Paladin
Resources (Norway) Limited

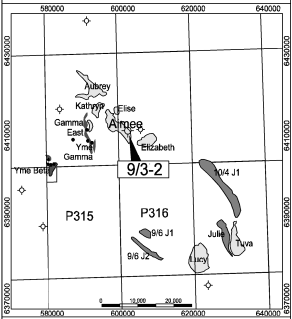
9/3-2

1:500
COMPOSITE WELL LOG

GENERAL WELL DATA

COUNTRY/AREA :	Norway North Sea
BLOCK :	9/3
LICENSE :	PL 316
OPERATOR :	Paladin Norway Ltd
License Interest :	Paladin (Norway) Ltd Talisman Energy Norge AS Revus Energy AS Petra AS
Pre-Drill Well Status :	Exploration
Prtimary Objective :	Sandnes Sandstone Mbr
Post Completion Well Status :	P & A
Formation at TD:	Skaggerak
Rig Name :	Maersk Giant
RTE :	46 m
Water depth :	100.8 m
Spud Date :	23/10/2005
TD Date :	21/11/2005
Rig Released :	09/12/2005

LOCATION MAP



ENGINEERING DATA

HOLE SIZE	DEPTHS	CASING	SHOE	MUD SYSTEM
36" x 36"	147 - 219 m	30"	210.7 m	Sea-water
9 7/8" x 24"	210.7 - 507 m	20"	501.4 m	Sea-water/KCl
17 1/2"	501.4 - 1149 m	13 3/8"	1144 m	Seawater
8 1/2"	1144 - 3154 m			Enviromul OBM

WELL LOCATION

	Surface Location
Latitude :	57° 49' 25.791"
Longitude :	04° 42' 39.638"
Easting :	601 631.20 m E
Northing :	6 410 52.85m N

	TD Location
Latitude :	57° 49' 27.027"
Longitude :	04° 42' 42.875"
Easting :	601 683.65 m E
Northing :	6 410 566.42m N

TD Depth:	3154.0m MDRT 3106.0 m TVDSS

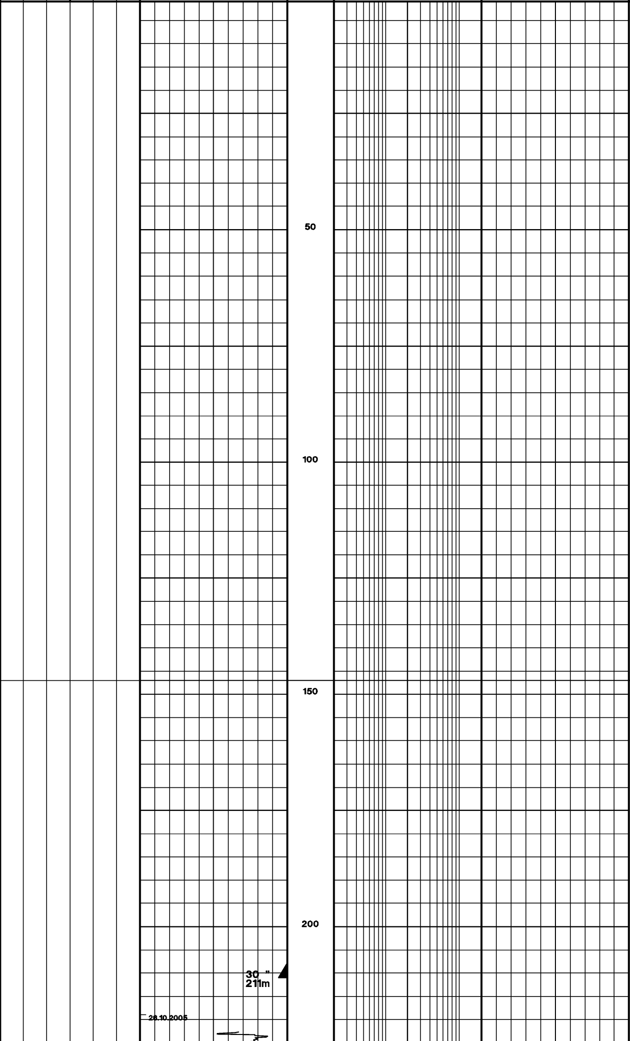
WIRELINE LOG COVERAGE

RUN	DATE	INTERVAL	SUITE
1A	25/11/2005	1144 - 3156 m	PEX-DSI-AIT

MLWD LOG COVERAGE

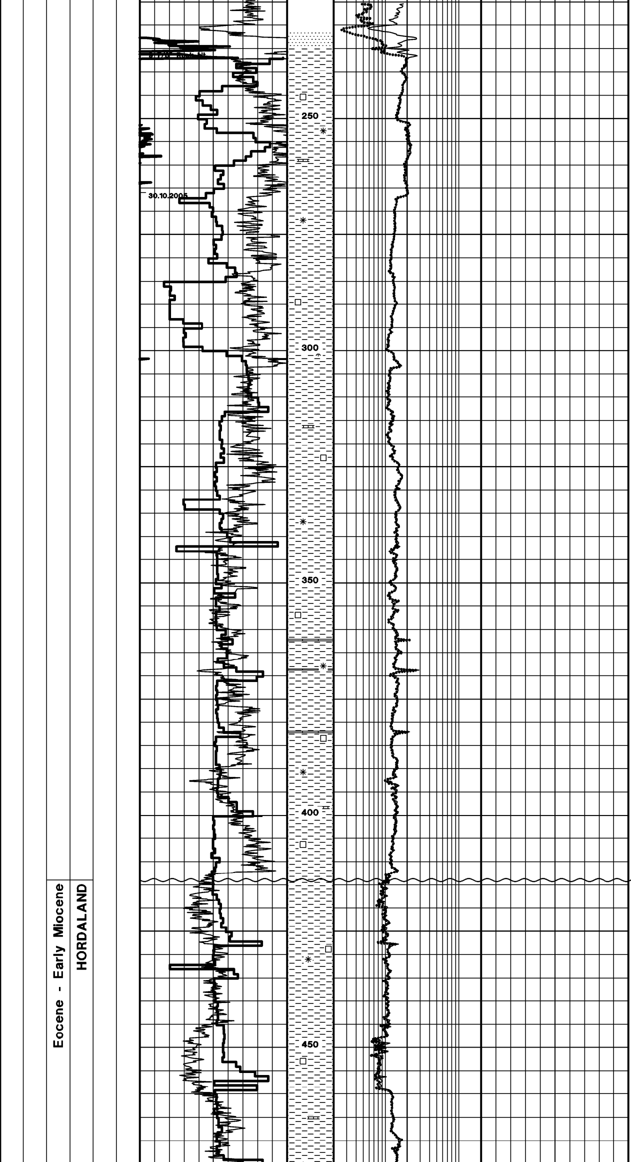
RUN	INTERVAL	SUITE
1	211 - 507m	DGR/EWR
2	507 - 1144m	DGR/EWR
3	1144 - 2065m	DGR/EWR
4	2065 - 3154m	DGR/EWR

CHRONO/LITHO STRATIGRAPHY	GAMMA RAY	DEPTH AND LITH	RESISTIVITY	NEUTRON/DENSITY SONIC	LITHOLOGY DESCRIPTION
SYSTEM SERIES STAGE GROUP FORMATION MEMBER	0 GR(API) 150 6.00 HCAL(Inches) 16 100 ROP(m/hr) 0 0 KGBR(API) 150		0.20 AHT90(Ohmm) 20 0.20 AHT30(Ohmm) 20 0.20 AHO90(Ohmm) 20 0.20 AHO30(Ohmm) 20 0.20 SEDP(Ohmm) 20 0.20 SESP(Ohmm) 20	1.95 RHOZ(g/cc) 2.95 0.45 NPHI(v/v) -0.15 140 DTCO(us/ft) 40	



Seabed @ 147 m MD BRT.

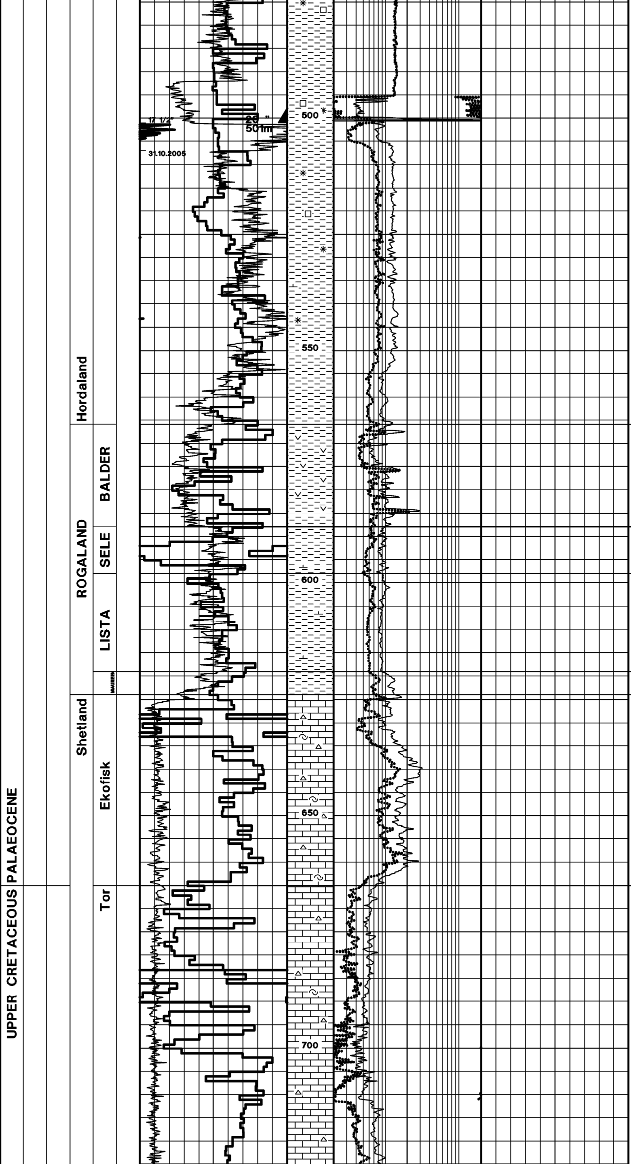
9 5/8" Pilot Hole / 24" Section - 1.07 sg WBM



CLAYSTONE: light greyish green, medium dark grey, soft, sticky, trace Pyrite, trace becoming abundant Glauconite with trace of SAND: varicoloured, fine to granules becoming fine to medium, poor to moderately sorted, angular to subrounded, loose and trace of LIMESTONE: white, hard, blocky, microcrystalline

HORDALAND GP 414.0 m MDRT (368.0 m TVDSS)

CLAYSTONE: greenish grey, medium dark grey, soft, sticky, trace Pyrite, trace to abundant Glauconite interbedded with SAND: varicoloured, very fine to fine occasionally fine to medium, poor to moderately sorted, angular to subrounded, loose and rare to trace LIMESTONE: white, hard, blocky, microcrystalline



17 1/2" Section - 1.03 sg WBM

CLAYSTONE: light greenish grey, greenish grey, soft becoming soft to firm, sticky, rare trace Pyrite, trace Glauconite and trace becoming rare LIMESTONE: light greenish grey, greenish gray, soft, argillaceous

BALDER FM 566.0 m MDRT (520.0 m TVDSS)

CLAYSTONE: olive black, greenish black, dark greenish grey, soft to firm, sticky. TUFF: medium grey, light grey, soft-firm, black specs

SELE FM 588.0 m MDRT (542.0 m TVDSS)

LISTA FM 598.0 m MDRT (551.0 m TVDSS)

CLAYSTONE: olive black, greenish black, olive grey, soft to firm, slightly calcareous.

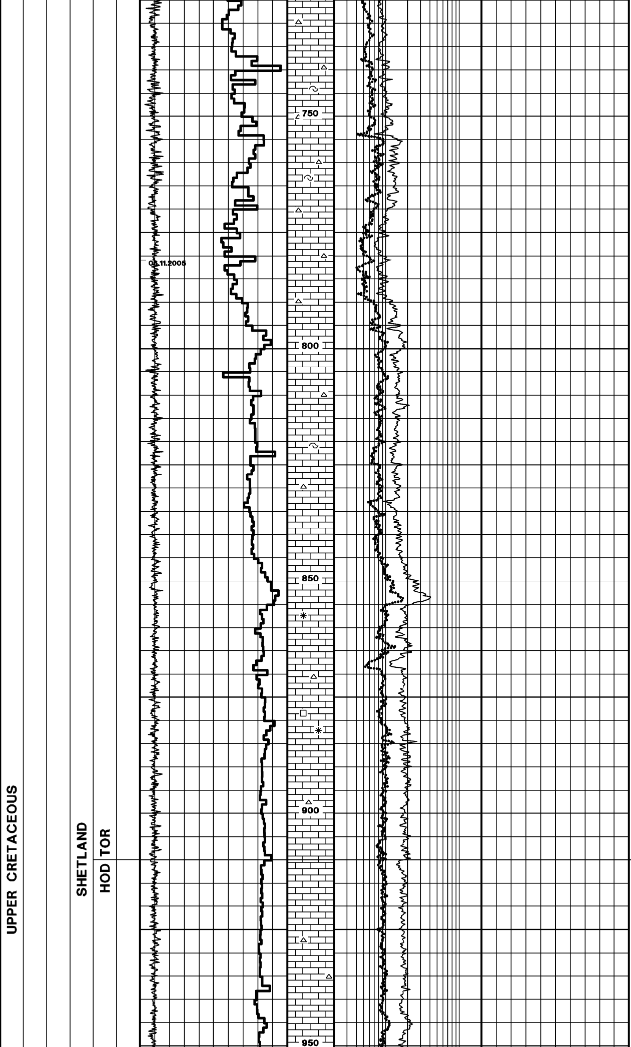
MAUREEN FM 619.0 m MDRT (573.0 m TVDSS)

EKOFISK FM 624.0 m MDRT (578.0 m TVDSS)

LIMESTONE: white to off white, hard to very hard, iritic, occasionally cryptocrystalline, abundant Bryozoa, trace angular to very angular, hard to very hard chert.

TOR FM 665.0 m MDRT (619.0 m TVDSS)

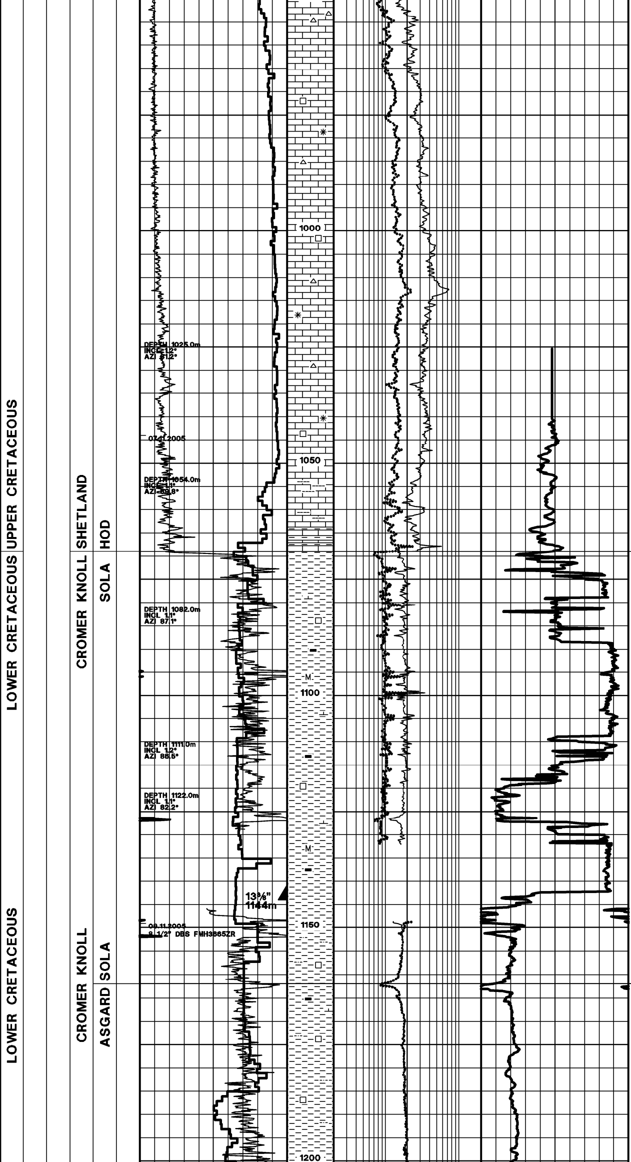
LIMESTONE: white to off white, hard to very hard, micritic, occasionally cryptocrystalline, traces of Bryozoa, abundant angular to very angular, hard to very hard chert.



LIMESTONE: white to off white, hard to very hard, micritic, occasionally cryptocrystalline, traces of fossil fragments, traces of angular to very angular, hard to very hard chert.

LIMESTONE: white to off white, hard to very hard, micritic, occasionally cryptocrystalline, traces of fossil fragments, traces of angular to very angular, hard to very hard chert, traces of Glauconite, traces of Pyrite

HOD FM 910.0 m MDRT (864.0 m TVDSS)



LIMESTONE: white to off white, locally light grey, soft to firm, occasionally hard and blocky, micritic, occasionally cryptocrystalline, traces of fossil fragments, traces of angular to very angular, hard to very hard chert, good traces of Glauconite, traces of Pyrite, with traces of CLAYSTONE: dark greenish grey, soft to firm, amorphous to sub-blocky, slightly silty, slightly calcareous.

SOLA FM 1069.0 m MDRT (1023.0 m TVDSS)

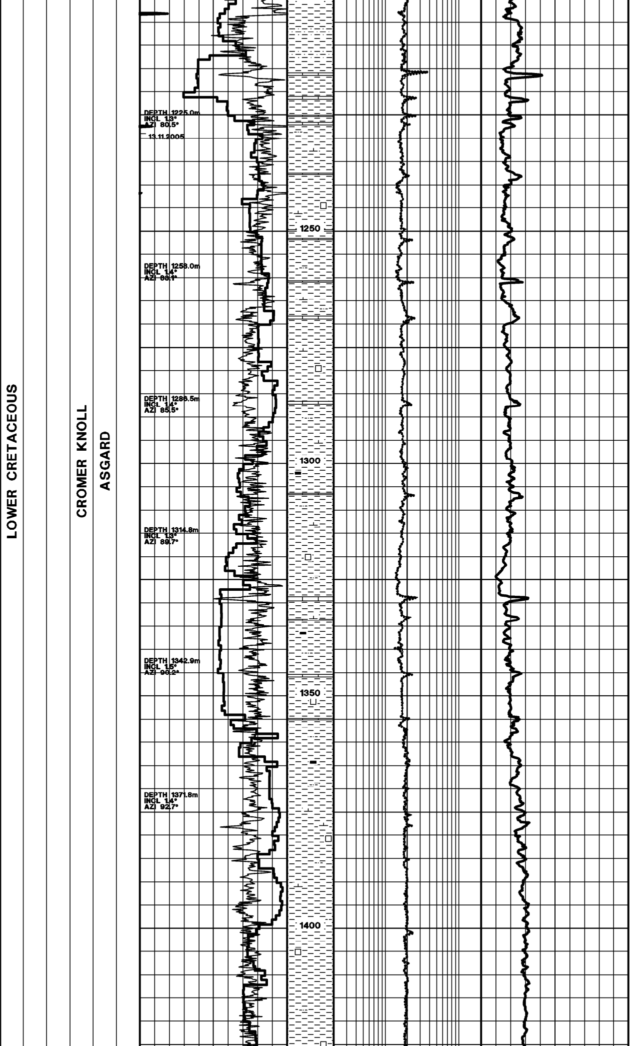
CLAYSTONE : olive grey to dark greenish grey, occasionally dark grey, soft to firm, amorphous to sub-blocky, moderately calcareous, traces of carbonaceous fragments, micaceous, occasionally abundant micropyrite.

LOT: 1.68 SG EQMW

Hole displaced to 1.30 SG OBM

ASGARD FM 1162.0 m MDBRT (1116.0 m TVDSS)

CLAYSTONE: medium to dark grey to greyish black, firm to moderately hard, amorphous to sub-blocky, slightly calcareous, slightly silty, good trace of crystalline pyrite, traces of carbonaceous material, with thin interbeds of SILTSTONE: dark brown to dark grey, firm, locally friable, sub-blocky, non calcareous, traces of carbonaceous material and thin stringers of LIMESTONE: light brown, firm to moderately hard, angular to blocky, micritic



MW: 1.30 SG

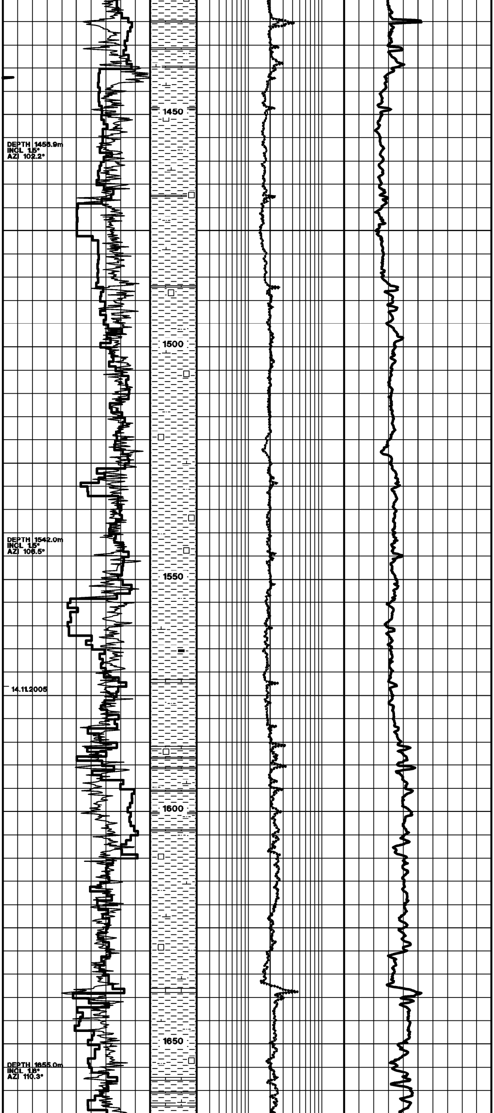
CLAYSTONE: medium to dark grey to greyish black, firm to moderately hard, amorphous to sub-blocky, slightly calcareous, slightly silty, good trace of crystalline pyrite, traces of carbonaceous material, with thin interbeds of SILTSTONE: dark brown to dark grey, firm, locally friable, sub-blocky, non calcareous, traces of carbonaceous material, occasionally slightly sandy and thin stringers of Limestone.

MW: 1.30 SG

LOWER CRETACEOUS

CROMER KNOLL

ASGARD

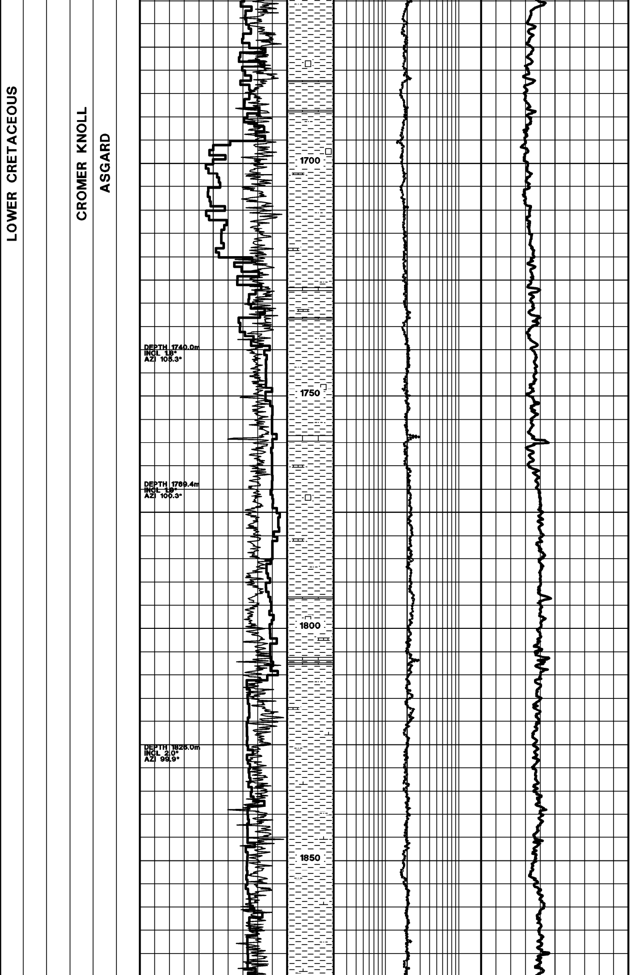


MW: 1.30 SG

CLAYSTONE: medium grey to greyish black, firm to moderately hard, sub-blocky to blocky, slightly calcareous, slightly silty in part, good trace of crystalline pyrite, traces of carbonaceous specks, with minor stringers of **LIMESTONE:** off white, buff, firm to moderately hard, angular to blocky, chalky texture, microcrystalline.

MW: 1.30 SG

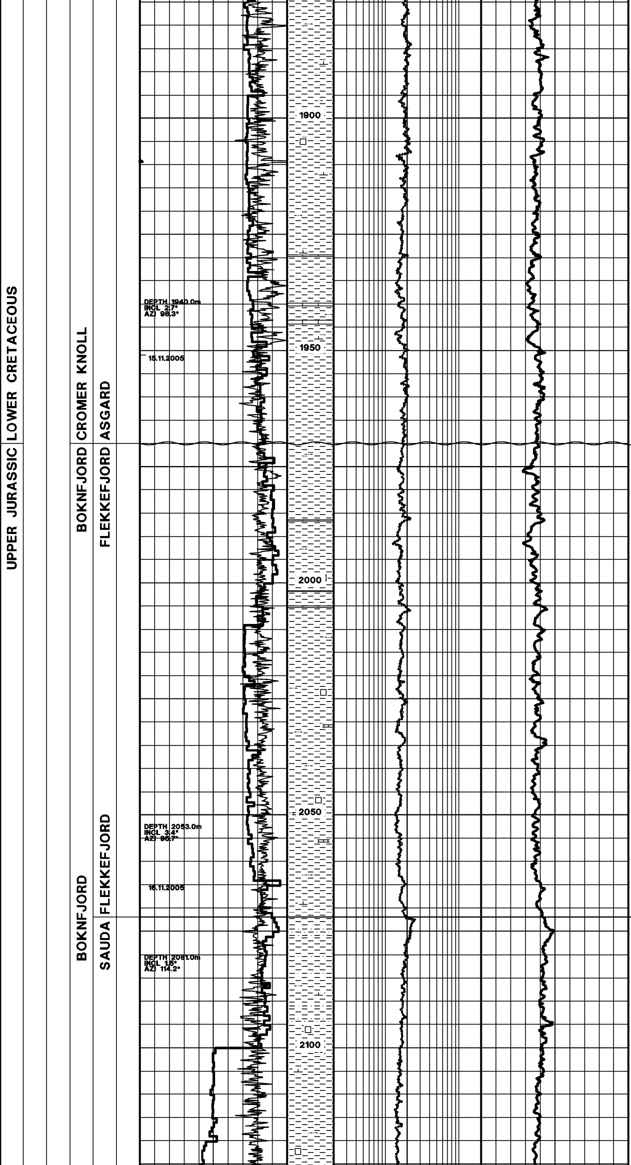
CLAYSTONE: medium grey to dark grey, firm to moderately hard, sub-blocky to blocky, slightly calcareous, slightly silty in part, locally very silty and grading to siltstone, common micropyrite, good trace of crystalline pyrite, traces of carbonaceous specks, with minor stringers of **LIMESTONE:** off white, buff, firm to moderately hard, angular to blocky, microcrystalline, common dark grey argillaceous laminations.



MW: 1.30 SG

CLAYSTONE: medium grey , rarely dark grey, firm to moderately hard, sub-blocky to blocky, slightly calcareous, slightly silty in part, locally very silty and grading to siltstone, occasionally very finely sandy, common micropyrite, good trace of crystalline pyrite, traces of carbonaceous material. with minor stringers of LIMESTONE: buff to medium yellow brown, firm to moderately hard, angular to blocky, microcrystalline, common dark grey argillaceous laminations, poor visible porosity.

MW: 1.30 SG



MW: 1.30 SG

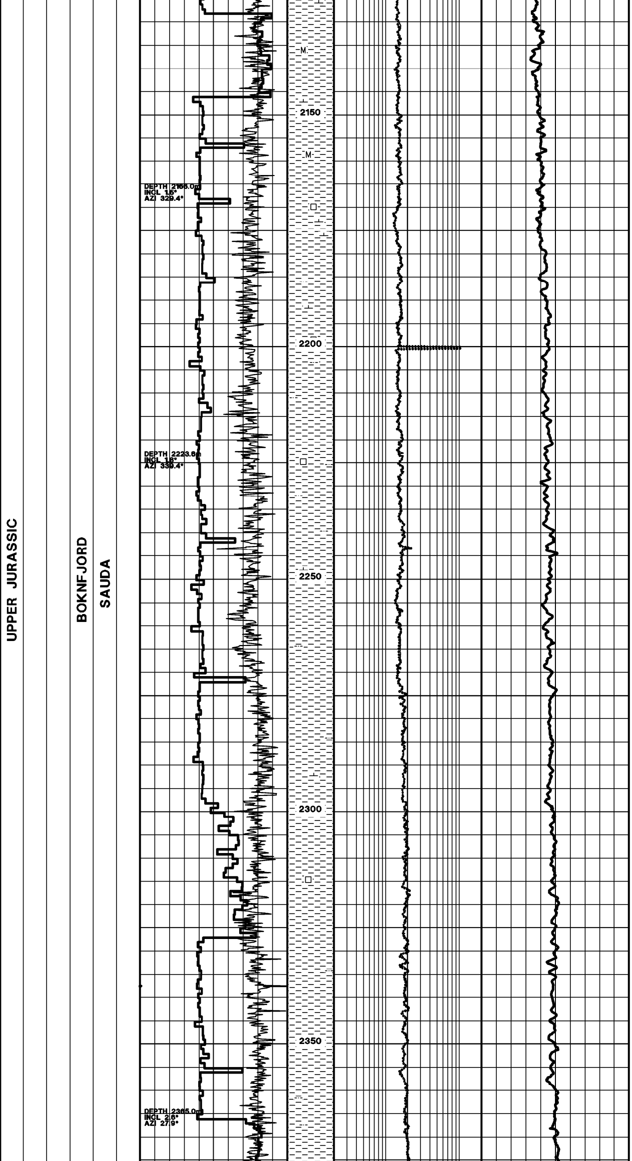
FLEKKEFJORD FM 1970.0 m MDRT (1924.0 m TVDSS)

CLAYSTONE: dark grey, firm to moderately hard, sub-blocky to blocky, non calcareous, slightly silty in part, rare pyrite, trace carbonaceous specks, - with minor stringers of LIMESTONE: buff yellow brown, firm to moderately hard, angular to blocky, microcrystalline, slightly argillaceous.

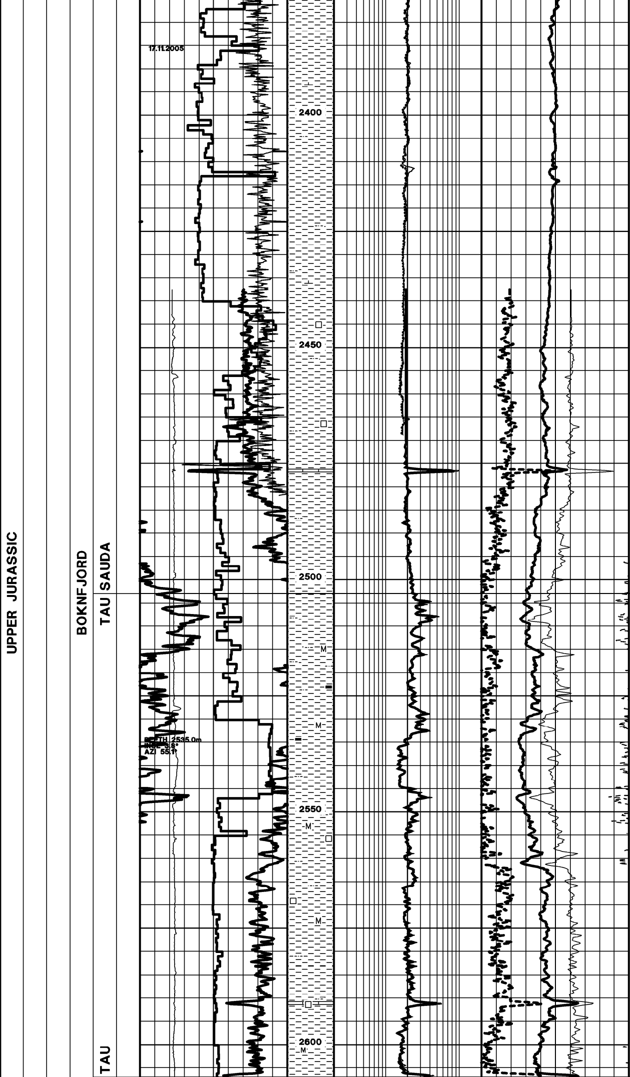
MW: 1.03 SG

SAUDA FM 2072.0 m MDRT (2026.0 m TVDSS)

CLAYSTONE: dark grey to dark olive black, moderately hard to hard, blocky, slightly calcareous, slightly silty, traces of micropyrite, traces of carbonaceous material, with thin interbeds of SILTSTONE: light to medium grey, firm, locally friable, blocky, micromicaceous, slightly calcareous, common dark grey argillaceous laminations.



MW: 1.35 SG

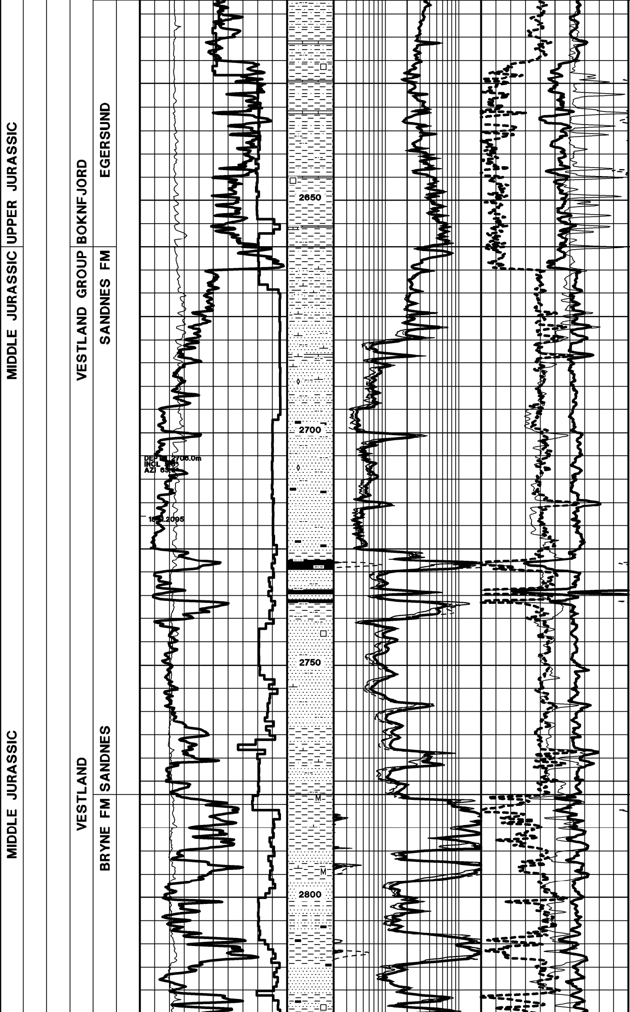


CLAYSTONE: olive grey, firm to moderately hard, blocky to sub angular, slightly calcareous, slightly silty, traces of micropyrite, occasional traces of carbonaceous material, with thin interbeds of SILTSTONE: medium grey, firm, locally friable, blocky, micromicaceous, slightly calcareous.

TAU FM 2503.0 m MDRT (2456.0 m TVDSS)

CLAYSTONE: dark grey, dark grey brown, firm to moderately hard, sub blocky, occasionally earthy texture, slightly calcareous, silty, locally grading to siltstone, abundant carbonaceous fragments, with minor interbeds of LIMESTONE: medium brown, hard, angular, microcrystalline, occasional argillaceous laminations.

ERGERSUND FM 2607.0 m MDRT (2559.7 m TVDSS)



SILTSTONE: light to medium grey, friable to firm, amorphous to sub-blocky, slightly calcareous, argillaceous and grading to claystone, trace glauconite, trace pyrite, no shows. Interbedded with CLAYSTONE: dark grey, moderately hard to hard, sub-blocky, silty, traces of micromica, traces of pyrite, with minor interbeds of LIMESTONE: medium brown, hard, angular, microcrystalline, occasional argillaceous laminations, poor visible porosity.

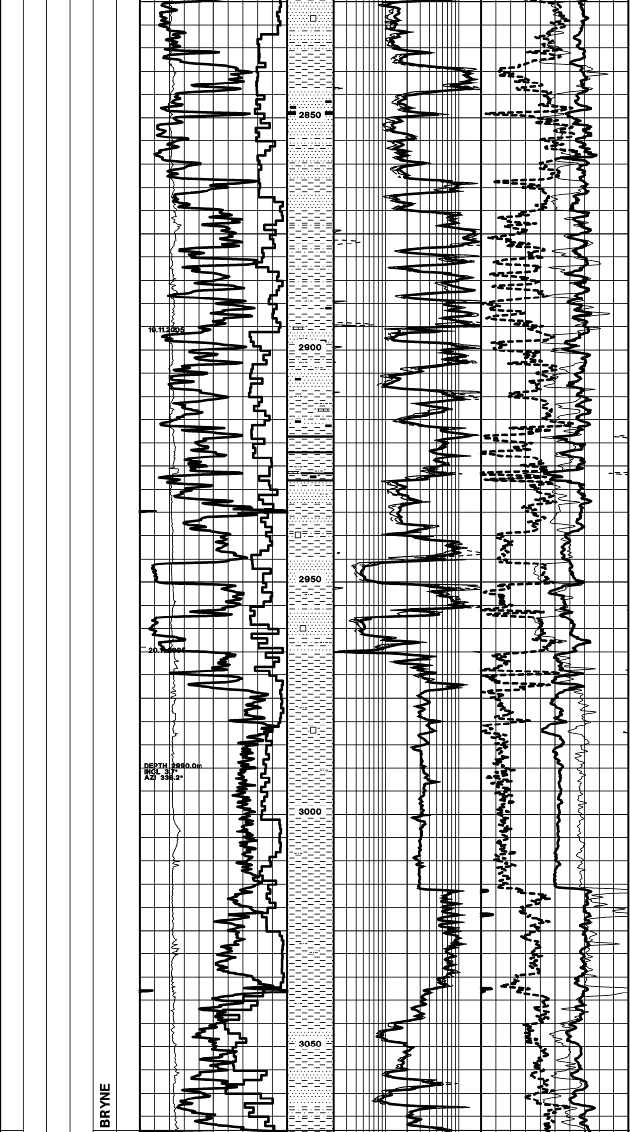
SANDNES FM 2660.0 m MDRT (2612.6 m TVDSS)

SANDSTONE: off white, pale grey brown, soft to firm, friable, crumbly, calcareous matrix, quartz grains, clear, translucent, occasionally white, very fine to fine, occasionally medium, sub angular, sub rounded, weak siliceous cement, occasionally calcitic, poor to moderately sorted, NO SHOWS. grading to SILTSTONE: pale grey brown, pale grey, soft to firm, amorphous to sub blocky, calcareous, trace glauconite, trace pyrite, trace carbonaceous fragments.

MW: 1.35 SG

BRYNE FM 2777.9 m MDRT (2730.2 m TVDSS)

SANDSTONE: quartz, light grey to medium grey, very fine to fine, occasionally medium, well sorted, sub-rounded, abundant argillaceous matrix, traces of pyrite, and glauconite, poor visible porosity, No direct fluorescence, rare slow flooding white cut, very pale white residual ring, with traces of COAL: black, hard, angular, brittle, conchoidal fracture, vitreous luster, with interbeds of SILTSTONE: medium to dark grey, friable to firm, sub-blocky, slightly calcareous, trace pyrite.

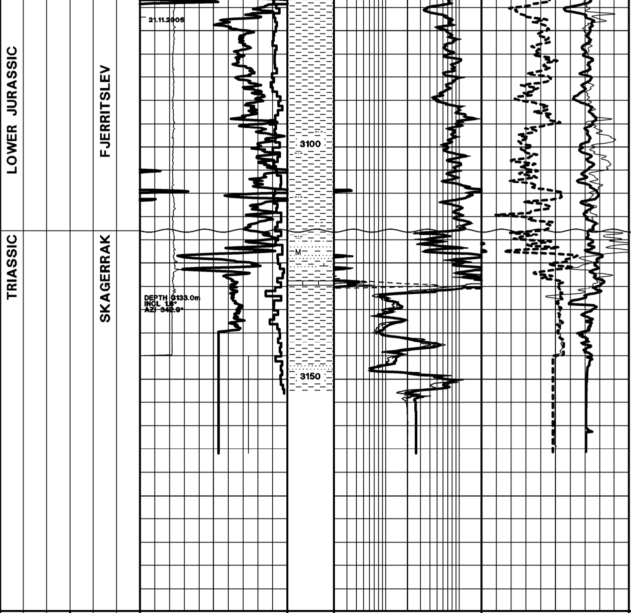


MW: 1.35 SG

CLAYSTONE: medium grey, pale grey brown, firm to moderately hard, sub blocky to blocky, non calcareous, occasionally carbonaceous, non calcareous, locally silty, with traces of COAL: black, hard, angular, brittle, conchoidal fracture, vitreous luster, with interbeds of SILTSTONE: medium to dark grey, friable to firm, sub-blocky, locally very sandy, grading to sandstone in places.

CLAYSTONE: dusky yellowish brown, firm to moderately hard, sub-blocky to blocky, slightly silty, slightly to moderately calcareous, trace pyrite, common carbonaceous laminations.

FJERRITSLEV FM 3068.0 m MDRT (3019.7 m TVDSS)



CLAYSTONE: dark grey, occasionally dusky brown, rarely dark brown, firm to moderately hard, sub fissile, non calcareous, carbonaceous streaks, micro-micaceous, locally silty.

SKAGERRAK FM 3118.0 m MDRT (3069.6 m TVDSS)

CLAYSTONE: red brown, moderately hard, blocky, silty, grading to siltstone, micromicaceous, becoming dark grey, moderately hard, blocky, silty, slightly calcareous, interbedded with SILTSTONE: medium to dark grey, firm to moderately hard, blocky, slightly calcareous, interbedded with SANDSTONE: quartz, light grey, very fine to fine, well sorted, sub rounded, abundant off white argillaceous matrix, calcareous / silicaceous cement, friable, poor visible porosity, no shows.

LIMESTONE: light grey, firm to moderately hard, blocky, microcrystalline.

TD REACHED ON 21st NOV 2005
DRILLERS TD 3154.0 m MDRT (3106.0 m TVDSS)
LOGGERS TD 3156.0 m MDRT (3107.5 m TVDSS)
RUN WIRELINE: 1A PEX-DSI-AIT

SYSTEM SERIES STAGE GROUP FORMATION MEMBER	0 KGBR(API) 150 100 ROP(m/hr) 0 6.00 HCAL(inches) 16 0 GR(API) 150		0.20 SESP(Ohmm) 20 0.20 SEDP(Ohmm) 20 0.20 AHO30(Ohmm) 20 0.20 AHO90(Ohmm) 20 0.20 AHT30(Ohmm) 20 0.20 AHT90(Ohmm) 20	140 DTCO(us/ft) 40 0.45 NPHI(v/v) -0.15 1.95 RHOZ(g/cc) 2.95	
CHRONO/LITHO STRATIGRAPHY	GAMMA RAY	DEPTH AND LITH	RESISTIVITY	NEUTRON/DENSITY SONIC	LITHOLOGY DESCRIPTION