

GEOLOGI FOR SAMFUNNET

GEOLOGY FOR SOCIETY



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<p>Sammendrag:</p> <p>NGU har sammen med Nordnorsk Fjellovervåkning gjort borehullslogging med optisk televiwer i det oppsprukne fjellpartiet Jettan på Nordnesfjellet i Kåfjord kommune i Troms. Området er under overvåkning da det er fare for ras ned i Lyngenfjorden. For å kunne kartlegge størrelsen på det ustabile fjellpartiet er det boret et 200 m dypt borehull hvor det er utført logging med optisk televiwer. På grunn av sterk oppsprekking måtte boring og utstøping av hullet forgå etappevis og logging ble gjort tilsvarende.</p> <p>Rapporten presenterer ulike foliasjons- og sprekkestatistikker basert på prosesserte optisk televiwer-data fra borehullet.</p> <p>Foliasjonens retning og vinkel er beregnet langs hele hullet. I de øverste 40 m er fallretningen tilnærmet mot vest, dvs. ned mot fjorden. Fallvinkelen er 10 - 20 ° og foliasjonsparallele sprekker vil øke faren for utrasing. Under 40 m varierer fallretningen mye mens fallvinkelen er liten og konstant (0 – 15 °).</p> <p>Sprekkekartlegging med optisk televiwer viser mange foliasjonsparallele sprekker i området 20 – 40 m dyp. Flere oppknuste partier er kartlagt som ved 36 - 41 m. Partiet mellom 41 og 46 m er boret opp etter utstøping og tolkning av sprekker er vanskelig. Mulig struktur (sprekk) ved 45.8 m kan ha ugunstig fall og retning med hensyn til stabilitet. Under 40 m dyp har de fleste sprekker steilt fall (45-90°) mens sprekkenes fallretning varierer mye. Stedvis faller foliasjon og sprekkeretning sammen (130 – 150 m og 180 m), men generelt ser det ut til å være liten sammenheng mellom foliasjon sprekker. En sterkt oppknust sone opptrer ved 156.6 – 157.7 m dyp. Legger en foliasjon, sprekkeretninger og fjellsidens retning til grunn, ut fra de tolkninger som er gjort av OPTV-data, kan det være dårligst stabilitet i partiet over 46 m.</p>			
Emneord: Geofysikk	Borehullslogging	Optisk televiwer	
		Fagrapport	

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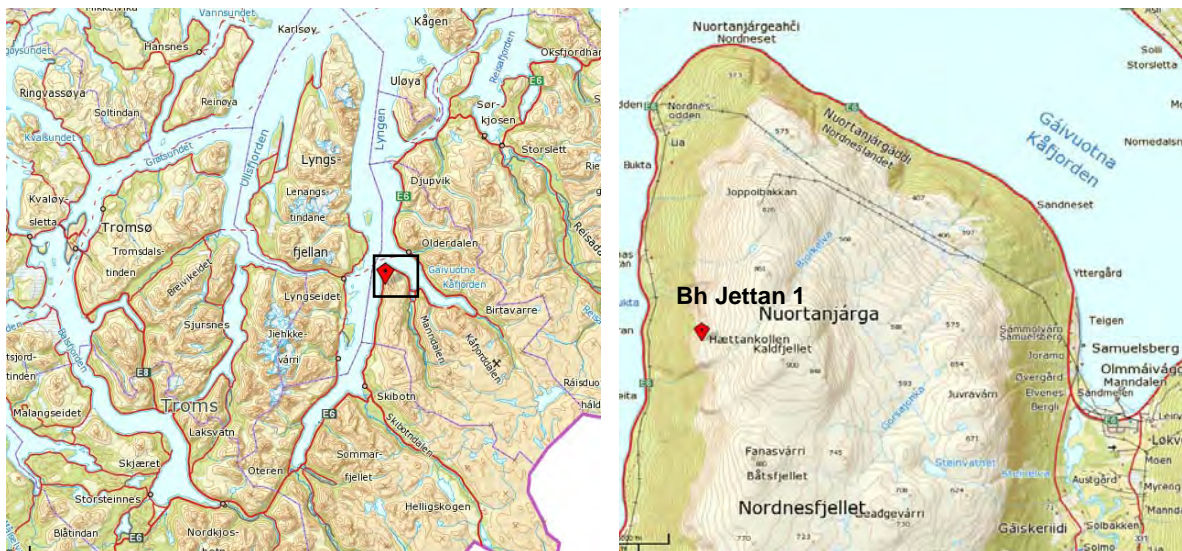
1. INNLEDNING

NGU har sammen med Nordnorsk Fjellovervåkning gjort borehullslogging med optisk televiwer i et 200 m dypt borehull i det ustabile fjellpartiet på Nordnesfjellet i Kåfjord kommune, Troms. Hensikten var å kartlegge sprekker og sprekkesoner som kan ha betydning for fjellets stabilitet, samt å bidra til å kartlegge størrelsen av det ustabile partiet. På grunn av svært dårlig fjell med mye oppsprekking foregikk boring og logging i flere etapper. Flere partier måtte støpes for å stabilisere fjellet. Det er logget ned til 200 m dyp. NGU har tidligere gjort 2D resistivetsmålinger og georadar (Tønnesen & Dalsegg 2004) og 2D resistivetsmålinger og refraksjonsseismikk (Rønning et al 2008) i området.

Øvre del av hullet, 0 - 41 m, er logget av Nordnorsk Fjellovervåkning og Åknes/Tafjord Beredskap med deres televiwerer i august 2012. NGU logget ned til 160 m 11.09.2012, utført av Harald Elvebakk med assistanse fra Nordnorsk Fjellovervåkning. Bernt Lyngstad, Nordnorsk Fjellovervåkning, logget ned til 200 m med NGUs televiwerer 24.09.2012. Data fra begge televiwerere er prosessert av Harald Elvebakk, NGU.

2. MÅLEOMRÅDE OG BOREHULL

Figur 1 viser oversiktskart med borehullet Jettan 1 markert. Figur 2 viser et bilde med borehull og baksprekk markert. Bergartene i området består av glimmerskifre med innslag av dolomitt- og kalkspatmarmor (Zwaan 1988).



Figur 1. Oversiktskart som viser plassering av borehullet på Jettan, Nordnesfjellet.



Figur 2. Bilde fra boreplass med baksprekk.

Borehullets lengde er 200 m og borehulldiameter er 98 mm. Hullet er boret vertikalt. Casing går ned til 30 m. De øverste 41 m av hullet ble logget med ÅTB's televierer (Åknes/Tafjord Beredskap). Disse data er benyttet til tolkning ned til 41 m. NGU logget fra 30 m, men på det tidspunkt var det støpt ned til 46 m. På grunn av dette fikk en ikke tolkbare data mellom 41 og 46 m. Hullet var tørt.

3. MÅLEMETODE OG UTFØRELSE

Det er benyttet loggeutstyr produsert av Robertson Geologging ltd.
(<http://www.geologging.com>).

Metodebeskrivelse for optisk televierer ligger på NGU's hjemmesider på følgende link:
<http://www.ngu.no/no/hm/Norges-geologi/Geofysikk/Borehullsgeofysikk/>

Optisk televierer filmer innvendig borehullsvegg kontinuerlig nedover med en pixelstørrelse på ca.1 x 1 mm. Fra opptaket kan en digitalisere sprekker og geologiske strukturer. Data

presenteres som sprekkestereogram, frekvenshistogram og rosedigram. Tabell 1 viser loggehastighet og samplingstetthet for optisk televiewer.

Tabell 1. Loggehastighet og samplingstetthet for optisk televiewer.

Målt parameter	Loggehastighet	Samplingstetthet
Borehullsavvik (televiewer)	1 m/min	1 m
Optisk televiewer	1 m/min	1 mm

4. RESULTATER

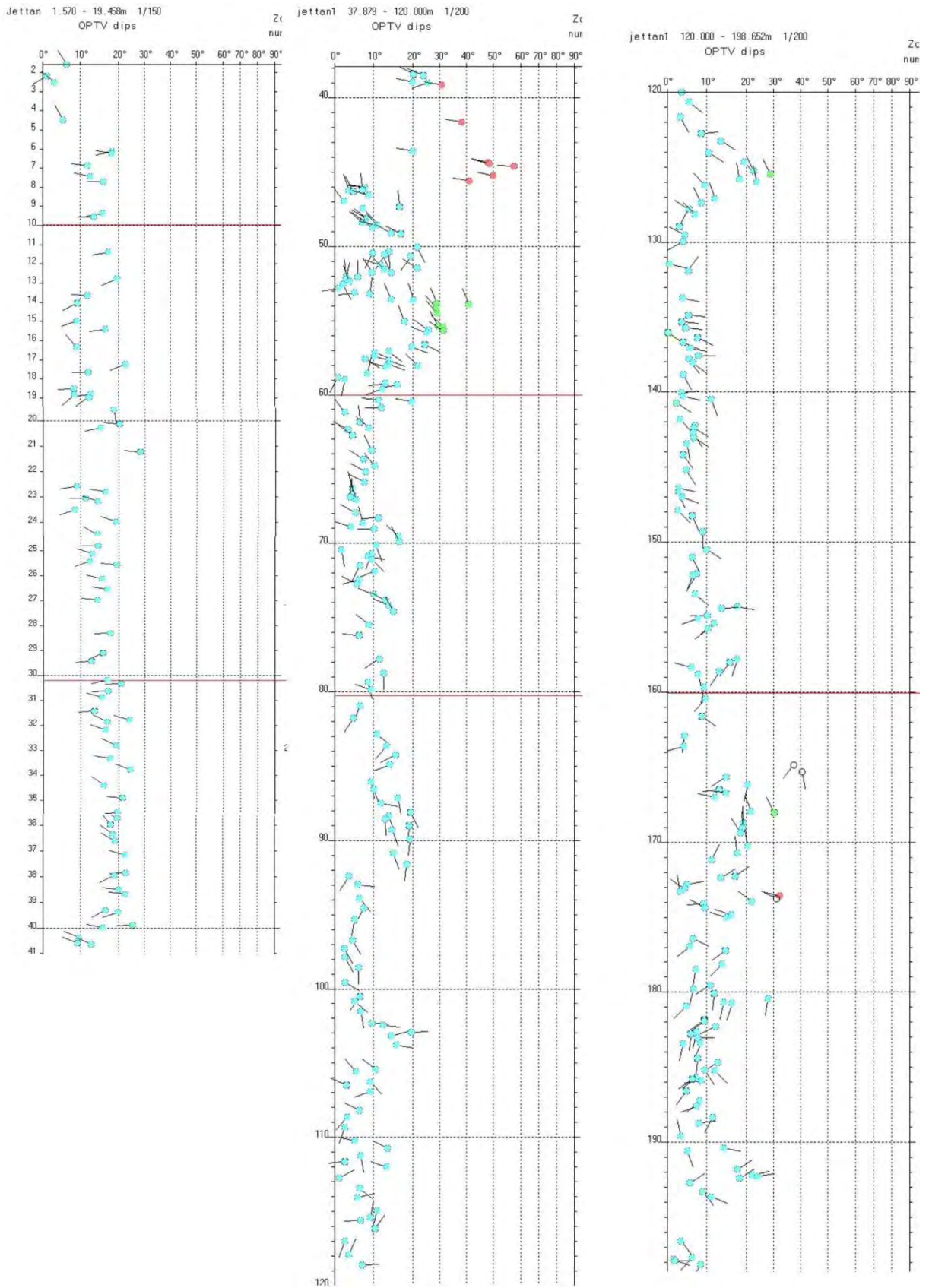
Det er i denne rapporten ikke gjort vurderinger av fjellets stabilitet ut fra det som vites om geologi, geologiske strukturer, oppsprekkingsmønster i dagen, kjernemateriale fra boringen og kartlagte bevegelser. Rapporten presenterer de målbare data en kan få fra OPTV.

Som nevnt foran ble det logget i flere perioder med to televiewere. På grunn av sterkt oppsprukket fjell der det var påkrevd med støping, måtte loggingen tilpasses boringens fremdrift.

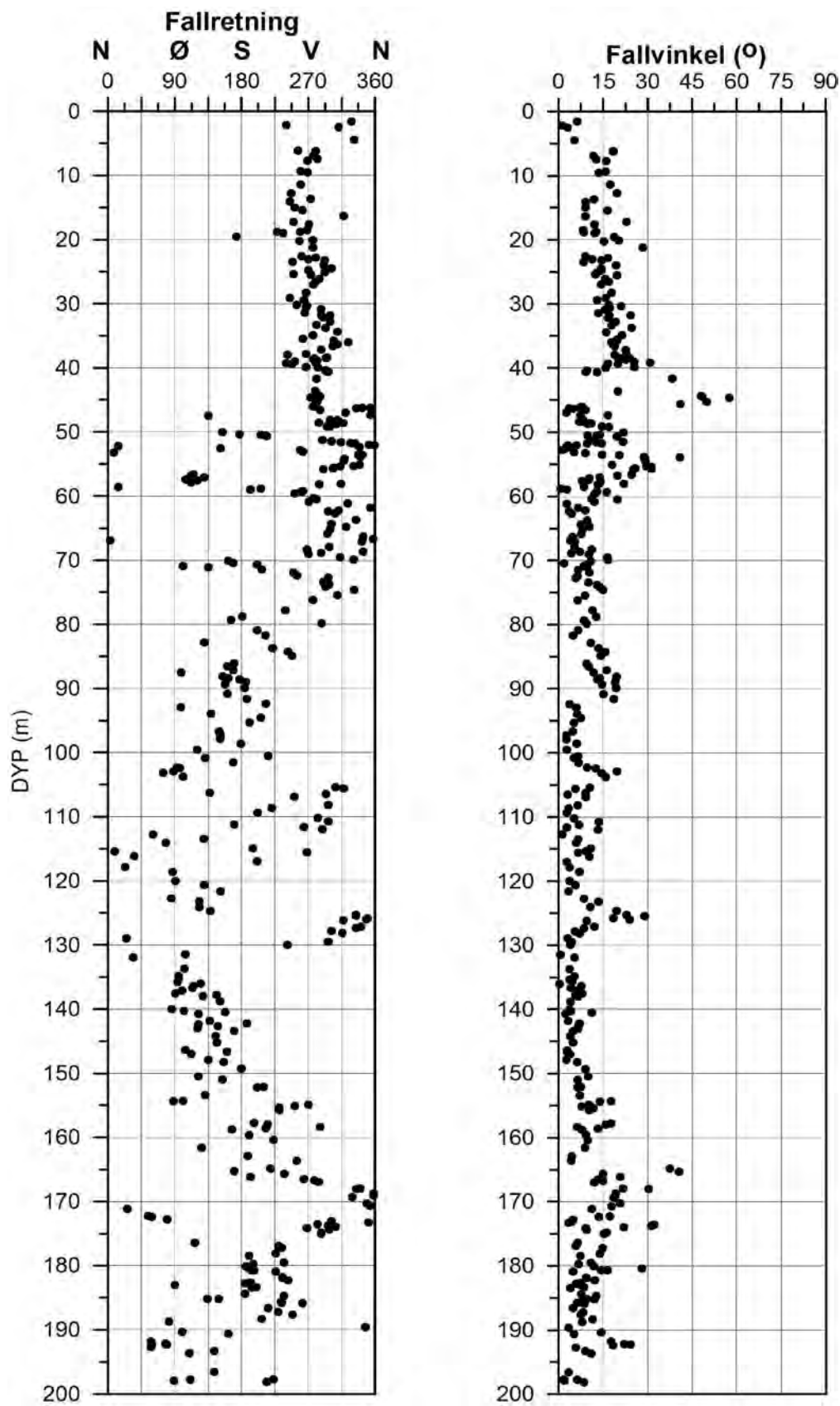
Foliasjonen (fallretning og fallvinkel) er presentert i tabell og i grafisk plott som viser variasjon av fallretning og fallvinkel nedover hullet. Alle sprekker og sprekkesoner er digitalisert med beregning av strøk og fall. Der det er mulig er det beregnet tykkelse (åpning) av sprekke. Prosesserte data er presentert som sprekkestereogram og sprekkefrekvenshistogram. Prosessert OPTV-logg for hele hullet er også presentert for å få et bedre og helhetlig bilde av oppsprekkingen nedover hullet (Databilag 4).

4.1 Beregnet foliasjon Jettan 1

Foliasjonens strøk, fallretning (strøk + 90°) og fallvinkel er beregnet langs hullet der det er tydelig foliasjon å se. Til dette er prosesseringsprogrammet til OPTV benyttet. Resultatet er vist i figur 3 som viser nålplott av alle digitaliserte foliasjonsretninger, der "nålene" peker i fallretning (vest til venstre) og nålens hode angir fall. De ulike fargene på pilene fremkommer ved inndeling av beregnet foliasjon i hovedgrupper med noenlunde samme fall og fallretning. Hver gruppe får sin farge. Dette brukes mest i sprekkekartlegging for å fremstille sprekkeretninger i sprekkestereogram. Figur 4 viser de samme data plottet i XY-plott med hhv. fallretning og fallvinkel plottet mot hulldyp. Både figur 3 og 4 viser entydig fall mot vest ned til ca 45 m dyp. Fallvinkelen varierer lite, 10 - 20°. Fallretning er ned mot Lyngenfjorden noe som er ugunstig ved foliasjonsparallele sprekker. Mellom 41 og 47 m er det logget etter støping og utboring, men mellom sprekker fylt med sement kan en flere steder se tydelig foliasjon da det meste av sementen er boret ut. Fallvinkelen øker opp mot 60° og varierer noe ned til 60 m dyp. Under 60 m dyp er fallvinkelen for det meste under 15°. Under 45 m dyp er det stor spredning i foliasjonens fallretning. Noe av dette kan skyldes det slake fallet. Det skal liten endring i fallvinkelen før fallretningen snur motsatt. Uansett tyder det på at det har vært bevegelse ved slike endringer. Databilag 1 viser foliasjonsdata data i tabellform, mens databilag 2 viser OPTV-logg som viser hvor foliasjonen er målt.



Figur 3. Jettan 1. Diagram som viser foliasjonens fallretning og fallvinkel.

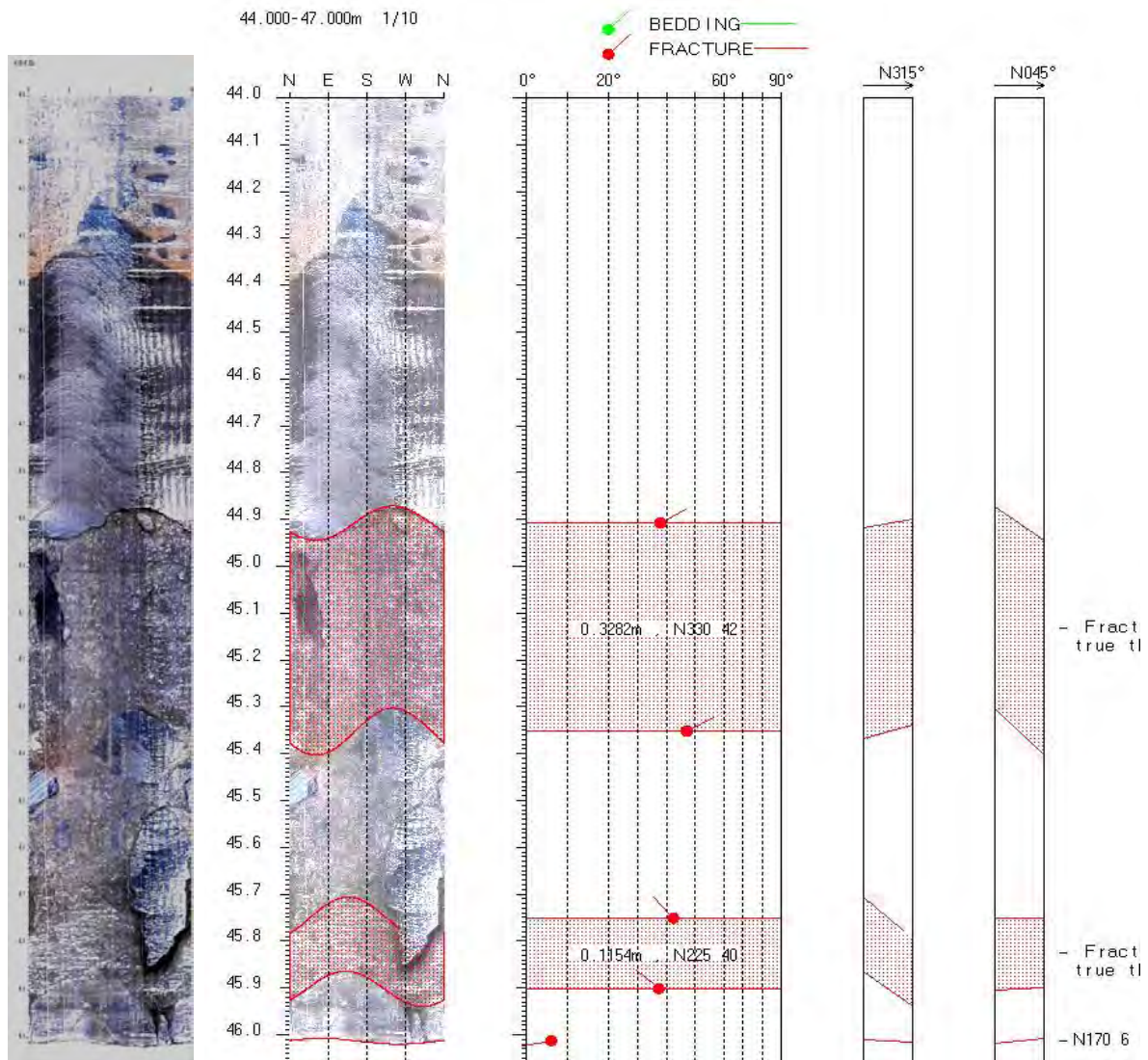


Figur 4. Jettan 1, Foliasjonens fallretning (venstre) og fallvinkel (høyre).

4.2 Sprekker

Som nevnt foran er de øverste 41 m filmet med Åknes/Taffjord Beredskapssenters televiever. Det ble gjort 4 opptak i dette området etter hvert som boring og støping ble utført i det oppsprukne fjellet. Filformatene som blir generert med denne televieveren kan ikke slås sammen til en sammenhengende fil. Det måtte derfor lages sprekkestereogram, sprekkefrekvenshistogram og rosedigram for hvert opptak.

Området 36 – 41 m er spesielt sterkt oppsprukket, se databilag 4. Når det gjelder detaljtolking av dette oppsprukne området må dette gjøres ved å studere bildene da ikke alle strukturer og sprekker lar seg digitalisere. Området 41 – 46 m er logget etter støping og oppboring. En ser tydelig sementfylte sprekker, hulrom i oppknust fjell. Det er vanskelig å gjøre en tolkning i dette området da noe av sementen ble igjen på borehullsveggen. Ved 44.9 – 45.4 m kan en se en trolig åpen sprekk som er fylt med sement, se figur 5. Denne har fall på 42° mot NNØ. Dersom dette er en riktig tolkning (antatt fylt sprekk) faller den innover fra fjorden. En mulig struktur ved 45.8 – 45.9 m har et fall på 40° mot NV noe som er ugunstig i forhold til fjellsidens fall og retning.



Figur 5. Tolkning av sementfylte sprekker mellom 44.9 og 45.9 m dyp.

Figur 6 og 7 viser sprekestereogram for observerte sprekker på OPTV-opptakene. Gjennomsnittlig strøk og fall for definerte sprekegrupper (farger) er vist i tabellene for hvert stereogram. I tillegg vises antall sprekker (n) og gjennomsnittlig sprekefrekvens (f). Databilag 2 viser detaljerte sprekeedata i tabellform. Figur 8 og 9 viser rosedigram med fallretning og fallvinkel.

Sprekefrekvenshistogram for observerte sprekker er vist i figur 10, 11 og 12. Høy sprekefrekvens er beregnet ved 26 – 32 m, 36 – 40 m, 58 – 64 m, 140 – 160 m, 165 – 168 m, 176 – 182 m og 193 – 198 m. Hvis en ser litt mer detaljert på de tolkede loggene i databilag 4 ser en at en del av sprekkene er tynne, tette sprekker som neppe har direkte betydning for fjellets stabilitet. Imidlertid er det også mange åpne sprekker, sprekesoner (knust fjell) som kan påvirke stabiliteten. I tillegg er mange sprekker fylt med sement (41 – 46 m, se foran) hvor det er vanskelig å gjøre en god tolkning.

Figur 12 viser en sammenstilling av fallretning og fallvinkel for foliasjon og sprekker. Områder der sprekkene har samme retning og fall som foliasjonen samt retning ned mot fjorden vil trolig ha størst fare for utrasing. På figur 13 er det mange foliasjonsparallele sprekker mellom 25 og 40 m dyp. I dette området er fallretning ned mot fjorden.

Under 40 m er det stor spredning både i retning og fallvinkel, men hovedfallretning er VNV, se rosedigrammene i figur 6. Det er også en tendens til større fallvinkel under 100 m dyp. Flesteparten av sprekkene har her et fall mellom 45 og 90 °. Foliasjonens fallvinkel er her tydelig mindre (0 -15 °) og konstant. Det er liten sammenheng mellom foliasjon og oppsprekking under 40 m dyp.

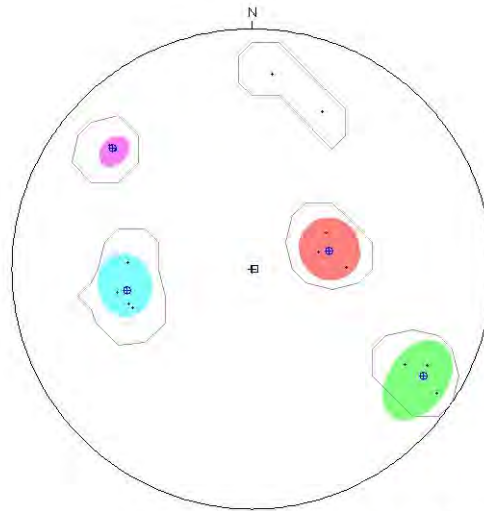
Mellom 140 og 158 m dyp finnes flere åpne sprekker/sprekesoner hvor den verste er ved 156.5 – 157.7 m dyp, se Databilag 4 side 31. Det er vanskelig å tolke nøyaktig retning og fall på denne sonen.

Zone 0, 2.358 - 19.458m
 Deviation 0.8 N108.5
 Mean dip format: strike and dip
 dip data sets
 OPTV dips

	mean dip	n	f
N350 44	N350 44	4	(0.33)
N167 27	N167 27	3	(0.20)
N212 73	N212 73	3	(0.57)
N041 66	N041 66	2	(0.30)

intersections

	N350 44	N167 27	N212 73	N041 66
N350 44		1 N169	28 N023	43 N066
N167 27	1 N169		22 N219	20 N212
N212 73	28 N023	22 N219		12 N216
N041 66	43 N066	20 N212	12 N216	



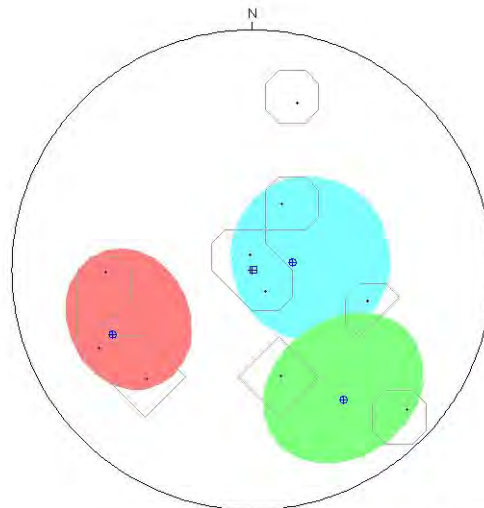
equal-area lower-hemisphere 0-90
 contour-levels 1. □ well axis
 ⊕ mean dip

Jetten
 Zone 0, 19.327 - 24.643m
 Deviation 0.3 N72.0
 Mean dip format: strike and dip
 dip data sets
 OPTV dips

	mean dip	n	f
N169 14	N169 14	4	0.77
N335 54	N335 54	3	0.96
N235 56	N235 56	2	(0.67)

intersections

	N169 14	N335 54	N235 56
N169 14		3 N337	14 N244
N335 54	3 N337		43 N017
N235 56	14 N244	43 N017	



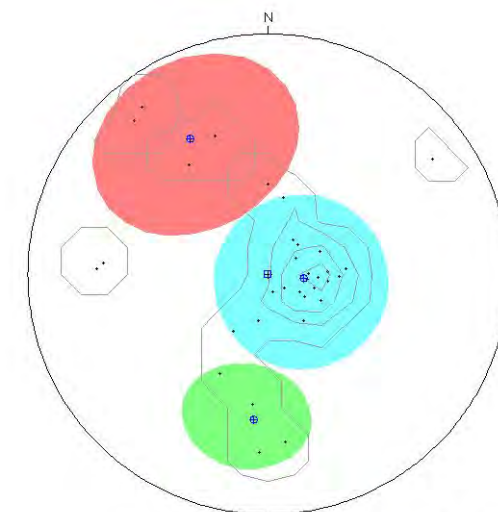
equal-area lower-hemisphere 0-90
 contour-levels 1. □ well axis
 ⊕ mean dip

Jetten
 Zone 0, 23.588 - 35.378m
 Deviation 0.4 N262.5
 Mean dip format: strike and dip
 dip data sets
 OPTV dips

	mean dip	n	f
N187 12	N187 12	21	1.82
N060 55	N060 55	5	(0.74)
N276 51	N276 51	4	(0.54)

intersections

	N187 12	N060 55	N276 51
N187 12		9 N234	12 N286
N060 55	9 N234		22 N077
N276 51	12 N286	22 N077	



equal-area lower-hemisphere 0-90
 contour-levels 1,3,6,10. □ well axis
 ⊕ mean dip

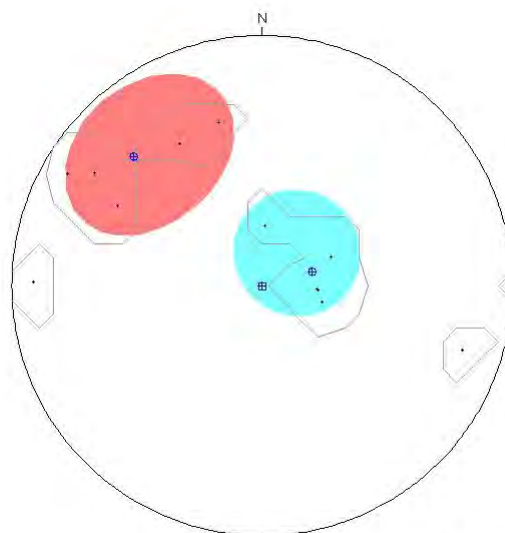
Figur 6. Sprekkestereogram, observerte sprekker i Jetten 1. Øverst 2 – 19 m dyp, i midten 19 – 24 m dyp og nederst 24 – 36 m dyp.

Jettan
 Zone 0, 35.923 - 41.038m
 Deviation 0.4 N209.1
 Mean dip format: strike and dip
 dip data sets
 OPTV dips

	mean dip	n	f
N165 17	N165 17	5	1.02
N045 62	N045 62	5	2.10

intersections

	N165 17	N045 62
N165 17		14 N218
N045 62	14 N218	



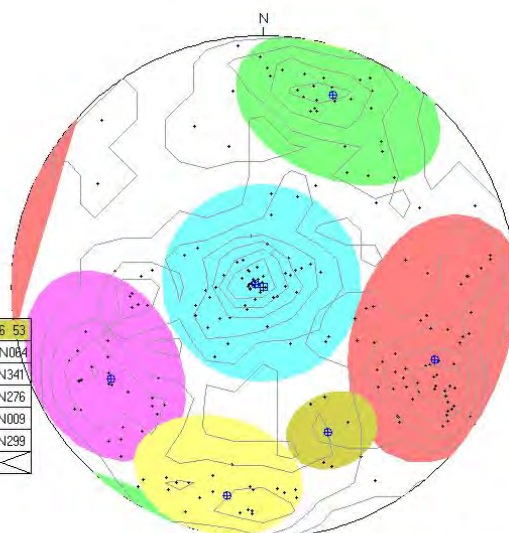
equal-area lower-hemisphere 0-90
 contour-levels 1.
 □ well axis
 ⊕ mean dip

jettan
 Zone 0, 36.894 - 198.865m
 Deviation 0.3 N239.0
 Mean dip format: strike and dip
 dip data sets
 OPTV dips

	mean dip	n	f
N019 3	N019 3	56	0.35
N203 63	N203 63	55	0.75
N110 70	N110 70	28	(0.50)
N329 60	N329 60	30	(0.36)
N280 73	N280 73	19	(0.39)
N246 53	N246 53	5	0.05

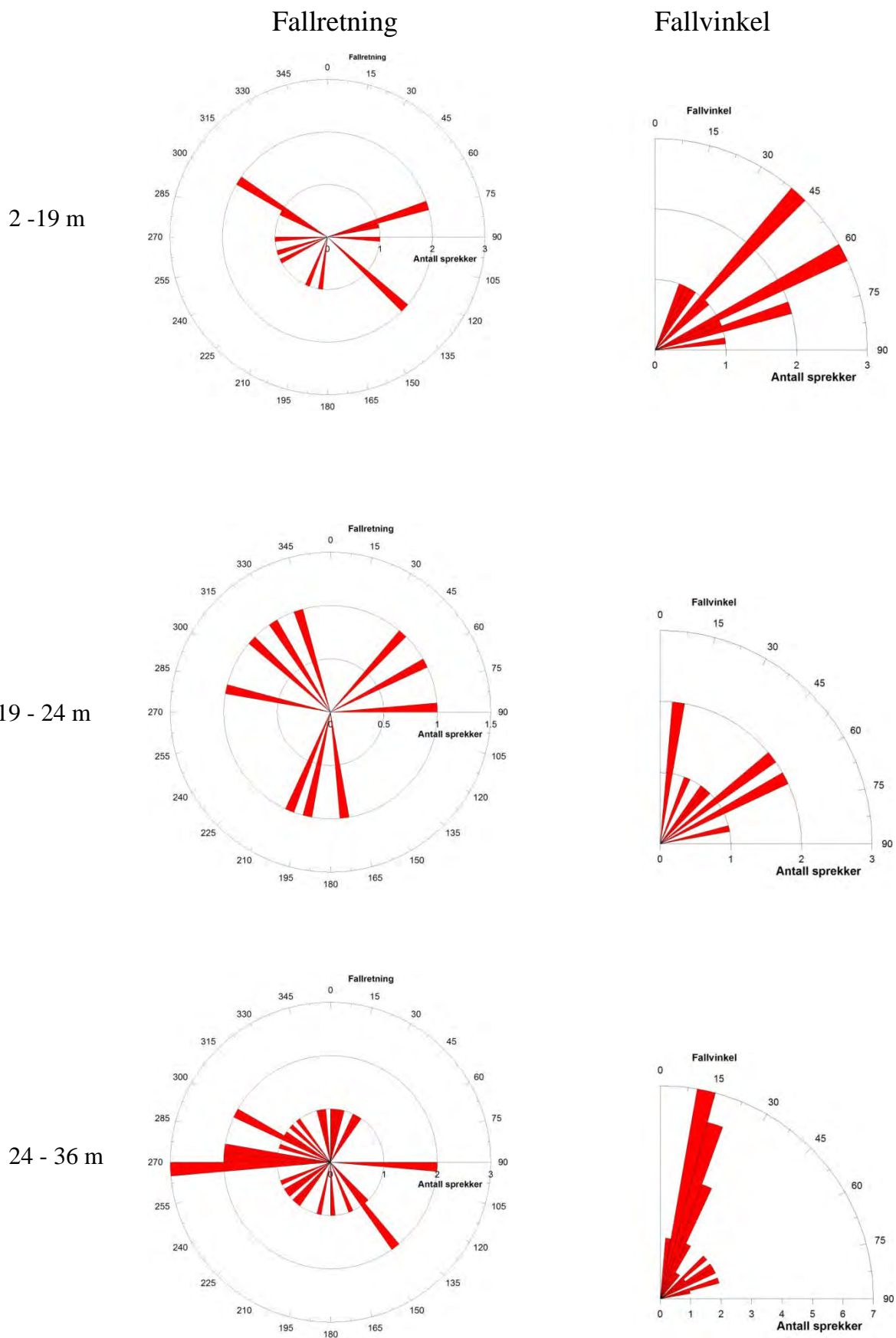
intersections

	N019 3	N203 63	N110 70	N329 60	N280 73	N246 53
N019 3		0 N023	3 N111	2 N148	3 N099	2 N064
N203 63	0 N023		57 N255	40 N358	61 N314	53 N341
N110 70	3 N111	57 N255		35 N125	15 N285	34 N276
N329 60	2 N148	40 N358	35 N125		60 N069	48 N009
N280 73	3 N099	61 N314	15 N285	60 N069		47 N299
N246 53	2 N064	53 N341	34 N276	48 N009	47 N299	



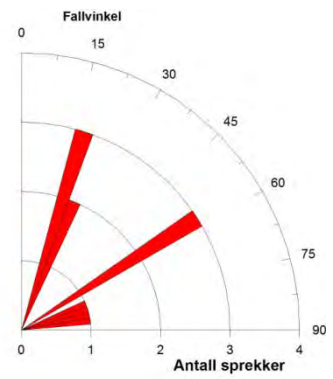
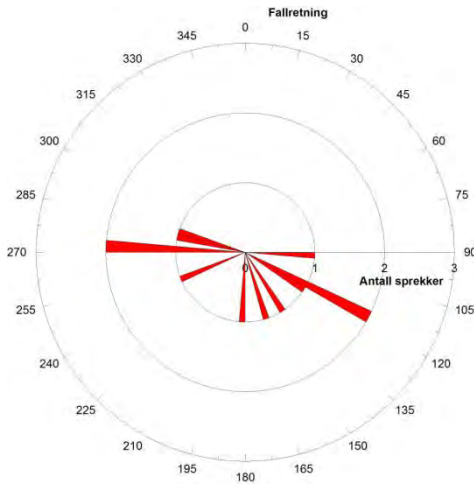
equal-area lower-hemisphere 0-90
 contour-levels 1,3,6,10,15,21.
 □ well axis
 ⊕ mean dip

Figur 7. Sprekkestereogram, observerte sprekker i Jettan 1. Øverst 36 – 41 m dyp, nederst 36 – 199 m dyp.

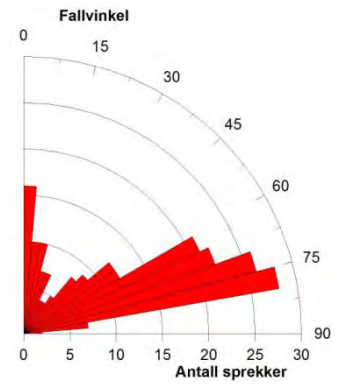
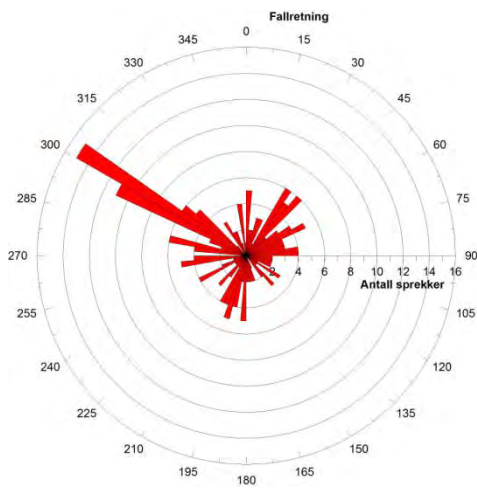


Figur 8. Rosediagram for observerte sprekker i Jettan 1, 2 – 36 m dyp. Strøketretning (venstre) og fallretning (høyre).

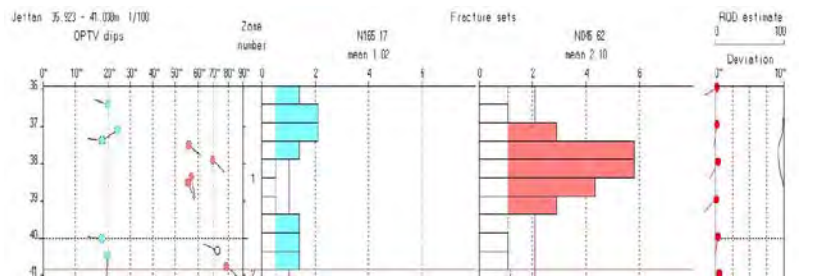
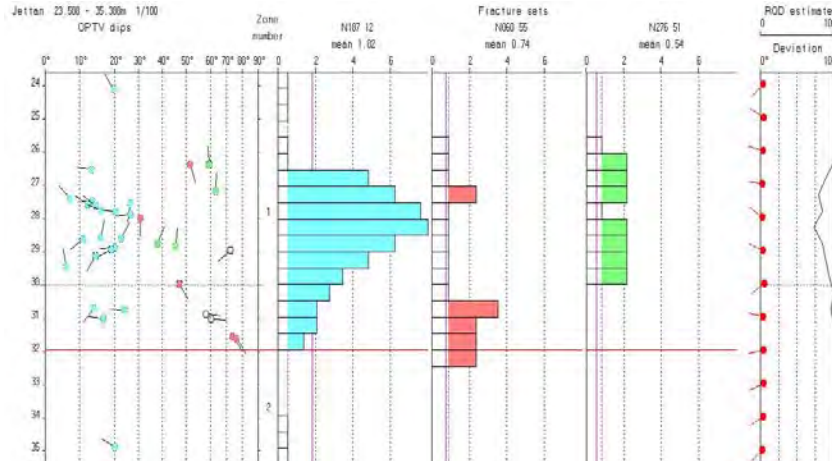
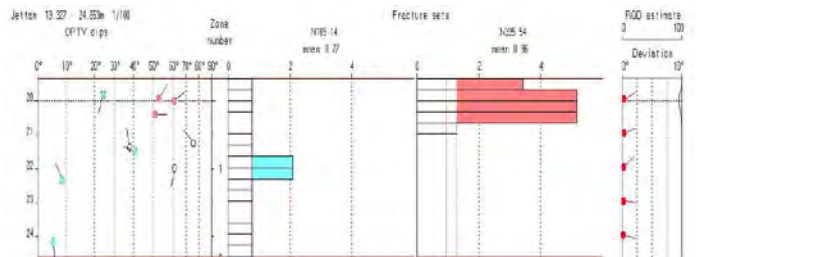
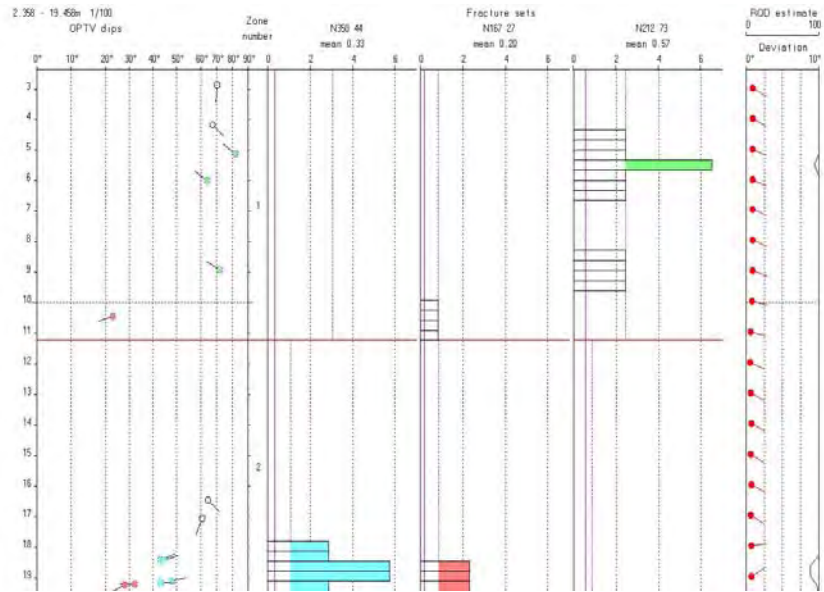
36 - 41 m



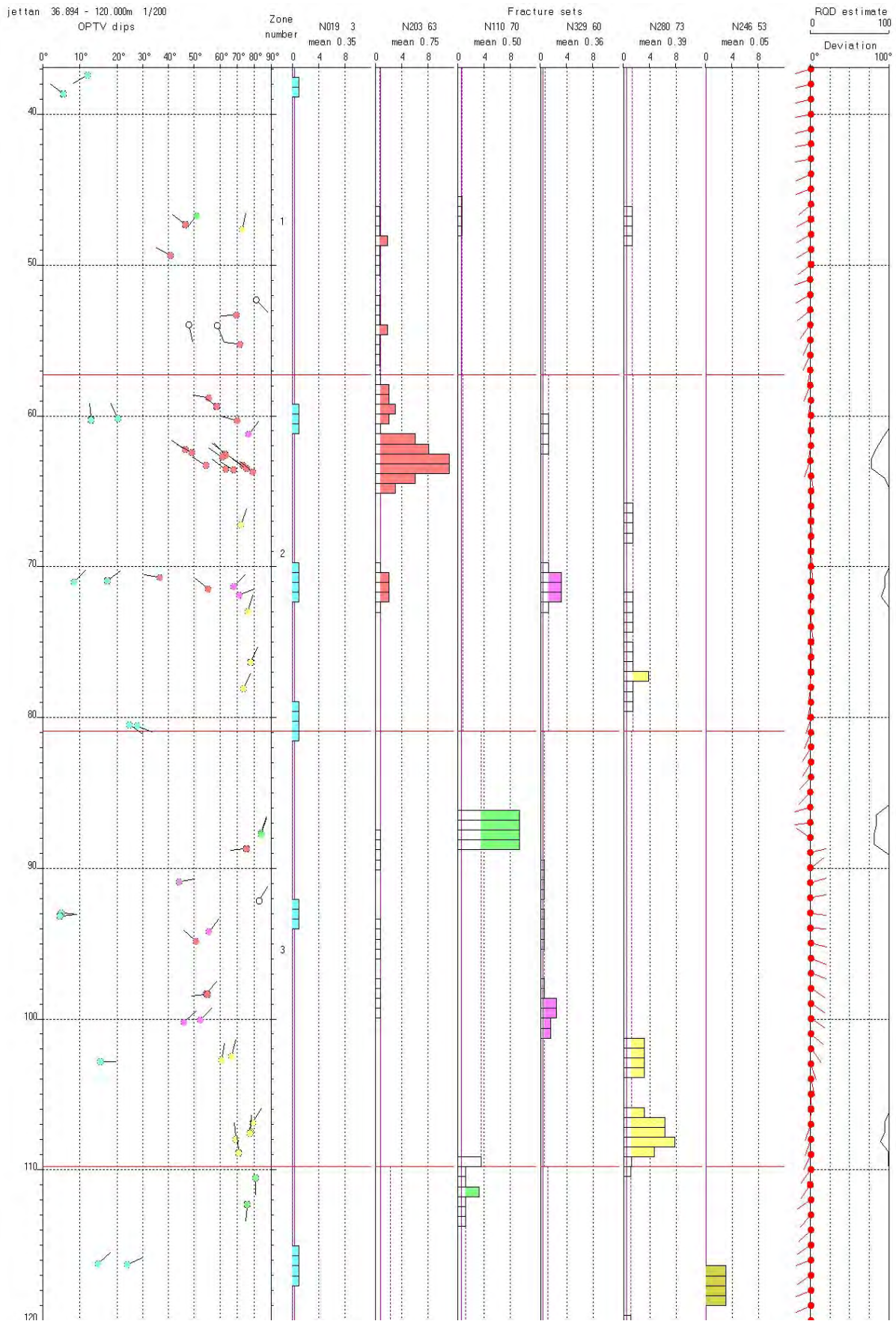
36 - 199 m



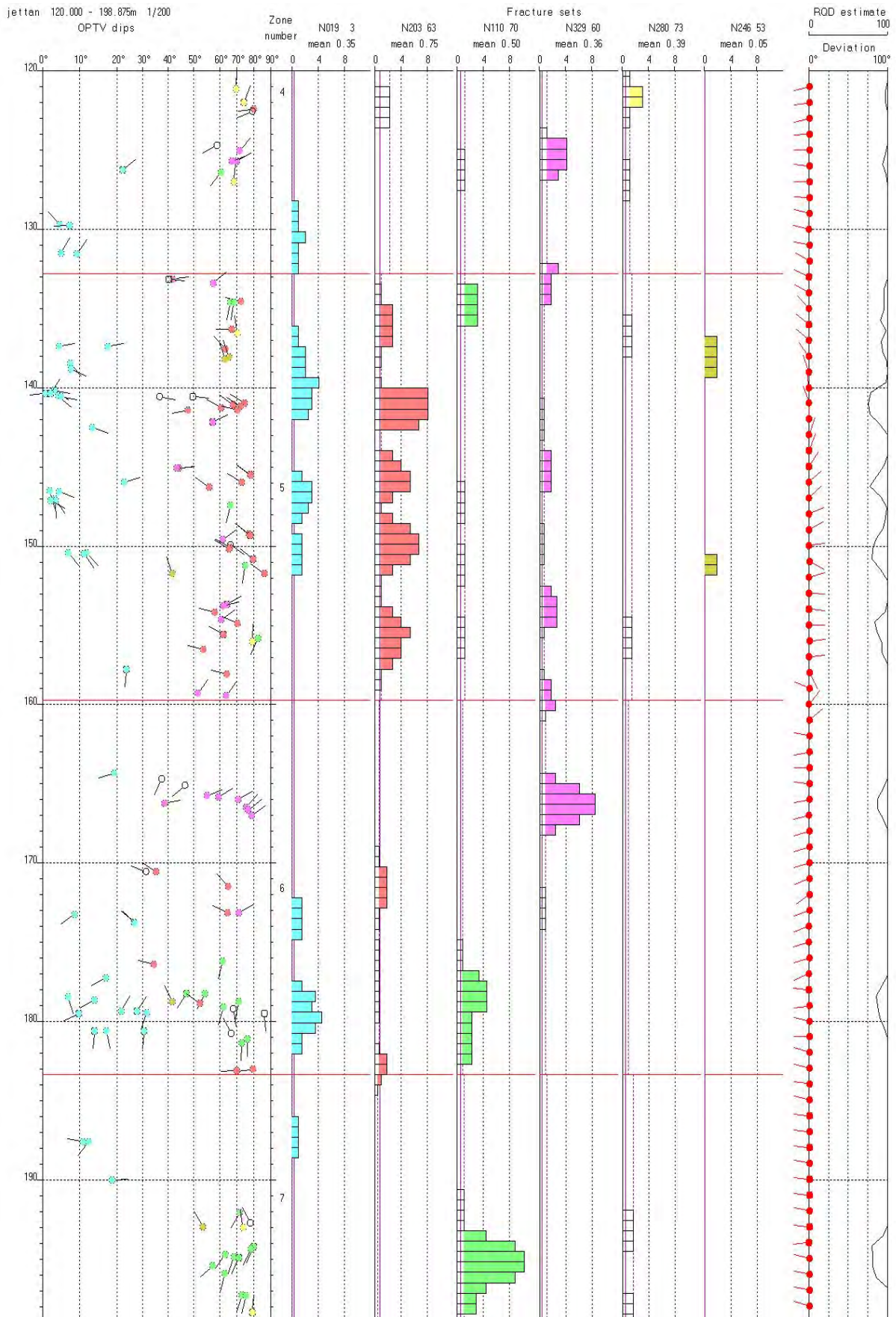
Figur 9. Rosediagram for observerte sprekker i Jettan, 36 – 199 m dyp. Strøketretning (venstre) og fallretning (høyre).



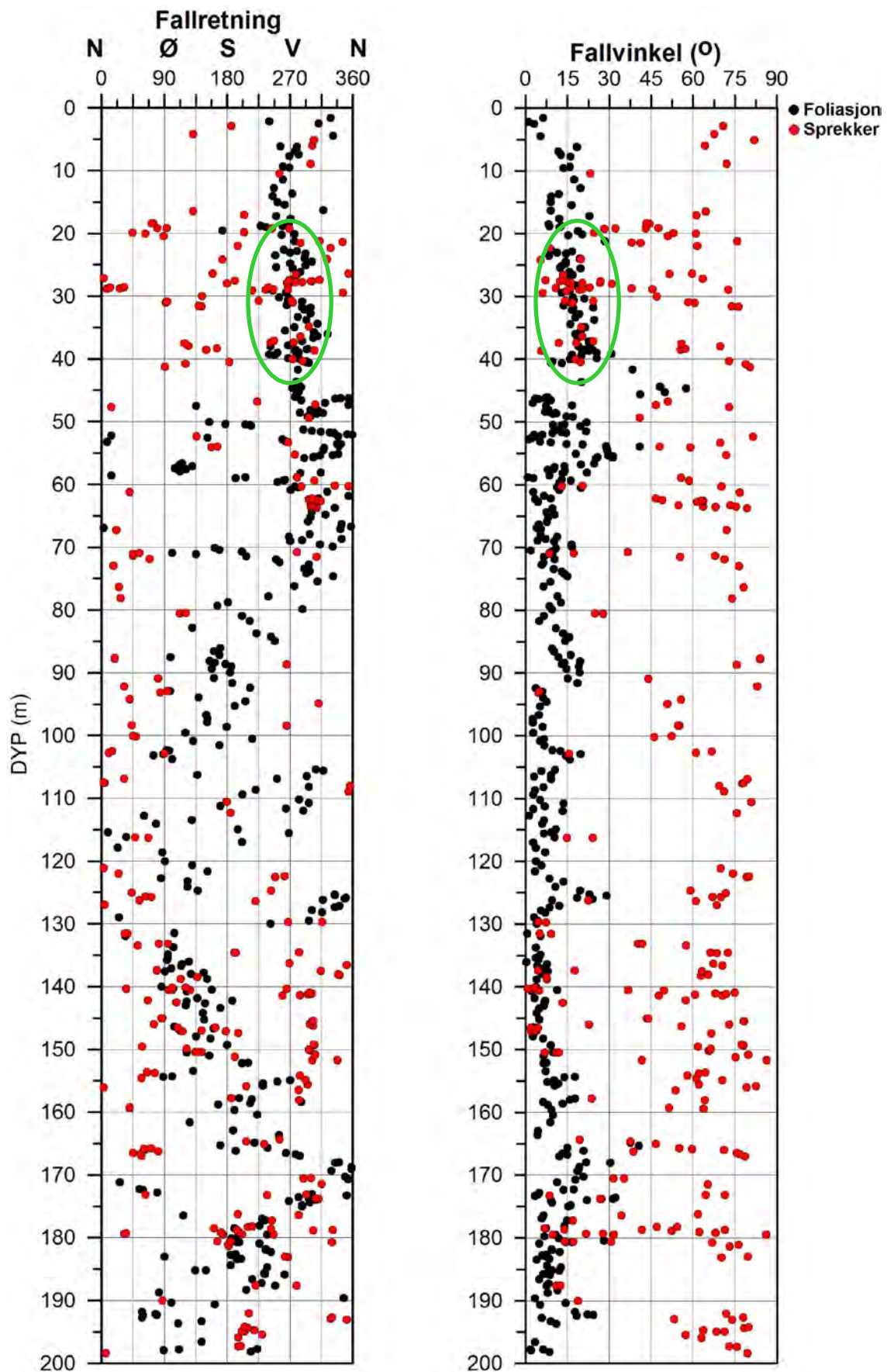
Figur 10. Jettan 1. Sprekkfrekvenshistogram av observerte sprekker, 2 - 41 m hulldyp.



Figur 11. Jettan 1. Sprekkefrekvenshistogram av observerte sprekker, 37 - 120 m hulldyp



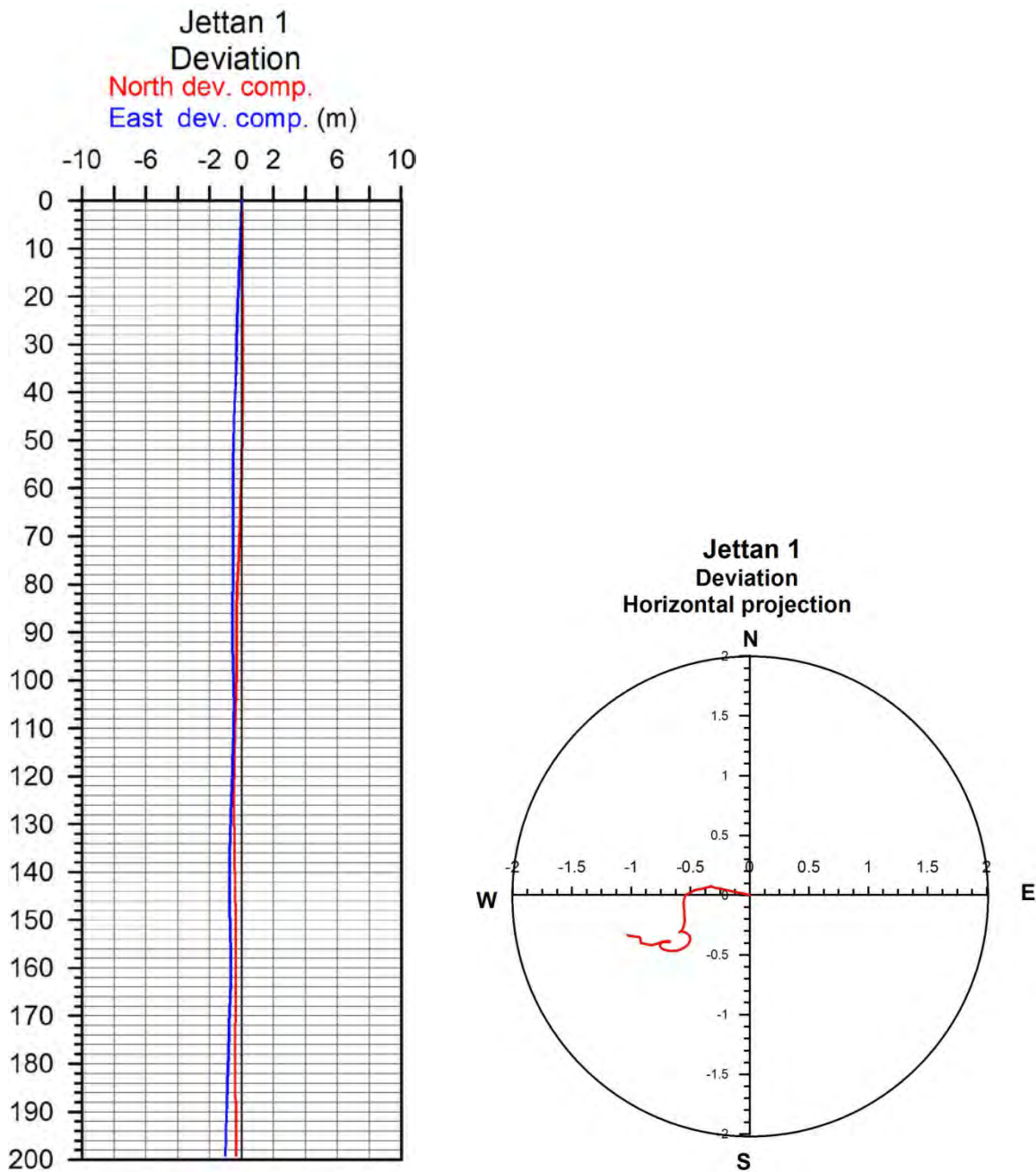
Figur 12. Jettan 1. Sprekkefrekvenshistogram av observerte sprekker, 120 - 199 m hulldyb.



Figur 13. Jettan 1. Sammenstilling av fallretning og fallvinkel for foliasjonsdata (svart) og sprekkedata (rød). Foliasjonsparallelle sprekker markert med grønt.

4.3 Borehullsforløp

Borehullsforløp måles som en integrert del av optisk televiwer. Det beregnes nord- og østkomponent i forhold til vertikalen. Figur 14 viser disse komponentene samt en horisontalprojeksjon av borehullsforløpet som da viser retningen til hullet. Det var svært lite avvik i hullet, med 1 m horisontalavvik i bunnen på 200 m dyp. Med så lite avvik er det noe feil å snakke om retning, men hullet går litt mot vest.



Figur 14. Jettan 1, borehullsforløp. Nord og østkomponent (venstre) og retning (høyre).

5. KONKLUSJON

NGU har sammen med Nordnorsk Fjellovervåkning gjort borehullslogging med optisk televiwer i det oppsprukne fjellpartiet Jettan på Nordnesfjellet i Kåfjord kommune i Troms. Området er under overvåkning da det er fare for ras ned i Lyngenfjorden. For å kunne kartlegge størrelsen på det ustabile fjellpartiet er det boret et 200 m dypt borehull hvor det er utført logging med optisk televiwer. På grunn av sterk oppsprekking måtte boring og utstøping av hullet forgå etappevis og logging ble gjort tilsvarende.

Rapporten presenterer ulike foliasjons- og sprekkestatistikker basert på prosesserte optisk televiwer-data fra borehullet.

Foliasjonens retning og vinkel er beregnet langs hele hullet. I de øverste 40 m er fallretningen tilnærmet mot vest, dvs. ned mot fjorden. Fallvinkelen er 10 - 20 ° og foliasjonsparallele sprekker vil øke faren for utrasing. Under 40 m varierer fallretningen mye mens fallvinkelen er liten og konstant (0 – 15 °).

Sprekkekartlegging med optisk televiwer viser mange foliasjonsparallele sprekker i området 20 – 40 m dyp. Flere oppknuste partier er kartlagt som ved 36 - 41 m. Partiet mellom 41 og 46 m er boret opp etter utstøping og tolkning av sprekker er vanskelig. Mulig struktur (sprekk) ved 45.8 m kan ha ugunstig fall og retning med hensyn til stabilitet. Under 40 m dyp har de fleste sprekker steilt fall (45-90°) mens sprekkenes fallretning varierer mye. Stedvis faller foliasjon og sprekkeretning sammen (130 – 150 m og 180 m), men generelt ser det ut til å være liten sammenheng mellom foliasjon sprekker. En sterkt oppknust sone opptrer ved 156.6 – 157.7 m dyp. Legger en foliasjon, sprekkeretninger og fjellsidens retning til grunn, ut fra de tolkninger som er gjort av OPTV-data, kan det være dårligst stabilitet i partiet over 46 m.

6. REFERANSER

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Forklaring Databilag 1 og Databilag 3.

Depth	-hulldyp
Azimuth	-fallretning
Dip	-fallvinkel
Upper Depth	-øvre grense for malt foliasjon
Lower Depth	- nedre grense for malt foliasjon
Well Diam	-hulldiameter (m)
Well Azimuth	-hullets fallretning
deviation Dev	-hulletsfallvinkel

Forklaring Databilag 2, målt foliasjon.

Til venstre, Retningsorientert (NESWN) utbrettet bilde av borehullsvegg med digitaliserte sprekker.

I midten, Pilplott som viser sprekkenes fallretning (N er opp) og fallvinkel (0 – 90 °). Åpning på åpne sprekker er beregnet.

Til høyre, To snitt fra forskjellige retninger (90 ° forskjell) som viser sprekkenes fall. Helt til høyre vises kommentar til hver sprekk.

Forklaring Databilag 4, tolket sprekkelogg.

Til venstre, Retningsorientert (NESWN) utbrettet bilde av borehullsvegg med digitaliserte sprekker.

I midten, Pilplott som viser sprekkenes fallretning (N er opp) og fallvinkel (0 – 90 °). Åpning på åpne sprekker er beregnet.

Til høyre, To snitt fra forskjellige retninger (90 ° forskjell) som viser sprekkenes fall. Helt til høyre vises kommentar til hver sprekk.

Forklaring Databilag 5, borehullsfoløp

Depth,	hulldyp
North,	nordkomponent
East,	østkomponent
Down,	vertikalt dyp
Devaz ,	retning
Dev,	fallvinkel (målt fra vertikalt)

Depth	Azimuth	Dip	Upper Depth	Lower Depth	Well Diam	Well Azimuth	deviation Dev
1.582	N328	6.3	1.577	1.586	0.098	131	0.96
2.179	N240	1.1	2.178	2.18	0.098	124.5	0.93
2.509	N311	3.1	2.507	2.511	0.098	118.9	0.9
4.459	N332	5.4	4.455	4.463	0.098	111.89	0.89
6.138	N256	18.3	6.122	6.153	0.098	110.33	0.88
6.246	N280	18.4	6.231	6.262	0.098	110	0.87
6.894	N277	11.8	6.885	6.904	0.098	108	0.9
7.45	N282	12.7	7.44	7.46	0.098	111.16	0.88
7.701	N269	16	7.688	7.715	0.098	111.15	0.89
9.341	N260	15.9	9.327	9.354	0.098	104.81	0.89
9.551	N269	13.6	9.54	9.562	0.098	104.07	0.86
11.403	N260	17.4	11.388	11.418	0.098	96.01	0.56
12.761	N247	19.6	12.744	12.778	0.098	116.73	0.63
13.655	N273	11.9	13.646	13.665	0.098	118	0.7
14.055	N245	9.1	14.048	14.063	0.098	115.05	0.7
14.993	N252	9	14.986	15.001	0.098	118.22	0.62
15.42	N262	16.5	15.406	15.434	0.098	118.33	0.65
16.325	N318	8.9	16.317	16.332	0.098	115	0.77
17.242	N250	22.9	17.222	17.262	0.098	113	0.82
17.645	N271	12	17.635	17.655	0.098	106.83	0.88
18.503	N268	8.3	18.496	18.51	0.098	65.11	0.61
18.769	N259	12.7	18.758	18.779	0.098	54.95	0.68
18.836	N228	8.5	18.83	18.843	0.098	57.66	0.64
18.978	N236	12.2	18.968	18.988	0.098	61	0.72
19.55	N173	18.8	19.533	19.566	0.098	290.17	0.67
20.126	N276	20.3	20.108	20.144	0.098	73.04	0.44
20.266	N258	15.3	20.253	20.279	0.098	87.51	0.51
21.24	N276	28.3	21.214	21.266	0.098	59.56	0.34
22.573	N261	9	22.566	22.581	0.098	71.82	0.23
22.793	N280	16.7	22.779	22.807	0.098	92.73	0.26
23.064	N270	11.3	23.054	23.073	0.098	84.3	0.19
23.18	N292	14.5	23.167	23.192	0.098	97.48	0.24
23.508	N249	8.4	23.501	23.516	0.098	88.97	0.19
23.975	N291	19.3	23.958	23.992	0.098	101.63	0.15
24.479	N301	14.3	24.466	24.491	0.098	34.54	0.2
24.799	N270	14.4	24.786	24.812	0.098	288.28	0.46
25.115	N292	12.9	25.103	25.126	0.098	288.79	0.41
25.408	N250	12.4	25.397	25.419	0.098	289.19	0.35
25.542	N274	19.6	25.524	25.56	0.098	285.24	0.37
26.118	N285	15.7	26.104	26.132	0.098	287.15	0.34
26.537	N280	16.9	26.522	26.552	0.098	280.66	0.3
26.984	N277	14.4	26.971	26.997	0.098	277.4	0.32
28.294	N267	17.9	28.278	28.31	0.098	303.46	0.39
29.106	N245	15.9	29.092	29.12	0.098	291.05	0.3
29.415	N264	12.9	29.403	29.426	0.098	267.79	0.41
30.176	N254	16.9	30.16	30.191	0.098	234.06	0.62
30.333	N268	21	30.314	30.352	0.098	233.19	0.62
30.622	N267	17.2	30.606	30.637	0.098	242.06	0.53
30.871	N287	15.7	30.857	30.885	0.098	288.85	0.47
31.428	N265	13.5	31.416	31.44	0.098	254.52	0.44
31.786	N287	24.2	31.764	31.808	0.098	263.59	0.43
31.846	N299	17.1	31.83	31.861	0.098	265	0.45
32.17	N290	16.7	32.155	32.185	0.098	253.34	0.41
32.802	N299	19.2	32.784	32.819	0.098	239.91	0.44
33.33	N281	17.8	33.314	33.346	0.098	240.53	0.4
33.779	N293	24.5	33.756	33.802	0.098	241.98	0.37
34.395	N309	16	34.381	34.409	0.098	233	0.33
34.916	N276	21.4	34.896	34.935	0.098	229.49	0.32
35.471	N263	19.8	35.453	35.489	0.098	231.27	0.31
35.732	N304	19.7	35.714	35.749	0.098	240.78	0.26
35.993	N324	17.9	35.978	36.009	0.098	237.54	0.26
36.352	N309	18.5	36.336	36.368	0.098	225.39	0.23
36.596	N303	19	36.58	36.613	0.098	224.9	0.22
36.352	N309	18.5	36.336	36.368	0.098	225.39	0.23
36.596	N303	19	36.58	36.613	0.098	224.9	0.22
37.163	N287	22.6	37.142	37.183	0.098	186.71	0.26
37.852	N267	22.9	37.831	37.873	0.098	213.92	0.38
37.956	N242	19	37.939	37.973	0.098	216.87	0.48
38.503	N278	20.1	38.485	38.521	0.098	210.98	0.35
38.695	N277	22.5	38.674	38.715	0.098	217.09	0.32
39.299	N240	16.6	39.284	39.314	0.098	203.71	0.5
39.392	N248	20	39.374	39.41	0.098	194.65	0.47
39.879	N267	25.5	39.855	39.902	0.098	193.5	0.62
39.979	N283	15.9	39.965	39.993	0.098	193.5	0.44
40.363	N293	9.6	40.354	40.371	0.098	227.11	0.61
40.576	N294	9.1	40.568	40.585	0.098	227.7	0.6
40.647	N297	12.9	40.635	40.658	0.098	224.15	0.72
38.925	N282	20.2	38.907	38.944	0.098	259.09	0.82
39.018	N252	25.5	38.994	39.042	0.098	257.65	0.81
39.172	N280	30.8	39.142	39.202	0.098	260.79	0.8
41.672	N281	38.3	41.632	41.711	0.098	259.22	0.7
43.602	N279	20	43.584	43.621	0.098	256.49	0.84
44.354	N284	48.1	44.298	44.41	0.098	241.62	0.7
44.468	N286	48.3	44.412	44.524	0.098	242.65	0.76
44.621	N273	57.5	44.543	44.7	0.098	245.78	0.71
45.258	N282	49.9	45.199	45.318	0.098	245.37	0.61

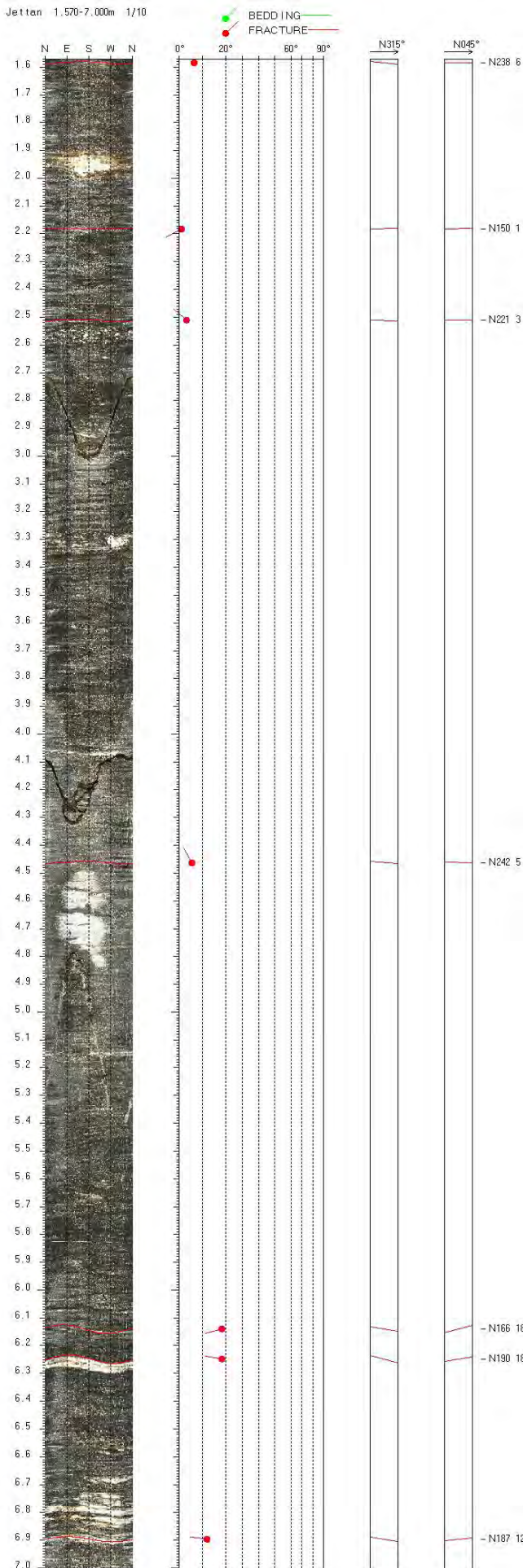
Depth	Azimuth	Dip	Upper Depth	Lower Depth	Well Diam	Well Azimuth	deviation Dev
45.589	N280	41	45.545	45.632	0.098	251.15	0.68
46.045	N280	7.9	46.038	46.052	0.098	229.29	0.64
46.071	N277	7.6	46.064	46.078	0.098	228.23	0.61
46.221	N354	7	46.215	46.226	0.098	232.6	0.77
46.273	N343	3.5	46.27	46.275	0.098	229.45	0.75
46.32	N335	4.7	46.316	46.324	0.098	229	0.7
46.573	N286	8.9	46.565	46.581	0.098	238.85	0.78
46.972	N320	2.6	46.97	46.974	0.098	244.4	0.77
47.353	N354	16.6	47.339	47.368	0.098	243.9	0.72
47.443	N135	7.3	47.437	47.449	0.098	245.69	0.75
48.116	N299	8.3	48.109	48.124	0.098	242.13	0.75
48.14	N309	8.2	48.133	48.148	0.098	243.27	0.76
48.36	N304	8	48.352	48.367	0.098	240.65	0.75
48.389	N311	7	48.383	48.395	0.098	241.48	0.75
48.575	N284	10.6	48.566	48.585	0.098	242.97	0.72
48.62	N317	11	48.611	48.63	0.098	242.13	0.73
48.739	N308	9.8	48.73	48.747	0.098	241.23	0.71
49.13	N299	14.6	49.117	49.144	0.098	243	0.67
49.176	N295	16.9	49.161	49.192	0.098	243	0.68
50.063	N154	21.8	50.044	50.083	0.098	254.9	0.31
50.381	N177	13.9	50.369	50.393	0.098	250.31	0.35
50.465	N206	9.7	50.456	50.473	0.098	251.75	0.35
50.547	N213	12.8	50.535	50.558	0.098	246.61	0.33
50.677	N214	19.6	50.659	50.694	0.098	247.04	0.29
51.262	N289	11.9	51.251	51.272	0.098	264.76	0.28
51.483	N301	21.7	51.463	51.502	0.098	258	0.27
51.589	N314	12.8	51.578	51.6	0.098	262.57	0.28
51.756	N327	9.6	51.748	51.765	0.098	246.83	0.25
51.784	N333	14.5	51.771	51.796	0.098	245.34	0.25
52.029	N352	3	52.027	52.032	0.098	238.91	0.23
52.05	N359	5.9	52.045	52.055	0.098	238.07	0.24
52.218	N014	2.8	52.215	52.22	0.098	231.31	0.24
52.375	N339	3.8	52.371	52.378	0.098	231	0.28
52.571	N152	2.2	52.569	52.573	0.098	230	0.28
52.795	N259	1	52.794	52.796	0.098	232.08	0.28
53.113	N263	5.1	53.108	53.117	0.098	227.29	0.29
53.212	N008	9	53.205	53.22	0.098	222	0.32
53.55	N337	14.6	53.538	53.563	0.098	212.93	0.33
53.595	N343	20.4	53.577	53.613	0.098	212.59	0.33
53.87	N340	28.8	53.843	53.897	0.098	219.57	0.32
53.916	N340	40.9	53.874	53.958	0.098	219.22	0.31
54.159	N319	28.9	54.132	54.186	0.098	222.1	0.29
54.536	N318	29.2	54.509	54.563	0.098	215.56	0.29
55.087	N339	18	55.072	55.103	0.098	209.59	0.34
55.356	N331	29.6	55.328	55.384	0.098	202.74	0.34
55.404	N313	31.3	55.374	55.433	0.098	205.07	0.41
55.628	N304	25.7	55.605	55.652	0.098	208.97	0.39
55.689	N303	31.3	55.66	55.719	0.098	207.51	0.4
55.807	N290	25.2	55.784	55.831	0.098	208.18	0.38
56.641	N115	24.6	56.619	56.664	0.098	184.14	0.4
56.791	N112	19.8	56.773	56.808	0.098	186.73	0.4
57.055	N130	13.9	57.043	57.067	0.098	196.67	0.38
57.162	N110	10.3	57.153	57.171	0.098	204.79	0.37
57.421	N105	10.1	57.413	57.43	0.098	213.66	0.34
57.573	N121	7.9	57.566	57.58	0.098	212.32	0.31
57.685	N112	14	57.673	57.697	0.098	212.16	0.36
57.924	N112	13.9	57.912	57.936	0.098	205.83	0.33
58.085	N314	22	58.065	58.104	0.098	197.84	0.34
58.145	N285	13.2	58.134	58.157	0.098	198.1	0.33
58.558	N014	8.5	58.551	58.565	0.098	197.62	0.41
58.822	N206	0.8	58.821	58.823	0.098	191.91	0.44
58.953	N192	2.7	58.95	58.955	0.098	190.98	0.48
59.234	N263	12.9	59.223	59.246	0.098	186	0.5
59.342	N261	16.1	59.328	59.356	0.098	187.81	0.49
59.619	N252	12.2	59.608	59.63	0.098	191	0.48
60.355	N277	11.2	60.346	60.365	0.098	179	0.53
60.467	N281	19.8	60.45	60.485	0.098	176.6	0.51
60.856	N271	12	60.846	60.867	0.098	181.82	0.52
61.156	N323	2.7	61.154	61.158	0.098	183.16	0.56
61.824	N354	6.5	61.819	61.829	0.098	188.06	0.64
62.23	N311	8.9	62.223	62.238	0.098	185.87	0.5
62.342	N297	3.5	62.339	62.345	0.098	180.3	0.47
62.715	N306	4.5	62.712	62.719	0.098	196	0.46
63.733	N334	9.6	63.725	63.741	0.098	173.12	0.59
64.333	N301	7.5	64.327	64.339	0.098	169	0.51
64.79	N321	10.3	64.781	64.798	0.098	179.76	0.52
65.192	N299	8	65.186	65.199	0.098	183.31	0.51
65.895	N296	7.6	65.888	65.901	0.098	178.65	0.51
66.304	N344	4.7	66.3	66.307	0.098	177.47	0.53
66.736	N357	4.5	66.732	66.739	0.098	175.48	0.51
66.869	N003	4	66.866	66.872	0.098	175.16	0.54
67.085	N342	5.5	67.081	67.089	0.098	173.68	0.54
67.922	N298	5.3	67.918	67.926	0.098	178.1	0.6
68.304	N268	11.2	68.294	68.314	0.098	182.91	0.58
68.654	N344	7.2	68.648	68.659	0.098	181.93	0.52
68.866	N287	4.3	68.862	68.869	0.098	176.68	0.54

Depth	Azimuth	Dip	Upper Depth	Lower Depth	Well Diam	Well Azimuth	deviation Dev
69.028	N270	10.2	69.019	69.036	0.098	170.96	0.53
69.524	N313	16.5	69.51	69.538	0.098	168.94	0.63
69.878	N331	16.6	69.864	69.892	0.098	169.02	0.72
70.114	N162	10.8	70.104	70.124	0.098	171	0.72
70.43	N169	1.8	70.428	70.432	0.098	170	0.76
70.67	N201	9.5	70.661	70.679	0.098	171.14	0.75
70.874	N101	8.6	70.866	70.881	0.098	175.88	0.71
71.099	N135	9.6	71.09	71.108	0.098	179	0.61
71.469	N207	6.6	71.463	71.475	0.098	181	0.58
71.906	N250	10.3	71.897	71.915	0.098	184.16	0.67
72.426	N255	6.4	72.42	72.431	0.098	185.03	0.58
72.756	N297	5.7	72.752	72.761	0.098	180.41	0.62
73.429	N290	10.1	73.421	73.438	0.098	172.08	0.71
73.844	N298	12.9	73.833	73.854	0.098	171	0.75
74.172	N293	13.9	74.16	74.184	0.098	169.81	0.7
74.613	N332	15	74.601	74.626	0.098	177.55	0.72
75.478	N309	8.8	75.471	75.485	0.098	177.02	0.87
76.212	N276	6.4	76.206	76.217	0.098	184.39	0.76
77.801	N239	11.5	77.791	77.812	0.098	185.03	0.78
78.756	N181	12.6	78.744	78.767	0.098	192	0.78
79.336	N166	8.6	79.328	79.344	0.098	195.55	0.77
79.874	N288	9.4	79.866	79.882	0.098	198.06	0.8
80.927	N201	6.6	80.921	80.934	0.098	200.02	0.77
81.731	N212	4.9	81.726	81.735	0.098	209.93	0.72
82.859	N130	10.9	82.85	82.869	0.098	214.72	0.65
83.675	N222	13.4	83.663	83.687	0.098	221.82	0.59
84.266	N243	15.7	84.252	84.28	0.098	226.65	0.49
84.92	N248	14.2	84.908	84.933	0.098	226	0.37
86.071	N170	9.5	86.063	86.079	0.098	256.88	0.28
86.577	N161	10.2	86.568	86.586	0.098	261	0.21
87.136	N169	16.2	87.122	87.15	0.098	276.29	0.08
87.49	N099	11.8	87.48	87.501	0.098	346.04	0.05
88.129	N155	19.5	88.112	88.146	0.098	271.26	0.1
88.38	N162	13.9	88.368	88.392	0.098	306.48	0.07
88.582	N177	12.9	88.571	88.593	0.098	52.35	0.18
88.995	N186	19.1	88.978	89.012	0.098	75.24	0.29
89.325	N158	14.7	89.312	89.338	0.098	80.01	0.09
89.911	N184	19.3	89.894	89.927	0.098	50.34	0.22
90.843	N161	15.1	90.83	90.856	0.098	76.68	0.32
91.629	N187	18.6	91.613	91.645	0.098	77.08	0.34
92.407	N213	3.7	92.404	92.41	0.098	88.19	0.4
92.944	N098	6	92.939	92.95	0.098	97.65	0.37
93.935	N139	6.3	93.929	93.94	0.098	93.85	0.37
94.554	N206	7.4	94.547	94.56	0.098	98.06	0.42
95.332	N191	5.1	95.327	95.336	0.098	102.19	0.47
96.696	N150	4.7	96.692	96.701	0.098	109.39	0.54
97.289	N152	2.5	97.286	97.291	0.098	115	0.48
97.887	N151	2.6	97.884	97.89	0.098	118	0.49
98.592	N179	6.1	98.586	98.597	0.098	120.29	0.48
99.556	N120	2.7	99.553	99.559	0.098	121.42	0.54
100.522	N216	6.5	100.516	100.527	0.098	135.89	0.51
100.829	N131	5.1	100.824	100.834	0.098	131.11	0.53
101.514	N169	6.7	101.508	101.52	0.098	138.74	0.49
102.316	N093	9.6	102.307	102.325	0.098	143.44	0.57
102.425	N097	12.5	102.414	102.436	0.098	141.11	0.58
102.93	N088	19.6	102.912	102.947	0.098	161.05	0.51
103.166	N074	14.5	103.154	103.179	0.098	171.14	0.5
103.774	N101	15.9	103.76	103.789	0.098	165.05	0.5
105.407	N307	10.5	105.398	105.416	0.098	188.98	0.54
105.599	N318	5.6	105.594	105.603	0.098	188.86	0.54
106.264	N137	9.2	106.256	106.273	0.098	191.5	0.62
106.494	N294	3	106.491	106.496	0.098	197.33	0.63
106.918	N251	9.1	106.91	106.926	0.098	200.82	0.63
108.187	N297	6.4	108.182	108.193	0.098	203.37	0.55
108.64	N221	3.3	108.636	108.643	0.098	206	0.57
109.361	N202	2.7	109.358	109.364	0.098	212.95	0.57
110.224	N283	5.2	110.219	110.228	0.098	220.51	0.52
110.761	N297	13.6	110.749	110.773	0.098	224.36	0.46
111.228	N170	6.8	111.222	111.234	0.098	217.02	0.51
111.621	N264	2.7	111.618	111.624	0.098	231.88	0.66
111.969	N289	13.3	111.957	111.981	0.098	237.17	0.67
112.753	N061	1.2	112.753	112.754	0.098	225.36	0.48
113.454	N129	6.5	113.448	113.46	0.098	224.54	0.55
114.035	N078	6	114.031	114.04	0.098	231.83	0.53
114.944	N195	10.9	114.934	114.954	0.098	234.7	0.74
115.407	N009	9.2	115.4	115.415	0.098	241.83	0.81
115.596	N268	6.6	115.59	115.602	0.098	243.52	0.44
116.169	N035	10.4	116.16	116.177	0.098	246.01	0.48
117.017	N201	2.7	117.014	117.019	0.098	237.79	0.63
117.877	N023	3.7	117.874	117.88	0.098	251.01	0.55
118.586	N087	7	118.581	118.592	0.098	245.95	0.54
120.017	N091	3.7	120.014	120.02	0.098	250.2	0.5
120.674	N130	5.6	120.669	120.679	0.098	256.82	0.56
121.652	N152	3.3	121.649	121.654	0.098	260.54	0.57
122.734	N085	8.6	122.727	122.741	0.098	264.43	0.53
123.233	N123	13.5	123.222	123.244	0.098	260.49	0.

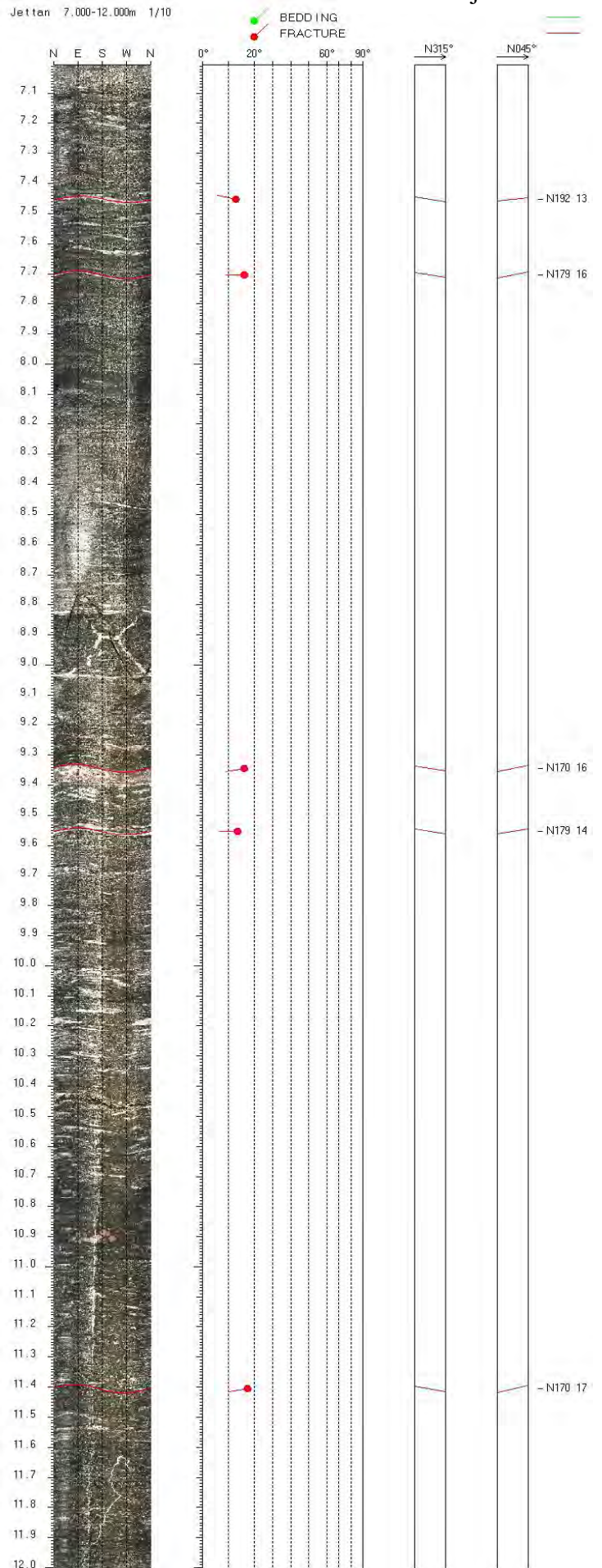
Depth	Azimuth	Dip	Upper Depth	Lower Depth	Well Diam	Well Azimuth	deviation Dev
124.078	N123	10.6	124.069	124.087	0.098	268.02	0.64
124.681	N138	19.5	124.664	124.698	0.098	267.29	0.63
125.27	N334	22.8	125.249	125.291	0.098	275.14	0.68
125.467	N334	29	125.439	125.494	0.098	278.79	0.7
125.826	N350	18.4	125.81	125.843	0.098	276.04	0.66
125.996	N348	24	125.974	126.018	0.098	272.85	0.59
126.22	N317	9.5	126.212	126.229	0.098	270.73	0.56
127.106	N341	12	127.096	127.117	0.098	268.83	0.52
127.373	N334	8.6	127.366	127.381	0.098	267.85	0.51
127.819	N301	5.5	127.814	127.824	0.098	272.67	0.59
128.178	N316	7	128.171	128.184	0.098	276.04	0.63
128.956	N025	3.1	128.953	128.958	0.098	285.28	0.57
129.511	N297	4.4	129.507	129.515	0.098	283.36	0.51
129.981	N242	4	129.977	129.984	0.098	283	0.42
131.478	N104	0.6	131.478	131.478	0.098	284.02	0.6
131.933	N034	5.3	131.928	131.937	0.098	293.34	0.55
133.736	N103	3.7	133.733	133.739	0.098	292.17	0.4
134.893	N095	5.4	134.889	134.898	0.098	306	0.32
135.342	N095	3.6	135.339	135.345	0.098	301.23	0.3
135.716	N094	4.6	135.712	135.719	0.098	297.68	0.33
136.011	N125	0.3	136.011	136.011	0.098	305	0.28
136.394	N115	7.6	136.388	136.4	0.098	305.04	0.32
136.657	N114	4.1	136.654	136.66	0.098	307.21	0.34
137.062	N100	5.7	137.057	137.066	0.098	310.08	0.35
137.56	N091	7.9	137.553	137.567	0.098	325.34	0.42
137.769	N146	5.6	137.765	137.774	0.098	324.93	0.4
138.009	N128	6.5	138.004	138.014	0.098	320.36	0.34
138.822	N151	4	138.819	138.825	0.098	333.41	0.31
140.034	N086	3.7	140.031	140.037	0.098	351.38	0.18
140.27	N102	4.1	140.267	140.274	0.098	342.92	0.22
140.478	N158	11.2	140.468	140.487	0.098	335.94	0.26
140.74	N122	2.3	140.739	140.742	0.098	332	0.33
141.821	N137	3.2	141.818	141.823	0.098	357	0.29
142.225	N187	7	142.22	142.231	0.098	1	0.31
142.404	N122	6.8	142.398	142.409	0.098	4.86	0.28
142.673	N148	6.5	142.668	142.679	0.098	9.93	0.25
143.025	N121	6.6	143.019	143.03	0.098	21.05	0.27
143.423	N170	4.9	143.419	143.427	0.098	26.08	0.28
144.184	N145	4	144.181	144.187	0.098	15.98	0.22
145.205	N147	4.8	145.201	145.209	0.098	34.32	0.29
146.384	N104	2.9	146.381	146.386	0.098	45	0.29
146.662	N160	2.9	146.659	146.664	0.098	48.31	0.35
146.991	N112	3.8	146.988	146.995	0.098	48.43	0.3
147.91	N135	2.6	147.908	147.913	0.098	70.34	0.3
148.252	N156	6.3	148.247	148.258	0.098	67.98	0.25
149.292	N180	8.9	149.285	149.3	0.098	68.82	0.31
150.473	N122	9.9	150.465	150.482	0.098	94.32	0.3
150.982	N154	6.4	150.976	150.988	0.098	114.89	0.84
152.114	N210	7.5	152.108	152.12	0.098	77.53	0.39
152.179	N201	6.4	152.174	152.185	0.098	73.05	0.39
153.424	N131	7.1	153.418	153.43	0.098	91.94	0.37
154.319	N101	17.7	154.303	154.335	0.098	96.33	0.33
154.375	N088	13.8	154.363	154.387	0.098	96.04	0.37
154.879	N270	10.2	154.87	154.887	0.098	93.04	0.38
155.102	N252	7.8	155.096	155.109	0.098	86.53	0.33
155.404	N231	11.8	155.394	155.414	0.098	84.23	0.36
155.76	N231	10.4	155.751	155.768	0.098	82.29	0.47
157.78	N197	17.7	157.765	157.796	0.098	68.18	0.32
157.978	N215	15.9	157.964	157.992	0.098	151.66	0.52
158.369	N286	6.2	158.364	158.374	0.098	157.69	0.32
158.598	N213	13.2	158.587	158.61	0.098	78.24	0.04
158.803	N167	7.9	158.797	158.809	0.098	305.45	0.93
159.643	N190	9.3	159.636	159.651	0.098	336.03	0.21
160.433	N223	9.7	160.425	160.441	0.098	63.02	0.35
161.605	N126	8.8	161.598	161.612	0.098	287.31	0.52
162.911	N188	4.5	162.907	162.915	0.098	262.36	0.64
163.623	N254	4.2	163.619	163.627	0.098	263.39	0.57
164.855	N219	37.5	164.817	164.894	0.098	270.86	0.66
165.296	N170	40.6	165.255	165.337	0.098	292.96	0.67
165.653	N238	14.9	165.639	165.667	0.098	265.34	0.73
166.151	N192	20.7	166.132	166.169	0.098	264.41	0.61
166.519	N264	13.2	166.507	166.531	0.098	275.52	0.48
166.704	N278	14.9	166.691	166.718	0.098	267.57	0.4
167.006	N284	12	166.996	167.017	0.098	258.35	0.43
167.974	N340	21.7	167.955	167.994	0.098	254.8	0.53
168.038	N335	30.4	168.01	168.067	0.098	257.09	0.51
168.711	N358	19.2	168.694	168.728	0.098	253	0.59
169.09	N358	19.1	169.073	169.107	0.098	252.51	0.56
169.36	N329	18.6	169.343	169.377	0.098	255.66	0.57
170.264	N349	20.7	170.246	170.283	0.098	248.5	0.51
170.71	N353	17.8	170.694	170.726	0.098	250.34	0.56
171.149	N026	11.2	171.14	171.158	0.098	246.87	0.57
172.269	N054	17.2	172.254	172.284	0.098	244.16	0.53
172.377	N059	13.6	172.365	172.388	0.098	244	0.47
172.815	N080	4.9	172.811	172.819	0.098	247.48	0.52
173.068	N301	4.4	173.064	173.072	0.098	253.63	0.58

Depth	Azimuth	Dip	Upper Depth	Lower Depth	Well Diam	Well Azimuth	deviation Dev
173.269	N351	3.3	173.266	173.271	0.098	259.17	0.57
173.571	N282	32.1	173.54	173.603	0.098	259.89	0.54
173.763	N297	31.2	173.733	173.794	0.098	260.97	0.45
173.975	N307	22	173.955	173.995	0.098	251.24	0.45
174.136	N268	9.1	174.128	174.145	0.098	247.63	0.47
174.348	N298	9.5	174.34	174.357	0.098	250.43	0.54
174.814	N287	16.2	174.8	174.829	0.098	261	0.5
175.016	N287	15.2	175.003	175.03	0.098	254.79	0.44
176.425	N117	6.4	176.42	176.43	0.098	263.86	0.46
176.907	N230	5.8	176.901	176.912	0.098	252	0.37
177.223	N234	14.8	177.21	177.236	0.098	253	0.49
178.103	N226	13.9	178.091	178.115	0.098	304.95	0.4
178.468	N190	7.3	178.461	178.474	0.098	274.52	0.47
179.516	N237	10.9	179.506	179.525	0.098	265.91	0.56
179.759	N196	6.7	179.753	179.765	0.098	278.63	0.57
180.089	N186	11.9	180.079	180.099	0.098	285.27	0.56
180.419	N189	28.1	180.393	180.445	0.098	283.5	0.6
180.688	N193	14.4	180.675	180.7	0.098	278	0.72
180.723	N197	16.4	180.709	180.738	0.098	278	0.74
180.913	N226	4.8	180.908	180.918	0.098	272.11	0.76
181.809	N235	9.3	181.801	181.817	0.098	308.27	0.58
181.927	N235	9.4	181.918	181.935	0.098	292.99	0.65
182.266	N243	12.2	182.255	182.277	0.098	279.87	0.76
182.648	N192	7.5	182.642	182.654	0.098	305.94	0.63
182.772	N185	5.9	182.767	182.777	0.098	280.29	0.56
183.044	N090	7.6	183.038	183.05	0.098	282.01	0.56
183.365	N200	8.5	183.358	183.373	0.098	272.93	0.58
183.456	N194	4	183.453	183.46	0.098	270	0.6
184.404	N185	7.7	184.397	184.41	0.098	283.93	0.69
184.696	N237	12.7	184.685	184.708	0.098	285.62	0.62
185.181	N149	9.5	185.173	185.189	0.098	284	0.57
185.218	N134	12	185.208	185.228	0.098	284	0.58
185.693	N233	7.3	185.686	185.699	0.098	280.06	0.58
185.795	N234	6.3	185.789	185.801	0.098	279.93	0.59
185.894	N262	8.7	185.886	185.902	0.098	278.67	0.59
186.609	N216	4.9	186.605	186.614	0.098	275.29	0.56
187.24	N229	8.2	187.233	187.248	0.098	268.26	0.55
187.605	N249	7.5	187.599	187.612	0.098	274	0.6
188.32	N207	11.5	188.31	188.33	0.098	279.42	0.62
188.744	N082	7.9	188.738	188.751	0.098	278.34	0.57
189.588	N347	3.4	189.585	189.591	0.098	276.22	0.57
190.369	N100	14.3	190.357	190.381	0.098	275.16	0.56
190.613	N162	5.1	190.609	190.617	0.098	276.28	0.55
191.802	N058	17.7	191.786	191.817	0.098	278.99	0.57
192.197	N077	22.2	192.177	192.216	0.098	277	0.59
192.287	N079	24.3	192.266	192.309	0.098	277.8	0.6
192.398	N059	18.3	192.383	192.414	0.098	277.43	0.57
192.718	N058	5.7	192.714	192.723	0.098	275.54	0.54
193.287	N143	8.9	193.28	193.294	0.098	270.59	0.6
193.664	N110	11	193.654	193.673	0.098	278.27	0.39
196.614	N143	3.4	196.612	196.617	0.098	275.25	0.53
197.723	N223	6.2	197.718	197.729	0.098	289.84	0.4
197.795	N111	1.6	197.794	197.796	0.098	288.92	0.41
197.91	N089	2	197.908	197.911	0.098	286	0.45
198.152	N214	8.5	198.145	198.16	0.098	282.51	0.59

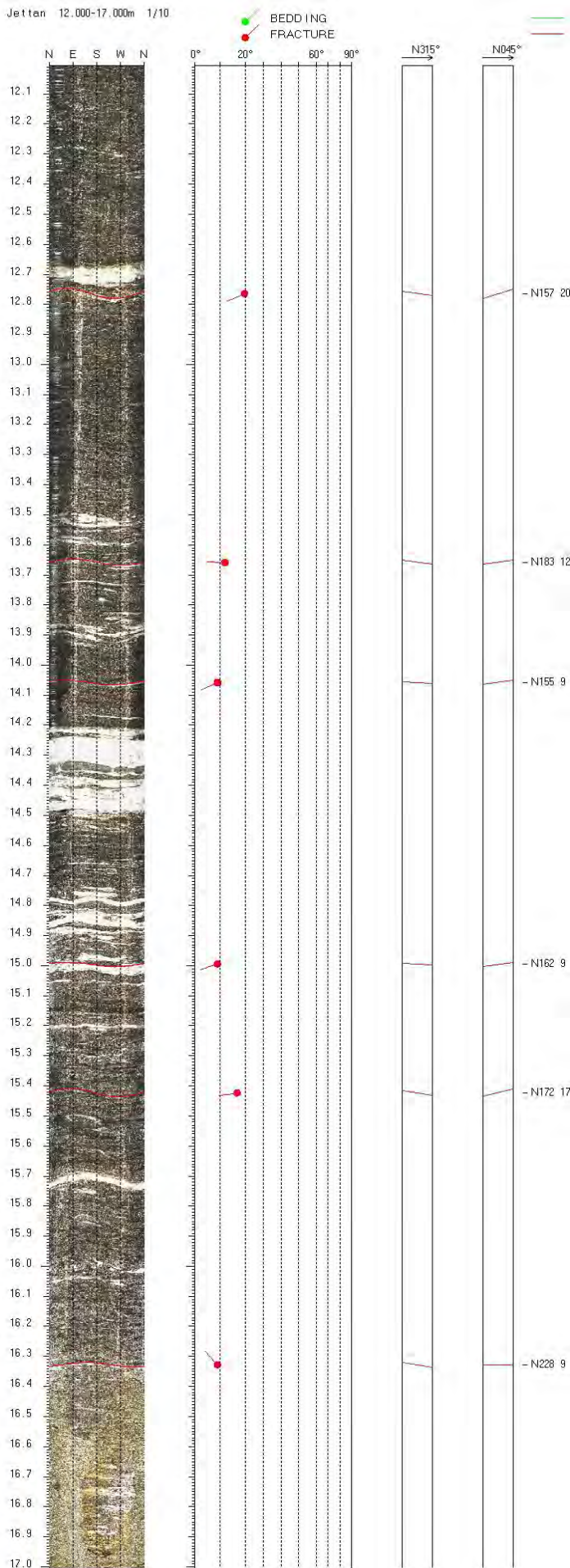
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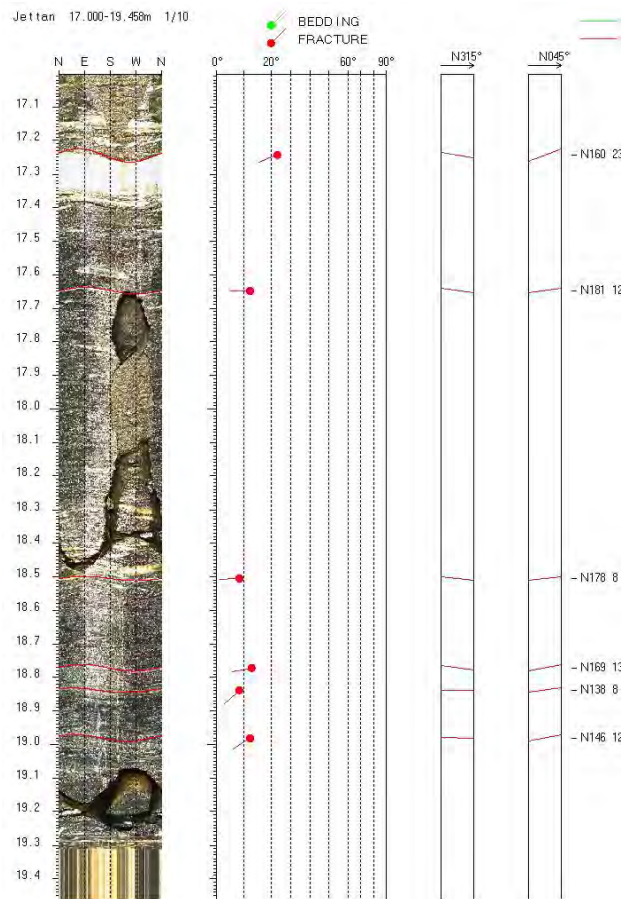
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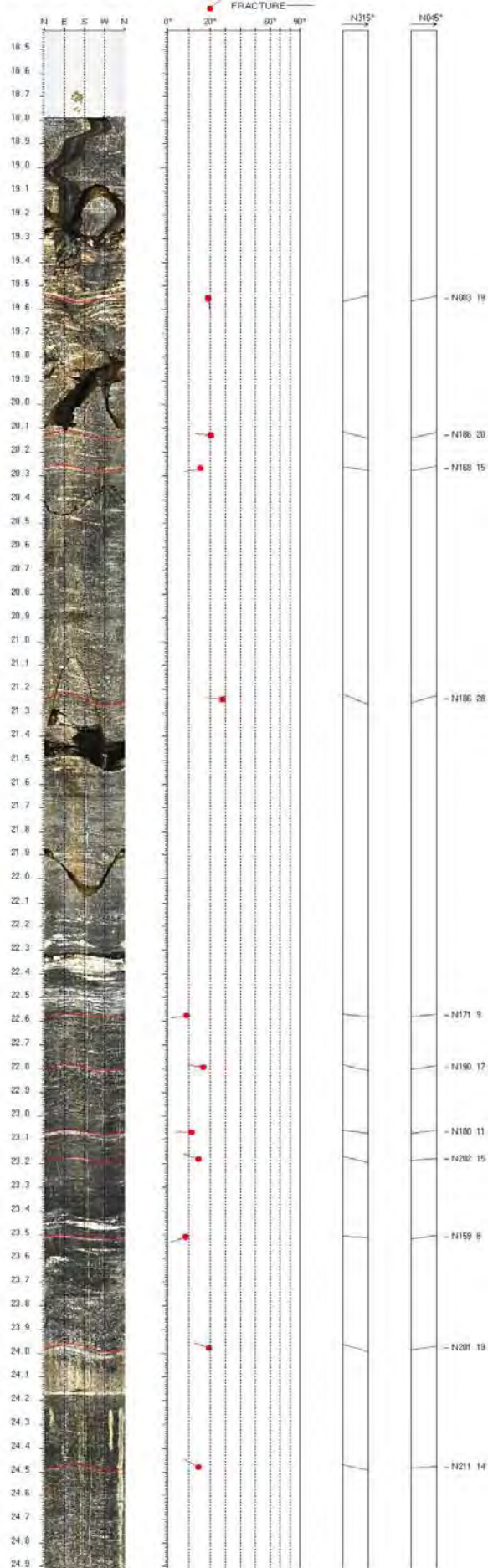
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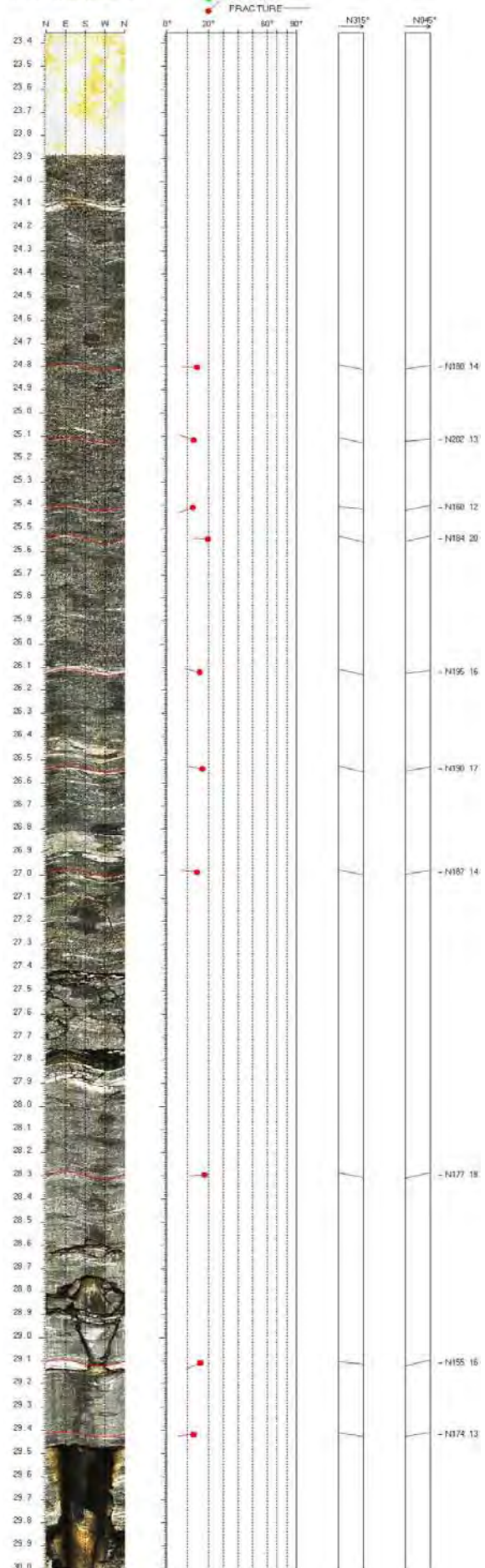
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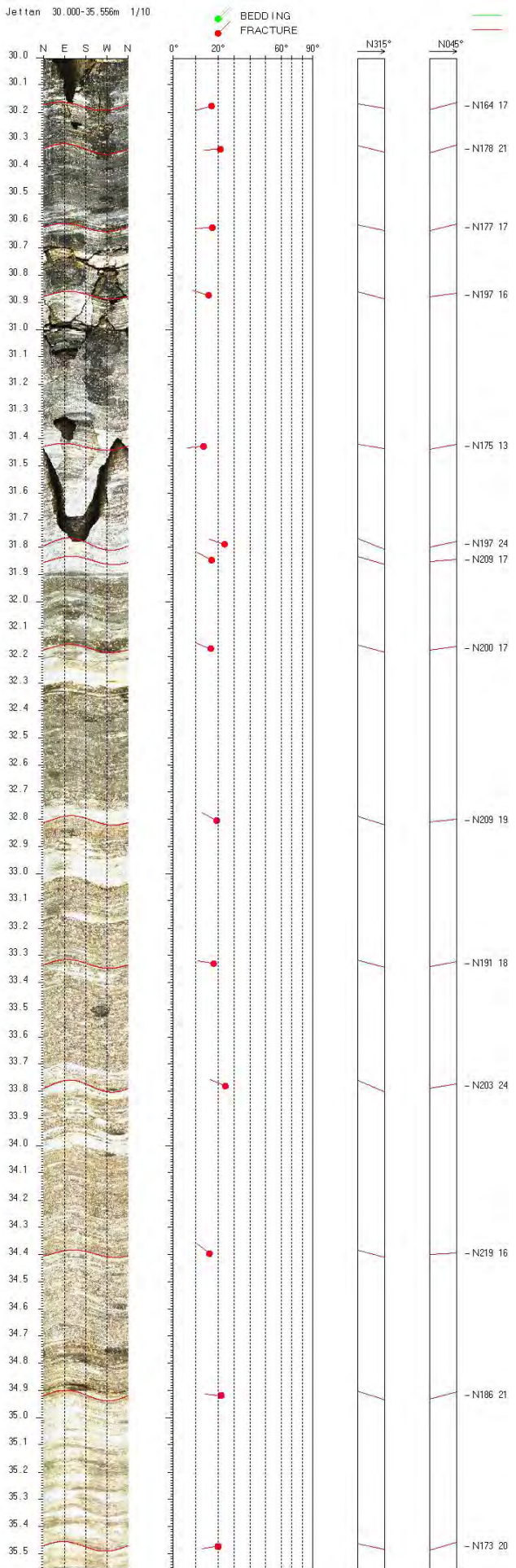
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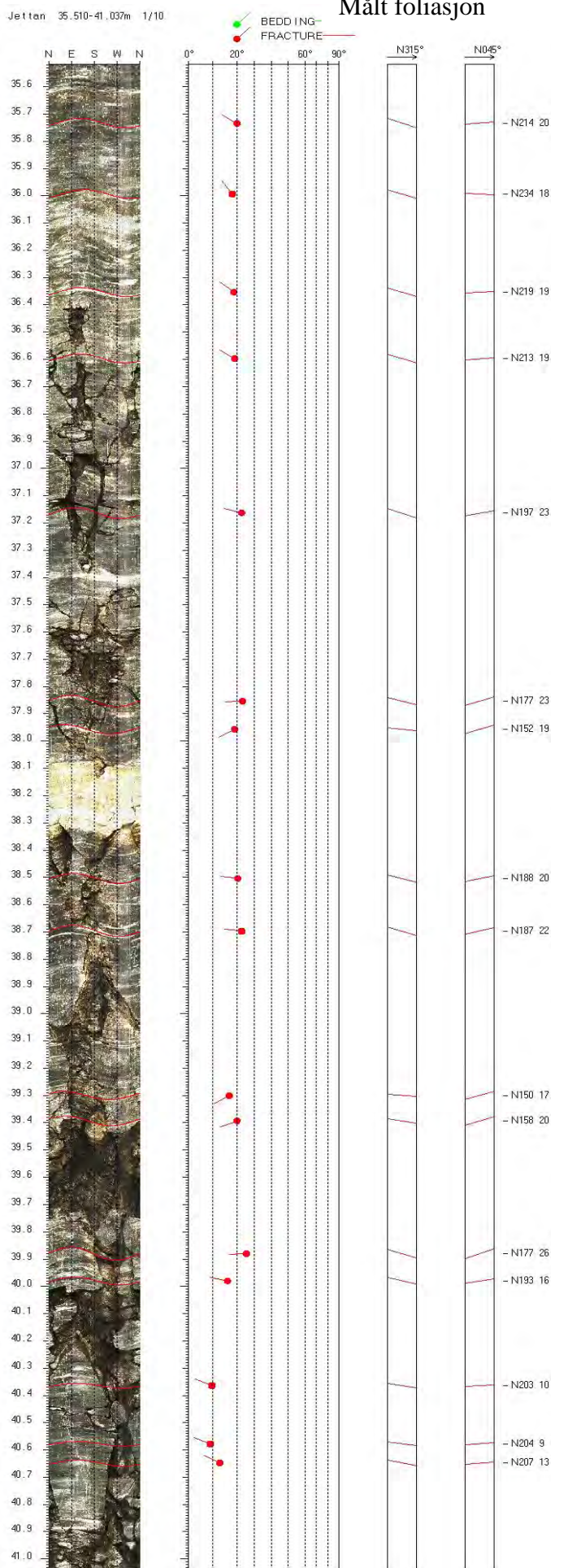
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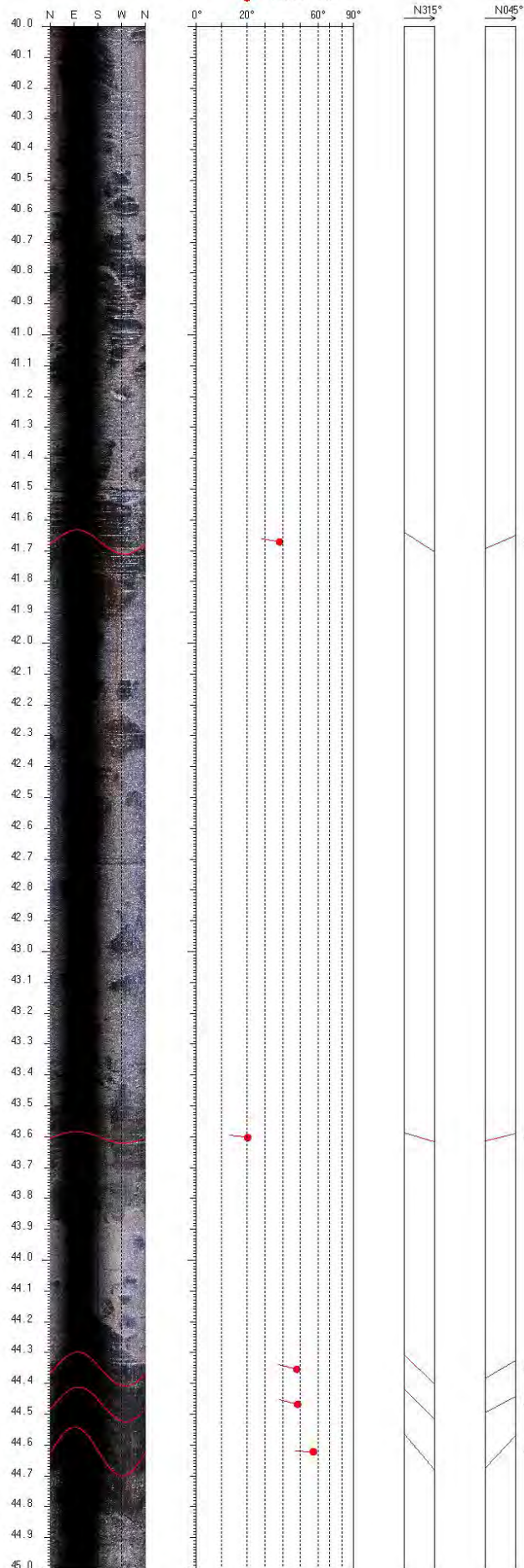
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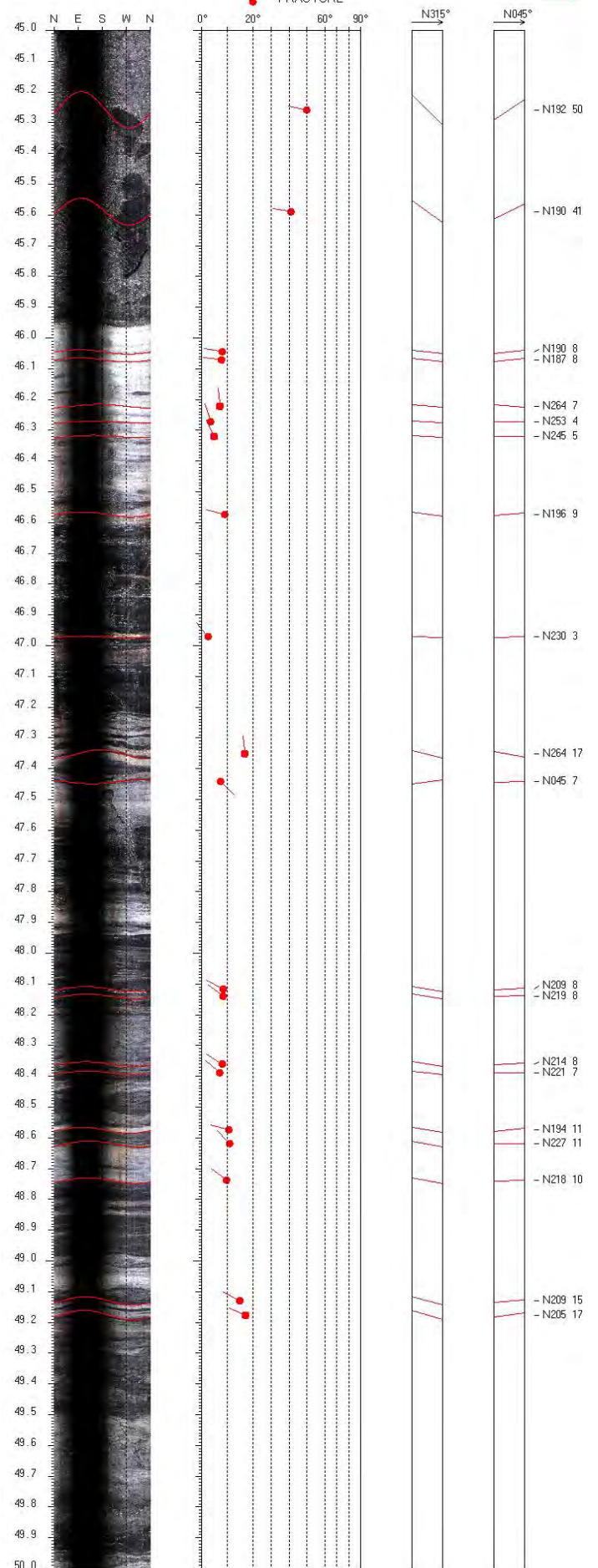
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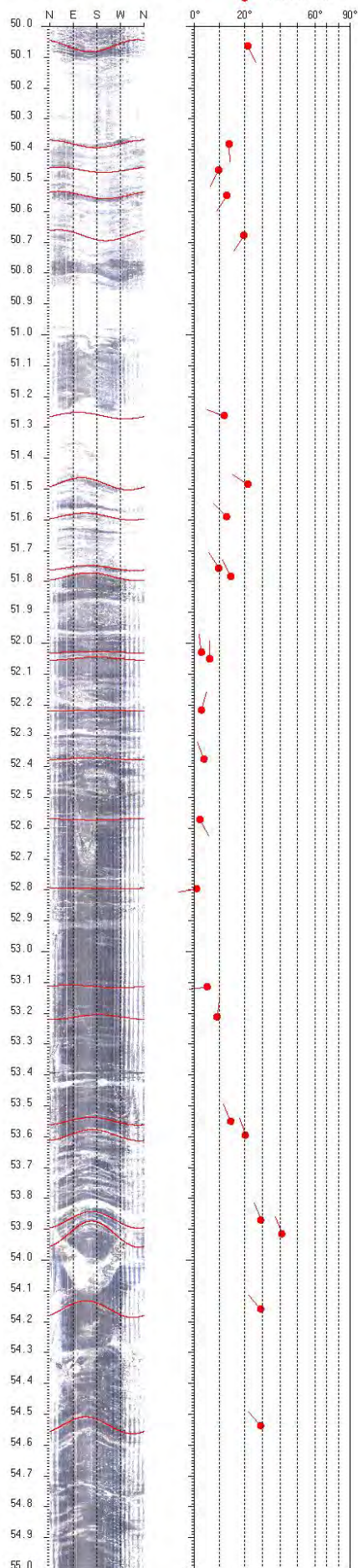
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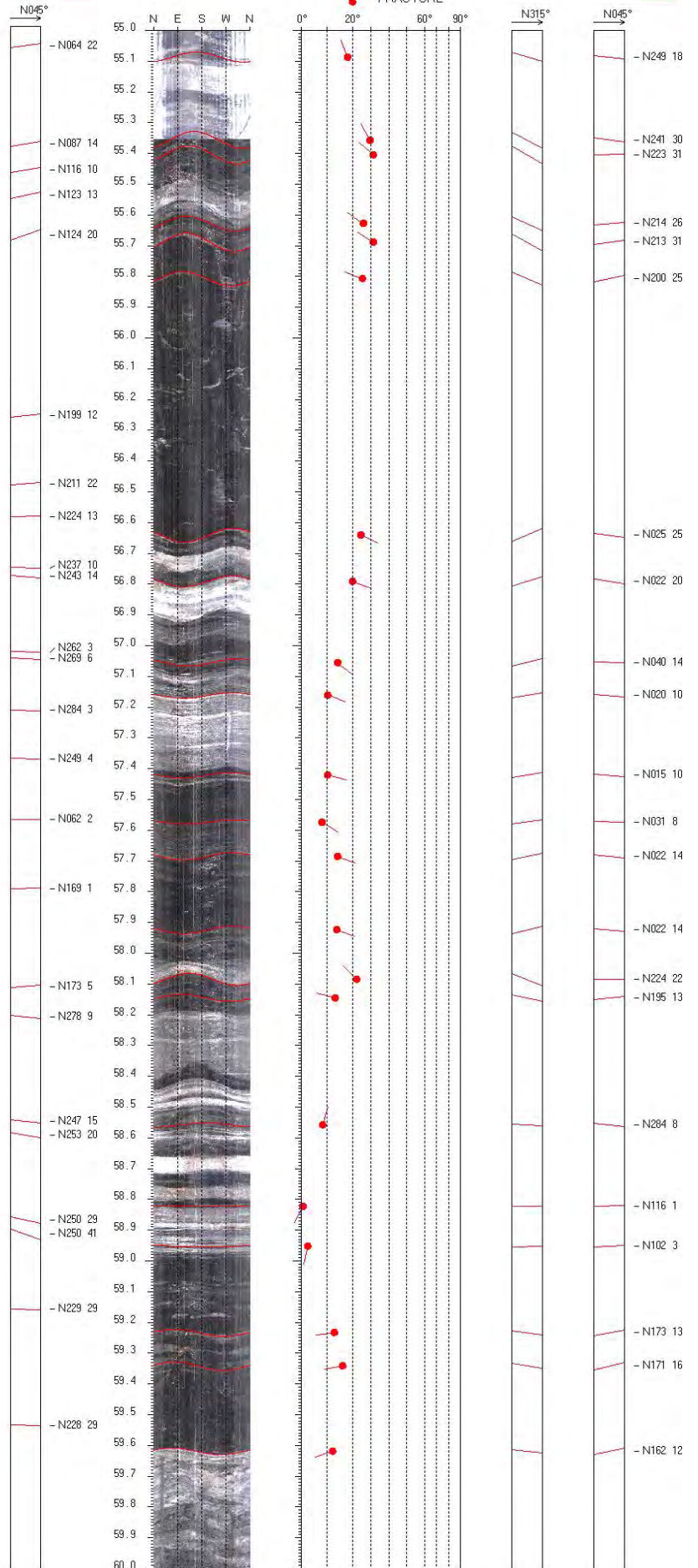
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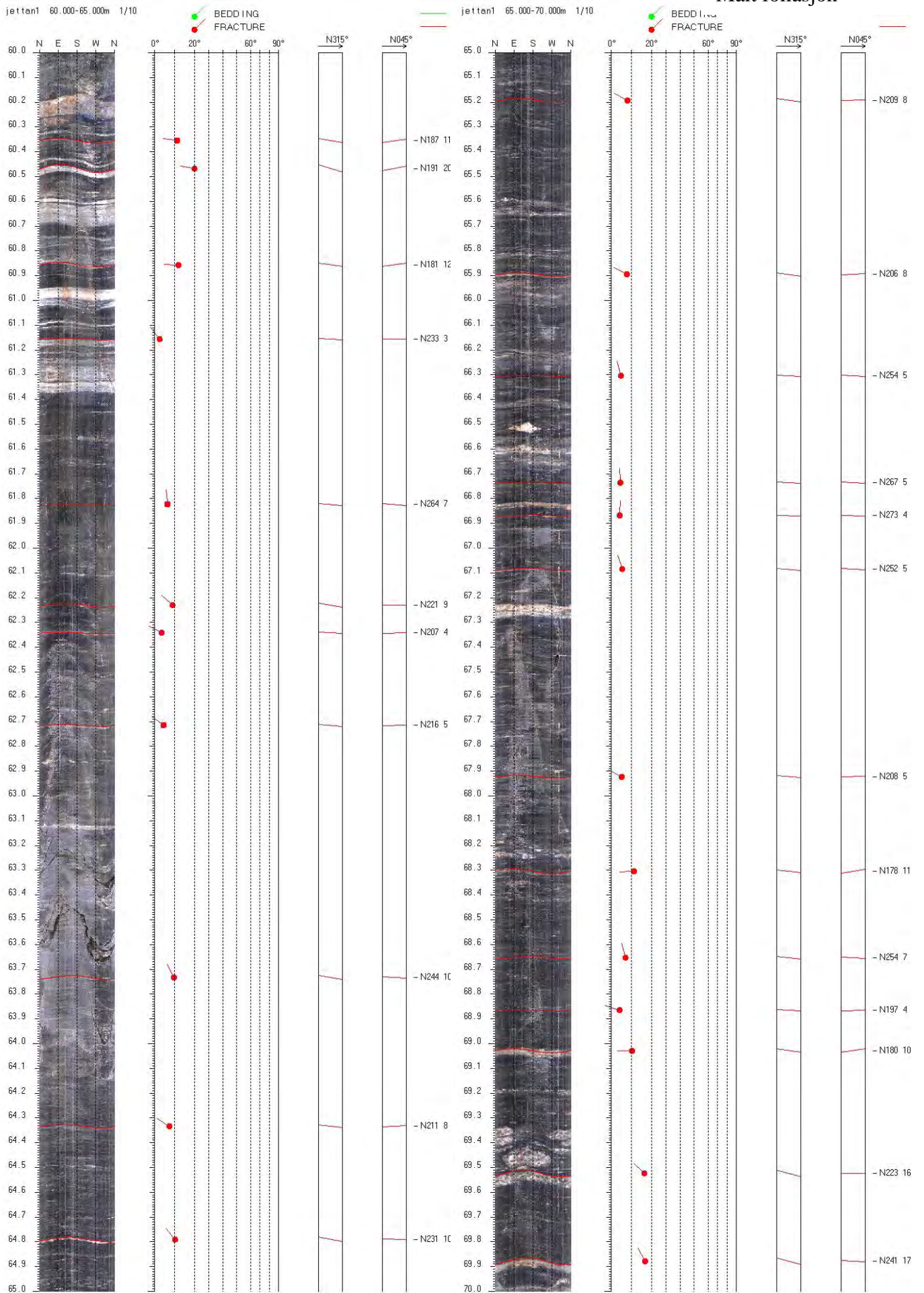


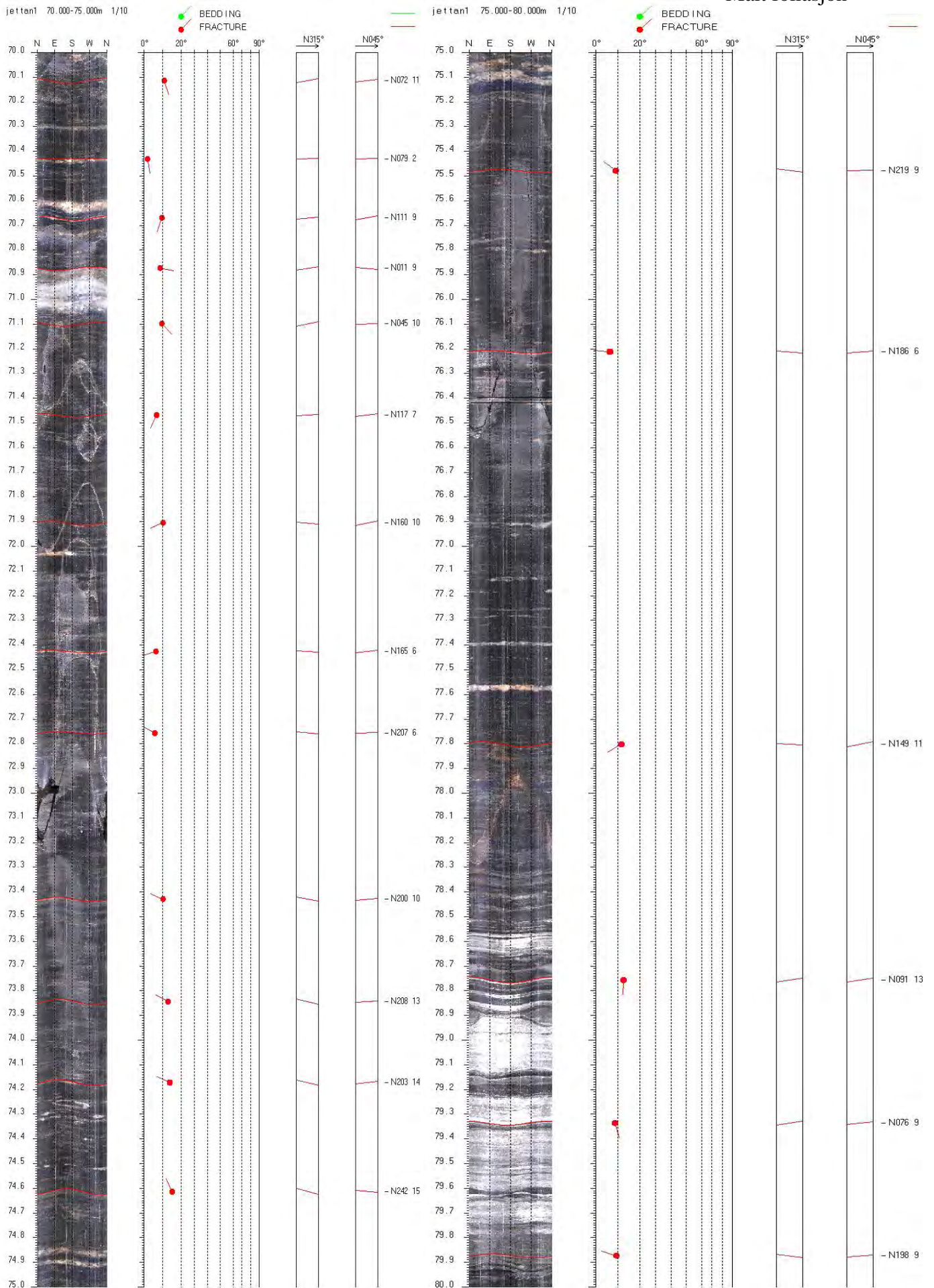
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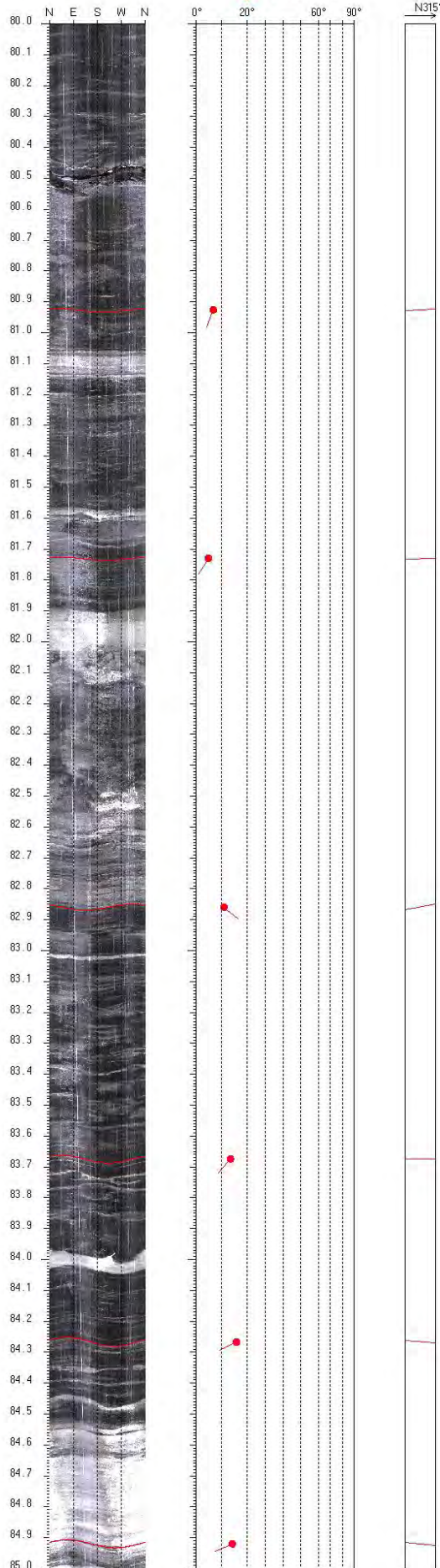
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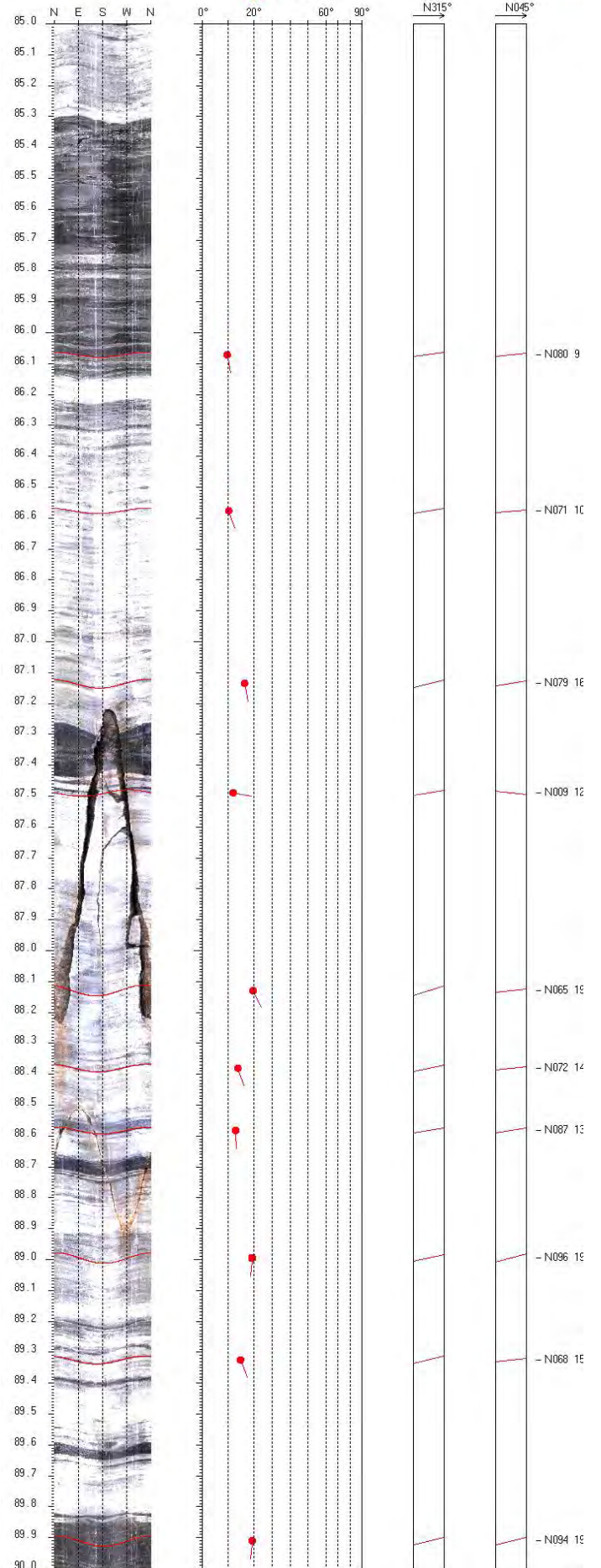




jettten1 80.000-85.000m 1/10

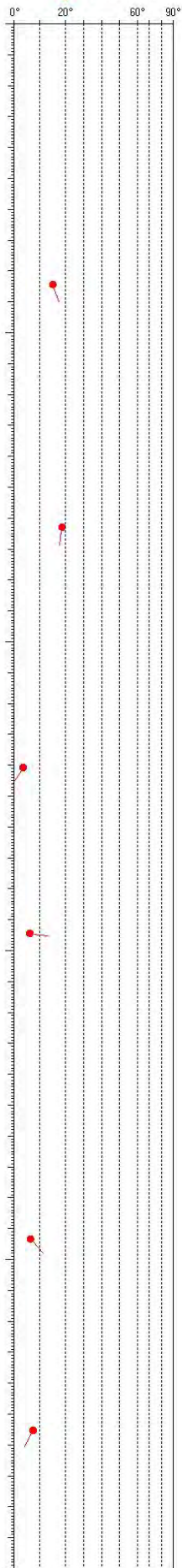
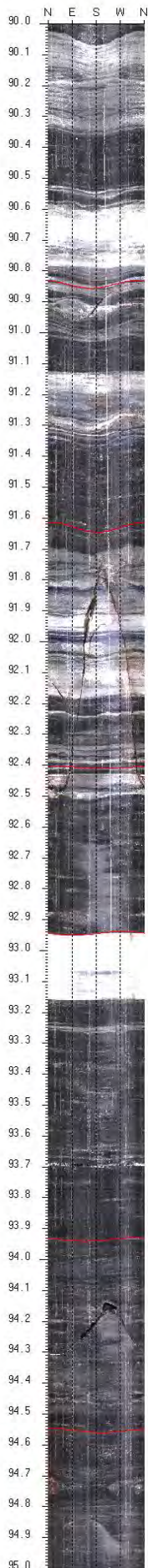


jettten1 85.000-90.000m 1/10



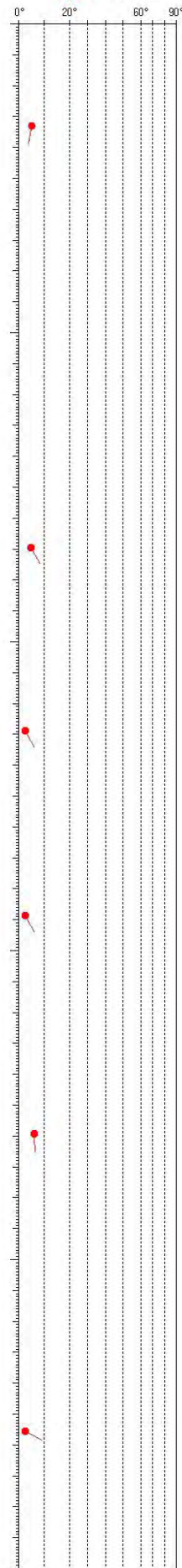
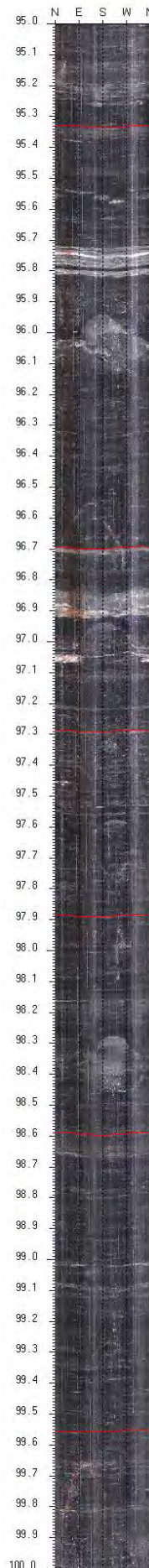
jettan1 90.000-95.000m 1/10

BEDDING
 FRACTURE

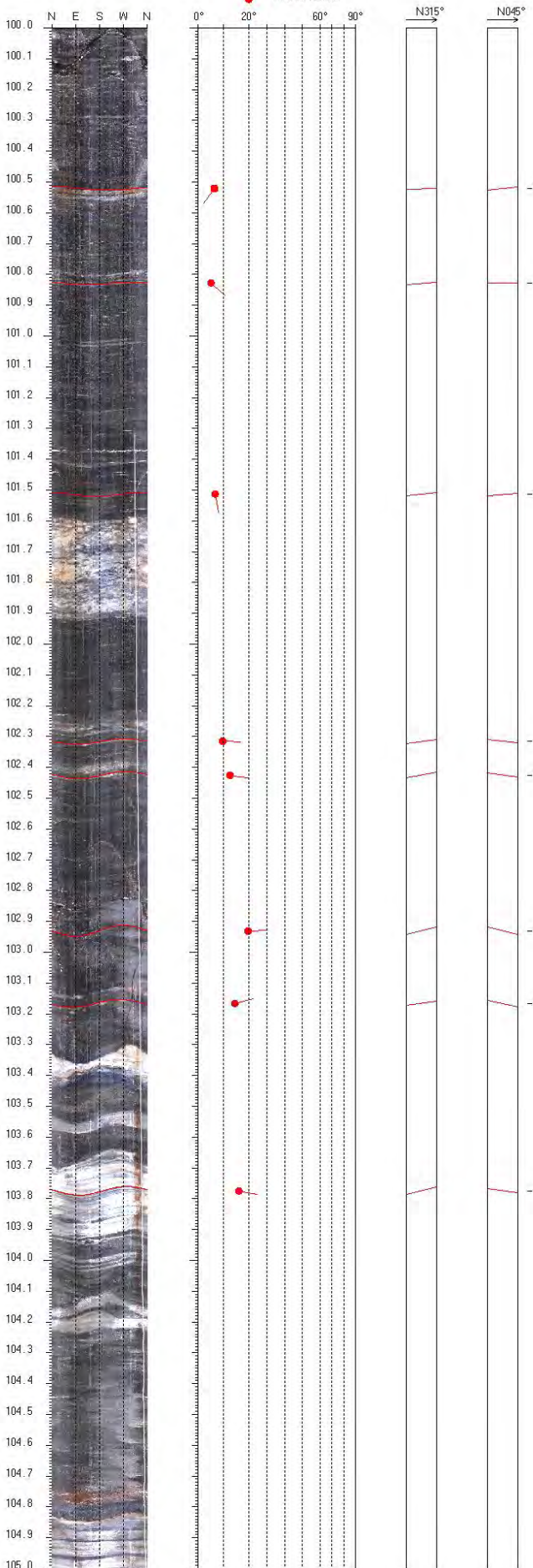


jettan1 95.000-100.000m 1/10

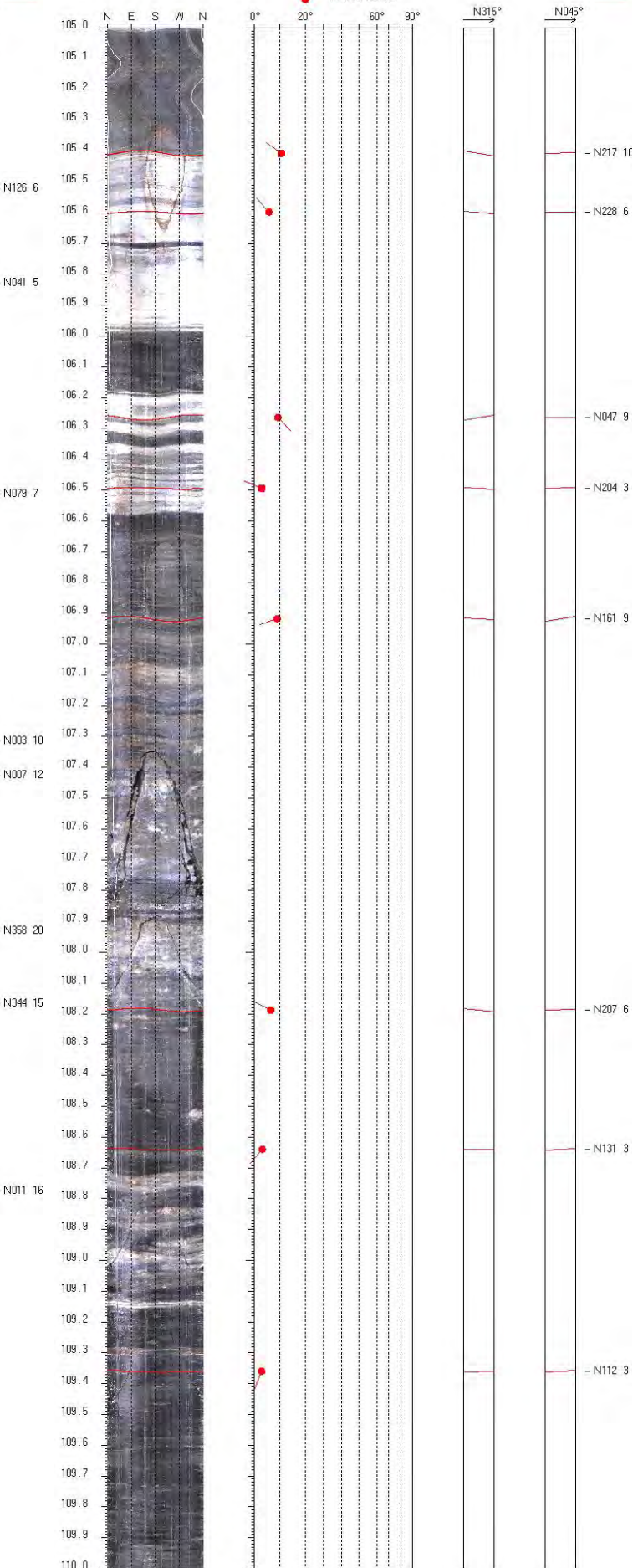
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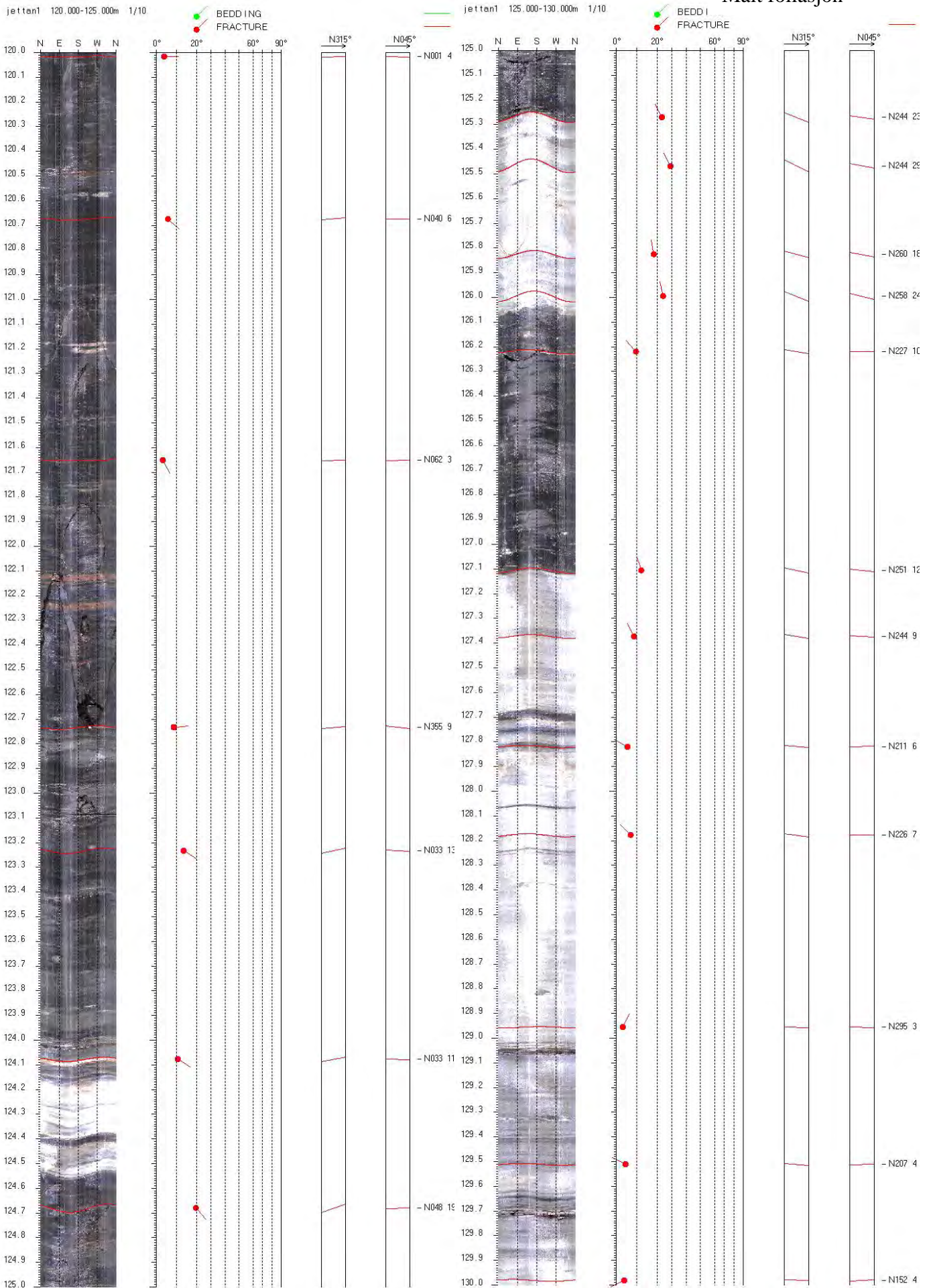
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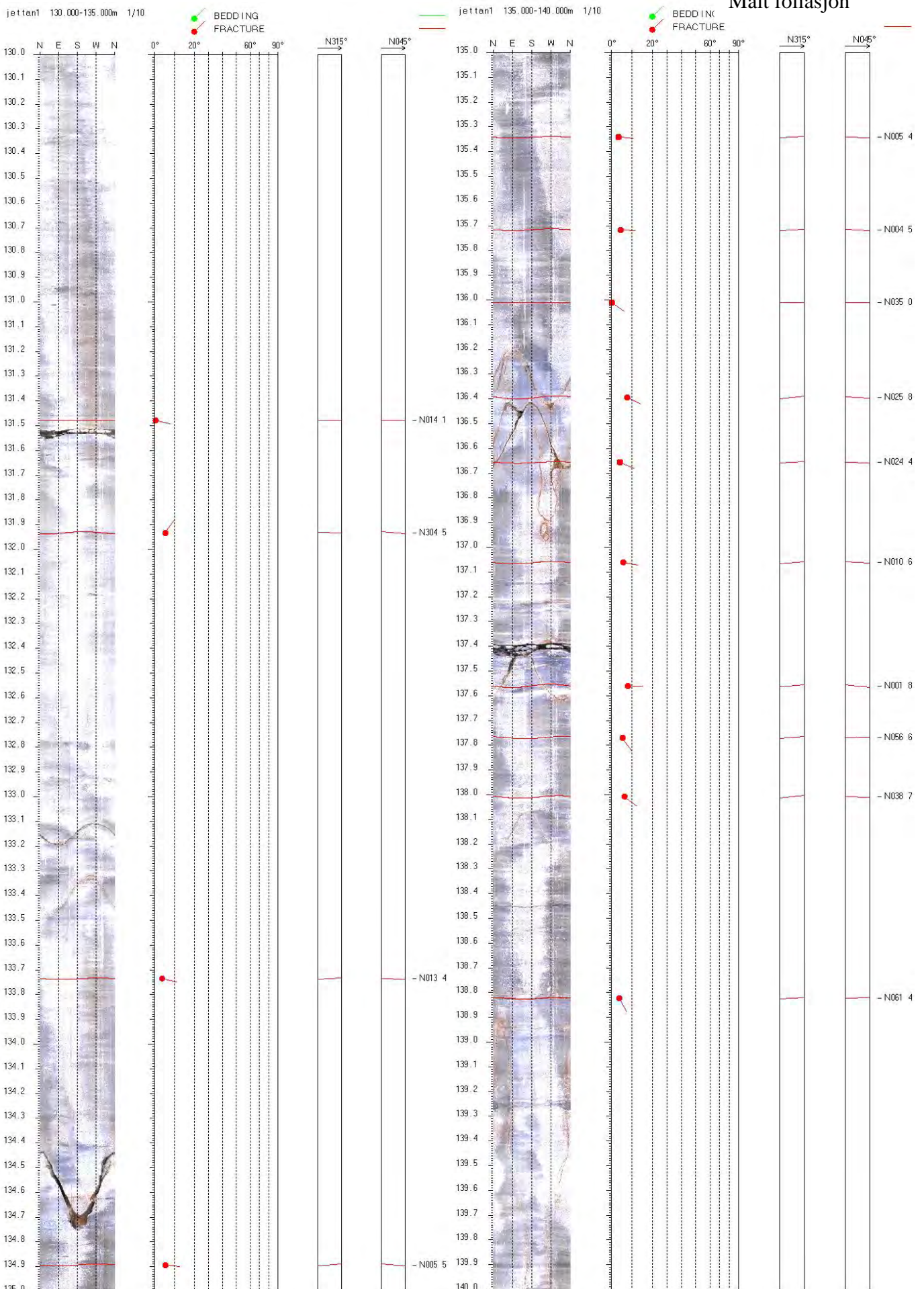


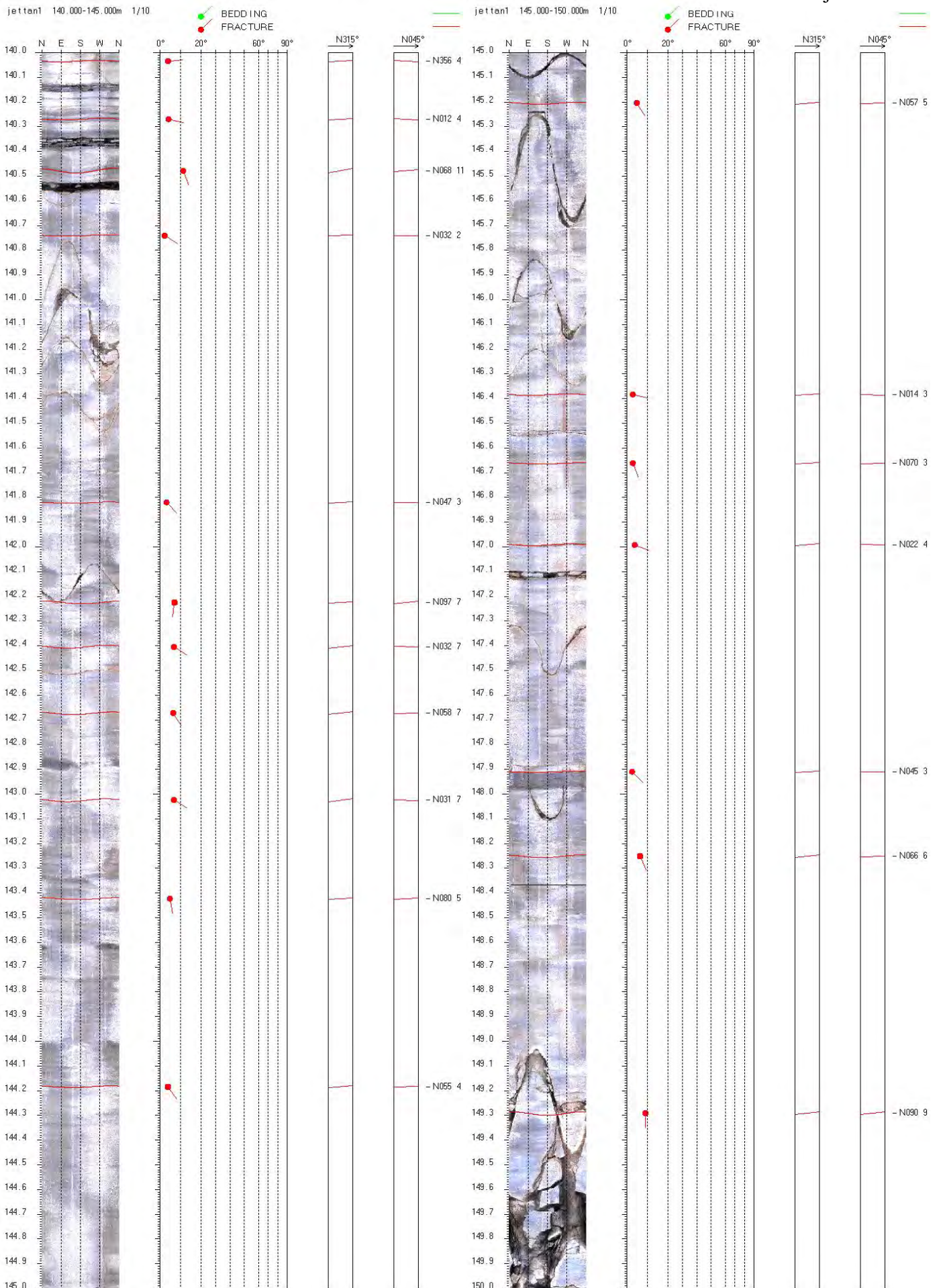
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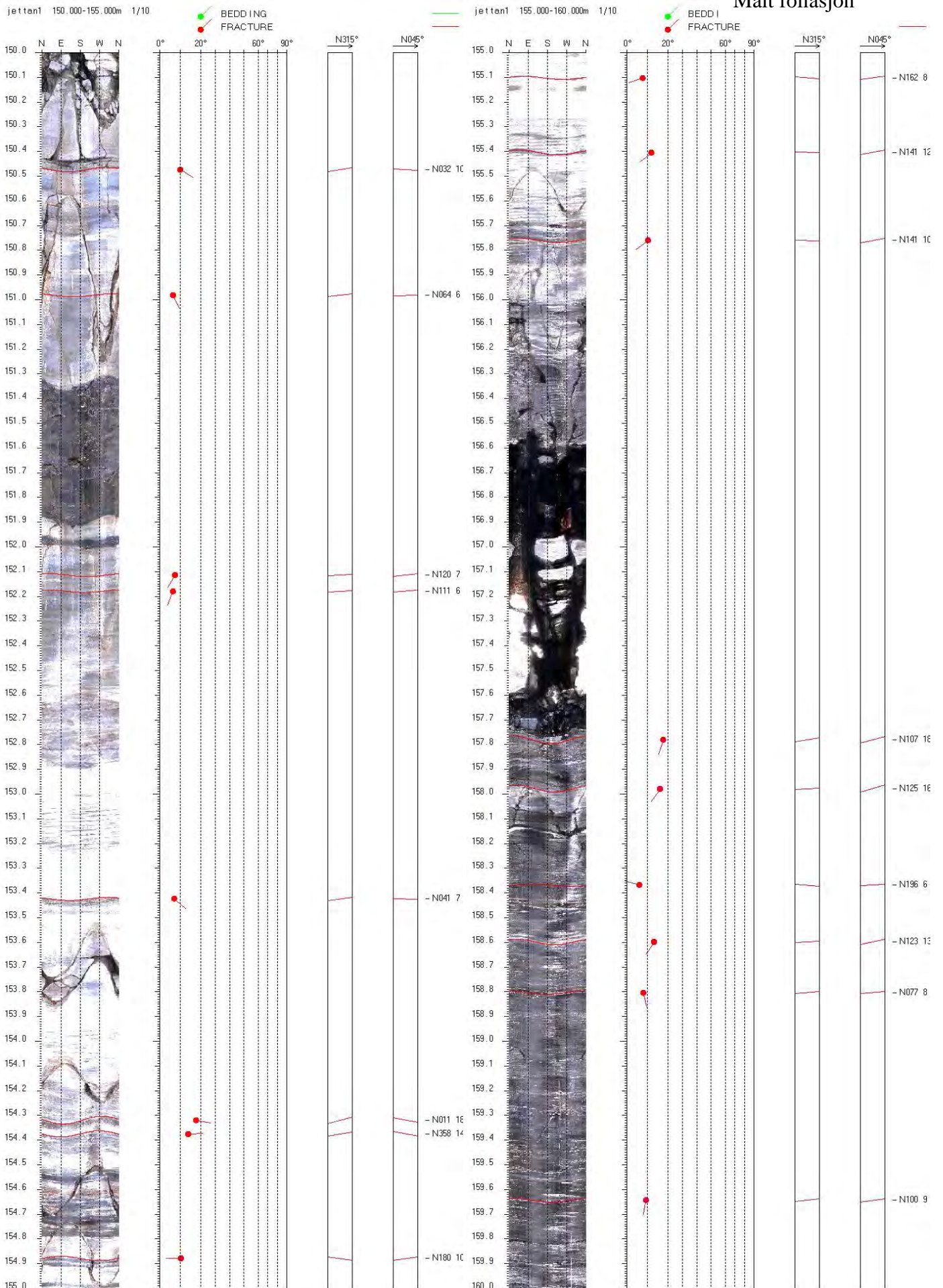


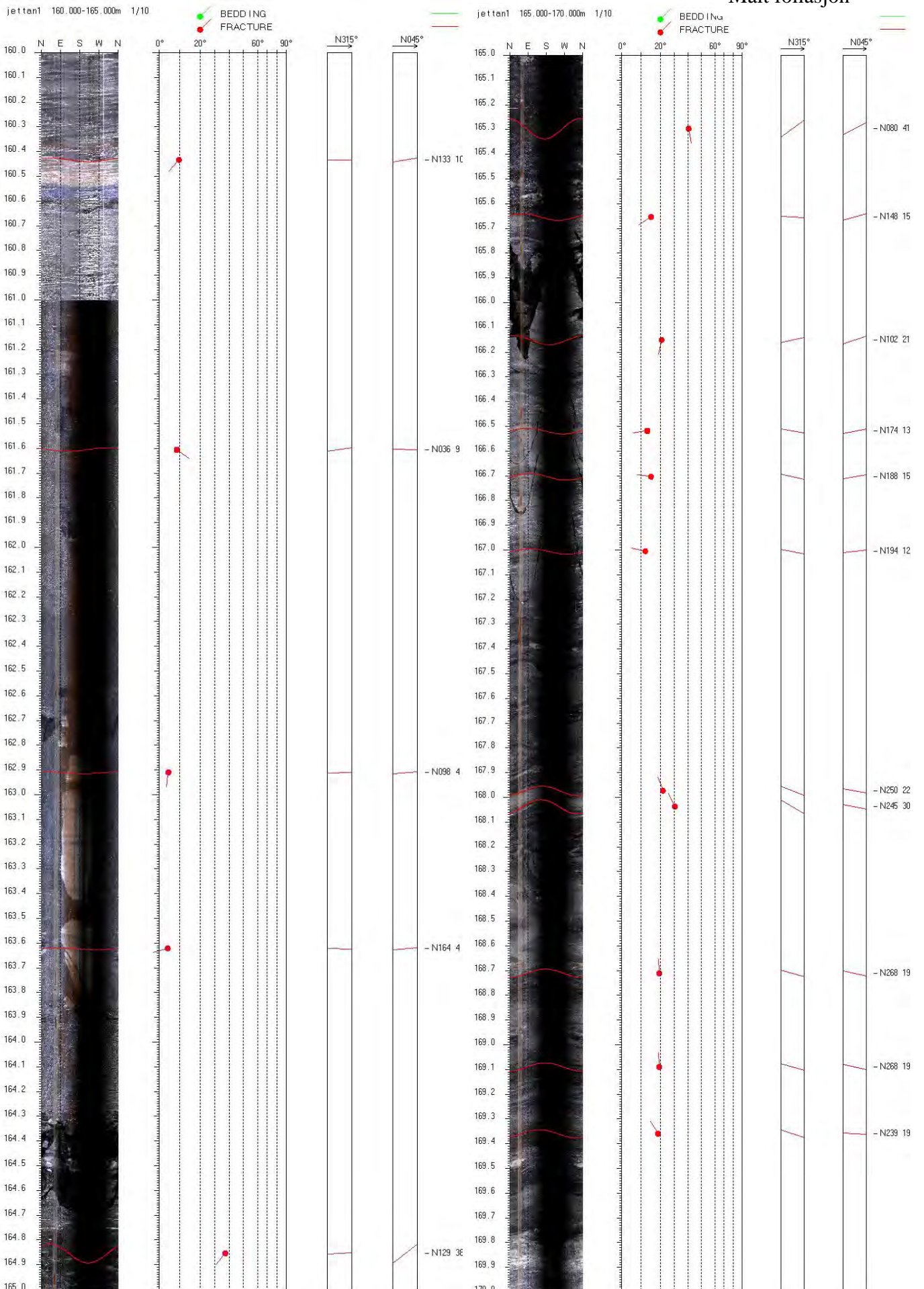


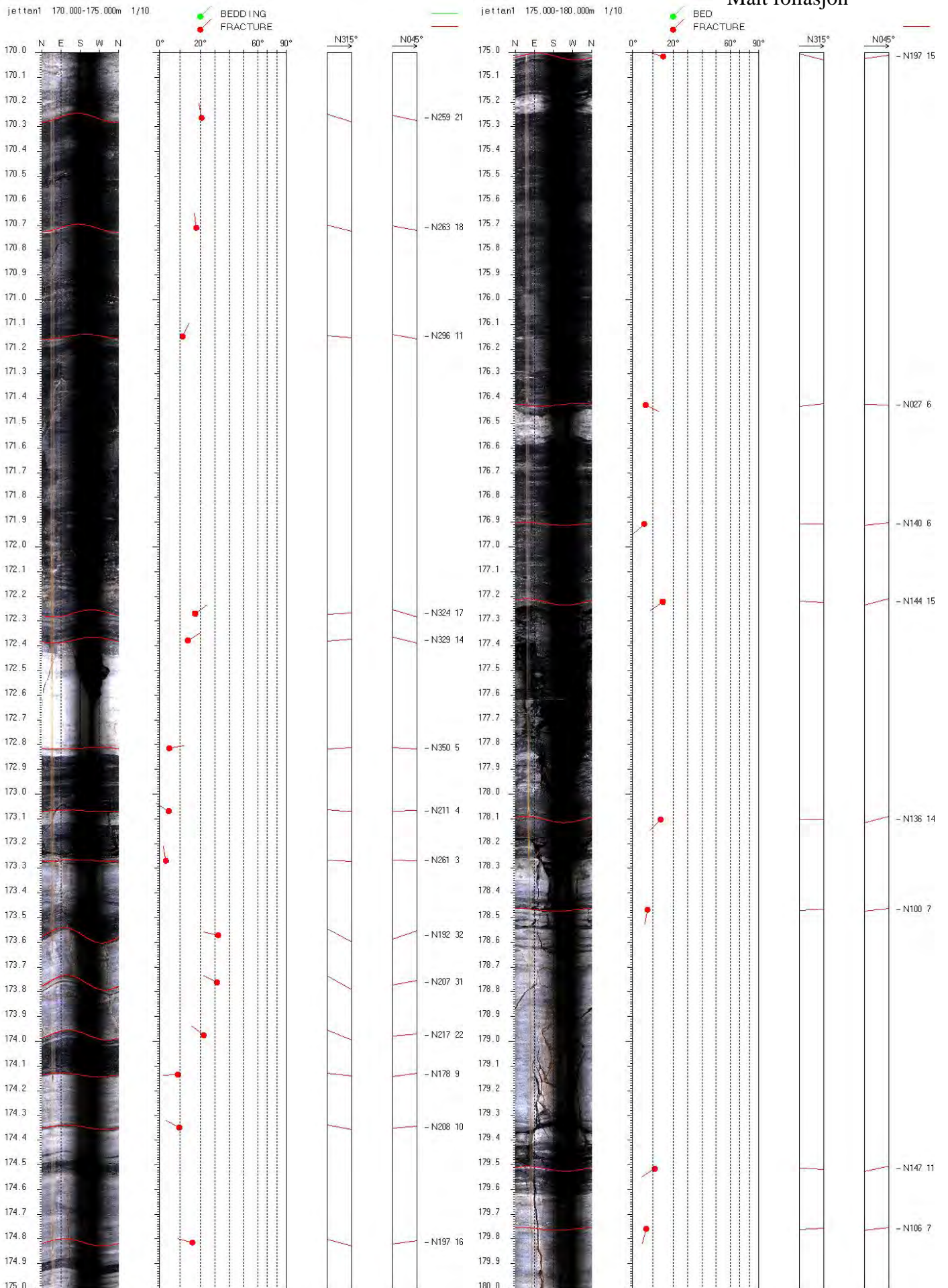




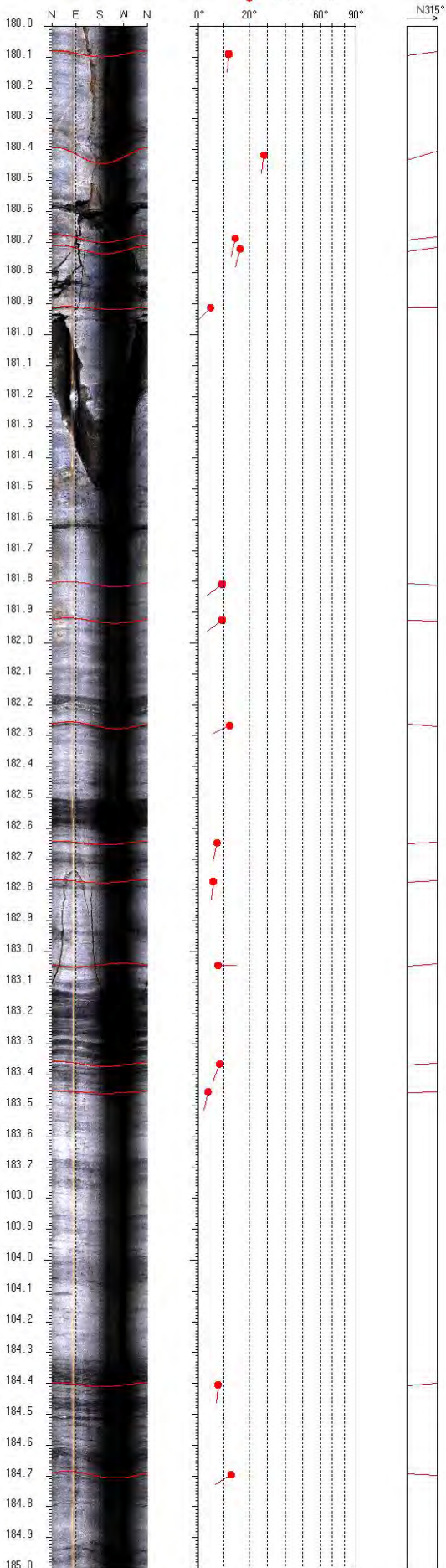




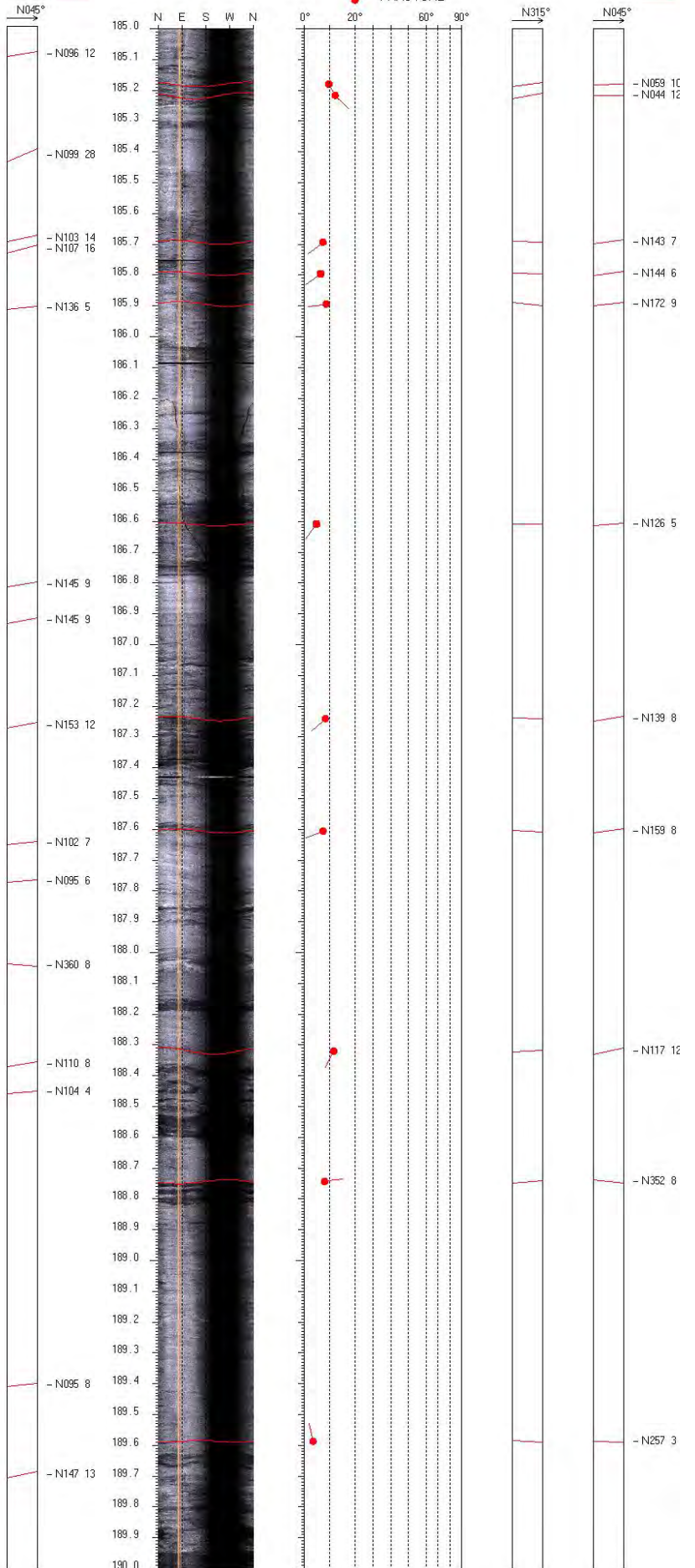




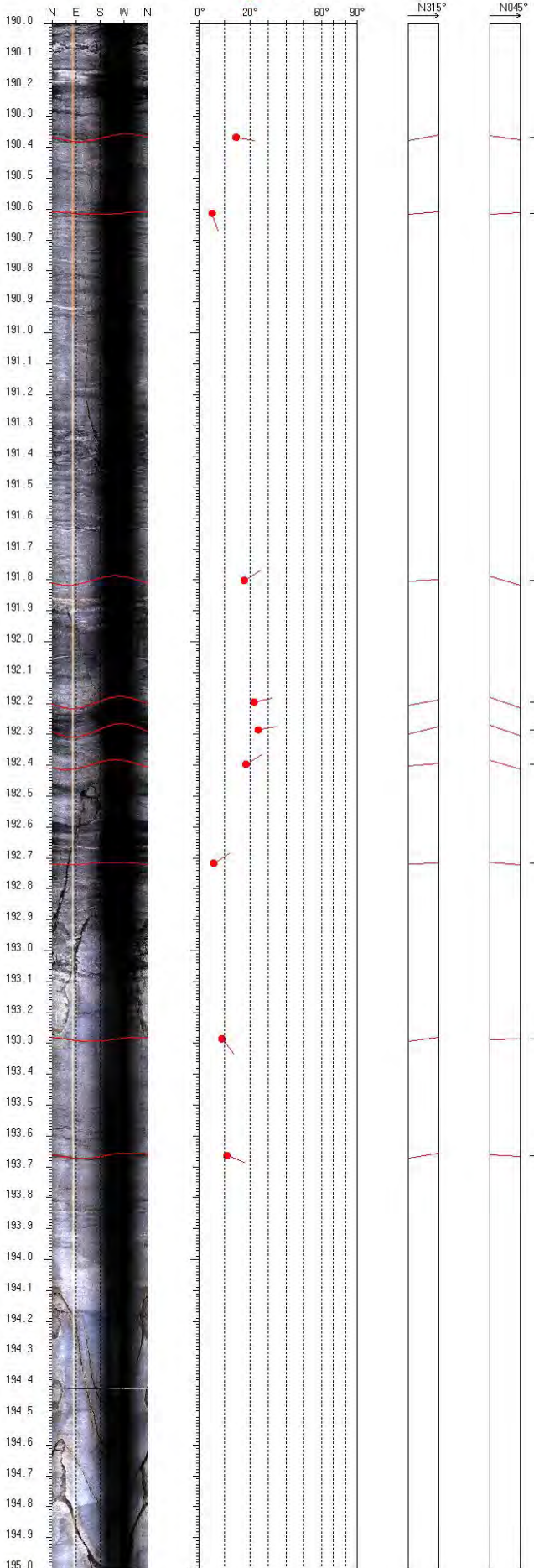
jettten1 180.000-185.000m 1/10



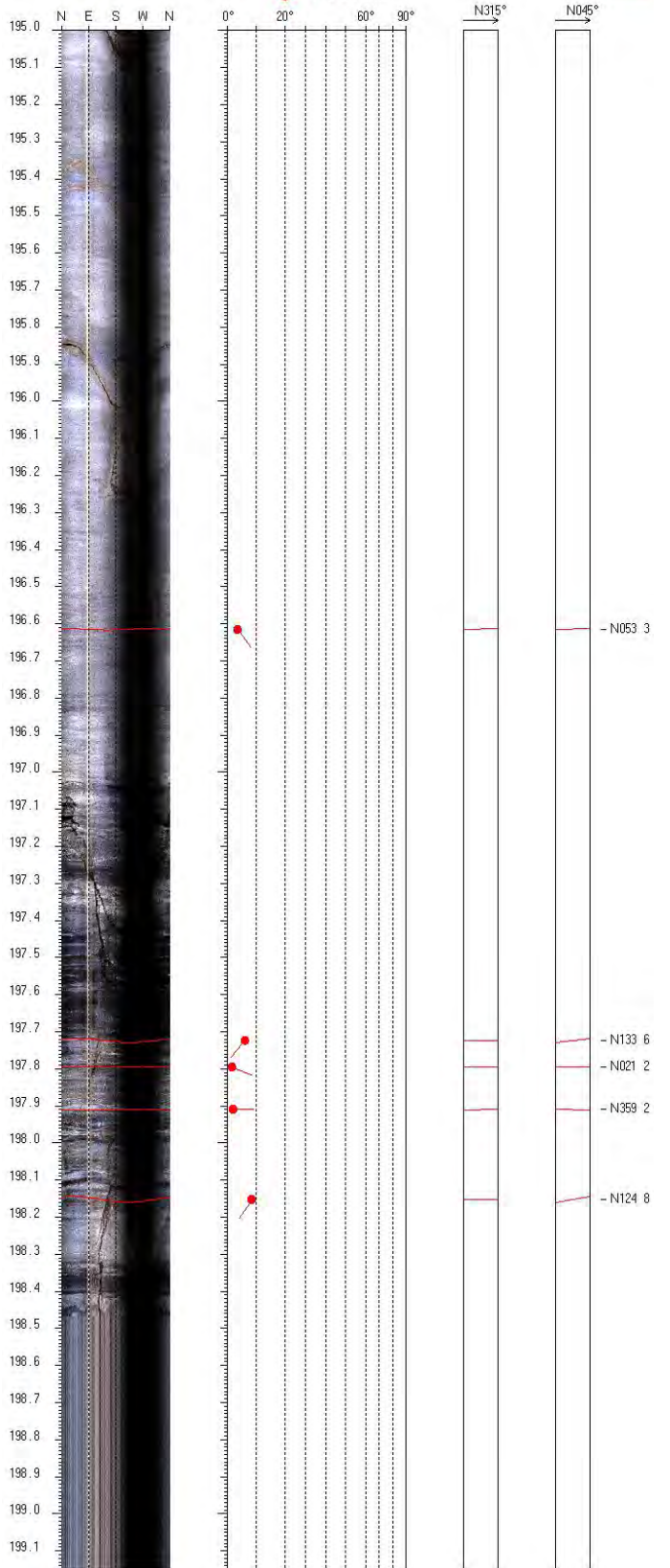
jettten1 185.000-190.000m 1/10



jettan1 190.000-195.000m 1/10



jettan1 195.000-199.147m 1/10



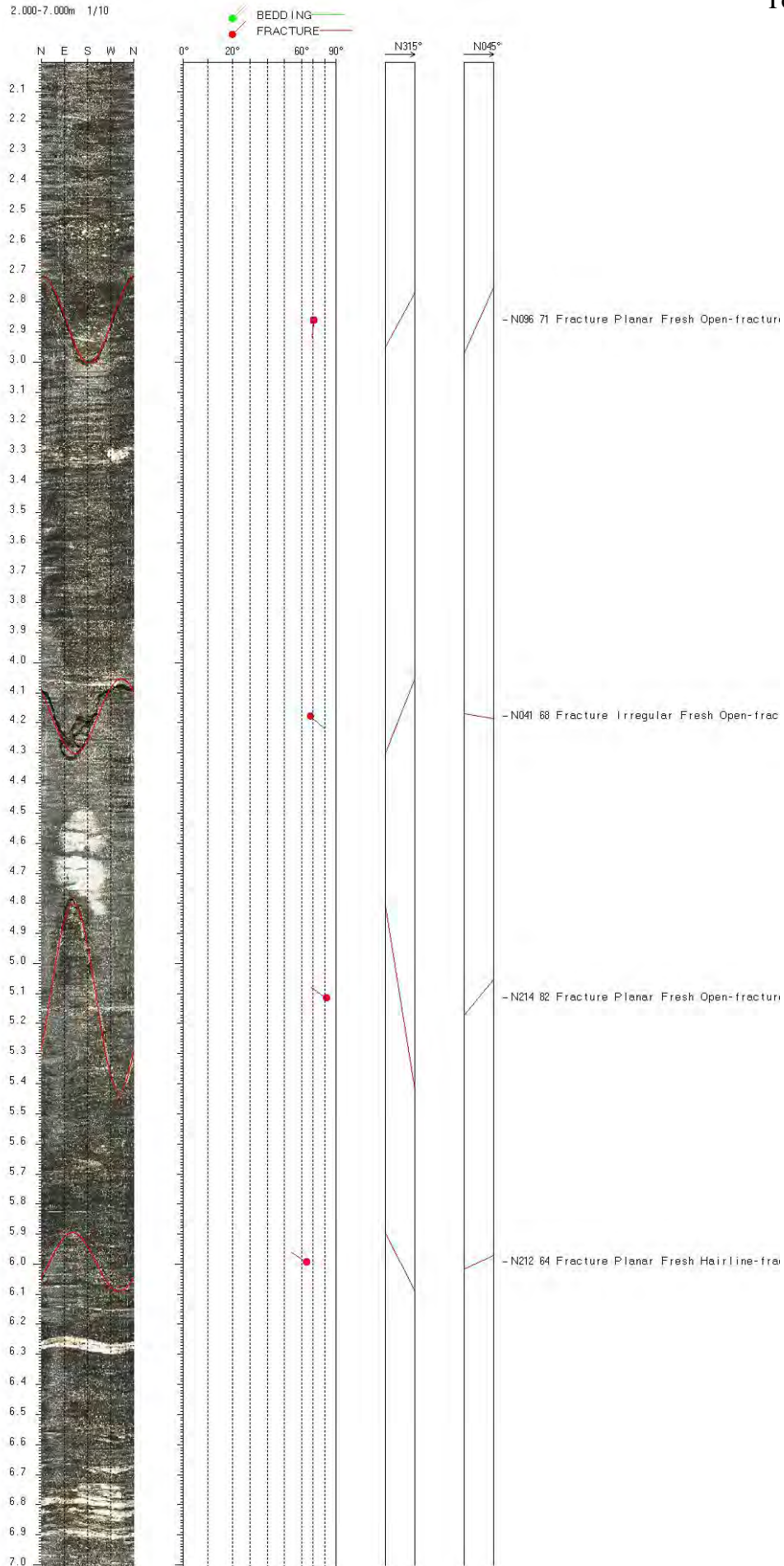
Depth	Azimuth	Dip	Upper Depth	Lower Depth	Well Diam	Well Azimuth	Well Dev	Well Dev	Thickness				
2.858	N186	70.7	2.716	3	0.098	118.2	0.87	0		Fracture	Planar	Fresh	Open-fracture
4.175	N131	67.6	4.051	4.299	0.098	113.14	0.88	0		Fracture	Irregular	Fresh	Open-fracture
5.11	N304	81.9	4.798	5.422	0.098	110.89	0.88	0		Fracture	Planar	Fresh	Open-fracture
5.99	N302	64.2	5.892	6.088	0.098	110.53	0.9	0		Fracture	Planar	Fresh	Hairline-fracture
8.91	N299	72	8.767	9.053	0.098	107.13	0.92	0		Fracture	Irregular	Fresh	Open-fracture
10.453	N255	23.2	10.433	10.473	0.098	109	0.73	0		Fracture	Planar	Weathered	Open-fracture
16.466	N131	64.5	16.36	16.572	0.098	116.76	0.77	0		Fracture	Irregular	Fresh	Open-fracture
17.064	N204	61.1	16.976	17.153	0.098	115.59	0.79	0.3228		Fracture	Irregular	Fresh	Open-fracture
18.395	N072	43.3	18.348	18.442	0.098	74.48	0.67	0		Fracture	Planar	Fresh	Open-fracture
18.421	N074	44.4	18.372	18.47	0.098	72.6	0.67	0.0186		Fracture	Planar	Fresh	Open-fracture
19.116	N080	47.5	19.061	19.17	0.098	59.77	0.69	0		Fracture	Irregular	Fresh	Open-fracture
19.161	N093	43.1	19.114	19.208	0.098	59.29	0.71	0.032		Fracture	Irregular	Fresh	Open-fracture
19.205	N269	32.1	19.175	19.235	0.098	61.14	0.68	0		Fracture	Irregular	Fresh	Open-fracture
19.231	N244	28.2	19.205	19.256	0.098	62.63	0.67	0.022		Fracture	Irregular	Fresh	Open-fracture
19.827	204	24.6	19.804	19.849	0.098	114.55	0.33	0		Fracture	Plaar	Fresh	Hairlie-fracture
19.923	44	52.9	19.858	19.989	0.098	90.4	0.34	0		Fracture	Discontinuous	Fresh	Ope-fracture
20.002	63	61	19.912	20.091	0.098	50.94	0.37	0.0431		Fracture	Discontinuous	Fresh	Ope-fracture
20.403	89	51	20.342	20.465	0.098	76.91	0.54	0		Fracture	Plaar	Fresh	Ope-fracture
21.244	312	75.8	21.052	21.436	0.098	59.4	0.34	0		Fracture	Plaar	Fresh	Ope-fracture
21.383	345	37.9	21.345	21.421	0.098	65.59	0.32	0		Fracture	Irregular	Fresh	Ope-fracture
21.497	285	41.1	21.454	21.539	0.098	75.12	0.31	0.0925		Fracture	Irregular	Fresh	Ope-fracture
21.967	195	61.4	21.878	22.056	0.098	60.33	0.26	0		Fracture	Plaar	Fresh	Ope-fracture
22.316	328	8.6	22.309	22.324	0.098	69.75	0.26	0		Fracture	Plaar	Fresh	Ope-fracture
24.153	173	5.4	24.149	24.158	0.098	98.94	0.14	0		Fracture	Plaar	Fresh	Hairlie-fracture
24.088	323	19.8	24.07	24.106	0.098	325.06	0.33	0		Fracture	Plaar	Fresh	Hairlie-fracture
26.371	354	59.6	26.287	26.455	0.098	283	0.32	0		Fracture	Plaar	Fresh	Hairlie-fracture
26.387	159	51.6	26.356	26.449	0.098	283	0.32	0		Fracture	Discontinuous	Fresh	Hairlie-fracture
26.536	278	13.4	26.524	26.548	0.098	280.65	0.3	0		Fracture	Plaar	Fresh	Hairlie-fracture
27.172	3	63.4	27.074	27.27	0.098	278.08	0.28	0		Fracture	Plaar	Fresh	Ope-fracture
27.414	312	7.2	27.408	27.42	0.098	275.2	0.28	0		Fracture	Plaar	Fresh	Fracture-zoe
27.473	268	13.5	27.461	27.485	0.098	277.16	0.26	0.0578		Fracture	Plaar	Fresh	Fracture-zoe
27.547	191	26.8	27.522	27.572	0.098	281.59	0.26	0		Fracture	Plaar	Fresh	Ope-fracture
27.587	300	12.3	27.576	27.598	0.098	285.93	0.25	0		Fracture	Plaar	Fresh	Hairlie-fracture
27.611	301	14.6	27.598	27.624	0.098	288.27	0.25	0		Fracture	Plaar	Fresh	Ope-fracture
27.758	287	16.2	27.744	27.773	0.098	294.91	0.27	0		Fracture	Plaar	Fresh	Ope-fracture
27.816	277	20.3	27.797	27.834	0.098	294	0.29	0.0545		Fracture	Plaar	Fresh	Ope-fracture
27.887	266	26.7	27.862	27.912	0.098	297.39	0.27	0		Fracture	Plaar	Fresh	Hairlie-fracture
27.974	180	30.9	27.945	28.003	0.098	302.82	0.3	0		Fracture	Plaar	Fresh	Hairlie-fracture
28.601	32	22.8	28.58	28.621	0.098	296.27	0.35	0		Fracture	Plaar	Fresh	Ope-fracture
28.611	12	16.1	28.597	28.625	0.098	296	0.34	0		Fracture	Plaar	Fresh	Ope-fracture
28.63	239	10.8	28.621	28.64	0.098	296	0.32	0		Fracture	Plaar	Fresh	Ope-fracture
28.763	26	37.9	28.725	28.801	0.098	289.28	0.33	0		Fracture	Plaar	Fresh	Fracture-zoe
28.826	7	45.5	28.776	28.876	0.098	286.45	0.32	0.0473		Fracture	Plaar	Fresh	Fracture-zoe
28.877	267	20.2	28.859	28.896	0.098	284.58	0.3	0		Fracture	Plaar	Fresh	Ope-fracture
28.921	246	19.2	28.903	28.938	0.098	284.78	0.3	0		Fracture	Plaar	Fresh	Ope-fracture
28.951	235	72.6	28.851	29.109	0.098	289.56	0.33	0		Fracture	Discontinuous	Fresh	Ope-fracture
29.141	216	14.6	29.128	29.154	0.098	280.14	0.34	0		Fracture	Plaar	Fresh	Ope-fracture
29.458	346	6.1	29.453	29.464	0.098	267.18	0.43	0		Fracture	Plaar	Fresh	Ope-fracture
29.989	144	47	29.937	30.042	0.098	235.59	0.6	0.4965		Fracture	Plaar	Fresh	Ope-fracture
30.703	225	14.2	30.691	30.716	0.098	248.37	0.55	0		Fracture	Plaar	Fresh	Ope-fracture
30.753	272	24.2	30.73	30.775	0.098	285.84	0.66	0		Fracture	Plaar	Fresh	Ope-fracture
30.89	94	58.2	30.813	30.968	0.098	284.12	0.43	0		Fracture	Plaar	Fresh	Hairlie-fracture
31.001	274	16.8	30.985	31.008	0.098	286.46	0.4	0		Fracture	Discontinuous	Fresh	Ope-fracture
31.025	92	60.5	30.94	31.11	0.098	284.07	0.46	0		Fracture	Irregular	Fresh	Hairlie-fracture
31.555	139	73.8	31.389	31.722	0.098	256.82	0.43	0		Fracture	Irregular	Fresh	Ope-fracture
31.62	143	76.2	31.422	31.818	0.098	253	0.42	0.0168		Fracture	Irregular	Fresh	Ope-fracture
34.888	297	20	34.87	34.906	0.098	229	0.32	0		Fracture	Plaar	Fresh	Hairlie-fracture
36.423	285	20.2	36.405	36.441	0.098	229	0.23	0		Fracture	Crushed	Fresh	Fracture-zoe
37.115	247	24.3	37.093	37.137	0.098	186	0.27	0		Fracture	Plaar	Fresh	Ope-fracture
37.379	275	18.2	37.362	37.395	0.098	203.94	0.31	0.9031		Fracture	Crushed	Fresh	Fracture-zoe
37.506	119	55.8	37.434	37.578	0.098	200.04	0.38	0		Fracture	Crushed	Fresh	Fracture-zoe
37.917	124	69.7	37.784	38.049	0.098	217.74	0.46	0.1884		Fracture	Crushed	Fresh	Fracture-zoe
38.356	165	57.1	38.28	38.433	0.098	210.83	0.37	0		Fracture	Irregular	Fresh	Ope-fracture
38.512	150	55.5	38.44	38.584	0.098	210.47	0.35	0		Fracture	Irregular	Fresh	Ope-fracture
40.01	274	17.9	39.994	40.026	0.098	195.89	0.44	0		Fracture	Crushed	Fresh	Fracture-zoe
40.342	288	72.9	40.179	40.504	0.098	227.52	0.61	0.2337		Fracture	Crushed	Fresh	Fracture-zoe
40.456	183	19.7	40.438	40.474	0.098	221.64	0.73	0		Fracture	Discontinuous	Fresh	Hairlie-fracture
40.771	120	78.8	40.528	41.015	0.098	225.29	0.55	0		Fracture	Crushed	Fresh	Fracture-zoe
41.223	91	80.4	40.946	41.5	0.098	237	0.59	0.084		Fracture	Crushed	Fresh	Fracture-zoe
37.394	N242	11.9	37.383	37.406	0.098	253		0		Fracture	Planar	Fresh	Hairline-fracture
38.664	N305	5.6	38.659	38.669	0.098	261.23	0.82	0		Fracture	Planar	Fresh	Hairline-fracture
46.778	N223	51	46.716	46.84	0.098	244	0.72	0		Fracture	Planar	Fresh	Hairline-fracture
47.294	N306	46.6	47.242	47.347	0.098	245.34	0.72	0		Fracture	Planar	Fresh	Hairline-fracture
47.653	N014	72.9	47.498	47.807	0.098	243.49	0.71	0		Fracture	Irregular	Fresh	Open-fracture
49.348	N297	40.8	49.305	49.391	0.098	242.42	0.65	0		Fracture	Planar	Fresh	Hairline-fracture
52.339	N136	81.4	52.438	52.66	0.098	231	0.26	0		Fracture	Discontinuous	Fresh	Open-fracture
53.319	N267	69.7	53.185	53.453	0.098	217.62	0.33	0		Fracture	Planar	Fresh	Hairline-fracture
53.952	N166	48	53.897	54.007	0.098	218.51	0.3	0		Vein	Irregular	Mineralized	
54.029	N157	59	53.947	54.111	0.098	220.9	0.31	0.0463		Vein	Irregular	Mineralized	
55.245	N277	71.9	55.094	55.396	0.098	205.47	0.32	0		Fracture	Irregular	Fresh	Hairline-fracture
58.842	N280	55.6	58.771	58.914	0.098	192.3	0.44	0		Fracture	Planar	Fresh	Hairline-fracture
59.376	N305	58.6	59.297	59.456	0.098	185.06	0.49	0		Fracture	Planar	Fresh	Hairline-fracture
60.183	N334	20.4	60.165	60.201	0.098	177.24	0.5	0		Vein	Planar	Mineralized	
60.252	N354	13	60.241	60.263	0.098	179.5	0.5	0.0661		Vein	Planar	Mineralized	
60.312	N286	70.1	60.27	60.446	0.098	179.31	0.52	0		Fracture	Discontinuous	Fresh	Hairline-fracture
61.226	N040	76.7	61.026	61.426	0.098	184	0.55	0		Fracture	Irregular	Fresh	Hairline-fracture

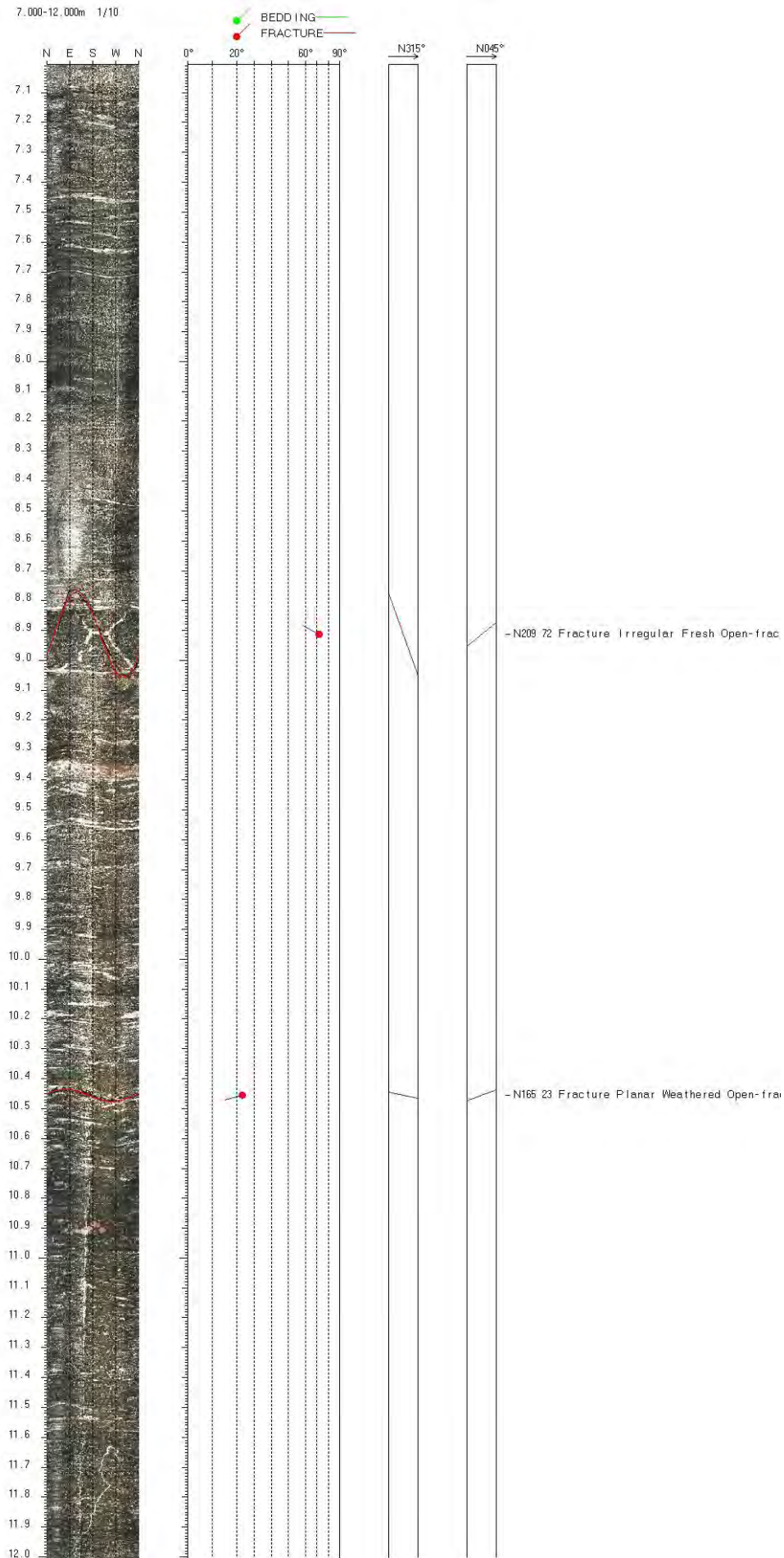
Depth	Azimuth	Dip	Upper Depth	Lower Depth	Well Diam	Well Azimuth	Well Dev	deviation	Thickness				
62.228	N302	46.6	62.176	62.279	0.098	185.97	0.5	0		Fracture	Planar	Fresh	Hairline-fracture
62.438	N297	48.9	62.382	62.494	0.098	187.33	0.5	0		Fracture	Planar	Fresh	Hairline-fracture
62.525	N307	63.1	62.429	62.62	0.098	187.87	0.51	0		Fracture	Planar	Fresh	Hairline-fracture
62.624	N314	63.6	62.527	62.722	0.098	194.62	0.48	0		Fracture	Planar	Fresh	Hairline-fracture
62.741	N302	61.4	62.651	62.83	0.098	196.55	0.46	0		Fracture	Planar	Fresh	Hairline-fracture
63.258	N301	73.3	63.096	63.42	0.098	191.77	0.5	0		Fracture	Planar	Fresh	Open-fracture
63.289	N300	54.7	63.22	63.358	0.098	190.51	0.51	0		Fracture	Planar	Fresh	Open-fracture
63.483	N302	75.3	63.301	63.666	0.098	182.37	0.57	0		Fracture	Planar	Fresh	Open-fracture
63.506	N304	63.5	63.409	63.603	0.098	183.72	0.58	0		Fracture	Planar	Fresh	Open-fracture
63.555	N300	68	63.435	63.674	0.098	182.76	0.6	0.0203		Fracture	Planar	Fresh	Open-fracture
63.735	N308	79.3	63.486	63.983	0.098	173.15	0.59	0		Fracture	Irregular	Fresh	Hairline-fracture
67.223	N021	72	67.077	67.37	0.098	171.86	0.55	0		Fracture	Discontinuous	Fresh	Hairline-fracture
70.732	N280	36.6	70.696	70.768	0.098	172	0.74	0		Fracture	Planar	Fresh	Hairline-fracture
70.921	N054	17.3	70.906	70.936	0.098	176.88	0.68	0		Vein	Planar	Mineralized	Quartz-vein
71.029	N045	8.5	71.022	71.036	0.098	177.07	0.65	0.1051		Vein	Planar	Mineralized	Quartz-vein
71.364	N045	67.8	71.246	71.482	0.098	179.74	0.59	0		Fracture	Irregular	Mineralized	Hairline-fracture
71.483	N308	55.3	71.413	71.553	0.098	181	0.58	0		Fracture	Planar	Mineralized	Hairline-fracture
71.878	N069	71.2	71.737	72.02	0.098	183.06	0.67	0		Fracture	Planar	Fresh	Open-fracture
72.98	N017	76.4	72.786	73.175	0.098	177.07	0.64	0		Fracture	Planar	Fresh	Open-fracture
76.322	N025	78.1	76.103	76.541	0.098	182	0.77	0		Fracture	Irregular	Fresh	Open-fracture
78.111	N027	73.9	77.949	78.273	0.098	188.32	0.76	0		Fracture	Irregular	Fresh	Hairline-fracture
80.479	N121	24.8	80.456	80.502	0.098	197.07	0.8	0.0007		Fracture	Planar	Weathered	
80.528	N112	27.8	80.502	80.554	0.098	198.97	0.8	0		Fracture	Planar	Weathered	
87.667	N019	84.1	87.188	88.146	0.098	3.39	0.07	4.8352		Fracture	Irregular	Fresh	Open-fracture
87.781	N019	84.1	87.3	88.262	0.098	7.91	0.06	0		Fracture	Irregular	Fresh	Open-fracture
88.688	N265	75.7	88.499	88.877	0.098	68.56	0.24	0		Fracture	Irregular	Fresh	Open-fracture
90.914	N081	43.9	90.866	90.961	0.098	76	0.33	0		Fracture	Irregular	Fresh	Hairline-fracture
92.159	N032	82.9	91.752	92.566	0.098	85.2	0.38	0		Fracture	Irregular	Fresh	Open-fracture
92.945	N094	4.9	92.941	92.95	0.098	97.64	0.37	0		Vein	Planar	Mineralized	Quartz-vein
93.155	N084	4.6	93.151	93.159	0.098	103.8	0.44	0.2092		Vein	Planar	Mineralized	Quartz-vein
94.238	N040	55.6	94.166	94.31	0.098	97.15	0.39	0		Fracture	Irregular	Fresh	Open-fracture
94.89	N311	50.7	94.831	94.95	0.098	100.73	0.44	0		Fracture	Planar	Fresh	Hairline-fracture
98.347	N043	54.6	98.278	98.376	0.098	121	0.51	0		Fracture	Discontinuous	Fresh	Hairline-fracture
98.387	N265	55	98.318	98.456	0.098	120.8	0.5	0		Fracture	Planar	Fresh	Hairline-fracture
100.065	N045	52.3	100.001	100.129	0.098	126.76	0.5	0		Fracture	Planar	Open-fracture	
100.209	N049	46.1	100.157	100.26	0.098	127.26	0.5	0		Fracture	Planar	Fresh	Hairline-fracture
102.474	N015	66.6	102.363	102.585	0.098	143.85	0.6	0		Fracture	Planar	Fresh	Hairline-fracture
102.723	N010	61	102.636	102.809	0.098	151.83	0.58	0		Fracture	Planar	Fresh	Hairline-fracture
102.841	N090	15.5	102.828	102.855	0.098	157.45	0.56	0		Fracture	Planar	Fresh	Hairline-fracture
106.892	N032	79.4	106.647	107.138	0.098	200.31	0.64	0		Fracture	Irregular	Fresh	Hairline-fracture
107.497	N003	78	107.276	107.718	0.098	209.19	0.55	0		Fracture	Irregular	Fresh	Open-fracture
107.588	N004	77.6	107.373	107.802	0.098	208.21	0.53	0.0191		Fracture	Irregular	Fresh	Open-fracture
108.006	N356	69.4	107.879	108.133	0.098	202.16	0.55	0		Fracture	Irregular	Fresh	Open-fracture
108.898	N354	71	108.76	109.037	0.098	207.86	0.56	0		Fracture	Irregular	Fresh	Open-fracture
110.549	N179	80.8	110.237	110.861	0.098	223.64	0.48	0		Fracture	Irregular	Fresh	Hairline-fracture
112.309	N185	75.7	112.116	112.507	0.098	232.64	0.56	0		Fracture	Discontinuous	Mineralized	Hairline-fracture
116.238	N048	14.8	116.226	116.251	0.098	248.29	0.48	0		Fracture	Planar	Clayey	Open-fracture
116.275	N067	24.1	116.253	116.296	0.098	239.52	0.55	0.0345		Fracture	Planar	Clayey	Open-fracture
121.144	N003	69.8	121.012	121.275	0.098	255.66	0.62	0		Fracture	Irregular	Fresh	Hairline-fracture
121.971	N024	74.2	121.802	122.025	0.098	262	0.52	0		Fracture	Discontinuous	Fresh	Open-fracture
122.402	N262	80.1	122.107	122.697	0.098	264	0.49	0		Fracture	Irregular	Fresh	Hairline-fracture
122.508	N249	79.1	122.241	122.776	0.098	264.12	0.55	0		Fracture	Irregular	Fresh	Hairline-fracture
124.66	N243	59	124.577	124.743	0.098	267	0.63	0		Fracture	Planar	Fresh	Hairline-fracture
125.056	N043	71.7	124.912	125.2	0.098	270	0.66	0		Fracture	Planar	Fresh	Hairline-fracture
125.671	N063	70	125.541	125.802	0.098	279.12	0.69	0		Fracture	Irregular	Fresh	Hairline-fracture
125.697	N071	67	125.585	125.81	0.098	279.4	0.69	0		Fracture	Irregular	Fresh	Hairline-fracture
126.235	N054	22.4	126.215	126.255	0.098	270.22	0.55	0		Fracture	Irregular	Fresh	Hairline-fracture
126.375	N221	61	126.289	126.465	0.098	269.96	0.58	0		Fracture	Discontinuous	Fresh	Hairline-fracture
126.976	N004	68.4	126.852	127.099	0.098	268.95	0.51	0		Fracture	Irregular	Fresh	Hairline-fracture
129.698	N316	4.6	129.694	129.703	0.098	282.87	0.47	0		Fracture	Planar	Fresh	Open-fracture
129.718	N267	7.3	129.711	129.724	0.098	280.95	0.48	0.0191		Fracture	Planar	Fresh	Open-fracture
131.515	N033	5	131.511	131.52	0.098	284.77	0.6	0		Fracture	Planar	Fresh	Open-fracture
131.537	N037	9.1	131.529	131.545	0.098	285.4	0.6	0.0214		Fracture	Planar	Fresh	Open-fracture
133.147	N082	41.8	133.104	133.19	0.098	295.4	0.41	0		Fracture	Planar	Fresh	Open-fracture
133.148	N095	40.3	133.107	133.189	0.098	295.42	0.41	0		Fracture	Planar	Fresh	Hairline-fracture
133.398	N052	57.5	133.322	133.475	0.098	294.43	0.37	0		Fracture	Planar	Fresh	Hairline-fracture
134.537	N283	72.4	134.379	134.661	0.098	296.4	0.39	0		Fracture	Discontinuous	Fresh	Hairline-fracture
134.574	N192	66.2	134.463	134.684	0.098	294.2	0.4	0		Fracture	Irregular	Fresh	Open-fracture
134.607	N190	68.4	134.484	134.73	0.098	295.2	0.39	0.0129		Fracture	Irregular	Fresh	Open-fracture
136.311	N269	67.2	136.192	136.429	0.098	300.35	0.32	0		Fracture	Irregular	Fresh	Open-fracture
136.557	N351	70.5	136.416	136.697	0.098	304.41	0.37	0		Fracture	Irregular	Fresh	Open-fracture
137.389	N079	4.4	137.385	137.393	0.098	323.67	0.38	0		Fracture	Planar	Fresh	Open-fracture
137.421	N079	17.6	137.405	137.436	0.098	328.09	0.4	0.031		Fracture	Planar	Fresh	Open-fracture
137.53	N314	63.2	137.431	137.629	0.098	325.95	0.42	0		Fracture	Irregular	Fresh	Open-fracture
138.057	N339	65.4	137.948	138.165	0.098	317.04	0.32	0		Fracture	Planar	Fresh	Hairline-fracture
138.175	N341	62.9	138.078	138.273	0.098	318.03	0.34	0		Fracture	Planar	Fresh	Hairline-fracture
138.448	N137	7.5	138.442	138.454	0.098	323.83	0.3	0		Fracture	Planar	Fresh	Hairline-fracture
138.823	N113	7.6	138.817	138.83	0.098	333.3	0.31	0		Fracture	Planar	Fresh	Open-fracture
140.13	N121	3.2	140.128	140.133	0.098	353.62	0.17	0		Fracture	Planar	Fresh	Open-fracture
140.153	N101	3.1	140.15	140.155	0.098	350.91	0.15	0.0225		Fracture	Planar	Fresh	Open-fracture
140.344	N265	0.7	140.343	140.345	0.098	337.28	0.2	0		Fracture	Planar	Fresh	Open-fracture
140.377	N035	2.1	140.375	140.379	0.098	332.02	0.21	0.0328		Fracture	Planar	Fresh	Open-fracture
140.523	N127	4.3	140.519	140.526	0.098	331.43	0.31	0		Fracture	Planar	Fresh	Open-fracture
140.535	N099	36.7	140.56	140.571	0.098	331.46	0.32	0		Fracture	Discontinuous	Fresh	Hairline-fracture
140.555	N101	4.9	140.551	140.559	0.098	332.69	0.32	0.0324		Fracture	Planar	Fresh	Open-fracture

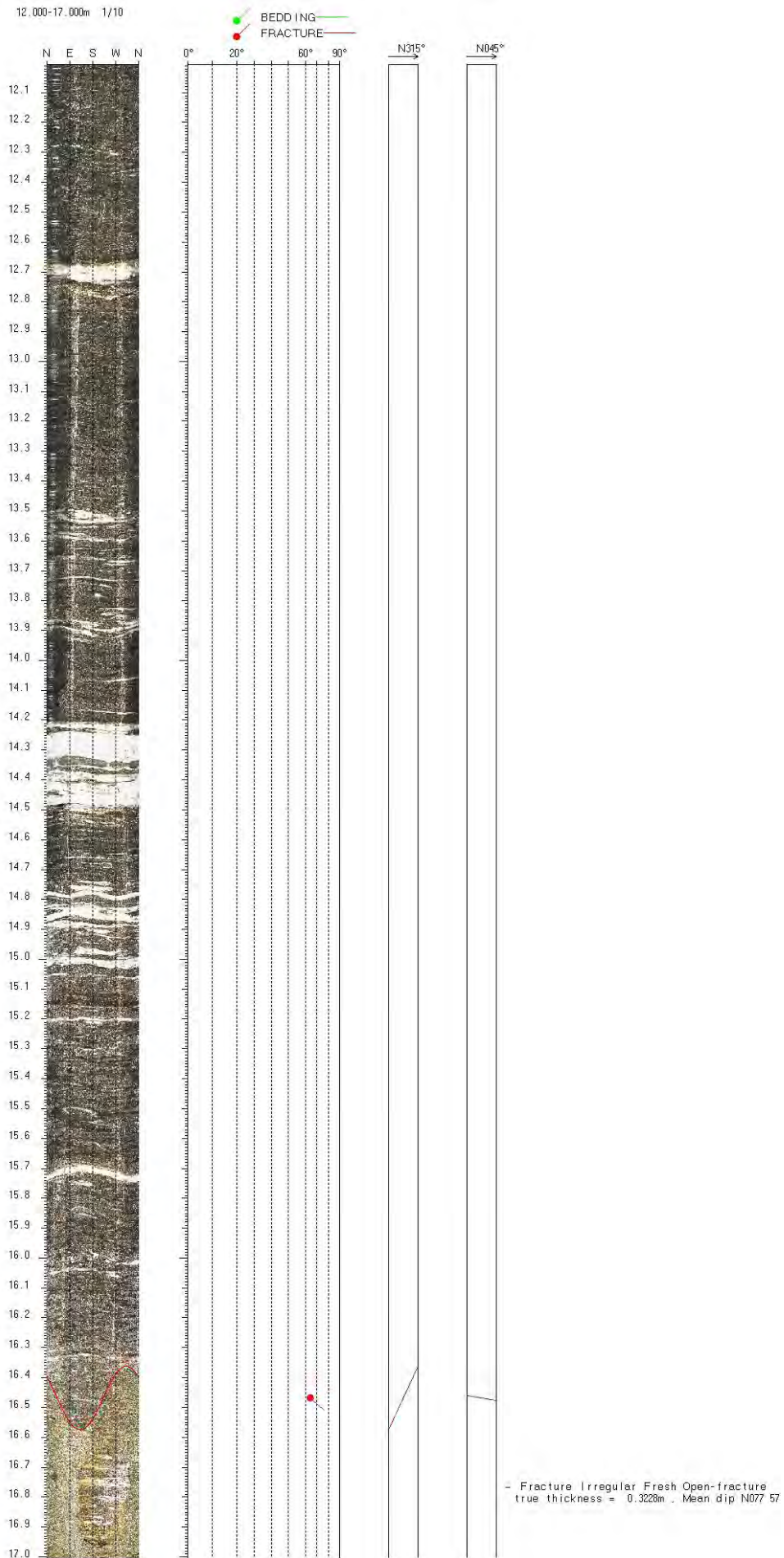
Depth	Azimuth	Dip	Upper Depth	Lower Depth	Well Diam	Well Azimuth	Well Dev	deviation	Thickness				
140.564	N096	49.6	140.562	140.622	0.098	333.23	0.32	0		Fracture	Discontinuous	Fresh	Hairline-fracture
140.949	N298	74.8	140.765	141.133	0.098	338.31	0.3	0		Fracture	Planar	Fresh	Hairline-fracture
141.072	N301	68	140.949	141.195	0.098	346.2	0.24	0		Fracture	Irregular	Fresh	Open-fracture
141.132	N300	71.9	140.98	141.284	0.098	346.99	0.26	0.0205		Fracture	Irregular	Fresh	Open-fracture
141.247	N296	60.7	141.159	141.335	0.098	351.64	0.23	0		Fracture	Irregular	Fresh	Hairline-fracture
141.391	N284	70.4	141.428	141.53	0.098	354	0.23	0		Fracture	Discontinuous	Fresh	Open-fracture
141.424	N259	47.8	141.37	141.478	0.098	354	0.24	0		Fracture	Irregular	Fresh	Open-fracture
142.149	N066	57.3	142.072	142.226	0.098	2.11	0.34	0		Fracture	Planar	Fresh	Open-fracture
142.503	N107	13.3	142.491	142.515	0.098	6.93	0.25	0		Fracture	Planar	Fresh	Hairline-fracture
145.044	N086	44	144.997	145.092	0.098	36.43	0.28	0		Fracture	Planar	Fresh	Open-fracture
145.056	N087	43.4	145.009	145.103	0.098	38.06	0.28	0.0084		Fracture	Planar	Fresh	Open-fracture
145.436	N303	78	145.206	145.667	0.098	32	0.28	0		Fracture	Irregular	Fresh	Open-fracture
145.485	N302	78.3	145.248	145.722	0.098	32.46	0.27	0.0099		Fracture	Irregular	Fresh	Open-fracture
145.965	N075	22.7	145.953	145.986	0.098	49.62	0.24	0		Fracture	Discontinuous	Fresh	Hairline-fracture
145.98	N298	72.9	145.821	146.138	0.098	51.05	0.24	0		Fracture	Irregular	Fresh	Open-fracture
146.267	N303	55.9	146.195	146.339	0.098	53.41	0.26	0		Fracture	Planar	Fresh	Hairline-fracture
146.527	N163	1.8	146.526	146.529	0.098	43.98	0.31	0		Fracture	Planar	Fresh	Hairline-fracture
146.54	N109	4.4	146.536	146.544	0.098	42.69	0.31	0		Fracture	Planar	Fresh	Hairline-fracture
146.991	N143	3.2	146.989	146.994	0.098	48.43	0.3	0		Fracture	Planar	Fresh	Hairline-fracture
147.097	N178	3.5	147.095	147.1	0.098	44.36	0.3	0		Fracture	Planar	Fresh	Open-fracture
147.121	N116	2	147.119	147.122	0.098	42.51	0.3	0.0232		Fracture	Planar	Fresh	Open-fracture
147.397	N196	66.5	147.286	147.509	0.098	53.63	0.31	0		Fracture	Irregular	Fresh	Open-fracture
149.237	N304	77.3	149.022	149.452	0.098	63.8	0.31	0		Fracture	Planar	Fresh	Open-fracture
149.292	N305	78	149.064	149.52	0.098	68.76	0.31	0.0117		Fracture	Planar	Fresh	Open-fracture
149.544	N058	61.7	149.452	149.636	0.098	81.34	0.32	0		Fracture	Crushed	Fresh	Fracture-zone
149.898	N122	66.4	149.784	150.012	0.098	86.17	0.33	0.1762		Fracture	Crushed	Fresh	Fracture-zone
150.042	N297	66	149.933	150.15	0.098	78.26	0.33	0		Fracture	Crushed	Fresh	Fracture-zone
150.182	N298	65.6	150.075	150.29	0.098	61.67	0.24	0.0577		Fracture	Crushed	Fresh	Fracture-zone
150.428	N137	6.9	150.422	150.434	0.098	60.03	0.28	0		Fracture	Planar	Fresh	Open-fracture
150.435	N134	11.9	150.425	150.446	0.098	65.33	0.28	0.0069		Fracture	Planar	Fresh	Open-fracture
150.447	N143	11	150.438	150.457	0.098	74.58	0.29	0		Fracture	Planar	Fresh	Hairline-fracture
150.817	N306	79.8	150.556	151.079	0.098	85.47	0.51	0		Fracture	Irregular	Fresh	Open-fracture
151.212	N191	75.2	151.028	151.397	0.098	83.84	0.26	0		Fracture	Irregular	Fresh	Open-fracture
151.706	N338	41.6	151.662	151.749	0.098	93.56	0.37	0		Fracture	Irregular	Fresh	Hairline-fracture
151.715	N302	86.3	151.93	152.41	0.098	92.45	0.35	0		Fracture	Discontinuous	Fresh	Hairline-fracture
153.646	N065	64.3	153.543	153.75	0.098	94.93	0.39	0		Fracture	Planar	Fresh	Fracture-zone
153.763	N076	62.1	153.669	153.857	0.098	95.28	0.4	0.0528		Fracture	Planar	Fresh	Fracture-zone
154.16	N284	58	154.083	154.237	0.098	97.34	0.36	0		Fracture	Planar	Fresh	Open-fracture
154.605	N057	61.1	154.516	154.695	0.098	98.43	0.37	0		Fracture	Irregular	Fresh	Open-fracture
154.85	N292	70.5	154.714	154.985	0.098	91.9	0.39	0		Fracture	Irregular	Fresh	Open-fracture
155.558	N295	62.1	155.467	155.649	0.098	82.12	0.41	0		Fracture	Planar	Fresh	Open-fracture
155.839	N207	82.5	155.975	156.202	0.098	86.54	0.47	0		Fracture	Discontinuous	Fresh	Hairline-fracture
156.038	N003	79.2	155.779	155.977	0.098	82.79	0.51	0		Fracture	Discontinuous	Fresh	Hairline-fracture
156.501	N282	53.7	156.435	156.567	0.098	78	0.37	0		Fracture	Irregular	Fresh	Fracture-zone
157.751	N186	23.6	157.73	157.772	0.098	64.48	0.4	1.0859		Fracture	Irregular	Fresh	Fracture-zone
158.075	N283	64.2	157.978	158.173	0.098	134.09	1.09	0		Fracture	Irregular	Fresh	Open-fracture
159.273	N040	51.4	159.212	159.335	0.098	54.43	0.18	0		Fracture	Planar	Fresh	Hairline-fracture
159.403	N040	63.8	159.303	159.503	0.098	46.23	0.16	0		Fracture	Planar	Fresh	Hairline-fracture
164.33	N255	19.3	164.312	164.347	0.098	269	0.47	0		Fracture	Planar	Fresh	Fracture-zone
164.671	N207	37.5	164.633	164.709	0.098	262.77	0.62	0.3056		Fracture	Planar	Fresh	Fracture-zone
165.067	N233	46.6	165.015	165.12	0.098	291.22	0.8	0		Fracture	Planar	Fresh	Hairline-fracture
165.738	N071	55	165.671	165.806	0.098	259.05	0.91	0		Fracture	Planar	Fresh	Hairline-fracture
165.839	N061	59.6	165.758	165.92	0.098	256.46	0.92	0		Fracture	Planar	Fresh	Fracture-zone
165.965	N063	71	165.828	166.103	0.098	254.39	0.67	0.0529		Fracture	Planar	Fresh	Fracture-zone
166.249	N081	38.6	166.211	166.288	0.098	267.45	0.6	0		Fracture	Planar	Fresh	Hairline-fracture
166.491	N045	75.6	166.305	166.678	0.098	273.87	0.53	0		Fracture	Irregular	Fresh	Hairline-fracture
166.629	N056	76.7	166.429	166.83	0.098	265.38	0.49	0		Fracture	Irregular	Fresh	Hairline-fracture
166.982	N057	78.6	166.748	167.217	0.098	256.42	0.43	0		Fracture	Irregular	Fresh	Hairline-fracture
170.52	N300	35.2	170.485	170.555	0.098	247.29	0.5	0		Fracture	Planar	Fresh	Hairline-fracture
170.534	N289	31.4	170.504	170.565	0.098	247.29	0.5	0		Fracture	Planar	Fresh	Hairline-fracture
171.475	N315	65.2	171.368	171.582	0.098	238.97	0.54	0		Fracture	Planar	Fresh	Hairline-fracture
173.143	N293	64.5	173.038	173.096	0.098	255.57	0.6	0		Fracture	Discontinuous	Fresh	Open-fracture
173.15	N063	71.4	173.009	173.21	0.098	256.34	0.6	0		Fracture	Discontinuous	Fresh	Open-fracture
173.241	N237	8.5	173.233	173.249	0.098	259.72	0.58	0		Fracture	Planar	Fresh	Open-fracture
173.76	N307	26.6	173.735	173.785	0.098	261.79	0.45	0		Fracture	Planar	Fresh	Hairline-fracture
173.782	N311	27.1	173.756	173.807	0.098	258	0.45	0		Fracture	Planar	Fresh	Hairline-fracture
176.221	N195	61.7	176.129	176.313	0.098	261.12	0.5	0		Fracture	Planar	Fresh	Hairline-fracture
176.393	N282	34.3	176.359	176.427	0.098	261.25	0.47	0		Fracture	Irregular	Fresh	Hairline-fracture
177.257	N244	16.9	177.242	177.272	0.098	254.81	0.5	0		Fracture	Crushed	Weathered	Fracture-zone
178.241	N216	47	178.188	178.294	0.098	290.09	0.78	0.8399		Fracture	Crushed	Weathered	Fracture-zone
178.266	N210	54.3	178.197	178.334	0.098	286.57	0.72	0		Fracture	Planar	Fresh	Open-fracture
178.465	N161	6.9	178.459	178.471	0.098	274.96	0.47	0		Fracture	Planar	Fresh	Open-fracture
178.633	N243	13.9	178.621	178.646	0.098	270.25	0.59	0		Fracture	Planar	Fresh	Hairline-fracture
178.735	N194	71.4	178.689	178.882	0.098	264.03	0.59	0		Fracture	Discontinuous	Fresh	Hairline-fracture
178.748	N331	41.6	178.705	178.776	0.098	260.87	0.6	0		Fracture	Discontinuous	Fresh	Hairline-fracture
178.829	N303	52.3	178.765	178.893	0.098	247.59	0.49	0		Fracture	Irregular	Fresh	Hairline-fracture
179.081	N197	62.2	179.023	179.175	0.098	262.43	0.62	0		Fracture	Discontinuous	Fresh	Hairline-fracture
179.177	N171	68	179.071	179.297	0.098	263.04	0.59	0		Fracture	Discontinuous	Fresh	Hairline-fracture
179.338	N035	27.8	179.313	179.363	0.098	259.44	0.56	0		Fracture	Planar	Fresh	Open-fracture
179.351	N032	21.6	179.332	179.37	0.098	259.96	0.57	0.0118		Fracture	Planar	Fresh	Open-fracture
179.458	N201	31.5	179.428	179.489	0.098	266.77	0.57	0		Fracture	Irregular	Fresh	Open-fracture
179.476	N246	9.7	179.467	179.485	0.098	268.92	0.58	0		Fracture	Irregular	Fresh	Open-fracture
179.504	N174	86.2	179.466	180.232	0.098	266.81	0.56	0		Fracture	Irregular	Fresh	Open-fracture
180.582	N185	14	180.57	180.594	0.098	287.03	0.68	0		Fracture	Planar	Fresh	Open-fracture
180.604	N166	17.1	180.589	180.619	0.098	283.08	0.67	0.0211		Fracture	Planar	Fresh	Open-fracture
180.613	N185	30.6	180.584	180.642	0.098	281.5	0.67	0		Fracture	Planar	Fresh	Open-fracture

Depth	Azimuth	Dip	Upper Depth	Lower Depth	Well Diam	Well Azimuth	Well deviation Dev	Thickness				
180.734	N330	66.7	180.617	180.85	0.098	277.87	0.74	0	Fracture	Planar	Fresh	Open-fracture
181.116	N181	76.2	180.916	181.316	0.098	268.77	0.63	0	Fracture	Planar	Fresh	Open-fracture
181.343	N182	73	181.182	181.504	0.098	267.64	0.57	0.0603	Fracture	Planar	Fresh	Open-fracture
183.018	N263	79.6	182.737	182.919	0.098	282.81	0.56	0	Fracture	Discontinuous		Fresh Open-fracture
183.107	N267	70.1	183.062	183.247	0.098	282.43	0.55	0	Fracture	Discontinuous		Fresh Open-fracture
187.587	N221	12.5	187.575	187.598	0.098	274	0.6	0	Fracture	Planar	Fresh	Hairline-fracture
187.609	N279	11	187.599	187.619	0.098	274	0.6	0	Fracture	Planar	Fresh	Hairline-fracture
190.019	N087	18.8	190.003	190.035	0.098	274.32	0.55	0	Fracture	Planar	Fresh	Hairline-fracture
192.05	N211	71.8	191.899	192.202	0.098	277.53	0.63	0	Fracture	Planar	Fresh	Hairline-fracture
192.711	N330	77.9	192.475	192.947	0.098	275.97	0.54	0	Fracture	Planar	Fresh	Open-fracture
192.95	N328	53.3	192.884	193.017	0.098	274.46	0.56	0	Fracture	Discontinuous		Fresh Open-fracture
193.034	N351	73.9	192.878	193.114	0.098	271.27	0.57	0	Fracture	Discontinuous		Fresh Open-fracture
194.204	N205	79.8	194.097	194.485	0.098	262	0.49	0	Fracture	Discontinuous		Fresh Open-fracture
194.366	N209	78.3	194.124	194.608	0.098	268.56	0.54	0	Fracture	Irregular	Fresh	Open-fracture
194.709	N219	63.5	194.61	194.809	0.098	277.64	0.49	0	Fracture	Planar	Fresh	Hairline-fracture
194.885	N201	68.3	194.761	195.008	0.098	280.85	0.44	0	Fracture	Planar	Fresh	Open-fracture
194.923	N205	71.3	194.778	195.069	0.098	280.08	0.47	0.0133	Fracture	Planar	Fresh	Open-fracture
195.429	N230	57.4	195.352	195.506	0.098	288.04	0.46	0	Fracture	Planar	Fresh	Hairline-fracture
195.918	N196	63	195.822	196.015	0.098	280.34	0.51	0	Fracture	Planar	Fresh	Open-fracture
197.271	N199	72.9	197.111	197.431	0.098	284.63	0.53	0	Fracture	Planar	Fresh	Open-fracture
197.343	N196	75.6	197.152	197.534	0.098	283.64	0.54	0	Fracture	Planar	Fresh	Open-fracture
198.375	N006	79.4	198.112	198.377	0.098	278.09	0.7	0	Fracture	Discontinuous		Fresh Hairline-fracture

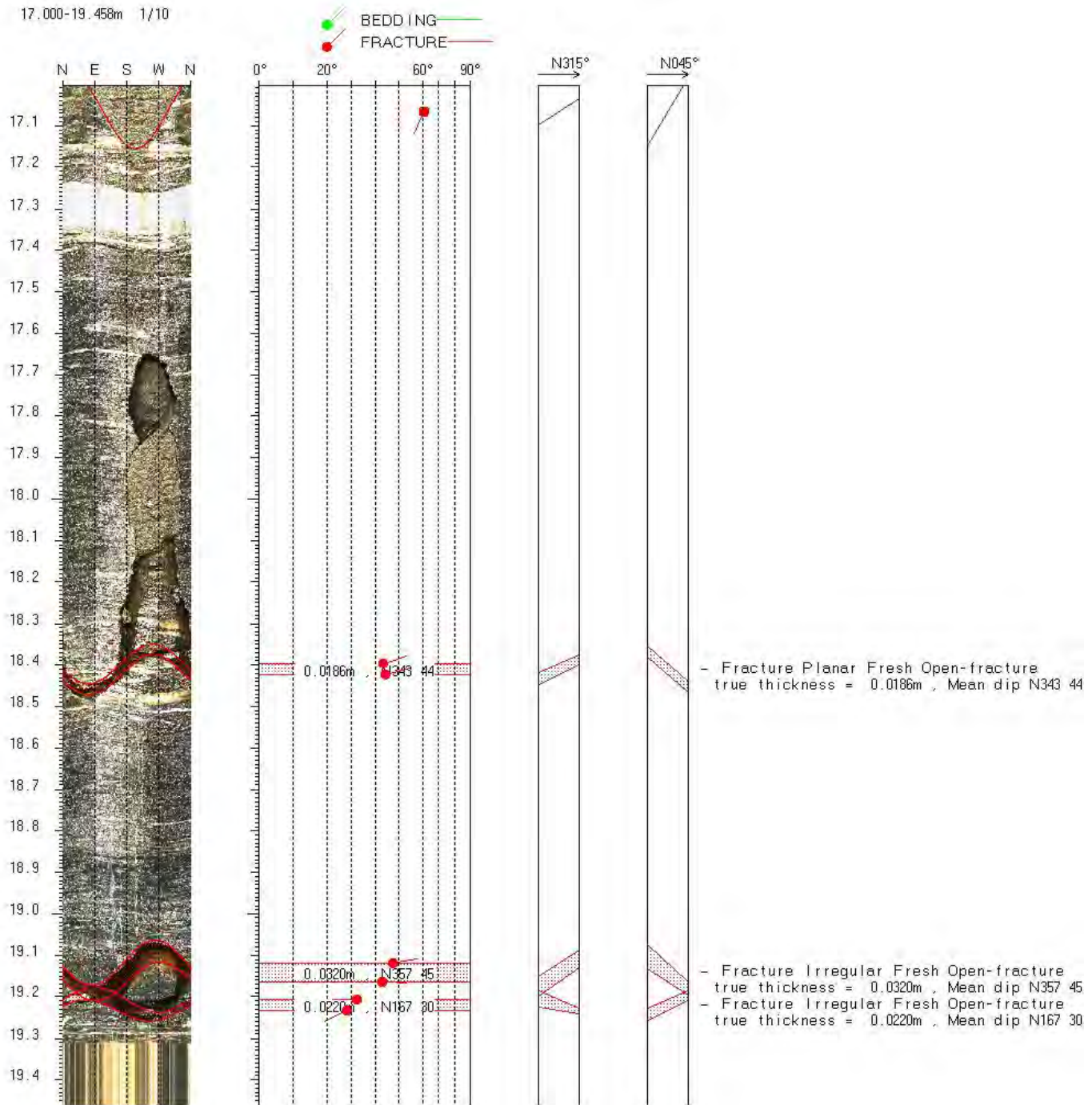
2.000-7.000m 1/10

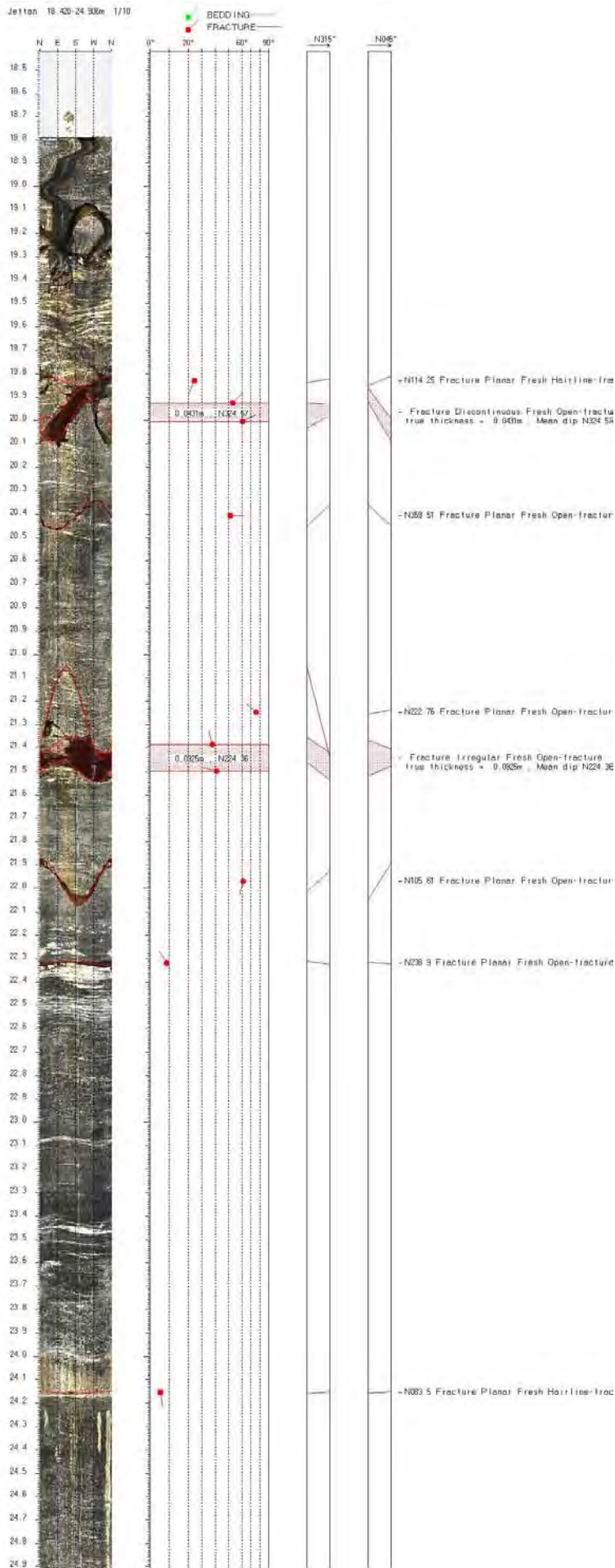


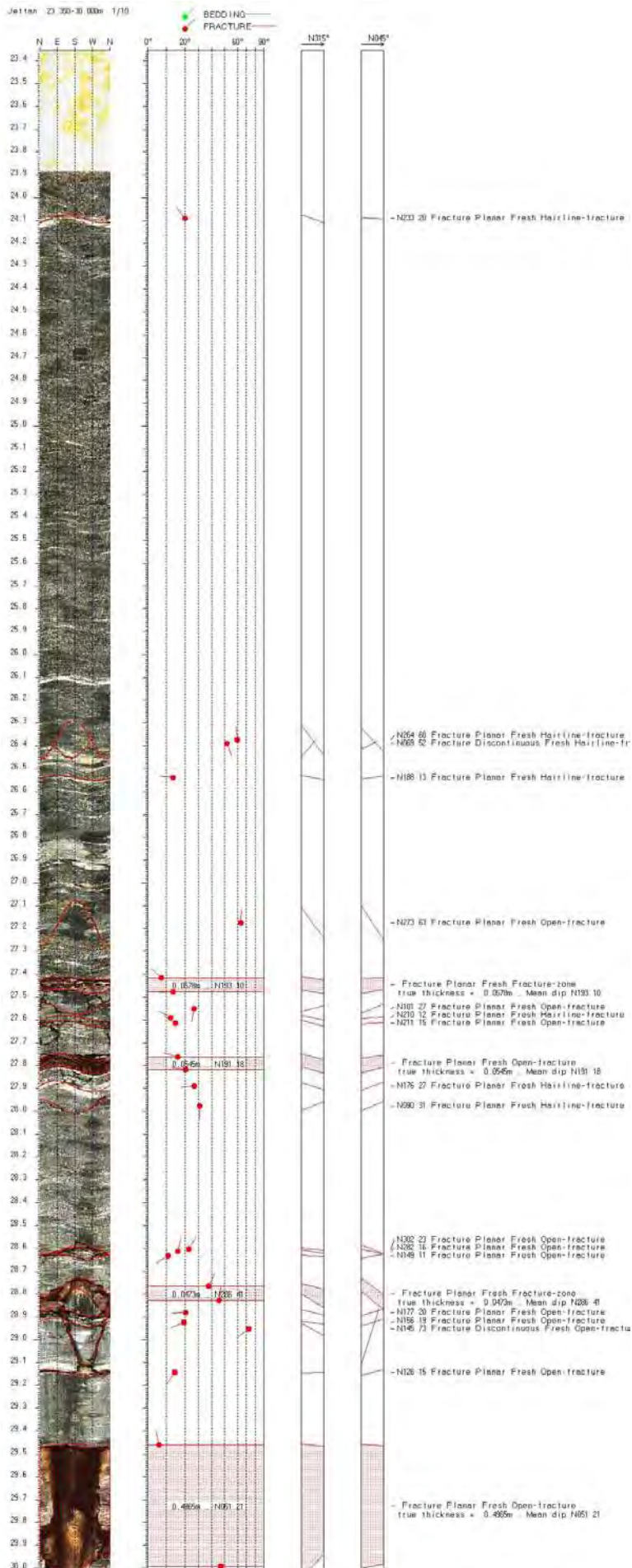




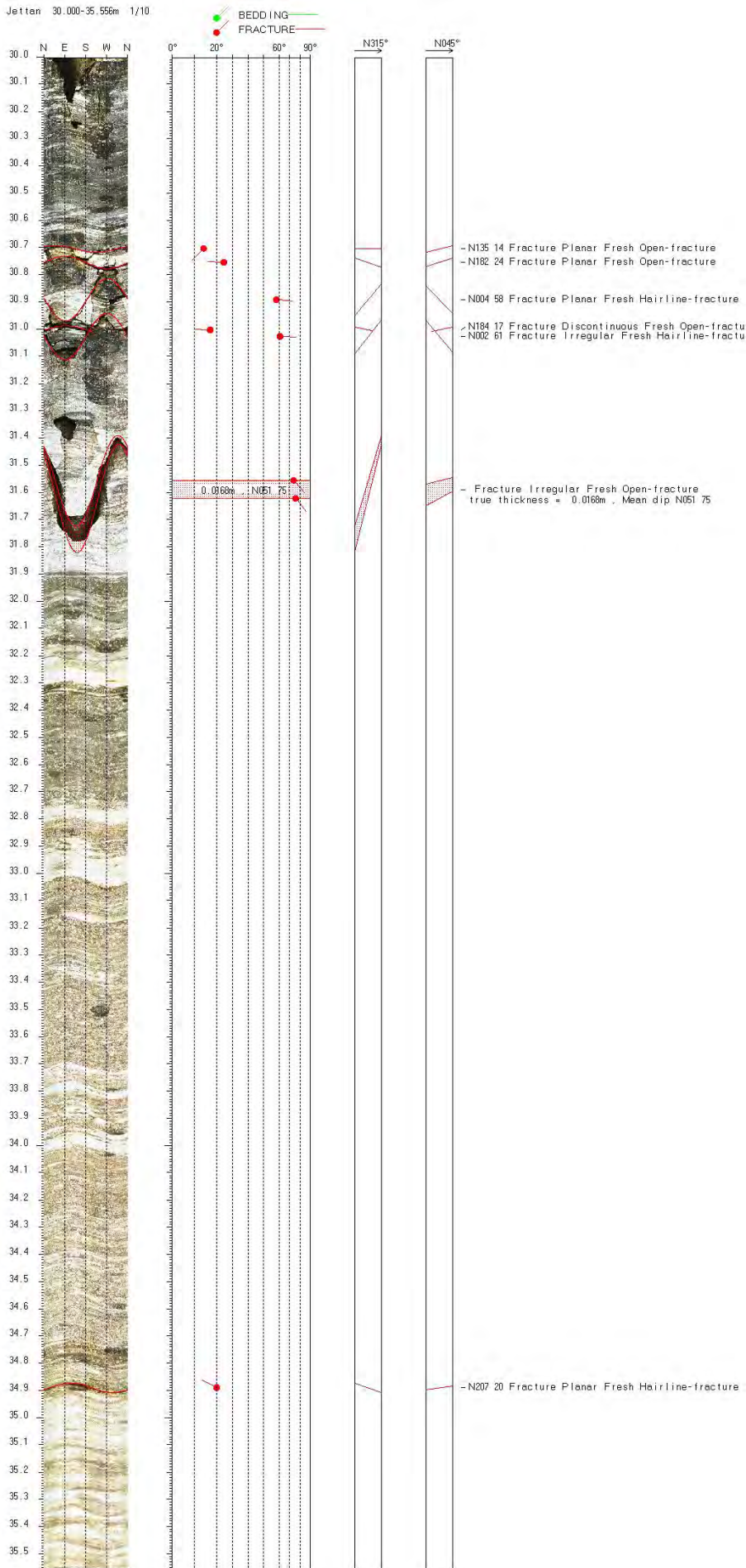
17.000-19.458m 1/10



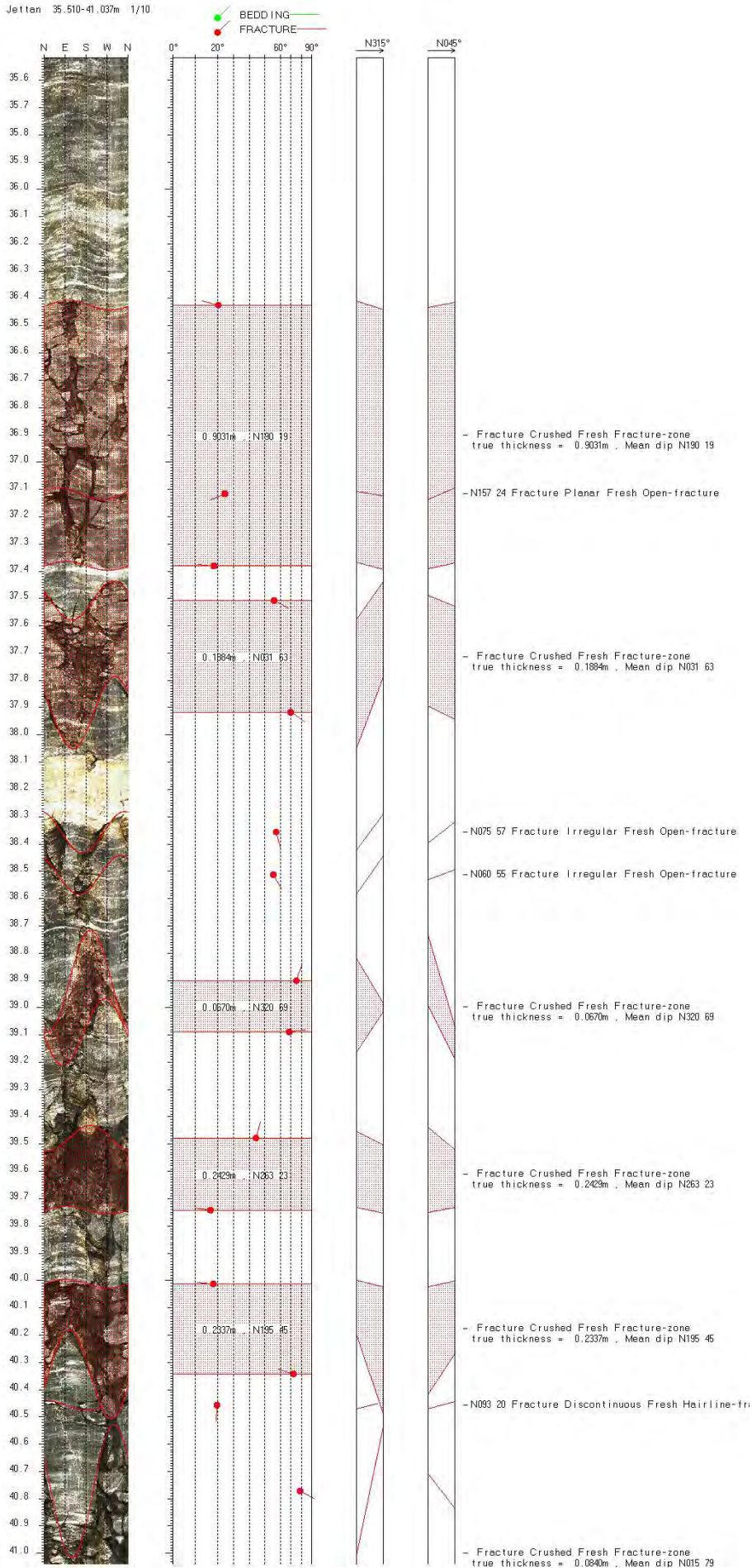


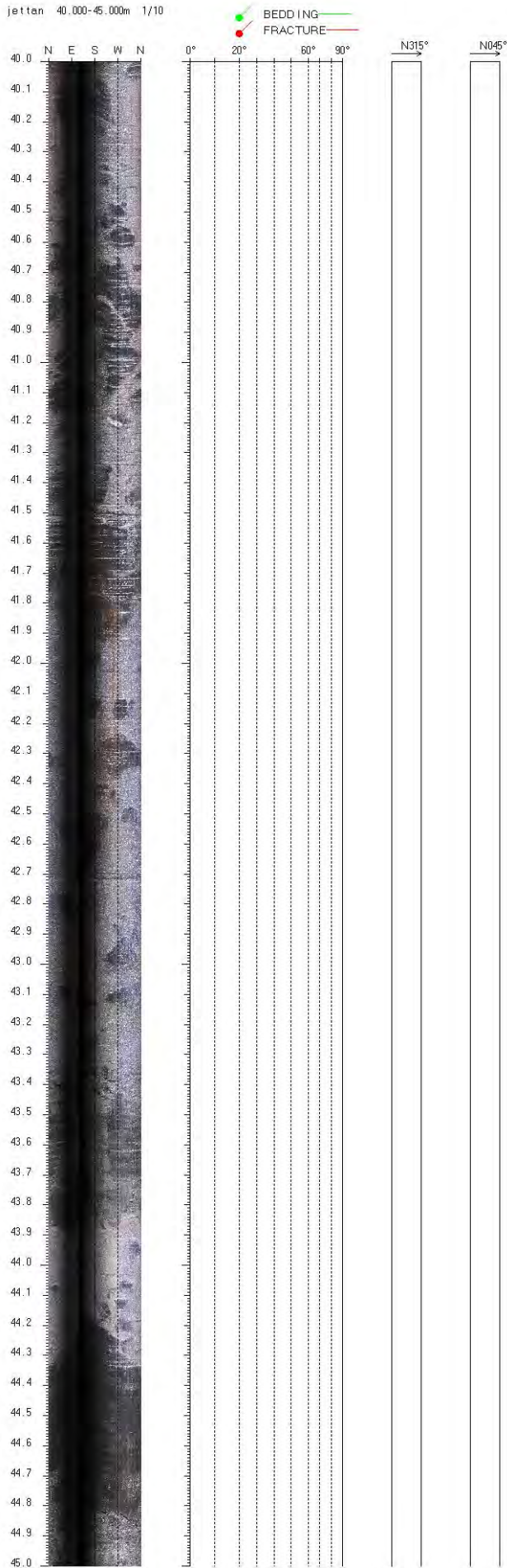


Jetten 30.000-35.566m 1/10

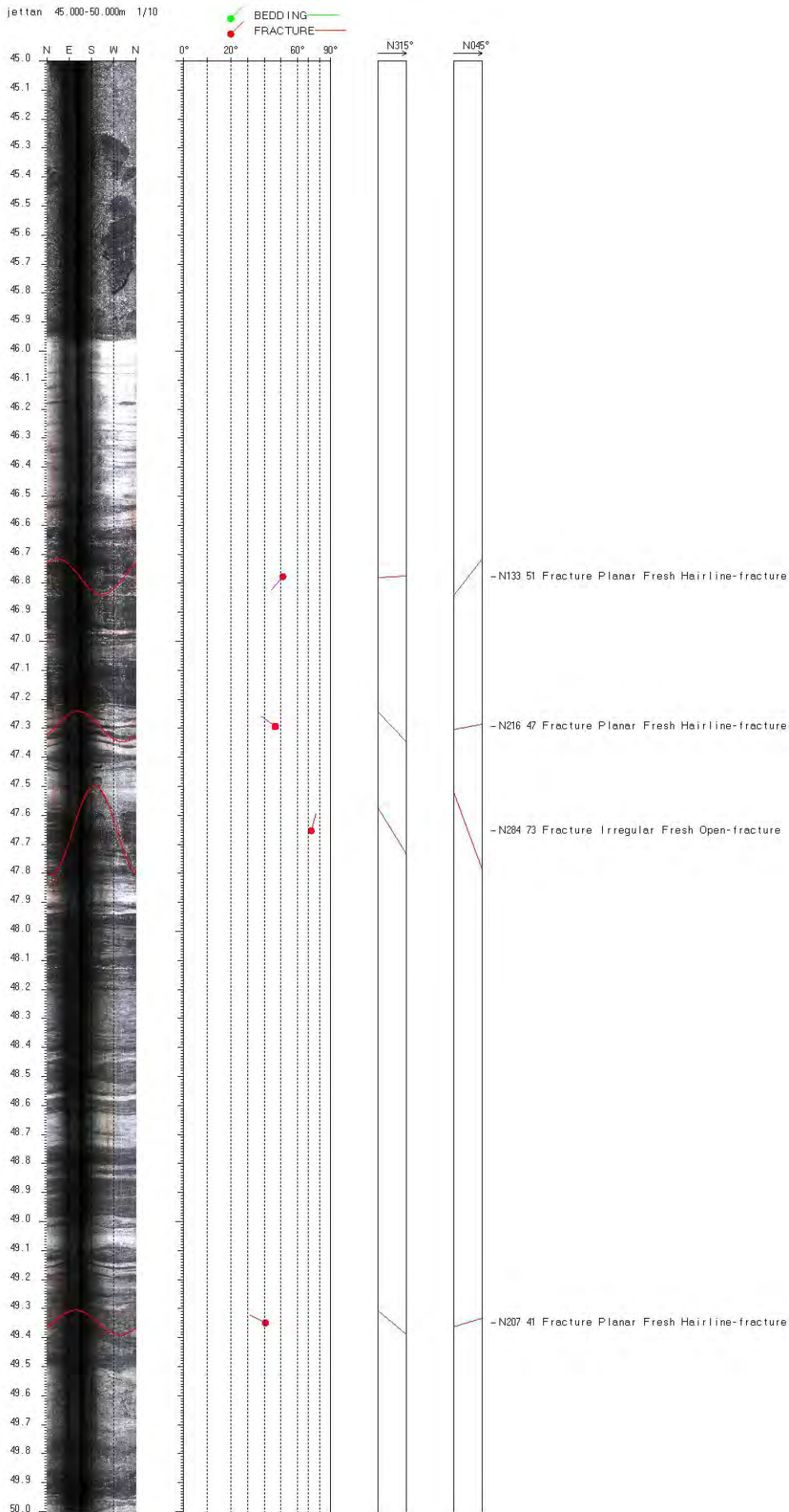


Jetten 35.510-41.037m 1/10

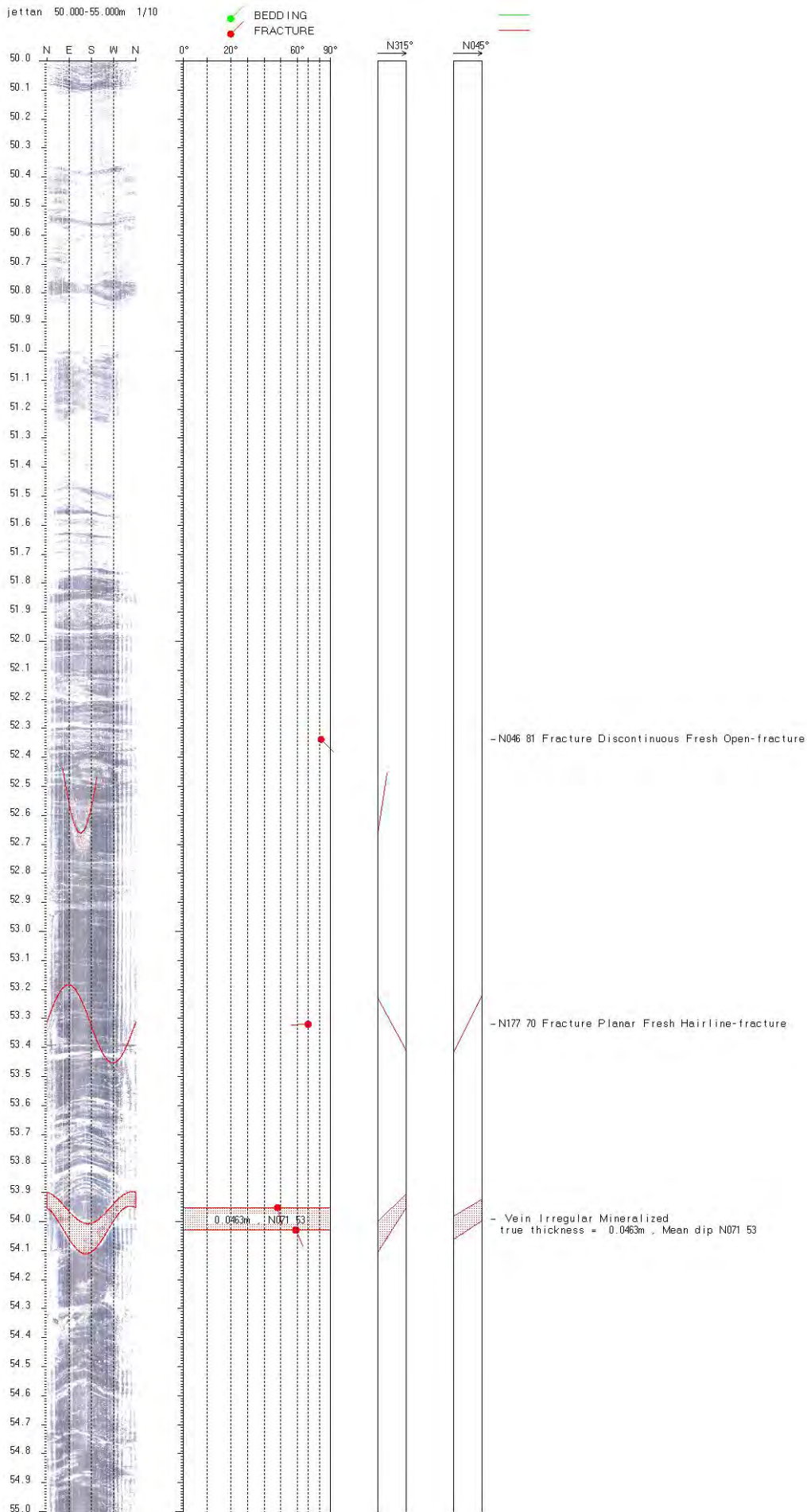




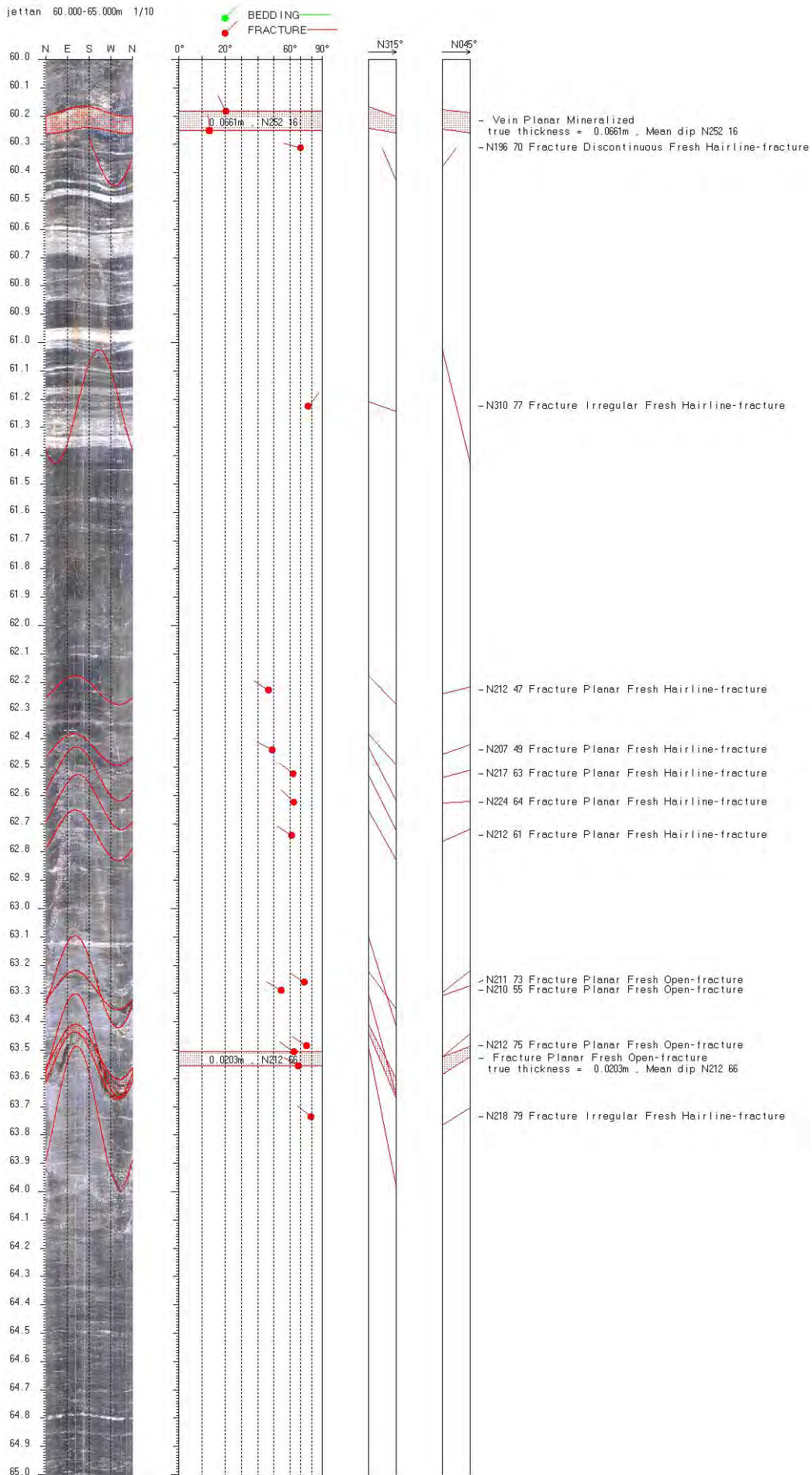
jetten 45.000-50.000m 1/10



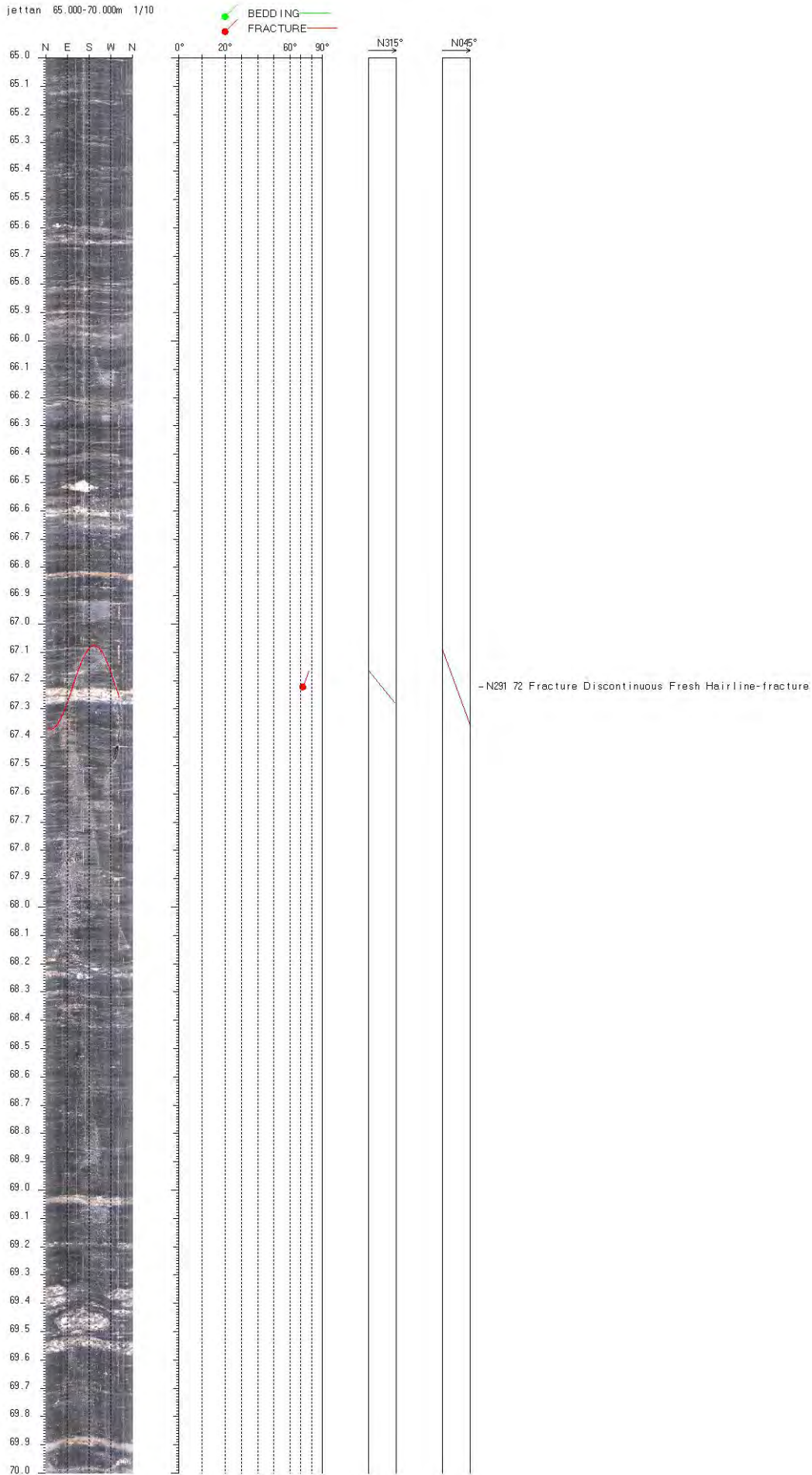
jetten 50.000-55.000m 1/10



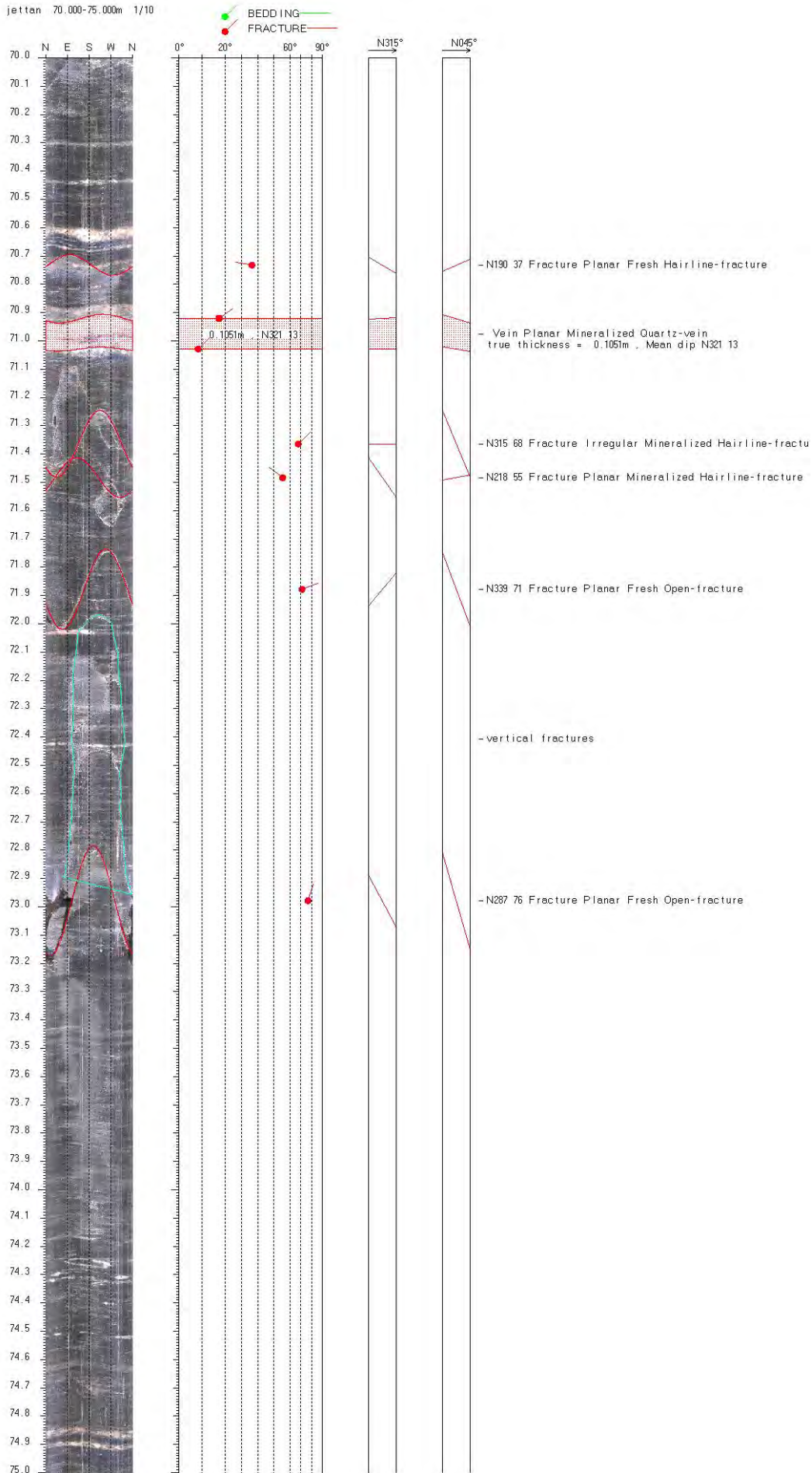
jetten 60.000-65.000m 1/10



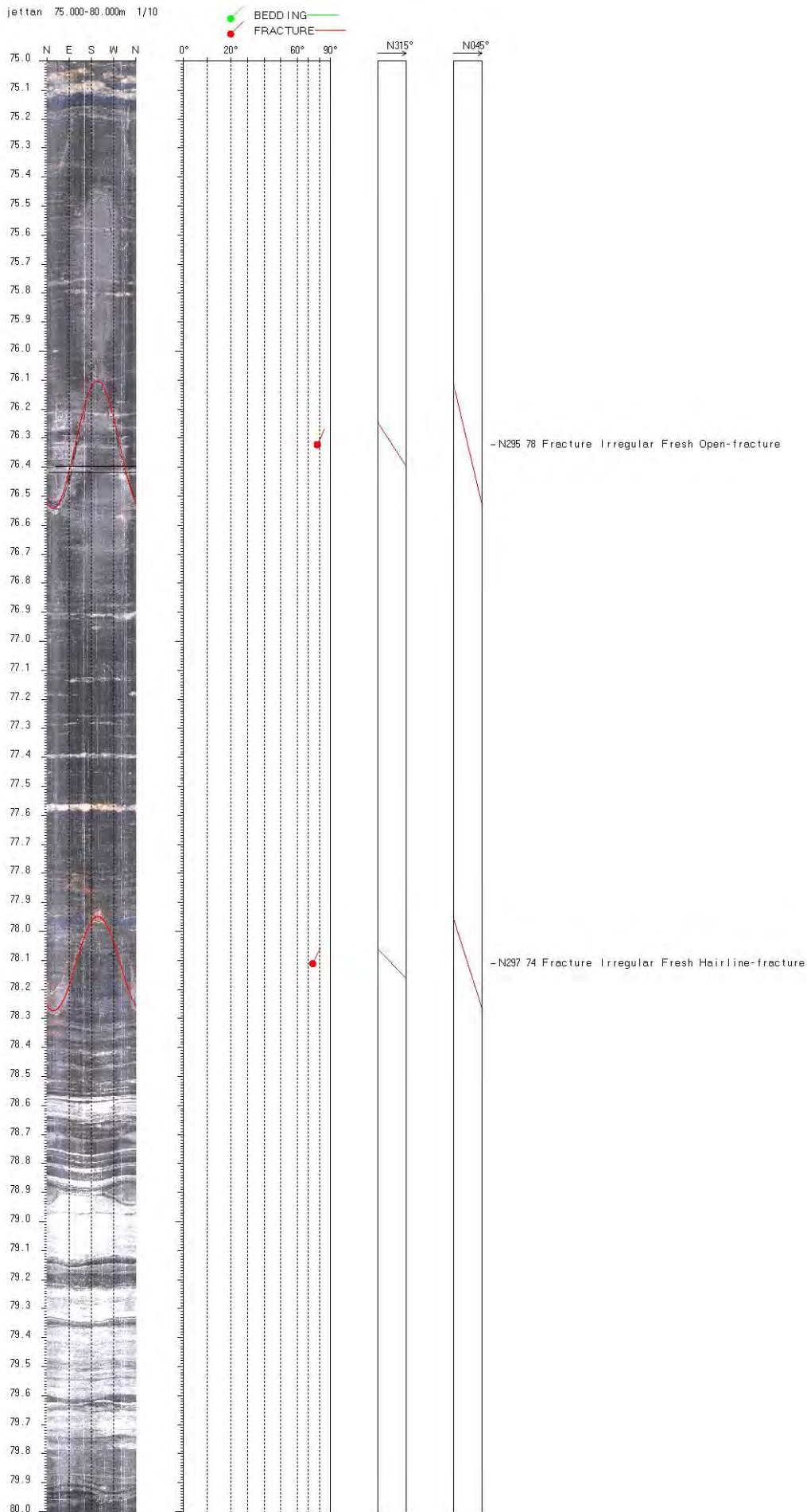
jetten 65.000-70.000m 1/10



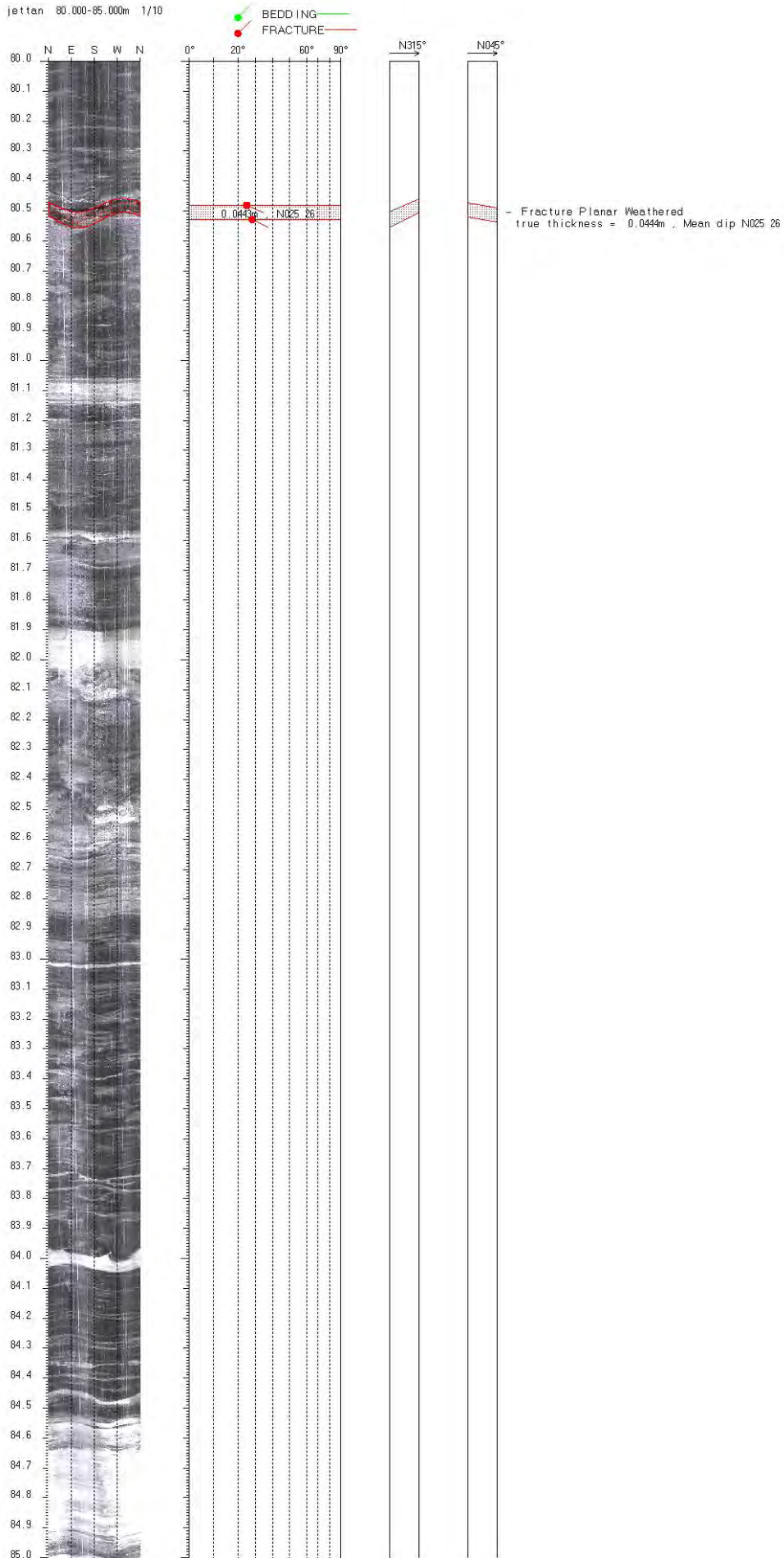
jetten 70.000-75.000m 1/10



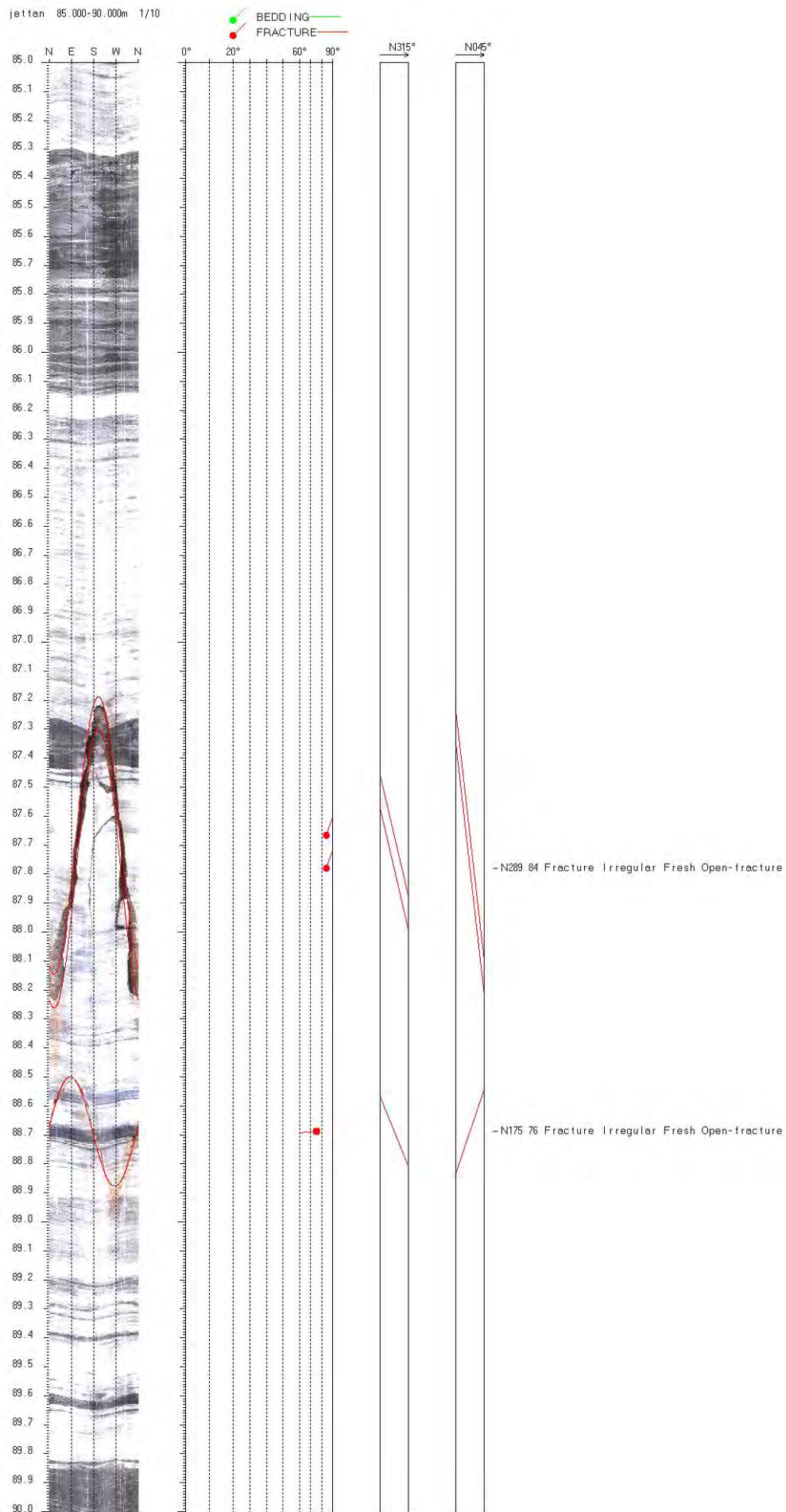
jetten 75.000-80.000m 1/10



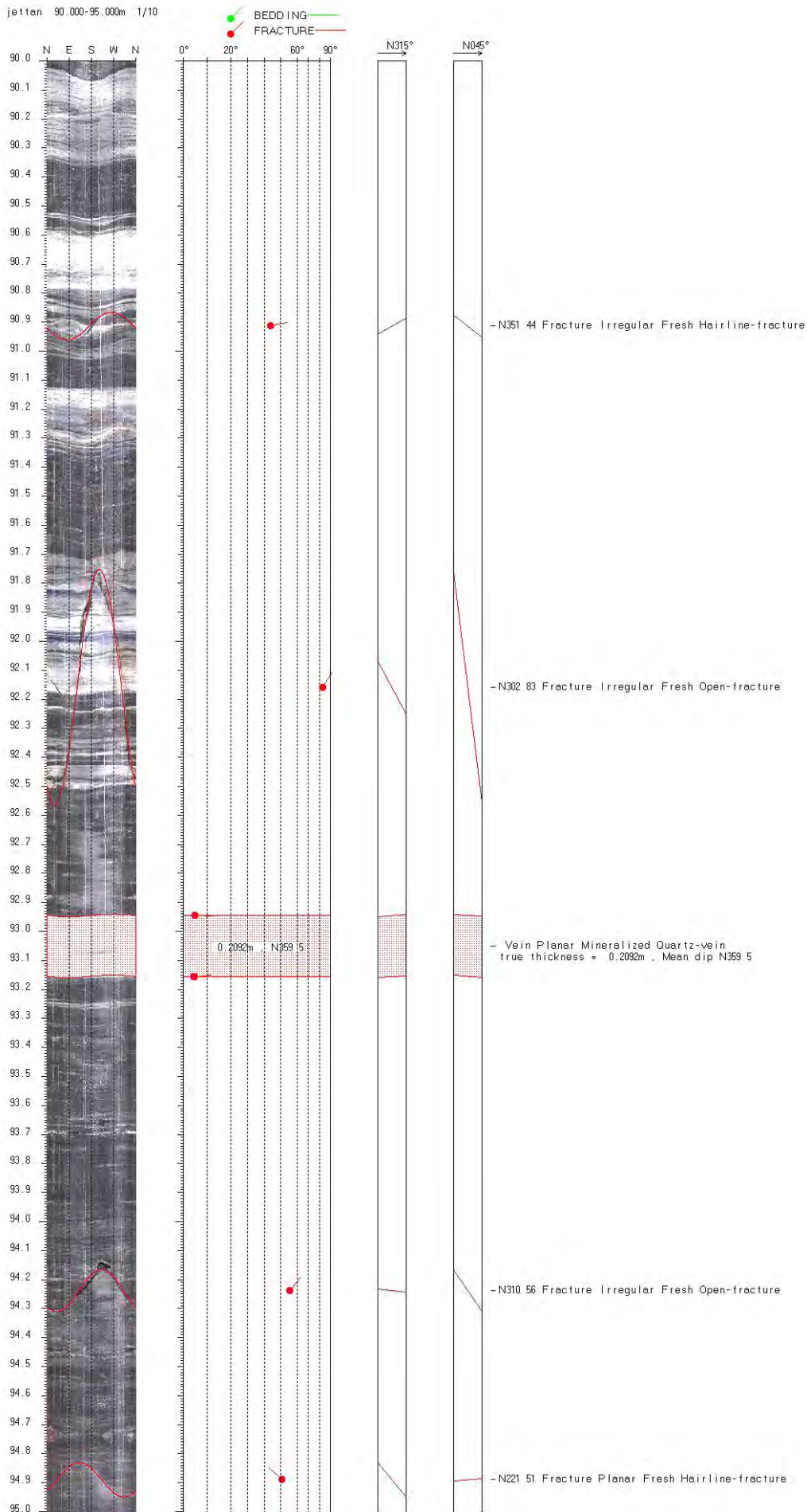
jetten 80.000-85.000m 1/10



jetten 85.000-90.000m 1/10



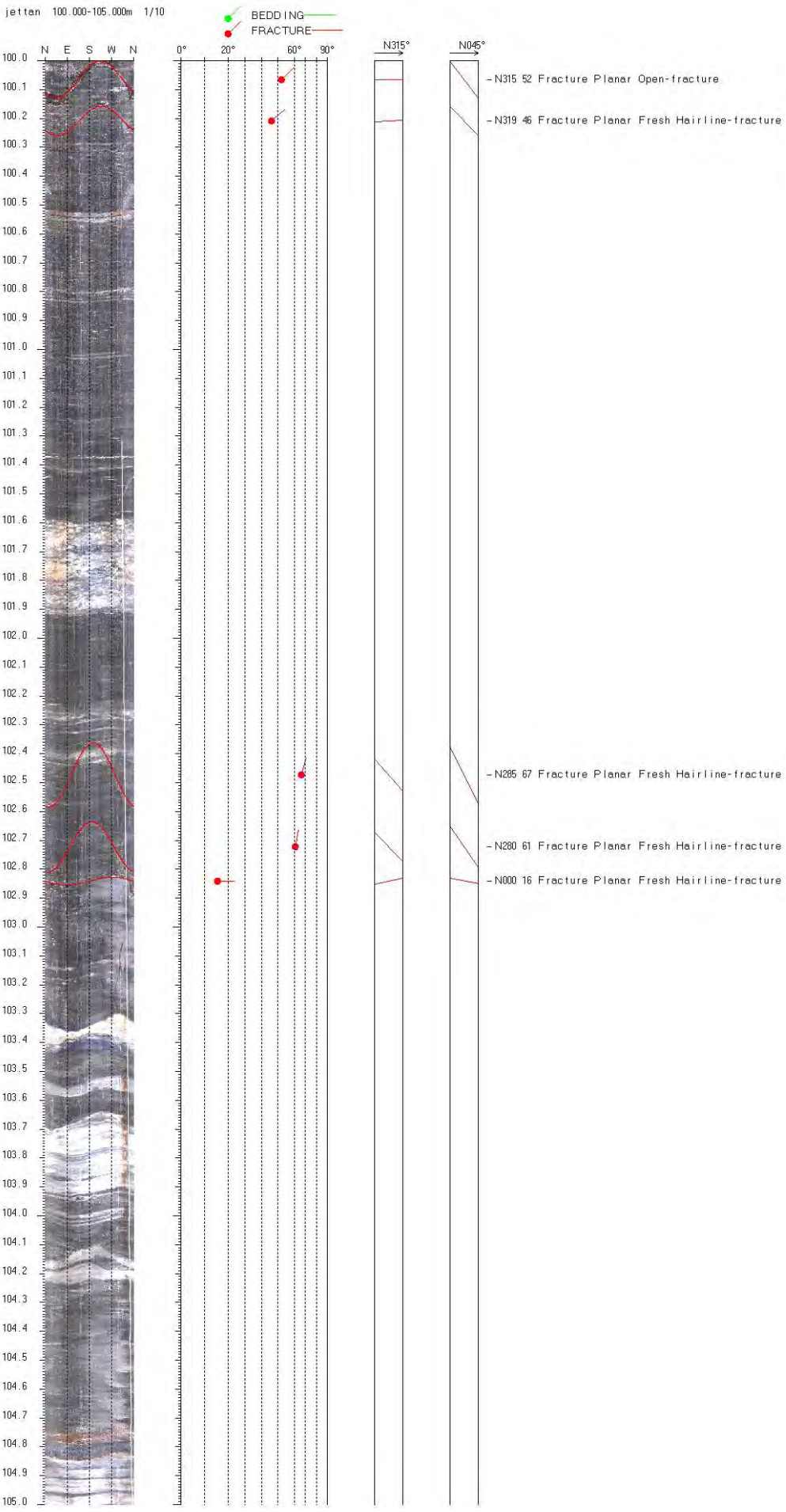
jetten 90.000-95.000m 1/10



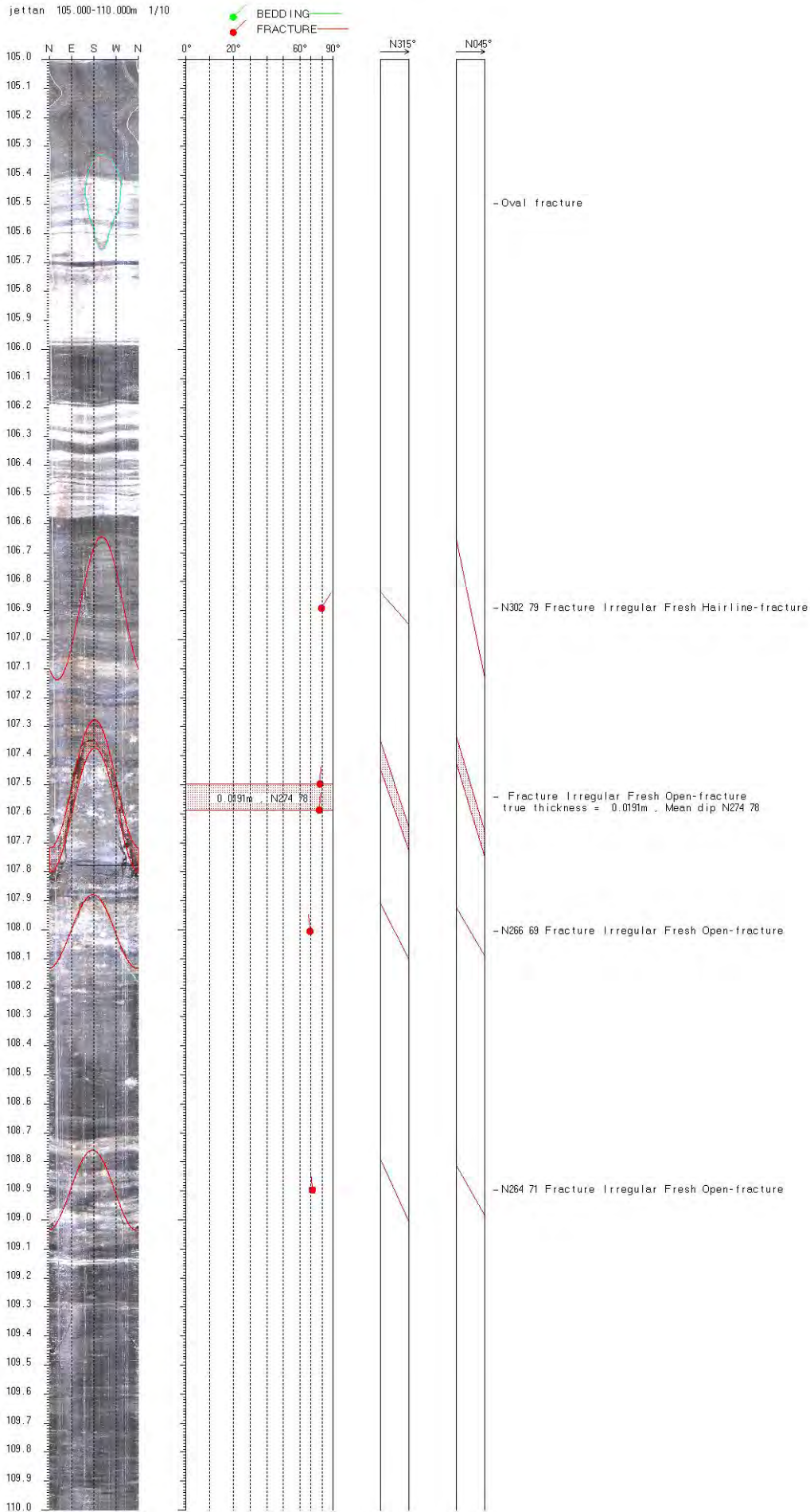
jetten 95.000-100.000m 1/10

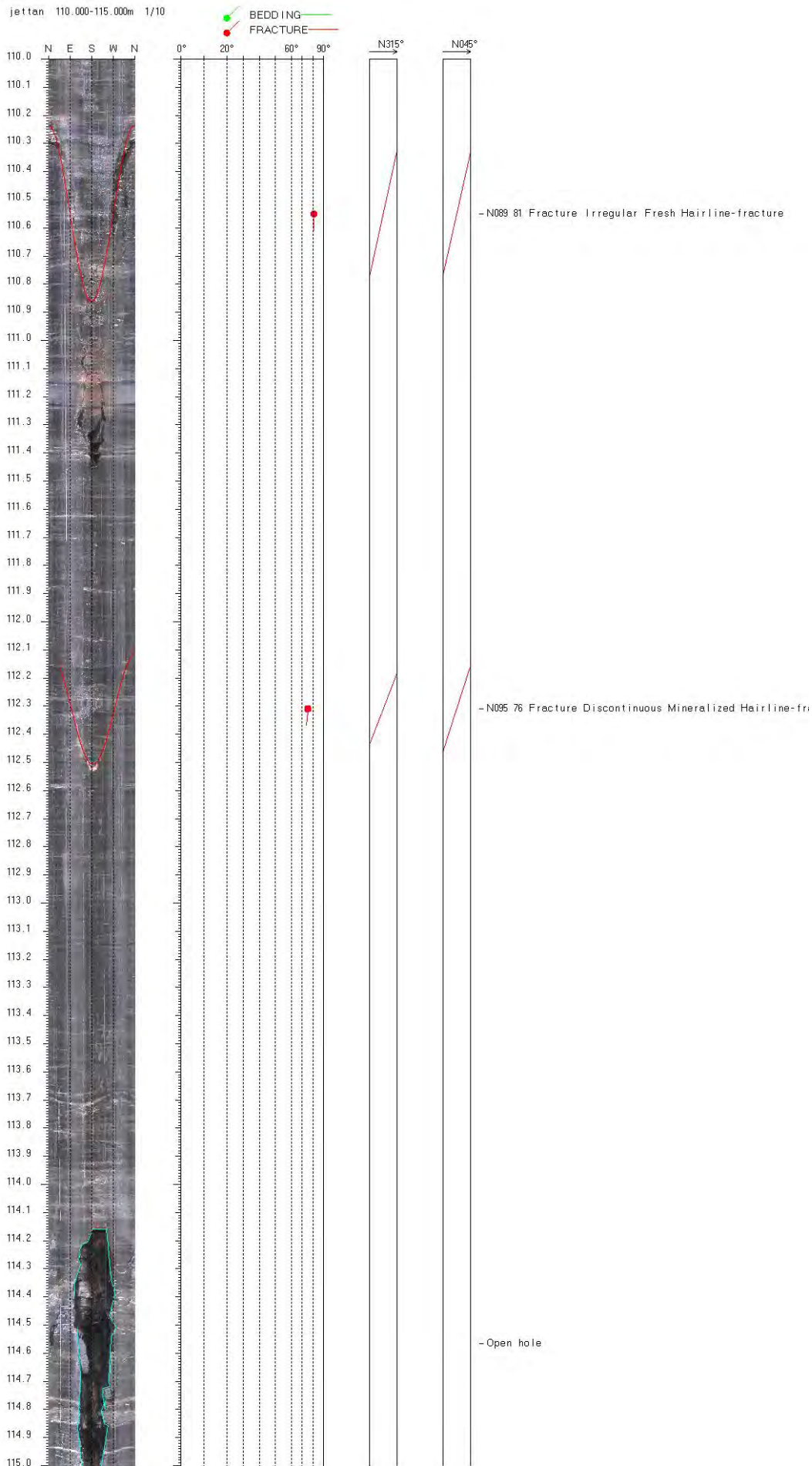


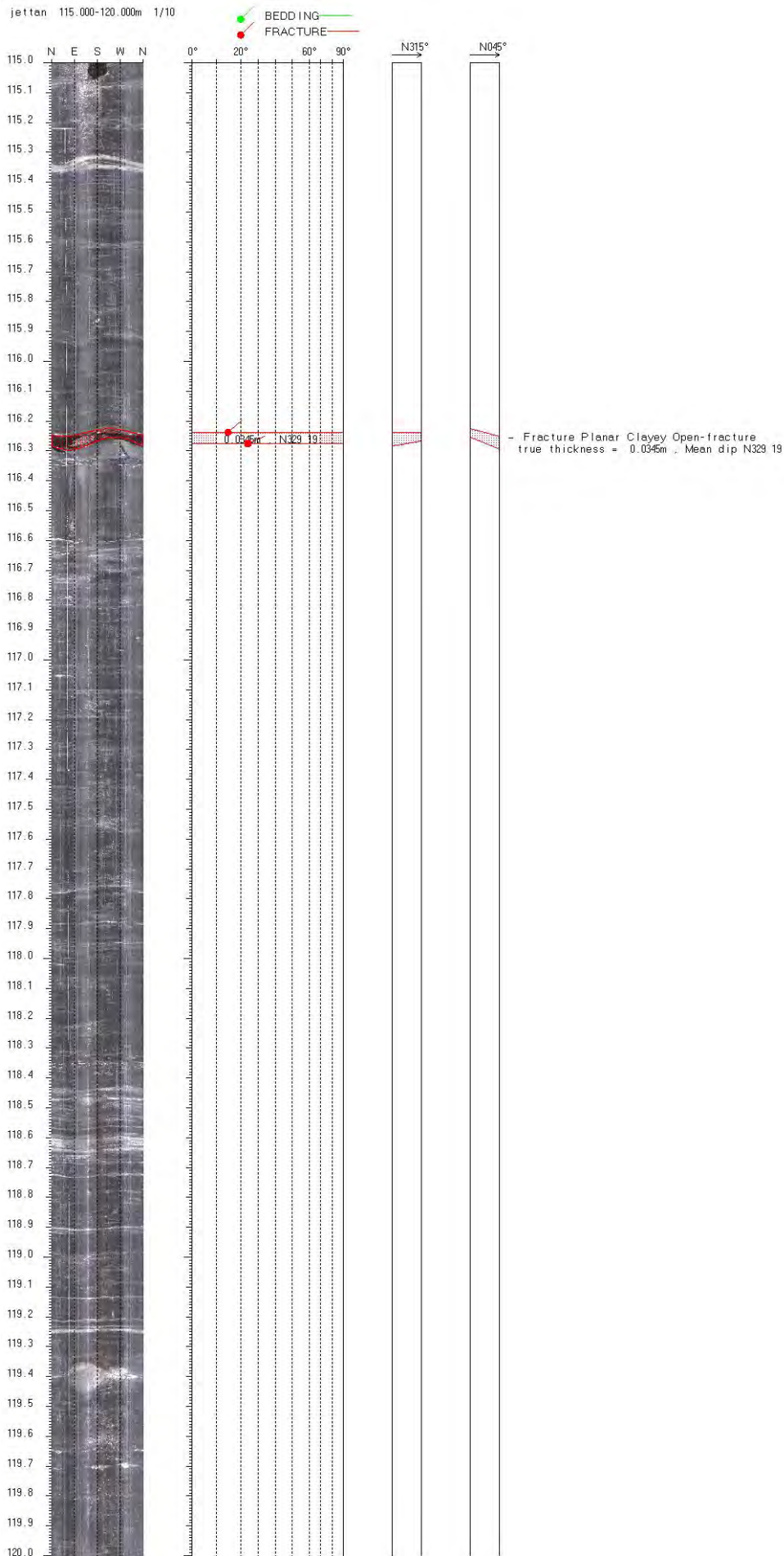
jetten 100.000-105.000m 1/10



jetten 105.000-110.000m 1/10

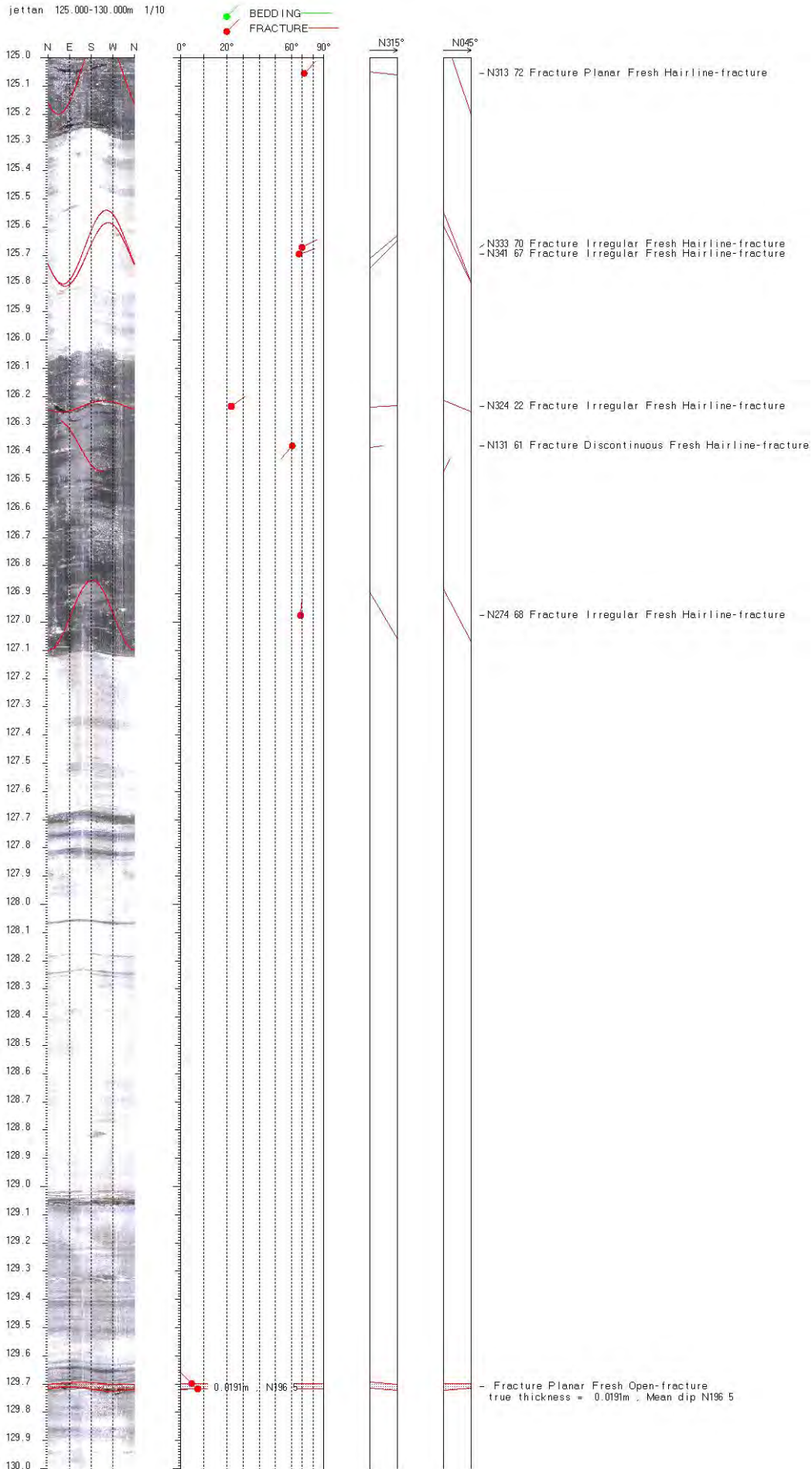




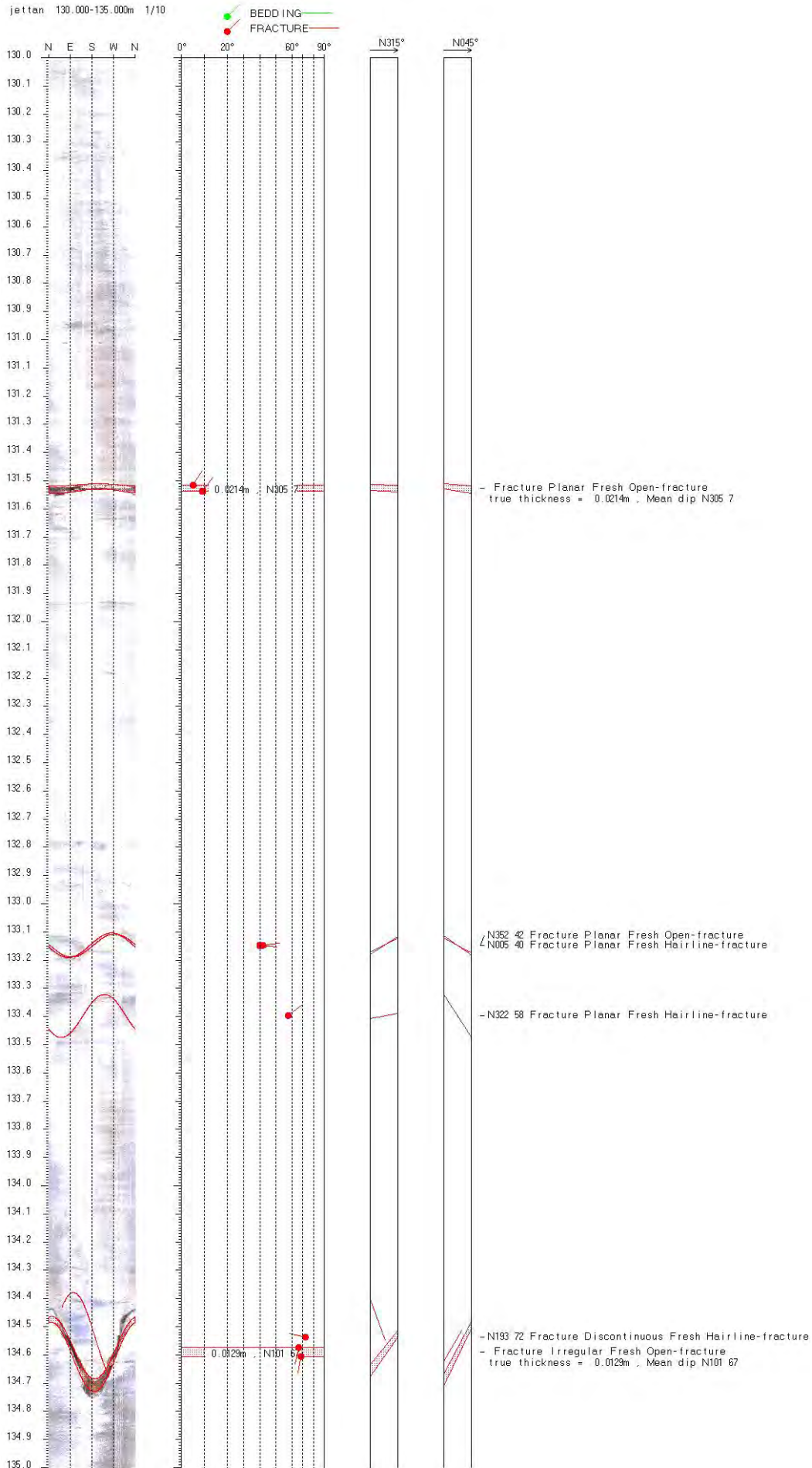




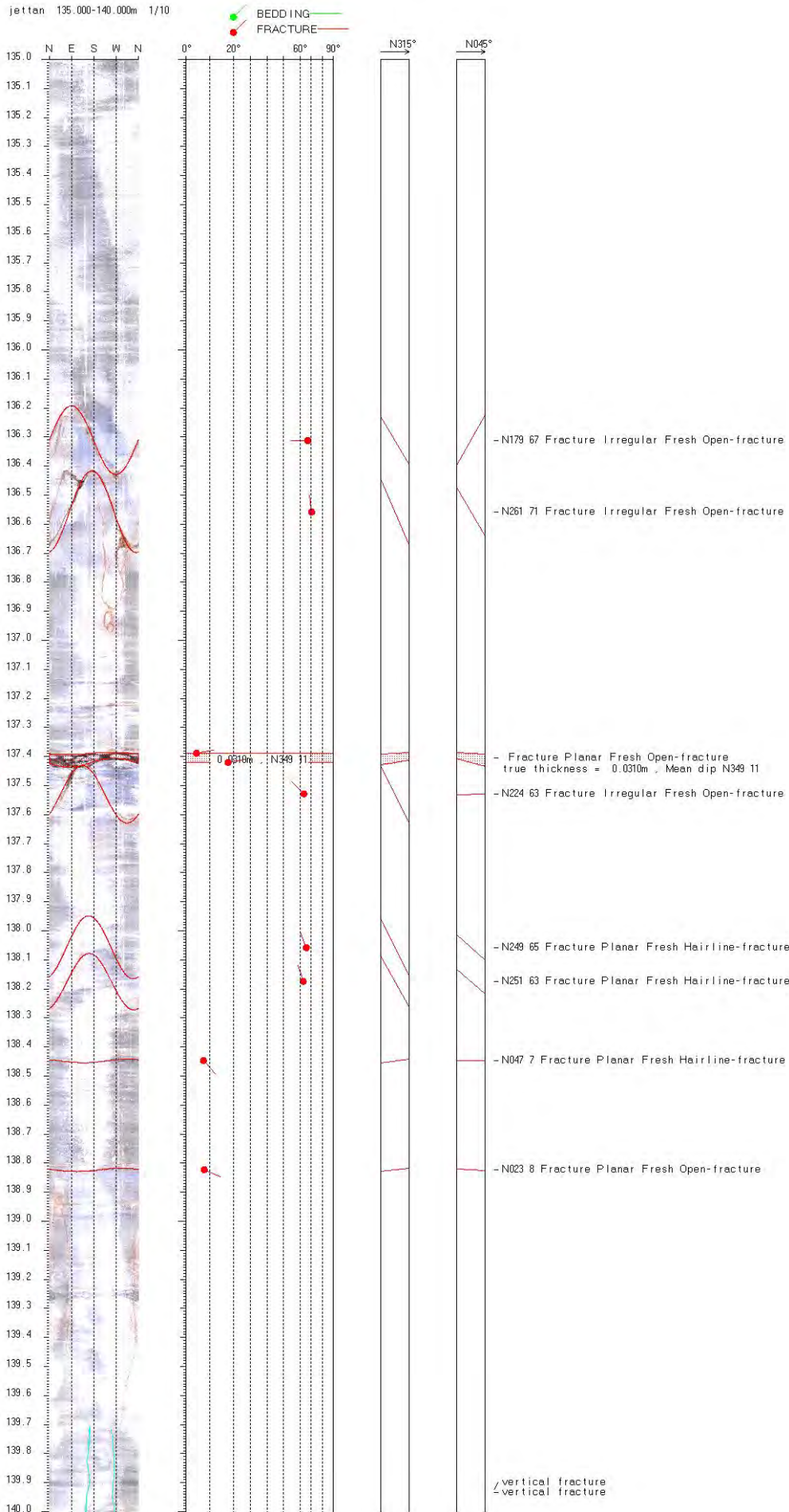
jetten 125.000-130.000m 1/10



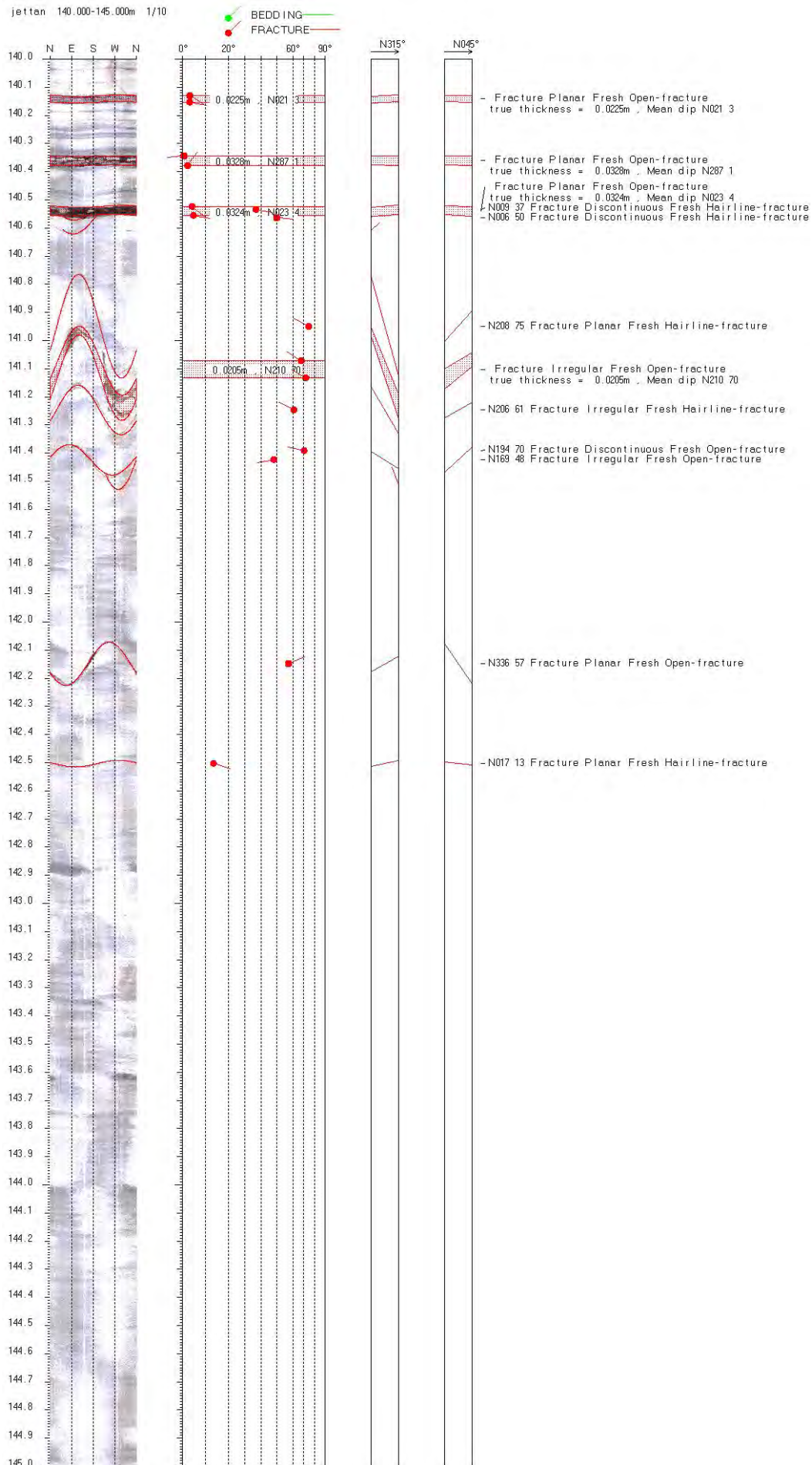
jetten 130.000-135.000m 1/10



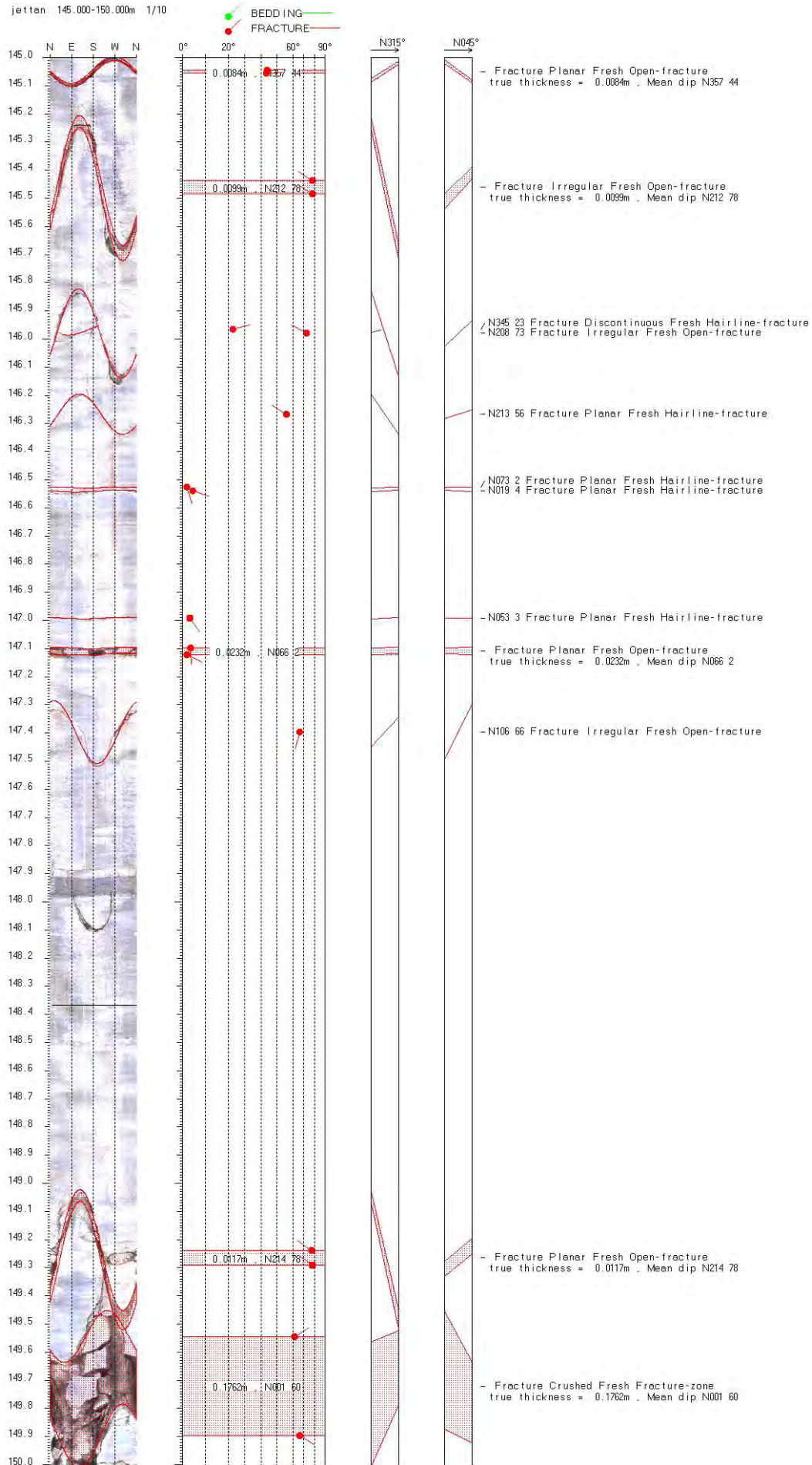
jetten 135.000-140.000m 1/10



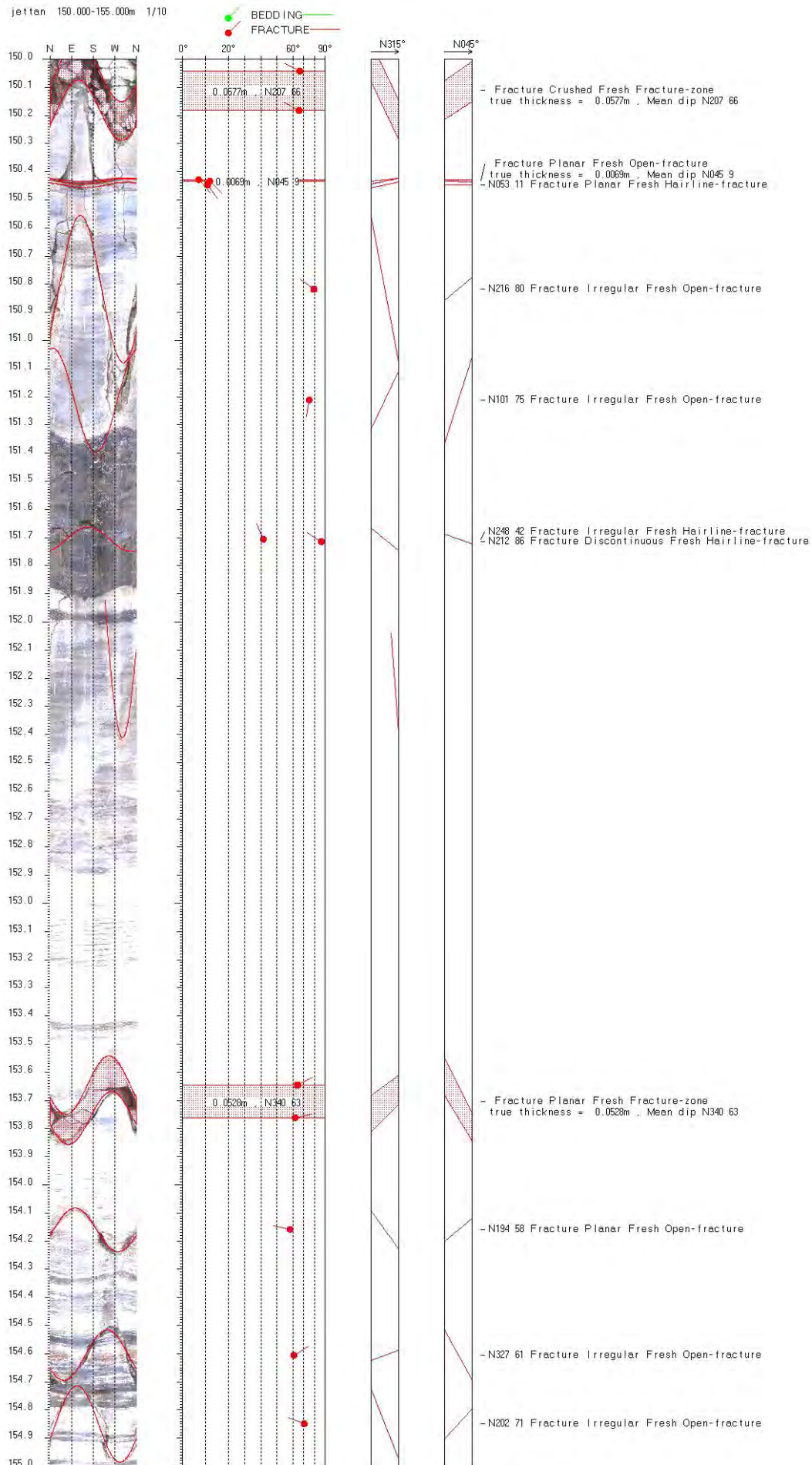
jetten 140.000-145.000m 1/10



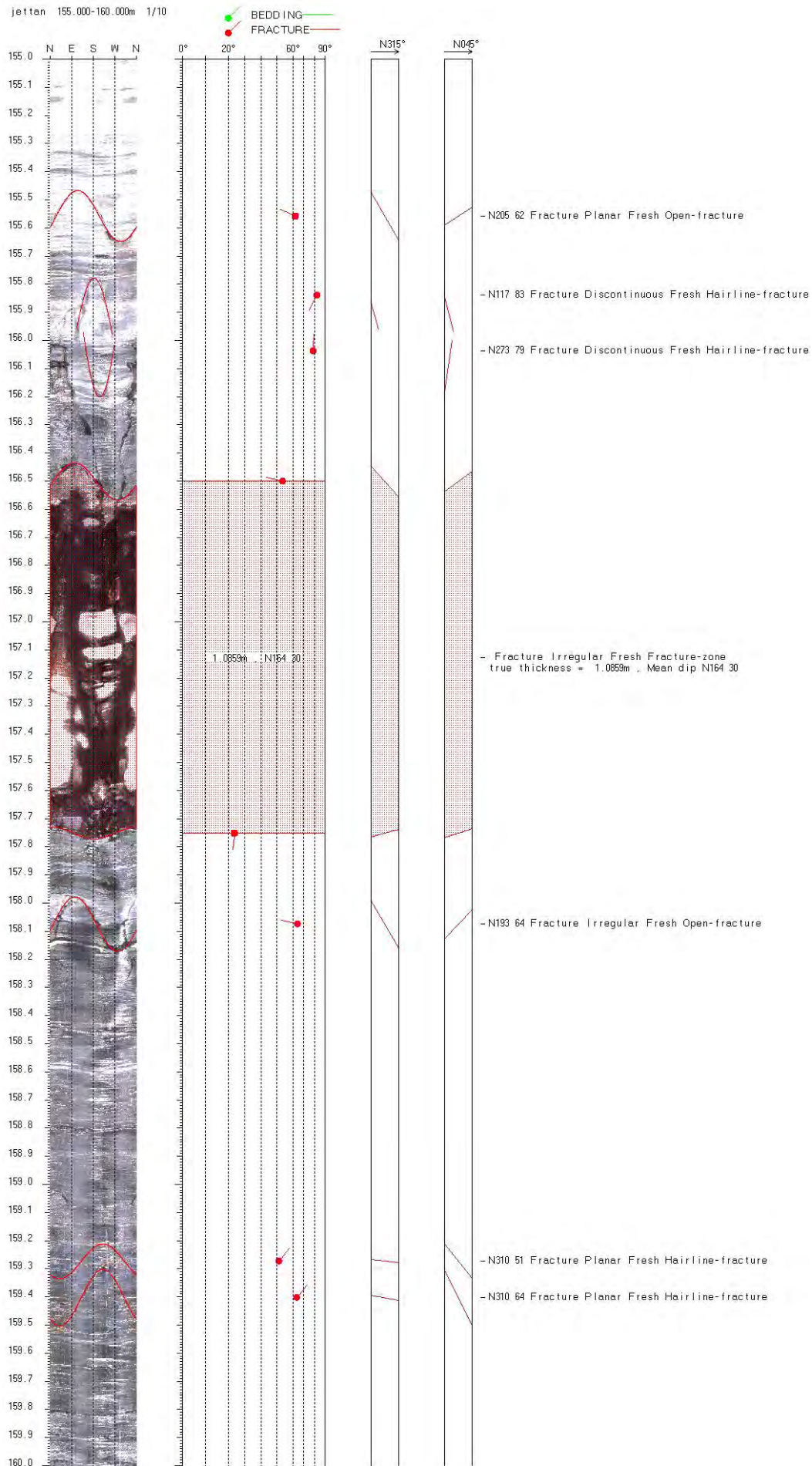
jetten 145.000-150.000m 1/10



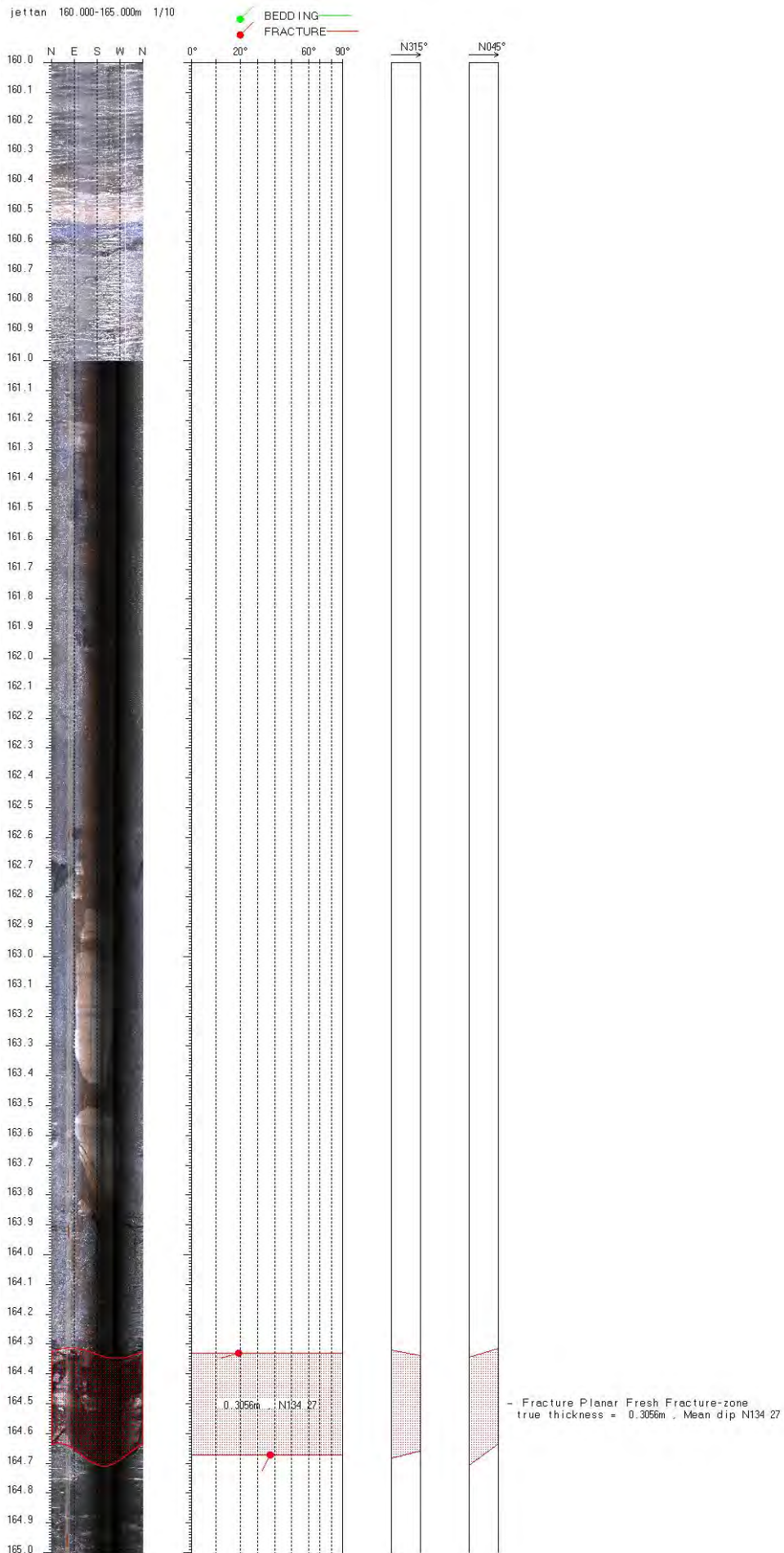
jetten 150.000-155.000m 1/10



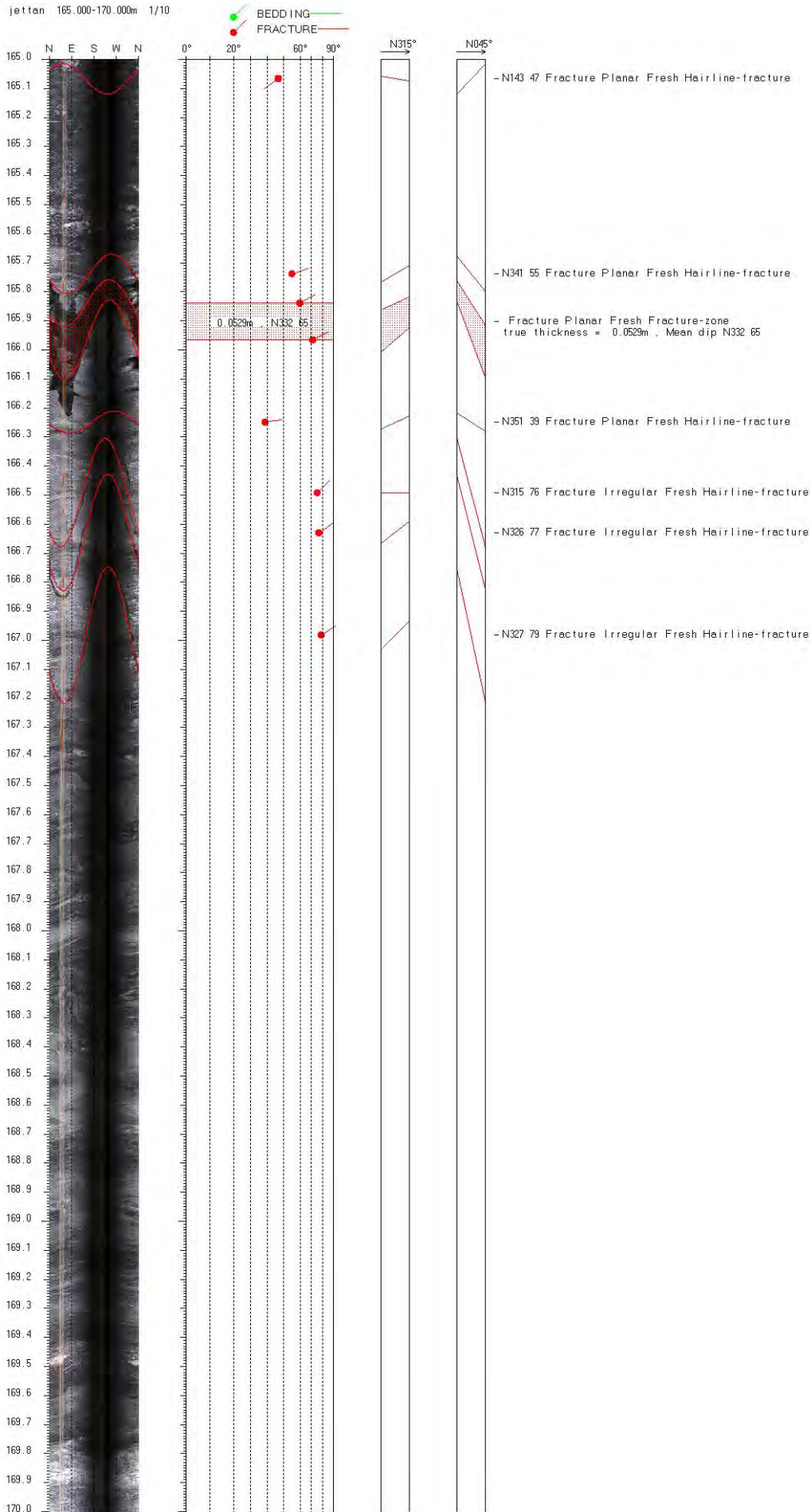
jetten 155.000-160.000m 1/10

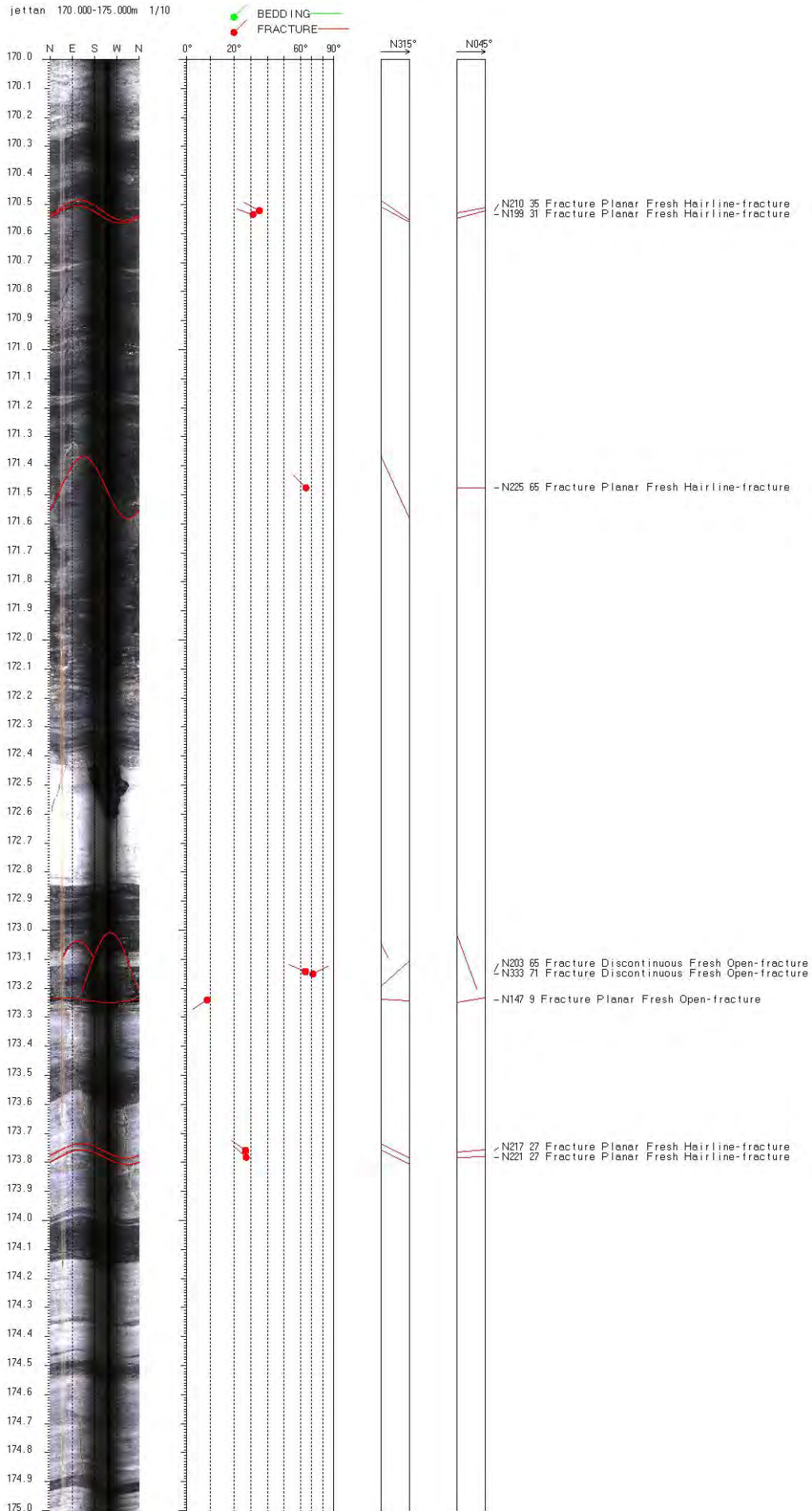


jetten 160.000-165.000m 1/10

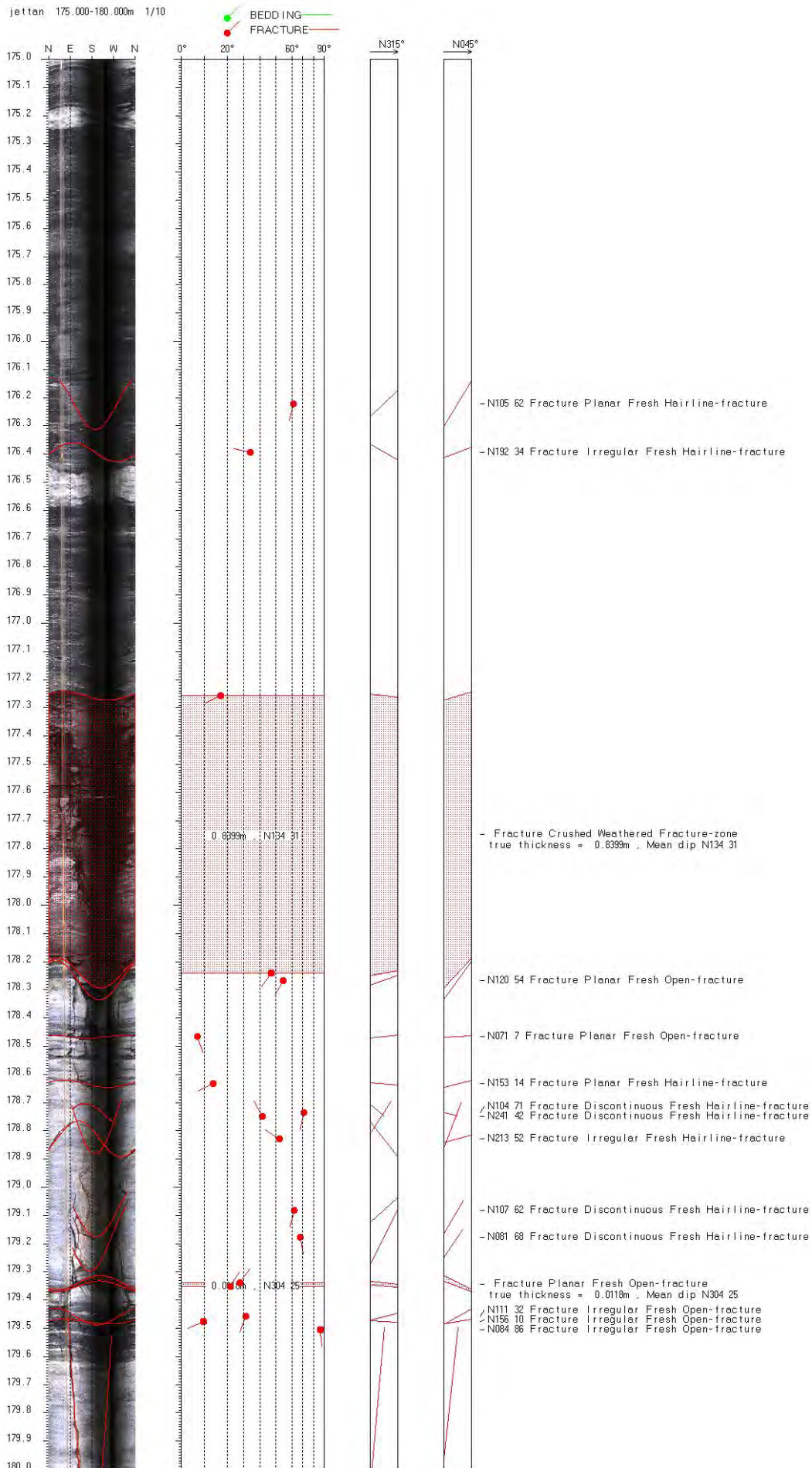


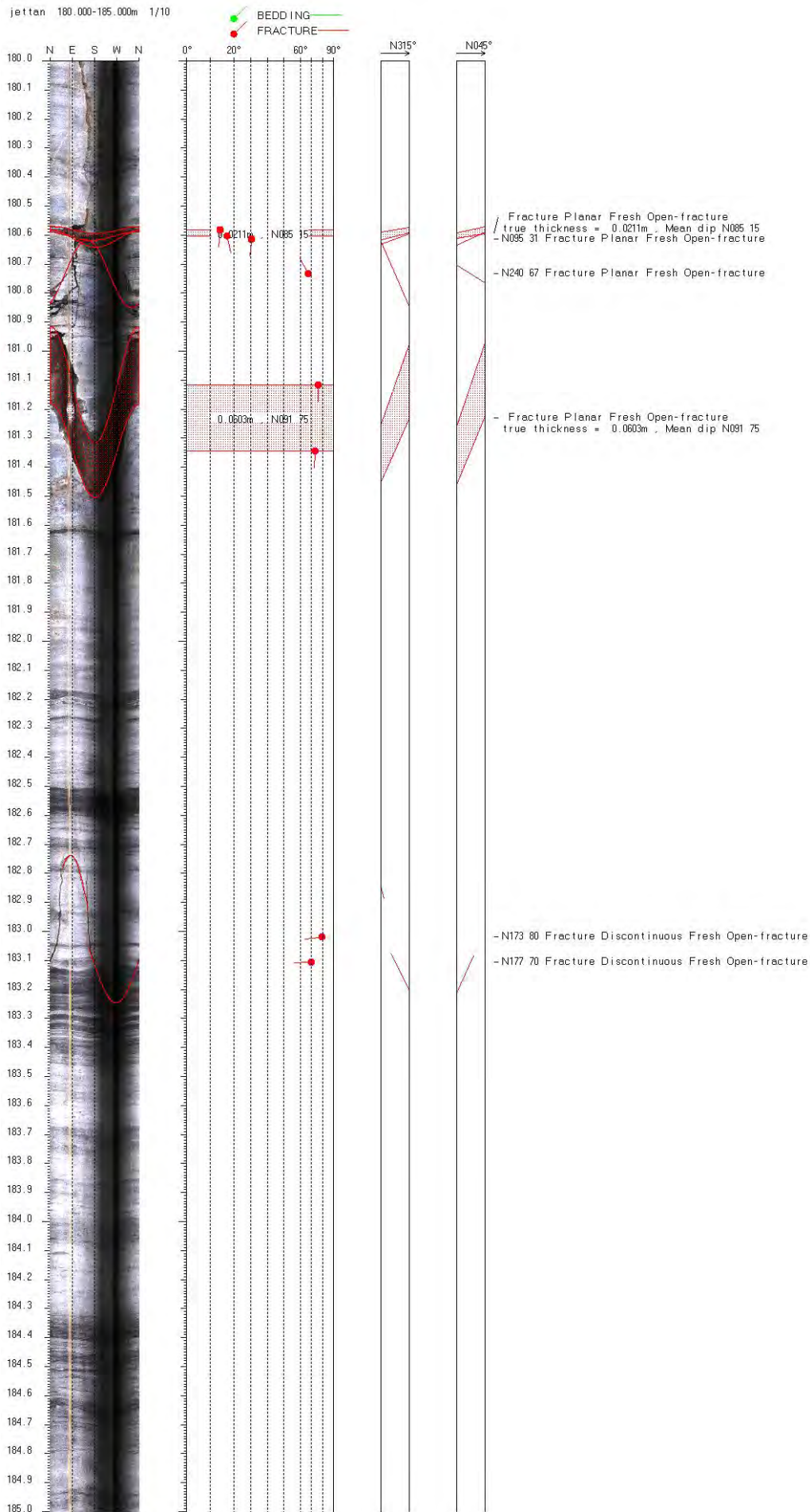
jetten 165.000-170.000m 1/10

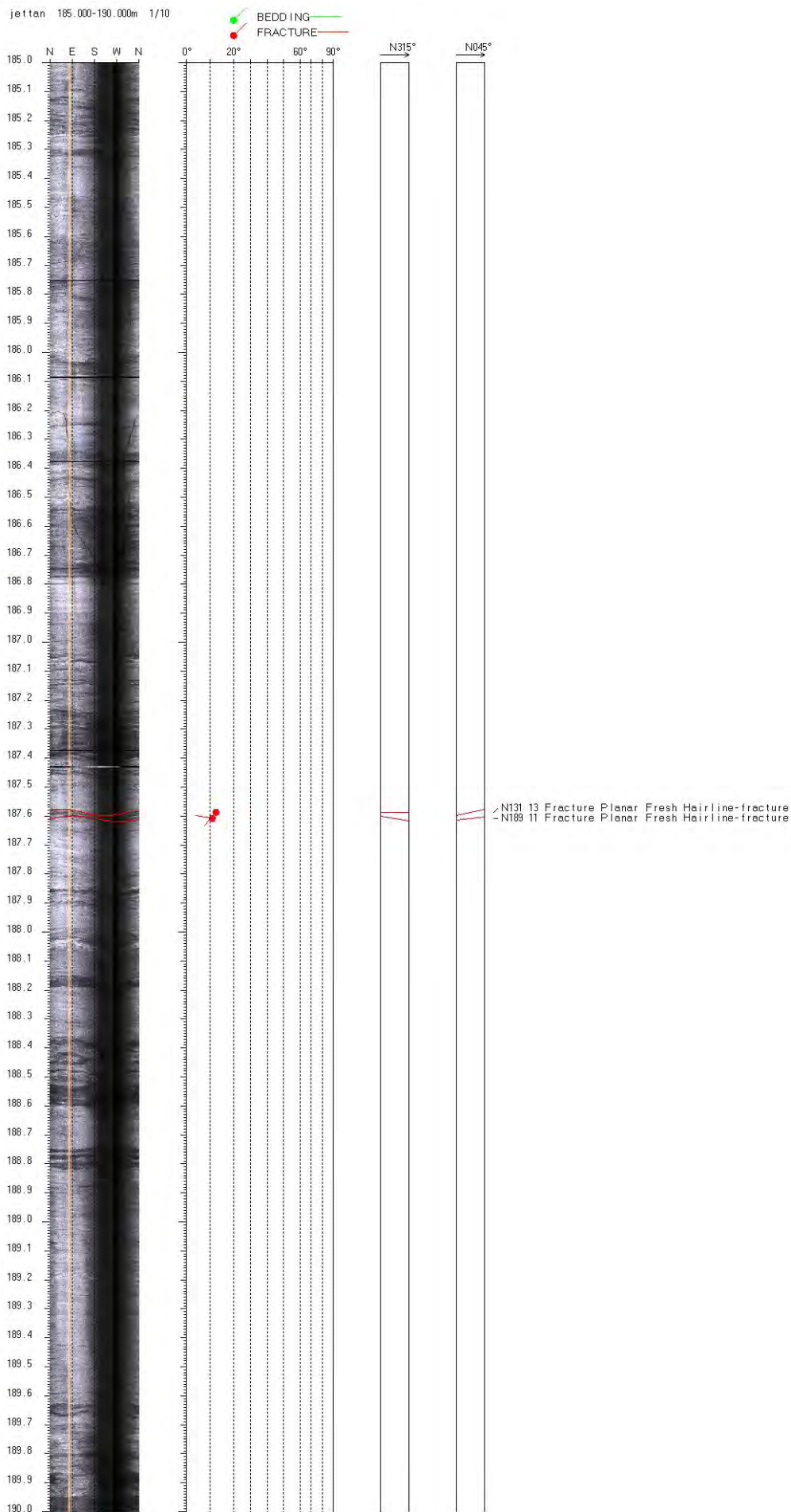




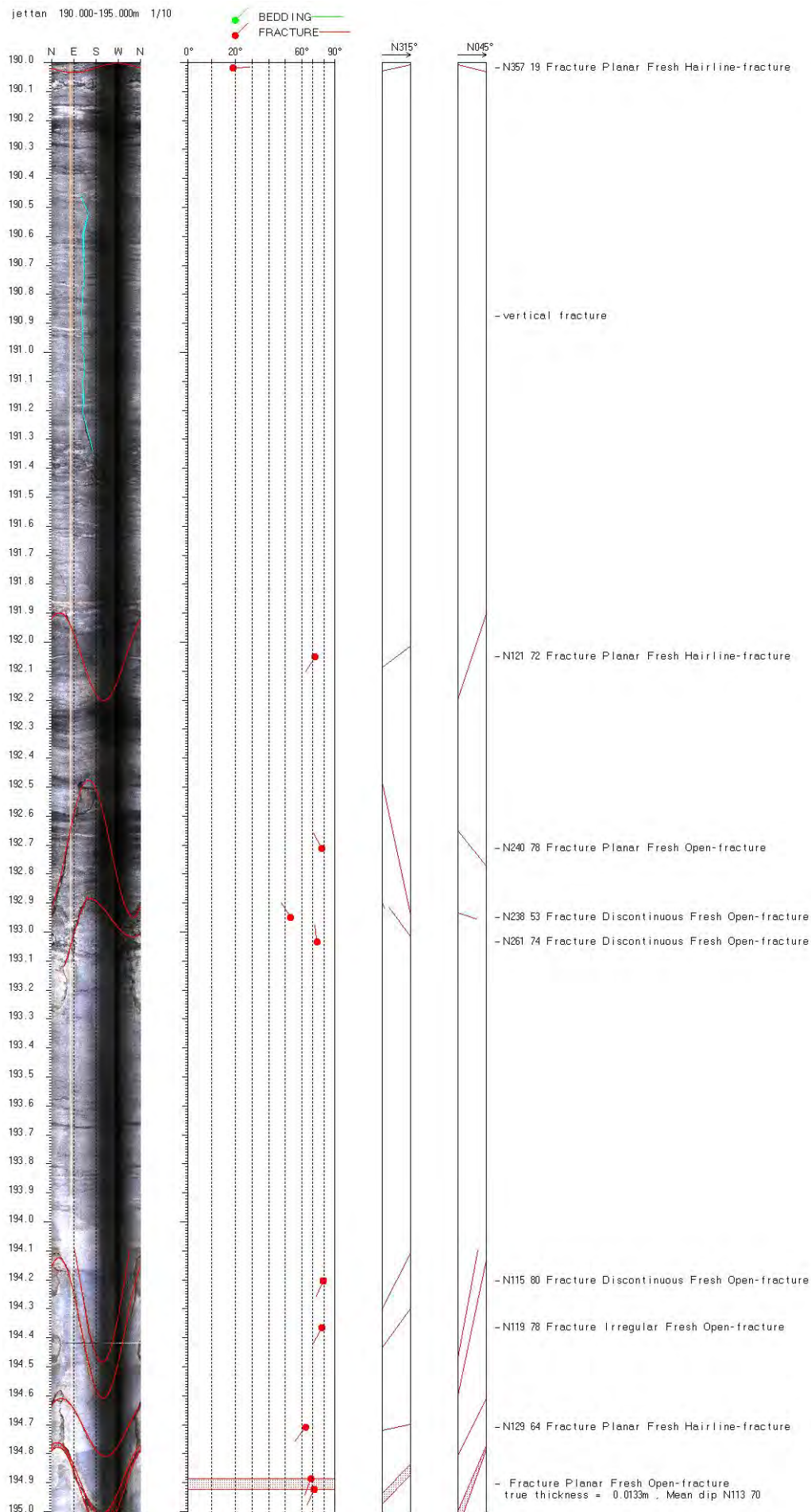
jetten 175.000-180.000m 1/10



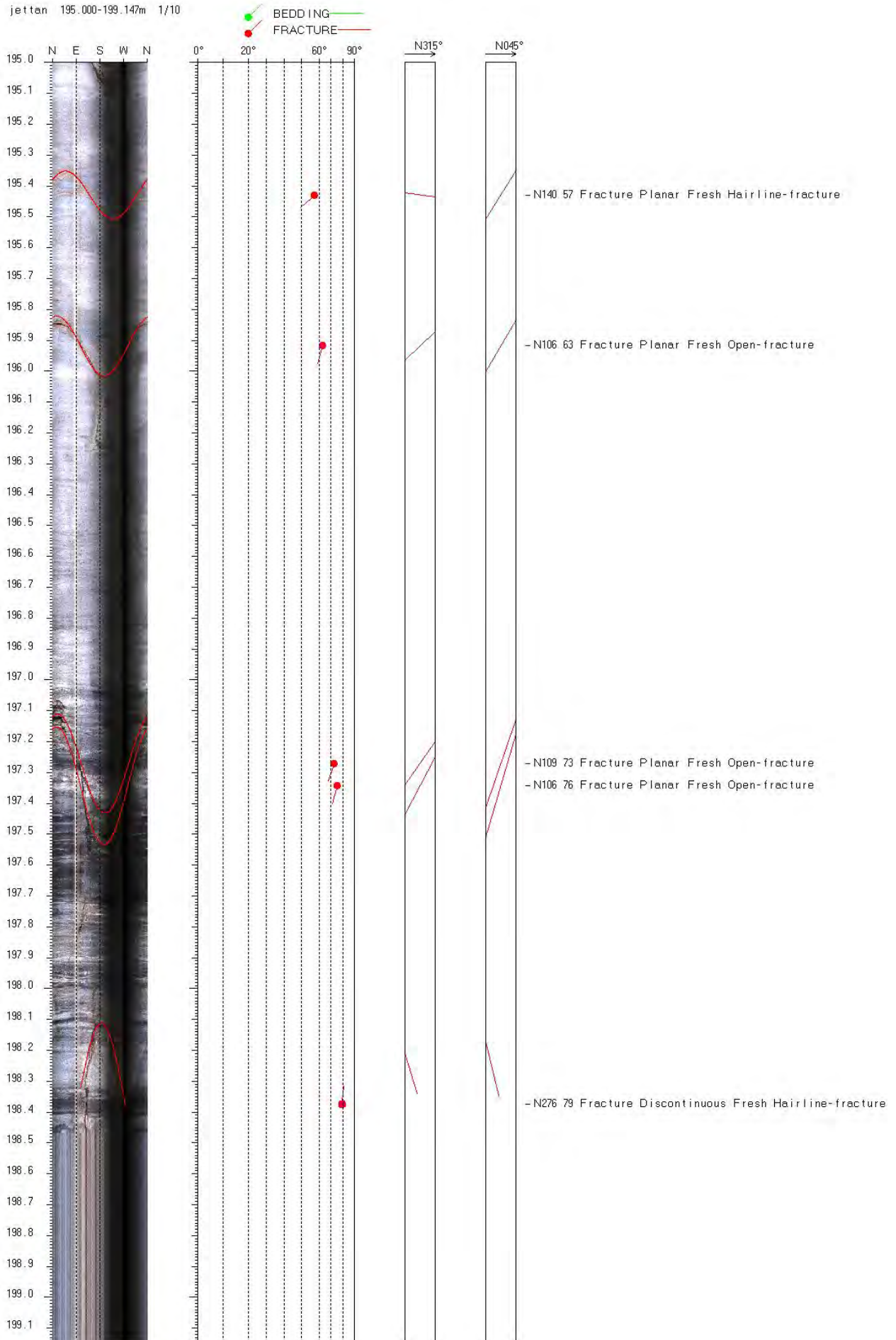




jetten 190.000-195.000m 1/10



jettan 195.000-199.147m 1/10



Depth	Deviation components				
	North	East	Down	Devaz	Dev
0.000	0.000	0.000	0.000	282.00	0.64
1.000	0.002	-0.011	0.977	282.00	0.64
2.000	0.005	-0.022	1.977	282.00	0.64
3.000	0.007	-0.033	2.977	282.00	0.64
4.000	0.009	-0.043	3.977	282.00	0.64
5.000	0.012	-0.054	4.977	282.00	0.64
6.000	0.014	-0.065	5.977	282.00	0.64
7.000	0.016	-0.076	6.977	282.00	0.64
8.000	0.019	-0.087	7.977	282.00	0.64
9.000	0.021	-0.098	8.976	282.00	0.64
10.000	0.023	-0.109	9.976	282.00	0.64
11.000	0.025	-0.120	10.976	282.00	0.64
12.000	0.028	-0.131	11.976	282.00	0.64
13.000	0.030	-0.142	12.976	282.00	0.64
14.000	0.032	-0.153	13.976	282.00	0.64
15.000	0.035	-0.164	14.976	282.00	0.64
16.000	0.037	-0.175	15.976	282.00	0.64
17.000	0.039	-0.185	16.976	282.00	0.64
18.000	0.042	-0.196	17.976	282.00	0.64
19.000	0.044	-0.207	18.976	282.00	0.64
20.000	0.046	-0.218	19.976	282.00	0.64
21.000	0.049	-0.229	20.976	282.00	0.64
22.000	0.051	-0.240	21.976	282.00	0.64
23.000	0.053	-0.251	22.976	282.00	0.64
24.000	0.056	-0.262	23.976	282.00	0.64
25.000	0.058	-0.273	24.975	282.00	0.64
26.000	0.060	-0.284	25.975	282.00	0.64
27.000	0.063	-0.295	26.975	282.00	0.64
28.000	0.065	-0.306	27.975	282.00	0.64
29.000	0.067	-0.317	28.975	282.00	0.64
30.000	0.070	-0.328	29.975	282.00	0.64
31.000	0.077	-0.329	30.975	74.00	0.56
32.000	0.073	-0.332	31.975	65.00	0.51
33.000	0.072	-0.324	32.975	85.00	0.55
34.000	0.069	-0.331	33.975	261.00	0.66
35.000	0.067	-0.342	34.975	258.00	0.58
36.000	0.065	-0.354	35.975	259.00	0.71
37.000	0.061	-0.367	36.975	254.00	0.81
38.000	0.057	-0.380	37.975	258.00	0.80
39.000	0.055	-0.394	38.975	256.00	0.81
40.000	0.052	-0.407	39.974	259.00	0.77
41.000	0.050	-0.421	40.974	258.00	0.73
42.000	0.048	-0.433	41.974	261.00	0.75
43.000	0.046	-0.446	42.974	259.00	0.74
44.000	0.042	-0.459	43.974	247.00	0.76
45.000	0.038	-0.471	44.974	251.00	0.73
46.000	0.033	-0.481	45.974	231.00	0.62
47.000	0.026	-0.491	46.974	245.00	0.77
48.000	0.020	-0.503	47.974	241.00	0.75
49.000	0.014	-0.514	48.974	242.00	0.68
50.000	0.008	-0.524	49.974	234.00	0.67
51.000	0.007	-0.529	50.974	253.00	0.28
52.000	0.005	-0.533	51.974	241.00	0.22
53.000	0.003	-0.537	52.974	232.00	0.30
54.000	-0.002	-0.540	53.974	218.00	0.29
55.000	-0.006	-0.543	54.974	207.00	0.32
56.000	-0.012	-0.546	55.974	207.00	0.36
57.000	-0.018	-0.547	56.974	191.00	0.37
58.000	-0.023	-0.550	57.973	203.00	0.33
59.000	-0.030	-0.552	58.973	190.00	0.49
60.000	-0.038	-0.553	59.973	187.00	0.47
61.000	-0.047	-0.553	60.973	185.00	0.52
62.000	-0.057	-0.555	61.973	191.00	0.54
63.000	-0.065	-0.556	62.973	202.00	0.42
64.000	-0.075	-0.556	63.973	171.00	0.60
65.000	-0.084	-0.555	64.973	181.00	0.53
66.000	-0.093	-0.555	65.973	178.00	0.51
67.000	-0.102	-0.555	66.973	174.00	0.54
68.000	-0.112	-0.554	67.973	179.00	0.65
69.000	-0.122	-0.554	68.973	175.00	0.57
70.000	-0.133	-0.552	69.973	173.00	0.69
71.000	-0.145	-0.551	70.973	178.00	0.66
72.000	-0.156	-0.551	71.973	184.00	0.68
73.000	-0.167	-0.551	72.973	177.00	0.64
74.000	-0.179	-0.550	73.973	169.00	0.73
75.000	-0.192	-0.548	74.973	175.00	0.80

Depth	Deviation components				
	North	East	Down	Devaz	Dev
76.000	-0.206	-0.548	75.973	181.00	0.76
77.000	-0.220	-0.549	76.972	185.00	0.82
78.000	-0.234	-0.550	77.972	189.00	0.77
79.000	-0.247	-0.553	78.972	192.00	0.76
80.000	-0.260	-0.556	79.972	199.00	0.81
81.000	-0.273	-0.561	80.972	203.00	0.78
82.000	-0.284	-0.567	81.972	213.00	0.67
83.000	-0.294	-0.573	82.972	213.00	0.61
84.000	-0.302	-0.580	83.972	226.00	0.58
85.000	-0.307	-0.586	84.972	226.00	0.40
86.000	-0.310	-0.591	85.972	255.00	0.30
87.000	-0.311	-0.594	86.972	263.00	0.14
88.000	-0.310	-0.595	87.972	303.00	0.06
89.000	-0.309	-0.594	88.972	77.00	0.30
90.000	-0.308	-0.591	89.972	56.00	0.21
91.000	-0.307	-0.587	90.972	74.00	0.31
92.000	-0.306	-0.581	91.972	80.00	0.39
93.000	-0.306	-0.575	92.972	97.00	0.38
94.000	-0.307	-0.568	93.972	93.00	0.37
95.000	-0.308	-0.561	94.972	103.00	0.46
96.000	-0.310	-0.553	95.972	112.00	0.47
97.000	-0.313	-0.545	96.972	108.00	0.53
98.000	-0.317	-0.537	97.972	123.00	0.51
99.000	-0.321	-0.529	98.972	122.00	0.50
100.000	-0.326	-0.522	99.971	123.00	0.48
101.000	-0.332	-0.515	100.971	129.00	0.55
102.000	-0.338	-0.509	101.971	142.00	0.47
103.000	-0.347	-0.504	102.971	162.00	0.50
104.000	-0.355	-0.503	103.971	167.00	0.52
105.000	-0.364	-0.501	104.971	177.00	0.55
106.000	-0.373	-0.502	105.971	186.00	0.62
107.000	-0.384	-0.505	106.971	202.00	0.62
108.000	-0.393	-0.510	107.971	201.00	0.54
109.000	-0.402	-0.514	108.971	206.00	0.55
110.000	-0.410	-0.519	109.971	217.00	0.56
111.000	-0.417	-0.525	110.971	215.00	0.44
112.000	-0.423	-0.532	111.971	237.00	0.68
113.000	-0.430	-0.540	112.971	223.00	0.53
114.000	-0.436	-0.546	113.971	228.00	0.56
115.000	-0.442	-0.555	114.971	238.00	0.73
116.000	-0.446	-0.566	115.971	252.00	0.48
117.000	-0.451	-0.574	116.971	237.00	0.63
118.000	-0.456	-0.583	117.971	248.00	0.55
119.000	-0.459	-0.592	118.971	247.00	0.53
120.000	-0.462	-0.601	119.971	251.00	0.51
121.000	-0.465	-0.610	120.970	258.00	0.61
122.000	-0.467	-0.620	121.970	262.00	0.52
123.000	-0.468	-0.629	122.970	258.00	0.60
124.000	-0.469	-0.640	123.970	268.00	0.63
125.000	-0.469	-0.651	124.970	270.00	0.64
126.000	-0.468	-0.662	125.970	274.00	0.59
127.000	-0.467	-0.672	126.970	269.00	0.51
128.000	-0.468	-0.681	127.970	273.00	0.63
129.000	-0.465	-0.692	128.970	284.00	0.56
130.000	-0.463	-0.700	129.970	283.00	0.42
131.000	-0.462	-0.708	130.970	279.00	0.52
132.000	-0.459	-0.718	131.970	296.00	0.54
133.000	-0.455	-0.725	132.970	294.00	0.41
134.000	-0.453	-0.731	133.970	297.00	0.38
135.000	-0.449	-0.737	134.970	316.00	0.28
136.000	-0.447	-0.741	135.970	305.00	0.29
137.000	-0.443	-0.746	136.970	308.00	0.36
138.000	-0.438	-0.750	137.970	321.00	0.35
139.000	-0.434	-0.753	138.970	339.00	0.30
140.000	-0.429	-0.754	139.970	353.00	0.17
141.000	-0.425	-0.756	140.970	340.00	0.27
142.000	-0.421	-0.756	141.970	0.00	0.29
143.000	-0.416	-0.756	142.970	22.00	0.26
144.000	-0.412	-0.754	143.970	24.00	0.24
145.000	-0.408	-0.752	144.970	35.00	0.26
146.000	-0.405	-0.749	145.970	51.00	0.24
147.000	-0.401	-0.745	146.970	49.00	0.30
148.000	-0.398	-0.741	147.970	69.00	0.30
149.000	-0.396	-0.737	148.970	64.00	0.30
150.000	-0.395	-0.732	149.970	83.00	0.32
151.000	-0.394	-0.726	150.970	116.00	0.89

Depth	Deviation components				
	North	East	Down	Devaz	Dev
152.000	-0.395	-0.720	151.970	74.00	0.40
153.000	-0.394	-0.714	152.970	92.00	0.37
154.000	-0.394	-0.707	153.970	95.00	0.38
155.000	-0.395	-0.701	154.970	90.00	0.36
156.000	-0.394	-0.694	155.970	86.00	0.47
157.000	-0.393	-0.687	156.970	86.00	0.39
158.000	-0.393	-0.679	157.969	152.00	0.52
159.000	-0.395	-0.680	158.969	291.00	0.68
160.000	-0.392	-0.679	159.969	41.00	0.26
161.000	-0.389	-0.672	160.969	52.00	0.47
162.000	-0.387	-0.682	161.969	281.00	0.50
163.000	-0.387	-0.691	162.969	261.00	0.68
164.000	-0.388	-0.702	163.969	269.00	0.46
165.000	-0.388	-0.711	164.969	274.00	0.64
166.000	-0.388	-0.723	165.969	259.00	0.63
167.000	-0.389	-0.732	166.969	256.00	0.43
168.000	-0.392	-0.741	167.969	255.00	0.53
169.000	-0.394	-0.750	168.969	254.00	0.55
170.000	-0.397	-0.760	169.969	255.00	0.51
171.000	-0.400	-0.768	170.969	251.00	0.55
172.000	-0.404	-0.777	171.969	239.00	0.54
173.000	-0.408	-0.785	172.969	253.00	0.54
174.000	-0.410	-0.794	173.969	251.00	0.45
175.000	-0.412	-0.802	174.969	254.00	0.43
176.000	-0.415	-0.810	175.969	254.00	0.47
177.000	-0.417	-0.817	176.969	250.00	0.38
178.000	-0.418	-0.825	177.969	275.00	0.37
179.000	-0.416	-0.834	178.969	262.00	0.47
180.000	-0.417	-0.844	179.969	283.00	0.61
181.000	-0.415	-0.855	180.968	271.00	0.72
182.000	-0.412	-0.864	181.968	286.00	0.65
183.000	-0.410	-0.875	182.968	282.00	0.56
184.000	-0.409	-0.886	183.968	278.00	0.73
185.000	-0.406	-0.897	184.968	283.00	0.60
186.000	-0.404	-0.907	185.968	276.00	0.57
187.000	-0.403	-0.917	186.968	274.00	0.53
188.000	-0.353	-0.927	187.918	275.00	0.63
189.000	-0.351	-0.937	188.918	279.00	0.54
190.000	-0.350	-0.946	189.918	276.00	0.56
191.000	-0.349	-0.956	190.918	275.00	0.55
192.000	-0.348	-0.966	191.918	279.00	0.59
193.000	-0.346	-0.976	192.918	275.00	0.57
194.000	-0.346	-0.984	193.918	264.00	0.38
195.000	-0.346	-0.992	194.918	282.00	0.49
196.000	-0.344	-1.001	195.918	280.00	0.52
197.000	-0.343	-1.010	196.918	279.00	0.60
198.000	-0.341	-1.019	197.918	285.00	0.50
199.000	-0.336	-1.029	198.918	304.00	0.71



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