

RMU File

2/4 9

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N.B. - Only the chapters marked with a cross appear in this report.

- 1 1 – Object
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- 1 5 – Main results

N.B. – Only the subjects marked with a cross appear in this chapter.

OBJECT

To carry out Drill Stem Tests for Phillips Petroleum Co. Norway on Well 2/4-9.

D.S.T. No.1. Perforations 11,050' - 11,024'

Well was produced wide open and flowed through Separator. Oil and gas measurements were taken.

D.S.T. No.2. Perforations 11,020' - 10,854'

The lower zone was not squeezed off so both zones were flowed together. Choking was at the Halliburton manifold for maximum flow rate, 2/3 maximum and 1/3 maximum. + 5/16" CHOKE.

1st Stimulation. (40,000 gls. Acid).

Due to problems with BAKER lubricators and B.O.P and a leaking bottom master valve, the well was killed, and the string pulled. The string was run in again for:-

D.S.T. No.3.

The same two zones were tested (11,050' - 11,024' and 11,020' - 10,854'). The well was flowed on a 1/4" choke.

2nd Stimulation. (40,000 gls. Acid).

The well was flowed on 20/64" + 24/64" chokes then killed and plugged back.

D.S.T. No.4. Perforations 10,770' - 10,740'

At first the well flowed some water.

3rd Stimulation. (30,000 gals Acid).

Again some water with traces of oil.

The well was then killed and plugged back.

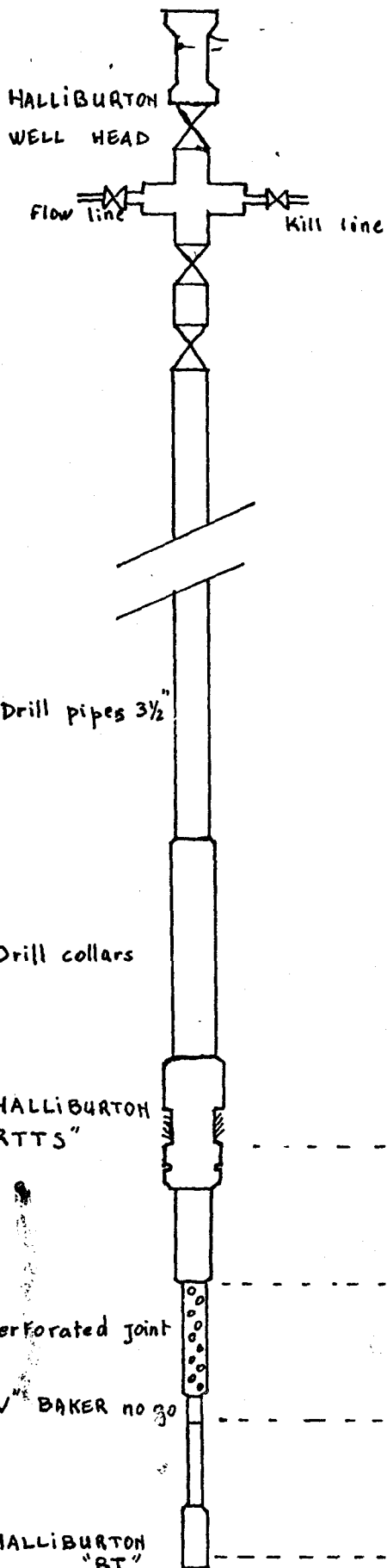
D.S.T. No.5. Perforations 10,570' - 10,580'

This zone flowed only water.

4th Stimulation. (40,000 gals Acid).

The well flowed some water then died. Pumped 10 Bbls drill water into tubing; the well then re-started and flowed some water with traces of oil. The well was then killed.

END OF TESTS.



| <u>DST</u> <u>no 1</u> | <u>DST</u> <u>no 2 & 3</u> | <u>DST</u> <u>no 4</u> | <u>DST</u> <u>no 5</u> |
|---------------------------|-----------------------------------|---------------------------|---------------------------|
| | | | |
| 10967' | 10748' | 10559' | 10370' |
| | 10922' | 10728' | 10544' |
| no one | 10947' | 10753' | 10569' |
| | 10994' | 10765' | 10616' |

| | OIL RATE BOPD. | CHOKE | GRAVITY API ^o | GAS RATE MMSCF. | G.O.R. MCF/BBL. | W.H.P. PSI. | SEPARATOR PRESS. PSIG. |
|---------------------|-------------------|-----------------|-----------------------------|--------------------|--------------------|----------------|------------------------------|
| <u>D.S.T. No.1.</u> | | | | | | | |
| Flow Period No.1. | 1/4 hr. only. | No. readings. | | | | | |
| Flow Period No.2. | 760 | wide open | 43 | 3.45 | 4,500 | 265 | 180 |
| <u>D.S.T. No.2.</u> | | | | | | | |
| Flow Period No.1. | 2800 | 32/64 ✓ | 44 | 14.4 | 5,168 | 3,905 ✓ | 525 |
| Flow Period No.2. | 1415 | 20/64 ✓ | 46 | 6.6 | 4,593 | 4,905 ✓ | 185 |
| Flow Period No.3. | 1870 | 24/64 ✓ | 46 | 8.5 | 4,470 | 4,700 ✓ | 260 |
| Flow Period No.4. | 2600 | 20/64 + 24/64 ✓ | 45 | 13.1 | 4,894 | 4,150 | 360 |
| <u>D.S.T. No.3.</u> | | | | | | | |
| Flow Period No.1. | 920 | 16/64 | 46 | 4.7 | 5,207 | 5,013 | 160 |
| Flow Period No.2. | 2900 | 20/64 + 24/64 ✓ | 44 | 16.1 | 5,487 | 4,527 | 440 |
| <u>D.S.T. No.4.</u> | No flow. | | | | | | |
| <u>D.S.T. No.5.</u> | No flow. | | | | | | |