

DUPLIKAT

 **STATOIL**

Denne rapport
tilhører

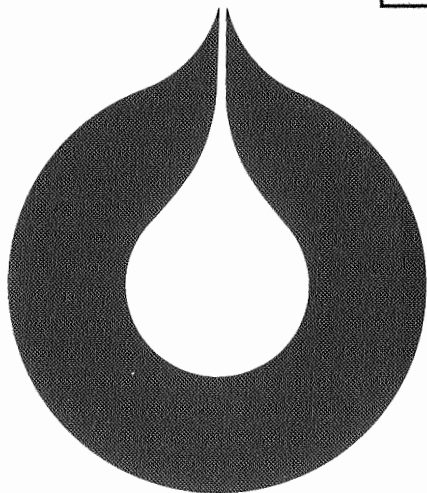
99.595.274-8

L&U DOK. SENTER

L. NR. 12381030081

KODE

Returneres etter bruk



statoil

Den norske stats oljeselskap a.s

PETROPHYSICAL EVALUATION
WELL 34/10-8 AND 34/10-9
BY: PETROLEUM ENGINEERING
PETROPHYSICAL GROUP
NOV. 1980
ENG: T. HELGØY

General well data

Norway offshore

Licence	:	050	050
Wildcat well	:	34/10-8	34/10-9
Location	:	61° 09' 59.53"N 02° 12' 3.40"E	61° 12' 55.30"N 02° 15' 00.50"E
Spudded	:	8/3-1980	24/3-1980
Rig released	:	26/5-1980	3/7-1980
KB-elevation	:	25 m	25 m
Water depth	:	158 m	203 m
Total depth	:	2213 m	2202 m
Objective	:	Jurassic sandstone	
Operator	:	Statoil	
Partners	:	Norsk Hydro, Saga Petroleum	
Status	:	Plugged and abandoned	

Introduction

Six wells have already been drilled on this structure in block 34/10. The main objective of these two wells where still to test the Jurassic sandstone formations for hydrocarbon accumulations. The purpose of this report is to evaluate the petrophysical parameters of the Brent formation using established methods described in the previous reports submitted for block 34/10.

Summary.

34/10-8 encountered hydrocarbones in the Brentformation (1821 - 2065). It also penetrated the Dunlin formation which is wet in this well.

34/10-9 penetrated hydrocarbonbearing Brentformation (1822 - 1957) and encountered hydrocarbons in the Dunlin. The Dunlin formation will be evaluated in a separate report.

The oil water contact has been reconfirmed to be \pm 1971.5 m from the 34/10-8 well. This well encountered 103.75 m net sand. Average porosity is 28.1% and the average watersaturation in the oil zone is 18.3%.

34/10-9 penetrated 97.1 m of net hydrocarbon bearing sand with an average watersaturation of 14%.

In put parameters.

In put parameters to the calculations have been picked based on the regional knowledge which the previous wells have given. Therefore these values will be the same as those having been used in the previous petrophysical reports. The only thing that changes is the R_{mf} and may be R_w if the temperature should change.

In this wells we have used $R_w = 0.07 \Omega_m$ and $R_{mf} = 0.085 \Omega_m$ at $160^{\circ}F$. A standard value for the hydrocarbon density has also been used 0.785 g/cc.

Average Petrophysical parameters for 34/10-8 and 34/10-9 in the Brent formation.

Unit	Interval	N/G	\emptyset	Sw	K_{log}
Unit 5b 34/10-8	1821 - 1853	0.8	0.321	0.129	1021
Unit 5a 34/10-8	1853 - 1868	0.52	0.243	0.346	98
Unit 4 34/10-8	1868 - 1975	0.57	0.29	0.363	324
34/10-9	1833 - 1836	0.50	0.19	0.90	20
Unit 3 34/10-8	1975 - 2005	0.91	0.313	1.-	1842
34/10-9	1836 - 1868	0.79	0.310	0.127	1410
Unit 2 34/10-8	2005 - 2040	0.94	0.23	1.0	24
34/10-9	1868 - 1935	0.93	0.301	0.142	199
Unit 1 34/10-8	2040 - 2053	0.46	0.193	1.-	6
34/10-9	1935 - 1945	0.80	0.259	0.446	38

Cut off criterion:

$$V_{SH} > 40\%$$

$$PHIF < 12\%$$

$$SW > 65\%$$

SHALE PARAMETERS.

Standard shale parameters previously obtained have been used:

$$\rho_{bSH} = 235 \text{ g/cc} \quad \phi_{NSH} = 0.45 \quad \Delta t_{SH} = 120 \text{ } \mu\text{sec/ft}$$

COMPUTATION

The standard method previously described in the petrophysical reports has also been used for the evaluation of these two wells to obtain ϕ , S_w V_{cl} and permeability.

References

1. Petrophysical report on 34/10-1, 3, 4, 5, 6.

Enclosure:

Summary log 34/10-8

Summary log 34/10-9

CPI 34/10-8

CPI 34/10-9

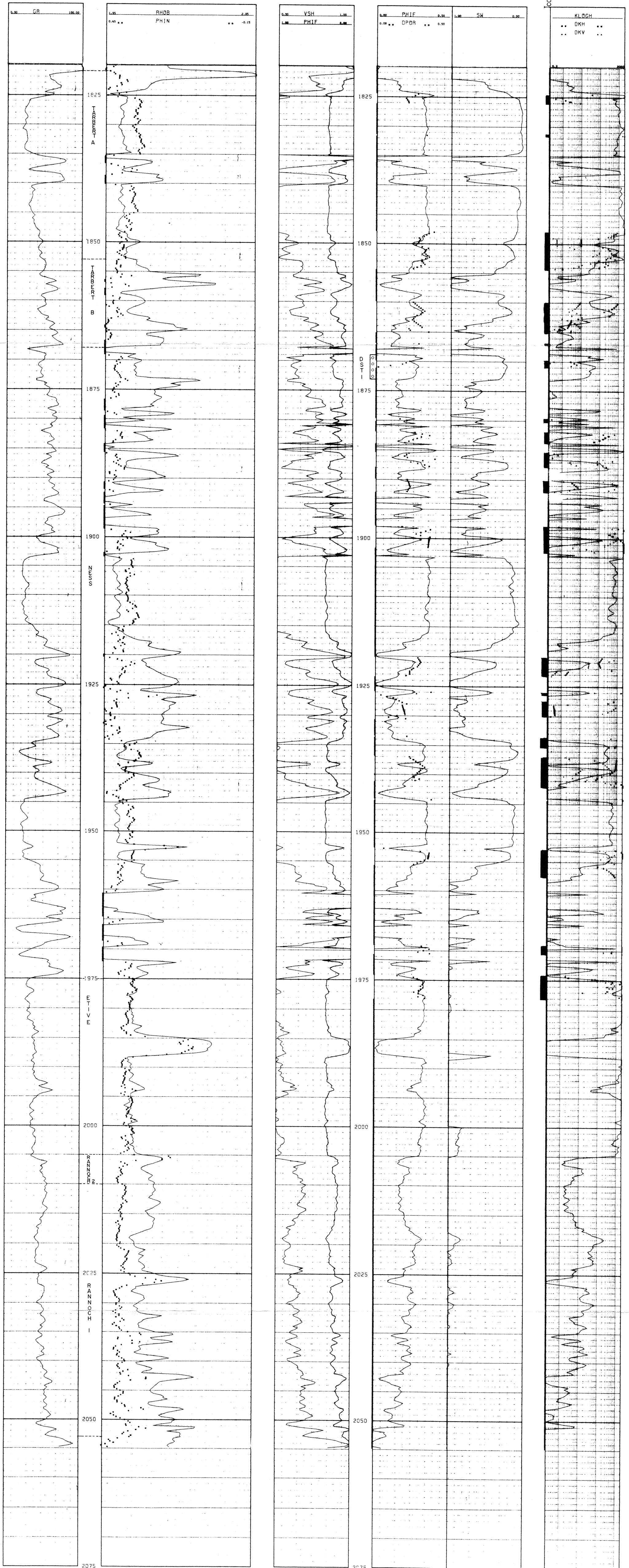
Brentformation

GRAPHICAL LOG-PRESENTATION

WELL : 34-10-8 DEPTH INTERVAL : 1820.00-2055.00 (METER)
 ENGINEER : THY SCALE 1:
 DATE : 13.15.57 1 OKTOBER 1980



SUMMARY LOG 34/10-8



DST 1
 INTERVAL : 1869 - 1873
 CHOKE : 1/2"
 OIL : 3135 STB/D
 GAS : 1.2·10⁶ SCF/D

LOCATION :
 61° 09' 59.53" N
 02° 12' 3.4" E

KB ELEVATION = 25 m
 WATER DEPTH = 158 m

STATUS:
 SPUDDED: 8/3-1980
 RIG RELEASED: 26/5-80
 PLUGGED AN ABANDONED

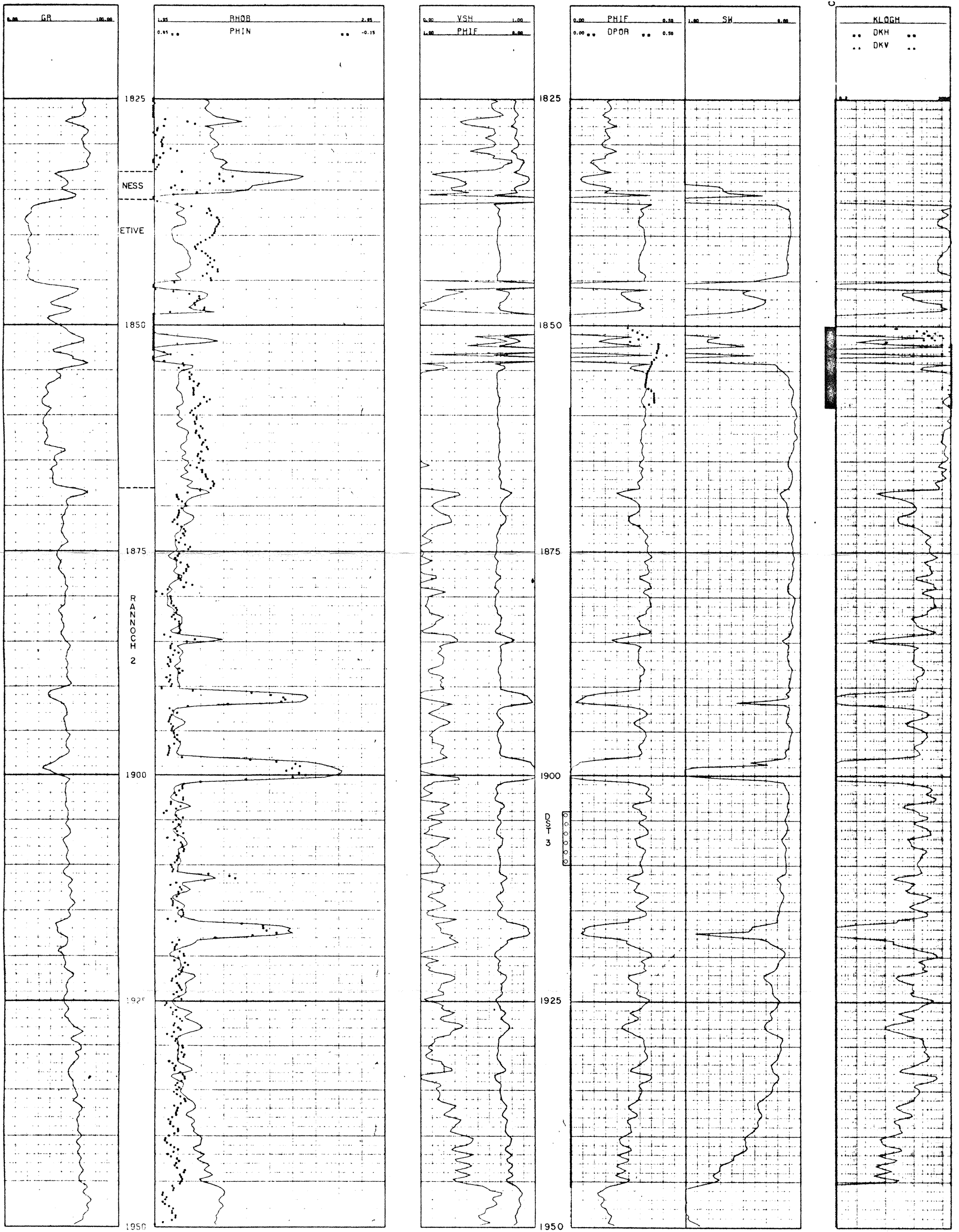
OCT. : 1980
 PE/EVALTEK
 TH/AM

GRAPHICAL LOG-PRESENTATION

WELL : 34-10-9 DEPTH INTERVAL : 1825.00-1950.00 (METER)
 ENGINEER : THY SCALE 1:200
 DATE : 12.56.13 1 OKTOBER 1980



SUMMARY LOG 34/10-9



DST DATA

DST : 3 INTERVAL : 1904 - 1910 CHOKE : 1/2" OIL : 4575 STB/D GAS : 1.6 · 10 ⁶ SCF/D	LOCATION 61° 12' 55.3" N 02° 15' 00.5" E	KB ELEVATION = 25 m WATER DEPTH = 203m	STATUS SPUDDED : 24/3 -1980 RIG RELEASED : 3/7-1980 PLUGGED AND ABANDONED	OCT. : 1980 PE/EVALTEK TH/AM
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COMPUTERIZED LOG INTERPRETATION

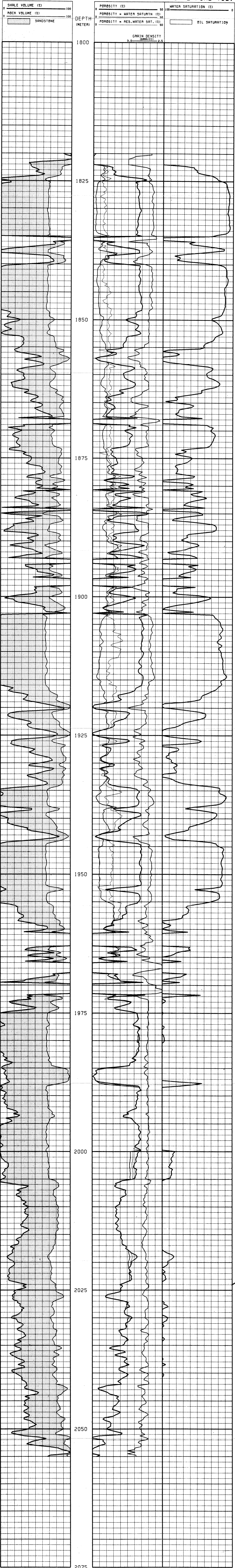
PROGRAM: PGM0377 N-10/FORUS
 VERSION: 2 (26FEB80) +
 BY: C.O.PETERSEN/PAD

WELL: 34/10-8
 FIELD: DELTA
 ENGINEER: HELGOY
 DATE: 24/11-80

DEPTH INTERVAL: 1820 - 2055 (METER)
 RKB: 25.0 (METER) SCALE: 1 : 200
 PERMANENT DATUM: MSL
 DEPTH REFERENCE: FDC/CNL

INPUT PARAMETERS:

DEPTH INTERVAL	RW	RMF	ASH	RHOBSH	PHINSH	DTSH	FORM.TEMP. (DEG. F)
1820 - 2055	0.070	0.085	1.50	2.35	0.45	120.0	160



COMPUTERIZED LOG INTERPRETATION

PROGRAM: PGM0377 N-10/FORUS
 VERSION: 2 (26FEB80) +
 BY: C.O.PETTERSEN/PR0

WELL: 34/10-9
 FIELD: DELTA
 ENGINEER: HELGOY
 DATE: 24/11-80

DEPTH INTERVAL: 1825 - 1950 (METER)
 RKB: 25.0 (METER) SCALE: 1 : 200
 PERMANENT DATUM: MSL
 DEPTH REFERENCE: FDC/CNL

INPUT PARAMETERS:

DEPTH INTERVAL	RW	RMF	RSH	RHOB _{SH}	PHIN _{SH}	DT _{SH}	FORM. TEMP. (DEG. F)
1825 - 1950	0.070	0.085	1.50	2.35	0.45	120.0	160

