



ANCHOR DRILLING FLUIDS AS

OSLO - STAVANGER

Drilling Mud Properties Record

MUD SYSTEM GEL/SEAWATER - GEL/DRISPAC

WELL NAME 6609/7-1 AREA TRAENAFANKEN
 OPERATOR PPCON RIG NEPTUNO NORDRAU
 ENGINEERS FOLKVORD/TORGENSEN/LAURITZEN

| Day No. | DATE | DEPTH FEET <input type="checkbox"/> METERS <input checked="" type="checkbox"/> | MUD PROPERTIES | | | | | | | | | | | | | | | | | | OPERATION REMARKS | | | |
|---------|-------|---|---|-----------|-----------------------------|----------|-------------------|-----------|-----------------------|-------------|--------------|------|-------------------|---------------------|------------|--------|-------|----------|-----------------|--------------|-------------------|---------------|-----|-----|
| | | | DENSITY PPG <input type="checkbox"/> SG <input checked="" type="checkbox"/> | VISCOSITY | | | | GELS 0 | FLUID LOSS 30 Min ccs | CAKE 32 nds | H.T.H.P. ccs | PH | Filtrate Analysis | | | RETORT | | | BENTONITE #/BBL | POTASH #/BBL | | POLYMER #/BBL | "N" | "K" |
| | | | | sec/qt | A.V. cps | P.V. cps | Y.P. #/100 sq.ft. | | | | | | 10 | Cl ⁻ ppm | Ca. ++ ppm | PI | % OIL | % SOLIDS | | | | | | |
| 1 | 21.06 | 289 | 1.03 | 110 | | | | | | | | | | | | | | | | | | | | |
| 2 | 22.06 | 350 | 1.05 | 180 | 49 | 11 | 76 | 24 | | | | | | | | | | | | | | | | |
| 3 | 23.06 | 380 | 1.06 | 38 | | | | 20 | | | | | | | | | | | | | | | | |
| 4 | 24.06 | 840 | 1.13 | 42 | 31.5 | 8 | 47 | 20 | NC | | 9.5 | | | | | | | | | | | | | |
| 5 | 25.06 | 1040 | 1.14 | 44 | 34 | 7 | 54 | 23 | NC | | 9.3 | | | | | | | | | | | | | |
| 6 | 26.06 | 1040 | 1.15 | 38 | 24.5 | 5 | 39 | 21 | NC | | 9.3 | | | | | | | | | | | | | |
| 7 | 27.06 | 1040 | 1.18 | 41 | 27 | 6 | 42 | 22 | NC | | 9.2 | | | | | | | | | | | | | |
| 8 | 28.06 | 1040 | 1.13 | 85 | H I V I S C O S I T Y M U D | | | | 3 | | | 9.2 | | | | | | | | | | | | |
| 9 | 29.06 | 1040 | 1.08 | 45 | 12 | 7 | 10 | 9 | 11 | 1 | 10.0 | 9 | 250 | .1 | | nil | 8 | | | | | | | |
| 10 | 30.6 | 1043 | 1.09 | 39 | 11 | 6 | 10 | 3 | 6 | 1 | 11.7 | 10 | 400 | .4 | | nil | 75 | | | | | | | |
| 11 | 01.07 | 1247 | 1.12 | 45 | 16 | 9 | 14 | 5 | 50 | 9 | 9.6 | 12 | 320 | .1 | 9 | TR | 13 | | | | | | | |
| 12 | 02.07 | 1350 | 1.14 | 47 | 16.5 | 9 | 15 | 10 | 56 | 11.5 | 9.9 | 14.5 | 260 | .1 | 9 | TR | 13.5 | | | | | | | |
| 13 | 03.07 | 1561 | 1.37 | 48 | 18 | 12 | 12 | 6 | 36 | 10.0 | 9.6 | 15.5 | 280 | .1 | 15 | .50 | 15 | | | | | | | |
| 14 | 04.07 | 1584 | 1.42 | 49 | 21 | 11 | 20 | 10 | 54 | 11.0 | 10.4 | 17.5 | 200 | .3 | 15 | .25 | 15 | | | | | | | |
| REMARKS | | | | | | | | | | | | | | | | | | | | | | | | |



ANCHOR DRILLING FLUIDS AS

OSLO — STAVANGER

Drilling Mud Properties Record

MUD SYSTEM

GEL/DRISPAK

WELL NAME 6609/7--1

AREA TRAENABANKEN

OPERATOR PPCON

RIG NEPTUNO NORDRA

ENGINEERS TORGERSEN/LAURITZEN/VASTVEIT

| Day No. | DATE | DEPTH FEET <input type="checkbox"/> METERS <input checked="" type="checkbox"/> | MUD PROPERTIES | | | | | | | | | | | | | | | | | OPERATION REMARKS | | | | | |
|---------|-------|---|---|-----------|----------|----------|-------------------|-----------|------------------------|-------------|---------------|------|---------------------|------------|-----|--------|---|-----------------|--------------|-------------------|---------------|-----|-----|--------|--|
| | | | DENSITY PPG <input type="checkbox"/> SG <input checked="" type="checkbox"/> | VISCOSITY | | | | GELS 0 | FLUID LOSS 30 Min cc's | CAKE 32 nds | H.T.H.P. cc's | PH | Filtrate Analysis | | | RETORT | | BENTONITE #/BBL | POTASH #/BBL | | POLYMER #/BBL | "N" | "K" | | |
| | | | | sec/qt | A.V. cps | P.V. cps | Y.P. #/100 sq.ft. | | | | | | Cl ⁻ ppm | Ca. ++ ppm | PI | % OIL | % SOLIDS Corrected for Cl ⁻ | | | | | | | % SAND | |
| 15 | 05.07 | 1816 | 1.42 | 50 | 18.5 | 11 | 15 | 9 | 48 | 8.8 | 1 | 10.2 | 18 | 260 | .25 | 15 | TR | 18 | | | | | | | |
| 16 | 06.07 | 1843 | 1.42 | 49 | 18.5 | 11 | 15 | 10 | 48 | 9.8 | 1 | 9.9 | 18.5 | 300 | .2 | 14 | TR | 20 | | | | | | | |
| 17 | 07.07 | 1843 | 1.43 | 48 | 18 | 11 | 14 | 12 | 45 | 9.8 | 1 | 9.9 | 18 | 280 | .15 | 15 | TR | 20 | | | | | | | |
| 18 | 08.07 | 1843 | 1.43 | 48 | 19 | 12 | 14 | 12 | 45 | 11 | 1 | 9.6 | 18 | 280 | .15 | 15 | TR | 20 | | | | | | | |
| 19 | 09.07 | 1843 | 1.43 | 44 | 14 | 9 | 10 | 8 | 35 | 11. | 1 | 10.8 | 16 | 250 | .1 | 15 | TR | 20 | | | | | | | |
| 20 | 10.07 | 1860 | 1.41 | 55 | 20 | 12 | 17 | 12 | 50 | 11.5 | 1 | 10.8 | 16 | 240 | .2 | 15 | TR | 19 | | | | | | | |
| 21 | 11.07 | 1925 | 1.53 | 47 | 21 | 14 | 15 | 7 | 36 | 9.8 | 1 | 10.0 | 17 | 550 | .1 | 19 | TR | 16 | | | | | | | |
| 22 | 12.07 | 1942 | 1.53 | 46 | 18 | 12 | 12 | 4 | 20 | 7.5 | 1 | 10.2 | 17 | 450 | .1 | 19 | TR | 14 | | | | | | | |
| 23 | 13.07 | 1943 | 1.53 | 49 | 22 | 16 | 13 | 5 | 30 | 12 | 1 | 10.8 | 10 | 250 | .2 | 19 | TR | 16 | | | | | | | |
| 24 | 14.07 | 1945 | 1.52 | 49 | 24 | 18 | 13 | 4 | 22 | 9.1 | 1 | 10.0 | 8 | 240 | .1 | 19 | TR | 15 | | | | | | | |
| 25 | 15.07 | 1946 | 1.50 | 45 | 19.5 | 13 | 13 | 11 | 50 | 12 | 2 | 10.2 | 4.5 | 120 | .1 | 19 | TR | 15 | | | | | | | |
| 25 | 16.07 | 1946 | 1.52 | 45 | 21.5 | 14 | 15 | 6 | 35 | 12 | 2 | 11 | 16 | 160 | .5 | 19 | TR | 13 | | | | | | | |
| 27 | 17.07 | 1946 | 1.52 | 46 | 23.5 | 15 | 17 | 15 | 40 | 12 | 2 | 10.3 | 11 | 240 | .2 | 19 | .50 | 12.5 | | | | | | | |
| 23 | 18.07 | 1946 | 1.53 | 43 | 18 | 12 | 12 | 8 | 36 | 13 | 2 | 10.1 | 12 | 280 | .2 | 19 | .50 | 12.5 | | | | | | | |

REMARKS



ANCHOR DRILLING FLUIDS AS

OSLO — STAVANGER

Drilling Mud Properties Record

MUD SYSTEM GEL/DRISPA

WELL NAME 6609/7-1 AREA TRAFNABANKEN
 OPERATOR PCON RIG. NEPTUNO NORDRA
 ENGINEERS FOLKVORD/VASTVEIT/TORGENSEN

| Day No. | DATE | DEPTH FEET METERS | MUD PROPERTIES | | | | | | | | | | | | | | | | | | | | OPERATION REMARKS | | |
|---------|-------|-------------------------|--------------------|-----------|----------|----------|-------------------|-----------|------------------------|-------------|---------------|------|-------------------|-----|-------|--------------------|--------|-----------------|--------------|---------------|-----|-----|-------------------|----|----|
| | | | DENSITY PPG □ SG □ | VISCOSITY | | | | GELS 0 | FLUID LOSS 30 Min cc's | CAKE 32 nds | H.T.H.P. cc's | PH | Filtrate Analysis | | | RETORT | | BENTONITE #/BBL | POTASH #/BBL | POLYMER #/BBL | "N" | "K" | | | |
| | | | | sec/qt | A.V. cps | P.V. cps | Y.P. #/100 sq.ft. | | | | | | Ca. ++ ppm | PT | % OIL | % SOLIDS Corrected | % SAND | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | 10 | 20 |
| 29 | 19.07 | 1946 | 1.53 | 44 | 18.5 | 10 | 17 | 22 | 35 | 14 | 2 | 10.6 | 9.5 | 200 | .2 | 18 | .75 | 13 | | | | | | | |
| 30 | 20.07 | 1946 | 1.53 | 44 | 22 | 12 | 20 | 20 | 45 | 14 | 2 | 11.0 | 7.5 | 120 | .25 | 18 | .75 | 13 | | | | | | | |
| 31 | 21.07 | 1946 (1838) | 1.53 | 43 | 18 | 12 | 12 | 15 | 40 | 14 | 2 | 11.9 | 8 | 120 | .8 | 18 | .50 | 14 | | | | | | | |
| 32 | 22.07 | 1946 | 1.53 | 38 | 18.5 | 10 | 17 | 16 | 45 | 14 | 2 | 12 | 7 | 120 | .9 | 17 | .50 | 13 | | | | | | | |
| 33 | 23.07 | 1946 | 1.53 | 39 | 16.5 | 10 | 13 | 19 | 40 | 12 | 2 | 11.8 | 6 | 100 | .75 | 17 | .50 | 13 | | | | | | | |
| 34 | 24.07 | 1946 | 1.53 | 43 | 19 | 11 | 16 | 22 | 45 | 12 | 2 | 12.5 | 7 | 140 | 2.0 | 18 | .25 | 14 | | | | | | | |
| 35 | 25.07 | 1946 | 1.53 | 45 | 21.5 | 13 | 17 | 9 | 54 | 10 | 2 | 12.2 | 7 | 140 | 1.3 | 18 | .25 | 14 | | | | | | | |
| 36 | 26.07 | 1954 | 1.53 | 46 | 23 | 15 | 16 | 5 | 55 | 8.0 | 2 | 12.0 | 7 | 140 | 1.0 | 18 | TR | 13 | | | | | | | |
| 37 | 27.07 | 1965 | 1.53 | 48 | 21 | 14 | 14 | 8 | 30 | 7.8 | 1 | 11.8 | 7 | 160 | .75 | 18 | TR | 13 | | | | | | | |
| 38 | 28.07 | 1967 | 1.53 | 49 | 22.5 | 15 | 15 | 6 | 35 | 8.0 | 1 | 11.6 | 7 | 160 | .55 | 18 | TR | 13 | | | | | | | |
| 39 | 29.07 | 1968 | 1.53 | 49 | 20.5 | 14 | 13 | 5 | 28 | 7.8 | 1 | 11.6 | 7.5 | 180 | .55 | 18 | TR | 13 | | | | | | | |
| 40 | 30.07 | 1775 | 1.53 | 43 | 16 | 11 | 10 | 5 | 23 | 9.8 | 1 | 11.4 | 7 | 180 | .35 | 18 | TR | 13 | | | | | | | |
| 41 | 31.07 | 1750 | 1.41 | 41 | | | | | | | | 11.4 | | | | | | | | | | | | | |

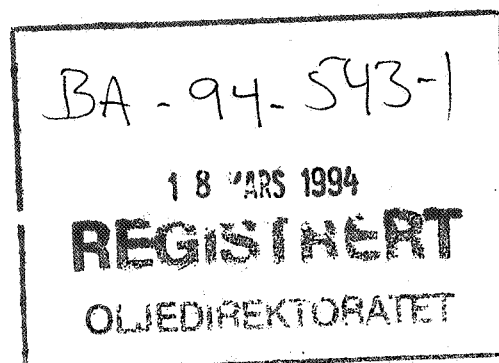
REMARKS

Geochemical Report for

Well NOCS 6609/7-1

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Date : 11.02.92

Chapter 1

INTRODUCTION

The well 6609/7-1, drilled by Phillips Petroleum in 1983, is located in the Nordland I area, some 160 km west-northwest of Sandnessjøen, situated 66°24'56.49" N, 09°01'14.91" E. The waterdepth at the location is 250 m and the KBE was 25 m. All depths given are relative to KB unless otherwise specified. The well was drilled to a total depth of 1969 m in the basement and plugged/abandoned as a dry hole.

The main objective of drilling the well was to test the anticipated Upper Palaeozoic sandstones within the Nordland Ridge. As the Palaeozoic sands were absent and no significant hydrocarbon shows were encountered, the well was not tested (NPD Well Data Summary Sheet, Volume 14).

The main objective of this Geolab Nor study was to locate and characterize potential source rock horizons in the well, with a secondary target to detect free hydrocarbons present in any of the stratigraphic units of the well, and finally to evaluate the thermal maturity throughout the well.

1.1 General Comments

The samples were collected at the Norwegian Petroleum directorate (NPD) in Stavanger. The cuttings samples were washed, described and picked before analyses commenced. The conventional cores were collected as core-chips which were analysed after cleansing off any superficial contamination. Both screening and follow-

up analyses were performed. The well was drilled using water based drillmud (NPD Well Data Summary Sheet, Volume 14).

1.2 Analytical Program

The following analytical was conducted on samples from Well NOCS 6609/7-1.

| <u>Analysis type</u> | <u>No of samples</u> | <u>Figures</u> | <u>Tables</u> |
|--|----------------------|----------------|---------------|
| Lithology description | 63 | 1 | 1 |
| TOC | 25 | 1 | 1,2 |
| Rock-Eval pyrolysis | 25 | 2,3,4 | 2 |
| Thermal extraction GC (GHM, S ₁) | 3 | 5 | |
| Pyrolysis GC (GHM, S ₂) | 3 | 6,7a-b | 3 |
| Vitrinite reflectance | 8 | 8 | 4 |
| Visual kerogen microscopy | 7 | 9 | 5 |

- 1-

Table 1 : Lithology description for well NOCS 6609/7-1

Depth unit of measure: m

| Depth | Type | Grp | Frm | Age | Trb | Sample |
|--------|------|------|-----|---------------------------|-----|---------|
| Int | Cvd | TOC% | % | Lithology description | | |
| 360.00 | | | | | | 0001 |
| | | | 100 | Cont : cem | | 0001-1L |
| 390.00 | | | | | | 0002 |
| | | | 75 | S/Sst : w, l | | 0002-3L |
| | | | 15 | Slstst : ol blk to w, mic | | 0002-1L |
| | | | 10 | Cont : bar, cem | | 0002-2L |
| 420.00 | | | | | | 0003 |
| | | | 75 | S/Sst : w, l | | 0003-3L |
| | | | 15 | Other : ign | | 0003-4L |
| | | | 10 | Slstst : w to ol blk, mic | | 0003-1L |
| | | | tr | Cont : cem | | 0003-2L |
| 450.00 | | | | | | 0004 |
| | 0.09 | | 75 | S/Sst : w, l | | 0004-2L |
| | | | 15 | Other : ign, mic | | 0004-3L |
| | | | 10 | Cont : cem, Coal-ad | | 0004-1L |
| 480.00 | | | | | | 0005 |
| | | | 75 | S/Sst : w, l | | 0005-2L |
| | | | 15 | Other : ign, mic | | 0005-3L |
| | | | 10 | Cont : cem, Coal-ad | | 0005-1L |
| 510.00 | | | | | | 0006 |
| | | | 70 | S/Sst : w, l | | 0006-2L |
| | | | 15 | Other : ign, mic | | 0006-3L |
| | | | 10 | Cont : cem, Coal-ad | | 0006-1L |
| | | | 5 | Slstst : ol blk, cly | | 0006-4L |

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Table 1 : Lithology description for well NOCS 6609/7-1

Depth unit of measure: m

| Depth | Type | Grp | Frm | Age | Trb | Sample |
|--------|------|------|-----|----------------------------------|-----|---------|
| Int | Cvd | TOC% | % | Lithology description | | |
| 540.00 | | | | | | 0007 |
| | 0.07 | | 90 | S/Sst : w, l, f, ang | | 0007-2L |
| | | | 5 | Cont : cem, Coal-ad | | 0007-1L |
| | | | 5 | Other : ign, mic | | 0007-3L |
| | | | tr | Sltst : ol blk, cly | | 0007-4L |
| 570.00 | | | | | | 0008 |
| | | | 90 | S/Sst : w, l, f, ang | | 0008-1L |
| | | | 10 | Other : ign, mic | | 0008-2L |
| | | | tr | Sltst : ol blk, cly | | 0008-3L |
| | | | tr | Other : fos, pyr | | 0008-4L |
| 600.00 | | | | | | 0009 |
| | | | 90 | S/Sst : w, l, f, ang | | 0009-1L |
| | | | 5 | Other : fos, ign | | 0009-3L |
| | | | 5 | Cont : Coal-ad, cem | | 0009-4L |
| | | | tr | Sltst : ol blk, cly | | 0009-2L |
| 630.00 | | | | | | 0010 |
| | | | 90 | S/Sst : w to lt gy pi, l, f, ang | | 0010-1L |
| | | | 5 | Other : fos, ign, mic | | 0010-3L |
| | | | 5 | Cont : Coal-ad, cem | | 0010-4L |
| | | | tr | Sltst : ol blk, cly | | 0010-2L |
| 660.00 | | | | | | 0011 |
| | 0.01 | | 95 | S/Sst : w to lt gy pi, l, f, ang | | 0011-1L |
| | | | 5 | Cont : Coal-ad | | 0011-3L |
| | | | tr | Other : ign, mic | | 0011-2L |

- 3-

Table 1 : Lithology description for well NOCS 6609/7-1

Depth unit of measure: m

| Depth | Type | Grp | Frm | Age | Trb | Sample |
|--------|------|------|-----|----------------------------------|-----|---------|
| Int | Cvd | TOC% | % | Lithology description | | |
| 690.00 | | | | | | 0012 |
| | | | 90 | S/Sst : w to lt gy pi, l, f, ang | | 0012-1L |
| | | | 5 | Other : ign, mic | | 0012-2L |
| | | | 5 | Cont : Coal-ad | | 0012-3L |
| 720.00 | | | | | | 0013 |
| | | | 90 | S/Sst : w to lt gy pi, l, f, ang | | 0013-1L |
| | | | 5 | Other : ign, mic | | 0013-2L |
| | | | 5 | Cont : Coal-ad, cem | | 0013-3L |
| 750.00 | | | | | | 0014 |
| | 0.08 | | 90 | S/Sst : w to lt gy pi, l, f, ang | | 0014-1L |
| | | | 5 | Other : ign, mic, fos | | 0014-2L |
| | | | 5 | Cont : Coal-ad, cem | | 0014-3L |
| 780.00 | | | | | | 0015 |
| | | | 90 | S/Sst : w to y gy, l, f, ang | | 0015-1L |
| | | | 5 | Other : ign, mic, fos | | 0015-2L |
| | | | 5 | Cont : Coal-ad, cem | | 0015-3L |
| 810.00 | | | | | | 0016 |
| | | | 90 | S/Sst : w to y gy, ang, l, f | | 0016-1L |
| | | | 5 | Cont : Coal-ad, cem | | 0016-2L |
| | | | 5 | Other : ign, fos, mic | | 0016-3L |
| 850.00 | | | | | | 0017 |
| | | | 50 | Sh/Clst: lt ol gy, slt, calc | | 0017-1L |
| | 0.40 | | 50 | Sh/Clst: brn blk, slt | | 0017-2L |

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Table 1 : Lithology description for well NOCS 6609/7-1

Depth unit of measure: m

| Depth | Type | Grp | Frm | Age | Trb | Sample |
|--------|------|------|-----|---|-----|---------|
| Int | Cvd | TOC% | % | Lithology description | | |
| 870.00 | | | | | | 0018 |
| | | | | 90 S/Sst : w to y gy, l, f | | 0018-1L |
| | | | | 5 Cont : ns, dd, prp | | 0018-2L |
| | | | | 5 Sh/Clst: brn blk, slt, mic | | 0018-3L |
| 900.00 | | | | | | 0019 |
| | | | | 80 S/Sst : w to y gy, l, f | | 0019-1L |
| | | | | 15 Cont : dd, prp | | 0019-2L |
| | | | | 5 Sh/Clst: brn blk to gy red, slt, mic | | 0019-3L |
| 930.00 | | | | | | 0020 |
| | | | | 75 S/Sst : w to y gy, l, f | | 0020-1L |
| | | | | 20 Cont : dd, prp | | 0020-2L |
| | | | | 5 Sh/Clst: brn blk, slt, mic | | 0020-3L |
| | | | | tr Other : fos | | 0020-4L |
| 960.00 | | | | | | 0021 |
| | 0.25 | | | 75 S/Sst : w to y gy, l, f | | 0021-1L |
| | | | | 20 Cont : dd, ns | | 0021-2L |
| | | | | 5 Sh/Clst: gy red to brn blk, slt, mic | | 0021-3L |
| | | | | tr Other : fos, ign | | 0021-4L |
| 990.00 | | | | | | 0022 |
| | | | | 75 S/Sst : w to y gy, l, f | | 0022-1L |
| | | | | 25 Cont : dd, ns | | 0022-2L |
| | | | | tr Sh/Clst: gy red to brn blk, slt, mic, fos, ign | | 0022-3L |

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Table 1 : Lithology description for well NOCS 6609/7-1

Depth unit of measure: m

| Depth | Type | Grp | Frm | Age | Trb | Sample |
|---------|------|------|-----|--|-----|---------|
| Int | Cvd | TOC% | % | Lithology description | | |
| 1020.00 | | | | | | 0023 |
| | | | 80 | S/Sst : w to y gy, l, f | | 0023-1L |
| | | | 20 | Cont : dd, ns | | 0023-2L |
| | | | tr | Sh/Clst: gy red to brn blk, slt, mic, fos, ign | | 0023-3L |
| 1050.00 | | | | | | 0024 |
| | | | 70 | S/Sst : w to y gy, l, f | | 0024-1L |
| | | | 20 | Cont : dd, ns | | 0024-2L |
| | | | 10 | Sh/Clst: brn blk, slt, fos, ign | | 0024-3L |
| 1080.00 | | | | | | 0025 |
| | 0.39 | | 45 | Sh/Clst: y gy, calc, slt | | 0025-1L |
| | | | 40 | S/Sst : gy w, l, f, crs | | 0025-2L |
| | | | 10 | Other : ign | | 0025-3L |
| | | | 5 | Sh/Clst: brn blk, slt | | 0025-4L |
| 1110.00 | | | | | | 0026 |
| | | | 60 | S/Sst : gy w, l, f, crs | | 0026-2L |
| | | | 25 | Sh/Clst: y gy, calc, slt | | 0026-1L |
| | | | 10 | Sh/Clst: brn blk, slt | | 0026-4L |
| | | | 5 | Other : ign | | 0026-3L |
| | | | tr | Cont : prp | | 0026-5L |
| 1140.00 | | | | | | 0027 |
| | 0.10 | | 75 | S/Sst : gy w, l, f, crs | | 0027-2L |
| | | | 15 | Sh/Clst: y gy, calc, slt | | 0027-1L |
| | | | 5 | Other : ign, mic, fos | | 0027-3L |
| | | | 5 | Sh/Clst: brn blk, slt | | 0027-4L |
| | | | tr | Cont : prp | | 0027-5L |

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Table 1 : Lithology description for well NOCS 6609/7-1

Depth unit of measure: m

| Depth | Type | Grp | Frm | Age | Trb | Sample |
|---------|------|------|-----|-------------------------------|-----|---------|
| Int | Cvd | TOC% | % | Lithology description | | |
| 1170.00 | | | | | | 0028 |
| | | | | 85 S/Sst : gy w, l, f, crs | | 0028-2L |
| | | | | 10 Sh/Clst: y gy, calc, slt | | 0028-1L |
| | | | | 5 Other : ign, mic | | 0028-3L |
| | | | | tr Sh/Clst: brn blk, slt | | 0028-4L |
| | | | | tr Cont : prp | | 0028-5L |
| 1200.00 | | | | | | 0029 |
| | | | | 75 S/Sst : gy w, l, f, crs | | 0029-2L |
| | | | | 15 Sh/Clst: y gy, calc, slt | | 0029-1L |
| | | | | 5 Other : ign, mic | | 0029-3L |
| | | | | 5 Sh/Clst: brn blk, slt, mic | | 0029-4L |
| | | | | tr Cont : prp | | 0029-5L |
| 1230.00 | | | | | | 0030 |
| | 0.10 | | | 70 S/Sst : gy w, l, f, crs | | 0030-2L |
| | | | | 20 Sh/Clst: y gy, calc, slt | | 0030-1L |
| | | | | 10 Other : ign, mic, fos | | 0030-3L |
| | | | | tr Sh/Clst: brn blk, slt, mic | | 0030-4L |
| | | | | tr Cont : prp | | 0030-5L |
| 1260.00 | | | | | | 0031 |
| | | | | 65 S/Sst : gy w, l, f, crs | | 0031-2L |
| | | | | 20 Sh/Clst: y gy, calc, slt | | 0031-1L |
| | | | | 10 Other : ign, mic, fos | | 0031-3L |
| | | | | 5 Cont : ns, prp | | 0031-4L |
| 1290.00 | | | | | | 0032 |
| | | | | 65 S/Sst : gy w, l, f, crs | | 0032-2L |
| | | | | 20 Sh/Clst: y gy, calc, slt | | 0032-1L |
| | | | | 10 Other : ign, mic, fos | | 0032-3L |
| | | | | 5 Cont : ns, prp | | 0032-4L |

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Table 1 : Lithology description for well NOCS 6609/7-1

Depth unit of measure: m

| Depth | Type | Grp | Frm | Age | Trb | Sample |
|---------|------|------|-----|--------------------------|-----|---------|
| Int | Cvd | TOC% | % | Lithology description | | |
| 1320.00 | | | | | | 0033 |
| | 0.13 | | 55 | S/Sst : gy w, l, f, crs | | 0033-2L |
| | | | 35 | Sh/Clst: y gy, calc, slt | | 0033-1L |
| | | | 10 | Other : ign, mic, fos | | 0033-3L |
| | | | tr | Cont : ns, prp | | 0033-4L |
| 1350.00 | | | | | | 0034 |
| | | | 70 | S/Sst : gy w, l, f, crs | | 0034-2L |
| | | | 20 | Sh/Clst: y gy, calc, slt | | 0034-1L |
| | | | 10 | Other : ign, mic, fos | | 0034-3L |
| | | | tr | Cont : ns | | 0034-4L |
| 1380.00 | | | | | | 0035 |
| | 0.07 | | 80 | S/Sst : gy w, l, f, crs | | 0035-2L |
| | | | 15 | Sh/Clst: y gy, calc, slt | | 0035-1L |
| | | | 5 | Other : ign, mic, fos | | 0035-3L |
| 1410.00 | | | | | | 0036 |
| | | | 70 | S/Sst : gy w, l, f, crs | | 0036-2L |
| | | | 25 | Sh/Clst: y gy, calc, slt | | 0036-1L |
| | | | 5 | Other : ign, pyr, mic | | 0036-3L |
| | | | tr | Cont : prp, fib | | 0036-4L |
| 1440.00 | | | | | | 0037 |
| | 0.12 | | 70 | S/Sst : gy w, l, f, crs | | 0037-2L |
| | | | 25 | Sh/Clst: y gy, calc, slt | | 0037-1L |
| | | | 5 | Other : ign, pyr, mic | | 0037-3L |
| | | | tr | Cont : prp, fib | | 0037-4L |

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Table 1 : Lithology description for well NOCS 6609/7-1

Depth unit of measure: m

| Depth | Type | Grp | Frm | Age | Trb | Sample |
|---------|------|------|-----|-------------------------------------|-----|---------|
| Int | Cvd | TOC% | % | Lithology description | | |
| 1470.00 | | | | | | 0038 |
| | | | | 40 Sh/Clst: y gy, calc, slt | | 0038-1L |
| | | | | 40 Sh/Clst: lt ol gy to ol gy, calc | | 0038-3L |
| | | | | 20 S/Sst : gy w, l, f, crs | | 0038-2L |
| 1500.00 | | | | | | 0039 |
| | 0.91 | 100 | | Sh/Clst: lt ol gy to lt gy, calc | | 0039-1L |
| | | | | tr Sltst : brn blk | | 0039-2L |
| 1530.00 | | | | | | 0040 |
| | | | | 95 Sh/Clst: lt ol gy to lt gy, calc | | 0040-1L |
| | | | | 5 Sh/Clst: y gy, slt, calc | | 0040-3L |
| | | | | tr S/Sst : brn blk | | 0040-2L |
| 1560.00 | | | | | | 0041 |
| | 0.70 | 95 | | Sh/Clst: lt ol gy to lt gy, calc | | 0041-1L |
| | | | | 5 Sh/Clst: y gy, slt, calc | | 0041-3L |
| | | | | tr S/Sst : brn blk | | 0041-2L |
| | | | | tr Other : pyr | | 0041-4L |
| 1590.00 | | | | | | 0042 |
| | | | | 95 Sh/Clst: w to lt gy, calc, lam | | 0042-1L |
| | | | | 5 Sltst : or gy, fe | | 0042-2L |
| 1620.00 | | | | | | 0043 |
| | | | | 40 Sh/Clst: w to m gy, calc | | 0043-3L |
| | | | | 35 Sh/Clst: w to lt gy, calc, lam | | 0043-1L |
| | | | | 20 Sltst : w to m gy to or gy, l | | 0043-4L |
| | | | | 5 Sltst : or gy, fe | | 0043-2L |
| | | | | tr Other : pyr | | 0043-5L |

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Table 1 : Lithology description for well NOCS 6609/7-1

Depth unit of measure: m

| Depth | Type | Grp | Frm | Age | Trb | Sample |
|---------|------|------|-----|--|-----|---------|
| Int | Cvd | TOC% | % | Lithology description | | |
| 1650.00 | | | | | | 0044 |
| | 1.10 | | 50 | Sh/Clst: w to m gy, calc | | 0044-3L |
| | | | 35 | Sltst : w to m gy to or gy, l | | 0044-4L |
| | | | 10 | Sh/Clst: w to lt gy, calc, lam | | 0044-1L |
| | | | 5 | Sltst : or gy, fe | | 0044-2L |
| | | | tr | Other : pyr | | 0044-5L |
| 1680.00 | | | | | | 0046 |
| | | | 60 | Sh/Clst: w to m gy, calc, slt | | 0046-2L |
| | | | 20 | S/Sst : w to m gy to or gy, l, slt | | 0046-3L |
| | | | 15 | Sh/Clst: w to lt gy, lam | | 0046-5L |
| | | | 5 | Sltst : or gy, fe | | 0046-1L |
| | | | tr | Other : pyr | | 0046-4L |
| 1710.00 | | | | | | 0045 |
| | | | 60 | Sh/Clst: w to m gy, calc, slt | | 0045-2L |
| | | | 35 | Sltst : w to m gy to or gy, l | | 0045-3L |
| | | | 5 | Sltst : or gy, fe | | 0045-1L |
| | | | tr | Other : pyr | | 0045-4L |
| 1750.00 | | | | | | 0047 |
| | | | 60 | Sh/Clst: lt gy to m gy to pl ol, calc, slt | | 0047-2L |
| | | | 35 | S/Sst : w to m gy to or gy, l, slt | | 0047-3L |
| | | | 5 | Sltst : or gy, fe | | 0047-1L |
| | | | tr | Other : pyr | | 0047-4L |
| 1770.00 | | | | | | 0048 |
| | 0.88 | | 60 | Sh/Clst: lt gy to m gy to pl ol, calc, slt | | 0048-2L |
| | | | 35 | S/Sst : w to m gy to drk gy, l, slt | | 0048-3L |
| | | | 5 | Sltst : or gy, fe | | 0048-1L |
| | | | tr | Other : pyr | | 0048-4L |

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Table 1 : Lithology description for well NOCS 6609/7-1

Depth unit of measure: m

| Depth | Type | Grp | Frm | Age | Trb | Sample |
|---------|------|------|-----|---|-----|---------|
| Int | Cvd | TOC% | % | Lithology description | | |
| 1800.00 | | | | | | 0049 |
| | | | | 60 Sh/Clst: lt gy to m gy to pl ol, calc, slt | | 0049-2L |
| | | | | 35 S/Sst : w to m gy to drk gy, l, slt | | 0049-3L |
| | | | | 5 Sltst : or gy, fe | | 0049-1L |
| | | | | tr Other : pyr | | 0049-4L |
| 1860.00 | | | | | | 0050 |
| | 0.69 | | | 85 Sh/Clst: lt gy to m gy to pl ol, calc, slt | | 0050-2L |
| | | | | 10 S/Sst : w to m gy to drk gy, l, slt | | 0050-3L |
| | | | | 5 Sltst : or gy, fe | | 0050-1L |
| | | | | tr Other : pyr | | 0050-4L |
| 1870.00 | | | | | | 0051 |
| | | | | 85 Sh/Clst: lt gy, calc, slt | | 0051-1L |
| | | | | 10 S/Sst : w to drk gy, l, slt | | 0051-2L |
| | | | | 5 Cont : prp | | 0051-4L |
| | | | | tr Other : pyr | | 0051-3L |
| 1875.00 | | | | | | 0052 |
| | 0.78 | | | 90 Sltst : lt brn gy to m gy, hd, s | | 0052-2L |
| | | | | 10 Sh/Clst: lt gy, calc, slt | | 0052-1L |
| 1880.00 | | | | | | 0053 |
| | | | | 50 Sh/Clst: lt gy, calc, slt | | 0053-1L |
| | | | | 50 Sltst : lt brn gy to m gy, hd, s | | 0053-2L |
| 1885.00 | | | | | | 0054 |
| | | | | 80 Sltst : lt brn gy to m gy, hd, s | | 0054-2L |
| | | | | 20 Sh/Clst: lt gy, calc, slt | | 0054-1L |

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Table 1 : Lithology description for well NOCS 6609/7-1

Depth unit of measure: m

| Depth | Type | Grp | Frm | Age | Trb | Sample |
|---------|------|------|-----|---|-----|---------|
| Int | Cvd | TOC% | % | Lithology description | | |
| 1890.00 | | | | | | 0055 |
| | | | 100 | S/Sst : lt brn gy to m gy to drk gy, hd, slt | | 0055-2L |
| | | | | tr Sh/Clst: lt gy, calc, slt | | 0055-1L |
| 1895.00 | | | | | | 0056 |
| | 0.10 | | 100 | S/Sst : lt brn gy to m gy to drk gy, hd, slt | | 0056-1L |
| 1900.00 | | | | | | 0057 |
| | | | 100 | S/Sst : lt brn gy to m gy to drk gy, hd, slt | | 0057-1L |
| 1905.00 | | | | | | 0058 |
| | | | 95 | S/Sst : lt brn gy to m gy to drk gy, hd, slt | | 0058-1L |
| | | | 5 | Slstst : w, calc | | 0058-2L |
| 1910.00 | | | | | | 0059 |
| | 0.01 | | 100 | S/Sst : lt brn gy to m gy to drk gy, hd, slt | | 0059-1L |
| | | | | tr Slstst : w, calc | | 0059-2L |
| 1915.00 | | | | | | 0060 |
| | | | 100 | S/Sst : lt brn gy to m gy to drk gy, hd, slt | | 0060-1L |
| | | | | tr Slstst : w, calc | | 0060-2L |

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Table 1 : Lithology description for well NOCS 6609/7-1

Depth unit of measure: m

| Depth | Type | Grp | Frm | Age | Trb | Sample |
|---------|------|-----|-----------------------|--------------------------------|-----|---------|
| Int Cvd | TOC% | % | Lithology description | | | |
| 1920.00 | | | | | | 0061 |
| | | 100 | Meta | : m gy to drk gy to gn blk, hd | | 0061-1L |
| | | | tr Sltst | : w, calc | | 0061-2L |
| 1946.00 | ccp | | | | | 0062 |
| | | 100 | Meta | : gn blk, mic, hd | | 0062-2L |
| 1969.00 | ccp | | | | | 0063 |
| | 0.01 | 100 | Meta | : brn gy to gn blk, mic, hd | | 0063-1L |

Table 2 : Rock-Eval table for well NOCS 6609/7-1

Depth unit of measure: m

| Depth | Typ | Lithology | S1 | S2 | S3 | S2/S3 | TOC | HI | OI | PP | PI | Tmax | Sample |
|---------|-----|----------------------------|------|------|------|-------|------|-----|-----|-----|------|------|---------|
| 450.00 | cut | S/Sst : w | 0.01 | 0.02 | - | - | 0.09 | 22 | - | - | 0.33 | 340 | 0004-2L |
| 540.00 | cut | S/Sst : w | 0.01 | 0.06 | - | - | 0.07 | 86 | - | 0.1 | 0.14 | 459 | 0007-2L |
| 660.00 | cut | S/Sst : w to lt gy pi | - | 0.09 | - | - | 0.01 | 900 | - | 0.1 | - | 435 | 0011-1L |
| 750.00 | cut | S/Sst : w to lt gy pi | - | 0.05 | - | - | 0.08 | 63 | - | 0.1 | - | 391 | 0014-1L |
| 850.00 | cut | Sh/Clst: brn blk | 0.23 | 0.31 | 0.60 | 0.52 | 0.40 | 78 | 150 | 0.5 | 0.43 | 369 | 0017-2L |
| 960.00 | cut | S/Sst : w to y gy | 0.15 | 0.16 | 0.35 | 0.46 | 0.25 | 64 | 140 | 0.3 | 0.48 | 387 | 0021-1L |
| 1080.00 | cut | Sh/Clst: y gy | 0.18 | 0.20 | 0.62 | 0.32 | 0.39 | 51 | 159 | 0.4 | 0.47 | 408 | 0025-1L |
| 1140.00 | cut | S/Sst : gy w | - | - | - | - | 0.10 | - | - | - | - | 265 | 0027-2L |
| 1230.00 | cut | S/Sst : gy w | 0.01 | 0.05 | - | - | 0.10 | 50 | - | 0.1 | 0.17 | 340 | 0030-2L |
| 1320.00 | cut | S/Sst : gy w | 0.03 | 0.06 | 0.11 | 0.55 | 0.13 | 46 | 85 | 0.1 | 0.33 | 347 | 0033-2L |
| 1380.00 | cut | S/Sst : gy w | 0.01 | 0.02 | - | - | 0.07 | 29 | - | - | 0.33 | 295 | 0035-2L |
| 1440.00 | cut | S/Sst : gy w | 0.02 | 0.09 | 0.11 | 0.82 | 0.12 | 75 | 92 | 0.1 | 0.18 | 436 | 0037-2L |
| 1500.00 | cut | Sh/Clst: lt ol gy to lt gy | 0.23 | 0.65 | 0.72 | 0.90 | 0.91 | 71 | 79 | 0.9 | 0.26 | 393 | 0039-1L |
| 1560.00 | cut | Sh/Clst: lt ol gy to lt gy | 0.18 | 0.52 | 0.52 | 1.00 | 0.70 | 74 | 74 | 0.7 | 0.26 | 396 | 0041-1L |
| 1620.00 | com | bulk | 0.25 | 0.81 | 0.80 | 1.01 | 1.40 | 58 | 57 | 1.1 | 0.24 | 391 | 0064-0B |

Depth unit of measure: m

| Depth | Typ | Lithology | S1 | S2 | S3 | S2/S3 | TOC | HI | OI | PP | PI | Tmax | Sample |
|---------|-----|-------------------------------------|------|------|------|-------|------|-----|-----|-----|------|------|---------|
| 1650.00 | cut | Sh/Clst: w to m gy | 0.22 | 0.60 | 0.93 | 0.65 | 1.10 | 55 | 85 | 0.8 | 0.27 | 393 | 0044-3L |
| 1710.00 | com | bulk | 0.20 | 0.47 | 0.79 | 0.59 | 0.99 | 47 | 80 | 0.7 | 0.30 | 403 | 0065-0B |
| 1770.00 | cut | Sh/Clst: lt gy to m gy to pl ol | 0.19 | 0.46 | 0.65 | 0.71 | 0.88 | 52 | 74 | 0.7 | 0.29 | 402 | 0048-2L |
| 1800.00 | com | bulk | 0.67 | 0.35 | 0.87 | 0.40 | 0.76 | 46 | 114 | 1.0 | 0.66 | 405 | 0066-0B |
| 1860.00 | cut | Sh/Clst: lt gy to m gy to pl ol | 0.20 | 0.36 | 0.42 | 0.86 | 0.69 | 52 | 61 | 0.6 | 0.36 | 423 | 0050-2L |
| 1875.00 | cut | Sltst : lt brn gy to m gy | 0.15 | 0.36 | 0.64 | 0.56 | 0.78 | 46 | 82 | 0.5 | 0.29 | 428 | 0052-2L |
| 1895.00 | cut | S/Sst : lt brn gy to m gy to drk gy | 0.02 | 0.02 | 0.08 | 0.25 | 0.10 | 20 | 80 | - | 0.50 | 437 | 0056-1L |
| 1910.00 | cut | S/Sst : lt brn gy to m gy to drk gy | 0.01 | 0.04 | 0.06 | 0.67 | 0.01 | 400 | 600 | 0.1 | 0.20 | 374 | 0059-1L |
| 1969.00 | ccp | Meta : brn gy to gn blk | 0.01 | 0.01 | 0.01 | 1.00 | 0.01 | 100 | 100 | - | 0.50 | 331 | 0063-1L |

Table 3 : Pyrolysis GC Data (S2 peak) as Percentage of Total Area for Well NOCS 6609/7-1

Depth unit of measure: m

| Depth | Typ | Lithology | C1 | C2-C5 | C6-C14 | C15+ | S2 from Rock-Eval | Sample |
|---------|-----|-------------------|------|-------|--------|------|----------------------|---------|
| 960.00 | cut | S/Sst : w to y gy | 4.41 | 40.21 | 50.50 | 4.88 | 0.16 | 0021-1L |
| 1710.00 | com | bulk | 4.12 | 43.13 | 49.51 | 3.24 | 0.47 | 0065-0B |
| 1800.00 | com | bulk | 7.58 | 33.45 | 50.85 | 8.12 | 0.35 | 0066-0B |

Depth unit of measure: m

| Depth | Typ | Lithology | Vitrinite Reflectance (%) | Number of Readings | Standard Deviation | Spore Fluorescence Colour | SCI | T _{max} (°C) | Sample |
|---------|-----|---------------------------------|---------------------------|--------------------|--------------------|---------------------------|------------|-----------------------|---------|
| 850.00 | cut | Sh/Clst: brn blk | 0.23 | 13 | 0.03 | - | 2.0 | 369 | 0017-2L |
| 1080.00 | cut | Sh/Clst: y gy | NDP | - | - | - | 2.0-2.5 | 408 | 0025-1L |
| 1230.00 | com | bulk | NDP | - | - | - | - | - | 0067-0B |
| 1440.00 | com | bulk | NDP | - | - | - | - | - | 0068-0B |
| 1500.00 | cut | Sh/Clst: lt ol gy to lt gy | 0.47 | 3 | 0.04 | - | 2.5-3.0(?) | 393 | 0039-1L |
| 1560.00 | cut | Sh/Clst: lt ol gy to lt gy | - | - | - | - | 2.5-3.0(?) | 396 | 0041-1L |
| 1620.00 | com | bulk | NDP | - | - | - | 4.0(??) | 391 | 0064-0B |
| 1710.00 | com | bulk | - | - | - | - | 4.5 | 403 | 0065-0B |
| 1750.00 | cut | Sh/Clst: lt gy to m gy to pl ol | 0.53 | 4 | 0.03 | - | - | - | 0047-2L |
| 1860.00 | cut | Sh/Clst: lt gy to m gy to pl ol | - | - | - | - | 4.5-5.0 | 423 | 0050-2L |
| 1870.00 | cut | Sh/Clst: lt gy | 0.54 | 3 | 0.01 | - | - | - | 0051-1L |

Depth unit of measure: m

| Depth | Typ | Lithology | L | A | L | S | C | R | A | D | I | S | I | M | S | V | C | V | A | Sample | |
|---------|-----|---------------------------------|-----|---|----|----|---|----|---|---|-----|---|---|---|---|-----|---|----|---|---------|---|
| | | | P | m | i | p | u | R | A | D | I | F | m | t | c | B | T | T | e | | t |
| | | | T | r | D | P | i | s | g | o | R | F | D | r | I | R | e | l | D | | |
| | | | % | L | t | o | l | c | i | n | e | l | t | n | o | I | % | n | i | n | V |
| 850.00 | cut | Sh/Clst: brn blk | NDP | * | ** | * | * | * | | | NDP | * | | | | NDP | * | ** | | 0017-2L | |
| 1080.00 | cut | Sh/Clst: y gy | 20 | | * | ** | * | * | | | 30 | * | | | | 50 | * | ** | | 0025-1L | |
| 1500.00 | cut | Sh/Clst: lt ol gy to lt gy | 40 | * | ** | ** | | | | | 35 | * | | | | 25 | | * | | 0039-1L | |
| 1560.00 | cut | Sh/Clst: lt ol gy to lt gy | 70 | * | ** | * | | * | * | | 20 | * | | | | 10 | | * | | 0041-1L | |
| 1620.00 | com | bulk | 85 | * | * | * | | ** | * | | 5 | * | | | | 10 | | * | | 0064-0B | |
| 1710.00 | com | bulk | 60 | | * | * | | ** | | | 25 | * | | | | 15 | * | ** | | 0065-0B | |
| 1860.00 | cut | Sh/Clst: lt gy to m gy to pl ol | TR | | | ** | | * | | | 70 | * | * | | | 30 | * | * | * | 0050-2L | |