AGIP ARCHIVIO POZZI AGEO

# GULF ITALIA CO.

AGIP - AMI ARCHIVIO CEDI

E/PROF
2459 BN

# WELLSITE LOG

WELL : *MODI 1x*

GULF INTEREST : *50 %*

LOCATION : *Latitude 44° 07' 20.5" N.* *Longitude 0°41' 30" W. of M. Mario, Rome* *11° 45' 38" E. of Greenwich*

ELEVATIONS : *1763.32'* KB : *1747'* GROUND :

TOTAL DEPTH : *12,211' (3722 m.)* DRILLER : *12,180'* SCHLUM.

MOVE ON DATE : *August 17, 1971*

SPUD DATE : *August 31, 1971*

COMPLETION DATE : *February 1, 1972*

RIG RELEASE DATE : *February 4, 1972*

PLATFORM NAME : *—*

CONTRACTOR & RIG *PERGEMINE NATIONAL 80 B*

CASING : *20" @ 701' ; 13 ⅜" @ 3490' ; 9 ⅝" @ 6514' ; 7" @ 8865'*

ROCK BITS USED : *58*

CONVENTIONAL CORES : *—*

SIDEWALL CORES : *—* ATTEMPTED *—* RECOVERED *—*

SCHLUMBERGER SURVEYS : *Induction - Es : 6502'- 699'*
*12,180' - 8850'*
*BHC - Sonic : 3494' - 699'*
*12,177' - 8855'*
*Es : 8865' - 6542'* *GR : 3494' - 0'*

GEOLOGISTS : *Merla - Noseda - Little*

STATUS : *P & A*

**SCALE 1/1000**

# LOG SYMBOLS

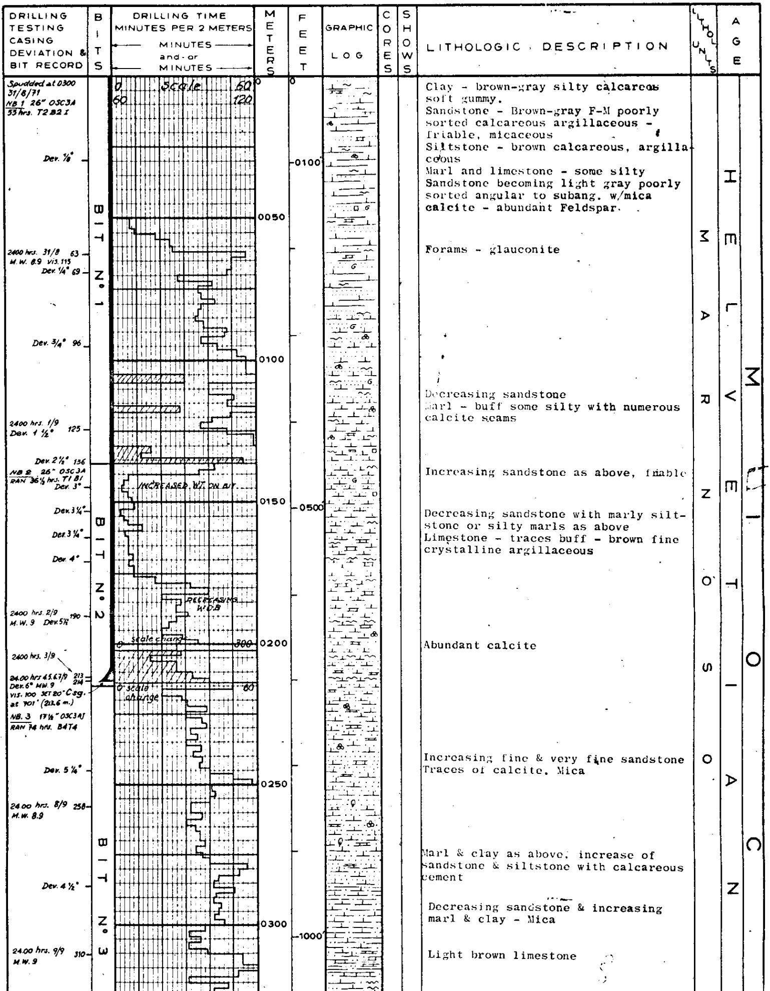
- ⌶ DST N°
- ▯ CORE
- ◢ CASING
- ← SIDE WALL CORE
- ▨ CEMENT PLUG
- ┼ PERFORATIONS
- ╪ SQUEEZED PERFORATIONS
- ☼ GAS SHOW
- ● OIL SHOW
- • TRACE OIL
- ▲ ASPHALT
- → FORMATION TEST
- G GLAUCONITE
- ■ PYRITE
- △ CHERT
- ஃ MICROFOSSILS
- ᘓ MACROFOSSILS
- o OOLITIC
- ♀ LIGNITE
- C CHALKY
- / DOLOMITIC
- ∼ SILTY
- ▦ GYPSIFEROUS
- ╪ CALCAREOUS
- □ FELDSPAR
- — ARGILLACEOUS
- ⬚ SAND
- ⬚ SANDSTONE
- ⬚ CONGLOMER.
- ≈ SILTSTONE
- ⊞ LIMESTONE
- ⧄ DOLOMITE
- ▭ COAL OR LIGNITE
- ^ SALT
- ▩ ANHYDRITE or GYPSUM
- ≡ CLAY
- ▭
- ▭

▤ SHALE

▦ MARLS

⁘ IGNEOUS ROCK

☐



Clay - brown-gray silty calcareous soft gummy.
Sandstone - Brown-gray F-M poorly sorted calcareous argillaceous - friable, micaceous
Siltstone - brown calcareous, argillaceous
Marl and limestone - some silty
Sandstone becoming light gray poorly sorted angular to subang. w/mica calcite - abundant Feldspar.

Forams - glauconite

Decreasing sandstone
Marl - buff some silty with numerous calcite seams

Increasing sandstone as above, friable

Decreasing sandstone with marly siltstone or silty marls as above
Limestone - traces buff - brown fine crystalline argillaceous

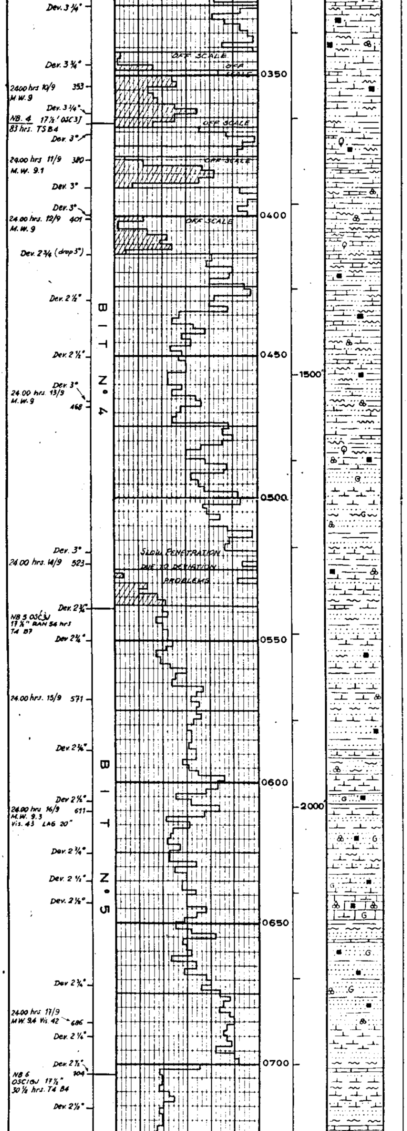
Abundant calcite

Increasing fine & very fine sandstone
Traces of calcite, Mica

Marl & clay as above, increase of sandstone & siltstone with calcareous cement

Decreasing sandstone & increasing marl & clay - Mica

Light brown limestone



Sandstone & siltstone with calcareous cement. Brown calcareous marl, light gray marl & clay - Mica

Decreasing sandstone

Buff silty calcareous marl or marly limestone

Decreasing marl & increasing sandstone & siltstone

Calcarenite tan to light gray with microfossils, trace glauconite, pyrite becoming shaly in part. Fracutured and porous.

Sandstone light gray quartzitic clean to shaly in part w/green, smokey and clear quartz, mica and pyrite, becoming darker gray, shaly and calcareous with calcite filled fractures.

Shale light gray fissile soft dissolves in mud

Marls dark gray micaceous

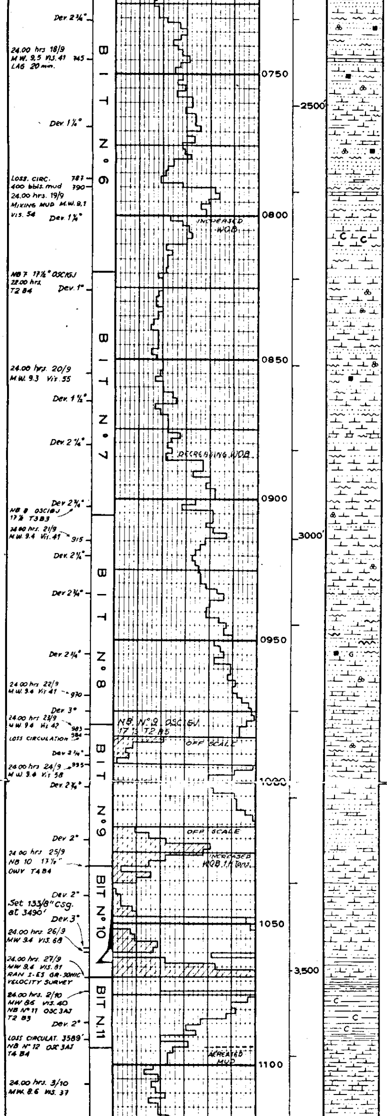
Siltstone gray, shaly, calcareous

Limestone brown, argillaceous, impure

ARENACEA

HELVETIAN

ENE



Sandstone hard, light gray with poorly sorted sub-round clear quartz, micaceous, calcareous, friable

Marls uniformly medium gray, silty

Sandstone gray fine grained argillaceous

Lost circ. in marls & fine grained argillaceous sdst. as above. Abundant calcite

Limestone trace brown fx

Bypassing shaker

Some chalky marls

Predominantly marls and silty marls with thin sandstone and siltstone

Turned to shaker at 890

Sandstones becoming fine grained and **decreasing to traces**

**Marls light to dark** gray some arenaceous, with calcareous siltstone

Increasing siltstone 940 - 960

Marl & silty marl light gray. Rare sandstone and siltstone

Marl as above but dark brown-gray color

Hard micaceous sandstone with sub-angular to sub-rounded **quartz** grains and calcareous cement

Clay gray soft sticky

marl gray to dark gray compact

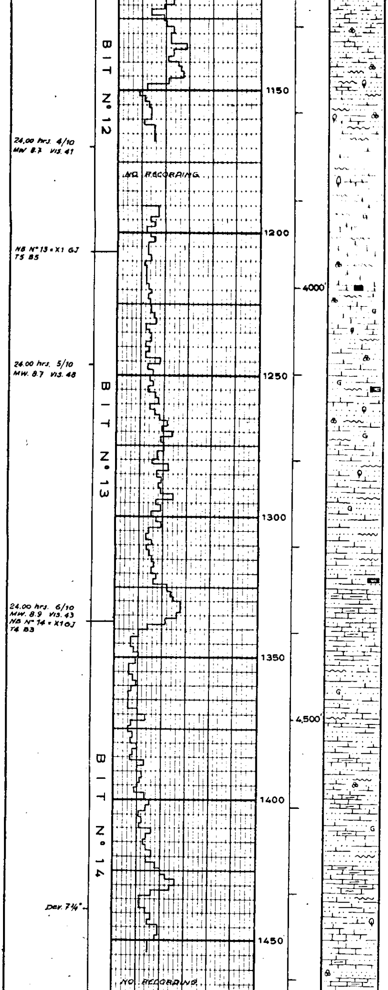
Very abundant slickensides (fault)

Yellowish gray chalky clay, very soft, with sparse very fine quartz grains

LANGHIAN

MARNOSO

MIOCENE



Dark gray clacareous marl with thin intercalation of sandstone

As above with brown silty marl and sandstone to siltstone with calcareous cement

Increase of very micaceous sandstone

Sequence of marl, siltstone and sandstone. Glauconite is common in the sandstone and lignite in the marl

As above plus few intercalations of buff argillaceous limestone

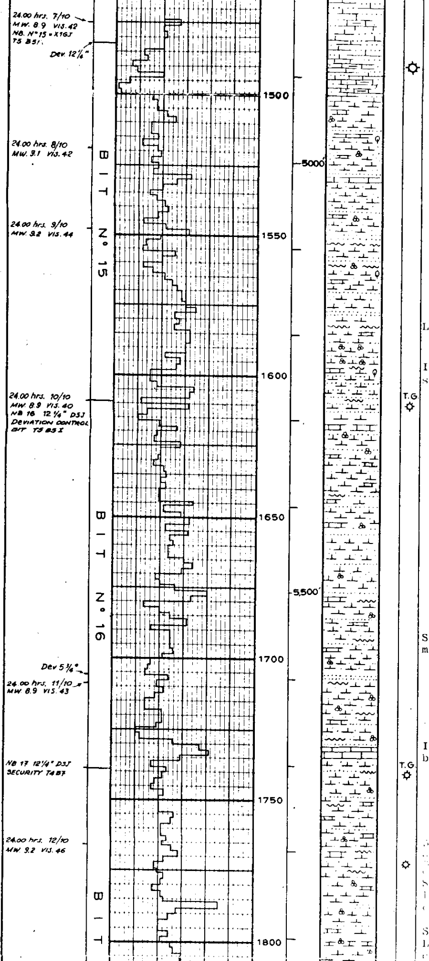
As above plus yellow brownish detritic sandy limestone

A R E N A C E A

L A N G H I A N

E

M I O



Gas show - 0.34% Methane at 1480 m

Increase of buff argillaceous limestone and light yellow detritic sandy limestone

Same as above

Light gray fossiliferous marl

Increase of siliceous sandstone and siltstone

Strong decrease of buff calcareous marl, increase of sandstone

Increase of detritic limestone and buff calcareous silty marl

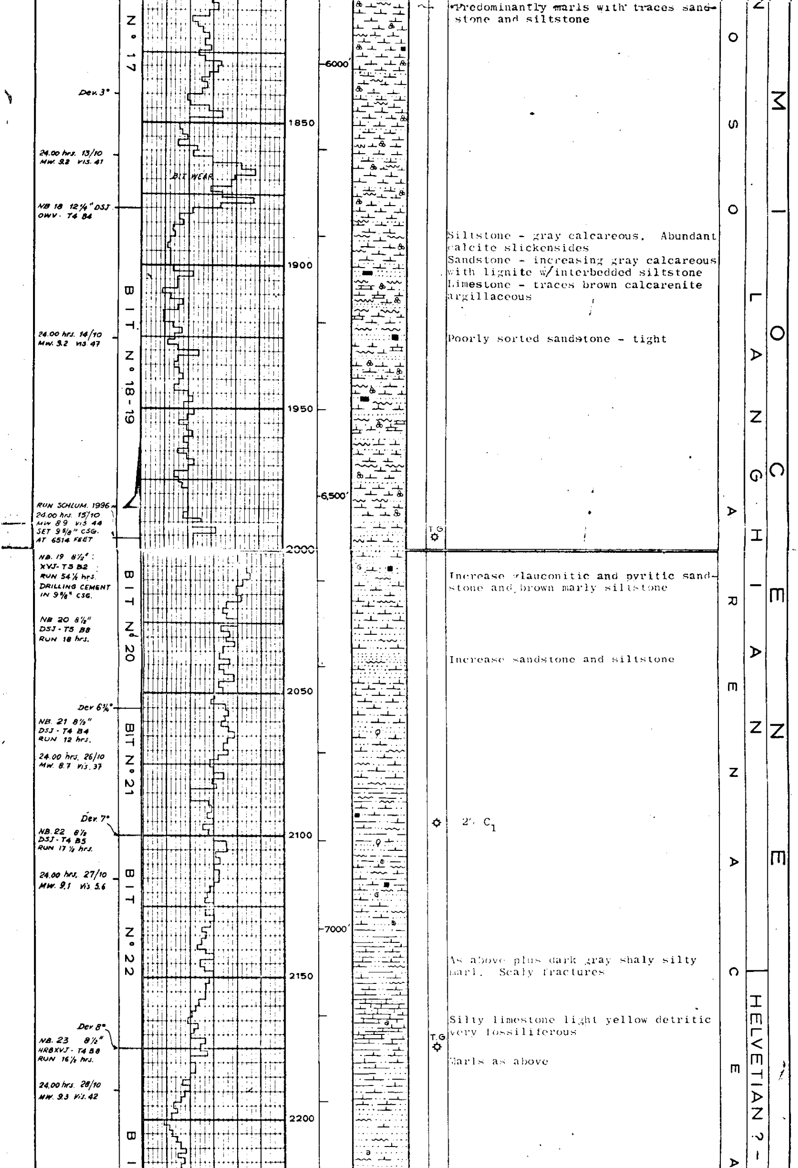
Marl - light gray fossiliferous to darker gray silty.
Sandstone - gray poorly sorted angular well cemented with calcite. Siliceous glauconitic quartzitic grading to shaly.
Siltstone - traces gray calcareous
Limestone - traces tan calcarenitic calcite

M A R N

HELVETIAN ?

L A N G H I A N

C E N E



Predominantly marls with traces sandstone and siltstone

Siltstone - gray calcareous. Abundant calcite slickensides
Sandstone - increasing gray calcareous with lignite w/interbedded siltstone
Limestone - traces brown calcarenite argillaceous

Poorly sorted sandstone - tight

Increase glauconitic and pyritic sandstone and brown marly siltstone

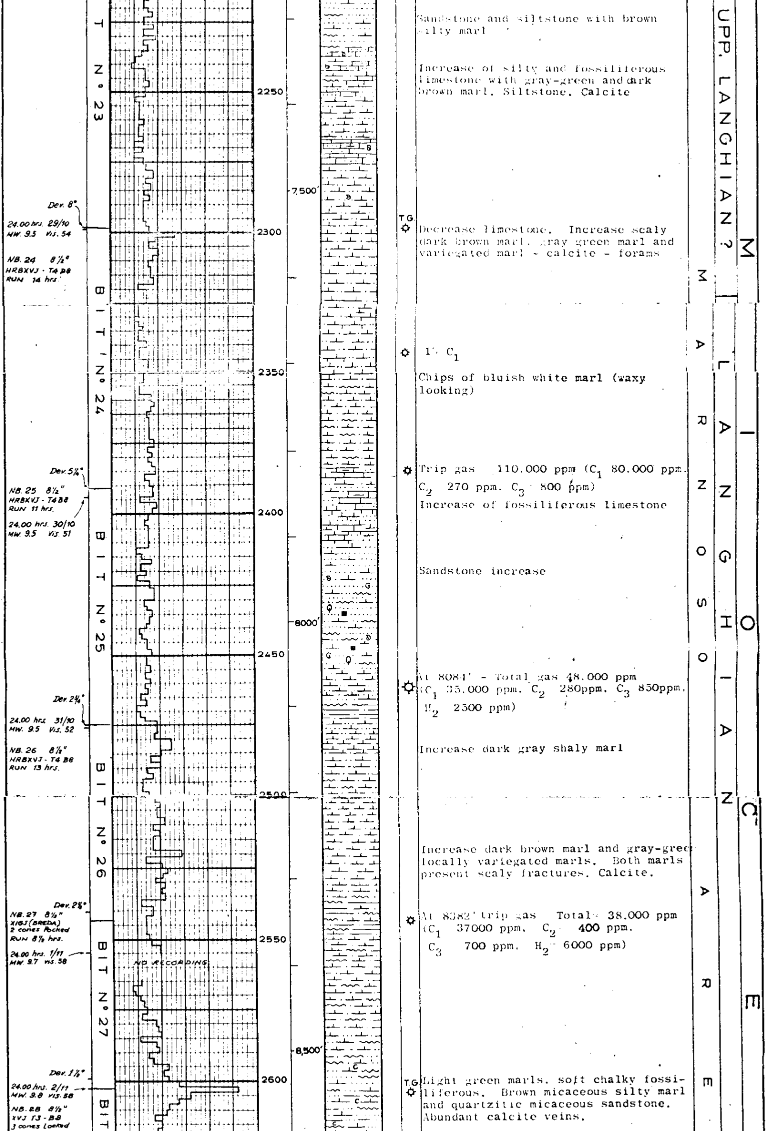
Increase sandstone and siltstone

2% $C_1$

As above plus dark gray shaly silty marl. Scaly fractures

Silty limestone light yellow detritic very fossiliferous

Marls as above



Sandstone and siltstone with brown silty marl

Increase of silty and fossiliferous limestone with gray-green and dark brown marl. Siltstone. Calcite

Decrease limestone. Increase scaly dark brown marl, gray green marl and variegated marl - calcite - forams

1% $C_1$

Chips of bluish white marl (waxy looking)

Trip gas 110.000 ppm ($C_1$ 80.000 ppm. $C_2$ 270 ppm. $C_3$ 800 ppm)

Increase of fossiliferous limestone

Sandstone increase

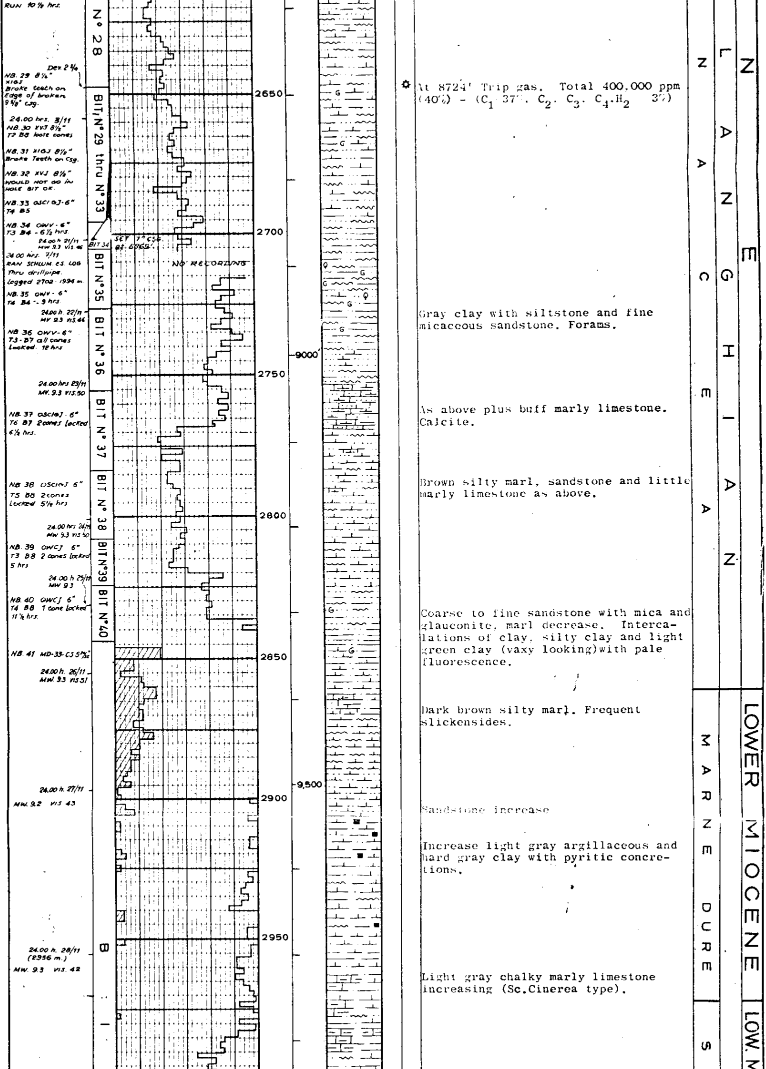
At 8084' - Total gas 48.000 ppm ($C_1$ 35.000 ppm. $C_2$ 280ppm. $C_3$ 850ppm. $H_2$ 2500 ppm)

Increase dark gray shaly marl

Increase dark brown marl and gray-gree locally variegated marls. Both marls present scaly fractures. Calcite.

At 8382' trip gas Total 38.000 ppm ($C_1$ 37000 ppm. $C_2$ 400 ppm. $C_3$ 700 ppm. $H_2$ 6000 ppm)

Light green marls. soft chalky fossiliferous. Brown micaceous silty marl and quartzitic micaceous sandstone. Abundant calcite veins.



✲ At 8724' Trip gas. Total 400,000 ppm (40%) - ($C_1$ 37%. $C_2$. $C_3$. $C_4$.$H_2$ 3%)

Gray clay with siltstone and fine micaceous sandstone. Forams.

As above plus buff marly limestone. Calcite.

Brown silty marl, sandstone and little marly limestone as above.

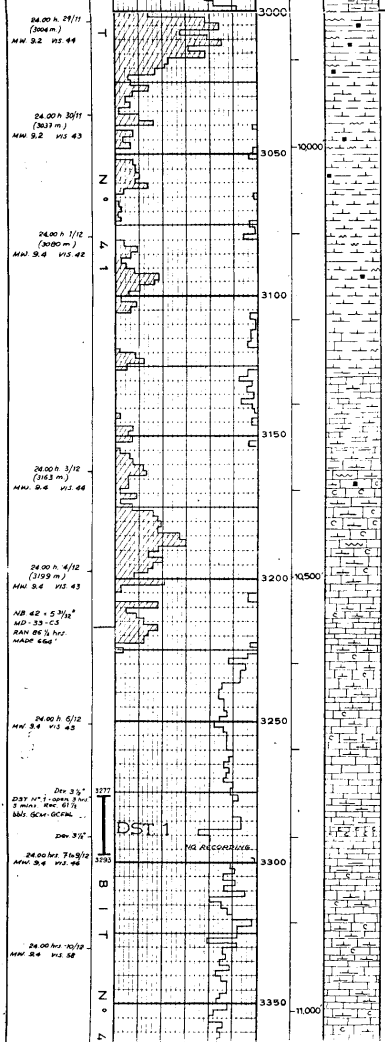
Coarse to fine sandstone with mica and glauconite, marl decrease. Intercalations of clay, silty clay and light green clay (vaxy looking) with pale fluorescence.

Dark brown silty marl. Frequent slickensides.

Sandstone increase

Increase light gray argillaceous and hard gray clay with pyritic concretions.

Light gray chalky marly limestone increasing (Sc.Cinerea type).



Light gray-green scaly shale (?) increase.

Marls gray to green or brown, silty.

✿ Traces of $C_1$ at 3135 beginning of pink soft marls and marly limestones fossiliferous.

✿ Traces of $C_1$. Red microcrystalline limestone and pink soft marls.

Decreasing pink marl and marly limestone.

✿ In white chalky soft limestone gas show at 3290m (10794') Total gas 200,000 ppm ($C_1$ 190,000 ppm. $C_2$ 1100 ppm. $C_3$ 320 ppm).

As above plus a little of white fossiliferous limestone.

✿ Traces at 3344m 8000 ppm
✿ ($C_1$ 6500. $C_2$ 560. $C_3$ 220)
Trip gas ppm are $C_1$ 5500. $C_2$ 560.
($C$ 200)

SCAGLIA CINEREA

SCAGLIA

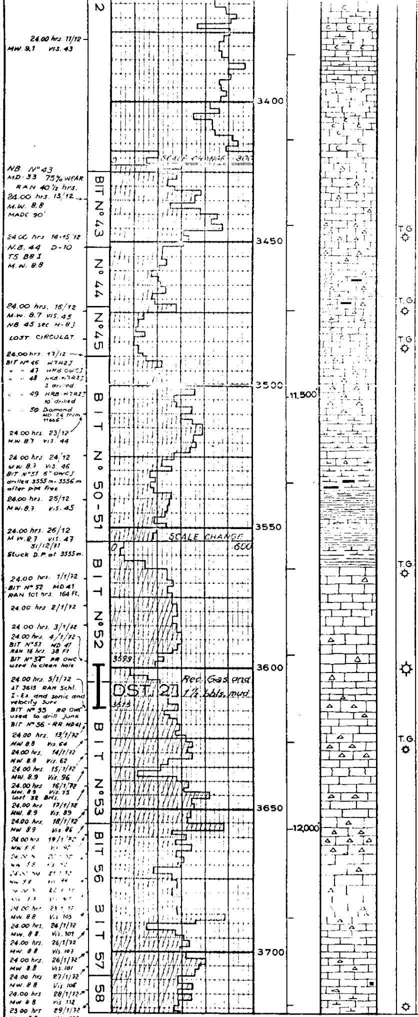
MAESTRICHTIAN - C

MIOC. - OLIGOC.

UPP. EOCENE ?

MIDDLE EOC. - PALEOCENE

UPPER CRE



[illegible] color sometime variegated calcareous marl.

Strong increase of pink marl, reddish and rusty marly limestone.

Limestone changing to predominantly pink, red and mauve with traces white cryptocrystalline. Porcelanitic fractured with fractures filled in part with calcite and perpendicular to stratification, conchoidal. [illegible] nitrogen [illegible] red chert.

[illegible] increasing white cryptocrystalline limestone. [illegible]

[illegible] increasing red chert.

[illegible] change to limestone [illegible] to white. [illegible] bituminous material [illegible] black, red, gray-green chert, traces gray stylolitic [illegible]

[illegible] decreasing chert, softer limestone.

[illegible] limestone becoming [illegible]

[illegible] limestone, dense [illegible] black chert [illegible] marly siltstone.

[illegible] intercalations of [illegible] plastic with black carb. marl.

Pale green marl, black-gray plastic clay. Green and black shale, some calc. Brown marly limestone, at 3545.

3562 white to light tan porcelain limestone, very hard with traces of white chert. Thin black shaly laminations on bedding planes.

17% C1, 0.38% C2 at 3603m DST recovered gas TSTM and 1.1/2 bbl. mud.

White limestone as above.

Trip gas to T.D. in small amounts of 1% to 2% $C_1$ tr. $C_2$

Increase the number of black shaly laminations.

Limestone as above, color changing to light gray and light tan. Milky and scarse orange chert.
Few small pyritic concretions.
Small intercalations of pale reddish brown limestone slightly argillaceous.
Fine bed of gray detritic limestone.

OSSA
NOMANIAN
TACEOUS
ALBIAN-APTIAN
APTIAN-NEOCOMIAN
MARNA A FUCOIDI
LOWER CRETACEOUS
TITONIAN
CALCARE AD APTICI
MALM ?
JURASSIC
?

TD. 3722 m. (12,211 Feet)