COMPOSITE WELL LOG 1:500

DATUM REFERENCE : DEPTH

WELL: 6507/5-5

OPERATOR	:	BP AMOCO, 30%
COUNTRY	:	NORWAY
AREA	:	Norwegian North Sea
LICENSE	:	212
BLOCK	:	6507/5
NPD PERMIT NO	:	1021-L
GROUP INTEREST	:	Statoil, 30% Enterprise Oil & Gas, 25% Exxon Mobil, 15%

GEOGRAPHICAL COORDINATES		SURFACE COORDINATES	
LAT	: 65 42' 08.010" N	UTM	: 435533.04 X
LONG	: 07 35' 45.360" E		7287623.7 Y
TARGET COORDINATES			
LAT	: 65 42' 08.010"	UTM	: 435533.04 X
LONG	: 07 35' 45.360"		7287623.7 Y
BOTTOM HOLE COORDINATES			
LAT	: 65*42' 10,114" N	UTM	: 435505.09 X
LONG	: 07*35' 43,054" E		7287689.48 Y

K.B. ELEV. :18 m

TOTAL DEPTH :3950 m (loggers depth)

WATER DEPTH :375 m

PRE-SPUD CLASSIFICATION	:	APPRAISAL
DATE ON LOCATION	:	24.11.2001
SPUD DATE	:	28.11.2001
KICK OFF DATE	:	
DATE T.D. REACHED	:	05.01.2002
COMPLETION DATE	:	09.02.2002
WELL STATUS	:	P & A
WELL CLASSIFICATION	:	OIL DISCOVERY

RIG	:	WEST ALPHA
DRILLING CONTRACTOR	:	A/S SMEDVIG DRILLING CO.
W/L - LOGGING CONTRACTOR	:	SCHLUMBERGER W. SERVICE
MWD - LOGGING CONTRACTOR	:	BHI
MUD-LOGGING CONTRACTOR	:	BHI

WELLSITE GEOLOGISTS :

RUSSELL BULMANN
DEREK MOSS
ASBJORN HIKSDAHL
WILL CHURCHER

COMPILED BY :

SIMON THOMAS
INGE EIKELMANN
TRINE HAUKEBO

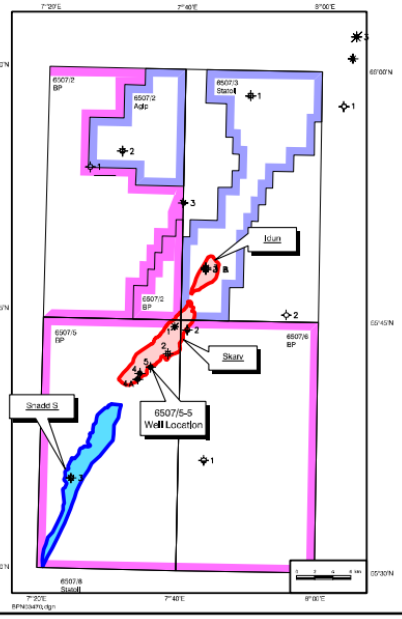
CASING RECORD

Casing Size	Section TD mBRT	Casing Depth mBRT	Test Depth mBRT	Lithology	Formation	Comments
30"	471.0	466.5	-	Mudstone	Undifferentiated Quaternary	Surface conductor.
20"	1060.0	1051.3	1063.0 LOT	Mudstone	Naust Formation	LOT: 1.56sg EMW @1063m BRT. 1.20sg mud Leak off Pressure 538 psi
13 3/8"	2106.0	2100.4	2109.0 LOT	Mudstone	Tang Formation	LOT: 1.90sg EMW @2109m BRT. 1.58sg mud Leak off Pressure 960 psi
9 5/8" Liner	3643.0	3642.0	-	Mudstone	Melke Formation	Top of liner set at 2044.5m BRT
7" Liner	3950.0	3938.8	-	Mudstone	Åre Formation	Top of liner set at 3531,5m BRT Top of Scab liner set at 2028.0m BRT

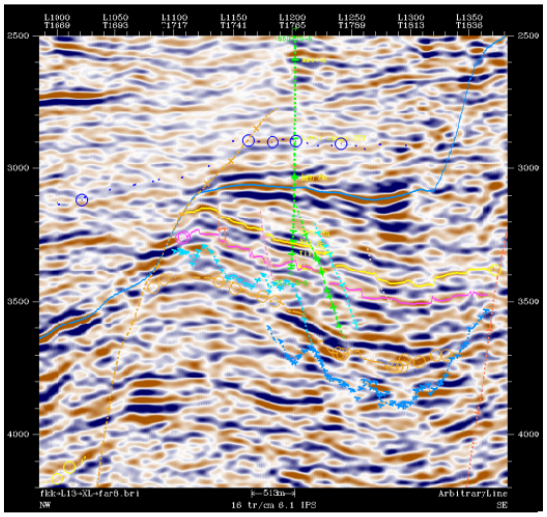
MUD DATA

HOLE SIZE, INCHES	MUD WEIGHT	TYPE
36"	1.05 SG Displaced hole to 1.40 SG mud after drilling.	Seawater w/hi-vis pills every 15m.
26"	1.05 SG Displaced hole to 1.20 SG mud after drilling.	Seawater w/hi-vis pills every 15m.
17 ½"	1.21-1.50 SG	KCL/Polymer
12 ¼"	1.50-1.59 SG	OBM
8 ½"	1.20 SG	KCL

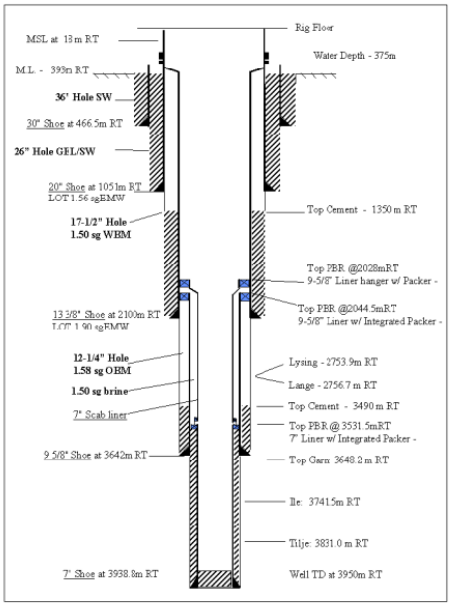
WELL LOCATION MAP



WELL PROFILE



WELLBORE SCHEMATIC



LWD LOGGING

Run No.	Tool String	Hole Size ins	Logged interval (relative to GR) mBRT	mBRT	Remarks
5	MWD (Baker Hughes Inteq)	26"	471.0	1060.0	Directional only.
6	MPR/GR (Baker Hughes Inteq)	17 ½"	1060.0	2106.0	No ROP restrictions resulted in varying data density and lost realtime data in some areas. Memory fine. GR failure at 2000m BRT – no realtime or memory data between 2000 and 2106m BRT. GR API corrections (GR-APICF) due to adding KCL to increase MW.
7	MPR/GR (Baker Hughes Inteq) 8 was a clean out trip witout LWD	12 ¼"	2106.0	3643.0	No ROP restrictions above Cretaceous formations resulted in varying data density and lost realtime data in some areas. Memory data - good. Section was drilled with OBM and MPR resistivity was corrected for mud-resestivity (Rm).
9	MPR/GR (Baker Hughes Inteq) 10 was a coring run without LWD	8 ½"	3643.0	3655.0	Controlled drilling to core point. Realtime and memory data - good.
11	MPR/GR (Baker Hughes Inteq)	8 ½"	3736.0	3950.0	Reamed cored interval for data (3655-3736) at 30m/hrs. Good realtime and memory data in whole section. GR API corrections (GR-APICF) due to KCL mud.

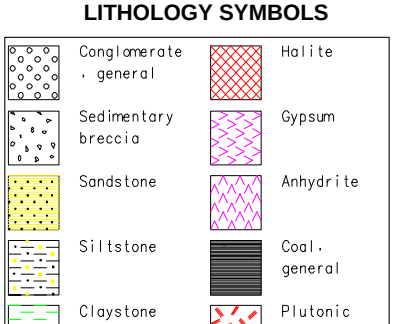
STRATIGRAPHY

Chrono/Lithostratigraphy		Tops Depth mMDBRT	Depth mTVDBRT	Depth mTVDSS	Thickness m
Middle Miocene - Recent	**Nordland Group**				
	Quaternary	393.0	393.0	375.0	472,7
	Naust Fm	865.7	865.6	847.6	527,9
	Kai Fm	1393.6	1393.4	1375.4	495.3
Late Palaeocene – Late Oligocene	**Hordaland Group**				
	Brygge Fm	1888.9	1888.7	1870.7	132.8
Late Campanian - Late Palaeocene	**Rogaland Group**				
	Tare Fm	2021.7	2021.5	2003.5	41.2
	Tang Fm	2062.9	2062.7	2044.7	44.3
Coniacian – Late Campanian	**Shetland Group**				
	Springar Fm	2107.2	2107.0	2089.0	73.9
	Nise Fm	2181.1	2180.9	2162.9	375.0
	Kvitnos Fm	2556.2	2555.9	2537.9	197.7
Coniacian - Late Aptian	**Cromer Knoll Group**				
	Lysing Fm	2753.9	2753.6	2735.6	2.8
	Lange Fm	2756.7	2756.4	2738.4	570.0
	Lyr Fm.	3326.7	3326.4	3308.4	12.1
Late- middle Kimmeridgian – late/latest early Bajocian	**Viking Group**				
	Spekk Fm	3338.8	3338.5	3320.5	32.6
	Melke Fm	3371.5	3371.1	3353.1	276.4
Aalenian	**Fangst Group**				
	Garn Fm	3648.2	3647.5	3629.5	74.6
	Not Fm	3723.0	3722.1	3704.1	18.4
	Ile Fm	3741.5	3740.5	3722.5	31.9
Late/Middle Toarcian – early Plensbachian	**Båt Group**				
	Ror Fm	3773.4	3772.4	3754.4	57.2
	Tilje Fm	3831.0	3829.6	3811.6	93.6
	Åre Fm	3925.2	3923.2	3905.2	
	TD	3950.0	3948.0	3930.0	

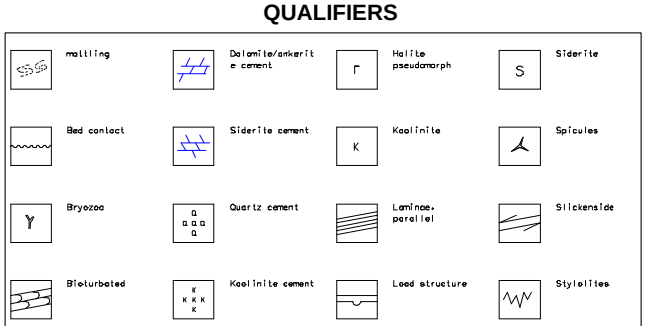
WIRELINE

Run No.	Date	Tool String	Hole Size ins	Max Temp (°C)	Time since circ. (hrs:min)	Logged interval mBRT	mBRT	Remarks
1A	26/12/01	DSI-IPLT-GR	12.25	115.0	12:45	3644.5	2100.0	GR all the way to seabed – 393m BRT
2A	06/01/02	DSI-HRLA-GR-EMS	8.5	122.0	13.5	3950.0	3440.0	Communication with the DSI failed during the repeat section.
2B	06/01/02	IPLT-GR	8.5	130.0	22.5	3950.0	3644.0	
2A	06-07/01/02	MDT-GR	8.5	129.5	33.16	3950.0	3644.0	OFA failed prior to taking first sample.
2B	07-08/01/02	MDT-GR	8.5	132.0	62.0	3885.0	3653.3	Sampling run -3 sample depths (2 good, 1 tight). Minor communication problems with the tool.
2A	08/01/02	VSI	8.5			-	-	Communication problems with the tool - POOH.
2B	09/01/02	VSI	8.5			3946.4	1322.5	VSP data; 3422.5 - 3922.5m BRT Check shots data; 1322.5 - 3422.5m BRT Poor data due to bad cement job between; 2022.5 - 3422.5m BRT. Minor communication problems with the tool.

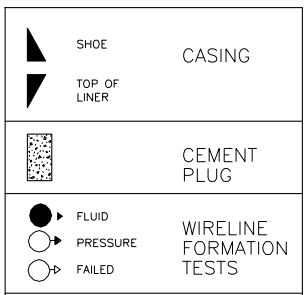
LITHOLOGY SYMBOLS

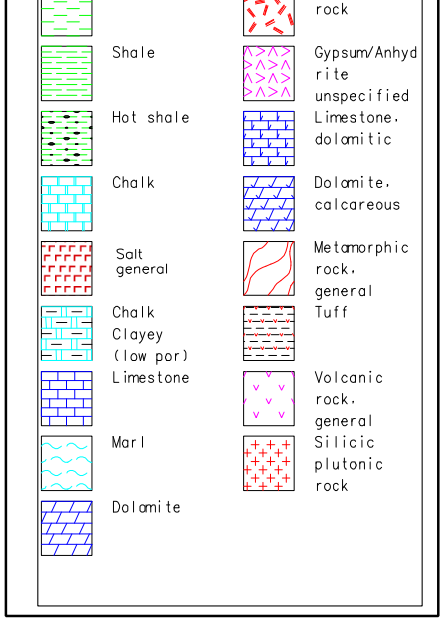


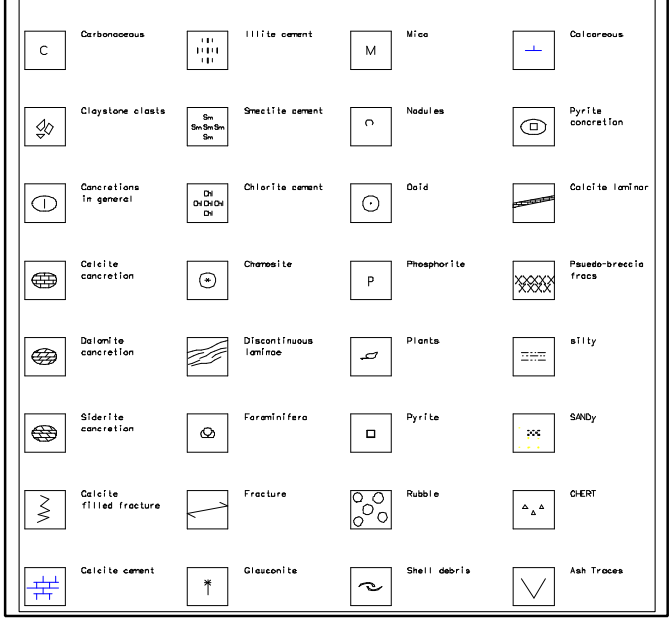
QUALIFIERS

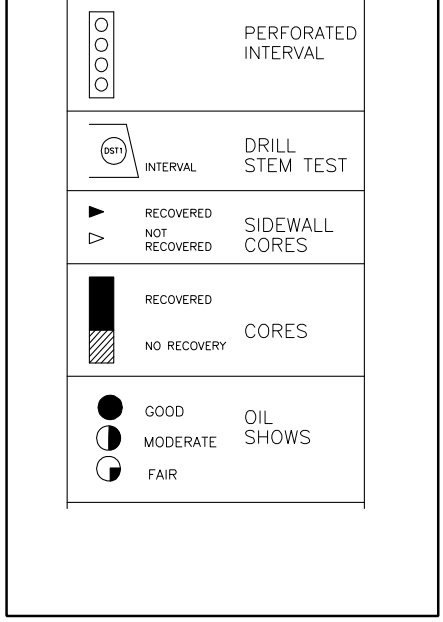


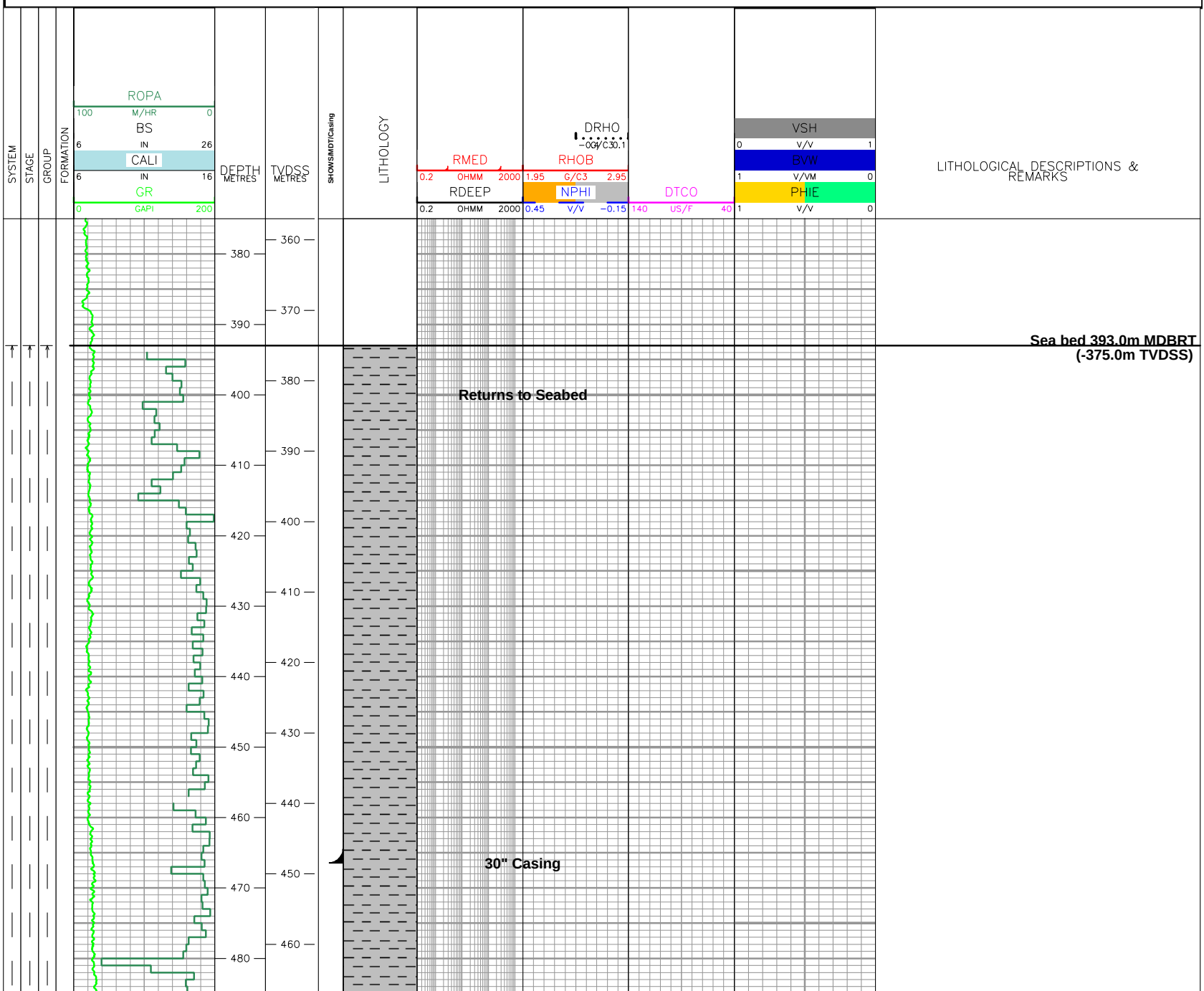
GENERAL SYMBOLS

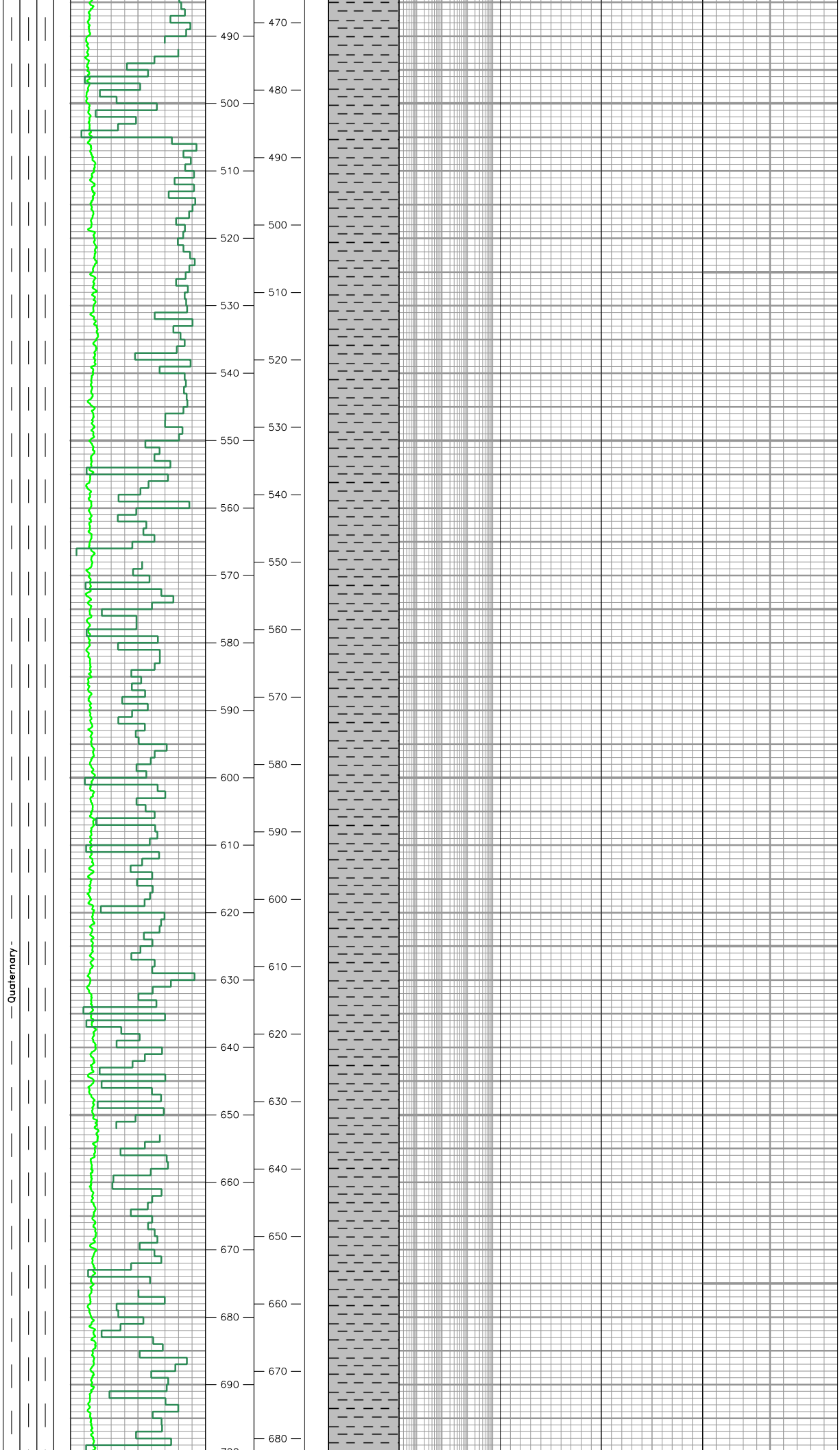



Shale
Hot shale
Chalk
Salt general
Chalk Clayey (low por)
Limestone
Marl
Dolomite
rock
Gypsum/Anhydrite unspecified
Limestone, dolomitic
Dolomite, calcareous
Metamorphic rock, general
Tuff
Volcanic rock, general
Silicic plutonic rock


Carbonaceous
Illite cement
Mica
Calcareous
Claystone clasts
Smectite cement
Nodules
Pyrite concretion
Concretions in general
Chlorite cement
Gold
Calcite laminar
Calcite concretion
Chamosite
Phosphorite
Pseudo-breccia fracs
Dolomite concretion
Discontinuous laminae
Plants
silty
Siderite concretion
Foraminifera
Pyrite
SANDy
Calcite filled fracture
Fracture
Rubble
CHERT
Calcite cement
Glauconite
Shell debris
Ash Traces


PERFORATED INTERVAL
DST1
INTERVAL
DRILL STEM TEST
RECOVERED
NOT RECOVERED
SIDEWALL CORES
RECOVERED
NO RECOVERY
CORES
GOOD
MODERATE
FAIR
OIL SHOWS


SYSTEM
STAGE
GROUP
FORMATION
ROPA
100 M/HR 0
BS
6 IN 26
CALI
6 IN 16
GR
0 GAPI 200
DEPTH METRES
TVDSS METRES
SHOWS/MDT/Casing
LITHOLOGY
RMED
0.2 OHMM 2000
RDEEP
0.2 OHMM 2000
DRHO
-0G/C30.1
RHOB
1.95 G/C3 2.95
NPHI
0.45 V/V -0.15
DTCO
140 US/F 40
VSH
0 V/V 1
BVW
1 V/VM 0
PHIE
1 V/V 0
LITHOLOGICAL DESCRIPTIONS & REMARKS
Sea bed 393.0m MDBRT
(-375.0m TVDSS)
Returns to Seabed
30" Casing


Quaternary
490
500
510
520
530
540
550
560
570
580
590
600
610
620
630
640
650
660
670
680
690
470
480
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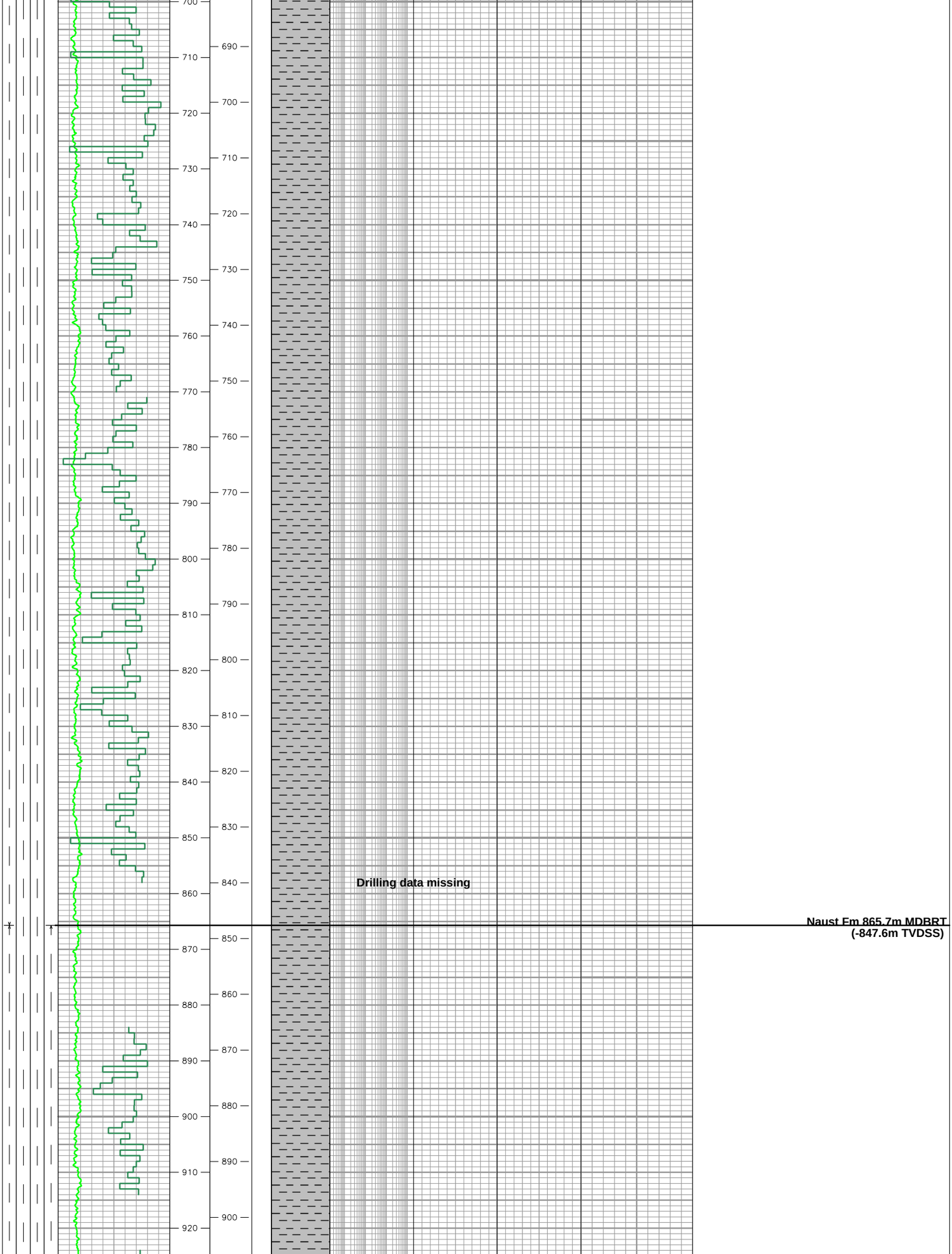
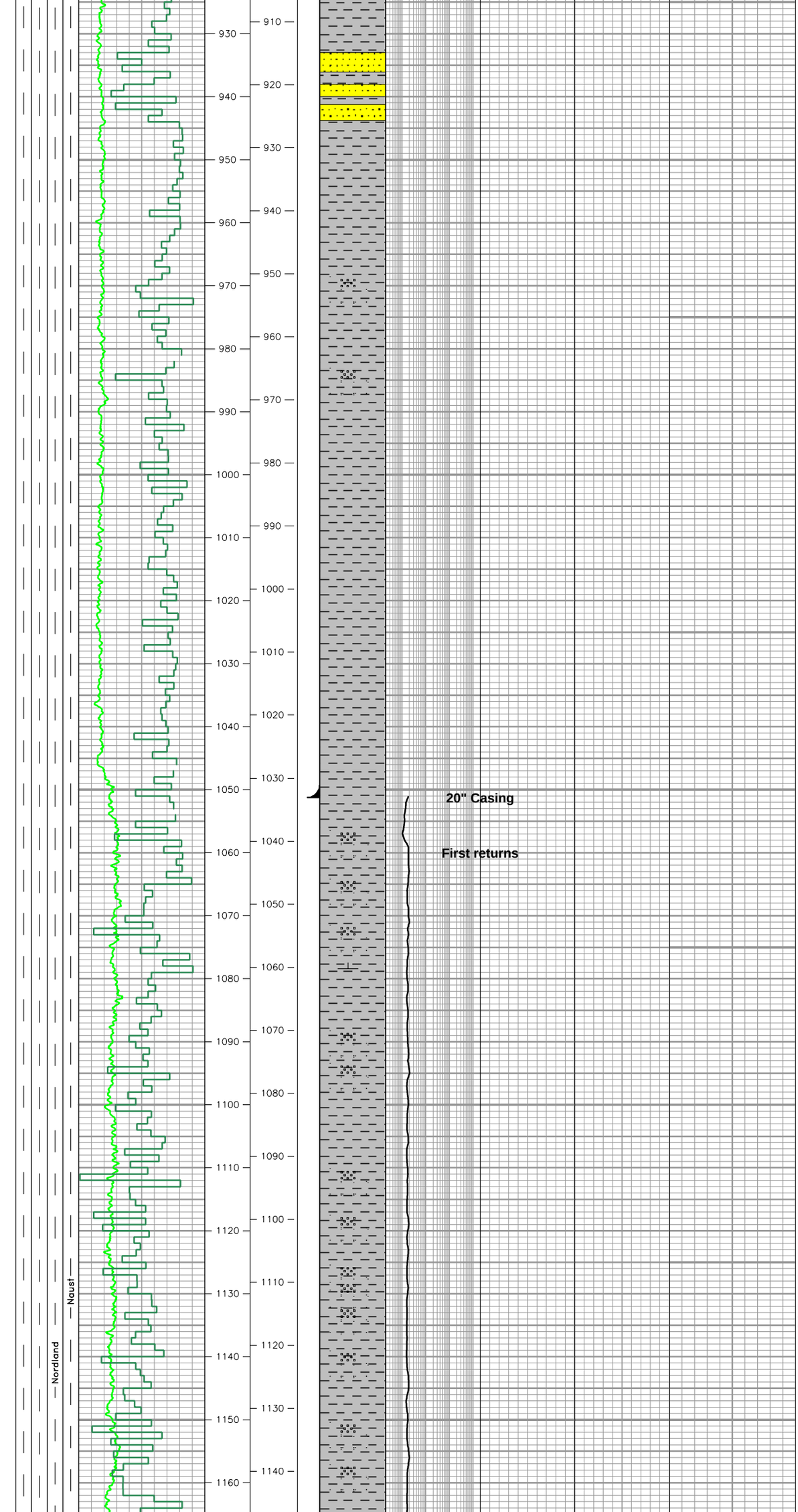
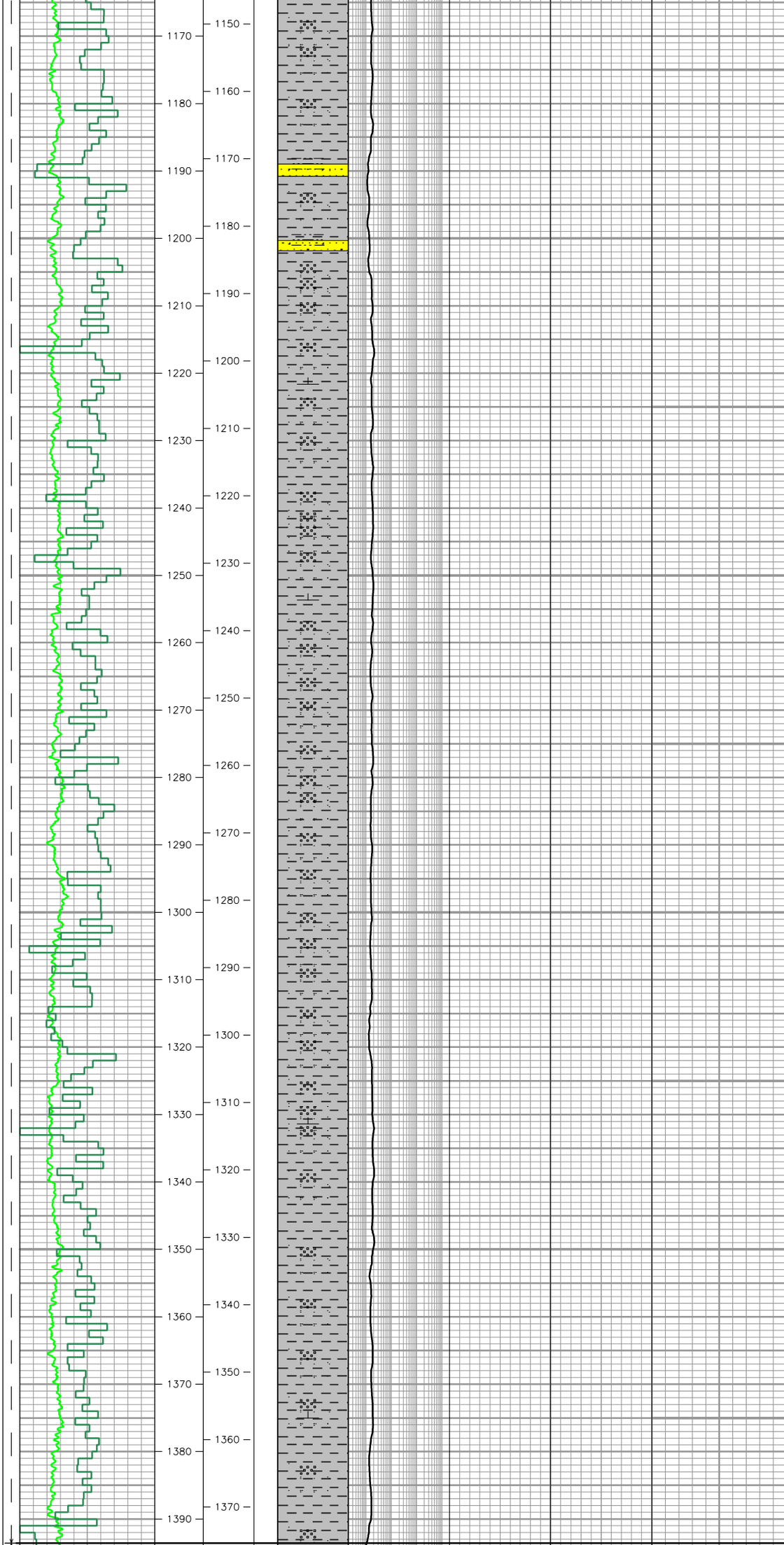
590
600
610
620
630
640
650
660
670
680


Drilling data missing
Naust Fm 865.7m MDBRT
(-847.6m TVDSS)



MUDSTONE: light olive grey, soft, sticky, moderately silty, moderately calcareous, commonly sandy: quartz, transparent to translucent, fine to very coarse, subangular, abundant lithic fragments, frequent pyroxene, mica, occasional bioclasts.

MUDSTONE: light olive grey, soft, sticky, sandy, quartz, translucent to transparent, fine to coarse, locally very coarse, subangular, abundant lithic fragments, occasional bivalve fragments.



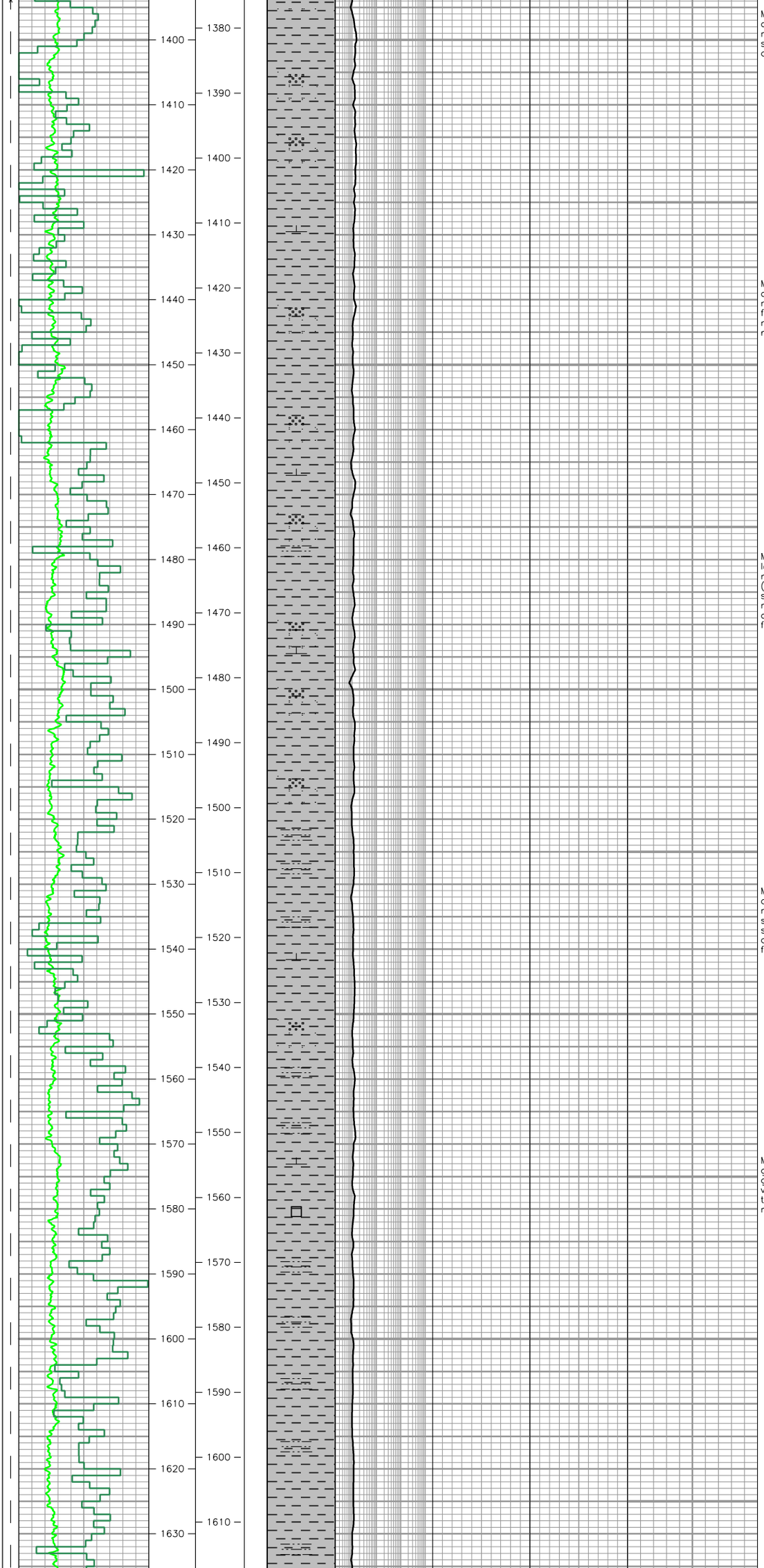
MUDSTONE: light olive grey, soft, sticky in part, generally amorphous, weakly calcareous, very sandy, quartz, very fine (U) to medium (L), subround to angular, moderately sorted, frequent metamorphic lithic fragments, local concentrations of bivalves.

MUDSTONE: light to medium olive grey, soft, becoming firm, sandy, fine (L) to medium (L), subrounde to angular, subelongate, moderately well sorted, weakly to moderately calcareous, frequent metamorphic lithic fragments.

MUDSTONE: light olive grey, firm, locally very sandy, fine (L–U), subangular to angular, subspherical to subelongate, well sorted, weakly calcareous, common metamorphic lithic fragments.

MUDSTONE: light olive grey, firm, very sandy, fine (L–U), subround to angular, subelongate, well sorted, weakly to moderately calcareous, frequent metamorphic lithic fragments.

Kai Fm 1393.6m MDBRT



(-1375.4m TVDSS)

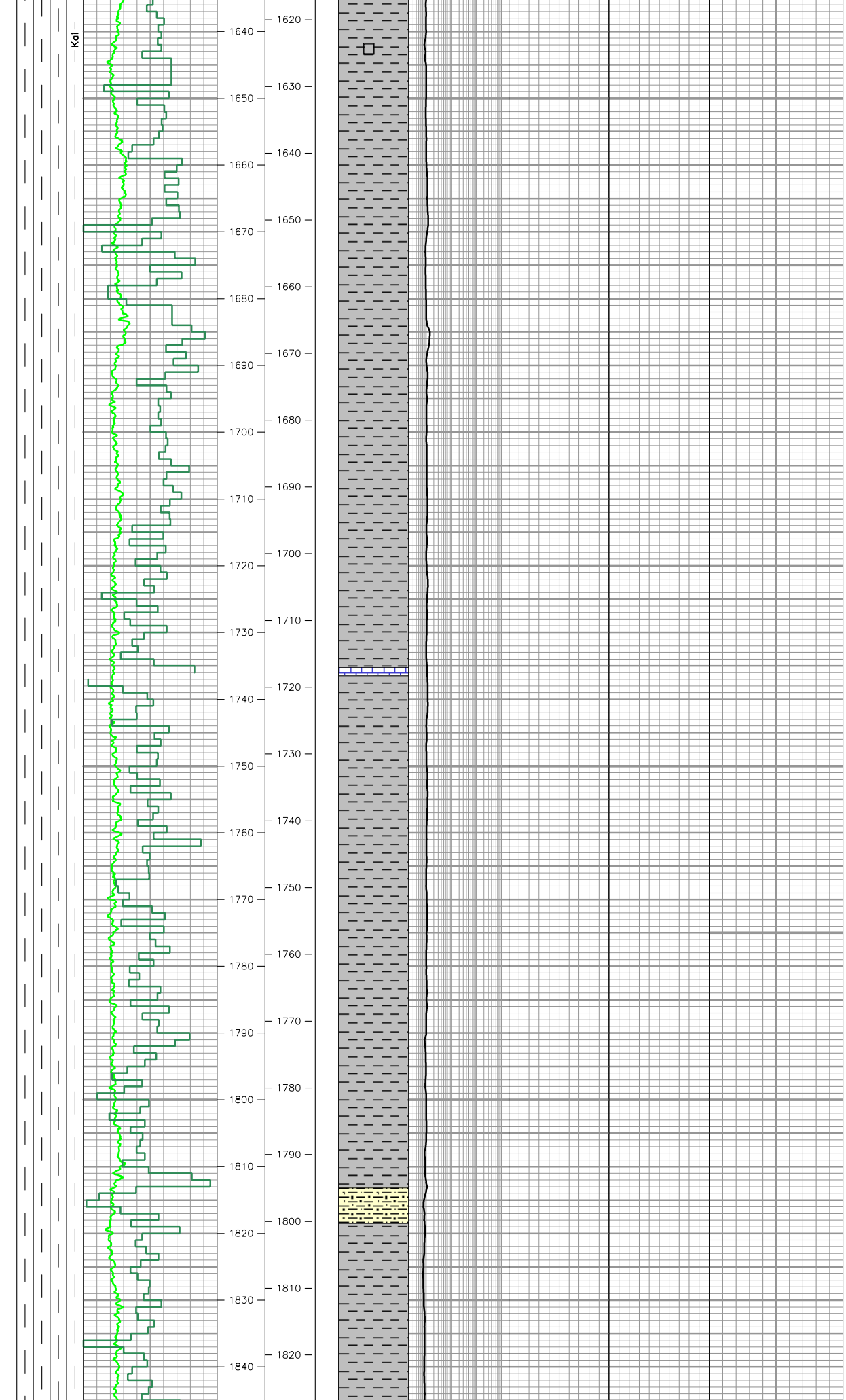
MUDSTONE: light grey to light cream grey, soft to firm, moderately sandy, fine, angular, sub elongate, well sorted, very calcareous.

MUDSTONE: light grey to light cream grey, soft to firm, moderately sandy, very fine (U) to fine (U), subangular, well sorted, moderately to strongly calcareous, rare lithic fragments.

MUDSTONE: light olive grey, locally light cream grey, firm, moderately to slightly sandy, fine (L), subangular, subspherical to subelongate, well sorted, moderately to weakly calcareous, occasional metamorphic lithic fragments.

MUDSTONE: light olive grey, firm, amorphous to blocky, slightly to moderately sandy, fine (L), subangular to angular, subspherical, well sorted, weakly calcareous, rare lithic fragments.

MUDSTONE: light to medium olive grey, occasionally medium green grey, firm, sub-blocky to blocky, very silty to finely sandy, weakly to moderately calcareous, rare micropyritic aggregates.



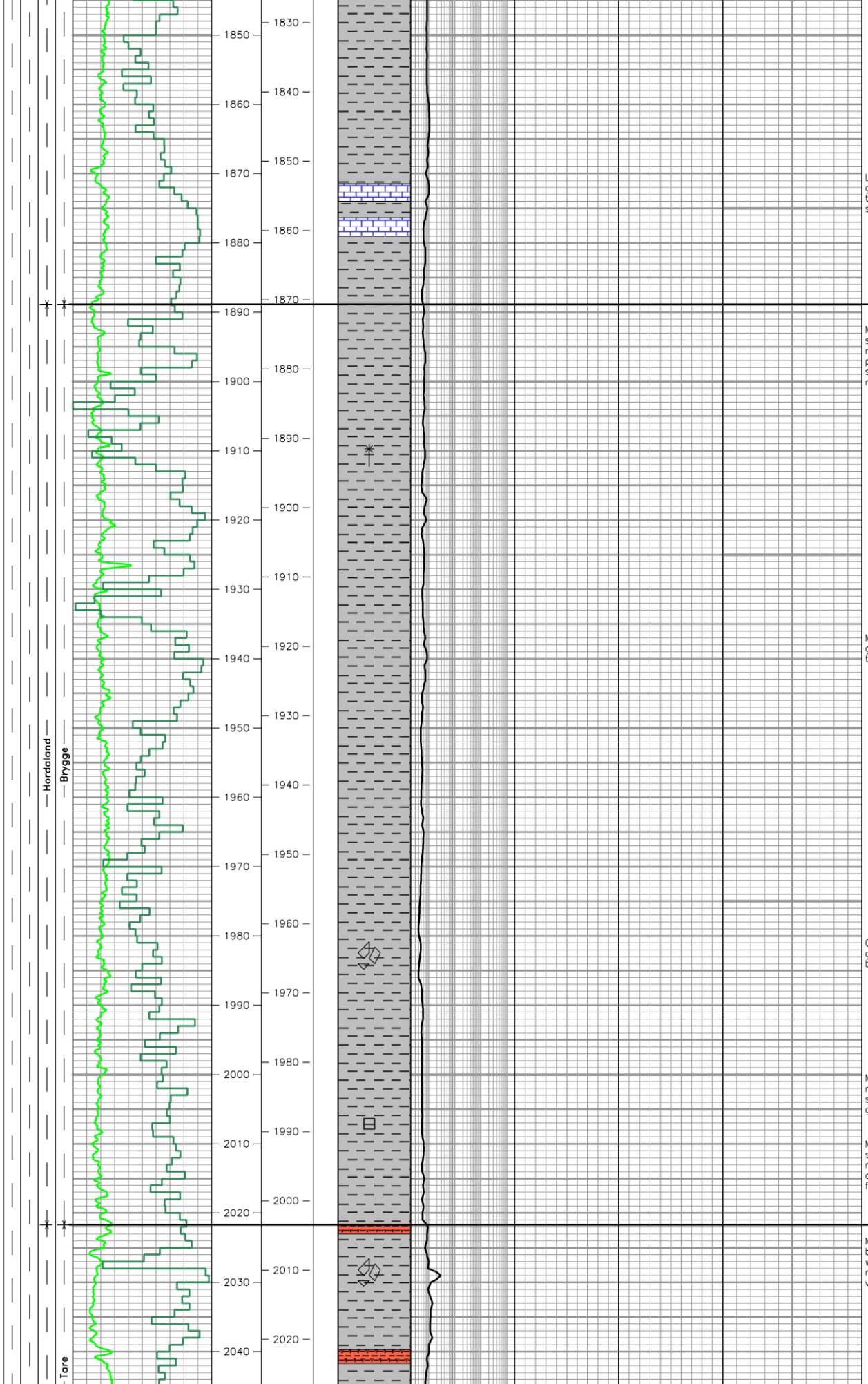
MUDSTONE: medium grey to medium dark grey, firm, sub-blocky to blocky, silty to finely sandy, moderately calcareous, micro micaceous, rare micro pyrite aggregates.

MUDSTONE: medium brownish grey, firm, sub-blocky to blocky, slightly to moderately silty, non-calcareous, micro micaceous.

MUDSTONE: brownish grey, firm, blocky, silty to slightly sandy, moderately to very calcareous, micro micaceous, glauconite specks.

SILTSTONE: dusky green, firm, blocky, sand sized, glauconite specks, glauconite cement, non-calcareous.

MUDSTONE: medium brownish grey, medium light to medium grey, firm, blocky, silty, weakly calcareous, glauconite specks.



LIMESTONE Off white to yellowish grey, firm, blocky, mudstone texture, dolomitic, argillaceous streaks.

Brygge Fm 1888.9m MDBRT (-1870.7m TVDSS)

MUDSTONE: yellowish grey, firm, sub-blocky, slightly silty, non-calcareous, traces of greyish purple, firm, occasional hard sub-blocky argillaceous, non-calcareous mudstone.

MUDSTONE: light to medium grey green, moderately hard, sub-blocky to hackly, waxy in part.

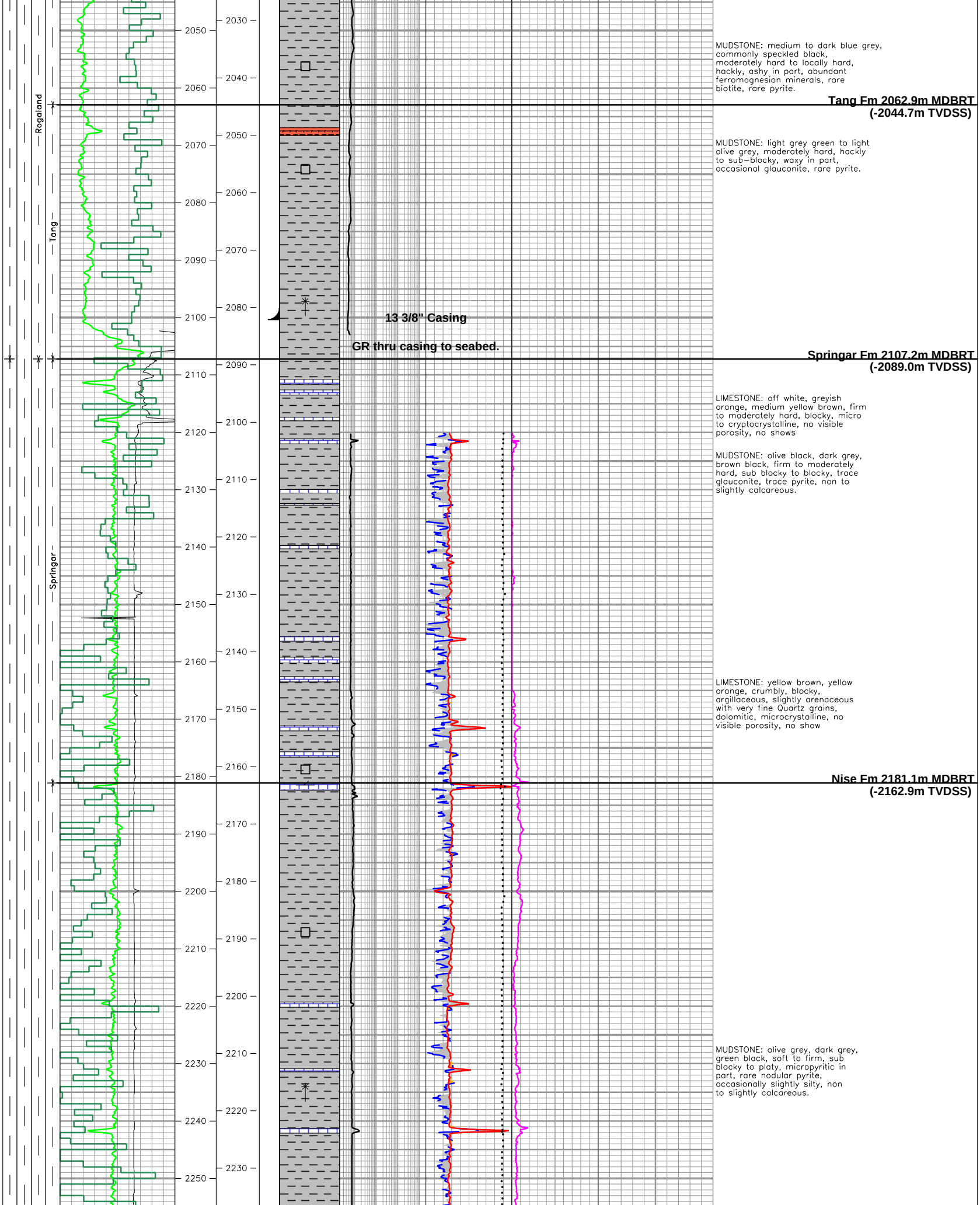
CHERT: strong traces, very dark grey to black, very hard, angular, brittle.

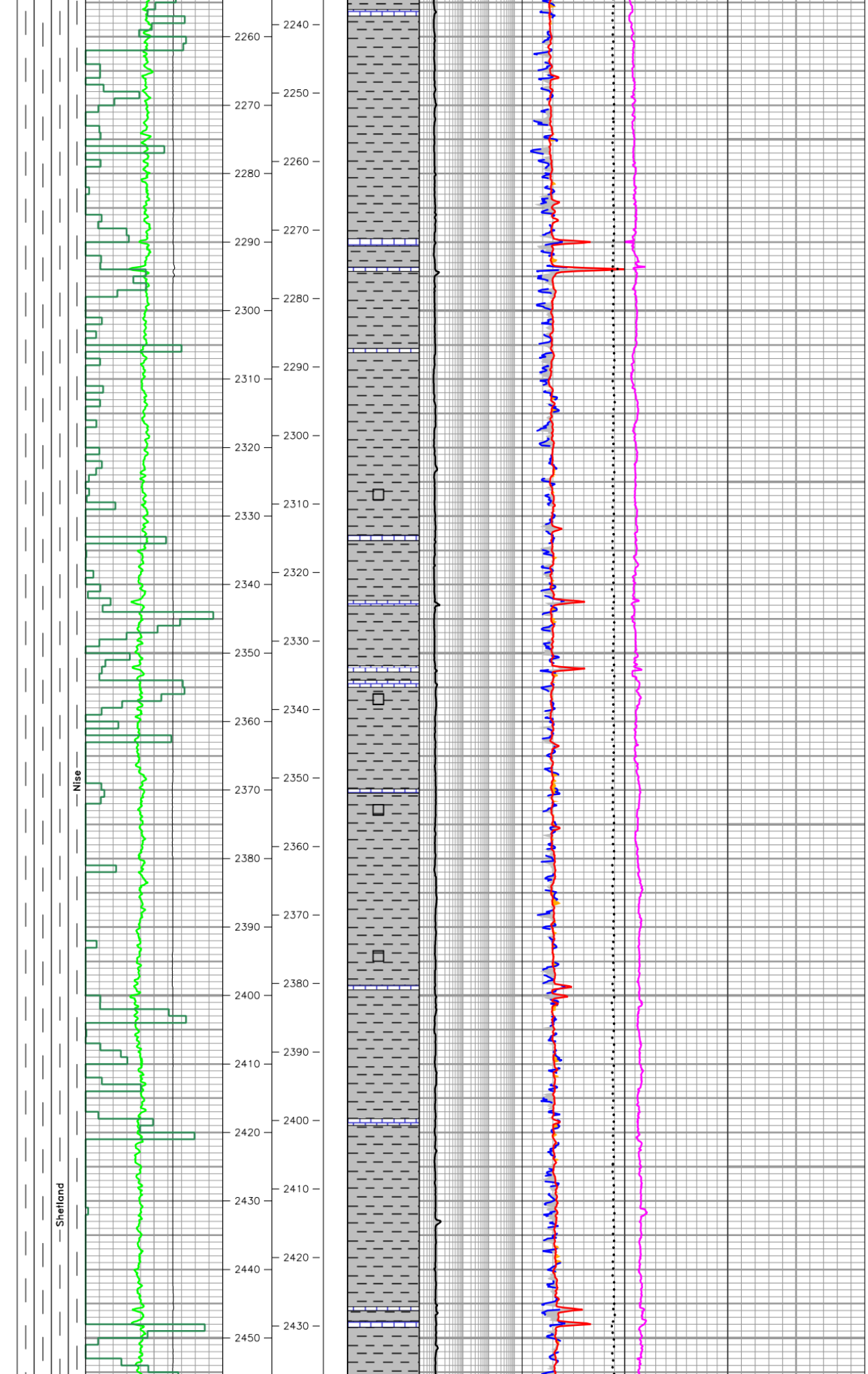
MUDSTONE: dark brown grey, moderately hard, sub-blocky to subfissile, rare micropyrite, generally homogeneous.

MUDSTONE: traces, light grey, specled white & brick red, moderately hard, friable in part, ashy, occasional fine grained ferromagnesium minerals.

Tare Fm 2021.7m MDBRT (-2003.5m TVDSS)

MUDSTONE: light green grey to light blue grey, moderately hard, hackly, waxy in part, occasional tuffaceous material, local CHERT, dark grey, very hard, angular.

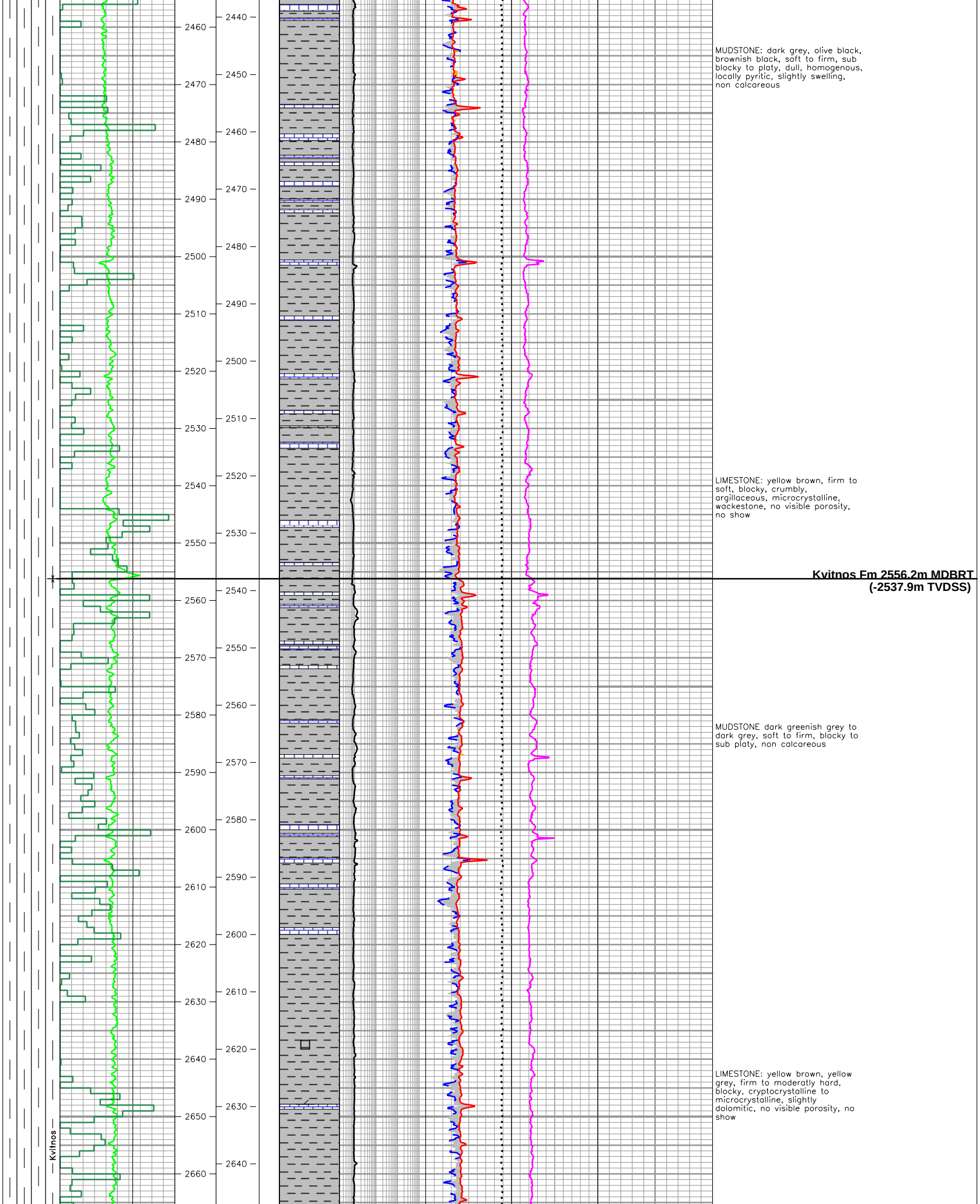

Rogaland
Tang
Springar
2050
2060
2030
2040
2070
2080
2090
2100
2110
2120
2130
2140
2150
2160
2170
2180
2190
2200
2210
2220
2230
2240
2250
13 3/8" Casing
GR thru casing to seabed.
MUDSTONE: medium to dark blue grey, commonly speckled black, moderately hard to locally hard, hackly, ashy in part, abundant ferromagnesian minerals, rare biotite, rare pyrite.
Tang Fm 2062.9m MDBRT
(-2044.7m TVDSS)
MUDSTONE: light grey green to light olive grey, moderately hard, hackly to sub-blocky, waxy in part, occasional glauconite, rare pyrite.
Springar Fm 2107.2m MDBRT
(-2089.0m TVDSS)
LIMESTONE: off white, greyish orange, medium yellow brown, firm to moderately hard, blocky, micro to cryptocrystalline, no visible porosity, no shows
MUDSTONE: olive black, dark grey, brown black, firm to moderately hard, sub blocky to blocky, trace glauconite, trace pyrite, non to slightly calcareous.
LIMESTONE: yellow brown, yellow orange, crumbly, blocky, argillaceous, slightly arenaceous with very fine Quartz grains, dolomitic, microcrystalline, no visible porosity, no show
Nise Fm 2181.1m MDBRT
(-2162.9m TVDSS)
MUDSTONE: olive grey, dark grey, green black, soft to firm, sub blocky to platy, micropyritic in part, rare nodular pyrite, occasionally slightly silty, non to slightly calcareous.

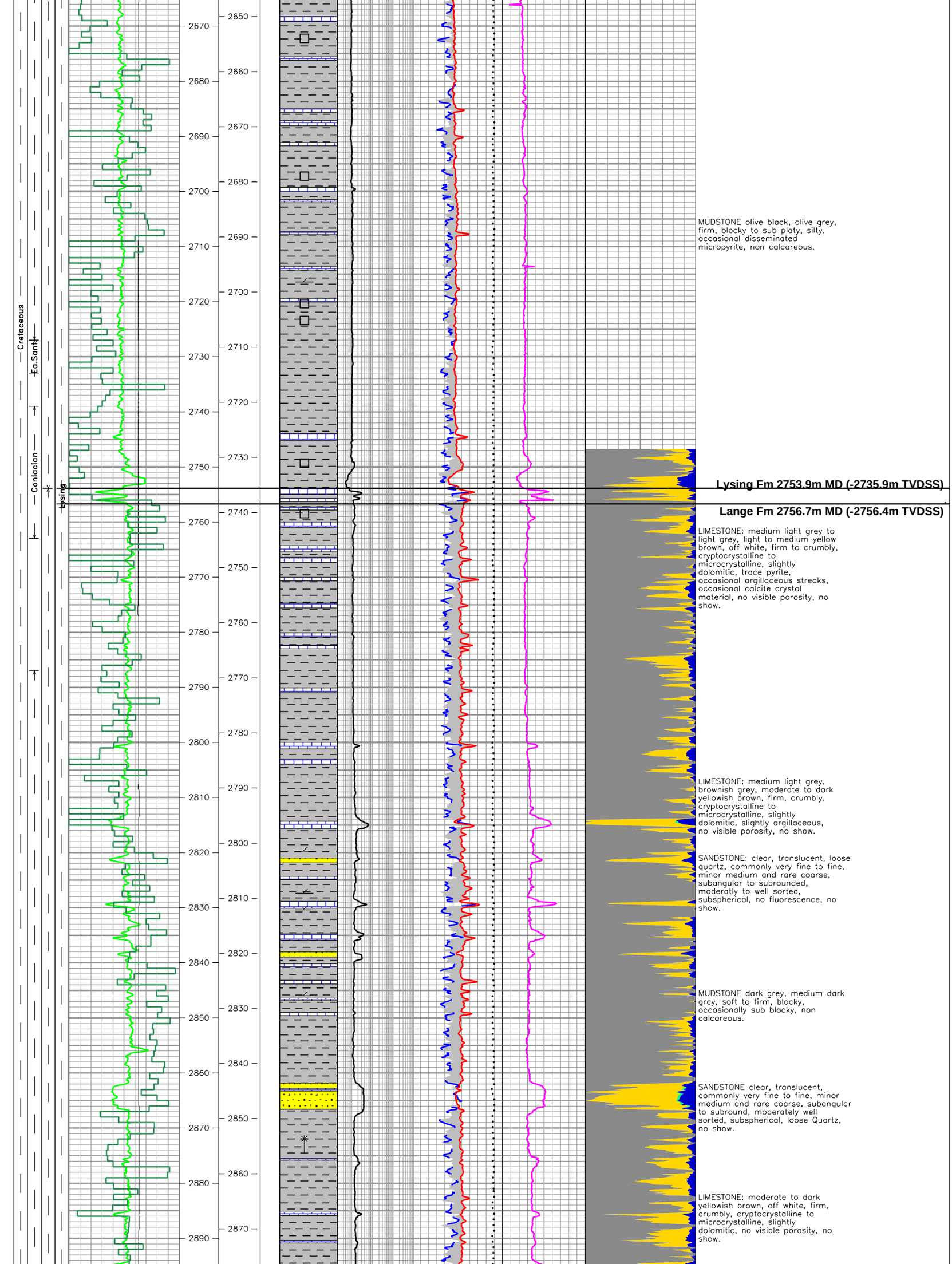


MUDSTONE: dark grey, olive grey, soft to firm, sub blocky to platy, micropyritic in part, occasionally slightly silty, slightly swelling, non to slightly calcareous

LIMESTONE: yellow brown, yellow grey, grey speckled, firm to soft, blocky, crumbly, argillaceous, slightly arenaceous, microcrystalline, wackestone to packstone, no visible porosity, no show.

MUDSTONE: dark grey, olive black, soft to firm, sub blocky to platy, micropyritic in part, dull, homogenous, occasionally slightly silty, slightly swelling, non calcareous


MUDSTONE: dark grey, olive black, brownish black, soft to firm, sub blocky to platy, dull, homogenous, locally pyritic, slightly swelling, non calcareous
LIMESTONE: yellow brown, firm to soft, blocky, crumbly, argillaceous, microcrystalline, wackestone, no visible porosity, no show
Kvitnos Fm 2556.2m MDBRT
(-2537.9m TVDSS)
MUDSTONE dark greenish grey to dark grey, soft to firm, blocky to sub platy, non calcareous
LIMESTONE: yellow brown, yellow grey, firm to moderatly hard, blocky, cryptocrystalline to microcrystalline, slightly dolomitic, no visible porosity, no show
Kvitnos


Cretaceous
Ea.Sant
Coniacian
Lysing
2650
2660
2670
2680
2690
2700
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2720
2730
2740
2750
2760
2770
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2790
2800
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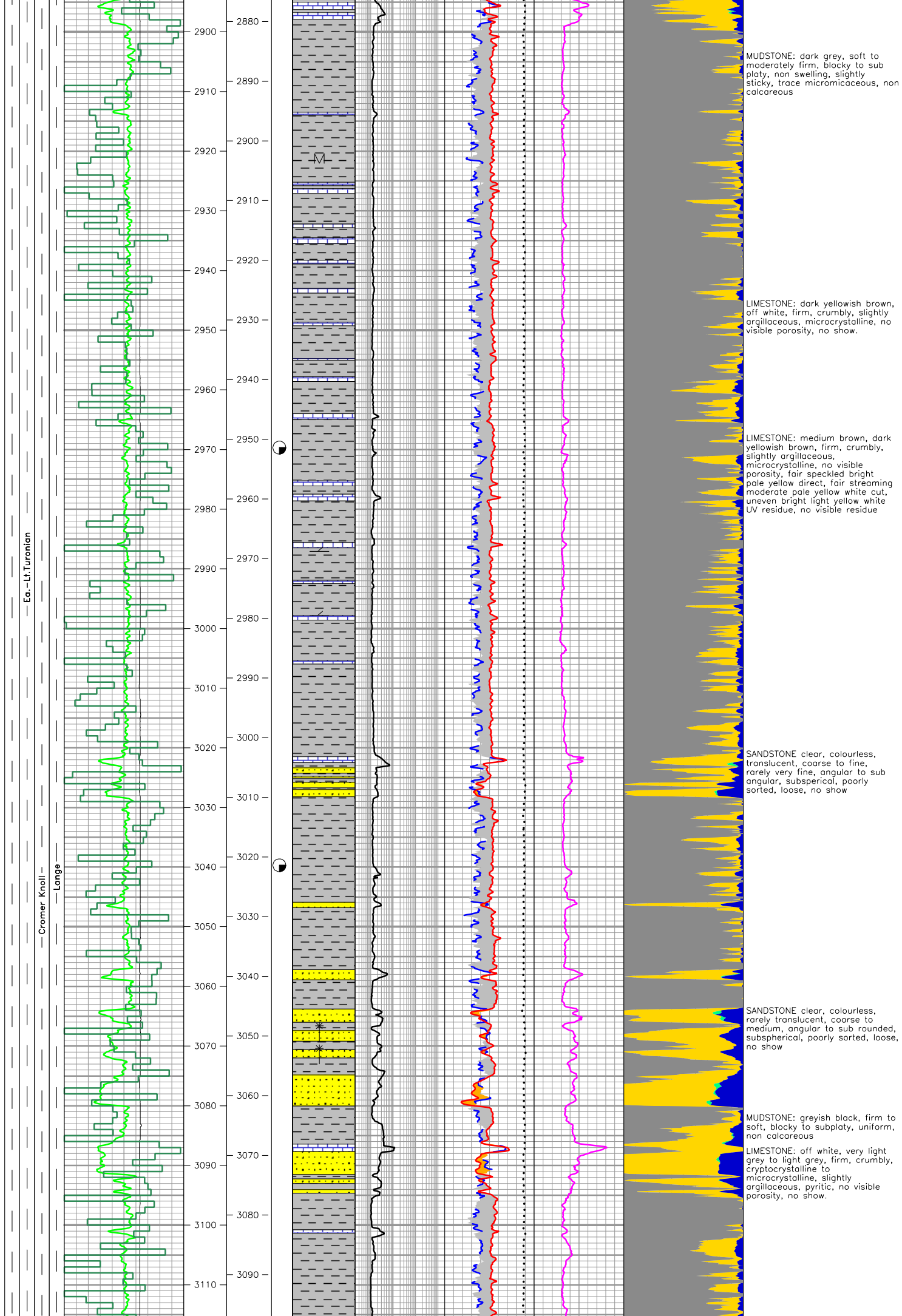
2890
MUDSTONE olive black, olive grey, firm, blocky to sub platy, silty, occasional disseminated micropyrite, non calcareous.
Lysing Fm 2753.9m MD (-2735.9m TVDSS)
Lange Fm 2756.7m MD (-2756.4m TVDSS)
LIMESTONE: medium light grey to light grey, light to medium yellow brown, off white, firm to crumbly, cryptocrystalline to microcrystalline, slightly dolomitic, trace pyrite, occasional argillaceous streaks, occasional calcite crystal material, no visible porosity, no show.
LIMESTONE: medium light grey, brownish grey, moderate to dark yellowish brown, firm, crumbly, cryptocrystalline to microcrystalline, slightly dolomitic, slightly argillaceous, no visible porosity, no show.
SANDSTONE: clear, translucent, loose quartz, commonly very fine to fine, minor medium and rare coarse, subangular to subrounded, moderatly to well sorted, subspherical, no fluorescence, no show.
MUDSTONE dark grey, medium dark grey, soft to firm, blocky, occasionally sub blocky, non calcareous.
SANDSTONE clear, translucent, commonly very fine to fine, minor medium and rare coarse, subangular to subround, moderately well sorted, subspherical, loose Quartz, no show.
LIMESTONE: moderate to dark yellowish brown, off white, firm, crumbly, cryptocrystalline to microcrystalline, slightly dolomitic, no visible porosity, no show.


Ea.–Lt.Turonian
Cromer Knoll
Lange
2900
2910
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2990
3000
3010
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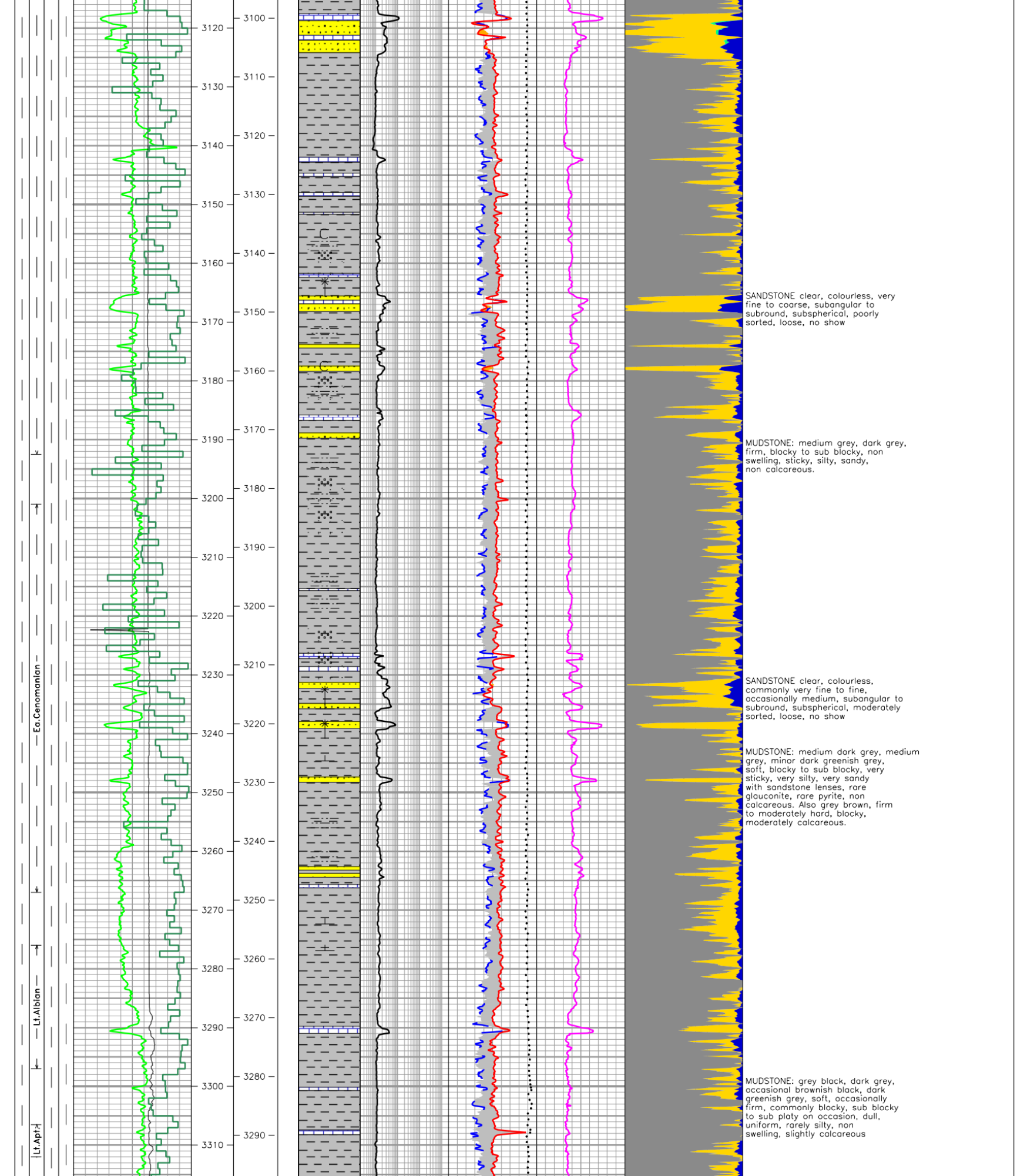
3090
MUDSTONE: dark grey, soft to moderately firm, blocky to sub platy, non swelling, slightly sticky, trace micromicaceous, non calcareous
LIMESTONE: dark yellowish brown, off white, firm, crumbly, slightly argillaceous, microcrystalline, no visible porosity, no show.
LIMESTONE: medium brown, dark yellowish brown, firm, crumbly, slightly argillaceous, microcrystalline, no visible porosity, fair speckled bright pale yellow direct, fair streaming moderate pale yellow white cut, uneven bright light yellow white UV residue, no visible residue
SANDSTONE clear, colourless, translucent, coarse to fine, rarely very fine, angular to sub angular, subsperical, poorly sorted, loose, no show
SANDSTONE clear, colourless, rarely translucent, coarse to medium, angular to sub rounded, subspherical, poorly sorted, loose, no show
MUDSTONE: greyish black, firm to soft, blocky to subplaty, uniform, non calcareous
LIMESTONE: off white, very light grey to light grey, firm, crumbly, cryptocrystalline to microcrystalline, slightly argillaceous, pyritic, no visible porosity, no show.


Ea.Cenomanian
Lt.Albian
Lt.Apt
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3120
3130
3140
3150
3160
3170
3180
3190
3200
3210
3220
3230
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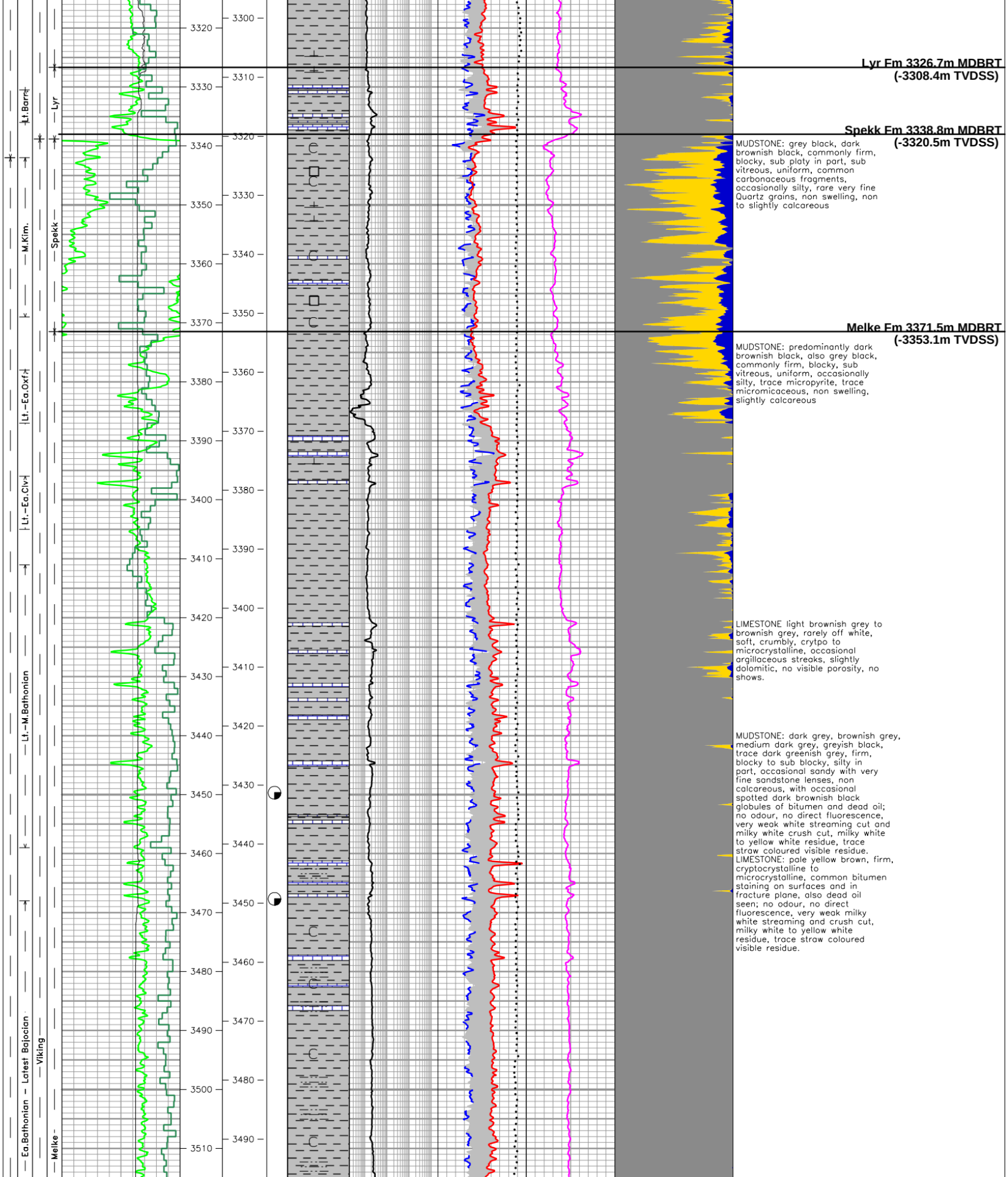
3280
3290
3300
3310
SANDSTONE clear, colourless, very fine to coarse, subangular to subround, subspherical, poorly sorted, loose, no show
MUDSTONE: medium grey, dark grey, firm, blocky to sub blocky, non swelling, sticky, silty, sandy, non calcareous.
SANDSTONE clear, colourless, commonly very fine to fine, occasionally medium, subangular to subround, subspherical, moderately sorted, loose, no show
MUDSTONE: medium dark grey, medium grey, minor dark greenish grey, soft, blocky to sub blocky, very sticky, very silty, very sandy with sandstone lenses, rare glauconite, rare pyrite, non calcareous. Also grey brown, firm to moderately hard, blocky, moderately calcareous.
MUDSTONE: grey black, dark grey, occasional brownish black, dark greenish grey, soft, occasionally firm, commonly blocky, sub blocky to sub platy on occasion, dull, uniform, rarely silty, non swelling, slightly calcareous


Lyr Fm 3326.7m MDBRT
(-3308.4m TVDSS)
Spekk Fm 3338.8m MDBRT
(-3320.5m TVDSS)
Melke Fm 3371.5m MDBRT
(-3353.1m TVDSS)
MUDSTONE: grey black, dark brownish black, commonly firm, blocky, sub platy in part, sub vitreous, uniform, common carbonaceous fragments, occasionally silty, rare very fine Quartz grains, non swelling, non to slightly calcareous
MUDSTONE: predominantly dark brownish black, also grey black, commonly firm, blocky, sub vitreous, uniform, occasionally silty, trace micropyrite, trace micromicaceous, non swelling, slightly calcareous
LIMESTONE light brownish grey to brownish grey, rarely off white, soft, crumbly, crytpo to microcrystalline, occasional argillaceous streaks, slightly dolomitic, no visible porosity, no shows.
MUDSTONE: dark grey, brownish grey, medium dark grey, greyish black, trace dark greenish grey, firm, blocky to sub blocky, silty in part, occasional sandy with very fine sandstone lenses, non calcareous, with occasional spotted dark brownish black globules of bitumen and dead oil; no odour, no direct fluorescence, very weak white streaming cut and milky white crush cut, milky white to yellow white residue, trace straw coloured visible residue.
LIMESTONE: pale yellow brown, firm, cryptocrystalline to microcrystalline, common bitumen staining on surfaces and in fracture plane, also dead oil seen; no odour, no direct fluorescence, very weak milky white streaming and crush cut, milky white to yellow white residue, trace straw coloured visible residue.
Lt.Barr
Lyr
M.Kim.
Spekk
Lt.-Ea.Oxf
Lt.-Ea.Clv
Lt.-M.Bathonian
Ea.Bathonian - Latest Bajocian
Viking
Melke
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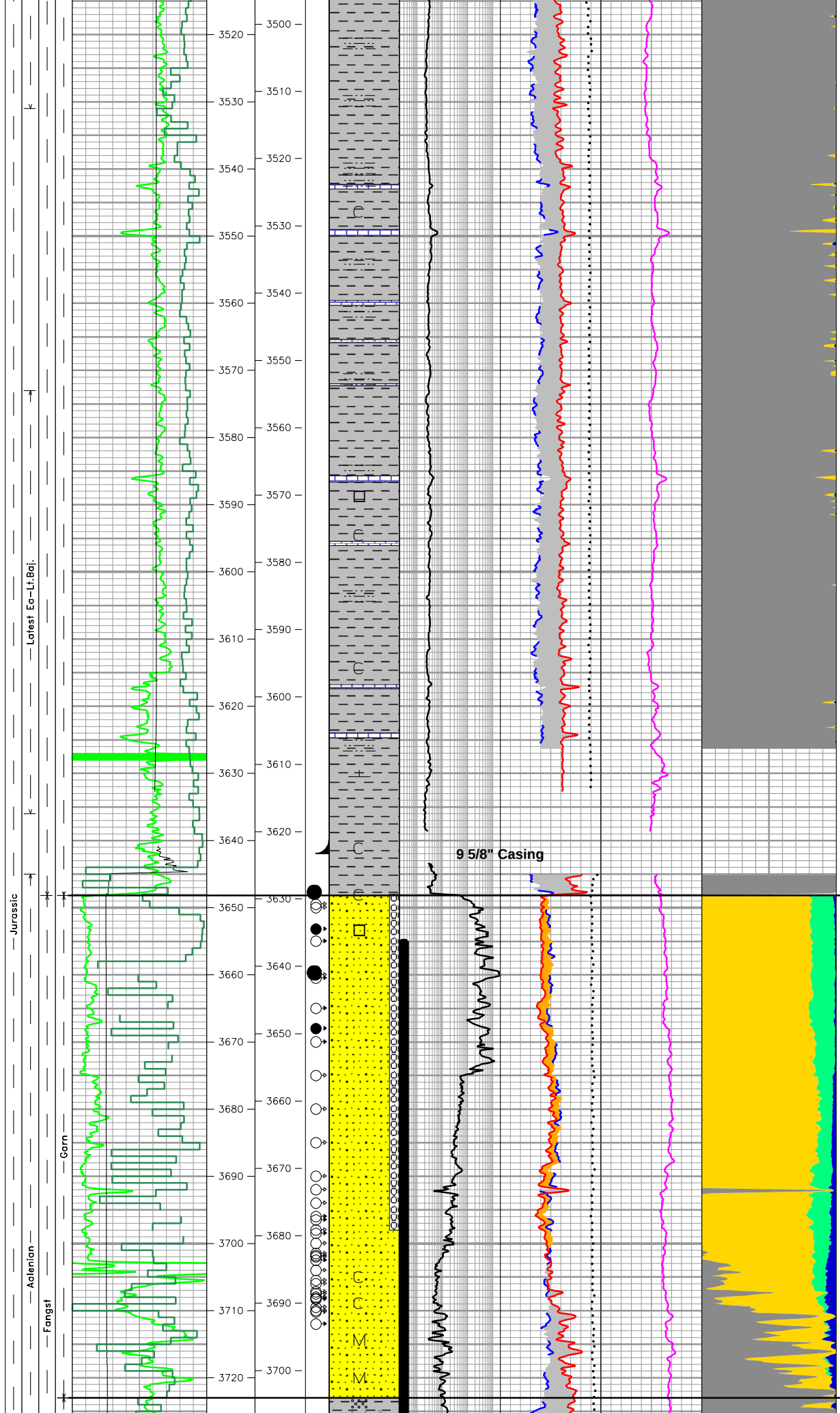


MUDSTONE: moderate to dark brownish black, soft to firm, blocky to sub blocky, dull, very silty, common fine grained subrounded qtz grains, micropyritic in part, hygroturgid, slightly to non calcareous.

MUDSTONE: grey black, brownish black, trace dark green grey, soft to firm, blocky to subplaty, dull, homogenous, silty, sticky, earthy in part, non calcareous.

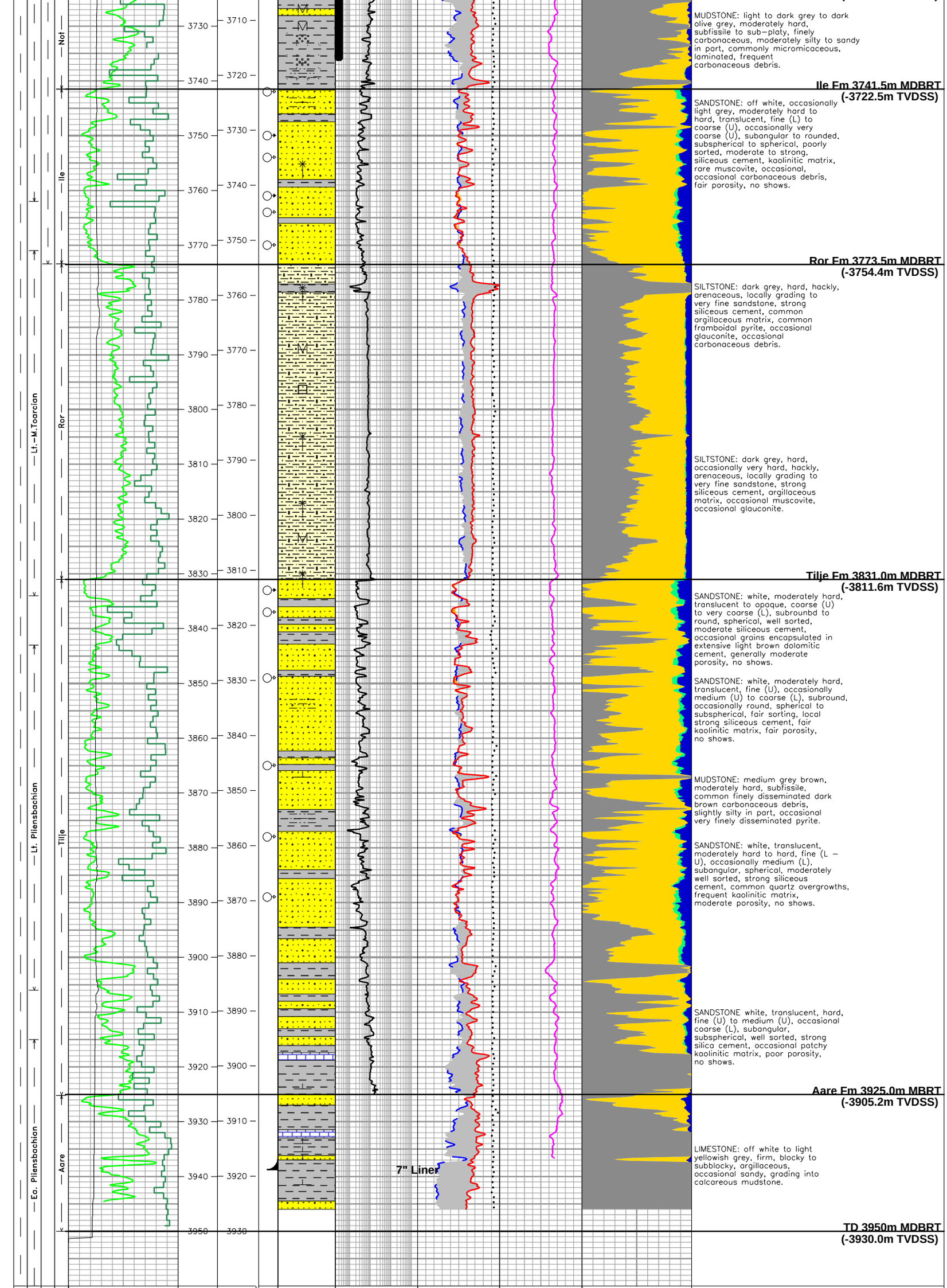
LIMESTONE: pale yellow brown, very light grey to light grey, soft, blocky, crumbly, microcrystalline to cryptocrystalline, no visible porosity, no shows.

MUDSTONE: very dark grey, moderately hard, subfissile to hackly, moderately carbonaceous, frequent very finely disseminated carbonaceous debris.

SANDSTONE: light grey, light brown oil stain, moderately hard to hard, hackly to angular break, fine (U) to medium (L), subangular, subspherical, moderately well sorted, abundant quartz overgrowths, rare lithic clasts, strong siliceous cement, very occasional coalified plant fragments, fair porosity.
SHOWS: strong petroliferous odour, uniform light brown oil stain, uniform bright yellow direct fluorescence, intermediate streaming white cut fluorescence, bright white residual fluorescence, very faint medium brown visible residue

SANDSTONE: light grey , light brown oil stain, moderately hard to hard, hackly, medium (U) to coarse (U), subround, subspherical to occasionally subelongate, common quartz overgrowths, moderate to poor sorting, strong siliceous cement, patchy kaolinitic matrix, fair porosity.
SHOWS: moderate petroliferous odour, uniform light brown oil stain, uniform dull yellow direct fluorescence, intermediate streaming dull white cut fluorescence, faint dull white residual fluorescence, very faint dull brown visible residue.

SANDSTONE: light grey to medium dark grey, hard, angular break, fine (U), occasionally medium (U), subangular to subrounded, subspherical, well sorted, common quartz overgrowths, strong siliceous cement, very common mica concentrated in thin lamina, no shows.


Not
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Ror
Tilje
Aare
Lt.–M.Toarcian
Lt. Pliensbachian
Ea. Pliensbachian
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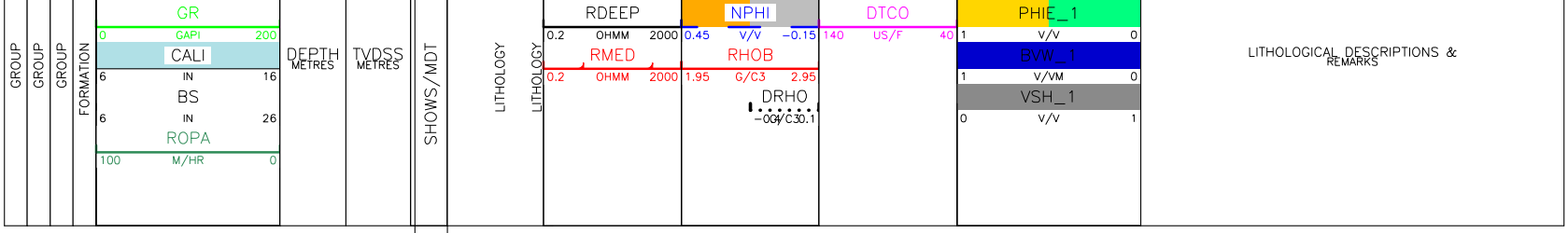
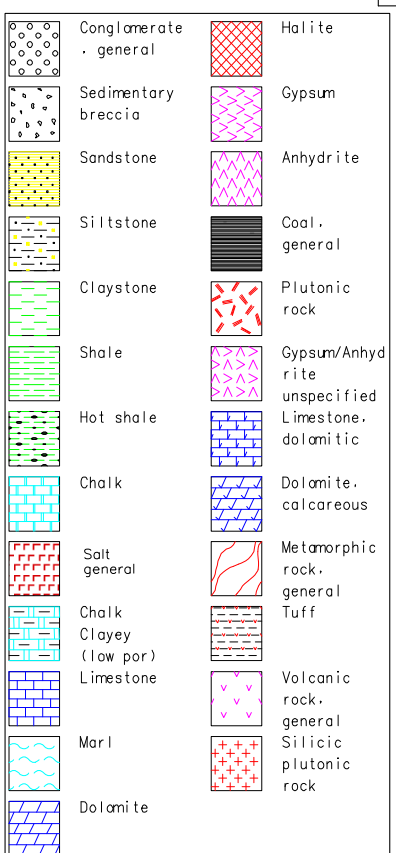
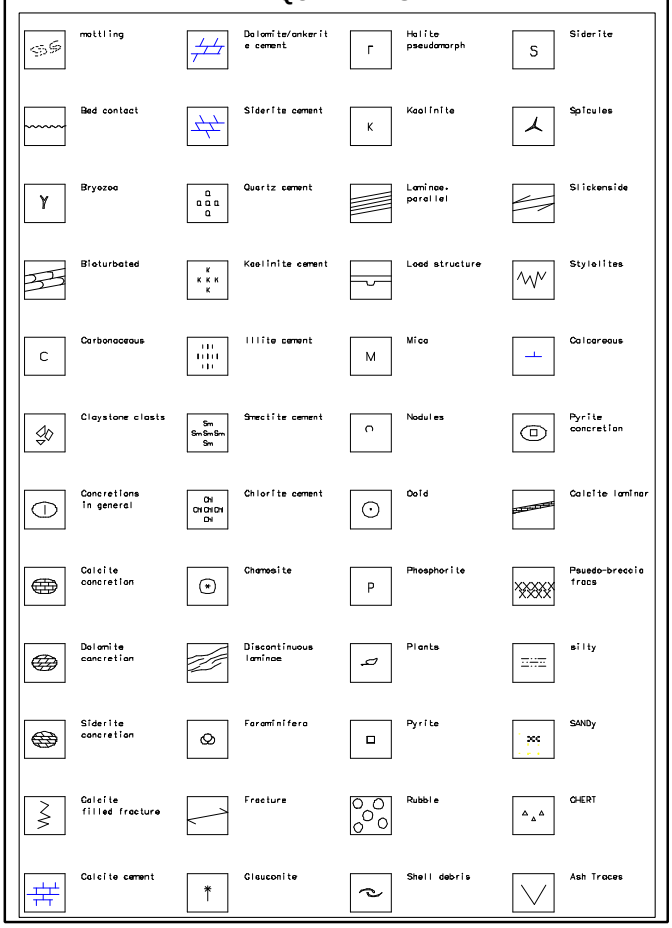
7" Liner
MUDSTONE: light to dark grey to dark olive grey, moderately hard, subfissile to sub–platy, finely carbonaceous, moderately silty to sandy in part, commonly micromicaceous, laminated, frequent carbonaceous debris.
Ile Fm 3741.5m MDBRT
(-3722.5m TVDSS)
SANDSTONE: off white, occasionally light grey, moderately hard to hard, translucent, fine (L) to coarse (U), occasionally very coarse (U), subangular to rounded, subspherical to spherical, poorly sorted, moderate to strong, siliceous cement, kaolinitic matrix, rare muscovite, occasional, occasional carbonaceous debris, fair porosity, no shows.
Ror Fm 3773.5m MDBRT
(-3754.4m TVDSS)
SILTSTONE: dark grey, hard, hackly, arenaceous, locally grading to very fine sandstone, strong siliceous cement, common argillaceous matrix, common framboidal pyrite, occasional glauconite, occasional carbonaceous debris.
SILTSTONE: dark grey, hard, occasionally very hard, hackly, arenaceous, locally grading to very fine sandstone, strong siliceous cement, argillaceous matrix, occasional muscovite, occasional glauconite.
Tilje Fm 3831.0m MDBRT
(-3811.6m TVDSS)
SANDSTONE: white, moderately hard, translucent to opaque, coarse (U) to very coarse (L), subrounbd to round, spherical, well sorted, moderate siliceous cement, occasional grains encapsulated in extensive light brown dolomitic cement, generally moderate porosity, no shows.
SANDSTONE: white, moderately hard, translucent, fine (U), occasionally medium (U) to coarse (L), subround, occasionally round, spherical to subspherical, fair sorting, local strong siliceous cement, fair kaolinitic matrix, fair porosity, no shows.
MUDSTONE: medium grey brown, moderately hard, subfissile, common finely disseminated dark brown carbonaceous debris, slightly silty in part, occasional very finely disseminated pyrite.
SANDSTONE: white, translucent, moderately hard to hard, fine (L – U), occasionally medium (L), subangular, spherical, moderately well sorted, strong siliceous cement, common quartz overgrowths, frequent kaolinitic matrix, moderate porosity, no shows.
SANDSTONE white, translucent, hard, fine (U) to medium (U), occasional coarse (L), subangular, subspherical, well sorted, strong silica cement, occasional patchy kaolinitic matrix, poor porosity, no shows.
Aare Fm 3925.0m MDBRT
(-3905.2m TVDSS)
LIMESTONE: off white to light yellowish grey, firm, blocky to subblocky, argillaceous, occasional sandy, grading into calcareous mudstone.
TD 3950m MDBRT
(-3930.0m TVDSS)



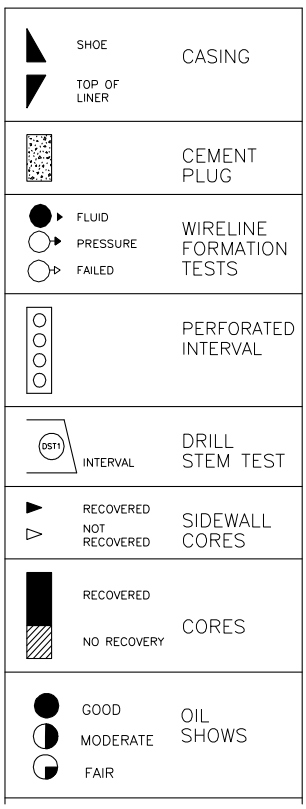
LITHOLOGY SYMBOLS



QUALIFIERS



GENERAL SYMBOLS



WIRELINE FM. TEST

Run	Test	Depth m MDBRT	Depth m TVDSS	Mud Hydrostatic (psia)		Formation Pressure (psia)	Comment
				Before	After		
2A	1	3712.0	3693.1.1	6370.0	6367.7	-	Pressure drop
"	2	3712.0	3693.1.1	6370.0	6367.7	-	Tight
"	3	3742.0	3723.0	6419.1	6418.9	-	Dry test
"	4	3750.0	3731.0	6434.9	6435.1	5745.4	Good Test
"	5	3754.0	3735.0	6441.8	6441.5	5835.3	Tight
"	6	3761.0	3741.9	6454.2	6454.0	5732.7	Good Test
"	7	3764.0	3744.9	6458.6	6460.3	-	Supercharged
"	8	3770.0	3750.9	6469.8	6471.2	-	Tight
"	9	3833.0	3813.6	6577.2	6577.6	5792.7	Tight
	10	3837.0	387.6	-	6586.6	5815.0	
"	11	3849.0	3829.6	6604.8	6404.8	-	Supercharged
"	12	3865.0	3845.5	6634.1	6629.7	5863.4	Tight?
"	13	3878.0	3858.4	6656.2	6654.6	5856.7	Tight?
"	14	3889.0	3869.4	6672.6	6675.0	5947.2	Tight?
"	15	3649.5	3630.8	6263.9	6262.9	5419.9	Tight-no stabilisation
"	16	3650.0	3631.3	6263.9	6262.9	5420.1	Tight-no stabilisation
2B	1	3653.2	3634.5	-	6328.2	5423.7	Sample
2A	17	3655.0	3636.3	6273.4	6271.7	5424.6	Good(no stabilisation)
"	18	3660.0	3641.3	6279.9	6280.6	-	Lost seal
"	19	3660.5	3641.8	6283.1	6282.9	5429.7	Good Test
"	20	3665.0	3646.2	6290.8	6290.9	5433.8	Good Test
2B	2	3668.0	3649.2	-	6320.0	5436.4	Sample
2A	21	3670	3651.2	6297.5	6298.1	5438.3	Good Test
"	22	3675.0	3656.2	6306.5	6307.2	5442.8	Tight-no stabilisation
"	23	3680.0	3661.2	6314.8	6315.5	5448.1	Tight-no stabilisation

Run	Test	Depth m MDBRT	Depth m TVDSS	Mud Hydrostatic (psia)		Formation Pressure (psia)	Comment
				Before	After		
"	24	3685.0	3666.2	6323.9	6324.8	5452.7	Tight-no stabilisation
"	25	3690.0	3671.1	6333.6	6332.3	5456.3	Tight-no stabilisation
"	26	3692.0	3673.1	6335.6	6335.8	5458.5	Tight
"	27	3694.0	3675.1	6338.7	6340.1	-	Tight-no stabilisation
"	28	3696	3677.1	6343.0	6342.8	5461.9	Good Test
"	29	3696.5	3677.7	-	6339.9	5462.5	Good Test
"	30	3698.0	3697.1	6345.6	6346.2	-	Tight - no seal
"	31	3698.5	3679.6	6345.5	6343.8	5464.8	Good Test
"	32	3700	3681.1	6348.4	6348.3	5466.2	Tight - no seal
"	33	3701.5	3682.6	6350.5	6350.5	-	Tight - lost seal
2B	3	3701.8	3682.9	-	6348.8	5468.9	Unsuccessful sample
2A	34	3702.0	3683.1	6351.0	6351.6	-	Tight - lost seal
"	35	3702.5	3683.6	6351.8	6351.9	5468.8	Good Test
2B	4	3702.5	3683.6	-	6351.1	5473.2	Tight
2A	36	3704.0	3685.1	6355.9	6356.1	5546.5	Tight
"	37	3705.5	3686.6	6357.8	6358.0	-	Tight
"	38	3706.0	3687.1	6358.3	6357.9	-	Dry test
2B	5	3707.2	3688.3	-	6357.2	5579.6	Tight
2A	39	3707.5	3688.6	6360.2	6360.9	-	Dry test
"	40	3707.5	3688.6	6359.8	6361.2	5597.6	Good Test
"	41	3708.0	3689.1	6361.9	6362.9	-	Tight
2B	6	3708.2	3689.3	-	6359.1	5555.8	Tight
2A	42	3708.3	3689.4	6361.3	6360.3	5571.6	Good Test
"	43	3709.5	3690.6	6364.2	6364.4	5613.9	Tight
"	44	3710.0	3691.1	6365.6	6365.6	-	Tight
"	45	3710.2	3691.3	6365.5	6366.0	-	Dry test