæn | Marin transgression og sandudbygning mod NNØ | Finkornet sand/silt |
| Senglacial | Yoldiahav aflejringer (dybere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

Figur 13. Oversigt over geologiske enheder og lithologi i området.

Tolkning af fase IB innomar detail-seismik, sammenholdt med resultater af vibrocore boringer har påvist at den øverste mobile sandenhed typisk er mere højreflektiv (Figur 15) og basis af den øverste Holocæne sandenhed, der har ressourcepotentialer, har hermed kunnet kortlægges.



Figur 14. Eksempel på tolket sparker seismikprofil (fase IA) gennem boringspositionerne VC-12 og VC-11 (fase IB område) og videre mod nordøst gennem VC-10 og VC-08 (fase IA område).



Figur 15. Eksempel på tolkede Innomar profiler (SV-NØ) gennem henholdsvis den nordlige (A), den centrale (B) og den sydlige del (C) af surveyområdet. Over fladen tolket som basis af Holocæne sandaflejringer (blå) findes finsandede aflejringer opbygget af lentikulære underenheder. Det øverste højere reflektive lag (over rød linje) udgør ressourcenheden bestående af mellemkornet sand.

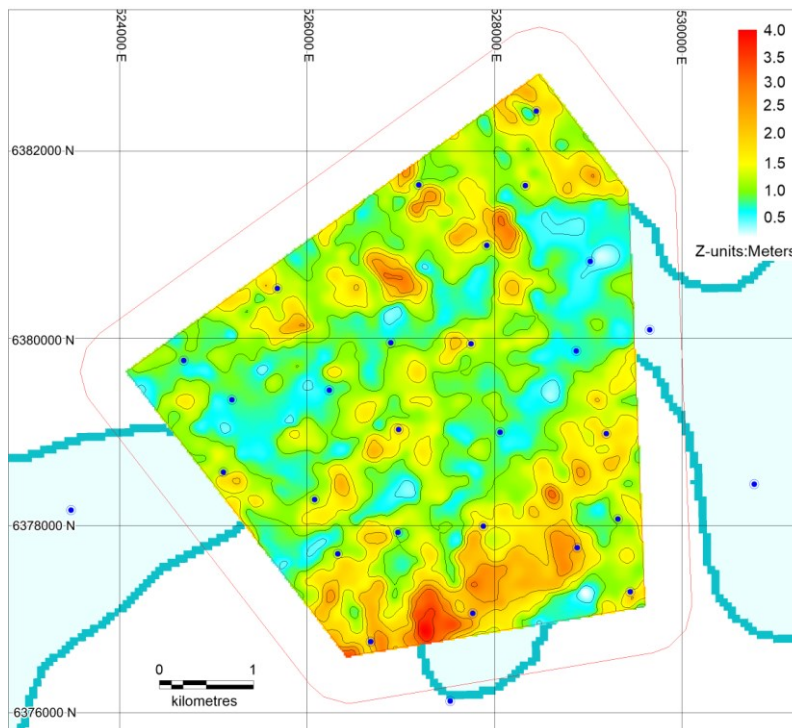
5. Ressourcekortlægning

På baggrund af detaljeret seismisk kortlægning af Innomar sediment-ekkoloddata kombineret med resultater af vibrocore borer er der kortlagt en relativ tynd sandressourceenhed, som generelt må antages at overholde de krav til kornstørrelsesfordeling som Kystdirektoratet har anført for området.

Ressourcen har en varierende mægtighed på op til ca. 3,5 m (Figur 16). De største mægtigheder ses i den sydlige del af området, samt i større sandrygge i den nordlige del af området. I større dele af den centrale dele ses en begrænset mægtighed på 0,5 m eller mindre. De større mægtigheder er sammenfaldende med forekomst af store sandrygge, som opbygger de højereliggende dele af undersøgelsesområdet. Således varierer ressourcemægtighed og sandkvalitet lateralt mere i SV-NØ retning sammenlignet med NV-SØ retning.

Volumenberegning af den kortlagte ressourceforekomst giver et samlet volumen på 16,6 mio. m³. Heraf findes ca. 75% i den øvre m under havbunden.

Ressourceforekomsten overlejrer en adskillige m tyk enhed af finkornet marint sand og det må generelt antages at substrattypen ikke vil ændres væsentligt ved en potentiel fuld udnyttelse af ressourcen.



Figur 16. Kortlagt mægtighed af ressourceforekomst med 1 m konturlinjer i undersøgelsesområdet (excl. 500 m zone). Blå punkter markerer positioner af vibrationsboringer.

6. Indvinding ansøgningsområde

På baggrund af geofysisk detailkortlægning understøttet med boringer anbefales det, at hele Lønstrup fase IB interesseområdet (Figur 2, Tabel 1) får status af ansøgningsområde i forhold til nyt Kystdirektorat bygherreområde for sandindvinding til Lønstrupkysten.

7. Referencer

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

GEUS Rapport 2021/9: Efterforskning og kortlægning af sandressourcer i Nordsøen for Kystdirektoratet- Lønstrup fase 1a. Danmarks og Grønlands Geologiske Undersøgelse Rapport 2021/9.

Bilag

A1: Kortbilag – Sejlinjer

A2: Kortbilag – Bathymetri baseret på multibeam opmåling

A3: Kortbilag – Side-scan sonar mosaik

A4: Kortbilag – Prøvetagningpunkter (Vibrocores og HAPS)

A5: Kortbilag – Substrattypkort med ROV positioner

A6: Kortbilag – Kortlagt ressourcemægtighed med boringspositioner

B1: Boringspositionsliste

B2: Boringsbeskrivelser med udvalgte analyseresultater

B3: Fotos af boringer

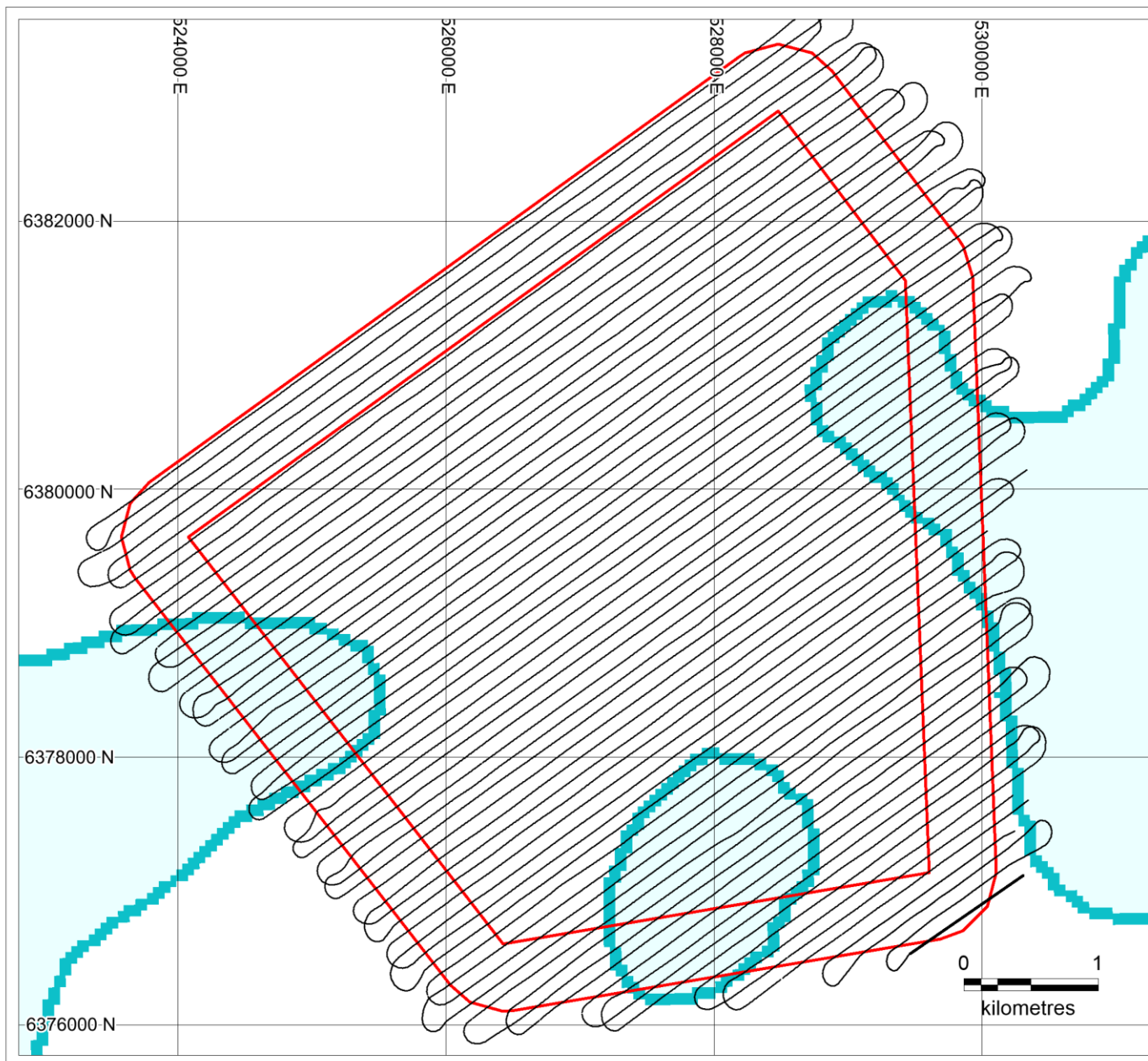
B4: Boringer: Kornstørrelse-, vandindhold-, og glødetabsanalyser (oversigt)

B5: Boringer: Kornstørrelsesdata og fordelingskurver

C1: HAPS positioner og feltbeskrivelser (WSP survey, kortfattet oversigt)

C2: HAPS analyseresultater (WSP survey, kortfattet oversigt)


D1: ROV dyk resultater (WSP survey, kortfattet oversigt)



Område: Lønstrup

Undersøgellesfase Ib

Signaturforklaring

 Undersøgellesområde
inkl. 500 m zone

 Sejllinje

Datum: WGS84

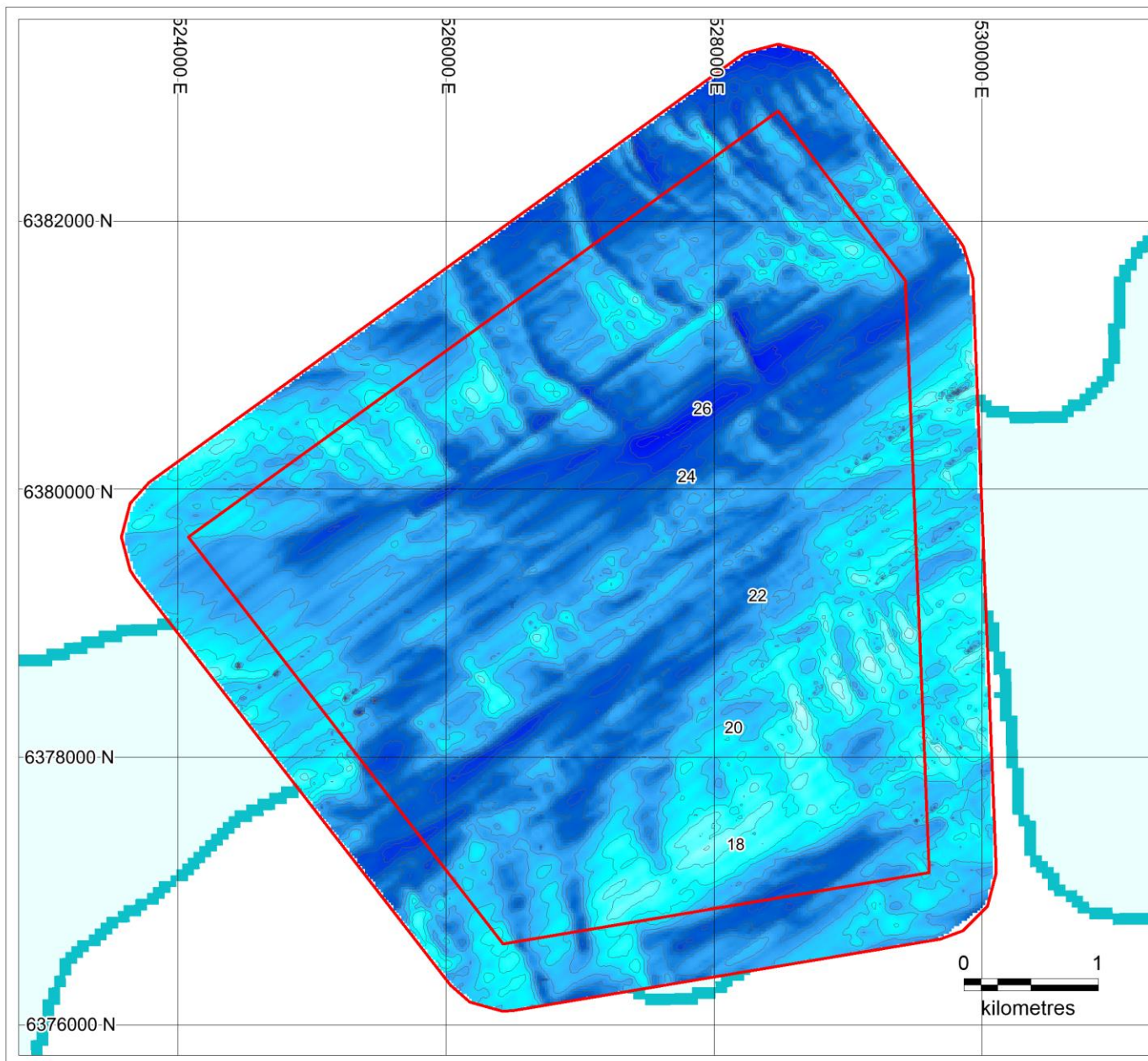
Projektion: UTM 32N

Klient:



Udført: NNP 08-02-2021


Bilag A1: Sejllinjer (100 m afstand)



Område: Lønstrup

Undersøgelsesfase Ib

Signaturforklaring

 Undersøelsesområde
inkl. 500 m zone

Dybde (m) - DVR90



27.0
26.0
25.0
24.0
23.0
22.0
21.0
20.0
19.0
18.0
17.0

Datum: WGS84

Projektion: UTM 32N

Klient:

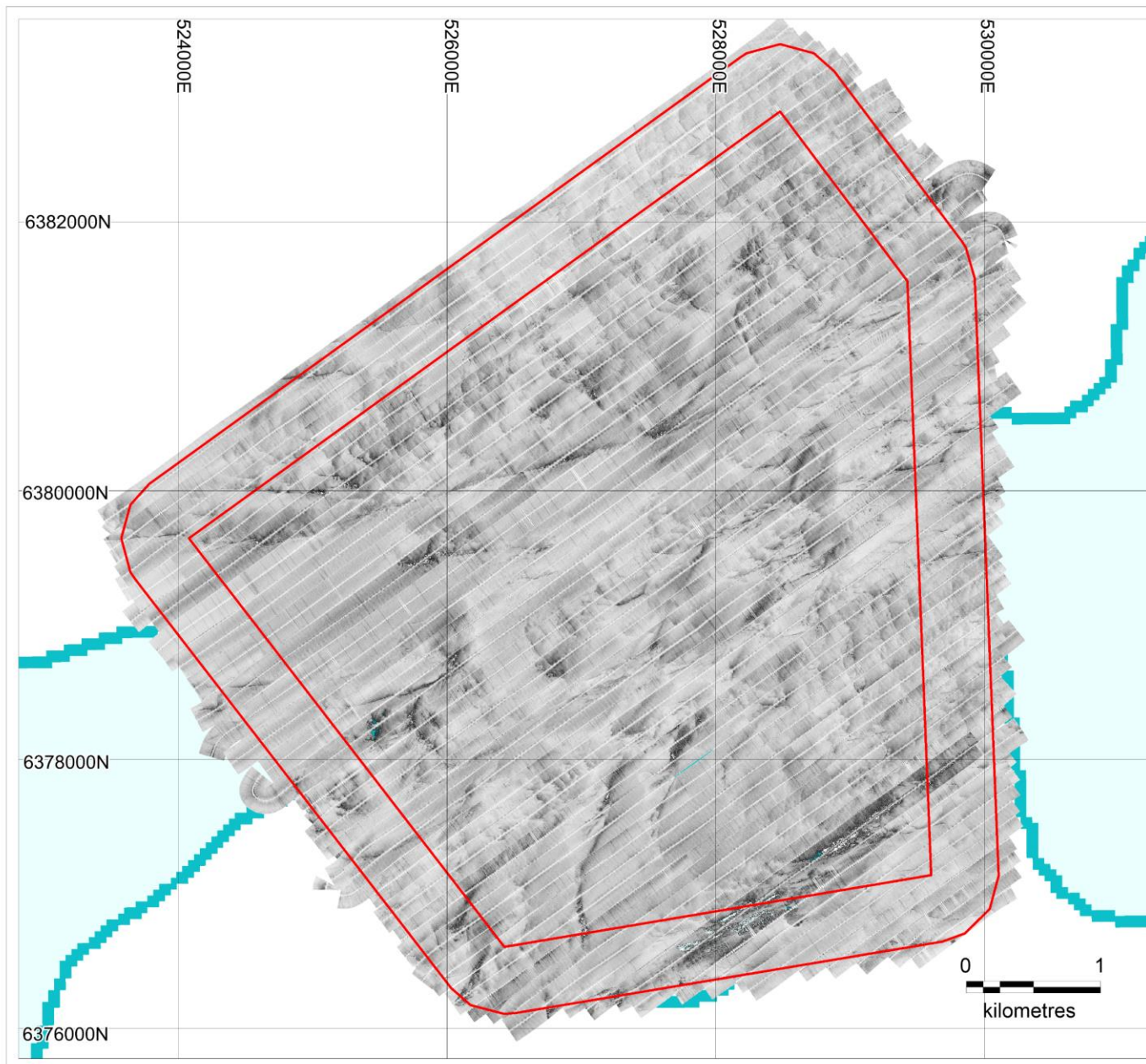


Miljø- og Fødevareministeriet
Kystdirektoratet



Udført: NNP 08-02-2021


Bilag A2:
Bathymetri - 1m konturlinjer



Område: Lønstrup

Undersøgsfase Ib

Signaturforklaring

 Undersøgsområde
inkl. 500 m zone

Datum: WGS84

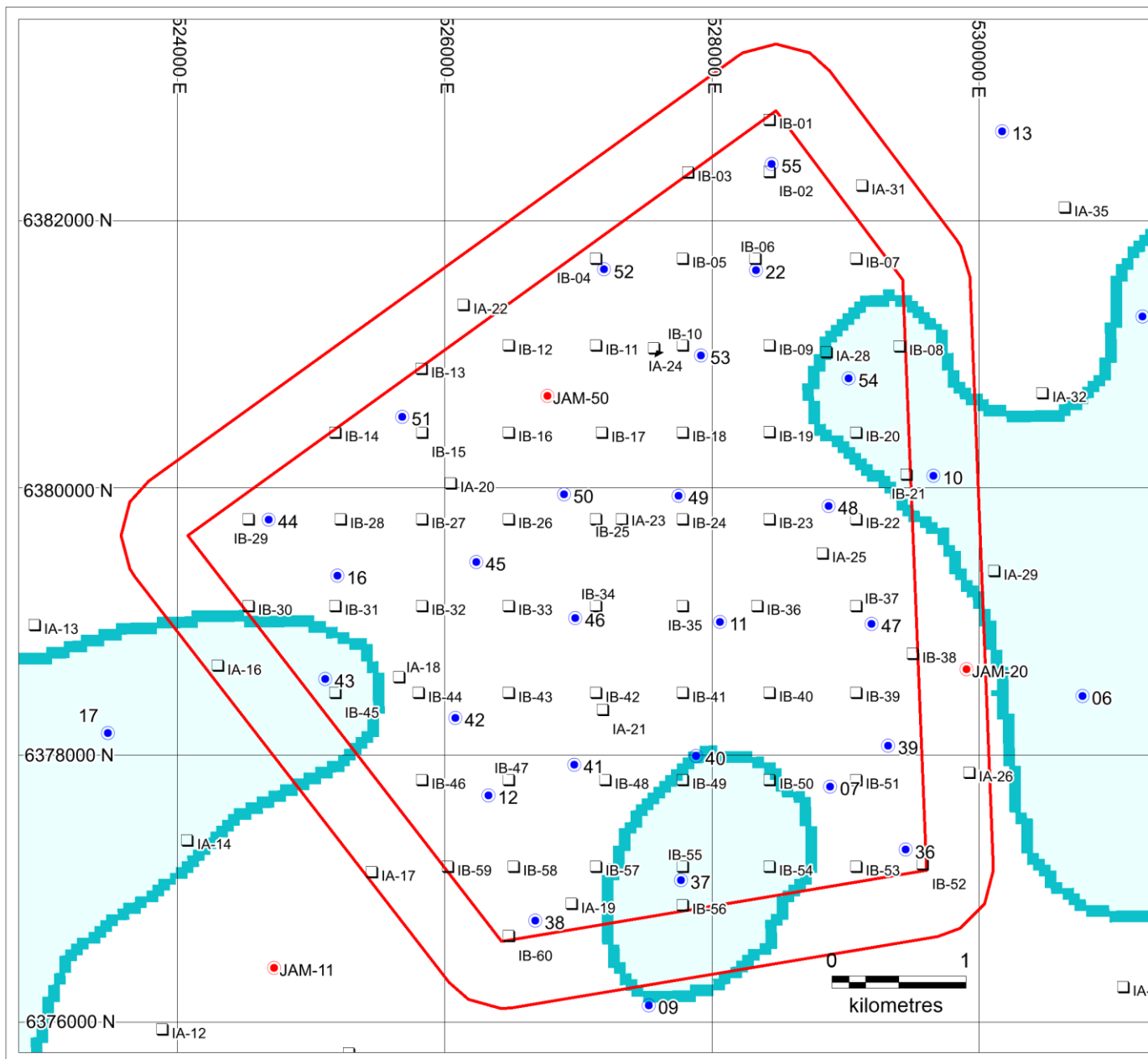
Projektion: UTM 32N

Klient:



Udført: NNP 08-02-2021

Bilag A3:
Side-scan sonar mosaik



Område: Lønstrup

Undersøglesfase Ib

Signaturforklaring

- Undersøelsesområde inkl. 500 m zone
- Vibrationsboring (fase IA og IB)
- Arkivboring (MST 2020)
- HAPS prøve (Fase IA og IB)

Datum: WGS84

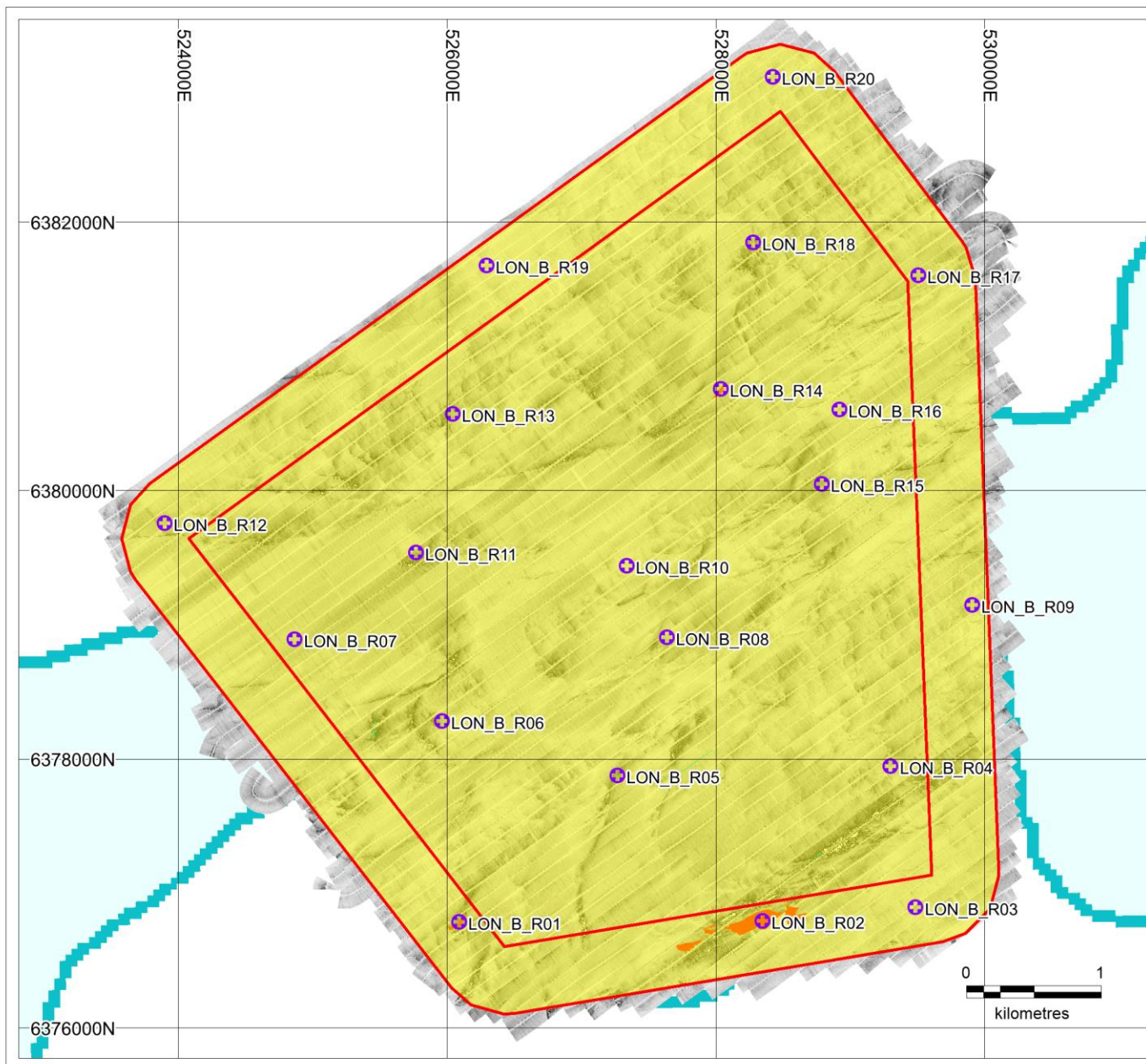
Projektion: UTM 32N

Klient:



Udført: NNP 08-02-2021





Bilag A4: Prøvetagningspunkter - Vibrocores og HAPS



Område: Lønstrup

Undersøgsfase Ib

Signaturforklaring

-  Undersøgsområde inkl. 500 m zone
-  Substrattype 1b
-  Substrattype 2
-  ROV verifikationspunkter

Datum: WGS84

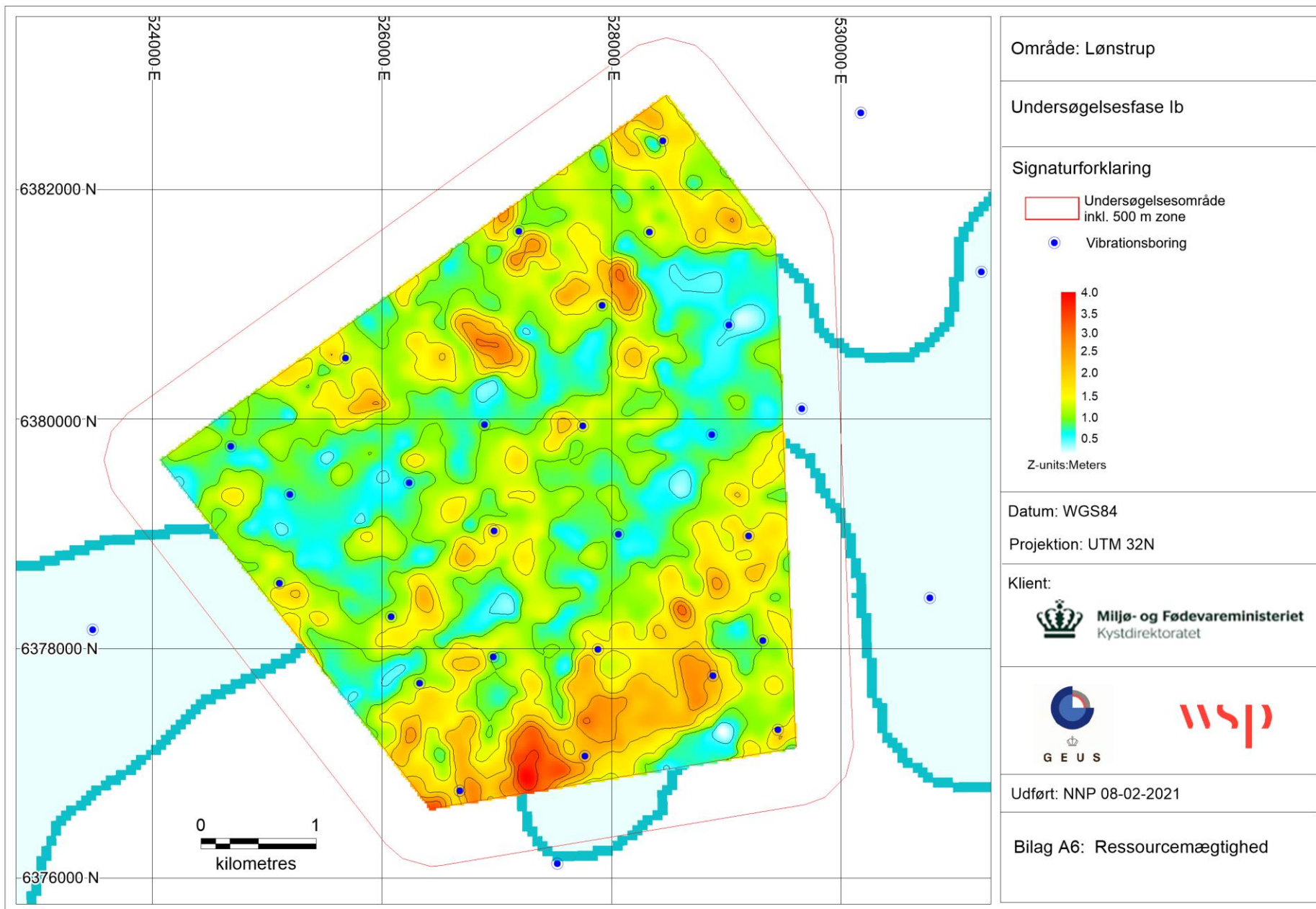
Projektion: UTM 32N

Klient:



Udført: NNP 08-02-2021

Bilag A5:
Substrattypfordeling /
side-scan sonar mosaik










Bilag B-1.

Vibrocore positionsliste

| Kerne ID | Længde (cm) | Y (UTM32N) | X (UTM32N) | Lat. N | Long. E | Dybde (m) |
|-------------|-------------|------------|------------|-------------|--------------|-----------|
| Løn-B_IA_07 | 420 | 6377762 | 528889 | 57° 32.487' | 009° 28.955' | 19.9 |
| Løn-B_IA_11 | 515 | 6378993 | 528062 | 57° 33.153' | 009° 28.135' | 22.9 |
| Løn-B_IA_12 | 400 | 6377695 | 526332 | 57° 32.460' | 009° 26.392' | 21.6 |
| Løn-B_IA_16 | 580 | 6379340 | 525199 | 57° 33.350' | 009° 25.267' | 22.0 |
| Løn-B_IA_22 | 500 | 6381627 | 528331 | 57° 34.572' | 009° 28.423' | 25.9 |
| Løn_B_IB_36 | 532 | 529451 | 6377290 | 57° 32.230' | 009° 29.515' | 22.4 |
| Løn_B_IB_37 | 510 | 527772 | 6377063 | 57° 32.114' | 009° 27.831' | 22.4 |
| Løn_B_IB_38 | 551 | 526680 | 6376760 | 57° 31.951' | 009° 26.743' | 23.7 |
| Løn_B_IB_39 | 290 | 529322 | 6378068 | 57° 32.650' | 009° 29.391' | 22.8 |
| Løn_B_IB_40 | 535 | 527883 | 6377990 | 57° 32.613' | 009° 27.949' | 22.4 |
| Løn_B_IB_41 | 431 | 526972 | 6377926 | 57° 32.582' | 009° 27.035' | 25.5 |
| Løn_B_IB_42 | 582 | 526082 | 6378275 | 57° 32.773' | 009° 26.145' | 23.1 |
| Løn_B_IB_43 | 526 | 525110 | 6378567 | 57° 32.934' | 009° 25.173' | 22.9 |
| Løn_B_IB_44 | 548 | 524687 | 6379761 | 57° 33.579' | 009° 24.756' | 23.2 |
| Løn_B_IB_45 | 468 | 526238 | 6379443 | 57° 33.402' | 009° 26.309' | 25.2 |
| Løn_B_IB_46 | 578 | 526981 | 6379023 | 57° 33.173' | 009° 27.051' | 22.9 |
| Løn_B_IB_47 | 373 | 529198 | 6378979 | 57° 33.141' | 009° 29.274' | 21.8 |
| Løn_B_IB_48 | 465 | 528877 | 6379863 | 57° 33.619' | 009° 28.958' | 23.6 |
| Løn_B_IB_49 | 524 | 527754 | 6379939 | 57° 33.664' | 009° 27.833' | 24.7 |
| Løn_B_IB_50 | 464 | 526895 | 6379950 | 57° 33.673' | 009° 26.971' | 26.1 |
| Løn_B_IB_51 | 387 | 525686 | 6380530 | 57° 33.990' | 009° 25.763' | 22.1 |
| Løn_B_IB_52 | 522 | 527196 | 6381633 | 57° 34.579' | 009° 27.284' | 23.0 |
| Løn_B_IB_53 | 500 | 527919 | 6380988 | 57° 34.229' | 009° 28.005' | 25.2 |
| Løn_B_IB_54 | 540 | 529027 | 6380818 | 57° 34.133' | 009° 29.115' | 25.6 |
| Løn_B_IB_55 | 327 | 528451 | 6382424 | 57° 35.001' | 009° 28.549' | 24.1 |

Legende til logs



Litologi

| | |
|---|--|
|  | Dynd/gytje |
|  | Ler |
|  | Silt |
|  | Sand |
|  | Heterolit med vekslende lag af ler og sand |
|  | Grus |
|  | Tørv |

Strukturer

| | |
|---|---------|
|  | Homogen |
|  | Lagdelt |

Lag-grænser

| | |
|---|--------------|
|  | Gradvis |
|  | Skarp/erosiv |

Kornstørrelsesskala (mm)

| | |
|-------|------------------|
| 64 | sten |
| 4 | fingrus |
| 2 | meget groft sand |
| 1 | groft sand |
| 0.5 | mellemsand |
| 0.250 | finsand |
| 0.125 | meget fint sand |
| 0.063 | silt og ler |

+: kalkholdig
-: kalkfri

Postglaciale aflejringer

HG - marint grus
HS - marint sand
HI - marint silt
HL - marint ler
HV - vekslende lag
FT - tørv

Senglaciale aflejringer

TG - smeltevandsgrus
TS - smeltevandssand
TI - lakustrint silt
TL - lakustrint ler
TP - gytje
TV - vekslende lag

Glaciale aflejringer

DS - smeltevandssand
DI - lacustrine silt
DL - lacustrine clay
MG - gravelly till
MS - sandy till
ML - clayey till

Miocæne aflejringer

GS - glimmersand

| Core ID: Løn_B_IB_36 | | Coordinates (m): E: 529451 N: 6377290 | | Water depth (m): 22.4 | | Coordinate system: UTM 32 Reference datum: WGS84 | | | | | | | | | | | | | | | | | | |
|----------------------|--------------------------------|---|-----------|-----------------------|------|--|---|----|----------|-------------|-----------------|---------|---------------|------------|-----------|-------------------|---------------|-----------------|----------------------|-----------|-------------------|------------------|-----------------|------------|
| DGU no: 570914.21 | | Longitude: 9°29.515'E Latitude: 57°32.230'N | | | | | | | | | | | | | | | | | | | | | | |
| Core type: Vibrocore | | Core length (m): 5.32 | | | | | | | | | | | | | | | | | | | | | | |
| Core section | Depth below mean sea level (m) | Depth below sea bed (m) | Lithology | Mud Sand Gravel | | | | | | Description | Age/environment | Samples | Laboratory ID | Grain size | | | | | Loss on ignition (%) | Water (%) | CaCO ₃ | Other parameters | | |
| | | | | clay | silt | vf | m | vc | granules | | | | | pebbles | Mean (mm) | Silt and clay (%) | Fine sand (%) | Medium sand (%) | | | | | Coarse sand (%) | Gravel (%) |
| VI | | | | | | | | | | | | 200593 | 0.28 | 0.97 | 20.37 | 72.90 | 4.57 | 1.19 | 0.4 | 17 | + | | | |
| V | | 23.4 | | | | | | | | | | 200594 | 0.18 | 1.83 | 64.09 | 33.04 | 0.93 | 0.11 | 0.6 | 18 | + | | | |
| IV | | 24.4 | | | | | | | | | | 200595 | 0.27 | 1.05 | 32.40 | 57.08 | 8.00 | 1.47 | 0.5 | 17 | + | | | |
| III | | 25.4 | | | | | | | | | | 200596 | 0.15 | 2.36 | 81.92 | 14.14 | 1.49 | 0.10 | 0.6 | 19 | + | | | |
| | | | | | | | | | | | | | 200597 | 0.18 | 8.57 | 48.68 | 36.86 | 4.21 | 1.68 | 0.8 | 17 | + | | |
| II | | 26.4 | | | | | | | | | | 200598 | 0.16 | 14.22 | 42.41 | 37.63 | 2.80 | 2.94 | 1.3 | 16 | | + | | |
| I | | 27.4 | | | | | | | | | | | | | | | | | | | | | | |

Geological Survey of Denmark and Greenland



Client: Kystdirektoratet

Coring: M/S Skoven

Date: 14 November 2020

Description: Ole Bennike

Date: 19 November 2020

QC: Henrik Jønsson Granat

Date: 19 November 2020

| Core ID: Løn_B_IB_37 | | Coordinates (m): E: 527772 N: 6377063 | | Water depth (m): 22.4 | | Coordinate system: UTM 32 Reference datum: WGS84 | | | | | | | | | | | | | | | | | |
|----------------------|--------------------------------|---|-----------|---|------|--|---|----|----------|-----------------|---------|---------------|------------|-------------|-----------|-------------------|---------------|----------------------|-----------|-------------------|------------------|-----------------|-----------------|
| DGU no: 570914.22 | | Longitude: 9°27.831'E Latitude: 57°32.114'N | | | | | | | | | | | | | | | | | | | | | |
| Core type: Vibrocore | | Core length (m): 5.10 | | | | | | | | | | | | | | | | | | | | | |
| Core section | Depth below mean sea level (m) | Depth below sea bed (m) | Lithology | Mud Sand Gravel | | | | | | Age/environment | Samples | Laboratory ID | Grain size | | | | | Loss on ignition (%) | Water (%) | CaCO ₃ | Other parameters | | |
| | | | | clay | silt | vf | m | vc | granules | | | | pebbles | Description | Mean (mm) | Silt and clay (%) | Fine sand (%) | | | | | Medium sand (%) | Coarse sand (%) |
| V | 23.4 | 1 | | | | | | | | | HS | 200599 | 0.30 | 1.31 | 19.00 | 70.92 | 8.04 | 0.74 | 0.4 | 15 | - | | |
| IV | 24.4 | 2 | | 0-510 cm: medium sand i upper part very fine sand i lower part olive-yellow 2.5Y 6/6 in upper part dark grey 5Y 4/1 in medium part grey 5Y 6/1 in lower part Spisula, Ensis, Venus | | | | | | | | HS | 200600 | 0.29 | 1.08 | 22.57 | 69.53 | 6.35 | 0.46 | 0.4 | 16 | + | |
| III | 25.4 | 3 | | | | | | | | | | HS | 200601 | 0.26 | 1.18 | 25.68 | 67.87 | 4.42 | 0.85 | 0.4 | 17 | + | |
| II | 26.4 | 4 | | | | | | | | | | HS | 200602 | 0.16 | 1.03 | 71.56 | 26.84 | 0.46 | 0.11 | 0.4 | 21 | + | |
| I | 27.4 | 5 | | | | | | | | | | HS | 200603 | 0.14 | 4.23 | 82.51 | 11.85 | 0.77 | 0.64 | 0.9 | 19 | + | |
| | | | | | | | | | | | | HS | 200604 | 0.14 | 4.68 | 86.70 | 8.12 | 0.51 | 0.00 | 0.8 | 19 | + | |

| Core ID: Løn_B_IB_38 | | Coordinates (m): E: 526680 N: 6376760 | | Water depth (m): 23.7 | | Coordinate system: UTM 32 Reference datum: WGS84 | | | | | | | | | | | | | | |
|----------------------|--------------------------------|---|-----------|-----------------------|-----------------|--|---|-----------------|------------|---------------|-----------|-------------------|---------------|-----------------|-----------------|------------|----------------------|-----------|-------------------|------------------|
| DGU no: 570914.23 | | Longitude: 9°26.743'E Latitude: 57°31.951'N | | | | | | | | | | | | | | | | | | |
| Core type: Vibrocore | | Core length (m): 5.51 | | | | | | | Grain size | | | | | | | | | | | |
| Core section | Depth below mean sea level (m) | Depth below sea bed (m) | Lithology | Mud clay silt | Sand vf m vc | Gravel granules pebbles | Description | Age/environment | Samples | Laboratory ID | Mean (mm) | Silt and clay (%) | Fine sand (%) | Medium sand (%) | Coarse sand (%) | Gravel (%) | Loss on ignition (%) | Water (%) | CaCO ₃ | Other parameters |
| | | | | | | | | | | | | | | | | | | | | |
| VI | | | | | | | 0-141 cm: medium sand light olive-brown 2.5Y 5/4 Spisula, Ensis | HS | █ | 200605 | 0.30 | 0.57 | 19.96 | 69.73 | 8.42 | 1.32 | 1.0 | 14 | | + |
| V | 24.7 | 1 | | | | | | | █ | 200606 | 0.28 | 0.92 | 24.99 | 66.87 | 6.61 | 0.60 | 0.9 | 17 | | |
| IV | 25.7 | 2 | | | | | 141-370 cm: fine and medium sand dark grey 5Y 4/1 Spisula | HS | █ | 200607 | 0.21 | 1.40 | 48.32 | 46.50 | 3.40 | 0.38 | 1.2 | 18 | | + |
| III | 26.7 | 3 | | | | | | | █ | 200608 | 0.13 | 7.63 | 83.00 | 8.92 | 0.45 | 0.00 | 0.7 | 20 | | + |
| II | 27.7 | 4 | | | | | 370-390 cm: pebbles dark grey 5Y 4/1, Spisula | HG | █ | 200609 | 3.25 | 0.73 | 7.82 | 8.59 | 8.37 | 74.50 | 0.7 | 5 | | |
| | | | | | | | 390-510 cm: fine sand dark grey 5Y 4/1, Spisula | HS | █ | 200610 | 0.13 | 7.17 | 74.79 | 16.08 | 1.68 | 0.29 | 0.7 | 19 | | + |
| I | 28.7 | 5 | | | | | 510-551 cm: silt with pebbles dark grey 5Y 4/1, Spisula | HI | █ | | | | | | | | | | | + |

Geological Survey of
Denmark and Greenland



Client: Kystdirektoratet

Coring: M/S Skoven

Date: 14 November 2020

Description: Ole Bennike

Date: 19 November 2020

QC: Henrik Jønsson Granat

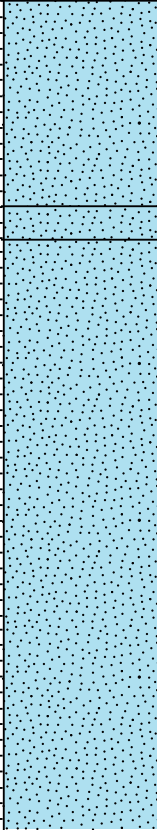

Date: 19 November 2020

| Core ID: Løn_B_IB_39 | | Coordinates (m): E: 529322 N: 6378068 | | Water depth (m): 22.8 | | Coordinate system: UTM 32 Reference datum: WGS84 | | | | | | | | | | | | | | | | | |
|----------------------|--------------------------------|---|-----------|-----------------------|------|--|---|----|---|-------------|-----------------|---------|---------------|-----------|-------------------|---------------|-----------------|-----------------|------------|----------------------|-----------|-------------------|------------------|
| DGU no: 570914.24 | | Longitude: 9°29.391'E Latitude: 57°32.650'N | | | | | | | | | | | | | | | | | | | | | |
| Core type: Vibrocore | | Core length (m): 5.35 | | | | | | | Grain size | | | | | | | | | | | | | | |
| Core section | Depth below mean sea level (m) | Depth below sea bed (m) | Lithology | Mud Sand Gravel | | | | | | Description | Age/environment | Samples | Laboratory ID | Mean (mm) | Silt and clay (%) | Fine sand (%) | Medium sand (%) | Coarse sand (%) | Gravel (%) | Loss on ignition (%) | Water (%) | CaCO ₃ | Other parameters |
| | | | | clay | silt | vf | m | vc | granules | | | | | | | | | | | | | | |
| III | | | | | | | | | 0-75 cm: fine and medium sand greyish-brown 2.5Y 5/2 Spisula, Ensis | HS | | 200611 | 0.21 | 0.86 | 47.85 | 47.36 | 3.80 | 0.14 | 0.4 | 17 | + | | |
| II | 23.8 | 1 | | | | | | | 75-290 cm: fine and medium sand grey 5Y 5/1 Spisula, Venus | HS | | 200612 | 0.23 | 1.39 | 43.90 | 46.74 | 6.69 | 1.29 | 0.5 | 17 | | | |
| I | 24.8 | 2 | | | | | | | | HS | | 200613 | 0.17 | 0.97 | 72.82 | 25.87 | 0.34 | 0.00 | 0.5 | 18 | | | |
| | 25.8 | 3 | | | | | | | | HS | | 200614 | 0.23 | 0.50 | 37.20 | 59.23 | 2.43 | 0.65 | 0.3 | 15 | | | |
| | | 4 | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | | | | | | | | | | | | | | | | | | | | | |

| Core ID: Løn_B_IB_40 | | Coordinates (m): E: 527883 N: 6377990 | | Water depth (m): 22.4 | | Coordinate system: UTM 32 Reference datum: WGS84 | | | | | | | | | | | | | | | | |
|----------------------|--------------------------------|---|--|-----------------------|----|--|----|---------------|----------------------|-----------|-------------------|------------------|---------|-----------|-------------------|---------------|-----------------|-----------------|------------|--|--|--|
| DGU no: 570914.25 | | Longitude: 9°27.949'E Latitude: 57°32.613'N | | | | | | | | | | | | | | | | | | | | |
| Core type: Vibrocore | | Core length (m): 5.35 | | | | | | | | | | | | | | | | | | | | |
| Core section | Depth below mean sea level (m) | Lithology | Grain size | | | | | | Loss on ignition (%) | Water (%) | CaCO ₃ | Other parameters | | | | | | | | | | |
| | | | clay | silt | vf | m | vc | granules | | | | | pebbles | Mean (mm) | Silt and clay (%) | Fine sand (%) | Medium sand (%) | Coarse sand (%) | Gravel (%) | | | |
| | | Mud | | Sand | | Gravel | | | | | | | | | | | | | | | | |
| | | Description | | Age/environment | | Samples | | Laboratory ID | | | | | | | | | | | | | | |
| VI | | | | | | | | | | | | | | | | | | | | | | |
| V | 23.4 | | 0-145 cm: medium and fine sand light olive-brown 2.5Y 5/4 Spisula, Ensis | | | | | | | | | | | | | | | | | | | |
| IV | 24.4 | | | | | | | | | | | | | | | | | | | | | |
| III | 25.4 | | 145-535 cm: fine and very fine sand silty in lower part dark grey 5Y 4/1 Spisula, Venus | | | | | | | | | | | | | | | | | | | |
| II | 26.4 | | | | | | | | | | | | | | | | | | | | | |
| I | 27.4 | | | | | | | | | | | | | | | | | | | | | |

| Core ID: Løn_B_IB_41 | | Coordinates (m): E: 526972 N: 6377926 | | Water depth (m): 25.5 | | Coordinate system: UTM 32 Reference datum: WGS84 | | | | | | | | | | | | | | | | | | | | | |
|----------------------|--------------------------------|---|-----------|-----------------------|------|--|---|---|---|-------------|-----------------|---------|---------------|------------|---------|-----------|-------------------|---------------|----------------------|-----------|-------------------|------------------|-----------------|-----------------|------------|--|--|
| DGU no: 570914.26 | | Longitude: 9°27.035'E Latitude: 57°32.582'N | | | | | | | | | | | | | | | | | | | | | | | | | |
| Core type: Vibrocore | | Core length (m): 4.31 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Core section | Depth below mean sea level (m) | Depth below sea bed (m) | Lithology | Mud Sand Gravel | | | | | | Description | Age/environment | Samples | Laboratory ID | Grain size | | | | | Loss on ignition (%) | Water (%) | CaCO ₃ | Other parameters | | | | | |
| | | | | clay | silt | vf | f | m | vc | | | | | granules | pebbles | Mean (mm) | Silt and clay (%) | Fine sand (%) | | | | | Medium sand (%) | Coarse sand (%) | Gravel (%) | | |
| V | | | | | | | | | | | | 200621 | 0.22 | 0.98 | 43.87 | 50.26 | 4.63 | 0.25 | 0.5 | 17 | | | | | | | |
| IV | 26.5 | 1 | | | | | | | 0-144 cm: fine and medium sand dark grey 5Y 4/1 Spisula, Ensis | HS | | 200622 | 0.25 | 0.87 | 38.41 | 52.43 | 7.59 | 0.70 | 0.5 | 19 | | | | | | | |
| III | 27.5 | 2 | | | | | | | | HS | | 200623 | 0.13 | 7.17 | 85.52 | 7.16 | 0.15 | 0.00 | 1.0 | 19 | | | | | | | |
| II | 28.5 | 3 | | | | | | | 144-413 cm: fine and very fine sand, grey 5Y 6/1 Ensis, Venus, Tellina | HS | | 200624 | 0.11 | 9.13 | 89.40 | 1.39 | 0.08 | 0.00 | 1.0 | 23 | | | | | | | |
| I | 29.5 | 4 | | | | | | | | HS | | 200625 | 0.10 | 14.14 | 83.79 | 1.31 | 0.38 | 0.38 | 1.1 | 24 | | | | | | | |
| | | 5 | | | | | | | | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------|--------------------------------|--|---------------------|---------------------------|-------------------------------------|--|-----------------|---|---------------|------------|-------------------|---------------|--|-----------------|----------------------|-----------|-------------------|------------------|------------|-----|----|---|--|
| Core ID: Løn_B_IB_42 | | Coordinates (m): E: 526082 N: 6378275 | | Water depth (m): 23.1 | | Coordinate system: UTM 32 Reference datum: WGS84 | | | | | | | | | | | | | | | | | |
| DGU no: 570914.27 | | Longitude: 9°26.145'E Latitude: 57°32.773'N | | | | | | | | | | | | | | | | | | | | | |
| Core type: Vibrocore | | Core length (m): 5.82 | | | | | Grain size | | | | | | | | | | | | | | | | |
| Core section | Depth below mean sea level (m) | Lithology | Mud clay silt | Sand vf f m c | Gravel vc granules pebbles | Description | Age/environment | Samples | Laboratory ID | Grain size | | | | | Loss on ignition (%) | Water (%) | CaCO ₃ | Other parameters | | | | | |
| | | | | | | | | | | Mean (mm) | Silt and clay (%) | Fine sand (%) | Medium sand (%) | Coarse sand (%) | | | | | Gravel (%) | | | | |
| VI | | | | | | 0-390 cm: fine, medium and some coarse sand grey 5Y 5/1, Spisula, Balanus | HS | | 200689 | 0.19 | 1.31 | 53.01 | 45.00 | 0.68 | 0.00 | 1.0 | 22 | + | | | | | |
| | 24.1-1 | | | | | | | | | | | | 200690 | 0.25 | 0.91 | 35.55 | 54.54 | 7.81 | 1.20 | 0.9 | 18 | + | |
| V | | | | | | | | | | | | | | | | | | | | | | | |
| IV | | | | | | | | | | | | | | | | | | | | | | | |
| III | | | | | | | | | | | | | | | | | | | | | | | |
| | 25.1-2 | | | | | | | | | | | | | | | | | | | | | | |
| | 26.1-3 | | | | | | | | | | | | | | | | | | | | | | |
| II | | | | | | 390-582 cm: very fine sand grey 5Y 5/1, Tellina, Cardium | HS | | 200693 | 0.11 | 8.29 | 90.55 | 0.99 | 0.03 | 0.13 | 1.2 | 20 | + | | | | | |
| I | | | | | | | | | | | | | | | | | | | | | | | |
| | 27.1-4 | | | | | | | | | | | | | | | | | | | | | | |
| | 28.1-5 | | | | | | | | | | | | | | | | | | | | | | |
| | | Geological Survey of Denmark and Greenland | | | Client: Kystdirektoratet | | | Coring: M/S Skoven Description: Ole Bennike QC: Henrik Jønsson Granat | | | | | Date: 14 November 2020 Date: 20 November 2020 Date: 20 November 2020 | | | | | | | | | | |

| Core ID: Løn_B_IB_43 | | Coordinates (m): E: 525110 N: 6378567 | | Water depth (m): 22.9 | | Coordinate system: UTM 32 Reference datum: WGS84 | | | | | | | | | | | | | | |
|---|--------------------------------|---|--|---|------|--|-------------|------------------------|---------|---------------|------------|-------------------|---------------|-----------------|-----------------|----------------------|-----------|-------------------|------------------|------------|
| DGU no: 570914.28 | | Longitude: 9°25.173'E Latitude: 57°32.934'N | | | | | | | | | | | | | | | | | | |
| Core type: Vibrocore | | Core length (m): 5.26 | | | | | | | | | | | | | | | | | | |
| Core section | Depth below mean sea level (m) | Depth below sea bed (m) | Lithology | Mud clay silt vf f m c vc granules pebbles | Sand | Gravel | Description | Age/environment | Samples | Laboratory ID | Grain size | | | | | Loss on ignition (%) | Water (%) | CaCO ₃ | Other parameters | |
| | | | | | | | | | | | Mean (mm) | Silt and clay (%) | Fine sand (%) | Medium sand (%) | Coarse sand (%) | | | | | Gravel (%) |
| VI | | |  | | | | | | | | | | | | | | | | | |
| V | 23.9 | 1 | | 0-132 cm: fine and medium sand greyish-brown 2.5Y 5/2 Spisula, Venus, Ensis | | | | HS | ■ | 200626 | 0.19 | 1.03 | 61.08 | 35.98 | 1.77 | 0.15 | 0.5 | 17 | | + |
| IV | 24.9 | 2 | | 132-152 cm: medium sand grey 5Y 5/1, Spisula, Ensis | | | | HS | ■ | 200627 | 0.17 | 1.01 | 68.00 | 30.26 | 0.71 | 0.03 | 0.4 | 20 | | + |
| III | 25.9 | 3 | | 132-526 cm: fine and very fine sand dark grey 5Y 4/1 Venus, Arctica | | | | HS | ■ | 200628 | 0.15 | 1.11 | 80.82 | 16.17 | 1.08 | 0.83 | 0.5 | 21 | | + |
| II | 26.9 | 4 | | | | | | HS | ■ | 200629 | 0.15 | 2.09 | 79.63 | 16.77 | 1.41 | 0.11 | 0.5 | 20 | | + |
| I | 27.9 | 5 | | | | | | HS | ■ | 200630 | 0.14 | 7.68 | 68.98 | 22.36 | 0.83 | 0.15 | 0.9 | 19 | | + |
| | | | | | | | HS | ■ | 200631 | 0.13 | 9.66 | 75.47 | 13.62 | 0.76 | 0.50 | 0.9 | 19 | | + | |
| Geological Survey of Denmark and Greenland | | Client: Kystdirektoratet | | Coring: M/S Skoven | | | | Date: 14 November 2020 | | | | | | | | | | | | |
|  | | Description: Ole Bennike | | | | Date: 19 November 2020 | | | | | | | | | | | | | | |
| | | QC: Henrik Jønsson Granat | | | | Date: 19 November 2020 | | | | | | | | | | | | | | |

| Core ID: Løn_B_IB_44 | | Coordinates (m): E: 524687 N: 6379761 | | Water depth (m): 23.2 | | Coordinate system: UTM 32 Reference datum: WGS84 | | | | | | | | | | | | | | | | |
|----------------------|--------------------------------|---|-----------|-----------------------|------|--|---|----|----------|--|-----------------|---------|---------------|------------|-----------|-------------------|---------------|-----------------|----------------------|-----------|-------------------|------------------|
| DGU no: 570914.29 | | Longitude: 9°24.756'E Latitude: 57°33.579'N | | | | | | | | | | | | | | | | | | | | |
| Core type: Vibrocore | | Core length (m): 5.48 | | | | | | | | | | | | | | | | | | | | |
| Core section | Depth below mean sea level (m) | Depth below sea bed (m) | Lithology | Mud Sand Gravel | | | | | | Description | Age/environment | Samples | Laboratory ID | Grain size | | | | | Loss on ignition (%) | Water (%) | CaCO ₃ | Other parameters |
| | | | | clay | silt | vf | m | vc | granules | | | | | pebbles | Mean (mm) | Silt and clay (%) | Fine sand (%) | Medium sand (%) | | | | |
| VI | | | | | | | | | | 0-58 cm: medium and fine sand olive brown 2.5Y 4/3 Spisula, Venus | HS | 200632 | 0.29 | 1.15 | 20.88 | 71.79 | 5.81 | 0.36 | 0.5 | 17 | (+) | |
| V | 25.7 | 1 | | | | | | | | 58-238 cm: fine and medium sand dark grey 5Y 4/1 Spisula | HS | 200633 | 0.24 | 1.11 | 34.10 | 60.13 | 4.37 | 0.29 | 0.5 | 19 | (+) | |
| IV | 26.7 | 2 | | | | | | | | 238-308 cm: fine sand dark grey 5Y 4/1 Spisula | HS | 200634 | 0.23 | 0.83 | 43.94 | 48.65 | 5.95 | 0.63 | 0.5 | 17 | | |
| III | 27.7 | 3 | | | | | | | | 308-438 cm: fine and medium sand dark grey 5Y 4/1 Spisula, Ensis, Echinocyamus | HS | 200635 | 0.38 | 0.47 | 69.94 | 15.50 | 4.42 | 0.00 | 0.4 | 13 | (+) | |
| II | 28.7 | 4 | | | | | | | | 438-548 cm: fine sand dark grey 5Y 4/1 Spisula, Ensis | HS | 200636 | 0.23 | 0.72 | 48.67 | 38.67 | 7.97 | 3.97 | 0.4 | 16 | + | |
| I | 29.7 | 5 | | | | | | | | | HS | 200637 | 0.12 | 7.38 | 84.86 | 7.15 | 0.56 | 0.06 | 1.0 | 20 | + | |

| Core ID: Løn_B_IB_45 | | Coordinates (m): E: 526238 N: 6379443 | | Water depth (m): 25.2 | | Coordinate system: UTM 32 Reference datum: WGS84 | | | | | | | | | | | |
|----------------------|--------------------------------|---|--|-----------------------|------|--|---|----|----------|----------------------|-----------|-------------------|------------------|---------|-----------|-------------------|---------------|
| DGU no: 570914.30 | | Longitude: 9°26.309'E Latitude: 57°33.402'N | | | | | | | | | | | | | | | |
| Core type: Vibrocore | | Core length (m): 4.68 | | | | | | | | | | | | | | | |
| Core section | Depth below mean sea level (m) | Depth below sea bed (m) | Lithology | Grain size | | | | | | Loss on ignition (%) | Water (%) | CaCO ₃ | Other parameters | | | | |
| | | | | clay | silt | vf | m | vc | granules | | | | | pebbles | Mean (mm) | Silt and clay (%) | Fine sand (%) |
| | | | Description | | | | | | | | | | | | | | |
| V | | | 0-44 cm: fine and medium sand olive grey grey 5Y 5/2 | | | | | | | | | | | | | | |
| IV | 26.2 | 1 | 44-151 cm: fine sand, grey 5Y 6/1 | | | | | | | | | | | | | | |
| | | | 151-170 cm: coarse sand, grey 5Y 5/1, Ensis | | | | | | | | | | | | | | |
| III | 27.2 | 2 | 170-207 cm: fine and medium sand, grey 5Y 5/1 | | | | | | | | | | | | | | |
| | | | 207-264 cm: mainly medium sand, olive grey 5Y 5/2 Spisula | | | | | | | | | | | | | | |
| II | 28.2 | 3 | 264-351 cm: fine and medium sand, grey 5Y 6/1 | | | | | | | | | | | | | | |
| | | | 351-360 cm: coarse sand, some granule, grey 5Y 5/1 | | | | | | | | | | | | | | |
| I | 29.2 | 4 | 360-468 cm: fine and medium sand, grey 5Y 5/1 Tellina, Venus | | | | | | | | | | | | | | |
| | | 5 | | | | | | | | | | | | | | | |

Geological Survey of Denmark and Greenland



Client: Kystdirektoratet

Coring: M/S Skoven

Date: 14 November 2020

Description: Ole Bennike

Date: 18 November 2020

QC: Henrik Jønsson Granat

Date: 18 November 2020

| Core ID: Løn_B_IB_46 | | Coordinates (m): E: 526981 N: 6379023 | | Water depth (m): 22.9 | | Coordinate system: UTM 32 Reference datum: WGS84 | | | | | | | | | | | | | | | | |
|----------------------|--------------------------------|---|-----------|-----------------------|------|--|---|---|--|-------------|-----------------|---------|---------------|------------|-----------|-------------------|---------------|-----------------|----------------------|-----------|-------------------|------------------|
| DGU no: 570914.31 | | Longitude: 9°27.051'E Latitude: 57°33.173'N | | | | | | | | | | | | | | | | | | | | |
| Core type: Vibrocore | | Core length (m): 5.78 | | | | | | | | | | | | | | | | | | | | |
| Core section | Depth below mean sea level (m) | Depth below sea bed (m) | Lithology | Mud Sand Gravel | | | | | | Description | Age/environment | Samples | Laboratory ID | Grain size | | | | | Loss on ignition (%) | Water (%) | CaCO ₃ | Other parameters |
| | | | | clay | silt | vf | m | vc | granules | | | | | pebbles | Mean (mm) | Silt and clay (%) | Fine sand (%) | Medium sand (%) | | | | |
| VI | | | | | | | | | | | | 200643 | 0.26 | 0.67 | 27.33 | 64.18 | 6.47 | 1.35 | 0.4 | 15 | + | |
| V | 23.9 | 1 | | | | | | | 0-100 cm: medium and coarse sand olive-grey 5Y 4/2, Spisula, Venus | HS | | 200644 | 0.37 | 0.33 | 15.07 | 61.57 | 16.97 | 6.06 | 0.5 | 14 | | |
| IV | 24.9 | 2 | | | | | | | | HS | | 200645 | 0.18 | 0.32 | 25.45 | 65.45 | 7.60 | 1.18 | 0.4 | 18 | + | |
| III | 25.9 | 3 | | | | | | | 100-480 cm: fine and medium sand grey 5Y 5/1, Spisula, Ensis | HS | | 200646 | 0.22 | 1.02 | 41.27 | 54.12 | 3.47 | 0.13 | 0.3 | 18 | | |
| II | 26.9 | 4 | | | | | | | | HS | | 200647 | 0.18 | 2.47 | 59.54 | 35.45 | 2.48 | 0.07 | 0.5 | 19 | + | |
| I | 27.9 | 5 | | | | | | | 480-488 cm: coarse sand, dark grey 5Y 4/1, Venus 488-503 cm: fine and medium sand | HS | | 200648 | 0.11 | 7.85 | 91.48 | 0.67 | 0.01 | 0.00 | 1.0 | 23 | + | |
| | | | | | | | | 503-578 cm: very fine sand, grey 5Y 6/1 Tellina | | | | | | | | | | | | | | |

Geological Survey of Denmark and Greenland



Client: Kystdirektoratet

Coring: M/S Skoven

Date: 14 November 2020

Description: Ole Bennike

Date: 18 November 2020

QC: Henrik Jønsson Granat

Date: 18 November 2020

| Core ID: Løn_B_IB_47 | | Coordinates (m): E: 529198 N: 6378979 | | Water depth (m): 21.8 | | Coordinate system: UTM 32 Reference datum: WGS84 | | | | | | | | | | | | | | | | | |
|----------------------|--------------------------------|---|-----------|-----------------------|------|--|---|------------|---|-------------|-----------------|---------|---------------|-----------|-------------------|---------------|-----------------|-----------------|------------|----------------------|-----------|-------------------|------------------|
| DGU no: 570914.32 | | Longitude: 9°29.274'E Latitude: 57°33.141'N | | | | | | | | | | | | | | | | | | | | | |
| Core type: Vibrocore | | Core length (m): 3.73 | | | | | | Grain size | | | | | | | | | | | | | | | |
| Core section | Depth below mean sea level (m) | Depth below sea bed (m) | Lithology | Mud Sand Gravel | | | | | | Description | Age/environment | Samples | Laboratory ID | Mean (mm) | Silt and clay (%) | Fine sand (%) | Medium sand (%) | Coarse sand (%) | Gravel (%) | Loss on ignition (%) | Water (%) | CaCO ₃ | Other parameters |
| | | | | clay | silt | vf | m | vc | granules | | | | | | | | | | | | | | |
| IV | | | | | | | | | 0-90 cm: fine and medium sand light olive grey 5Y 4/2, Spisula | HS | █ | 200649 | 0.20 | 1.28 | 47.53 | 50.00 | 1.12 | 0.07 | 0.4 | 17 | + | | |
| III | 22.8 | 1 | | | | | | | | | █ | 200650 | 0.17 | 0.93 | 72.11 | 26.07 | 0.80 | 0.09 | 0.4 | 19 | + | | |
| II | 23.8 | 2 | | | | | | | 90-373 cm: fine sand grey 5Y 5/1, Spisula | HS | █ | 200651 | 0.14 | 3.54 | 84.58 | 11.32 | 0.56 | 0.00 | 0.6 | 19 | | | |
| I | 24.8 | 3 | | | | | | | | | █ | 200652 | 0.13 | 6.32 | 85.84 | 7.39 | 0.42 | 0.04 | 0.8 | 19 | + | | |
| | 25.8 | 4 | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | | | | | | | | | | | | | | | | | | | | | |

| Core ID: Løn_B_IB_48 | | Coordinates (m): E: 528877 N: 6379863 | | Water depth (m): 23.6 | | Coordinate system: UTM 32 Reference datum: WGS84 | | | | | | | | | | | | |
|----------------------|--------------------------------|---|-----------|--|--|--|---------|---------------|------------|-------------------|---------------|-----------------|-----------------|----------------------|-----------|-------------------|------------------|------------|
| DGU no: 570914.33 | | Longitude: 9°28.958'E Latitude: 57°33.619'N | | | | | | | | | | | | | | | | |
| Core type: Vibrocore | | Core length (m): 4.65 | | | | | | | | | | | | | | | | |
| Core section | Depth below mean sea level (m) | Depth below sea bed (m) | Lithology | Mud clay silt vf m vc Sand f c Gravel granules pebbles | Description | Age/environment | Samples | Laboratory ID | Grain size | | | | | Loss on ignition (%) | Water (%) | CaCO ₃ | Other parameters | |
| | | | | | | | | | Mean (mm) | Silt and clay (%) | Fine sand (%) | Medium sand (%) | Coarse sand (%) | | | | | Gravel (%) |
| V | | | | | 0-25 cm: fine and medium sand, grey, Spisula 25-31 cm: coarse sand, olive grey 5Y 4/2 | HS | █ | 200653 | 0.19 | 1.76 | 59.20 | 34.07 | 4.40 | 0.58 | 0.5 | 19 | | |
| IV | 24.6 | 1 | | | | HS | █ | 200654 | 0.14 | 4.85 | 81.21 | 13.25 | 0.67 | 0.02 | 0.9 | 19 | | + |
| III | 25.6 | 2 | | | 31-455 cm: fine and very fine sand grey 5Y 5/1, Tellina | HS | █ | 200655 | 0.13 | 4.88 | 86.85 | 7.88 | 0.39 | 0.00 | 0.8 | 20 | | + |
| II | 26.6 | 3 | | | | HS | █ | 200656 | 0.12 | 7.44 | 85.63 | 6.23 | 0.61 | 0.09 | 0.8 | 21 | | + |
| I | 27.6 | 4 | | | 455-465 cm: fine and medium sand some granules, grey 5Y 5/1 | HS | █ | 200657 | 0.12 | 7.42 | 88.22 | 4.09 | 0.24 | 0.03 | 0.7 | 20 | | + |
| | | 5 | | | | | | | | | | | | | | | | |

Geological Survey of
Denmark and Greenland



Client: Kystdirektoratet

Coring: M/S Skoven

Date: 15 November 2020

Description: Ole Bennike

Date: 18 November 2020

QC: Henrik Jønsson Granat

Date: 18 November 2020

| Core ID: Løn_B_IB_49 | | Coordinates (m): E: 527754 N: 6379939 | | Water depth (m): 24.7 | | Coordinate system: UTM 32 Reference datum: WGS84 | | | | | | | | | | | | | |
|--|--------------------------------|---|-----------|-----------------------|---------|--|-----------|-------------------|---------------|-----------------|-----------------|-------------------|----------------------|-----------------|-------------------|----------------------|-----------|-------------------|------------------|
| DGU no: 570914.34 | | Longitude: 9°27.833'E Latitude: 57°33.664'N | | | | | | | | | | | | | | | | | |
| Core type: Vibrocore | | Core length (m): 5.24 | | | | | | | | | | | | | | | | | |
| Core section | Depth below mean sea level (m) | Depth below sea bed (m) | Lithology | Mud Sand Gravel | | | | | | Grain size | | | | | | Loss on ignition (%) | Water (%) | CaCO ₃ | Other parameters |
| | | | | clay | silt | vf | m | vc | granules | pebbles | Mean (mm) | Silt and clay (%) | Fine sand (%) | Medium sand (%) | Coarse sand (%) | | | | |
| Description | | | | Age/environment | Samples | Laboratory ID | Mean (mm) | Silt and clay (%) | Fine sand (%) | Medium sand (%) | Coarse sand (%) | Gravel (%) | Loss on ignition (%) | Water (%) | CaCO ₃ | Other parameters | | | |
| VI | | | | | | | | | | | | | | | | | | | |
| V | 25.7 | 1 | | | | | | | | | | | | | | | | | |
| IV | 26.7 | 2 | | | | | | | | | | | | | | | | | |
| III | 27.7 | 3 | | | | | | | | | | | | | | | | | |
| II | 28.7 | 4 | | | | | | | | | | | | | | | | | |
| I | 29.7 | 5 | | | | | | | | | | | | | | | | | |
| 0-380 cm: medium and fine sand in upper part fine sand in lower part olive grey 5Y 4/2 in upper part grey 5Y 5/1 in lower part Spisula, Ensis, venus | | | | HS | | 200658 | 0.30 | 0.60 | 22.64 | 64.97 | 9.25 | 2.54 | 0.4 | 14 | | | | | |
| 380-388 cm: coarse sand, grey 5Y 5/1 | | | | | | | | | | | | | | | | | | | |
| 388-488 cm: fine and medium sand poorly sorted grey 5Y 5/1, Spisula, Ensis | | | | HS | | 200662 | 0.16 | 7.48 | 62.20 | 21.60 | 7.19 | 1.53 | 0.6 | 18 | | | | | |
| 488-524 cm: fine, medium and coarse sand some granules, grey 5Y 5/1, Aporrhais, Zirfaea | | | | HS | | 200663 | 0.38 | 4.85 | 19.17 | 50.41 | 13.84 | 11.73 | 0.8 | 16 | | | | | |

| Core ID: Løn_B_IB_50 | | Coordinates (m): E: 526895 N: 6379950 | | Water depth (m): 26.1 | | Coordinate system: UTM 32 Reference datum: WGS84 | | | | | | | | | | | | | | |
|----------------------|--------------------------------|---|-----------|--|------|--|---|-----------------|---------|---------------|------------|-------------------|---------------|-----------------|-----------------|----------------------|-----------|-------------------|------------------|------------|
| DGU no: 570914.35 | | Longitude: 9°26.971'E Latitude: 57°33.673'N | | | | | | | | | | | | | | | | | | |
| Core type: Vibrocore | | Core length (m): 4.64 | | | | | | | | | | | | | | | | | | |
| Core section | Depth below mean sea level (m) | Depth below sea bed (m) | Lithology | Mud clay silt vf m vc granules pebbles | Sand | Gravel | Description | Age/environment | Samples | Laboratory ID | Grain size | | | | | Loss on ignition (%) | Water (%) | CaCO ₃ | Other parameters | |
| | | | | | | | | | | | Mean (mm) | Silt and clay (%) | Fine sand (%) | Medium sand (%) | Coarse sand (%) | | | | | Gravel (%) |
| V | | | | | | | 0-58 cm: fine and medium sand olive grey 5Y 4/2, Spisula, Ensis | HS | █ | 200664 | 0.16 | 2.15 | 70.94 | 26.06 | 0.85 | 0.00 | 0.6 | 19 | + | |
| IV | 27.1 | 1 | | | | | 58-64 cm: medium and coarse sand grey 5Y 5/1 | HS | █ | 200665 | 0.13 | 2.94 | 91.43 | 5.34 | 0.29 | 0.00 | 0.7 | 20 | | |
| III | 28.1 | 2 | | | | | 64-293 cm: fine and medium sand grey 5Y 5/1, Spisula, Ensis, Venus | HS | █ | 200666 | 0.19 | 3.87 | 40.58 | 52.78 | 2.52 | 0.25 | 0.6 | 18 | + | |
| II | 29.1 | 3 | | | | | 293-404 cm: fine and medium sand, silty in lower part dark grey 5Y 4/1, Spisula | HS | █ | 200667 | 0.18 | 17.62 | 48.63 | 32.20 | 1.10 | 0.44 | 0.8 | 18 | + | |
| I | 30.1 | 4 | | | | | 404-450 cm: fine and medium sand dark grey 5Y 4/1, Spisula | HS | █ | 200668 | 0.21 | 5.21 | 30.81 | 56.91 | 4.15 | 2.91 | 0.5 | 16 | + | |
| | | 5 | | | | | 450-464 cm: very fine sand and silt dark grey 5Y 4/1, Tellina | | | | | | | | | | | | | |

| Core ID: Løn_B_IB_51 | | Coordinates (m): E: 525686 N: 6380530 | | Water depth (m): 22.1 | | Coordinate system: UTM 32 Reference datum: WGS84 | | | | | | | | | | | | | | | |
|----------------------|--------------------------------|---|-----------|-----------------------|-----------------|--|---|-----------------|---------|---------------|------------|-------------------|---------------|-----------------|-----------------|----------------------|-----------|-------------------|------------------|------------|--|
| DGU no: 570914.36 | | Longitude: 9°25.763'E Latitude: 57°33.990'N | | | | | | | | | | | | | | | | | | | |
| Core type: Vibrocore | | Core length (m): 3.87 | | | | | | | | | | | | | | | | | | | |
| Core section | Depth below mean sea level (m) | Depth below sea bed (m) | Lithology | Mud clay silt | Sand vf m vc | Gravel granules pebbles | Description | Age/environment | Samples | Laboratory ID | Grain size | | | | | Loss on ignition (%) | Water (%) | CaCO ₃ | Other parameters | | |
| | | | | | | | | | | | Mean (mm) | Silt and clay (%) | Fine sand (%) | Medium sand (%) | Coarse sand (%) | | | | | Gravel (%) | |
| IV | | | | | | | 0-56 cm: medium and fine sand greyish-brown 2.5Y 5/2 Spisula, Ensis, Venus | HS | ■ | 200669 | 0.29 | 0.81 | 20.16 | 71.22 | 7.70 | 0.11 | 0.3 | 16 | - | | |
| III | 23.1 | 1 | | | | | | HS | ■ | 200670 | 0.22 | 0.85 | 39.69 | 56.76 | 2.34 | 0.36 | 0.3 | 17 | | | |
| II | 24.1 | 2 | | | | | 56-387 cm: fine and medium sand dark grey 5Y 4/1 Ensis, Spisula, Venus, Cardium | HS | ■ | 200671 | 0.21 | 1.16 | 47.86 | 47.99 | 2.37 | 0.62 | 0.4 | 17 | + | | |
| I | 25.1 | 3 | | | | | | HS | ■ | 200672 | 0.15 | 3.91 | 72.81 | 20.43 | 2.71 | 0.15 | 0.6 | 18 | + | | |
| | 26.1 | 4 | | | | | | | | | | | | | | | | | | | |
| | | 5 | | | | | | | | | | | | | | | | | | | |

| Core ID: Løn_B_IB_52 | | Coordinates (m): E: 527196 N: 6381633 | | Water depth (m): 23.0 | | Coordinate system: UTM 32 Reference datum: WGS84 | | | | | | | | | | | | | | | | |
|----------------------|--------------------------------|---|-----------|-----------------------|------|--|---|----|----------|-----------------|---------|---------------|------------|-------------|-----------|-------------------|---------------|----------------------|-----------|-------------------|------------------|-----------------|
| DGU no: 570914.37 | | Longitude: 9°27.284'E Latitude: 57°34.579'N | | | | | | | | | | | | | | | | | | | | |
| Core type: Vibrocore | | Core length (m): 5.22 | | | | | | | | | | | | | | | | | | | | |
| Core section | Depth below mean sea level (m) | Depth below sea bed (m) | Lithology | Mud Sand Gravel | | | | | | Age/environment | Samples | Laboratory ID | Grain size | | | | | Loss on ignition (%) | Water (%) | CaCO ₃ | Other parameters | |
| | | | | clay | silt | vf | m | vc | granules | | | | pebbles | Description | Mean (mm) | Silt and clay (%) | Fine sand (%) | | | | | Medium sand (%) |
| VI | | | | | | | | | | HS | █ | 200673 | 0.23 | 1.30 | 36.00 | 59.50 | 2.86 | 0.34 | 0.3 | 17 | + | |
| V | | 24.0 | | | | | | | | HS | █ | 200674 | 0.17 | 1.26 | 59.58 | 39.08 | 0.08 | 0.00 | 0.4 | 17 | | |
| IV | | 25.0 | | | | | | | | HS | █ | 200675 | 0.19 | 1.78 | 54.48 | 40.76 | 2.67 | 0.30 | 0.5 | 17 | + | |
| III | | 26.0 | | | | | | | | HS | █ | 200676 | 0.14 | 4.51 | 76.60 | 18.17 | 0.72 | 0.00 | 0.6 | 16 | | |
| II | | 27.0 | | | | | | | | HS | █ | 200677 | 0.12 | 6.46 | 87.66 | 5.52 | 0.35 | 0.00 | 0.9 | 20 | + | |
| I | | 28.0 | | | | | | | | HS | █ | 200678 | 0.10 | 9.61 | 89.65 | 0.72 | 0.03 | 0.00 | 0.9 | 21 | + | |
| | | | | | | | | | | | | | | | | | | | | | | |

Geological Survey of Denmark and Greenland



Client: Kystdirektoratet

Coring: M/S Skoven

Date: 15 November 2020

Description: Ole Bennike

Date: 18 November 2020

QC: Henrik Jønsson Granat

Date: 18 November 2020

| Core ID: Løn_B_IB_53 | | Coordinates (m): E: 527919 N: 6380988 | | Water depth (m): 25.2 | | Coordinate system: UTM 32 Reference datum: WGS84 | | | | | | | | | | | | | | |
|----------------------|--------------------------------|---|-----------|--|------|--|---|-----------------|---------|---------------|------------|-------------------|---------------|-----------------|-----------------|----------------------|-----------|-------------------|------------------|------------|
| DGU no: 570914.38 | | Longitude: 9°28.005'E Latitude: 57°34.229'N | | | | | | | | | | | | | | | | | | |
| Core type: Vibrocore | | Core length (m): 5.00 | | | | | | | | | | | | | | | | | | |
| Core section | Depth below mean sea level (m) | Depth below sea bed (m) | Lithology | Mud clay silt vf m vc granules pebbles | Sand | Gravel | Description | Age/environment | Samples | Laboratory ID | Grain size | | | | | Loss on ignition (%) | Water (%) | CaCO ₃ | Other parameters | |
| | | | | | | | | | | | Mean (mm) | Silt and clay (%) | Fine sand (%) | Medium sand (%) | Coarse sand (%) | | | | | Gravel (%) |
| V | 26.2 | 1 | | | | | 0-40 cm: medium and coarse sand greyish-brown 2.5Y 5/2 Spisula, Arctica | HS | █ | 200695 | 0.41 | 0.94 | 4.87 | 75.84 | 15.98 | 2.37 | 0.4 | 13 | + | |
| | | | | | | | | | | | | | | | | | | | | |
| IV | 27.2 | 2 | | | | | 40-255 cm: fine sand grey 5Y 5/1 Tellina | HS | █ | 200696 | 0.14 | 3.59 | 87.86 | 8.04 | 0.49 | 0.02 | 0.9 | 20 | + | |
| | | | | | | | | | | | | | | | | | | | | |
| III | 28.2 | 3 | | | | | 225-463 cm: medium sand grey 5Y 5/1 Ensis, Spisula | HS | █ | 200698 | 0.35 | 1.37 | 10.61 | 71.80 | 13.30 | 2.93 | 0.4 | 13 | + | |
| | | | | | | | | | | | | | | | | | | | | |
| II | 29.2 | 4 | | | | | 463-473 cm: sand and silt, grey 5Y 5/1, Lucina | HV HS | █ | 200699 | 0.31 | 1.83 | 14.03 | 73.05 | 9.69 | 1.40 | 0.5 | 14 | + | |
| | | | | | | | | | | | | | | | | | | | | |
| I | 30.2 | 5 | | | | | 473-500 cm: silty, very fine sand, grey 5Y 5/1, Corbula | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |

Geological Survey of
Denmark and Greenland



Client.: Kystdirektoratet

Coring: M/S Skoven

Date: 15 November 2020

Description: Ole Bennike

Date: 20 November 2020

QC: Henrik Jønsson Granat

Date: 20 November 2020

| Core ID: Løn_B-IB_54 | | Coordinates (m): E: 529027 N: 6380818 | | Water depth (m): 25.6 | | Coordinate system: UTM 32 Reference datum: WGS84 | | | | | | | | | | | | | | | | |
|----------------------|--------------------------------|---|-----------|-----------------------|------|--|---|------------|---|-------------|-----------------|---------|---------------|------------|-----------|-------------------|---------------|-----------------|----------------------|-----------|-------------------|------------------|
| DGU no: 570914.39 | | Longitude: 9°29.115'E Latitude: 57°34.133'N | | | | | | | | | | | | | | | | | | | | |
| Core type: Vibrocore | | Core length (m): 5.40 | | | | | | Grain size | | | | | | | | | | | | | | |
| Core section | Depth below mean sea level (m) | Depth below sea bed (m) | Lithology | Mud Sand Gravel | | | | | | Description | Age/environment | Samples | Laboratory ID | Grain size | | | | | Loss on ignition (%) | Water (%) | CaCO ₃ | Other parameters |
| | | | | clay | silt | vf | m | vc | granules | | | | | pebbles | Mean (mm) | Silt and clay (%) | Fine sand (%) | Medium sand (%) | | | | |
| VI | | | | | | | | | | | | 200679 | 0.19 | 1.23 | 59.48 | 36.85 | 2.24 | 0.21 | 0.4 | 17 | + | |
| V | 26.6 | 1 | | | | | | | 0-96 cm: fine and medium sand grey 5Y 5/1, Spisula | HS | | 200680 | 0.13 | 6.31 | 84.83 | 8.13 | 0.73 | 0.00 | 1.0 | 19 | + | |
| IV | 27.6 | 2 | | | | | | | 96-348 cm: very fine sand, dark grey 5Y 4/1 Ensis, Spisula | HS | | 200681 | 0.12 | 8.66 | 87.50 | 3.23 | 0.54 | 0.07 | 1.2 | 19 | + | |
| III | 28.6 | 3 | | | | | | | | | | 200682 | 0.11 | 8.78 | 89.66 | 1.16 | 0.08 | 0.31 | 1.0 | 20 | + | |
| II | 29.6 | 4 | | | | | | | 348-540 cm: medium, fine and some coarse sand grey 5Y 5/1 Echinocyamus, Venus, Nucula, EnsisW | HS | | 200683 | 0.29 | 2.65 | 19.48 | 67.56 | 8.98 | 1.34 | 0.4 | 15 | | |
| I | 30.6 | 5 | | | | | | | | | | 200684 | 0.28 | 1.86 | 18.63 | 73.28 | 5.17 | 1.06 | 0.5 | 15 | | |

Geological Survey of Denmark and Greenland



Client: Kystdirektoratet

Coring: M/S Skoven


Date: 15 November 2020

Description: Ole Bennike

Date: 19 November 2020


QC: Henrik Jønsson Granat

Date: 19 November 2020

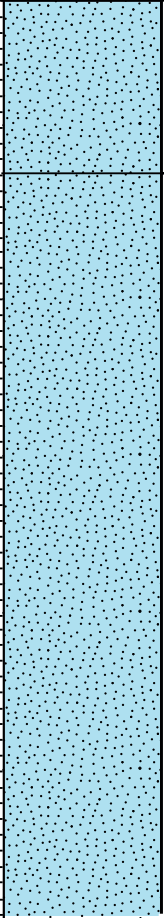
| Core ID: Løn_B_IB_55 | | Coordinates (m): E: 528451 N: 6382424 | | Water depth (m): 24.1 | | Coordinate system: UTM 32 Reference datum: WGS84 | | | | | | | | | | | | | |
|---|--------------------------------|---|-----------|-----------------------|--|--|---------|--------------------------|------------|-----------|-------------------|--------------------|-----------------|---------------------------|------------------------|-------------------|------------------------|-----------------|------------|
| DGU no: 570914.40 | | Longitude: 9°28.549'E Latitude: 57°35.001'N | | | | | | | | | | | | | | | | | |
| Core type: Vibrocore | | Core length (m): 3.27 | | | | | | | | | | | | | | | | | |
| Core section | Depth below mean sea level (m) | Depth below sea bed (m) | Lithology | | Description | Age/environment | Samples | Laboratory ID | Grain size | | | | | Loss on ignition (%) | Water (%) | CaCO ₃ | Other parameters | | |
| | | | Mud | Sand | | | | | Gravel | Mean (mm) | Silt and clay (%) | Fine sand (%) | Medium sand (%) | | | | | Coarse sand (%) | Gravel (%) |
| | | | clay | silt | vf | m | vc | granules | pebbles | | | | | | | | | | |
| IV | | | | | 0-65 cm: fine and medium sand grey 5Y 4/1, Ensis, Laevecardium Echinocyamus | HS | █ | 200685 | 0.25 | 0.97 | 35.71 | 54.22 | 8.41 | 0.69 | 0.4 | 12 | + | | |
| III | 25.1 | 1 | | | 65-213 cm: fine and medium sand, dark grey 5Y 4/1 Ensis, Spisula | HS | █ | 200686 | 0.21 | 1.78 | 53.20 | 33.47 | 9.21 | 2.33 | 0.5 | 19 | + | | |
| II | 26.1 | 2 | | | 213-297 cm: fine sand, grey 5Y 5/1 Spisula | HS | █ | 200687 | 0.23 | 1.52 | 49.74 | 36.76 | 11.15 | 0.82 | 0.5 | 15 | + | | |
| I | 27.1 | 3 | | | 297-327 cm: fine and medium sand, grey 5Y 4/1 Spisula, 3 silt layers, 1 cm thick | HS | █ | 200688 | 0.17 | 2.34 | 65.33 | 31.05 | 1.24 | 0.05 | 0.4 | 16 | + | | |
| | | 4 | | | | | | | | | | | | | | | | | |
| | | 5 | | | | | | | | | | | | | | | | | |
| Geological Survey of Denmark and Greenland  | | | | | | | | Client: Kystdirektoratet | | | | Coring: M/S Skoven | | | Date: 15 November 2020 | | | | |
| | | | | | | | | | | | | | | Description: Ole Bennike | | | Date: 19 November 2020 | | |
| | | | | | | | | | | | | | | QC: Henrik Jønsson Granat | | | Date: 19 November 2020 | | |

Lorem ipsum dolor

| 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 | | | | | Loss on ignition (%) | Water (%) | CaCO ₃ | Other parameters | |
| | | | Mud | Sand | | | | | Gravel | Mean (mm) | Silt and clay (%) | Fine sand (%) | Medium sand (%) | | | | | Coarse sand (%) |
| | | | clay | silt | vf | m | vc | granules | pebbles | | | | | | | | | |
| V | | | | | | | | | | | | | | | | | | |
| IV | 20.9 | 1 | | | | light yellowish brown 2.5Y 6/3 | | █ | 200251 | 0.31 | 0.76 | 29.06 | 51.47 | 12.08 | 6.63 | 0.4 | 14 | |
| III | 21.9 | 2 | | | | 0-415 cm: fine-, medium and coarse sand Spisula, Ensis, Venus | HS | █ | 200252 | 0.27 | 0.96 | 40.84 | 46.98 | 8.30 | 2.92 | 0.4 | 14 | + |
| II | 22.9 | 3 | | | | | | █ | 200253 | 0.27 | 0.97 | 43.38 | 45.12 | 9.62 | 0.91 | 0.4 | 16 | + |
| I | 23.9 | 4 | | | | grey 5Y 5/1 | | █ | 200254 | 0.13 | 3.60 | 88.62 | 6.99 | 0.57 | 0.23 | 0.6 | 18 | |
| | | 5 | | | | | █ | 200255 | 0.13 | 6.72 | 86.17 | 4.89 | 0.92 | 1.30 | 0.7 | 19 | + | |

| 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 | Depth below mean sea level (m) | Depth below sea bed (m) | Lithology | Mud Sand Gravel | | | | | | | Age/environment | Samples | Laboratory ID | Grain size | | | | | Loss on ignition (%) | Water (%) | CaCO ₃ | Other parameters | | | | | | | | |
| | | | | clay | silt | vf | m | vc | granules | pebbles | | | | Description | Mean (mm) | Silt and clay (%) | Fine sand (%) | Medium sand (%) | | | | | Coarse sand (%) | Gravel (%) | | | | | | |
| VI | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| V | | | | | | | | | HS | ■ | 200270 | 0.58 | 0.65 | 8.40 | 49.86 | 25.81 | 15.28 | 0.4 | 12 | | + | | | | | | | | | |
| | | | | | | | | ■ | | 200271 | 0.30 | 0.85 | 20.27 | 66.11 | 11.93 | 0.83 | 0.3 | 16 | | + | | | | | | | | | | |
| | 23.9 | 1 | | | | | | | | ■ | 200272 | 0.12 | 4.23 | 91.63 | 3.62 | 0.48 | 0.05 | 0.8 | 20 | | | | | | | | | | | |
| IV | | | | | | | | | | ■ | 200273 | 0.10 | 8.37 | 89.71 | 1.59 | 0.11 | 0.22 | 1.1 | 19 | | + | | | | | | | | | |
| | 24.9 | 2 | | | | | | | | ■ | 200274 | 0.10 | 8.34 | 91.09 | 0.50 | 0.07 | 0.00 | 1.0 | 20 | | | | | | | | | | | |
| III | | | | | | | | | | | ■ | 200275 | 0.10 | 7.96 | 91.60 | 0.39 | 0.06 | 0.00 | 1.0 | 20 | | + | | | | | | | | |
| | 25.9 | 3 | | | | | | | | ■ | 200276 | 0.12 | 11.63 | 78.07 | 5.83 | 1.95 | 2.52 | 0.8 | 17 | | | | | | | | | | | |
| II | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 26.9 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| I | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 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-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) | Lithology | Mud Sand Gravel | | | | | | Description | Age/environment | Samples | Laboratory ID | Grain size | | | | | Loss on ignition (%) | Water (%) | CaCO ₃ | Other parameters | | | |
| | | | | clay | silt | vf | m | vc | granules | | | | | pebbles | Mean (mm) | Silt and clay (%) | Fine sand (%) | Medium sand (%) | | | | | Coarse sand (%) | Gravel (%) | |
| IV | | | | | | | | | | 0-100 cm: medium, fine and coarse sand shell-rich layers in lower part light yellowish brown 2.5Y 6/3, Spisula, Ensis, Venus | HS | █ | 200277 | 0.30 | 0.63 | 18.94 | 68.33 | 10.05 | 2.05 | 0.4 | 14 | | + | | |
| III | 22.6 | 1 | | | | | | | | 100-280 cm: fine sand with shell-rich layers dark grey 5Y 4/1, Spisula, Ensis, Laevicardium | HS | █ | 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 | | + | |
| | 24.6 | 3 | | | | | | | | | | HS | █ | 200280 | 0.10 | 6.42 | 92.68 | 0.83 | 0.07 | 0.00 | 0.8 | 19 | | + | |
| I | 25.6 | 4 | | | | | | | | 280-400 cm: fine- and medium sand, grey 5Y 5/1 shell fragments | HS | █ | 200281 | 0.10 | 0.66 | 91.11 | 0.23 | 0.00 | 0.00 | 0.8 | 20 | | + | | |
| | | 5 | | | | | | | | | | | | | | | | | | | | | | | |

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

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-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 | | | | | | | | | | | | | | | | |
| Core section | Depth below mean sea level (m) | Depth below sea bed (m) | Lithology | Grain size | | | | | | Loss on ignition (%) | Water (%) | CaCO ₃ | Other parameters | | | | | |
| | | | | clay | silt | vf | m | vc | granules | | | | | pebbles | Mean (mm) | Silt and clay (%) | Fine sand (%) | Medium sand (%) |
| | | | Description | Age/environment | Samples | Laboratory ID | Mean (mm) | Silt and clay (%) | Fine sand (%) | Medium sand (%) | Coarse sand (%) | Gravel (%) | Loss on ignition (%) | Water (%) | CaCO ₃ | Other parameters | | |
| V | | | 0-51 cm: fine sand, grey 5Y 5/1 | HS | █ | 200319 | 0.12 | 3.26 | 89.41 | 4.44 | 1.77 | 1.12 | 0.4 | 20 | | | | |
| | | | 51-62 cm: sand and gravel, grey 5Y 5/1 | HG | | | | | | | | | | | | | + | |
| IV | 26.9 | 1 | 62-170 cm: fine, medium and coarse sand, grey 5Y 5/1 | HS | █ | 200320 | 0.48 | 1.37 | 20.03 | 40.81 | 19.60 | 18.19 | 0.4 | 12 | | + | | |
| | | | 170-177 cm: silt, grey 5Y 5/1 | HI | | | | | | | | | | | | | | |
| III | 27.9 | 2 | 177-219 cm: fine and medium sand, grey 5Y 5/1 | HI | █ | 200321 | 0.25 | 2.02 | 26.05 | 61.83 | 8.81 | 1.29 | 0.5 | 13 | | | | |
| | | | 219-224 cm: silt, grey 5Y 5/1 | HI | | | | | | | | | | | | | | |
| | | | 224-270 cm: medium and coarse sand, grey 5Y 5/1 | HS | | | | | | | | | | | | | | |
| II | 28.9 | 3 | 270-277 cm: silt, grey 5Y 5/1 | HI | | | | | | | | | | | | | | |
| | | | 277-495 cm: fine and medium silty sand poorly sorted, with granules and pebbles in lower part grey 5Y 5/1 | HS | █ | 200322 | 0.16 | 11.47 | 49.75 | 34.34 | 3.55 | 0.89 | 1.2 | 14 | | | | |
| I | 29.9 | 4 | | | █ | 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 B-3.

- Fotos af borekerner

Løn-07

0-0,25

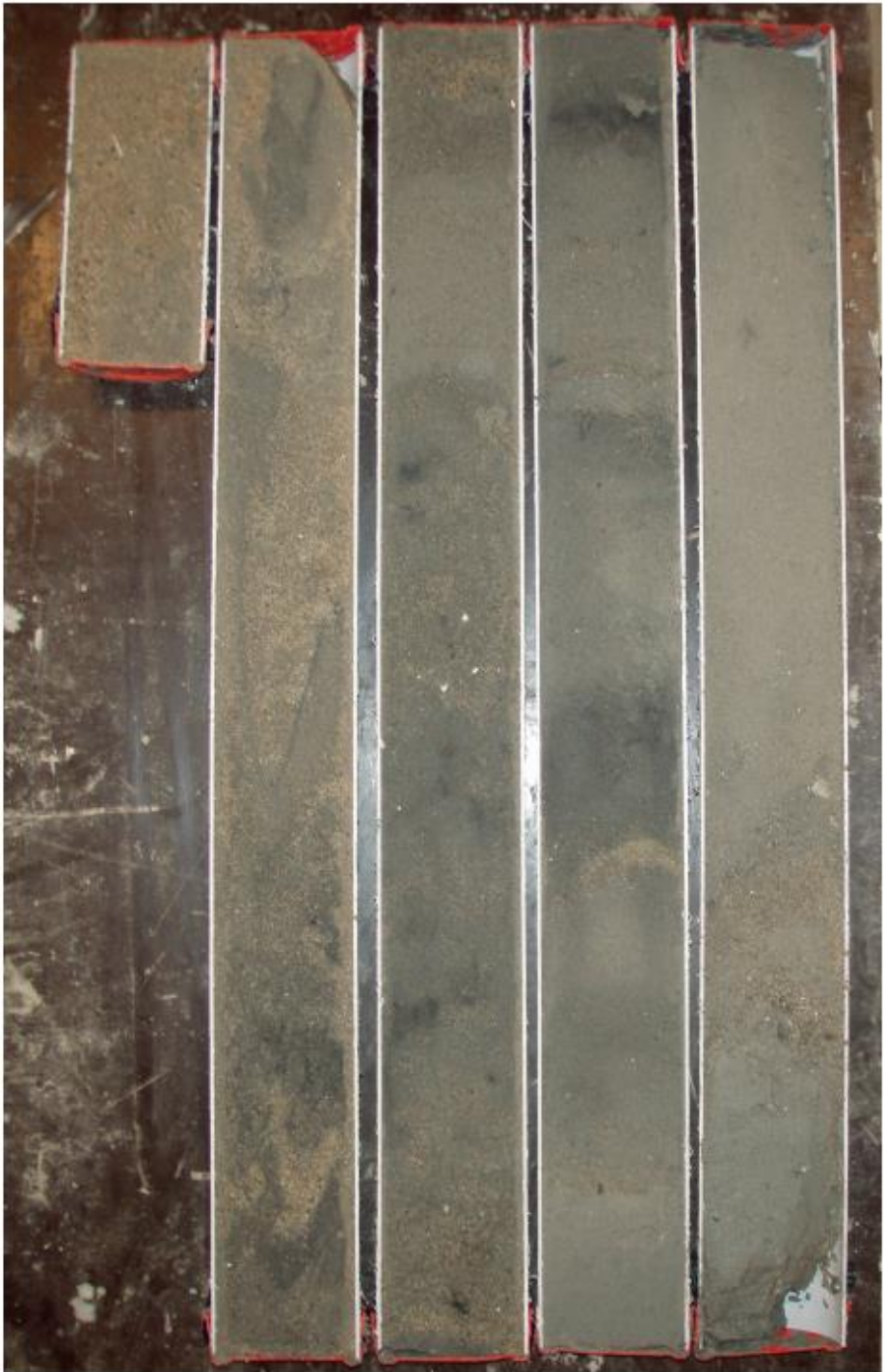
0,25-1,25

1,25-2,25

2,25-3,25

3,25-4,25

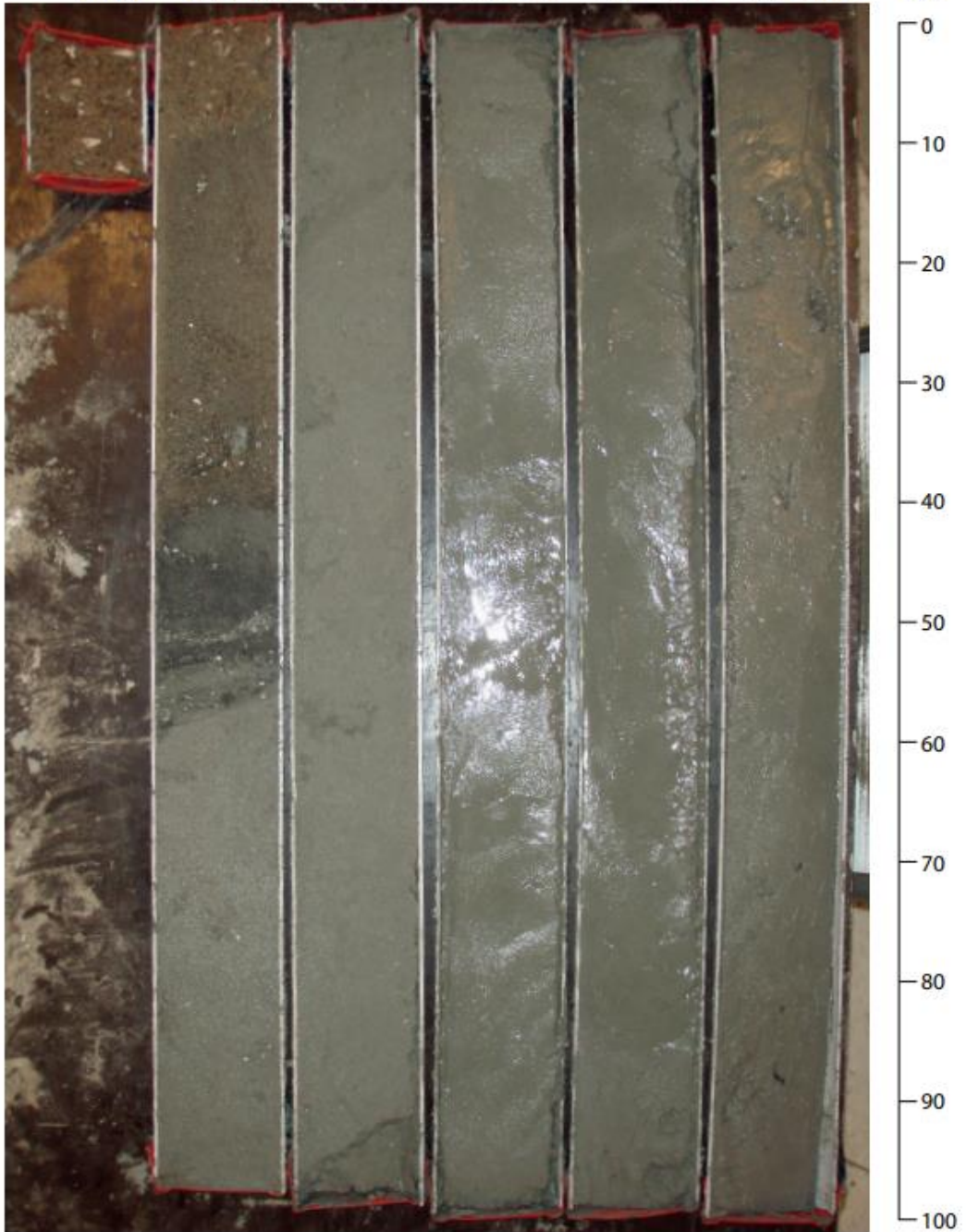
cm



0
10
20
30
40
50
60
70
80
90
100

Løn-11

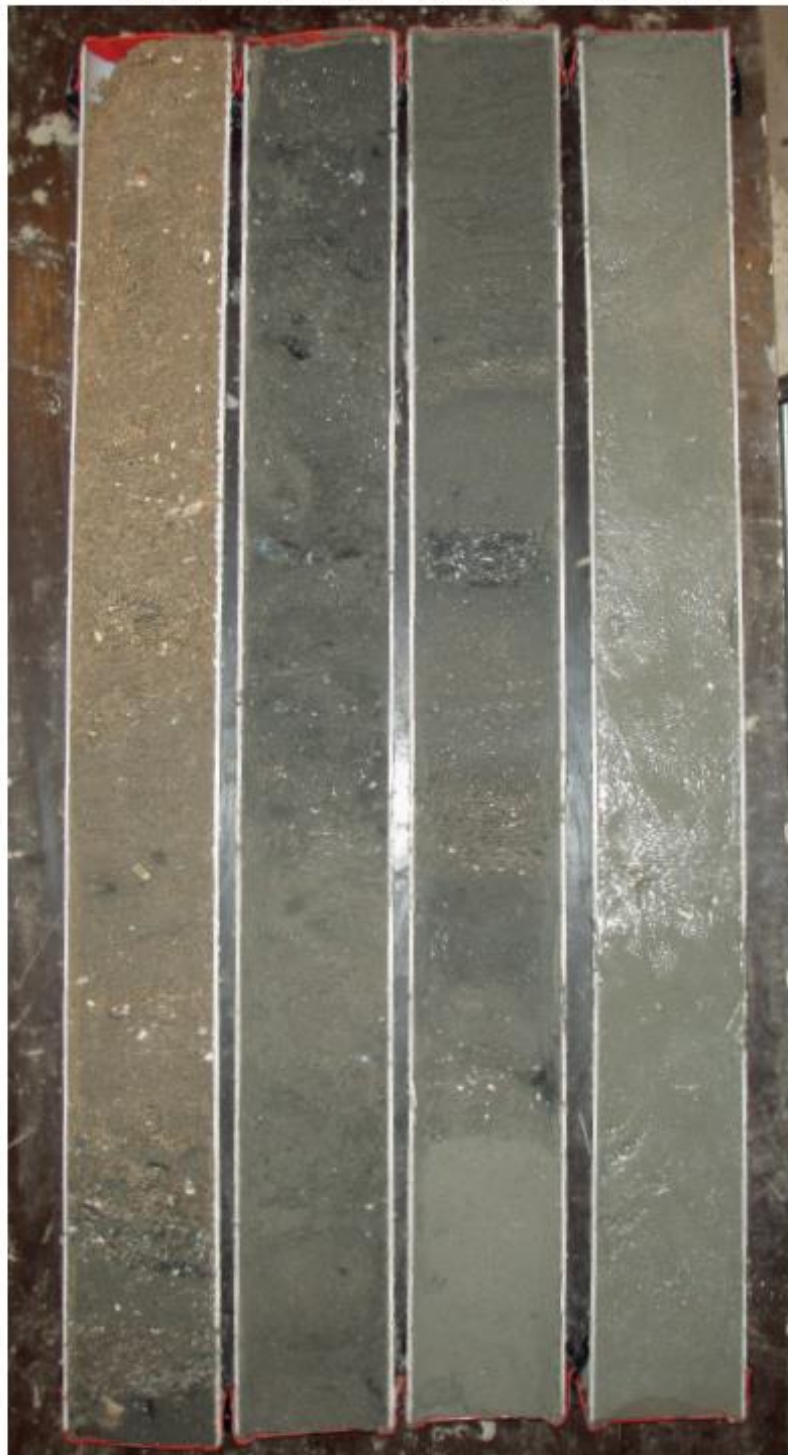
0-0,11 0,11-1,11 1,11-2,11 2,11-3,11 3,11-4,11 4,11-5,11 cm



Løn-12

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

cm



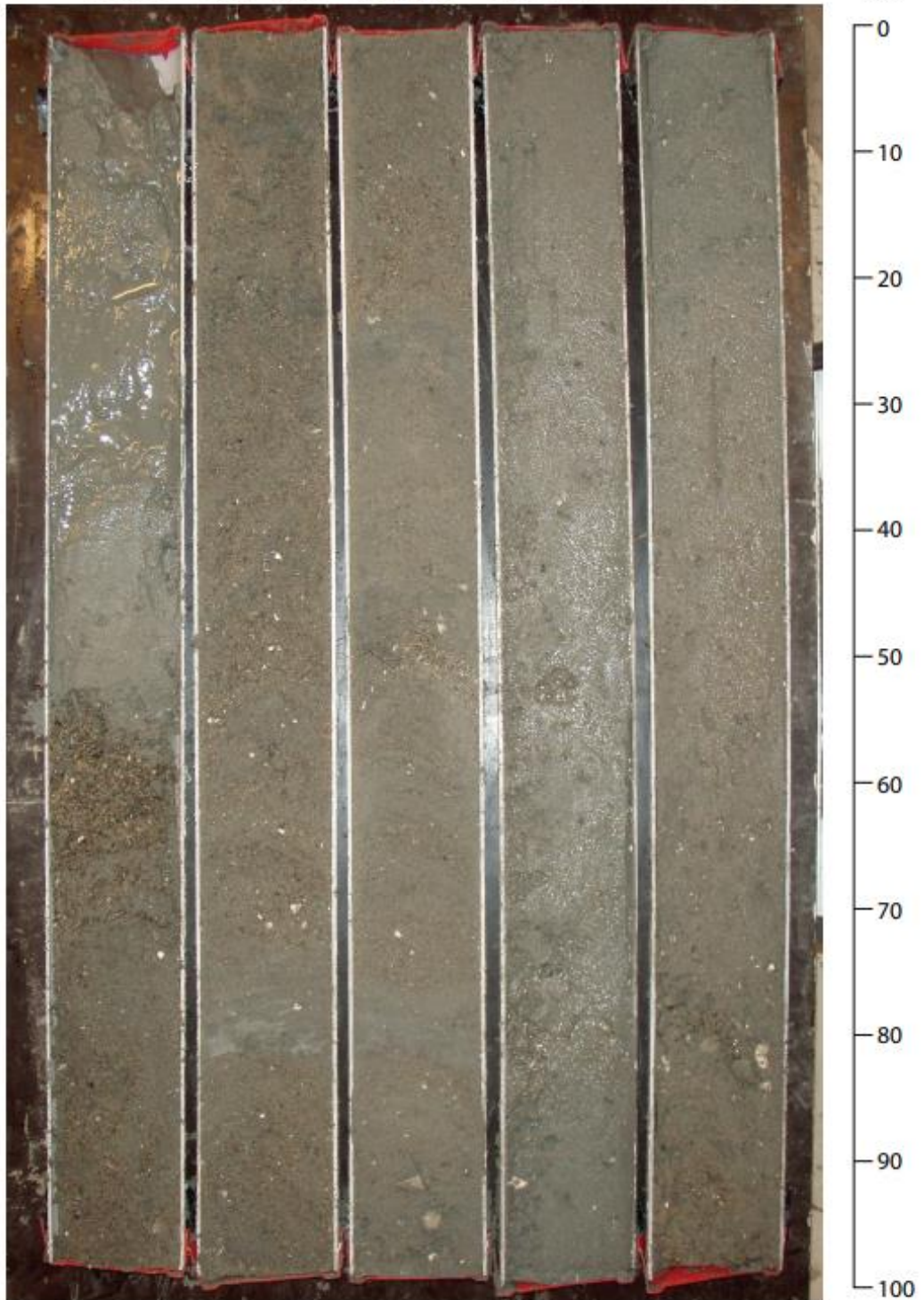
0
10
20
30
40
50
60
70
80
90
100

Løn-16



Løn-22

0-0,95 0,95-1,95 1,95-2,95 2,95-3,95 3,95-4,95



Løn_B_IB_36

0-0,32

0,32-1,32

1,32-2,32

2,32-3,32

3,32-4,32

4,32-5,32

cm



0
10
20
30
40
50
60
70
80
90
100

Løn_B_IB_37

0-0,10 0,10-1,10 1,10-2,10 2,10-3,10 3,10-4,10 4,10-5,10

cm



0

10

20

30

40

50

60

70

80

90

100

Løn_B_IB_38

0-0,51 0,51-1,51 1,51-2,51 2,51-3,51 3,51-4,51 4,51-5,51



cm
0
10
20
30
40
50
60
70
80
90
100

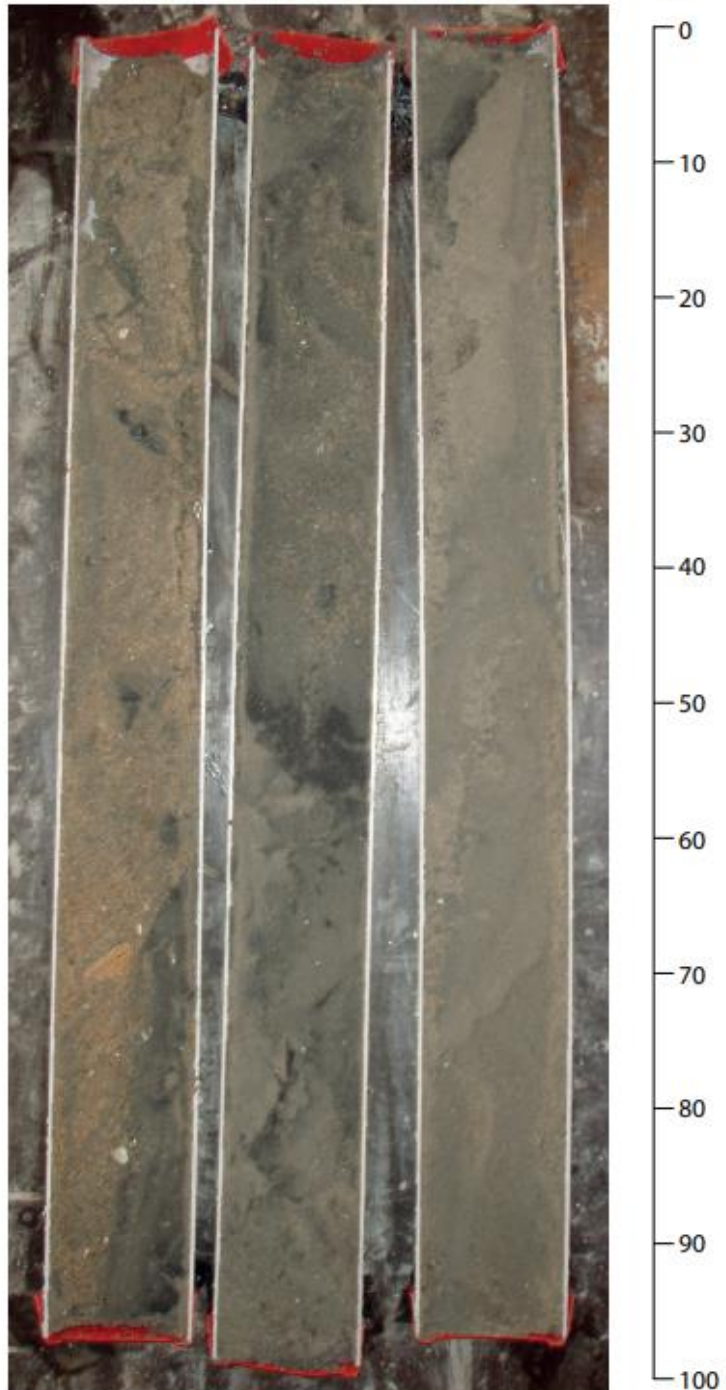
Løn_B_IB_39

0-0,90

0,90-1,90

1,90-2,90

cm



Løn_B_IB_40

0-0,35

0,35-1,35

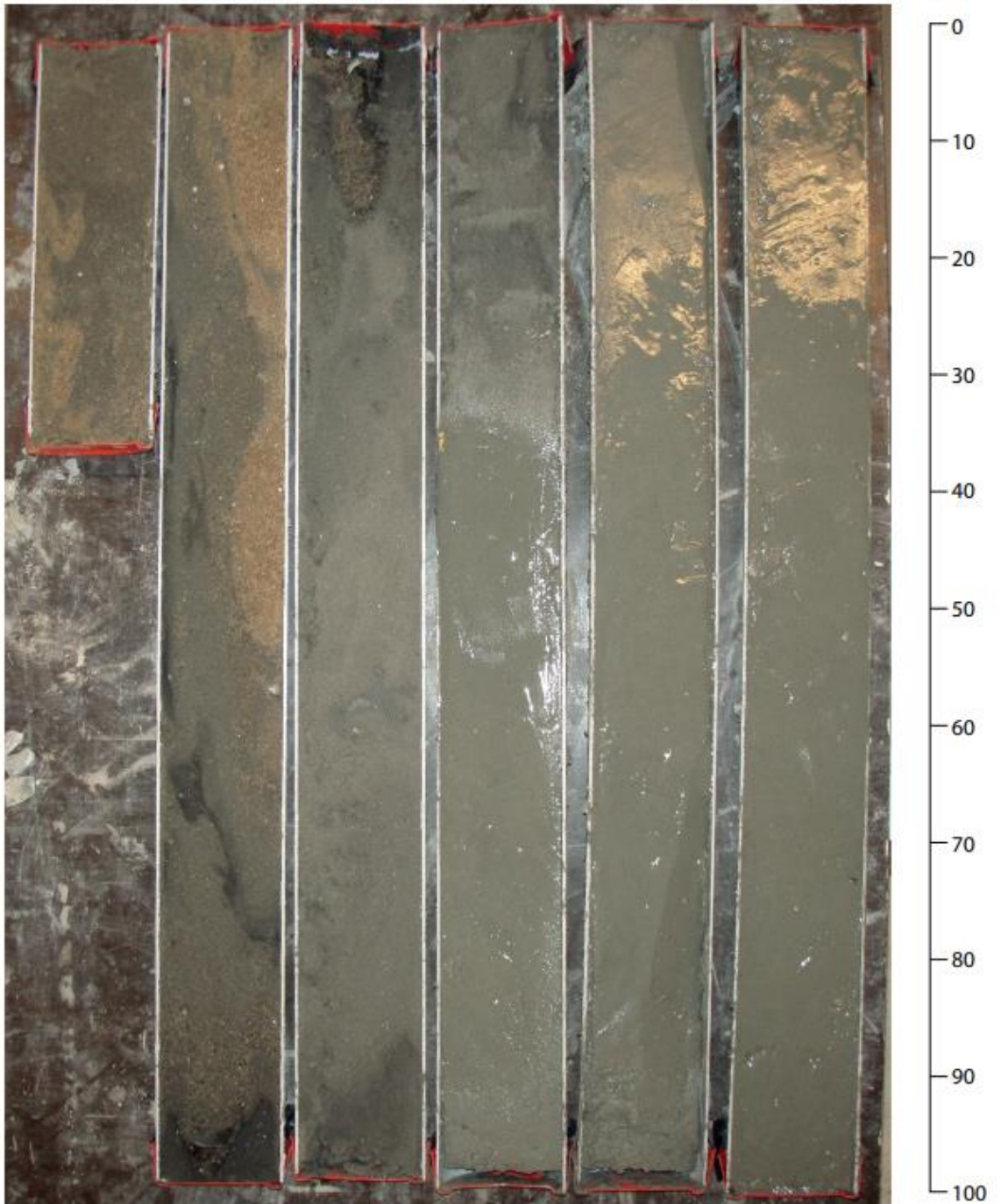
1,35-2,35

2,35-3,35

3,35-4,35

4,35-5,35

cm



Løn_B_IB_41

0-0,31

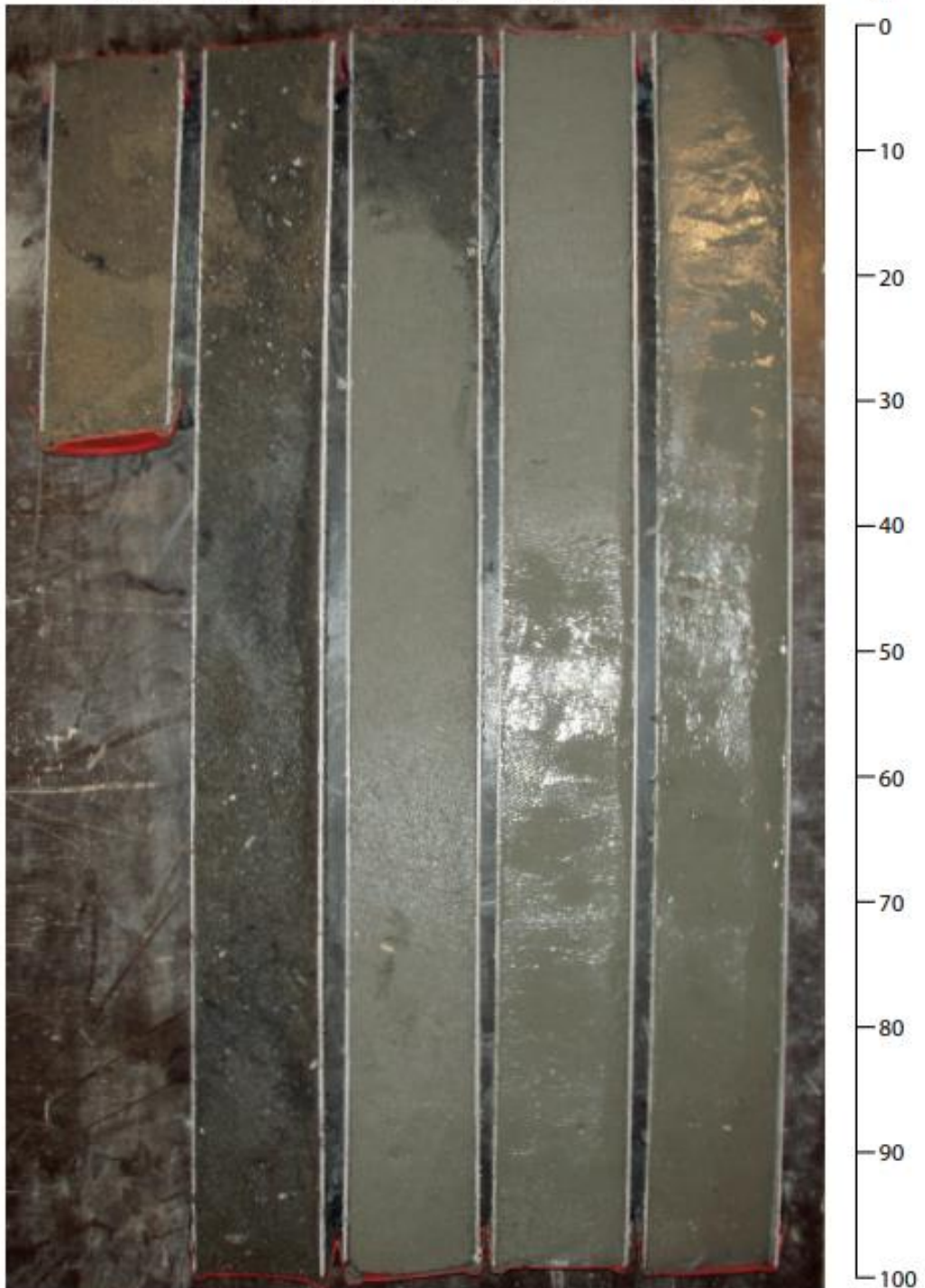
0,31-1,31

1,31-2,31

2,31-3,31

3,31-4,31

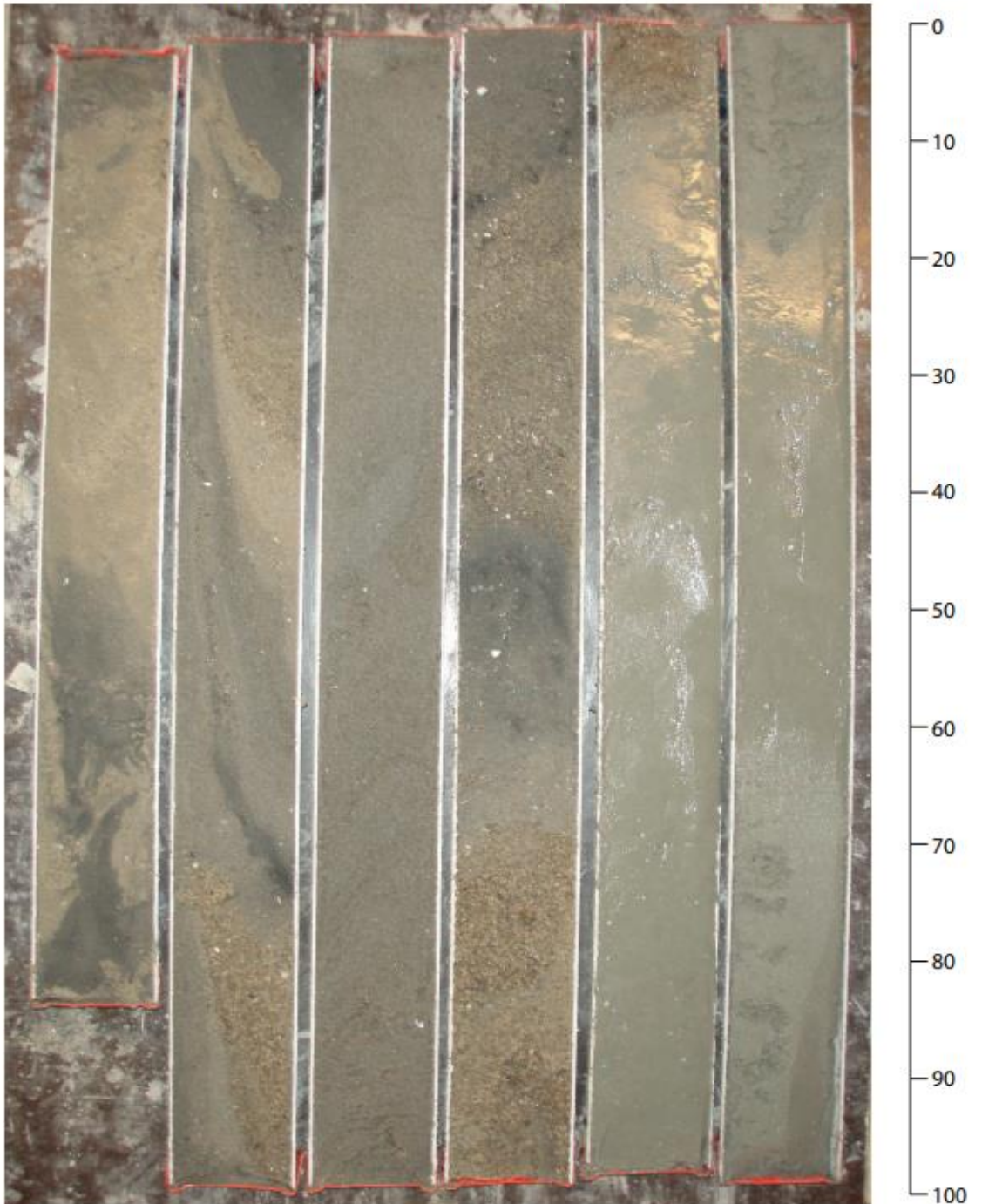
cm



Løn_B_IB_42

0-0,82 0,82-1,82 1,82-2,82 2,82-3,82 3,82-4,82 4,82-5,82

cm



Løn_B_IB_43

0-0,26 0,26-1,26 1,26-2,26 2,26-3,26 3,26-4,26 4,26-5,26

cm



0
10
20
30
40
50
60
70
80
90
100

Løn_B_IB_44

0-0,48

0,48-1,48

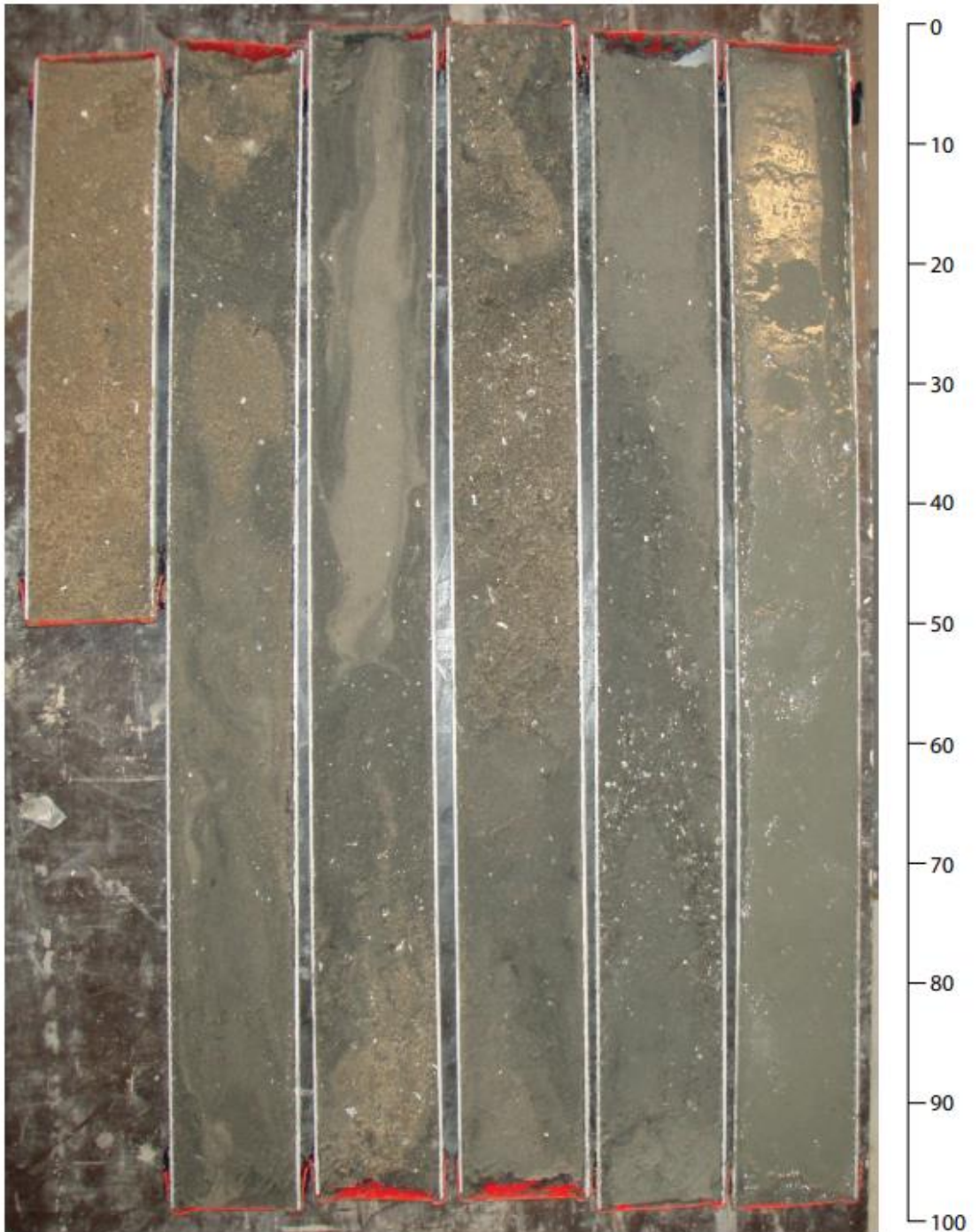
1,48-2,48

2,48-3,48

3,48-4,48

4,48-5,48

cm



Løn_B_IB_45

0-0,68

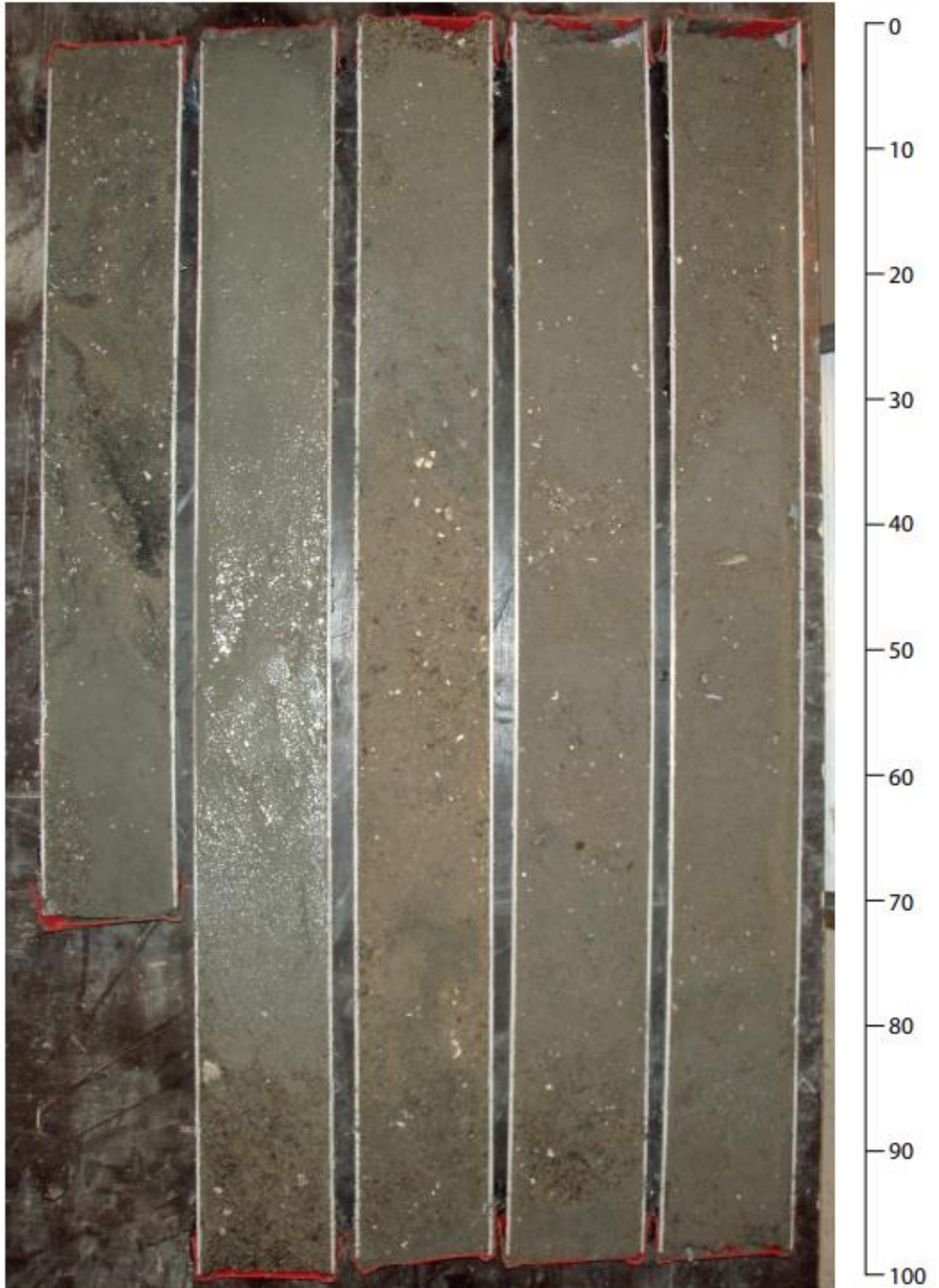
0,68-1,68

1,68-2,68

2,68-3,68

3,68-4,68

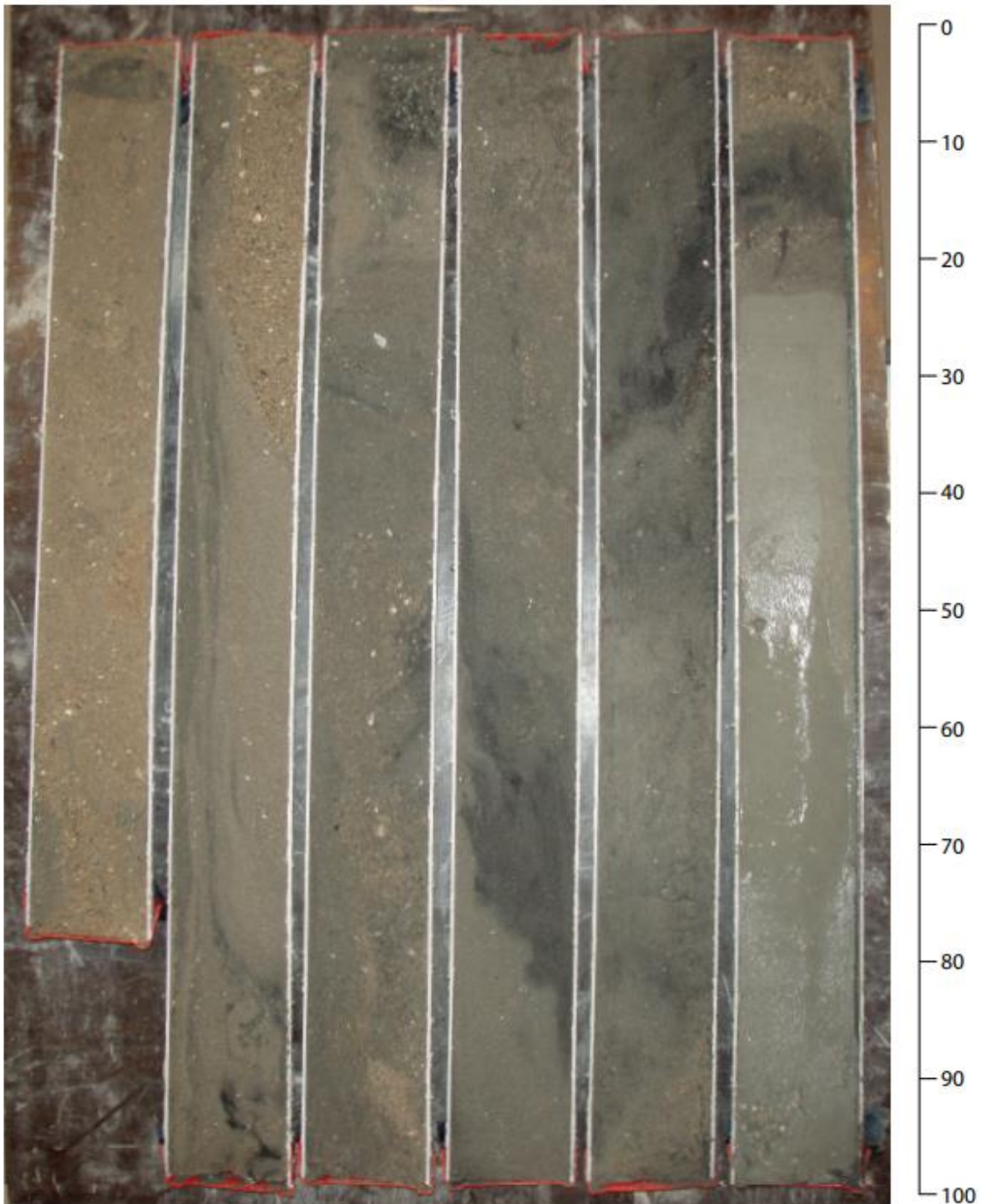
cm



Løn_B_IB_46

0-0,78 0,78-1,78 1,78-2,78 2,78-3,78 3,78-4,78 4,78-5,78

cm



Løn_B_IB_47

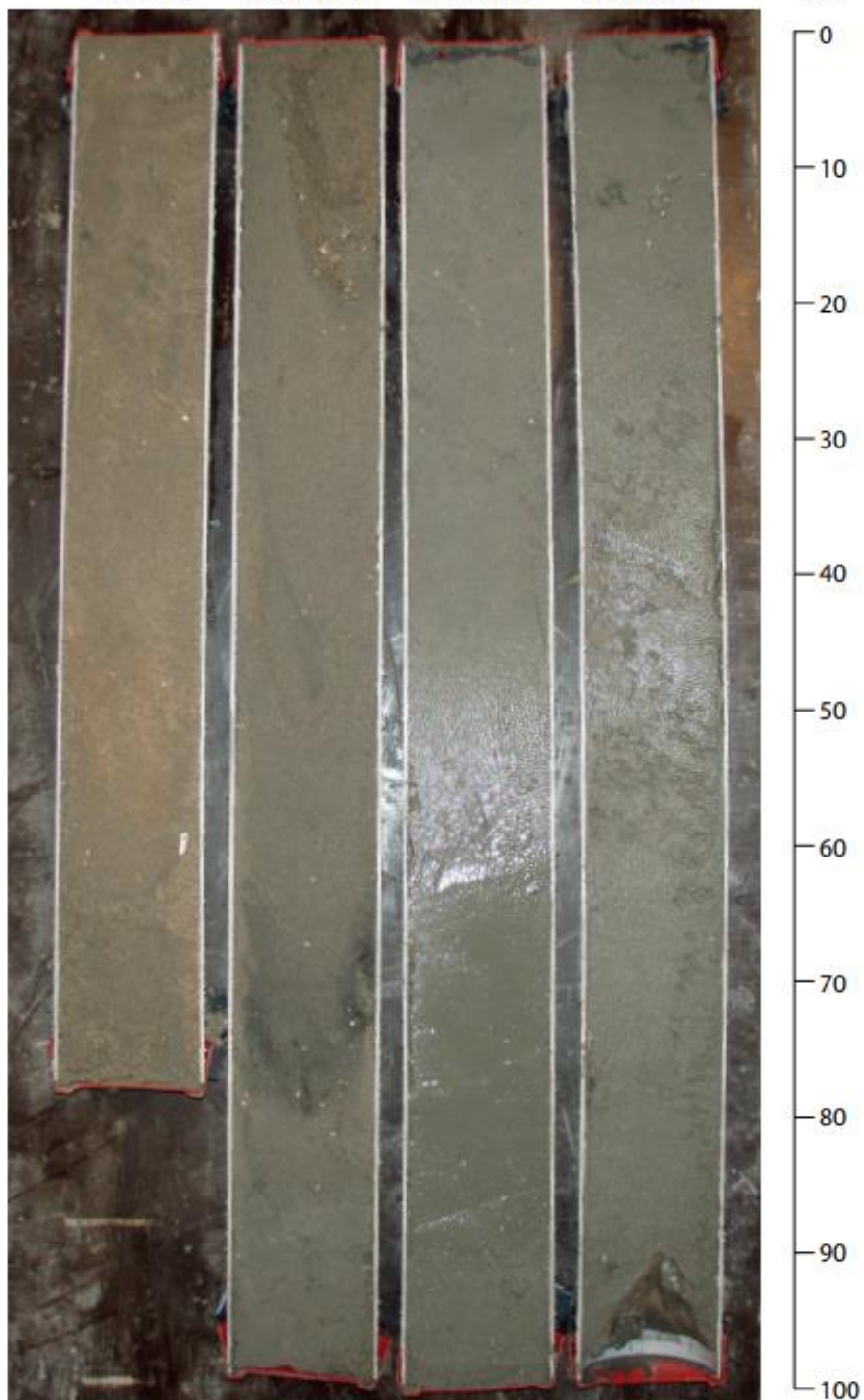
0-0,78

0,78-1,78

1,78-2,78

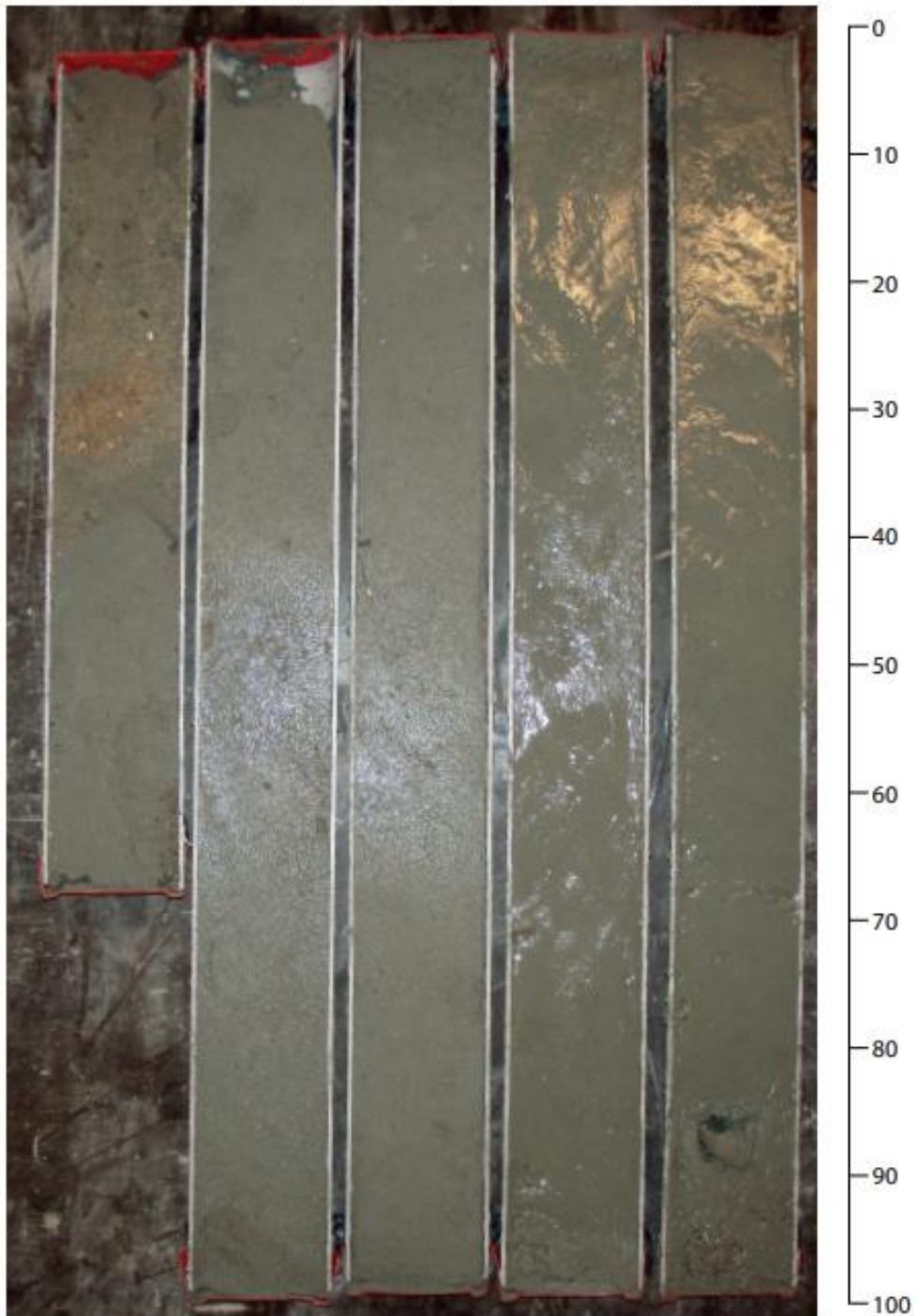
2,78-3,73

cm

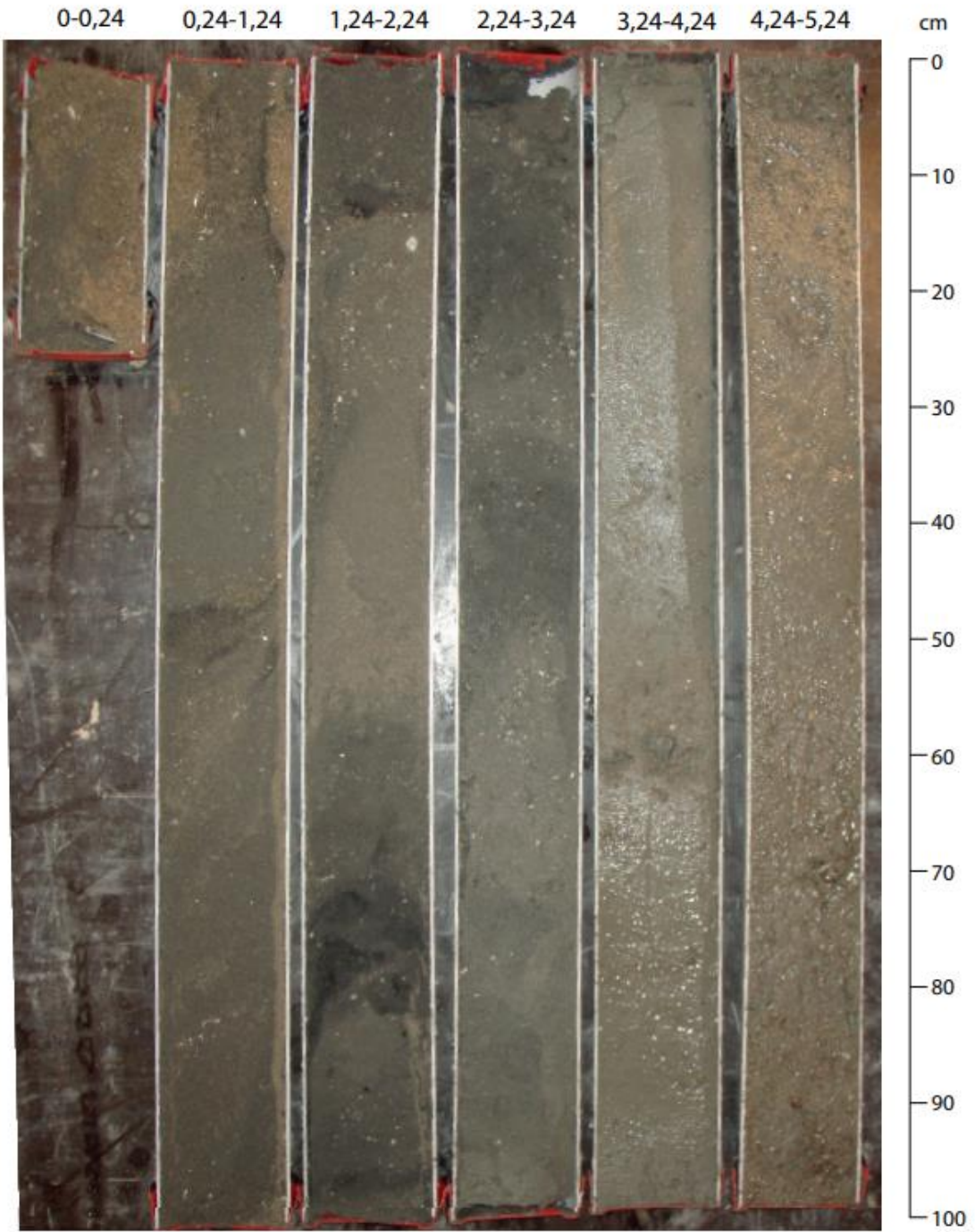


Løn_B_IB_48

0-0,65 0,65-1,65 1,65-2,65 2,65-3,65 3,65-4,65 cm



Løn_B_IB_49



Løn_B_IB_50

0-0,64

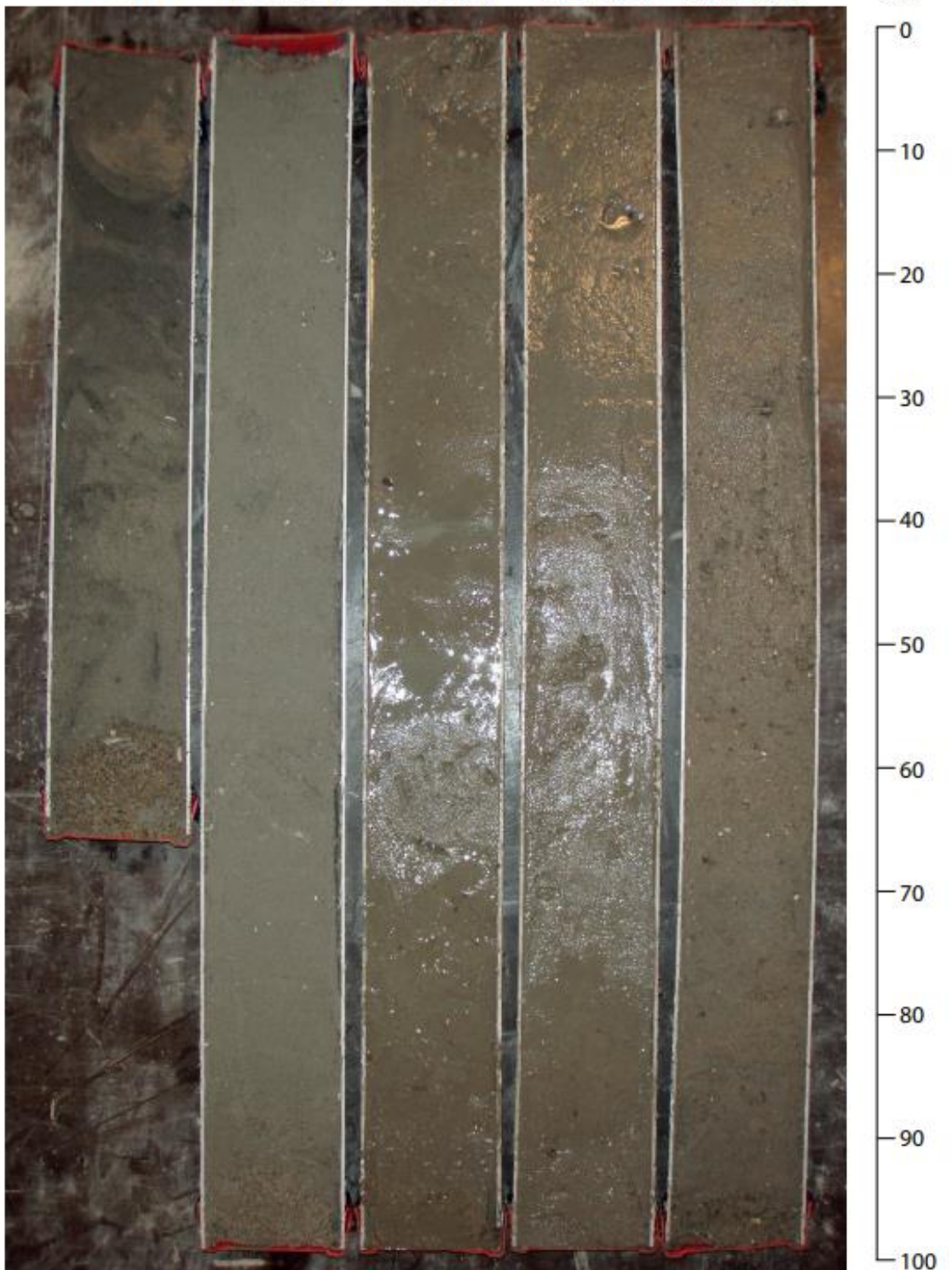
0,64-1,64

1,64-2,64

2,64-3,64

3,64-4,64

cm



Løn_B_IB_51

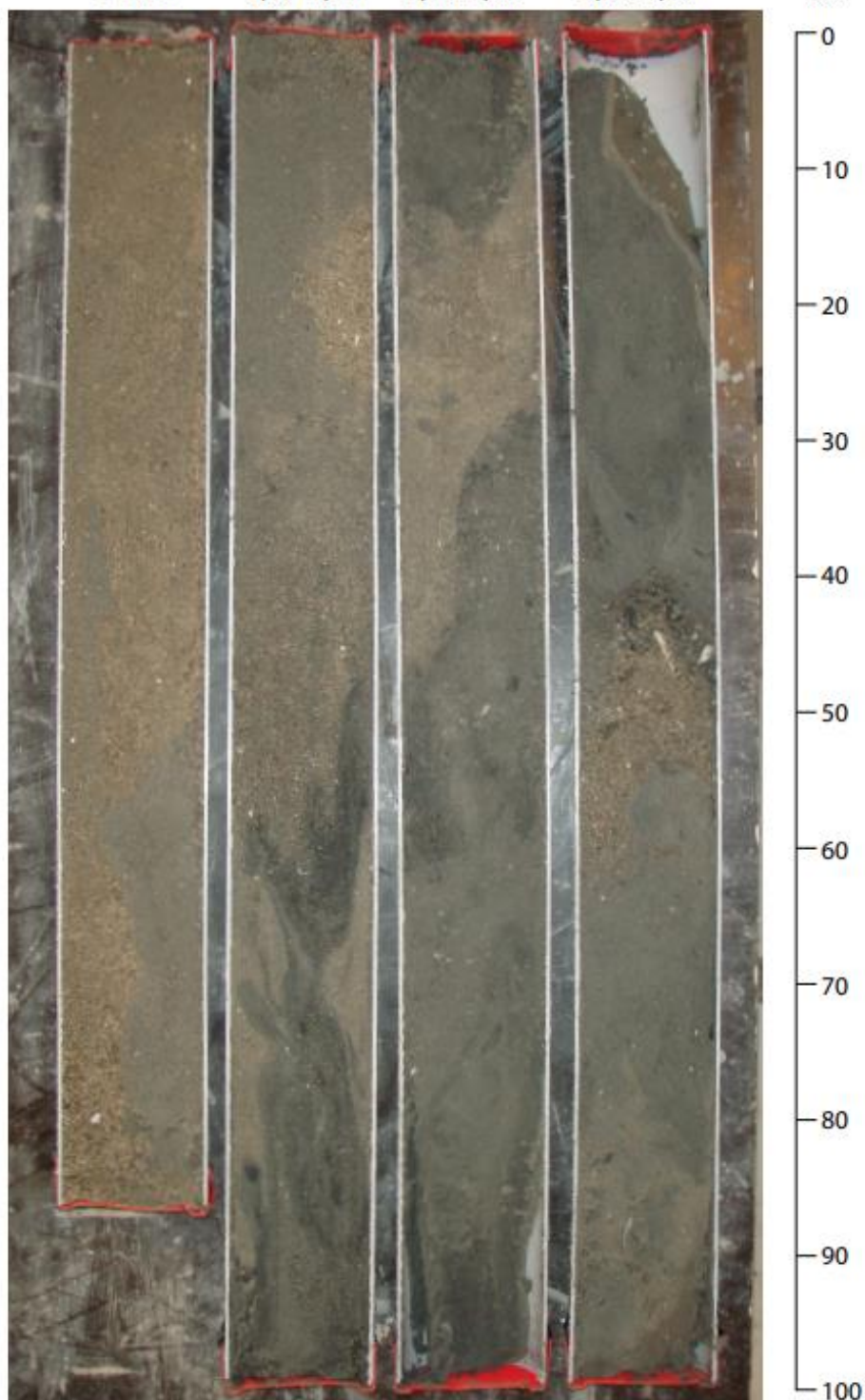
0-0,87

0,87-1,87

1,87-2,87

2,87-3,87

cm



Løn_B_IB_52

0-0,22

0,22-1,22

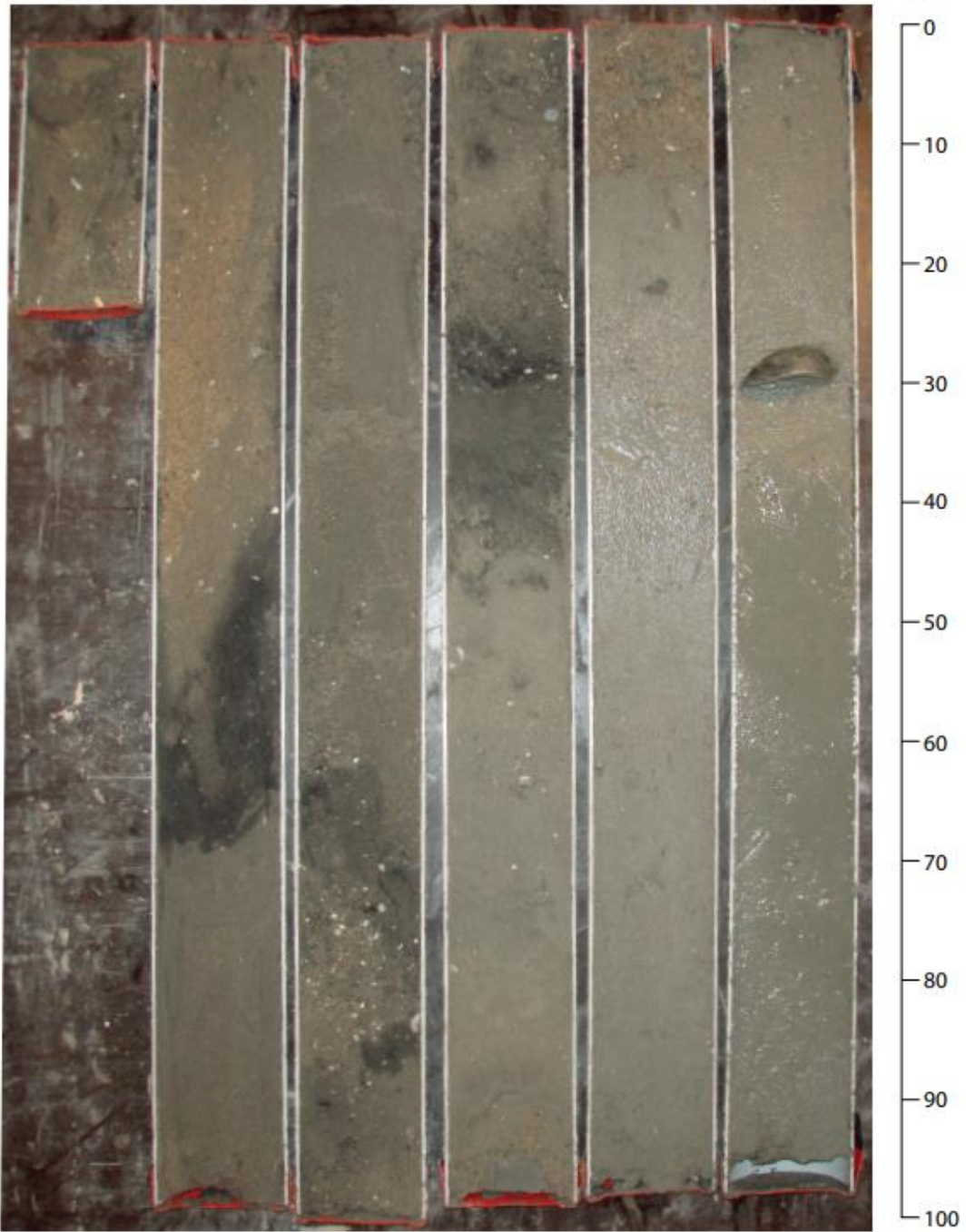
1,22-2,22

2,22-3,22

3,22-4,22

4,22-5,22

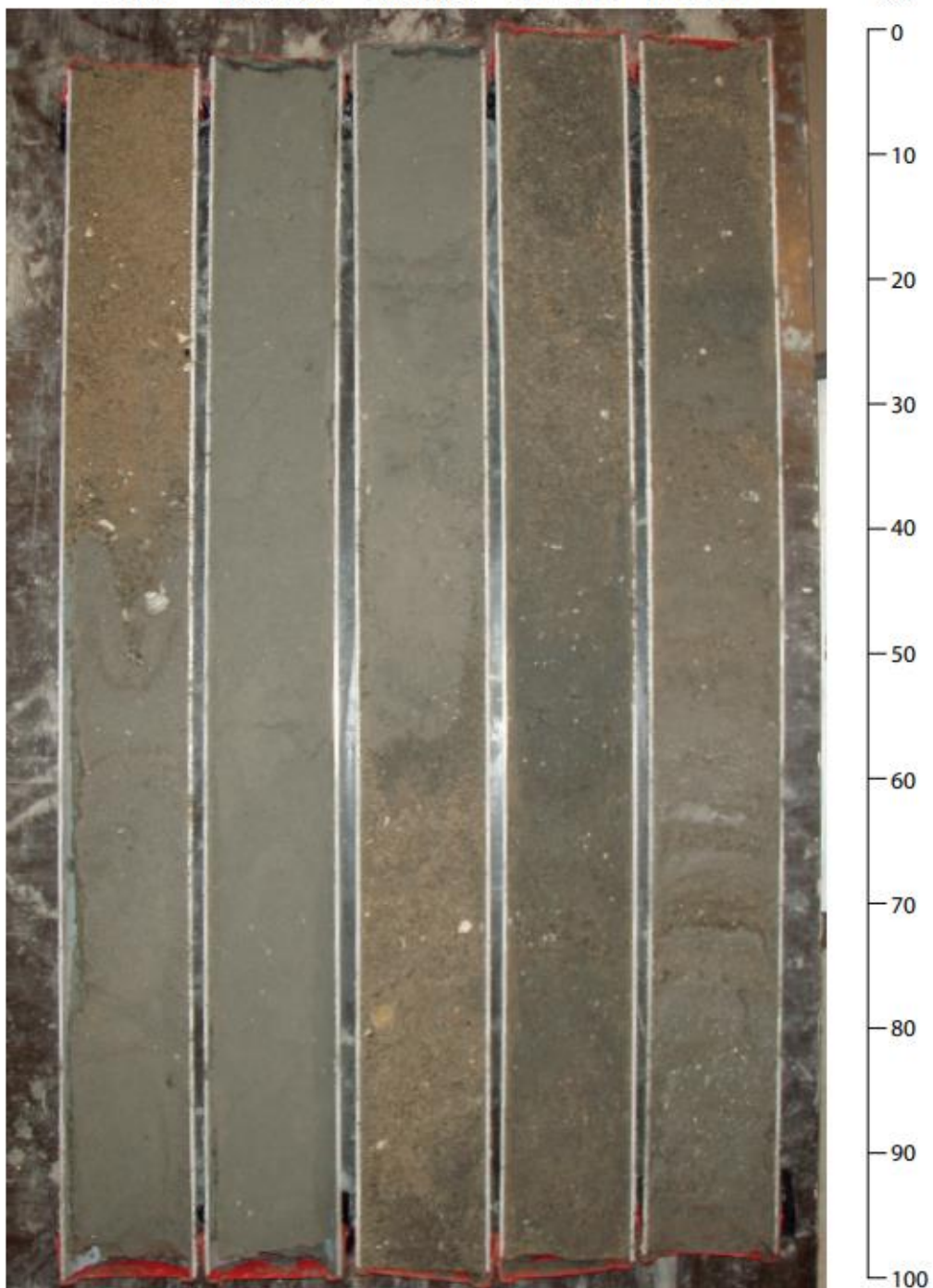
cm



Løn_B_IB_53

0-1,00 1,00-2,00 2,00-3,00 3,00-4,00 4,00-5,00

cm



Løn_B_IB_54

0-0,40 0,40-1,40 1,40-2,40 2,40-3,40 3,40-4,40 4,40-5,40

cm



0

10

20

30

40

50

60

70

80

90

100

Løn_B_IB_55

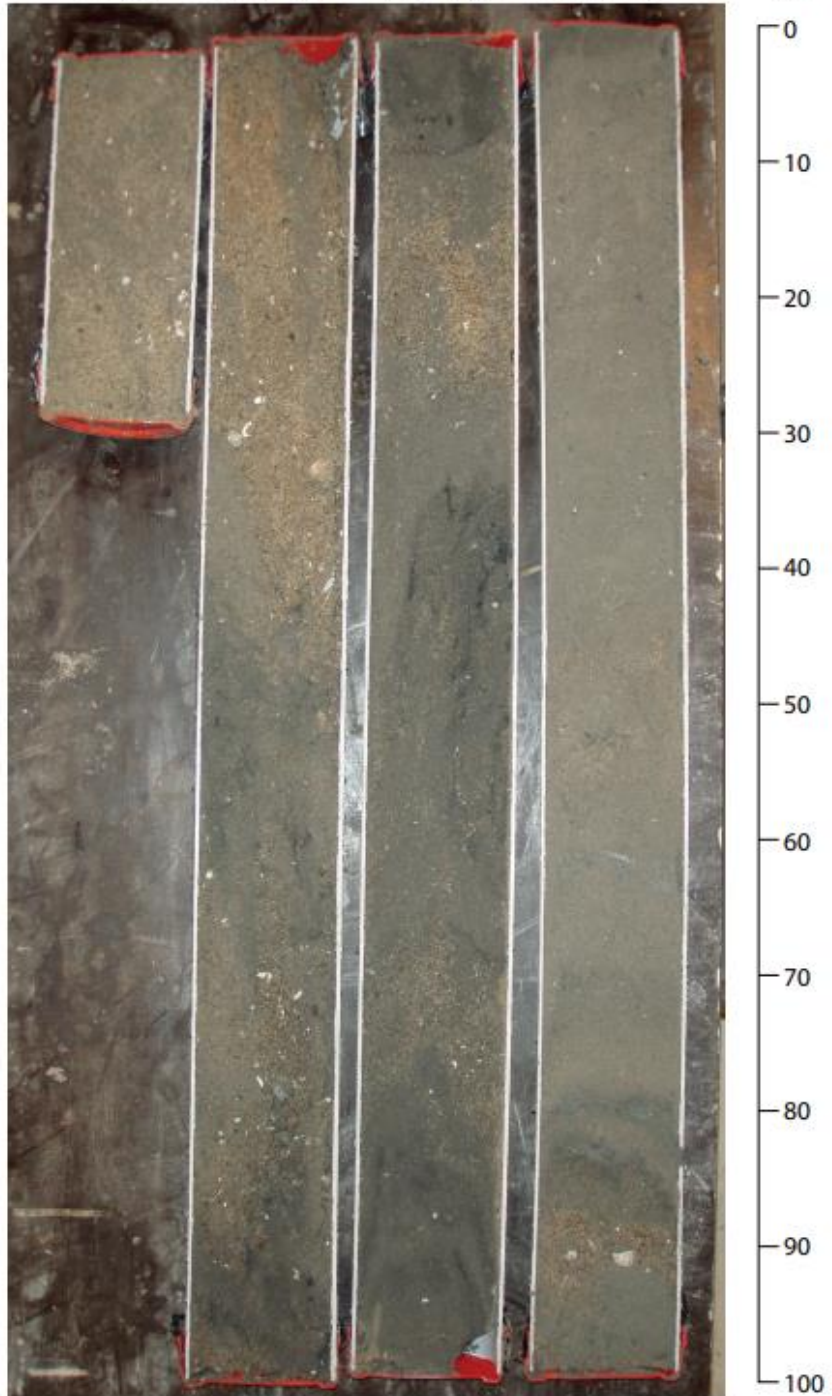
0-0,27

0,27-1,27

1,27-2,27

2,27-3,27

cm



Bilag B-4.

Vibrationsboringer - Oversigt over sigterestater, vandindhold, og glødetab

| Vibrocore no. | Lab. Id. No. | Prøve interval (cm) | D-50 (mm) | <0,125 mm (%) | Vandindhold (%) | Glødetab (%) |
|---------------|--------------|---------------------|-----------|---------------|-----------------|--------------|
| Løn-B-IA_07 | 200251 | 0-20 | 0.3 | 2.77 | 14 | 0.4 |
| - | 200252 | 100-120 | 0.27 | 5.1 | 14 | 0.4 |
| - | 200253 | 200-220 | 0.27 | 9.52 | 16 | 0.4 |
| - | 200254 | 300-320 | 0.15 | 20.52 | 18 | 0.6 |
| - | 200255 | 395-415 | 0.14 | 30.53 | 19 | 0.7 |
| Løn-B-IA_11 | 200270 | 0-20 | 0.53 | 1.56 | 12 | 0.4 |
| - | 200271 | 30-50 | 0.3 | 2.13 | 16 | 0.3 |
| - | 200272 | 100-120 | 0.13 | 46.33 | 20 | 0.8 |
| - | 200273 | 200-220 | 0.09 | 61.67 | 19 | 1.1 |
| - | 200274 | 300-320 | 0.09 | 69.06 | 20 | 1.0 |
| - | 200275 | 400-420 | 0.08 | 73.17 | 20 | 1.0 |
| - | 200276 | 490-510 | 0.13 | 42.02 | 17 | 0.8 |
| Løn-B-IA_12 | 200277 | 0-20 | 0.3 | 1.69 | 14 | 0.4 |
| - | 200278 | 100-120 | 0.15 | 18.1 | 18 | 0.6 |
| - | 200279 | 200-220 | 0.15 | 9.24 | 18 | 0.4 |
| - | 200280 | 300-320 | 0.09 | 58.78 | 19 | 0.8 |
| - | 200281 | 380-400 | 0.08 | 75.68 | 20 | 0.8 |
| Løn-B-IA_16 | 200295 | 0-20 | 0.14 | 28.1 | 19 | 0.6 |
| - | 200296 | 90-110 | 0.26 | 3.14 | 17 | 0.9 |
| - | 200297 | 130-150 | 0.09 | 67.13 | 19 | 0.7 |
| - | 200298 | 200-220 | 0.08 | 81.83 | 20 | 0.7 |
| - | 200299 | 300-320 | 0.08 | 86.69 | 24 | 1.0 |
| - | 200300 | 400-420 | 0.08 | 91.05 | 21 | 1.2 |
| - | 200301 | 500-520 | 0.08 | 79.73 | 22 | 1.3 |
| - | 200302 | 560-580 | 0.09 | 63.71 | 20 | 1.1 |
| Løn-B-IA_22 | 200319 | 0-20 | 0.13 | 40.74 | 20 | 0.4 |
| - | 200320 | 100-120 | 0.34 | 9.97 | 12 | 0.4 |
| - | 200321 | 200-220 | 0.29 | 9.13 | 13 | 0.5 |
| - | 200322 | 300-320 | 0.16 | 35.96 | 14 | 1.2 |
| - | 200323 | 400-420 | 0.09 | 56.21 | 18 | 1.6 |
| - | 200324 | 470-490 | 0.3 | 10.31 | 13 | 0.6 |
| Løn-B-IB_36 | 200593 | 0-20 | 0.29 | 4.87 | 17.5 | 0.42 |
| - | 200594 | 100-120 | 0.17 | 17.80 | 17.7 | 0.61 |
| - | 200595 | 200-220 | 0.28 | 11.64 | 16.8 | 0.46 |
| - | 200596 | 300-320 | 0.15 | 23.99 | 19.0 | 0.56 |
| - | 200597 | 400-420 | 0.18 | 23.31 | 16.8 | 0.78 |
| - | 200598 | 480-500 | 0.18 | 30.95 | 16.1 | 1.25 |
| Løn-B-IB_37 | 200599 | 0-20 | 0.3 | 4.83 | 15.2 | 0.41 |
| - | 200600 | 100-120 | 0.28 | 5.25 | 15.9 | 0.43 |
| - | 200601 | 200-220 | 0.26 | 6.26 | 17.0 | 0.37 |
| - | 200602 | 300-320 | 0.16 | 19.57 | 20.8 | 0.39 |
| - | 200603 | 400-420 | 0.15 | 27.51 | 18.7 | 0.89 |
| - | 200604 | 490-510 | 0.14 | 30.72 | 19.3 | 0.84 |

| | | | | | | |
|-------------|--------|---------|------|-------|------|------|
| Løn-B-IB_38 | 200605 | 0-20 | 0.31 | 5.06 | 14.3 | 0.41 |
| - | 200606 | 100-120 | 0.28 | 6.83 | 16.6 | 0.40 |
| - | 200607 | 200-220 | 0.2 | 13.92 | 18.2 | 0.37 |
| - | 200608 | 300-320 | 0.13 | 44.17 | 20.0 | 0.92 |
| - | 200609 | 400-420 | 5.51 | 4.11 | 5.4 | 0.54 |
| - | 200610 | 500-520 | 0.13 | 48.87 | 18.8 | 0.74 |
| Løn-B-IB_39 | 200611 | 0-20 | 0.2 | 8.63 | 17.4 | 0.44 |
| - | 200612 | 100-120 | 0.21 | 9.44 | 16.7 | 0.48 |
| - | 200613 | 200-220 | 0.16 | 15.34 | 17.8 | 0.47 |
| - | 200614 | 270-290 | 0.23 | 7.06 | 15.5 | 0.32 |
| Løn-B-IB_40 | 200615 | 0-20 | 0.29 | 3.18 | 16.6 | 0.29 |
| - | 200616 | 100-120 | 0.22 | 7.69 | 16.0 | 0.41 |
| - | 200617 | 200-220 | 0.16 | 16.72 | 19.0 | 0.48 |
| - | 200618 | 300-320 | 0.13 | 45.13 | 19.9 | 0.88 |
| - | 200619 | 400-420 | 0.12 | 51.38 | 19.7 | 0.86 |
| - | 200620 | 500-520 | 0.12 | 56.24 | 20.1 | 0.77 |
| Løn-B-IB_41 | 200621 | 0-20 | 0.21 | 8.55 | 16.7 | 0.47 |
| - | 200622 | 100-120 | 0.23 | 9.24 | 18.5 | 0.54 |
| - | 200623 | 200-220 | 0.13 | 49.79 | 18.9 | 1.02 |
| - | 200624 | 300-320 | 0.11 | 70.17 | 23.2 | 1.01 |
| - | 200625 | 400-420 | 0.1 | 80.57 | 24.2 | 1.07 |
| Løn-B-IB_42 | 200689 | 0-20 | 0.19 | 9.71 | 18.3 | 0.40 |
| - | 200690 | 100-120 | 0.23 | 6.34 | 16.4 | 0.40 |
| - | 200691 | 200-220 | 0.17 | 18.20 | 17.0 | 0.39 |
| - | 200692 | 300-320 | 0.34 | 5.74 | 14.6 | 0.42 |
| - | 200693 | 400-420 | 0.11 | 71.81 | 20.2 | 1.13 |
| - | 200694 | 500-520 | 0.11 | 78.53 | 21.1 | 0.97 |
| Løn-B-IB_43 | 200626 | 0-20 | 0.17 | 16.50 | 16.9 | 0.46 |
| - | 200627 | 100-120 | 0.16 | 19.26 | 20.1 | 0.44 |
| - | 200628 | 200-220 | 0.15 | 24.80 | 20.8 | 0.49 |
| - | 200629 | 300-320 | 0.15 | 32.55 | 19.6 | 0.55 |
| - | 200630 | 400-420 | 0.15 | 39.01 | 19.2 | 0.86 |
| - | 200631 | 500-520 | 0.12 | 51.13 | 19.4 | 0.94 |
| Løn-B-IB_44 | 200632 | 0-20 | 0.31 | 7.05 | 16.9 | 0.51 |
| - | 200633 | 100-120 | 0.24 | 10.73 | 18.9 | 0.47 |
| - | 200634 | 200-220 | 0.22 | 14.77 | 17.2 | 0.51 |
| - | 200635 | 280-300 | 0.34 | 1.83 | 13.2 | 0.36 |
| - | 200636 | 400-420 | 0.2 | 15.18 | 16.1 | 0.39 |
| - | 200637 | 500-520 | 0.12 | 63.35 | 20.3 | 1.01 |
| Løn-B-IB_45 | 200638 | 0-20 | 0.17 | 19.71 | 18.2 | 0.63 |
| - | 200639 | 100-120 | 0.11 | 70.31 | 20.0 | 0.87 |
| - | 200640 | 180-200 | 0.16 | 44.95 | 15.5 | 1.23 |
| - | 200641 | 300-320 | 0.23 | 14.65 | 15.8 | 0.48 |
| - | 200642 | 400-420 | 0.24 | 17.62 | 17.2 | 0.70 |
| Løn-B-IB_46 | 200643 | 10-20 | 0.25 | 4.16 | 15.1 | 0.40 |
| - | 200644 | 80-100 | 0.34 | 1.48 | 14.2 | 0.46 |
| - | 200645 | 200-220 | 0.27 | 3.83 | 17.9 | 0.37 |
| - | 200646 | 300-320 | 0.22 | 11.21 | 18.2 | 0.34 |
| - | 200647 | 400-420 | 0.17 | 20.07 | 18.6 | 0.51 |
| - | 200648 | 560-578 | 0.11 | 71.87 | 22.8 | 0.99 |

| | | | | | | |
|-------------|--------|---------|------|-------|------|------|
| Løn-B-IB_47 | 200649 | 0-20 | 0.2 | 7.93 | 17.5 | 0.41 |
| - | 200650 | 100-120 | 0.16 | 15.42 | 19.1 | 0.41 |
| - | 200651 | 200-220 | 0.15 | 29.39 | 18.5 | 0.63 |
| - | 200652 | 300-320 | 0.13 | 41.38 | 19.3 | 0.76 |
| Løn-B-IB_48 | 200653 | 0-20 | 0.17 | 12.87 | 19.3 | 0.48 |
| - | 200654 | 100-120 | 0.14 | 34.51 | 18.5 | 0.89 |
| - | 200655 | 200-220 | 0.13 | 41.21 | 20.2 | 0.80 |
| - | 200656 | 300-320 | 0.12 | 51.80 | 20.7 | 0.82 |
| - | 200657 | 400-420 | 0.12 | 61.43 | 20.3 | 0.65 |
| Løn-B-IB_49 | 200658 | 0-20 | 0.3 | 3.83 | 14.2 | 0.41 |
| - | 200659 | 100-120 | 0.22 | 7.94 | 16.8 | 0.41 |
| - | 200660 | 200-220 | 0.16 | 19.48 | 18.7 | 0.51 |
| - | 200661 | 300-320 | 0.13 | 49.26 | 20.4 | 0.68 |
| - | 200662 | 400-420 | 0.12 | 52.87 | 18.1 | 0.64 |
| - | 200663 | 500-520 | 0.33 | 13.10 | 16.0 | 0.77 |
| Løn-B-IB_50 | 200664 | 0-20 | 0.16 | 23.90 | 19.3 | 0.62 |
| - | 200665 | 100-120 | 0.12 | 51.27 | 20.3 | 0.69 |
| - | 200666 | 200-220 | 0.21 | 25.29 | 17.8 | 0.58 |
| - | 200667 | 300-320 | 0.13 | 49.49 | 18.2 | 0.83 |
| - | 200668 | 410-430 | 0.23 | 17.34 | 16.1 | 0.55 |
| Løn-B-IB_51 | 200669 | 0-20 | 0.29 | 3.48 | 16.0 | 0.34 |
| - | 200670 | 100-120 | 0.22 | 8.50 | 17.1 | 0.30 |
| - | 200671 | 200-220 | 0.2 | 9.76 | 16.6 | 0.36 |
| - | 200672 | 300-320 | 0.15 | 30.79 | 18.2 | 0.61 |
| Løn-B-IB_52 | 200673 | 0-20 | 0.23 | 8.15 | 16.6 | 0.33 |
| - | 200674 | 100-120 | 0.18 | 18.14 | 17.4 | 0.41 |
| - | 200675 | 200-220 | 0.18 | 17.29 | 17.1 | 0.54 |
| - | 200676 | 300-320 | 0.13 | 44.20 | 15.5 | 0.55 |
| - | 200677 | 400-420 | 0.12 | 62.05 | 19.7 | 0.87 |
| - | 200678 | 500-520 | 0.11 | 81.01 | 20.8 | 0.90 |
| Løn-B-IB_53 | 200695 | 0-20 | 0.4 | 2.10 | 13.4 | 0.37 |
| - | 200696 | 100-120 | 0.14 | 34.92 | 19.5 | 0.86 |
| - | 200697 | 200-220 | 0.13 | 42.05 | 18.9 | 0.83 |
| - | 200698 | 300-320 | 0.33 | 5.38 | 13.3 | 0.38 |
| - | 200699 | 400-420 | 0.31 | 7.33 | 13.8 | 0.45 |
| Løn-B-IB_54 | 200679 | 0-20 | 0.18 | 12.23 | 17.0 | 0.43 |
| - | 200680 | 100-120 | 0.13 | 43.63 | 19.1 | 1.02 |
| - | 200681 | 200-220 | 0.12 | 60.52 | 19.4 | 1.16 |
| - | 200682 | 300-320 | 0.11 | 70.14 | 20.3 | 1.04 |
| - | 200683 | 400-420 | 0.27 | 4.75 | 15.0 | 0.40 |
| - | 200684 | 500-520 | 0.27 | 3.46 | 15.4 | 0.52 |
| Løn-B-IB_55 | 200685 | 0-20 | 0.23 | 7.26 | 12.5 | 0.42 |
| - | 200686 | 100-120 | 0.18 | 19.27 | 18.8 | 0.52 |
| - | 200687 | 190-210 | 0.2 | 17.81 | 14.6 | 0.51 |
| - | 200688 | 300-320 | 0.17 | 20.37 | 15.8 | 0.40 |

Bilag B-5.

Vibrationsboringer - Kornstørrelsesanalyser

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



Total Weight 127,98 g

Size Fractions

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

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| Size Class | 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 | Percentile | d(mm) | φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 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 $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

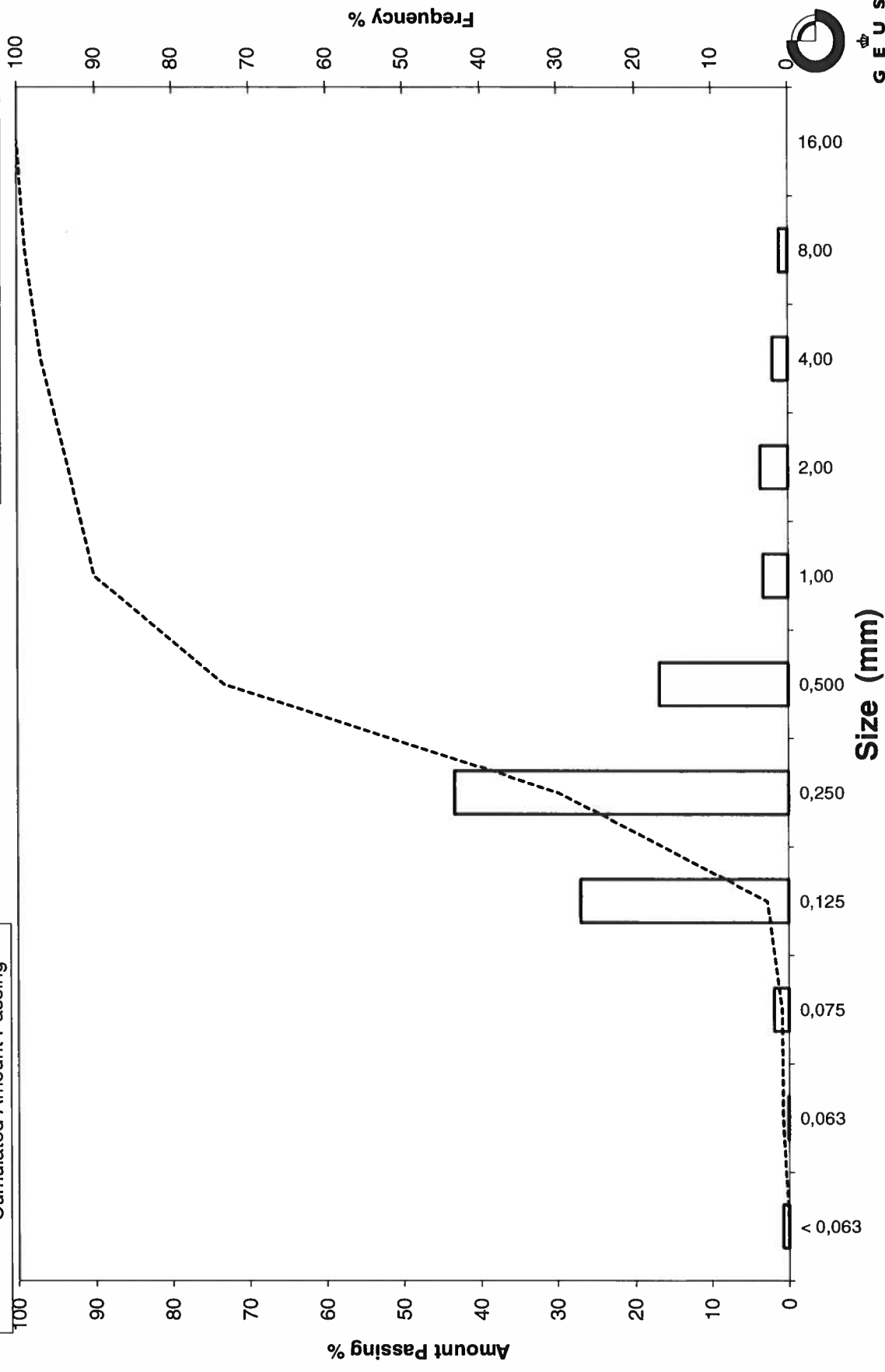
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: LØN 07 0-20

Frequency Percent
Cumulated Amount Passing



GEUS

Grain Size Distribution

Geotechnical

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



Total Weight 102,57 g

Size Fractions

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

Sieve Analysis

Gravel

Sand

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 | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 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 $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

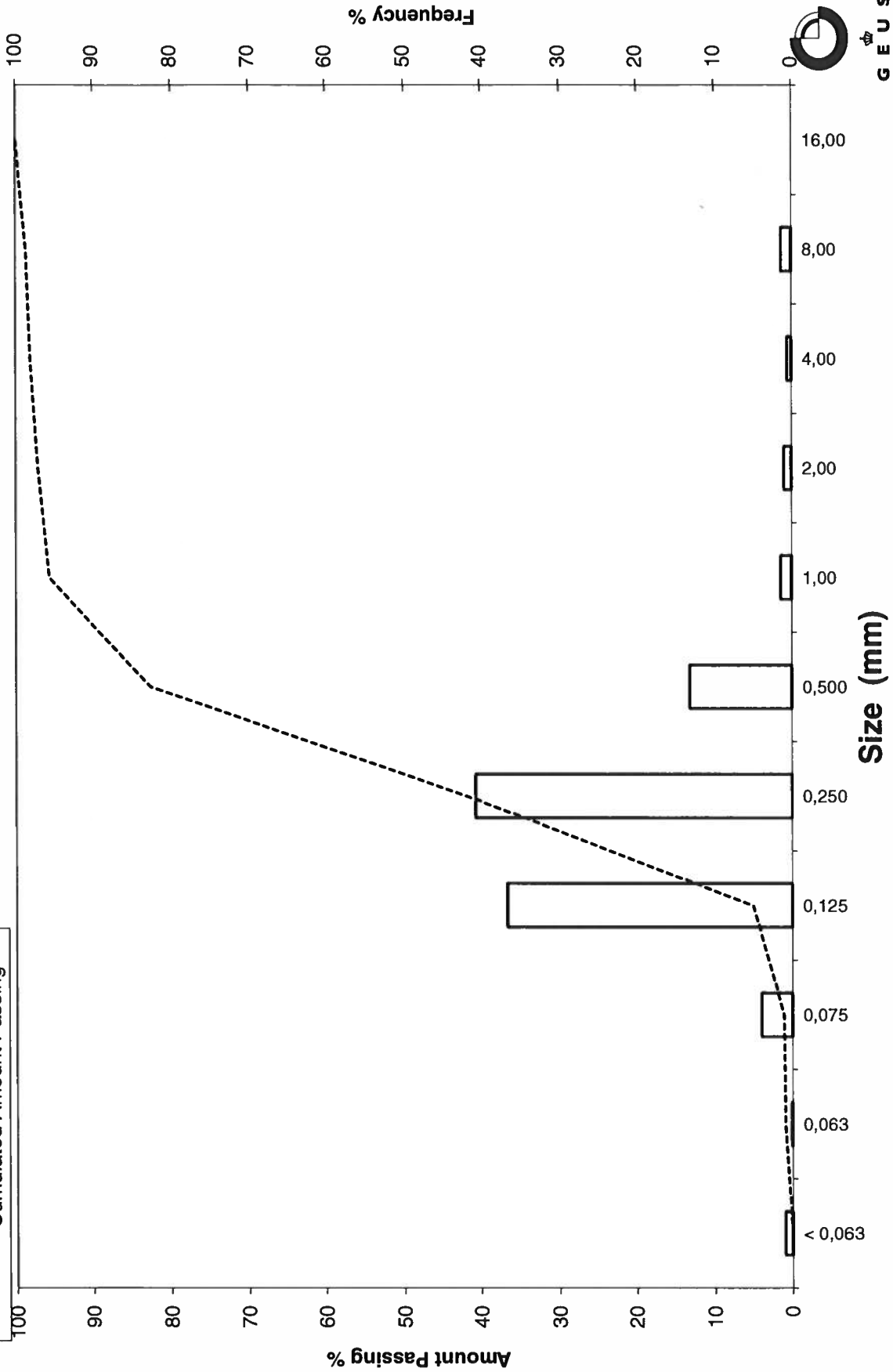
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: LØN 07 100-120

Frequency Percent
Cumulated Amount Passing



GEUS

Grain Size Distribution

Geotechnical

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



Total Weight 100,29 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 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 |
| 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 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| Size Class | 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 | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 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 $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

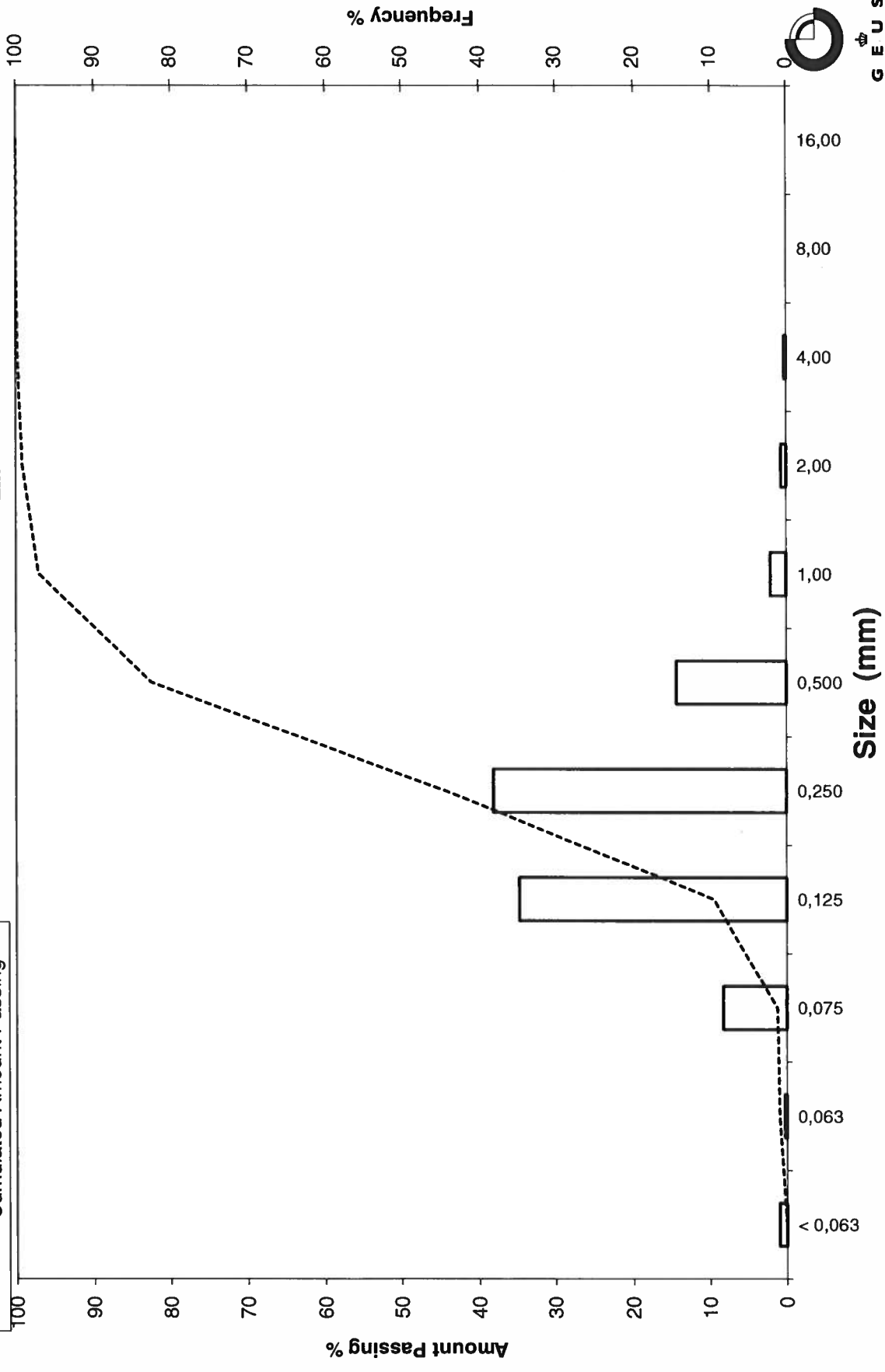
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: LØN 07 200-220

Frequency Percent
Cumulated Amount Passing



G E U S

Grain Size Distribution

Geotechnical

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



Total Weight 92,53 g

Size Fractions

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

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| Size Class | 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 | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 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 $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

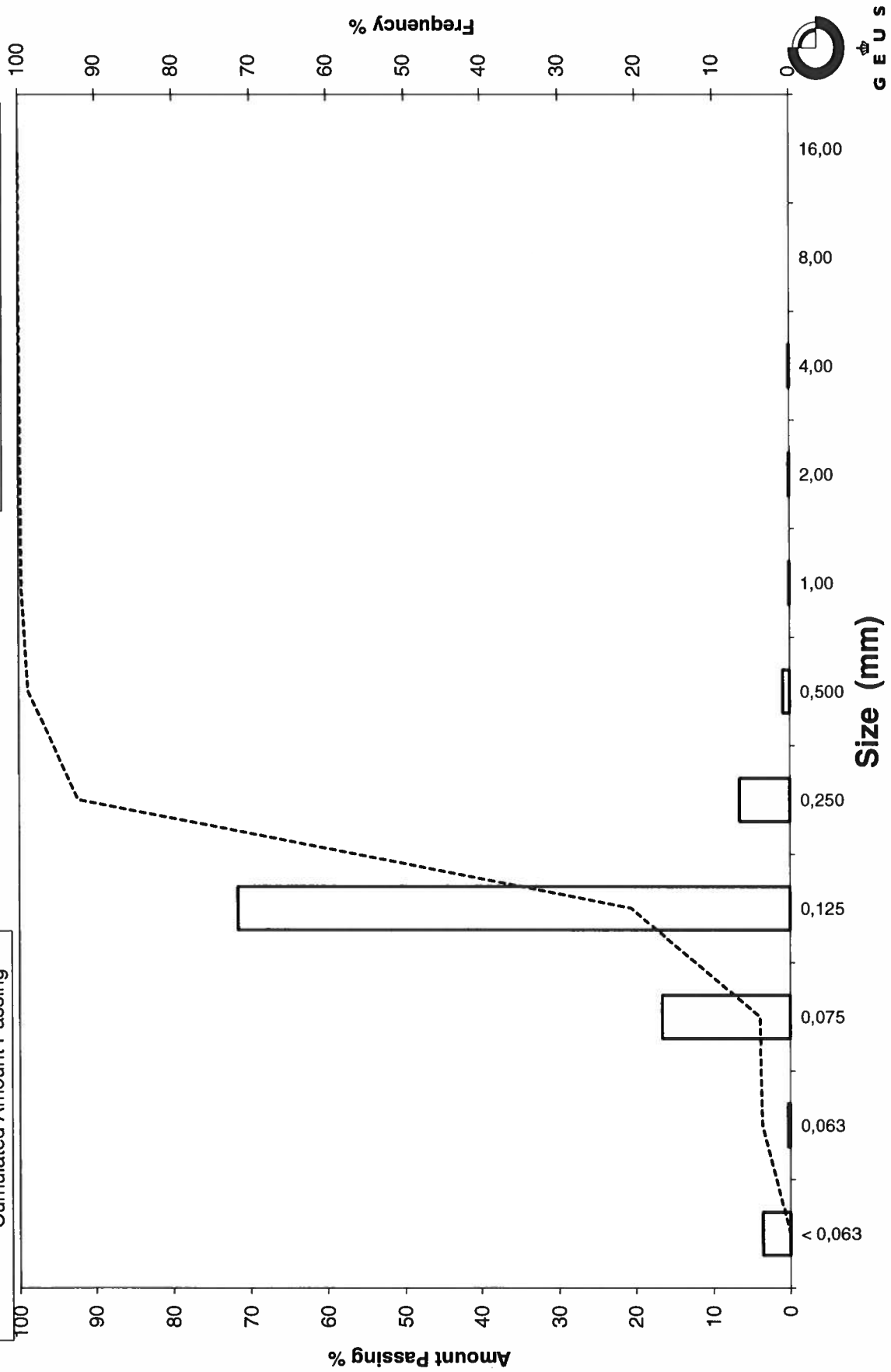
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: LØN 07 300-320

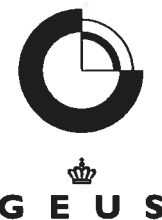
Frequency Percent
Cumulated Amount Passing



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

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

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| Size Class | 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 | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 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 $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

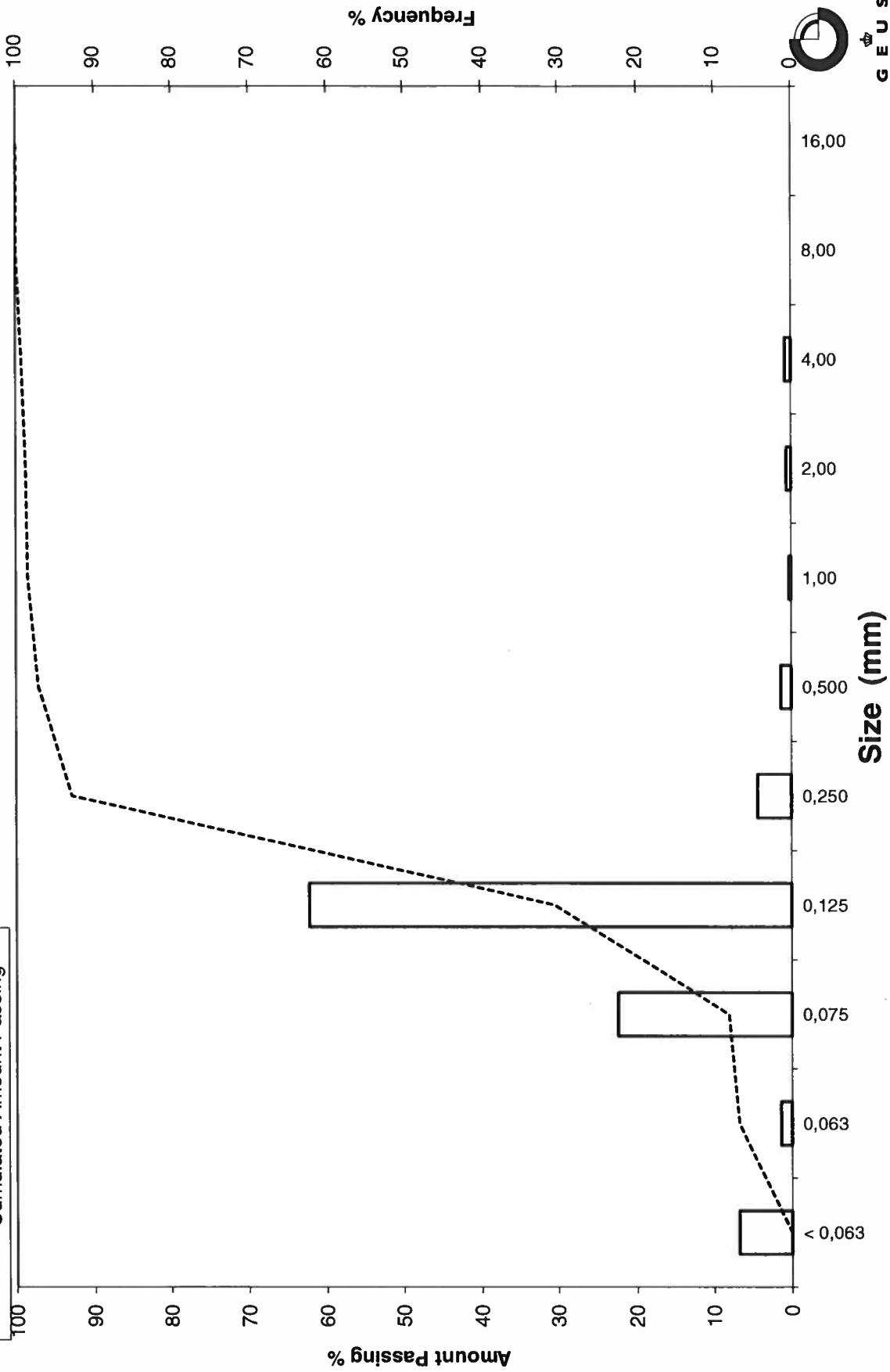
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Sample Id: LØN 07 395-415

Grain Size Distribution

Frequency Percent
Cumulated Amount Passing



G E U S

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



Total Weight 235,68 g

Size Fractions

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

Sieve Analysis

Gravel

Sand

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 | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 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 $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

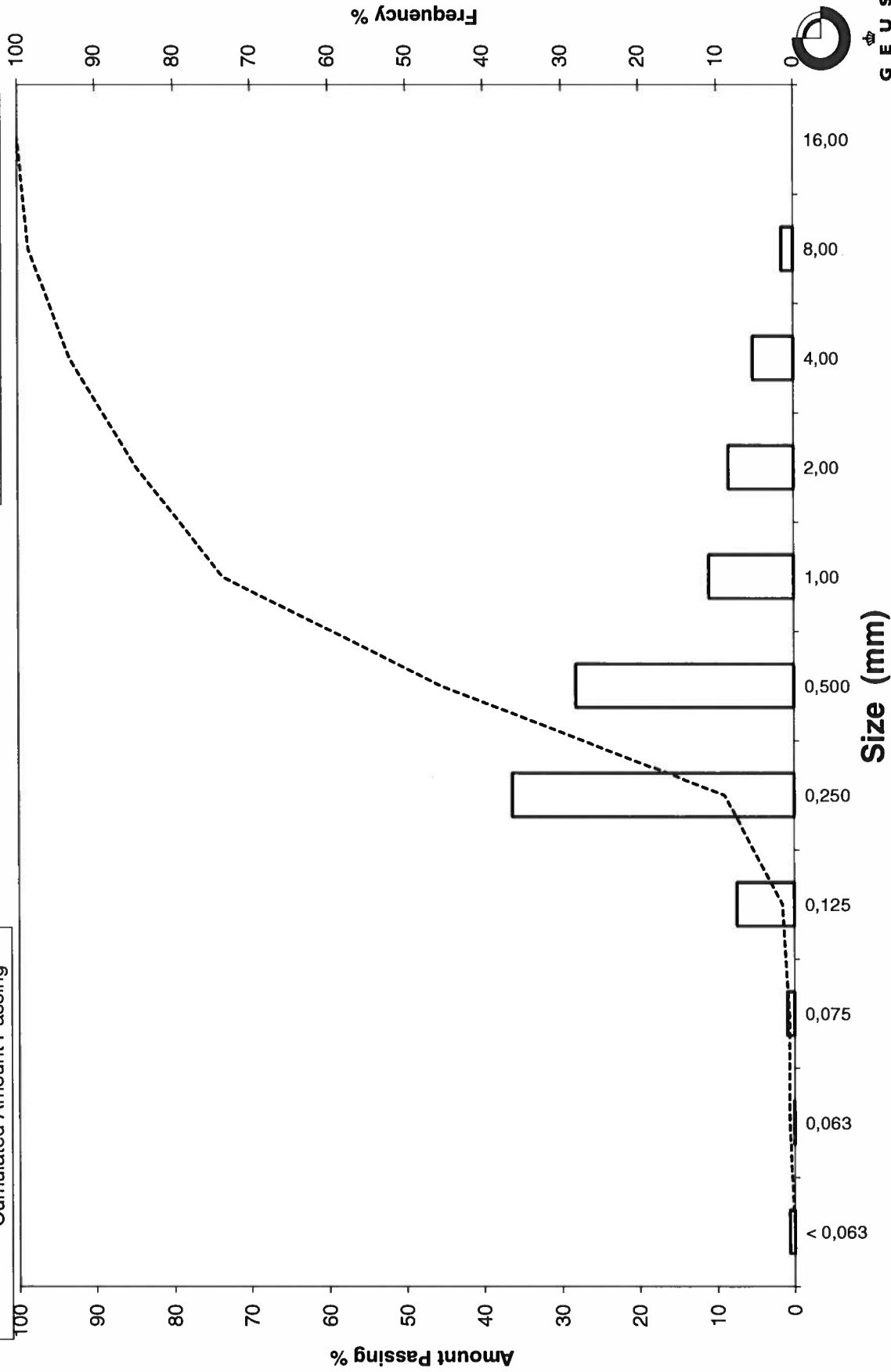
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: LØN 11 0-19

Frequency Percent
Cumulated Amount Passing



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



Total Weight 104,52 g

Size Fractions

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

Sieve Analysis

Gravel

Sand

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 | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 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 $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

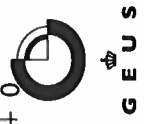
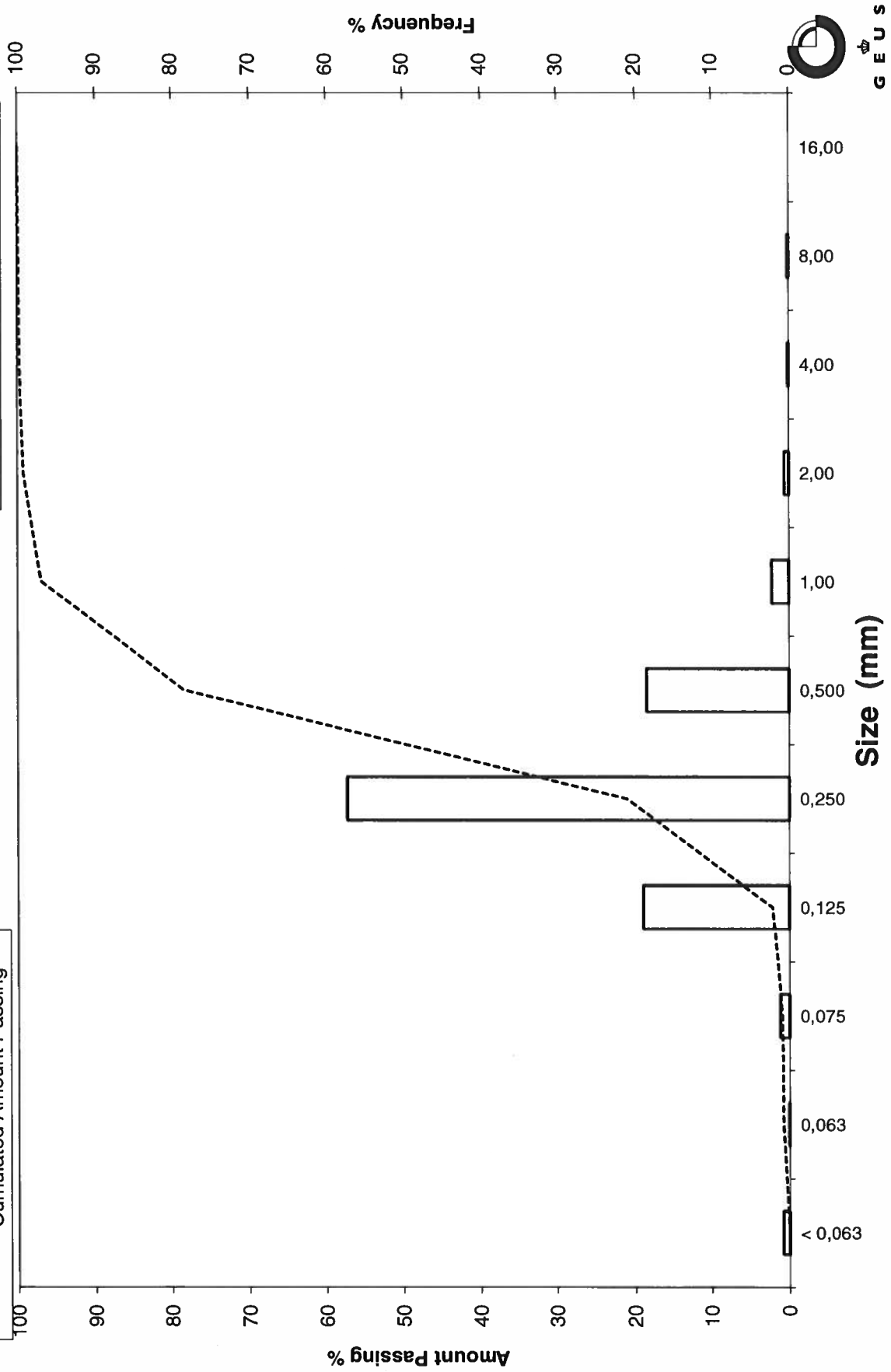
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: LØN 11 30-50

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

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



Total Weight 87,77 g

Size Fractions

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

Sieve Analysis

Gravel

Sand

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 | Percentile | d(mm) | φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 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 $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

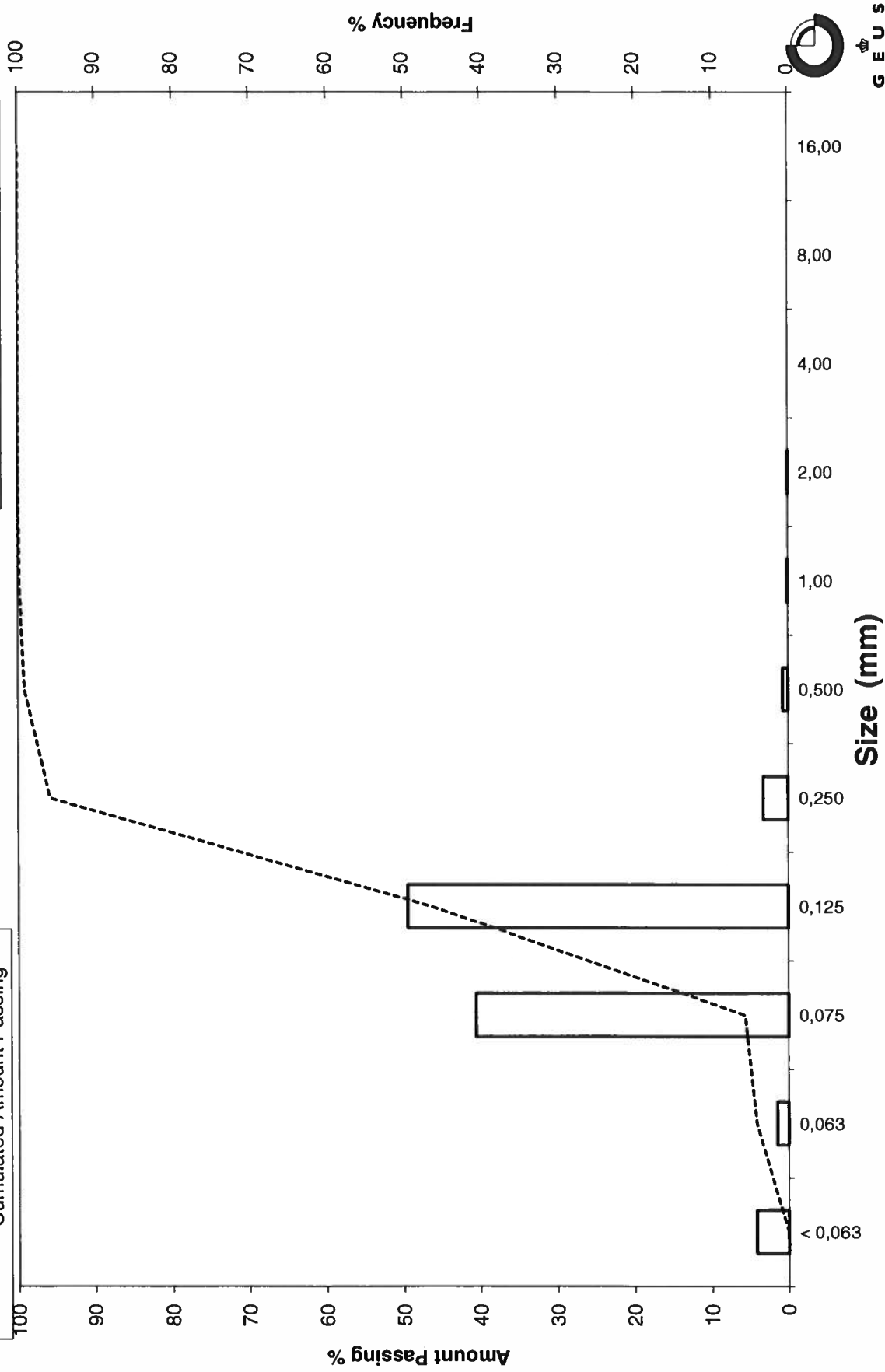
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: LØN 11 100-120

Frequency Percent
Cumulated Amount Passing



GEUS

Grain Size Distribution

Geotechnical

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



Total Weight 91,08 g

Size Fractions

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

Sieve Analysis

Gravel

Sand

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 | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 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 $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

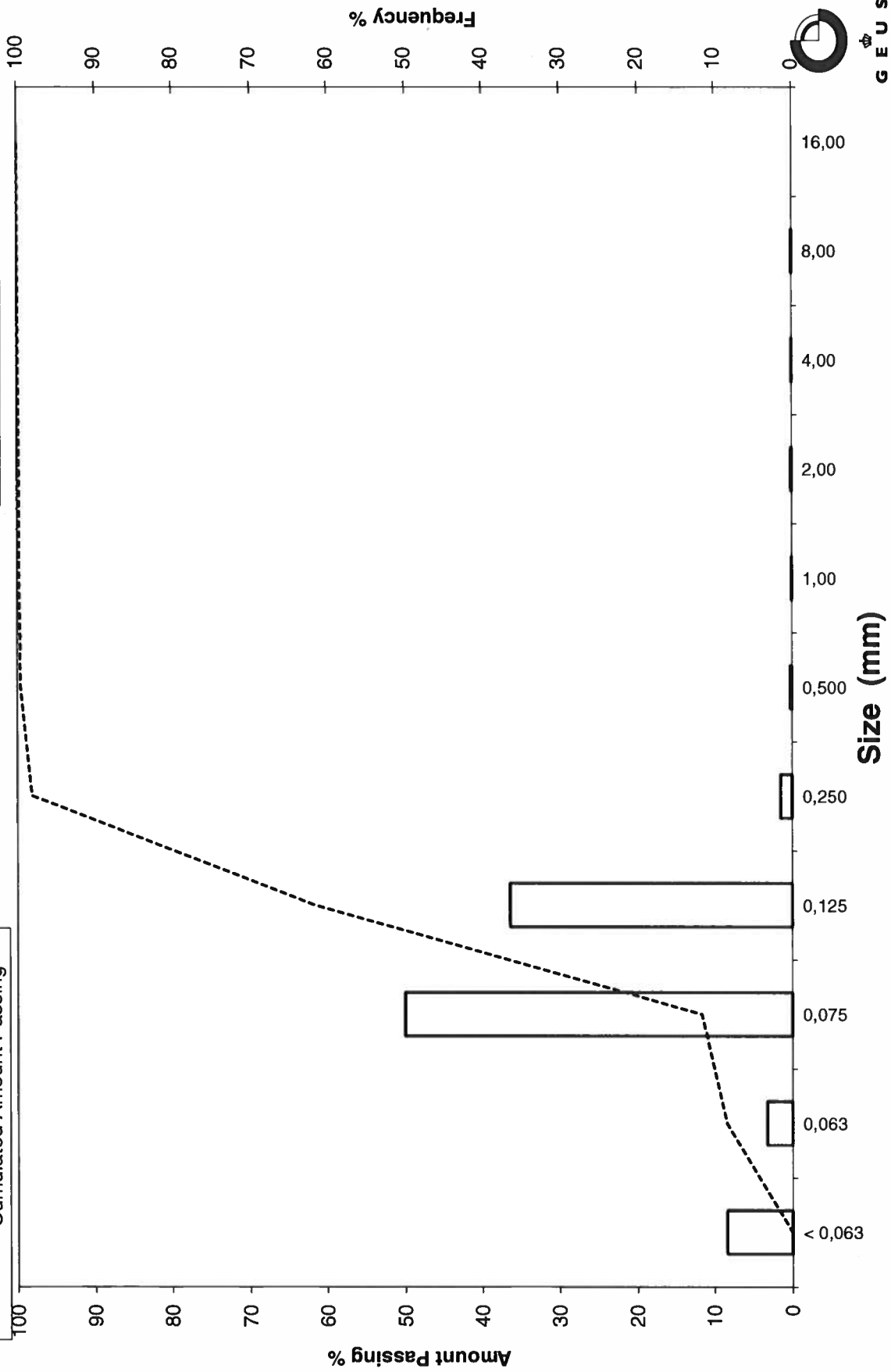
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: LØN 11 200-220

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

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



Total Weight 89,47 g

Size Fractions

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

Sieve Analysis

Gravel

Sand

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 | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 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 $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgt-Bulletin 1988)

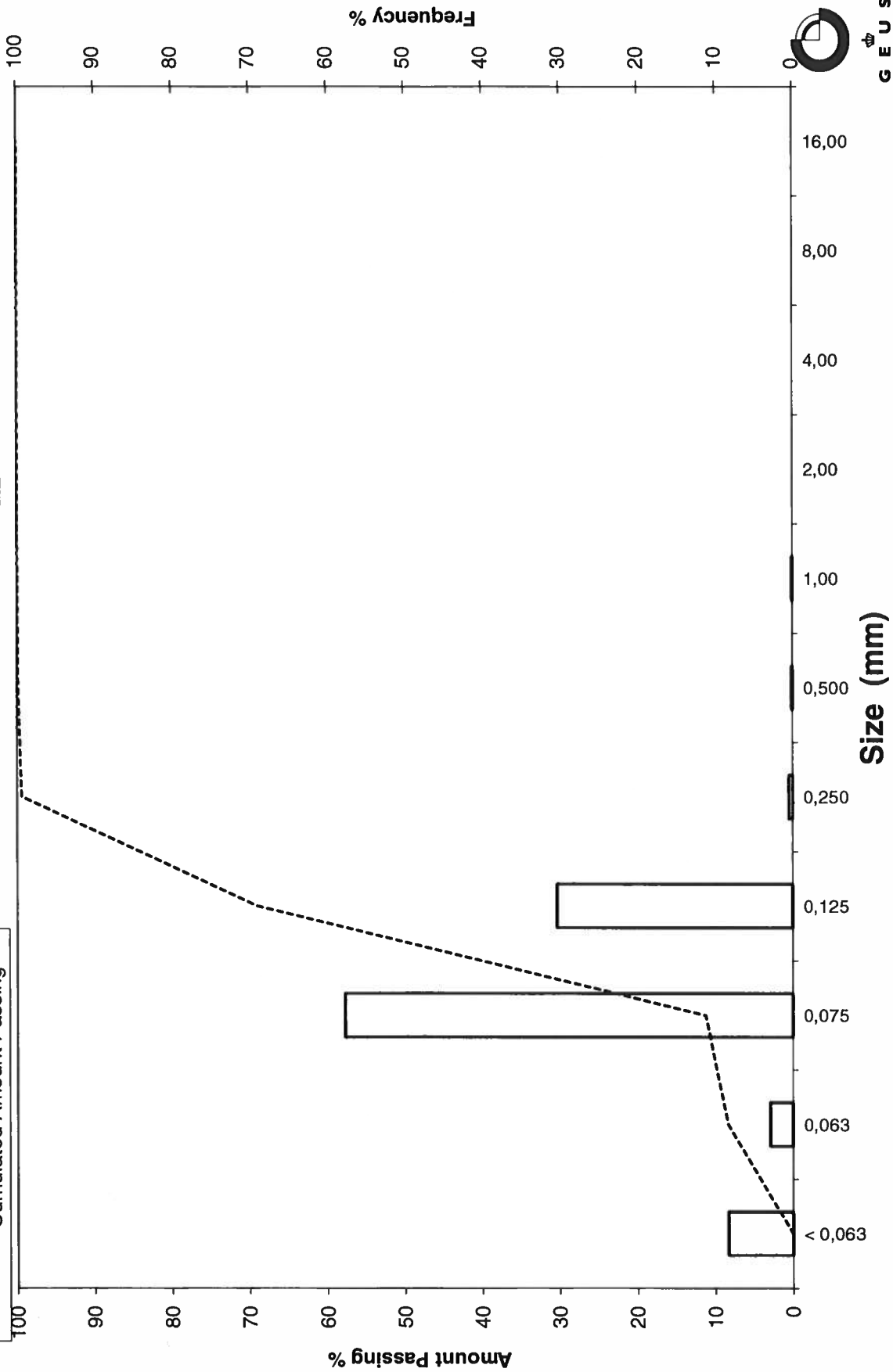
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Sample Id: LØN 11 300-320

Grain Size Distribution

Frequency Percent
Cumulated Amount Passing



G E U S

Grain Size Distribution

Geotechnical

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



Total Weight 90,11 g

Size Fractions

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

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| Size Class | 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 | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 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 $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

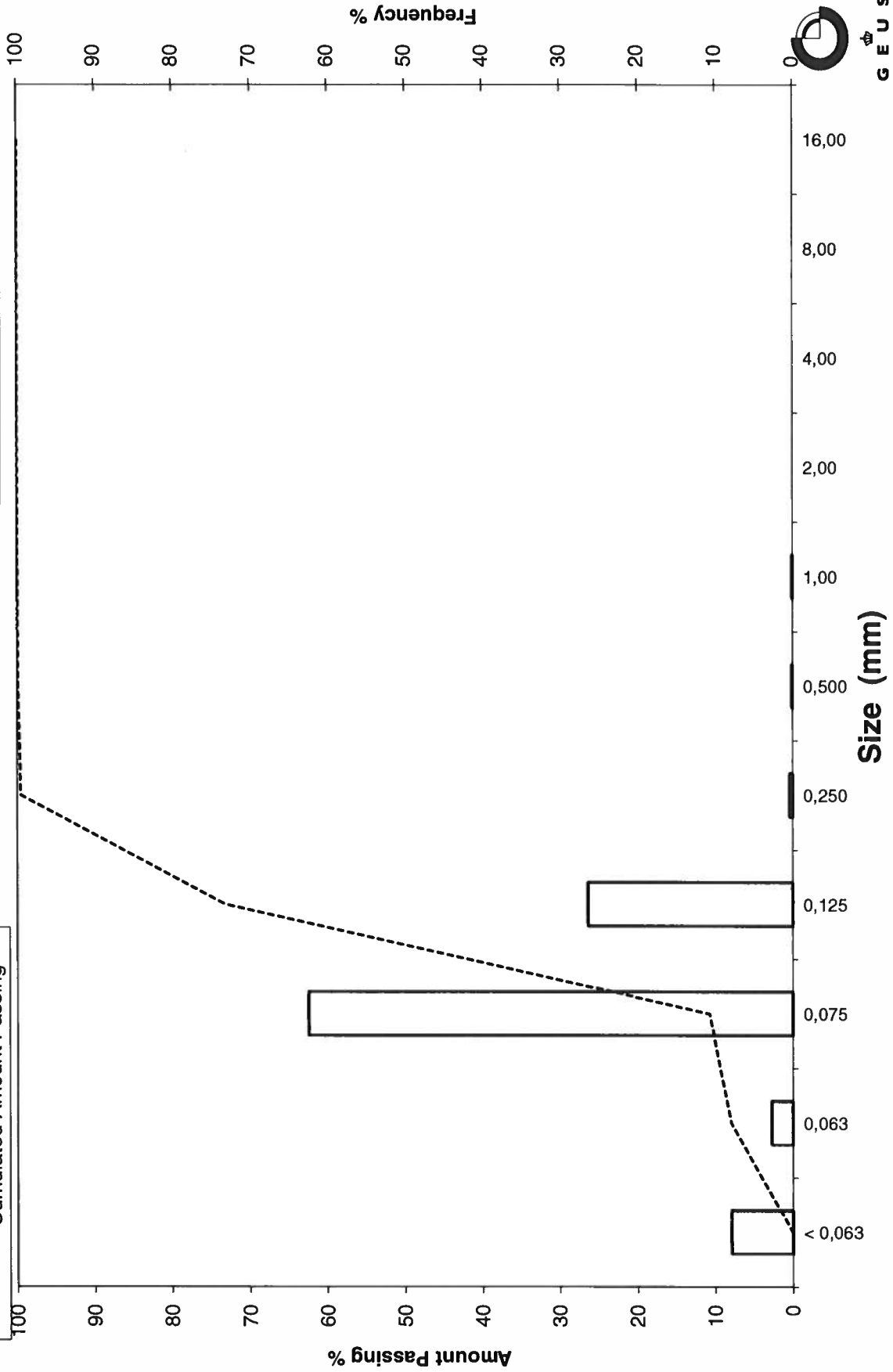
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: LØN 11 400-420

Frequency Percent
Cumulated Amount Passing

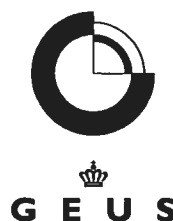


GEUS

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



Total Weight 95,2 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 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 |
| 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 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| Size Class | 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 | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 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 $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

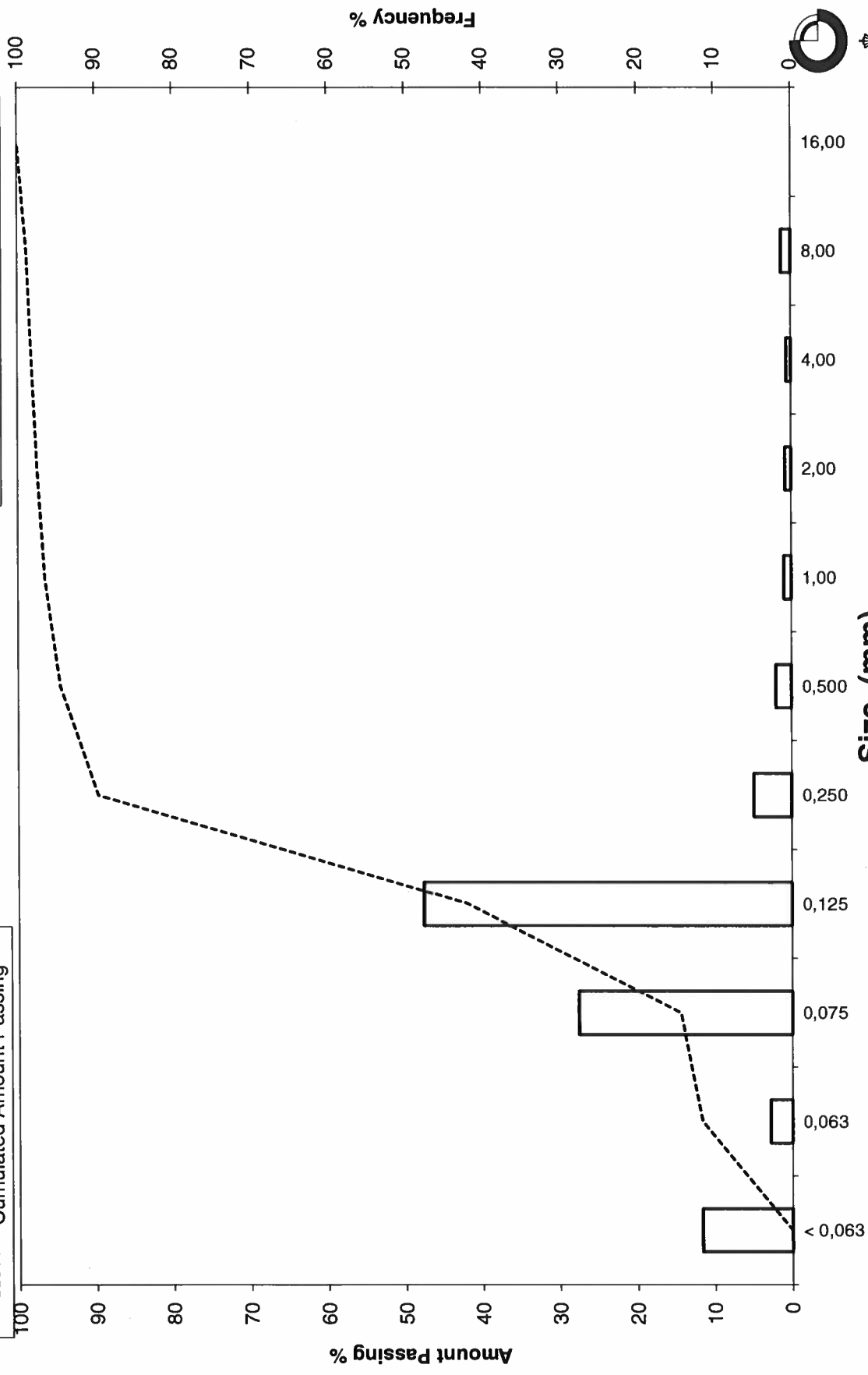
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: LØN 11 490-510

Frequency Percent
Cumulated Amount Passing



G E U S

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



Total Weight 104,3 g

Size Fractions

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

Sieve Analysis

Gravel

Sand

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 | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 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 $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

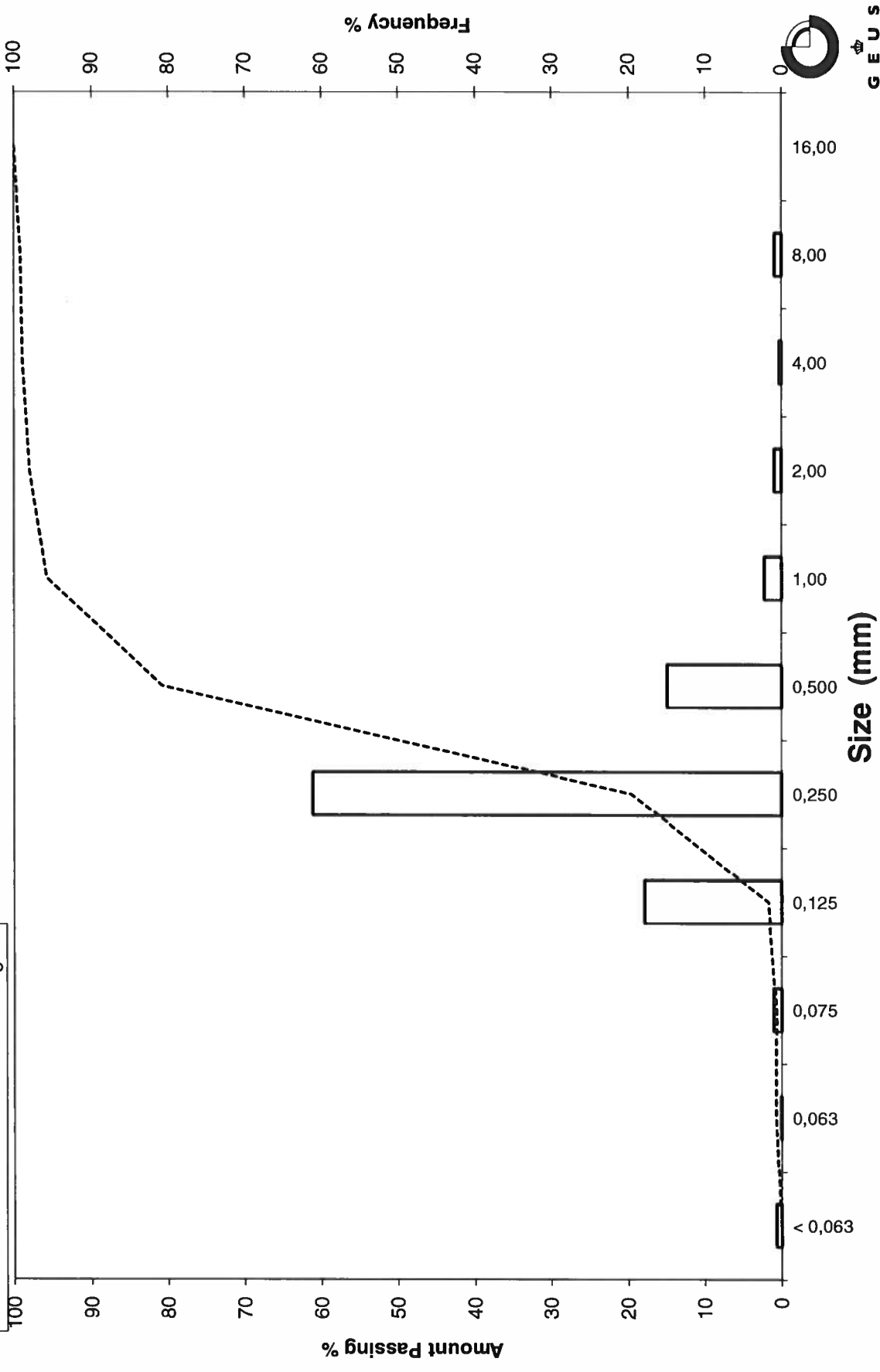
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: LØN 12 0-20

Frequency Percent
Cumulated Amount Passing



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



Total Weight 96,4 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 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 |
| 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 |

Sieve Analysis

Gravel
Sand

Size Classes (DGF-Bulletin 1 1988)

| Size Class | 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 | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 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 $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dGF-Bulletin 1988)

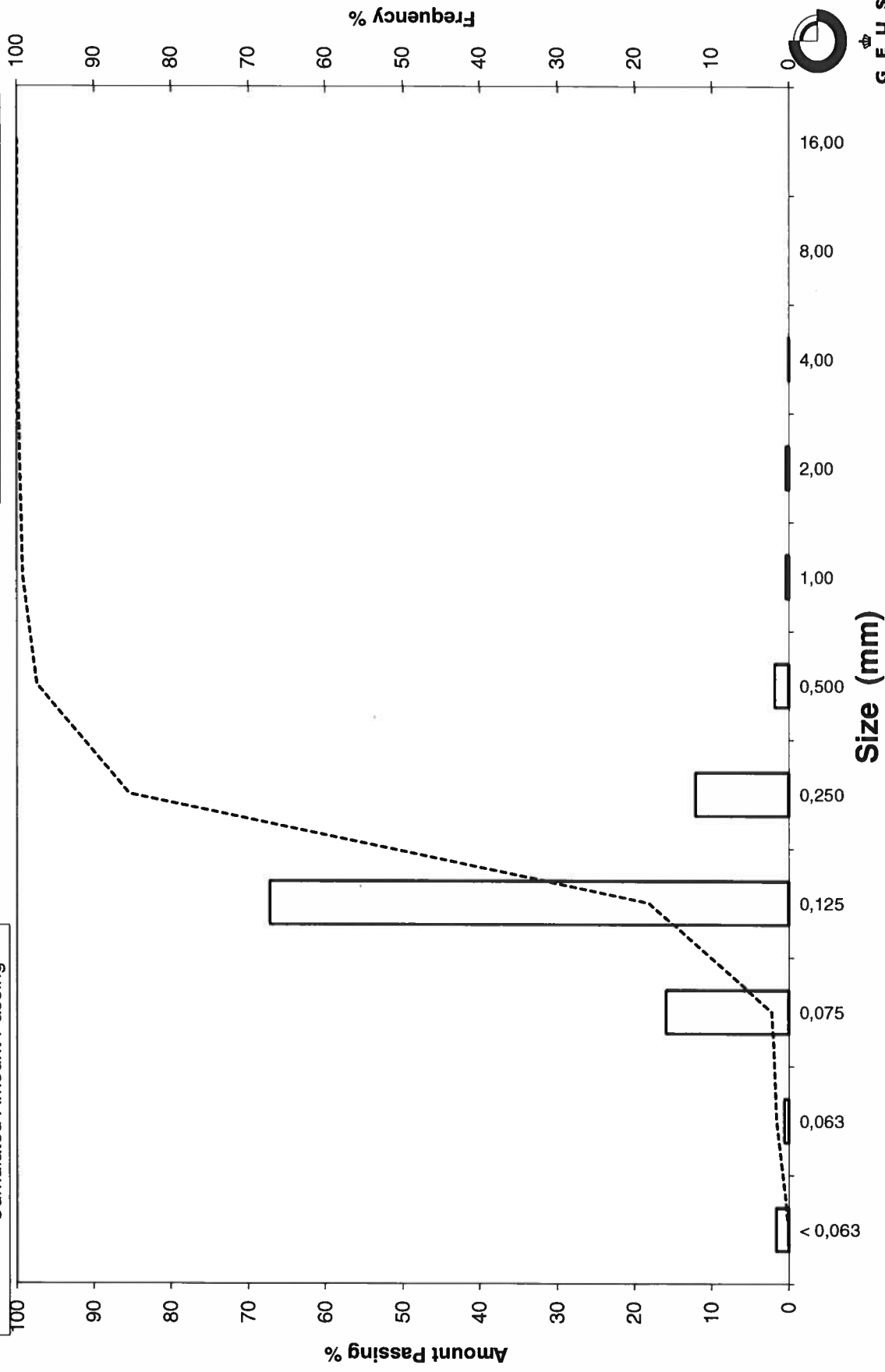
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: LØN 12 100-120

Frequency Percent
Cumulated Amount Passing



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



Total Weight 93,36 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 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 |
| 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 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| Size Class | 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 | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 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 $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

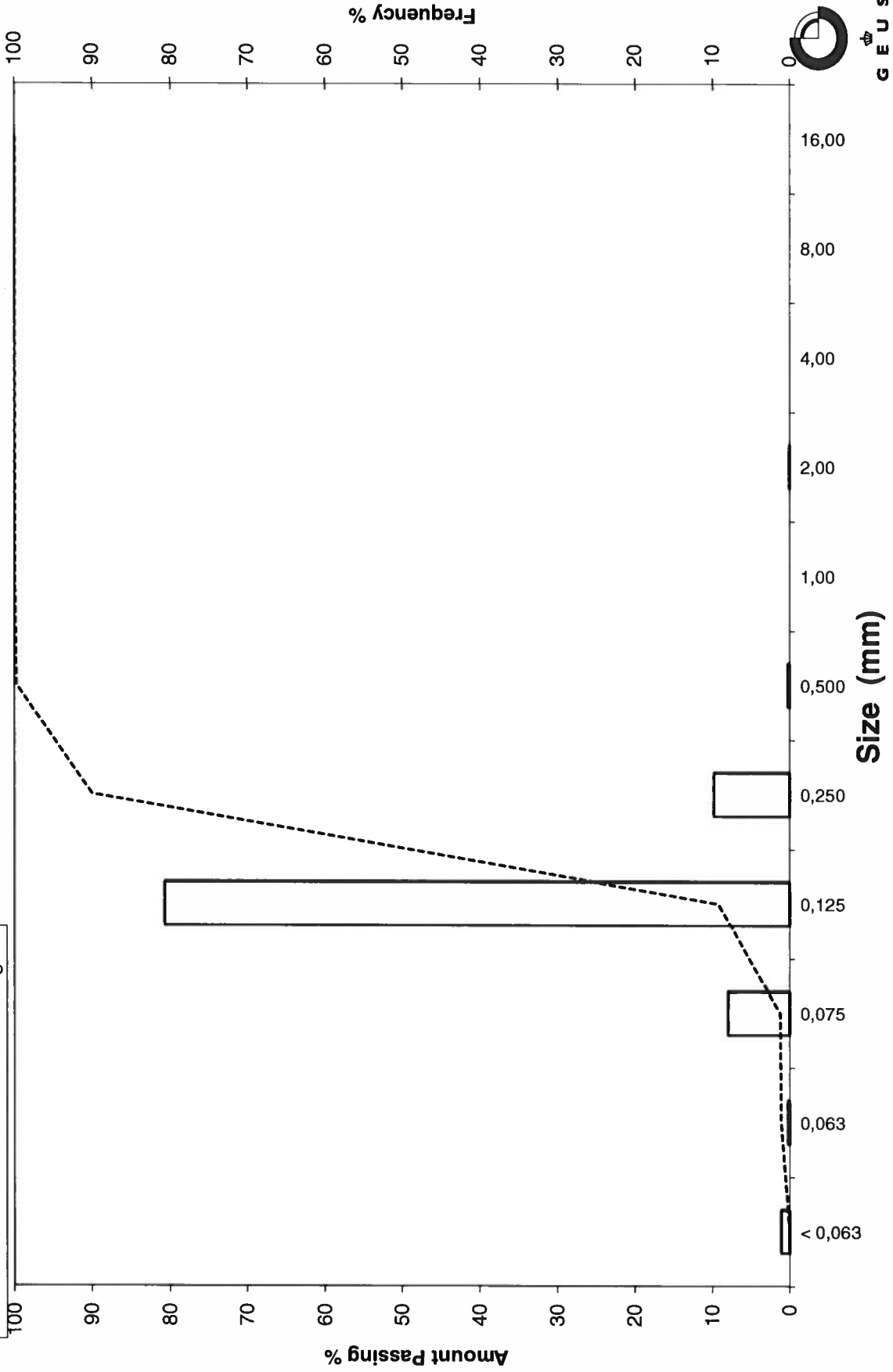
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: LØN 12 200-220

Frequency Percent
Cumulated Amount Passing



GEUS

Grain Size Distribution

Geotechnical

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



Total Weight 92,92 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | φ | g | % | % |
| 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 |
| 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 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| Size Class | 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 | Percentile | d(mm) | φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 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 $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

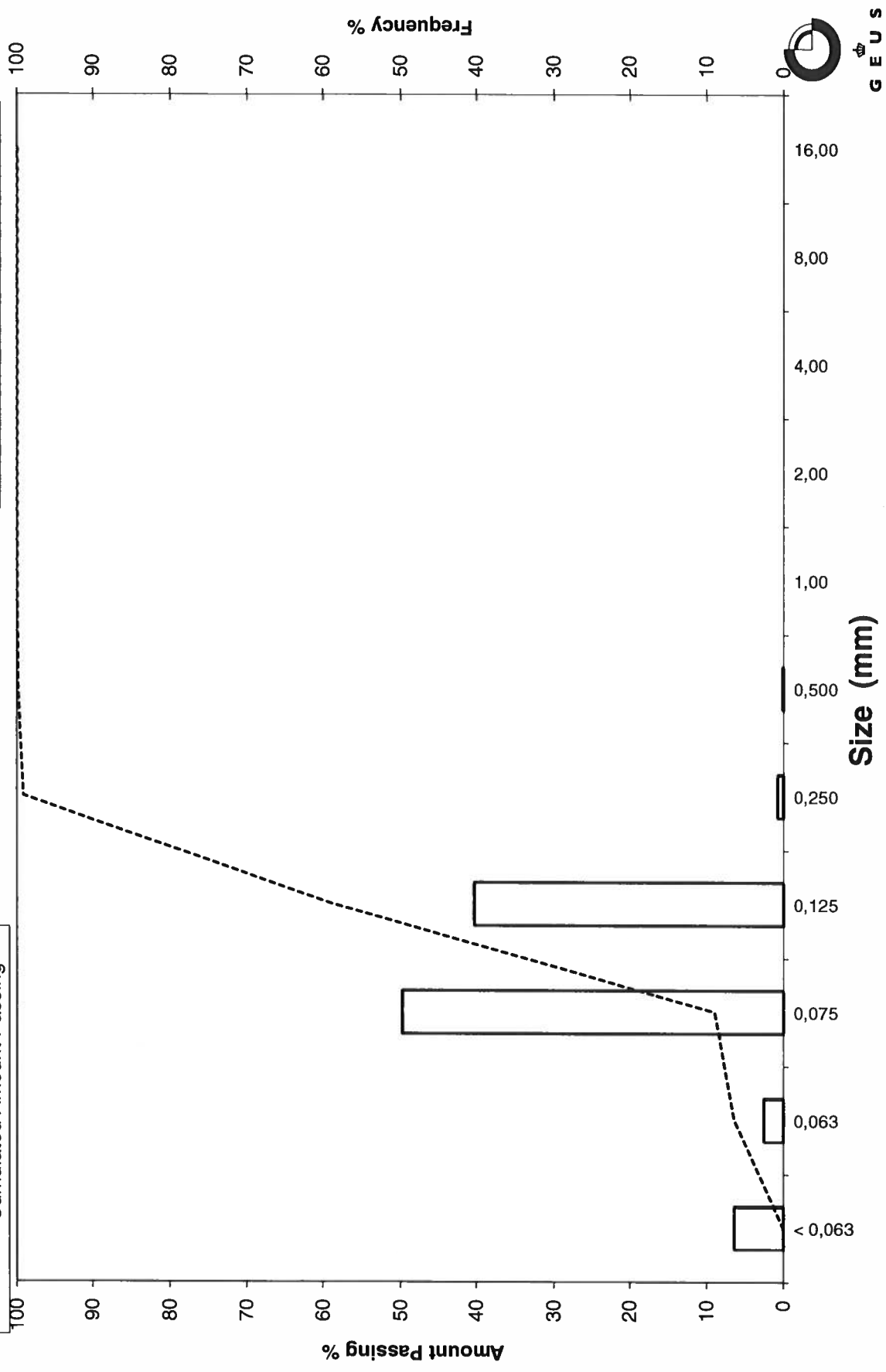
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: LØN 12 300-320

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

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



Total Weight 91,08 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 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 |
| 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 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| Size Class | 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 | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 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 $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dGF-Bulletin 1988)

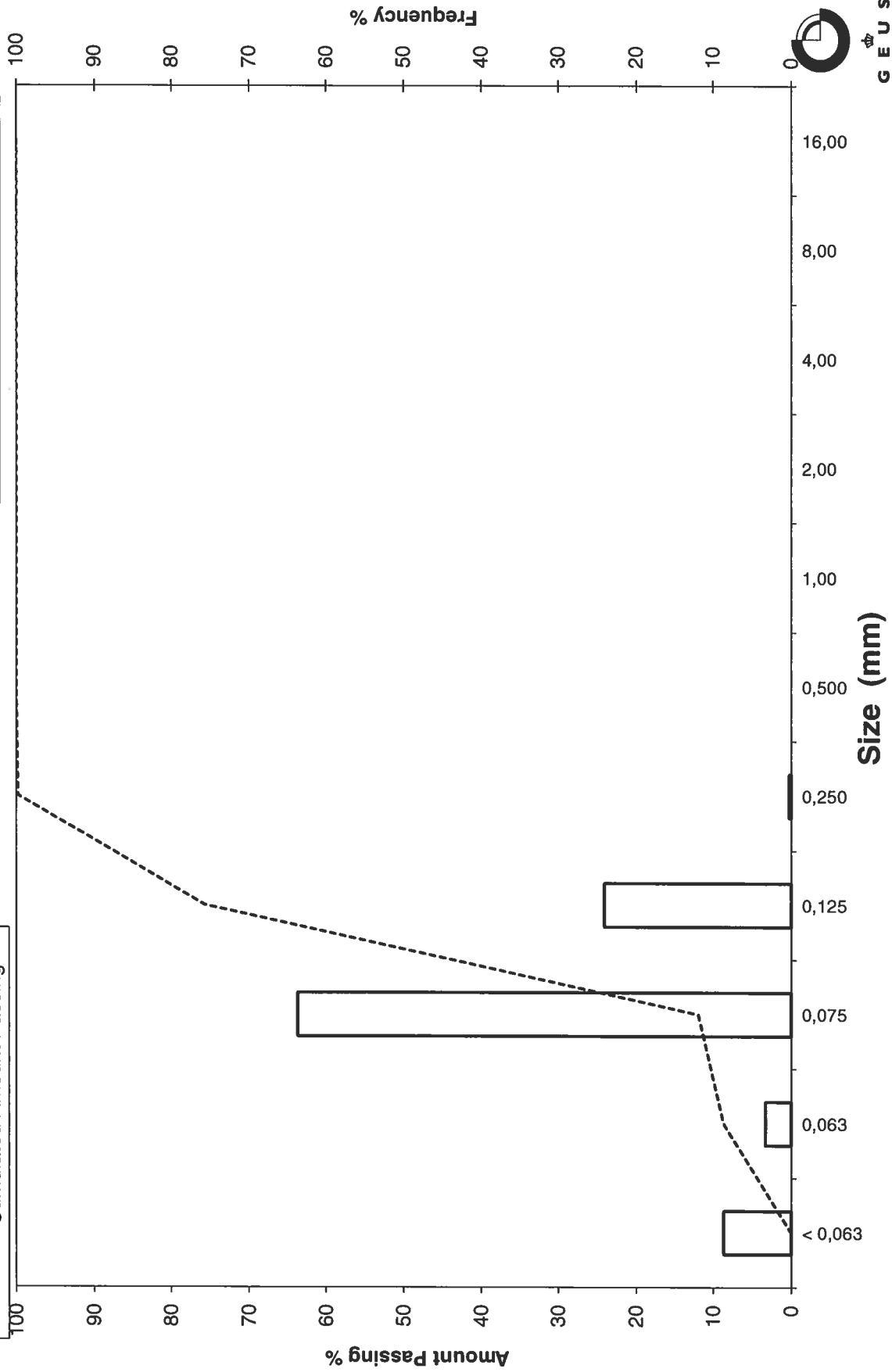
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: LØN 12 380-400

Frequency Percent
Cumulated Amount Passing



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



Total Weight 94,84 g

Size Fractions

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

Sieve Analysis

Gravel

Sand

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 | Percentile | d(mm) | φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 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 $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

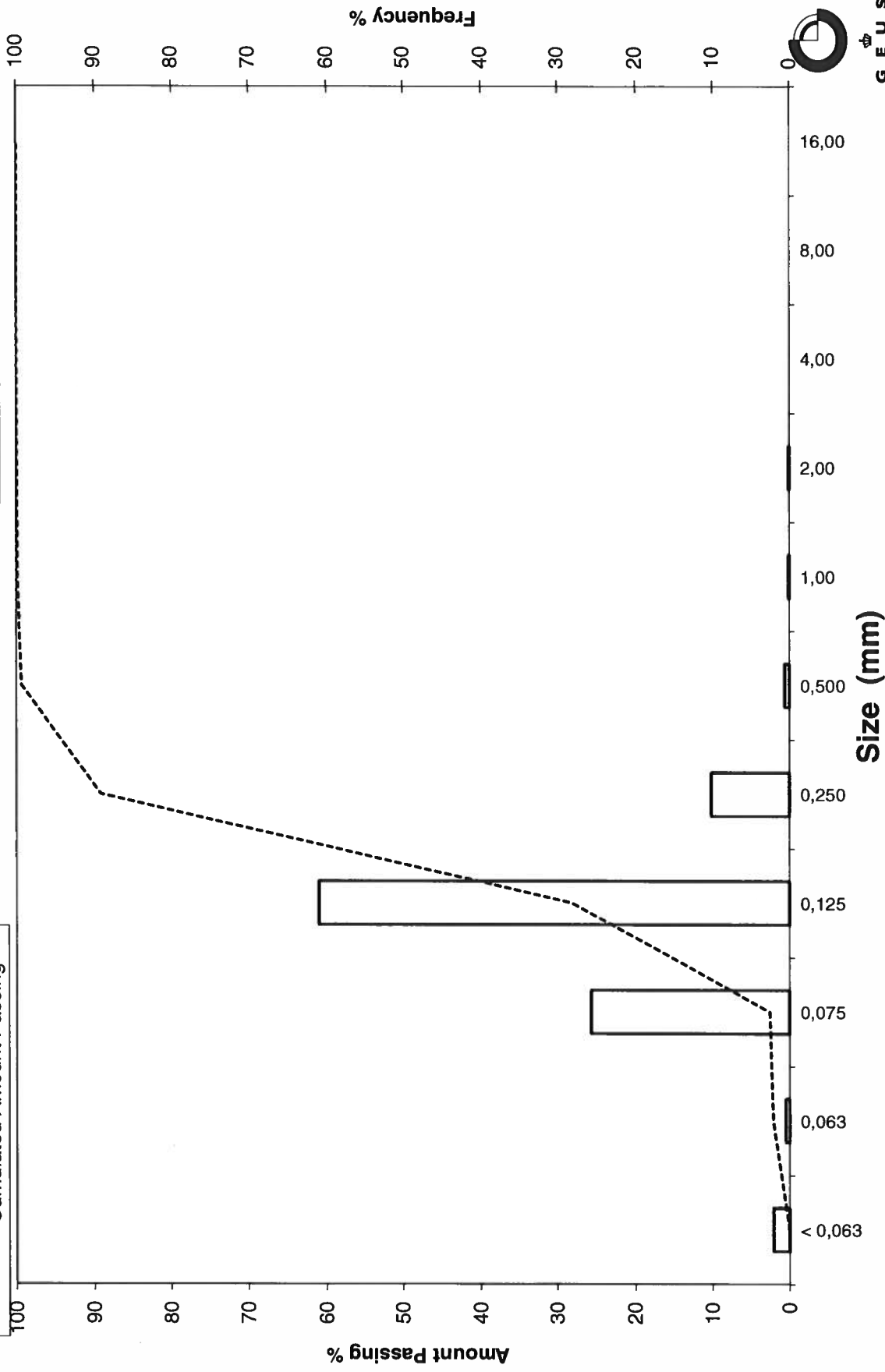
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: LØN 16 0-20

Frequency Percent
Cumulated Amount Passing



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



Total Weight 122,48 g

Size Fractions

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

Sieve Analysis

Gravel

Sand

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 | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 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 $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

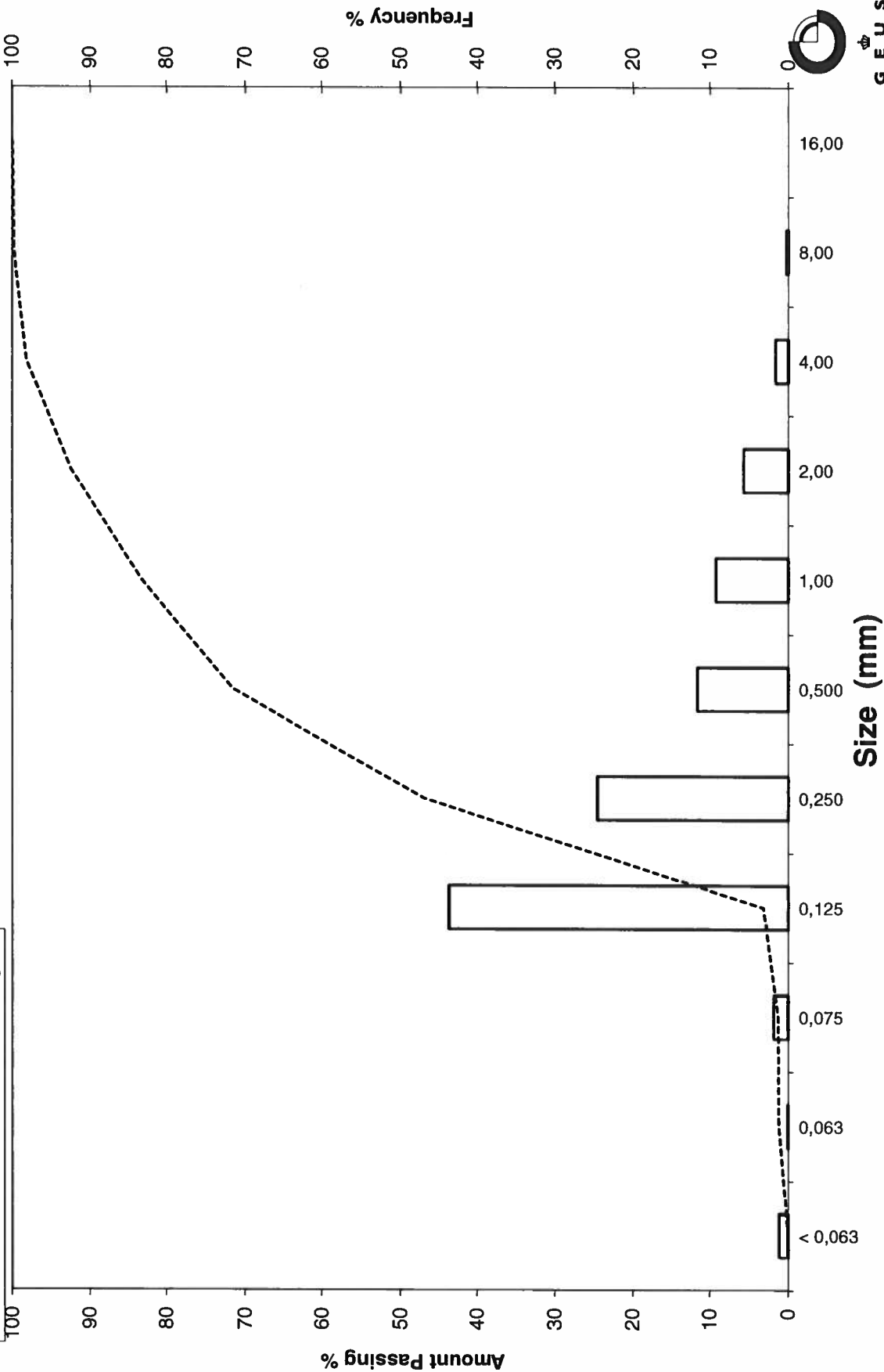
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: LØN 16 90-110

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

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



Total Weight 93,22 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 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 |
| 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 |

Sieve Analysis

Gravel

Sand

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 | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 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 $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

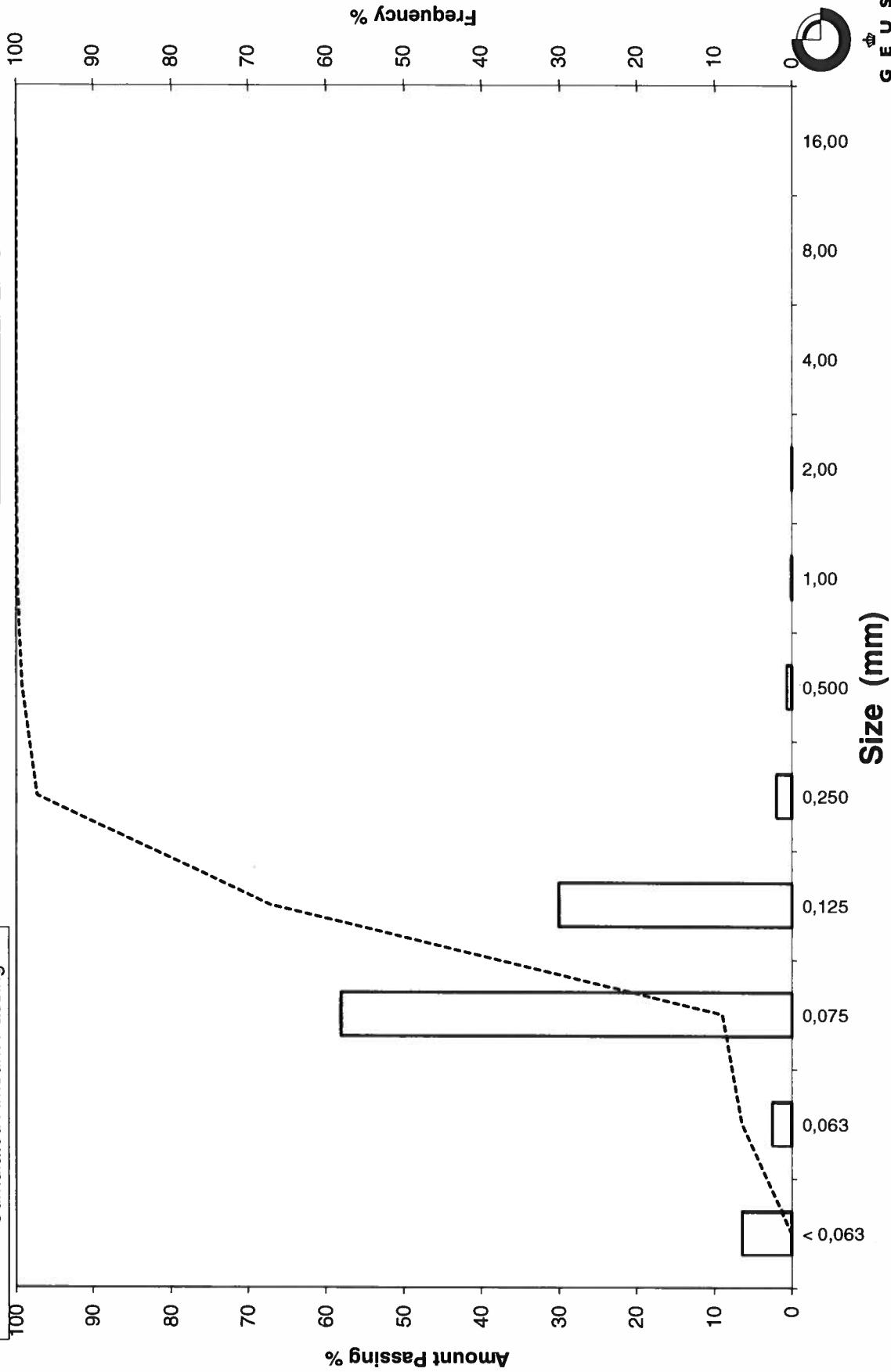
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: LØN 16 130-150

Frequency Percent
Cumulated Amount Passing



GEUS

Grain Size Distribution

Geotechnical

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



Total Weight 88,53 g

Size Fractions

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

Sieve Analysis

Gravel

Sand

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 | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 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 $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

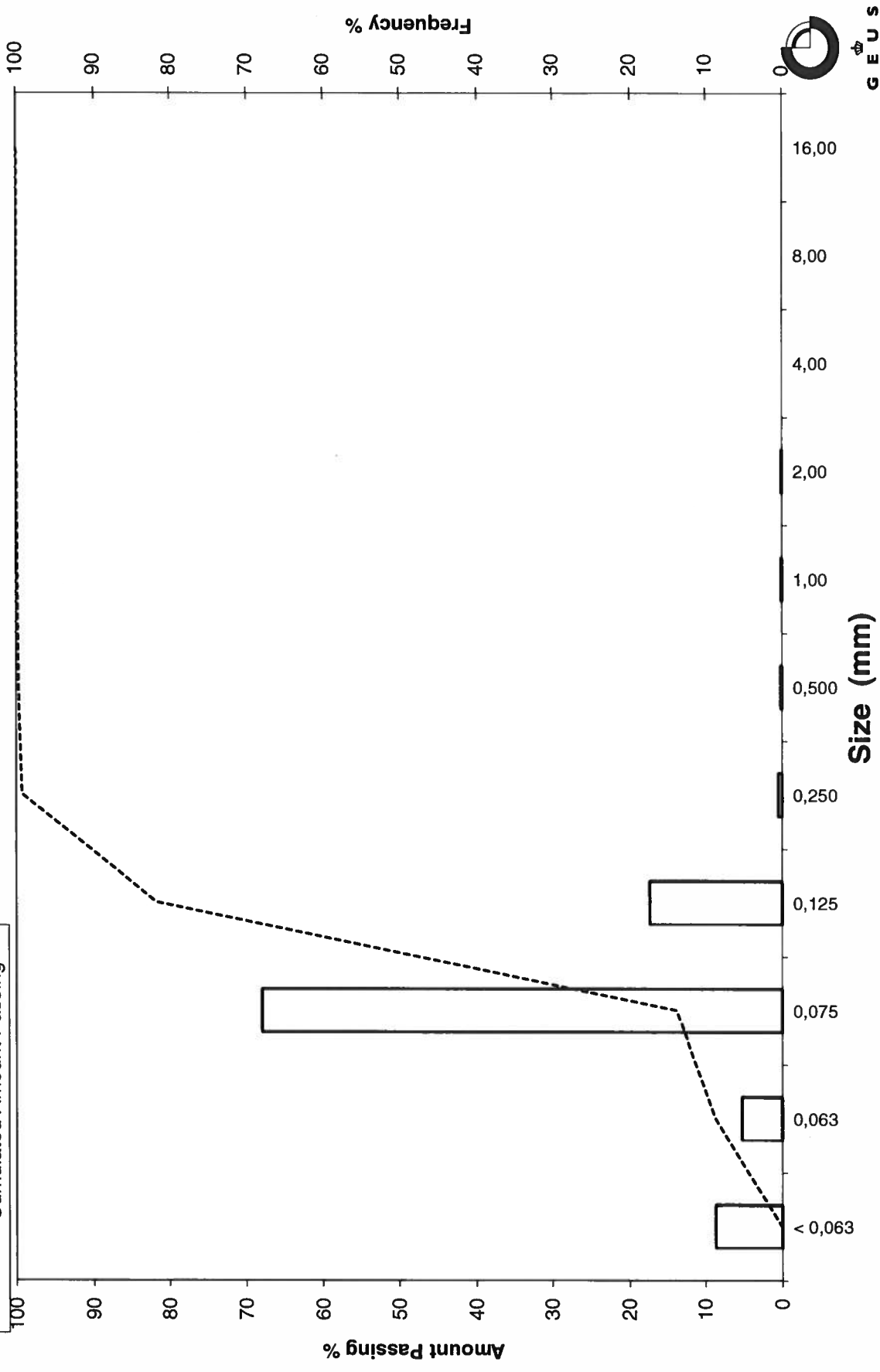
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Sample Id: LØN 16 200-220

Grain Size Distribution

Frequency Percent
Cumulated Amount Passing



G E U S

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

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 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 |
| 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 |

Sieve Analysis

Gravel

Sand

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 | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 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 $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

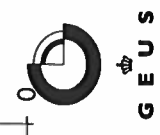
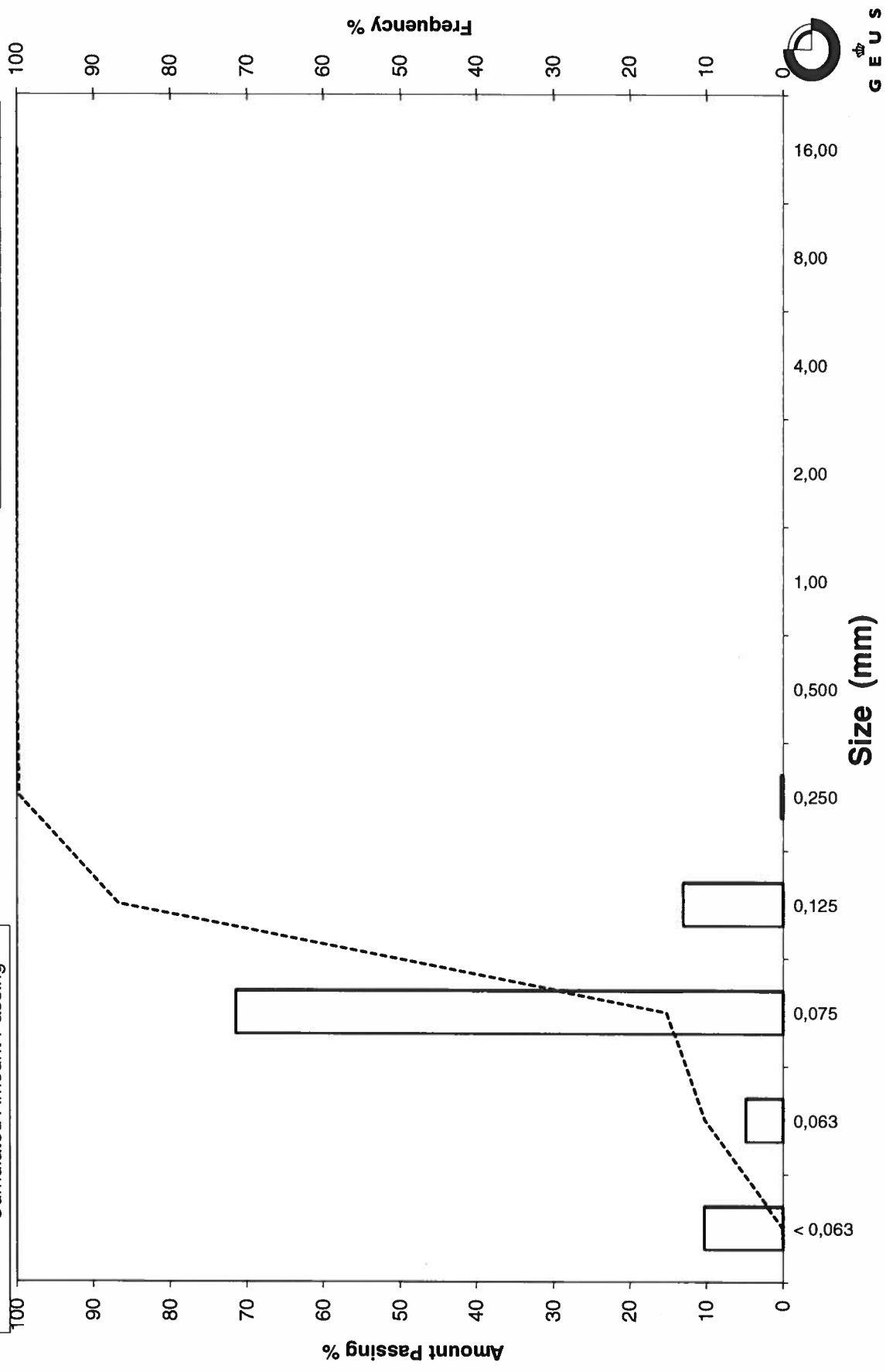
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: LØN 16 300-320

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

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



Total Weight 99,44 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 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 |
| 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 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| Size Class | 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 | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 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 $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

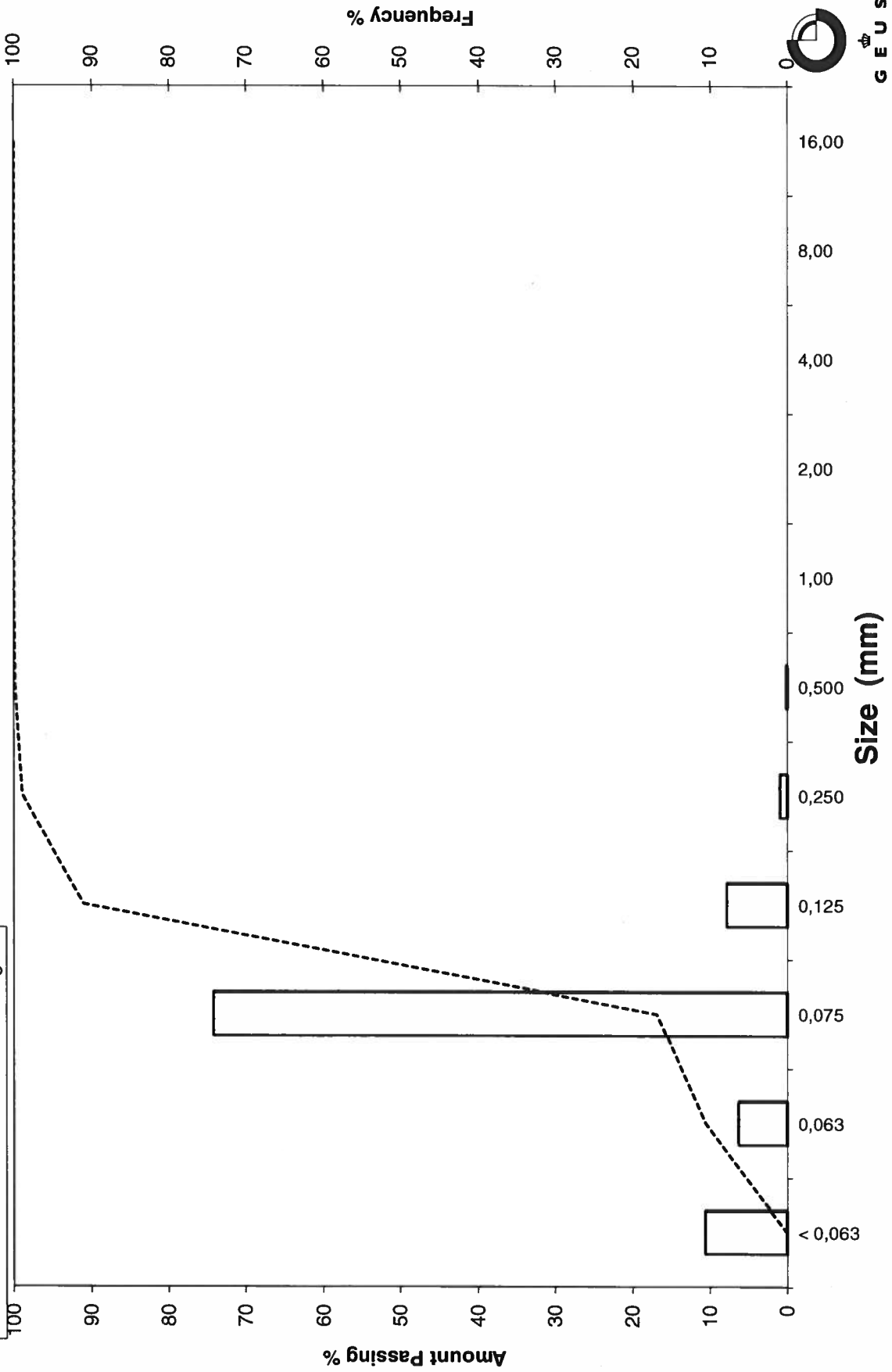
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: LØN 16 400-420

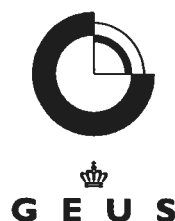
Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

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



Total Weight 106,42 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | |
| 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 |
| 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 |

Sieve Analysis

Gravel

Sand

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 | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 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 $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

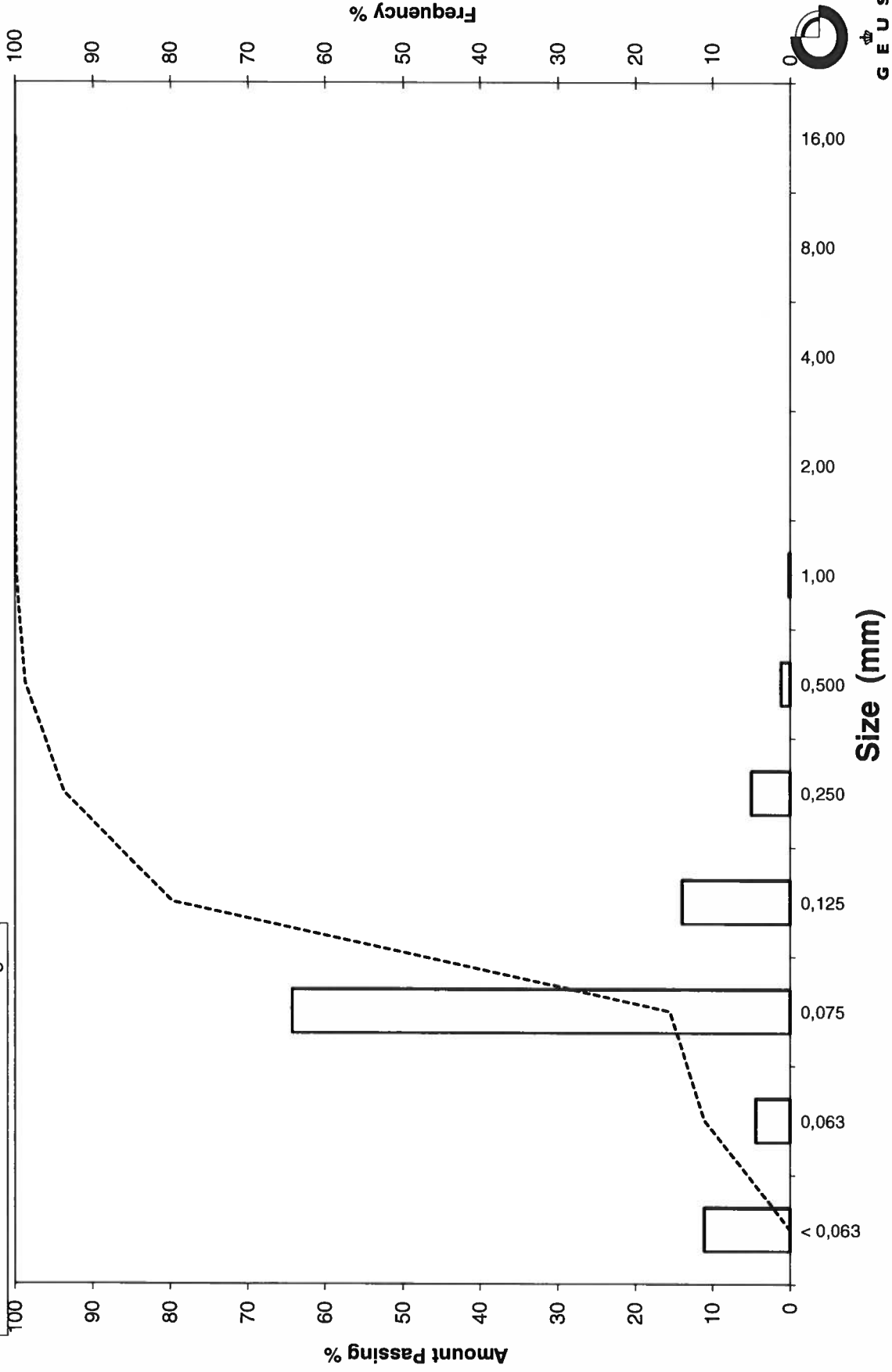
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: LØN 16 500-520

Frequency Percent
Cumulated Amount Passing



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



Total Weight 100,96 g

Size Fractions

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

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| Size Class | 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 | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 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 $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

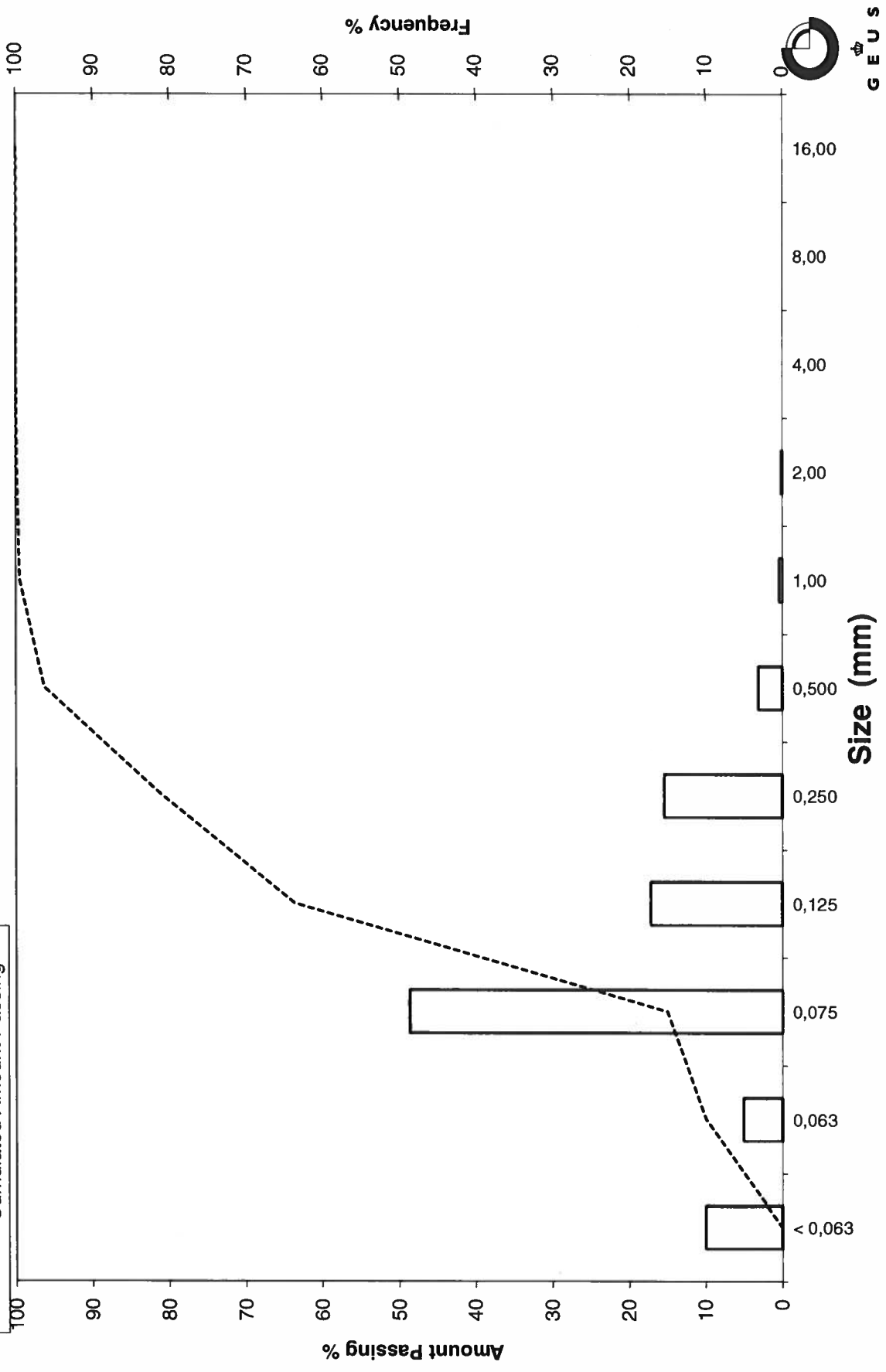
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: LØN 16 560-580

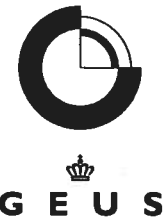
Frequency Percent
Cumulated Amount Passing



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



Total Weight 95,18 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 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 |
| 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 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| Size Class | 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 | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 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 $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

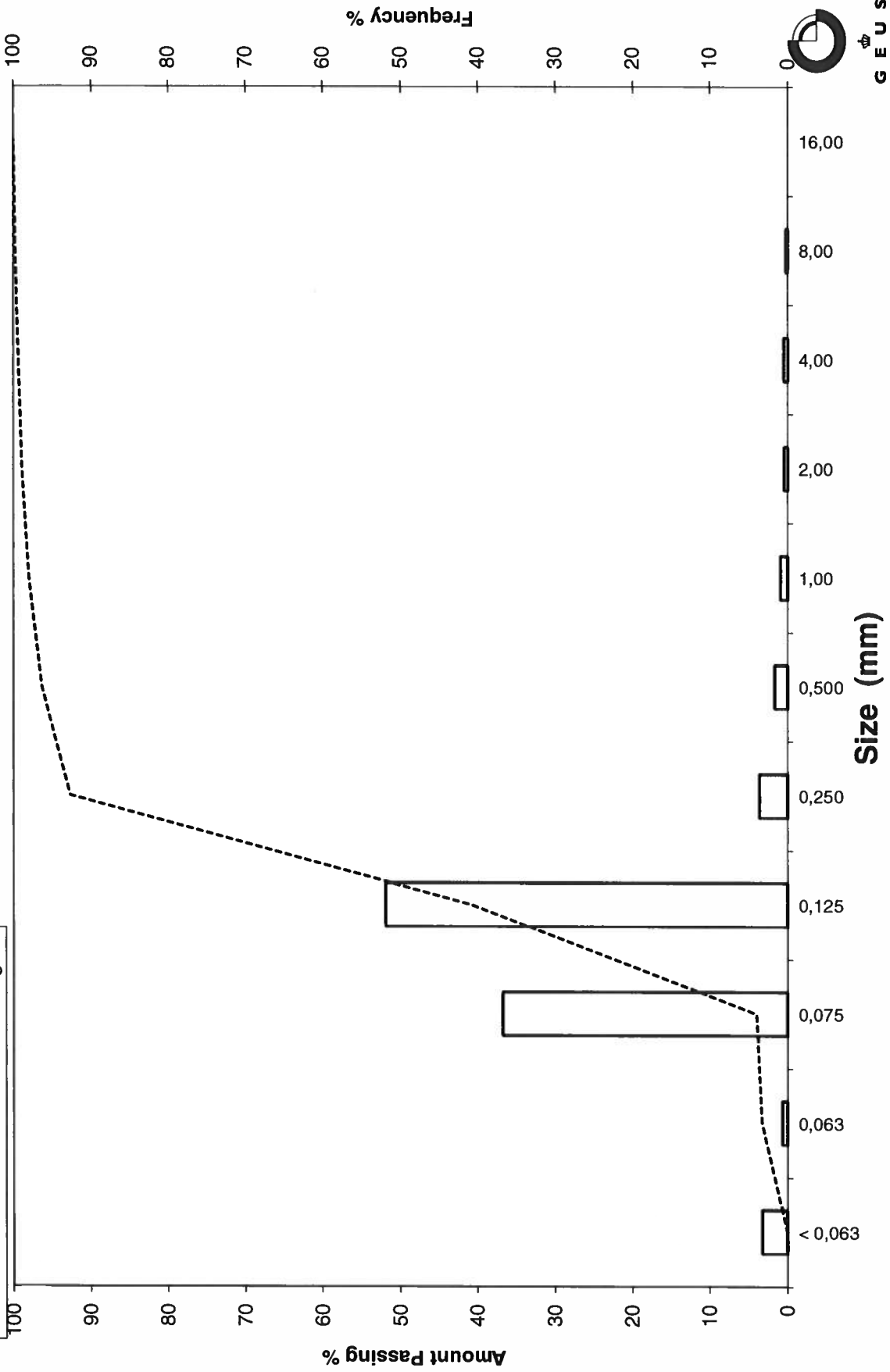
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: LØN 22 0-20

Frequency Percent
Cumulated Amount Passing



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



Total Weight 223,01 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 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 |
| 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 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| Size Class | 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 | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 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 $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

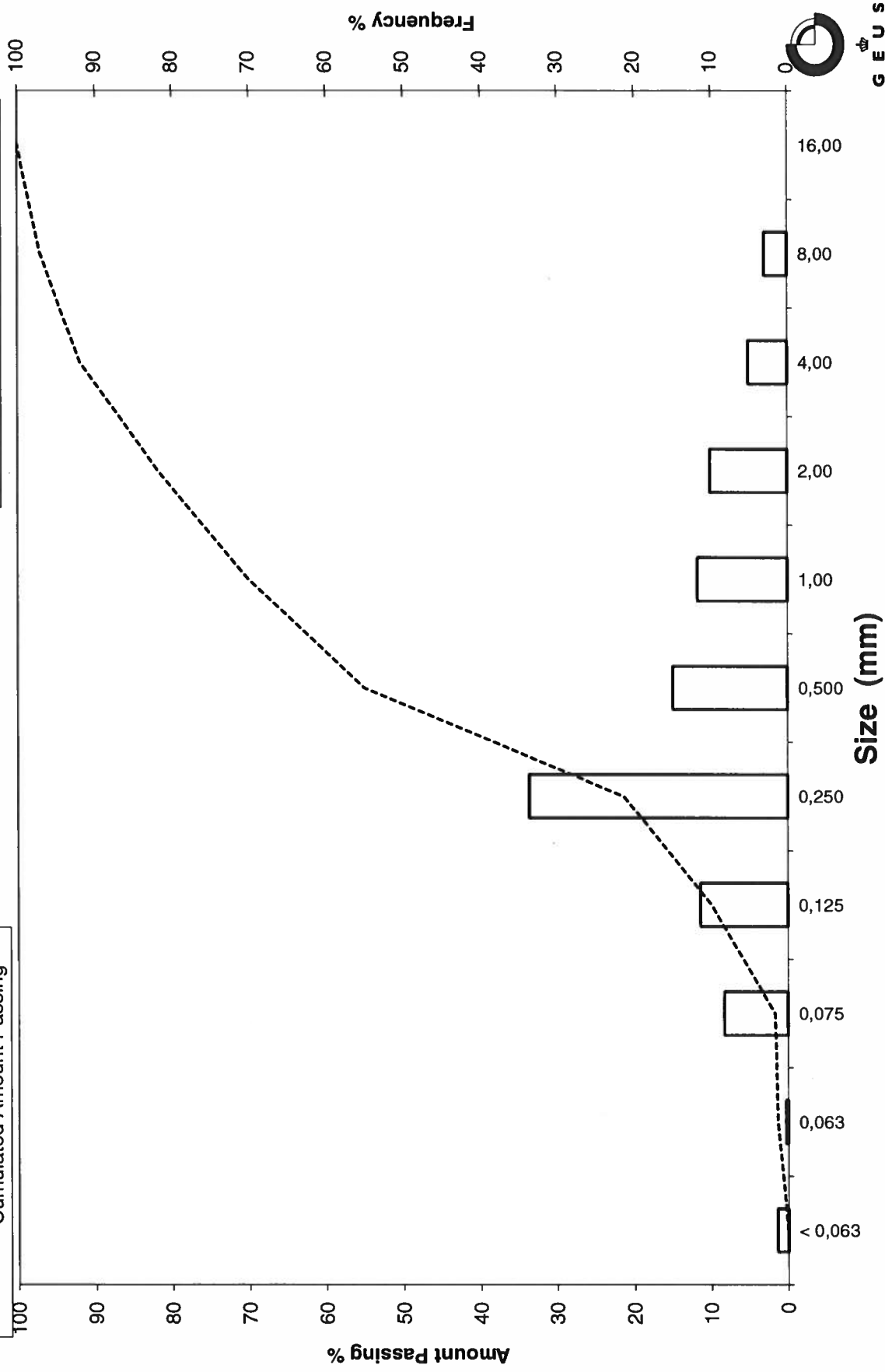
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Sample Id: LØN 22 100-120

Grain Size Distribution

Frequency Percent
Cumulated Amount Passing



G E U S

Grain Size Distribution

Geotechnical

Sample Id: LØN 22 200-220
Lab. Id: 200321
Projekt: Kystdirektoratet
Subject: 0
Date: august 2020
Executed: PS
Remarks:



Total Weight 115,14 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 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 |
| 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 |

Sieve Analysis

Gravel

Sand

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 | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 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 $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

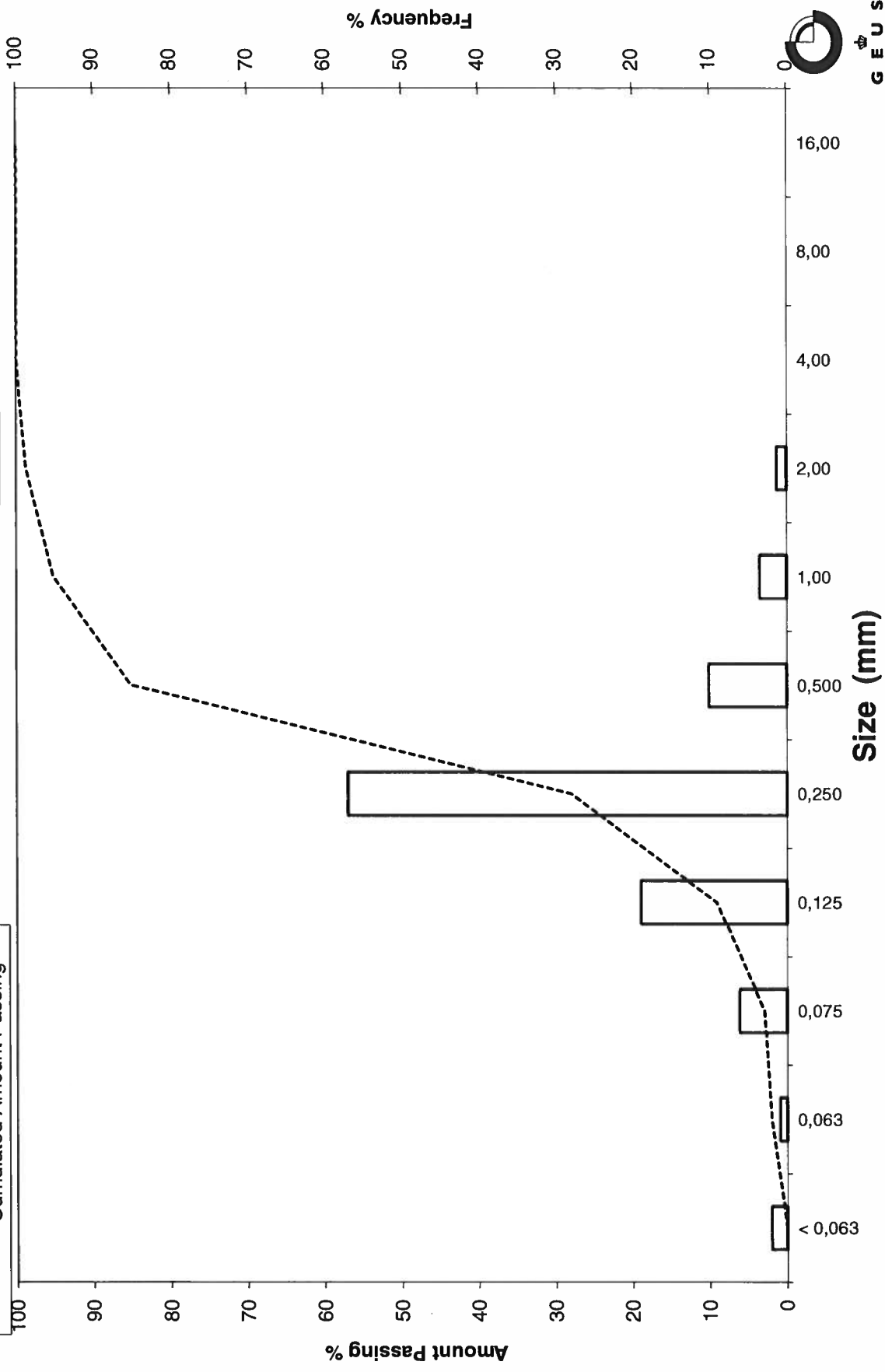
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: LØN 22 200-220

Frequency Percent
Cumulated Amount Passing



G E U S

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



Total Weight 105,21 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 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 |
| 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 |

Sieve Analysis

Gravel

Sand

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 | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 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 $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

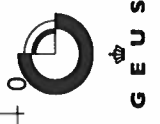
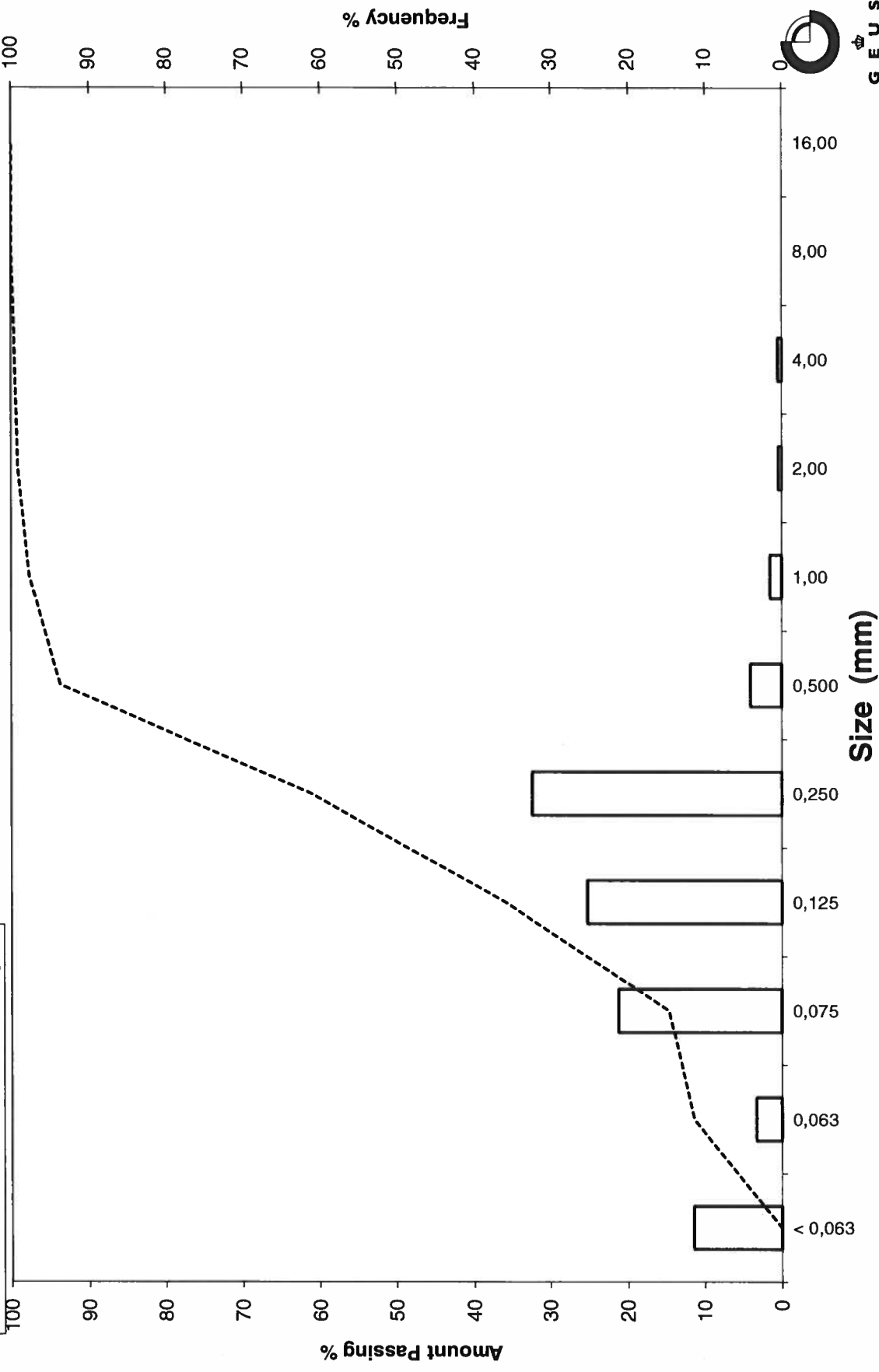
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: LØN 22 300-320

Frequency Percent
 Cumulated Amount Passing



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



Total Weight 103,52 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,00 | 0,00 | 100,00 |
| 4,00 | -2,00 | 0,05 | 0,05 | 99,95 |
| 2,00 | -1,00 | 0,31 | 0,30 | 99,65 |
| 1,00 | 0,00 | 0,79 | 0,76 | 98,89 |
| 0,500 | 1,00 | 1,64 | 1,58 | 97,30 |
| 0,250 | 2,00 | 18,52 | 17,89 | 79,41 |
| 0,125 | 3,00 | 24,02 | 23,20 | 56,21 |
| 0,075 | 3,74 | 29,98 | 28,96 | 27,25 |
| 0,063 | 3,99 | 7,02 | 6,78 | 20,47 |
| < 0,063 | > 3,99 | 21,19 | 20,47 | 0,00 |

Sieve Analysis

Gravel

Sand

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 | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 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 $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

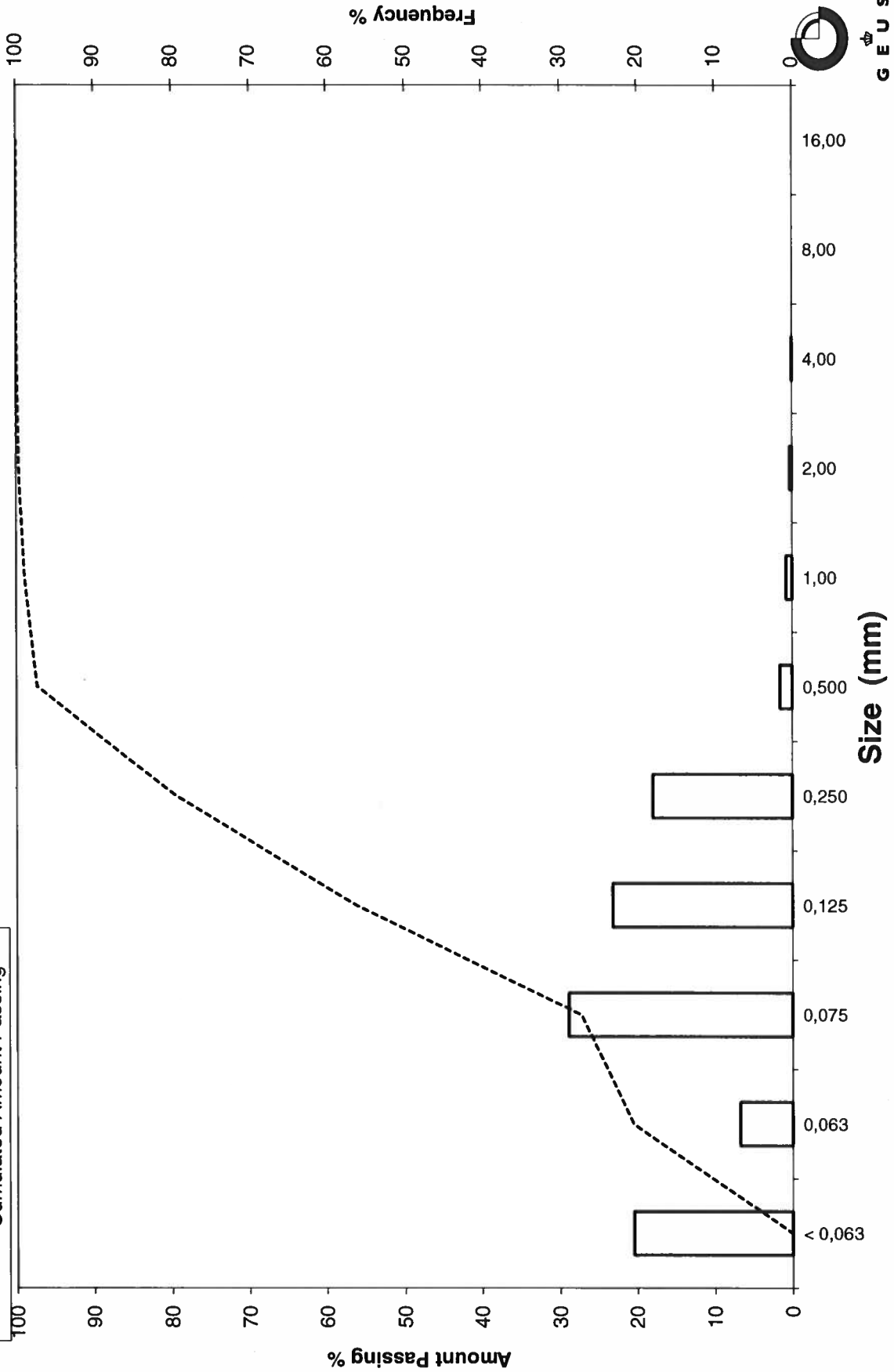
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Sample Id: LØN 22 400-420

Grain Size Distribution

Frequency Percent
Cumulated Amount Passing



G E U S

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



Total Weight 129,03 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 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 |
| 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 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| Size Class | 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 | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 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 $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

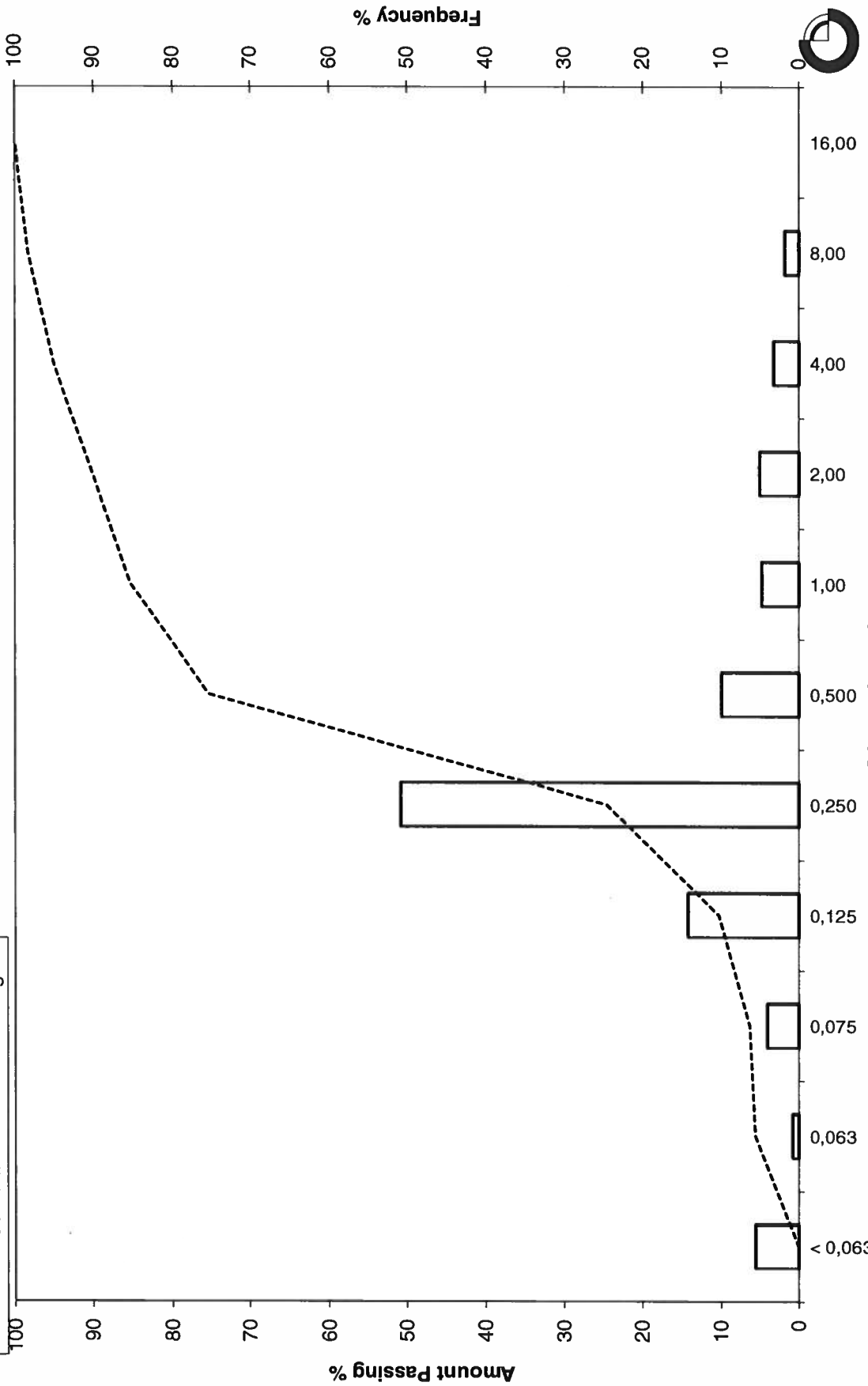
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Sample Id: LØN 22 470-490

Grain Size Distribution

Frequency Percent
Cumulated Amount Passing



G E U S

Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_36, 0-20
Lab. Id: 200593
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >2mm består af skaller



Total Weight 134,07 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,50 | 0,37 | 99,63 |
| 4,00 | -2,00 | 0,79 | 0,59 | 99,04 |
| 2,80 | -1,49 | 0,11 | 0,08 | 98,96 |
| 2,00 | -1,00 | 0,20 | 0,15 | 98,81 |
| 1,40 | -0,49 | 0,37 | 0,28 | 98,53 |
| 1,00 | 0,00 | 0,92 | 0,69 | 97,84 |
| 0,710 | 0,49 | 1,56 | 1,16 | 96,68 |
| 0,500 | 1,00 | 6,25 | 4,66 | 92,02 |
| 0,355 | 1,49 | 24,43 | 18,22 | 73,80 |
| 0,250 | 2,00 | 50,17 | 37,42 | 36,38 |
| 0,180 | 2,47 | 28,23 | 21,06 | 15,32 |
| 0,125 | 3,00 | 14,01 | 10,45 | 4,87 |
| 0,090 | 3,47 | 4,84 | 3,61 | 1,26 |
| 0,075 | 3,74 | 0,28 | 0,21 | 1,05 |
| 0,063 | 3,99 | 0,11 | 0,08 | 0,97 |
| < 0,063 | > 3,99 | 1,30 | 0,97 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 0,97 |
| Sand, fine (0,063 mm - 0,200 mm): | 20,37 |
| Sand, medium (0,2 mm - 0,6 mm): | 72,90 |
| Sand, coarse (0,6 mm - 2 mm): | 4,57 |
| Gravel (> 2 mm): | 1,19 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,63 | 0,66 |
| 16% | 84% | 0,44 | 1,20 |
| 25% | 75% | 0,36 | 1,46 |
| 40% | 60% | 0,32 | 1,66 |
| Median 50% | 50% | 0,29 | 1,79 |
| 75% | 25% | 0,21 | 2,24 |
| 84% | 16% | 0,18 | 2,46 |
| 90% | 10% | 0,15 | 2,72 |
| 95% | 5% | 0,13 | 2,99 |

Moments Statistics

| | |
|------------------------|------|
| Mean | 1,82 |
| Sorting | 0,67 |
| Skewness | 0,04 |
| Kurtosis | 1,23 |
| Uniformity Coefficient | 2,08 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

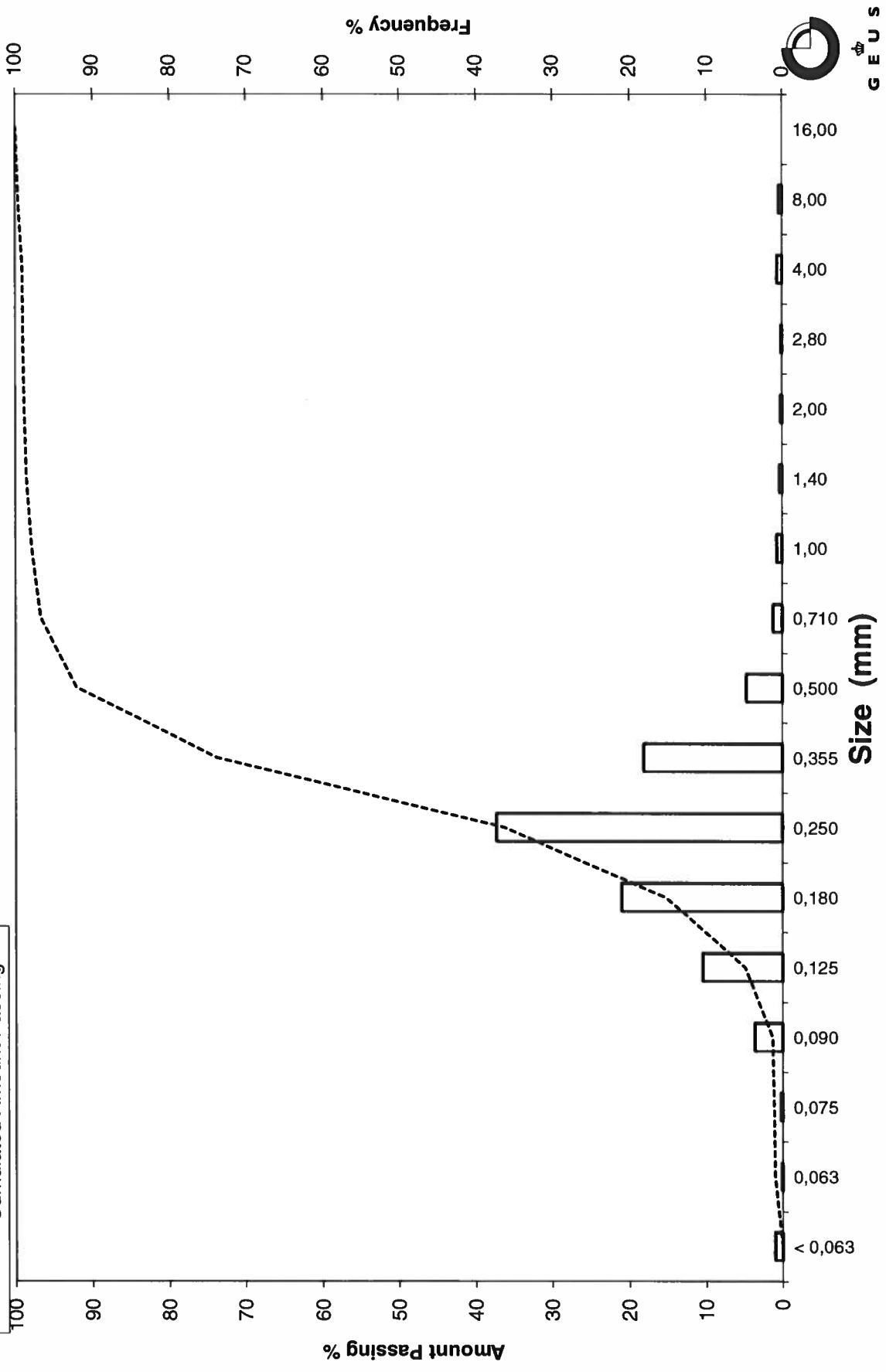
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_36, 0-20

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_36, 100-120
Lab. Id: 200594
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >1,4mm består af skaller



Total Weight 121,38 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,11 | 0,09 | 99,91 |
| 4,00 | -2,00 | 0,00 | 0,00 | 99,91 |
| 2,80 | -1,49 | 0,02 | 0,02 | 99,89 |
| 2,00 | -1,00 | 0,00 | 0,00 | 99,89 |
| 1,40 | -0,49 | 0,03 | 0,02 | 99,87 |
| 1,00 | 0,00 | 0,21 | 0,17 | 99,70 |
| 0,710 | 0,49 | 0,30 | 0,25 | 99,45 |
| 0,500 | 1,00 | 1,12 | 0,92 | 98,53 |
| 0,355 | 1,49 | 6,02 | 4,96 | 93,57 |
| 0,250 | 2,00 | 14,26 | 11,75 | 81,82 |
| 0,180 | 2,47 | 27,01 | 22,25 | 59,57 |
| 0,125 | 3,00 | 50,70 | 41,77 | 17,80 |
| 0,090 | 3,47 | 17,59 | 14,49 | 3,30 |
| 0,075 | 3,74 | 1,25 | 1,03 | 2,27 |
| 0,063 | 3,99 | 0,54 | 0,44 | 1,83 |
| < 0,063 | > 3,99 | 2,22 | 1,83 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 1,83 |
| Sand, fine (0,063 mm - 0,200 mm): | 64,09 |
| Sand, medium (0,2 mm - 0,6 mm): | 33,04 |
| Sand, coarse (0,6 mm - 2 mm): | 0,93 |
| Gravel (> 2 mm): | 0,11 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,40 | 1,33 |
| 16% | 84% | 0,27 | 1,89 |
| 25% | 75% | 0,23 | 2,13 |
| 40% | 60% | 0,18 | 2,46 |
| Median 50% | 50% | 0,17 | 2,58 |
| 75% | 25% | 0,13 | 2,89 |
| 84% | 16% | 0,12 | 3,05 |
| 90% | 10% | 0,11 | 3,24 |
| 95% | 5% | 0,09 | 3,41 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 2,51 |
| Sorting | 0,60 |
| Skewness | -0,19 |
| Kurtosis | 1,11 |
| Uniformity Coefficient | 1,71 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

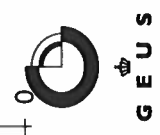
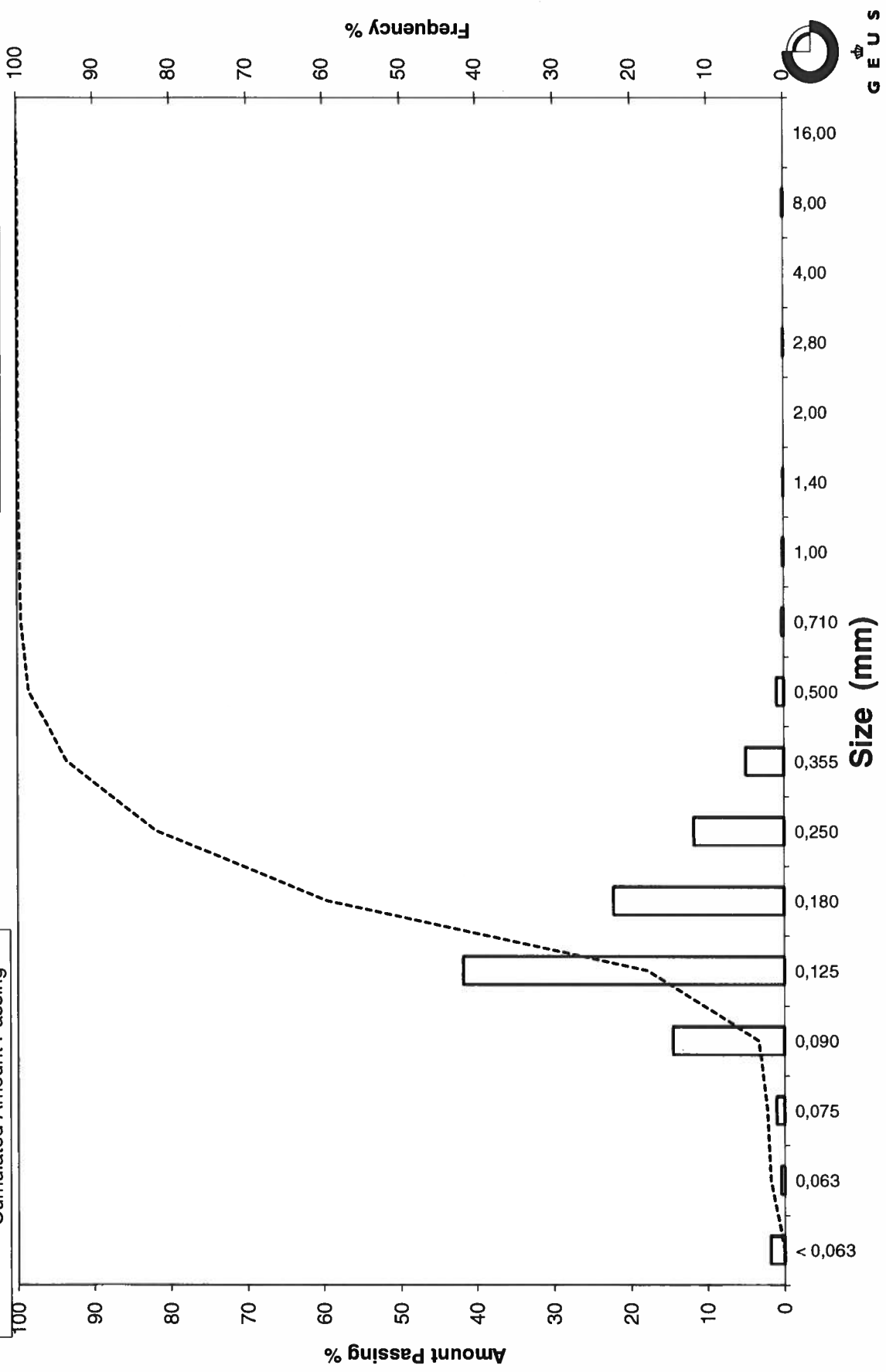
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_36, 100-120

Frequency Percent
 Cumulated Amount Passing



GEUS

Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_36, 200-220
Lab. Id: 200595
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >2mm heraf 1,3g skaller



Total Weight 129,69 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,00 | 0,00 | 100,00 |
| 4,00 | -2,00 | 1,28 | 0,99 | 99,01 |
| 2,80 | -1,49 | 0,26 | 0,20 | 98,81 |
| 2,00 | -1,00 | 0,36 | 0,28 | 98,53 |
| 1,40 | -0,49 | 0,40 | 0,31 | 98,23 |
| 1,00 | 0,00 | 0,89 | 0,69 | 97,54 |
| 0,710 | 0,49 | 2,07 | 1,60 | 95,94 |
| 0,500 | 1,00 | 13,40 | 10,33 | 85,61 |
| 0,355 | 1,49 | 27,33 | 21,07 | 64,54 |
| 0,250 | 2,00 | 25,80 | 19,89 | 44,64 |
| 0,180 | 2,47 | 20,33 | 15,68 | 28,97 |
| 0,125 | 3,00 | 22,47 | 17,33 | 11,64 |
| 0,090 | 3,47 | 12,92 | 9,96 | 1,68 |
| 0,075 | 3,74 | 0,59 | 0,45 | 1,23 |
| 0,063 | 3,99 | 0,23 | 0,18 | 1,05 |
| < 0,063 | > 3,99 | 1,36 | 1,05 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| Size Class | Weight % |
|----------------------------------|---------------|
| Silt and clay (< 0,063 mm) | 1,05 |
| Sand, fine (0,063 mm - 0,200 mm) | 32,40 |
| Sand, medium (0,2 mm - 0,6 mm) | 57,08 |
| Sand, coarse (0,6 mm - 2 mm) | 8,00 |
| Gravel (> 2 mm) | 1,47 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,69 | 0,53 |
| 16% | 84% | 0,49 | 1,03 |
| 25% | 75% | 0,43 | 1,23 |
| 40% | 60% | 0,33 | 1,59 |
| Median 50% | 50% | 0,28 | 1,85 |
| 75% | 25% | 0,17 | 2,58 |
| 84% | 16% | 0,14 | 2,85 |
| 90% | 10% | 0,12 | 3,07 |
| 95% | 5% | 0,10 | 3,30 |

Moments Statistics

| | |
|------------------------|------|
| Mean | 1,91 |
| Sorting | 0,87 |
| Skewness | 0,08 |
| Kurtosis | 0,84 |
| Uniformity Coefficient | 2,78 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

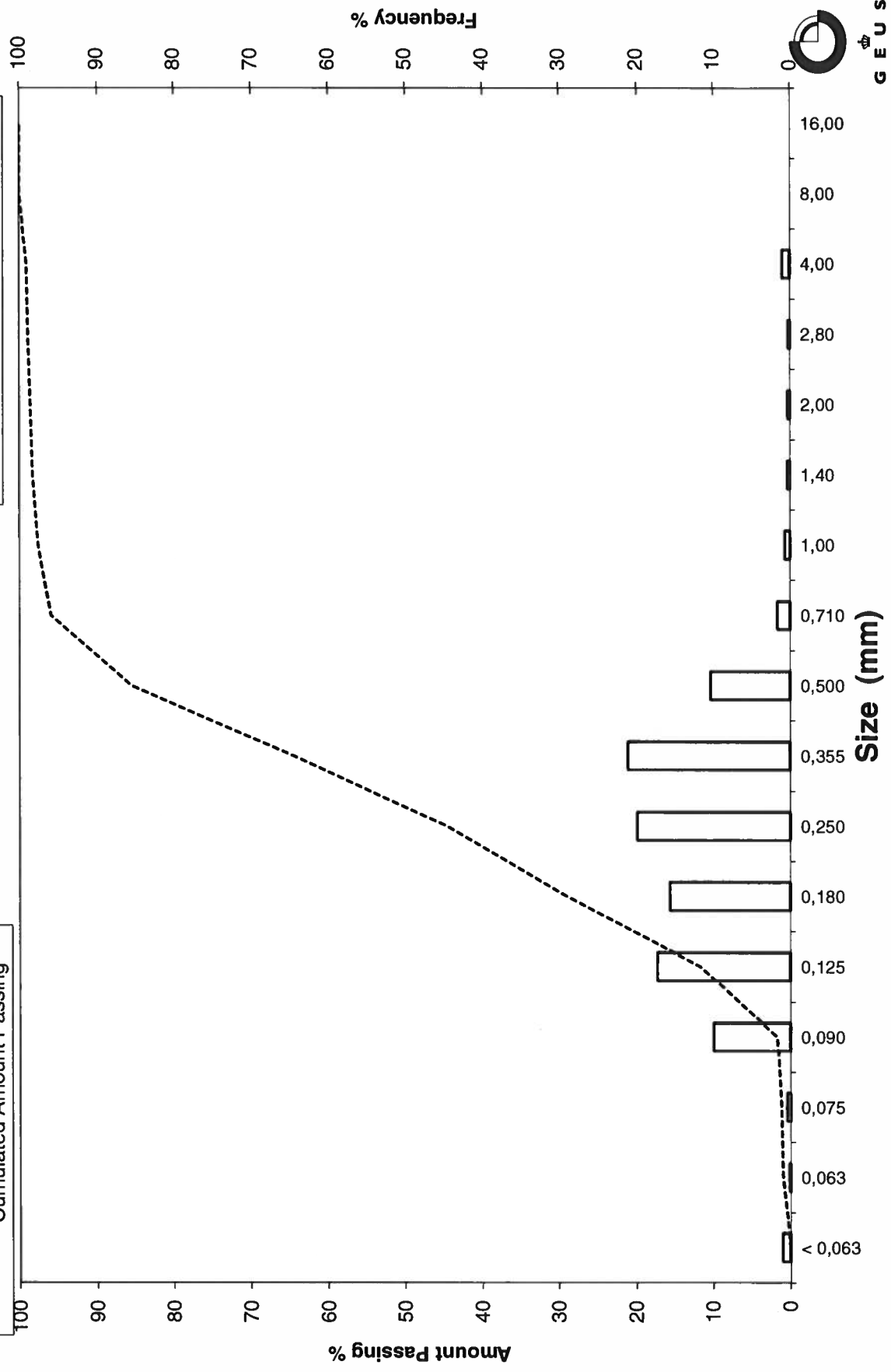
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_36, 200-220

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_36, 300-320
Lab. Id: 200596
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks:



Total Weight 111,2 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | φ | g | % | % |
| 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 |
| 2,80 | -1,49 | 0,06 | 0,05 | 99,95 |
| 2,00 | -1,00 | 0,05 | 0,04 | 99,90 |
| 1,40 | -0,49 | 0,02 | 0,02 | 99,88 |
| 1,00 | 0,00 | 0,42 | 0,38 | 99,51 |
| 0,710 | 0,49 | 0,63 | 0,57 | 98,94 |
| 0,500 | 1,00 | 1,11 | 1,00 | 97,94 |
| 0,355 | 1,49 | 1,99 | 1,79 | 96,15 |
| 0,250 | 2,00 | 3,62 | 3,26 | 92,90 |
| 0,180 | 2,47 | 13,42 | 12,07 | 80,83 |
| 0,125 | 3,00 | 63,20 | 56,83 | 23,99 |
| 0,090 | 3,47 | 19,85 | 17,85 | 6,14 |
| 0,075 | 3,74 | 2,96 | 2,66 | 3,48 |
| 0,063 | 3,99 | 1,25 | 1,12 | 2,36 |
| < 0,063 | > 3,99 | 2,62 | 2,36 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| Size Class | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 2,36 |
| Sand, fine (0,063 mm - 0,200 mm): | 81,92 |
| Sand, medium (0,2 mm - 0,6 mm): | 14,14 |
| Sand, coarse (0,6 mm - 2 mm): | 1,49 |
| Gravel (> 2 mm): | 0,10 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,32 | 1,65 |
| 16% | 84% | 0,20 | 2,33 |
| 25% | 75% | 0,17 | 2,52 |
| 40% | 60% | 0,16 | 2,65 |
| Median 50% | 50% | 0,15 | 2,74 |
| 75% | 25% | 0,13 | 2,99 |
| 84% | 16% | 0,11 | 3,19 |
| 90% | 10% | 0,10 | 3,36 |
| 95% | 5% | 0,08 | 3,58 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 2,75 |
| Sorting | 0,51 |
| Skewness | -0,03 |
| Kurtosis | 1,68 |
| Uniformity Coefficient | 1,64 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

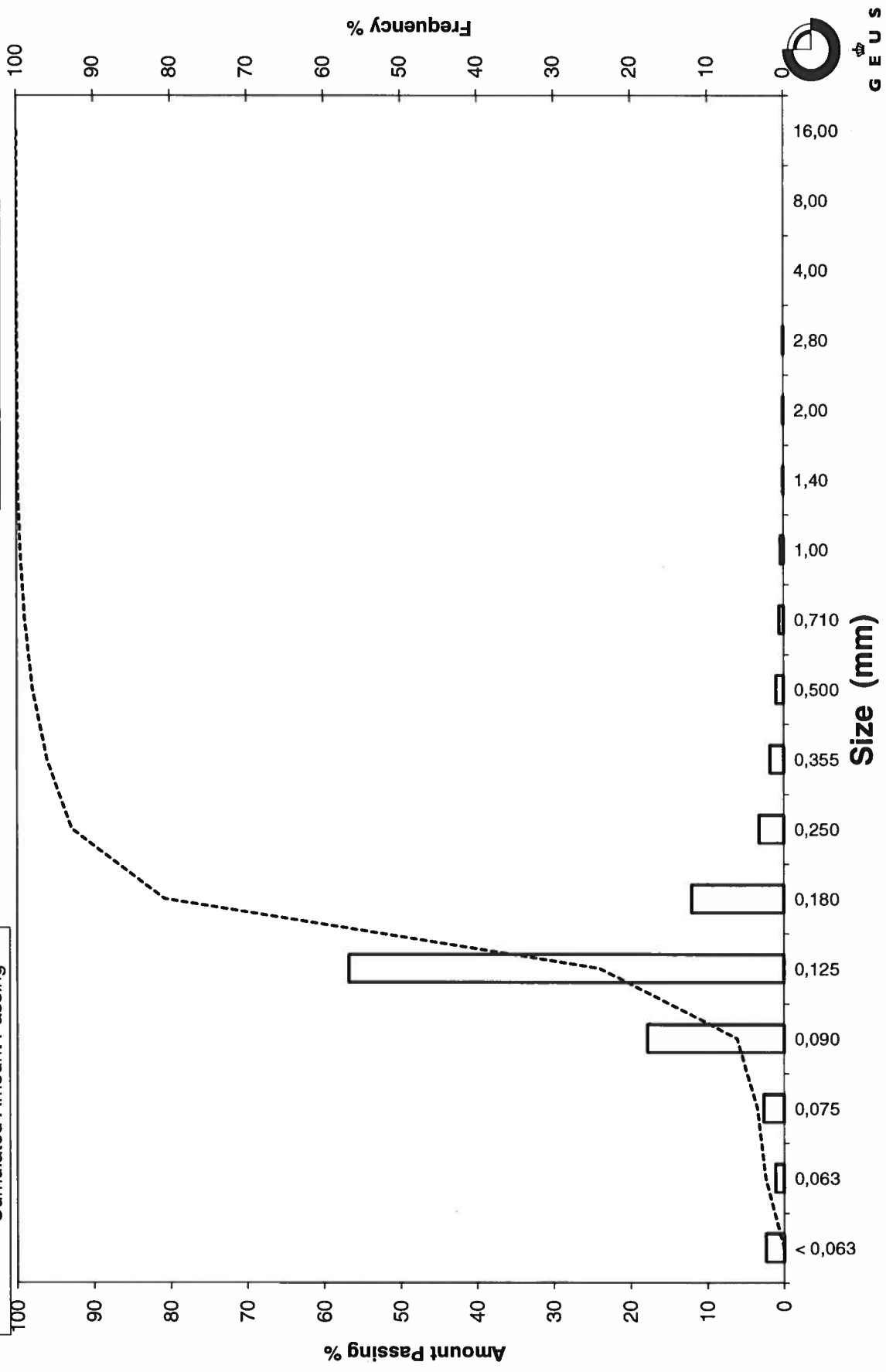
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_36, 300-320

Frequency Percent
 Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_36, 400-420
Lab. Id: 200597
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks:



Total Weight 117,32 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,00 | 0,00 | 100,00 |
| 4,00 | -2,00 | 0,98 | 0,84 | 99,16 |
| 2,80 | -1,49 | 0,37 | 0,32 | 98,85 |
| 2,00 | -1,00 | 0,62 | 0,53 | 98,32 |
| 1,40 | -0,49 | 0,88 | 0,75 | 97,57 |
| 1,00 | 0,00 | 1,12 | 0,95 | 96,62 |
| 0,710 | 0,49 | 1,34 | 1,14 | 95,47 |
| 0,500 | 1,00 | 3,06 | 2,61 | 92,87 |
| 0,355 | 1,49 | 7,47 | 6,37 | 86,50 |
| 0,250 | 2,00 | 15,30 | 13,04 | 73,46 |
| 0,180 | 2,47 | 26,62 | 22,69 | 50,77 |
| 0,125 | 3,00 | 32,21 | 27,45 | 23,31 |
| 0,090 | 3,47 | 10,08 | 8,59 | 14,72 |
| 0,075 | 3,74 | 4,39 | 3,74 | 10,98 |
| 0,063 | 3,99 | 2,82 | 2,40 | 8,57 |
| < 0,063 | > 3,99 | 10,06 | 8,57 | 0,00 |

Sieve Analysis

Gravel
Sand

Size Classes (DGF-Bulletin 1 1988)

| Size Class | Weight % |
|----------------------------------|---------------|
| Silt and clay (< 0,063 mm) | 8,57 |
| Sand, fine (0,063 mm - 0,200 mm) | 48,68 |
| Sand, medium (0,2 mm - 0,6 mm) | 36,86 |
| Sand, coarse (0,6 mm - 2 mm) | 4,21 |
| Gravel (> 2 mm) | 1,68 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,67 | 0,57 |
| 16% | 84% | 0,33 | 1,58 |
| 25% | 75% | 0,26 | 1,93 |
| 40% | 60% | 0,21 | 2,26 |
| Median 50% | 50% | 0,18 | 2,49 |
| 75% | 25% | 0,13 | 2,96 |
| 84% | 16% | 0,10 | 3,39 |
| 90% | 10% | 0,07 | 3,83 |
| 95% | 5% | ----- | ----- |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 2,49 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | 2,97 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

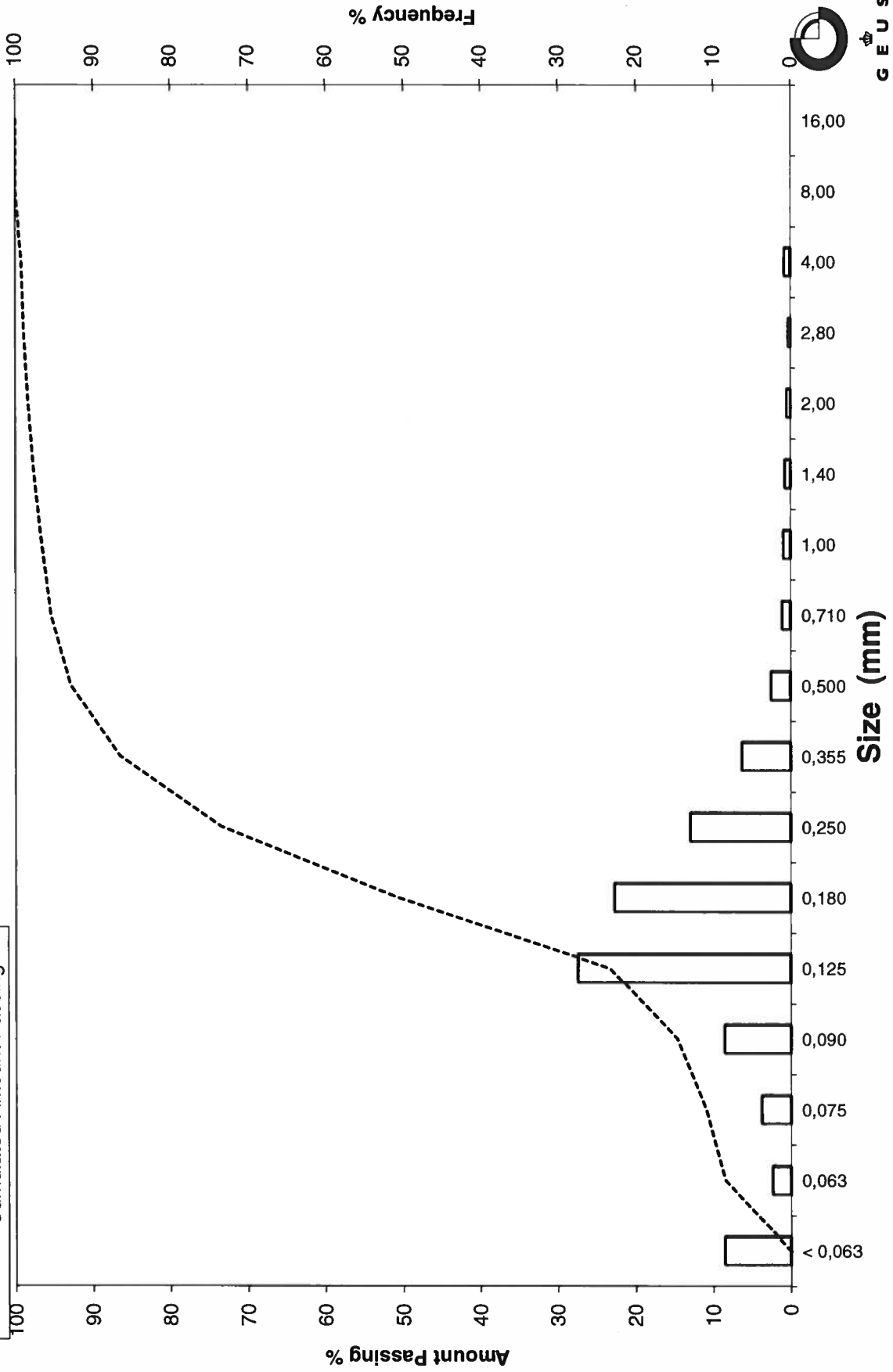
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_36, 400-420

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_36, 480-500
Lab. Id: 200598
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >2,8mm heraf 0,3g skaller




GEUS

Total Weight 125,52 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,00 | 0,00 | 100,00 |
| 4,00 | -2,00 | 1,78 | 1,42 | 98,58 |
| 2,80 | -1,49 | 1,08 | 0,86 | 97,72 |
| 2,00 | -1,00 | 0,83 | 0,66 | 97,06 |
| 1,40 | -0,49 | 0,72 | 0,57 | 96,49 |
| 1,00 | 0,00 | 0,86 | 0,69 | 95,80 |
| 0,710 | 0,49 | 0,86 | 0,69 | 95,12 |
| 0,500 | 1,00 | 2,05 | 1,63 | 93,48 |
| 0,355 | 1,49 | 6,98 | 5,56 | 87,92 |
| 0,250 | 2,00 | 19,08 | 15,20 | 72,72 |
| 0,180 | 2,47 | 28,28 | 22,53 | 50,19 |
| 0,125 | 3,00 | 24,15 | 19,24 | 30,95 |
| 0,090 | 3,47 | 10,77 | 8,58 | 22,37 |
| 0,075 | 3,74 | 5,69 | 4,53 | 17,84 |
| 0,063 | 3,99 | 4,54 | 3,62 | 14,22 |
| < 0,063 | > 3,99 | 17,85 | 14,22 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| Size Class | Weight % |
|----------------------------------|---------------|
| Silt and clay (< 0,063 mm) | 14,22 |
| Sand, fine (0,063 mm - 0,200 mm) | 42,41 |
| Sand, medium (0,2 mm - 0,6 mm) | 37,63 |
| Sand, coarse (0,6 mm - 2 mm) | 2,80 |
| Gravel (> 2 mm) | 2,94 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,70 | 0,52 |
| 16% | 84% | 0,33 | 1,61 |
| 25% | 75% | 0,27 | 1,91 |
| 40% | 60% | 0,21 | 2,25 |
| Median 50% | 50% | 0,18 | 2,48 |
| 75% | 25% | 0,10 | 3,31 |
| 84% | 16% | 0,07 | 3,86 |
| 90% | 10% | ----- | ----- |
| 95% | 5% | ----- | ----- |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 2,65 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | ----- |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

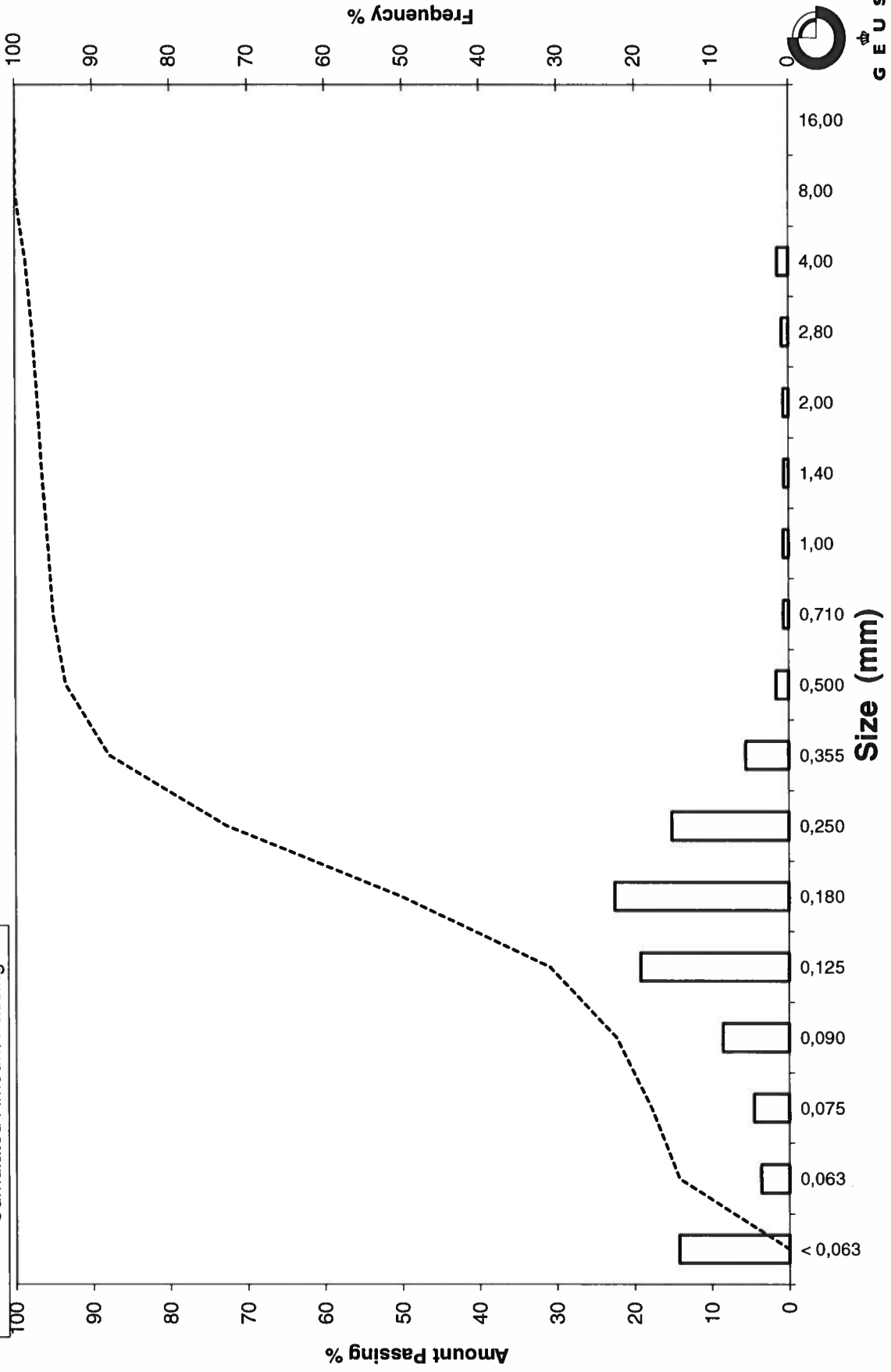
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_36, 480-500

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_37, 0-20
Lab. Id: 200599
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >2,8mm heraf 0,1g skaller



Total Weight 126,97 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,00 | 0,00 | 100,00 |
| 4,00 | -2,00 | 0,22 | 0,17 | 99,83 |
| 2,80 | -1,49 | 0,31 | 0,24 | 99,58 |
| 2,00 | -1,00 | 0,41 | 0,32 | 99,26 |
| 1,40 | -0,49 | 0,57 | 0,45 | 98,81 |
| 1,00 | 0,00 | 1,17 | 0,92 | 97,89 |
| 0,710 | 0,49 | 2,33 | 1,84 | 96,05 |
| 0,500 | 1,00 | 11,72 | 9,23 | 86,82 |
| 0,355 | 1,49 | 27,20 | 21,42 | 65,40 |
| 0,250 | 2,00 | 37,11 | 29,23 | 36,17 |
| 0,180 | 2,47 | 28,21 | 22,22 | 13,96 |
| 0,125 | 3,00 | 11,59 | 9,13 | 4,83 |
| 0,090 | 3,47 | 3,97 | 3,13 | 1,70 |
| 0,075 | 3,74 | 0,36 | 0,28 | 1,42 |
| 0,063 | 3,99 | 0,14 | 0,11 | 1,31 |
| < 0,063 | > 3,99 | 1,66 | 1,31 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 1,31 |
| Sand, fine (0,063 mm - 0,200 mm): | 19,00 |
| Sand, medium (0,2 mm - 0,6 mm): | 70,92 |
| Sand, coarse (0,6 mm - 2 mm): | 8,04 |
| Gravel (> 2 mm): | 0,74 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,69 | 0,54 |
| 16% | 84% | 0,48 | 1,06 |
| 25% | 75% | 0,42 | 1,25 |
| 40% | 60% | 0,34 | 1,58 |
| Median 50% | 50% | 0,30 | 1,74 |
| 75% | 25% | 0,21 | 2,22 |
| 84% | 16% | 0,19 | 2,42 |
| 90% | 10% | 0,16 | 2,68 |
| 95% | 5% | 0,13 | 2,99 |

Moments Statistics

| | |
|------------------------|------|
| Mean | 1,74 |
| Sorting | 0,71 |
| Skewness | 0,01 |
| Kurtosis | 1,04 |
| Uniformity Coefficient | 2,15 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

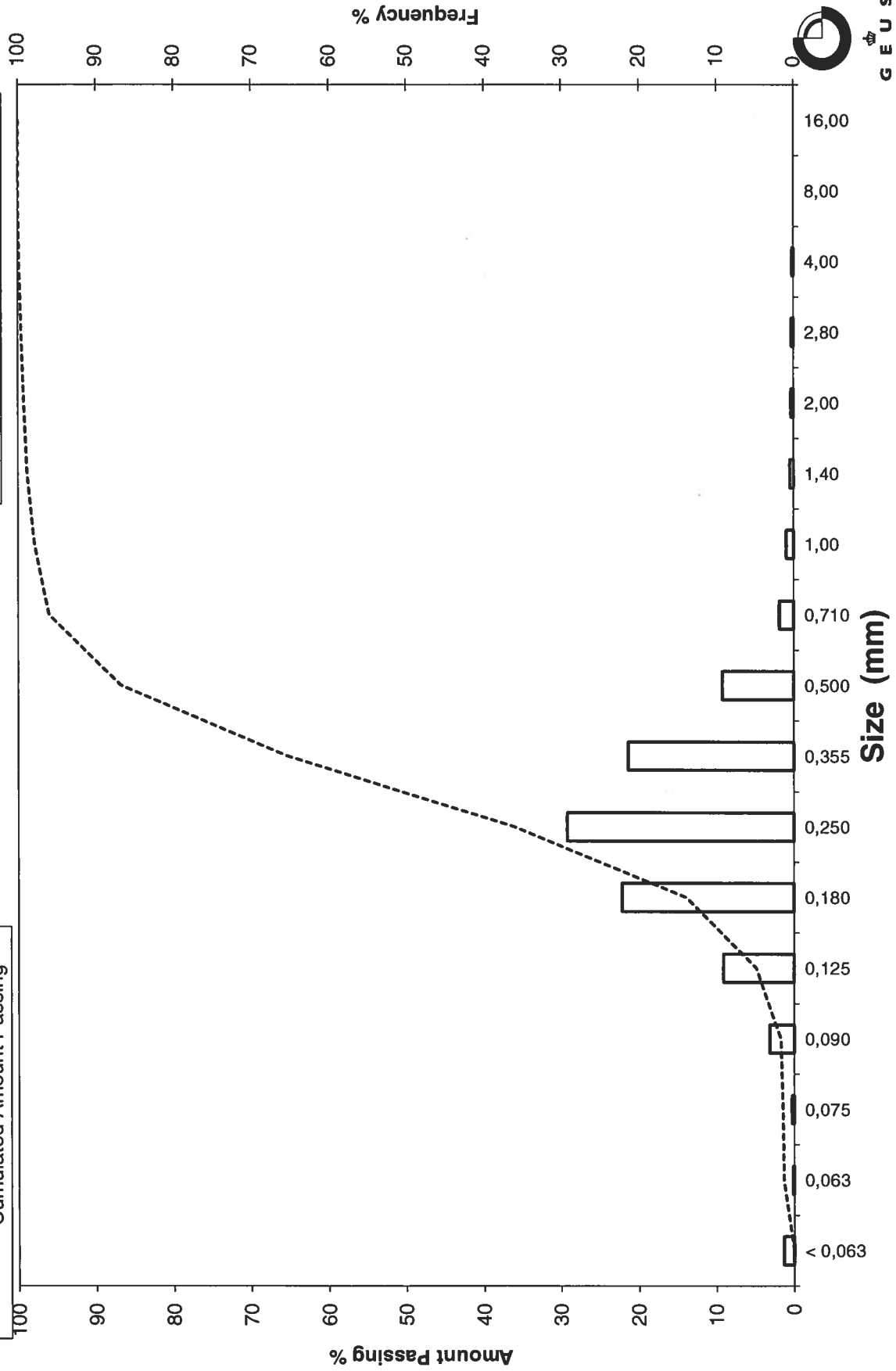
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_37, 0-20

Frequency Percent
Cumulated Amount Passing



GEUS

Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_37, 100-120
Lab. Id: 200600
Projekt Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >4mm består af skaller



Total Weight 116,49 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,00 | 0,00 | 100,00 |
| 4,00 | -2,00 | 0,13 | 0,11 | 99,89 |
| 2,80 | -1,49 | 0,17 | 0,15 | 99,74 |
| 2,00 | -1,00 | 0,24 | 0,21 | 99,54 |
| 1,40 | -0,49 | 0,46 | 0,39 | 99,14 |
| 1,00 | 0,00 | 0,98 | 0,84 | 98,30 |
| 0,710 | 0,49 | 1,64 | 1,41 | 96,89 |
| 0,500 | 1,00 | 8,25 | 7,08 | 89,81 |
| 0,355 | 1,49 | 23,93 | 20,54 | 69,27 |
| 0,250 | 2,00 | 31,49 | 27,03 | 42,24 |
| 0,180 | 2,47 | 30,31 | 26,02 | 16,22 |
| 0,125 | 3,00 | 12,78 | 10,97 | 5,25 |
| 0,090 | 3,47 | 4,17 | 3,58 | 1,67 |
| 0,075 | 3,74 | 0,45 | 0,39 | 1,28 |
| 0,063 | 3,99 | 0,23 | 0,20 | 1,08 |
| < 0,063 | > 3,99 | 1,26 | 1,08 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 1,08 |
| Sand, fine (0,063 mm - 0,200 mm): | 22,57 |
| Sand, medium (0,2 mm - 0,6 mm): | 69,53 |
| Sand, coarse (0,6 mm - 2 mm): | 6,35 |
| Gravel (> 2 mm): | 0,46 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,65 | 0,61 |
| 16% | 84% | 0,46 | 1,12 |
| 25% | 75% | 0,40 | 1,34 |
| 40% | 60% | 0,32 | 1,65 |
| Median 50% | 50% | 0,28 | 1,84 |
| 75% | 25% | 0,20 | 2,30 |
| 84% | 16% | 0,18 | 2,48 |
| 90% | 10% | 0,15 | 2,75 |
| 95% | 5% | 0,12 | 3,03 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 1,81 |
| Sorting | 0,71 |
| Skewness | -0,03 |
| Kurtosis | 1,03 |
| Uniformity Coefficient | 2,14 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

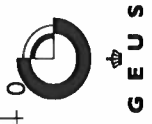
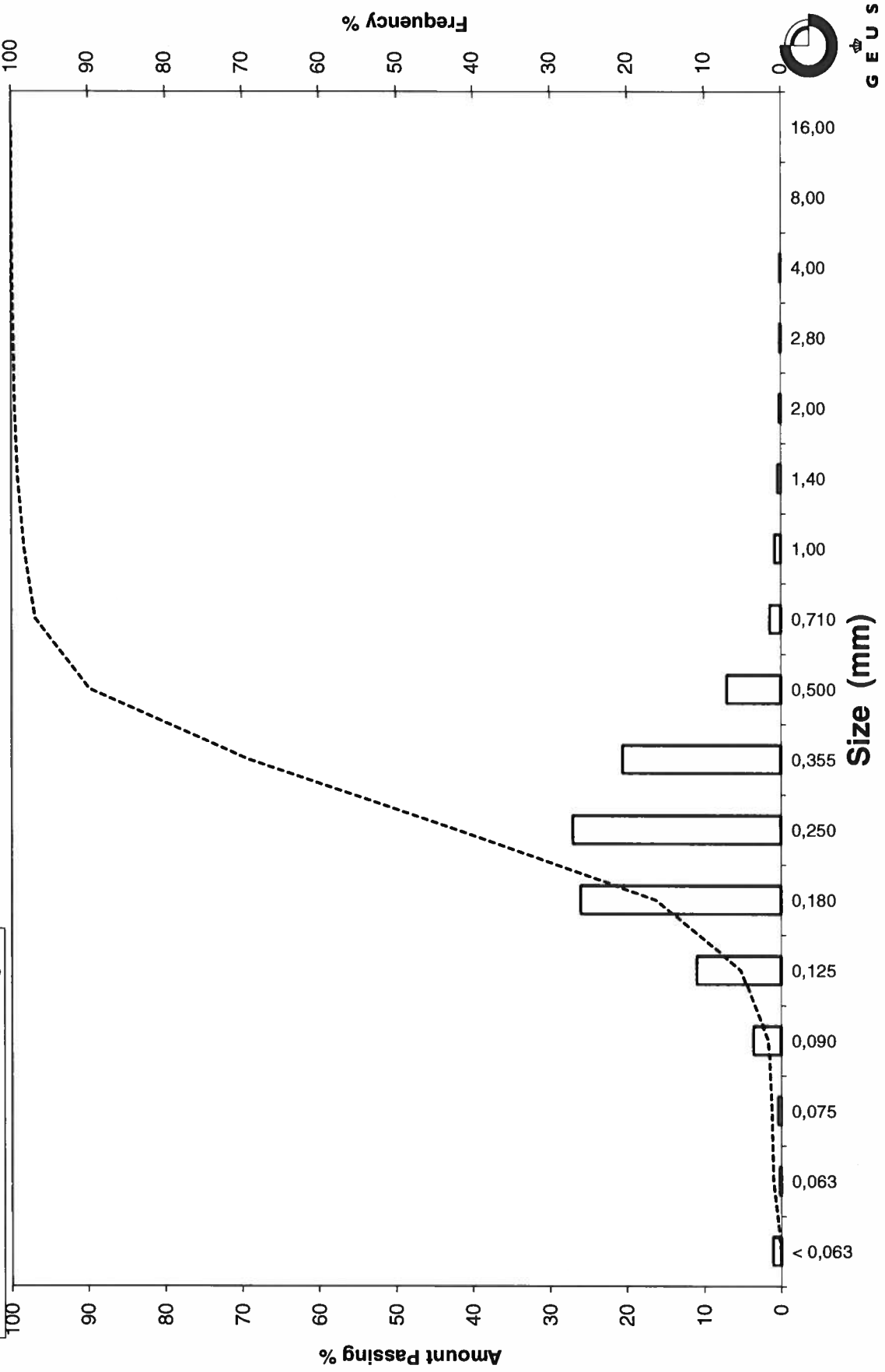
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_37, 100-120

Frequency Percent
 Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_37, 200-220
Lab. Id: 200601
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks:



Total Weight 116,86 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,00 | 0,00 | 100,00 |
| 4,00 | -2,00 | 0,71 | 0,61 | 99,39 |
| 2,80 | -1,49 | 0,13 | 0,11 | 99,28 |
| 2,00 | -1,00 | 0,15 | 0,13 | 99,15 |
| 1,40 | -0,49 | 0,41 | 0,35 | 98,80 |
| 1,00 | 0,00 | 0,59 | 0,50 | 98,30 |
| 0,710 | 0,49 | 1,12 | 0,96 | 97,34 |
| 0,500 | 1,00 | 5,82 | 4,98 | 92,36 |
| 0,355 | 1,49 | 16,82 | 14,39 | 77,97 |
| 0,250 | 2,00 | 35,02 | 29,97 | 48,00 |
| 0,180 | 2,47 | 34,58 | 29,59 | 18,41 |
| 0,125 | 3,00 | 14,19 | 12,14 | 6,26 |
| 0,090 | 3,47 | 5,31 | 4,54 | 1,72 |
| 0,075 | 3,74 | 0,41 | 0,35 | 1,37 |
| 0,063 | 3,99 | 0,22 | 0,19 | 1,18 |
| < 0,063 | > 3,99 | 1,38 | 1,18 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| Size Class | Weight % |
|----------------------------------|---------------|
| Silt and clay (< 0,063 mm) | 1,18 |
| Sand, fine (0,063 mm - 0,200 mm) | 25,68 |
| Sand, medium (0,2 mm - 0,6 mm) | 67,87 |
| Sand, coarse (0,6 mm - 2 mm) | 4,42 |
| Gravel (> 2 mm) | 0,85 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,61 | 0,71 |
| 16% | 84% | 0,42 | 1,27 |
| 25% | 75% | 0,34 | 1,54 |
| 40% | 60% | 0,29 | 1,78 |
| Median 50% | 50% | 0,26 | 1,96 |
| 75% | 25% | 0,20 | 2,35 |
| 84% | 16% | 0,17 | 2,56 |
| 90% | 10% | 0,14 | 2,82 |
| 95% | 5% | 0,12 | 3,12 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 1,93 |
| Sorting | 0,69 |
| Skewness | -0,05 |
| Kurtosis | 1,21 |
| Uniformity Coefficient | 2,06 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

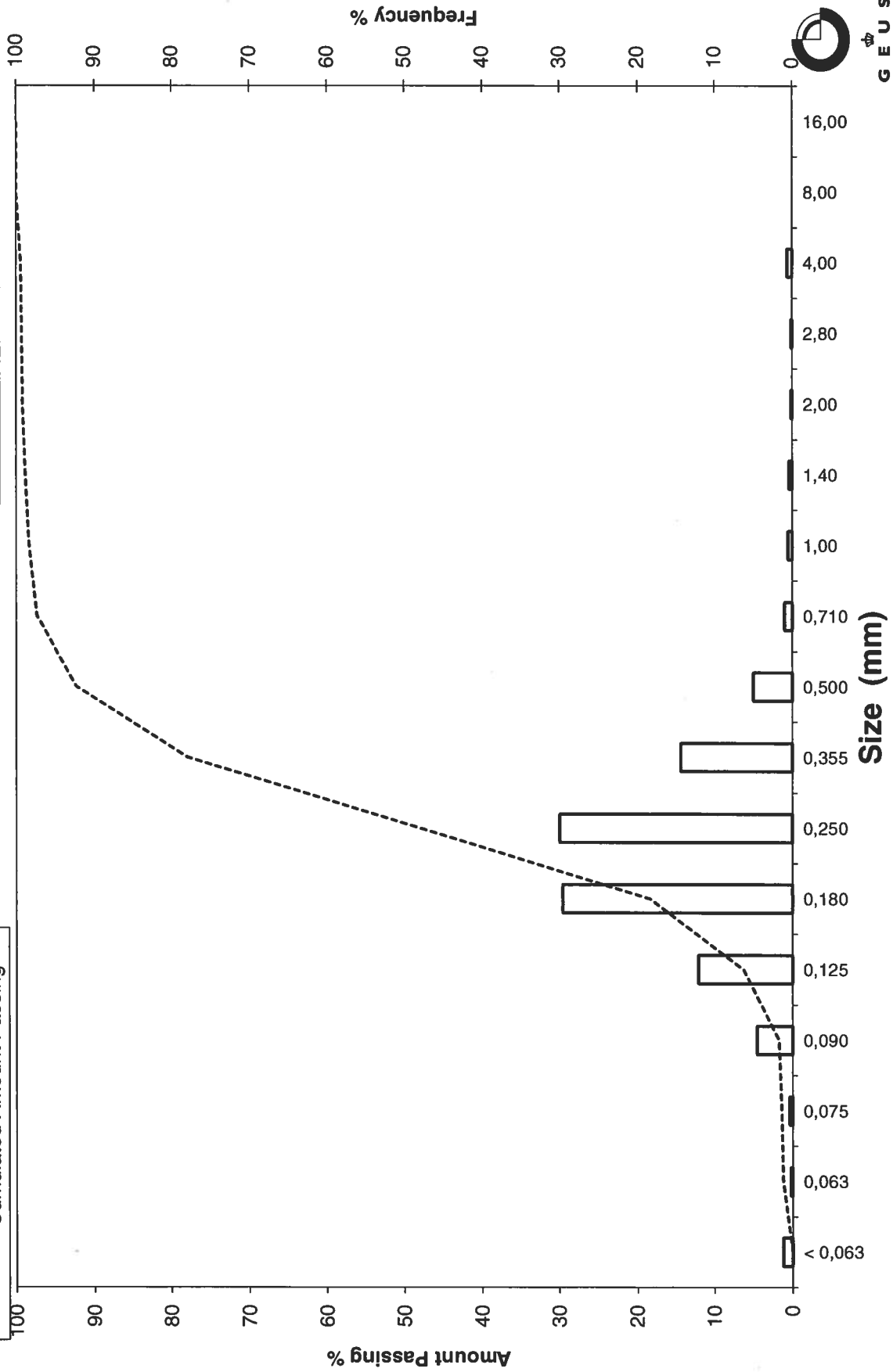
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_37, 200-220

Frequency Percent
Cumulated Amount Passing



G E U S

Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_37, 300-320
Lab. Id: 200602
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >4mm består af skaller



Total Weight 106,02 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount |
|---------|--------|--------|--------|------------------|
| mm | Φ | g | % | amount passing % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,00 | 0,00 | 100,00 |
| 4,00 | -2,00 | 0,08 | 0,08 | 99,92 |
| 2,80 | -1,49 | 0,00 | 0,00 | 99,92 |
| 2,00 | -1,00 | 0,04 | 0,04 | 99,89 |
| 1,40 | -0,49 | 0,02 | 0,02 | 99,87 |
| 1,00 | 0,00 | 0,09 | 0,08 | 99,78 |
| 0,710 | 0,49 | 0,12 | 0,11 | 99,67 |
| 0,500 | 1,00 | 0,49 | 0,46 | 99,21 |
| 0,355 | 1,49 | 1,87 | 1,76 | 97,44 |
| 0,250 | 2,00 | 6,83 | 6,44 | 91,00 |
| 0,180 | 2,47 | 27,33 | 25,78 | 65,22 |
| 0,125 | 3,00 | 48,40 | 45,65 | 19,57 |
| 0,090 | 3,47 | 18,05 | 17,03 | 2,55 |
| 0,075 | 3,74 | 1,21 | 1,14 | 1,41 |
| 0,063 | 3,99 | 0,40 | 0,38 | 1,03 |
| < 0,063 | > 3,99 | 1,09 | 1,03 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 1,03 |
| Sand, fine (0,063 mm - 0,200 mm): | 71,56 |
| Sand, medium (0,2 mm - 0,6 mm): | 26,84 |
| Sand, coarse (0,6 mm - 2 mm): | 0,46 |
| Gravel (> 2 mm): | 0,11 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,32 | 1,67 |
| 16% | 84% | 0,23 | 2,11 |
| 25% | 75% | 0,21 | 2,28 |
| 40% | 60% | 0,17 | 2,53 |
| Median 50% | 50% | 0,16 | 2,63 |
| 75% | 25% | 0,13 | 2,93 |
| 84% | 16% | 0,12 | 3,09 |
| 90% | 10% | 0,11 | 3,25 |
| 95% | 5% | 0,10 | 3,40 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 2,61 |
| Sorting | 0,51 |
| Skewness | -0,09 |
| Kurtosis | 1,09 |
| Uniformity Coefficient | 1,65 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

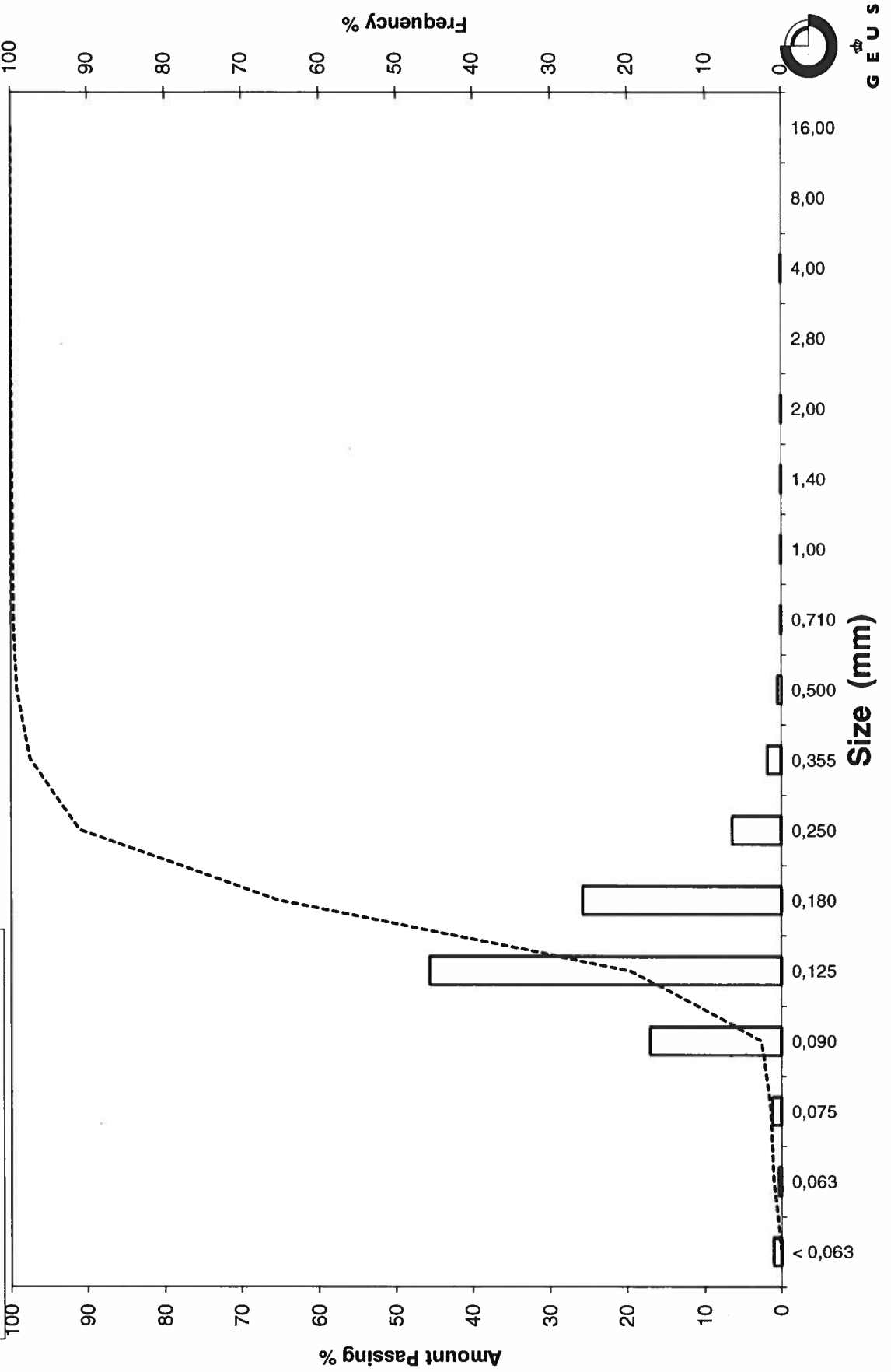
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_37, 300-320

Frequency Percent
 Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_37, 400-420
Lab. Id: 200603
Projekt Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >4mm heraf 0,1 g skaller



Total Weight 120,16 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,00 | 0,00 | 100,00 |
| 4,00 | -2,00 | 0,31 | 0,26 | 99,74 |
| 2,80 | -1,49 | 0,36 | 0,30 | 99,44 |
| 2,00 | -1,00 | 0,10 | 0,08 | 99,36 |
| 1,40 | -0,49 | 0,19 | 0,16 | 99,20 |
| 1,00 | 0,00 | 0,19 | 0,16 | 99,04 |
| 0,710 | 0,49 | 0,22 | 0,18 | 98,86 |
| 0,500 | 1,00 | 0,61 | 0,51 | 98,35 |
| 0,355 | 1,49 | 0,81 | 0,67 | 97,68 |
| 0,250 | 2,00 | 2,69 | 2,24 | 95,44 |
| 0,180 | 2,47 | 14,63 | 12,18 | 83,26 |
| 0,125 | 3,00 | 66,99 | 55,75 | 27,51 |
| 0,090 | 3,47 | 22,93 | 19,08 | 8,43 |
| 0,075 | 3,74 | 3,51 | 2,92 | 5,51 |
| 0,063 | 3,99 | 1,54 | 1,28 | 4,23 |
| < 0,063 | > 3,99 | 5,08 | 4,23 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| Size Class | Weight % |
|----------------------------------|---------------|
| Silt and clay (< 0,063 mm) | 4,23 |
| Sand, fine (0,063 mm - 0,200 mm) | 82,51 |
| Sand, medium (0,2 mm - 0,6 mm) | 11,85 |
| Sand, coarse (0,6 mm - 2 mm) | 0,77 |
| Gravel (> 2 mm) | 0,64 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,25 | 2,01 |
| 16% | 84% | 0,18 | 2,44 |
| 25% | 75% | 0,17 | 2,54 |
| 40% | 60% | 0,16 | 2,67 |
| Median 50% | 50% | 0,15 | 2,76 |
| 75% | 25% | 0,12 | 3,05 |
| 84% | 16% | 0,10 | 3,27 |
| 90% | 10% | 0,09 | 3,43 |
| 95% | 5% | 0,07 | 3,83 |

Moments Statistics

| | |
|------------------------|------|
| Mean | 2,82 |
| Sorting | 0,48 |
| Skewness | 0,20 |
| Kurtosis | 1,45 |
| Uniformity Coefficient | 1,69 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

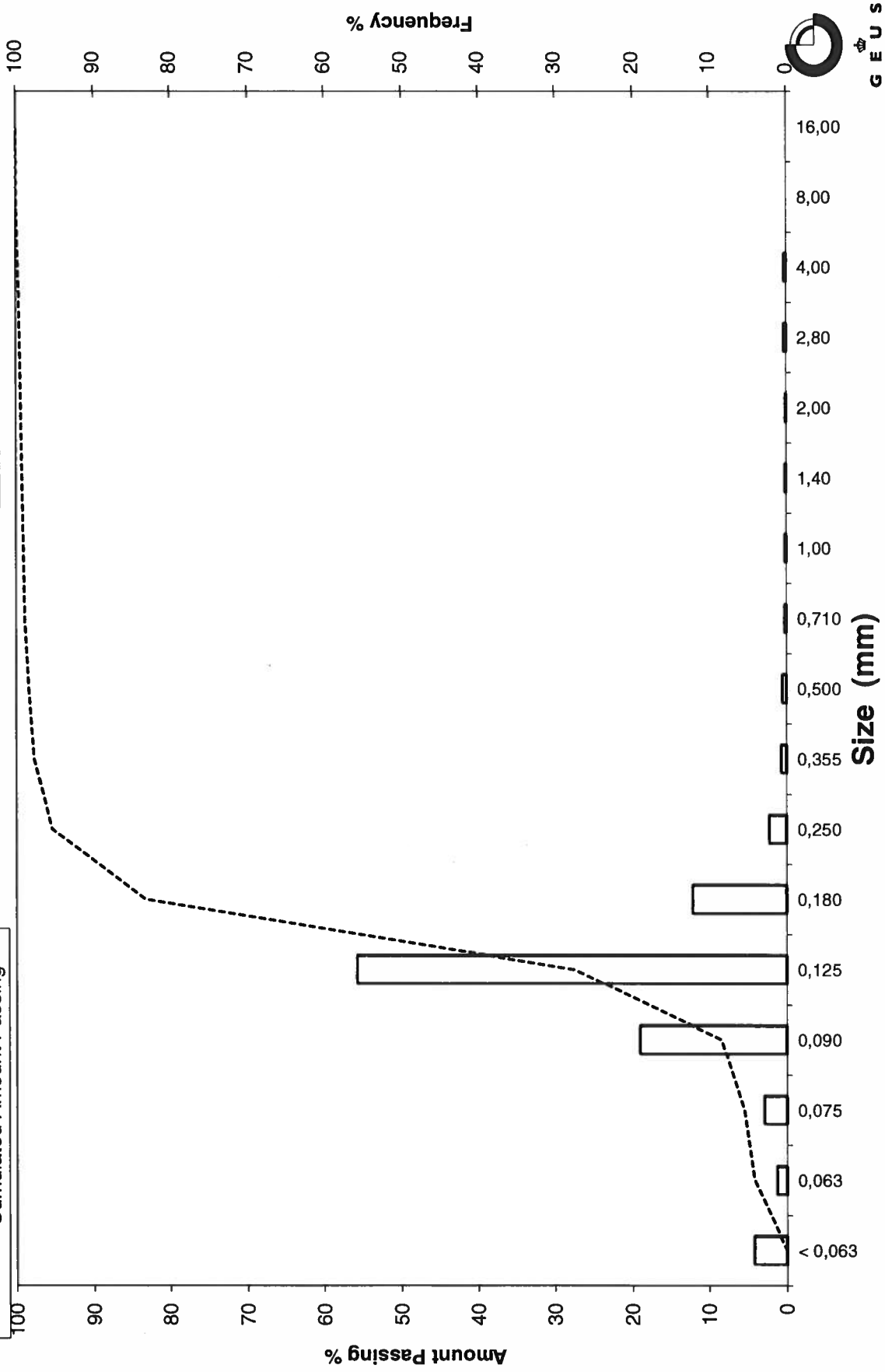
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_37, 400-420

Frequency Percent
 Cumulated Amount Passing



G E U S

Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_37, 490-510
Lab. Id: 200604
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks:



Total Weight 103,3 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 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 |
| 2,80 | -1,49 | 0,00 | 0,00 | 100,00 |
| 2,00 | -1,00 | 0,00 | 0,00 | 100,00 |
| 1,40 | -0,49 | 0,06 | 0,06 | 99,94 |
| 1,00 | 0,00 | 0,17 | 0,16 | 99,78 |
| 0,710 | 0,49 | 0,14 | 0,14 | 99,64 |
| 0,500 | 1,00 | 0,29 | 0,28 | 99,36 |
| 0,355 | 1,49 | 0,48 | 0,46 | 98,90 |
| 0,250 | 2,00 | 1,28 | 1,24 | 97,66 |
| 0,180 | 2,47 | 9,09 | 8,80 | 88,86 |
| 0,125 | 3,00 | 60,06 | 58,14 | 30,72 |
| 0,090 | 3,47 | 21,94 | 21,24 | 9,48 |
| 0,075 | 3,74 | 3,49 | 3,38 | 6,10 |
| 0,063 | 3,99 | 1,47 | 1,42 | 4,68 |
| < 0,063 | > 3,99 | 4,83 | 4,68 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| Size Class | Weight % |
|----------------------------------|---------------|
| Silt and clay (< 0,063 mm) | 4,68 |
| Sand, fine (0,063 mm - 0,200 mm) | 86,70 |
| Sand, medium (0,2 mm - 0,6 mm) | 8,12 |
| Sand, coarse (0,6 mm - 2 mm) | 0,51 |
| Gravel (> 2 mm) | 0,00 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,23 | 2,13 |
| 16% | 84% | 0,18 | 2,51 |
| 25% | 75% | 0,17 | 2,58 |
| 40% | 60% | 0,15 | 2,71 |
| Median 50% | 50% | 0,14 | 2,80 |
| 75% | 25% | 0,12 | 3,11 |
| 84% | 16% | 0,10 | 3,31 |
| 90% | 10% | 0,09 | 3,46 |
| 95% | 5% | 0,07 | 3,93 |

Moments Statistics

| | |
|------------------------|------|
| Mean | 2,88 |
| Sorting | 0,47 |
| Skewness | 0,26 |
| Kurtosis | 1,39 |
| Uniformity Coefficient | 1,68 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

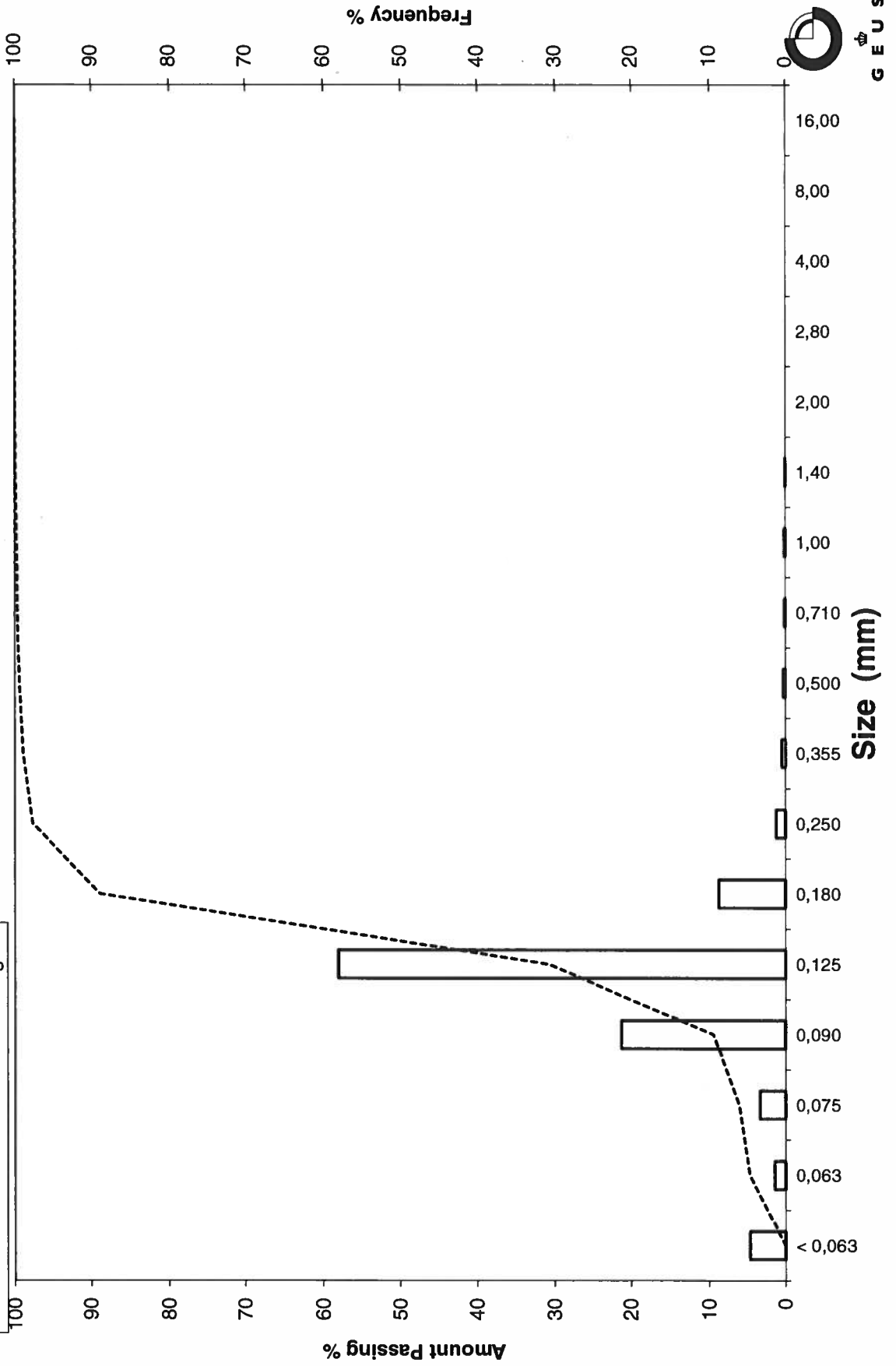
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_37, 490-510

Frequency Percent
 Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_38, 0-20
Lab. Id: 200605
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >4mm består af skaller



Total Weight 120,83 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,08 | 0,07 | 99,93 |
| 4,00 | -2,00 | 0,03 | 0,02 | 99,91 |
| 2,80 | -1,49 | 0,69 | 0,57 | 99,34 |
| 2,00 | -1,00 | 0,79 | 0,65 | 98,68 |
| 1,40 | -0,49 | 1,12 | 0,93 | 97,76 |
| 1,00 | 0,00 | 1,29 | 1,07 | 96,69 |
| 0,710 | 0,49 | 2,54 | 2,10 | 94,59 |
| 0,500 | 1,00 | 9,98 | 8,26 | 86,33 |
| 0,355 | 1,49 | 25,94 | 21,47 | 64,86 |
| 0,250 | 2,00 | 39,33 | 32,55 | 32,31 |
| 0,180 | 2,47 | 19,92 | 16,49 | 15,82 |
| 0,125 | 3,00 | 13,01 | 10,77 | 5,06 |
| 0,090 | 3,47 | 4,94 | 4,09 | 0,97 |
| 0,075 | 3,74 | 0,33 | 0,27 | 0,70 |
| 0,063 | 3,99 | 0,15 | 0,12 | 0,57 |
| < 0,063 | > 3,99 | 0,69 | 0,57 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 0,57 |
| Sand, fine (0,063 mm - 0,200 mm): | 19,96 |
| Sand, medium (0,2 mm - 0,6 mm): | 69,73 |
| Sand, coarse (0,6 mm - 2 mm): | 8,42 |
| Gravel (> 2 mm): | 1,32 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,77 | 0,38 |
| 16% | 84% | 0,48 | 1,05 |
| 25% | 75% | 0,42 | 1,24 |
| 40% | 60% | 0,34 | 1,56 |
| Median 50% | 50% | 0,31 | 1,70 |
| 75% | 25% | 0,22 | 2,19 |
| 84% | 16% | 0,18 | 2,47 |
| 90% | 10% | 0,15 | 2,73 |
| 95% | 5% | 0,12 | 3,01 |

Moments Statistics

| | |
|------------------------|------|
| Mean | 1,74 |
| Sorting | 0,75 |
| Skewness | 0,03 |
| Kurtosis | 1,13 |
| Uniformity Coefficient | 2,26 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

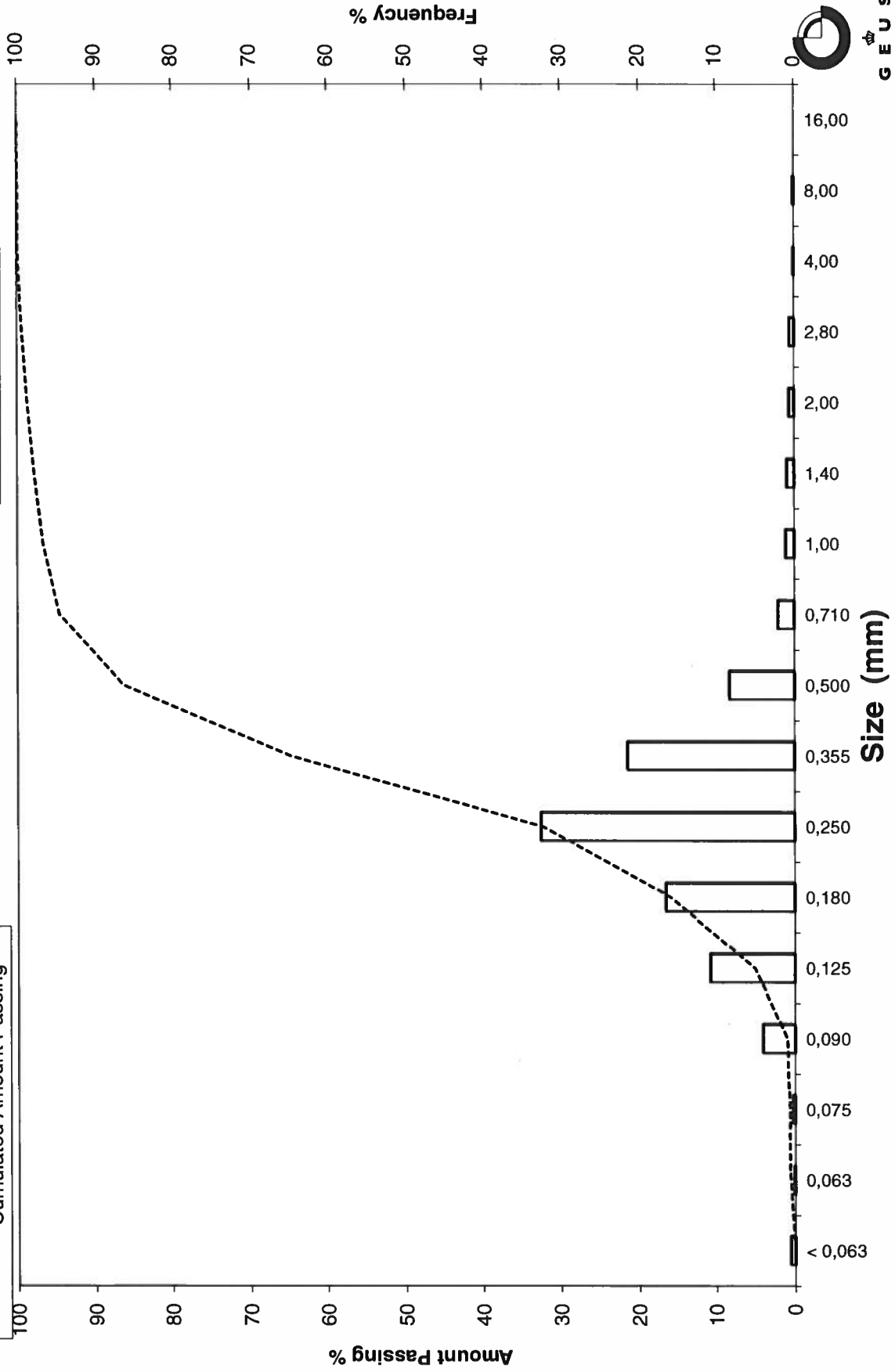
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_38, 0-20

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_38, 100-120
Lab. Id: 200606
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks:



Total Weight 120,03 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,00 | 0,00 | 100,00 |
| 4,00 | -2,00 | 0,16 | 0,13 | 99,87 |
| 2,80 | -1,49 | 0,14 | 0,12 | 99,75 |
| 2,00 | -1,00 | 0,42 | 0,35 | 99,40 |
| 1,40 | -0,49 | 0,42 | 0,35 | 99,05 |
| 1,00 | 0,00 | 1,06 | 0,88 | 98,17 |
| 0,710 | 0,49 | 2,43 | 2,02 | 96,14 |
| 0,500 | 1,00 | 7,69 | 6,41 | 89,74 |
| 0,355 | 1,49 | 21,54 | 17,95 | 71,79 |
| 0,250 | 2,00 | 37,21 | 31,00 | 40,79 |
| 0,180 | 2,47 | 25,00 | 20,83 | 19,96 |
| 0,125 | 3,00 | 15,76 | 13,13 | 6,83 |
| 0,090 | 3,47 | 6,33 | 5,27 | 1,56 |
| 0,075 | 3,74 | 0,53 | 0,44 | 1,12 |
| 0,063 | 3,99 | 0,23 | 0,19 | 0,92 |
| < 0,063 | > 3,99 | 1,11 | 0,92 | 0,00 |

Sieve Analysis

Gravel
Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 0,92 |
| Sand, fine (0,063 mm - 0,200 mm): | 24,99 |
| Sand, medium (0,2 mm - 0,6 mm): | 66,87 |
| Sand, coarse (0,6 mm - 2 mm): | 6,61 |
| Gravel (> 2 mm): | 0,60 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,67 | 0,57 |
| 16% | 84% | 0,45 | 1,14 |
| 25% | 75% | 0,38 | 1,39 |
| 40% | 60% | 0,32 | 1,67 |
| Median 50% | 50% | 0,28 | 1,83 |
| 75% | 25% | 0,20 | 2,34 |
| 84% | 16% | 0,16 | 2,61 |
| 90% | 10% | 0,14 | 2,85 |
| 95% | 5% | 0,11 | 3,15 |

Moments Statistics

| | |
|------------------------|------|
| Mean | 1,86 |
| Sorting | 0,76 |
| Skewness | 0,04 |
| Kurtosis | 1,11 |
| Uniformity Coefficient | 2,28 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

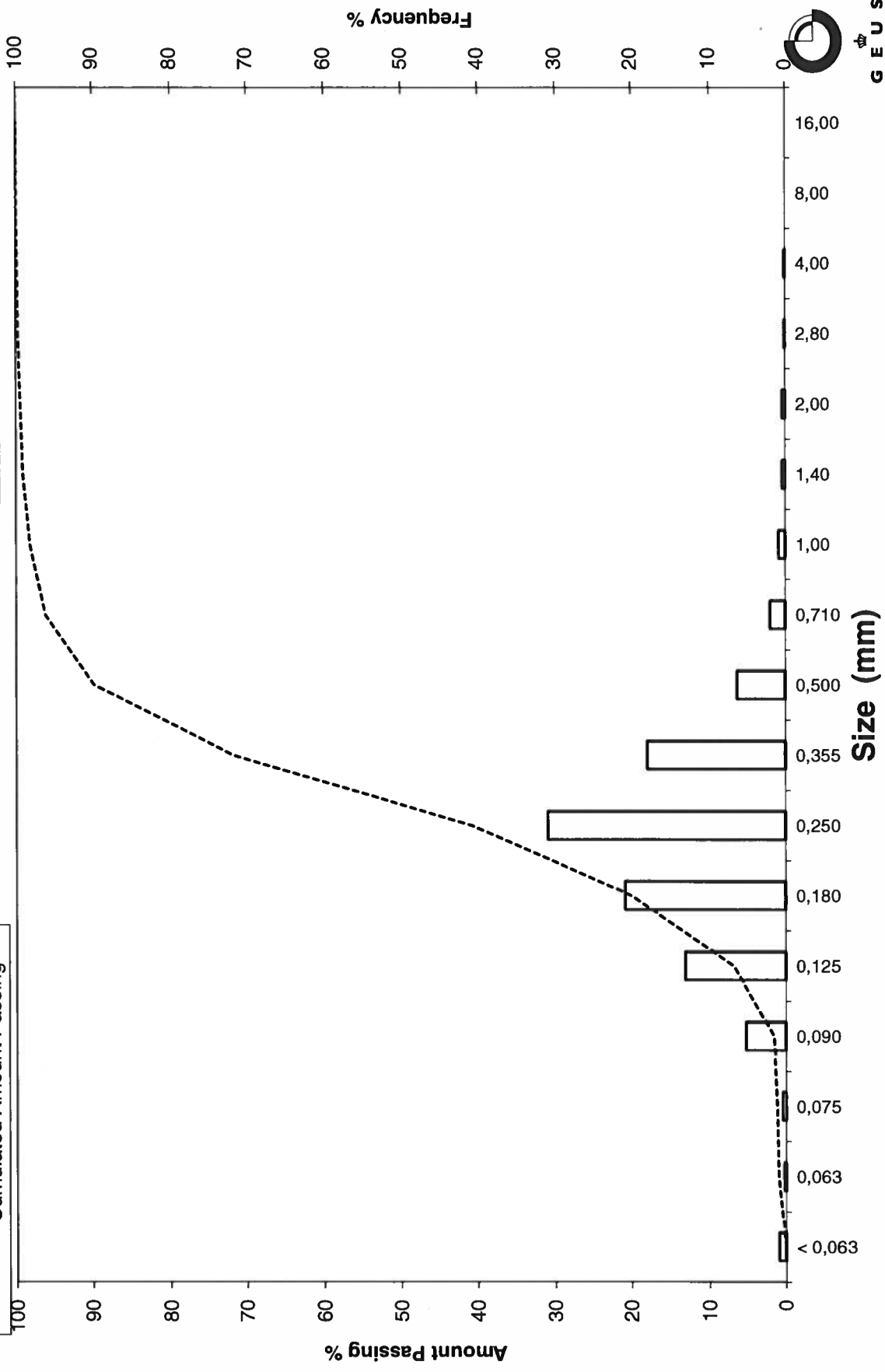
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_38, 100-120

Frequency Percent
 Cumulated Amount Passing



G E U S

Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_38, 200-220
Lab. Id: 200607
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >2,8mm består af skaller



Total Weight 117,94 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,00 | 0,00 | 100,00 |
| 4,00 | -2,00 | 0,16 | 0,14 | 99,86 |
| 2,80 | -1,49 | 0,13 | 0,11 | 99,75 |
| 2,00 | -1,00 | 0,16 | 0,14 | 99,62 |
| 1,40 | -0,49 | 0,39 | 0,33 | 99,29 |
| 1,00 | 0,00 | 0,58 | 0,49 | 98,80 |
| 0,710 | 0,49 | 1,07 | 0,91 | 97,89 |
| 0,500 | 1,00 | 3,77 | 3,20 | 94,69 |
| 0,355 | 1,49 | 11,66 | 9,89 | 84,81 |
| 0,250 | 2,00 | 22,97 | 19,48 | 65,33 |
| 0,180 | 2,47 | 25,78 | 21,86 | 43,47 |
| 0,125 | 3,00 | 34,85 | 29,55 | 13,92 |
| 0,090 | 3,47 | 13,43 | 11,39 | 2,54 |
| 0,075 | 3,74 | 0,92 | 0,78 | 1,76 |
| 0,063 | 3,99 | 0,42 | 0,36 | 1,40 |
| < 0,063 | > 3,99 | 1,65 | 1,40 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 1,40 |
| Sand, fine (0,063 mm - 0,200 mm): | 48,32 |
| Sand, medium (0,2 mm - 0,6 mm): | 46,50 |
| Sand, coarse (0,6 mm - 2 mm): | 3,40 |
| Gravel (> 2 mm): | 0,38 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,52 | 0,94 |
| 16% | 84% | 0,35 | 1,51 |
| 25% | 75% | 0,30 | 1,73 |
| 40% | 60% | 0,23 | 2,10 |
| Median 50% | 50% | 0,20 | 2,32 |
| 75% | 25% | 0,15 | 2,78 |
| 84% | 16% | 0,13 | 2,96 |
| 90% | 10% | 0,11 | 3,15 |
| 95% | 5% | 0,10 | 3,36 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 2,26 |
| Sorting | 0,73 |
| Skewness | -0,12 |
| Kurtosis | 0,94 |
| Uniformity Coefficient | 2,06 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

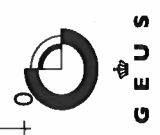
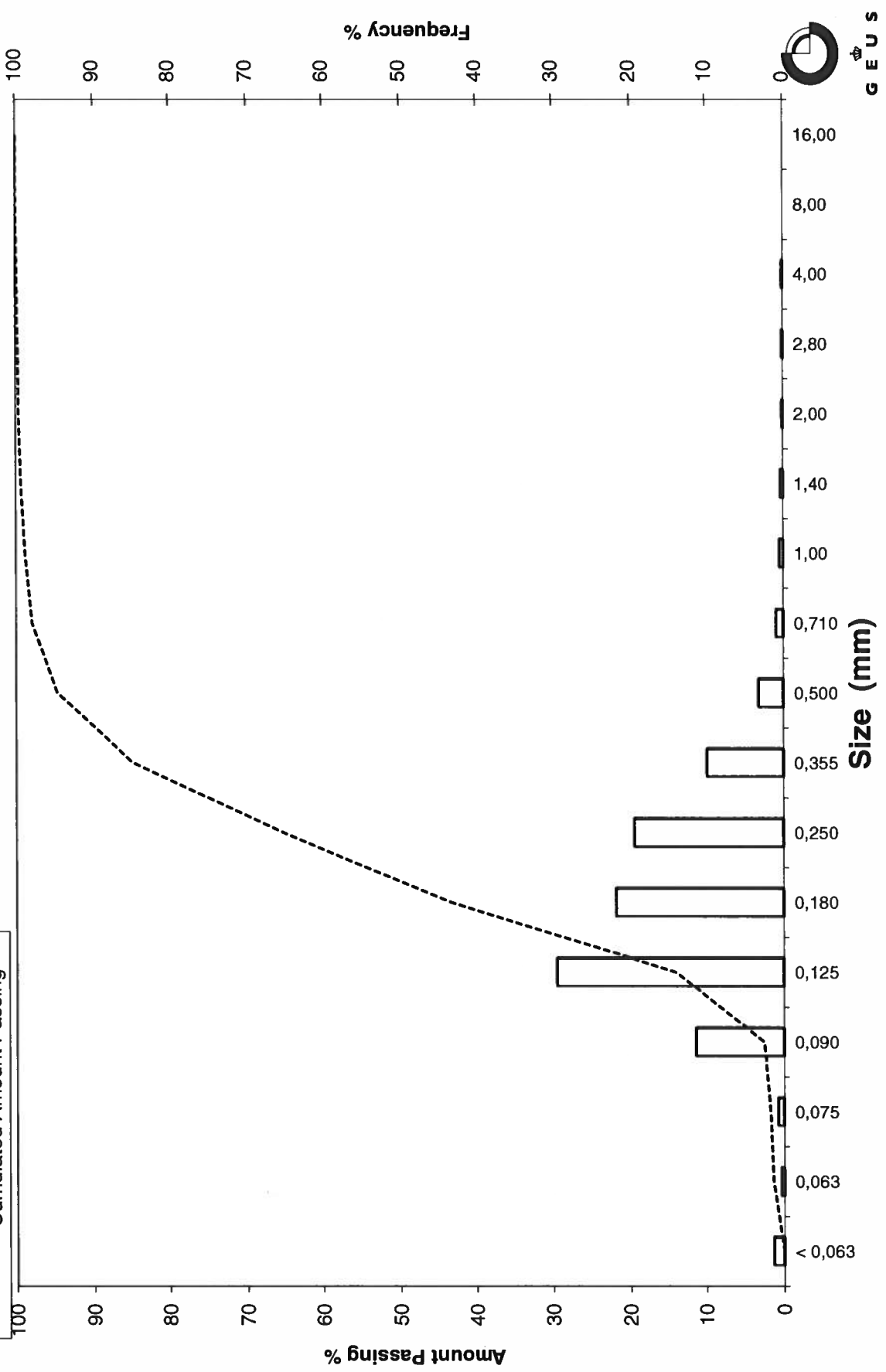
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_38, 200-220

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_38, 300-320
Lab. Id: 200608
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks:



Total Weight 110,63 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 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 |
| 2,80 | -1,49 | 0,00 | 0,00 | 100,00 |
| 2,00 | -1,00 | 0,00 | 0,00 | 100,00 |
| 1,40 | -0,49 | 0,03 | 0,03 | 99,97 |
| 1,00 | 0,00 | 0,13 | 0,12 | 99,86 |
| 0,710 | 0,49 | 0,17 | 0,15 | 99,70 |
| 0,500 | 1,00 | 0,32 | 0,29 | 99,41 |
| 0,355 | 1,49 | 0,54 | 0,49 | 98,92 |
| 0,250 | 2,00 | 1,86 | 1,68 | 97,24 |
| 0,180 | 2,47 | 10,24 | 9,26 | 87,99 |
| 0,125 | 3,00 | 48,47 | 43,81 | 44,17 |
| 0,090 | 3,47 | 32,86 | 29,70 | 14,47 |
| 0,075 | 3,74 | 5,24 | 4,74 | 9,74 |
| 0,063 | 3,99 | 2,33 | 2,11 | 7,63 |
| < 0,063 | > 3,99 | 8,44 | 7,63 | 0,00 |

Sieve Analysis

Gravel
Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 7,63 |
| Sand, fine (0,063 mm - 0,200 mm): | 83,00 |
| Sand, medium (0,2 mm - 0,6 mm): | 8,92 |
| Sand, coarse (0,6 mm - 2 mm): | 0,45 |
| Gravel (> 2 mm): | 0,00 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,23 | 2,10 |
| 16% | 84% | 0,17 | 2,51 |
| 25% | 75% | 0,16 | 2,61 |
| 40% | 60% | 0,14 | 2,79 |
| Median 50% | 50% | 0,13 | 2,92 |
| 75% | 25% | 0,10 | 3,29 |
| 84% | 16% | 0,09 | 3,45 |
| 90% | 10% | 0,08 | 3,72 |
| 95% | 5% | ----- | ----- |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 2,96 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | 1,91 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

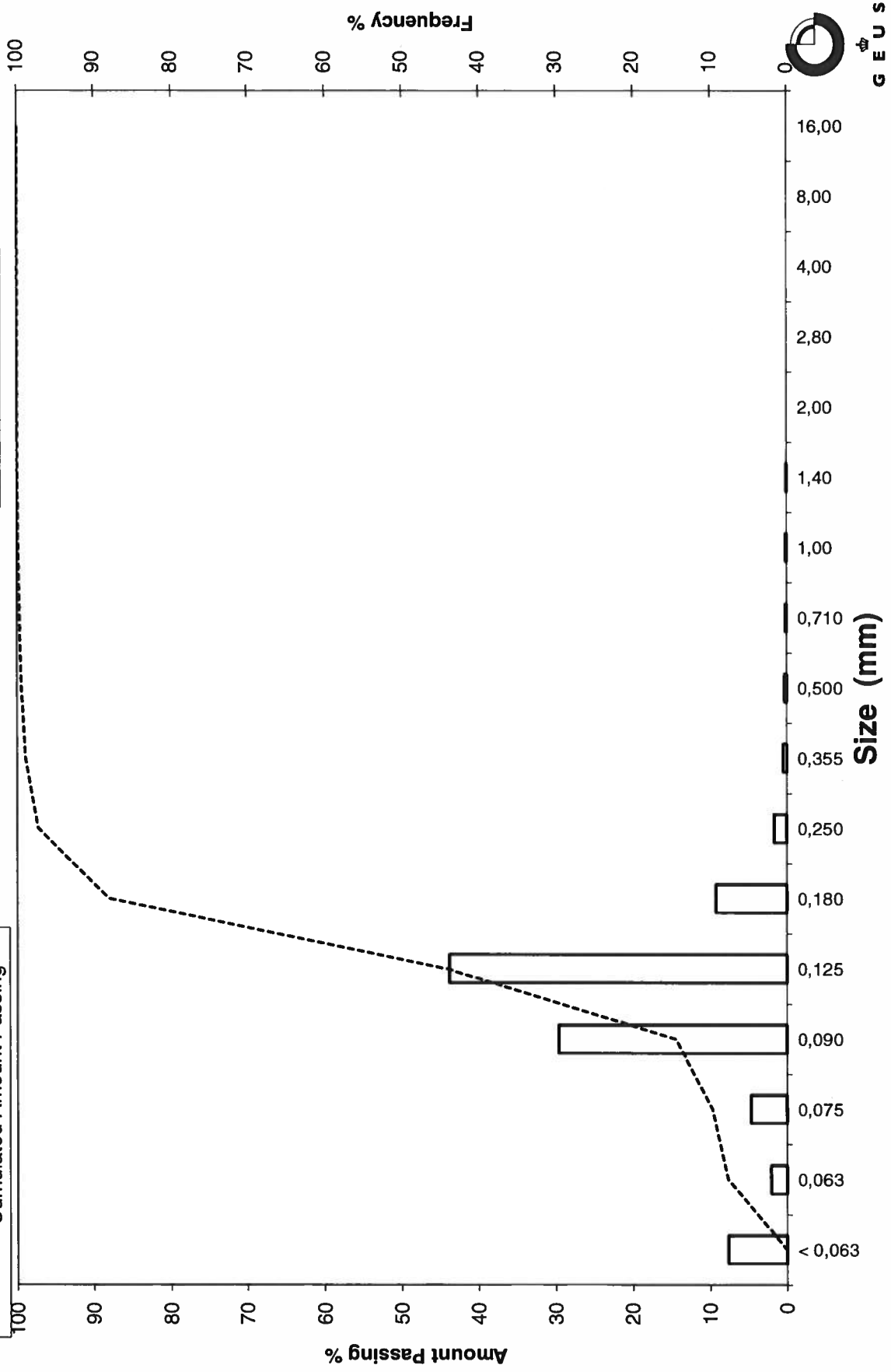
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_38, 300-320

Frequency Percent
 Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_38, 400-420
Lab. Id: 200609
Projekt Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks:



Total Weight 321,28 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------------|
| mm | Φ | g | % | |
| 16,00 | -4,00 | 8,10 | 2,52 | 97,48 |
| 8,00 | -3,00 | 98,42 | 30,63 | 66,85 |
| 4,00 | -2,00 | 87,11 | 27,11 | 39,73 |
| 2,80 | -1,49 | 30,37 | 9,45 | 30,28 |
| 2,00 | -1,00 | 15,34 | 4,77 | 25,50 |
| 1,40 | -0,49 | 10,46 | 3,26 | 22,25 |
| 1,00 | 0,00 | 7,07 | 2,20 | 20,05 |
| 0,710 | 0,49 | 5,57 | 1,73 | 18,31 |
| 0,500 | 1,00 | 7,24 | 2,25 | 16,06 |
| 0,355 | 1,49 | 9,12 | 2,84 | 13,22 |
| 0,250 | 2,00 | 10,60 | 3,30 | 9,92 |
| 0,180 | 2,47 | 6,18 | 1,92 | 8,00 |
| 0,125 | 3,00 | 12,49 | 3,89 | 4,11 |
| 0,090 | 3,47 | 8,66 | 2,70 | 1,42 |
| 0,075 | 3,74 | 1,41 | 0,44 | 0,98 |
| 0,063 | 3,99 | 0,79 | 0,25 | 0,73 |
| < 0,063 | > 3,99 | 2,35 | 0,73 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 0,73 |
| Sand, fine (0,063 mm - 0,200 mm): | 7,82 |
| Sand, medium (0,2 mm - 0,6 mm): | 8,59 |
| Sand, coarse (0,6 mm - 2 mm): | 8,37 |
| Gravel (> 2 mm): | 74,50 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 15,35 | -3,94 |
| 16% | 84% | 12,48 | -3,64 |
| 25% | 75% | 10,13 | -3,34 |
| 40% | 60% | 6,99 | -2,81 |
| Median 50% | 50% | 5,51 | -2,46 |
| 75% | 25% | 1,91 | -0,93 |
| 84% | 16% | 0,50 | 1,01 |
| 90% | 10% | 0,25 | 1,99 |
| 95% | 5% | 0,14 | 2,86 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | -1,70 |
| Sorting | 2,19 |
| Skewness | 0,53 |
| Kurtosis | 1,16 |
| Uniformity Coefficient | 27,69 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

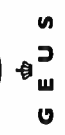
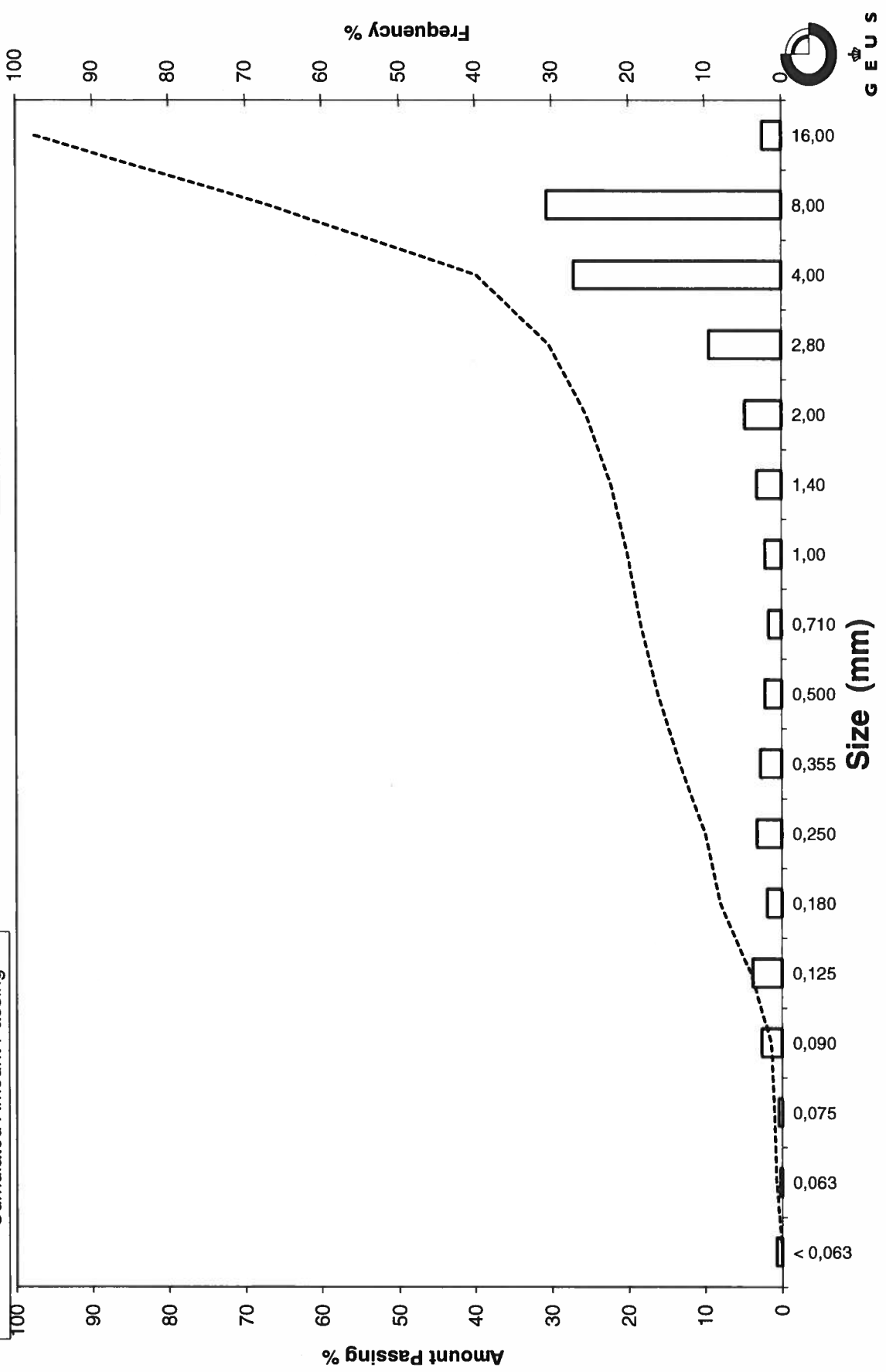
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_38, 400-420

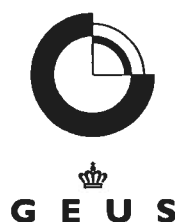
Legend:
 [Bar] Frequency Percent
 [Dashed Line] Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_38, 500-520
Lab. Id: 200610
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >2,8mm består af skaller



Total Weight 102,71 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,00 | 0,00 | 100,00 |
| 4,00 | -2,00 | 0,07 | 0,07 | 99,93 |
| 2,80 | -1,49 | 0,04 | 0,04 | 99,89 |
| 2,00 | -1,00 | 0,19 | 0,18 | 99,71 |
| 1,40 | -0,49 | 0,08 | 0,08 | 99,63 |
| 1,00 | 0,00 | 0,31 | 0,30 | 99,33 |
| 0,710 | 0,49 | 0,60 | 0,58 | 98,74 |
| 0,500 | 1,00 | 1,40 | 1,36 | 97,38 |
| 0,355 | 1,49 | 3,46 | 3,37 | 94,01 |
| 0,250 | 2,00 | 6,33 | 6,16 | 87,85 |
| 0,180 | 2,47 | 8,48 | 8,26 | 79,59 |
| 0,125 | 3,00 | 31,56 | 30,73 | 48,87 |
| 0,090 | 3,47 | 32,44 | 31,58 | 17,28 |
| 0,075 | 3,74 | 6,84 | 6,66 | 10,62 |
| 0,063 | 3,99 | 3,55 | 3,46 | 7,17 |
| < 0,063 | > 3,99 | 7,36 | 7,17 | 0,00 |

Sieve Analysis

Gravel
Sand

Size Classes (DGF-Bulletin 1 1988)

| Size Class | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 7,17 |
| Sand, fine (0,063 mm - 0,200 mm): | 74,79 |
| Sand, medium (0,2 mm - 0,6 mm): | 16,08 |
| Sand, coarse (0,6 mm - 2 mm): | 1,68 |
| Gravel (> 2 mm): | 0,29 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,40 | 1,33 |
| 16% | 84% | 0,22 | 2,20 |
| 25% | 75% | 0,17 | 2,54 |
| 40% | 60% | 0,14 | 2,79 |
| Median 50% | 50% | 0,13 | 2,98 |
| 75% | 25% | 0,10 | 3,34 |
| 84% | 16% | 0,09 | 3,52 |
| 90% | 10% | 0,07 | 3,78 |
| 95% | 5% | ----- | ----- |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 2,90 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | 1,99 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

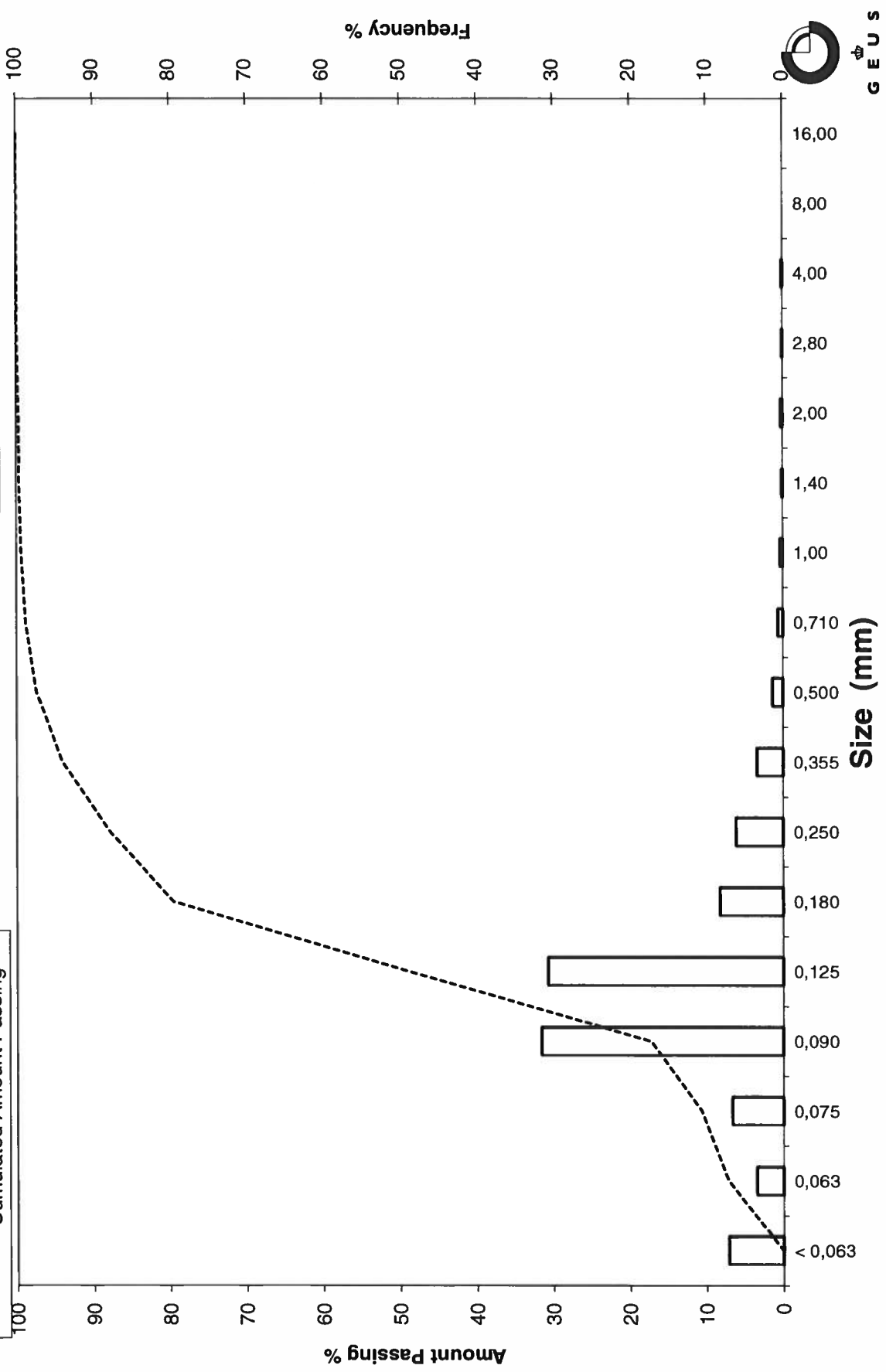
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_38, 500-520

Frequency Percent
 Cumulated Amount Passing



G E U S

Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_39, 0-20
Lab. Id: 200611
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks:



Total Weight 107,55 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 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 |
| 2,80 | -1,49 | 0,00 | 0,00 | 100,00 |
| 2,00 | -1,00 | 0,15 | 0,14 | 99,86 |
| 1,40 | -0,49 | 0,16 | 0,15 | 99,71 |
| 1,00 | 0,00 | 0,44 | 0,41 | 99,30 |
| 0,710 | 0,49 | 1,02 | 0,95 | 98,35 |
| 0,500 | 1,00 | 4,71 | 4,38 | 93,97 |
| 0,355 | 1,49 | 8,08 | 7,51 | 86,46 |
| 0,250 | 2,00 | 14,61 | 13,58 | 72,88 |
| 0,180 | 2,47 | 36,40 | 33,84 | 39,03 |
| 0,125 | 3,00 | 32,70 | 30,40 | 8,63 |
| 0,090 | 3,47 | 7,76 | 7,22 | 1,41 |
| 0,075 | 3,74 | 0,44 | 0,41 | 1,00 |
| 0,063 | 3,99 | 0,16 | 0,15 | 0,86 |
| < 0,063 | > 3,99 | 0,92 | 0,86 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 0,86 |
| Sand, fine (0,063 mm - 0,200 mm): | 47,85 |
| Sand, medium (0,2 mm - 0,6 mm): | 47,36 |
| Sand, coarse (0,6 mm - 2 mm): | 3,80 |
| Gravel (> 2 mm): | 0,14 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,55 | 0,86 |
| 16% | 84% | 0,34 | 1,57 |
| 25% | 75% | 0,27 | 1,91 |
| 40% | 60% | 0,22 | 2,16 |
| Median 50% | 50% | 0,20 | 2,30 |
| 75% | 25% | 0,15 | 2,69 |
| 84% | 16% | 0,14 | 2,85 |
| 90% | 10% | 0,13 | 2,97 |
| 95% | 5% | 0,11 | 3,22 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 2,24 |
| Sorting | 0,68 |
| Skewness | -0,18 |
| Kurtosis | 1,23 |
| Uniformity Coefficient | 1,75 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

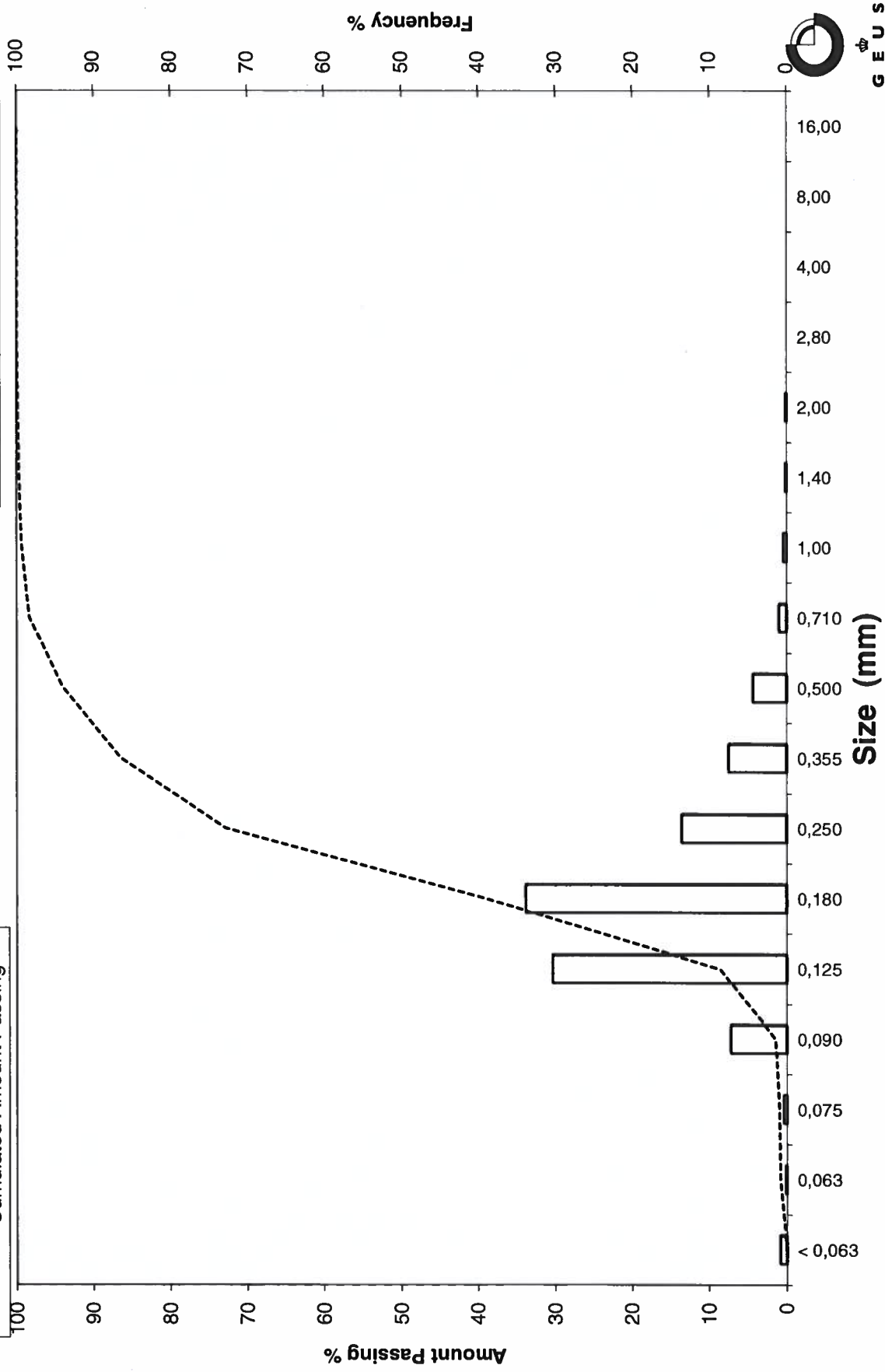
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_39, 0-20

Legend:
□ Frequency Percent
- - - Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_39, 100-120
Lab. Id: 200612
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >4mm består af skaller



Total Weight 118,2 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,74 | 0,63 | 99,37 |
| 4,00 | -2,00 | 0,13 | 0,11 | 99,26 |
| 2,80 | -1,49 | 0,14 | 0,12 | 99,15 |
| 2,00 | -1,00 | 0,51 | 0,43 | 98,71 |
| 1,40 | -0,49 | 0,48 | 0,41 | 98,31 |
| 1,00 | 0,00 | 1,10 | 0,93 | 97,38 |
| 0,710 | 0,49 | 1,97 | 1,67 | 95,71 |
| 0,500 | 1,00 | 8,32 | 7,04 | 88,67 |
| 0,355 | 1,49 | 13,34 | 11,29 | 77,39 |
| 0,250 | 2,00 | 15,34 | 12,98 | 64,41 |
| 0,180 | 2,47 | 31,64 | 26,77 | 37,64 |
| 0,125 | 3,00 | 33,33 | 28,20 | 9,44 |
| 0,090 | 3,47 | 8,51 | 7,20 | 2,24 |
| 0,075 | 3,74 | 0,68 | 0,58 | 1,67 |
| 0,063 | 3,99 | 0,33 | 0,28 | 1,39 |
| < 0,063 | > 3,99 | 1,64 | 1,39 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 1,39 |
| Sand, fine (0,063 mm - 0,200 mm): | 43,90 |
| Sand, medium (0,2 mm - 0,6 mm): | 46,74 |
| Sand, coarse (0,6 mm - 2 mm): | 6,69 |
| Gravel (> 2 mm): | 1,29 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,69 | 0,54 |
| 16% | 84% | 0,44 | 1,18 |
| 25% | 75% | 0,34 | 1,57 |
| 40% | 60% | 0,24 | 2,07 |
| Median 50% | 50% | 0,21 | 2,24 |
| 75% | 25% | 0,16 | 2,69 |
| 84% | 16% | 0,14 | 2,86 |
| 90% | 10% | 0,13 | 2,99 |
| 95% | 5% | 0,10 | 3,27 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 2,09 |
| Sorting | 0,83 |
| Skewness | -0,25 |
| Kurtosis | 1,01 |
| Uniformity Coefficient | 1,89 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

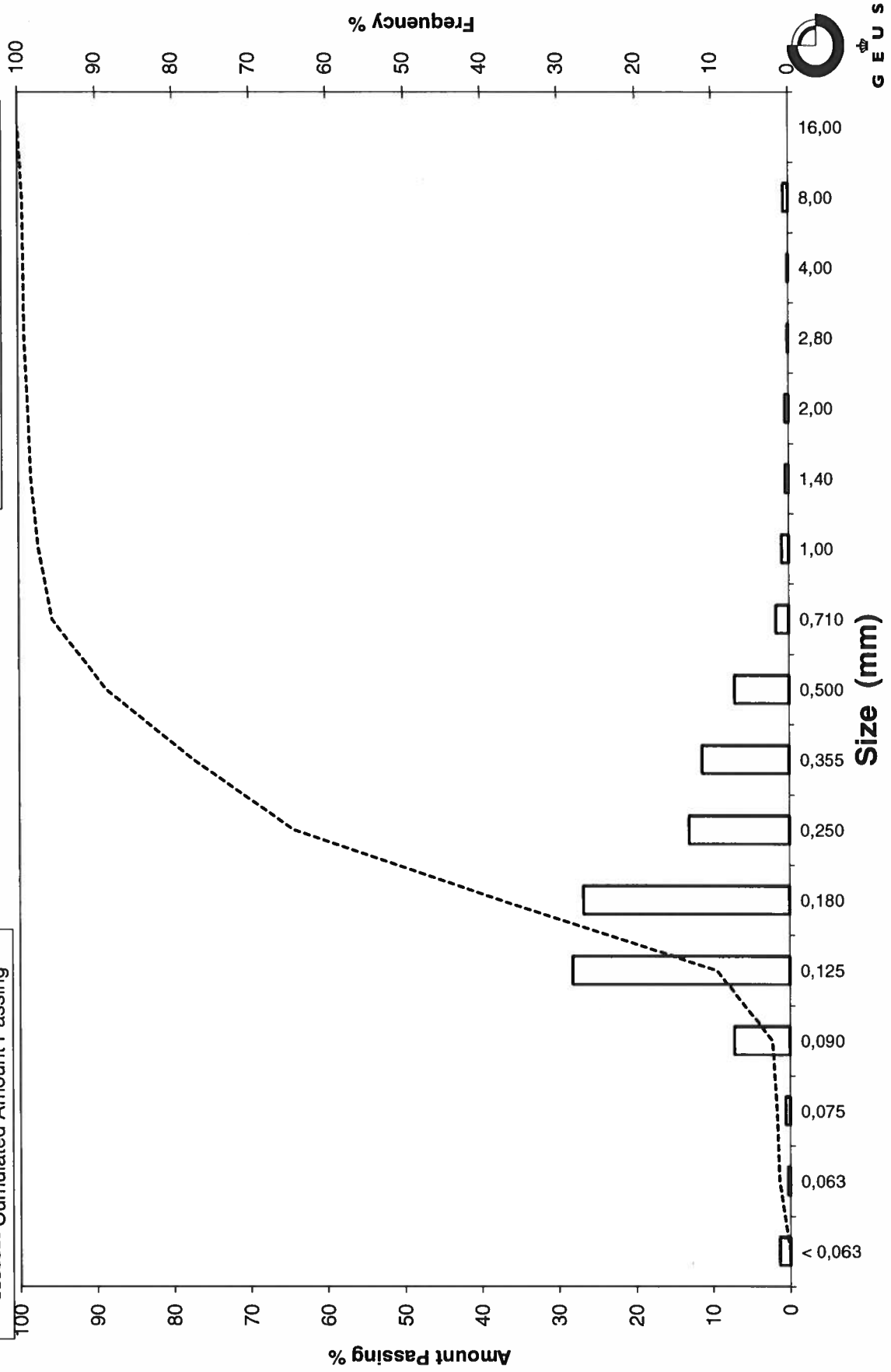
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_39, 100-120

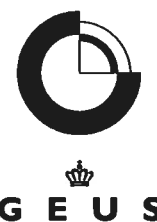
Legend:
▬ Frequency Percent
- - - Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_39, 200-220
Lab. Id: 200613
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks:



Total Weight 116,83 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 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 |
| 2,80 | -1,49 | 0,00 | 0,00 | 100,00 |
| 2,00 | -1,00 | 0,00 | 0,00 | 100,00 |
| 1,40 | -0,49 | 0,03 | 0,03 | 99,97 |
| 1,00 | 0,00 | 0,05 | 0,04 | 99,93 |
| 0,710 | 0,49 | 0,10 | 0,09 | 99,85 |
| 0,500 | 1,00 | 0,42 | 0,36 | 99,49 |
| 0,355 | 1,49 | 1,33 | 1,14 | 98,35 |
| 0,250 | 2,00 | 8,60 | 7,36 | 90,99 |
| 0,180 | 2,47 | 28,13 | 24,08 | 66,91 |
| 0,125 | 3,00 | 60,25 | 51,57 | 15,34 |
| 0,090 | 3,47 | 15,50 | 13,27 | 2,07 |
| 0,075 | 3,74 | 0,91 | 0,78 | 1,29 |
| 0,063 | 3,99 | 0,38 | 0,33 | 0,97 |
| < 0,063 | > 3,99 | 1,13 | 0,97 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 0,97 |
| Sand, fine (0,063 mm - 0,200 mm): | 72,82 |
| Sand, medium (0,2 mm - 0,6 mm): | 25,87 |
| Sand, coarse (0,6 mm - 2 mm): | 0,34 |
| Gravel (> 2 mm): | 0,00 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,31 | 1,70 |
| 16% | 84% | 0,23 | 2,12 |
| 25% | 75% | 0,20 | 2,30 |
| 40% | 60% | 0,17 | 2,53 |
| Median 50% | 50% | 0,16 | 2,63 |
| 75% | 25% | 0,14 | 2,89 |
| 84% | 16% | 0,13 | 2,99 |
| 90% | 10% | 0,11 | 3,17 |
| 95% | 5% | 0,10 | 3,36 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 2,58 |
| Sorting | 0,47 |
| Skewness | -0,14 |
| Kurtosis | 1,15 |
| Uniformity Coefficient | 1,56 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

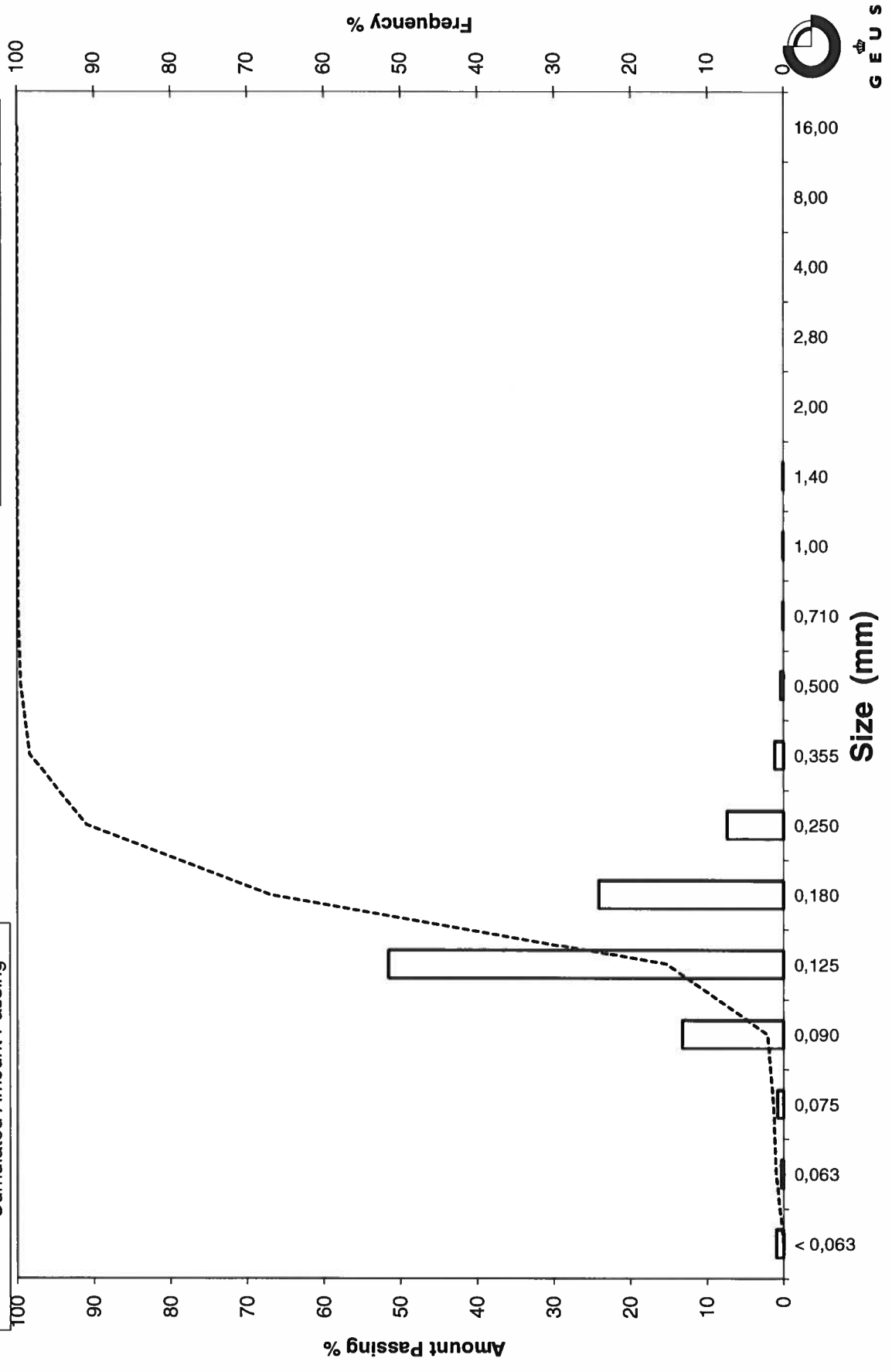
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_39, 200-220

Frequency Percent
 Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_39, 270-290
Lab. Id: 200614
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >2,8mm heraf 0,6g skaller



Total Weight 116,88 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,54 | 0,46 | 99,54 |
| 4,00 | -2,00 | 0,00 | 0,00 | 99,54 |
| 2,80 | -1,49 | 0,12 | 0,10 | 99,44 |
| 2,00 | -1,00 | 0,10 | 0,09 | 99,35 |
| 1,40 | -0,49 | 0,20 | 0,17 | 99,18 |
| 1,00 | 0,00 | 0,37 | 0,32 | 98,86 |
| 0,710 | 0,49 | 0,72 | 0,62 | 98,25 |
| 0,500 | 1,00 | 2,95 | 2,52 | 95,72 |
| 0,355 | 1,49 | 12,77 | 10,93 | 84,80 |
| 0,250 | 2,00 | 33,24 | 28,44 | 56,36 |
| 0,180 | 2,47 | 30,54 | 26,13 | 30,23 |
| 0,125 | 3,00 | 27,08 | 23,17 | 7,06 |
| 0,090 | 3,47 | 7,08 | 6,06 | 1,00 |
| 0,075 | 3,74 | 0,45 | 0,39 | 0,62 |
| 0,063 | 3,99 | 0,14 | 0,12 | 0,50 |
| < 0,063 | > 3,99 | 0,58 | 0,50 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| Size Class | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 0,50 |
| Sand, fine (0,063 mm - 0,200 mm): | 37,20 |
| Sand, medium (0,2 mm - 0,6 mm): | 59,23 |
| Sand, coarse (0,6 mm - 2 mm): | 2,43 |
| Gravel (> 2 mm): | 0,65 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,49 | 1,03 |
| 16% | 84% | 0,35 | 1,51 |
| 25% | 75% | 0,32 | 1,65 |
| 40% | 60% | 0,26 | 1,92 |
| Median 50% | 50% | 0,23 | 2,10 |
| 75% | 25% | 0,17 | 2,58 |
| 84% | 16% | 0,15 | 2,77 |
| 90% | 10% | 0,13 | 2,92 |
| 95% | 5% | 0,11 | 3,14 |

Moments Statistics

| | |
|------------------------|------|
| Mean | 2,13 |
| Sorting | 0,64 |
| Skewness | 0,02 |
| Kurtosis | 0,93 |
| Uniformity Coefficient | 2,00 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

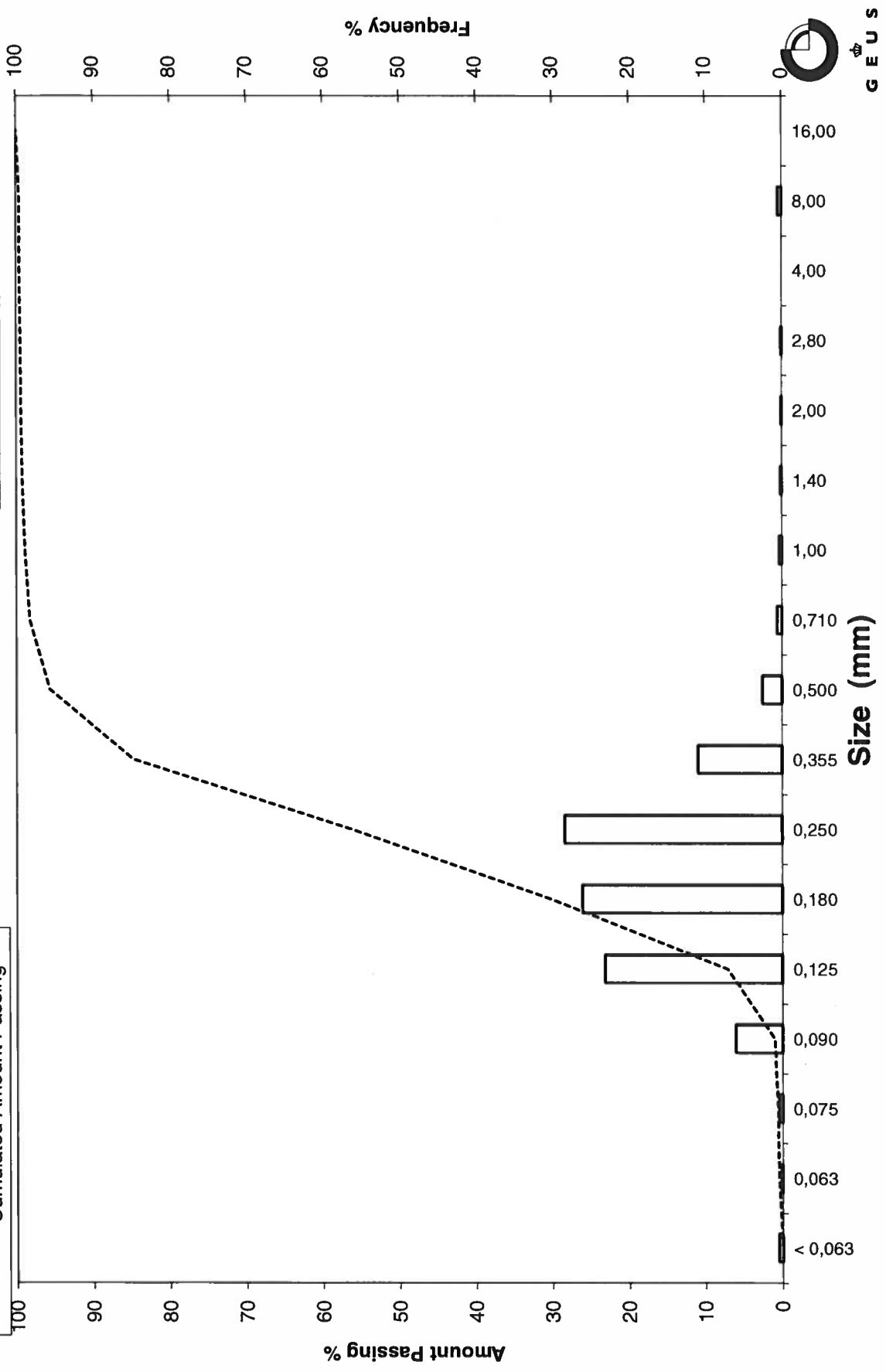
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_39, 270-290

Legend:
 [Bar] Frequency Percent
 [Dashed Line] Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_40, 0-20
Lab. Id: 200615
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: 4mm består af skaller



Total Weight 120,12 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,00 | 0,00 | 100,00 |
| 4,00 | -2,00 | 0,07 | 0,06 | 99,94 |
| 2,80 | -1,49 | 0,00 | 0,00 | 99,94 |
| 2,00 | -1,00 | 0,17 | 0,14 | 99,80 |
| 1,40 | -0,49 | 0,29 | 0,24 | 99,56 |
| 1,00 | 0,00 | 0,64 | 0,53 | 99,03 |
| 0,710 | 0,49 | 1,64 | 1,37 | 97,66 |
| 0,500 | 1,00 | 7,18 | 5,98 | 91,68 |
| 0,355 | 1,49 | 21,64 | 18,02 | 73,67 |
| 0,250 | 2,00 | 42,67 | 35,52 | 38,15 |
| 0,180 | 2,47 | 29,43 | 24,50 | 13,64 |
| 0,125 | 3,00 | 12,57 | 10,46 | 3,18 |
| 0,090 | 3,47 | 2,91 | 2,42 | 0,76 |
| 0,075 | 3,74 | 0,17 | 0,14 | 0,62 |
| 0,063 | 3,99 | 0,05 | 0,04 | 0,57 |
| < 0,063 | > 3,99 | 0,69 | 0,57 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 0,57 |
| Sand, fine (0,063 mm - 0,200 mm): | 20,07 |
| Sand, medium (0,2 mm - 0,6 mm): | 73,88 |
| Sand, coarse (0,6 mm - 2 mm): | 5,27 |
| Gravel (> 2 mm): | 0,20 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,62 | 0,70 |
| 16% | 84% | 0,44 | 1,19 |
| 25% | 75% | 0,37 | 1,45 |
| 40% | 60% | 0,31 | 1,67 |
| Median 50% | 50% | 0,29 | 1,81 |
| 75% | 25% | 0,21 | 2,23 |
| 84% | 16% | 0,19 | 2,42 |
| 90% | 10% | 0,16 | 2,64 |
| 95% | 5% | 0,13 | 2,89 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 1,81 |
| Sorting | 0,64 |
| Skewness | -0,01 |
| Kurtosis | 1,15 |
| Uniformity Coefficient | 1,96 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

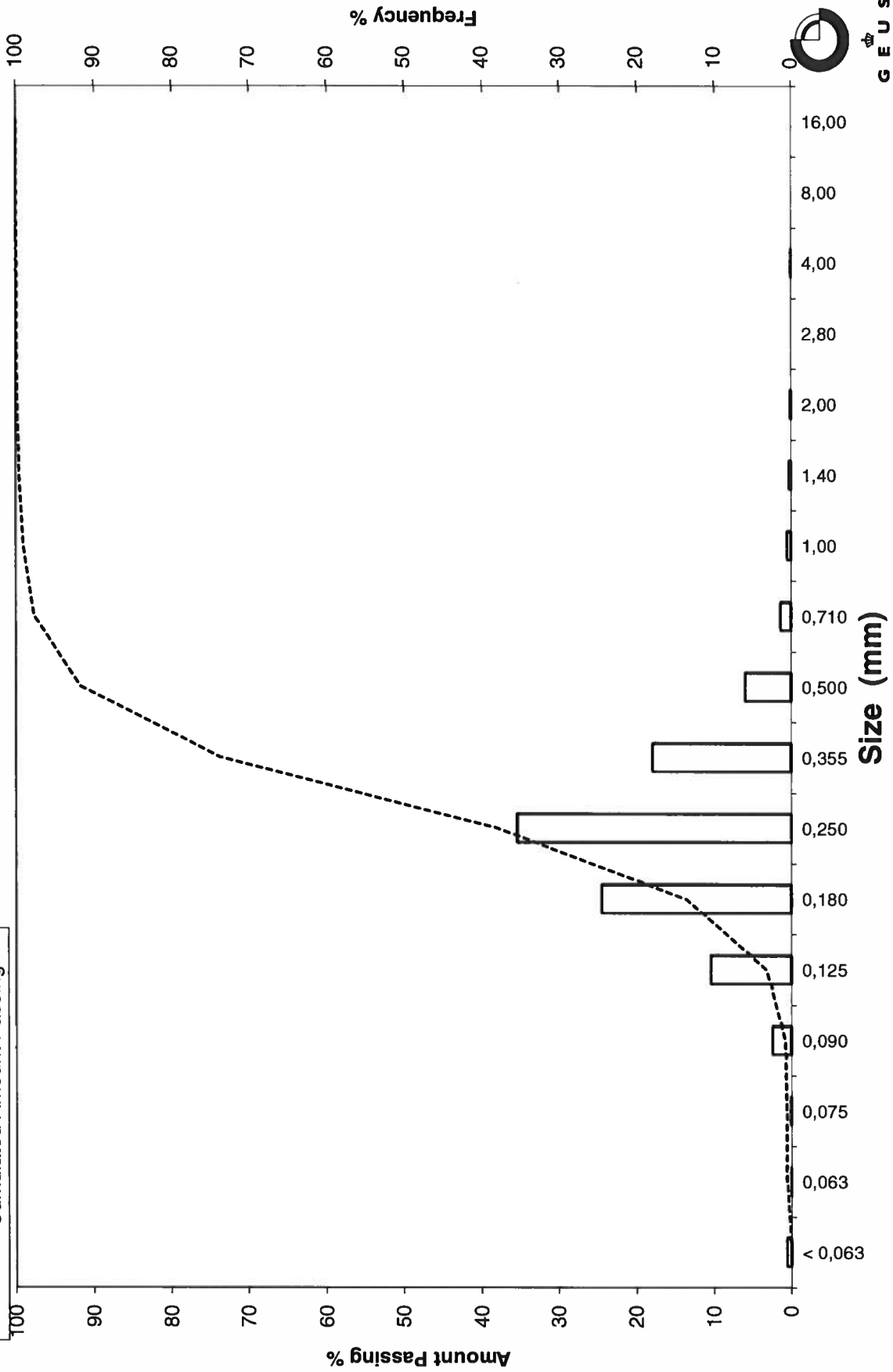
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_40, 0-20

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_40, 100-120
Lab. Id: 200616
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >4mm heraf 0,2g skaller



Total Weight 121,62 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,00 | 0,00 | 100,00 |
| 4,00 | -2,00 | 0,35 | 0,29 | 99,71 |
| 2,80 | -1,49 | 0,08 | 0,07 | 99,65 |
| 2,00 | -1,00 | 0,33 | 0,27 | 99,38 |
| 1,40 | -0,49 | 0,17 | 0,14 | 99,24 |
| 1,00 | 0,00 | 0,58 | 0,48 | 98,76 |
| 0,710 | 0,49 | 0,91 | 0,75 | 98,01 |
| 0,500 | 1,00 | 2,70 | 2,22 | 95,79 |
| 0,355 | 1,49 | 9,26 | 7,61 | 88,18 |
| 0,250 | 2,00 | 31,17 | 25,63 | 62,55 |
| 0,180 | 2,47 | 41,62 | 34,22 | 28,33 |
| 0,125 | 3,00 | 25,10 | 20,64 | 7,69 |
| 0,090 | 3,47 | 7,60 | 6,25 | 1,44 |
| 0,075 | 3,74 | 0,52 | 0,43 | 1,01 |
| 0,063 | 3,99 | 0,21 | 0,17 | 0,84 |
| < 0,063 | > 3,99 | 1,02 | 0,84 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 0,84 |
| Sand, fine (0,063 mm - 0,200 mm): | 37,26 |
| Sand, medium (0,2 mm - 0,6 mm): | 58,74 |
| Sand, coarse (0,6 mm - 2 mm): | 2,53 |
| Gravel (> 2 mm): | 0,62 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,48 | 1,04 |
| 16% | 84% | 0,34 | 1,57 |
| 25% | 75% | 0,30 | 1,73 |
| 40% | 60% | 0,24 | 2,03 |
| Median 50% | 50% | 0,22 | 2,16 |
| 75% | 25% | 0,17 | 2,55 |
| 84% | 16% | 0,15 | 2,76 |
| 90% | 10% | 0,13 | 2,93 |
| 95% | 5% | 0,11 | 3,19 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 2,16 |
| Sorting | 0,62 |
| Skewness | -0,01 |
| Kurtosis | 1,08 |
| Uniformity Coefficient | 1,87 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

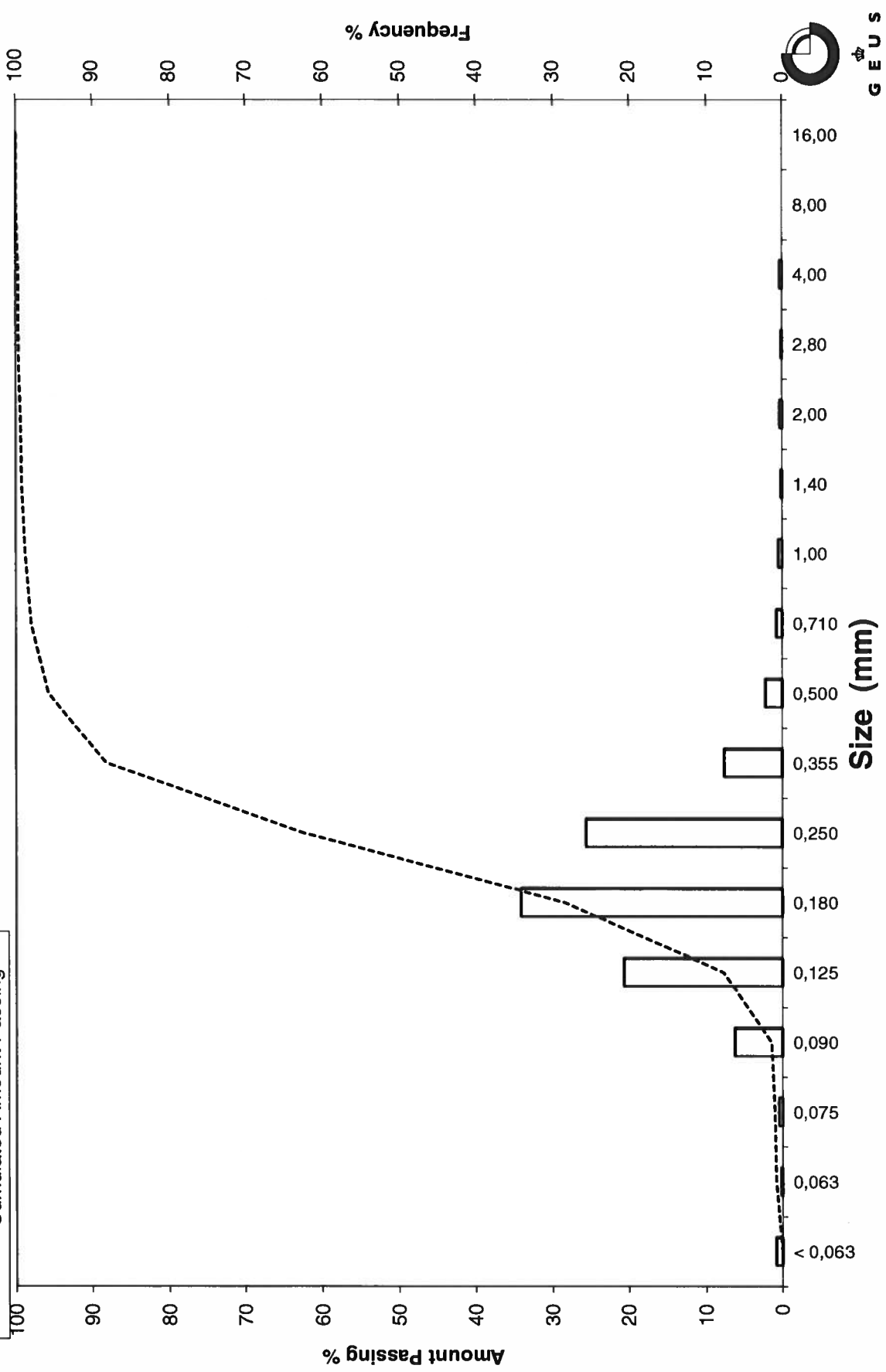
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_40, 100-120

Frequency Percent
 Cumulated Amount Passing



G E U S

Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_40, 200-220
Lab. Id: 200617
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks:



Total Weight 113,9 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 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 |
| 2,80 | -1,49 | 0,00 | 0,00 | 100,00 |
| 2,00 | -1,00 | 0,09 | 0,08 | 99,92 |
| 1,40 | -0,49 | 0,02 | 0,02 | 99,90 |
| 1,00 | 0,00 | 0,09 | 0,08 | 99,82 |
| 0,710 | 0,49 | 0,17 | 0,15 | 99,68 |
| 0,500 | 1,00 | 0,74 | 0,65 | 99,03 |
| 0,355 | 1,49 | 2,96 | 2,60 | 96,43 |
| 0,250 | 2,00 | 7,44 | 6,53 | 89,89 |
| 0,180 | 2,47 | 18,66 | 16,38 | 73,51 |
| 0,125 | 3,00 | 64,69 | 56,80 | 16,72 |
| 0,090 | 3,47 | 17,64 | 15,49 | 1,23 |
| 0,075 | 3,74 | 0,52 | 0,46 | 0,77 |
| 0,063 | 3,99 | 0,12 | 0,11 | 0,67 |
| < 0,063 | > 3,99 | 0,76 | 0,67 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 0,67 |
| Sand, fine (0,063 mm - 0,200 mm): | 77,53 |
| Sand, medium (0,2 mm - 0,6 mm): | 21,14 |
| Sand, coarse (0,6 mm - 2 mm): | 0,59 |
| Gravel (> 2 mm): | 0,08 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,33 | 1,59 |
| 16% | 84% | 0,22 | 2,15 |
| 25% | 75% | 0,19 | 2,42 |
| 40% | 60% | 0,17 | 2,58 |
| Median 50% | 50% | 0,16 | 2,67 |
| 75% | 25% | 0,13 | 2,91 |
| 84% | 16% | 0,12 | 3,02 |
| 90% | 10% | 0,11 | 3,19 |
| 95% | 5% | 0,10 | 3,34 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 2,61 |
| Sorting | 0,48 |
| Skewness | -0,21 |
| Kurtosis | 1,48 |
| Uniformity Coefficient | 1,52 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)
 Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)
 Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)
 Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)
 Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

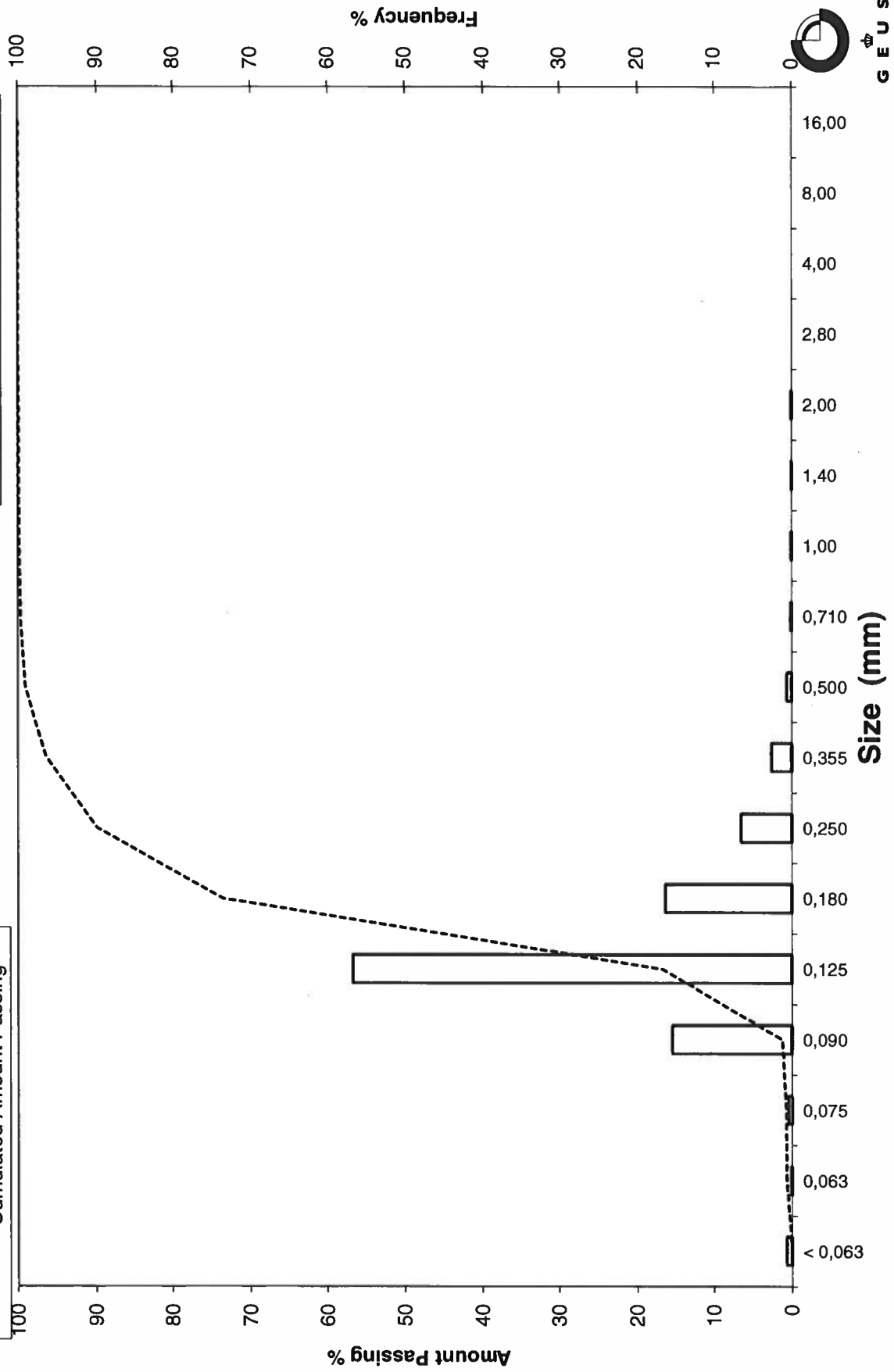
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_40, 200-220

Frequency Percent
 Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_40, 300-320
Lab. Id: 200618
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks:



Total Weight 107,72 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 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 |
| 2,80 | -1,49 | 0,00 | 0,00 | 100,00 |
| 2,00 | -1,00 | 0,00 | 0,00 | 100,00 |
| 1,40 | -0,49 | 0,00 | 0,00 | 100,00 |
| 1,00 | 0,00 | 0,07 | 0,06 | 99,94 |
| 0,710 | 0,49 | 0,10 | 0,09 | 99,84 |
| 0,500 | 1,00 | 0,37 | 0,34 | 99,50 |
| 0,355 | 1,49 | 0,74 | 0,69 | 98,81 |
| 0,250 | 2,00 | 2,06 | 1,91 | 96,90 |
| 0,180 | 2,47 | 7,46 | 6,93 | 89,97 |
| 0,125 | 3,00 | 48,31 | 44,85 | 45,13 |
| 0,090 | 3,47 | 37,74 | 35,04 | 10,09 |
| 0,075 | 3,74 | 3,62 | 3,36 | 6,73 |
| 0,063 | 3,99 | 1,71 | 1,59 | 5,14 |
| < 0,063 | > 3,99 | 5,54 | 5,14 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 5,14 |
| Sand, fine (0,063 mm - 0,200 mm): | 86,81 |
| Sand, medium (0,2 mm - 0,6 mm): | 7,71 |
| Sand, coarse (0,6 mm - 2 mm): | 0,34 |
| Gravel (> 2 mm): | 0,00 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,23 | 2,12 |
| 16% | 84% | 0,17 | 2,53 |
| 25% | 75% | 0,16 | 2,63 |
| 40% | 60% | 0,14 | 2,80 |
| Median 50% | 50% | 0,13 | 2,93 |
| 75% | 25% | 0,10 | 3,25 |
| 84% | 16% | 0,10 | 3,38 |
| 90% | 10% | 0,09 | 3,48 |
| 95% | 5% | ----- | ----- |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 2,95 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | 1,60 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

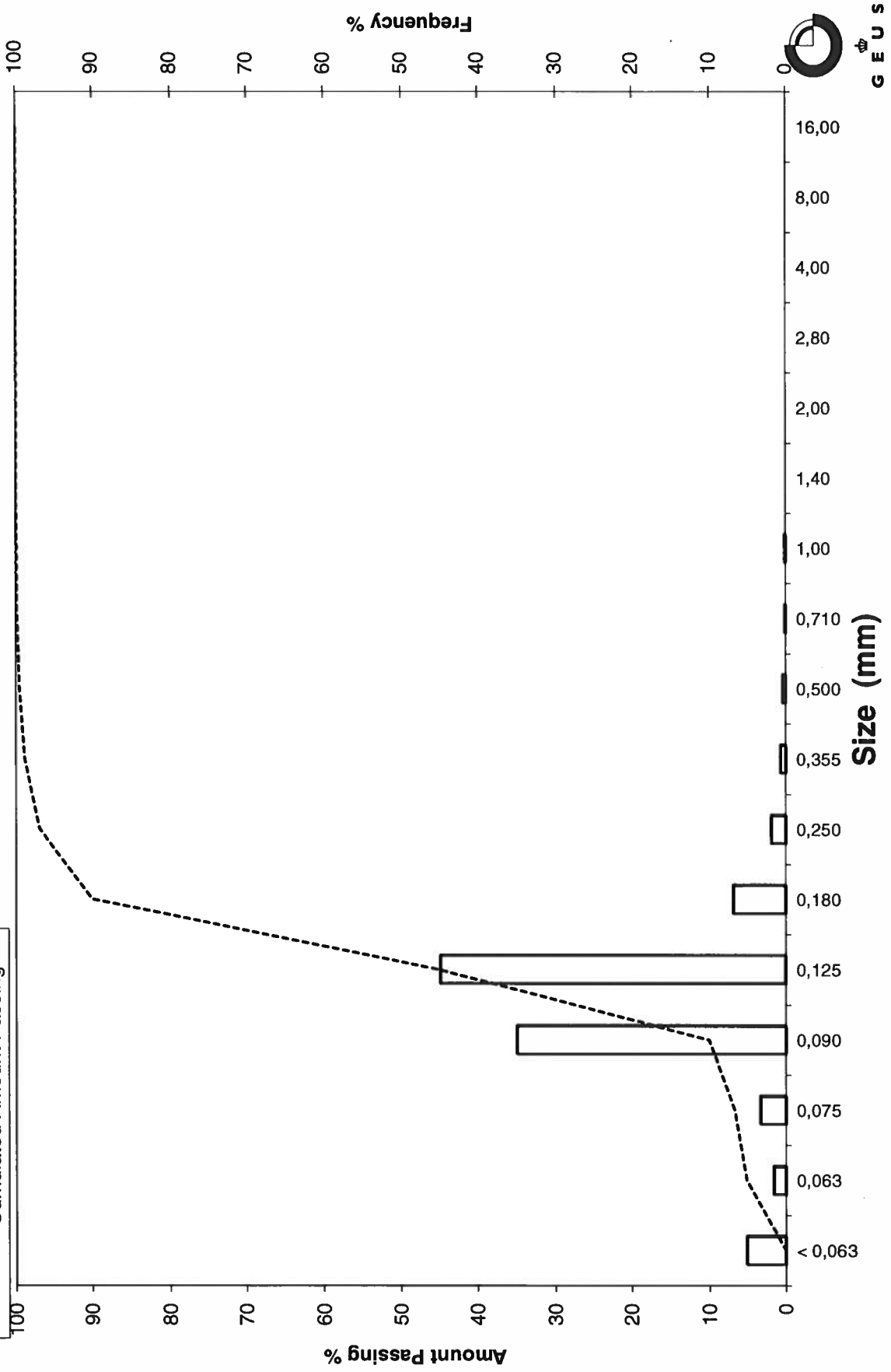
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_40, 300-320

Frequency Percent
 Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_40, 400-420
Lab. Id: 200619
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks:



Total Weight 105,63 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 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 |
| 2,80 | -1,49 | 0,00 | 0,00 | 100,00 |
| 2,00 | -1,00 | 0,03 | 0,03 | 99,97 |
| 1,40 | -0,49 | 0,00 | 0,00 | 99,97 |
| 1,00 | 0,00 | 0,00 | 0,00 | 99,97 |
| 0,710 | 0,49 | 0,07 | 0,07 | 99,91 |
| 0,500 | 1,00 | 0,12 | 0,11 | 99,79 |
| 0,355 | 1,49 | 0,20 | 0,19 | 99,60 |
| 0,250 | 2,00 | 1,09 | 1,03 | 98,57 |
| 0,180 | 2,47 | 5,04 | 4,77 | 93,80 |
| 0,125 | 3,00 | 44,81 | 42,42 | 51,38 |
| 0,090 | 3,47 | 41,13 | 38,94 | 12,44 |
| 0,075 | 3,74 | 4,60 | 4,35 | 8,08 |
| 0,063 | 3,99 | 2,09 | 1,98 | 6,11 |
| < 0,063 | > 3,99 | 6,45 | 6,11 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| Size Class | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 6,11 |
| Sand, fine (0,063 mm - 0,200 mm): | 89,06 |
| Sand, medium (0,2 mm - 0,6 mm): | 4,68 |
| Sand, coarse (0,6 mm - 2 mm): | 0,13 |
| Gravel (> 2 mm): | 0,03 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,20 | 2,34 |
| 16% | 84% | 0,17 | 2,58 |
| 25% | 75% | 0,16 | 2,68 |
| 40% | 60% | 0,14 | 2,88 |
| Median 50% | 50% | 0,12 | 3,01 |
| 75% | 25% | 0,10 | 3,30 |
| 84% | 16% | 0,09 | 3,42 |
| 90% | 10% | 0,08 | 3,62 |
| 95% | 5% | ----- | ----- |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 3,01 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | 1,67 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

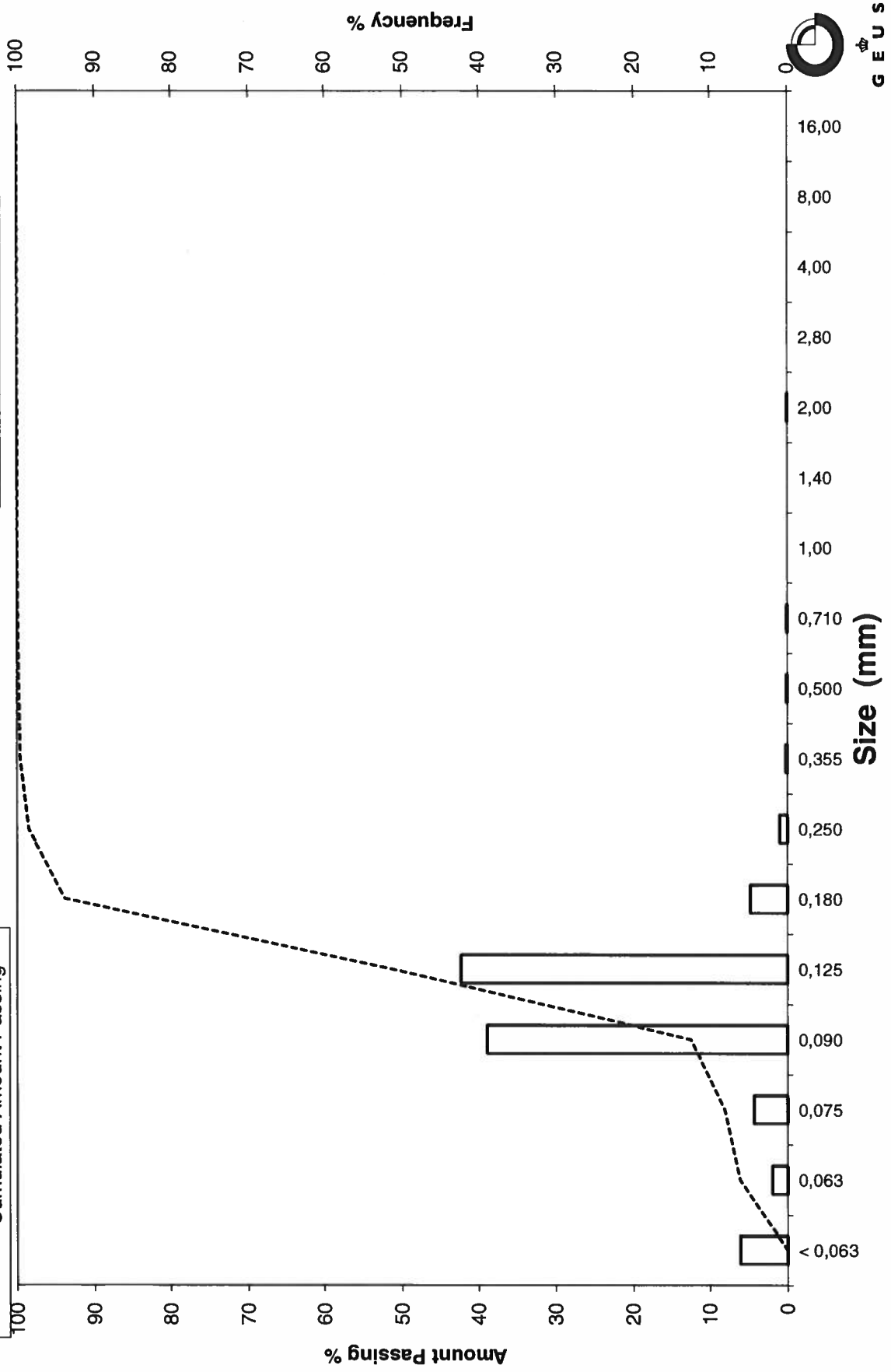
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_40, 400-420

Frequency Percent
 Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_40, 500-520
Lab. Id: 200620
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >2,8mm består af skaller



Total Weight 100,93 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | φ | g | % | % |
| 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 |
| 2,80 | -1,49 | 0,05 | 0,05 | 99,95 |
| 2,00 | -1,00 | 0,00 | 0,00 | 99,95 |
| 1,40 | -0,49 | 0,00 | 0,00 | 99,95 |
| 1,00 | 0,00 | 0,05 | 0,05 | 99,90 |
| 0,710 | 0,49 | 0,05 | 0,05 | 99,85 |
| 0,500 | 1,00 | 0,11 | 0,11 | 99,74 |
| 0,355 | 1,49 | 0,34 | 0,34 | 99,41 |
| 0,250 | 2,00 | 0,76 | 0,75 | 98,65 |
| 0,180 | 2,47 | 2,42 | 2,40 | 96,25 |
| 0,125 | 3,00 | 40,39 | 40,02 | 56,24 |
| 0,090 | 3,47 | 42,55 | 42,16 | 14,08 |
| 0,075 | 3,74 | 5,59 | 5,54 | 8,54 |
| 0,063 | 3,99 | 2,41 | 2,39 | 6,15 |
| < 0,063 | > 3,99 | 6,21 | 6,15 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 6,15 |
| Sand, fine (0,063 mm - 0,200 mm): | 90,79 |
| Sand, medium (0,2 mm - 0,6 mm): | 2,85 |
| Sand, coarse (0,6 mm - 2 mm): | 0,16 |
| Gravel (> 2 mm): | 0,05 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,18 | 2,49 |
| 16% | 84% | 0,16 | 2,62 |
| 25% | 75% | 0,15 | 2,73 |
| 40% | 60% | 0,13 | 2,94 |
| Median 50% | 50% | 0,12 | 3,06 |
| 75% | 25% | 0,10 | 3,34 |
| 84% | 16% | 0,09 | 3,45 |
| 90% | 10% | 0,08 | 3,66 |
| 95% | 5% | ----- | ----- |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 3,04 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | 1,65 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

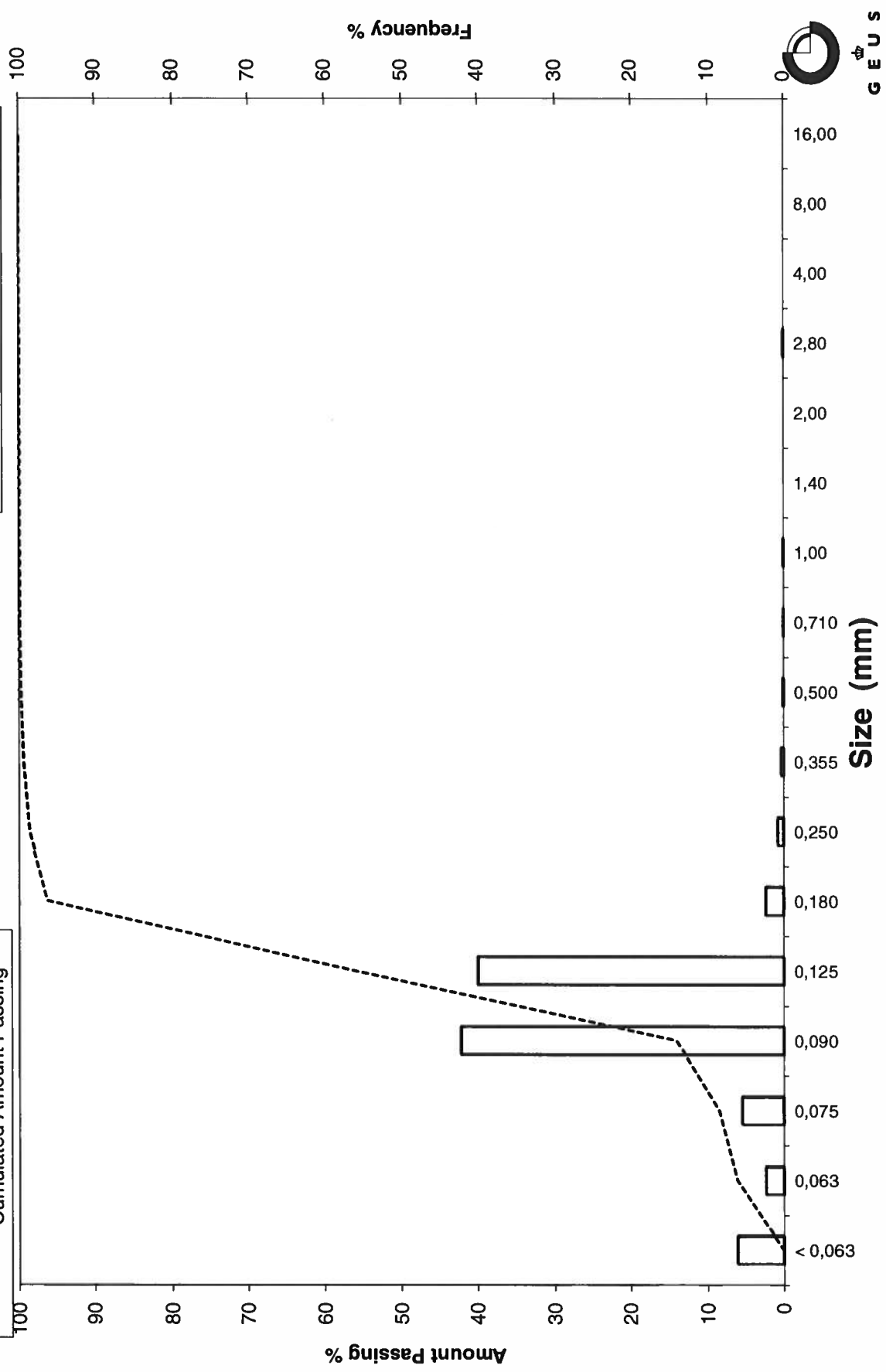
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_40, 500-520

Frequency Percent
 Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_41, 0-20
Lab. Id: 200621
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >4mm består af skaller



Total Weight 111,05 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 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 |
| 2,80 | -1,49 | 0,09 | 0,08 | 99,88 |
| 2,00 | -1,00 | 0,15 | 0,14 | 99,75 |
| 1,40 | -0,49 | 0,47 | 0,42 | 99,32 |
| 1,00 | 0,00 | 0,88 | 0,79 | 98,53 |
| 0,710 | 0,49 | 1,45 | 1,31 | 97,23 |
| 0,500 | 1,00 | 4,48 | 4,03 | 93,19 |
| 0,355 | 1,49 | 9,83 | 8,85 | 84,34 |
| 0,250 | 2,00 | 20,94 | 18,86 | 65,48 |
| 0,180 | 2,47 | 32,07 | 28,88 | 36,61 |
| 0,125 | 3,00 | 31,16 | 28,06 | 8,55 |
| 0,090 | 3,47 | 7,62 | 6,86 | 1,68 |
| 0,075 | 3,74 | 0,53 | 0,48 | 1,21 |
| 0,063 | 3,99 | 0,25 | 0,23 | 0,98 |
| < 0,063 | > 3,99 | 1,09 | 0,98 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 0,98 |
| Sand, fine (0,063 mm - 0,200 mm): | 43,87 |
| Sand, medium (0,2 mm - 0,6 mm): | 50,26 |
| Sand, coarse (0,6 mm - 2 mm): | 4,63 |
| Gravel (> 2 mm): | 0,25 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,59 | 0,75 |
| 16% | 84% | 0,35 | 1,50 |
| 25% | 75% | 0,30 | 1,72 |
| 40% | 60% | 0,24 | 2,08 |
| Median 50% | 50% | 0,21 | 2,23 |
| 75% | 25% | 0,16 | 2,67 |
| 84% | 16% | 0,14 | 2,84 |
| 90% | 10% | 0,13 | 2,97 |
| 95% | 5% | 0,11 | 3,23 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 2,19 |
| Sorting | 0,71 |
| Skewness | -0,15 |
| Kurtosis | 1,07 |
| Uniformity Coefficient | 1,85 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

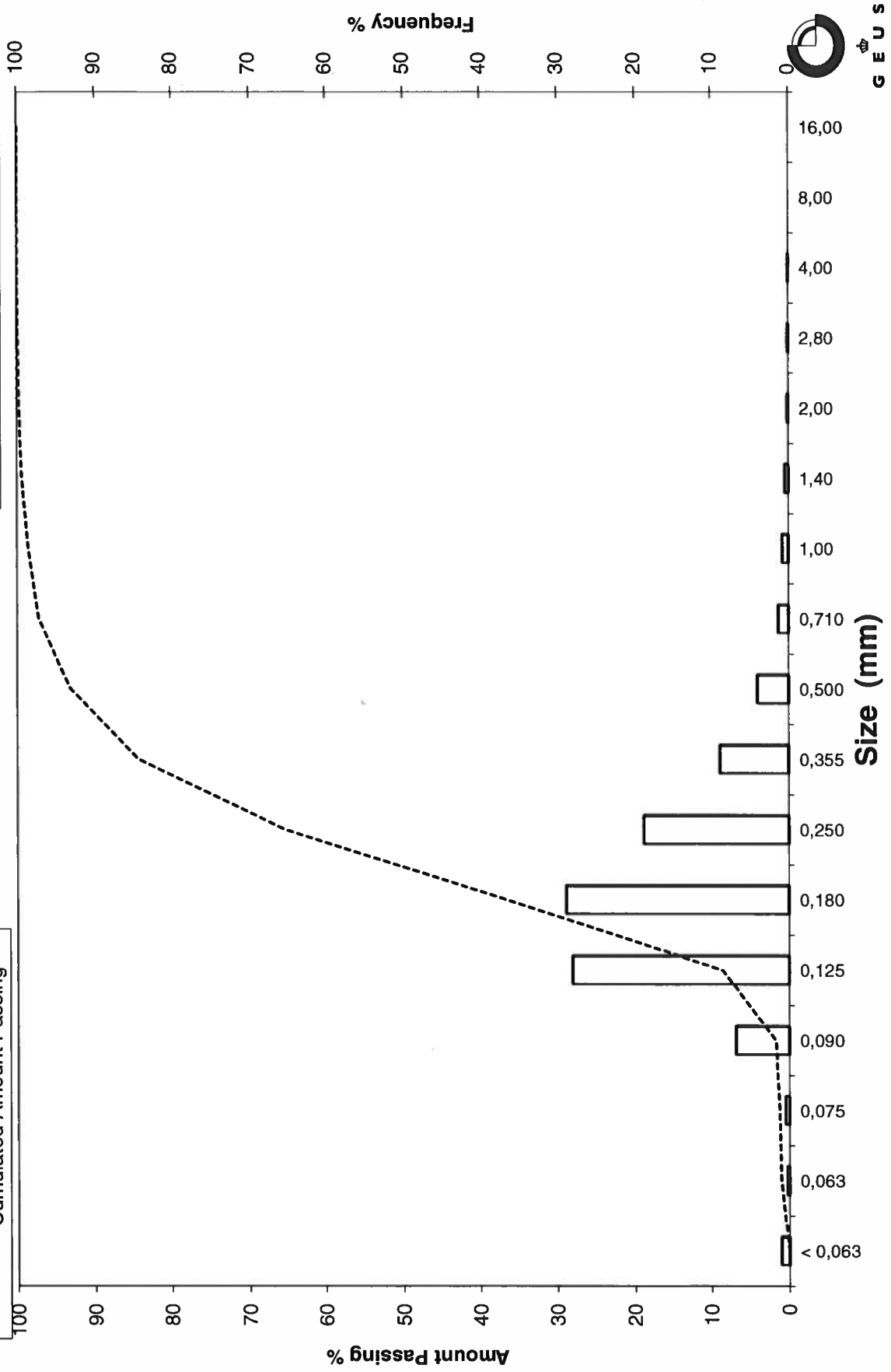
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_41, 0-20

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_41, 100-120
Lab. Id: 200622
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >2,8mm heraf 0,25g skaller



Total Weight 115,64 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 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 | 0,13 | 99,87 |
| 2,80 | -1,49 | 0,18 | 0,16 | 99,71 |
| 2,00 | -1,00 | 0,48 | 0,42 | 99,30 |
| 1,40 | -0,49 | 0,41 | 0,35 | 98,95 |
| 1,00 | 0,00 | 1,41 | 1,22 | 97,73 |
| 0,710 | 0,49 | 2,74 | 2,37 | 95,36 |
| 0,500 | 1,00 | 8,04 | 6,95 | 88,40 |
| 0,355 | 1,49 | 15,85 | 13,71 | 74,70 |
| 0,250 | 2,00 | 23,00 | 19,89 | 54,81 |
| 0,180 | 2,47 | 25,14 | 21,74 | 33,07 |
| 0,125 | 3,00 | 27,55 | 23,82 | 9,24 |
| 0,090 | 3,47 | 9,05 | 7,83 | 1,42 |
| 0,075 | 3,74 | 0,48 | 0,42 | 1,00 |
| 0,063 | 3,99 | 0,15 | 0,13 | 0,87 |
| < 0,063 | > 3,99 | 1,01 | 0,87 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| Size Class | Weight % |
|----------------------------------|---------------|
| Silt and clay (< 0,063 mm) | 0,87 |
| Sand, fine (0,063 mm - 0,200 mm) | 38,41 |
| Sand, medium (0,2 mm - 0,6 mm) | 52,43 |
| Sand, coarse (0,6 mm - 2 mm) | 7,59 |
| Gravel (> 2 mm) | 0,70 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,70 | 0,52 |
| 16% | 84% | 0,45 | 1,14 |
| 25% | 75% | 0,36 | 1,48 |
| 40% | 60% | 0,28 | 1,85 |
| Median 50% | 50% | 0,23 | 2,09 |
| 75% | 25% | 0,16 | 2,63 |
| 84% | 16% | 0,14 | 2,83 |
| 90% | 10% | 0,13 | 2,98 |
| 95% | 5% | 0,11 | 3,24 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 2,02 |
| Sorting | 0,83 |
| Skewness | -0,14 |
| Kurtosis | 0,97 |
| Uniformity Coefficient | 2,19 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

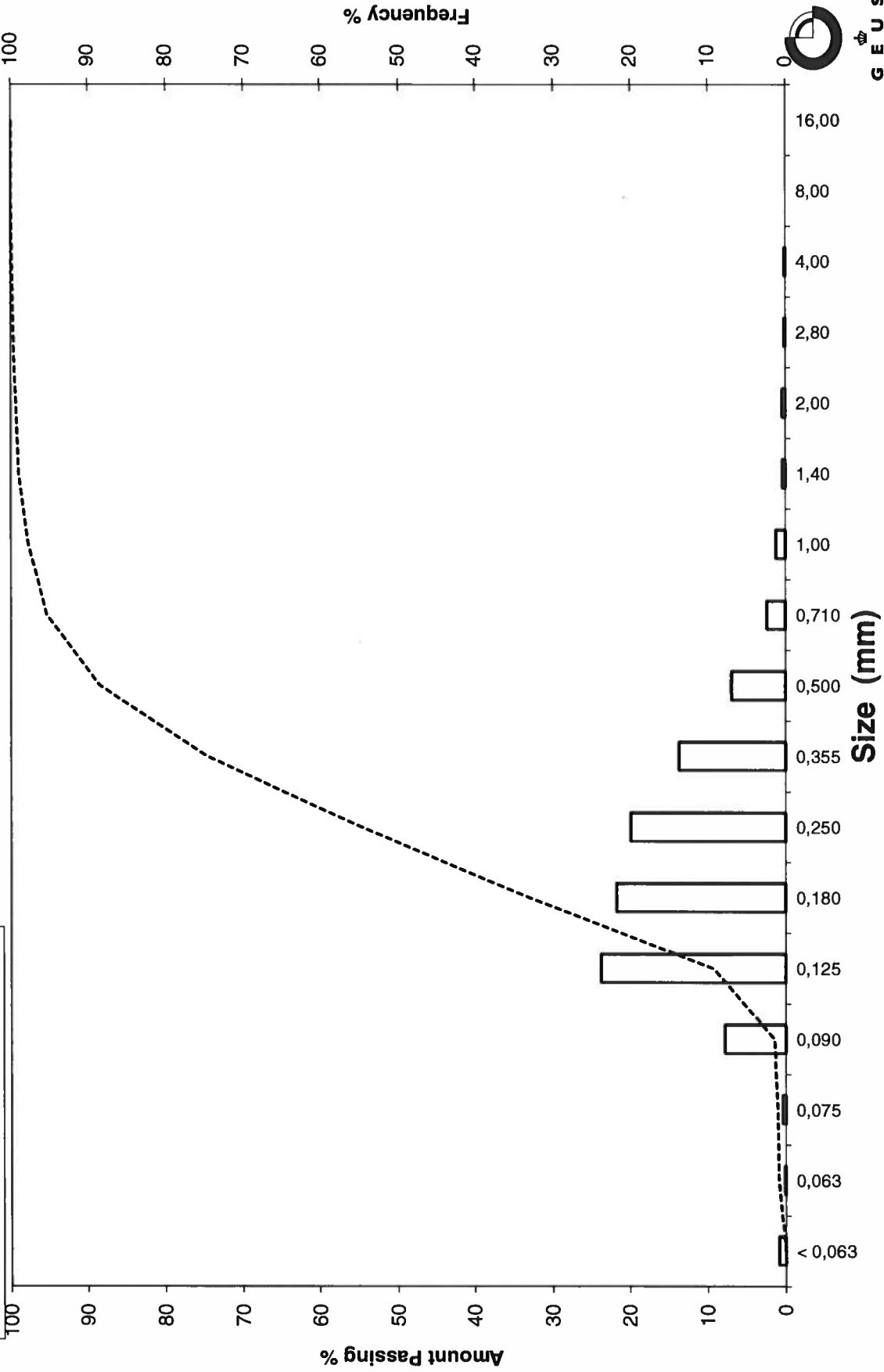
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_41, 100-120

Frequency Percent
 Cumulated Amount Passing



G E U S

Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_41, 200-220
Lab. Id: 200623
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks:



Total Weight 105,76 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 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 |
| 2,80 | -1,49 | 0,00 | 0,00 | 100,00 |
| 2,00 | -1,00 | 0,00 | 0,00 | 100,00 |
| 1,40 | -0,49 | 0,00 | 0,00 | 100,00 |
| 1,00 | 0,00 | 0,00 | 0,00 | 100,00 |
| 0,710 | 0,49 | 0,08 | 0,08 | 99,92 |
| 0,500 | 1,00 | 0,16 | 0,15 | 99,77 |
| 0,355 | 1,49 | 0,27 | 0,26 | 99,52 |
| 0,250 | 2,00 | 1,25 | 1,18 | 98,34 |
| 0,180 | 2,47 | 8,37 | 7,91 | 90,42 |
| 0,125 | 3,00 | 42,97 | 40,63 | 49,79 |
| 0,090 | 3,47 | 37,78 | 35,72 | 14,07 |
| 0,075 | 3,74 | 5,02 | 4,75 | 9,32 |
| 0,063 | 3,99 | 2,28 | 2,16 | 7,17 |
| < 0,063 | > 3,99 | 7,58 | 7,17 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 7,17 |
| Sand, fine (0,063 mm - 0,200 mm): | 85,52 |
| Sand, medium (0,2 mm - 0,6 mm): | 7,16 |
| Sand, coarse (0,6 mm - 2 mm): | 0,15 |
| Gravel (> 2 mm): | 0,00 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,22 | 2,18 |
| 16% | 84% | 0,17 | 2,55 |
| 25% | 75% | 0,16 | 2,65 |
| 40% | 60% | 0,14 | 2,85 |
| Median 50% | 50% | 0,13 | 3,00 |
| 75% | 25% | 0,10 | 3,31 |
| 84% | 16% | 0,09 | 3,44 |
| 90% | 10% | 0,08 | 3,70 |
| 95% | 5% | ----- | ----- |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 3,00 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | 1,80 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

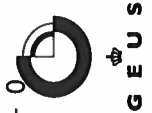
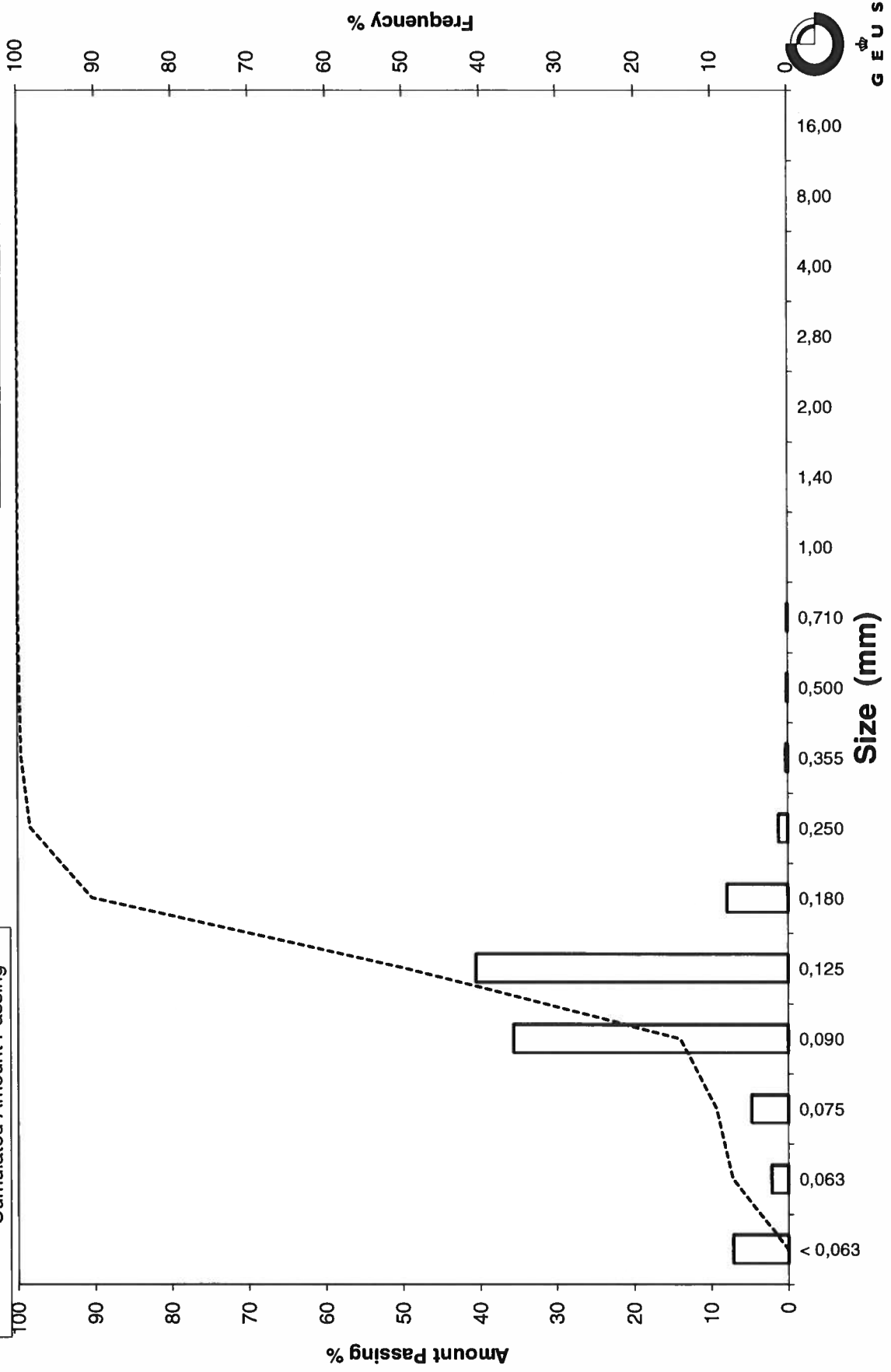
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_41, 200-220

Frequency Percent
 Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_41, 300-320
Lab. Id: 200624
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >1mm består af skaller



Total Weight 104,2 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount |
|---------|--------|--------|--------|------------------|
| mm | Φ | g | % | amount passing % |
| 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 |
| 2,80 | -1,49 | 0,00 | 0,00 | 100,00 |
| 2,00 | -1,00 | 0,00 | 0,00 | 100,00 |
| 1,40 | -0,49 | 0,00 | 0,00 | 100,00 |
| 1,00 | 0,00 | 0,02 | 0,02 | 99,98 |
| 0,710 | 0,49 | 0,04 | 0,04 | 99,94 |
| 0,500 | 1,00 | 0,05 | 0,05 | 99,89 |
| 0,355 | 1,49 | 0,12 | 0,12 | 99,78 |
| 0,250 | 2,00 | 0,24 | 0,23 | 99,55 |
| 0,180 | 2,47 | 1,49 | 1,43 | 98,12 |
| 0,125 | 3,00 | 29,12 | 27,95 | 70,17 |
| 0,090 | 3,47 | 53,35 | 51,20 | 18,97 |
| 0,075 | 3,74 | 6,88 | 6,60 | 12,37 |
| 0,063 | 3,99 | 3,38 | 3,24 | 9,13 |
| < 0,063 | > 3,99 | 9,51 | 9,13 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| Size Class | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 9,13 |
| Sand, fine (0,063 mm - 0,200 mm): | 89,40 |
| Sand, medium (0,2 mm - 0,6 mm): | 1,39 |
| Sand, coarse (0,6 mm - 2 mm): | 0,08 |
| Gravel (> 2 mm): | 0,00 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,17 | 2,52 |
| 16% | 84% | 0,15 | 2,72 |
| 25% | 75% | 0,13 | 2,89 |
| 40% | 60% | 0,12 | 3,08 |
| Median 50% | 50% | 0,11 | 3,17 |
| 75% | 25% | 0,09 | 3,41 |
| 84% | 16% | 0,08 | 3,59 |
| 90% | 10% | 0,07 | 3,92 |
| 95% | 5% | ----- | ----- |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 3,16 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | 1,78 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

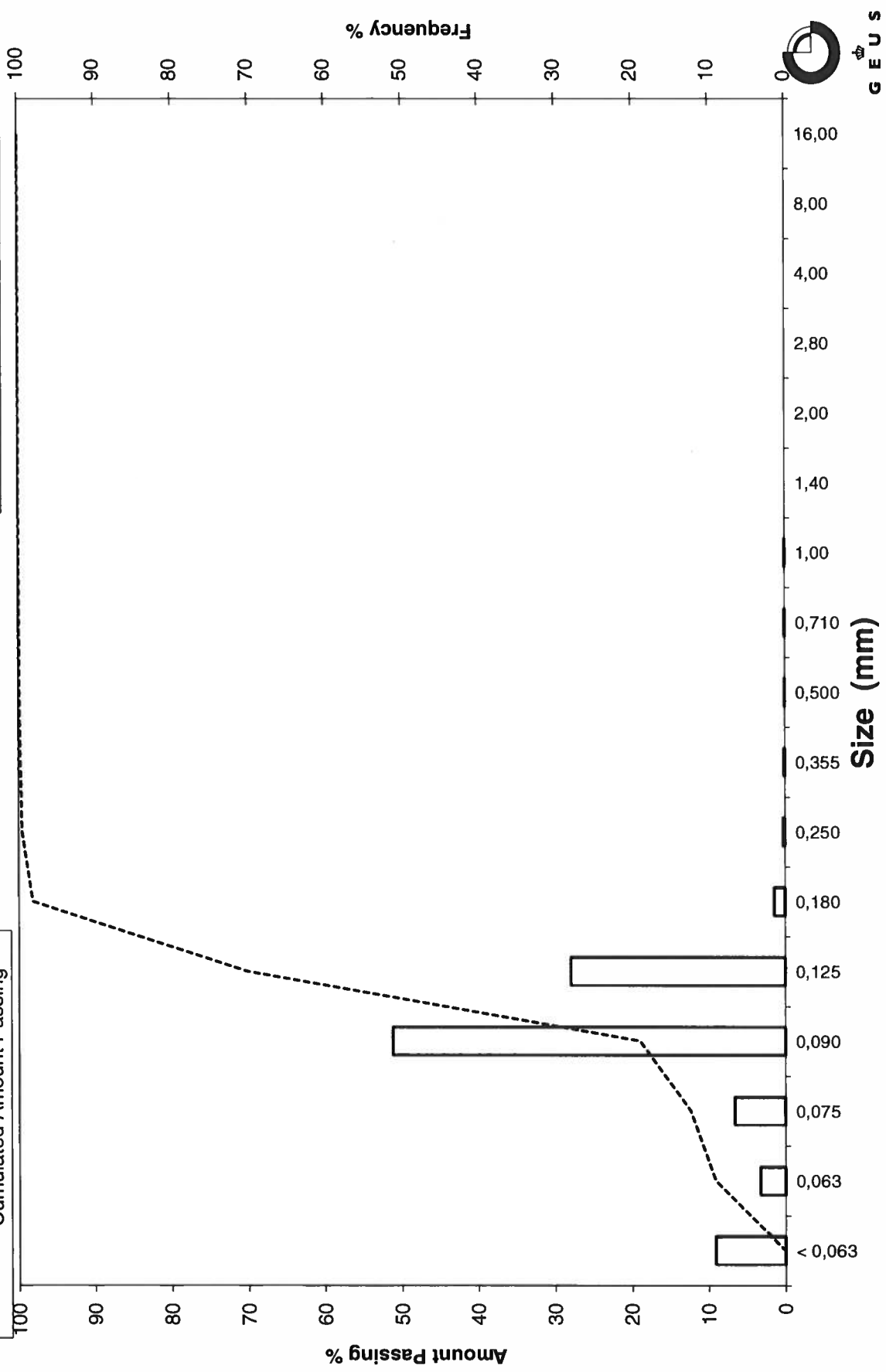
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_41, 300-320

 Frequency Percent
 Cumulated Amount Passing



G E U S

Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_41, 400-420
Lab. Id: 200625
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks:



Total Weight 99,81 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,00 | 0,00 | 100,00 |
| 4,00 | -2,00 | 0,25 | 0,25 | 99,75 |
| 2,80 | -1,49 | 0,00 | 0,00 | 99,75 |
| 2,00 | -1,00 | 0,13 | 0,13 | 99,62 |
| 1,40 | -0,49 | 0,12 | 0,12 | 99,50 |
| 1,00 | 0,00 | 0,11 | 0,11 | 99,39 |
| 0,710 | 0,49 | 0,06 | 0,06 | 99,33 |
| 0,500 | 1,00 | 0,17 | 0,17 | 99,16 |
| 0,355 | 1,49 | 0,21 | 0,21 | 98,95 |
| 0,250 | 2,00 | 0,32 | 0,32 | 98,63 |
| 0,180 | 2,47 | 0,98 | 0,98 | 97,65 |
| 0,125 | 3,00 | 17,04 | 17,07 | 80,57 |
| 0,090 | 3,47 | 51,61 | 51,71 | 28,86 |
| 0,075 | 3,74 | 8,87 | 8,89 | 19,98 |
| 0,063 | 3,99 | 5,83 | 5,84 | 14,14 |
| < 0,063 | > 3,99 | 14,11 | 14,14 | 0,00 |

Sieve Analysis
 Gravel
 Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 14,14 |
| Sand, fine (0,063 mm - 0,200 mm): | 83,79 |
| Sand, medium (0,2 mm - 0,6 mm): | 1,31 |
| Sand, coarse (0,6 mm - 2 mm): | 0,38 |
| Gravel (> 2 mm): | 0,38 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,17 | 2,54 |
| 16% | 84% | 0,14 | 2,88 |
| 25% | 75% | 0,12 | 3,04 |
| 40% | 60% | 0,11 | 3,17 |
| Median 50% | 50% | 0,10 | 3,26 |
| 75% | 25% | 0,08 | 3,58 |
| 84% | 16% | 0,07 | 3,90 |
| 90% | 10% | ----- | ----- |
| 95% | 5% | ----- | ----- |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 3,35 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | ----- |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

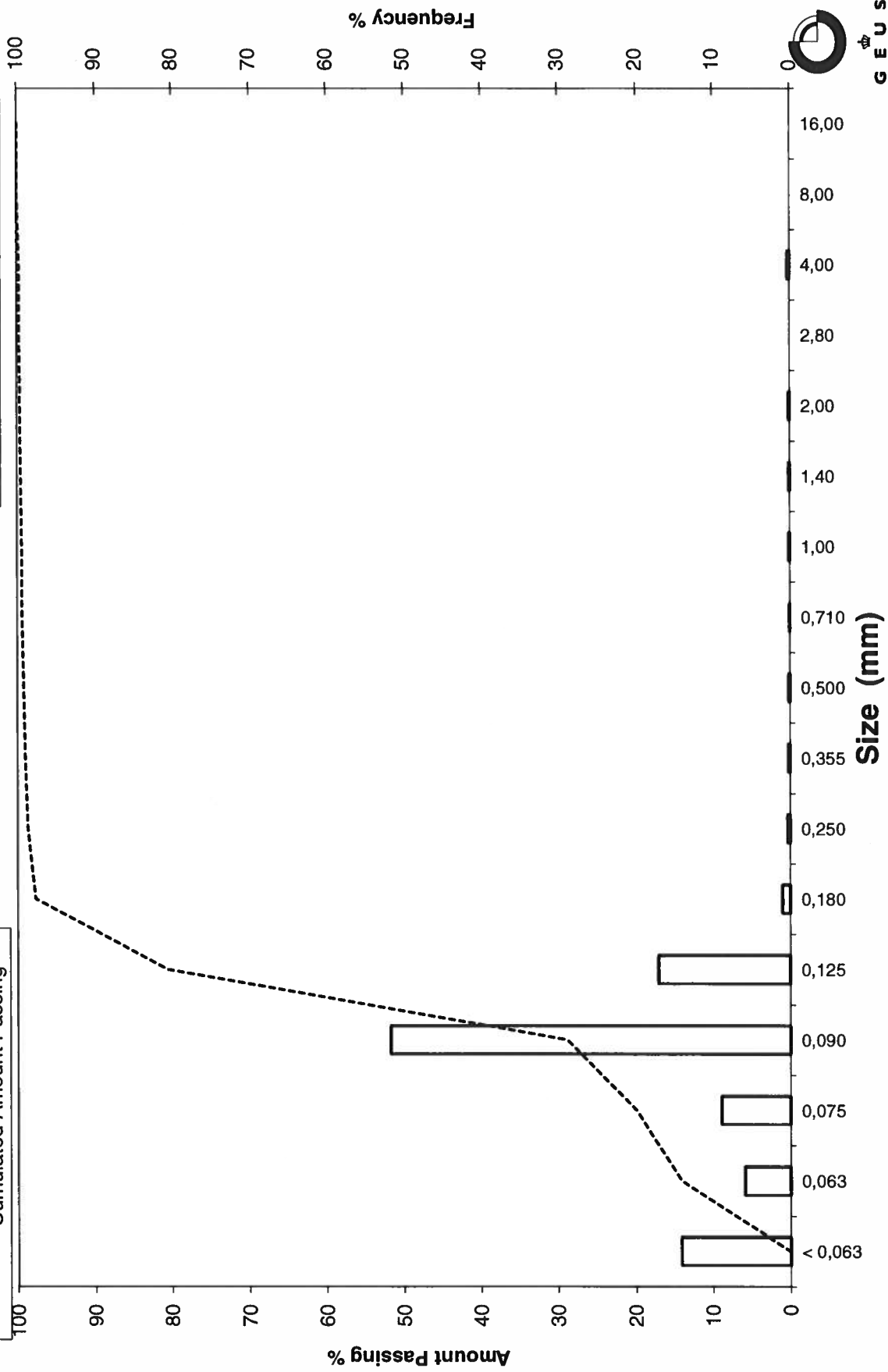
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_41, 400-420

Frequency Percent
 Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_43, 0-20
Lab. Id: 200626
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >2mm består af skaller



Total Weight 111,13 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,00 | 0,00 | 100,00 |
| 4,00 | -2,00 | 0,08 | 0,07 | 99,93 |
| 2,80 | -1,49 | 0,00 | 0,00 | 99,93 |
| 2,00 | -1,00 | 0,09 | 0,08 | 99,85 |
| 1,40 | -0,49 | 0,02 | 0,02 | 99,83 |
| 1,00 | 0,00 | 0,22 | 0,20 | 99,63 |
| 0,710 | 0,49 | 0,52 | 0,47 | 99,16 |
| 0,500 | 1,00 | 2,30 | 2,07 | 97,09 |
| 0,355 | 1,49 | 9,32 | 8,39 | 88,71 |
| 0,250 | 2,00 | 14,46 | 13,01 | 75,70 |
| 0,180 | 2,47 | 21,15 | 19,03 | 56,66 |
| 0,125 | 3,00 | 44,63 | 40,16 | 16,50 |
| 0,090 | 3,47 | 15,93 | 14,33 | 2,17 |
| 0,075 | 3,74 | 0,93 | 0,84 | 1,33 |
| 0,063 | 3,99 | 0,34 | 0,31 | 1,03 |
| < 0,063 | > 3,99 | 1,14 | 1,03 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 1,03 |
| Sand, fine (0,063 mm - 0,200 mm): | 61,08 |
| Sand, medium (0,2 mm - 0,6 mm): | 35,98 |
| Sand, coarse (0,6 mm - 2 mm): | 1,77 |
| Gravel (> 2 mm): | 0,15 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,46 | 1,11 |
| 16% | 84% | 0,32 | 1,66 |
| 25% | 75% | 0,25 | 2,01 |
| 40% | 60% | 0,19 | 2,38 |
| Median 50% | 50% | 0,17 | 2,55 |
| 75% | 25% | 0,14 | 2,87 |
| 84% | 16% | 0,12 | 3,01 |
| 90% | 10% | 0,11 | 3,20 |
| 95% | 5% | 0,10 | 3,37 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 2,41 |
| Sorting | 0,68 |
| Skewness | -0,29 |
| Kurtosis | 1,08 |
| Uniformity Coefficient | 1,76 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

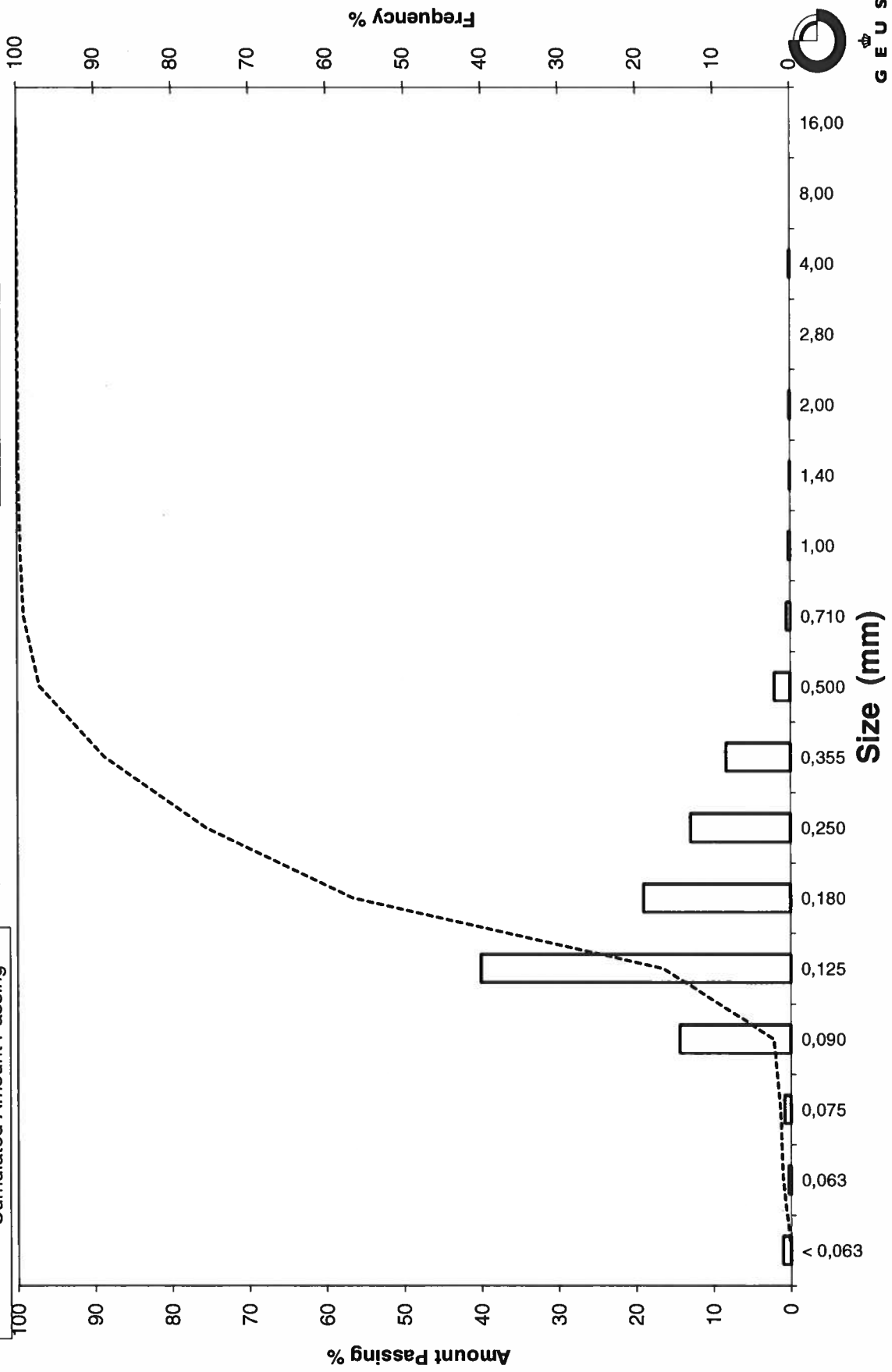
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Sample Id: Løn B-1B_43, 0-20

Grain Size Distribution

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_43, 100-120
Lab. Id: 200627
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >2mm består af skaller



Total Weight 111 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,00 | 0,00 | 100,00 |
| 4,00 | -2,00 | 0,02 | 0,02 | 99,98 |
| 2,80 | -1,49 | 0,00 | 0,00 | 99,98 |
| 2,00 | -1,00 | 0,01 | 0,01 | 99,97 |
| 1,40 | -0,49 | 0,02 | 0,02 | 99,95 |
| 1,00 | 0,00 | 0,06 | 0,05 | 99,90 |
| 0,710 | 0,49 | 0,18 | 0,16 | 99,74 |
| 0,500 | 1,00 | 1,01 | 0,91 | 98,83 |
| 0,355 | 1,49 | 4,86 | 4,38 | 94,45 |
| 0,250 | 2,00 | 11,85 | 10,68 | 83,77 |
| 0,180 | 2,47 | 22,95 | 20,68 | 63,10 |
| 0,125 | 3,00 | 48,66 | 43,84 | 19,26 |
| 0,090 | 3,47 | 18,86 | 16,99 | 2,27 |
| 0,075 | 3,74 | 0,97 | 0,87 | 1,40 |
| 0,063 | 3,99 | 0,43 | 0,39 | 1,01 |
| < 0,063 | > 3,99 | 1,12 | 1,01 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 1,01 |
| Sand, fine (0,063 mm - 0,200 mm): | 68,00 |
| Sand, medium (0,2 mm - 0,6 mm): | 30,26 |
| Sand, coarse (0,6 mm - 2 mm): | 0,71 |
| Gravel (> 2 mm): | 0,03 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,37 | 1,42 |
| 16% | 84% | 0,25 | 1,99 |
| 25% | 75% | 0,22 | 2,18 |
| 40% | 60% | 0,18 | 2,51 |
| Median 50% | 50% | 0,16 | 2,61 |
| 75% | 25% | 0,13 | 2,92 |
| 84% | 16% | 0,12 | 3,08 |
| 90% | 10% | 0,11 | 3,24 |
| 95% | 5% | 0,10 | 3,39 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 2,56 |
| Sorting | 0,57 |
| Skewness | -0,18 |
| Kurtosis | 1,09 |
| Uniformity Coefficient | 1,66 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

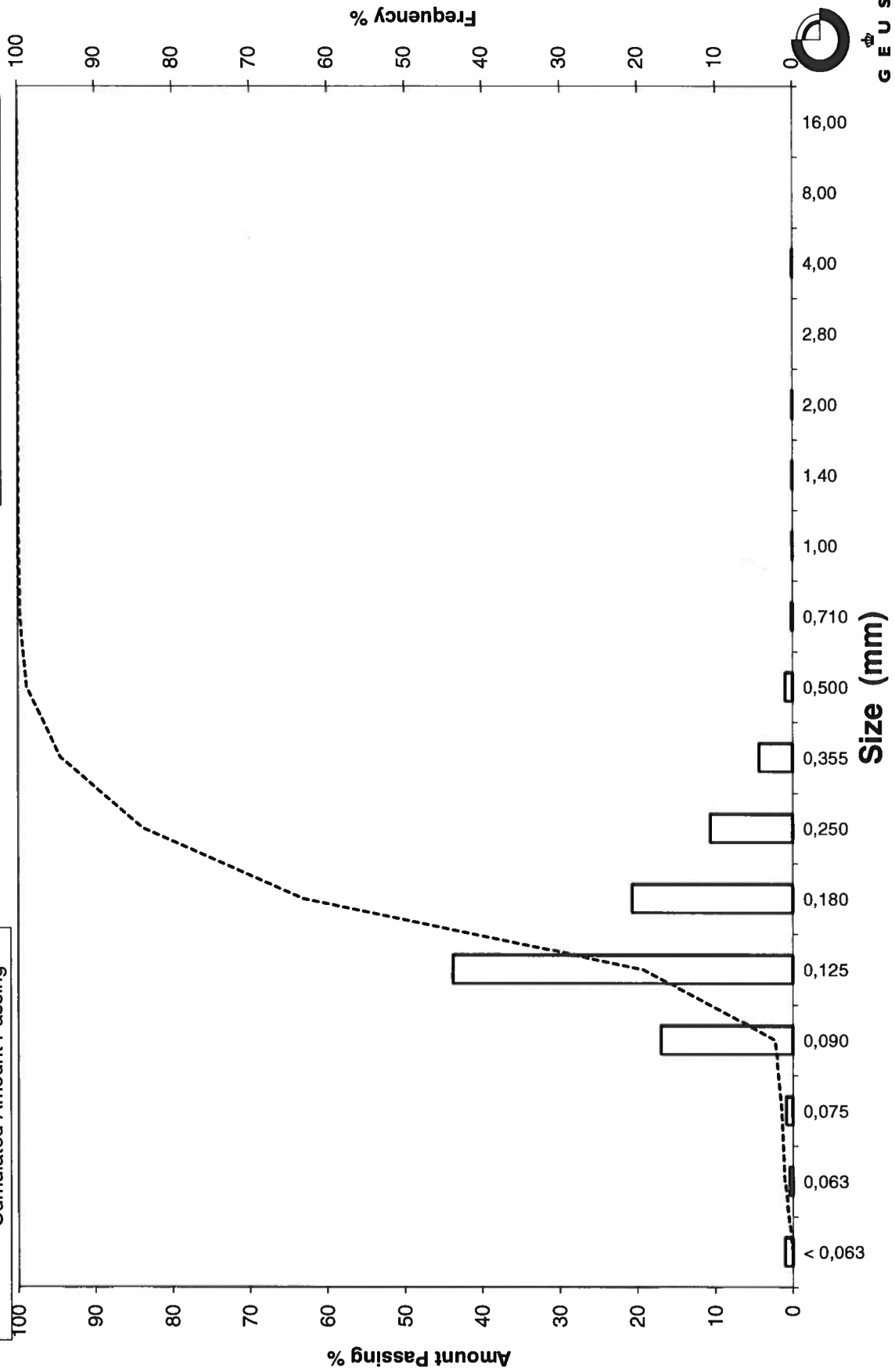
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_43, 100-120

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_43, 200-220
Lab. Id: 200628
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >2mm består af skaller



Total Weight 111,22 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,40 | 0,36 | 99,64 |
| 4,00 | -2,00 | 0,28 | 0,25 | 99,39 |
| 2,80 | -1,49 | 0,14 | 0,13 | 99,26 |
| 2,00 | -1,00 | 0,10 | 0,09 | 99,17 |
| 1,40 | -0,49 | 0,11 | 0,10 | 99,07 |
| 1,00 | 0,00 | 0,22 | 0,20 | 98,88 |
| 0,710 | 0,49 | 0,38 | 0,34 | 98,53 |
| 0,500 | 1,00 | 0,93 | 0,84 | 97,70 |
| 0,355 | 1,49 | 2,03 | 1,83 | 95,87 |
| 0,250 | 2,00 | 4,38 | 3,94 | 91,93 |
| 0,180 | 2,47 | 15,59 | 14,02 | 77,92 |
| 0,125 | 3,00 | 59,08 | 53,12 | 24,80 |
| 0,090 | 3,47 | 24,35 | 21,89 | 2,90 |
| 0,075 | 3,74 | 1,48 | 1,33 | 1,57 |
| 0,063 | 3,99 | 0,52 | 0,47 | 1,11 |
| < 0,063 | > 3,99 | 1,23 | 1,11 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| Size Class | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 1,11 |
| Sand, fine (0,063 mm - 0,200 mm): | 80,82 |
| Sand, medium (0,2 mm - 0,6 mm): | 16,17 |
| Sand, coarse (0,6 mm - 2 mm): | 1,08 |
| Gravel (> 2 mm): | 0,83 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,33 | 1,59 |
| 16% | 84% | 0,21 | 2,25 |
| 25% | 75% | 0,18 | 2,50 |
| 40% | 60% | 0,16 | 2,63 |
| Median 50% | 50% | 0,15 | 2,73 |
| 75% | 25% | 0,13 | 3,00 |
| 84% | 16% | 0,11 | 3,17 |
| 90% | 10% | 0,10 | 3,30 |
| 95% | 5% | 0,09 | 3,42 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 2,72 |
| Sorting | 0,51 |
| Skewness | -0,14 |
| Kurtosis | 1,50 |
| Uniformity Coefficient | 1,59 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

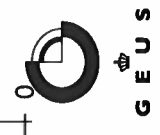
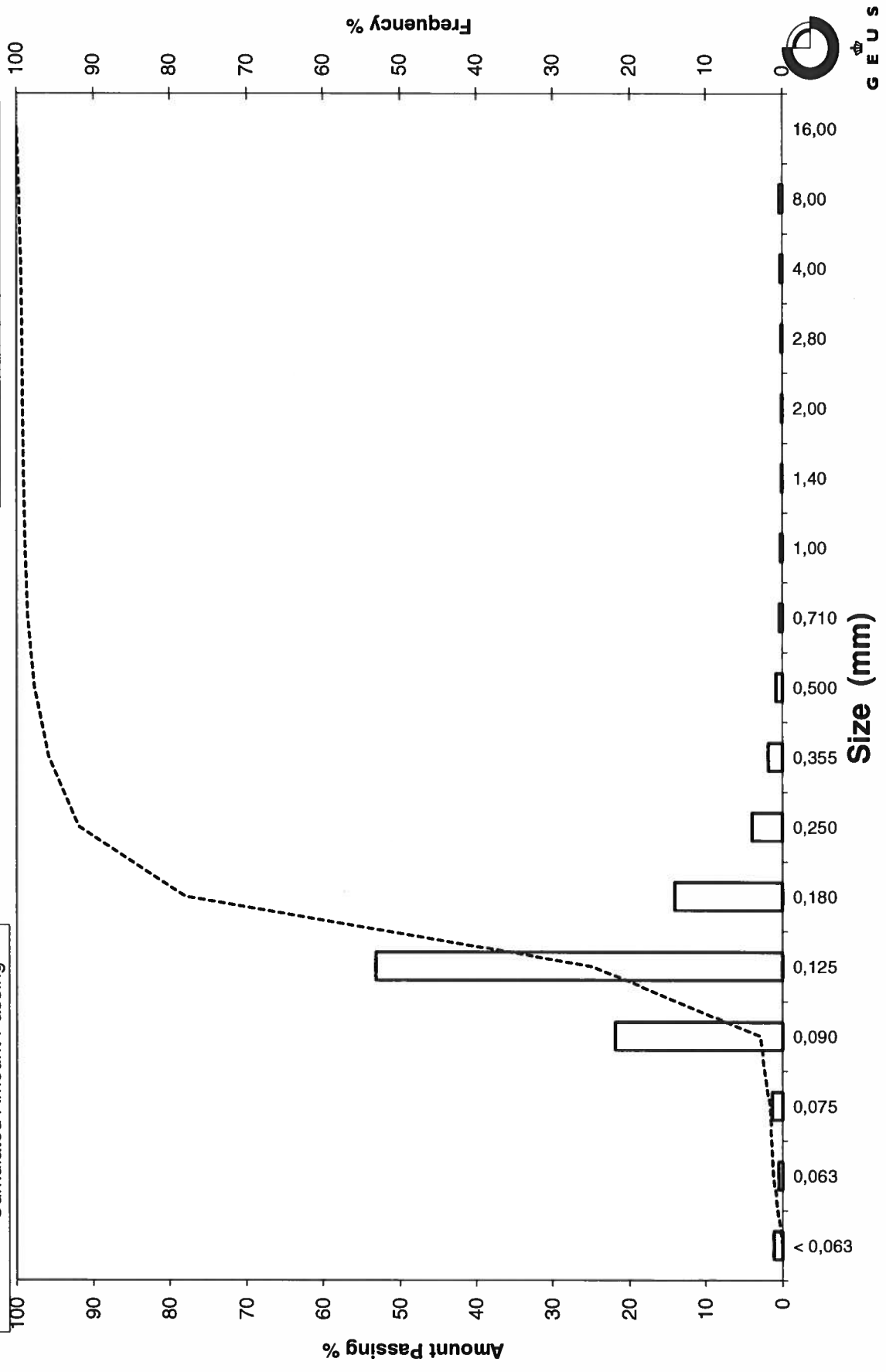
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_43, 200-220

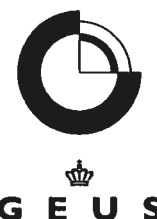
Frequency Percent
 Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_43, 300-320
Lab. Id: 200629
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >2mm består af skaller



Total Weight 110,06 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 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 |
| 2,80 | -1,49 | 0,00 | 0,00 | 99,97 |
| 2,00 | -1,00 | 0,09 | 0,08 | 99,89 |
| 1,40 | -0,49 | 0,11 | 0,10 | 99,79 |
| 1,00 | 0,00 | 0,23 | 0,21 | 99,58 |
| 0,710 | 0,49 | 0,37 | 0,34 | 99,25 |
| 0,500 | 1,00 | 1,60 | 1,45 | 97,79 |
| 0,355 | 1,49 | 3,50 | 3,18 | 94,61 |
| 0,250 | 2,00 | 4,99 | 4,53 | 90,08 |
| 0,180 | 2,47 | 12,88 | 11,70 | 78,38 |
| 0,125 | 3,00 | 50,43 | 45,82 | 32,55 |
| 0,090 | 3,47 | 30,59 | 27,79 | 4,76 |
| 0,075 | 3,74 | 2,00 | 1,82 | 2,94 |
| 0,063 | 3,99 | 0,94 | 0,85 | 2,09 |
| < 0,063 | > 3,99 | 2,30 | 2,09 | 0,00 |

Sieve Analysis

Gravel
Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 2,09 |
| Sand, fine (0,063 mm - 0,200 mm): | 79,63 |
| Sand, medium (0,2 mm - 0,6 mm): | 16,77 |
| Sand, coarse (0,6 mm - 2 mm): | 1,41 |
| Gravel (> 2 mm): | 0,11 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,37 | 1,42 |
| 16% | 84% | 0,21 | 2,23 |
| 25% | 75% | 0,18 | 2,51 |
| 40% | 60% | 0,16 | 2,66 |
| Median 50% | 50% | 0,15 | 2,78 |
| 75% | 25% | 0,12 | 3,11 |
| 84% | 16% | 0,10 | 3,26 |
| 90% | 10% | 0,10 | 3,37 |
| 95% | 5% | 0,09 | 3,47 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 2,76 |
| Sorting | 0,57 |
| Skewness | -0,19 |
| Kurtosis | 1,38 |
| Uniformity Coefficient | 1,64 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

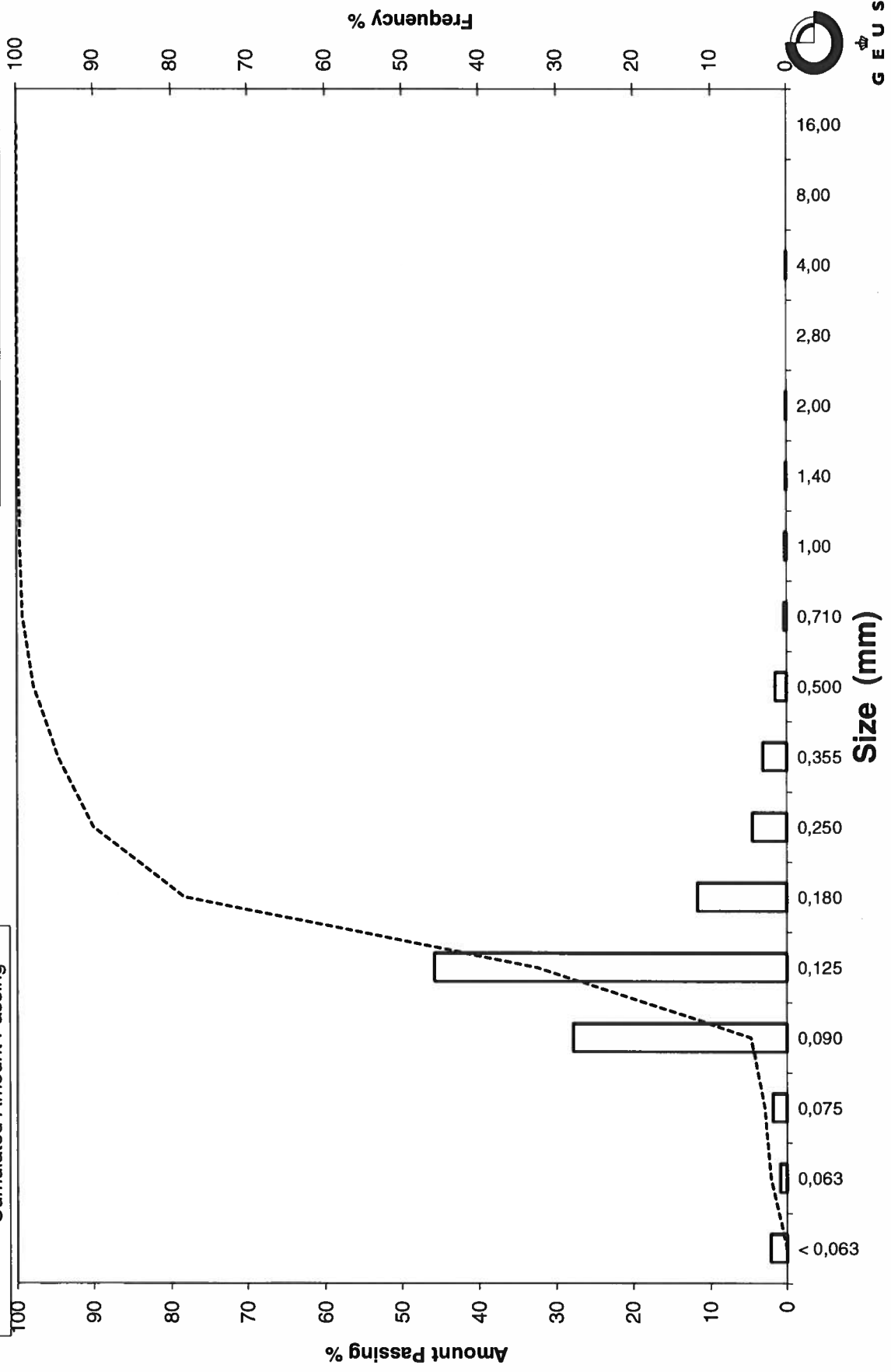
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_43, 300-320

Frequency Percent
 Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_43, 400-420
Lab. Id: 200630
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >2,8mm består af skaller



Total Weight 108,19 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount |
|---------|--------|--------|--------|------------------|
| mm | Φ | g | % | amount passing % |
| 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 |
| 2,80 | -1,49 | 0,08 | 0,07 | 99,93 |
| 2,00 | -1,00 | 0,08 | 0,07 | 99,85 |
| 1,40 | -0,49 | 0,06 | 0,06 | 99,80 |
| 1,00 | 0,00 | 0,20 | 0,18 | 99,61 |
| 0,710 | 0,49 | 0,35 | 0,32 | 99,29 |
| 0,500 | 1,00 | 0,56 | 0,52 | 98,77 |
| 0,355 | 1,49 | 0,84 | 0,78 | 97,99 |
| 0,250 | 2,00 | 2,20 | 2,03 | 95,96 |
| 0,180 | 2,47 | 29,24 | 27,03 | 68,93 |
| 0,125 | 3,00 | 32,38 | 29,93 | 39,01 |
| 0,090 | 3,47 | 23,53 | 21,75 | 17,26 |
| 0,075 | 3,74 | 7,31 | 6,76 | 10,50 |
| 0,063 | 3,99 | 3,05 | 2,82 | 7,68 |
| < 0,063 | > 3,99 | 8,31 | 7,68 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 7,68 |
| Sand, fine (0,063 mm - 0,200 mm): | 68,98 |
| Sand, medium (0,2 mm - 0,6 mm): | 22,36 |
| Sand, coarse (0,6 mm - 2 mm): | 0,83 |
| Gravel (> 2 mm): | 0,15 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,25 | 2,01 |
| 16% | 84% | 0,22 | 2,19 |
| 25% | 75% | 0,20 | 2,35 |
| 40% | 60% | 0,16 | 2,61 |
| Median 50% | 50% | 0,15 | 2,78 |
| 75% | 25% | 0,10 | 3,29 |
| 84% | 16% | 0,09 | 3,52 |
| 90% | 10% | 0,07 | 3,78 |
| 95% | 5% | ----- | ----- |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 2,83 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | 2,24 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

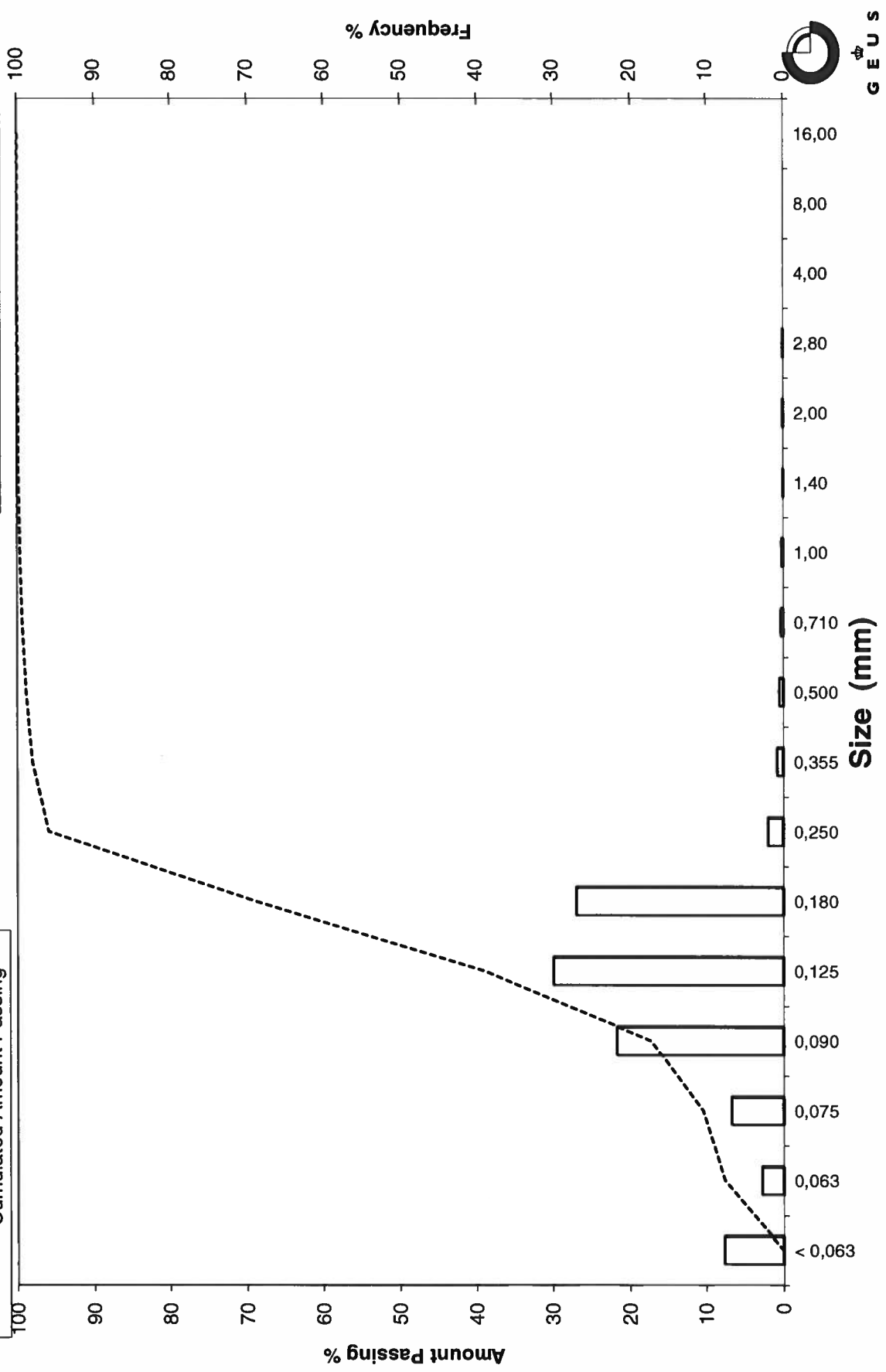
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_43, 400-420

Frequency Percent
 Cumulated Amount Passing





 G E U S

Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_43, 500-520
Lab. Id: 200631
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks:



Total Weight 106,87 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 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 |
| 2,80 | -1,49 | 0,37 | 0,35 | 99,65 |
| 2,00 | -1,00 | 0,16 | 0,15 | 99,50 |
| 1,40 | -0,49 | 0,13 | 0,12 | 99,38 |
| 1,00 | 0,00 | 0,20 | 0,19 | 99,20 |
| 0,710 | 0,49 | 0,24 | 0,22 | 98,97 |
| 0,500 | 1,00 | 0,46 | 0,43 | 98,54 |
| 0,355 | 1,49 | 0,63 | 0,59 | 97,95 |
| 0,250 | 2,00 | 1,33 | 1,24 | 96,71 |
| 0,180 | 2,47 | 17,32 | 16,21 | 80,50 |
| 0,125 | 3,00 | 31,39 | 29,37 | 51,13 |
| 0,090 | 3,47 | 33,04 | 30,92 | 20,21 |
| 0,075 | 3,74 | 7,31 | 6,84 | 13,37 |
| 0,063 | 3,99 | 3,97 | 3,71 | 9,66 |
| < 0,063 | > 3,99 | 10,32 | 9,66 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| Size Class | Weight % |
|----------------------------------|---------------|
| Silt and clay (< 0,063 mm) | 9,66 |
| Sand, fine (0,063 mm - 0,200 mm) | 75,47 |
| Sand, medium (0,2 mm - 0,6 mm) | 13,62 |
| Sand, coarse (0,6 mm - 2 mm) | 0,76 |
| Gravel (> 2 mm) | 0,50 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,24 | 2,04 |
| 16% | 84% | 0,20 | 2,36 |
| 25% | 75% | 0,17 | 2,56 |
| 40% | 60% | 0,14 | 2,82 |
| Median 50% | 50% | 0,12 | 3,01 |
| 75% | 25% | 0,10 | 3,39 |
| 84% | 16% | 0,08 | 3,63 |
| 90% | 10% | 0,06 | 3,96 |
| 95% | 5% | ----- | ----- |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 3,00 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | 2,21 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

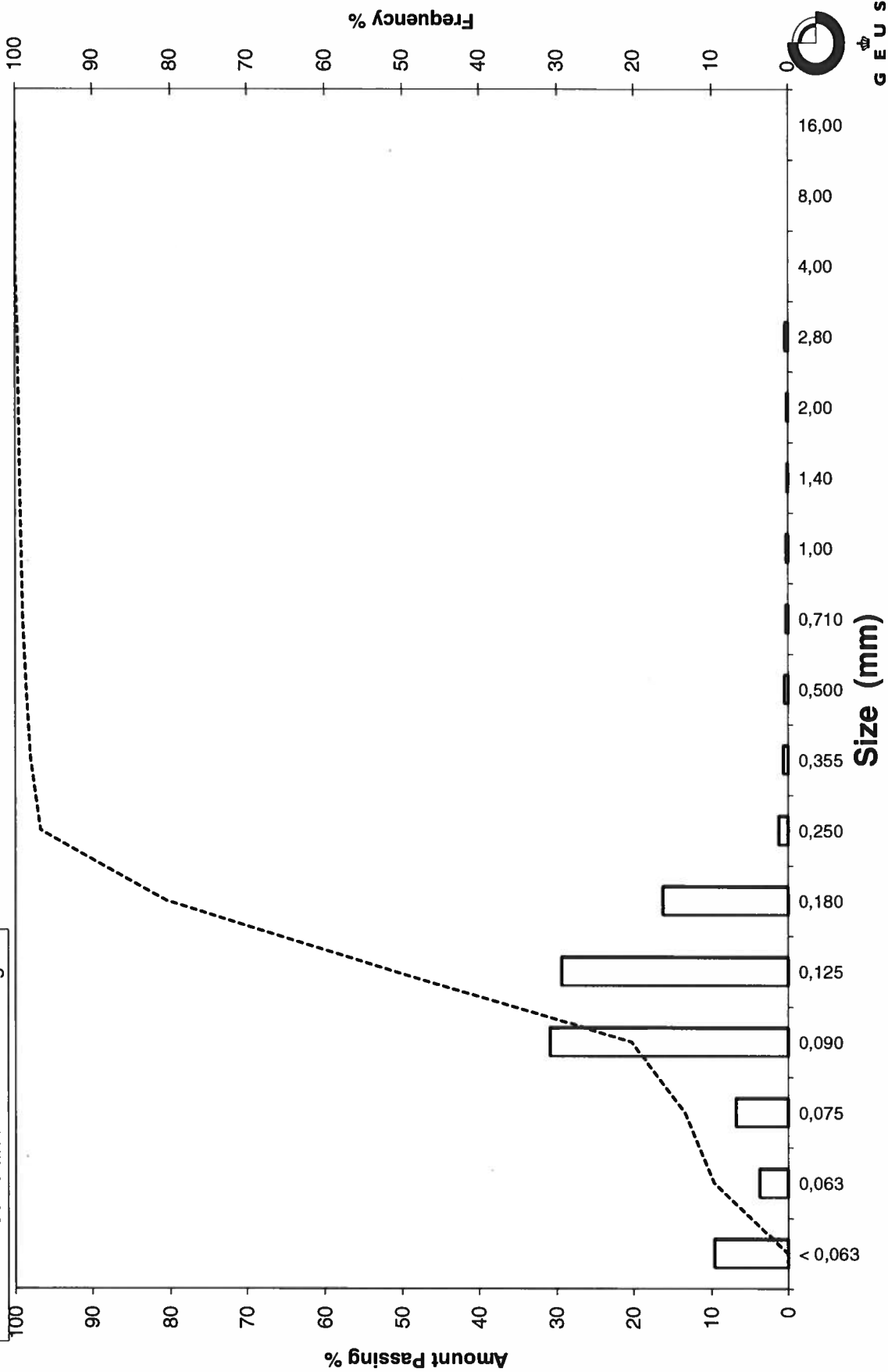
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_43, 500-520

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_44, 0-20
Lab. Id: 200632
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >2,8mm består af skaller



Total Weight 110,23 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount |
|---------|--------|--------|--------|------------------|
| mm | Φ | g | % | amount passing % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,00 | 0,00 | 100,00 |
| 4,00 | -2,00 | 0,08 | 0,07 | 99,93 |
| 2,80 | -1,49 | 0,13 | 0,12 | 99,81 |
| 2,00 | -1,00 | 0,19 | 0,17 | 99,64 |
| 1,40 | -0,49 | 0,15 | 0,14 | 99,50 |
| 1,00 | 0,00 | 0,64 | 0,58 | 98,92 |
| 0,710 | 0,49 | 1,73 | 1,57 | 97,35 |
| 0,500 | 1,00 | 7,41 | 6,72 | 90,63 |
| 0,355 | 1,49 | 27,58 | 25,02 | 65,61 |
| 0,250 | 2,00 | 36,73 | 33,32 | 32,29 |
| 0,180 | 2,47 | 15,82 | 14,35 | 17,94 |
| 0,125 | 3,00 | 12,00 | 10,89 | 7,05 |
| 0,090 | 3,47 | 5,56 | 5,04 | 2,00 |
| 0,075 | 3,74 | 0,54 | 0,49 | 1,52 |
| 0,063 | 3,99 | 0,40 | 0,36 | 1,15 |
| < 0,063 | > 3,99 | 1,27 | 1,15 | 0,00 |

Sieve Analysis

Gravel
Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 1,15 |
| Sand, fine (0,063 mm - 0,200 mm): | 20,88 |
| Sand, medium (0,2 mm - 0,6 mm): | 71,79 |
| Sand, coarse (0,6 mm - 2 mm): | 5,81 |
| Gravel (> 2 mm): | 0,36 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,64 | 0,65 |
| 16% | 84% | 0,46 | 1,12 |
| 25% | 75% | 0,41 | 1,29 |
| 40% | 60% | 0,34 | 1,57 |
| Median 50% | 50% | 0,31 | 1,71 |
| 75% | 25% | 0,21 | 2,22 |
| 84% | 16% | 0,17 | 2,55 |
| 90% | 10% | 0,14 | 2,84 |
| 95% | 5% | 0,11 | 3,17 |

Moments Statistics

| | |
|------------------------|------|
| Mean | 1,79 |
| Sorting | 0,74 |
| Skewness | 0,17 |
| Kurtosis | 1,11 |
| Uniformity Coefficient | 2,41 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

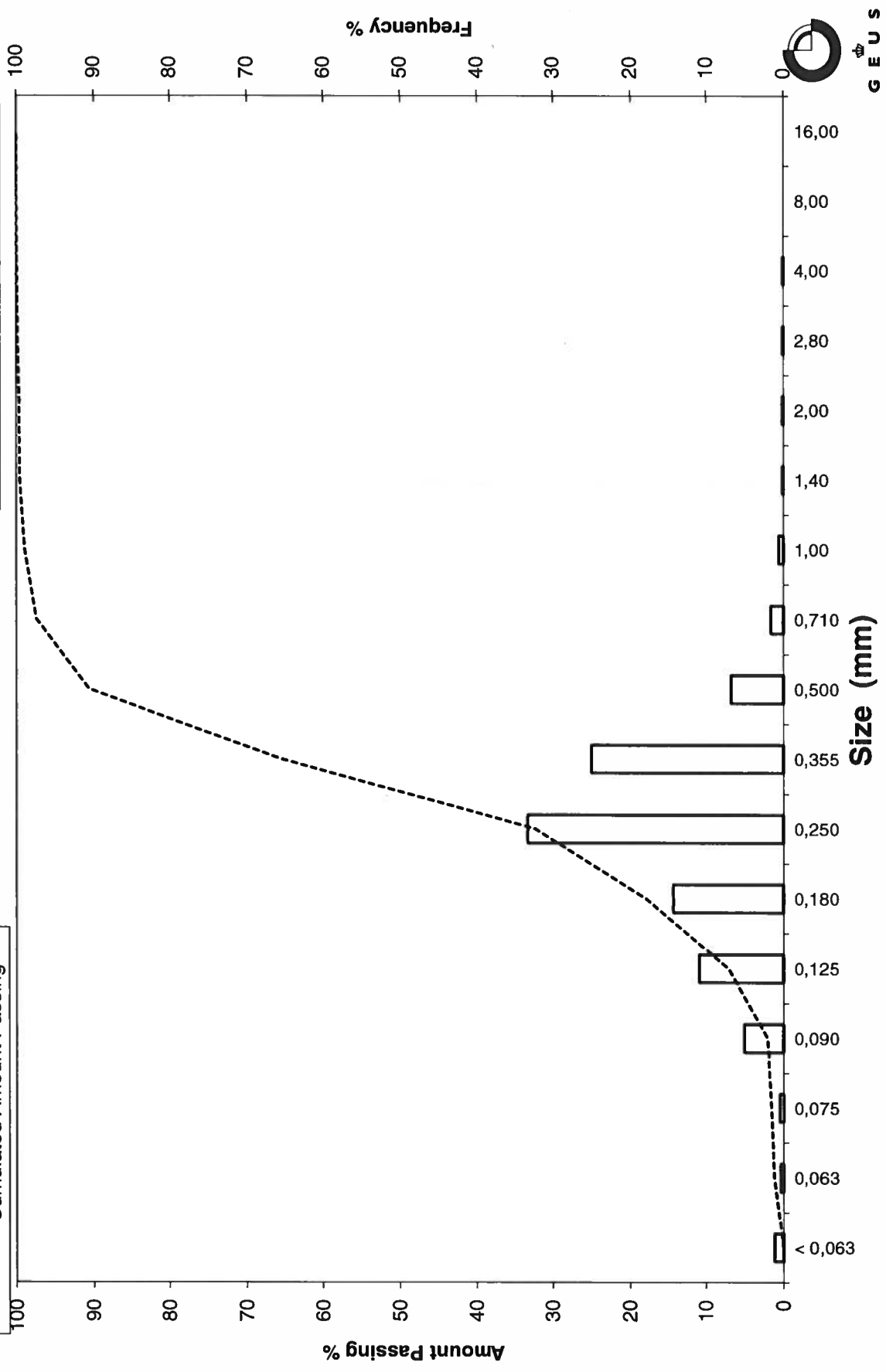
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Sample Id: Løn B-1B_44, 0-20

Grain Size Distribution

Legend:
□ Frequency Percent
- - - Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_44, 100-120
Lab. Id: 200633
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks:



Total Weight 114,74 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 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 |
| 2,80 | -1,49 | 0,14 | 0,12 | 99,88 |
| 2,00 | -1,00 | 0,19 | 0,17 | 99,71 |
| 1,40 | -0,49 | 0,34 | 0,30 | 99,42 |
| 1,00 | 0,00 | 0,74 | 0,64 | 98,77 |
| 0,710 | 0,49 | 1,42 | 1,24 | 97,53 |
| 0,500 | 1,00 | 4,81 | 4,19 | 93,34 |
| 0,355 | 1,49 | 14,26 | 12,43 | 80,91 |
| 0,250 | 2,00 | 32,99 | 28,75 | 52,16 |
| 0,180 | 2,47 | 27,24 | 23,74 | 28,42 |
| 0,125 | 3,00 | 20,30 | 17,69 | 10,73 |
| 0,090 | 3,47 | 10,13 | 8,83 | 1,90 |
| 0,075 | 3,74 | 0,63 | 0,55 | 1,35 |
| 0,063 | 3,99 | 0,28 | 0,24 | 1,11 |
| < 0,063 | > 3,99 | 1,27 | 1,11 | 0,00 |

Sieve Analysis

Gravel
Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 1,11 |
| Sand, fine (0,063 mm - 0,200 mm): | 34,10 |
| Sand, medium (0,2 mm - 0,6 mm): | 60,13 |
| Sand, coarse (0,6 mm - 2 mm): | 4,37 |
| Gravel (> 2 mm): | 0,29 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,58 | 0,78 |
| 16% | 84% | 0,39 | 1,35 |
| 25% | 75% | 0,33 | 1,58 |
| 40% | 60% | 0,28 | 1,84 |
| Median 50% | 50% | 0,24 | 2,04 |
| 75% | 25% | 0,17 | 2,56 |
| 84% | 16% | 0,14 | 2,82 |
| 90% | 10% | 0,12 | 3,03 |
| 95% | 5% | 0,10 | 3,29 |

Moments Statistics

| | |
|------------------------|------|
| Mean | 2,07 |
| Sorting | 0,75 |
| Skewness | 0,03 |
| Kurtosis | 1,05 |
| Uniformity Coefficient | 2,28 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

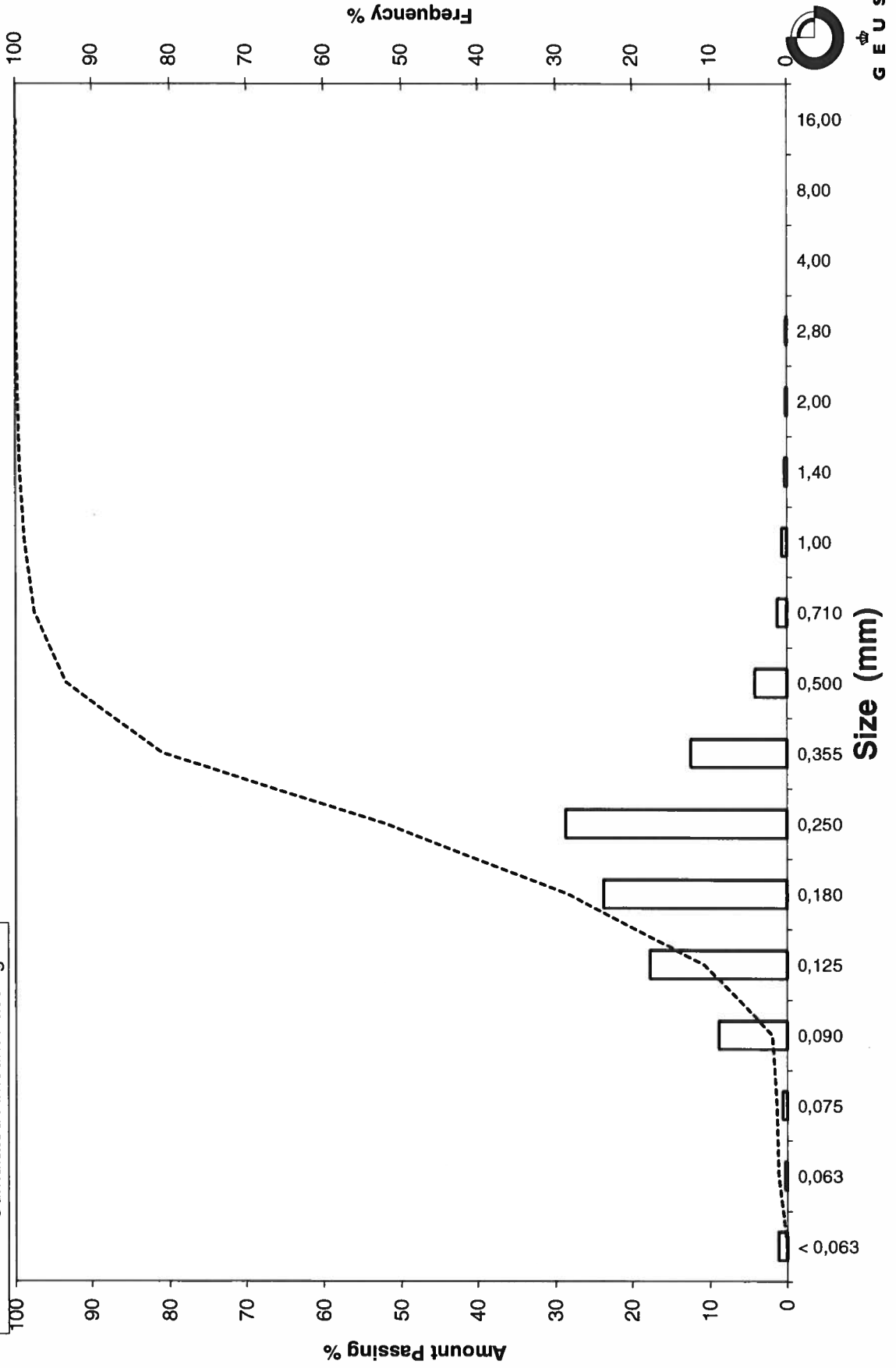
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_44, 100-120

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_44, 200-220
Lab. Id: 200634
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >2,8mm heraf 0,4g skaller



Total Weight 115,5 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,00 | 0,00 | 100,00 |
| 4,00 | -2,00 | 0,39 | 0,34 | 99,66 |
| 2,80 | -1,49 | 0,11 | 0,10 | 99,57 |
| 2,00 | -1,00 | 0,23 | 0,20 | 99,37 |
| 1,40 | -0,49 | 0,33 | 0,29 | 99,08 |
| 1,00 | 0,00 | 0,90 | 0,78 | 98,30 |
| 0,710 | 0,49 | 2,18 | 1,89 | 96,42 |
| 0,500 | 1,00 | 6,60 | 5,71 | 90,70 |
| 0,355 | 1,49 | 15,88 | 13,75 | 76,95 |
| 0,250 | 2,00 | 22,36 | 19,36 | 57,59 |
| 0,180 | 2,47 | 20,73 | 17,95 | 39,65 |
| 0,125 | 3,00 | 28,73 | 24,87 | 14,77 |
| 0,090 | 3,47 | 14,94 | 12,94 | 1,84 |
| 0,075 | 3,74 | 0,86 | 0,74 | 1,09 |
| 0,063 | 3,99 | 0,30 | 0,26 | 0,83 |
| < 0,063 | > 3,99 | 0,96 | 0,83 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 0,83 |
| Sand, fine (0,063 mm - 0,200 mm): | 43,94 |
| Sand, medium (0,2 mm - 0,6 mm): | 48,65 |
| Sand, coarse (0,6 mm - 2 mm): | 5,95 |
| Gravel (> 2 mm): | 0,63 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,66 | 0,60 |
| 16% | 84% | 0,43 | 1,22 |
| 25% | 75% | 0,34 | 1,54 |
| 40% | 60% | 0,26 | 1,93 |
| Median 50% | 50% | 0,22 | 2,18 |
| 75% | 25% | 0,15 | 2,76 |
| 84% | 16% | 0,13 | 2,97 |
| 90% | 10% | 0,11 | 3,16 |
| 95% | 5% | 0,10 | 3,34 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 2,12 |
| Sorting | 0,85 |
| Skewness | -0,13 |
| Kurtosis | 0,92 |
| Uniformity Coefficient | 2,35 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

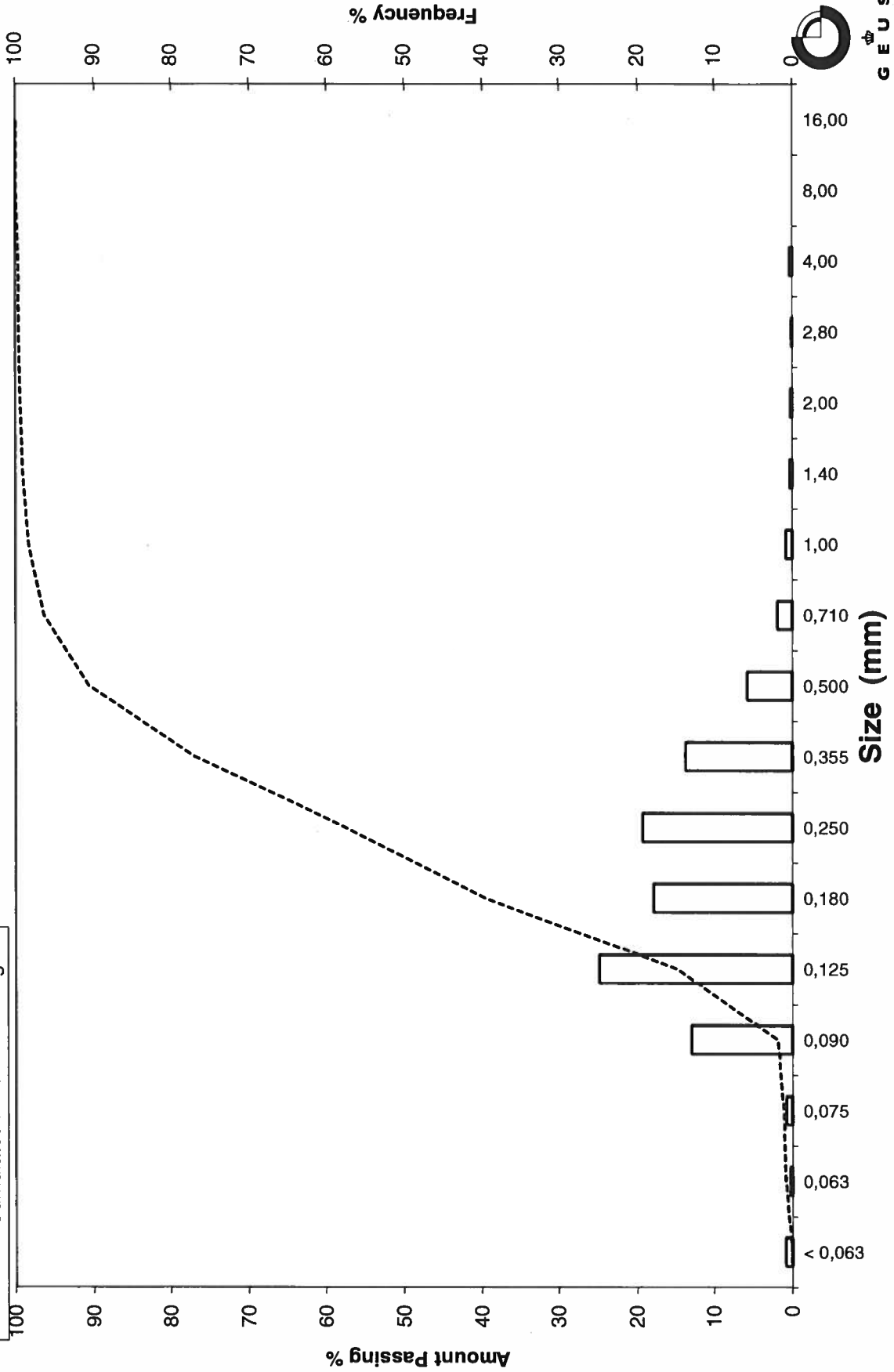
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_44, 200-220

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_44, 280-300
Lab. Id: 200635
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >4mm heraf 0,25g skaller



Total Weight 113,21 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 1,37 | 1,21 | 98,79 |
| 4,00 | -2,00 | 1,39 | 1,23 | 97,56 |
| 2,80 | -1,49 | 1,01 | 0,89 | 96,67 |
| 2,00 | -1,00 | 1,23 | 1,09 | 95,58 |
| 1,40 | -0,49 | 1,98 | 1,75 | 93,83 |
| 1,00 | 0,00 | 2,91 | 2,57 | 91,26 |
| 0,710 | 0,49 | 5,70 | 5,03 | 86,23 |
| 0,500 | 1,00 | 13,29 | 11,74 | 74,49 |
| 0,355 | 1,49 | 23,32 | 20,60 | 53,89 |
| 0,250 | 2,00 | 38,42 | 33,94 | 19,95 |
| 0,180 | 2,47 | 15,56 | 13,74 | 6,21 |
| 0,125 | 3,00 | 4,96 | 4,38 | 1,83 |
| 0,090 | 3,47 | 1,47 | 1,30 | 0,53 |
| 0,075 | 3,74 | 0,06 | 0,05 | 0,48 |
| 0,063 | 3,99 | 0,01 | 0,01 | 0,47 |
| < 0,063 | > 3,99 | 0,53 | 0,47 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| Size Class | Weight % |
|----------------------------------|---------------|
| Silt and clay (< 0,063 mm) | 0,47 |
| Sand, fine (0,063 mm - 0,200 mm) | 9,67 |
| Sand, medium (0,2 mm - 0,6 mm) | 69,94 |
| Sand, coarse (0,6 mm - 2 mm) | 15,50 |
| Gravel (> 2 mm) | 4,42 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 1,80 | -0,85 |
| 16% | 84% | 0,67 | 0,58 |
| 25% | 75% | 0,51 | 0,97 |
| 40% | 60% | 0,40 | 1,33 |
| Median 50% | 50% | 0,34 | 1,54 |
| 75% | 25% | 0,27 | 1,91 |
| 84% | 16% | 0,23 | 2,12 |
| 90% | 10% | 0,20 | 2,33 |
| 95% | 5% | 0,16 | 2,60 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 1,41 |
| Sorting | 0,91 |
| Skewness | -0,32 |
| Kurtosis | 1,51 |
| Uniformity Coefficient | 2,00 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

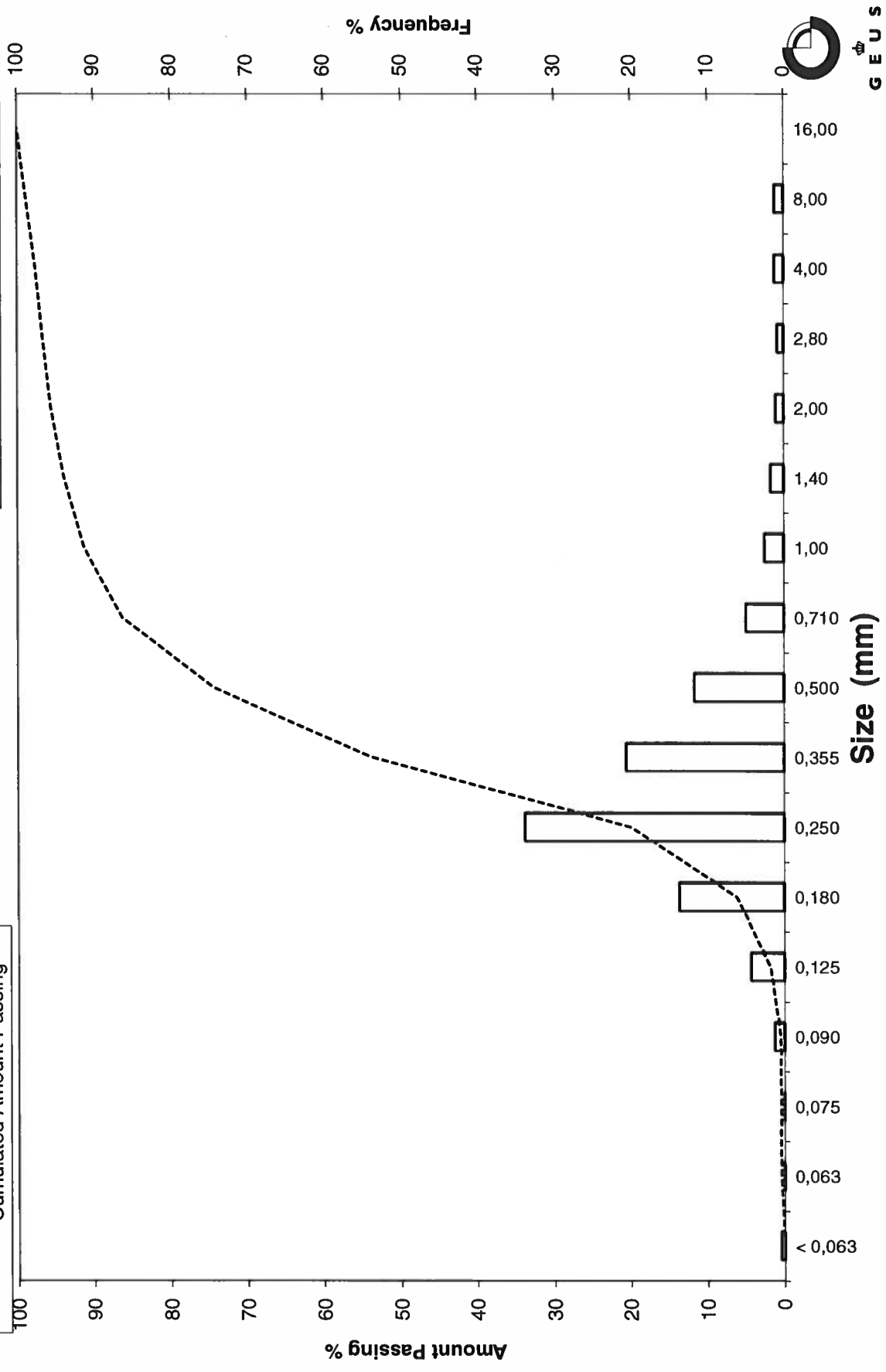
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_44, 280-300

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_44, 400-420
Lab. Id: 200636
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >2,8mm heraf 3,2g skaller



Total Weight 112,69 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,99 | 0,88 | 99,12 |
| 4,00 | -2,00 | 1,00 | 0,89 | 98,23 |
| 2,80 | -1,49 | 1,36 | 1,21 | 97,03 |
| 2,00 | -1,00 | 1,12 | 0,99 | 96,03 |
| 1,40 | -0,49 | 1,25 | 1,11 | 94,92 |
| 1,00 | 0,00 | 2,07 | 1,84 | 93,09 |
| 0,710 | 0,49 | 2,51 | 2,23 | 90,86 |
| 0,500 | 1,00 | 6,02 | 5,34 | 85,52 |
| 0,355 | 1,49 | 16,41 | 14,56 | 70,96 |
| 0,250 | 2,00 | 13,93 | 12,36 | 58,59 |
| 0,180 | 2,47 | 14,52 | 12,88 | 45,71 |
| 0,125 | 3,00 | 34,40 | 30,53 | 15,18 |
| 0,090 | 3,47 | 15,76 | 13,99 | 1,20 |
| 0,075 | 3,74 | 0,48 | 0,43 | 0,77 |
| 0,063 | 3,99 | 0,06 | 0,05 | 0,72 |
| < 0,063 | > 3,99 | 0,81 | 0,72 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| Size Class | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 0,72 |
| Sand, fine (0,063 mm - 0,200 mm): | 48,67 |
| Sand, medium (0,2 mm - 0,6 mm): | 38,67 |
| Sand, coarse (0,6 mm - 2 mm): | 7,97 |
| Gravel (> 2 mm): | 3,97 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 1,44 | -0,53 |
| 16% | 84% | 0,48 | 1,04 |
| 25% | 75% | 0,40 | 1,34 |
| 40% | 60% | 0,26 | 1,93 |
| Median 50% | 50% | 0,20 | 2,30 |
| 75% | 25% | 0,14 | 2,81 |
| 84% | 16% | 0,13 | 2,98 |
| 90% | 10% | 0,11 | 3,16 |
| 95% | 5% | 0,10 | 3,33 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 2,11 |
| Sorting | 1,07 |
| Skewness | -0,38 |
| Kurtosis | 1,08 |
| Uniformity Coefficient | 2,34 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

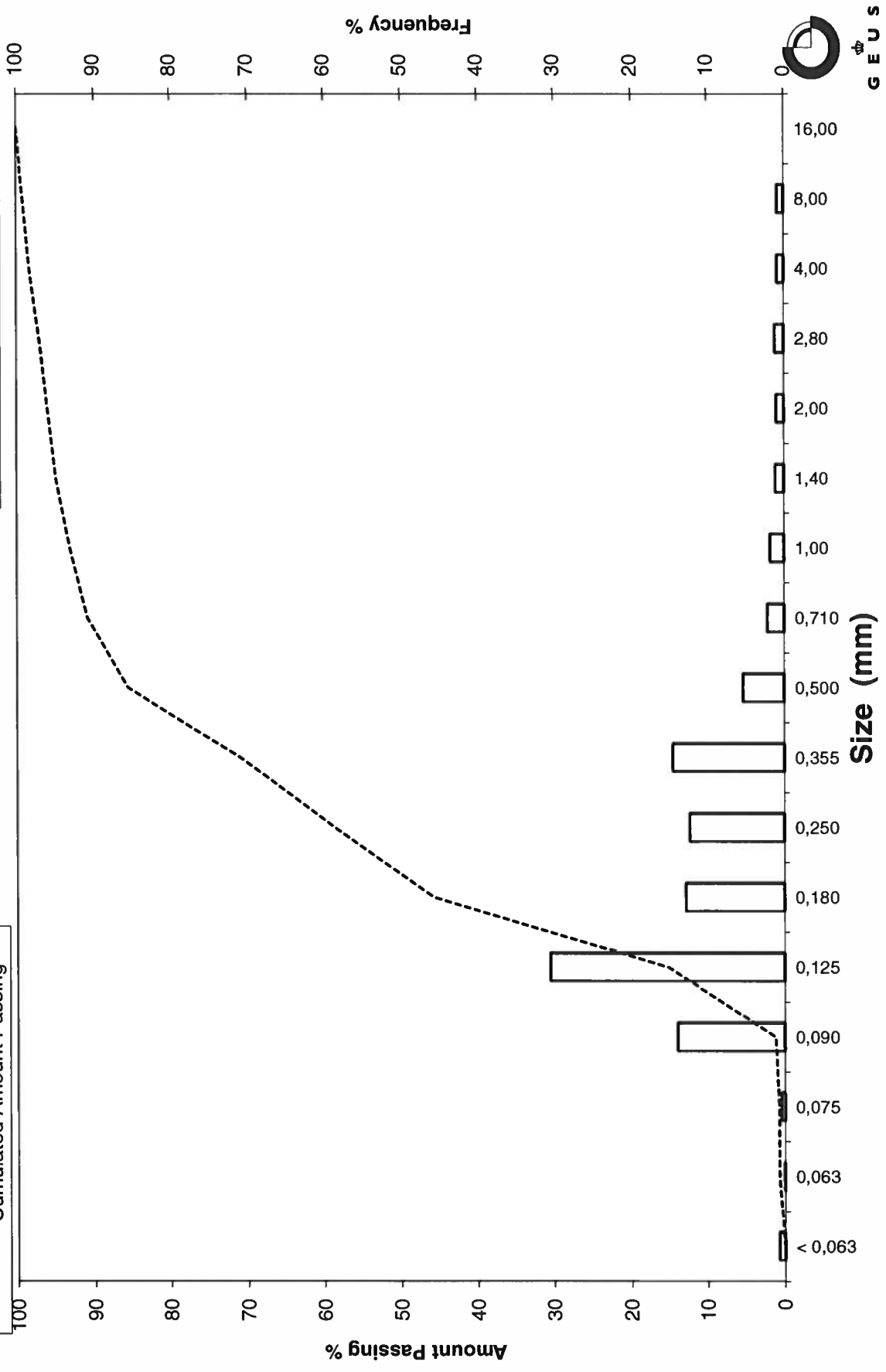
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_44, 400-420

Frequency Percent
 Cumulated Amount Passing



GEUS

Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_44, 500-520
Lab. Id: 200637
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: > 2,8mm består af skaller



Total Weight 99,5 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | φ | g | % | % |
| 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 |
| 2,80 | -1,49 | 0,06 | 0,06 | 99,94 |
| 2,00 | -1,00 | 0,00 | 0,00 | 99,94 |
| 1,40 | -0,49 | 0,12 | 0,12 | 99,82 |
| 1,00 | 0,00 | 0,11 | 0,11 | 99,71 |
| 0,710 | 0,49 | 0,18 | 0,18 | 99,53 |
| 0,500 | 1,00 | 0,28 | 0,28 | 99,25 |
| 0,355 | 1,49 | 0,54 | 0,54 | 98,70 |
| 0,250 | 2,00 | 1,83 | 1,84 | 96,86 |
| 0,180 | 2,47 | 6,45 | 6,48 | 90,38 |
| 0,125 | 3,00 | 26,90 | 27,04 | 63,35 |
| 0,090 | 3,47 | 47,20 | 47,44 | 15,91 |
| 0,075 | 3,74 | 5,76 | 5,79 | 10,12 |
| 0,063 | 3,99 | 2,73 | 2,74 | 7,38 |
| < 0,063 | > 3,99 | 7,34 | 7,38 | 0,00 |

Sieve Analysis

Gravel
Sand

Size Classes (DGF-Bulletin 1 1988)

| Size Class | Weight % |
|----------------------------------|---------------|
| Silt and clay (< 0,063 mm) | 7,38 |
| Sand, fine (0,063 mm - 0,200 mm) | 84,86 |
| Sand, medium (0,2 mm - 0,6 mm) | 7,15 |
| Sand, coarse (0,6 mm - 2 mm) | 0,56 |
| Gravel (> 2 mm) | 0,06 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,23 | 2,12 |
| 16% | 84% | 0,17 | 2,58 |
| 25% | 75% | 0,15 | 2,75 |
| 40% | 60% | 0,12 | 3,03 |
| Median 50% | 50% | 0,12 | 3,12 |
| 75% | 25% | 0,10 | 3,37 |
| 84% | 16% | 0,09 | 3,47 |
| 90% | 10% | 0,07 | 3,75 |
| 95% | 5% | ----- | ----- |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 3,06 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | 1,65 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

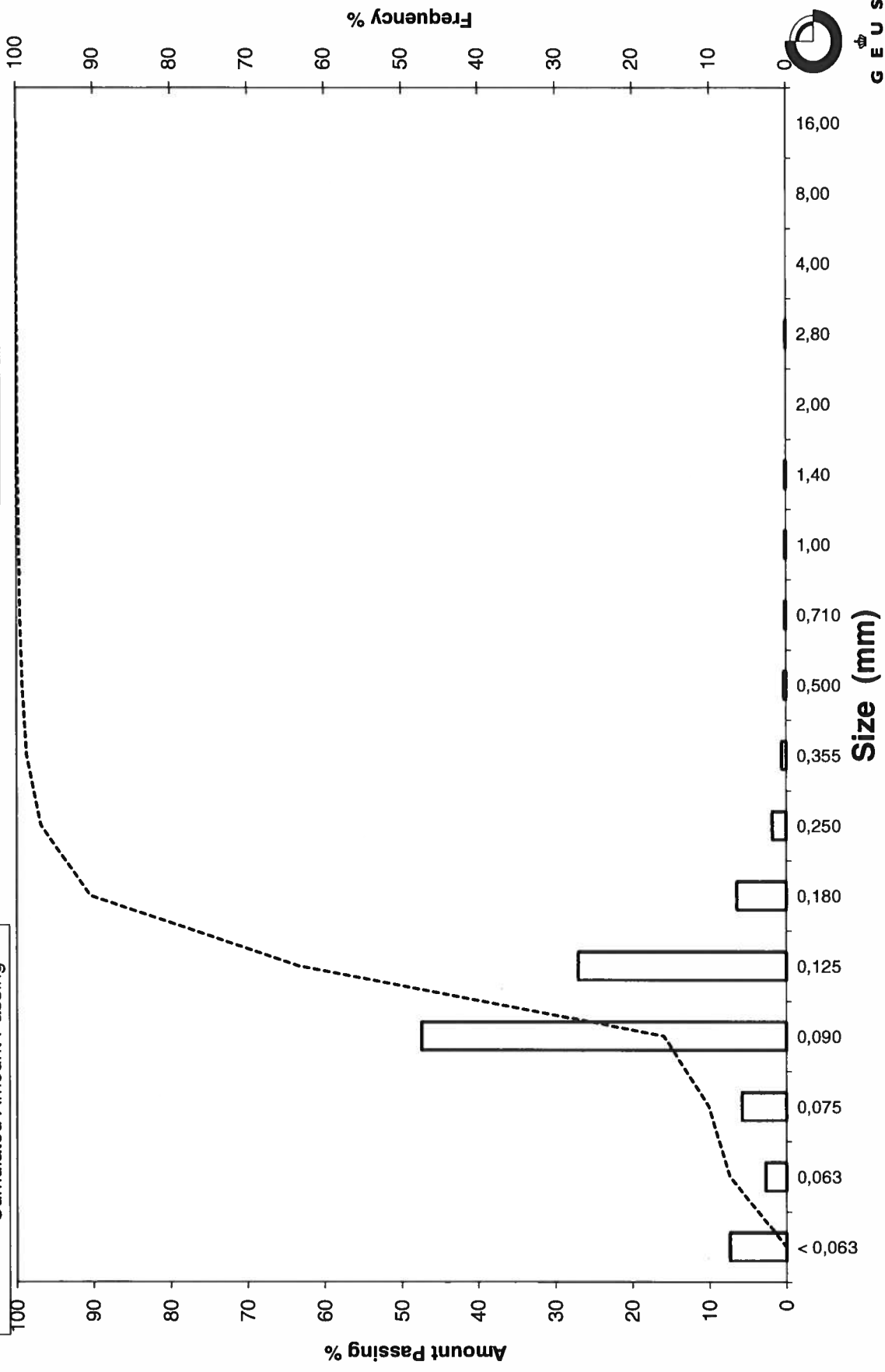
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_44, 500-520

Frequency Percent
 Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_45, 0-20
Lab. Id: 200638
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >2,8mm heraf 0,35g skaller



Total Weight 104,92 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 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 | 0,22 | 99,78 |
| 2,80 | -1,49 | 0,28 | 0,27 | 99,51 |
| 2,00 | -1,00 | 0,35 | 0,33 | 99,18 |
| 1,40 | -0,49 | 0,24 | 0,23 | 98,95 |
| 1,00 | 0,00 | 0,73 | 0,70 | 98,26 |
| 0,710 | 0,49 | 1,31 | 1,25 | 97,01 |
| 0,500 | 1,00 | 4,67 | 4,45 | 92,56 |
| 0,355 | 1,49 | 9,98 | 9,51 | 83,04 |
| 0,250 | 2,00 | 12,58 | 11,99 | 71,05 |
| 0,180 | 2,47 | 17,14 | 16,34 | 54,72 |
| 0,125 | 3,00 | 36,73 | 35,01 | 19,71 |
| 0,090 | 3,47 | 16,91 | 16,12 | 3,59 |
| 0,075 | 3,74 | 1,31 | 1,25 | 2,34 |
| 0,063 | 3,99 | 0,50 | 0,48 | 1,87 |
| < 0,063 | > 3,99 | 1,96 | 1,87 | 0,00 |

Sieve Analysis

Gravel
Sand

Size Classes (DGF-Bulletin 1 1988)

| Size Class | Weight % |
|----------------------------------|---------------|
| Silt and clay (< 0,063 mm) | 1,87 |
| Sand, fine (0,063 mm - 0,200 mm) | 57,52 |
| Sand, medium (0,2 mm - 0,6 mm) | 35,29 |
| Sand, coarse (0,6 mm - 2 mm) | 4,50 |
| Gravel (> 2 mm) | 0,82 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,62 | 0,70 |
| 16% | 84% | 0,37 | 1,44 |
| 25% | 75% | 0,28 | 1,81 |
| 40% | 60% | 0,20 | 2,30 |
| Median 50% | 50% | 0,17 | 2,53 |
| 75% | 25% | 0,13 | 2,91 |
| 84% | 16% | 0,12 | 3,10 |
| 90% | 10% | 0,10 | 3,27 |
| 95% | 5% | 0,09 | 3,43 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 2,36 |
| Sorting | 0,83 |
| Skewness | -0,33 |
| Kurtosis | 1,02 |
| Uniformity Coefficient | 1,95 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

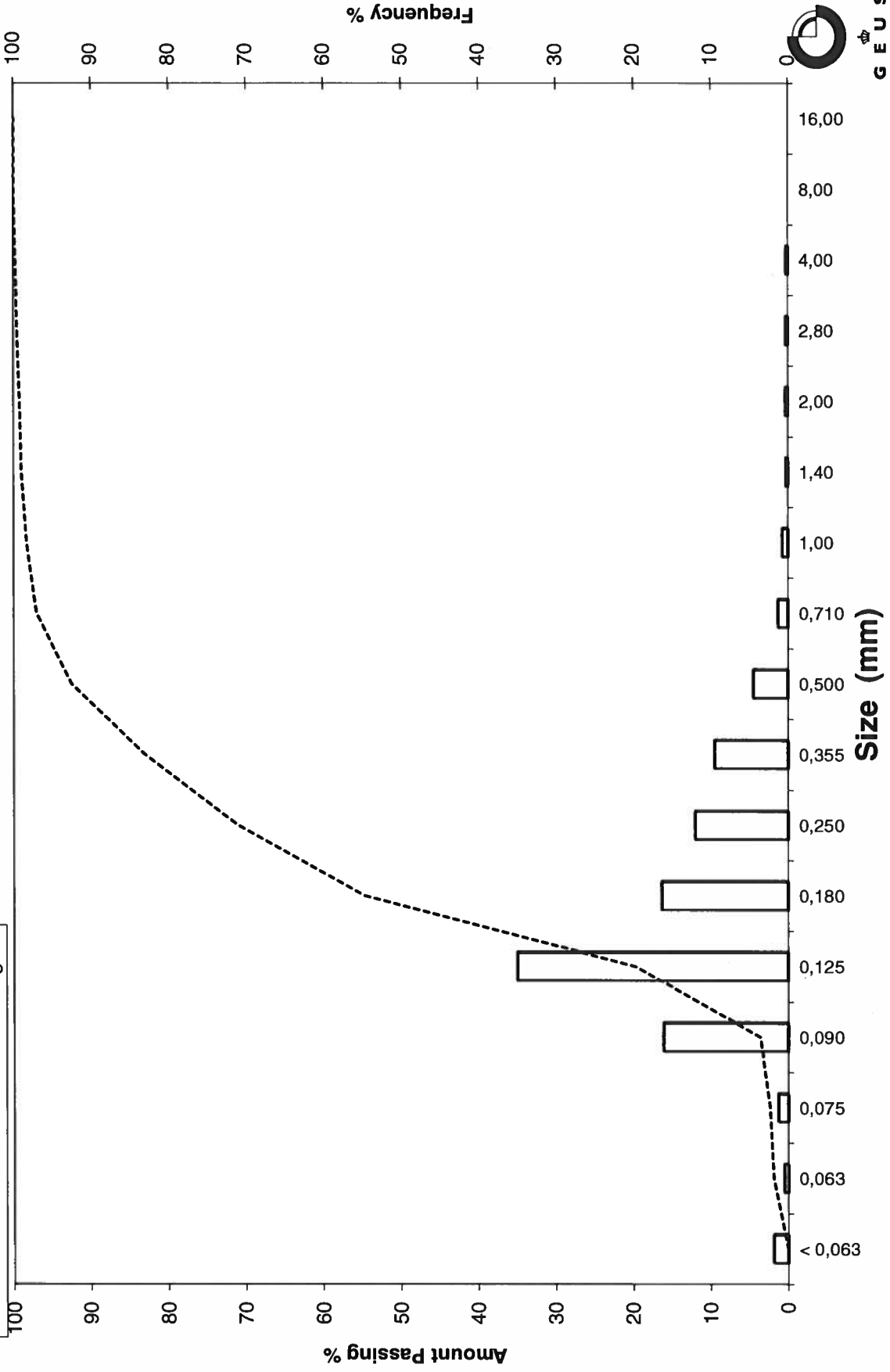
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Sample Id: Løn B-1B_45, 0-20

Grain Size Distribution

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_45, 100-120
Lab. Id: 200639
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks:



Total Weight 94,99 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 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 |
| 2,80 | -1,49 | 0,10 | 0,11 | 99,89 |
| 2,00 | -1,00 | 0,00 | 0,00 | 99,89 |
| 1,40 | -0,49 | 0,00 | 0,00 | 99,89 |
| 1,00 | 0,00 | 0,04 | 0,04 | 99,85 |
| 0,710 | 0,49 | 0,05 | 0,05 | 99,80 |
| 0,500 | 1,00 | 0,36 | 0,38 | 99,42 |
| 0,355 | 1,49 | 0,96 | 1,01 | 98,41 |
| 0,250 | 2,00 | 1,28 | 1,35 | 97,06 |
| 0,180 | 2,47 | 2,01 | 2,12 | 94,95 |
| 0,125 | 3,00 | 23,40 | 24,63 | 70,31 |
| 0,090 | 3,47 | 52,55 | 55,32 | 14,99 |
| 0,075 | 3,74 | 5,92 | 6,23 | 8,76 |
| 0,063 | 3,99 | 2,67 | 2,81 | 5,95 |
| < 0,063 | > 3,99 | 5,65 | 5,95 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| Size Class | Weight % |
|----------------------------------|---------------|
| Silt and clay (< 0,063 mm) | 5,95 |
| Sand, fine (0,063 mm - 0,200 mm) | 89,60 |
| Sand, medium (0,2 mm - 0,6 mm) | 4,05 |
| Sand, coarse (0,6 mm - 2 mm) | 0,29 |
| Gravel (> 2 mm) | 0,11 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,18 | 2,46 |
| 16% | 84% | 0,16 | 2,68 |
| 25% | 75% | 0,14 | 2,88 |
| 40% | 60% | 0,12 | 3,08 |
| Median 50% | 50% | 0,11 | 3,16 |
| 75% | 25% | 0,10 | 3,38 |
| 84% | 16% | 0,09 | 3,46 |
| 90% | 10% | 0,08 | 3,68 |
| 95% | 5% | ----- | ----- |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 3,10 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | 1,52 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

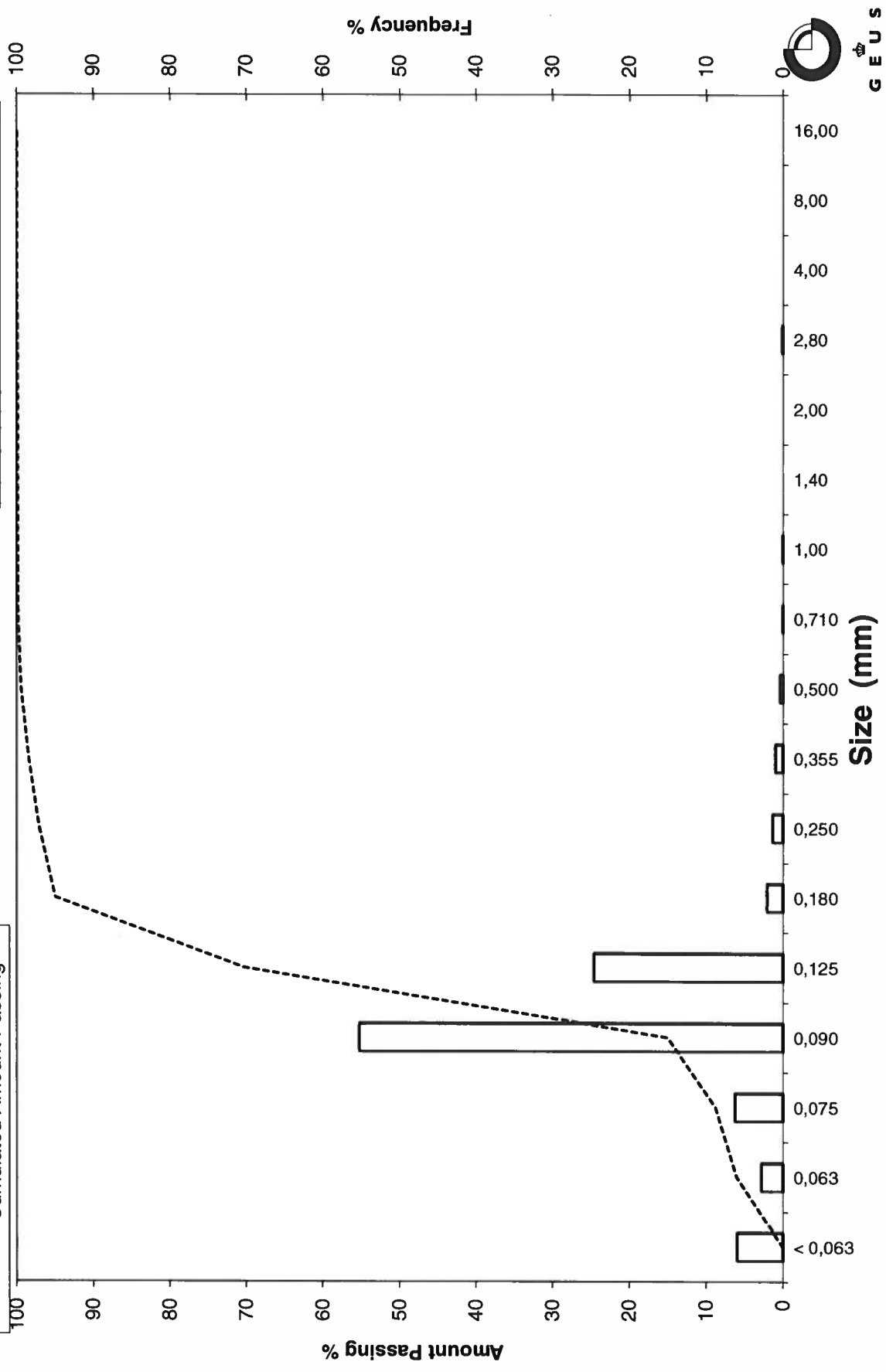
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_45, 100-120

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_45, 180-200
Lab. Id: 200640
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >8mm består af skaller



Total Weight 102,06 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,09 | 0,09 | 99,91 |
| 4,00 | -2,00 | 0,53 | 0,52 | 99,39 |
| 2,80 | -1,49 | 0,47 | 0,46 | 98,93 |
| 2,00 | -1,00 | 0,63 | 0,62 | 98,31 |
| 1,40 | -0,49 | 0,56 | 0,55 | 97,77 |
| 1,00 | 0,00 | 0,64 | 0,63 | 97,14 |
| 0,710 | 0,49 | 0,54 | 0,53 | 96,61 |
| 0,500 | 1,00 | 0,99 | 0,97 | 95,64 |
| 0,355 | 1,49 | 2,94 | 2,88 | 92,76 |
| 0,250 | 2,00 | 12,67 | 12,41 | 80,34 |
| 0,180 | 2,47 | 27,67 | 27,11 | 53,23 |
| 0,125 | 3,00 | 8,45 | 8,28 | 44,95 |
| 0,090 | 3,47 | 18,34 | 17,97 | 26,98 |
| 0,075 | 3,74 | 6,68 | 6,55 | 20,44 |
| 0,063 | 3,99 | 5,04 | 4,94 | 15,50 |
| < 0,063 | > 3,99 | 15,82 | 15,50 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| Size Class | Weight % |
|----------------------------------|---------------|
| Silt and clay (< 0,063 mm) | 15,50 |
| Sand, fine (0,063 mm - 0,200 mm) | 45,48 |
| Sand, medium (0,2 mm - 0,6 mm) | 35,12 |
| Sand, coarse (0,6 mm - 2 mm) | 2,21 |
| Gravel (> 2 mm) | 1,69 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,47 | 1,10 |
| 16% | 84% | 0,28 | 1,83 |
| 25% | 75% | 0,24 | 2,08 |
| 40% | 60% | 0,20 | 2,34 |
| Median 50% | 50% | 0,16 | 2,66 |
| 75% | 25% | 0,09 | 3,55 |
| 84% | 16% | 0,06 | 3,96 |
| 90% | 10% | ----- | ----- |
| 95% | 5% | ----- | ----- |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 2,82 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | ----- |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

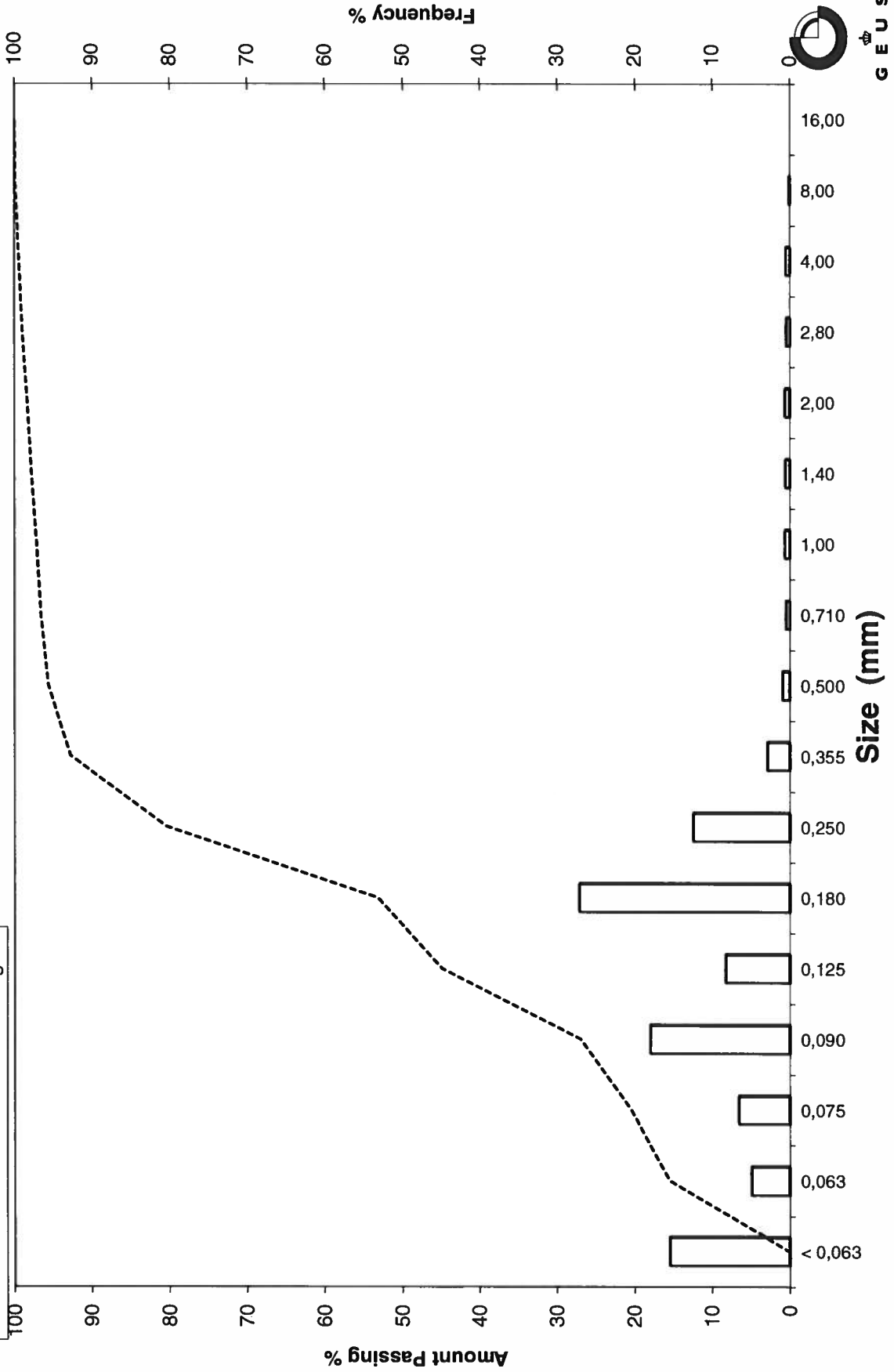
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_45, 180-200

Frequency Percent
Cumulated Amount Passing



GEUS

Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_45, 300-320
Lab. Id: 200641
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks:



Total Weight 113,1 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 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 |
| 2,80 | -1,49 | 0,43 | 0,38 | 99,62 |
| 2,00 | -1,00 | 0,59 | 0,52 | 99,10 |
| 1,40 | -0,49 | 0,56 | 0,50 | 98,60 |
| 1,00 | 0,00 | 0,63 | 0,56 | 98,05 |
| 0,710 | 0,49 | 0,91 | 0,80 | 97,24 |
| 0,500 | 1,00 | 1,87 | 1,65 | 95,59 |
| 0,355 | 1,49 | 6,83 | 6,04 | 89,55 |
| 0,250 | 2,00 | 35,57 | 31,45 | 58,10 |
| 0,180 | 2,47 | 39,77 | 35,16 | 22,94 |
| 0,125 | 3,00 | 9,37 | 8,28 | 14,65 |
| 0,090 | 3,47 | 6,27 | 5,54 | 9,11 |
| 0,075 | 3,74 | 3,44 | 3,04 | 6,07 |
| 0,063 | 3,99 | 2,03 | 1,79 | 4,27 |
| < 0,063 | > 3,99 | 4,83 | 4,27 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| Size Class | Weight % |
|----------------------------------|---------------|
| Silt and clay (< 0,063 mm) | 4,27 |
| Sand, fine (0,063 mm - 0,200 mm) | 28,71 |
| Sand, medium (0,2 mm - 0,6 mm) | 63,39 |
| Sand, coarse (0,6 mm - 2 mm) | 2,72 |
| Gravel (> 2 mm) | 0,90 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,49 | 1,04 |
| 16% | 84% | 0,34 | 1,57 |
| 25% | 75% | 0,31 | 1,71 |
| 40% | 60% | 0,26 | 1,96 |
| Median 50% | 50% | 0,23 | 2,10 |
| 75% | 25% | 0,18 | 2,44 |
| 84% | 16% | 0,13 | 2,90 |
| 90% | 10% | 0,10 | 3,39 |
| 95% | 5% | 0,07 | 3,88 |

Moments Statistics

| | |
|------------------------|------|
| Mean | 2,19 |
| Sorting | 0,76 |
| Skewness | 0,23 |
| Kurtosis | 1,58 |
| Uniformity Coefficient | 2,68 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

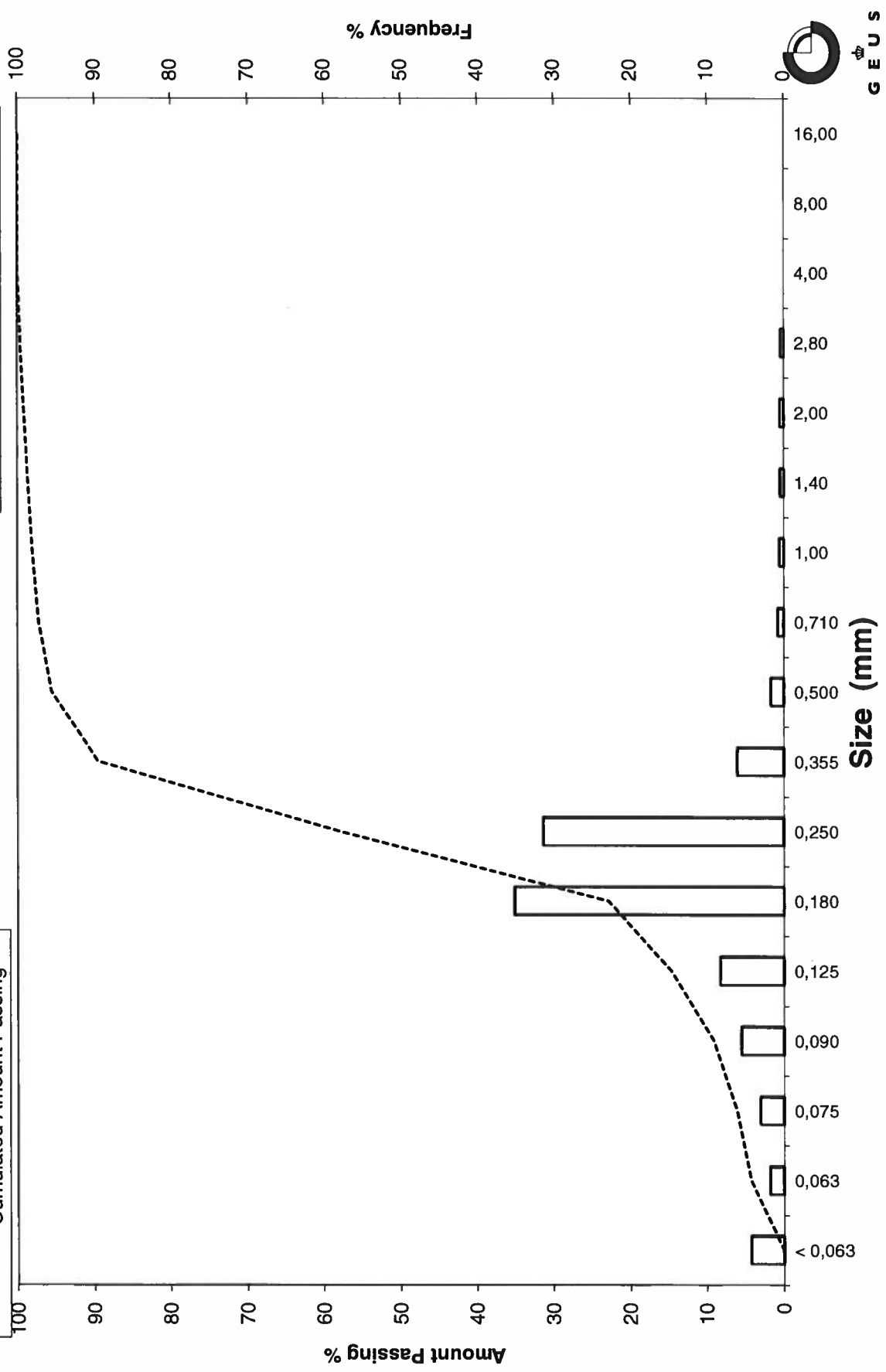
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_45, 300-320

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_45, 400-420
Lab. Id: 200642
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >4mm heraf 0,1g skaller



Total Weight 115,1 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing | |
|---------|--------|--------|--------|--------------------------|--------|
| | | | | | |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 | Gravel |
| 8,00 | -3,00 | 0,00 | 0,00 | 100,00 | |
| 4,00 | -2,00 | 0,16 | 0,14 | 99,86 | |
| 2,80 | -1,49 | 0,14 | 0,12 | 99,74 | |
| 2,00 | -1,00 | 0,19 | 0,17 | 99,57 | |
| 1,40 | -0,49 | 0,14 | 0,12 | 99,45 | |
| 1,00 | 0,00 | 0,37 | 0,32 | 99,13 | |
| 0,710 | 0,49 | 0,62 | 0,54 | 98,59 | |
| 0,500 | 1,00 | 1,57 | 1,36 | 97,23 | |
| 0,355 | 1,49 | 8,56 | 7,44 | 89,79 | |
| 0,250 | 2,00 | 37,91 | 32,94 | 56,85 | Sand |
| 0,180 | 2,47 | 37,28 | 32,39 | 24,47 | |
| 0,125 | 3,00 | 7,88 | 6,85 | 17,62 | |
| 0,090 | 3,47 | 10,10 | 8,77 | 8,84 | |
| 0,075 | 3,74 | 4,03 | 3,50 | 5,34 | |
| 0,063 | 3,99 | 1,67 | 1,45 | 3,89 | |
| < 0,063 | > 3,99 | 4,48 | 3,89 | 0,00 | |

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 3,89 |
| Sand, fine (0,063 mm - 0,200 mm): | 29,83 |
| Sand, medium (0,2 mm - 0,6 mm): | 64,16 |
| Sand, coarse (0,6 mm - 2 mm): | 1,70 |
| Gravel (> 2 mm): | 0,43 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,46 | 1,13 |
| 16% | 84% | 0,34 | 1,57 |
| 25% | 75% | 0,31 | 1,70 |
| 40% | 60% | 0,26 | 1,94 |
| Median 50% | 50% | 0,24 | 2,09 |
| 75% | 25% | 0,18 | 2,46 |
| 84% | 16% | 0,12 | 3,08 |
| 90% | 10% | 0,09 | 3,40 |
| 95% | 5% | 0,07 | 3,79 |

Moments Statistics

| | |
|------------------------|------|
| Mean | 2,25 |
| Sorting | 0,78 |
| Skewness | 0,30 |
| Kurtosis | 1,43 |
| Uniformity Coefficient | 2,75 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

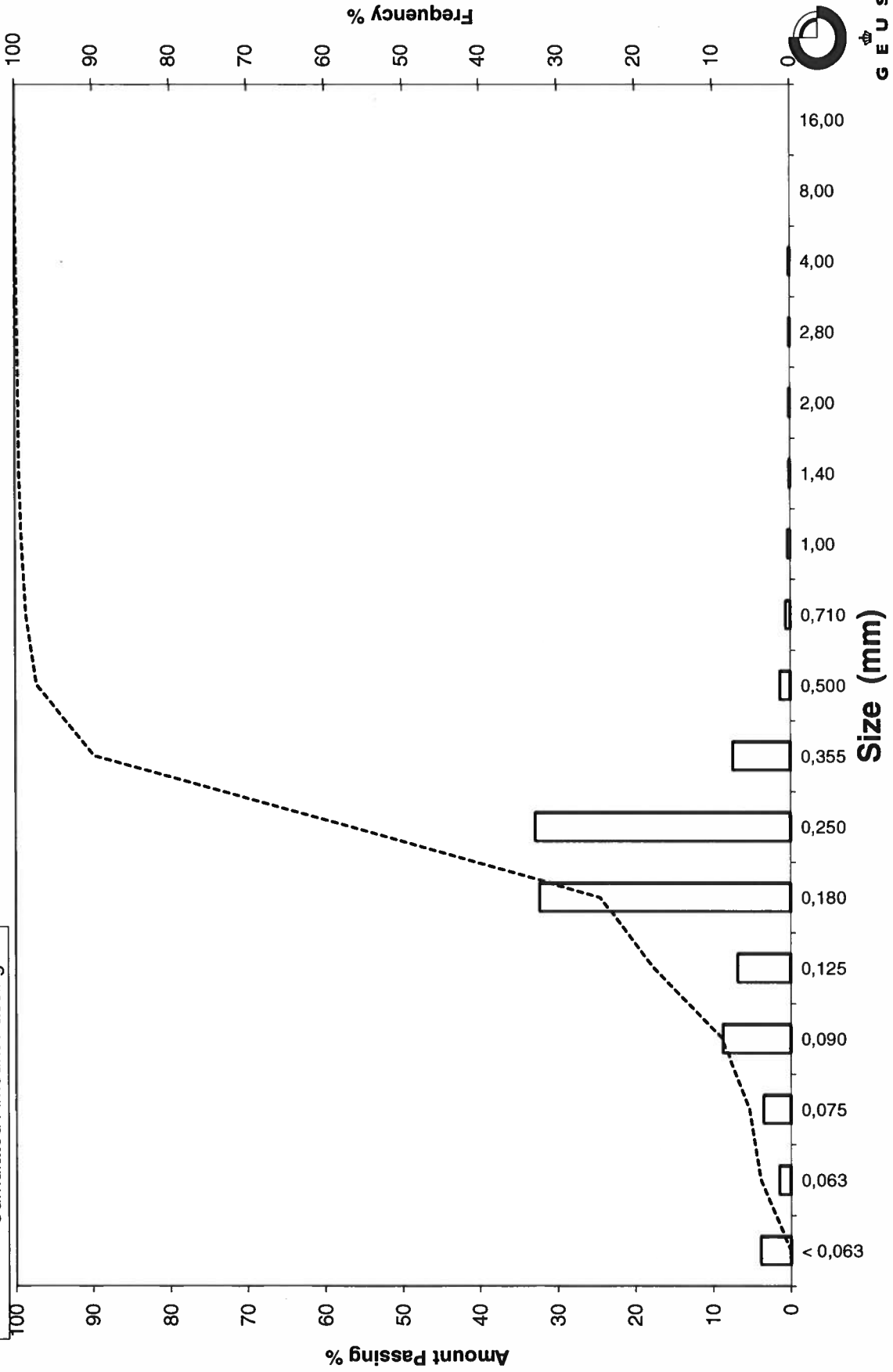
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_45, 400-420

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_46, 10-20
Lab. Id: 200643
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >2,8mm heraf 0,3g skaller



Total Weight 113,15 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,00 | 0,00 | 100,00 |
| 4,00 | -2,00 | 0,39 | 0,34 | 99,66 |
| 2,80 | -1,49 | 0,58 | 0,51 | 99,14 |
| 2,00 | -1,00 | 0,56 | 0,49 | 98,65 |
| 1,40 | -0,49 | 0,84 | 0,74 | 97,91 |
| 1,00 | 0,00 | 1,22 | 1,08 | 96,83 |
| 0,710 | 0,49 | 2,01 | 1,78 | 95,05 |
| 0,500 | 1,00 | 6,21 | 5,49 | 89,56 |
| 0,355 | 1,49 | 13,19 | 11,66 | 77,91 |
| 0,250 | 2,00 | 30,81 | 27,23 | 50,68 |
| 0,180 | 2,47 | 35,92 | 31,75 | 18,93 |
| 0,125 | 3,00 | 16,71 | 14,77 | 4,16 |
| 0,090 | 3,47 | 3,59 | 3,17 | 0,99 |
| 0,075 | 3,74 | 0,27 | 0,24 | 0,75 |
| 0,063 | 3,99 | 0,09 | 0,08 | 0,67 |
| < 0,063 | > 3,99 | 0,76 | 0,67 | 0,00 |

Sieve Analysis

Gravel
Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 0,67 |
| Sand, fine (0,063 mm - 0,200 mm): | 27,33 |
| Sand, medium (0,2 mm - 0,6 mm): | 64,18 |
| Sand, coarse (0,6 mm - 2 mm): | 6,47 |
| Gravel (> 2 mm): | 1,35 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,71 | 0,50 |
| 16% | 84% | 0,43 | 1,21 |
| 25% | 75% | 0,34 | 1,54 |
| 40% | 60% | 0,29 | 1,81 |
| Median 50% | 50% | 0,25 | 2,01 |
| 75% | 25% | 0,19 | 2,37 |
| 84% | 16% | 0,17 | 2,56 |
| 90% | 10% | 0,15 | 2,77 |
| 95% | 5% | 0,13 | 2,96 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 1,93 |
| Sorting | 0,71 |
| Skewness | -0,20 |
| Kurtosis | 1,22 |
| Uniformity Coefficient | 1,95 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)
 Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)
 Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)
 Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)
 Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

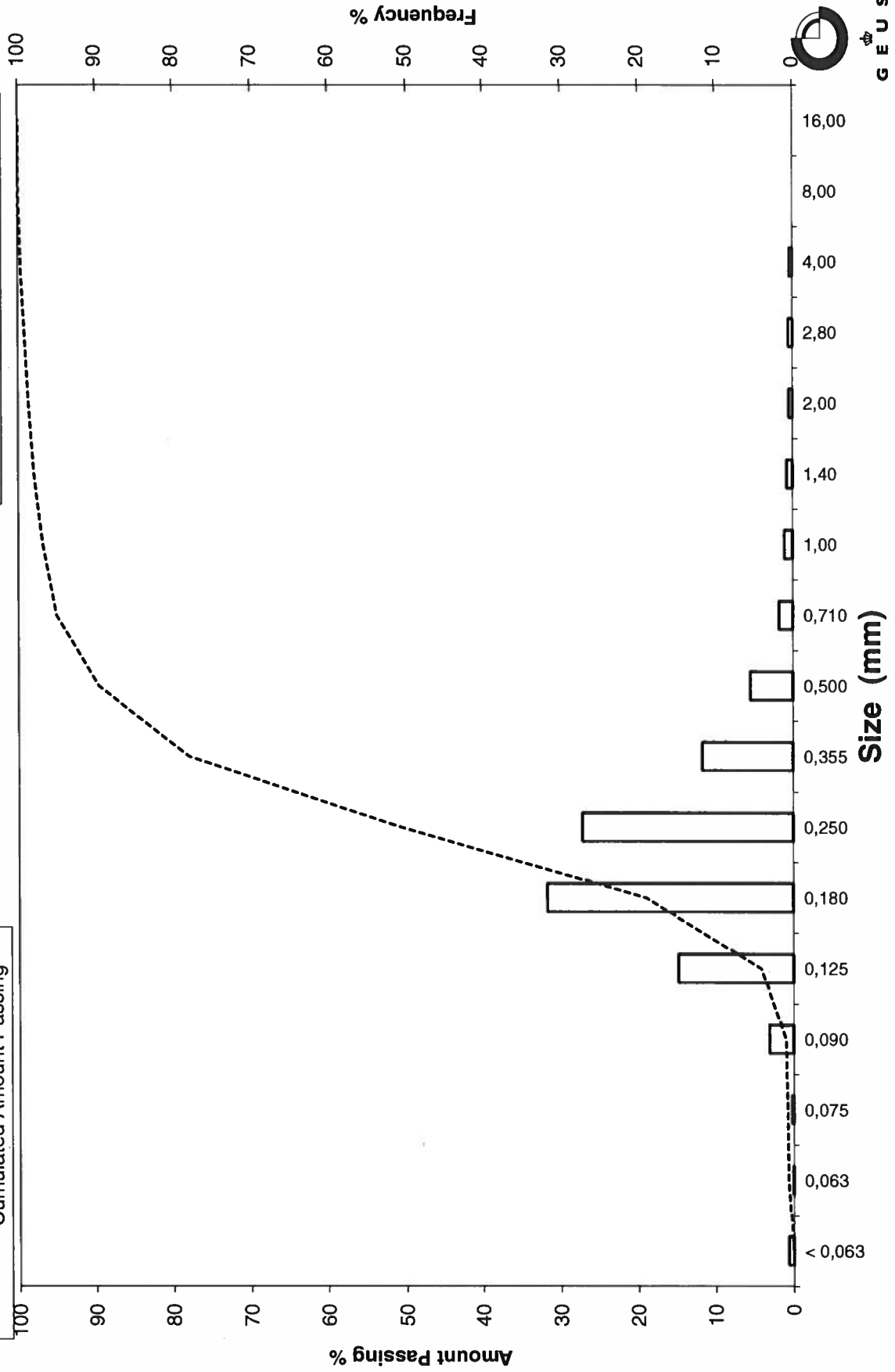
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_46, 10-20

Frequency Percent
Cumulated Amount Passing



G E U S

Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_46, 80-100
Lab. Id: 200644
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >4mm heraf 0,8g skaller



Total Weight 116,73 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,56 | 0,48 | 99,52 |
| 4,00 | -2,00 | 1,75 | 1,50 | 98,02 |
| 2,80 | -1,49 | 2,46 | 2,11 | 95,91 |
| 2,00 | -1,00 | 2,30 | 1,97 | 93,94 |
| 1,40 | -0,49 | 2,18 | 1,87 | 92,08 |
| 1,00 | 0,00 | 4,55 | 3,90 | 88,18 |
| 0,710 | 0,49 | 5,96 | 5,11 | 83,07 |
| 0,500 | 1,00 | 13,59 | 11,64 | 71,43 |
| 0,355 | 1,49 | 20,88 | 17,89 | 53,54 |
| 0,250 | 2,00 | 26,86 | 23,01 | 30,53 |
| 0,180 | 2,47 | 24,73 | 21,19 | 9,35 |
| 0,125 | 3,00 | 9,18 | 7,86 | 1,48 |
| 0,090 | 3,47 | 1,19 | 1,02 | 0,46 |
| 0,075 | 3,74 | 0,11 | 0,09 | 0,37 |
| 0,063 | 3,99 | 0,04 | 0,03 | 0,33 |
| < 0,063 | > 3,99 | 0,39 | 0,33 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 0,33 |
| Sand, fine (0,063 mm - 0,200 mm): | 15,07 |
| Sand, medium (0,2 mm - 0,6 mm): | 61,57 |
| Sand, coarse (0,6 mm - 2 mm): | 16,97 |
| Gravel (> 2 mm): | 6,06 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 2,43 | -1,28 |
| 16% | 84% | 0,76 | 0,39 |
| 25% | 75% | 0,56 | 0,83 |
| 40% | 60% | 0,41 | 1,30 |
| Median 50% | 50% | 0,34 | 1,56 |
| 75% | 25% | 0,23 | 2,11 |
| 84% | 16% | 0,20 | 2,31 |
| 90% | 10% | 0,18 | 2,46 |
| 95% | 5% | 0,15 | 2,74 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 1,42 |
| Sorting | 1,09 |
| Skewness | -0,32 |
| Kurtosis | 1,28 |
| Uniformity Coefficient | 2,24 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

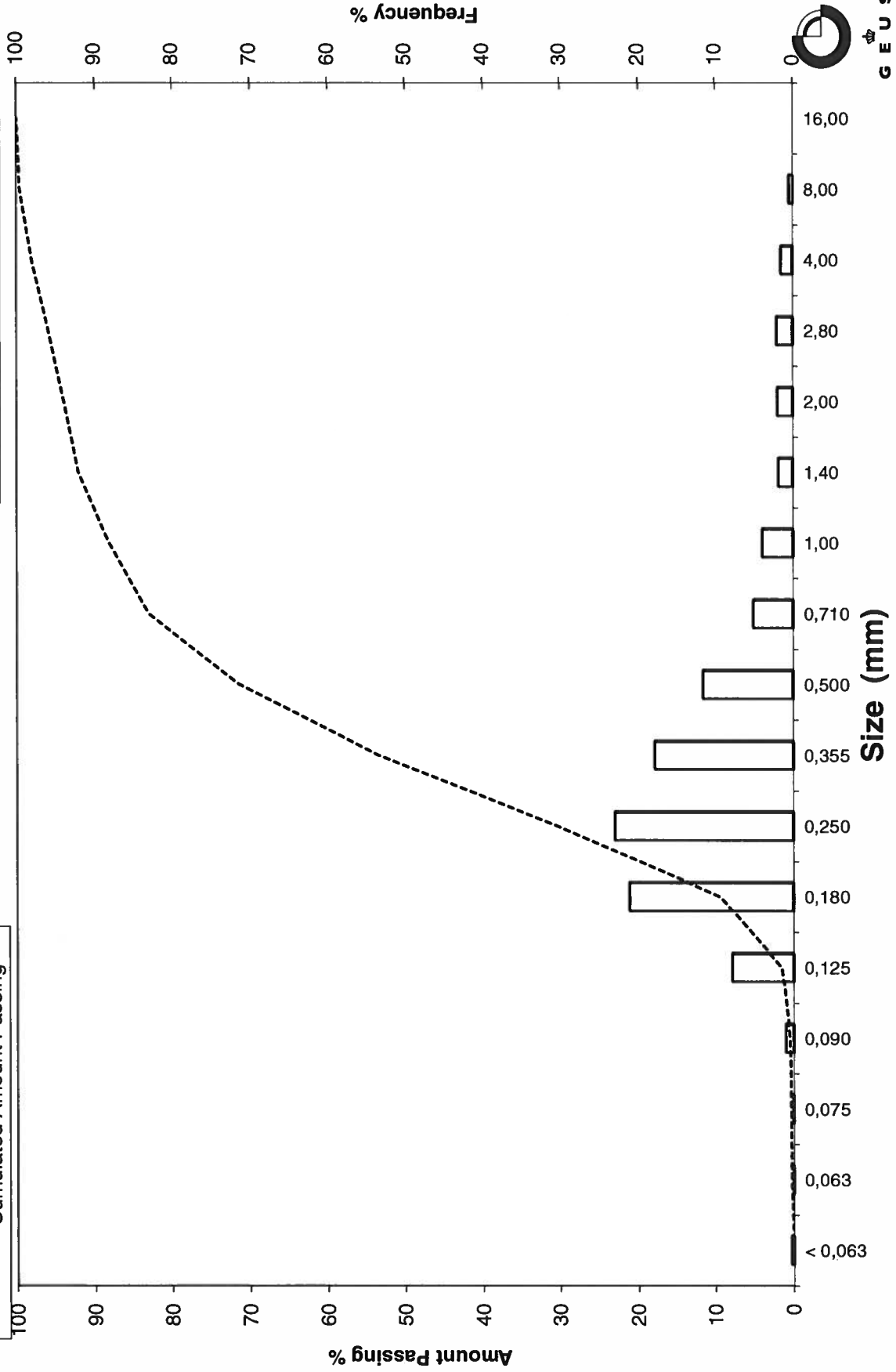
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_46, 80-100

Frequency Percent
Cumulated Amount Passing



GEUS

Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_46, 200-220
Lab. Id: 200645
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >4mm heraf 0,1g skaller



Total Weight 110,95 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,00 | 0,00 | 100,00 |
| 4,00 | -2,00 | 0,50 | 0,45 | 99,55 |
| 2,80 | -1,49 | 0,32 | 0,29 | 99,26 |
| 2,00 | -1,00 | 0,49 | 0,44 | 98,82 |
| 1,40 | -0,49 | 0,59 | 0,53 | 98,29 |
| 1,00 | 0,00 | 1,21 | 1,09 | 97,20 |
| 0,710 | 0,49 | 2,59 | 2,33 | 94,86 |
| 0,500 | 1,00 | 7,71 | 6,95 | 87,91 |
| 0,355 | 1,49 | 17,06 | 15,38 | 72,54 |
| 0,250 | 2,00 | 32,46 | 29,26 | 43,28 |
| 0,180 | 2,47 | 27,20 | 24,52 | 18,77 |
| 0,125 | 3,00 | 16,57 | 14,93 | 3,83 |
| 0,090 | 3,47 | 3,54 | 3,19 | 0,64 |
| 0,075 | 3,74 | 0,25 | 0,23 | 0,41 |
| 0,063 | 3,99 | 0,10 | 0,09 | 0,32 |
| < 0,063 | > 3,99 | 0,36 | 0,32 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 0,32 |
| Sand, fine (0,063 mm - 0,200 mm): | 25,45 |
| Sand, medium (0,2 mm - 0,6 mm): | 65,45 |
| Sand, coarse (0,6 mm - 2 mm): | 7,60 |
| Gravel (> 2 mm): | 1,18 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,73 | 0,46 |
| 16% | 84% | 0,46 | 1,11 |
| 25% | 75% | 0,38 | 1,40 |
| 40% | 60% | 0,31 | 1,69 |
| Median 50% | 50% | 0,27 | 1,87 |
| 75% | 25% | 0,20 | 2,34 |
| 84% | 16% | 0,17 | 2,56 |
| 90% | 10% | 0,15 | 2,76 |
| 95% | 5% | 0,13 | 2,95 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 1,85 |
| Sorting | 0,74 |
| Skewness | -0,09 |
| Kurtosis | 1,09 |
| Uniformity Coefficient | 2,10 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

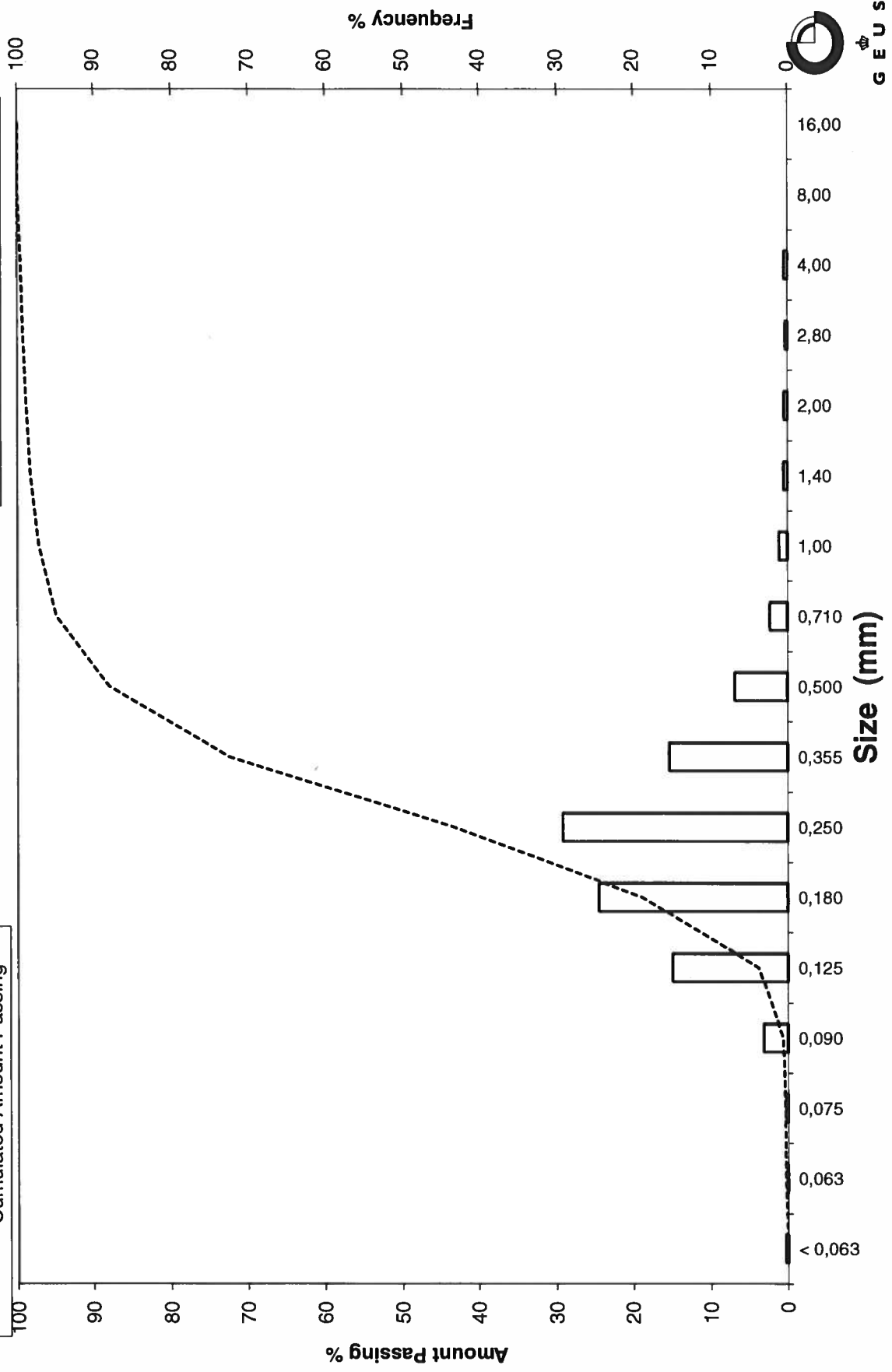
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_46, 200-220

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_46, 300-320
Lab. Id: 200646
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >2mm består af skaller



Total Weight 106,34 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 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 |
| 2,80 | -1,49 | 0,01 | 0,01 | 99,99 |
| 2,00 | -1,00 | 0,13 | 0,12 | 99,87 |
| 1,40 | -0,49 | 0,08 | 0,08 | 99,79 |
| 1,00 | 0,00 | 0,42 | 0,39 | 99,40 |
| 0,710 | 0,49 | 0,98 | 0,92 | 98,48 |
| 0,500 | 1,00 | 4,22 | 3,97 | 94,51 |
| 0,355 | 1,49 | 12,17 | 11,44 | 83,06 |
| 0,250 | 2,00 | 23,81 | 22,39 | 60,67 |
| 0,180 | 2,47 | 27,38 | 25,75 | 34,93 |
| 0,125 | 3,00 | 25,22 | 23,72 | 11,21 |
| 0,090 | 3,47 | 9,99 | 9,39 | 1,81 |
| 0,075 | 3,74 | 0,64 | 0,60 | 1,21 |
| 0,063 | 3,99 | 0,21 | 0,20 | 1,02 |
| < 0,063 | > 3,99 | 1,08 | 1,02 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 1,02 |
| Sand, fine (0,063 mm - 0,200 mm): | 41,27 |
| Sand, medium (0,2 mm - 0,6 mm): | 54,12 |
| Sand, coarse (0,6 mm - 2 mm): | 3,47 |
| Gravel (> 2 mm): | 0,13 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,53 | 0,93 |
| 16% | 84% | 0,37 | 1,45 |
| 25% | 75% | 0,32 | 1,66 |
| 40% | 60% | 0,25 | 2,01 |
| Median 50% | 50% | 0,22 | 2,18 |
| 75% | 25% | 0,16 | 2,67 |
| 84% | 16% | 0,14 | 2,88 |
| 90% | 10% | 0,12 | 3,05 |
| 95% | 5% | 0,10 | 3,30 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 2,17 |
| Sorting | 0,72 |
| Skewness | -0,04 |
| Kurtosis | 0,96 |
| Uniformity Coefficient | 2,06 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

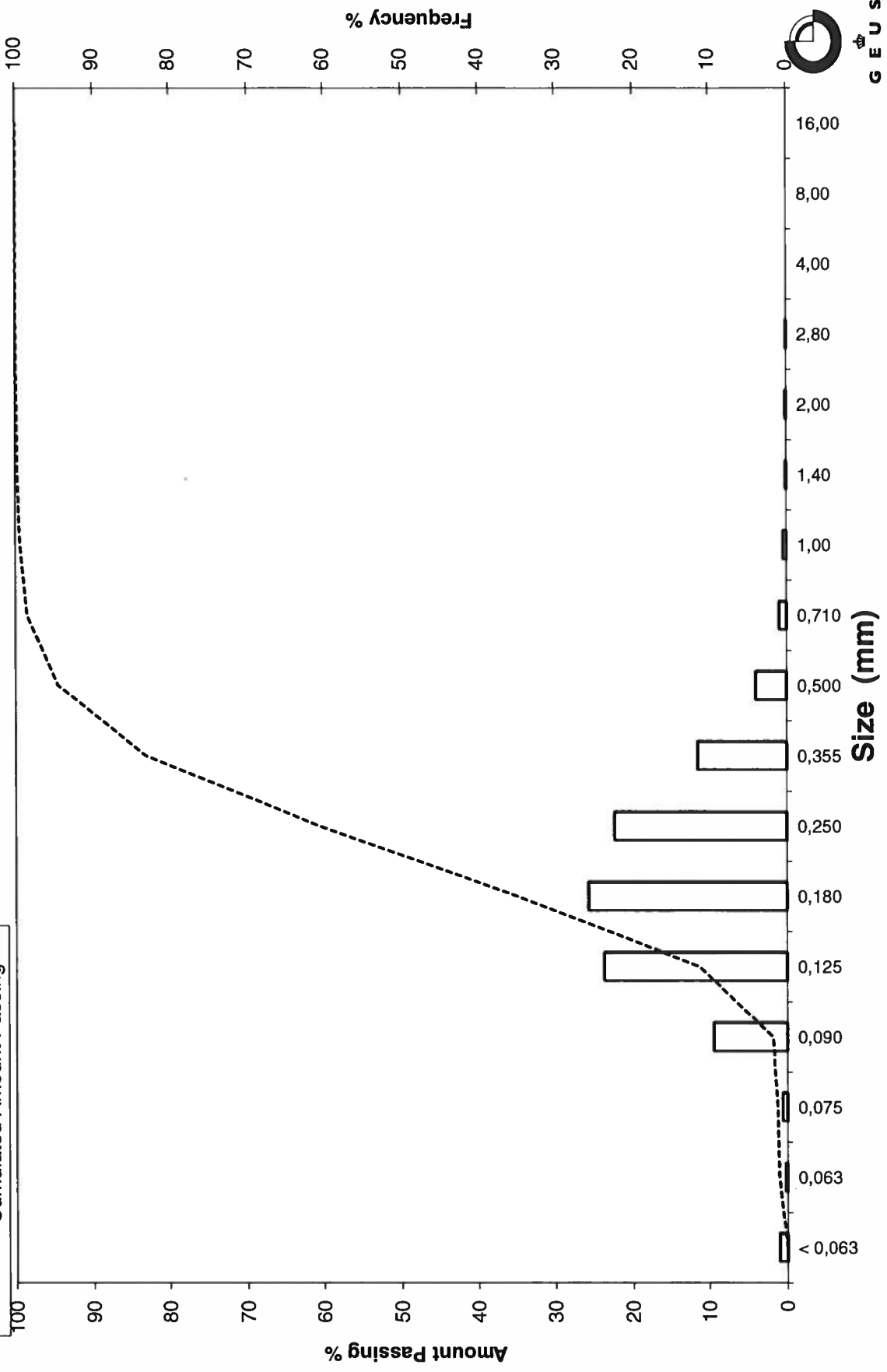
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_46, 300-320

Legend:
Frequency Percent (Bar)
Cumulated Amount Passing (Dashed Line)



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_46, 400-420
Lab. Id: 200647
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks:



Total Weight 103,71 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 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 |
| 2,80 | -1,49 | 0,00 | 0,00 | 100,00 |
| 2,00 | -1,00 | 0,07 | 0,07 | 99,93 |
| 1,40 | -0,49 | 0,15 | 0,14 | 99,79 |
| 1,00 | 0,00 | 0,32 | 0,31 | 99,48 |
| 0,710 | 0,49 | 0,71 | 0,68 | 98,79 |
| 0,500 | 1,00 | 2,65 | 2,56 | 96,24 |
| 0,355 | 1,49 | 5,95 | 5,74 | 90,50 |
| 0,250 | 2,00 | 13,21 | 12,74 | 77,76 |
| 0,180 | 2,47 | 22,88 | 22,06 | 55,70 |
| 0,125 | 3,00 | 36,96 | 35,64 | 20,07 |
| 0,090 | 3,47 | 16,60 | 16,01 | 4,06 |
| 0,075 | 3,74 | 1,14 | 1,10 | 2,96 |
| 0,063 | 3,99 | 0,51 | 0,49 | 2,47 |
| < 0,063 | > 3,99 | 2,56 | 2,47 | 0,00 |

Sieve Analysis

Gravel
Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 2,47 |
| Sand, fine (0,063 mm - 0,200 mm): | 59,54 |
| Sand, medium (0,2 mm - 0,6 mm): | 35,45 |
| Sand, coarse (0,6 mm - 2 mm): | 2,48 |
| Gravel (> 2 mm): | 0,07 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,47 | 1,09 |
| 16% | 84% | 0,30 | 1,73 |
| 25% | 75% | 0,24 | 2,05 |
| 40% | 60% | 0,19 | 2,37 |
| Median 50% | 50% | 0,17 | 2,55 |
| 75% | 25% | 0,13 | 2,91 |
| 84% | 16% | 0,12 | 3,11 |
| 90% | 10% | 0,10 | 3,28 |
| 95% | 5% | 0,09 | 3,44 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 2,46 |
| Sorting | 0,70 |
| Skewness | -0,21 |
| Kurtosis | 1,11 |
| Uniformity Coefficient | 1,88 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

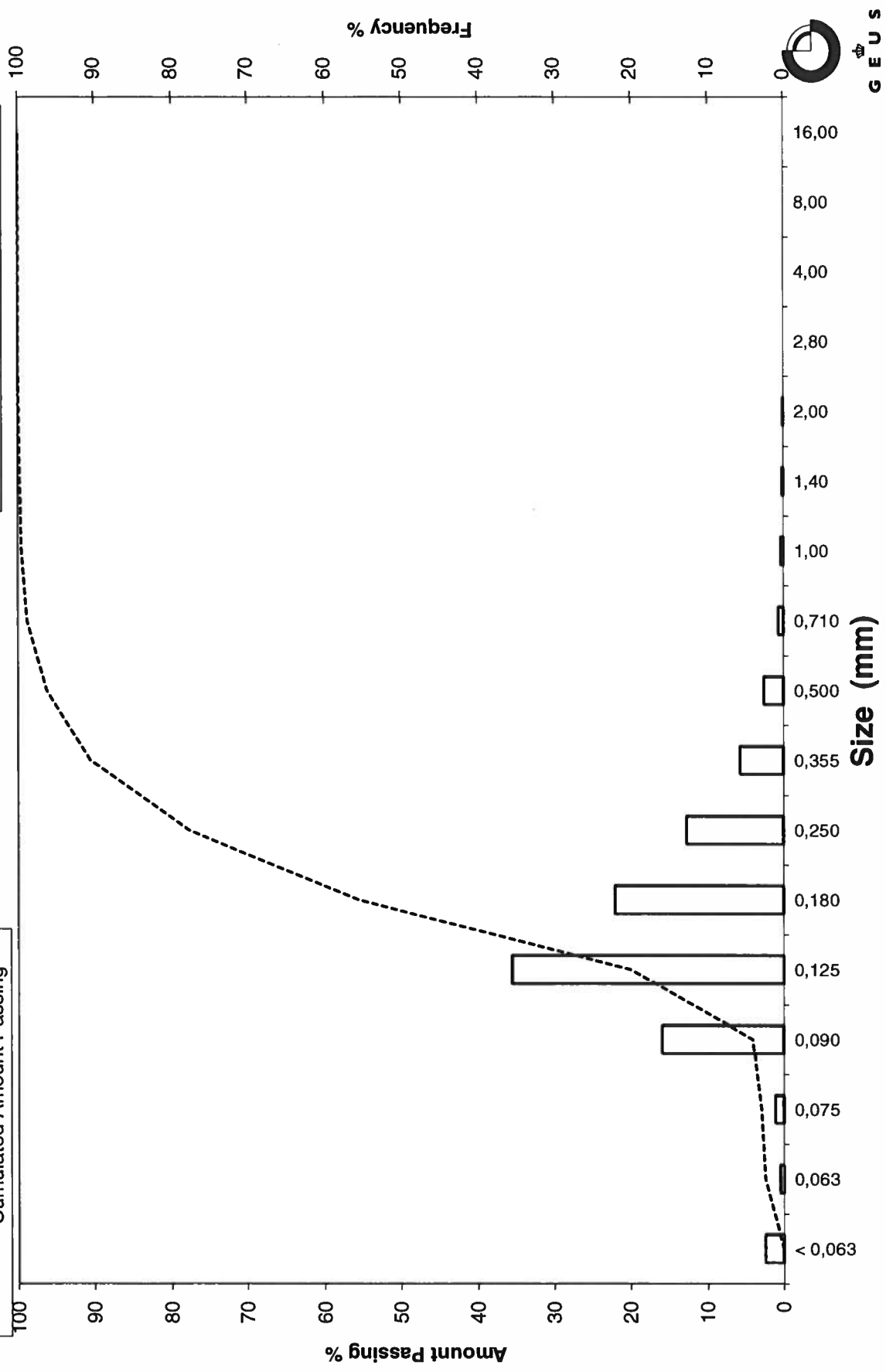
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_46, 400-420

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_46, 560-578
Lab. Id: 200648
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks:



Total Weight 99,68 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 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 |
| 2,80 | -1,49 | 0,00 | 0,00 | 100,00 |
| 2,00 | -1,00 | 0,00 | 0,00 | 100,00 |
| 1,40 | -0,49 | 0,00 | 0,00 | 100,00 |
| 1,00 | 0,00 | 0,00 | 0,00 | 100,00 |
| 0,710 | 0,49 | 0,00 | 0,00 | 100,00 |
| 0,500 | 1,00 | 0,02 | 0,02 | 99,98 |
| 0,355 | 1,49 | 0,08 | 0,08 | 99,90 |
| 0,250 | 2,00 | 0,14 | 0,14 | 99,76 |
| 0,180 | 2,47 | 0,61 | 0,61 | 99,15 |
| 0,125 | 3,00 | 27,19 | 27,28 | 71,87 |
| 0,090 | 3,47 | 54,62 | 54,80 | 17,07 |
| 0,075 | 3,74 | 6,32 | 6,34 | 10,73 |
| 0,063 | 3,99 | 2,88 | 2,89 | 7,85 |
| < 0,063 | > 3,99 | 7,82 | 7,85 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 7,85 |
| Sand, fine (0,063 mm - 0,200 mm): | 91,48 |
| Sand, medium (0,2 mm - 0,6 mm): | 0,67 |
| Sand, coarse (0,6 mm - 2 mm): | 0,01 |
| Gravel (> 2 mm): | 0,00 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,17 | 2,54 |
| 16% | 84% | 0,15 | 2,74 |
| 25% | 75% | 0,13 | 2,93 |
| 40% | 60% | 0,12 | 3,09 |
| Median 50% | 50% | 0,11 | 3,17 |
| 75% | 25% | 0,10 | 3,39 |
| 84% | 16% | 0,09 | 3,52 |
| 90% | 10% | 0,07 | 3,80 |
| 95% | 5% | ----- | ----- |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 3,14 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | 1,63 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

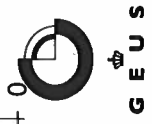
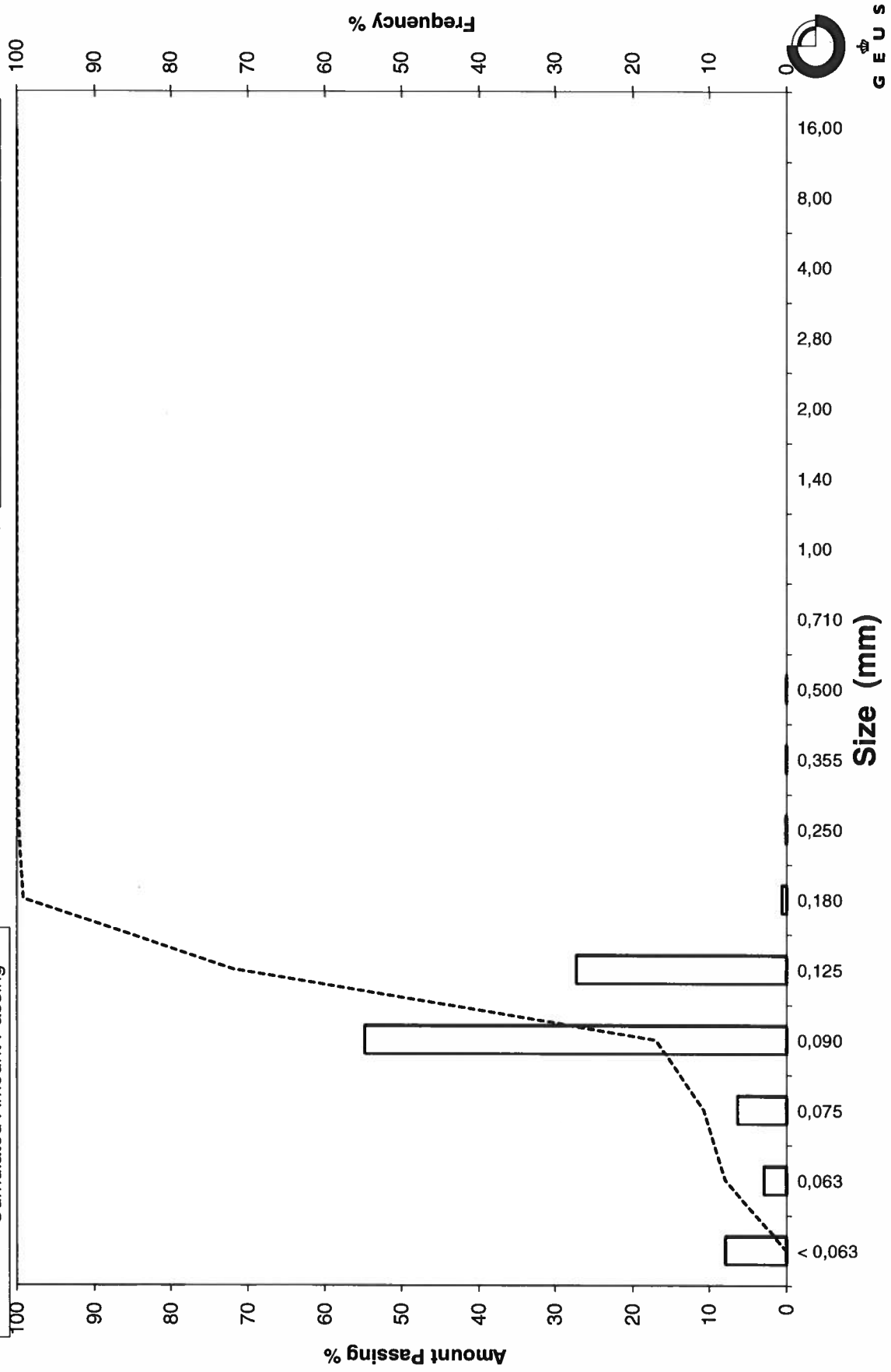
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_46, 560-578

Legend:
 [Bar] Frequency Percent
 [Dashed Line] Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_47, 0-20
Lab. Id: 200649
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >4mm består af skaller



Total Weight 100,89 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| | | | | |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,00 | 0,00 | 100,00 |
| 4,00 | -2,00 | 0,07 | 0,07 | 99,93 |
| 2,80 | -1,49 | 0,00 | 0,00 | 99,93 |
| 2,00 | -1,00 | 0,00 | 0,00 | 99,93 |
| 1,40 | -0,49 | 0,04 | 0,04 | 99,89 |
| 1,00 | 0,00 | 0,06 | 0,06 | 99,83 |
| 0,710 | 0,49 | 0,25 | 0,25 | 99,58 |
| 0,500 | 1,00 | 1,48 | 1,47 | 98,12 |
| 0,355 | 1,49 | 4,60 | 4,56 | 93,56 |
| 0,250 | 2,00 | 15,74 | 15,60 | 77,96 |
| 0,180 | 2,47 | 41,16 | 40,80 | 37,16 |
| 0,125 | 3,00 | 29,49 | 29,23 | 7,93 |
| 0,090 | 3,47 | 6,09 | 6,04 | 1,90 |
| 0,075 | 3,74 | 0,41 | 0,41 | 1,49 |
| 0,063 | 3,99 | 0,21 | 0,21 | 1,28 |
| < 0,063 | > 3,99 | 1,29 | 1,28 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 1,28 |
| Sand, fine (0,063 mm - 0,200 mm): | 47,53 |
| Sand, medium (0,2 mm - 0,6 mm): | 50,00 |
| Sand, coarse (0,6 mm - 2 mm): | 1,12 |
| Gravel (> 2 mm): | 0,07 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,40 | 1,32 |
| 16% | 84% | 0,29 | 1,78 |
| 25% | 75% | 0,24 | 2,03 |
| 40% | 60% | 0,22 | 2,19 |
| Median 50% | 50% | 0,20 | 2,31 |
| 75% | 25% | 0,16 | 2,67 |
| 84% | 16% | 0,14 | 2,83 |
| 90% | 10% | 0,13 | 2,96 |
| 95% | 5% | 0,11 | 3,21 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 2,31 |
| Sorting | 0,55 |
| Skewness | -0,02 |
| Kurtosis | 1,21 |
| Uniformity Coefficient | 1,70 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

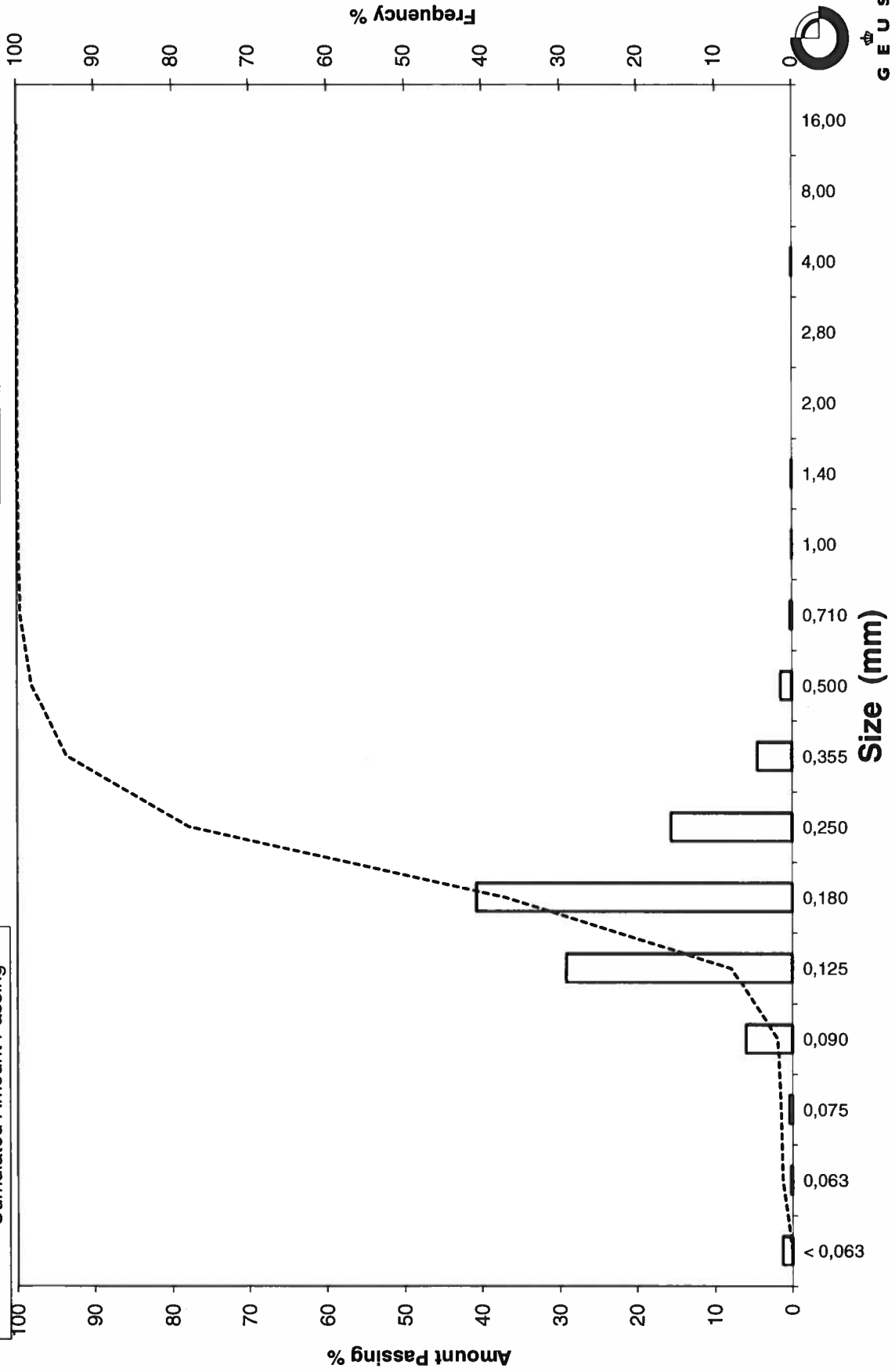
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_47, 0-20

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_47, 100-120
Lab. Id: 200650
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >4mm består af skaller



Total Weight 100,37 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing | |
|---------|--------|--------|--------|--------------------------|--------|
| | | | | | |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 | Gravel |
| 8,00 | -3,00 | 0,00 | 0,00 | 100,00 | |
| 4,00 | -2,00 | 0,05 | 0,05 | 99,95 | |
| 2,80 | -1,49 | 0,00 | 0,00 | 99,95 | |
| 2,00 | -1,00 | 0,04 | 0,04 | 99,91 | |
| 1,40 | -0,49 | 0,07 | 0,07 | 99,84 | |
| 1,00 | 0,00 | 0,13 | 0,13 | 99,71 | |
| 0,710 | 0,49 | 0,24 | 0,24 | 99,47 | |
| 0,500 | 1,00 | 0,69 | 0,69 | 98,78 | |
| 0,355 | 1,49 | 1,99 | 1,98 | 96,80 | |
| 0,250 | 2,00 | 5,46 | 5,44 | 91,36 | Sand |
| 0,180 | 2,47 | 25,75 | 25,66 | 65,71 | |
| 0,125 | 3,00 | 50,47 | 50,28 | 15,42 | |
| 0,090 | 3,47 | 13,64 | 13,59 | 1,83 | |
| 0,075 | 3,74 | 0,72 | 0,72 | 1,12 | |
| 0,063 | 3,99 | 0,19 | 0,19 | 0,93 | |
| < 0,063 | > 3,99 | 0,93 | 0,93 | 0,00 | |

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 0,93 |
| Sand, fine (0,063 mm - 0,200 mm): | 72,11 |
| Sand, medium (0,2 mm - 0,6 mm): | 26,07 |
| Sand, coarse (0,6 mm - 2 mm): | 0,80 |
| Gravel (> 2 mm): | 0,09 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,32 | 1,64 |
| 16% | 84% | 0,23 | 2,12 |
| 25% | 75% | 0,21 | 2,28 |
| 40% | 60% | 0,17 | 2,52 |
| Median 50% | 50% | 0,16 | 2,62 |
| 75% | 25% | 0,14 | 2,88 |
| 84% | 16% | 0,13 | 2,99 |
| 90% | 10% | 0,11 | 3,17 |
| 95% | 5% | 0,10 | 3,35 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 2,58 |
| Sorting | 0,48 |
| Skewness | -0,14 |
| Kurtosis | 1,17 |
| Uniformity Coefficient | 1,56 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

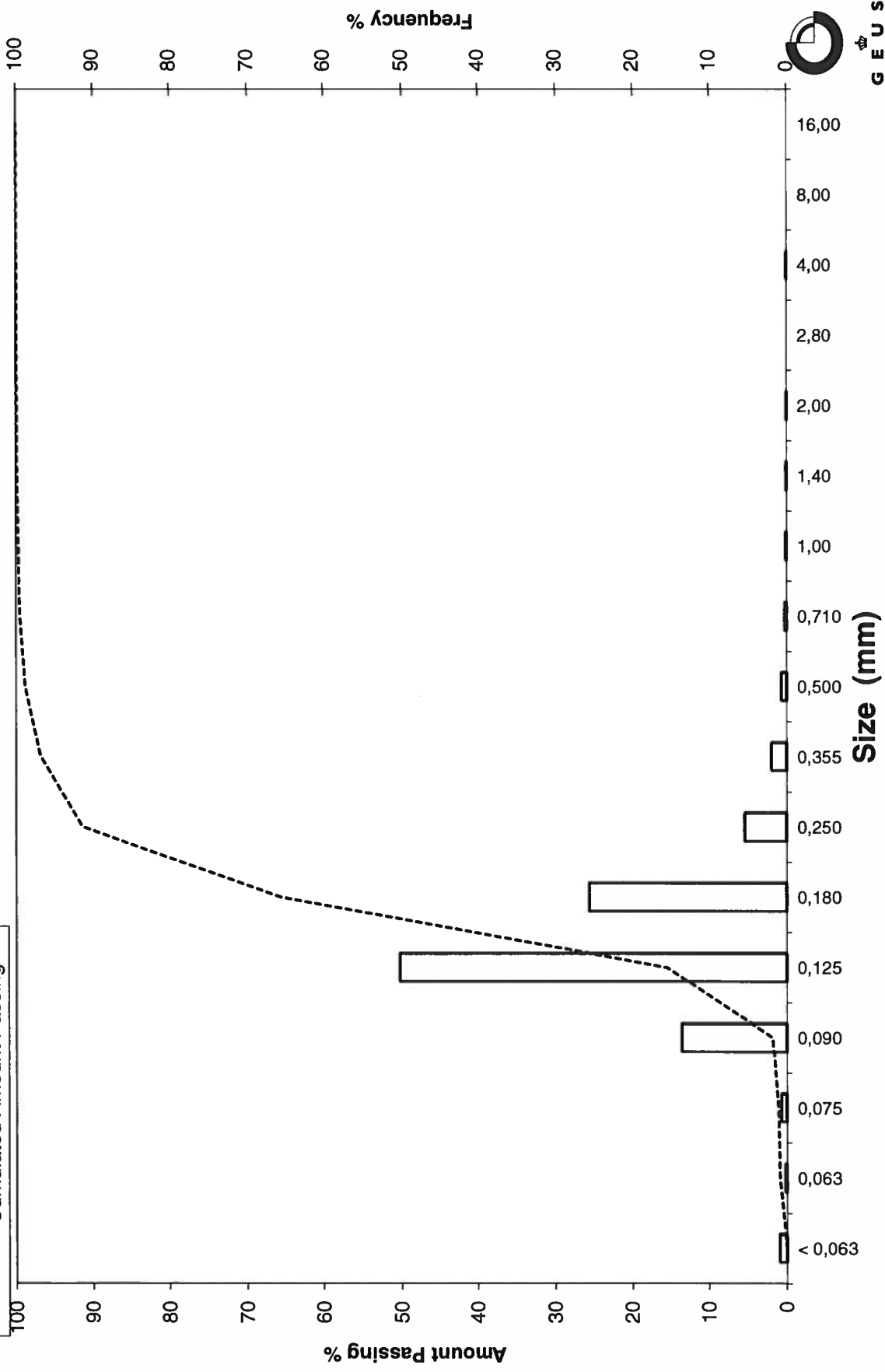
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_47, 100-120

Frequency Percent
 Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_47, 200-220
Lab. Id: 200651
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks:



Total Weight 100,23 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | φ | g | % | % |
| 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 |
| 2,80 | -1,49 | 0,00 | 0,00 | 100,00 |
| 2,00 | -1,00 | 0,00 | 0,00 | 100,00 |
| 1,40 | -0,49 | 0,02 | 0,02 | 99,98 |
| 1,00 | 0,00 | 0,06 | 0,06 | 99,92 |
| 0,710 | 0,49 | 0,15 | 0,15 | 99,77 |
| 0,500 | 1,00 | 0,63 | 0,63 | 99,14 |
| 0,355 | 1,49 | 0,94 | 0,94 | 98,20 |
| 0,250 | 2,00 | 2,18 | 2,17 | 96,03 |
| 0,180 | 2,47 | 11,10 | 11,07 | 84,95 |
| 0,125 | 3,00 | 55,69 | 55,56 | 29,39 |
| 0,090 | 3,47 | 22,94 | 22,89 | 6,51 |
| 0,075 | 3,74 | 1,99 | 1,99 | 4,52 |
| 0,063 | 3,99 | 0,98 | 0,98 | 3,54 |
| < 0,063 | > 3,99 | 3,55 | 3,54 | 0,00 |

Sieve Analysis

Gravel
Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 3,54 |
| Sand, fine (0,063 mm - 0,200 mm): | 84,58 |
| Sand, medium (0,2 mm - 0,6 mm): | 11,32 |
| Sand, coarse (0,6 mm - 2 mm): | 0,56 |
| Gravel (> 2 mm): | 0,00 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,24 | 2,04 |
| 16% | 84% | 0,18 | 2,48 |
| 25% | 75% | 0,17 | 2,56 |
| 40% | 60% | 0,16 | 2,69 |
| Median 50% | 50% | 0,15 | 2,78 |
| 75% | 25% | 0,12 | 3,08 |
| 84% | 16% | 0,10 | 3,26 |
| 90% | 10% | 0,10 | 3,39 |
| 95% | 5% | 0,08 | 3,67 |

Moments Statistics

| | |
|------------------------|------|
| Mean | 2,84 |
| Sorting | 0,44 |
| Skewness | 0,16 |
| Kurtosis | 1,27 |
| Uniformity Coefficient | 1,63 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

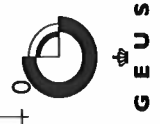
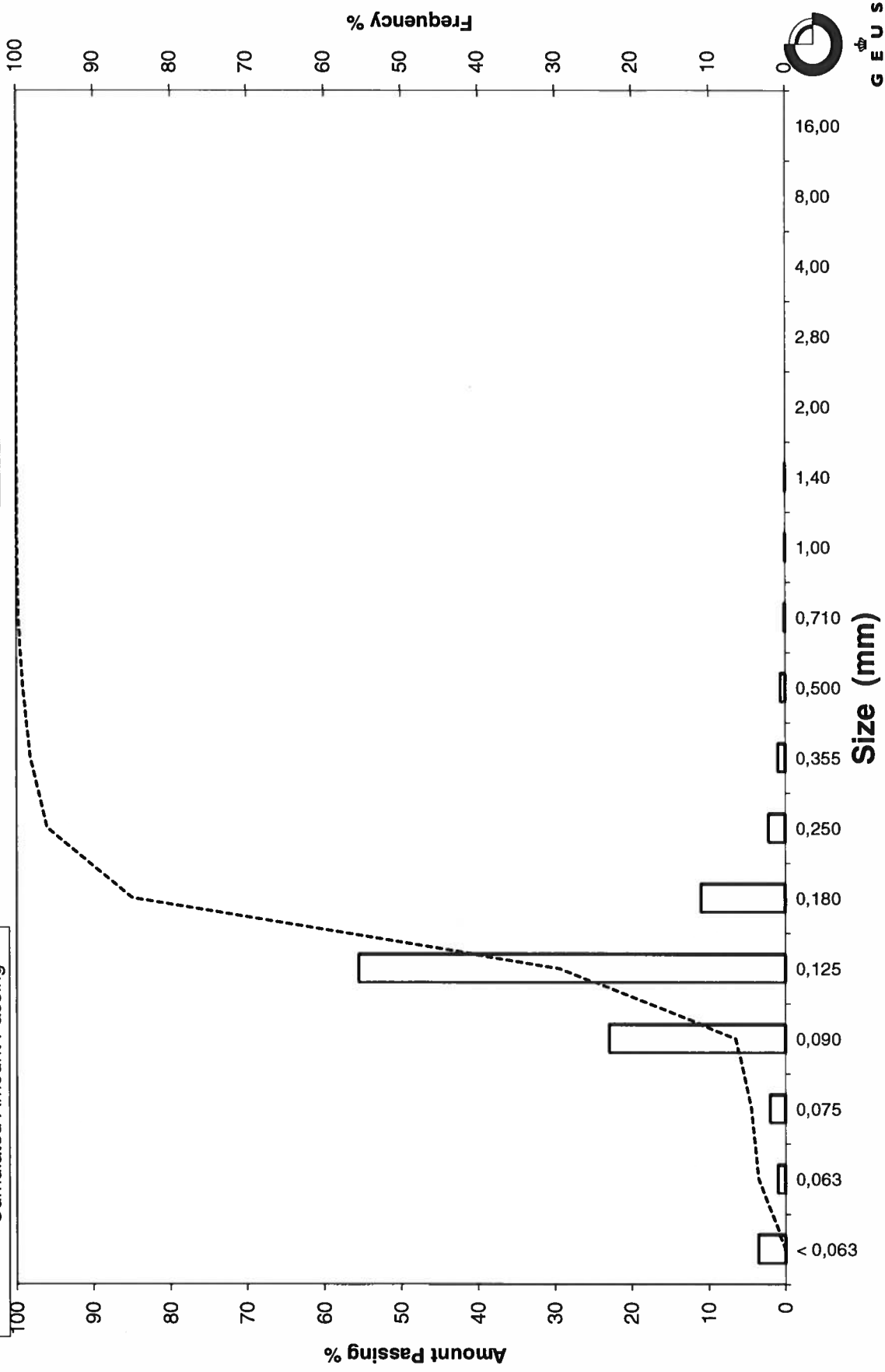
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_47, 200-220

Frequency Percent
 Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_47, 300-320
Lab. Id: 200652
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks:



Total Weight 97,7 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 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 |
| 2,80 | -1,49 | 0,00 | 0,00 | 100,00 |
| 2,00 | -1,00 | 0,04 | 0,04 | 99,96 |
| 1,40 | -0,49 | 0,00 | 0,00 | 99,96 |
| 1,00 | 0,00 | 0,00 | 0,00 | 99,96 |
| 0,710 | 0,49 | 0,14 | 0,14 | 99,82 |
| 0,500 | 1,00 | 0,51 | 0,52 | 99,29 |
| 0,355 | 1,49 | 0,94 | 0,96 | 98,33 |
| 0,250 | 2,00 | 1,65 | 1,69 | 96,64 |
| 0,180 | 2,47 | 6,14 | 6,28 | 90,36 |
| 0,125 | 3,00 | 47,85 | 48,98 | 41,38 |
| 0,090 | 3,47 | 29,98 | 30,69 | 10,70 |
| 0,075 | 3,74 | 3,00 | 3,07 | 7,63 |
| 0,063 | 3,99 | 1,28 | 1,31 | 6,32 |
| < 0,063 | > 3,99 | 6,17 | 6,32 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| Size Class | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 6,32 |
| Sand, fine (0,063 mm - 0,200 mm): | 85,84 |
| Sand, medium (0,2 mm - 0,6 mm): | 7,39 |
| Sand, coarse (0,6 mm - 2 mm): | 0,42 |
| Gravel (> 2 mm): | 0,04 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,23 | 2,11 |
| 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% | 0,11 | 3,23 |
| 84% | 16% | 0,10 | 3,38 |
| 90% | 10% | 0,09 | 3,53 |
| 95% | 5% | ----- | ----- |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 2,93 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | 1,68 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

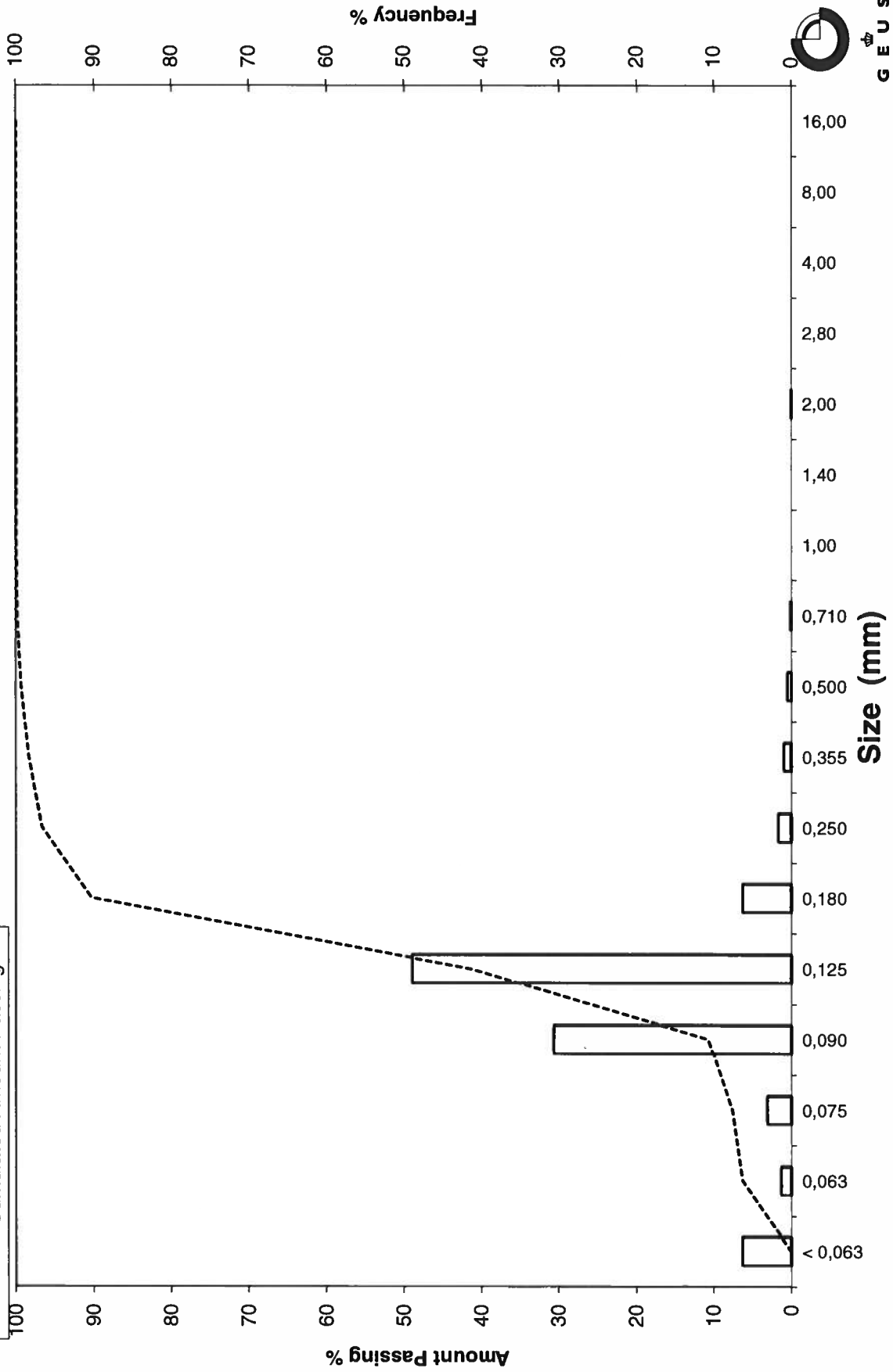
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_47, 300-320

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_48, 0-20
Lab. Id: 200653
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks:



Total Weight 98,5 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount |
|---------|--------|--------|--------|------------------|
| mm | Φ | g | % | amount passing % |
| 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 |
| 2,80 | -1,49 | 0,16 | 0,16 | 99,84 |
| 2,00 | -1,00 | 0,41 | 0,42 | 99,42 |
| 1,40 | -0,49 | 0,38 | 0,39 | 99,04 |
| 1,00 | 0,00 | 0,66 | 0,67 | 98,37 |
| 0,710 | 0,49 | 1,40 | 1,42 | 96,94 |
| 0,500 | 1,00 | 3,61 | 3,66 | 93,28 |
| 0,355 | 1,49 | 5,17 | 5,25 | 88,03 |
| 0,250 | 2,00 | 10,69 | 10,85 | 77,18 |
| 0,180 | 2,47 | 22,37 | 22,71 | 54,47 |
| 0,125 | 3,00 | 40,97 | 41,59 | 12,87 |
| 0,090 | 3,47 | 9,42 | 9,56 | 3,31 |
| 0,075 | 3,74 | 0,88 | 0,89 | 2,42 |
| 0,063 | 3,99 | 0,65 | 0,66 | 1,76 |
| < 0,063 | > 3,99 | 1,73 | 1,76 | 0,00 |

Sieve Analysis

Gravel
Sand

Size Classes (DGF-Bulletin 1 1988)

| Size Class | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 1,76 |
| Sand, fine (0,063 mm - 0,200 mm): | 59,20 |
| Sand, medium (0,2 mm - 0,6 mm): | 34,07 |
| Sand, coarse (0,6 mm - 2 mm): | 4,40 |
| Gravel (> 2 mm): | 0,58 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,60 | 0,74 |
| 16% | 84% | 0,32 | 1,66 |
| 25% | 75% | 0,24 | 2,04 |
| 40% | 60% | 0,20 | 2,34 |
| Median 50% | 50% | 0,17 | 2,52 |
| 75% | 25% | 0,14 | 2,83 |
| 84% | 16% | 0,13 | 2,95 |
| 90% | 10% | 0,11 | 3,13 |
| 95% | 5% | 0,10 | 3,38 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 2,38 |
| Sorting | 0,72 |
| Skewness | -0,34 |
| Kurtosis | 1,37 |
| Uniformity Coefficient | 1,72 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

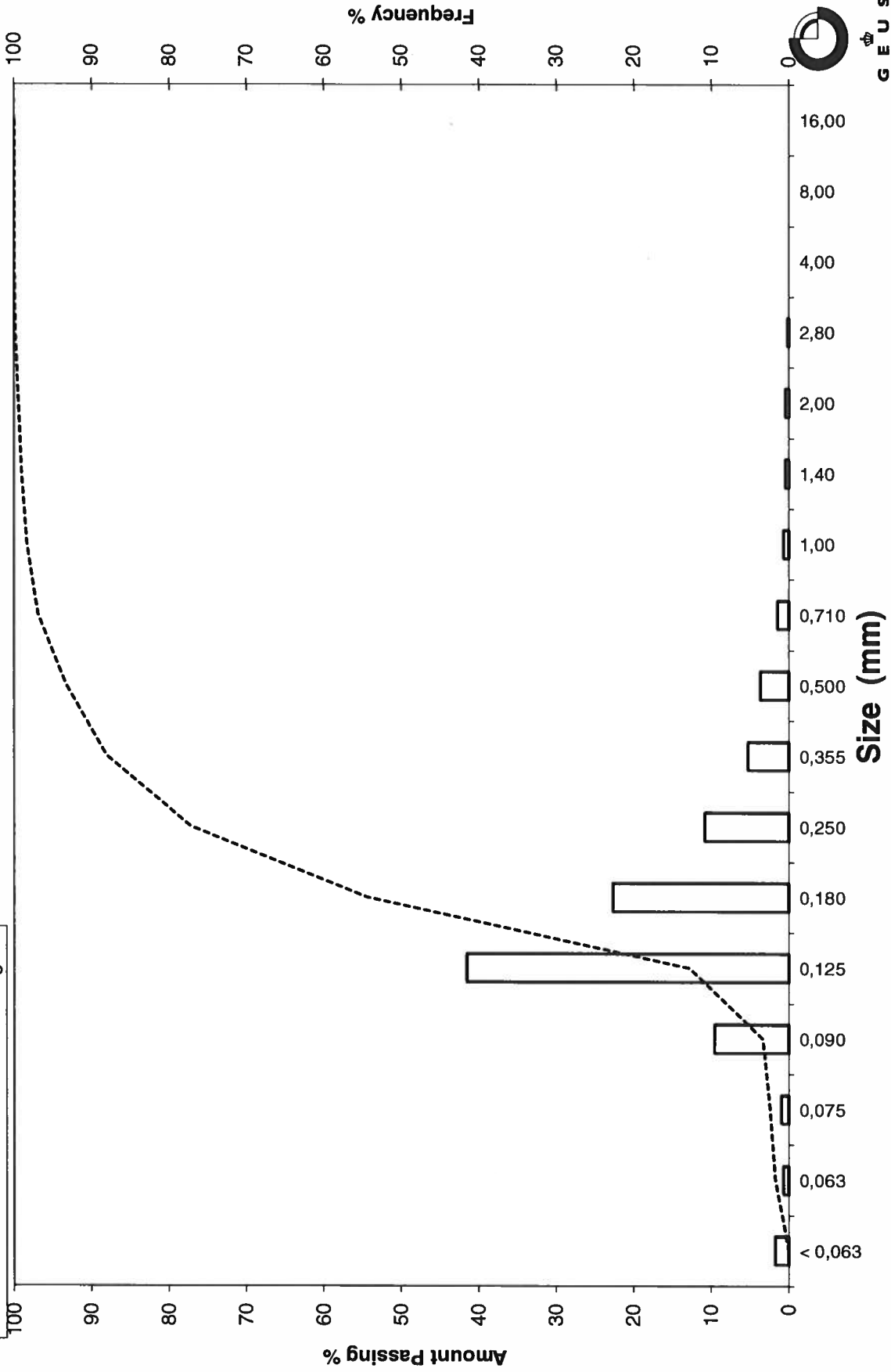
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_48, 0-20

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_48, 100-120
Lab. Id: 200654
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >4mm består af skaller



Total Weight 100,38 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| | | | | |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,00 | 0,00 | 100,00 |
| 4,00 | -2,00 | 0,02 | 0,02 | 99,98 |
| 2,80 | -1,49 | 0,00 | 0,00 | 99,98 |
| 2,00 | -1,00 | 0,00 | 0,00 | 99,98 |
| 1,40 | -0,49 | 0,00 | 0,00 | 99,98 |
| 1,00 | 0,00 | 0,07 | 0,07 | 99,91 |
| 0,710 | 0,49 | 0,16 | 0,16 | 99,75 |
| 0,500 | 1,00 | 0,84 | 0,84 | 98,91 |
| 0,355 | 1,49 | 1,98 | 1,97 | 96,94 |
| 0,250 | 2,00 | 3,36 | 3,35 | 93,59 |
| 0,180 | 2,47 | 10,59 | 10,55 | 83,04 |
| 0,125 | 3,00 | 48,72 | 48,54 | 34,51 |
| 0,090 | 3,47 | 26,41 | 26,31 | 8,20 |
| 0,075 | 3,74 | 2,29 | 2,28 | 5,92 |
| 0,063 | 3,99 | 1,07 | 1,07 | 4,85 |
| < 0,063 | > 3,99 | 4,87 | 4,85 | 0,00 |

Gravel

Sand

Sieve Analysis

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 4,85 |
| Sand, fine (0,063 mm - 0,200 mm): | 81,21 |
| Sand, medium (0,2 mm - 0,6 mm): | 13,25 |
| Sand, coarse (0,6 mm - 2 mm): | 0,67 |
| Gravel (> 2 mm): | 0,02 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,29 | 1,77 |
| 16% | 84% | 0,19 | 2,42 |
| 25% | 75% | 0,17 | 2,55 |
| 40% | 60% | 0,15 | 2,70 |
| Median 50% | 50% | 0,14 | 2,81 |
| 75% | 25% | 0,11 | 3,15 |
| 84% | 16% | 0,10 | 3,32 |
| 90% | 10% | 0,09 | 3,44 |
| 95% | 5% | 0,06 | 3,95 |

Moments Statistics

| | |
|------------------------|------|
| Mean | 2,85 |
| Sorting | 0,55 |
| Skewness | 0,09 |
| Kurtosis | 1,48 |
| Uniformity Coefficient | 1,67 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

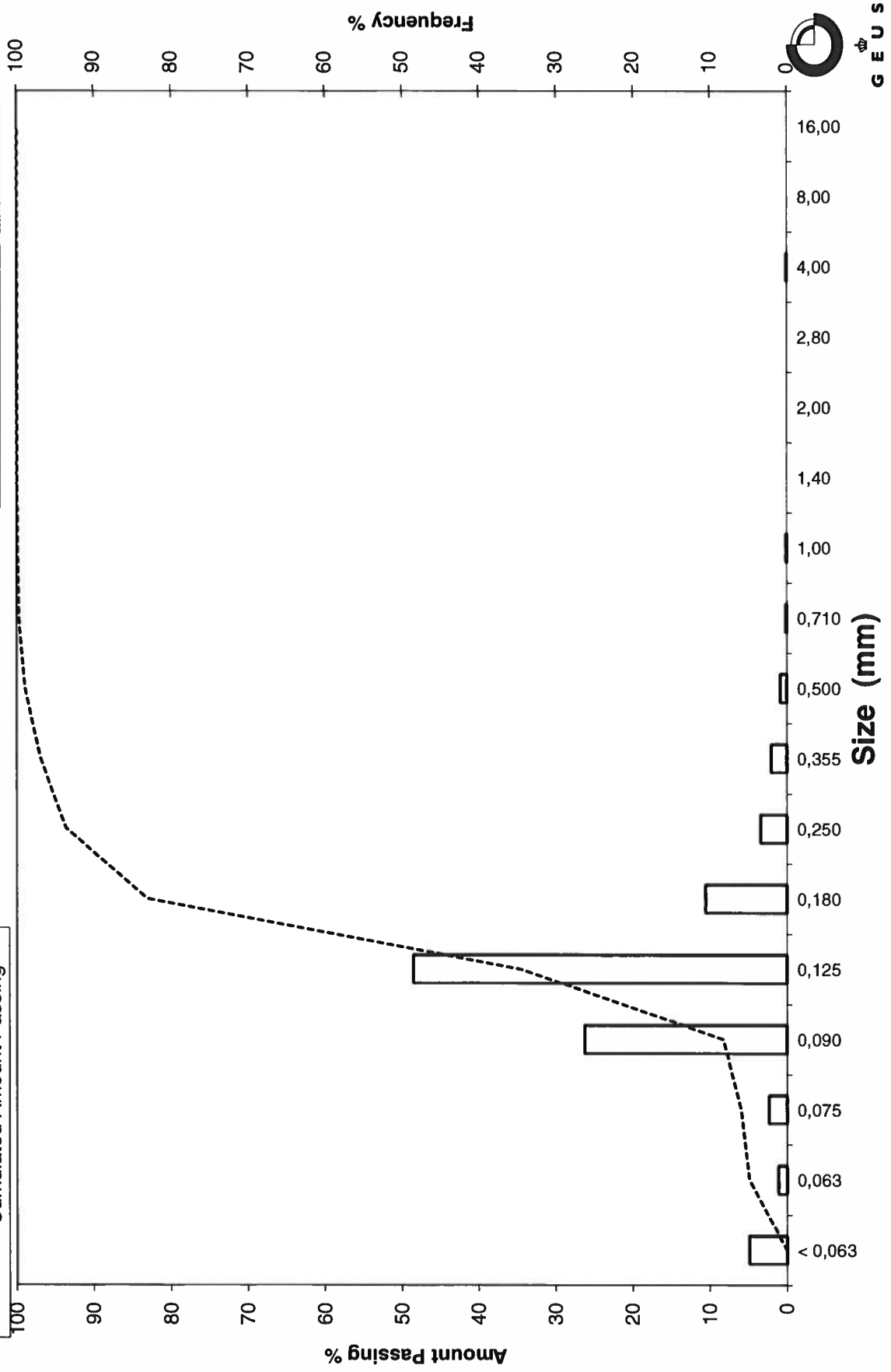
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_48, 100-120

Frequency Percent
 Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_48, 200-220
Lab. Id: 200655
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks:



Total Weight 96,97 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 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 |
| 2,80 | -1,49 | 0,00 | 0,00 | 100,00 |
| 2,00 | -1,00 | 0,00 | 0,00 | 100,00 |
| 1,40 | -0,49 | 0,00 | 0,00 | 100,00 |
| 1,00 | 0,00 | 0,07 | 0,07 | 99,93 |
| 0,710 | 0,49 | 0,10 | 0,10 | 99,82 |
| 0,500 | 1,00 | 0,40 | 0,41 | 99,41 |
| 0,355 | 1,49 | 0,80 | 0,82 | 98,59 |
| 0,250 | 2,00 | 2,12 | 2,19 | 96,40 |
| 0,180 | 2,47 | 6,34 | 6,54 | 89,86 |
| 0,125 | 3,00 | 47,18 | 48,65 | 41,21 |
| 0,090 | 3,47 | 31,60 | 32,59 | 8,62 |
| 0,075 | 3,74 | 2,44 | 2,52 | 6,10 |
| 0,063 | 3,99 | 1,19 | 1,23 | 4,88 |
| < 0,063 | > 3,99 | 4,73 | 4,88 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 4,88 |
| Sand, fine (0,063 mm - 0,200 mm): | 86,85 |
| Sand, medium (0,2 mm - 0,6 mm): | 7,88 |
| Sand, coarse (0,6 mm - 2 mm): | 0,39 |
| Gravel (> 2 mm): | 0,00 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,24 | 2,09 |
| 16% | 84% | 0,17 | 2,53 |
| 25% | 75% | 0,16 | 2,62 |
| 40% | 60% | 0,15 | 2,77 |
| Median 50% | 50% | 0,13 | 2,89 |
| 75% | 25% | 0,11 | 3,22 |
| 84% | 16% | 0,10 | 3,35 |
| 90% | 10% | 0,09 | 3,45 |
| 95% | 5% | 0,06 | 3,96 |

Moments Statistics

| | |
|------------------------|------|
| Mean | 2,92 |
| Sorting | 0,49 |
| Skewness | 0,13 |
| Kurtosis | 1,28 |
| Uniformity Coefficient | 1,60 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

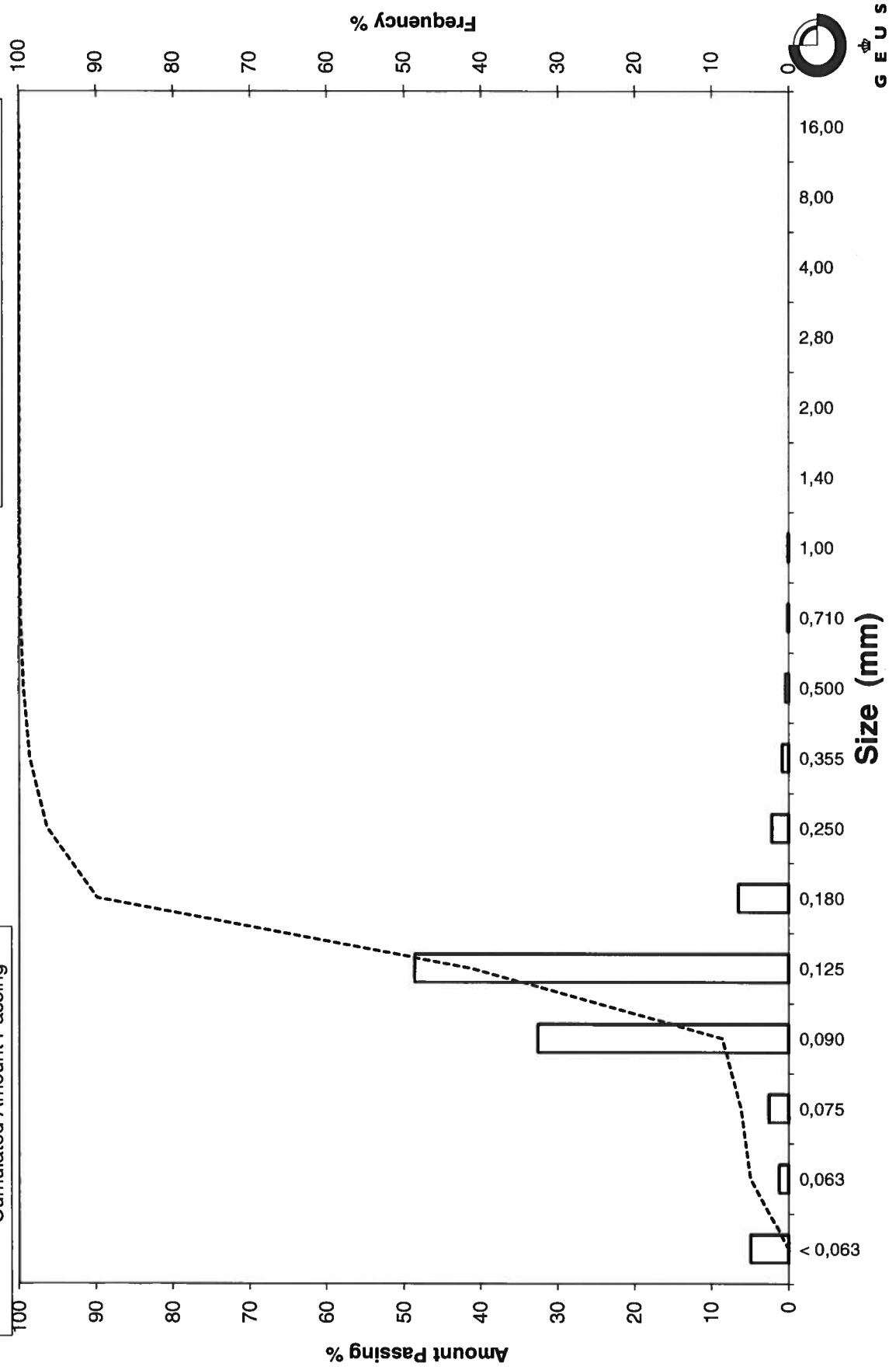
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_48, 200-220

Frequency Percent
 Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_48, 300-320
Lab. Id: 200656
Projekt Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >4mm består af skaller



Total Weight 94,1 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 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 |
| 2,80 | -1,49 | 0,00 | 0,00 | 99,97 |
| 2,00 | -1,00 | 0,05 | 0,05 | 99,91 |
| 1,40 | -0,49 | 0,00 | 0,00 | 99,91 |
| 1,00 | 0,00 | 0,10 | 0,11 | 99,81 |
| 0,710 | 0,49 | 0,19 | 0,20 | 99,61 |
| 0,500 | 1,00 | 0,55 | 0,58 | 99,02 |
| 0,355 | 1,49 | 0,80 | 0,85 | 98,17 |
| 0,250 | 2,00 | 1,41 | 1,50 | 96,67 |
| 0,180 | 2,47 | 4,75 | 5,05 | 91,63 |
| 0,125 | 3,00 | 37,48 | 39,83 | 51,80 |
| 0,090 | 3,47 | 35,74 | 37,98 | 13,82 |
| 0,075 | 3,74 | 4,21 | 4,47 | 9,34 |
| 0,063 | 3,99 | 1,79 | 1,90 | 7,44 |
| < 0,063 | > 3,99 | 7,00 | 7,44 | 0,00 |

Sieve Analysis

Gravel
Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 7,44 |
| Sand, fine (0,063 mm - 0,200 mm): | 85,63 |
| Sand, medium (0,2 mm - 0,6 mm): | 6,23 |
| Sand, coarse (0,6 mm - 2 mm): | 0,61 |
| Gravel (> 2 mm): | 0,09 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,23 | 2,14 |
| 16% | 84% | 0,17 | 2,56 |
| 25% | 75% | 0,16 | 2,67 |
| 40% | 60% | 0,14 | 2,87 |
| Median 50% | 50% | 0,12 | 3,02 |
| 75% | 25% | 0,10 | 3,32 |
| 84% | 16% | 0,09 | 3,44 |
| 90% | 10% | 0,08 | 3,70 |
| 95% | 5% | ----- | ----- |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 3,01 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | 1,77 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

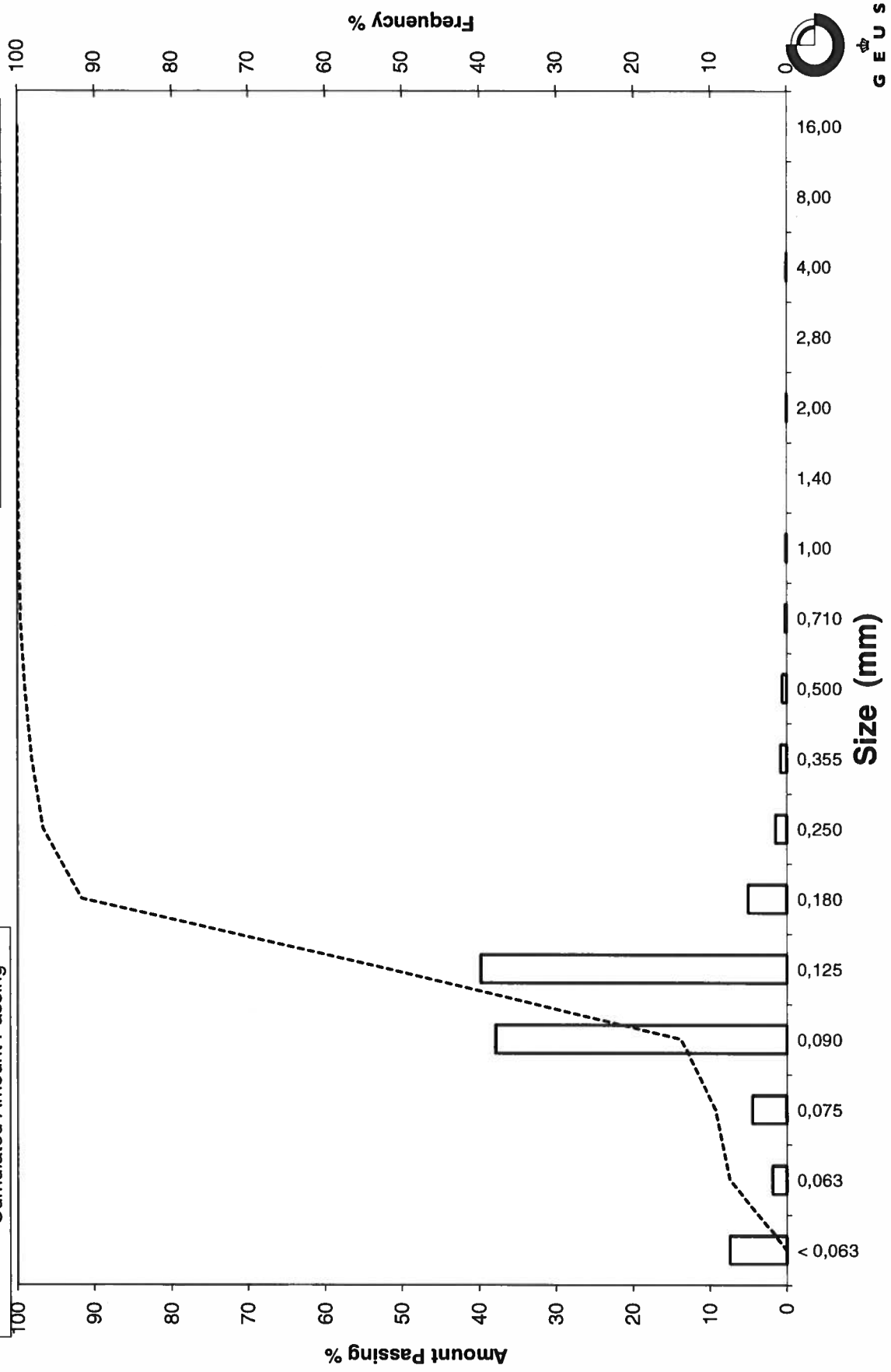
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_48, 300-320

Frequency Percent
 Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_48, 400-420
Lab. Id: 200657
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >2,8mm består af skaller



Total Weight 93,84 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 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 |
| 2,80 | -1,49 | 0,03 | 0,03 | 99,97 |
| 2,00 | -1,00 | 0,00 | 0,00 | 99,97 |
| 1,40 | -0,49 | 0,00 | 0,00 | 99,97 |
| 1,00 | 0,00 | 0,02 | 0,02 | 99,95 |
| 0,710 | 0,49 | 0,10 | 0,11 | 99,84 |
| 0,500 | 1,00 | 0,20 | 0,21 | 99,63 |
| 0,355 | 1,49 | 0,25 | 0,27 | 99,36 |
| 0,250 | 2,00 | 1,03 | 1,10 | 98,26 |
| 0,180 | 2,47 | 3,45 | 3,68 | 94,59 |
| 0,125 | 3,00 | 31,11 | 33,15 | 61,43 |
| 0,090 | 3,47 | 42,38 | 45,16 | 16,27 |
| 0,075 | 3,74 | 5,57 | 5,94 | 10,34 |
| 0,063 | 3,99 | 2,74 | 2,92 | 7,42 |
| < 0,063 | > 3,99 | 6,96 | 7,42 | 0,00 |

Sieve Analysis

Gravel
Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 7,42 |
| Sand, fine (0,063 mm - 0,200 mm): | 88,22 |
| Sand, medium (0,2 mm - 0,6 mm): | 4,09 |
| Sand, coarse (0,6 mm - 2 mm): | 0,24 |
| Gravel (> 2 mm): | 0,03 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,19 | 2,41 |
| 16% | 84% | 0,16 | 2,62 |
| 25% | 75% | 0,15 | 2,76 |
| 40% | 60% | 0,12 | 3,01 |
| Median 50% | 50% | 0,12 | 3,11 |
| 75% | 25% | 0,10 | 3,37 |
| 84% | 16% | 0,09 | 3,49 |
| 90% | 10% | 0,07 | 3,76 |
| 95% | 5% | ----- | ----- |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 3,07 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | 1,68 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

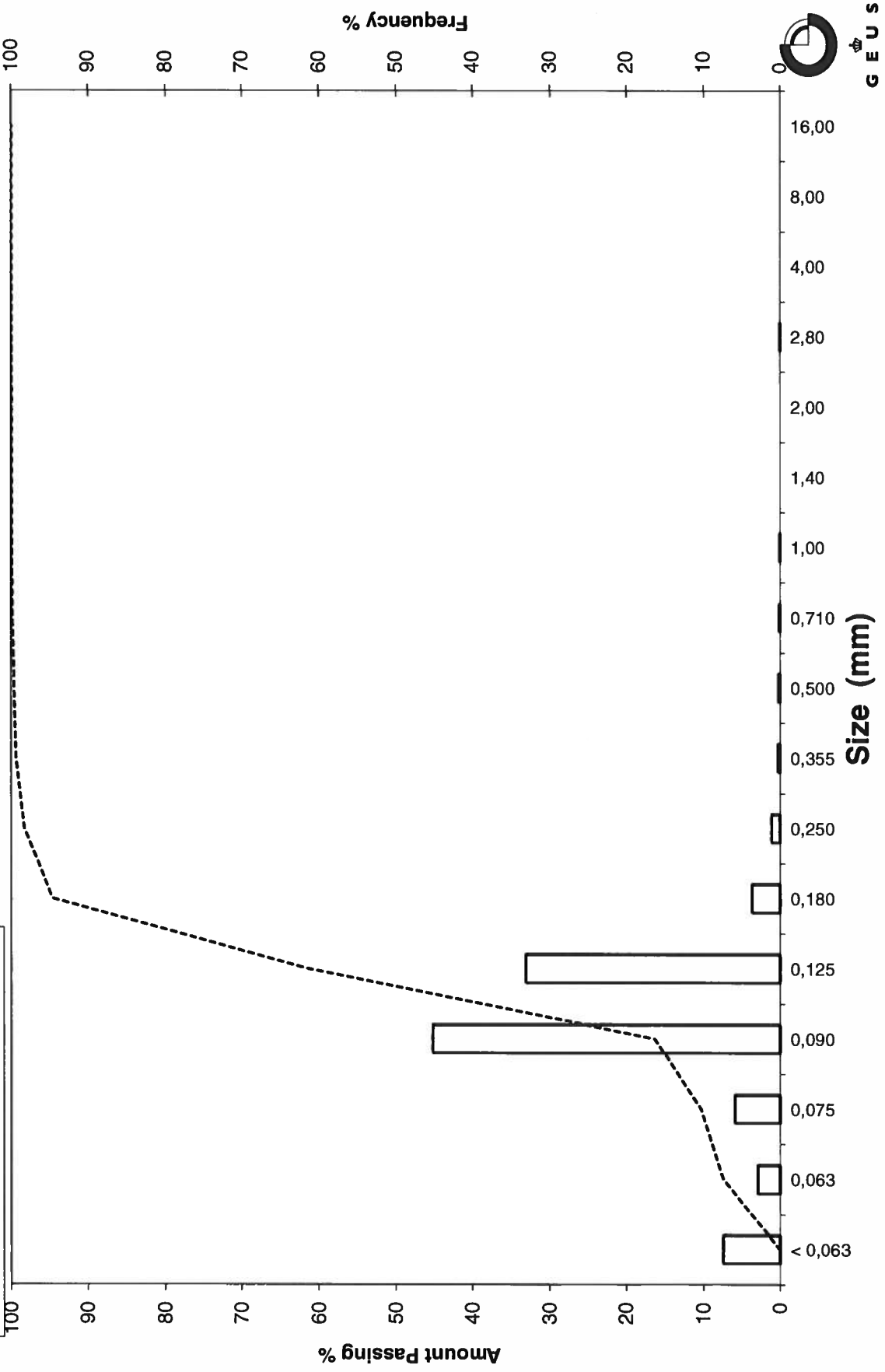
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_48, 400-420

Frequency Percent
 Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_49, 0-20
Lab. id: 200658
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >2,8mm heraf 1,8g skaller



Total Weight 110,32 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,98 | 0,89 | 99,11 |
| 8,00 | -3,00 | 0,51 | 0,46 | 98,65 |
| 4,00 | -2,00 | 0,30 | 0,27 | 98,38 |
| 2,80 | -1,49 | 0,40 | 0,36 | 98,01 |
| 2,00 | -1,00 | 0,61 | 0,55 | 97,46 |
| 1,40 | -0,49 | 0,75 | 0,68 | 96,78 |
| 1,00 | 0,00 | 1,82 | 1,65 | 95,13 |
| 0,710 | 0,49 | 2,72 | 2,47 | 92,67 |
| 0,500 | 1,00 | 9,38 | 8,50 | 84,16 |
| 0,355 | 1,49 | 23,04 | 20,88 | 63,28 |
| 0,250 | 2,00 | 29,73 | 26,95 | 36,33 |
| 0,180 | 2,47 | 20,22 | 18,33 | 18,00 |
| 0,125 | 3,00 | 15,64 | 14,18 | 3,83 |
| 0,090 | 3,47 | 3,22 | 2,92 | 0,91 |
| 0,075 | 3,74 | 0,25 | 0,23 | 0,68 |
| 0,063 | 3,99 | 0,09 | 0,08 | 0,60 |
| < 0,063 | > 3,99 | 0,66 | 0,60 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| Size Class | Weight % |
|----------------------------------|---------------|
| Silt and clay (< 0,063 mm) | 0,60 |
| Sand, fine (0,063 mm - 0,200 mm) | 22,64 |
| Sand, medium (0,2 mm - 0,6 mm) | 64,97 |
| Sand, coarse (0,6 mm - 2 mm) | 9,25 |
| Gravel (> 2 mm) | 2,54 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,98 | 0,02 |
| 16% | 84% | 0,50 | 1,00 |
| 25% | 75% | 0,44 | 1,20 |
| 40% | 60% | 0,34 | 1,55 |
| Median 50% | 50% | 0,30 | 1,72 |
| 75% | 25% | 0,21 | 2,27 |
| 84% | 16% | 0,17 | 2,54 |
| 90% | 10% | 0,15 | 2,75 |
| 95% | 5% | 0,13 | 2,95 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 1,75 |
| Sorting | 0,83 |
| Skewness | -0,05 |
| Kurtosis | 1,11 |
| Uniformity Coefficient | 2,30 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

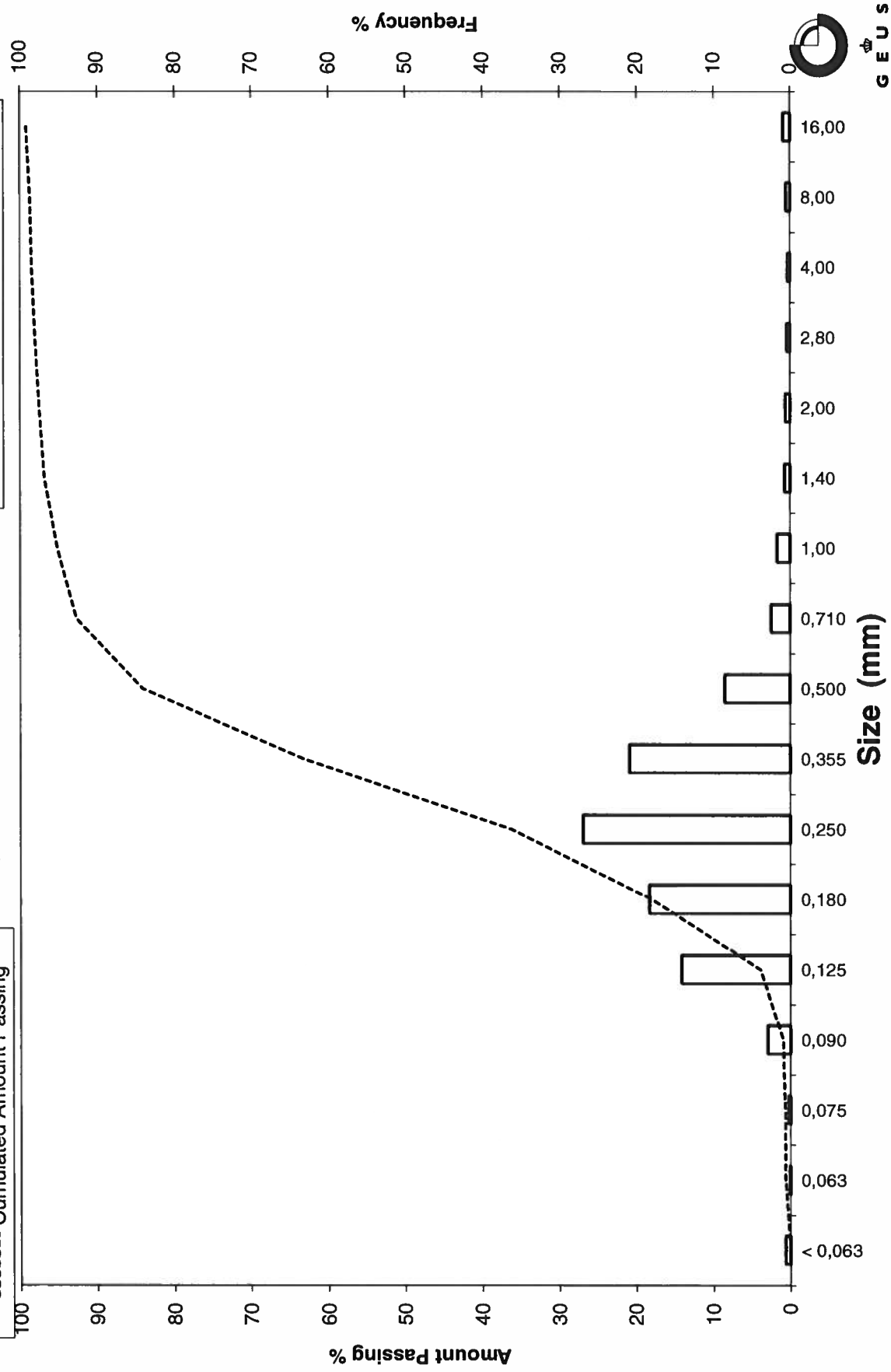
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_49, 0-20

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_49, 100-120
Lab. Id: 200659
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >4mm består af skaller



Total Weight 103,45 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 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 |
| 2,80 | -1,49 | 0,00 | 0,00 | 99,97 |
| 2,00 | -1,00 | 0,01 | 0,01 | 99,96 |
| 1,40 | -0,49 | 0,05 | 0,05 | 99,91 |
| 1,00 | 0,00 | 0,14 | 0,14 | 99,78 |
| 0,710 | 0,49 | 0,25 | 0,24 | 99,54 |
| 0,500 | 1,00 | 1,22 | 1,18 | 98,36 |
| 0,355 | 1,49 | 7,46 | 7,21 | 91,15 |
| 0,250 | 2,00 | 29,51 | 28,53 | 62,62 |
| 0,180 | 2,47 | 30,35 | 29,34 | 33,28 |
| 0,125 | 3,00 | 26,22 | 25,35 | 7,94 |
| 0,090 | 3,47 | 6,29 | 6,08 | 1,86 |
| 0,075 | 3,74 | 0,54 | 0,52 | 1,33 |
| 0,063 | 3,99 | 0,22 | 0,21 | 1,12 |
| < 0,063 | > 3,99 | 1,16 | 1,12 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| Size Class | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 1,12 |
| Sand, fine (0,063 mm - 0,200 mm): | 40,54 |
| Sand, medium (0,2 mm - 0,6 mm): | 57,25 |
| Sand, coarse (0,6 mm - 2 mm): | 1,04 |
| Gravel (> 2 mm): | 0,04 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,43 | 1,21 |
| 16% | 84% | 0,33 | 1,61 |
| 25% | 75% | 0,30 | 1,76 |
| 40% | 60% | 0,24 | 2,04 |
| Median 50% | 50% | 0,22 | 2,19 |
| 75% | 25% | 0,16 | 2,63 |
| 84% | 16% | 0,14 | 2,81 |
| 90% | 10% | 0,13 | 2,95 |
| 95% | 5% | 0,11 | 3,21 |

Moments Statistics

| | |
|------------------------|------|
| Mean | 2,20 |
| Sorting | 0,60 |
| Skewness | 0,03 |
| Kurtosis | 0,95 |
| Uniformity Coefficient | 1,88 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

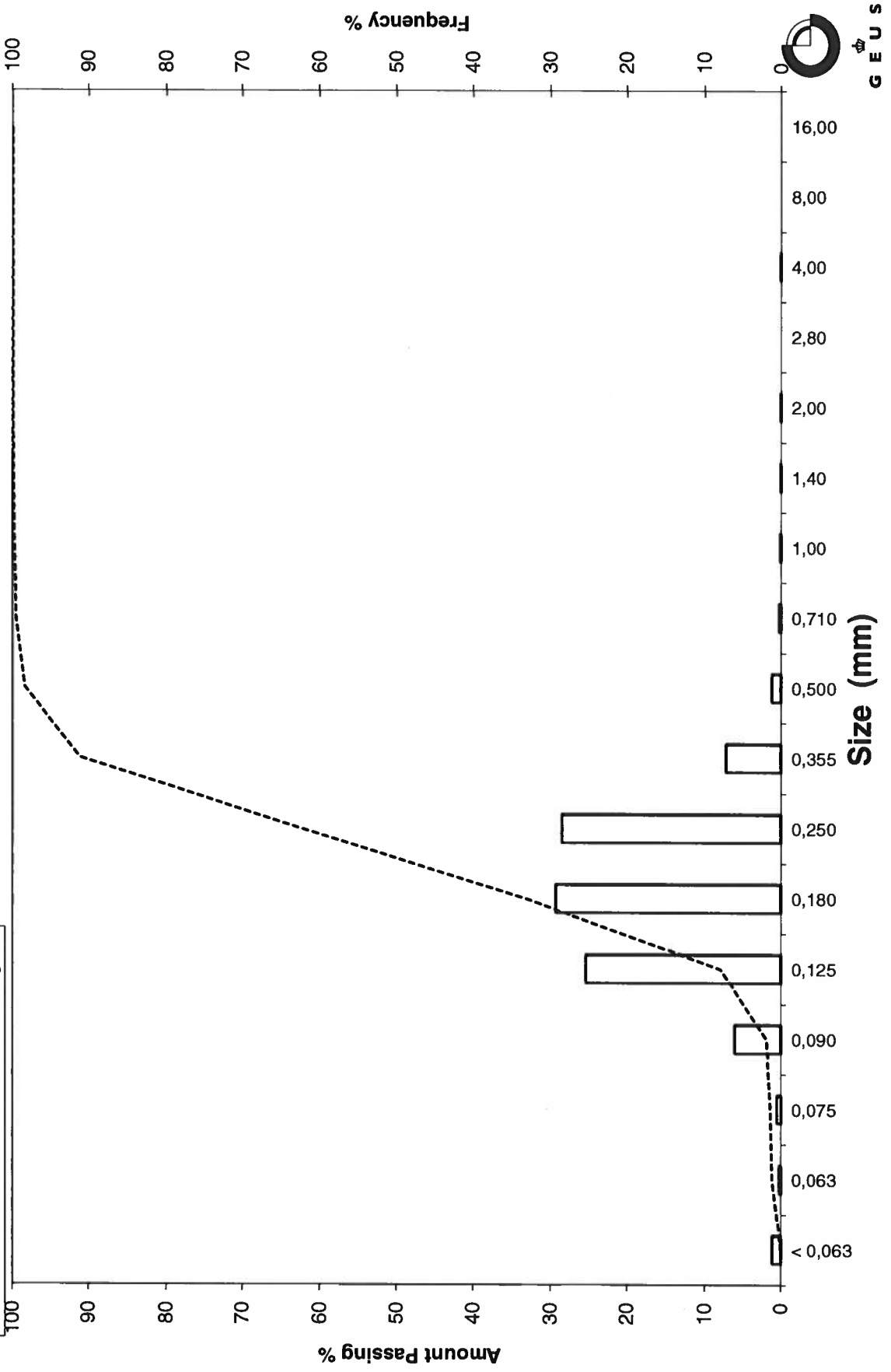
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_49, 100-120

Frequency Percent
 Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_49, 200-220
Lab. Id: 200660
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks:



Total Weight 95,77 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 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 |
| 2,80 | -1,49 | 0,00 | 0,00 | 100,00 |
| 2,00 | -1,00 | 0,00 | 0,00 | 100,00 |
| 1,40 | -0,49 | 0,05 | 0,05 | 99,95 |
| 1,00 | 0,00 | 0,12 | 0,13 | 99,82 |
| 0,710 | 0,49 | 0,19 | 0,20 | 99,62 |
| 0,500 | 1,00 | 0,72 | 0,75 | 98,87 |
| 0,355 | 1,49 | 2,86 | 2,99 | 95,89 |
| 0,250 | 2,00 | 7,53 | 7,86 | 88,02 |
| 0,180 | 2,47 | 16,53 | 17,26 | 70,76 |
| 0,125 | 3,00 | 49,11 | 51,28 | 19,48 |
| 0,090 | 3,47 | 15,62 | 16,31 | 3,17 |
| 0,075 | 3,74 | 1,19 | 1,24 | 1,93 |
| 0,063 | 3,99 | 0,44 | 0,46 | 1,47 |
| < 0,063 | > 3,99 | 1,41 | 1,47 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 1,47 |
| Sand, fine (0,063 mm - 0,200 mm): | 74,22 |
| Sand, medium (0,2 mm - 0,6 mm): | 23,54 |
| Sand, coarse (0,6 mm - 2 mm): | 0,77 |
| Gravel (> 2 mm): | 0,00 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,34 | 1,54 |
| 16% | 84% | 0,23 | 2,10 |
| 25% | 75% | 0,20 | 2,34 |
| 40% | 60% | 0,17 | 2,57 |
| Median 50% | 50% | 0,16 | 2,66 |
| 75% | 25% | 0,13 | 2,93 |
| 84% | 16% | 0,12 | 3,09 |
| 90% | 10% | 0,10 | 3,26 |
| 95% | 5% | 0,09 | 3,41 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 2,62 |
| Sorting | 0,53 |
| Skewness | -0,17 |
| Kurtosis | 1,30 |
| Uniformity Coefficient | 1,61 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

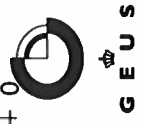
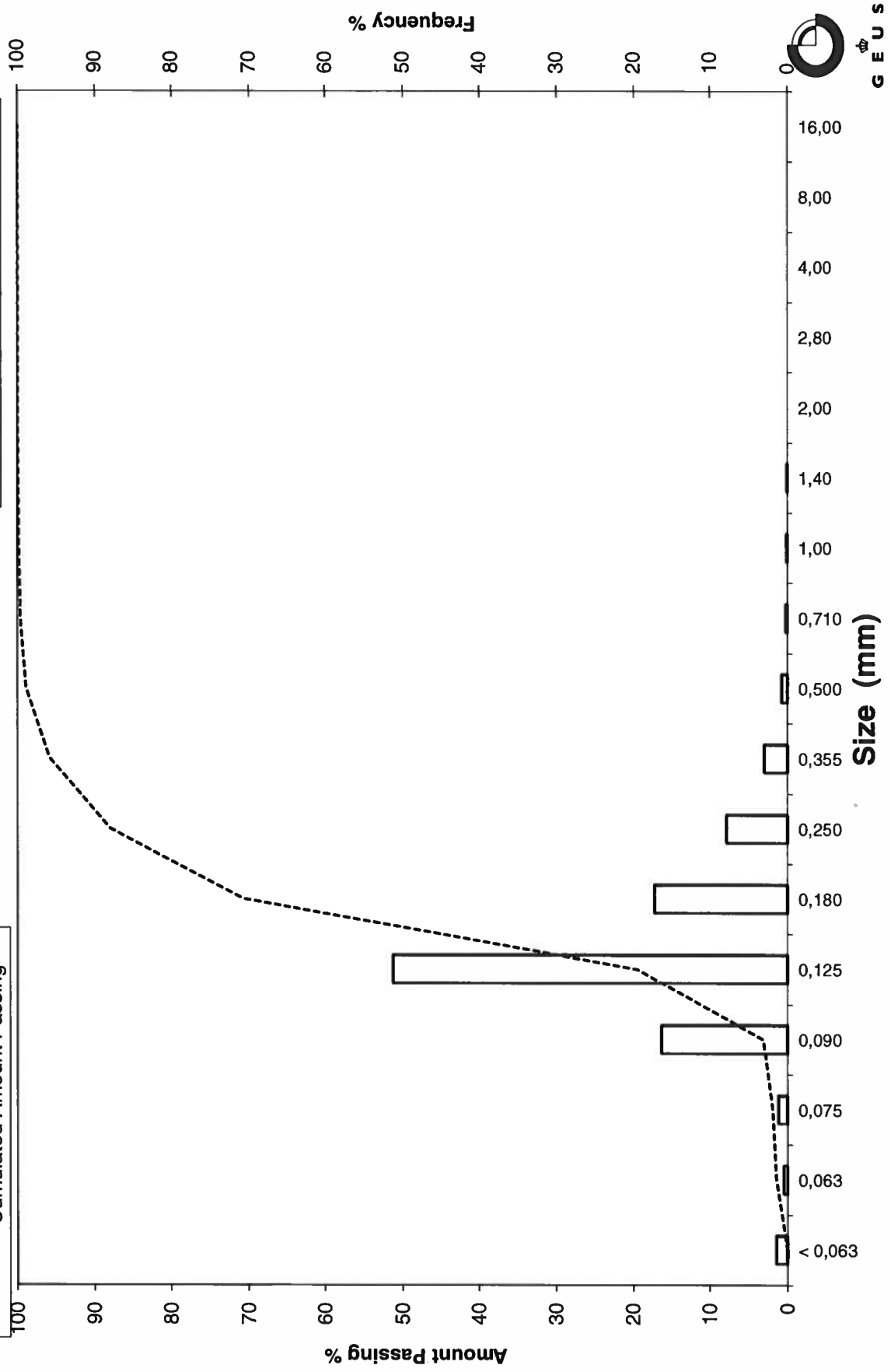
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_49, 200-220

Frequency Percent
 Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_49, 300-320
Lab. Id: 200661
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks:



Total Weight 93,52 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,00 | 0,00 | 100,00 |
| 4,00 | -2,00 | 0,17 | 0,18 | 99,82 |
| 2,80 | -1,49 | 0,09 | 0,10 | 99,72 |
| 2,00 | -1,00 | 0,15 | 0,16 | 99,56 |
| 1,40 | -0,49 | 0,17 | 0,18 | 99,38 |
| 1,00 | 0,00 | 0,27 | 0,29 | 99,09 |
| 0,710 | 0,49 | 0,60 | 0,64 | 98,45 |
| 0,500 | 1,00 | 1,73 | 1,85 | 96,60 |
| 0,355 | 1,49 | 2,03 | 2,17 | 94,43 |
| 0,250 | 2,00 | 2,54 | 2,72 | 91,71 |
| 0,180 | 2,47 | 3,62 | 3,87 | 87,84 |
| 0,125 | 3,00 | 36,08 | 38,58 | 49,26 |
| 0,090 | 3,47 | 36,99 | 39,55 | 9,71 |
| 0,075 | 3,74 | 3,45 | 3,69 | 6,02 |
| 0,063 | 3,99 | 1,61 | 1,72 | 4,30 |
| < 0,063 | > 3,99 | 4,02 | 4,30 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 4,30 |
| Sand, fine (0,063 mm - 0,200 mm): | 84,65 |
| Sand, medium (0,2 mm - 0,6 mm): | 8,53 |
| Sand, coarse (0,6 mm - 2 mm): | 2,08 |
| Gravel (> 2 mm): | 0,44 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,39 | 1,35 |
| 16% | 84% | 0,17 | 2,52 |
| 25% | 75% | 0,16 | 2,63 |
| 40% | 60% | 0,14 | 2,83 |
| Median 50% | 50% | 0,13 | 2,99 |
| 75% | 25% | 0,10 | 3,27 |
| 84% | 16% | 0,10 | 3,39 |
| 90% | 10% | 0,09 | 3,47 |
| 95% | 5% | 0,07 | 3,88 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 2,96 |
| Sorting | 0,60 |
| Skewness | -0,19 |
| Kurtosis | 1,61 |
| Uniformity Coefficient | 1,55 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

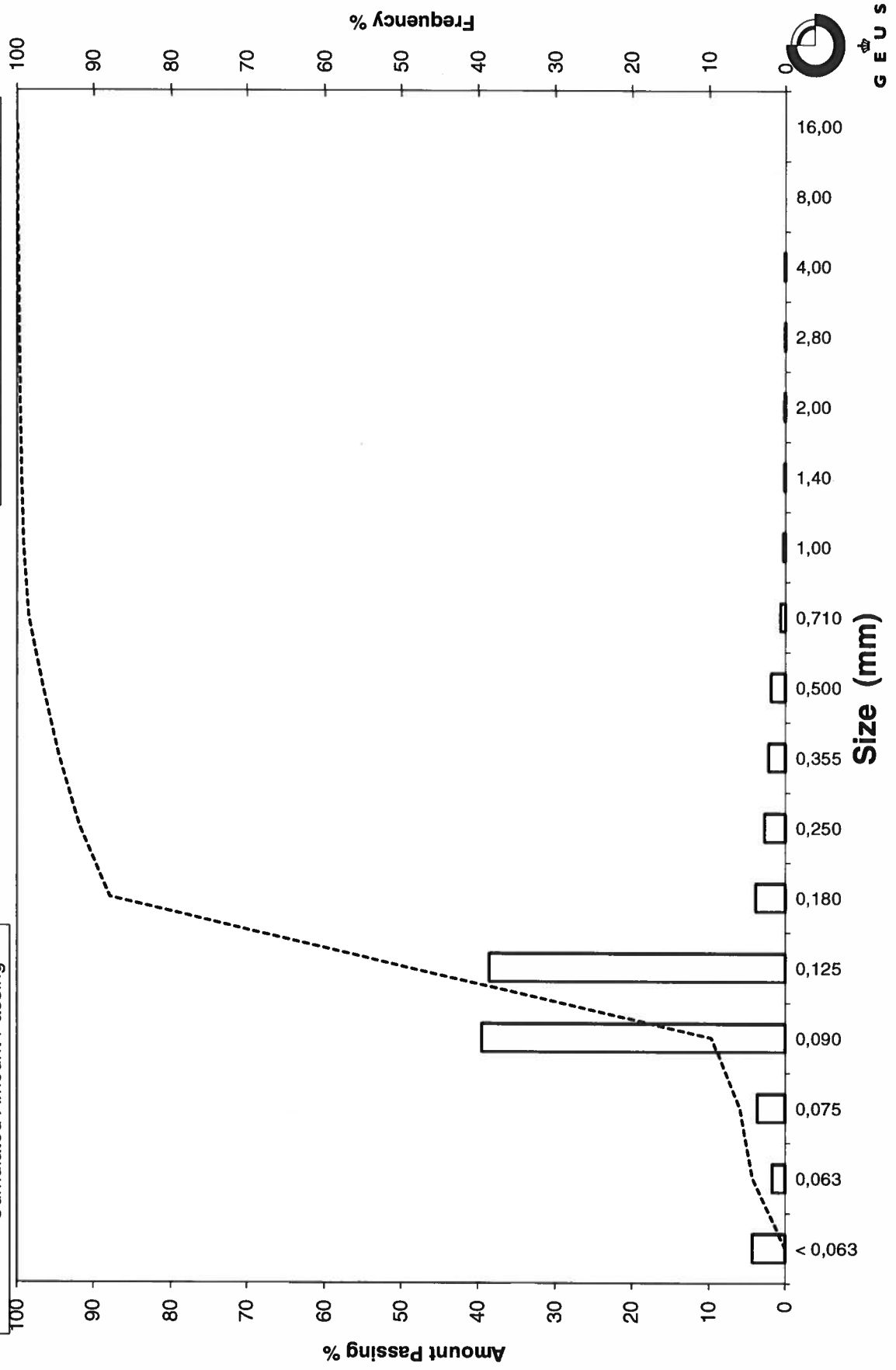
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_49, 300-320

 Frequency Percent
 Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_49, 400-420
Lab. Id: 200662
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >4mm heraf 0,05g skaller



Total Weight 101,21 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,00 | 0,00 | 100,00 |
| 4,00 | -2,00 | 0,36 | 0,36 | 99,64 |
| 2,80 | -1,49 | 0,55 | 0,54 | 99,10 |
| 2,00 | -1,00 | 0,64 | 0,63 | 98,47 |
| 1,40 | -0,49 | 0,71 | 0,70 | 97,77 |
| 1,00 | 0,00 | 2,05 | 2,03 | 95,74 |
| 0,710 | 0,49 | 2,02 | 2,00 | 93,75 |
| 0,500 | 1,00 | 4,77 | 4,71 | 89,03 |
| 0,355 | 1,49 | 7,57 | 7,48 | 81,55 |
| 0,250 | 2,00 | 8,12 | 8,02 | 73,53 |
| 0,180 | 2,47 | 5,46 | 5,39 | 68,14 |
| 0,125 | 3,00 | 15,45 | 15,27 | 52,87 |
| 0,090 | 3,47 | 37,60 | 37,15 | 15,72 |
| 0,075 | 3,74 | 5,64 | 5,57 | 10,15 |
| 0,063 | 3,99 | 2,70 | 2,67 | 7,48 |
| < 0,063 | > 3,99 | 7,57 | 7,48 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| Size Class | Weight % |
|----------------------------------|---------------|
| Silt and clay (< 0,063 mm) | 7,48 |
| Sand, fine (0,063 mm - 0,200 mm) | 62,20 |
| Sand, medium (0,2 mm - 0,6 mm) | 21,60 |
| Sand, coarse (0,6 mm - 2 mm) | 7,19 |
| Gravel (> 2 mm) | 1,53 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,89 | 0,16 |
| 16% | 84% | 0,40 | 1,31 |
| 25% | 75% | 0,27 | 1,89 |
| 40% | 60% | 0,15 | 2,73 |
| Median 50% | 50% | 0,12 | 3,03 |
| 75% | 25% | 0,10 | 3,34 |
| 84% | 16% | 0,09 | 3,47 |
| 90% | 10% | 0,07 | 3,75 |
| 95% | 5% | ----- | ----- |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 2,60 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | 2,03 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

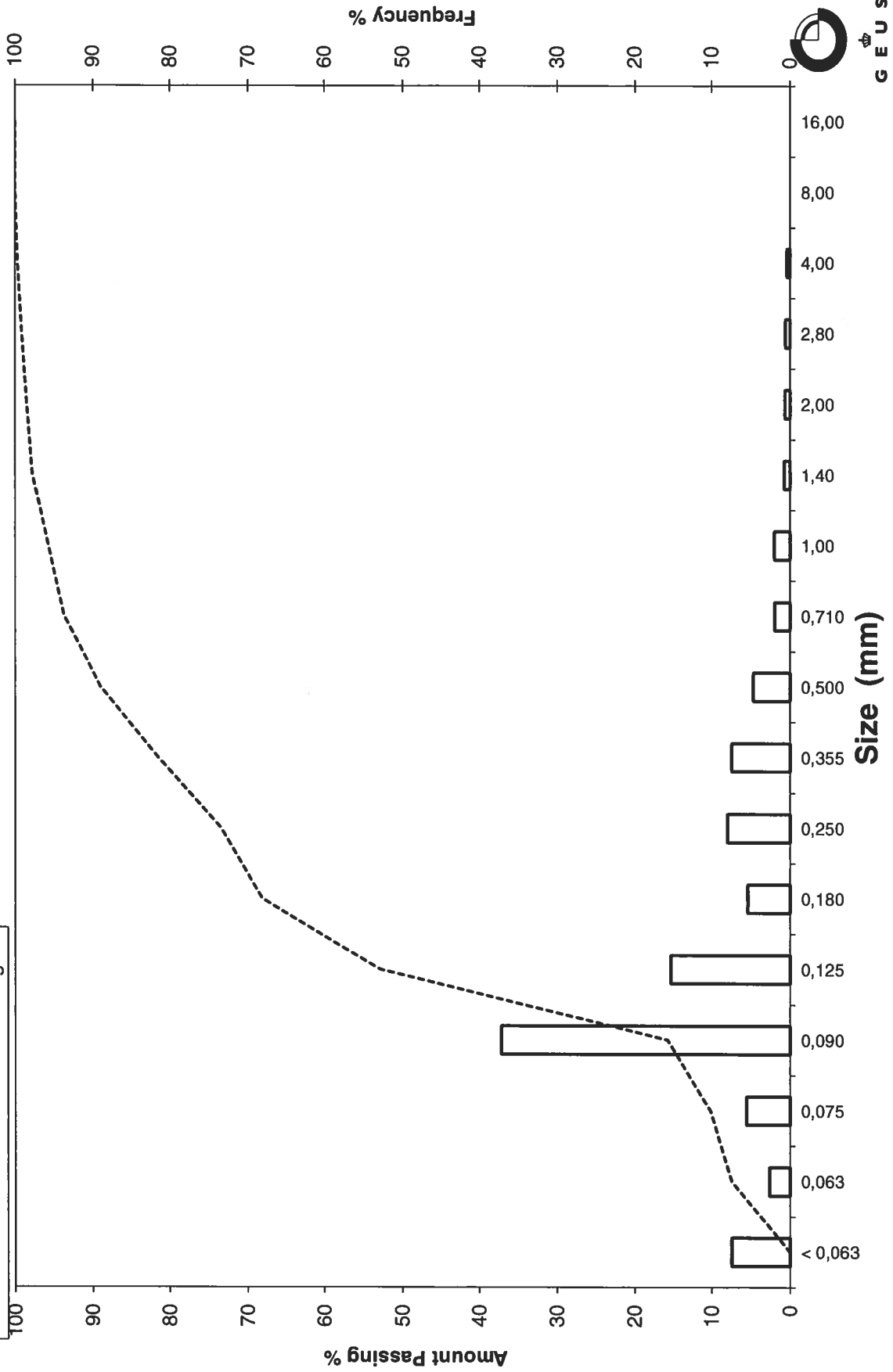
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_49, 400-420

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_49, 500-520
Lab. Id: 200663
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks:



Total Weight 118,82 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 6,50 | 5,47 | 94,53 |
| 4,00 | -2,00 | 3,40 | 2,86 | 91,67 |
| 2,80 | -1,49 | 1,81 | 1,52 | 90,14 |
| 2,00 | -1,00 | 2,23 | 1,88 | 88,27 |
| 1,40 | -0,49 | 1,96 | 1,65 | 86,62 |
| 1,00 | 0,00 | 4,27 | 3,59 | 83,02 |
| 0,710 | 0,49 | 5,06 | 4,26 | 78,77 |
| 0,500 | 1,00 | 9,84 | 8,28 | 70,48 |
| 0,355 | 1,49 | 18,58 | 15,64 | 54,85 |
| 0,250 | 2,00 | 24,62 | 20,72 | 34,13 |
| 0,180 | 2,47 | 16,82 | 14,16 | 19,97 |
| 0,125 | 3,00 | 8,17 | 6,88 | 13,10 |
| 0,090 | 3,47 | 5,74 | 4,83 | 8,26 |
| 0,075 | 3,74 | 2,56 | 2,15 | 6,11 |
| 0,063 | 3,99 | 1,50 | 1,26 | 4,85 |
| < 0,063 | > 3,99 | 5,76 | 4,85 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 4,85 |
| Sand, fine (0,063 mm - 0,200 mm): | 19,17 |
| Sand, medium (0,2 mm - 0,6 mm): | 50,41 |
| Sand, coarse (0,6 mm - 2 mm): | 13,84 |
| Gravel (> 2 mm): | 11,73 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 8,69 | -3,12 |
| 16% | 84% | 1,11 | -0,15 |
| 25% | 75% | 0,61 | 0,70 |
| 40% | 60% | 0,40 | 1,31 |
| Median 50% | 50% | 0,33 | 1,60 |
| 75% | 25% | 0,20 | 2,29 |
| 84% | 16% | 0,15 | 2,75 |
| 90% | 10% | 0,10 | 3,29 |
| 95% | 5% | 0,06 | 3,96 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 1,40 |
| Sorting | 1,80 |
| Skewness | -0,27 |
| Kurtosis | 1,83 |
| Uniformity Coefficient | 3,93 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

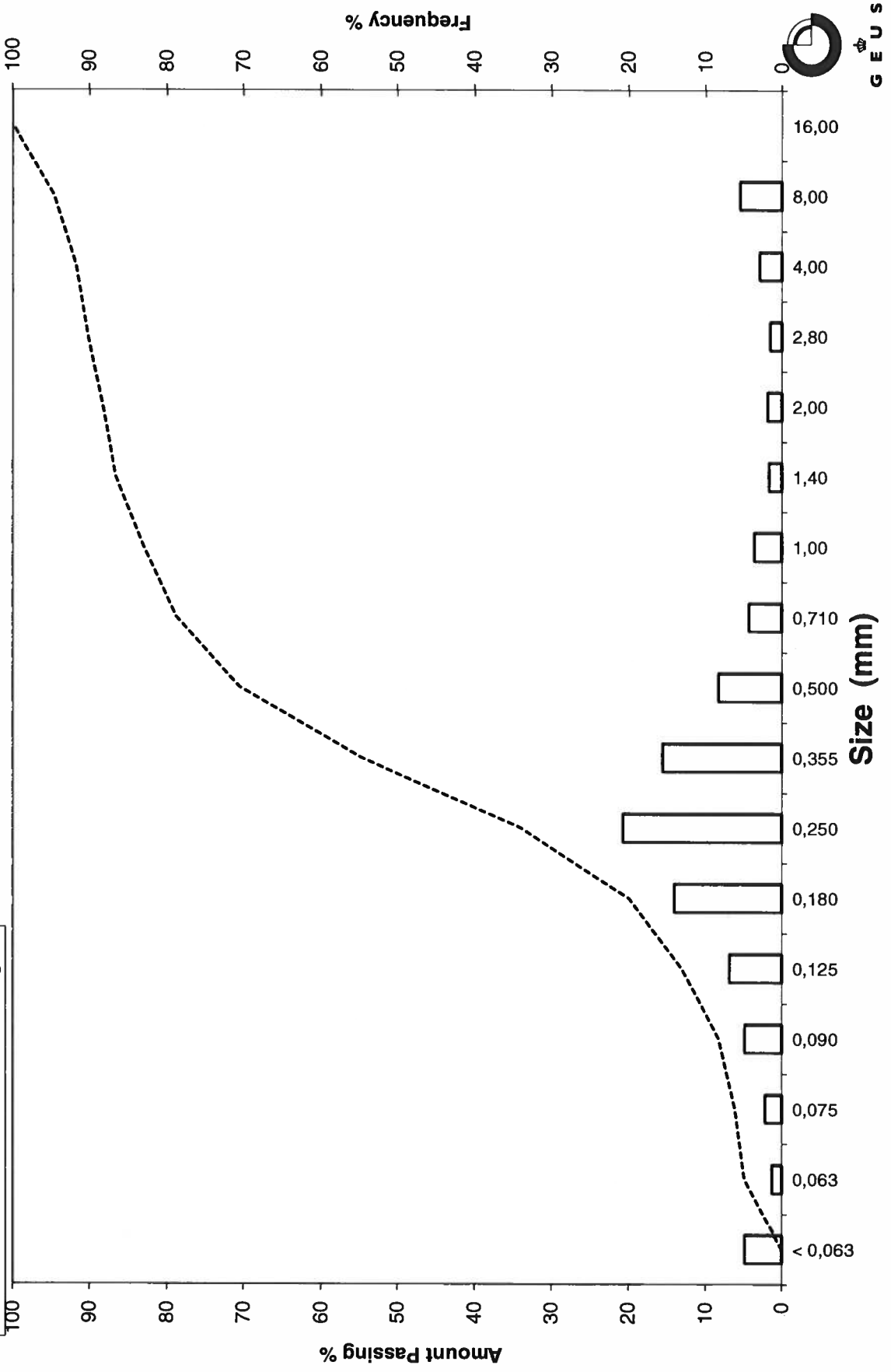
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_49, 500-520

Frequency Percent
 Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_50, 0-20
Lab. Id: 200664
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >1,4mm består af skaller



Total Weight 96,62 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | |
| 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 |
| 2,80 | -1,49 | 0,00 | 0,00 | 100,00 |
| 2,00 | -1,00 | 0,00 | 0,00 | 100,00 |
| 1,40 | -0,49 | 0,07 | 0,07 | 99,93 |
| 1,00 | 0,00 | 0,06 | 0,06 | 99,87 |
| 0,710 | 0,49 | 0,16 | 0,17 | 99,70 |
| 0,500 | 1,00 | 1,01 | 1,05 | 98,65 |
| 0,355 | 1,49 | 2,43 | 2,52 | 96,14 |
| 0,250 | 2,00 | 8,38 | 8,67 | 87,47 |
| 0,180 | 2,47 | 19,44 | 20,12 | 67,35 |
| 0,125 | 3,00 | 41,98 | 43,45 | 23,90 |
| 0,090 | 3,47 | 19,40 | 20,08 | 3,82 |
| 0,075 | 3,74 | 1,10 | 1,14 | 2,68 |
| 0,063 | 3,99 | 0,51 | 0,53 | 2,15 |
| < 0,063 | > 3,99 | 2,08 | 2,15 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| Size Class | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 2,15 |
| Sand, fine (0,063 mm - 0,200 mm): | 70,94 |
| Sand, medium (0,2 mm - 0,6 mm): | 26,06 |
| Sand, coarse (0,6 mm - 2 mm): | 0,85 |
| Gravel (> 2 mm): | 0,00 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,34 | 1,55 |
| 16% | 84% | 0,24 | 2,07 |
| 25% | 75% | 0,21 | 2,27 |
| 40% | 60% | 0,17 | 2,55 |
| Median 50% | 50% | 0,16 | 2,66 |
| 75% | 25% | 0,13 | 2,98 |
| 84% | 16% | 0,11 | 3,17 |
| 90% | 10% | 0,10 | 3,31 |
| 95% | 5% | 0,09 | 3,44 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 2,63 |
| Sorting | 0,56 |
| Skewness | -0,13 |
| Kurtosis | 1,09 |
| Uniformity Coefficient | 1,69 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

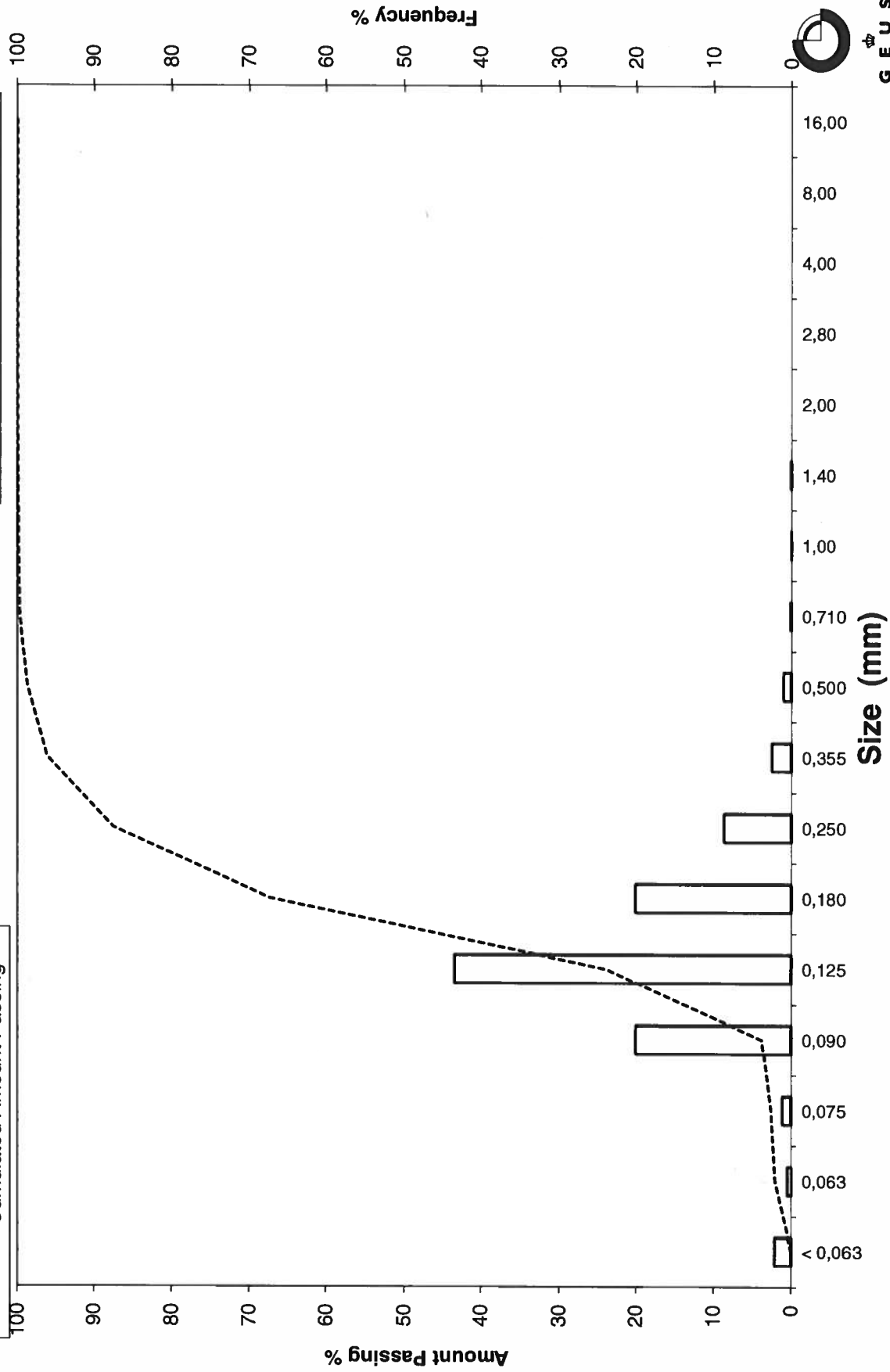
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_50, 0-20

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_50, 100-120
Lab. Id: 200665
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >1mm består af silkaller



Total Weight 92,82 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 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 |
| 2,80 | -1,49 | 0,00 | 0,00 | 100,00 |
| 2,00 | -1,00 | 0,00 | 0,00 | 100,00 |
| 1,40 | -0,49 | 0,00 | 0,00 | 100,00 |
| 1,00 | 0,00 | 0,05 | 0,05 | 99,95 |
| 0,710 | 0,49 | 0,08 | 0,09 | 99,86 |
| 0,500 | 1,00 | 0,27 | 0,29 | 99,57 |
| 0,355 | 1,49 | 1,08 | 1,16 | 98,41 |
| 0,250 | 2,00 | 1,43 | 1,54 | 96,86 |
| 0,180 | 2,47 | 3,24 | 3,49 | 93,37 |
| 0,125 | 3,00 | 39,08 | 42,10 | 51,27 |
| 0,090 | 3,47 | 41,11 | 44,29 | 6,98 |
| 0,075 | 3,74 | 2,89 | 3,11 | 3,87 |
| 0,063 | 3,99 | 0,86 | 0,93 | 2,94 |
| < 0,063 | > 3,99 | 2,73 | 2,94 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 2,94 |
| Sand, fine (0,063 mm - 0,200 mm): | 91,43 |
| Sand, medium (0,2 mm - 0,6 mm): | 5,34 |
| Sand, coarse (0,6 mm - 2 mm): | 0,29 |
| Gravel (> 2 mm): | 0,00 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,21 | 2,23 |
| 16% | 84% | 0,17 | 2,58 |
| 25% | 75% | 0,16 | 2,68 |
| 40% | 60% | 0,14 | 2,87 |
| Median 50% | 50% | 0,12 | 3,01 |
| 75% | 25% | 0,10 | 3,26 |
| 84% | 16% | 0,10 | 3,36 |
| 90% | 10% | 0,09 | 3,44 |
| 95% | 5% | 0,08 | 3,64 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 2,98 |
| Sorting | 0,41 |
| Skewness | -0,11 |
| Kurtosis | 0,99 |
| Uniformity Coefficient | 1,48 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

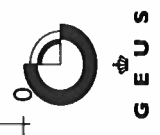
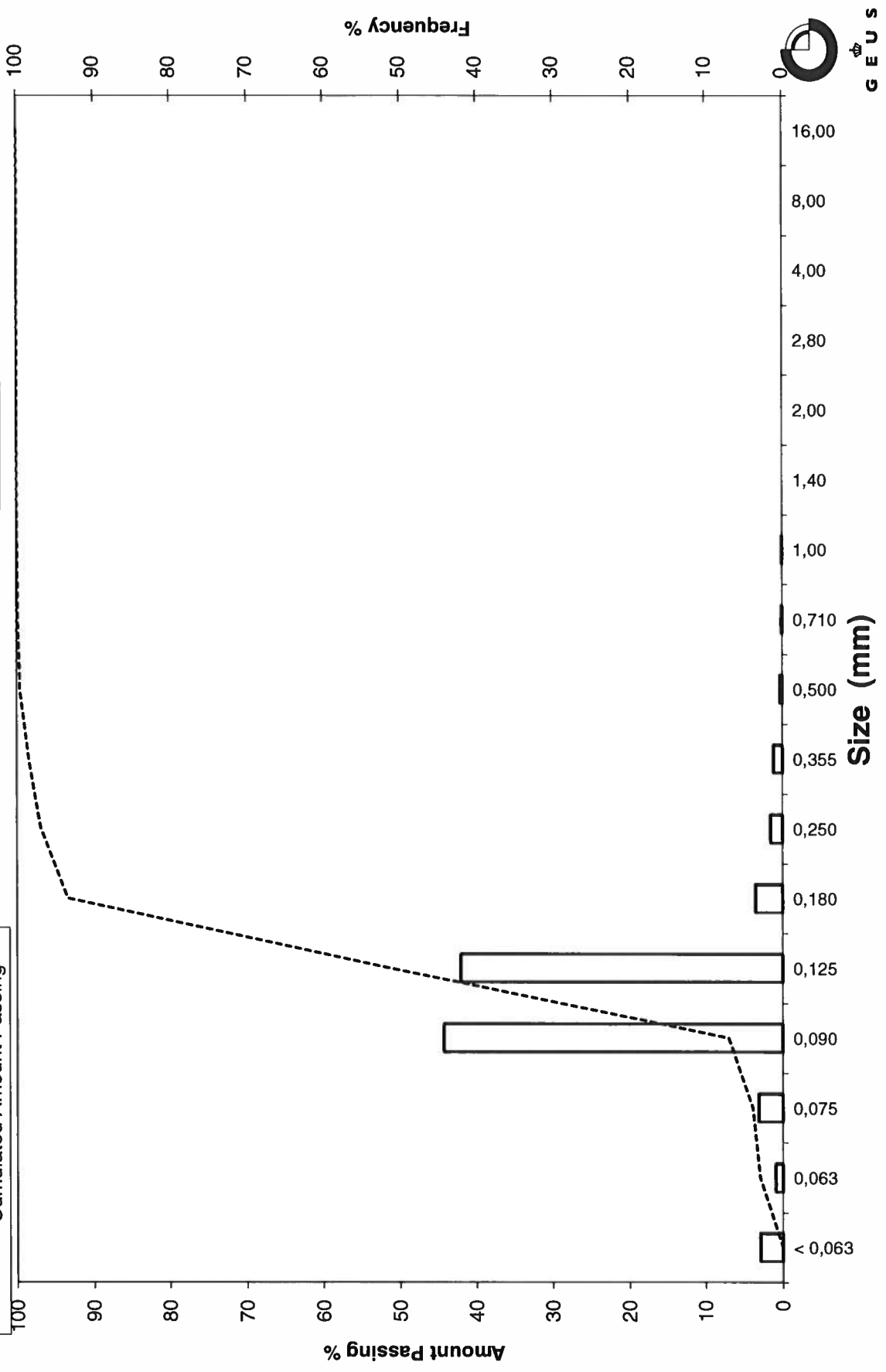
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_50, 100-120

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_50, 200-220
Lab. Id: 200666
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks:



Total Weight 107,51 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 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 |
| 2,80 | -1,49 | 0,02 | 0,02 | 99,98 |
| 2,00 | -1,00 | 0,25 | 0,23 | 99,75 |
| 1,40 | -0,49 | 0,36 | 0,33 | 99,41 |
| 1,00 | 0,00 | 0,57 | 0,53 | 98,88 |
| 0,710 | 0,49 | 0,79 | 0,73 | 98,15 |
| 0,500 | 1,00 | 1,90 | 1,77 | 96,38 |
| 0,355 | 1,49 | 7,17 | 6,67 | 89,71 |
| 0,250 | 2,00 | 24,68 | 22,96 | 66,76 |
| 0,180 | 2,47 | 33,58 | 31,23 | 35,52 |
| 0,125 | 3,00 | 11,00 | 10,23 | 25,29 |
| 0,090 | 3,47 | 16,14 | 15,01 | 10,28 |
| 0,075 | 3,74 | 4,75 | 4,42 | 5,86 |
| 0,063 | 3,99 | 2,14 | 1,99 | 3,87 |
| < 0,063 | > 3,99 | 4,16 | 3,87 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 3,87 |
| Sand, fine (0,063 mm - 0,200 mm): | 40,58 |
| Sand, medium (0,2 mm - 0,6 mm): | 52,78 |
| Sand, coarse (0,6 mm - 2 mm): | 2,52 |
| Gravel (> 2 mm): | 0,25 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,47 | 1,09 |
| 16% | 84% | 0,33 | 1,60 |
| 25% | 75% | 0,29 | 1,80 |
| 40% | 60% | 0,23 | 2,09 |
| Median 50% | 50% | 0,21 | 2,23 |
| 75% | 25% | 0,12 | 3,01 |
| 84% | 16% | 0,10 | 3,27 |
| 90% | 10% | 0,09 | 3,49 |
| 95% | 5% | 0,07 | 3,84 |

Moments Statistics

| | |
|------------------------|------|
| Mean | 2,37 |
| Sorting | 0,83 |
| Skewness | 0,21 |
| Kurtosis | 0,93 |
| Uniformity Coefficient | 2,64 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

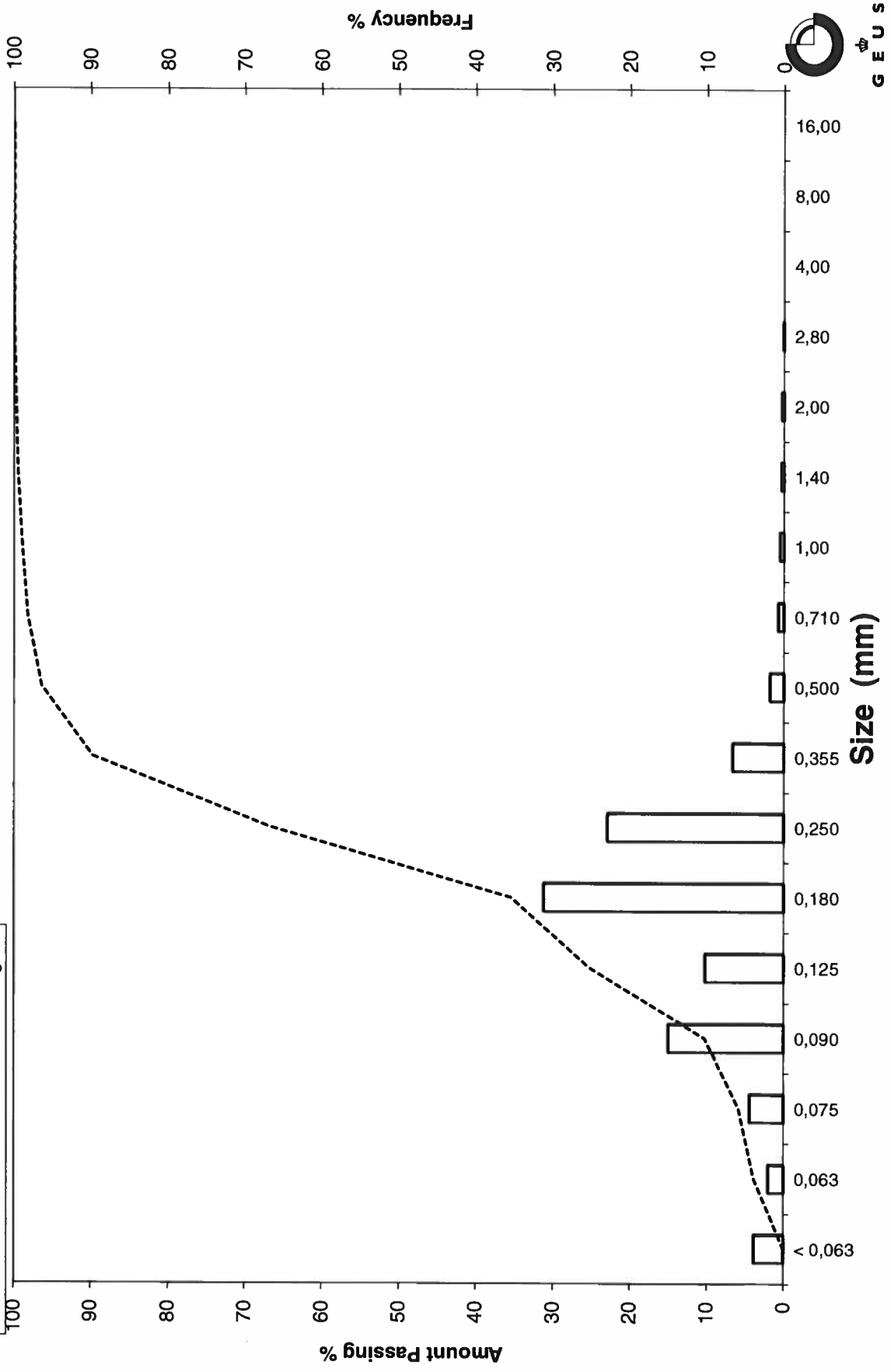
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_50, 200-220

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_50, 300-320
Lab. Id: 200667
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >4mm består af skaller



Total Weight 95,15 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,00 | 0,00 | 100,00 |
| 4,00 | -2,00 | 0,02 | 0,02 | 99,98 |
| 2,80 | -1,49 | 0,23 | 0,24 | 99,74 |
| 2,00 | -1,00 | 0,17 | 0,18 | 99,56 |
| 1,40 | -0,49 | 0,13 | 0,14 | 99,42 |
| 1,00 | 0,00 | 0,30 | 0,32 | 99,11 |
| 0,710 | 0,49 | 0,28 | 0,29 | 98,81 |
| 0,500 | 1,00 | 0,65 | 0,68 | 98,13 |
| 0,355 | 1,49 | 2,87 | 3,02 | 95,11 |
| 0,250 | 2,00 | 10,93 | 11,49 | 83,63 |
| 0,180 | 2,47 | 23,14 | 24,32 | 59,31 |
| 0,125 | 3,00 | 9,34 | 9,82 | 49,49 |
| 0,090 | 3,47 | 16,27 | 17,10 | 32,39 |
| 0,075 | 3,74 | 8,28 | 8,70 | 23,69 |
| 0,063 | 3,99 | 5,77 | 6,06 | 17,62 |
| < 0,063 | > 3,99 | 16,77 | 17,62 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 17,62 |
| Sand, fine (0,063 mm - 0,200 mm): | 48,63 |
| Sand, medium (0,2 mm - 0,6 mm): | 32,20 |
| Sand, coarse (0,6 mm - 2 mm): | 1,10 |
| Gravel (> 2 mm): | 0,44 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,35 | 1,50 |
| 16% | 84% | 0,25 | 1,98 |
| 25% | 75% | 0,23 | 2,15 |
| 40% | 60% | 0,18 | 2,46 |
| Median 50% | 50% | 0,13 | 2,97 |
| 75% | 25% | 0,08 | 3,69 |
| 84% | 16% | ----- | ----- |
| 90% | 10% | ----- | ----- |
| 95% | 5% | ----- | ----- |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 2,47 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | ----- |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

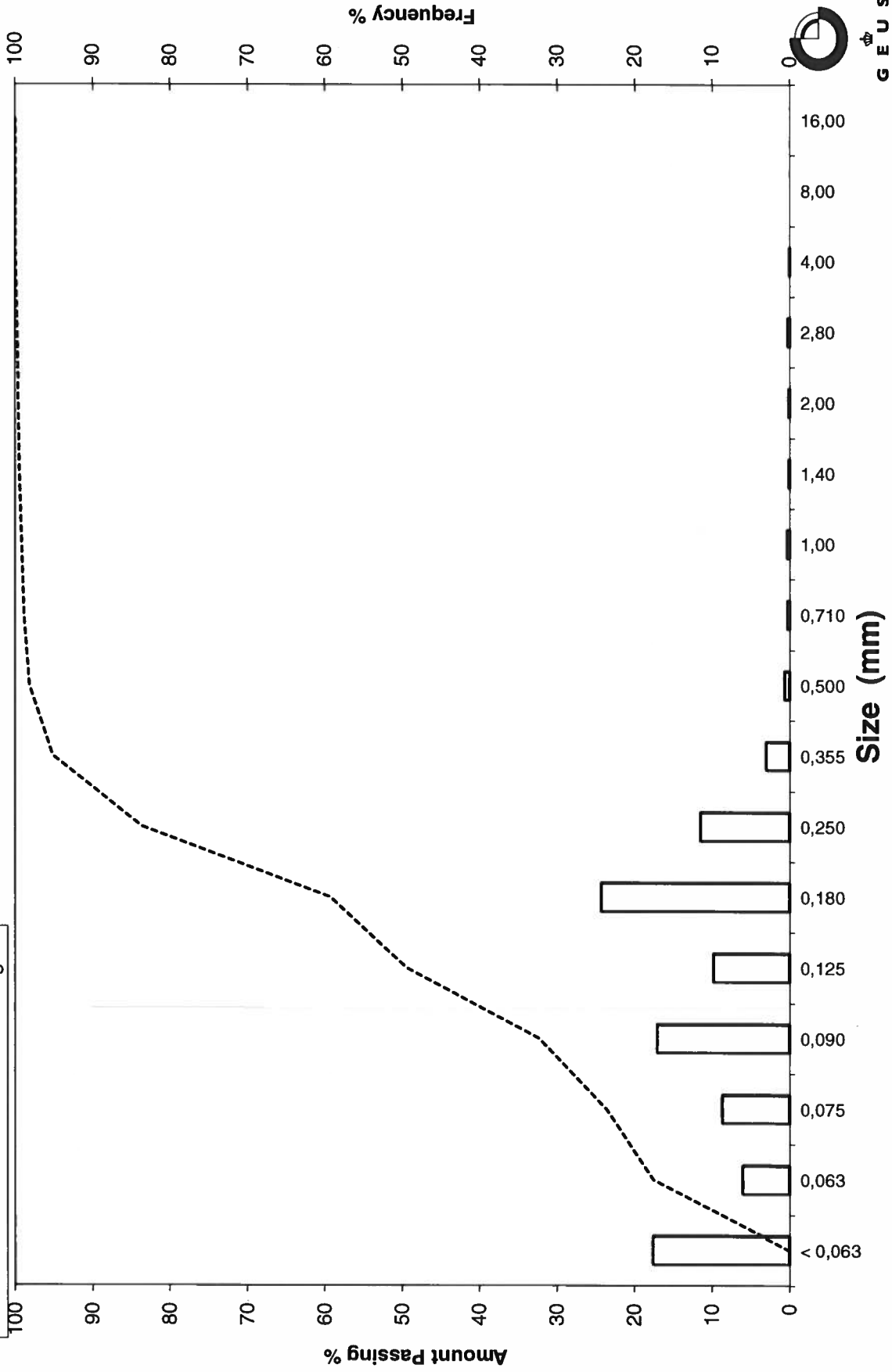
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_50, 300-320

Frequency Percent
Cumulated Amount Passing

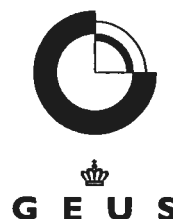


GEUS

Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_50, 410-430
Lab. Id: 200668
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >4mm heraf 0,8g skaller



Total Weight 109,88 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,76 | 0,69 | 99,31 |
| 4,00 | -2,00 | 0,70 | 0,64 | 98,67 |
| 2,80 | -1,49 | 0,67 | 0,61 | 98,06 |
| 2,00 | -1,00 | 1,07 | 0,97 | 97,09 |
| 1,40 | -0,49 | 1,07 | 0,97 | 96,11 |
| 1,00 | 0,00 | 1,01 | 0,92 | 95,19 |
| 0,710 | 0,49 | 1,27 | 1,16 | 94,04 |
| 0,500 | 1,00 | 2,30 | 2,09 | 91,95 |
| 0,355 | 1,49 | 7,25 | 6,60 | 85,35 |
| 0,250 | 2,00 | 29,47 | 26,82 | 58,53 |
| 0,180 | 2,47 | 34,61 | 31,50 | 27,03 |
| 0,125 | 3,00 | 10,65 | 9,69 | 17,34 |
| 0,090 | 3,47 | 6,42 | 5,84 | 11,49 |
| 0,075 | 3,74 | 4,14 | 3,77 | 7,73 |
| 0,063 | 3,99 | 2,76 | 2,51 | 5,21 |
| < 0,063 | > 3,99 | 5,73 | 5,21 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 5,21 |
| Sand, fine (0,063 mm - 0,200 mm): | 30,81 |
| Sand, medium (0,2 mm - 0,6 mm): | 56,91 |
| Sand, coarse (0,6 mm - 2 mm): | 4,15 |
| Gravel (> 2 mm): | 2,91 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,95 | 0,07 |
| 16% | 84% | 0,35 | 1,52 |
| 25% | 75% | 0,31 | 1,67 |
| 40% | 60% | 0,26 | 1,97 |
| Median 50% | 50% | 0,23 | 2,11 |
| 75% | 25% | 0,17 | 2,57 |
| 84% | 16% | 0,12 | 3,10 |
| 90% | 10% | 0,08 | 3,57 |
| 95% | 5% | ----- | ----- |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 2,24 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | 3,04 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

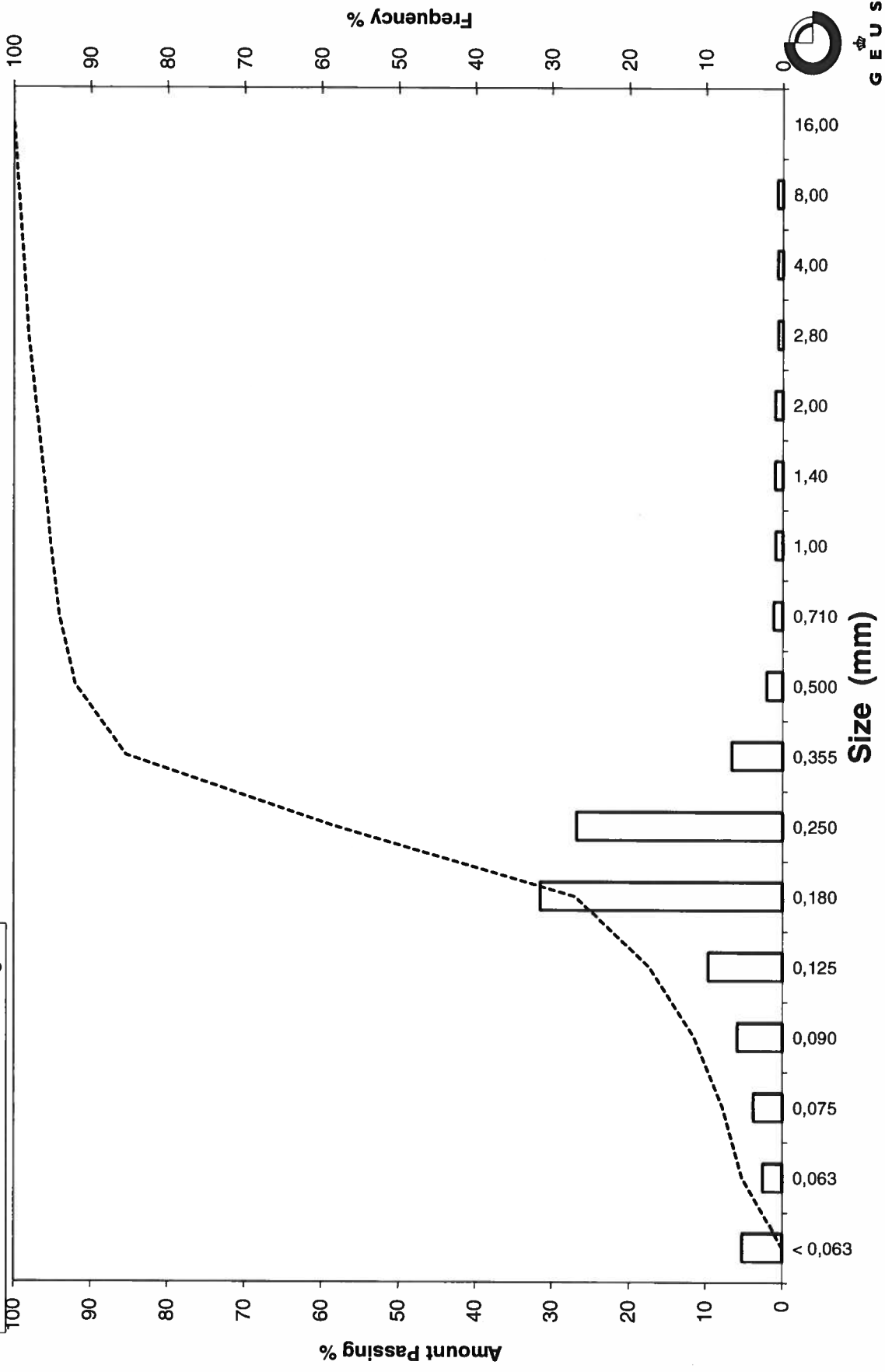
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_50, 410-430

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_51, 0-20
Lab. Id: 200669
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks:



Total Weight 109,83 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 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 |
| 2,80 | -1,49 | 0,06 | 0,05 | 99,95 |
| 2,00 | -1,00 | 0,06 | 0,05 | 99,89 |
| 1,40 | -0,49 | 0,24 | 0,22 | 99,67 |
| 1,00 | 0,00 | 0,97 | 0,88 | 98,79 |
| 0,710 | 0,49 | 2,44 | 2,22 | 96,57 |
| 0,500 | 1,00 | 9,17 | 8,35 | 88,22 |
| 0,355 | 1,49 | 20,16 | 18,36 | 69,86 |
| 0,250 | 2,00 | 33,17 | 30,20 | 39,66 |
| 0,180 | 2,47 | 28,74 | 26,17 | 13,49 |
| 0,125 | 3,00 | 11,00 | 10,02 | 3,48 |
| 0,090 | 3,47 | 2,69 | 2,45 | 1,03 |
| 0,075 | 3,74 | 0,18 | 0,16 | 0,86 |
| 0,063 | 3,99 | 0,06 | 0,05 | 0,81 |
| < 0,063 | > 3,99 | 0,89 | 0,81 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 0,81 |
| Sand, fine (0,063 mm - 0,200 mm): | 20,16 |
| Sand, medium (0,2 mm - 0,6 mm): | 71,22 |
| Sand, coarse (0,6 mm - 2 mm): | 7,70 |
| Gravel (> 2 mm): | 0,11 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,67 | 0,58 |
| 16% | 84% | 0,47 | 1,10 |
| 25% | 75% | 0,40 | 1,34 |
| 40% | 60% | 0,32 | 1,64 |
| Median 50% | 50% | 0,29 | 1,81 |
| 75% | 25% | 0,21 | 2,25 |
| 84% | 16% | 0,19 | 2,42 |
| 90% | 10% | 0,16 | 2,64 |
| 95% | 5% | 0,13 | 2,91 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 1,78 |
| Sorting | 0,68 |
| Skewness | -0,06 |
| Kurtosis | 1,05 |
| Uniformity Coefficient | 1,99 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

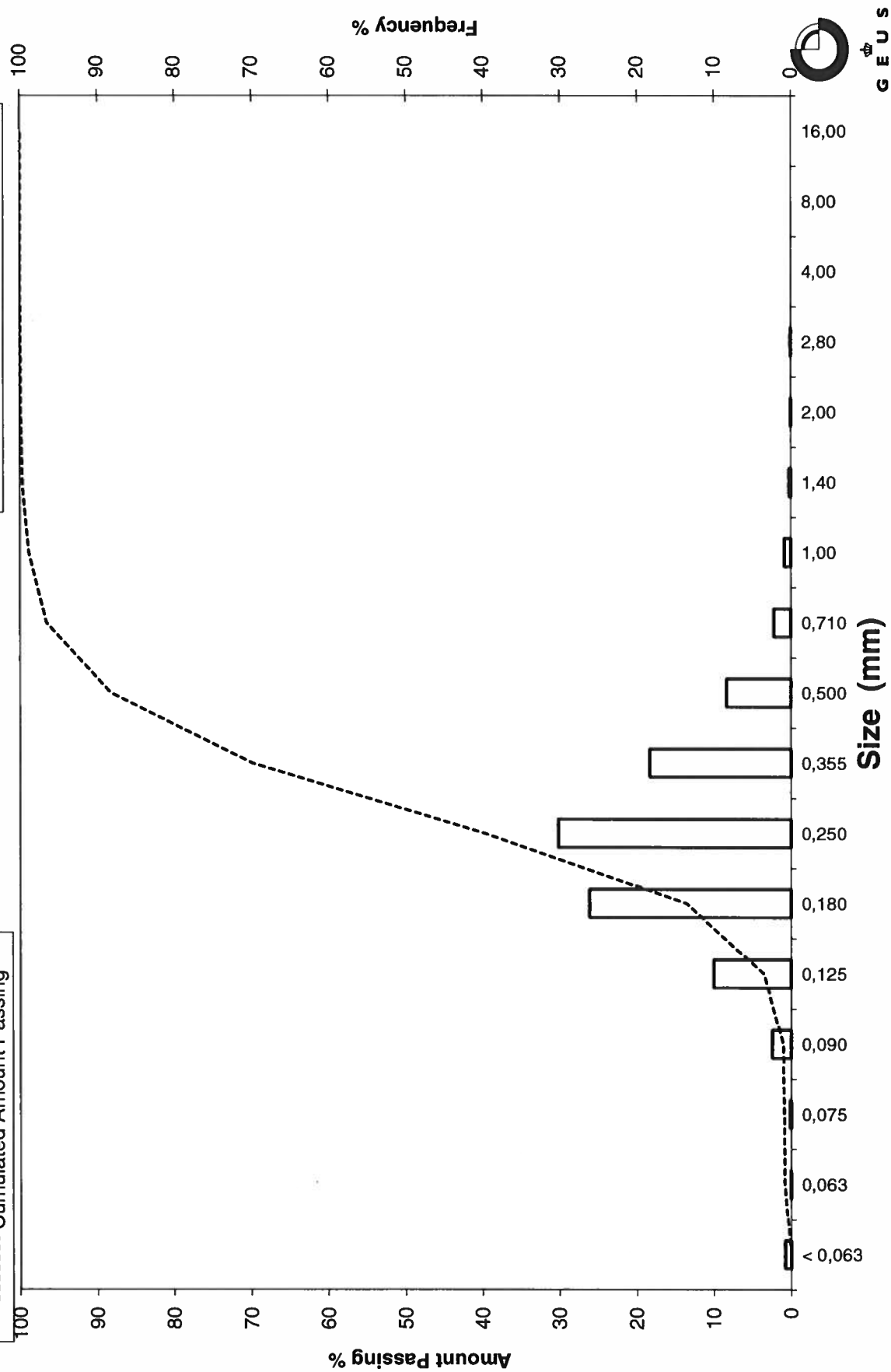
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Sample Id: Løn B-1B_51, 0-20

Grain Size Distribution

Frequency Percent
Cumulated Amount Passing



GEUS

Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_51, 100-120
Lab. Id: 200670
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks:



Total Weight 99,12 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 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 | 0,15 | 99,85 |
| 2,80 | -1,49 | 0,11 | 0,11 | 99,74 |
| 2,00 | -1,00 | 0,10 | 0,10 | 99,64 |
| 1,40 | -0,49 | 0,10 | 0,10 | 99,54 |
| 1,00 | 0,00 | 0,22 | 0,22 | 99,31 |
| 0,710 | 0,49 | 0,59 | 0,60 | 98,72 |
| 0,500 | 1,00 | 2,69 | 2,71 | 96,00 |
| 0,355 | 1,49 | 7,13 | 7,19 | 88,81 |
| 0,250 | 2,00 | 23,09 | 23,29 | 65,52 |
| 0,180 | 2,47 | 34,66 | 34,97 | 30,55 |
| 0,125 | 3,00 | 21,85 | 22,04 | 8,50 |
| 0,090 | 3,47 | 7,02 | 7,08 | 1,42 |
| 0,075 | 3,74 | 0,41 | 0,41 | 1,01 |
| 0,063 | 3,99 | 0,16 | 0,16 | 0,85 |
| < 0,063 | > 3,99 | 0,84 | 0,85 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 0,85 |
| Sand, fine (0,063 mm - 0,200 mm): | 39,69 |
| Sand, medium (0,2 mm - 0,6 mm): | 56,76 |
| Sand, coarse (0,6 mm - 2 mm): | 2,34 |
| Gravel (> 2 mm): | 0,36 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,48 | 1,06 |
| 16% | 84% | 0,33 | 1,59 |
| 25% | 75% | 0,29 | 1,77 |
| 40% | 60% | 0,24 | 2,07 |
| Median 50% | 50% | 0,22 | 2,19 |
| 75% | 25% | 0,17 | 2,59 |
| 84% | 16% | 0,14 | 2,80 |
| 90% | 10% | 0,13 | 2,96 |
| 95% | 5% | 0,11 | 3,22 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 2,19 |
| Sorting | 0,63 |
| Skewness | -0,02 |
| Kurtosis | 1,08 |
| Uniformity Coefficient | 1,86 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

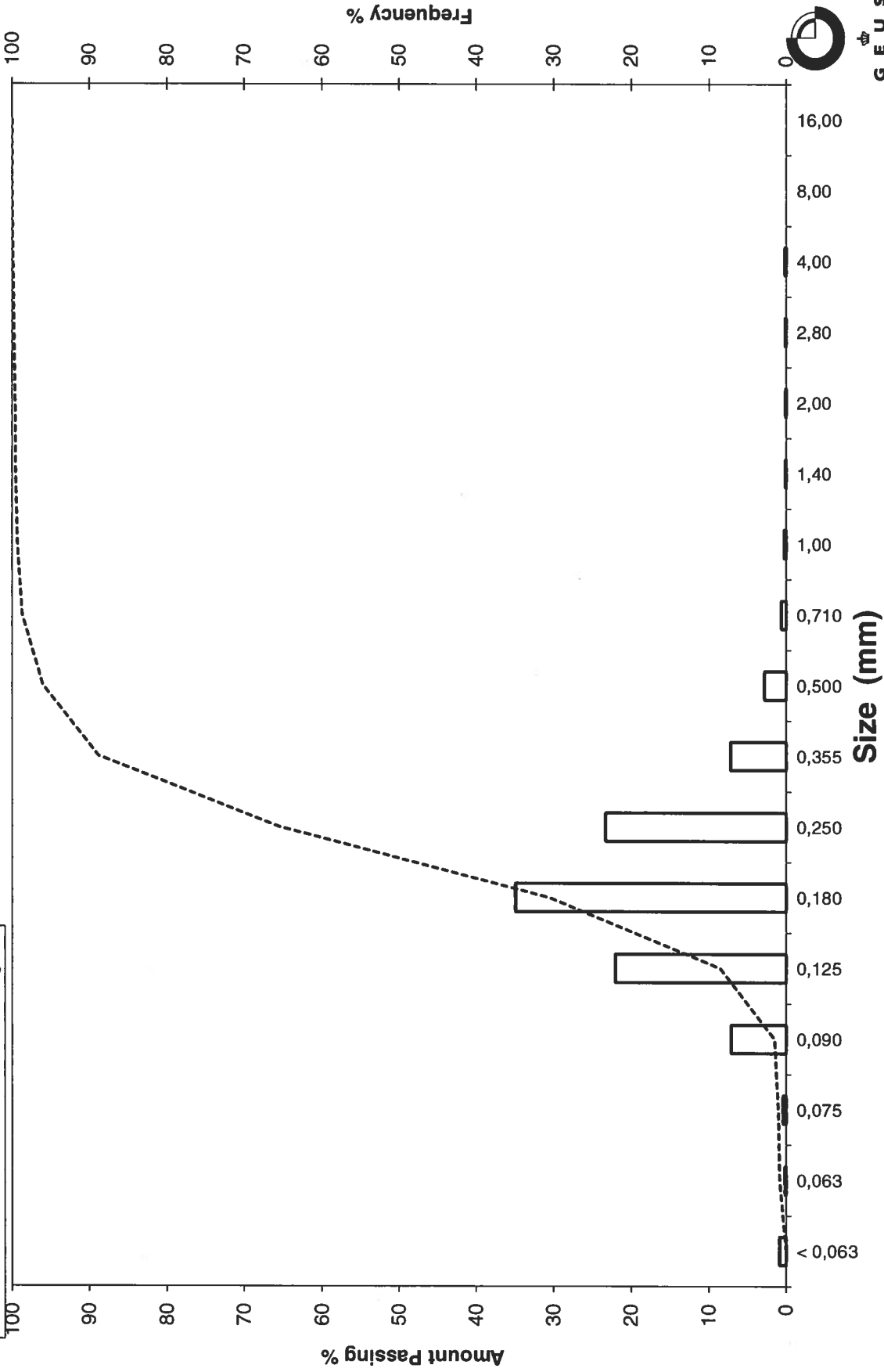
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_51, 100-120

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_51, 200-220
Lab. Id: 200671
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >4mm består af skaller



Total Weight 97,99 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,30 | 0,31 | 99,69 |
| 4,00 | -2,00 | 0,03 | 0,03 | 99,66 |
| 2,80 | -1,49 | 0,13 | 0,13 | 99,53 |
| 2,00 | -1,00 | 0,15 | 0,15 | 99,38 |
| 1,40 | -0,49 | 0,18 | 0,18 | 99,19 |
| 1,00 | 0,00 | 0,36 | 0,37 | 98,83 |
| 0,710 | 0,49 | 0,65 | 0,66 | 98,16 |
| 0,500 | 1,00 | 2,16 | 2,20 | 95,96 |
| 0,355 | 1,49 | 5,63 | 5,75 | 90,21 |
| 0,250 | 2,00 | 16,37 | 16,71 | 73,51 |
| 0,180 | 2,47 | 33,59 | 34,28 | 39,23 |
| 0,125 | 3,00 | 28,88 | 29,47 | 9,76 |
| 0,090 | 3,47 | 7,88 | 8,04 | 1,71 |
| 0,075 | 3,74 | 0,39 | 0,40 | 1,32 |
| 0,063 | 3,99 | 0,15 | 0,15 | 1,16 |
| < 0,063 | > 3,99 | 1,14 | 1,16 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 1,16 |
| Sand, fine (0,063 mm - 0,200 mm): | 47,86 |
| Sand, medium (0,2 mm - 0,6 mm): | 47,99 |
| Sand, coarse (0,6 mm - 2 mm): | 2,37 |
| Gravel (> 2 mm): | 0,62 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,48 | 1,07 |
| 16% | 84% | 0,32 | 1,66 |
| 25% | 75% | 0,26 | 1,95 |
| 40% | 60% | 0,22 | 2,17 |
| Median 50% | 50% | 0,20 | 2,31 |
| 75% | 25% | 0,15 | 2,70 |
| 84% | 16% | 0,14 | 2,87 |
| 90% | 10% | 0,13 | 2,99 |
| 95% | 5% | 0,10 | 3,26 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 2,28 |
| Sorting | 0,63 |
| Skewness | -0,10 |
| Kurtosis | 1,18 |
| Uniformity Coefficient | 1,77 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

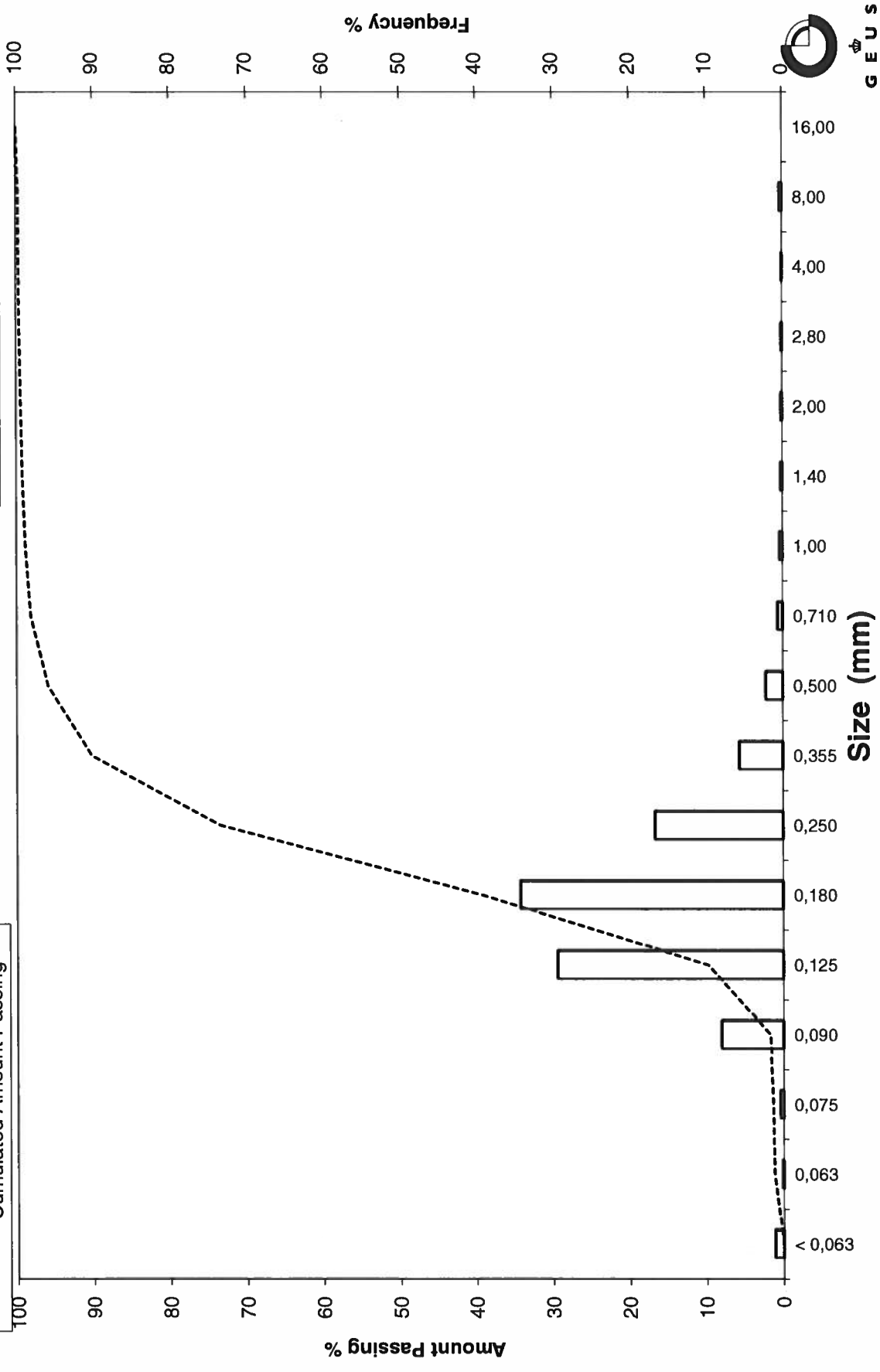
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_51, 200-220

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_51, 300-320
Lab. Id: 200672
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >4mm består af skaller



Total Weight 95,43 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,00 | 0,00 | 100,00 |
| 4,00 | -2,00 | 0,05 | 0,05 | 99,95 |
| 2,80 | -1,49 | 0,00 | 0,00 | 99,95 |
| 2,00 | -1,00 | 0,09 | 0,09 | 99,85 |
| 1,40 | -0,49 | 0,16 | 0,17 | 99,69 |
| 1,00 | 0,00 | 0,35 | 0,37 | 99,32 |
| 0,710 | 0,49 | 0,83 | 0,87 | 98,45 |
| 0,500 | 1,00 | 2,37 | 2,48 | 95,97 |
| 0,355 | 1,49 | 3,06 | 3,21 | 92,76 |
| 0,250 | 2,00 | 5,08 | 5,32 | 87,44 |
| 0,180 | 2,47 | 14,32 | 15,01 | 72,43 |
| 0,125 | 3,00 | 39,74 | 41,64 | 30,79 |
| 0,090 | 3,47 | 23,44 | 24,56 | 6,22 |
| 0,075 | 3,74 | 1,47 | 1,54 | 4,68 |
| 0,063 | 3,99 | 0,74 | 0,78 | 3,91 |
| < 0,063 | > 3,99 | 3,73 | 3,91 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| Size Class | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 3,91 |
| Sand, fine (0,063 mm - 0,200 mm): | 72,81 |
| Sand, medium (0,2 mm - 0,6 mm): | 20,43 |
| Sand, coarse (0,6 mm - 2 mm): | 2,71 |
| Gravel (> 2 mm): | 0,15 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,46 | 1,13 |
| 16% | 84% | 0,23 | 2,10 |
| 25% | 75% | 0,19 | 2,38 |
| 40% | 60% | 0,16 | 2,61 |
| Median 50% | 50% | 0,15 | 2,73 |
| 75% | 25% | 0,12 | 3,10 |
| 84% | 16% | 0,10 | 3,27 |
| 90% | 10% | 0,10 | 3,39 |
| 95% | 5% | 0,08 | 3,68 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 2,70 |
| Sorting | 0,68 |
| Skewness | -0,17 |
| Kurtosis | 1,45 |
| Uniformity Coefficient | 1,72 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

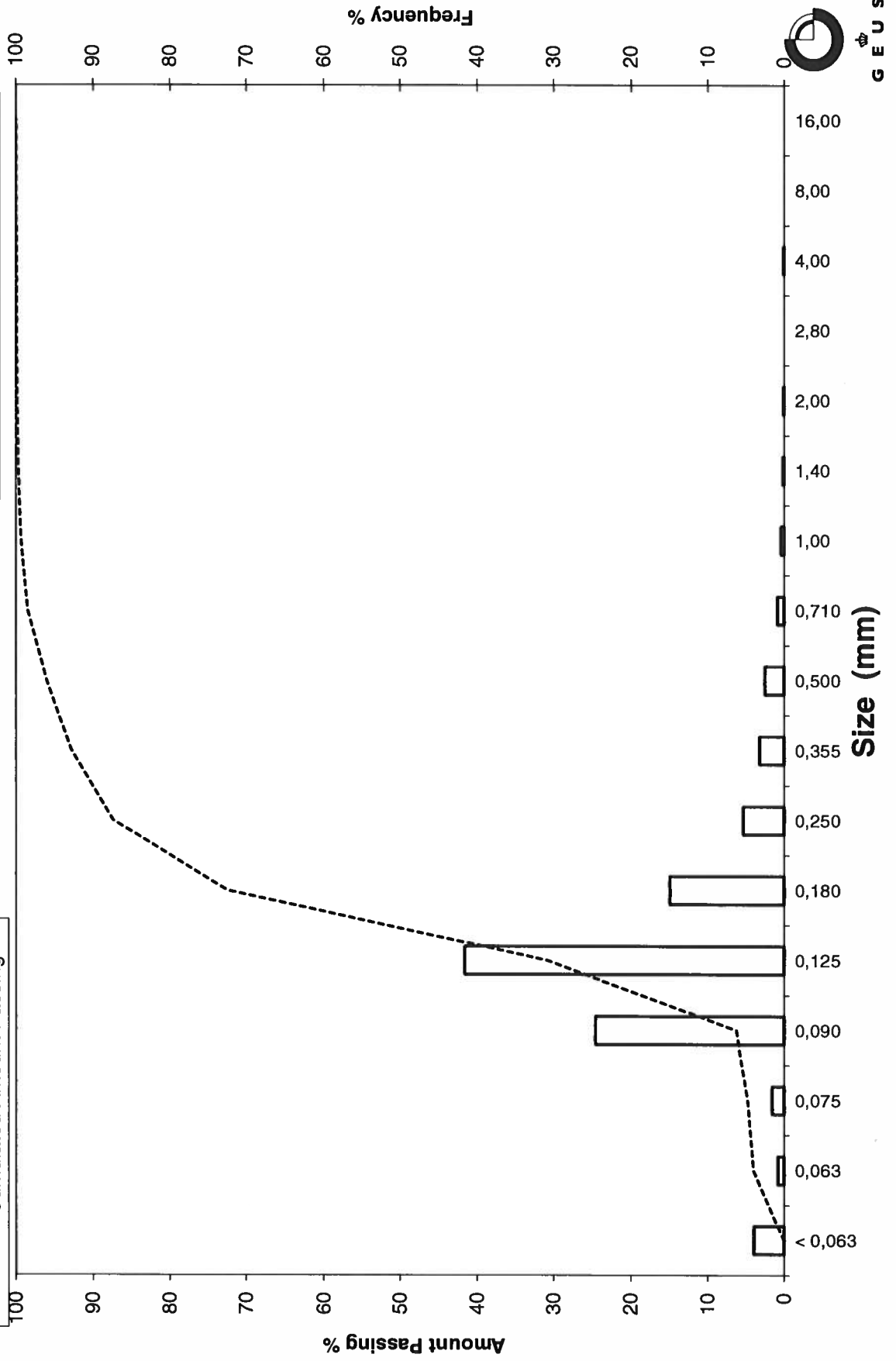
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_51, 300-320

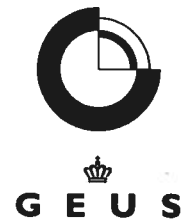
Frequency Percent
 Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_52, 0-20
Lab. Id: 200673
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >2,8mm eraf 0,05g skaller



Total Weight 102,37 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 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 |
| 2,80 | -1,49 | 0,21 | 0,21 | 99,79 |
| 2,00 | -1,00 | 0,14 | 0,14 | 99,66 |
| 1,40 | -0,49 | 0,12 | 0,12 | 99,54 |
| 1,00 | 0,00 | 0,42 | 0,41 | 99,13 |
| 0,710 | 0,49 | 0,74 | 0,72 | 98,41 |
| 0,500 | 1,00 | 3,14 | 3,07 | 95,34 |
| 0,355 | 1,49 | 9,06 | 8,85 | 86,49 |
| 0,250 | 2,00 | 26,14 | 25,53 | 60,96 |
| 0,180 | 2,47 | 33,90 | 33,12 | 27,84 |
| 0,125 | 3,00 | 20,16 | 19,69 | 8,15 |
| 0,090 | 3,47 | 6,37 | 6,22 | 1,92 |
| 0,075 | 3,74 | 0,45 | 0,44 | 1,48 |
| 0,063 | 3,99 | 0,19 | 0,19 | 1,30 |
| < 0,063 | > 3,99 | 1,33 | 1,30 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 1,30 |
| Sand, fine (0,063 mm - 0,200 mm): | 36,00 |
| Sand, medium (0,2 mm - 0,6 mm): | 59,50 |
| Sand, coarse (0,6 mm - 2 mm): | 2,86 |
| Gravel (> 2 mm): | 0,34 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,49 | 1,02 |
| 16% | 84% | 0,34 | 1,54 |
| 25% | 75% | 0,31 | 1,70 |
| 40% | 60% | 0,25 | 2,01 |
| Median 50% | 50% | 0,23 | 2,14 |
| 75% | 25% | 0,17 | 2,54 |
| 84% | 16% | 0,15 | 2,77 |
| 90% | 10% | 0,13 | 2,94 |
| 95% | 5% | 0,11 | 3,22 |

Moments Statistics

| | |
|------------------------|------|
| Mean | 2,15 |
| Sorting | 0,64 |
| Skewness | 0,00 |
| Kurtosis | 1,08 |
| Uniformity Coefficient | 1,90 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

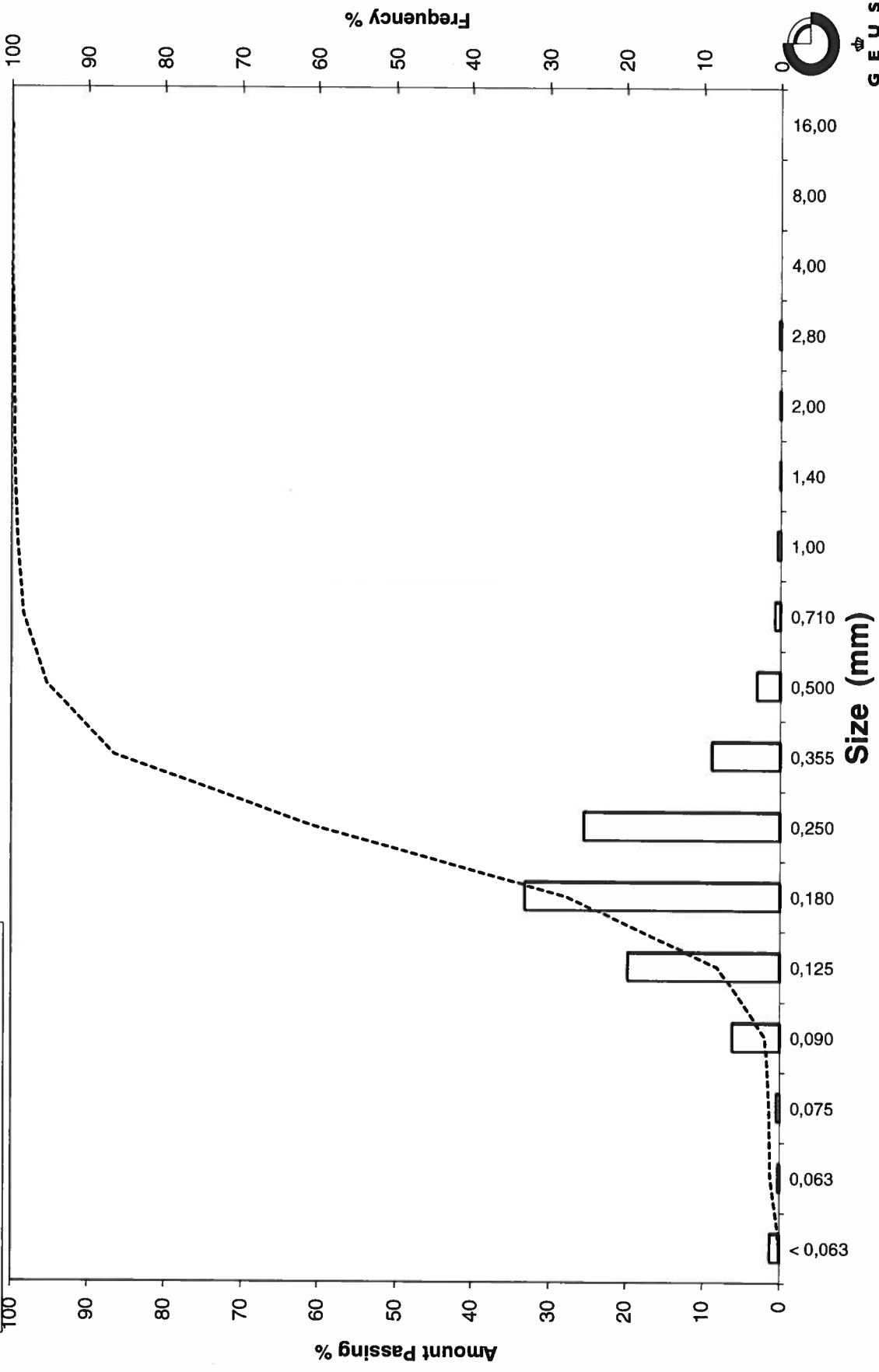
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Sample Id: Løn B-1B_52, 0-20

Grain Size Distribution

Frequency Percent
Cumulated Amount Passing



G E U S

Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_52, 100-120
Lab. Id: 200674
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks:



Total Weight 96,23 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 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 |
| 2,80 | -1,49 | 0,00 | 0,00 | 100,00 |
| 2,00 | -1,00 | 0,00 | 0,00 | 100,00 |
| 1,40 | -0,49 | 0,00 | 0,00 | 100,00 |
| 1,00 | 0,00 | 0,00 | 0,00 | 100,00 |
| 0,710 | 0,49 | 0,00 | 0,00 | 100,00 |
| 0,500 | 1,00 | 0,15 | 0,16 | 99,84 |
| 0,355 | 1,49 | 1,45 | 1,51 | 98,34 |
| 0,250 | 2,00 | 12,94 | 13,45 | 84,89 |
| 0,180 | 2,47 | 32,41 | 33,68 | 51,21 |
| 0,125 | 3,00 | 31,82 | 33,07 | 18,14 |
| 0,090 | 3,47 | 14,71 | 15,29 | 2,86 |
| 0,075 | 3,74 | 1,06 | 1,10 | 1,76 |
| 0,063 | 3,99 | 0,48 | 0,50 | 1,26 |
| < 0,063 | > 3,99 | 1,21 | 1,26 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| Size Class | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 1,26 |
| Sand, fine (0,063 mm - 0,200 mm): | 59,58 |
| Sand, medium (0,2 mm - 0,6 mm): | 39,08 |
| Sand, coarse (0,6 mm - 2 mm): | 0,08 |
| Gravel (> 2 mm): | 0,00 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,33 | 1,60 |
| 16% | 84% | 0,25 | 2,01 |
| 25% | 75% | 0,23 | 2,12 |
| 40% | 60% | 0,20 | 2,33 |
| Median 50% | 50% | 0,18 | 2,49 |
| 75% | 25% | 0,14 | 2,87 |
| 84% | 16% | 0,12 | 3,06 |
| 90% | 10% | 0,11 | 3,23 |
| 95% | 5% | 0,09 | 3,40 |

Moments Statistics

| | |
|------------------------|------|
| Mean | 2,52 |
| Sorting | 0,53 |
| Skewness | 0,05 |
| Kurtosis | 0,98 |
| Uniformity Coefficient | 1,86 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

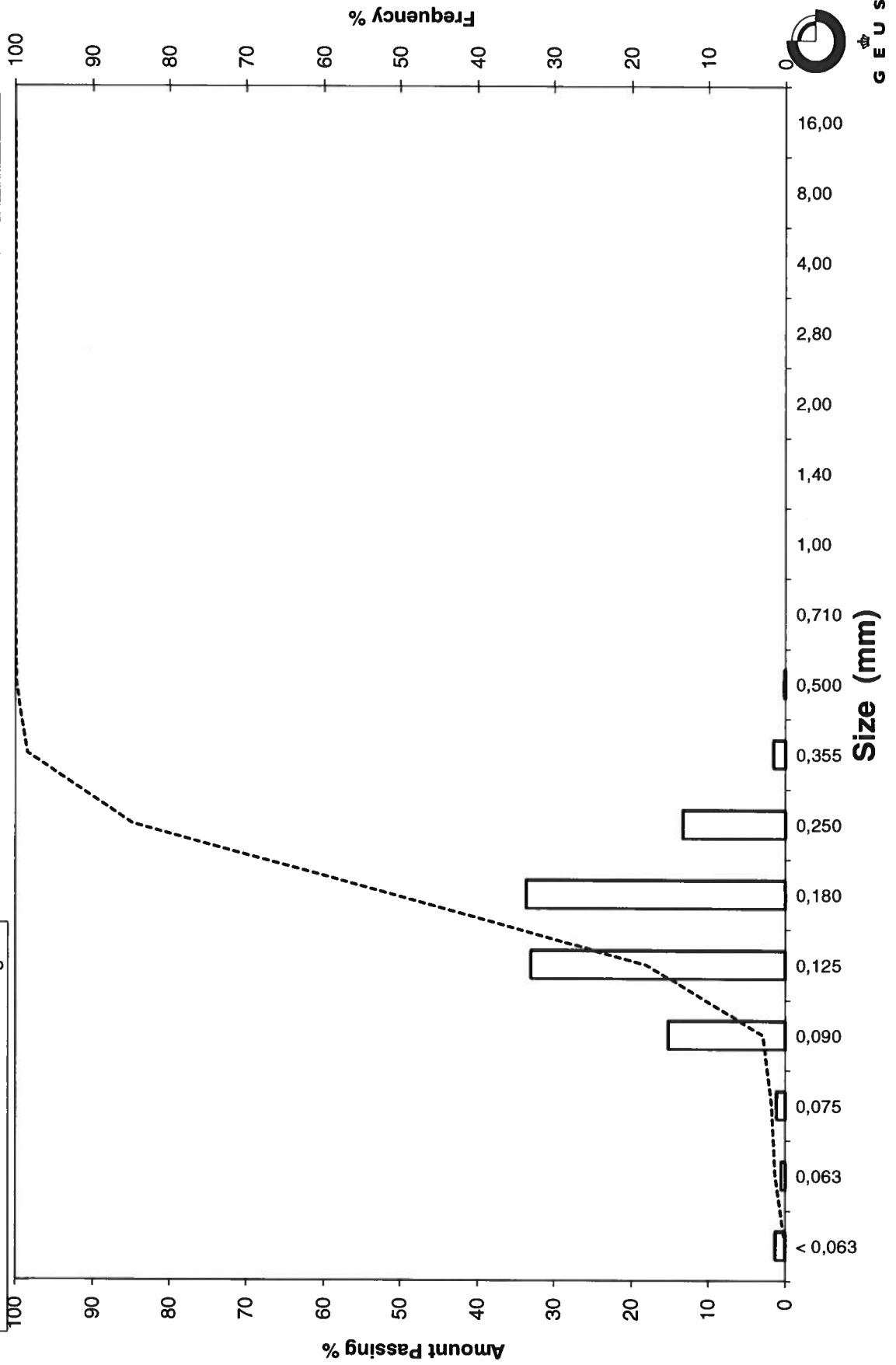
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_52, 100-120

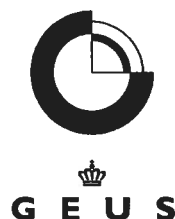
Frequency Percent
 Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_52, 200-220
Lab. Id: 200675
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks:



Total Weight 101,78 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,00 | 0,00 | 100,00 |
| 4,00 | -2,00 | 0,09 | 0,09 | 99,91 |
| 2,80 | -1,49 | 0,08 | 0,08 | 99,83 |
| 2,00 | -1,00 | 0,14 | 0,14 | 99,70 |
| 1,40 | -0,49 | 0,12 | 0,12 | 99,58 |
| 1,00 | 0,00 | 0,45 | 0,44 | 99,14 |
| 0,710 | 0,49 | 0,75 | 0,74 | 98,40 |
| 0,500 | 1,00 | 2,67 | 2,62 | 95,78 |
| 0,355 | 1,49 | 6,11 | 6,00 | 89,77 |
| 0,250 | 2,00 | 14,07 | 13,82 | 75,95 |
| 0,180 | 2,47 | 28,05 | 27,56 | 48,39 |
| 0,125 | 3,00 | 31,65 | 31,10 | 17,29 |
| 0,090 | 3,47 | 14,36 | 14,11 | 3,18 |
| 0,075 | 3,74 | 1,02 | 1,00 | 2,18 |
| 0,063 | 3,99 | 0,41 | 0,40 | 1,78 |
| < 0,063 | > 3,99 | 1,81 | 1,78 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 1,78 |
| Sand, fine (0,063 mm - 0,200 mm): | 54,48 |
| Sand, medium (0,2 mm - 0,6 mm): | 40,76 |
| Sand, coarse (0,6 mm - 2 mm): | 2,67 |
| Gravel (> 2 mm): | 0,30 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,48 | 1,06 |
| 16% | 84% | 0,31 | 1,68 |
| 25% | 75% | 0,25 | 2,01 |
| 40% | 60% | 0,21 | 2,26 |
| Median 50% | 50% | 0,18 | 2,44 |
| 75% | 25% | 0,14 | 2,85 |
| 84% | 16% | 0,12 | 3,04 |
| 90% | 10% | 0,11 | 3,23 |
| 95% | 5% | 0,09 | 3,40 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 2,39 |
| Sorting | 0,69 |
| Skewness | -0,15 |
| Kurtosis | 1,15 |
| Uniformity Coefficient | 1,96 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

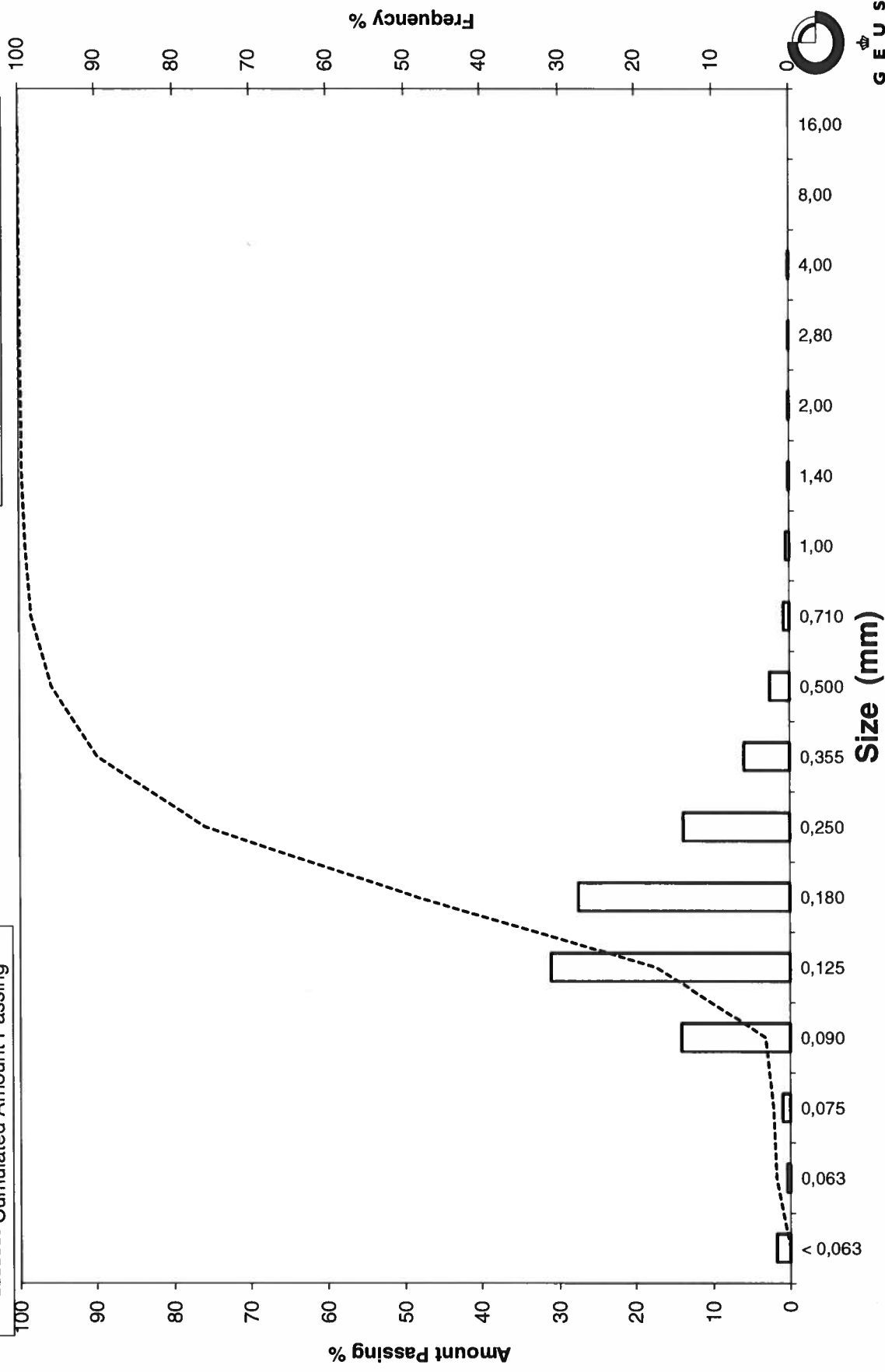
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_52, 200-220

Frequency Percent
 Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_52, 300-320
Lab. Id: 200676
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks:



Total Weight 96,86 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 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 |
| 2,80 | -1,49 | 0,00 | 0,00 | 100,00 |
| 2,00 | -1,00 | 0,00 | 0,00 | 100,00 |
| 1,40 | -0,49 | 0,06 | 0,06 | 99,94 |
| 1,00 | 0,00 | 0,06 | 0,06 | 99,88 |
| 0,710 | 0,49 | 0,15 | 0,15 | 99,72 |
| 0,500 | 1,00 | 0,81 | 0,84 | 98,88 |
| 0,355 | 1,49 | 2,64 | 2,73 | 96,16 |
| 0,250 | 2,00 | 6,71 | 6,93 | 89,23 |
| 0,180 | 2,47 | 11,01 | 11,37 | 77,86 |
| 0,125 | 3,00 | 32,61 | 33,67 | 44,20 |
| 0,090 | 3,47 | 33,85 | 34,95 | 9,25 |
| 0,075 | 3,74 | 3,13 | 3,23 | 6,02 |
| 0,063 | 3,99 | 1,46 | 1,51 | 4,51 |
| < 0,063 | > 3,99 | 4,37 | 4,51 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| Size Class | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 4,51 |
| Sand, fine (0,063 mm - 0,200 mm): | 76,60 |
| Sand, medium (0,2 mm - 0,6 mm): | 18,17 |
| Sand, coarse (0,6 mm - 2 mm): | 0,72 |
| Gravel (> 2 mm): | 0,00 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,34 | 1,57 |
| 16% | 84% | 0,22 | 2,20 |
| 25% | 75% | 0,18 | 2,51 |
| 40% | 60% | 0,15 | 2,73 |
| Median 50% | 50% | 0,13 | 2,89 |
| 75% | 25% | 0,11 | 3,24 |
| 84% | 16% | 0,10 | 3,37 |
| 90% | 10% | 0,09 | 3,46 |
| 95% | 5% | 0,07 | 3,90 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 2,82 |
| Sorting | 0,65 |
| Skewness | -0,16 |
| Kurtosis | 1,31 |
| Uniformity Coefficient | 1,66 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

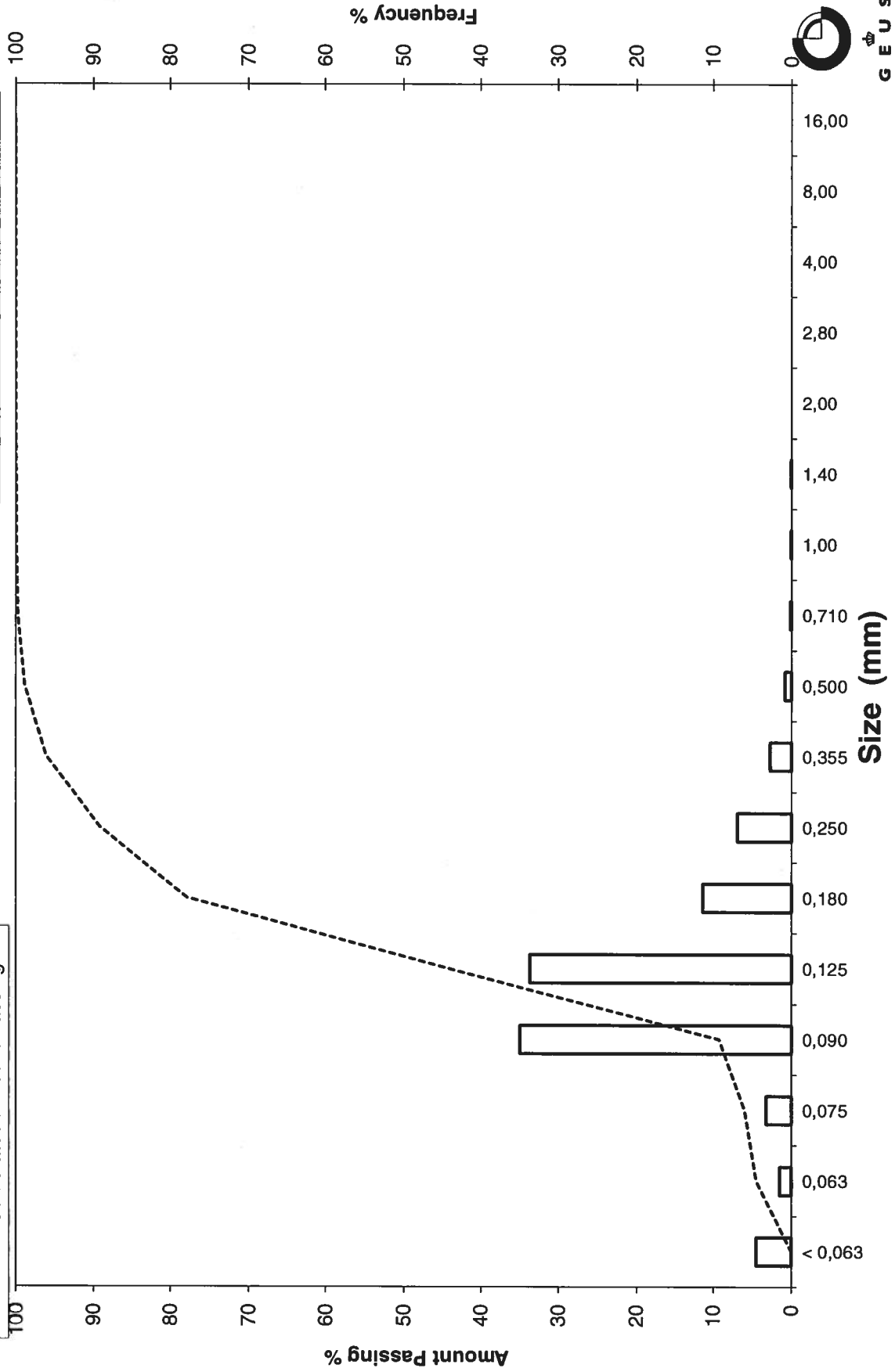
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_52, 300-320

Frequency Percent
 Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_52, 400-420
Lab. Id: 200677
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks:



Total Weight 95,3 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------------|
| mm | Φ | g | % | |
| 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 |
| 2,80 | -1,49 | 0,00 | 0,00 | 100,00 |
| 2,00 | -1,00 | 0,00 | 0,00 | 100,00 |
| 1,40 | -0,49 | 0,00 | 0,00 | 100,00 |
| 1,00 | 0,00 | 0,08 | 0,08 | 99,92 |
| 0,710 | 0,49 | 0,10 | 0,10 | 99,81 |
| 0,500 | 1,00 | 0,30 | 0,31 | 99,50 |
| 0,355 | 1,49 | 0,65 | 0,68 | 98,81 |
| 0,250 | 2,00 | 1,42 | 1,49 | 97,32 |
| 0,180 | 2,47 | 4,27 | 4,48 | 92,84 |
| 0,125 | 3,00 | 29,35 | 30,80 | 62,05 |
| 0,090 | 3,47 | 45,41 | 47,65 | 14,40 |
| 0,075 | 3,74 | 5,14 | 5,39 | 9,00 |
| 0,063 | 3,99 | 2,42 | 2,54 | 6,46 |
| < 0,063 | > 3,99 | 6,16 | 6,46 | 0,00 |

Sieve Analysis

Gravel
Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 6,46 |
| Sand, fine (0,063 mm - 0,200 mm): | 87,66 |
| Sand, medium (0,2 mm - 0,6 mm): | 5,52 |
| Sand, coarse (0,6 mm - 2 mm): | 0,35 |
| Gravel (> 2 mm): | 0,00 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,21 | 2,23 |
| 16% | 84% | 0,16 | 2,61 |
| 25% | 75% | 0,15 | 2,76 |
| 40% | 60% | 0,12 | 3,02 |
| Median 50% | 50% | 0,12 | 3,11 |
| 75% | 25% | 0,10 | 3,35 |
| 84% | 16% | 0,09 | 3,46 |
| 90% | 10% | 0,08 | 3,68 |
| 95% | 5% | ----- | ----- |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 3,06 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | 1,59 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

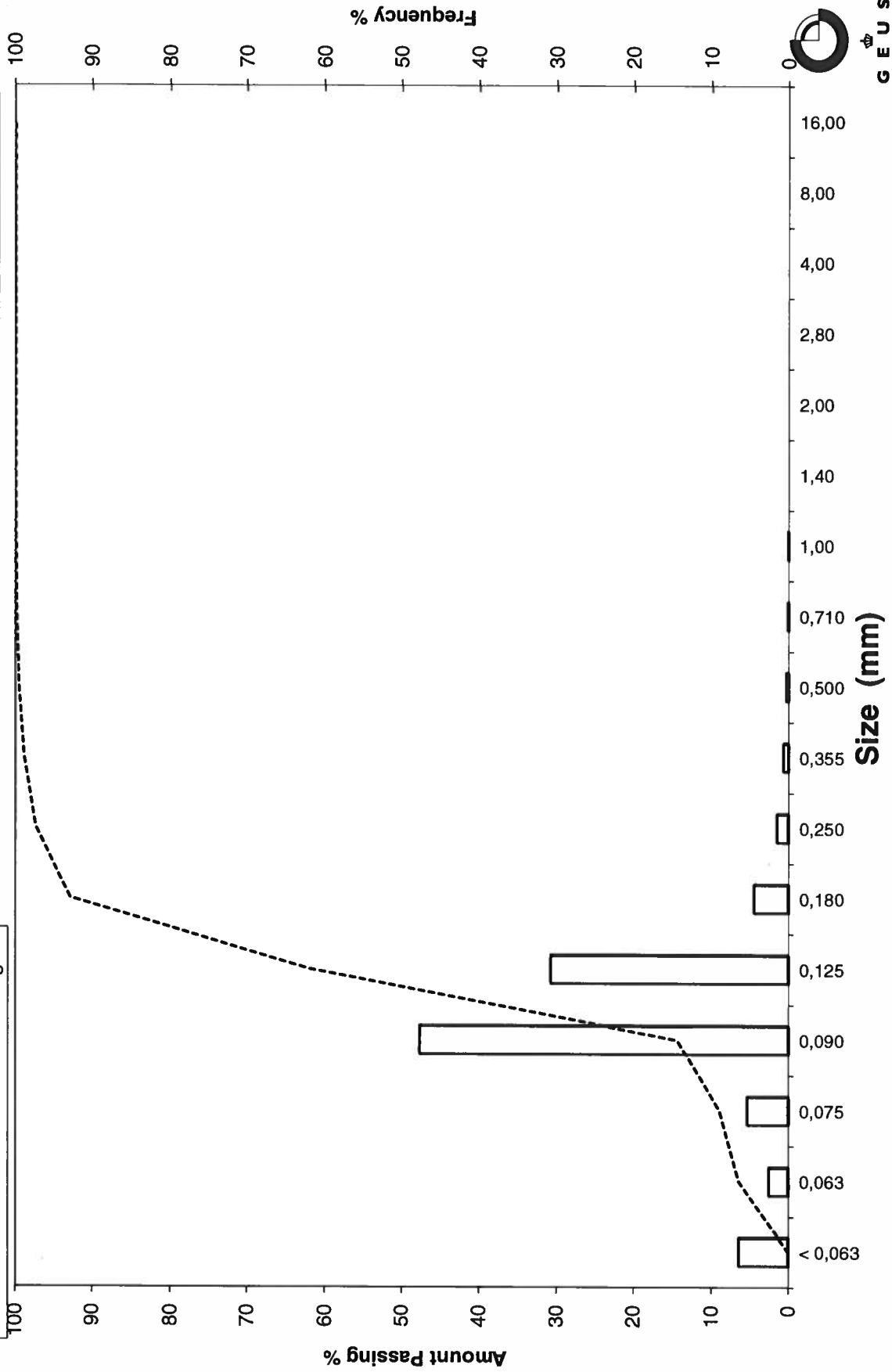
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_52, 400-420

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_52, 500-520
Lab. Id: 200678
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks:



Total Weight 98,74 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 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 |
| 2,80 | -1,49 | 0,00 | 0,00 | 100,00 |
| 2,00 | -1,00 | 0,00 | 0,00 | 100,00 |
| 1,40 | -0,49 | 0,00 | 0,00 | 100,00 |
| 1,00 | 0,00 | 0,00 | 0,00 | 100,00 |
| 0,710 | 0,49 | 0,00 | 0,00 | 100,00 |
| 0,500 | 1,00 | 0,05 | 0,05 | 99,95 |
| 0,355 | 1,49 | 0,06 | 0,06 | 99,89 |
| 0,250 | 2,00 | 0,21 | 0,21 | 99,68 |
| 0,180 | 2,47 | 0,58 | 0,59 | 99,09 |
| 0,125 | 3,00 | 17,85 | 18,08 | 81,01 |
| 0,090 | 3,47 | 58,44 | 59,19 | 21,82 |
| 0,075 | 3,74 | 8,27 | 8,38 | 13,45 |
| 0,063 | 3,99 | 3,79 | 3,84 | 9,61 |
| < 0,063 | > 3,99 | 9,49 | 9,61 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| Size Class | Weight % |
|----------------------------------|---------------|
| Silt and clay (< 0,063 mm) | 9,61 |
| Sand, fine (0,063 mm - 0,200 mm) | 89,65 |
| Sand, medium (0,2 mm - 0,6 mm) | 0,72 |
| Sand, coarse (0,6 mm - 2 mm) | 0,03 |
| Gravel (> 2 mm) | 0,00 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,17 | 2,58 |
| 16% | 84% | 0,13 | 2,90 |
| 25% | 75% | 0,12 | 3,04 |
| 40% | 60% | 0,11 | 3,15 |
| Median 50% | 50% | 0,11 | 3,23 |
| 75% | 25% | 0,09 | 3,44 |
| 84% | 16% | 0,08 | 3,65 |
| 90% | 10% | 0,06 | 3,96 |
| 95% | 5% | ----- | ----- |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 3,26 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | 1,75 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)
 Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)
 Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)
 Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)
 Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

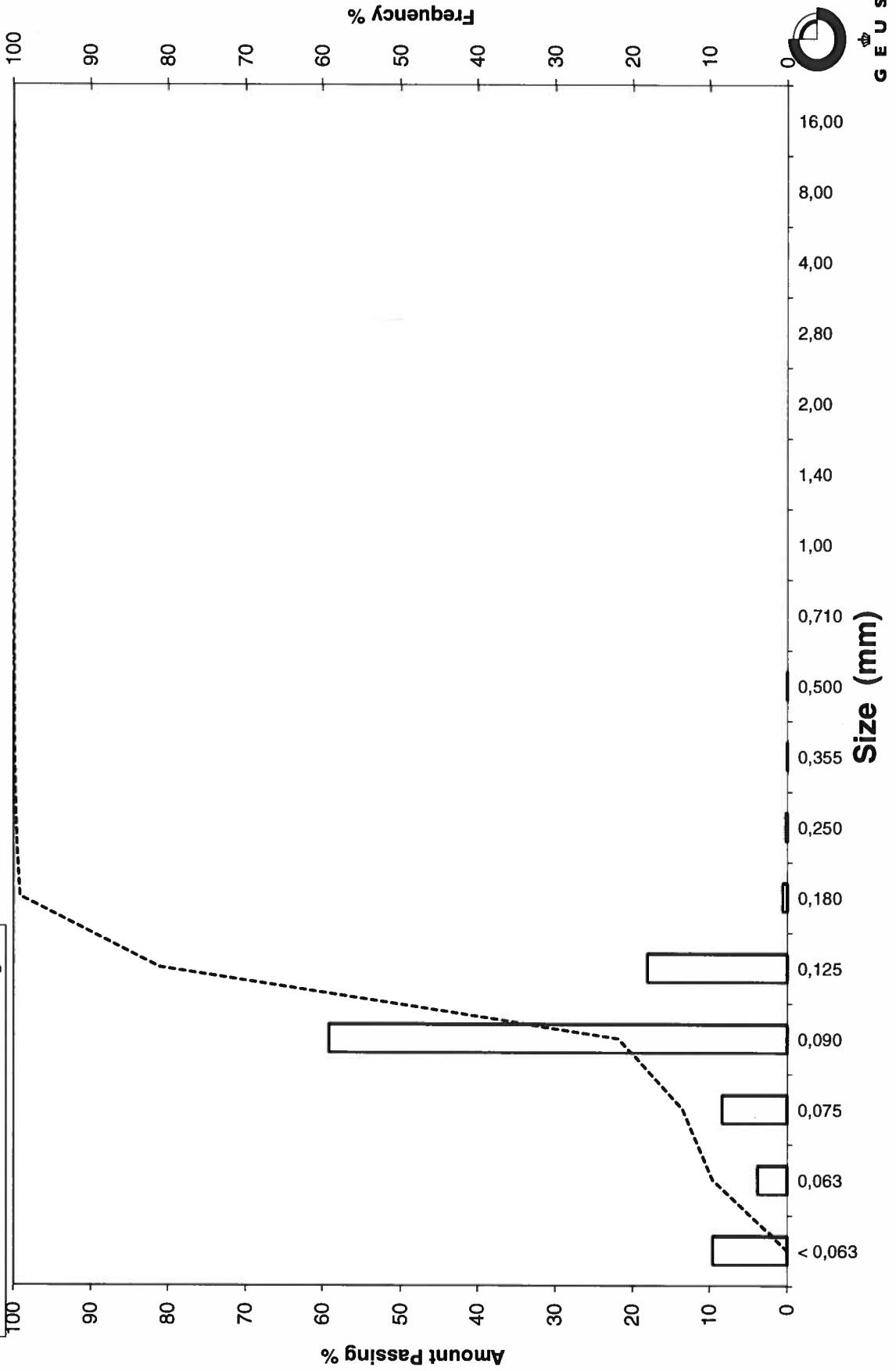
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_52, 500-520

Frequency Percent
Cumulated Amount Passing



G E U S

Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_54, 0-20
Lab. Id: 200679
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks:



Total Weight 98,62 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 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 |
| 2,80 | -1,49 | 0,07 | 0,07 | 99,93 |
| 2,00 | -1,00 | 0,14 | 0,14 | 99,79 |
| 1,40 | -0,49 | 0,14 | 0,14 | 99,65 |
| 1,00 | 0,00 | 0,46 | 0,47 | 99,18 |
| 0,710 | 0,49 | 0,59 | 0,60 | 98,58 |
| 0,500 | 1,00 | 1,94 | 1,97 | 96,61 |
| 0,355 | 1,49 | 4,66 | 4,73 | 91,89 |
| 0,250 | 2,00 | 11,32 | 11,48 | 80,41 |
| 0,180 | 2,47 | 27,21 | 27,59 | 52,82 |
| 0,125 | 3,00 | 40,03 | 40,59 | 12,23 |
| 0,090 | 3,47 | 10,12 | 10,26 | 1,97 |
| 0,075 | 3,74 | 0,57 | 0,58 | 1,39 |
| 0,063 | 3,99 | 0,16 | 0,16 | 1,23 |
| < 0,063 | > 3,99 | 1,21 | 1,23 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|----------|
| Silt and clay (< 0,063 mm): | 1,23 |
| Sand, fine (0,063 mm - 0,200 mm): | 59,48 |
| Sand, medium (0,2 mm - 0,6 mm): | 36,85 |
| Sand, coarse (0,6 mm - 2 mm): | 2,24 |
| Gravel (> 2 mm): | 0,21 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,45 | 1,15 |
| 16% | 84% | 0,28 | 1,82 |
| 25% | 75% | 0,24 | 2,08 |
| 40% | 60% | 0,20 | 2,33 |
| Median 50% | 50% | 0,18 | 2,50 |
| 75% | 25% | 0,14 | 2,81 |
| 84% | 16% | 0,13 | 2,94 |
| 90% | 10% | 0,12 | 3,09 |
| 95% | 5% | 0,10 | 3,32 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 2,42 |
| Sorting | 0,61 |
| Skewness | -0,23 |
| Kurtosis | 1,21 |
| Uniformity Coefficient | 1,69 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

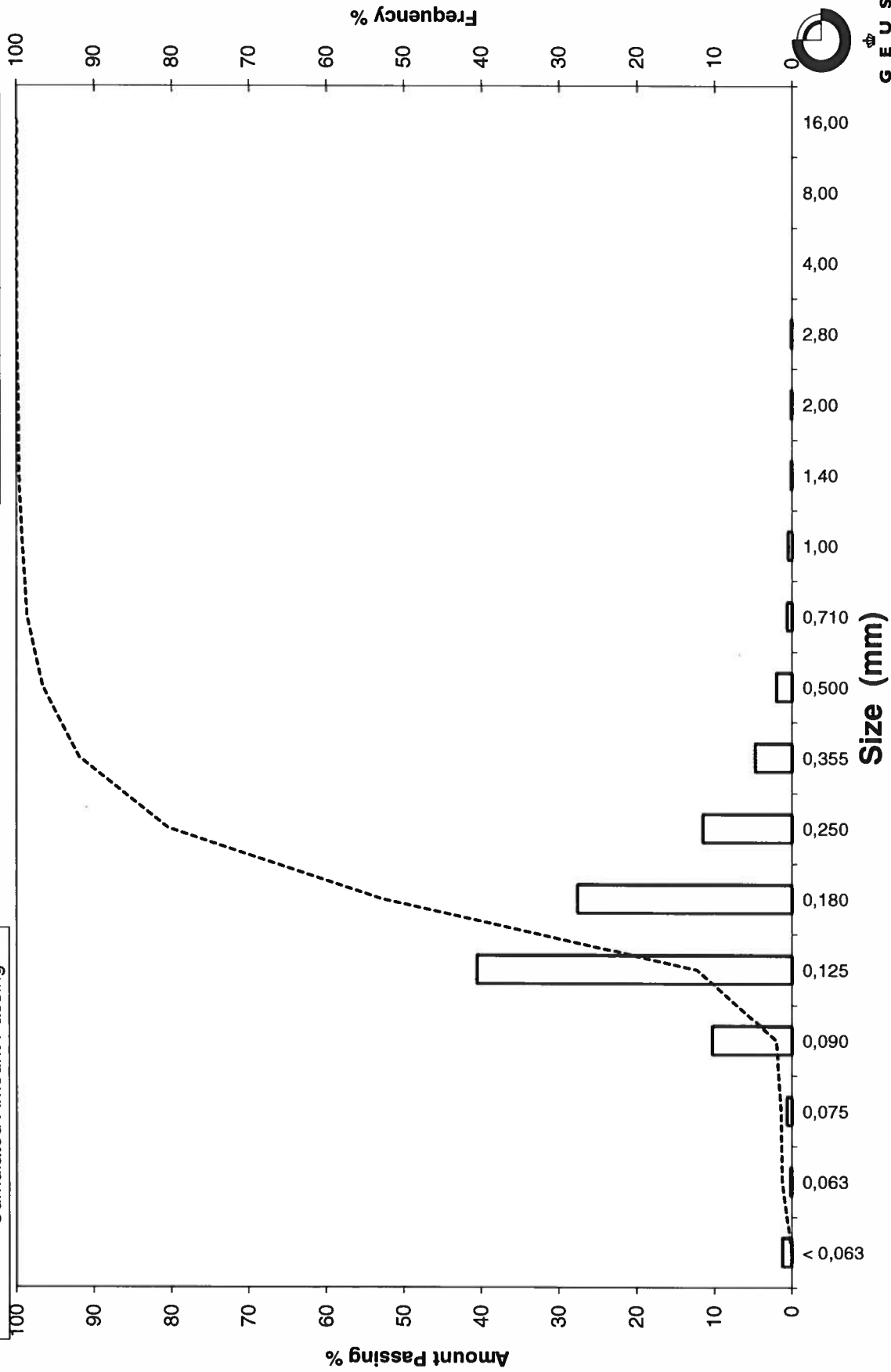
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_54, 0-20

Frequency Percent
Cumulated Amount Passing



GEUS

Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_54, 100-120
Lab. Id: 200680
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks:



Total Weight 99,69 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | |
| 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 |
| 2,80 | -1,49 | 0,00 | 0,00 | 100,00 |
| 2,00 | -1,00 | 0,00 | 0,00 | 100,00 |
| 1,40 | -0,49 | 0,05 | 0,05 | 99,95 |
| 1,00 | 0,00 | 0,05 | 0,05 | 99,90 |
| 0,710 | 0,49 | 0,22 | 0,22 | 99,68 |
| 0,500 | 1,00 | 0,78 | 0,78 | 98,90 |
| 0,355 | 1,49 | 1,32 | 1,32 | 97,57 |
| 0,250 | 2,00 | 2,92 | 2,93 | 94,64 |
| 0,180 | 2,47 | 4,89 | 4,91 | 89,74 |
| 0,125 | 3,00 | 45,97 | 46,11 | 43,63 |
| 0,090 | 3,47 | 32,97 | 33,07 | 10,55 |
| 0,075 | 3,74 | 2,83 | 2,84 | 7,71 |
| 0,063 | 3,99 | 1,40 | 1,40 | 6,31 |
| < 0,063 | > 3,99 | 6,29 | 6,31 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 6,31 |
| Sand, fine (0,063 mm - 0,200 mm): | 84,83 |
| Sand, medium (0,2 mm - 0,6 mm): | 8,13 |
| Sand, coarse (0,6 mm - 2 mm): | 0,73 |
| Gravel (> 2 mm): | 0,00 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,26 | 1,93 |
| 16% | 84% | 0,17 | 2,53 |
| 25% | 75% | 0,16 | 2,62 |
| 40% | 60% | 0,14 | 2,79 |
| Median 50% | 50% | 0,13 | 2,91 |
| 75% | 25% | 0,11 | 3,25 |
| 84% | 16% | 0,10 | 3,38 |
| 90% | 10% | 0,09 | 3,52 |
| 95% | 5% | ----- | ----- |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 2,94 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | 1,66 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

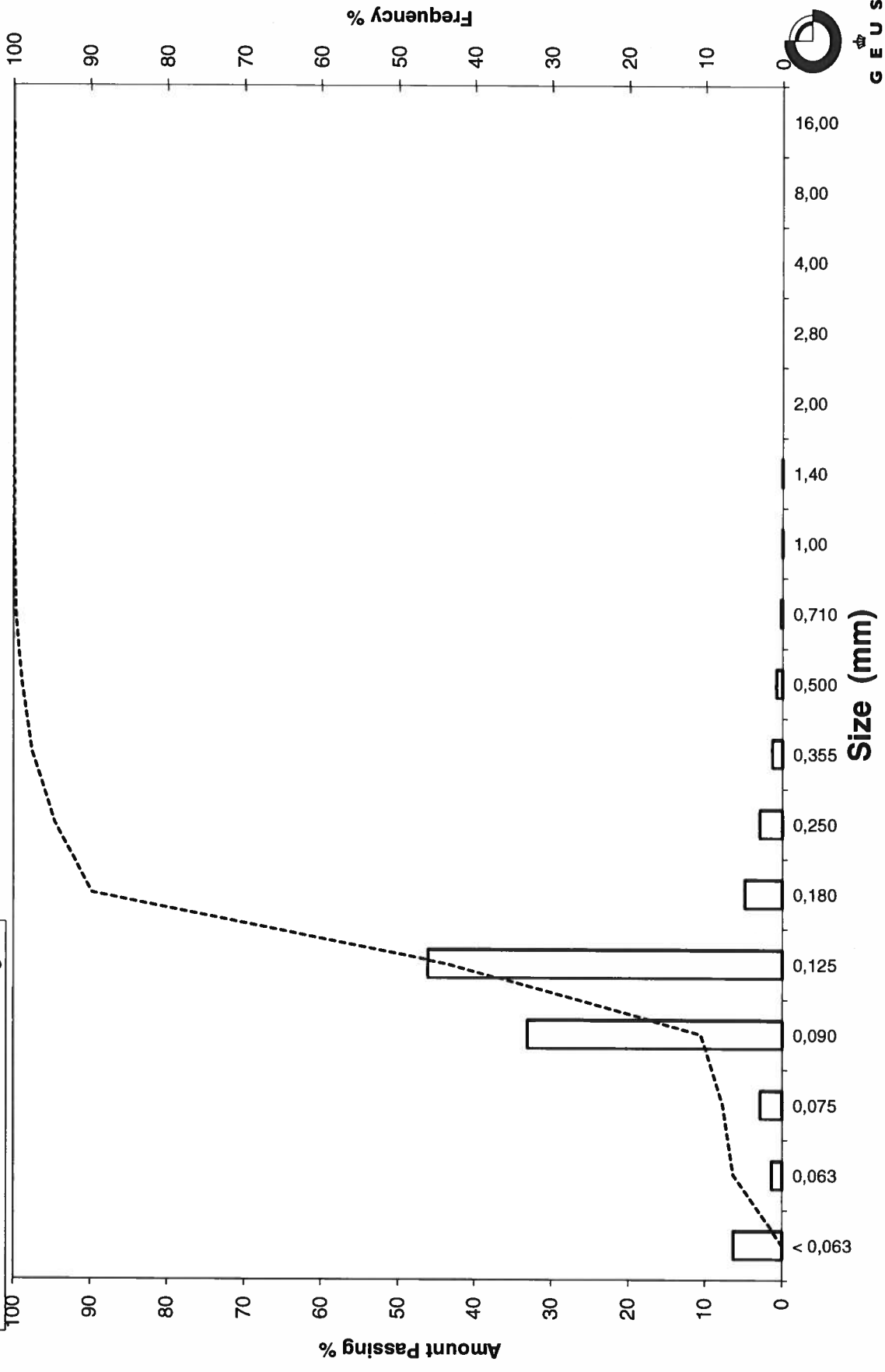
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_54, 100-120

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_54, 200-220
Lab. Id: 200681
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >1,4mm består af skaller



Total Weight 98,13 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 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 |
| 2,80 | -1,49 | 0,00 | 0,00 | 100,00 |
| 2,00 | -1,00 | 0,07 | 0,07 | 99,93 |
| 1,40 | -0,49 | 0,04 | 0,04 | 99,89 |
| 1,00 | 0,00 | 0,13 | 0,13 | 99,76 |
| 0,710 | 0,49 | 0,19 | 0,19 | 99,56 |
| 0,500 | 1,00 | 0,32 | 0,33 | 99,24 |
| 0,355 | 1,49 | 0,48 | 0,49 | 98,75 |
| 0,250 | 2,00 | 0,84 | 0,86 | 97,89 |
| 0,180 | 2,47 | 2,37 | 2,42 | 95,48 |
| 0,125 | 3,00 | 34,30 | 34,95 | 60,52 |
| 0,090 | 3,47 | 42,62 | 43,43 | 17,09 |
| 0,075 | 3,74 | 5,71 | 5,82 | 11,27 |
| 0,063 | 3,99 | 2,56 | 2,61 | 8,66 |
| < 0,063 | > 3,99 | 8,50 | 8,66 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 8,66 |
| Sand, fine (0,063 mm - 0,200 mm): | 87,50 |
| Sand, medium (0,2 mm - 0,6 mm): | 3,23 |
| Sand, coarse (0,6 mm - 2 mm): | 0,54 |
| Gravel (> 2 mm): | 0,07 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,18 | 2,48 |
| 16% | 84% | 0,16 | 2,63 |
| 25% | 75% | 0,15 | 2,76 |
| 40% | 60% | 0,12 | 3,00 |
| Median 50% | 50% | 0,12 | 3,10 |
| 75% | 25% | 0,10 | 3,38 |
| 84% | 16% | 0,09 | 3,52 |
| 90% | 10% | 0,07 | 3,85 |
| 95% | 5% | ----- | ----- |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 3,08 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | 1,80 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

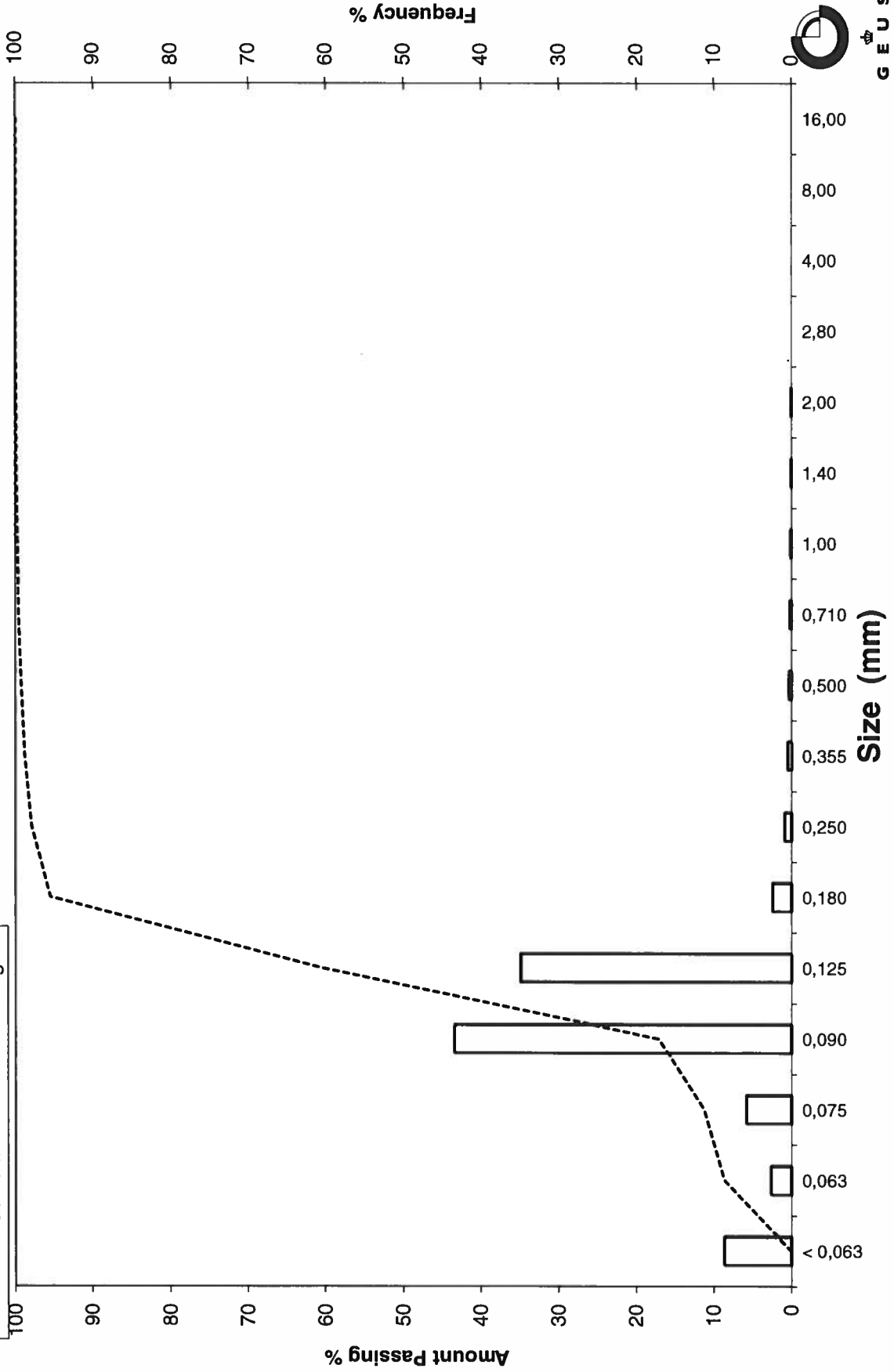
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_54, 200-220

Frequency Percent
 Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_54, 300-320
Lab. Id: 200682
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >8mm består af skaller



Total Weight 96,15 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,30 | 0,31 | 99,69 |
| 4,00 | -2,00 | 0,00 | 0,00 | 99,69 |
| 2,80 | -1,49 | 0,00 | 0,00 | 99,69 |
| 2,00 | -1,00 | 0,00 | 0,00 | 99,69 |
| 1,40 | -0,49 | 0,00 | 0,00 | 99,69 |
| 1,00 | 0,00 | 0,03 | 0,03 | 99,66 |
| 0,710 | 0,49 | 0,02 | 0,02 | 99,64 |
| 0,500 | 1,00 | 0,06 | 0,06 | 99,57 |
| 0,355 | 1,49 | 0,13 | 0,14 | 99,44 |
| 0,250 | 2,00 | 0,40 | 0,42 | 99,02 |
| 0,180 | 2,47 | 0,78 | 0,81 | 98,21 |
| 0,125 | 3,00 | 26,99 | 28,07 | 70,14 |
| 0,090 | 3,47 | 48,40 | 50,34 | 19,80 |
| 0,075 | 3,74 | 7,02 | 7,30 | 12,50 |
| 0,063 | 3,99 | 3,58 | 3,72 | 8,78 |
| < 0,063 | > 3,99 | 8,44 | 8,78 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| Size Class | Weight % |
|----------------------------------|---------------|
| Silt and clay (< 0,063 mm) | 8,78 |
| Sand, fine (0,063 mm - 0,200 mm) | 89,66 |
| Sand, medium (0,2 mm - 0,6 mm) | 1,16 |
| Sand, coarse (0,6 mm - 2 mm) | 0,08 |
| Gravel (> 2 mm) | 0,31 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,17 | 2,53 |
| 16% | 84% | 0,15 | 2,72 |
| 25% | 75% | 0,13 | 2,89 |
| 40% | 60% | 0,12 | 3,08 |
| Median 50% | 50% | 0,11 | 3,17 |
| 75% | 25% | 0,09 | 3,42 |
| 84% | 16% | 0,08 | 3,60 |
| 90% | 10% | 0,07 | 3,90 |
| 95% | 5% | ----- | ----- |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 3,16 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | 1,76 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

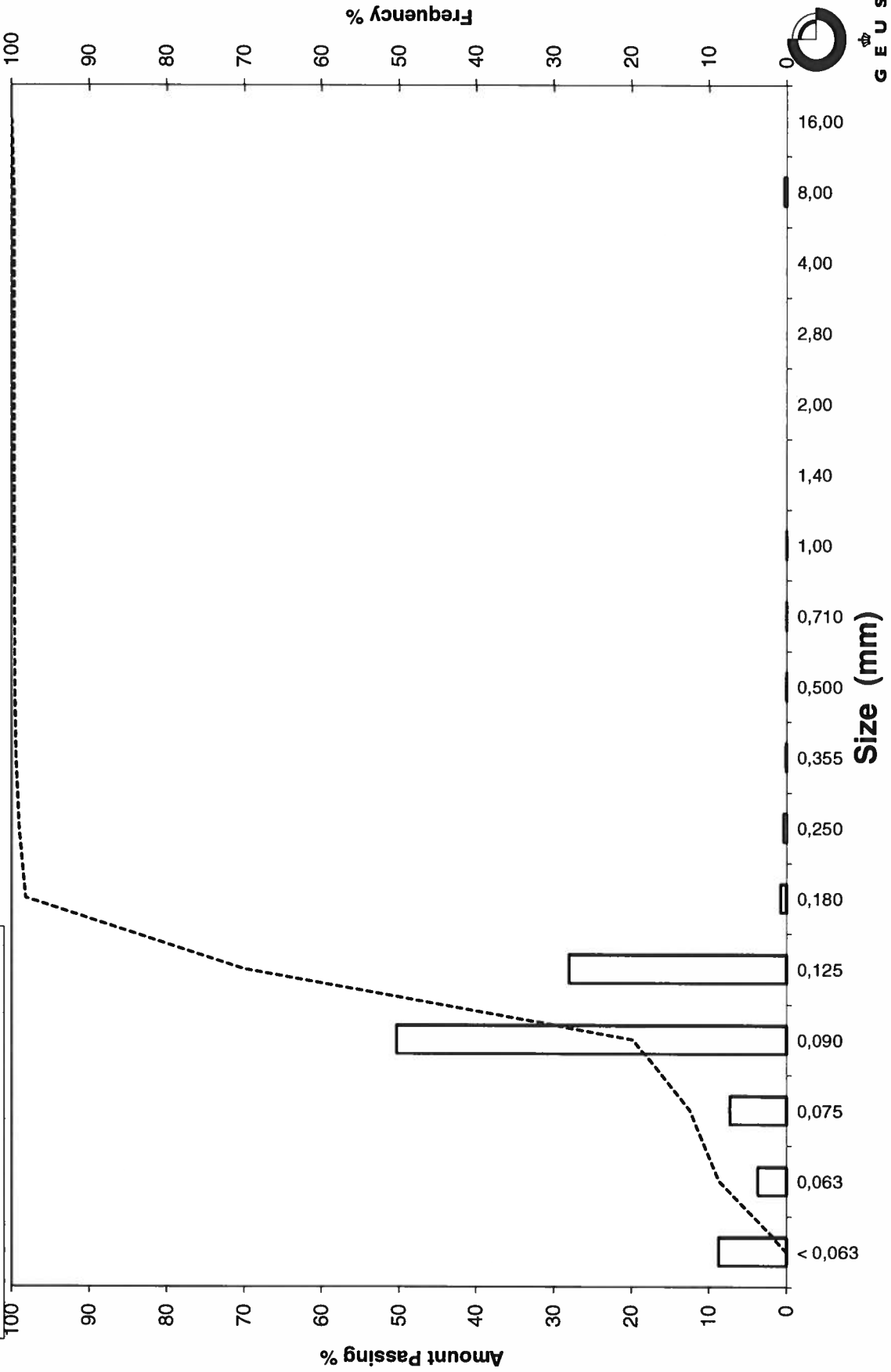
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_54, 300-320

Frequency Percent
 Cumulated Amount Passing



G E U S

Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_54, 400-420
Lab. Id: 200683
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >2,8mm heraf 0,5g skaller



Total Weight 112,08 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,00 | 0,00 | 100,00 |
| 4,00 | -2,00 | 0,20 | 0,18 | 99,82 |
| 2,80 | -1,49 | 0,50 | 0,45 | 99,38 |
| 2,00 | -1,00 | 0,80 | 0,71 | 98,66 |
| 1,40 | -0,49 | 1,09 | 0,97 | 97,69 |
| 1,00 | 0,00 | 1,84 | 1,64 | 96,05 |
| 0,710 | 0,49 | 2,76 | 2,46 | 93,58 |
| 0,500 | 1,00 | 8,35 | 7,45 | 86,13 |
| 0,355 | 1,49 | 15,25 | 13,61 | 72,53 |
| 0,250 | 2,00 | 31,92 | 28,48 | 44,05 |
| 0,180 | 2,47 | 34,40 | 30,69 | 13,36 |
| 0,125 | 3,00 | 9,65 | 8,61 | 4,75 |
| 0,090 | 3,47 | 1,38 | 1,23 | 3,52 |
| 0,075 | 3,74 | 0,50 | 0,45 | 3,07 |
| 0,063 | 3,99 | 0,47 | 0,42 | 2,65 |
| < 0,063 | > 3,99 | 2,97 | 2,65 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|----------|
| Silt and clay (< 0,063 mm): | 2,65 |
| Sand, fine (0,063 mm - 0,200 mm): | 19,48 |
| Sand, medium (0,2 mm - 0,6 mm): | 67,56 |
| Sand, coarse (0,6 mm - 2 mm): | 8,98 |
| Gravel (> 2 mm): | 1,34 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,88 | 0,19 |
| 16% | 84% | 0,48 | 1,07 |
| 25% | 75% | 0,38 | 1,39 |
| 40% | 60% | 0,31 | 1,70 |
| Median 50% | 50% | 0,27 | 1,88 |
| 75% | 25% | 0,21 | 2,28 |
| 84% | 16% | 0,19 | 2,43 |
| 90% | 10% | 0,16 | 2,66 |
| 95% | 5% | 0,13 | 2,98 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 1,79 |
| Sorting | 0,76 |
| Skewness | -0,20 |
| Kurtosis | 1,29 |
| Uniformity Coefficient | 1,95 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

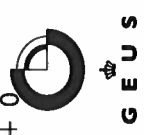
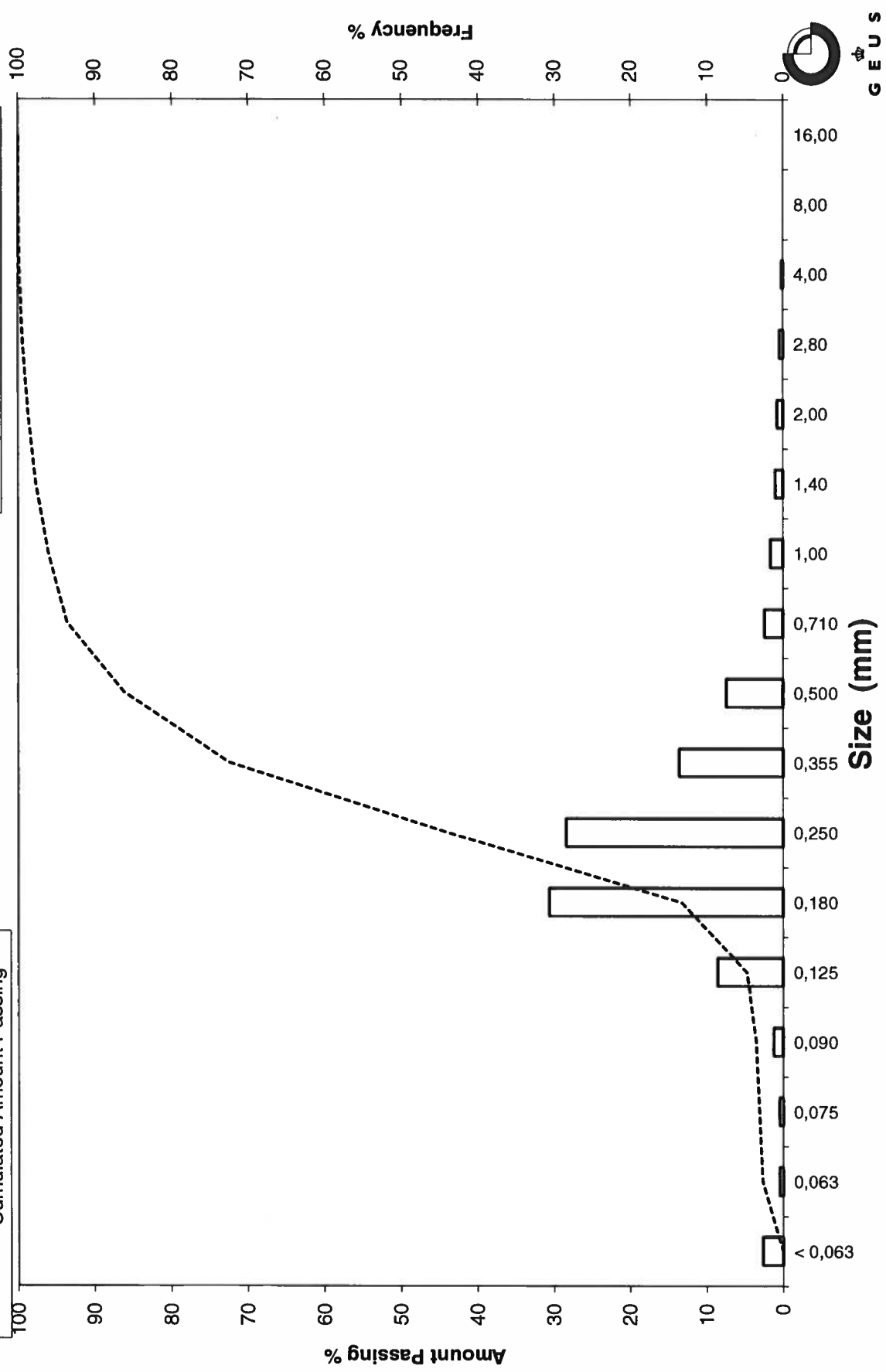
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_54, 400-420

Frequency Percent
 Cumulated Amount Passing



G E U S

Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_54, 500-520
Lab. Id: 200684
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >4mm heraf 0,2g skaller



Total Weight 105,23 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,00 | 0,00 | 100,00 |
| 4,00 | -2,00 | 0,34 | 0,32 | 99,68 |
| 2,80 | -1,49 | 0,35 | 0,33 | 99,34 |
| 2,00 | -1,00 | 0,43 | 0,41 | 98,94 |
| 1,40 | -0,49 | 0,44 | 0,42 | 98,52 |
| 1,00 | 0,00 | 0,70 | 0,67 | 97,85 |
| 0,710 | 0,49 | 1,39 | 1,32 | 96,53 |
| 0,500 | 1,00 | 5,56 | 5,28 | 91,25 |
| 0,355 | 1,49 | 13,45 | 12,78 | 78,47 |
| 0,250 | 2,00 | 37,86 | 35,98 | 42,49 |
| 0,180 | 2,47 | 32,41 | 30,80 | 11,69 |
| 0,125 | 3,00 | 8,66 | 8,23 | 3,46 |
| 0,090 | 3,47 | 0,94 | 0,89 | 2,57 |
| 0,075 | 3,74 | 0,33 | 0,31 | 2,25 |
| 0,063 | 3,99 | 0,41 | 0,39 | 1,86 |
| < 0,063 | > 3,99 | 1,96 | 1,86 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| Size Class | Weight % |
|----------------------------------|---------------|
| Silt and clay (< 0,063 mm) | 1,86 |
| Sand, fine (0,063 mm - 0,200 mm) | 18,63 |
| Sand, medium (0,2 mm - 0,6 mm) | 73,28 |
| Sand, coarse (0,6 mm - 2 mm) | 5,17 |
| Gravel (> 2 mm) | 1,06 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,65 | 0,62 |
| 16% | 84% | 0,42 | 1,26 |
| 25% | 75% | 0,34 | 1,54 |
| 40% | 60% | 0,30 | 1,73 |
| Median 50% | 50% | 0,27 | 1,88 |
| 75% | 25% | 0,21 | 2,25 |
| 84% | 16% | 0,19 | 2,40 |
| 90% | 10% | 0,17 | 2,57 |
| 95% | 5% | 0,14 | 2,89 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 1,85 |
| Sorting | 0,63 |
| Skewness | -0,10 |
| Kurtosis | 1,30 |
| Uniformity Coefficient | 1,78 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

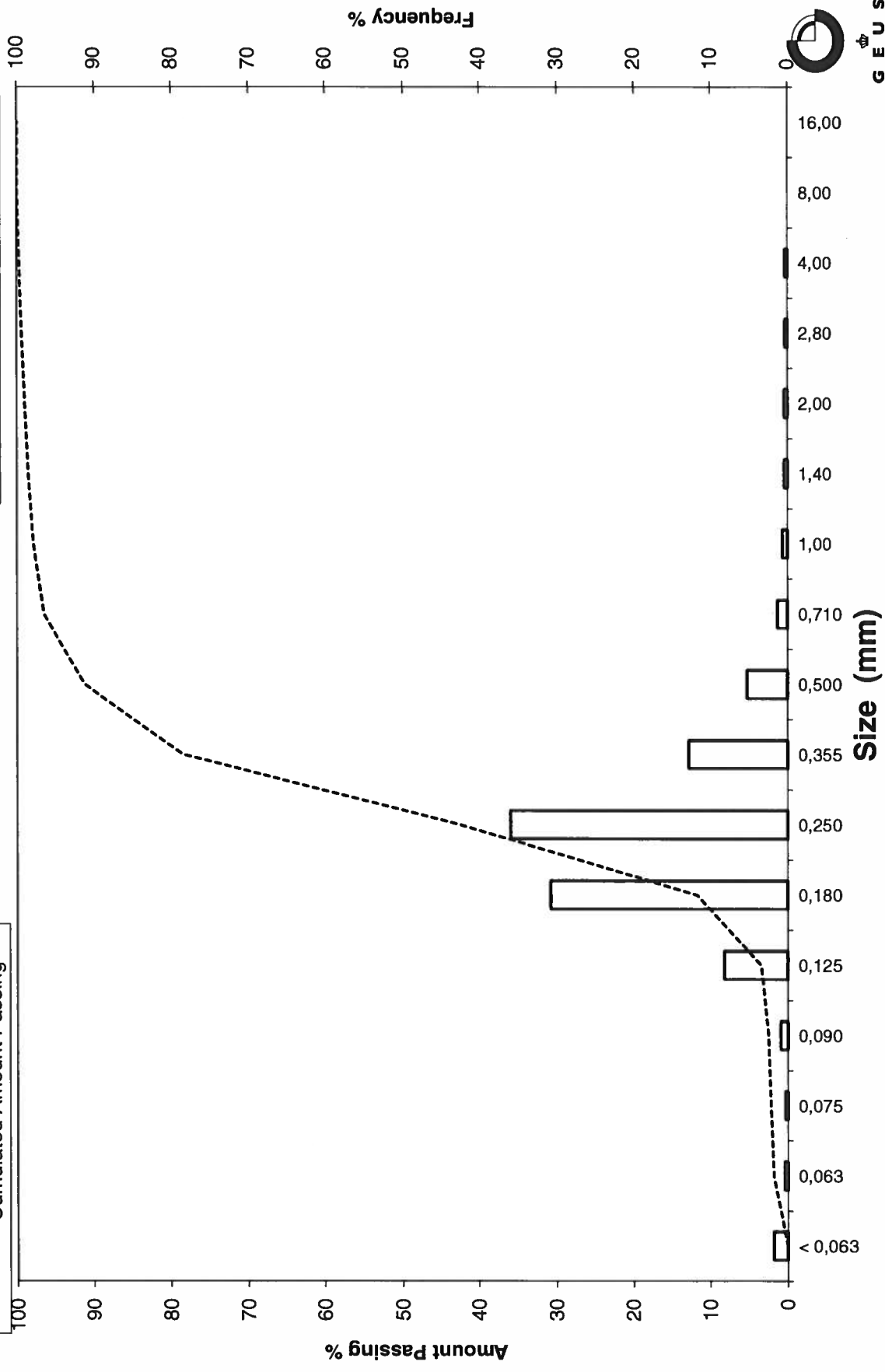
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_54, 500-520

Frequency Percent
 Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_55, 0-20
Lab. Id: 200685
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >4mm består af skaller



Total Weight 108,67 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 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 |
| 2,80 | -1,49 | 0,31 | 0,29 | 99,66 |
| 2,00 | -1,00 | 0,38 | 0,35 | 99,31 |
| 1,40 | -0,49 | 0,60 | 0,55 | 98,76 |
| 1,00 | 0,00 | 1,13 | 1,04 | 97,72 |
| 0,710 | 0,49 | 2,64 | 2,43 | 95,29 |
| 0,500 | 1,00 | 9,11 | 8,38 | 86,91 |
| 0,355 | 1,49 | 13,58 | 12,50 | 74,41 |
| 0,250 | 2,00 | 19,10 | 17,58 | 56,83 |
| 0,180 | 2,47 | 30,66 | 28,21 | 28,62 |
| 0,125 | 3,00 | 23,21 | 21,36 | 7,26 |
| 0,090 | 3,47 | 6,27 | 5,77 | 1,49 |
| 0,075 | 3,74 | 0,41 | 0,38 | 1,11 |
| 0,063 | 3,99 | 0,16 | 0,15 | 0,97 |
| < 0,063 | > 3,99 | 1,05 | 0,97 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 0,97 |
| Sand, fine (0,063 mm - 0,200 mm): | 35,71 |
| Sand, medium (0,2 mm - 0,6 mm): | 54,22 |
| Sand, coarse (0,6 mm - 2 mm): | 8,41 |
| Gravel (> 2 mm): | 0,69 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,70 | 0,51 |
| 16% | 84% | 0,47 | 1,10 |
| 25% | 75% | 0,36 | 1,47 |
| 40% | 60% | 0,27 | 1,89 |
| Median 50% | 50% | 0,23 | 2,10 |
| 75% | 25% | 0,17 | 2,55 |
| 84% | 16% | 0,15 | 2,76 |
| 90% | 10% | 0,13 | 2,92 |
| 95% | 5% | 0,11 | 3,17 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 1,99 |
| Sorting | 0,82 |
| Skewness | -0,20 |
| Kurtosis | 1,01 |
| Uniformity Coefficient | 2,04 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

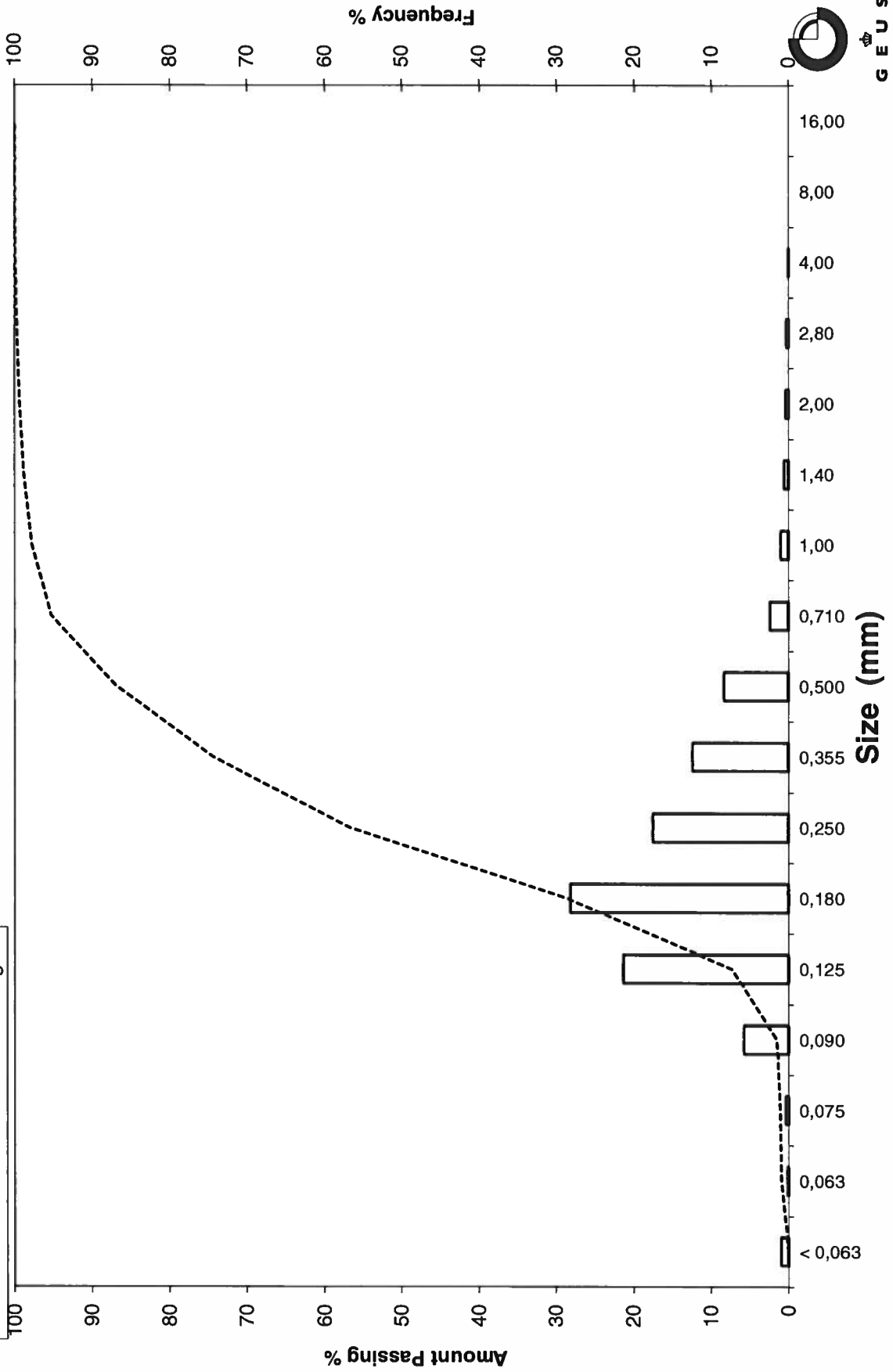
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_55, 0-20

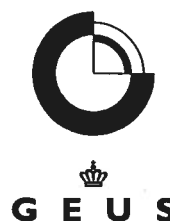
Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_55, 100-120
Lab. Id: 200686
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >4mm består af skaller



Total Weight 109,86 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,03 | 0,03 | 99,97 |
| 4,00 | -2,00 | 0,42 | 0,38 | 99,59 |
| 2,80 | -1,49 | 1,02 | 0,93 | 98,66 |
| 2,00 | -1,00 | 1,09 | 0,99 | 97,67 |
| 1,40 | -0,49 | 1,59 | 1,45 | 96,22 |
| 1,00 | 0,00 | 2,81 | 2,56 | 93,66 |
| 0,710 | 0,49 | 2,86 | 2,60 | 91,06 |
| 0,500 | 1,00 | 5,46 | 4,97 | 86,09 |
| 0,355 | 1,49 | 7,06 | 6,43 | 79,67 |
| 0,250 | 2,00 | 10,54 | 9,59 | 70,07 |
| 0,180 | 2,47 | 23,20 | 21,12 | 48,95 |
| 0,125 | 3,00 | 32,61 | 29,68 | 19,27 |
| 0,090 | 3,47 | 17,51 | 15,94 | 3,33 |
| 0,075 | 3,74 | 1,19 | 1,08 | 2,25 |
| 0,063 | 3,99 | 0,51 | 0,46 | 1,78 |
| < 0,063 | > 3,99 | 1,96 | 1,78 | 0,00 |

Sieve Analysis
 Gravel
 Sand

Size Classes (DGF-Bulletin 1 1988)

| Size Class | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 1,78 |
| Sand, fine (0,063 mm - 0,200 mm): | 53,20 |
| Sand, medium (0,2 mm - 0,6 mm): | 33,47 |
| Sand, coarse (0,6 mm - 2 mm): | 9,21 |
| Gravel (> 2 mm): | 2,33 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 1,21 | -0,27 |
| 16% | 84% | 0,45 | 1,14 |
| 25% | 75% | 0,30 | 1,72 |
| 40% | 60% | 0,22 | 2,21 |
| Median 50% | 50% | 0,18 | 2,45 |
| 75% | 25% | 0,14 | 2,88 |
| 84% | 16% | 0,12 | 3,09 |
| 90% | 10% | 0,10 | 3,26 |
| 95% | 5% | 0,09 | 3,42 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 2,22 |
| Sorting | 1,04 |
| Skewness | -0,41 |
| Kurtosis | 1,30 |
| Uniformity Coefficient | 2,07 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)
 Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)
 Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)
 Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)
 Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

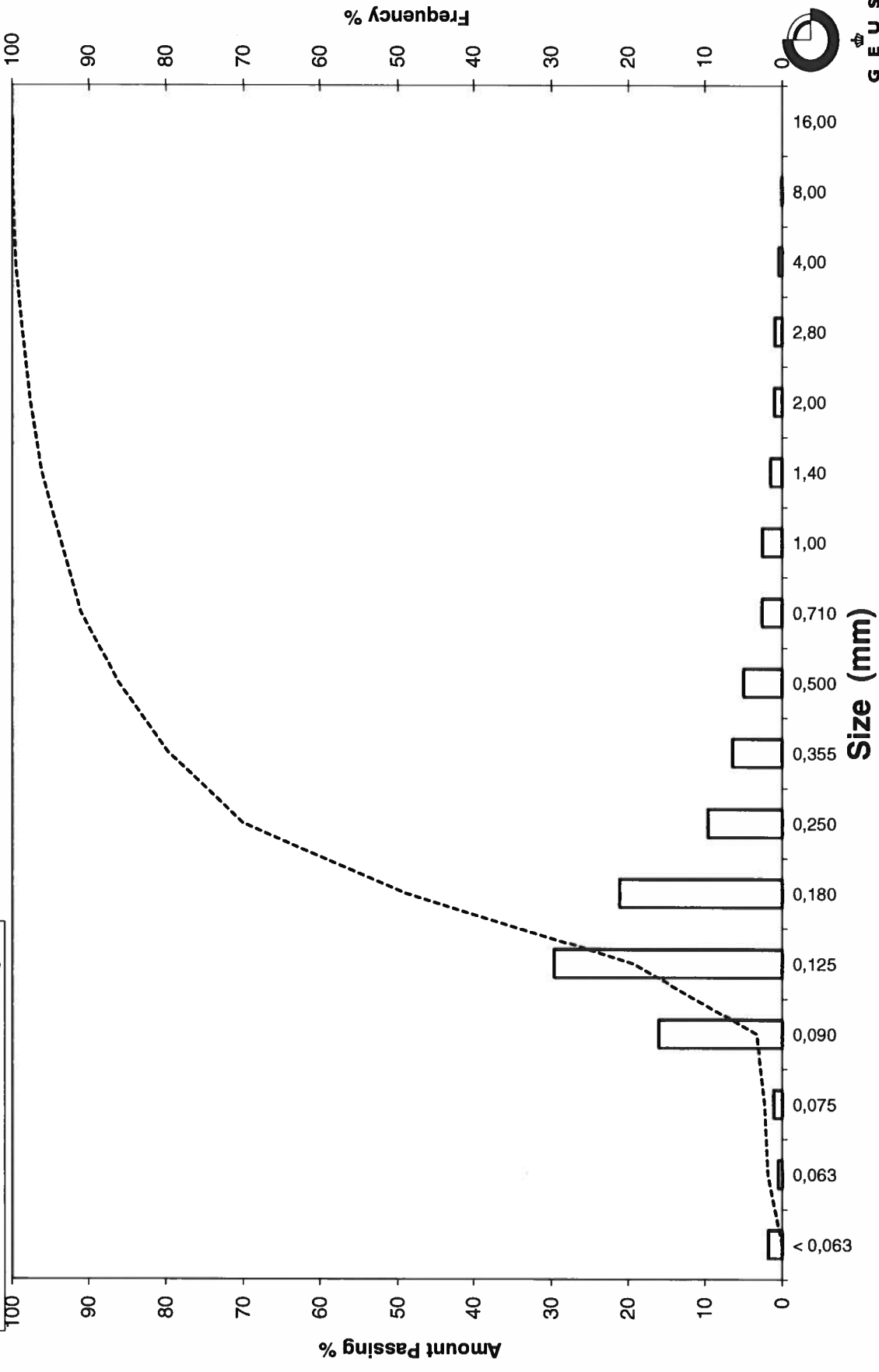
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_55, 100-120

Frequency Percent
 Cumulated Amount Passing



G E U S

Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_55, 190-210
Lab. Id: 200687
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >4mm består af skaller



Total Weight 111,61 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,00 | 0,00 | 100,00 |
| 4,00 | -2,00 | 0,07 | 0,06 | 99,94 |
| 2,80 | -1,49 | 0,39 | 0,35 | 99,59 |
| 2,00 | -1,00 | 0,46 | 0,41 | 99,18 |
| 1,40 | -0,49 | 1,10 | 0,99 | 98,19 |
| 1,00 | 0,00 | 2,01 | 1,80 | 96,39 |
| 0,710 | 0,49 | 4,07 | 3,65 | 92,74 |
| 0,500 | 1,00 | 10,05 | 9,00 | 83,74 |
| 0,355 | 1,49 | 10,84 | 9,71 | 74,03 |
| 0,250 | 2,00 | 10,53 | 9,43 | 64,59 |
| 0,180 | 2,47 | 20,82 | 18,65 | 45,94 |
| 0,125 | 3,00 | 31,39 | 28,12 | 17,81 |
| 0,090 | 3,47 | 16,46 | 14,75 | 3,06 |
| 0,075 | 3,74 | 1,23 | 1,10 | 1,96 |
| 0,063 | 3,99 | 0,49 | 0,44 | 1,52 |
| < 0,063 | > 3,99 | 1,70 | 1,52 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|----------|
| Silt and clay (< 0,063 mm): | 1,52 |
| Sand, fine (0,063 mm - 0,200 mm): | 49,74 |
| Sand, medium (0,2 mm - 0,6 mm): | 36,76 |
| Sand, coarse (0,6 mm - 2 mm): | 11,15 |
| Gravel (> 2 mm): | 0,82 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,89 | 0,17 |
| 16% | 84% | 0,51 | 0,98 |
| 25% | 75% | 0,37 | 1,44 |
| 40% | 60% | 0,23 | 2,10 |
| Median 50% | 50% | 0,20 | 2,36 |
| 75% | 25% | 0,14 | 2,85 |
| 84% | 16% | 0,12 | 3,05 |
| 90% | 10% | 0,11 | 3,23 |
| 95% | 5% | 0,09 | 3,40 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 2,13 |
| Sorting | 1,01 |
| Skewness | -0,34 |
| Kurtosis | 0,94 |
| Uniformity Coefficient | 2,19 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

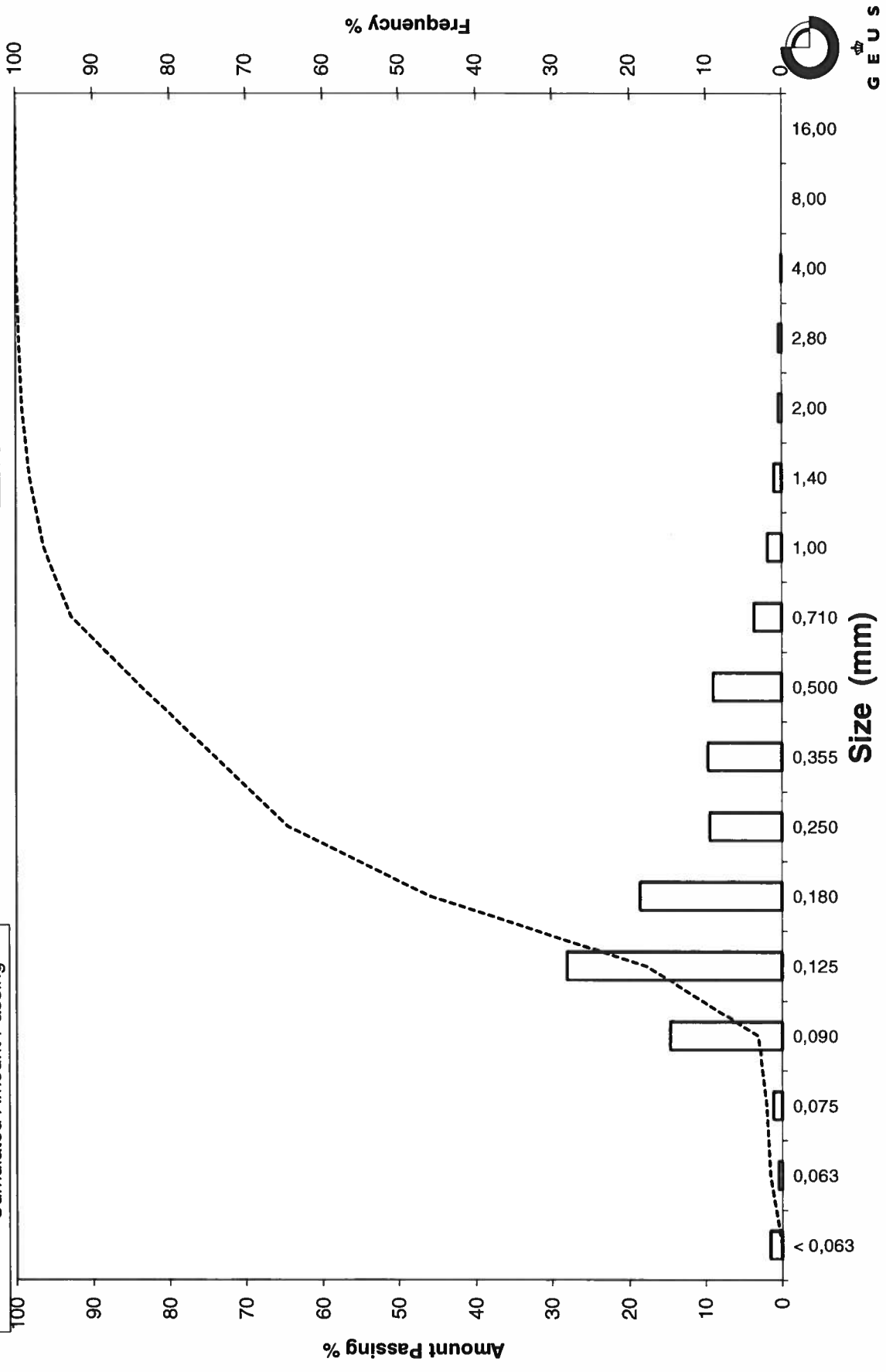
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_55, 190-210

Frequency Percent
 Cumulated Amount Passing



G E U S

Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_55, 300-320
Lab. Id: 200688
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >2mm består af skaller



Total Weight 104,31 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 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 |
| 2,80 | -1,49 | 0,01 | 0,01 | 99,99 |
| 2,00 | -1,00 | 0,04 | 0,04 | 99,95 |
| 1,40 | -0,49 | 0,06 | 0,06 | 99,89 |
| 1,00 | 0,00 | 0,15 | 0,14 | 99,75 |
| 0,710 | 0,49 | 0,33 | 0,32 | 99,43 |
| 0,500 | 1,00 | 1,44 | 1,38 | 98,05 |
| 0,355 | 1,49 | 4,48 | 4,29 | 93,76 |
| 0,250 | 2,00 | 9,24 | 8,86 | 84,90 |
| 0,180 | 2,47 | 25,17 | 24,13 | 60,77 |
| 0,125 | 3,00 | 42,14 | 40,40 | 20,37 |
| 0,090 | 3,47 | 17,18 | 16,47 | 3,90 |
| 0,075 | 3,74 | 1,21 | 1,16 | 2,74 |
| 0,063 | 3,99 | 0,42 | 0,40 | 2,34 |
| < 0,063 | > 3,99 | 2,44 | 2,34 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 2,34 |
| Sand, fine (0,063 mm - 0,200 mm): | 65,33 |
| Sand, medium (0,2 mm - 0,6 mm): | 31,05 |
| Sand, coarse (0,6 mm - 2 mm): | 1,24 |
| Gravel (> 2 mm): | 0,05 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,40 | 1,33 |
| 16% | 84% | 0,25 | 2,02 |
| 25% | 75% | 0,22 | 2,18 |
| 40% | 60% | 0,18 | 2,48 |
| Median 50% | 50% | 0,17 | 2,60 |
| 75% | 25% | 0,13 | 2,93 |
| 84% | 16% | 0,12 | 3,11 |
| 90% | 10% | 0,10 | 3,28 |
| 95% | 5% | 0,09 | 3,44 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 2,57 |
| Sorting | 0,59 |
| Skewness | -0,13 |
| Kurtosis | 1,15 |
| Uniformity Coefficient | 1,74 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

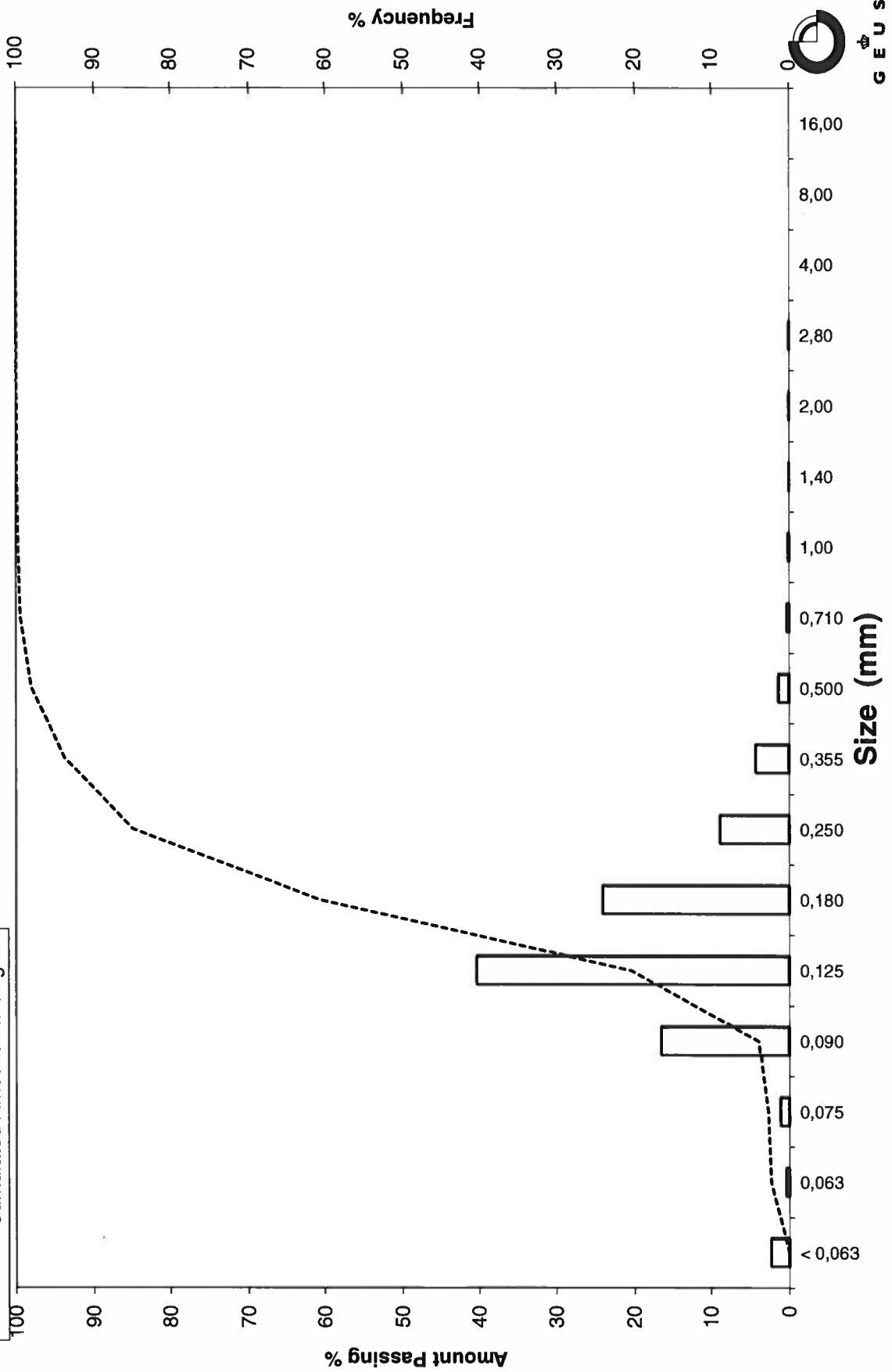
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_55, 300-320

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_42, 0-20
Lab. Id: 200689
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks:



Total Weight 100,83 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 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 |
| 2,80 | -1,49 | 0,00 | 0,00 | 100,00 |
| 2,00 | -1,00 | 0,00 | 0,00 | 100,00 |
| 1,40 | -0,49 | 0,02 | 0,02 | 99,98 |
| 1,00 | 0,00 | 0,09 | 0,09 | 99,89 |
| 0,710 | 0,49 | 0,19 | 0,19 | 99,70 |
| 0,500 | 1,00 | 0,74 | 0,73 | 98,97 |
| 0,355 | 1,49 | 3,60 | 3,57 | 95,40 |
| 0,250 | 2,00 | 15,96 | 15,83 | 79,57 |
| 0,180 | 2,47 | 35,65 | 35,36 | 44,21 |
| 0,125 | 3,00 | 34,79 | 34,50 | 9,71 |
| 0,090 | 3,47 | 7,77 | 7,71 | 2,00 |
| 0,075 | 3,74 | 0,51 | 0,51 | 1,50 |
| 0,063 | 3,99 | 0,19 | 0,19 | 1,31 |
| < 0,063 | > 3,99 | 1,32 | 1,31 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| Size Class | Weight % |
|----------------------------------|---------------|
| Silt and clay (< 0,063 mm) | 1,31 |
| Sand, fine (0,063 mm - 0,200 mm) | 53,01 |
| Sand, medium (0,2 mm - 0,6 mm) | 45,00 |
| Sand, coarse (0,6 mm - 2 mm) | 0,68 |
| Gravel (> 2 mm) | 0,00 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,35 | 1,50 |
| 16% | 84% | 0,28 | 1,84 |
| 25% | 75% | 0,24 | 2,05 |
| 40% | 60% | 0,21 | 2,24 |
| Median 50% | 50% | 0,19 | 2,38 |
| 75% | 25% | 0,15 | 2,74 |
| 84% | 16% | 0,14 | 2,89 |
| 90% | 10% | 0,13 | 2,99 |
| 95% | 5% | 0,10 | 3,27 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 2,37 |
| Sorting | 0,53 |
| Skewness | -0,02 |
| Kurtosis | 1,05 |
| Uniformity Coefficient | 1,68 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

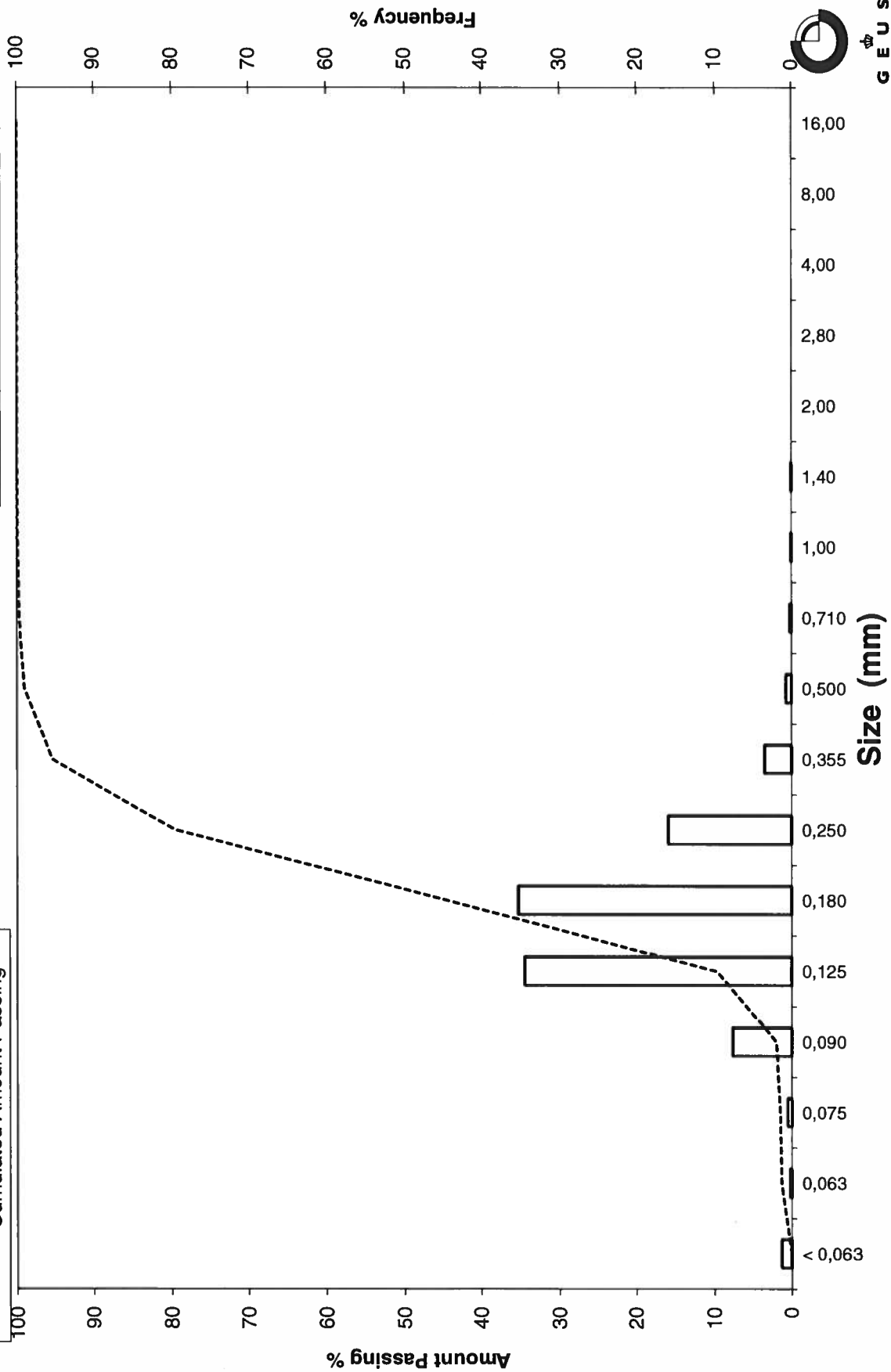
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_42, 0-20

Frequency Percent
 Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_42, 100-120
Lab. Id: 200690
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >4mm heraf 0,05g skaller



Total Weight 107,58 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,00 | 0,00 | 100,00 |
| 4,00 | -2,00 | 0,36 | 0,33 | 99,67 |
| 2,80 | -1,49 | 0,41 | 0,38 | 99,28 |
| 2,00 | -1,00 | 0,52 | 0,48 | 98,80 |
| 1,40 | -0,49 | 0,70 | 0,65 | 98,15 |
| 1,00 | 0,00 | 1,52 | 1,41 | 96,74 |
| 0,710 | 0,49 | 2,62 | 2,44 | 94,30 |
| 0,500 | 1,00 | 6,79 | 6,31 | 87,99 |
| 0,355 | 1,49 | 11,67 | 10,85 | 77,14 |
| 0,250 | 2,00 | 22,59 | 21,00 | 56,14 |
| 0,180 | 2,47 | 29,65 | 27,56 | 28,58 |
| 0,125 | 3,00 | 23,93 | 22,24 | 6,34 |
| 0,090 | 3,47 | 5,32 | 4,95 | 1,39 |
| 0,075 | 3,74 | 0,39 | 0,36 | 1,03 |
| 0,063 | 3,99 | 0,13 | 0,12 | 0,91 |
| < 0,063 | > 3,99 | 0,98 | 0,91 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 0,91 |
| Sand, fine (0,063 mm - 0,200 mm): | 35,55 |
| Sand, medium (0,2 mm - 0,6 mm): | 54,54 |
| Sand, coarse (0,6 mm - 2 mm): | 7,81 |
| Gravel (> 2 mm): | 1,20 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,79 | 0,33 |
| 16% | 84% | 0,45 | 1,16 |
| 25% | 75% | 0,34 | 1,54 |
| 40% | 60% | 0,27 | 1,89 |
| Median 50% | 50% | 0,23 | 2,09 |
| 75% | 25% | 0,17 | 2,55 |
| 84% | 16% | 0,15 | 2,75 |
| 90% | 10% | 0,13 | 2,90 |
| 95% | 5% | 0,12 | 3,11 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 2,00 |
| Sorting | 0,82 |
| Skewness | -0,22 |
| Kurtosis | 1,13 |
| Uniformity Coefficient | 2,01 |

The analysis is executed according to DS 405.9 extended by sieves to the ½ phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

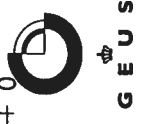
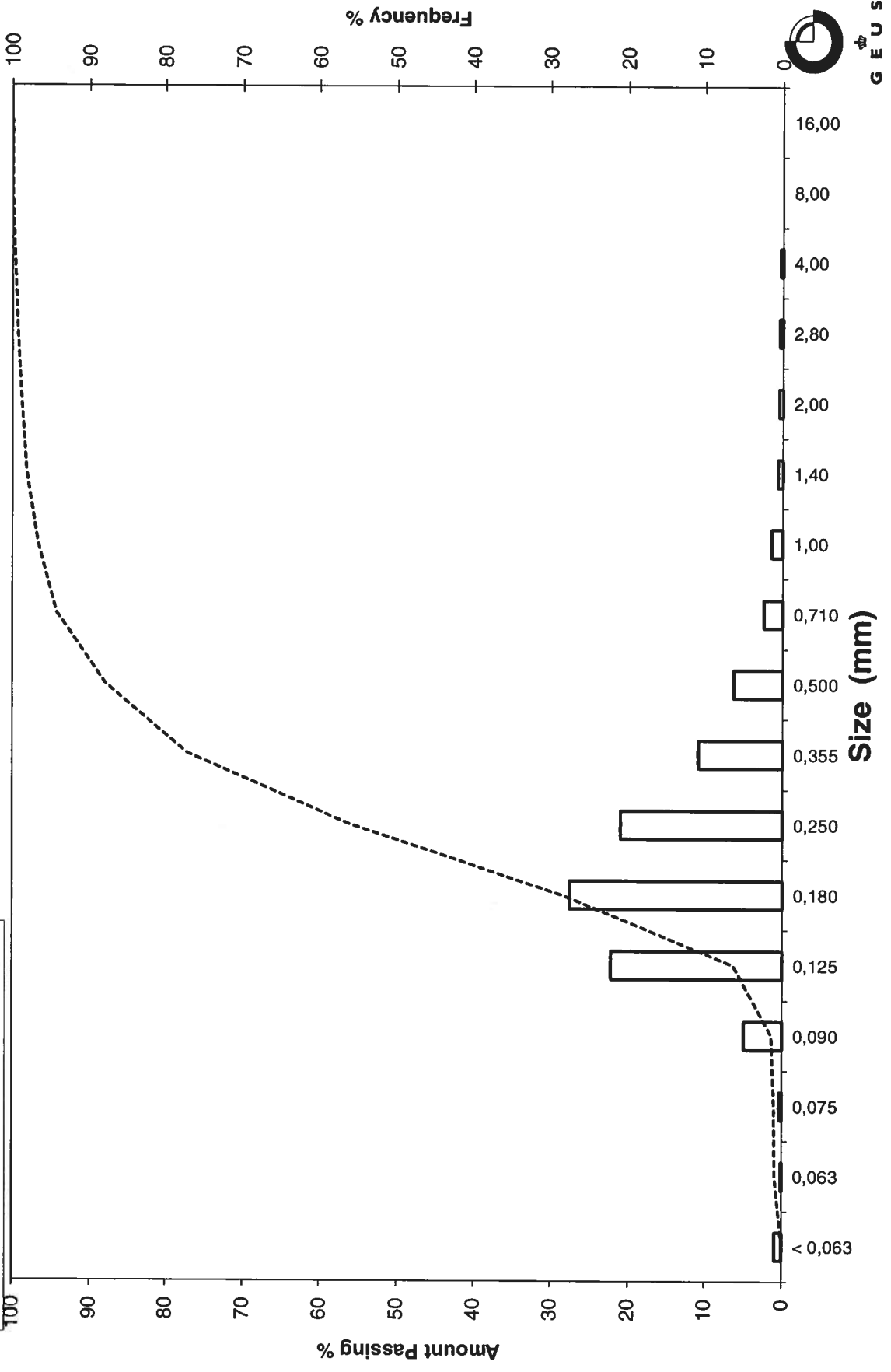
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_42, 100-120

Frequency Percent
 Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_42, 200-220
Lab. Id: 200691
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks:



Total Weight 98,95 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 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 |
| 2,80 | -1,49 | 0,00 | 0,00 | 100,00 |
| 2,00 | -1,00 | 0,00 | 0,00 | 100,00 |
| 1,40 | -0,49 | 0,00 | 0,00 | 100,00 |
| 1,00 | 0,00 | 0,09 | 0,09 | 99,91 |
| 0,710 | 0,49 | 0,31 | 0,31 | 99,60 |
| 0,500 | 1,00 | 1,67 | 1,69 | 97,91 |
| 0,355 | 1,49 | 6,54 | 6,61 | 91,30 |
| 0,250 | 2,00 | 15,98 | 16,15 | 75,15 |
| 0,180 | 2,47 | 20,57 | 20,79 | 54,36 |
| 0,125 | 3,00 | 35,78 | 36,16 | 18,20 |
| 0,090 | 3,47 | 13,39 | 13,53 | 4,67 |
| 0,075 | 3,74 | 1,66 | 1,68 | 2,99 |
| 0,063 | 3,99 | 0,73 | 0,74 | 2,25 |
| < 0,063 | > 3,99 | 2,23 | 2,25 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|----------|
| Silt and clay (< 0,063 mm): | 2,25 |
| Sand, fine (0,063 mm - 0,200 mm): | 58,05 |
| Sand, medium (0,2 mm - 0,6 mm): | 38,41 |
| Sand, coarse (0,6 mm - 2 mm): | 1,29 |
| Gravel (> 2 mm): | 0,00 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,44 | 1,20 |
| 16% | 84% | 0,31 | 1,70 |
| 25% | 75% | 0,25 | 2,00 |
| 40% | 60% | 0,20 | 2,33 |
| Median 50% | 50% | 0,17 | 2,53 |
| 75% | 25% | 0,14 | 2,89 |
| 84% | 16% | 0,12 | 3,07 |
| 90% | 10% | 0,10 | 3,27 |
| 95% | 5% | 0,09 | 3,46 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 2,43 |
| Sorting | 0,68 |
| Skewness | -0,19 |
| Kurtosis | 1,05 |
| Uniformity Coefficient | 1,92 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

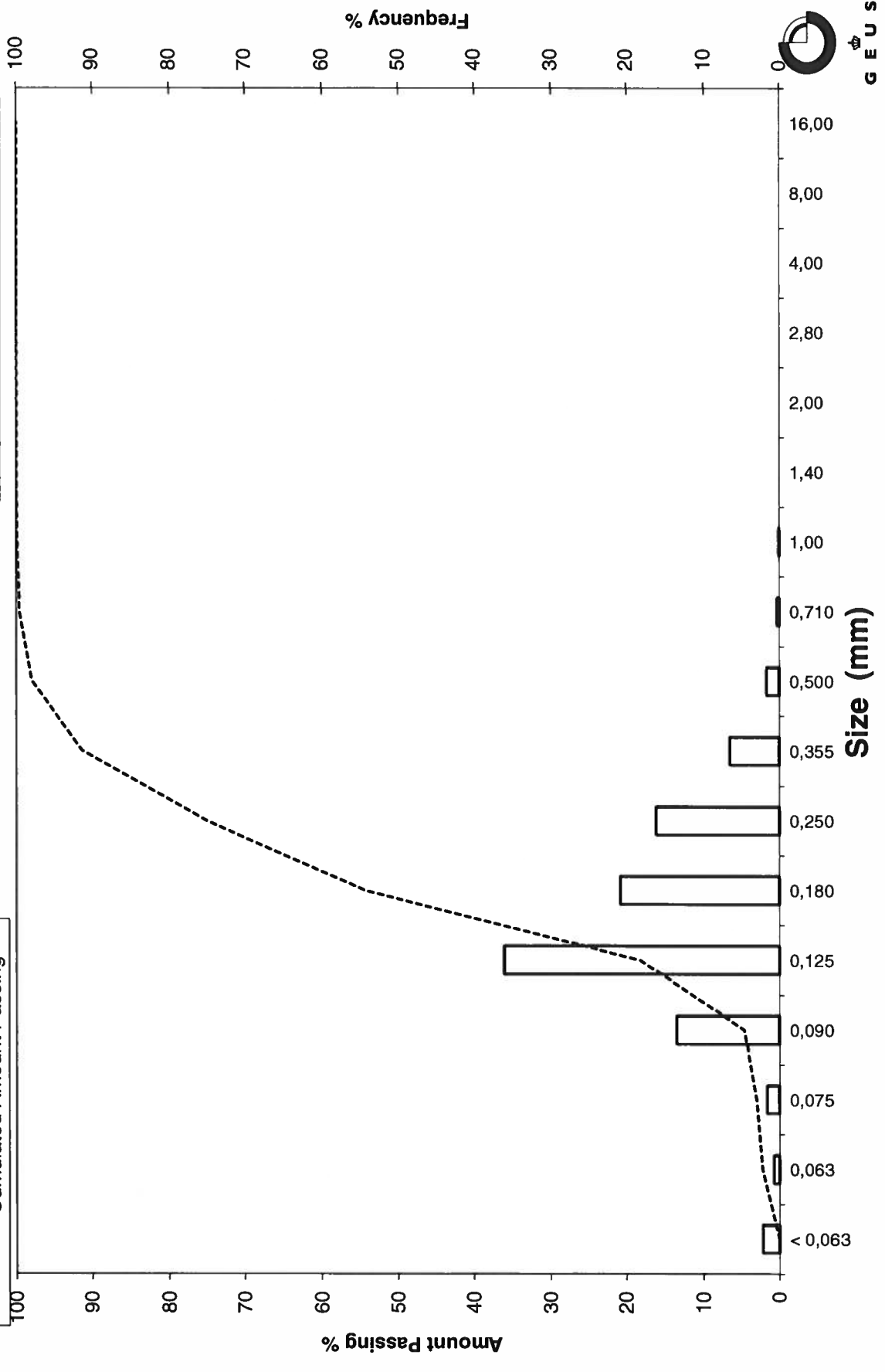
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_42, 200-220

Frequency Percent
 Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_42, 300-320
Lab. Id: 200692
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >4mm heraf 0,7g skaller



Total Weight 108,28 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,35 | 0,32 | 99,68 |
| 4,00 | -2,00 | 1,17 | 1,08 | 98,60 |
| 2,80 | -1,49 | 0,69 | 0,64 | 97,96 |
| 2,00 | -1,00 | 1,40 | 1,29 | 96,67 |
| 1,40 | -0,49 | 2,00 | 1,85 | 94,82 |
| 1,00 | 0,00 | 3,70 | 3,42 | 91,40 |
| 0,710 | 0,49 | 7,13 | 6,58 | 84,82 |
| 0,500 | 1,00 | 15,91 | 14,69 | 70,12 |
| 0,355 | 1,49 | 17,99 | 16,61 | 53,51 |
| 0,250 | 2,00 | 21,84 | 20,17 | 33,34 |
| 0,180 | 2,47 | 15,92 | 14,70 | 18,64 |
| 0,125 | 3,00 | 13,96 | 12,89 | 5,74 |
| 0,090 | 3,47 | 4,34 | 4,01 | 1,74 |
| 0,075 | 3,74 | 0,37 | 0,34 | 1,39 |
| 0,063 | 3,99 | 0,15 | 0,14 | 1,26 |
| < 0,063 | > 3,99 | 1,36 | 1,26 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| Size Class | Weight % |
|----------------------------------|---------------|
| Silt and clay (< 0,063 mm) | 1,26 |
| Sand, fine (0,063 mm - 0,200 mm) | 21,58 |
| Sand, medium (0,2 mm - 0,6 mm) | 54,28 |
| Sand, coarse (0,6 mm - 2 mm) | 19,55 |
| Gravel (> 2 mm) | 3,33 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 1,46 | -0,54 |
| 16% | 84% | 0,70 | 0,52 |
| 25% | 75% | 0,57 | 0,81 |
| 40% | 60% | 0,41 | 1,28 |
| Median 50% | 50% | 0,34 | 1,57 |
| 75% | 25% | 0,21 | 2,25 |
| 84% | 16% | 0,17 | 2,57 |
| 90% | 10% | 0,14 | 2,80 |
| 95% | 5% | 0,12 | 3,08 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 1,55 |
| Sorting | 1,06 |
| Skewness | -0,10 |
| Kurtosis | 1,03 |
| Uniformity Coefficient | 2,88 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

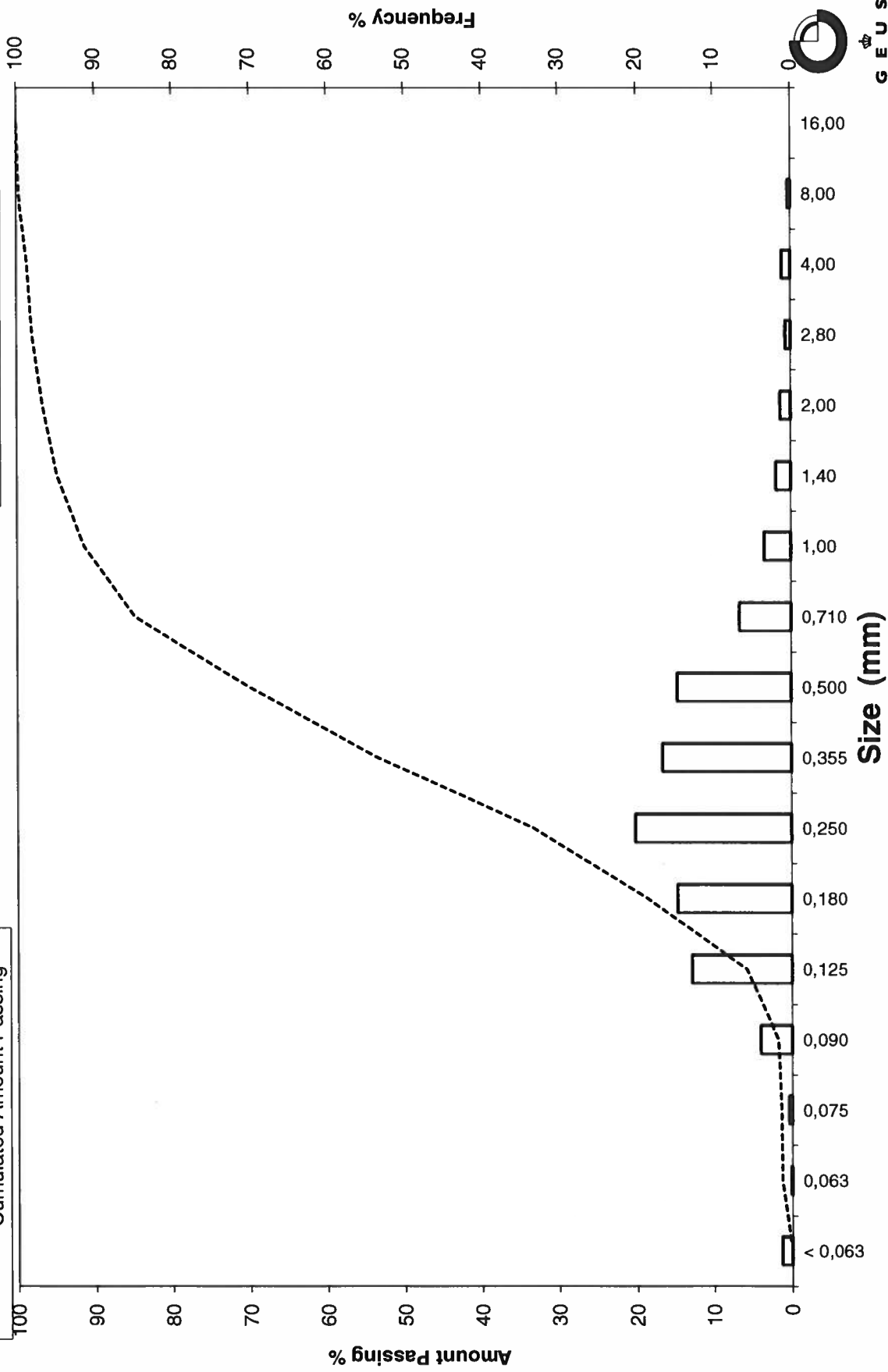
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_42, 300-320

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_42, 400-420
Lab. Id: 200693
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >0,710mm består af skaller



Total Weight 95,13 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,09 | 0,09 | 99,91 |
| 4,00 | -2,00 | 0,03 | 0,03 | 99,87 |
| 2,80 | -1,49 | 0,00 | 0,00 | 99,87 |
| 2,00 | -1,00 | 0,00 | 0,00 | 99,87 |
| 1,40 | -0,49 | 0,00 | 0,00 | 99,87 |
| 1,00 | 0,00 | 0,00 | 0,00 | 99,87 |
| 0,710 | 0,49 | 0,01 | 0,01 | 99,86 |
| 0,500 | 1,00 | 0,04 | 0,04 | 99,82 |
| 0,355 | 1,49 | 0,09 | 0,09 | 99,73 |
| 0,250 | 2,00 | 0,28 | 0,29 | 99,43 |
| 0,180 | 2,47 | 0,78 | 0,82 | 98,61 |
| 0,125 | 3,00 | 25,50 | 26,81 | 71,81 |
| 0,090 | 3,47 | 51,58 | 54,22 | 17,59 |
| 0,075 | 3,74 | 6,15 | 6,46 | 11,12 |
| 0,063 | 3,99 | 2,69 | 2,83 | 8,29 |
| < 0,063 | > 3,99 | 7,89 | 8,29 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| Size Class | Weight % |
|----------------------------------|---------------|
| Silt and clay (< 0,063 mm) | 8,29 |
| Sand, fine (0,063 mm - 0,200 mm) | 90,55 |
| Sand, medium (0,2 mm - 0,6 mm) | 0,99 |
| Sand, coarse (0,6 mm - 2 mm) | 0,03 |
| Gravel (> 2 mm) | 0,13 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,17 | 2,53 |
| 16% | 84% | 0,15 | 2,74 |
| 25% | 75% | 0,13 | 2,93 |
| 40% | 60% | 0,12 | 3,09 |
| Median 50% | 50% | 0,11 | 3,17 |
| 75% | 25% | 0,09 | 3,40 |
| 84% | 16% | 0,09 | 3,53 |
| 90% | 10% | 0,07 | 3,83 |
| 95% | 5% | ----- | ----- |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 3,15 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | 1,67 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

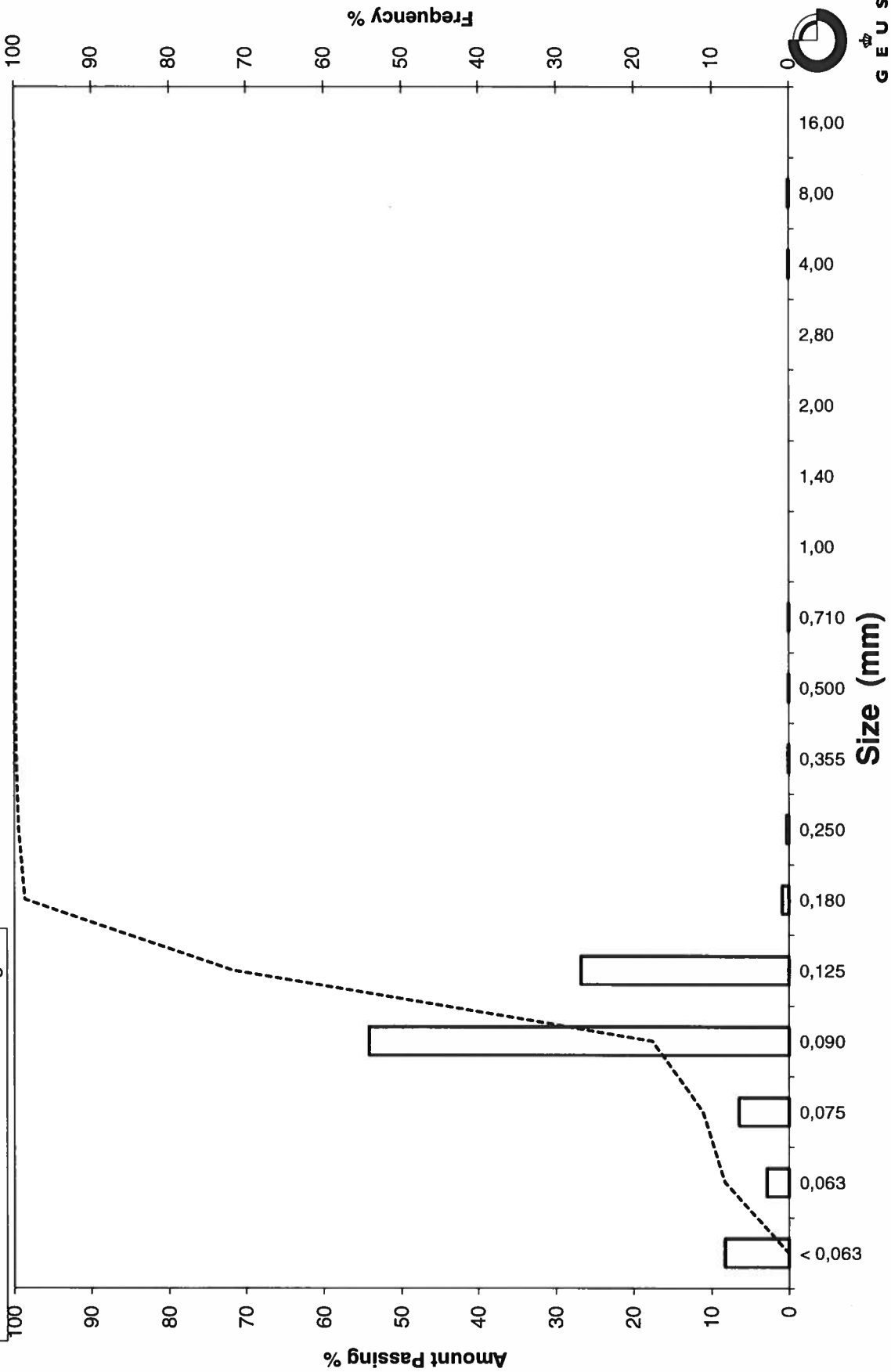
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_42, 400-420

Frequency Percent
Cumulated Amount Passing



G E U S

Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_42, 500-520
Lab. Id: 200694
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >4mm består af skaller



Total Weight 98,78 g

Sieve Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 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 |
| 2,80 | -1,49 | 0,00 | 0,00 | 99,97 |
| 2,00 | -1,00 | 0,00 | 0,00 | 99,97 |
| 1,40 | -0,49 | 0,00 | 0,00 | 99,97 |
| 1,00 | 0,00 | 0,04 | 0,04 | 99,93 |
| 0,710 | 0,49 | 0,02 | 0,02 | 99,91 |
| 0,500 | 1,00 | 0,04 | 0,04 | 99,87 |
| 0,355 | 1,49 | 0,05 | 0,05 | 99,82 |
| 0,250 | 2,00 | 0,21 | 0,21 | 99,61 |
| 0,180 | 2,47 | 0,59 | 0,60 | 99,01 |
| 0,125 | 3,00 | 20,23 | 20,48 | 78,53 |
| 0,090 | 3,47 | 57,56 | 58,27 | 20,26 |
| 0,075 | 3,74 | 7,10 | 7,19 | 13,07 |
| 0,063 | 3,99 | 3,35 | 3,39 | 9,68 |
| < 0,063 | > 3,99 | 9,56 | 9,68 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 9,68 |
| Sand, fine (0,063 mm - 0,200 mm): | 89,50 |
| Sand, medium (0,2 mm - 0,6 mm): | 0,71 |
| Sand, coarse (0,6 mm - 2 mm): | 0,08 |
| Gravel (> 2 mm): | 0,03 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,17 | 2,56 |
| 16% | 84% | 0,14 | 2,84 |
| 25% | 75% | 0,12 | 3,02 |
| 40% | 60% | 0,11 | 3,13 |
| Median 50% | 50% | 0,11 | 3,21 |
| 75% | 25% | 0,09 | 3,43 |
| 84% | 16% | 0,08 | 3,62 |
| 90% | 10% | 0,06 | 3,96 |
| 95% | 5% | ----- | ----- |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 3,23 |
| Sorting | ----- |
| Skewness | ----- |
| Kurtosis | ----- |
| Uniformity Coefficient | 1,78 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

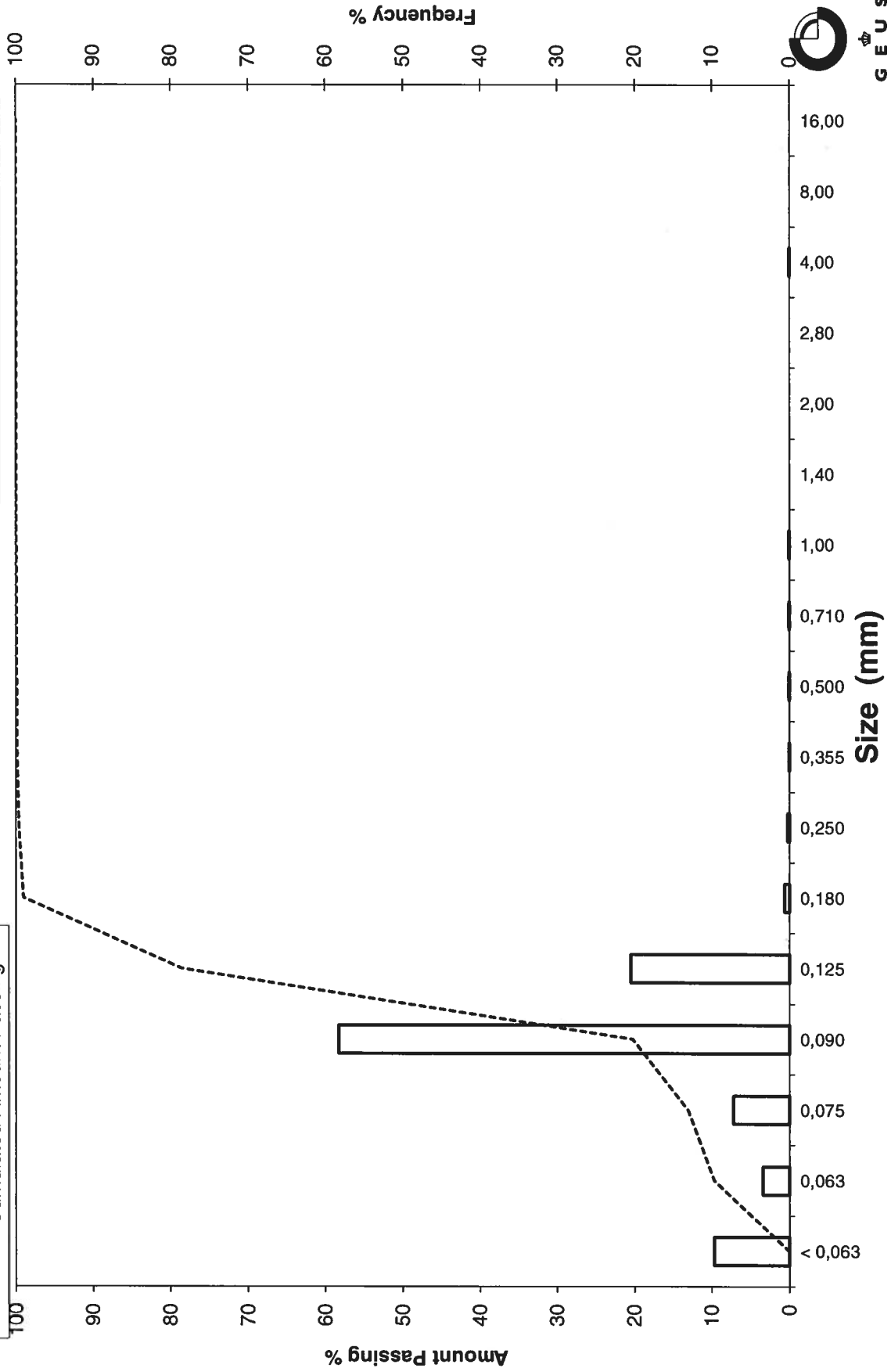
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Sample Id: Løn B-1B_42, 500-520

Grain Size Distribution

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_53, 0-20
Lab. Id: 200695
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >2,8mm heraf 0,6g skaller



Total Weight 109,31 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,35 | 0,32 | 99,68 |
| 4,00 | -2,00 | 0,18 | 0,16 | 99,52 |
| 2,80 | -1,49 | 0,53 | 0,48 | 99,03 |
| 2,00 | -1,00 | 1,53 | 1,40 | 97,63 |
| 1,40 | -0,49 | 1,61 | 1,47 | 96,16 |
| 1,00 | 0,00 | 3,93 | 3,60 | 92,56 |
| 0,710 | 0,49 | 4,59 | 4,20 | 88,36 |
| 0,500 | 1,00 | 14,01 | 12,82 | 75,55 |
| 0,355 | 1,49 | 41,04 | 37,54 | 38,00 |
| 0,250 | 2,00 | 31,06 | 28,41 | 9,59 |
| 0,180 | 2,47 | 5,78 | 5,29 | 4,30 |
| 0,125 | 3,00 | 2,40 | 2,20 | 2,10 |
| 0,090 | 3,47 | 1,14 | 1,04 | 1,06 |
| 0,075 | 3,74 | 0,10 | 0,09 | 0,97 |
| 0,063 | 3,99 | 0,03 | 0,03 | 0,94 |
| < 0,063 | > 3,99 | 1,03 | 0,94 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 0,94 |
| Sand, fine (0,063 mm - 0,200 mm): | 4,87 |
| Sand, medium (0,2 mm - 0,6 mm): | 75,84 |
| Sand, coarse (0,6 mm - 2 mm): | 15,98 |
| Gravel (> 2 mm): | 2,37 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 1,27 | -0,35 |
| 16% | 84% | 0,64 | 0,65 |
| 25% | 75% | 0,50 | 1,01 |
| 40% | 60% | 0,44 | 1,18 |
| Median 50% | 50% | 0,40 | 1,32 |
| 75% | 25% | 0,31 | 1,70 |
| 84% | 16% | 0,27 | 1,87 |
| 90% | 10% | 0,25 | 1,99 |
| 95% | 5% | 0,19 | 2,40 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 1,28 |
| Sorting | 0,72 |
| Skewness | -0,15 |
| Kurtosis | 1,61 |
| Uniformity Coefficient | 1,75 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

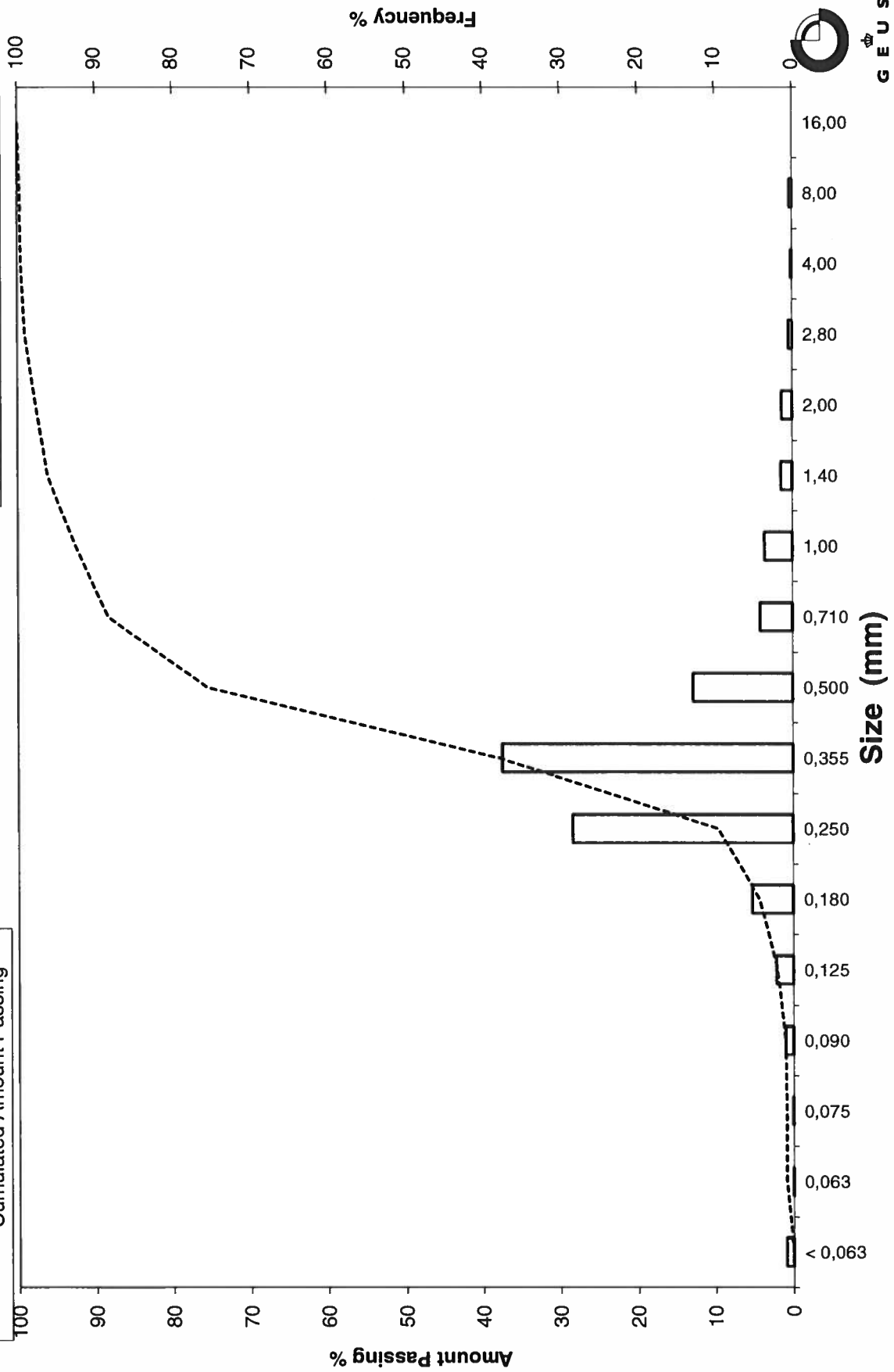
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_53, 0-20

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_53, 100-120
Lab. Id: 200696
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >2mm består af skaller



Total Weight 95,92 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 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 |
| 2,80 | -1,49 | 0,00 | 0,00 | 100,00 |
| 2,00 | -1,00 | 0,02 | 0,02 | 99,98 |
| 1,40 | -0,49 | 0,01 | 0,01 | 99,97 |
| 1,00 | 0,00 | 0,10 | 0,10 | 99,86 |
| 0,710 | 0,49 | 0,17 | 0,18 | 99,69 |
| 0,500 | 1,00 | 0,36 | 0,38 | 99,31 |
| 0,355 | 1,49 | 0,53 | 0,55 | 98,76 |
| 0,250 | 2,00 | 1,05 | 1,09 | 97,66 |
| 0,180 | 2,47 | 8,35 | 8,71 | 88,96 |
| 0,125 | 3,00 | 51,83 | 54,03 | 34,92 |
| 0,090 | 3,47 | 27,59 | 28,76 | 6,16 |
| 0,075 | 3,74 | 1,73 | 1,80 | 4,36 |
| 0,063 | 3,99 | 0,74 | 0,77 | 3,59 |
| < 0,063 | > 3,99 | 3,44 | 3,59 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| Size Class | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 3,59 |
| Sand, fine (0,063 mm - 0,200 mm): | 87,86 |
| Sand, medium (0,2 mm - 0,6 mm): | 8,04 |
| Sand, coarse (0,6 mm - 2 mm): | 0,49 |
| Gravel (> 2 mm): | 0,02 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,23 | 2,13 |
| 16% | 84% | 0,17 | 2,51 |
| 25% | 75% | 0,17 | 2,59 |
| 40% | 60% | 0,15 | 2,73 |
| Median 50% | 50% | 0,14 | 2,83 |
| 75% | 25% | 0,11 | 3,15 |
| 84% | 16% | 0,10 | 3,29 |
| 90% | 10% | 0,09 | 3,40 |
| 95% | 5% | 0,08 | 3,64 |

Moments Statistics

| | |
|------------------------|------|
| Mean | 2,88 |
| Sorting | 0,42 |
| Skewness | 0,13 |
| Kurtosis | 1,12 |
| Uniformity Coefficient | 1,59 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

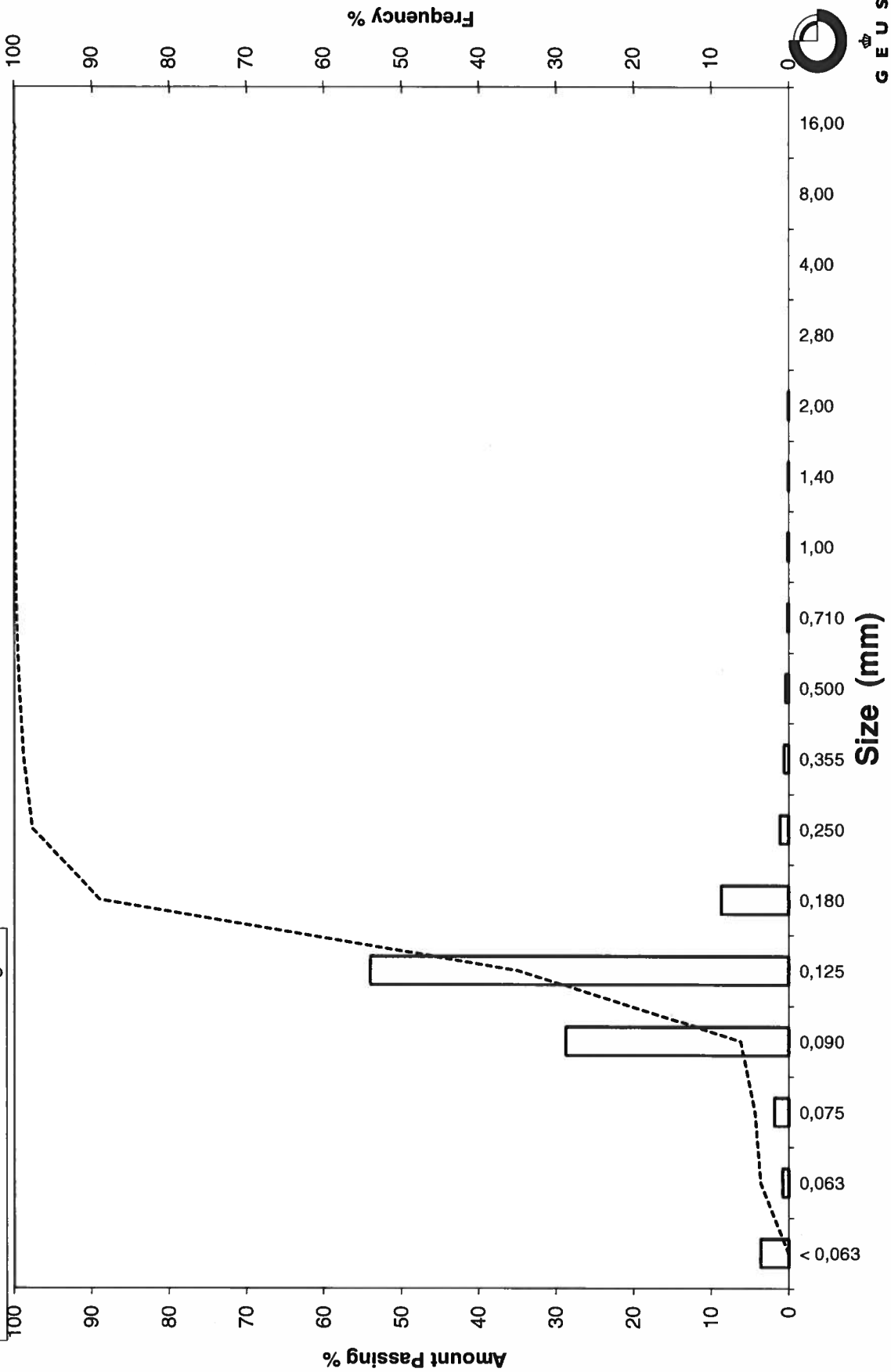
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_53, 100-120

Frequency Percent
 Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_53, 200-220
Lab. Id: 200697
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks:



Total Weight 96,28 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 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 |
| 2,80 | -1,49 | 0,08 | 0,08 | 99,92 |
| 2,00 | -1,00 | 0,03 | 0,03 | 99,89 |
| 1,40 | -0,49 | 0,09 | 0,09 | 99,79 |
| 1,00 | 0,00 | 0,19 | 0,20 | 99,59 |
| 0,710 | 0,49 | 0,16 | 0,17 | 99,43 |
| 0,500 | 1,00 | 0,23 | 0,24 | 99,19 |
| 0,355 | 1,49 | 0,40 | 0,42 | 98,77 |
| 0,250 | 2,00 | 0,86 | 0,89 | 97,88 |
| 0,180 | 2,47 | 5,38 | 5,59 | 92,29 |
| 0,125 | 3,00 | 48,37 | 50,24 | 42,05 |
| 0,090 | 3,47 | 32,89 | 34,16 | 7,89 |
| 0,075 | 3,74 | 2,40 | 2,49 | 5,40 |
| 0,063 | 3,99 | 0,97 | 1,01 | 4,39 |
| < 0,063 | > 3,99 | 4,23 | 4,39 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| Size Class | Weight % |
|----------------------------------|---------------|
| Silt and clay (< 0,063 mm) | 4,39 |
| Sand, fine (0,063 mm - 0,200 mm) | 89,50 |
| Sand, medium (0,2 mm - 0,6 mm) | 5,41 |
| Sand, coarse (0,6 mm - 2 mm) | 0,58 |
| Gravel (> 2 mm) | 0,11 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 0,21 | 2,22 |
| 16% | 84% | 0,17 | 2,55 |
| 25% | 75% | 0,16 | 2,63 |
| 40% | 60% | 0,14 | 2,79 |
| Median 50% | 50% | 0,13 | 2,90 |
| 75% | 25% | 0,11 | 3,22 |
| 84% | 16% | 0,10 | 3,35 |
| 90% | 10% | 0,09 | 3,44 |
| 95% | 5% | 0,07 | 3,83 |

Moments Statistics

| | |
|------------------------|------|
| Mean | 2,93 |
| Sorting | 0,44 |
| Skewness | 0,13 |
| Kurtosis | 1,13 |
| Uniformity Coefficient | 1,57 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

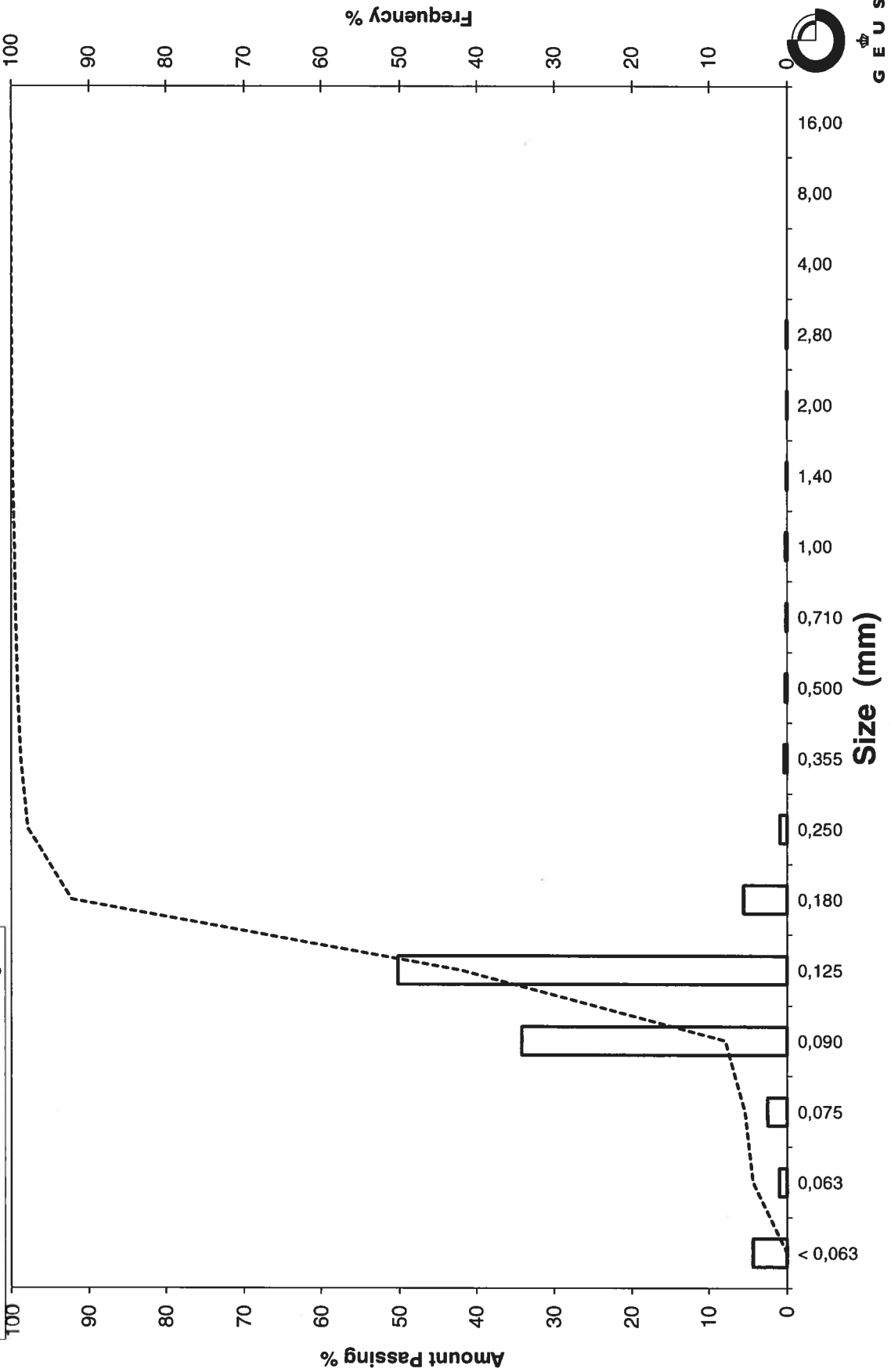
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_53, 200-220

Frequency Percent
 Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_53, 300-320
Lab. Id: 200698
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >4mm heraf 0,05g skaller



Total Weight 109,71 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,00 | 0,00 | 100,00 |
| 4,00 | -2,00 | 0,56 | 0,51 | 99,49 |
| 2,80 | -1,49 | 0,93 | 0,85 | 98,64 |
| 2,00 | -1,00 | 1,72 | 1,57 | 97,07 |
| 1,40 | -0,49 | 2,27 | 2,07 | 95,01 |
| 1,00 | 0,00 | 3,36 | 3,06 | 91,94 |
| 0,710 | 0,49 | 4,08 | 3,72 | 88,22 |
| 0,500 | 1,00 | 9,31 | 8,49 | 79,74 |
| 0,355 | 1,49 | 23,17 | 21,12 | 58,62 |
| 0,250 | 2,00 | 39,26 | 35,79 | 22,83 |
| 0,180 | 2,47 | 16,67 | 15,19 | 7,64 |
| 0,125 | 3,00 | 2,48 | 2,26 | 5,38 |
| 0,090 | 3,47 | 3,13 | 2,85 | 2,52 |
| 0,075 | 3,74 | 0,90 | 0,82 | 1,70 |
| 0,063 | 3,99 | 0,37 | 0,34 | 1,37 |
| < 0,063 | > 3,99 | 1,50 | 1,37 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| | Weight % |
|-----------------------------------|---------------|
| Silt and clay (< 0,063 mm): | 1,37 |
| Sand, fine (0,063 mm - 0,200 mm): | 10,61 |
| Sand, medium (0,2 mm - 0,6 mm): | 71,80 |
| Sand, coarse (0,6 mm - 2 mm): | 13,30 |
| Gravel (> 2 mm): | 2,93 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|-------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 1,40 | -0,48 |
| 16% | 84% | 0,61 | 0,72 |
| 25% | 75% | 0,47 | 1,10 |
| 40% | 60% | 0,36 | 1,46 |
| Median 50% | 50% | 0,33 | 1,60 |
| 75% | 25% | 0,26 | 1,96 |
| 84% | 16% | 0,22 | 2,19 |
| 90% | 10% | 0,19 | 2,39 |
| 95% | 5% | 0,12 | 3,05 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 1,51 |
| Sorting | 0,90 |
| Skewness | -0,19 |
| Kurtosis | 1,67 |
| Uniformity Coefficient | 1,91 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

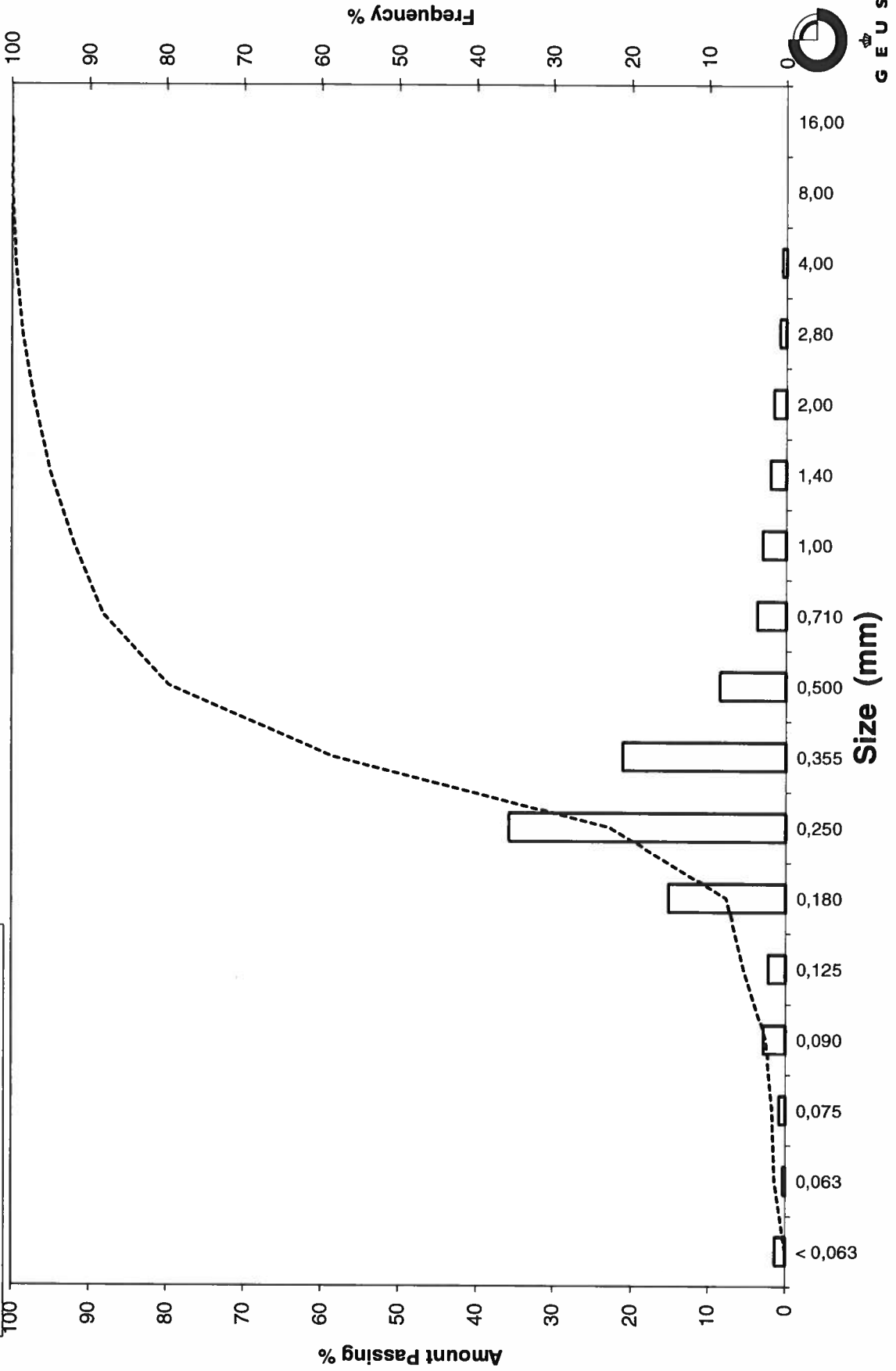
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_53, 300-320

Frequency Percent
Cumulated Amount Passing



Grain Size Distribution

Geotechnical

Sample Id: Løn B-1B_53, 400-420
Lab. Id: 200699
Projekt: Kystdirektoratet
Subject: 0
Date: december 2020
Executed: PS
Remarks: >8mm består af skaller



Total Weight 110,03 g

Size Fractions

| Size | Size | Weight | Weight | Cumulated amount passing |
|---------|--------|--------|--------|--------------------------|
| mm | Φ | g | % | % |
| 16,00 | -4,00 | 0,00 | 0,00 | 100,00 |
| 8,00 | -3,00 | 0,24 | 0,22 | 99,78 |
| 4,00 | -2,00 | 0,05 | 0,05 | 99,74 |
| 2,80 | -1,49 | 0,50 | 0,45 | 99,28 |
| 2,00 | -1,00 | 0,75 | 0,68 | 98,60 |
| 1,40 | -0,49 | 1,17 | 1,06 | 97,54 |
| 1,00 | 0,00 | 2,74 | 2,49 | 95,05 |
| 0,710 | 0,49 | 3,09 | 2,81 | 92,24 |
| 0,500 | 1,00 | 6,99 | 6,35 | 85,89 |
| 0,355 | 1,49 | 21,52 | 19,56 | 66,33 |
| 0,250 | 2,00 | 40,69 | 36,98 | 29,35 |
| 0,180 | 2,47 | 20,78 | 18,89 | 10,46 |
| 0,125 | 3,00 | 3,45 | 3,14 | 7,33 |
| 0,090 | 3,47 | 4,17 | 3,79 | 3,54 |
| 0,075 | 3,74 | 1,29 | 1,17 | 2,36 |
| 0,063 | 3,99 | 0,59 | 0,54 | 1,83 |
| < 0,063 | > 3,99 | 2,01 | 1,83 | 0,00 |

Sieve Analysis

Gravel

Sand

Size Classes (DGF-Bulletin 1 1988)

| Size Class | Weight % |
|----------------------------------|---------------|
| Silt and clay (< 0,063 mm) | 1,83 |
| Sand, fine (0,063 mm - 0,200 mm) | 14,03 |
| Sand, medium (0,2 mm - 0,6 mm) | 73,05 |
| Sand, coarse (0,6 mm - 2 mm) | 9,69 |
| Gravel (> 2 mm) | 1,40 |
| Sum: | 100,00 |

Moments Measures (Folk and Wards)

| Percentile | Percentile | d(mm) | Φ |
|-----------------|----------------|-------|------|
| Amount in sieve | Amount passing | | |
| 5% | 95% | 1,00 | 0,01 |
| 16% | 84% | 0,49 | 1,04 |
| 25% | 75% | 0,42 | 1,25 |
| 40% | 60% | 0,34 | 1,57 |
| Median 50% | 50% | 0,31 | 1,70 |
| 75% | 25% | 0,23 | 2,10 |
| 84% | 16% | 0,20 | 2,32 |
| 90% | 10% | 0,17 | 2,54 |
| 95% | 5% | 0,10 | 3,27 |

Moments Statistics

| | |
|------------------------|-------|
| Mean | 1,69 |
| Sorting | 0,81 |
| Skewness | -0,03 |
| Kurtosis | 1,59 |
| Uniformity Coefficient | 1,96 |

The analysis is executed according to DS 405.9 extended by sieves to the 1/2 phi scale

Size Classes and Percentiles are found by linear interpolation

Formulas

Mean $(\phi_{16\%} + \phi_{84\%} + \phi_{50\%}) / 3$ (Folk and Ward 1957)

Sorting $(\phi_{84\%} - \phi_{16\%}) / 4 + (\phi_{95\%} - \phi_{5\%}) / 6,6$ (Folk and Ward 1957)

Kurtosis $(\phi_{95\%} - \phi_{5\%}) / (2,44 * (\phi_{75\%} - \phi_{25\%}))$ (Folk and Ward 1957)

Skewness $(\phi_{16\%} + \phi_{84\%} - 2 * \phi_{50\%}) / (2 * (\phi_{84\%} - \phi_{16\%})) + (\phi_{5\%} + \phi_{95\%} - 2 * \phi_{50\%}) / (2 * (\phi_{95\%} - \phi_{5\%}))$ (Folk and Ward 1957)

Uniformity Coefficient $(d_{60\%} / d_{10\%})$ (dgf-Bulletin 1988)

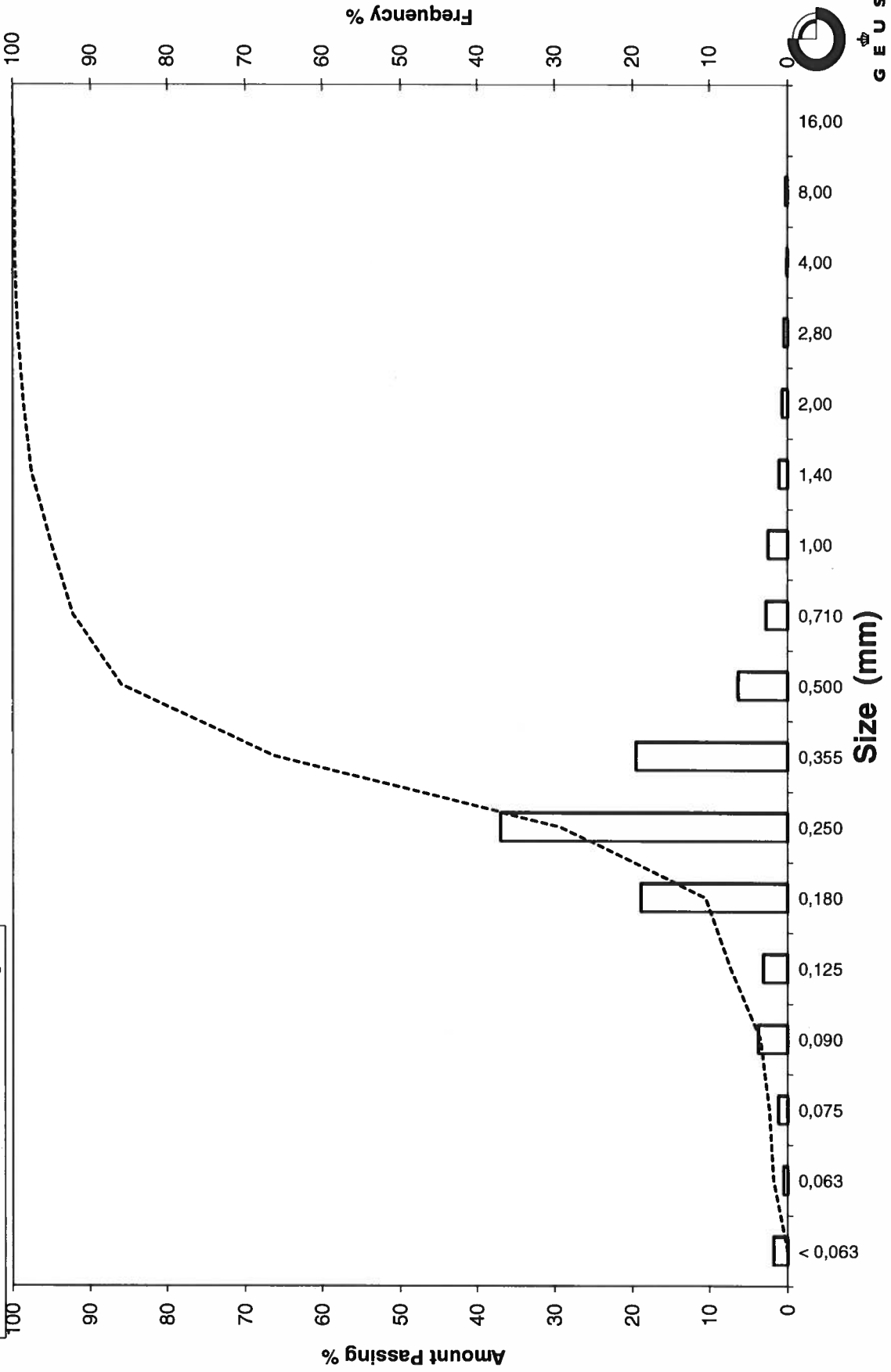
Mean, sorting, skewness and kurtosis are based on "Amount in sieve". Uniformity coefficient is based on "Amount passing".

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Grain Size Distribution

Sample Id: Løn B-1B_53, 400-420

Frequency Percent
 Cumulated Amount Passing



Bilag C1.

HAPS positioner og sedimentbeskrivelse jf. WSP prøvetagning

| Prøve no. | Y UTM 32N | X UTM 32N | Y d.d WGS 84 | X d.d WGS 84 | Dybde (m) | Sedimentbeskrivelse |
|-----------|--------------|--------------|-----------------|-----------------|--------------|---|
| LON_B_S01 | 6382740 | 528450 | 57.58618 | 9.47584 | 23.8 | SAND, fint - mellem, velsorteret |
| LON_B_S02 | 6382350 | 528450 | 57.58268 | 9.47579 | 26 | SAND, meget fint - fint, velsorteret |
| LON_B_S03 | 6382347 | 527841 | 57.58269 | 9.46561 | 25.8 | SAND, meget fint, sv. Siltet, velsorteret |
| LON_B_S04 | 6381700 | 527150 | 57.57692 | 9.45398 | 23.8 | SAND, fint - groft, sv. Gruset, velsorteret, nedad grovende |
| LON_B_S05 | 6381700 | 527800 | 57.57688 | 9.46485 | 23.4 | SAND, mellem - groft, usorteret |
| LON_B_S06 | 6381701 | 528344 | 57.57686 | 9.47395 | 23.2 | SAND, fint - mellem, velsorteret, nedad grovende |
| LON_B_S07 | 6381700 | 529100 | 57.5768 | 9.48658 | 21.5 | SAND, fint - groft, usorteret |
| LON_B_S08 | 6381045 | 529423 | 57.5709 | 9.4919 | 24.5 | SAND, fint - groft, sv. siltet i top, velsorteret, nedad grovende |
| LON_B_S09 | 6381050 | 528450 | 57.571 | 9.47564 | 27.6 | SAND, fint - mellem, velsorteret |
| LON_B_S10 | 6381050 | 527800 | 57.57104 | 9.46477 | 22.4 | SAND, mellem - groft, usorteret |
| LON_B_S11 | 6381050 | 527150 | 57.57108 | 9.45391 | 22.5 | SAND, mellem, velsorteret |
| LON_B_S12 | 6381050 | 526500 | 57.57112 | 9.44304 | 25 | SAND, fint - mellem, velsorteret |
| LON_B_S13 | 6380876 | 525846 | 57.5696 | 9.43208 | 23.7 | SAND, meget fint - fint, sv. Siltet |
| LON_B_S14 | 6380400 | 525200 | 57.56536 | 9.42124 | 22.5 | SAND, fint - mellem, bund siltet ler/gytje, lagdeling |
| LON_B_S15 | 6380400 | 525850 | 57.56532 | 9.4321 | 23.5 | SAND, mellem, velsorteret |
| LON_B_S16 | 6380400 | 526500 | 57.56528 | 9.44297 | 23.5 | SAND, mellem - groft, sorteret |
| LON_B_S17 | 6380397 | 527195 | 57.56522 | 9.45459 | 24.3 | SAND, mellem, velsorteret |
| LON_B_S18 | 6380400 | 527800 | 57.56521 | 9.4647 | 28.2 | SAND, meget fint - mellem, siltet, usorteret |
| LON_B_S19 | 6380401 | 528450 | 57.56517 | 9.47556 | 26.5 | SAND, fint - mellem, velsorteret |
| LON_B_S20 | 6380400 | 529100 | 57.56512 | 9.48643 | 23.3 | SAND, fint - mellem, velsorteret |
| LON_B_S21 | 6380085 | 529474 | 57.56227 | 9.49264 | 23.2 | SAND, fint - mellem, sv. Siltet, sorteret |
| LON_B_S22 | 6379751 | 529100 | 57.55929 | 9.48635 | 22.9 | SAND, fint - mellem, velsorteret |
| LON_B_S23 | 6379750 | 528450 | 57.55933 | 9.47549 | 23.4 | SAND, mellem - groft, sorteret |
| LON_B_S24 | 6379750 | 527800 | 57.55937 | 9.46463 | 23.9 | SAND, mellem, velsorteret |
| LON_B_S25 | 6379750 | 527150 | 57.55941 | 9.45376 | 24.9 | SAND, fint - mellem, sv. siltet top, sorteret, nedad grovende |
| LON_B_S26 | 6379751 | 526500 | 57.55945 | 9.4429 | 25.9 | SAND, fint - mellem, velsorteret |
| LON_B_S27 | 6379750 | 525850 | 57.55948 | 9.43204 | 23.6 | SAND, mellem - meget groft, sorteret |
| LON_B_S28 | 6379750 | 525241 | 57.55952 | 9.42185 | 27.3 | GRUS, fint grus og groft sand, usorteret |

| | | | | | | |
|-----------|---------|--------|----------|---------|------|---|
| LON_B_S29 | 6379751 | 524550 | 57.55956 | 9.41031 | 23 | SAND, mellem - groft, sorteret |
| LON_B_S30 | 6379100 | 524550 | 57.55372 | 9.41024 | 23.9 | SAND, meget fint - mellem, sv. Siltet, usortet |
| LON_B_S31 | 6379100 | 525200 | 57.55368 | 9.4211 | 23.6 | SAND, fint - mellem, velsortet |
| LON_B_S32 | 6379100 | 525850 | 57.55364 | 9.43197 | 24.6 | SAND, fint - mellem, velsortet |
| LON_B_S33 | 6379100 | 526500 | 57.55361 | 9.44283 | 23.8 | SAND, fint - mellem, sv. Siltet, sorteret, nedad grovende |
| LON_B_S34 | 6379100 | 527150 | 57.55357 | 9.45369 | 24.5 | SAND, fint - mellem, velsortet |
| LON_B_S35 | 6379100 | 527800 | 57.55353 | 9.46455 | 24.8 | SAND, mellem - groft, usortet |
| LON_B_S36 | 6379101 | 528358 | 57.5535 | 9.47388 | 23.5 | SAND, mellem - groft, sorteret |
| LON_B_S37 | 6379100 | 529100 | 57.55345 | 9.48627 | 22 | SAND, fint - mellem, velsortet |
| LON_B_S38 | 6378744 | 529521 | 57.55022 | 9.49327 | 21.2 | SAND, mellem - groft, sorteret |
| LON_B_S39 | 6378451 | 529100 | 57.54762 | 9.4862 | 23.6 | SAND, fint - groft, sorteret, nedad grovende |
| LON_B_S40 | 6378451 | 528450 | 57.54766 | 9.47534 | 22.6 | SAND, mellem - meget groft, nedad grovende |
| LON_B_S41 | 6378450 | 527800 | 57.54769 | 9.46448 | 23.6 | SAND, fint - groft, usortet |
| LON_B_S42 | 6378450 | 527150 | 57.54773 | 9.45362 | 25.3 | SAND, fint-mellem (top 10cm)/siltet ler m org. Mat, lagdeling |
| LON_B_S43 | 6378450 | 526500 | 57.54777 | 9.44276 | 23.2 | SAND, mellem, velsortet |
| LON_B_S44 | 6378450 | 525823 | 57.54781 | 9.43145 | 24.6 | SAND, mellem, velsortet |
| LON_B_S45 | 6378450 | 525200 | 57.54784 | 9.42104 | 24 | SAND, mellem, velsortet |
| LON_B_S46 | 6377800 | 525850 | 57.54197 | 9.43183 | 26.5 | SAND, fint - mellem, sv siltet top, usortet, nedad grovende |
| LON_B_S47 | 6377800 | 526500 | 57.54193 | 9.44269 | 24.4 | SAND, fint - groft, velsortet, nedad grovende |
| LON_B_S48 | 6377800 | 527219 | 57.54189 | 9.4547 | 23.4 | SAND, mellem - meget groft, usortet |
| LON_B_S49 | 6377800 | 527801 | 57.54185 | 9.46442 | 21.7 | SAND, mellem - groft, usortet |
| LON_B_S50 | 6377800 | 528451 | 57.54181 | 9.47528 | 22.1 | SAND, mellem - groft, usortet |
| LON_B_S51 | 6377800 | 529100 | 57.54177 | 9.48612 | 22.7 | SAND, fint - groft, usortet, nedad grovende |
| LON_B_S52 | 6377166 | 529596 | 57.53604 | 9.49432 | 21.7 | SAND, mellem, velsortet |
| LON_B_S53 | 6377150 | 529100 | 57.53593 | 9.48604 | 24.1 | SAND, meget fint - mellem, siltet, usortet |
| LON_B_S54 | 6377150 | 528450 | 57.53597 | 9.47518 | 24.4 | SAND, mellem - meget groft, gruset, usortet, nedad grovende |
| LON_B_S55 | 6377151 | 527801 | 57.53602 | 9.46434 | 20.3 | SAND, mellem - groft, gruset |
| LON_B_S56 | 6376862 | 527800 | 57.53343 | 9.4643 | 22.2 | SAND, fint - groft, nedad grovende |
| LON_B_S57 | 6377150 | 527151 | 57.53605 | 9.45348 | 21.6 | SAND, mellem - groft, sv. Gruset |
| LON_B_S58 | 6377150 | 526534 | 57.53609 | 9.44318 | 23.6 | SAND, mellem - groft, sv. Gruset, nedad grovende |
| LON_B_S59 | 6377149 | 526044 | 57.53611 | 9.435 | 23 | SAND, fint - mellem, velsortet |
| LON_B_S60 | 6376630 | 526500 | 57.53142 | 9.44256 | 23.8 | SAND, mellem - groft, velsortet |
| | | | | | | |

| Fase IA HAPS prøver beliggende i Fase IB område: | | | | | | |
|--|---------|--------|----------|---------|------|--|
| 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_28 | 6381001 | 528875 | 57.57054 | 9.48274 | 22.1 | SAND, fint-ml., sorteret, skalfragmenter, gråt |
| Løn_IA_HAPS_31 | 6382247 | 529142 | 57.58171 | 9.48735 | 18.4 | SAND, fint-ml., sorteret, skalfragmenter, gråbrunt |

Bilag C2:**HAPS analyseresultater**

| Info | | Fysisk | | | | | Kemisk | |
|-----------|-----------|-------------|-------------|-------------|-----------|--------------------------|----------------------------|-----------------|
| Prøvemrk. | Prøvenr. | D10 [mm] | D50 [mm] | D60 [mm] | U=D60/D10 | Finstof <0.125 mm (%) | Tørstof- indhold (%) | Glødetab (%) |
| LON_B_S01 | 260654/20 | 0.27 | 0.42 | 0.46 | 1.70 | 0.09 | 85.70 | 0.20 |
| LON_B_S02 | 260655/20 | 0.19 | 0.35 | 0.35 | 1.85 | 0.63 | 83.20 | 0.40 |
| LON_B_S03 | 260656/20 | 0.17 | 0.33 | 0.37 | 2.21 | 1.85 | 82.80 | 0.50 |
| LON_B_S04 | 260657/20 | 0.27 | 0.41 | 0.41 | 1.52 | 0.23 | 86.20 | 0.30 |
| LON_B_S05 | 260658/20 | 0.28 | 0.53 | 0.69 | 2.47 | 0.32 | 86.00 | 0.30 |
| LON_B_S06 | 260659/20 | 0.22 | 0.89 | 2.33 | 10.78 | 0.52 | 83.90 | 0.30 |
| LON_B_S07 | 260660/20 | 0.28 | 0.49 | 0.61 | 2.13 | 0.33 | 86.80 | 0.20 |
| LON_B_S08 | 260661/20 | 0.20 | 0.39 | 0.42 | 2.14 | 2.34 | 78.40 | 1.10 |
| LON_B_S09 | 260662/20 | 0.17 | 0.37 | 0.41 | 2.34 | 5.32 | 85.50 | 0.40 |
| LON_B_S10 | 260663/20 | 0.31 | 0.64 | 0.74 | 2.34 | 0.23 | 84.10 | 0.30 |
| LON_B_S11 | 260664/20 | 0.22 | 0.37 | 0.40 | 1.81 | 0.79 | 82.90 | 0.20 |
| LON_B_S12 | 260665/20 | 0.21 | 0.36 | 0.39 | 1.87 | 1.19 | 81.20 | 0.20 |
| LON_B_S13 | 260666/20 | 0.20 | 0.35 | 0.38 | 1.90 | 1.19 | 81.70 | 0.40 |
| LON_B_S14 | 260667/20 | 0.24 | 0.36 | 0.39 | 1.62 | 2.25 | 83.10 | 0.50 |
| LON_B_S15 | 260668/20 | 0.26 | 0.40 | 0.43 | 1.64 | 0.68 | 84.70 | 0.00 |
| LON_B_S16 | 260669/20 | 0.27 | 0.40 | 0.44 | 1.61 | 0.64 | 82.80 | 0.10 |
| LON_B_S17 | 260670/20 | 0.27 | 0.41 | 0.45 | 1.67 | 0.5 | 86.50 | 1.40 |
| LON_B_S18 | 260671/20 | 0.19 | 0.36 | 0.39 | 2.05 | 4.44 | 84.60 | 0.60 |
| LON_B_S19 | 260672/20 | 0.25 | 0.37 | 0.40 | 1.56 | 0.99 | 79.90 | 0.30 |
| LON_B_S20 | 260673/20 | 0.21 | 0.36 | 0.39 | 1.87 | 0.32 | 82.20 | 0.20 |
| LON_B_S21 | 260674/20 | 0.15 | 0.25 | 0.30 | 2.05 | 1.94 | 81.60 | 0.20 |
| LON_B_S22 | 260675/20 | 0.21 | 0.36 | 0.39 | 1.83 | 1.12 | 83.30 | 0.30 |
| LON_B_S23 | 260676/20 | 0.26 | 0.41 | 0.44 | 1.68 | 0.89 | 87.10 | 0.10 |
| LON_B_S24 | 260677/20 | 0.26 | 0.37 | 0.39 | 1.54 | 0.74 | 84.60 | 0.20 |
| LON_B_S25 | 260678/20 | 0.20 | 0.35 | 0.38 | 1.93 | 1.03 | 81.50 | 0.30 |
| LON_B_S26 | 260679/20 | 0.20 | 0.35 | 0.38 | 1.92 | 0.77 | 82.00 | 0.20 |
| LON_B_S27 | 260680/20 | 0.28 | 0.42 | 0.46 | 1.66 | 0.2 | 90.00 | 0.10 |
| LON_B_S28 | 260681/20 | 0.51 | 0.91 | 1.02 | 2.03 | 0.19 | 88.40 | 2.30 |
| LON_B_S29 | 260682/20 | 0.31 | 0.62 | 0.70 | 2.29 | 0.36 | 84.80 | 0.30 |
| LON_B_S30 | 260683/20 | 0.15 | 0.29 | 0.33 | 2.24 | 2.72 | 80.70 | 0.40 |
| LON_B_S31 | 260684/20 | 0.18 | 0.34 | 0.38 | 2.08 | 1.37 | 82.50 | 0.20 |
| LON_B_S32 | 260685/20 | 0.19 | 0.35 | 0.39 | 2.01 | 1.36 | 81.80 | 0.40 |
| LON_B_S33 | 260686/20 | 0.19 | 0.36 | 0.39 | 2.00 | 1.25 | 82.50 | 0.20 |
| LON_B_S34 | 260687/20 | 0.24 | 0.37 | 0.40 | 1.68 | 0.83 | 85.30 | 0.20 |
| LON_B_S35 | 260688/20 | 0.27 | 0.42 | 0.46 | 1.69 | 0.22 | 87.20 | 0.20 |
| LON_B_S36 | 260689/20 | 0.27 | 0.41 | 0.45 | 1.69 | 0.34 | 84.90 | 0.10 |
| LON_B_S37 | 260690/20 | 0.25 | 0.37 | 0.40 | 1.57 | 0.31 | 82.80 | 0.10 |
| LON_B_S38 | 260691/20 | 0.26 | 0.44 | 0.49 | 1.84 | 0.39 | 89.90 | 0.10 |
| LON_B_S39 | 260692/20 | 0.20 | 0.37 | 0.40 | 1.96 | 0.97 | 83.20 | 0.20 |
| LON_B_S40 | 260693/20 | 0.26 | 0.46 | 0.53 | 2.09 | 0.77 | 86.10 | 2.90 |
| LON_B_S41 | 260694/20 | 0.26 | 0.41 | 0.45 | 1.71 | 0.73 | 86.80 | 0.10 |
| LON_B_S42 | 260695/20 | 0.15 | 0.35 | 0.39 | 2.54 | 5.48 | 84.50 | 0.50 |
| LON_B_S43 | 260696/20 | 0.27 | 0.39 | 0.41 | 1.54 | 0.25 | 82.50 | 0.30 |

| Prøvemrk. | Prøvenr. | D10 [mm] | D50 [mm] | D60 [mm] | U=D60/D10 | Finstof <0.125 mm (%) | Tørstof- indhold (%) | Glødetab (%) |
|-----------|-----------|-------------|-------------|-------------|-----------|--------------------------|----------------------------|-----------------|
| LON_B_S44 | 260697/20 | 0.26 | 0.38 | 0.41 | 1.59 | 1.39 | 85.20 | 0.20 |
| LON_B_S45 | 260698/20 | 0.27 | 0.40 | 0.43 | 1.58 | 0.56 | 85.00 | 0.30 |
| LON_B_S46 | 260699/20 | 0.17 | 0.36 | 0.41 | 2.34 | 1.77 | 80.50 | 0.80 |
| LON_B_S47 | 260700/20 | 0.16 | 0.34 | 0.37 | 2.30 | 2.01 | 82.90 | 0.40 |
| LON_B_S48 | 260701/20 | 0.32 | 0.85 | 1.01 | 3.15 | 0.22 | 87.80 | 0.40 |
| LON_B_S49 | 260702/20 | 0.28 | 0.44 | 0.48 | 1.73 | 0.36 | 84.70 | 0.10 |
| LON_B_S50 | 260703/20 | 0.26 | 0.42 | 0.46 | 1.74 | 0.28 | 86.40 | 0.20 |
| LON_B_S51 | 260704/20 | 0.22 | 0.39 | 0.43 | 1.94 | 1.11 | 84.60 | 0.10 |
| LON_B_S52 | 260705/20 | 0.26 | 0.38 | 0.41 | 1.57 | 0.35 | 85.10 | 0.10 |
| LON_B_S53 | 260706/20 | 0.14 | 0.22 | 0.24 | 1.72 | 3.77 | 82.10 | 0.30 |
| LON_B_S54 | 260707/20 | 0.28 | 0.59 | 0.71 | 2.54 | 0.58 | 87.10 | 0.10 |
| LON_B_S55 | 260708/20 | 0.28 | 0.45 | 0.49 | 1.76 | 0.6 | 85.00 | 0.20 |
| LON_B_S56 | 260709/20 | 0.27 | 0.44 | 0.49 | 1.83 | 0.71 | 85.90 | 0.10 |
| LON_B_S57 | 260710/20 | 0.27 | 0.43 | 0.47 | 1.74 | 0.72 | 84.60 | 0.20 |
| LON_B_S58 | 260711/20 | 0.28 | 0.48 | 0.60 | 2.13 | 0.84 | 87.60 | 0.10 |
| LON_B_S59 | 260712/20 | 0.21 | 0.37 | 0.40 | 1.94 | 0.58 | 82.90 | 0.20 |
| LON_B_S60 | 260713/20 | 0.27 | 0.41 | 0.45 | 1.69 | 1.08 | 82.20 | 0.20 |

| Fase IA HAPS prøvetagninger beliggende i fase IB område | | | | | | | | |
|---|-----------|------|------|------|-------|-----|---|---|
| Løn_IA_HAPS_16 | 205138/20 | 0.13 | 0.20 | 0.21 | 1.57 | 3.5 | - | - |
| Løn_IA_HAPS_17 | 205139/20 | 0.14 | 0.23 | 0.25 | 1.77 | 3.3 | - | - |
| Løn_IA_HAPS_18 | 205140/20 | 0.15 | 0.29 | 0.34 | 2.28 | 3.1 | - | - |
| Løn_IA_HAPS_19 | 205141/20 | 0.23 | 4.81 | 6.38 | 28.32 | 1.7 | - | - |
| Løn_IA_HAPS_20 | 205142/20 | 0.28 | 0.59 | 0.73 | 2.60 | 0.6 | - | - |
| Løn_IA_HAPS_21 | 205143/20 | 0.14 | 0.23 | 0.26 | 1.82 | 1.4 | - | - |
| Løn_IA_HAPS_22 | 205144/20 | 0.19 | 0.38 | 0.42 | 2.15 | 1.6 | - | - |
| Løn_IA_HAPS_23 | 205145/20 | 0.14 | 0.20 | 0.22 | 1.61 | 3.5 | - | - |
| Løn_IA_HAPS_24 | 205146/20 | 0.26 | 0.42 | 0.46 | 1.72 | 1.1 | - | - |
| Løn_IA_HAPS_25 | 205147/20 | 0.27 | 0.58 | 0.68 | 2.49 | 0.9 | - | - |
| Løn_IA_HAPS_26 | 205148/20 | 0.23 | 0.39 | 0.42 | 1.80 | 0.8 | - | - |
| Løn_IA_HAPS_28 | 205150/20 | 0.15 | 0.32 | 0.36 | 2.45 | 5.5 | - | - |
| Løn_IA_HAPS_31 | 205153/20 | 0.16 | 0.32 | 0.36 | 2.22 | 0.8 | - | - |

Bilag D-1

ROV verifikationsdyk (WSP feltbeskrivelse)

| Punkt | Y UTM32N | X UTM32N | Y d.d (WGS 84) | X d.d (WGS 84) | Dybde (m) | Primær Substrat- type | Sekundær substrat- type | Substratbeskrivelse |
|-----------|-------------|-------------|-------------------|-------------------|--------------|-----------------------------|-------------------------------|--|
| LON_B_R01 | 6376783 | 526090 | 57.53282 | 9.43573 | 22.6 | 2a | 0 | 2a sand og grusbund. Bølgeribber på 10-15 cm højde og mellemrum på 30-40 cm. Skaller og grus, med småsten i trugene. Ikke meget flora eller fauna at se. |
| LON_B_R02 | 6376791 | 528348 | 57.53275 | 9.47344 | 25.2 | 2b | 3 | Stenet substrat, med sand og grus mellem stenene. Varierende stendækning af en type 2b - type 3. |
| LON_B_R03 | 6376893 | 529486 | 57.5336 | 9.49246 | 22 | 1b | 0 | 1b sandbund med bølgeribber, og stedvist grus og skaller i trugene. |
| LON_B_R04 | 6377945 | 529300 | 57.54306 | 9.48948 | 22 | 1b | 0 | 1b sandbund med skaller, og grovere sand og grus i trugene. Bunden struktur er domineret af både større og mindre bølgeribber. |
| LON_B_R05 | 6377874 | 527267 | 57.54255 | 9.45551 | 24 | 1b | 0 | 1b sandbund, med grovere sand, grus og skaller i trugene af 10 cm høje bølgeribber |
| LON_B_R06 | 6378281 | 525963 | 57.54628 | 9.43377 | 22 | 1b | 0 | 1b sandbund med bølgeribber, med groft sand, grys og skalfragmenter i trugene. |
| LON_B_R07 | 6378890 | 524866 | 57.55181 | 9.4155 | 22 | 1b | 0 | 1b fast sandbund med bølgeribber, fint-mellem sand og spredte skaller. |
| LON_B_R08 | 6378904 | 527635 | 57.55178 | 9.46177 | 25 | 1b | 0 | 1b ren sandbund med groft sand, og med grus og skaller i trugene. Bølgeribber 10 cm høje. |
| LON_B_R09 | 6379143 | 529908 | 57.55378 | 9.49978 | 21 | 1b | 0 | 1b sandbund med bølgeribber med groft sand, og med skaller og grus i trugene |
| LON_B_R10 | 6379437 | 527337 | 57.55658 | 9.45685 | 23 | 1b | 0 | 1b fast sandbund med bølgeribber på 10 cm højde og megaribber på 30 cm. højde |
| LON_B_R11 | 6379534 | 525767 | 57.55755 | 9.43063 | 22.5 | 1b | 0 | 1b fast sandbund med bølgeribber på 10 cm i højde. Mest fint-mellem med lidt grus og skaller i trugene |
| LON_B_R12 | 6379754 | 523899 | 57.55963 | 9.39943 | 24 | 1b | 0 | 1b fast sandbund med bølgeribber på 10 cm højde. Skaller i trugene |
| LON_B_R13 | 6380565 | 526042 | 57.56679 | 9.43533 | 22 | 1b | 0 | 1b sandbund med bølgeribber af mellem-groft sand. Grus og skaller i trugene |

| | | | | | | | | |
|-----------|---------|--------|----------|---------|------|----|---|--|
| LON_B_R14 | 6380751 | 528036 | 57.56834 | 9.46868 | 27 | 2a | 0 | 2a fast, gruset sandbund uden bølgeribber, med spredte skaller og få sten |
| LON_B_R15 | 6380046 | 528787 | 57.56196 | 9.48116 | 22.5 | 1b | 0 | 1b sandbund af mellem-groft sand med bølgeribber. Skaller, skalfragmenter og grus i trugene. |
| LON_B_R16 | 6380598 | 528920 | 57.56691 | 9.48344 | 25 | 1b | 0 | 1b fast sandbund med bølgeribber af fint-mellem sand med skalfragmenter |
| LON_B_R17 | 6381598 | 529507 | 57.57586 | 9.49338 | 25 | 1b | 0 | 1b fast sandbund med bølgeribber af mellem sand, med grus og skaller i trugene. Lokalt ler i ribbetrug |
| LON_B_R18 | 6381843 | 528278 | 57.57814 | 9.47286 | 22.5 | 1b | 0 | 1b fast sandbund med bølgeribber. Grus, småsten og skaller i trugene |
| LON_B_R19 | 6381670 | 526295 | 57.5767 | 9.43968 | 24 | 1b | 0 | 1b fast sandbund, med bølgeribber på 8 cm højde. Mellem-groft sand i bølgetoppene og groft sand, grus og skaller i trugene. |
| LON_B_R20 | 6383073 | 528423 | 57.58918 | 9.47543 | 26 | 1b | 0 | 1b sandbund med bølgeribber, af fint-mellem sand, samt skaller og grus i trugene. Bølgeribber 25 cm i bølgelængde og 8cm i bølgehøjde. |