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I032 N° 3/97 R
ELF NORGE
HG.MB

L-89

725.1

WELL PROGNOSIS

3/7-I

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I. GENERAL INFORMATION

Well : 3/7-I (SIV I)

Classification : Wildeat

Location : S.P. 6664 of the seismic line 66-47 close to the border of the 2 blocks 2/9 (AMOCO) and 3/7 (PETRONORD 2nd round)

Located 16 km South of the well 2/6-I and 22 km North-West of the well 2/9-I

Approximate coordinates :

56° 27' 37"

04° 00' 00"

Water depth : 65 m

Rig : Ocean Tide (Odeco)

Foreseen duration: 50 days

Total depth : 3800 m (refer to end of the well chapter)

2. ANTICIPATED FORMATION DEPTHS

Tuff - top Paleocene	2625 m
Upper Cretaceous - top	2725 m
Upper Cretaceous - base	3100 m
Top of Jurassic sandstones	3250 or 3350 m
Top of Zechstein	3300 or 3400 m

3. STRUCTURE

The structure to be drilled is a large and ancient uplift which seems to be an north-western extension of the Fynn-Falster high.

It is westerly limited by a big throw and easterly by a succession of little faults.

The structure has a surface of 200 km² at the PreZechstein horizon.

4. STRATIGRAPHY

The stratigraphy is resumed in the appendix.

5. OBJECTIVES

All the possible reservoirs are considered as objectives of the well.

5.1 - Chalk of Danian and/or Maestrichtian

As we know from the 2/6-I and 2/9-I wells the chalk is a fair reservoirs 22 to 28 % porosity.

The negative test of the chalk in the 2/6-I well is not conclusive. The uplift of the basement is older than the saliferous structure tested by 2/6-I and the accumulation of oil could be limited to the old crest.

5.2 - Jurassic sandstones

If they exist, they could have same or better porosity as 2/6-I in regard of their position on the top of the uplift. The porosity of the sandstones, core I of the 2/6-I, ranges between 15 and 23 %.

5.3 - PreZechstein

Under the Zechstein dolomite, one can assume the existence of Rotliegend sandstones as it is known in few neighbouring wells.

The Rotliegend could be partly or entirely volcanic and, in this case, not be reservoir.

It also could not exist.

We have no regional information about Carboniferous nor Devonian sandstones.

The granite^s of the basement could have been weathered superficially.

- 5.4 - The shales above the Jurassic sandstones are not particularly radioactive and organic material rich in 2/6-I but the uplift is in connexion westwards and eastwards with deep shaly basins which could have generated hydrocarbons.

6. STOPPING OF THE WELL

The decision as to ~~stopping~~ the drilling shall be taken after consulting all the partners, as it will be an uneasy decision due to the uncertainty about the nature of the Pre-Zechstein formations.

Several possibilities could be faced :

- Sandy Rotliegend. The Rotliegend may be sandy at the top and become volcanic at the base. It may be entirely volcanic (dolerite or weathered basalt). In this case, the well will have to drill through this series to explore the underlying formation.
- Carboniferous. It is unknown in this area and moreover unlikely to be found under a coal facies.
- Devonian. It has not been reached by any neighbouring well.

In the two preceding cases, the drilling would be stopped after having penetrated 200 m of the series if no shows.

- Basement. Granite or gneiss or any other rock excluding all possibility of finding underlying sedimentary formations.

In this case the drilling would be stopped immediately.

7. CORING AND TESTING PROGRAM

- 7.1 - Cores will be cut if the drilling penetrates reservoir with shows.

The cutting of extracores is within the well site geologist appreciation and the choice of the side wall coring belongs to the area geologist in Stavanger.

- 7.2 - Only test through casing perforations will be performed on evident hydrocarbon bearing formations.

FIT could be decided in case of uncertainty of the logs on the fluid content nature or to know accurately the formation pressure (FIT + Amerada).

8. LABORATORY STUDIES

The ELF lab. in BOUSSENS (South of France) is in charge of all studies.

It is foreseen to perform the studies of palynology, micro-paleontology, sedimentology and reflection power.

9. LOGGING PROGRAM

- No log in the 30" and 20" holes

- I7 I/2 hole IES
 SL-GR
 (GR will be logged till the mid line)

- I2 I/4 hole IES
 SL-GR

- 8 I/2 hole IES
 SL-GR
 HDT

ML-MLL)
LL9) on reservoirs
FDL SNP)

10. CASING PROGRAM

The casing program is included in the appendix 2.