Eni Norge　**Norsk Hydro**　**Petoro**

PARTNERS

STATOIL

WELL **6608/10-11 S**

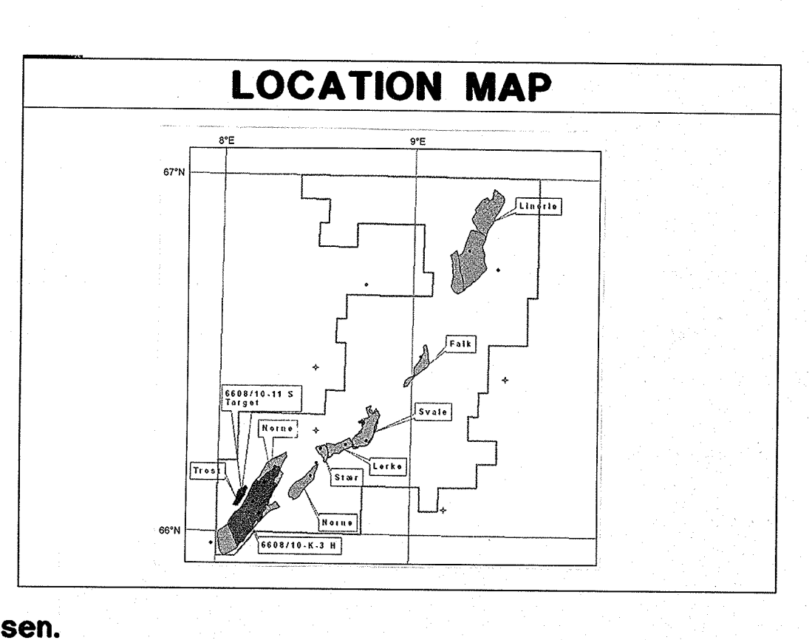
COMPOSITE LOG
1 : 500

PROSPECT STRUCTURE

TROST

AREA:	Norne
LICENCE:	PL 128
COORDINATES:	66° 00' 48.498" N 08° 03' 14.731" E
KB:	24 m
WATER DEPTH:	375.7 m MSL
TOTAL DEPTH:	3725.1 m MD RKB
FM. AT T.D.:	Tilje Fm.
SPUD DATE:	12.07.2006
RIG RELEASE:	15.08.2006, 23:59
WELL STATUS:	P&A
RIG:	Transocean Arctic
CONTRACTOR:	Transocean
GEOLOGISTS:	N.Townly, A.M.Horn, R.Hall, O.Giskeødegaard, J.Gilpin, L.C.Nilssen.
PREPARED BY:	Lena Charlotte Nilssen

LOCATION MAP



CASING DATA

13 3/8"	1366 m MD
9 5/8"	2845 m MD
7"	3391 m MD

LEAK OFF TESTS

FIT: 1.50 sg

VELOCITY SURVEY

Contractor: Read

Walk away VSP,
Interval: 3385 - 1200 m MD RKB

Vertical incident survey,
Interval: 3345 - 1200 m MD RKB

LOGS RUN　CONTRACTORS: MWD: BHI　WIRELINE: SCHLUMBERGER

MWD	Interval	Wireline	Interval
GR-Res-Dir-Press	1366-2851m	1A: PEX-DSI	3385-2848m
RAB-GR-Res-Dir-Press	2851-3392m	1A: MDT pre tests	2903-2948m
GR-Res-Dir-Press	3392-3725m	1A: VSP	3385-1200m
		2B: PEX-AIT	3721.6-3201m
		2A: CMR-GR	MISRUN
		2B: MDT-DSI	3681-3506m (MDT) 3720-3393m (DSI)
		2A: MSCT	MISRUN
		2C: MDT sampling	3510m

COMMENTS:

Well 6608/10-11 S was sidetracked from Norne well 6608/10-K-3 H below 13 3/8" casing shoe, at 1366 m MD RKB.

LITHOLOGICAL SYMBOLS

CONGLOMERATE	SHALE	MARL	COAL LIGNITE	FORAMS	MICA
SAND SANDSTONE	LIMESTONE	TUFF	WOOD FRAGS	BURROWS	KAOLINITE
SILT SILTSTONE	CHALK	SALT GEN'L	FOSSILS GEN'L	PYRITE	CHERT
CLAY CLAYSTONE	DOLOMITE	ANHYDRITE	SHELL FRAGS	GLAUCONITE	SIDERITE
OOZE					

CUTTINGS/FLUORESCENCE ◇　OIL SHOW ●　OIL/GAS SHOW ✹　GAS SHOW ☼

AZIMUTH & INCLINATION

SIDEWALL CORES
1.5 ▶ SIDEWALL CORE
2.8 ▷ NO RECOVERY
R 1.2 ▶ ROTARY SIDEWALL CORE

CORES　CORE NO

DST

RFT/FMT　SAMPLE

CASING SHOE / LINER

CHRONO STRAT UNCERTAINTY

Chron Strat	Litho Strat	Well Log	Lithological Descriptions

CLAYSTONE: olive grey to medium dark grey, blocky, soft, locally sticky, slightly calcareous, traces of glauconite, traces of limestone, very sandy, silty, traces of mica and pyrite.

SANDSTONE: clear to milky white quartz grains, locally pink, very fine to coarse, subangular to rounded, moderate to poor sorted, loose, traces of rock fragments.

KAI FORMATION
1387.0 m MD RKB / 1346.9 m TVD RKB
(-1322.9 m MSL, TWT: 1.349 sec.)

CLAYSTONE: medium grey to medium dark grey, soft, silty, traces of mica, traces of pyrite, moderate calcareous.

Traces of SANDSTONE: clear to milky white quartz grains, locally moderate reddish brown, very fine to coarse, subrounded to rounded, moderate to poor sorted.

CLAYSTONE: medium grey to light greenish grey, light grey, blocky, soft to firm, non to slightly calcareous, traces of glauconite.

LIMESTONE: light grey to greyish white, blocky, moderate hard, traces of micropyrite, microcrystalline, locally organic.

CLAYSTONE: greyish brown to pale yellowish brown, blocky, soft to firm, silty, micropyritic, micromicaceous, carbonaceous, non- to slightly calcareous.

Traces of SANDSTONE: clear to milky white, loose, subrounded to rounded, very fine to fine.

CLAYSTONE: dusky yellowish brown, greyish brown, moderate brown, soft to firm, crumbly, earthy texture, micromicaceous, occasionally coarse mica, micropyritic, traces of glauconite, occasional to abundant very fine quartz grains, slightly calcareous in parts.

CLAYSTONE: dusky yellowish brown, greyish brown, grading to pale yellowish brown, pale brown i.p. Soft, amorphous, earthy, sticky, occasional to abundant very fine mica, glauconite, carbonaceous material, slightly to occasionally moderately calcareous.

HORDALAND GROUP
BRYGGE FORMATION
1656.0 m MD RKB / 1578.3 m TVD RKB
(-1554.3 m MSL, TWT: 1.560 sec.)

CLAYSTONE: dusky yellowish brown, moderate brown, brownish black, soft to predominantly firm, earthy texture, blocky, micromicaceous, abundant very fine to coarse muscovite mica, fossil fragments, occasionally sandy, very fine, subangular quartz grains.

CLAYSTONE: dusky yellow brown, grading to moderate yellow brown, soft to firm, earthy texture, blocky in places, abundant muscovite, micromicaceous, abundant very fine to fine dark greenish black glauconite pellets, occasional sponge spicules, occasional to abundant very fine quartz.

BRYGGE TUFFACEOUS MEMBER
1760.0 m MD RKB / 1664.4 m TVD RKB
(-1640.4 m MSL)

TUFFACEOUS CLAYSTONE: bluish white, light greenish grey, grading to medium grey, medium dark grey, soft to firm, occasionally moderate hard, predominantly blocky, occasionally crumbly, occasional finely disseminated carbonaceous material.

TUFFACEOUS CLAYSTONE: medium grey, greenish grey, medium dark grey grading to greyish green, soft to predominantly moderate hard, crumbly to predominantly blocky, micropyritic, very occasional pyrite nodules, occasionally carbonaceous.

Traces of SANDSTONE: very fine to coarse quartz grains, occasional good hard pyrite cement.

LIMESTONE: light to medium light grey, light bluish grey, soft to firm, micro to cryptocrystalline.

TUFFACEOUS CLAYSTONE: medium dark grey grading to greyish green, pale brown and brownish grey, soft to predominantly moderate hard, crumbly to predominantly blocky to platy, micropyritic, pyrite nodules, occasionally carbonaceous. Traces of glauconite, calcareous.

TUFFACEOUS CLAYSTONE: pale brown to light brownish grey, light bluish grey, light grey, pale grey, soft, occasionally sticky, subblocky to platy, silty, pyrite nodules, non calcareous.

ROGALAND GROUP
TARE FORMATION
2005.0 m MD RKB / 1851.3 m TVD RKB
(-1827.3 m MSL, TWT: 1.819 sec.)

CLAYSTONE: light brownish grey to brownish grey, medium grey, light grey, light to dark greenish grey, subplaty to platy, soft to crumbly, occasionally sticky, silty, slightly calcareous, mica, pyrite.

Traces of LIMESTONE: light grey to medium light grey, light bluish grey, microcrystalline.

TANG FORMATION
2079.0 m MD RKB / 1906.2 m TVD RKB
(-1882.2 m MSL)

CLAYSTONE: greenish grey to dark greenish grey, pale yellowish brown, subplaty to platy, soft, crumbly, occasionally sticky, calcareous.

LIMESTONE: white, light grey to medium light grey, light bluish grey, microcrystalline.

SHETLAND GROUP
SPRINGAR FORMATION
2129.0 m MD RKB / 1943.5 m TVD RKB
(-1919.5 m MSL, TWT: 1.910 sec.)

CLAYSTONE: light olive grey to olive grey, medium grey, soft, crumbly, occasionally sticky, platy, calcareous.

Traces of LIMESTONE: white, soft.

CLAYSTONE: dark olive grey, light olive grey to olive grey, medium grey, soft, crumbly, occasionally sticky, platy, calcareous.

CLAYSTONE: greenish black, dark greenish grey, olive black, firm to moderate hard, plastic, blocky, subfissile in parts, micromicaceous, traces of very fine muscovite, microcarbonaceous.

Traces of DOLOMITE: light olive grey, pale yellowish brown, greyish orange, yellowish grey, soft to hard, amorphous to occasionally splintery, crypto to microcrystalline, grading to LIMESTONE in places.

NISE FORMATION
2295.0 m MD RKB / 2069.0 m TVD RKB
(-2045.0 m MSL)

CLAYSTONE: medium dark grey to dark greenish grey, fim to moderate hard, blocky, micromicaceous, micropyritic, pyrite nodules.

CLAYSTONE: medium dark grey, dark grey to dark greenish grey, firm to moderate hard, blocky, micromicaceous, microcarbonaceous, occasional very fine muscovite.

LIMESTONE: light olive grey, greyish orange, yellowish grey, soft to hard, amorphous to splintery, crypto to microcrystalline.

SILTSTONE: medium dark grey, dark grey, moderate hard, crumbly to blocky, micromicaceous, slightly calcareous cement, occasionally sandy, grading to CLAYSTONE.

CLAYSTONE: dark grey, dark brownish grey, dark greenish grey, firm to hard, blocky, micromicaceous, microcarbonaceous.

Traces of LIMESTONE: light olive grey, greenish grey, firm to moderate hard, blocky, very argillaceous, grading to calcareous CLAYSTONE.

CLAYSTONE: dark grey, dark brownish grey, dark greenish grey, firm to hard, blocky, micromicaceous, microcarbonaceous, rare pyrite nodules.

LIMESTONE: light olive grey, greenish grey, firm to moderate hard, blocky, very argillaceous, grading to CLAYSTONE.

KVITNOS FORMATION
2600.0 m MD RKB / 2307.2 m TVD RKB
(-2283.2 m MSL)

CLAYSTONE: dark grey, dark brownish grey, dark greenish grey, firm to hard, blocky, micromicaceous, microcarbonaceous.

CLAYSTONE: medium dark grey, hard, crumbly, silty, pyrite nodules.

CLAYSTONE: dark grey, dark olive grey, dark brownish grey, dark greenish grey, firm to hard, occasionally crumbly, blocky, non to slightly calcareous, occasionally silty, occasionally pyritic nodules.

LIMESTONE: pale yellow to ochre brown, soft.

CLAYSTONE: dark grey, dark brownish grey, traces of dark greenish grey, waxy to earthy texture, hard, blocky, non swelling, slightly calcareous, dolomitic in parts, crypyoturgid, traces of pyrite.

LIMESTONE: light grey, hard, blocky, very argillaceous, cryptocrystalline, dolomitic, pyritic in parts.

CROMER KNOLL GROUP
LYSING FORMATION
2909.0 m MD RKB / 2560.9 m TVD RKB
(-2536.9 m MSL)

SANDSTONE: brown coated, clear quartz grains, fine to medium, occasionally silty, subangular to subrounded, commonly recovered as loose grains. Olive grey, soft, friable, ashy, weak argillaceous matrix, non calcareous, low visible porosity.

LANGE FORMATION
2924.0 m MD RKB / 2573.4 m TVD RKB
(-2549.4 m MSL)

Traces of DOLOMITE: dark grey to dark brownish grey, very hard, blocky.

CLAYSTONE: olive grey, hard to firm, blocky, non calcareous, silty, trace micromica.

LYR FORMATION
2956.0 m MD RKB / 2599.9 m TVD RKB
(-2575.9 m MSL, TWT: 2.470 sec.)

CLAYSTONE: very light grey, dark grey, firm to hard, amorphous, subblocky, carbonaceous, sandy/silty, micromicaceous.

LIMESTONE: light grey, firm, crumbly.

CLAYSTONE: dark grey to olive black, minor brownish grey, blocky, firm to moderate hard, traces of carbonaceous material, locally silty, traces of pyrite, rare micromica.

LIMESTONE: pale yellowish brown, moderate hard, blocky, locally argillaceous, microcrystalline, locally grading to DOLOMITE.

CLAYSTONE: olive black to brownish black, firm, ashy, blocky, carbonaceous, slightly calcareous/dolomitic.

VIKING GROUP
SPEKK FORMATION
3106.5 m MD RKB / 2722.2 m TVD RKB
(-2698.2 m MSL, TWT: 2.553 sec.)

CLAYSTONE: olive black to brownish black, firm, ashy, blocky, carbonaceous, slightly calcareous/dolomitic, pyrite. Also dark greenish grey to greenish black, waxy texture, firm, subblocky, glauconite.

LIMESTONE: pale yellowish brown, moderate hard, blocky, locally argillaceous, microcrystalline, locally grading to DOLOMITE.

MELKE FORMATION
3152.5 m MD RKB / 2760.0 m MD RKB
(-2736.0 m MSL, TWT: 2.580 sec.)

CLAYSTONE: olive black to brownish black, dark greenish grey, firm, waxy texture, blocky, carbonaceous, non to slightly calcareous/dolomitic, pyrite.

DOLOMITE: dark yellowish brown, firm, brittle, blocky, very argillaceous.

Traces of SANDSTONE: clear, loose quartz grains, silty to very fine, subrounded to subangular.

CLAYSTONE: olive black to brownish black, hard, blocky, sandy/silty, microcarbonaceous, micromicaceous, pyrite.

LIMESTONE: dusky yellowish brown, hard, crumbly, argillaceous, crystalline.

CLAYSTONE: olive black to brownish black, hard, blocky, silty, sandy, slightly calcareous, microcarbonaceous, micromicaceous, pyrite.

CLAYSTONE: olive black to brownish black, soft to firm, subblocky, silty, crumbly in parts, micropyritic, slightly carbonaceous, slightly calcareous, grading to SILTSTONE in parts, traces of pyrite.

MELKE SANDSTONE MEMBER 3

Traces of SANDSTONE: clear to milky white, translucent, very fine to fine grains, occasionally coarse, subanguar to subrounded, olive grey and argillaceous matrix, slightly calcareous and loose to firm cement containing finely disseminated carbonaceous material.

MELKE SANDSTONE MEMBER 2

MELKE SANDSTONE MEMBER 1

CLAYSTONE: olive black to brownish black, occasionally black, soft to hard, amorphous to subblocky, silty, micropyritic, slightly carbonaceous, occasionally slightly calcareous, occasionally grading to SILTSTONE.

FANGST GROUP
NOT FORMATION
3479.6 m MD / 3028.2 m TVD RKB
(-3004.2 m MSL)

LIMESTONE: yellowish brown, dark yellowish brown, angular, subblocky, firm to hard, crumbly, dolomitic, micritic, microcrystalline.

SANDSTONE : loose quartz grains, clear, translucent and milky white, very fine to fine, moderate to well sorted, subangular to subrounded, spherical. Traces of pale grey to milky white, weak calcareous cemented sandstone fragments, very occasional weak silicate cement and traces of pyrite.

CLAYSTONE: brownish black to olive black, firm to moderately hard, angular to subblocky, silty grading to SILTSTONE and locally grading to very fine SANDSTONE, micromica and micropyrite, traces of pyrite nodules, non calcareous.

ILE FORMATION
3550.4 m MD RKB / 3089.9 m TVD RKB
(-3065.9 m MSL, TWT: 2.803 sec.)

SANDSTONE: clear, translucent, rare pink, very fine to fine, predominantly fine and occasionally medium, moderate to well sorted, subrounded, good sphericity, predominantly recovered as loose quartz grains. Calcareously cemented sandstone fragments, pale brown matrix, silty, pyritic.

CLAYSTONE: dark brownish grey, brownish black, firm to moderate hard, subblocky, silty, micromicaceous, micropyritic.

SANDSTONE: clear to translucent to milky white, very fine to coarse, predominantly medium, subangular to subrounded, spherical, poorly sorted, becoming moderate sorted. Light olive grey and loose cement, occasionally dark yellowish brown and calcareous matrix, glauconite.

LIMESTONE: very light grey to light grey, soft, subblocky, very argillaceous, sandy, microcrystalline, dolomitic.

CLAYSTONE: dark brownish grey, olive grey, firm, silty, micropyritic in parts and occasionally calcareous.

BÅT GROUP
TOFTE FORMATION
3637.6 m MD RKB / 3166.7 m TVD RKB
(-3142.7 m MSL, TWT: 2.848 sec.)

SANDSTONE: clear to translucent, very fine, occasionally coarse, poor to well sorted, subangular to subrounded. Light olive grey to olive grey matrix, very argillaceous, loose and non- to slightly calcareous, local pyrite nodules and glauconite.

CLAYSTONE: dark brownish grey, olive grey, olive black to black, firm, silty, micropyritic in parts and occasionally calcareous, organic rich black fragments.

TILJE FORMATION
3695.0 m MD RKB / 3216.9 m TVD RKB
(-3192.9 m MSL, TWT: 2.877 sec.)

SANDSTONE: milky white to smoky grey, translucent, very fine to very coarse, subangular to subrounded, poor to moderate sorted, loose to hard silica cement, occasional calcareous & pyritic cement, light olive grey & occasional greenish grey matrix.

TD at 3725.1 m MD RKB / 3243.3 m TVD RKB

Chron Strat	Litho Strat	Well Log	Lithological Descriptions