

Denne rapport
tilhører



L&U DOK.SENTER

L.NR. 30287290028

KODE Well 31/2-6 nr 37

Returneres etter bruk

PARTIAL FLUID STUDY

for

A/S Norske Shell Exploration & Production

Well: 31/2-6 Oil Zone

North Sea, Norway.

CORE LABORATORIES UK LTD.
Petroleum Reservoir Engineering
ABERDEEN, SCOTLAND

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18th June 1982

A/S Norske Shell Exploration & Production
Gamle Forusvei 43
N-4033 Forus
NORWAY

Subject: Partial Fluid Study
Well: 31/2-6 OIL ZONE
North Sea, Norway.
Our File: RFLA 820068

Attention: Mr. B. Rheinholdstein.

Gentlemen,

On the 15th September 1981 a subsurface fluid sample was collected from the subject well and forwarded to our Aberdeen laboratory for analysis as requested by telex FOR 190208.

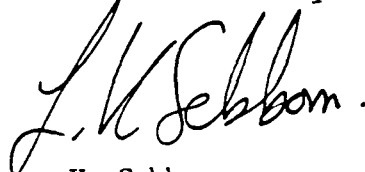
On receipt in the laboratory a portion of the sample was placed in a high pressure visual cell and thermally expanded to the operating temperature of 150°F. During pressure-volume relations a saturation pressure of 3101 psig was observed. The results of the pressure-volume relations are presented on page two.

This information was reported by telex on the 15th April 1982 and subsequently we were informed that no further analysis would be required.

We thank you for this opportunity to be of service to A/S Norske Shell Exploration & Production. Should any questions arise concerning data presented in this report, or if we can be of further assistance, please do not hesitate to contact us.

Very truly yours

Core Laboratories UK Limited
Reservoir Fluid Analysis



Les. K. Sebborn
Laboratory Manager

LKS/stb
10cc/Addressee

CORE LABORATORIES UK LTD.

Petroleum Reservoir Engineering

ABERDEEN, SCOTLAND

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File RFLA 820068

Company A/S Norske Shell Expl. & Prod. Date Sampled 15th September 1981

Well 31/2-6 State North Sea

Field Block 31/2 Country Norway

FORMATION CHARACTERISTICS

Formation Name	Oil Zone
Date First Well Completed	_____ , 19__
Original Reservoir Pressure	_____ PSIG @ _____ M.
Original Produced Gas-Oil Ratio	_____ SCF/Bbl
Production Ratio	_____ Bbl/Day
Separator Pressure and Temperature	_____ PSIG _____ °F.
Oil Gravity at 60°F.	_____ °API
Datum	_____ M. Subsea
Original Gas Cap	_____

WELL CHARACTERISTICS

Elevation	_____ M.
Total Depth	_____ M.
Producing Interval	1576 to 1579 M.
Tubing Size and Depth	5/3½ In. to 1571.45 M.
Productivity Index	_____ Bbl/D/PSI @ _____ Bbl/Day
Last Reservoir Pressure	2284.5 PSIG @ 1568 M.
Date	_____ , 19__
Reservoir Temperature	150* °F. @ _____ M.
Status of Well	_____
Pressure Gauge	_____
Normal Production Rate	_____ Bbl/Day
Gas-Oil Ratio	_____ SCF/Bbl
Separator Pressure and Temperature	_____ PSIG, _____ °F.
Base Pressure	_____ PSIA
Well Making Water	_____ % Cut

SAMPLING CONDITIONS

Sampled at	1553 M.
Status of Well	_____
Gas-Oil Ratio	_____ SCF/Bbl
Separator Pressure and Temperature	60 PSIG, 54 °F.
Tubing Pressure	525 PSIG
Casing Pressure	_____ PSIG
Sampled by	Flopetrol
Type Sampler	Schlumberger Modified

REMARKS: * Requested analysis temperature. Cylinder Number: 8088-70.

These analyses, opinions or interpretations are based on observations and material supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgement of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representations as to the productivity, proper operation, or profitability of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

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Well 31/2-6 OIL ZONE

VOLUMETRIC DATA OF RESERVOIR FLUID SAMPLE

1. Saturation pressure (bubble point pressure) 3101 PSIG @ 150 °F.

$$\frac{V @ 150 \text{ } ^\circ\text{F.}}{V @ 63 \text{ } ^\circ\text{F.}} = 1.04067$$
2. Thermal expansion of saturated oil: @ 5000 PSI = 1.04067
3. Compressibility of saturated oil @ reservoir temperature: Vol/Vol/PSI:

From 5000 PSI to 4000 PSI = 7.05×10^{-6}

From 4000 PSI to 3500 PSI = 8.43×10^{-6}

From 3500 PSI to 3101 PSI = 8.77×10^{-6}

4. Partial pressure-volume relations:

Pressure PSIG	Relative Volume (1)
5000	0.9853
4500	0.9885
4000	0.9923
3500	0.9965
3400	0.9974
3300	0.9983
3200	0.9992
<u>3101</u> Saturation Pressure	1.0000

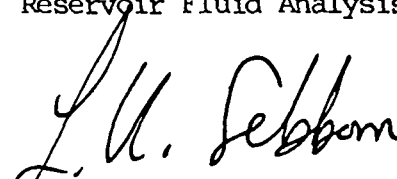
- (1) Relative Volume: V/Vsat is barrels at indicated pressure per barrel at saturation pressure.

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A/S NORSKE SHELL EXPLORATION & PRODUCTION
Well: 31/2-6 OIL ZONE

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Core Laboratories UK Limited
Reservoir Fluid Analysis

A handwritten signature in black ink, appearing to read 'L. K. Sebborn', written in a cursive style.

Les. K. Sebborn
Laboratory Manager