004271C

6406/5-1 T2

COMPLETION LOG

SCALE 1:500

AREA: BLOCK 6406/5 (Prospect "TOTT EAST")

LICENSE: PL 255

RIG: TRANSOCEAN WINNER

TOTAL DAYS: 136

WATER DEPTH: 286 m

DRILLERS T.D.: 4692 mMD

P&A GAS/COND

Latitude	Longitude
64.62128502	6.60087033
X Coordinate	Y Coordinate
385281.20	7168597.40

SPUD DATE: 23 DECEMBER 2001

KICK OFF DATE: 21 JANUARY 2002

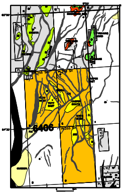
T.D. REACHED: 13 APRIL 2002

RIG RELEASED: 30 APRIL 2002

ELEVATION: 26 m

T.D. (Fm): TILJE

LOCATION MAP



OPERATOR: A/S NORSKE SHELL (30 %)

PARTNERS: STATOIL (20 %)
TOTALFINAELF (20 %)
PETORO (30 %)

OPS. GEOLOGIST: WILFRED POOL, INGER STRASS

WELLSITE GEOLOGIST: EDWARD LINAKER, CHRIS GREENE, RUPERT R. JAMIESON, GRAHAM HAYES, DAVID JOBSON

CONTRACTORS:

DRILLING CONTRACTOR: SEDCO VOREX

MUD LOGGING: GEOSERVICES

MUD ENGINEERING: MI NORGE

WIRELINE LOGGING: SCHLUMBERGER WIRELINE

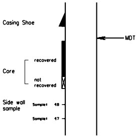
MWD/LWD: SCHLUMBERGER, DRILLING MEASURE

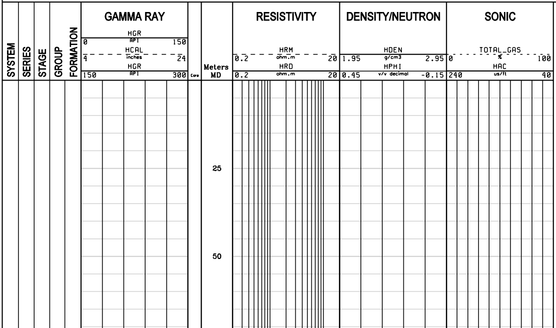
CORING: COREPRO

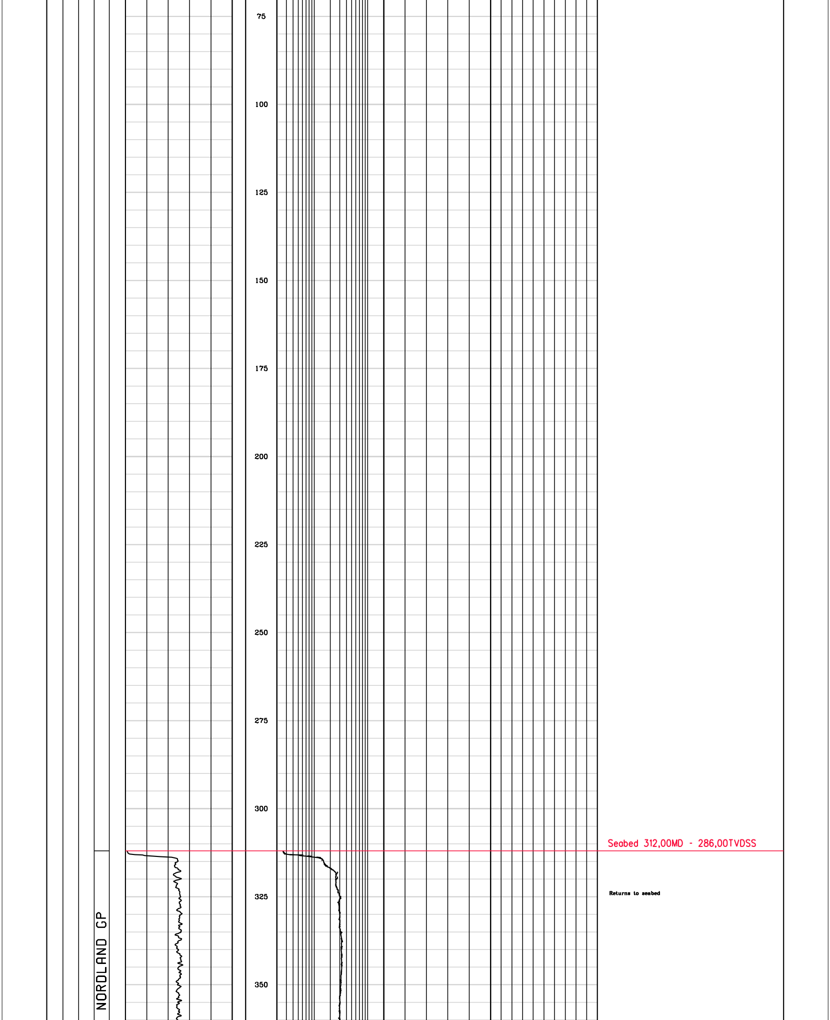
WELLSITE PALYNOLOGY: ICHRON

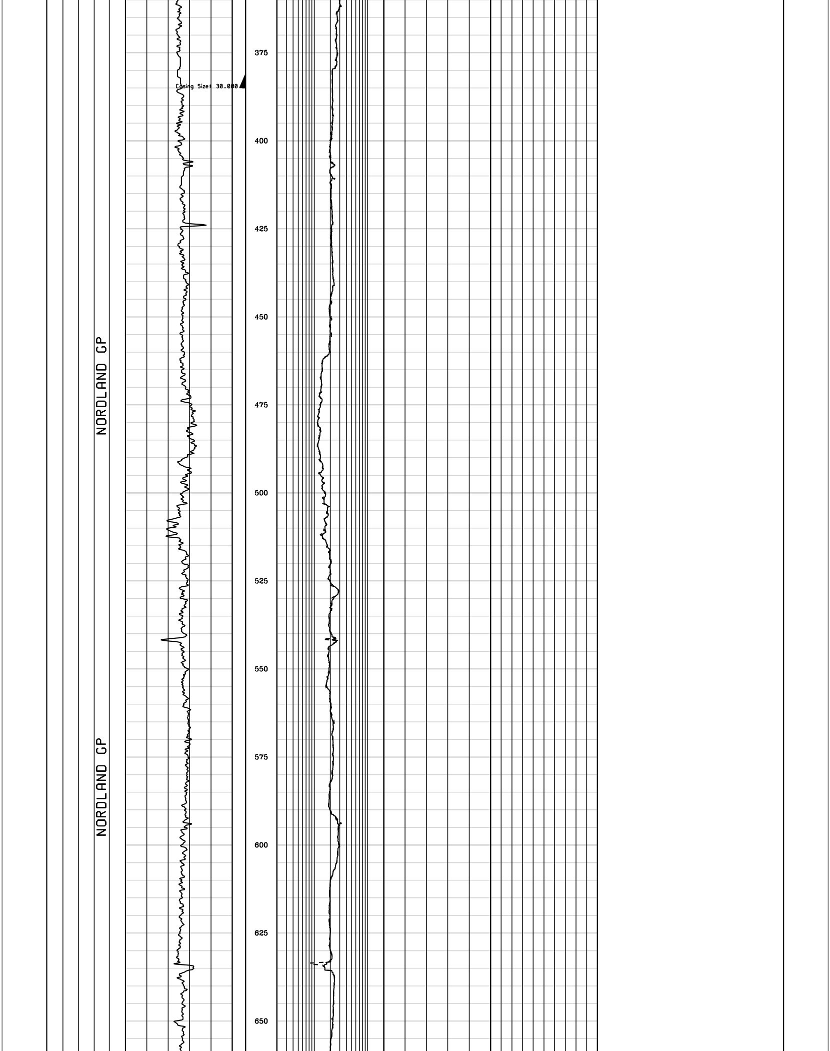
LITHOLOGY KEY

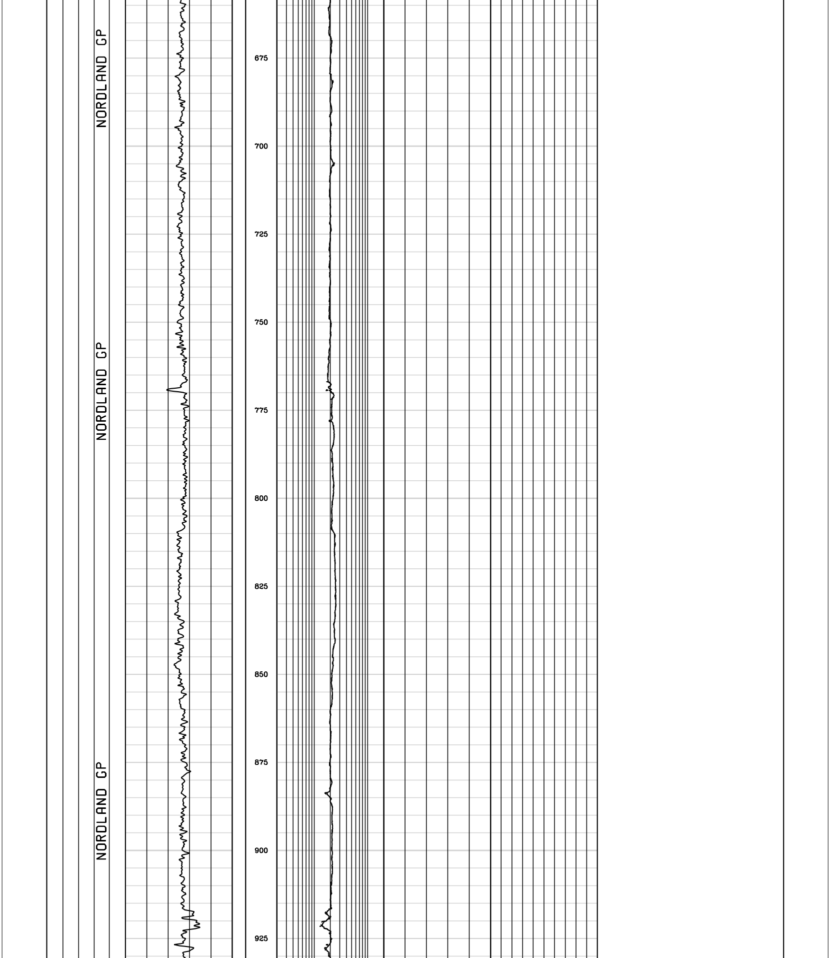
- 🟫 CALCAREOUS CLAYSTONE
- 🟨 SANDSTONE
- ⬜ SILTY CLAYSTONE
- 🟧 SILTSTONE
- ⬜ CLAYSTONE
- 🟦 DOLOMITE
- 🟪 TUFF
- 🟦 LIMESTONE
- 🟫 ARGILLACEOUS SILTSTONE
- 🟨 ARGILLACEOUS SANDSTONE
- 🟨 SILTY SANDSTONE

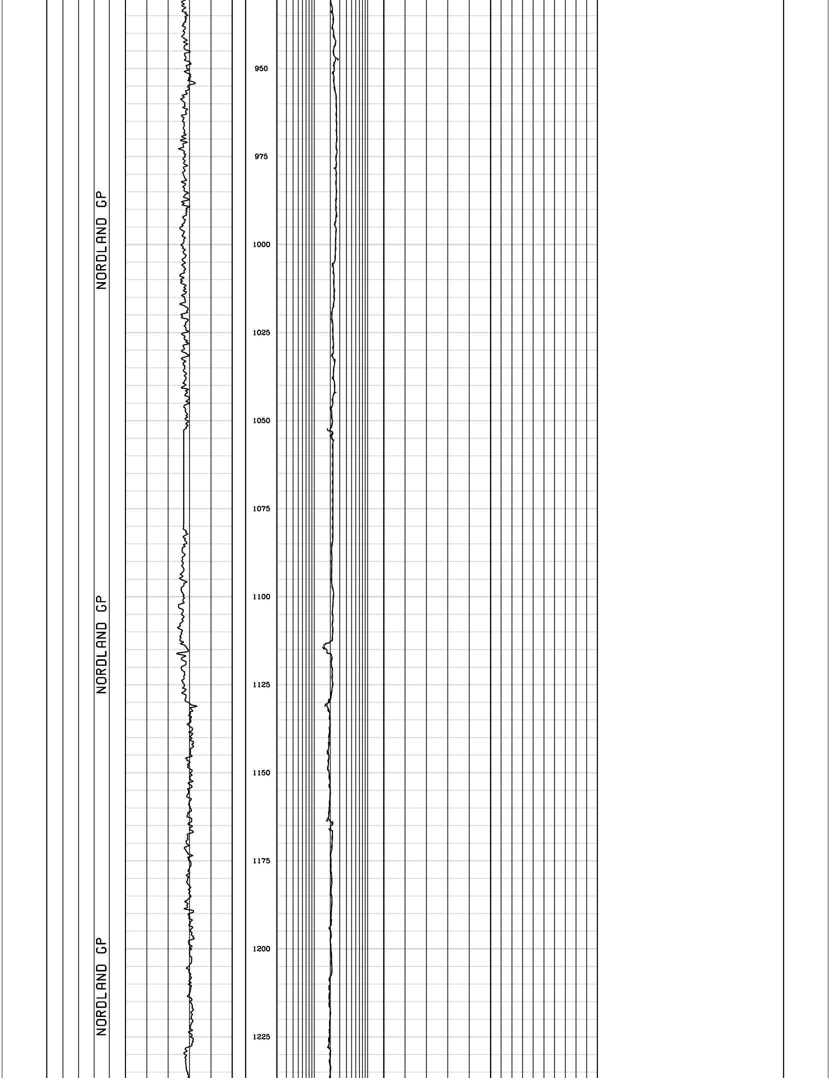


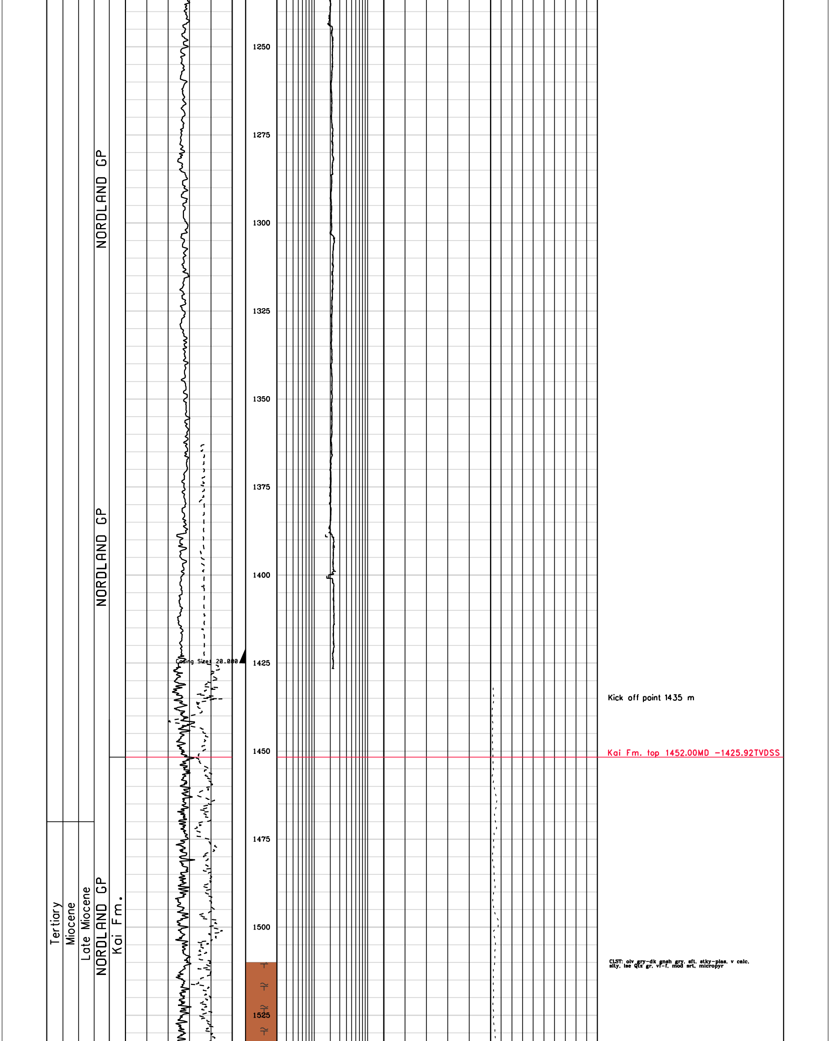


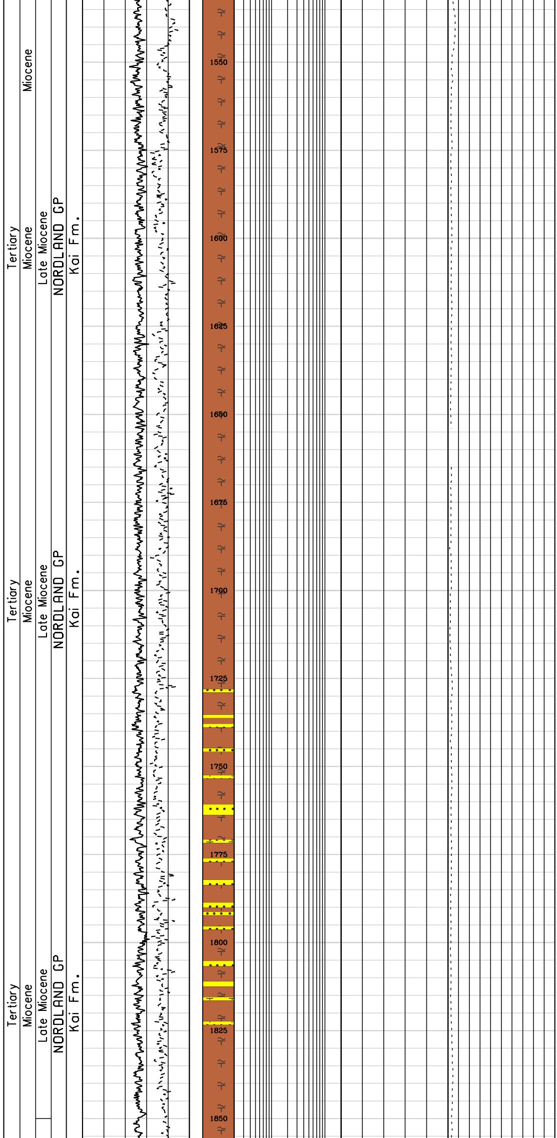












CLST: olv gry-dk gnsh gry, gnsh gry, sft-frm, slty I.P., sbblky-blky, mic, Tr Glauc, Tr Pyr, calc

CLST: olv gry, sft-frm, sbblky-blky, mic, Tr Glauc, Tr Pyr, slily calc-calc

CLST: olv gry-olv blk, sft-frm, sbblky-blky, slty I.P., mic, Tr Glauc, calc

CLST: olv gry-olv blk, sft-frm, plas-stky, sbblky-blky, slily calc, micromic, Tr Glauc

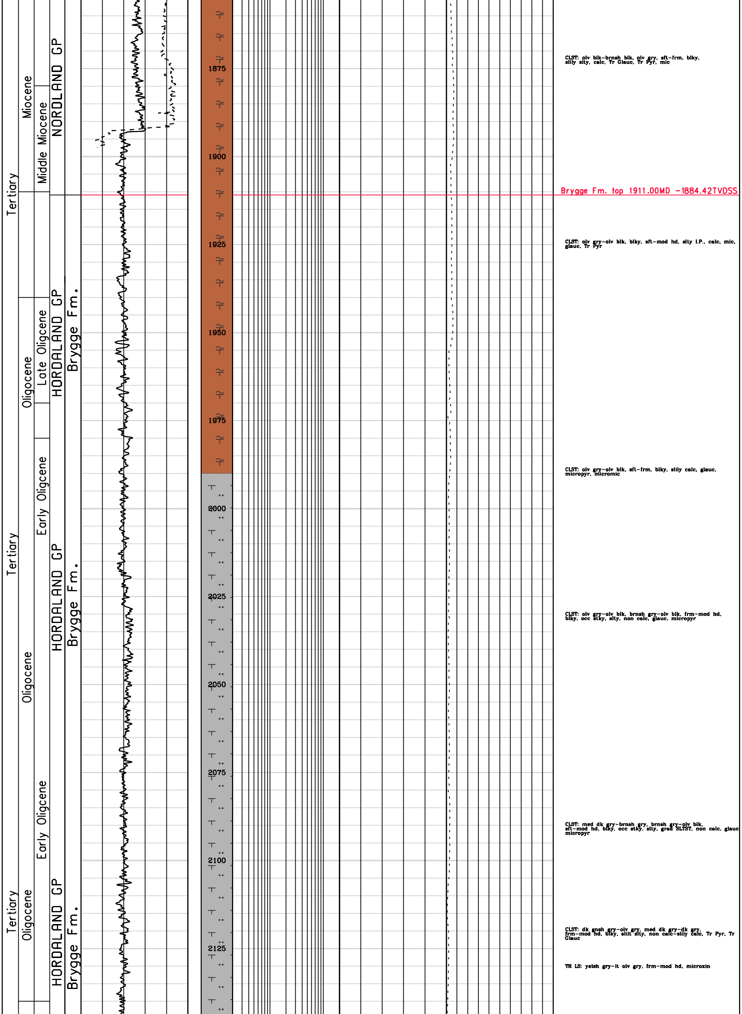
SST: lse clr-trnsl Qtz gr, vf, occ f, wl srt, sbrndd-rndd, glauc

CLST: olv gry-olv blk, sft-frm, plas-stky, sbblky-blky, calc, micromic, Glauc

SST: lse clr-trnsl Qtz gr, vf, occ f, wl srt, sbrndd-rndd, glauc

SST: lse clr-trnsl Qtz gr, vf, wl srt, sbang-sbrndd, Tr Pyr, Tr Glauc

CLST: olv gry-olv blk, sft-frm, sbblky-blky, slily slty, mic, Tr Glauc, calc



CLST: olv blk-brnsh blk, olv gry, sft-frm, blky, slily slty, calc, Tr Glauc, Tr Pyr, mic

Brygge Fm. top 1911.00MD -1884.42TVDSS

CLST: olv gry-olv blk, blky, sft-mod hd, slty I.P., calc, mic, glauc, Tr Pyr

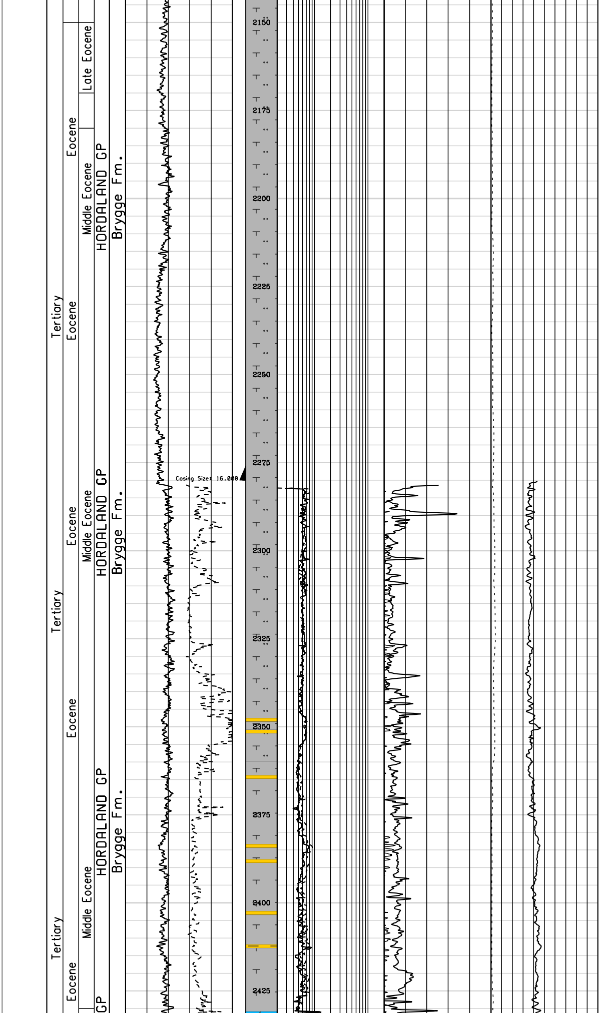
CLST: olv gry-olv blk, sft-frm, blky, slily calc, glauc, micropyr, micromic

CLST: olv gry-olv blk, brnsh gry-olv blk, frm-mod hd, blky, occ stky, slty, non calc, glauc, micropyr

CLST: med dk gry-brnsh gry, brnsh gry-olv blk, sft-mod hd, blky, occ stky, slty, grad SLTST, non calc, glauc micropyr

CLST: dk gnsh gry-olv gry, med dk gry-dk gry, frm-mod hd, blky, slilt slty, non calc-slily calc, Tr Pyr, Tr Glauc

TR LS: yelsh gry-lt olv gry, frm-mod hd, microxln



LS: lt gnsh gry-yelsh gry, lt olv gry, microxln, frm-hd

CLST: olv gry-dk gnsh gry, frm-mod hd, blky, slty I.P., calc I.P., Tr Pyr, Tr Glauc

LS: yelsh gry-grysh or, microxln, sft-hd, blky

CLST: med dk gry-dk gnsh gry, sft-mod hd, stky, blky, slily slty, non calc-slily calc, Tr Glauc, Tr Micropyr

CLST: olv gry-med dk gry, olv blk, blky, frm-mod hd, slty I.P., calc I.P., Tr Pyr, Tr Glauc

CLST: dk gnsh gry-olv gry, blky, frm-mod hd, slty I.P., slily calc-non calc, Tr Pyr, Tr Glauc

CLST: dk gnsh gry-olv gry, med dk gry, frm-mod hd, blky, pyr, mic, Tr Glauc, calc I.P.

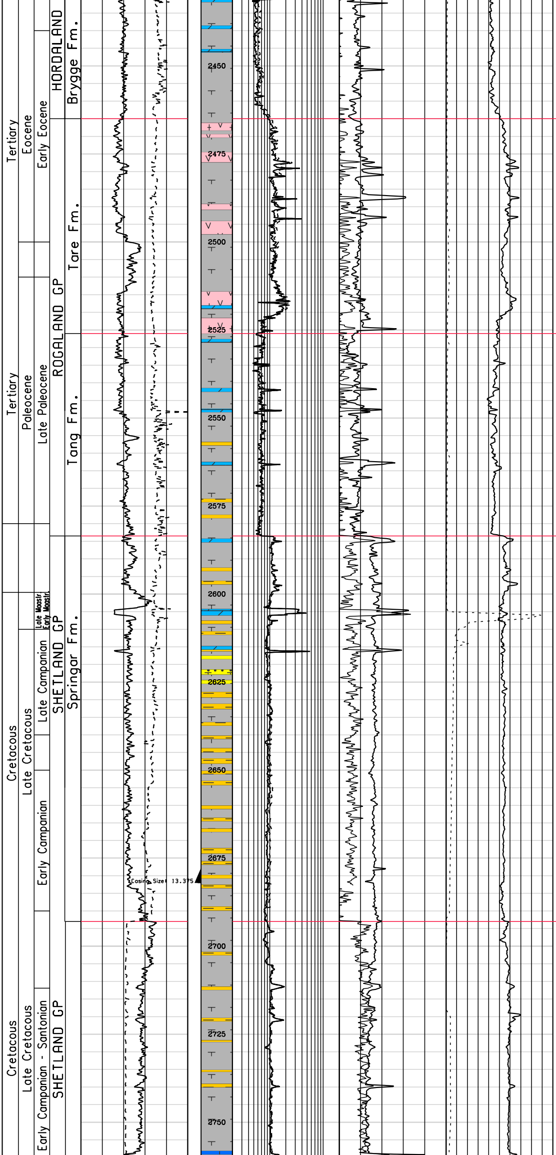
CLAYSTONE: Greenish grey, dark greenish grey, predominantly firm, slightly crumbly and flaky in part, non calcareous, waxy lustre, occasional carbonaceous flecks, trace disseminated pyrite

CLAYSTONE: Greenish grey, trace olive grey, trace greyish black carbonaceous banding, generally firm, crumbly and flaky in part, trace soft, amorphous hydrated cuttings, non calcareous

Traces of loose SILT

CLAYSTONE: Greyish brown, pale brown, trace greyish orange, firm, blocky, crumbly break, earthy lustre, faint traces of silt, trace very pale dolomitic partings and nodules

CLAYSTONE: Greenish grey, with pyrite speckles and dark green glauconitic patches



DOLOMITE: Greyish orange, firm to hard, brittle, sub angular, crypto-crystalline, slightly argillaceous, tight

CLAYSTONE: Greenish grey, light greenish grey, alternating with and patches of greyish brown, firm, slightly plastic, earthy lustre, non calcareous

CLAYSTONE: Greenish grey, with strong trace olive grey, firm, blocky, slightly silty, with grainy lustre, non calcareous, amorphous dark green - black glauconite grains

Tare Fm. top 2465.00MD -2437.31TVDSS

TUFF: Light bluish grey, soft, crumbly, ashy texture, with crypto-crystalline black mineral shards in a vitreous matrix

CLAYSTONE: Olive grey, dark greenish grey, with bluish grey tinges soft, arhorphous sticky, dispersed, slight ashy texture, non calcareous, tuffaceous

Trace TUFF: Light grey, soft - grading moderately firm, sub-blocky, abundant micro-crystalline cubic pyrite and black speckles in ashy matrix, non-calcareous

Trace DOLOMITE: Greyish orange, hard, angular, brittle, crypto-crystalline, tight

Tang Fm. top 2526.00MD -2498.20TVDSS

CLAYSTONE: Light greenish grey, soft to moderately firm, sub-blocky, plastic, trace ashy texture, non-calcareous, trace disseminated pyrite

CLAYSTONE: Light greenish grey, with intermittent dark greenish grey blotches, grading olive grey locally, firm, blocky, slightly plastic, massive, non-calcareous, rare carbonaceous flakes - often pyritised, becoming silty with trace of very fine quartz

CLAYSTONE: Dark green grey, trace olive grey, rare light green patches, homogeneous, non calcareous, slightly silty locally, trace carbonaceous fragments and disseminated pyrite

Springar Fm. top 2583.50MD -2555.56TVDSS

CLAYSTONE: Light greenish grey, soft, slightly sticky and sub-amorphous, pronounced grainy lustre, abundant silt and sub-ordinate very fine, sub-angular, low spherical quartz, common micro-crystalline pyrite clusters and amorphous dark green glauconitic grains, grading to SILTSTONE

SAND: Clear, translucent, trace amber and smoky hues, very fine, sub-angular to minor sub-rounded, low to moderate spherical index, trace elongate, moderate sorting, disaggregated, grains often coated with clay

CLAYSTONE: Light olive grey, firm, blocky, silty, non - weakly calcareous matrix, cross cut by calcite vein, with light brown oil inter-crystalline stain, 2-5% dull greenish yellow direct fluorescence, slow, diffuse, faint, greenish yellow cut fluorescence, trace greenish white residual ring

SILTSTONE: Yellowish grey, light olive grey, firm, trace soft and sticky, often friable, massive, non-calcareous, black carbonaceous speckles, trace very fine quartz, common disseminated pyrite, glauconitic

SAND: Translucent, citrine, very fine, grading silt locally, angular to sub-rounded, low spherical index, common elongate, moderately well sorted, quartz with trace felsic and mafics (gluaconite), disaggregated

TRACE DOLOMITE: Brownish grey, firm to hard, brittle, sub-angular, crypto-crystalline, slightly argillaceous, tight

CLAYSTONE: Light olive grey, moderately firm, plastic, slightly sticky with dispersed fraction, massive, variable silt and sand content, non-calcareous, trace micro-mica, disseminated pyrite and rare glauconite

CLAYSTONE: Light olive grey, subordinate olive grey, firm, slightly sticky, sub blocky, occasionally flaky, massive, homogeneous, non-calcareous, moderate silt content, traces of very fine quartz, micro-mica and nodular pyrite

SILTSTONE: Light olive grey, firm, slightly sticky, massive, homogeneous, non-calcareous, nodular pyrite and micro-mica

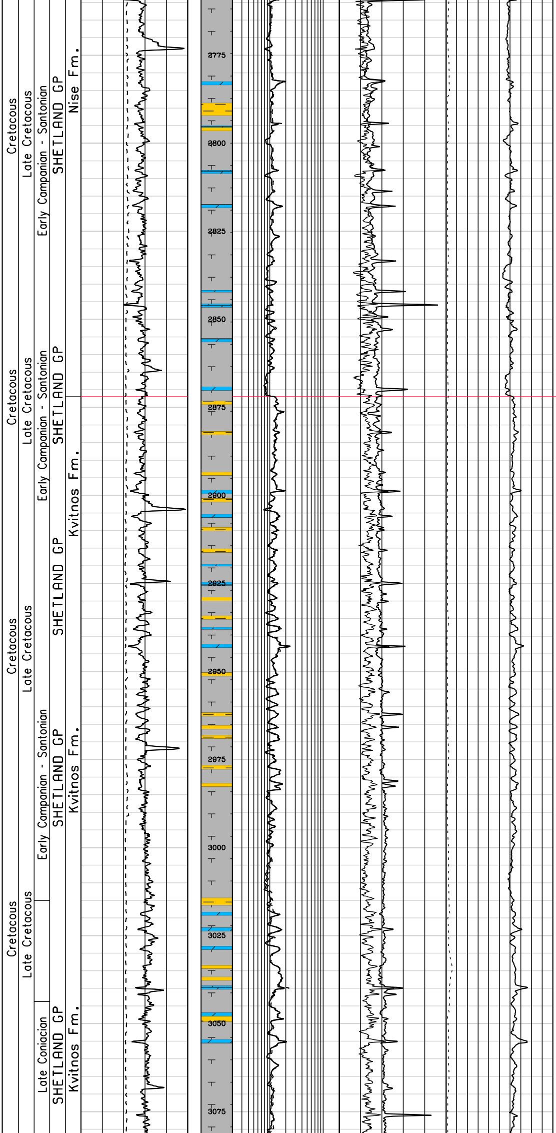
Nise Fm. top 2693.00MD -2664.68TVDSS

CLAYSTONE: Olive grey to medium dark grey, soft, plastic, firm in parts, sub blocky, non calcareous

SILTSTONE: Light olive grey to dark greenish grey, soft, friable, very glauconitic, non calcareous

CLAYSTONE: Olive grey to medium dark grey, soft, plastic, firm in parts, sub blocky, slightly glauconitic, trace carbonaceous material, non calcareous

SILTSTONE: Light olive grey to dark greenish grey, soft, friable, very glauconitic in parts, non calcareous



CLAYSTONE: Olive grey to medium dark grey, soft, plastic, firm in parts, sub blocky, slightly glauconitic, trace carbonaceous material, non calcareous

SAND: Loose quartz, clear to translucent, very fine to fine, sub angular, well sorted, lithic fragments, carbonaceous inclusions, no visible cementation, no shows.

CLAYSTONE: Olive grey to olive black, medium dark grey, soft, to firm in parts, sub blocky, slightly glauconitic, non calcareous.

DOLOMITE: light greenish grey to yellowish grey, moderately hard, crumbly, microcrystalline, slightly argillaceous, glauconitic.

CLAYSTONE: Olive grey to olive black, medium dark grey, soft, to firm in parts, sub blocky, slightly glauconitic, non calcareous.

Kvitnos Fm. top 2872.00MD -2843.12TVDSS

CLAYSTONE: Olive grey to olive black, medium dark grey, soft, to firm in parts, sub blocky, slightly glauconitic, non calcareous.

SILTSTONE: Light olive grey to dark greenish grey, soft, friable, slightly glauconitic in parts, non calcareous

SAND: Loose quartz, clear to translucent, very fine to fine, sub angular, well sorted, lithic fragments carbonaceous inclusions, no visible cementation, no shows.

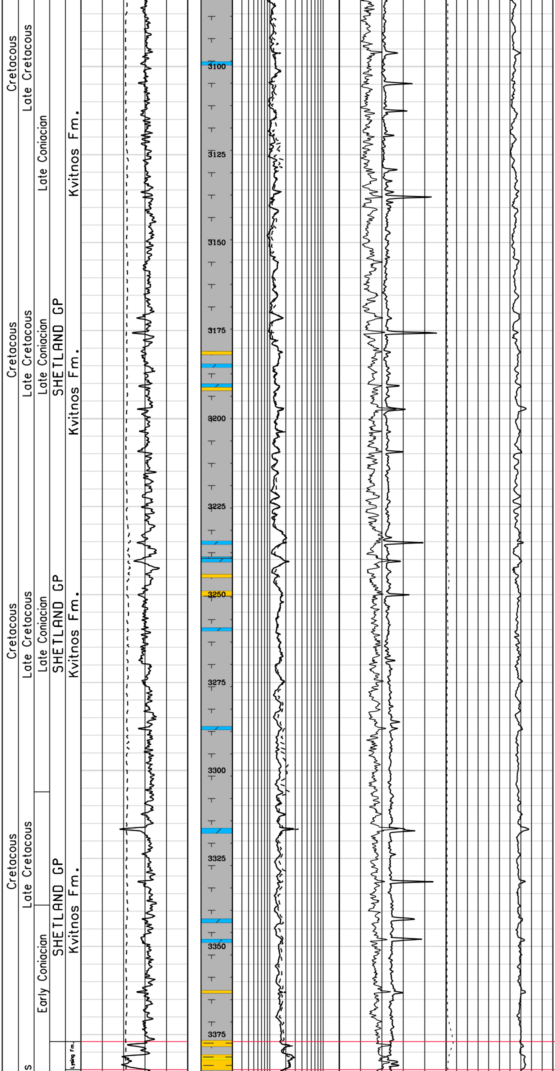
CLAYSTONE: Olive grey to olive black, firm, blocky, silty, micro micaceous, non to slightly calcareous

SILTSTONE: Olive grey to greenish grey, soft to firm, friable, glauconitic.

CLAYSTONE: Olive grey to olive black, firm, blocky, silty, micro micaceous, non to slightly calcareous.

DOLOMITE: Light greenish grey to yellowish grey, firm to hard, blocky to slightly crumbly, microcrystalline, slightly glauconitic.

CLAYSTONE: Olive grey to olive black, firm, blocky, silty, micro micaceous, non to slightly calcareous.



CLAYSTONE: Dark grey to olive black, firm to moderately hard, blocky, micro micaceous, non to slightly calcareous.

CLAYSTONE: Dark grey to olive grey, firm to moderately hard, blocky to sub blocky, slightly sticky, micro micaceous, slightly calcareous.

CLAYSTONE: Dark grey to olive grey, firm to moderately hard, blocky to sub blocky, slightly sticky, micro micaceous, slightly calcareous.

DOLOMITE: Light greenish grey to yellowish grey, firm to hard, blocky to slightly crumbly, microcrystalline, slightly glauconitic.

CLAYSTONE: Dark grey to olive grey, firm to moderately hard, blocky to sub blocky, slightly sticky, micro micaceous, slightly calcareous.

SILTSTONE: Light greenish grey to dark greenish grey, soft to firm, friable, glauconitic in parts, grades to very fine sandstone in parts, slightly calcareous.

CLAYSTONE: Dark grey to olive grey, firm to moderately hard, blocky to sub blocky, slightly sticky, micro micaceous, slightly calcareous.

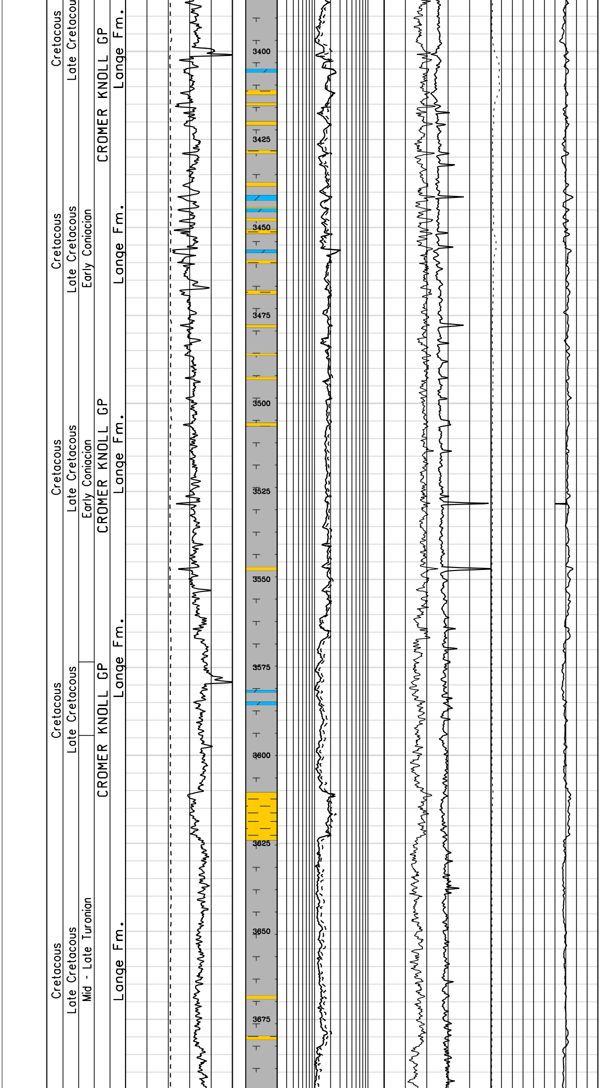
CLAYSTONE: Dark grey to olive grey, firm to moderately hard, blocky to sub blocky, slightly sticky, micro micaceous, slightly calcareous.

CLAYSTONE: Dark grey to olive black, firm to moderately hard, blocky to sub blocky, glauconitic, slightly sticky, micro micaceous, non to slightly calcareous.

Lysing Fm. top 3377.00MD -3346.37TVDSS

SANDSTONE: (trace) Yellowish grey to light greenish grey, soft, friable, very fine grained, well sorted, angular, glauconitic, grades to siltstone, calcareous, poor visible porosity, NO SHOWS.

Lange Fm. top 3385.00MD -3354.34TVDSS



CLAYSTONE: Dark grey to olive black, firm to moderately hard, blocky to sub blocky, silty, slightly sticky, micro micaceous, glauconitic, slightly calcareous.

SILTSTONE: Dark greenish grey to greenish grey, soft, friable, glauconitic, with very fine sand grains, calcareous matrix.

SANDSTONE: (trace) White to light greenish grey, very fine, grades to siltstone, angular, well cemented, calcareous cement, poor visible porosity, NO SHOWS.

CLAYSTONE: Dark grey to olive black, firm to moderately hard, blocky to sub blocky, silty, slightly sticky, micro micaceous, glauconitic, slightly calcareous.

SILTSTONE: Light greenish grey to greenish grey, soft to very soft, friable, amorphous, slightly glauconitic, non calcareous to slightly calcareous in parts.

CLAYSTONE: Dark grey to olive black, firm to moderately hard, blocky to sub blocky, silty, micro micaceous, glauconitic, slightly calcareous.

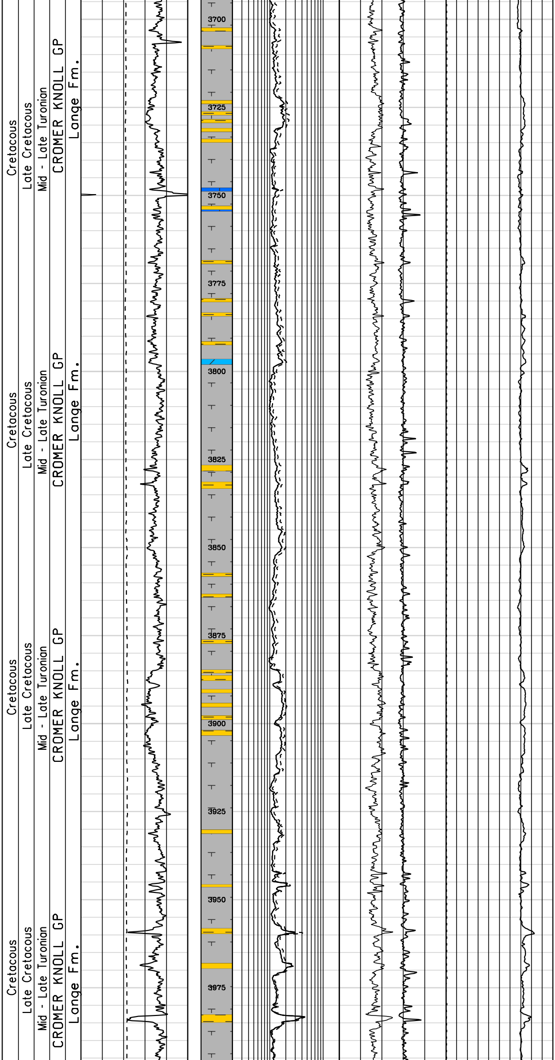
DOLOMITE: Light greenish grey to yellowish grey, firm to hard, brittle to slightly crumbly, microcrystalline, slightly glauconitic, argillaceous laminae.

SILTSTONE: Medium grey to light greenish grey in parts, soft to firm, crumbly to friable, trace glauconite, very fine sand grains, non to slightly calcareous.

SANDSTONE: (trace) Yellowish grey, very fine grained, well sorted (very rare medium grains), hard, well cemented, siliceous cement, glauconitic, no visible porosity, NO SHOWS.

CLAYSTONE: Dark grey to olive black, firm to moderately hard, blocky to sub blocky, slightly silty, micro micaceous, glauconitic, slightly calcareous.

CLAYSTONE: Dark grey to olive black, firm to moderately hard, blocky, slightly silty, micro micaceous, glauconitic, non to slightly calcareous.



SILTSTONE: Light greenish grey, very soft, friable, glauconitic, very fine sand grains, rock flour, non to slightly calcareous in parts.

SANDSTONE: (trace) Light greenish grey, very fine, sub angular, well sorted, glauconitic, well cemented, dolomitic, appearing as rock flour in parts.

LIMESTONE: Yellowish grey to light greenish grey, very hard, crystalline.

SANDSTONE: (trace) Light greenish grey, very fine, well sorted, hard, dolomitic cement, glauconitic, tight, NO SHOWS.

DOLOMITE: Yellowish grey to brownish grey, firm to hard, microcrystalline, brittle, slightly argillaceous.

SILTSTONE: Dark greenish grey to olive grey, very soft, friable, glauconitic, very fine sand grains, rock flour, non to slightly calcareous in parts.

CLAYSTONE: Medium grey to olive black, firm to moderately hard, blocky, slightly silty, micro micaceous, non calcareous.

SILTSTONE: Greenish grey to light greenish grey, soft to firm, friable, glauconitic, non calcareous.

DOLOMITE: Yellowish grey, firm to hard, crumbly, argillaceous streaks, microcrystalline.

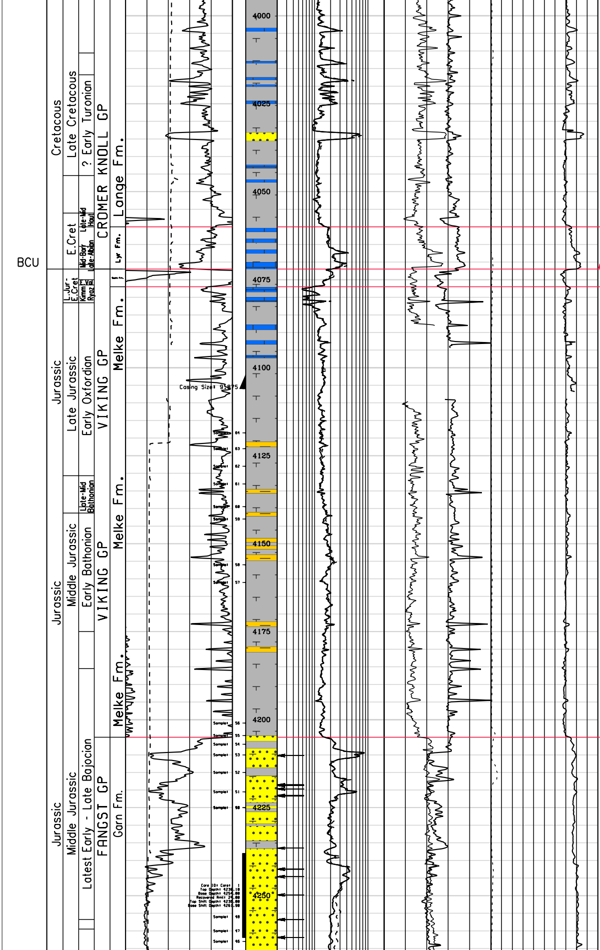
CLAYSTONE: Medium grey to olive black, firm to moderately hard, blocky, slightly silty, micro micaceous, non calcareous.

SILTSTONE: Greenish grey to light greenish grey, soft to firm, friable, glauconitic, non calcareous.

SANDSTONE: (trace) Greenish grey, very hard, very fine, sub angular, well sorted, well cemented, calcareous to dolomitic cement, poor visible porosity, NO SHOWS.

SILTSTONE: Greenish grey to light greenish grey, soft to firm, friable, glauconitic, non calcareous.

SANDSTONE: (trace) as above.



CLAYSTONE: dark grey to olive black, firm to moderately hard, blocky, occasionally sub fissile, silty in places, very rarely grading to SILTST ONE, non calcareous.

LIMESTONE (trace) Dark yellowish brown to dark grey brown, firm to moderately hard, sub blocky to blocky, occasionally silty, sandy in places, commonly dolomitic, microcrystalline to crypto crystalline, Mudstone texture.

CLAYSTONE: Dark grey to olive black, commonly medium dark grey, firm to moderately hard, blocky, rare splintery, occasionally sub fissile, silty in places, non calcareous.

SANDSTONE/SAND: Present as loose sand grains, clear to translucent, colourless to very pale yellow, very fine to fine grained, sub rounded, occasionally sub angular, sub spherical, well sorted, trace glauconite, NO SHOWS.

CLAYSTONE: Predominantly red brown, commonly dark grey to olive black, occasionally medium dark grey, firm to moderately hard, blocky, splintery in places, rarely sub fissile, non calcareous.

CLAYSTONE: Red brown, rare dark grey to olive black, firm to moderately hard, sub blocky to blocky, silty in places, occasional carbonaceous specks, moderately to very calcareous, grading to CALCAREOUS CLAYSTONE in places.

Lyr Fm. top 4060.00MD -4027.41 TVDSS

LIMESTONE: Yellowish grey to pale olive grey, moderately hard, blocky to splintery, occasionally sub fissile, very argillaceous, grading to CALCAREOUS CLAYSTONE, crypto crystalline, Mudstone texture.

Base Cretaceous Unconformity

Spekk Fm. top 4072.00MD -4039.38TVDSS

CLAYSTONE: Olive black, dark grey to grey black, moderately hard, sub blocky to splintery, sub fissile in places, carbonaceous, slightly to non calcareous.

Melke Fm. top 4077.00MD -4044.37TVDSS

CLAYSTONE: Predominantly dark grey to olive black, commonly dark brown, occasionally moderate yellowish brown, firm to moderately hard, sub blocky to blocky, splintery in places, occasionally sub fissile, carbonaceous in places, occasionally silty, slightly to non calcareous.

LIMESTONE: Light bluish grey to light grey, moderately hard, blocky to splintery, occasionally sub fissile, argillaceous, occasionally grading to CALCAREOUS CLAYSTONE, crypto crystalline to microcrystalline, Mudstone texture.

CLAYSTONE: Dark grey to dark brownish grey, occasionally brown black, firm to moderately hard, sub blocky alo blocky, occasionally splintery, sub fissile in places, silty in places, slightly carbonaceous, non calcareous.

CLAYSTONE: dark grey to olive black, dark greyish brown in places, firm to moderately hard, blocky, rarely splintery, silty in places, slightly micro micaceous, rare trace disseminated micro pyrite, non to occasionally slightly calcareous.

LIMESTONE: (trace) pale yellowish brown, firm to hard, blocky, argillaceous, crypto crystalline to microcrystalline, Mudstone texture.
CLAYSTONE dark grey to dark grey brown to brownish black, firm to moderately hard, occasionally soft, sub blocky to blocky, rarely splintery, occasionally sticky, silty, locally grading to SILTSTONE, slightly micro micaceous, rare trace disseminated micro pyrite, non calcareous.

LIMESTONE: (trace) greyish orange to off white, dark yellowish orange, firm to moderately hard, occasionally soft, blocky to sub blocky, argillaceous in places, crypto crystalline, Mudstone texture.

CLAYSTONE: dark grey to dark grey brown to brownish black, firm to moderately hard, sub blocky to blocky, rarely splintery, silty, locally grading to SILTSTONE, trace micro micaceous, locally common disseminated micro pyrite, rare pyrite micro laminations and micro pyrite nodules, non calcareous.

CLAYSTONE: dark grey to dark grey brown to brownish black, firm to moderately hard, sub blocky to blocky, rare splintery, silty, locally very silty, commonly grading to SILTSTONE, occasional very fine grained quartz inclusions, trace micro micaceous, trace to locally common disseminated micro pyrite, non calcareous.

CLAYSTONE: dark grey to olive black, firm, occasionally soft, sub blocky to blocky, occasionally sticky, silty in places, occasionally grading to SILTSTONE, trace micro micaceous, trace disseminated micro pyrite, non calcareous.

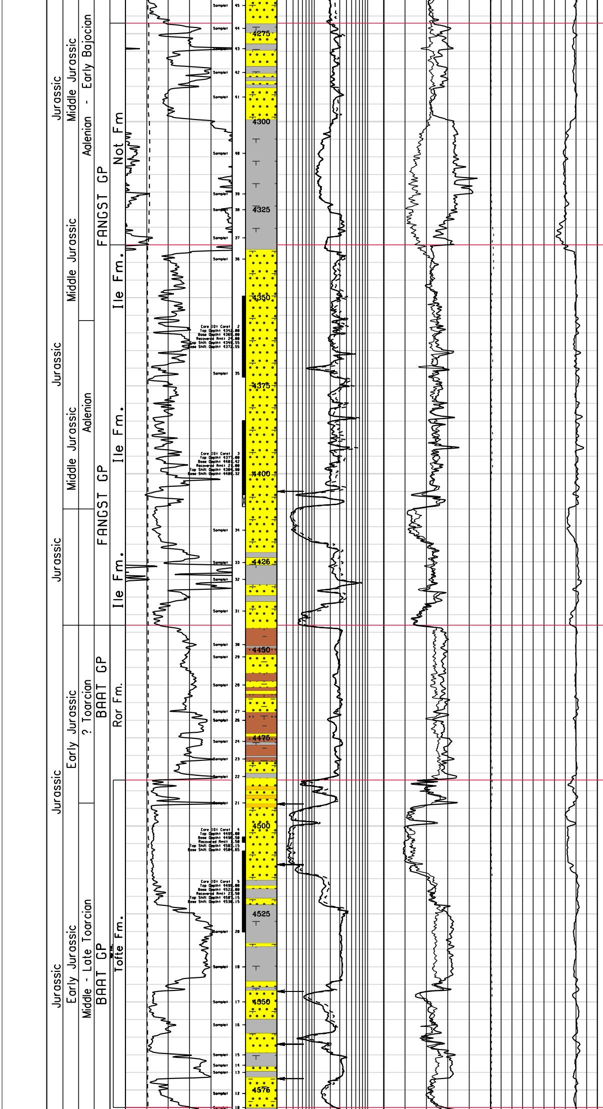
Garn Fm. top 4205.00MD -4172.08TVDSS

SANDSTONE: predominantly present as loose quartz grains, clear, colourless, occasionally translucent, pale yellow brown, very fine to fine grained, sub angular to sub rounded, sub spherical, moderately sorted, occasionally consolidated, light grey to off white, soft, sub blocky, poor to moderately calcite cemented, kaolinite? matrix, poor porosity, NO SHOWS

SANDSTONE: as above, very fine to fine grained, occasionally medium to coarse, rarely consolidated, firm, moderately calcite cemented, trace pyrite, no to poor visible porosity, NO SHOWS

CLAYSTONE: dark grey to greyish black, firm to moderately hard, sub blocky to platy, abundant medium grained mica, common to abundant crystalline occasionally fibrous pyrite, very carbonaceous, non calcareous. Occurring as 0.5mm-2mm laminations.

SANDSTONE: very light grey to off white, firm to moderately hard, occasionally soft, sub blocky, occasionally friable, clear to translucent, colourless to very light grey, commonly very pale yellow, fine to medium grained, sub angular, sub spherical, moderately sorted, moderately to well consolidated with predominantly dolomitic occasionally calcitic cement, very rare to locally abundant carbonaceous specks, occasional to common medium/coarse grained mica, rare trace chlorite, frequent trace micro pyrite, no to poor visible porosity, rarely moderate porosity. SHOWS: faint to moderate hydrocarbon odour, generally 50-80% patchy dull to bright patchy yellow white direct fluorescence, slow streaming to slow diffuse bright milky white cut fluorescence, milky white residual ring.



Not Fm. top 4272.00MD -4238.92TVDSS

CLAYSTONE: dark grey to greyish black becoming medium grey, firm to moderately hard, sub blocky to platy, locally crumbly, silty in parts, non calcareous.

SANDSTONE: present as rock flour, light grey to off white, soft, sub blocky, commonly loose quartz grains; clear, colourless, fine to medium grained, sub rounded, sub spherical, poor to moderately sorted, trace of dolomite cement, no to poor visible porosity, NO SHOWS

CLAYSTONE: dark grey to dark brownish grey, rarely dark grey to greyish black, sub blocky, silty in parts, trace micro-mica, non calcareous.

SANDSTONE: predominantly present as rock flour, light grey to off white, soft, sub blocky, commonly loose quartz grains; clear, colourless, occasionally translucent, very pale yellow/brown, fine to medium grained, sub rounded, sub spherical, poor to moderately sorted, no to poor visible porosity, trace dolomite cement, NO SHOWS

CLAYSTONE: dark grey to dark brownish grey, firm, occasionally moderately hard, sub blocky, locally crumbly, earthy texture, silty in parts, trace micro-mica, non calcareous to rarely slightly dolomitic.

CLAYSTONE: dark grey black to dark brownish grey, firm, occasionally moderately hard, sub blocky, locally crumbly, earthy texture, silty in parts, rare trace micro pyrite, trace micro-mica, carbonaceous in parts, non to occasionally slightly calcareous.

CLAYSTONE: dark grey black to dark brownish grey, firm to very firm, occasionally moderately hard, sub blocky, slightly waxy texture, silty in parts, rare trace micro pynite, rare trace micro-mica, becoming occasionally carbonaceous in parts, non to occasionally slightly calcareous.

Ile Fm. top 4335.00MD -4301.76TVDSS

SANDSTONE: predominantly present as off white to greyish orange rock flour, common loose quartz grains, clear to translucent, colourless to very pale yellow, fine to medium grained, sub rounded, sub spherical, moderately to poorly sorted, trace dolomitic cement, NO SHOWS.

SANDSTONE: light grey to light brownish grey, predominantly hard, well cemented with dolomitic cement, with very thin argillaceous and micaceous laminations. Occasionally soft and friable, poorly cemented with good porosity. Grains generally clear to translucent, fine to very fine, sub angular, moderate to well sorted, occasionally medium, rarely coarse, in soft friable areas. Abundant mica, carbonaceous and lithic fragments. Generally poor visible porosity, well cemented, occasionally fair to good porosity. SHOWS: poor to occasionally good, faint hydrocarbon odour, pale yellow direct fluorescence, generally no cut fluorescence, occasionally moderate streaming pale yellow to white, bright white, spotty residual ring, very pale brown hydrocarbon residue.

SANDSTONE: predominantly present as rock flour, off white to light grey, occasionally grey, soft to locally crumbly, sub blocky, fine to medium grained, rarely argillaceous, commonly as loose quartz grains; translucent, colourless to pale grey, fine very fine grained, sub rounded, sub spherical, moderately sorted, to poorly sorted in parts, trace carbonaceous specs, no visible porosity, NO SHOWS.

SANDSTONE: light grey to olive grey, hard, well cemented with dolomitic cement, occasionally soft and friable, poorly cemented with good porosity. Grains generally clear to translucent, fine to very fine, sub angular to angular, moderate to well sorted, locally medium to coarse, in soft friable areas, abundant mica. predominantly clean. Generally poor visible porosity, well cemented, occasionally fair to good porosity. SHOWS: fair to frequently good, in parts no shows, faint to occasionally strong hydrocarbon odour, pale yellow white direct fluorescence, slow streaming to blooming pale yellow to white cut, no residual ring.

CLAYSTONE: medium grey to olive grey, moderately hard, sub blocky to fissile, very micaceous, slightly silty in parts, non calcareous.

SANDSTONE: predominantly present as rock flour, off white to very light grey, occasionally light olive grey, soft to locally crumbly, sub blocky, fine to medium grained, generally clean, occasionally as loose quartz grains; translucent, colourless to pale grey, fine very fine grained, rarely coarse, sub rounded, sub spherical, moderately sorted, to poorly sorted in parts, trace carbonaceous specks, no visible porosity, NO SHOWS.

CLAYSTONE: dark grey to grey black , firm to moderately hard, sub blocky, locally micro-micaceous, silty to very silty in parts, non calcareous.

SANDSTONE: present as rock flour, off white to very light grey, occasionally olive grey, soft to locally crumbly, sub blocky, slightly argillaceous, rarely as loose quartz grains; fine to very fine grained, rarely coarse, moderately sorted, poorly sorted, trace carbonaceous specs, locally very abundant mica, no visible porosity, NO SHOWS.

Upper Ror Fm. top 4443.00MD -4409.47TVDS

ARGILLACEOUS SANDSTONE: light grey to grey, frequently dark grey, soft to crumbly, sub blocky, trace dolomitic cement, argillaceous matrix, abundant mica in parts, very fine to fine grained, rare coarse, poorly sorted, generally dirty, no visible porosity, NO SHOWS.

CLAYSTONE: olive grey to olive black, soft to firm, sub blocky, silty, micro micaeous, slightly dolomitic.

SILTSTONE: dark olive grey to olive black, soft to firm, friable, micaceous, argillaceous, slightly dolomitic.

Tofte Fm. top 4487.00MD -4453.35TVDSS

SANDSTONE: light olive grey, loose quartz grains and rock flour, very fine to medium grained, rare coarse to very coarse grains, sub angular, sub spherical, poorly sorted, trace dolomitic cement. Moderate inferred porosity. SHOWS: traces of weak pale yellow direct fluorescence, very slow pale yellowish white cut fluorescence.

SANDSTONE: Translucent, pale yellowish orange hues, brownish grey, fine, with very fine to trace coarse end members, poor sorting, sub angular to minor sub rounded, low spherical index, disaggregated, calcite frosting, trace ferruginous staining, quartz, rare quartzose lithics, poor to fair inferred porosity, becoming silty and argillaceous matter increasing, pyrite flecks coating individual grains, trace mica. SHOWS: bright yellow direct fluorescence, slow to moderate streaming/blooming yellowish white cut fluorescence, bright yellow fluorescence ring residue, no visible ring.

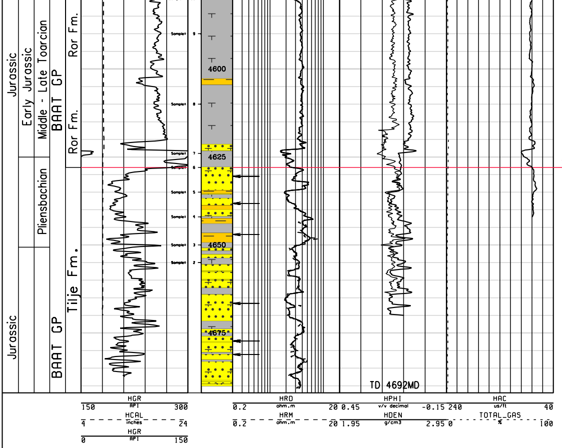
CLAYSTONE: Dark greenish grey, trace greenish black, firm, blocky, slight crumbly, grainy lustre in part, weakly calcareous, silt and very fine quartz inclusions, traces of disseminated pyrite and glauconite, occasional sandy fingers

SANDSTONE: Translucent, smoky hues, trace dark yellowish brown, very fine minor fine, sub angular, moderately spherical, fair to good sorting, becoming argillaceous, trace calcite frosting on grain surfaces, completely disaggregated, fair inferred porosity, quartzose, trace mafics, muscovite and carbonaceous fragments

CLAYSTONE: Dark greenish grey to olive black, firm, trace brownish black, medium dark grey, blocky, slight crumbly, grainy lustre in part, weakly calcareous in parts, silt with very fine quartz inclusions, traces of disseminated pyrite, NO SHOWS.

SANDSTONE: Dark yellowish brown, very fine occasionally fine, well sorted, predominantly disaggregated, argillaceous laminations in infrequent cuttings, silty, poor inferred porosity, slightly calcareous in parts, NO SHOWS.

Lower Ror Fm. top 4580.00MD -4546.13TVDS



CLAYSTONE: Dark grey to olive black, brownish grey, firm occasionally hard, blocky, grainy lustre in part, non calcareous, becoming more silty grading to SILTSTONE in parts, very fine grained quartz laminations, traces of disseminated pyrite, NO SHOWS.

CLAYSTONE: Greenish black, alternating with brownish black, hard, locally firm, splintery, non calcareous, silty

Tilje Fm. top 4628.00MD -4594.03TVDSS

SANDSTONE: Translucent, speckled with pale yellowish orange and smoky hues, very fine with strong trace silt, sub angular to sub rounded, low spherical index, completely disaggregated, fair inferred porosity, trace calcareous frosting, associated argillaceous matter, quartzose, trace mica, translucent brown organic matter, minor ferruginous staining on some grain surfaces, NO SHOWS.

CLAYSTONE: Olive grey, firm, slightly crumbly and with resinous lustre, homogeneous, non calcareous, moderate silt content, sporadic disseminated pyrite

SILTSTONE: Translucent, speckled with pale yellowish orange and smoky hues, disaggregated particles, in association with very fine quartz

SANDSTONE: Translucent, speckled with pale yellowish orange and smoky hues, pale yellowish brown, very fine with strong trace silt, sub angular to sub rounded, low spherical index, completely disaggregated, fair inferred porosity, trace calcareous frosting, associated argillaceous matter, quartzose, trace mica, translucent brown organic matter, minor ferruginous staining on some grain surfaces, NO SHOWS.

SANDSTONE: Translucent, speckled with pale yellowish orange and smoky hues, pale yellowish brown, light to medium light grey, very fine with strong trace silt, sub angular to sub rounded, low spherical index, completely disaggregated, fair inferred porosity, trace calcareous frosting, associated argillaceous matter NO SHOWS

BIT RUN DATA

Bit No	Top Depth	Base Depth	Bit Size	Manufacturer	Serial No	Bit Interval	Acc Hrs	Penetration Rate	Bit Weight	Rotary Rpm	Remark
3	385	1434	26.000				23	46		260	Grading 1-1-NO-A-E-I-NO-TD
4	1411	2600	17.500	Security	754288	1160	48				
5	1395	1412	17.500	Smith	MJ0273	169	21				
5	2364	2364	17.500	Smith	MJ0273	169	21				
5	2364	2364	17.500	Smith	MJ0273	169	21				
6	1412	2364	20.000	DPI	1963650	169	21				
7	2364	2364	14.750	Reed	467294	151	7				
7	2691	2691	14.750	Reed	67294		0				
8	2364	2691	17.500	DPI	1961997A	327	68				
9	2391	2691	12.250	SecDBS	5013187	169	21				
9	2691	4000	12.250	SecDBS	5013187	169	21				
9	4000	4115	12.250	SecDBS	5013187	115	34				
10	4115	4230	8.500	DBS	5013188	115	18				
10	4115	4230	8.500	DBS	5013188	82	33				
10	4260	4342	8.500	DBS	5013188	82	20				
10	4372	4377	8.500	DBS	5013188	5	1				
10	4401	4495	8.500	DBS	5013188	94	10				
10	4523	4692	8.500	DBS	5013188	169	21				
11	4230	4260	8.500	Longyear	142018	30	8				
12	4342	4372	8.500	Longyear	515052	30	16				
12	4377	4401	8.500	Longyear	515052	24	13				
13	4495	4496	8.500	Varel	CP6216C	31	1				
14	4496	4499	8.500	Security	751761	1	1				
15	4499	4523	8.500	Varel	CP6281C	24	8				

MDT DATA

MDT Test No	Recorder No	Recorder Depth	Formation Pressure	Remark
101	1	4210.2	777.03	
102	2	4210.2	777.03	Built-up to 777.040
103	3	4210.2	777.01	Pump for 7mins. 55%Duty
106	6	4218.5	778.42	Aborted. still building very supercharged
107	7	4218.5	753.30	Aborted. still building predicted to be very supercharged
104	4	4218.7	778.00	Aborted. still building very supercharged
105	5	4218.7	777.69	Aborted. still building very supercharged
108	8	4219.7	777.84	Repeated three times on second decimal place
109	9	4219.7	777.55	
110	10	4219.7	777.50	Pump-out 55% duty 5 mins
117	17	4221.5	779.12	Supercharged. still building rapidly. Terminated
116	16	4221.7	778.45	Supercharged. still building rapidly. Terminated
118	18	4236.5		Supercharged. still building rapidly. Terminated
111	11	4242.5	778.49	
113	13	4242.5	778.25	Pump-out 55% duty 5 mins
112	12	4242.5	778.50	Still building
115	15	4244.6	778.44	Pump-out 55% duty 5 mins
114	14	4244.6	778.45	
119	19	4249.8	778.96	
120	20	4249.8	778.92	Pump 55% duty. pump 1.5 strokes
121	21	4256.8	780.05	
122	22	4256.8	779.98	Pump-out 55% duty 5 mins:180cc
123	23	4256.8	779.96	Pump-out 55% duty 10 mins:360cc
124	24	4261.9	780.43	
125	25	4261.9	780.44	Tried to pump lost seal and reset packer (did not retract)
126	26	4261.9	780.34	Pump-out 55% duty 10 mins:360cc
127	27	4261.9	780.34	Pump-out 55% duty 10 mins:360cc
128	28	4405.0	804.83	
129	29	4493.8	813.77	
130	30	4493.8	813.81	
131	31	4511.0	815.45	
132	32	4511.0	815.50	
133	33	4547.0	819.26	
134	34	4547.0	819.31	
135	35	4562.0	820.73	
136	36	4562.0	820.77	
137	37	4571.8	822.31	
138	38	4571.8	822.35	
139	39	4630.5		Tight Point
140	40	4638.2	833.24	Likely supercharged. still building up at slow rate
141	41	4638.2	832.21	Likely supercharged. still building up at slow rate
142	42	4647.0		Tight Point
143	43	4666.6		Tight Point
144	44	4677.3		Lost seal
145	45	4677.3	835.28	Very supercharged. Still building at fast rate
146	46	4677.3	837.41	Very supercharged. Still building at fast rate
147	47	4681.1		Tight - very slow build-up

COMMENTS:

DEPTHS PRIOR TO LOG SHIFT, FOR DETAILS SEE FINAL WELL REPORT.

SIDE WALL CORE DATA

Sample Number	Top Depth	Recov Amt (cm)	Swc Rec Type	Lithology Desc
Sample: 64	4118.50		E	
Sample: 63	4123.00	1.2	R	CLYST: Brish bl.firm.resinous lustre.massive.n calc.homogeneous.disseminated pyrite
Sample: 62	4128.00		L	
Sample: 61	4133.00		L	
Sample: 60	4139.50	1.1	R	CLYST: Brish bl.firm.crumbly.resinous lustre.massive.n calc.homogeneous.disseminated pyrite
Sample: 59	4143.00		L	
Sample: 58	4156.00		L	
Sample: 57	4161.00	1.4	R	CLYST: Brish bl.firm.resinous lustre.massive.n calc.homogeneous.disseminated pyrite
Sample: 56	4201.00		L	
Sample: 55	4204.50		L	
Sample: 54	4207.00		L	
Sample: 53	4210.00	1.0	R	SST: Light Brish gy.v f.fair sorting.sub ang.sub spherical.sl silty.siliceous? Cmt.poor to fair por.quartzose.trace pyr.
Sample: 52	4215.00	1.3	R	SST: Yellowish gy.v f.fair sorting.sub ang.sub spherical.slightly silty.siliceous? Cmt.poor to fair por.quartzose.trace
Sample: 51	4220.50	1.5	R	SST: Light Brish gy. v f to fine.fair sorting.sub ang and sub spherical.trace por.clean.quartzose.silty.clay bands.trace
Sample: 49	4225.00	2.0	R	SST: Med.light gy with gyish bl CLYST patches.v f to fine.equi-granular.well sorted.sub ang and sub spherical.
Sample: 50	4225.01	2.0	R	SST: trace por.clean.quartzose.silty.trace chlorite and pyrite
Sample: 48	4256.00	2.0	R	SST: Yellowish gy v f to fine.equi-granular.well sorted.sub ang and sub spherical.fair por.clean.quartzose.silty.trace c
Sample: 47	4260.00	1.0	R	SST: Yellowish gy v f to fine.equi-granular.well sorted.sub ang and sub spherical.fair por.clean.quartzose.silty.trace c
Sample: 46	4263.00	1.5	R	SST: Yellowish gy v f to fine.equi-granular.well sorted.sub ang and sub spherical.fair por.clean.quartzose.silty.trace c
Sample: 45	4267.00	1.0	R	SST: Yellowish gy v f to fine.equi-granular.well sorted.sub ang and sub spherical.fair por.clean.quartzose.silty.trace c
Sample: 44	4273.50	2.0	R	SST: Yellowish gy with Brish bl clay wisps.v f to fine.well sorted.sub ang and sub spherical.fair por.clean.quartzose. s
Sample: 43	4279.30	2.0	R	SST: Light gy.v f.well sorted.sub ang and sub spherical.fair por.clean.quartzose.very silty
Sample: 42	4286.00	1.2	R	SST: Light gy.v f.well sorted.sub ang and sub spherical.trace por.clean.quartzose.silty and very micaceous
Sample: 41	4293.00	1.5	R	SST: Light gy.v f.well sorted.sub ang and sub spherical.trace to fair por.clean.quartzose
Sample: 40	4309.00		E	
Sample: 39	4320.50		E	
Sample: 38	4325.00		L	
Sample: 37	4333.00		E	
Sample: 36	4339.00		E	
Sample: 35	4371.50	2.0	R	SST: Light gy.slightly friable v f to trace fine.fair to well sorted.fair por.quartzose.weak siliceous? Cmt.generally cl
Sample: 34	4416.00	2.7	R	SST: Light gy.slightly friable v f to trace fine.fair to well sorted.fair por.quartzose.weak siliceous? Cmt.generally cl
Sample: 33	4425.20	1.0	R	SST: With 4mm olive bl CLYST laminations
Sample: 32	4430.00	1.5	R	SST: As above.with Brish gy patches
Sample: 31	4439.00	2.0	R	SST: Very gy.v f to Med.poor sorting.sub ang.sub spherical.low por.siliceous? Cmt.quartzose.chlorite growths
Sample: 30	4448.50	1.5	R	SST: With 1mm CLYST laminations
Sample: 29	4452.00	1.0	R	SST: As above.with muscovite flakes and chlorite growths
Sample: 28	4460.00	1.5	R	SST: Med gy.speckled with yellowish gy.v f.silty.sub ang and non spherical.poor por.arg Cmt.clay patches
Sample: 27	4467.50	1.5	R	SLTST: Brish gy.firm.quite friable.predominantly homogeneous.rare Med to granule rounded and spherical quartz
Sample: 25	4470.00	1.5	R	SST: Med gy with Brish bl patchwork.firm.v f.trace fine to Med.poor sorting.sub ang.
Sample: 26	4470.01	1.5	R	SST: low spherical index.high silt and org matter content.low por.quartzose.trace chlorite
Sample: 24	4476.00	1.2	R	CLYST: Olive bl.firm.brittle.slightly flaky.with silt and fine to Med ang quartz inclusions
Sample: 23	4481.00		E	
Sample: 22	4486.00	1.0	R	CLYST: Olive bl.firm.brittle.slightly flaky.with silt and fine to Med ang quartz inclusions
Sample: 21	4493.50	1.0	R	CLYST: Becoming very silty
Sample: 20	4530.00	1.3	R	CLYST: As above.with numerous silty layers
Sample: 18	4540.00	1.5	R	CLYST: Br bl.firm.blocky.slight crumbly.grainy lustre in part.weakly calc.silt and v f quartz inclusions.
Sample: 19	4540.01	1.5	R	CLYST: traces of disseminated pyrite and occasional silt wisps
Sample: 17	4550.00	2.0	R	SST: Yel gy.friable.v f to Med.common interstitial silt particles.poor sorting.sub ang.non spherical.weak siliceous? Cmt
Sample: 16	4556.50	2.0	R	SST: As above.with 1-5mm thick CLYST bands
Sample: 15	4565.00	1.0	R	SST: Med dark gy.v f to fine.silt particles poorly sorted.sub ang.arg Cmt.low por.disseminated pyrite and mica
Sample: 14	4568.00	1.0	R	CLYST: As above.with thin SILTSSTONE bands
Sample: 13	4570.00	5.0	P	CLYST: Green bl.firm and indurated.slight grainy lustre.n calc.disseminated pyrite
Sample: 12	4576.00	1.0	R	SST: low spherical index.arg matter and clay patches.trace por.quartzose.trace mica and organic matter
Sample: 11	4576.00	1.0	R	SST: Light gy with Med dark gy patches.v f.with associated silt.sub ang.trace sub rounded.
Sample: 10	4580.00	1.7	R	CLYST: Olive gy.firm.slightly flaky.grainy lustre.n calc.silty and sandy lenses
Sample: 9	4590.00		E	
Sample: 8	4610.00		E	
Sample: 7	4624.00		E	
Sample: 6	4628.00		E	
Sample: 5	4635.00	1.5	R	SLTST: Light gyish Br.smoky hues.slightly friable.n calc.massive.trace v f quartz and abundant disseminated pyrite
Sample: 4	4642.00	1.5	R	SLTST: Light gyish Br.smoky hues.slightly friable.n calc.massive.trace v f quartz and disseminated pyrite
Sample: 3	4650.00	1.5	R	SLTST: Light gyish Br.smoky hues.slightly friable.n calc.massive.grading to CLYST
Sample: 2	4655.00		E	
Sample: 1	4655.00		E	

CONVENTIONAL CORE

Core Id	Top Depth	Base Depth	Top Shift Depth	Base Shift Depth	Recovered amount (m)
Core: 1	4230	4254	4238	4262	24,0
Core: 2	4342	4365	4350	4373	24,0
Core: 3	4377	4401	4385	4409	21,0
Core: 4	4495	4496	4503	4505	1,5
Core: 5	4499	4522	4507	4530	23,5