

SUMMARY OF TESTRESULTS

FROM

BRENT GROUP, 30/2-2

| | | |
|---|---|-------------|
| Test No. | : | 1 B |
| Interval (m KB) | : | 4071 - 4076 |
| Flowperiod (hrs) | : | 7.07 |
| Choke (mm) | : | 19.05 |
| Liquid Rate (m ³ /D) | : | 5 |
| Last Flowing Bottomhole Pressure Reading (bar) | : | 345 |
| Last Buildup Pressure Reading (bar) | : | 654 |
| Max Temperature Reading (°C) | : | 150 |

Comment: 1 A failed due to problems with testequipment.

| | | |
|---|---|------------------------------------|
| Test No. | : | 2 B |
| Interval (m KB) | : | 4011-4013, 4017-4025, 4035-4042 |
| Flowperiod (hrs) | : | 13.5 |
| Choke (mm) | : | 19.05 |
| Liquid Rate (m ³ /D) | : | 8 |
| Last Flowing Bottomhole Pressure Reading (bar) | : | 361 |
| Last Buildup Pressure Reading (bar) | : | 675 |
| Max Temperature Reading (°C) | : | 148 |

Comment: 2 A failed due to problems with testequipment.

| | | |
|---|---|------------------------------------|
| Test No. | : | 3 |
| Interval (m KB) | : | 3935-3949, 3955-3959, 3967-3974 |
| Flowperiod (hrs) | : | 18.7 |
| Choke (mm) | : | 19.05 |
| Gas Rate (sm ³ /D) | : | 226 |
| Gas Density (rel. air) | : | 0.734 |
| Cond Rate (sm ³ /D) | : | 105 |
| Cond Density (g/cc) | : | 0.808 |
| GOR (sm ³ /sm ³) | : | 2160 |
| Last Flowing Bottomhole Pressure Reading (bar) | : | 138 |
| Last Buildup Pressure Reading (bar) | : | 676 |
| Max Temperature Reading (°C) | : | 137 |

OPERATOR

STATOIL

WELL NO.

30/2-2

MATERIAL CONSUMPTION & COST ANALYSIS

17 1/2" HOLE DRILLED TO 2365 ^{Meters} ~~Feet~~ 13 3/8" CASING SET AT 2350 ^{Meters} ~~Feet~~

ACTUAL AMOUNT OF HOLE DRILLED 1342 ^{Meters} ~~Feet~~ DAYS ON INTERVAL 14

DRILLING FLUID SYSTEM GYP / CMC

| MATERIAL | UNIT SIZE | UNIT PRICE | CONSUMPTION | COST |
|-----------------------|-----------|------------|-------------|-----------|
| ILMENITE MT | MT | 148 | 674 | 99.752,- |
| BENTONITE MT | MT | 380 | 18 | 6.840,- |
| BENTONITE SXS | 50 KG | 18 | 44 | 792,- |
| LIGNO SXS | 25 KG | 19.50 | 214 | 4.173,- |
| DESCO SXS | 25 LBS | 38 | 30 | 1.140,- |
| CMC LV SXS | 25 KG | 65 | 281 | 18.265,- |
| CMC HV SXS | 25 KG | 67 | 171 | 11.457,- |
| DRISPAC REG. SXS | 50 LBS | 154 | 39 | 6.006,- |
| CAUSTIC SXS | 25 KG | 20 | 290 | 5.800,- |
| SODA BICARB SXS | 50 KG | 24 | 105 | 2.520,- |
| SODA ASH SXS | 50 KG | 21 | 6 | 126,- |
| GYP SXS | 40 KG | 10.50 | 1017 | 10.678,50 |
| CaCl ₂ SXS | 50 KG | 30 | 7 | 210,- |
| DEFOAMER CAN | 25 LTR | 118 | 1 | 118,- |
| | | | | |
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| | | | | |
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| | | | | |

COST/DAY US\$ 11.991,25 COST FOR INTERVAL US\$ 167.877,50

JST/ METRE US\$ 125,10

OPERATOR STATOIL

WELL NO. 30/2-2

MATERIAL CONSUMPTION & COST ANALYSIS

8 1/2" HOLE DRILLED TO 4172 Meters Feet 7" liner CASING SET AT 4170 Meters Feet

ACTUAL AMOUNT OF HOLE DRILLED 650 Meters Feet DAYS ON INTERVAL 44

DRILLING FLUID SYSTEM GEL / LIGNO

| MATERIAL | UNIT SIZE | UNIT PRICE | CONSUMPTION | COST |
|--------------|-----------|------------|-------------|-----------|
| BARITE M/T | M/T | 148 | 1131 | 167.388,- |
| BENTONITE | " | 380 | 62 | 23.560,- |
| BENTONITE | 50 KG | 18 | 51 | 918,- |
| CAUSTIC SODA | 25 KG | 20 | 251 | 5.020,- |
| SODA ASH | 50 KG | 21 | 89 | 1.869,- |
| BICARB | 50 KG | 24 | 115 | 2.760,- |
| LIGNO | 25 KG | 19.50 | 447 | 8.716,50 |
| LIGNITE | 25 KG | 32 | 408 | 13.056,- |
| DESCO | 25 LBS | 38 | 98 | 3.724,- |
| ANCO RESIN | 25 KG | 81.25 | 191 | 15.518,75 |
| CMC LV | 25 KG | 65 | 249 | 16.185,- |
| CMC HV | 25 KG | 67 | 42 | 2.814,- |
| LIME | 25 KG | 6.50 | 54 | 351,- |
| DEFOAMER | 25 LTRS | 118 | 7 | 826,- |
| IMCO SPOT | | 85 | 95 | 8.075,- |
| PIPELAX | 200 LTPS | 1089 | 5 | 5.445,- |
| A. OXIN | 25 LTRS | 133 | 3 | 399,- |
| | | | | |
| | | | | |
| | | | | |

COST/DAY US\$ 6.286,94

COST FOR INTERVAL US\$ 276.625,25

COST/ MT US\$ 425,58

OPERATOR STATOIL

WELL NO. 30/2-2

TOTAL CONSUMPTION & COST ANALYSIS

TOTAL DEPTH Meters
feet

TOTAL HOLE DRILLED Meters
feet

TOTAL DAYS

| MATERIAL | UNIT SIZE | UNIT PRICE | CONSUMPTION | COST |
|-------------------|-----------|------------|-------------|-----------|
| BARITE | MT | 148 | 1231 | 182.188,- |
| ILMENITE | MT | 148 | 1812 | 268.176,- |
| BENTONITE | MT | 380 | 192 | 72.960,- |
| BENTONITE | 50 KG | 18 | 95 | 1.710,- |
| CAUSTIC | 25 KG | 20 | 1191 | 23.820,- |
| SODA ASH | 50 KG | 21 | 102 | 2.142,- |
| BICARB | 50 KG | 24 | 226 | 5.424,- |
| LIGNO | 25 KG | 19.50 | 1509 | 29.425,50 |
| LIGNITE | 25 KG | 32 | 408 | 13.056,- |
| DESCO | 25 LBS | 38 | 181 | 6.878,- |
| ANCO RESIN | 25 KGS | 81.25 | 191 | 15.518,75 |
| CMC LV | 25 KG | 65 | 975 | 63.375,- |
| CMC HV | 25 KG | 67 | 246 | 16.482,- |
| LIME | 25 KG | 6.50 | 54 | 351 |
| DEFOAMER | 25 LTRS | 118 | 14 | 1.652,- |
| IMCO SPOT | 50 LBS | 85 | 95 | 8.075,- |
| PIPELAX | 200 LTRS | 1089 | 5 | 5.445,- |
| A. OXIN | 25 LTRS | 133 | 3 | 399 |
| GYPSUM | 40 KG | 10.50 | 1538 | 16.149,- |
| CaCl ₂ | 50 KG | 30 | 7 | 210,- |
| DRISPAC REG. | 50 LBS | 154 | 48 | 7.392,- |

COST/DAY

TOTAL CHEMICAL COSTS

JST/METRE

TOTAL ENGINEERING CHARGES

TOTAL DRILLING FLUID RELATED COSTS

Drilling Mud Properties Record

MUD SYSTEM GEL/SEAWATER 36" Hole 30" casing, 26" hole 20" casing

WELL NAME 30/2-2

AREA NORTH SEA

OPERATOR STATOIL

RIG DYVI DELTA

ENGINEERS SUNDE/FOLKVORD/WIIK

| Day No. | DATE | DEPTH FEET <input type="checkbox"/> METERS <input type="checkbox"/> | MUD PROPERTIES | | | | | | | | | | | | | | | | | OPERATION REMARKS | | | | | | | |
|---------|-------|---|---|----------|----------|-------------------|-----------|----|---------------------|------------|------|-------|-----------------------|-------------|--------------|-----|-------------------|--------|---|-------------------|--------|--|--|-----------------|---------------|-----|-----|
| | | | DENSITY PPG <input type="checkbox"/> SG <input type="checkbox"/> | | | | VISCOSITY | | | | GELS | | FLUID LOSS 30 Min ccs | CAKE 32 nds | H.T.H.P. ccs | pH | Filtrate Analysis | | | | RETORT | | | BENTONITE #/BBL | POLYMER #/BBL | "N" | "K" |
| | | | sec/qt | A.V. cps | P.V. cps | Y.P. #/100 sq.ft. | 0 | 10 | Cl ⁻ ppm | Ca. ++ ppm | PI | % OIL | | | | | % SOLIDS | % SAND | | | | | | | | | |
| 1 | 16.12 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | 17.12 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | 18.12 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 19.12 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | 20.12 | 214 | 1.05 | 45 | 18 | 8 | 20 | | | | | | | | | | | | | | | | | | | | |
| 6 | 21.12 | 215 | 1.05 | 43 | 17 | 7 | 20 | | | | | | | | | | | | | | | | | | | | |
| 7 | 22.12 | 215 | 1.05 | 43 | 17 | 7 | 20 | | | | | | | | | | | | | | | | | | | | |
| 8 | 23.12 | 330 | 1.08 | 38 | 20 | 7 | 26 | 15 | | | | | | 9.7 | 13 | 240 | .1 | - | 5 | Tr | 19 | | | | | | |
| 9 | 24.12 | 811 | 1.07 | 37 | 19 | 5 | 28 | 19 | | | | | | 9.7 | 18 | 400 | .1 | - | 5 | Tr | 14 | | | | | | |
| 10 | 25.12 | 1019 | 1.08 | 34 | 15.5 | 5 | 21 | 14 | | | | | | 10.0 | 19 | 400 | .1 | - | 5 | Tr | 15 | | | | | | |
| 11 | 26.12 | 1019 | 1.07 | 42 | 22 | 7 | 30 | 20 | | | | | | | | | | | | | | | | | | | |
| 12 | 27.12 | 1019 | 1.07 | 60 | 37.5 | 7 | 61 | 22 | | | | | | | | | | | | | | | | | | | |
| 13 | 28.12 | 1023 | 1.07 | 61 | 38 | 8 | 60 | 28 | | | | | | | | | | | | | | | | | | | |
| 14 | 29.12 | 1023 | 1.06 | 45 | 9 | 4 | 10 | 35 | 25 | 1 | | | 10.2 | | | | | | | | | | | | | | |

END OF 36" SECTION

END OF 26" SECTION

REMARKS

Drilling Mud Properties Record

MUD SYSTEM GYP/CMC 17 1/2" Hole, 13 3/8" casing

| Day No. | DATE | DEPTH FEET <input type="checkbox"/> METERS <input type="checkbox"/> | MUD PROPERTIES | | | | | | | | | | | | | | | | | OPERATION REMARKS | | | | | |
|---------|-------|---|---|-----------|----------|----------|-------------------|-----------|------------------------|-------------|---------------|------------|-------------------|----|-------|----------|--------|-----|-----------------|-------------------|------------|---------------|-----|-----|--|
| | | | DENSITY PPG <input type="checkbox"/> SG <input 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 | | EXCESS GYP | POLYMER #/BBL | "N" | "K" | |
| | | | | sec/qt | A.V. cps | P.V. cps | Y.P. #/100 sq ft. | | | | | | Ca. ++ ppm | PI | % OIL | % SOLIDS | % SAND | | | | | | | | |
| 15 | 30.12 | Pit | 1.06 | 43 | 9 | 4 | 10 | 6 | 12 | 1 | 10.2 | 3800 | | | | | 10 | 6 | | | | | | | |
| 16 | 31.12 | Pit | 1.07 | 35 | 7 | 3 | 8 | 4 | 14 | 1 | 10.5 | 3200 | .05 | 0 | 5 | - | 10 | 5 | | | | | | | |
| 17 | 01.01 | 1070 | 1.08 | 43 | 12.5 | 8 | 9 | 2 | 8 | 1 | 11.2 | 11K 1280 | .1 | 0 | 10 | - | 10.5 | 5 | | | | | | | |
| 18 | 02.01 | 1495 | 1.10 | 42 | 13 | 8 | 10 | 4 | 8.6 | 1 | 9.6 | 13.5 1600 | .05 | 0 | 9 | 1/4 | 21 | 4.5 | | | | | | | |
| 19 | 03.01 | 1790 | 1.11 | 51 | 17 | 9 | 16 | 13 | 12.8 | 2 | 9.3 | 17K 2280 | .05 | 0 | 7 | 1/4 | 26 | 3.1 | | | | | | | |
| 20 | 04.01 | 1954 | 1.25 | 51 | 19 | 9 | 20 | 22 | 19.5 | 2 | 9.4 | 17.5K 1960 | .05 | 0 | 11 | 1/4 | 29 | 2.1 | | | | | | | |
| 21 | 05.01 | 2138 | 1.45 | 64 | 31 | 15 | 32 | 33 | 17.5 | 2 | 9.5 | 18K 2400 | .05 | 0 | 16 | 1/4 | 29 | 2.1 | | | | | | | |
| 22 | 06.01 | 2258 | 1.45 | 56 | 25 | 16 | 18 | 16 | 14.0 | 2 | 9.1 | 19K 2400 | .05 | Tr | 15 | 1/2 | 30 | 3.1 | | | | | | | |
| 23 | 07.01 | 2365 | 1.45 | 48 | 20 | 13 | 14 | 10 | 16.0 | 2 | 9.5 | 19.5K 2320 | .05 | Tr | 16 | 1/4 | 29 | 4.0 | | | | | | | |
| 24 | 08.01 | 2365 | 1.53 | 58 | 26 | 16 | 18 | 16 | 13.8 | 2 | 9.9 | 19.5K 2160 | .1 | Tr | 20 | 1/2 | 30 | 4.1 | | | | | | | |
| 25 | 09.01 | 2365 | 1.53 | 66 | 23.5 | 16 | 15 | 10 | 13 | 2 | 9.2 | 19.5K 2040 | .05 | Tr | 19.5 | 1/2 | 30 | 4.2 | | | | | | | |
| 26 | 10.01 | 2365 | 1.53 | 58 | 24 | 18 | 12 | 8 | 12 | 2 | 9.5 | 19.5K 1800 | .05 | Tr | 19 | 1/2 | 31 | 5.1 | | | | | | | |
| 27 | 11.01 | 2365 | 1.53 | 60 | 24.5 | 16 | 17 | 12 | 12.2 | 2 | 9.5 | 19.5K 1720 | .05 | Tr | 17 | 1/2 | 30 | 4.7 | END OF 17 1/2" | | | | | | |
| 28 | 12.01 | 2380 | 1.55 | 53 | 23 | 16 | 14 | 11 | 13.2 | 2 | 10.8 | 19.5K 1880 | .15 | Tr | 17 | 1/4 | 26 | 4.1 | | | | | | | |

REMARKS

Drilling Mud Properties Record

MUD SYSTEM GYP/CMC

| Day No. | DATE | DEPTH FEET □ METERS ☒ | MUD PROPERTIES | | | | | | | | | | | | | | | | | | | OPERATION REMARKS | | | |
|---------|-------|-----------------------------|-----------------------|-----------|----------|----------|-------------------|-----------|------------------------|-------------|---------------|-----|-------------------|--------|------------|--------|-------|-----------------|------------|---------------|-----|-------------------|-----|----------|--------|
| | | | DENSITY PPG □ SG ☒ | VISCOSITY | | | | GELS 0 | FLUID LOSS 30 Min cc's | CAKE 32 rds | H.T.H.P. cc's | PH | Filtrate Analysis | | | RETORT | | BENTONITE #/BBL | EXCESS GYP | POLYMER #/BBL | "N" | | "K" | | |
| | | | | sec/qt | A.V. cps | P.V. cps | Y.P. #/100 sq.ft. | | | | | | 10 | CI ppm | Ca. ++ ppm | PT | % OIL | | | | | | | % SOLIDS | % SAND |
| 29 | 13.01 | 2472 | 1.55 | 56 | 26.5 | 18 | 17 | 10/70 | 8.8 | 1 | 28 | 9.8 | 20 | 2000 | .1 | - | 18.5 | Tr | 21 | 3.9 | | | | | |
| 30 | 14.01 | 2565 | 1.70 | 56 | 30 | 22 | 16 | 10/78 | 8.8 | 1 | 28 | 9.8 | 20.5 | 1860 | .1 | Tr | 22.5 | Tr | 19 | 2.9 | | | | | |
| 31 | 15.01 | 2677 | 1.73 | 52 | 29.5 | 22 | 15 | 8/75 | 8.8 | 1 | 30 | 9.9 | 20.5 | 2080 | .1 | Tr | 22.5 | Tr | 19 | 2.4 | | | | | |
| 32 | 16.01 | 2742 | 1.77 | 53 | 29.5 | 22 | 15 | 7/65 | 8.6 | 1 | 30 | 9.5 | 21 | 2040 | .05 | Tr | 23.6 | Tr | 19 | 2.8 | | | | | |
| 33 | 17.01 | 2802 | 1.75 | 52 | 27.5 | 20 | 15 | 9/63 | 7.8 | 1 | 29 | 9.3 | 21 | 1800 | .05 | Tr | 23.4 | Tr | 19 | 2.8 | | | | | |
| 34 | 18.01 | 2865 | 1.75 | 52 | 30.5 | 22 | 17 | 16/86 | 8.5 | 1 | 28 | 9.4 | 20.5 | 1720 | .1 | Tr | 23.0 | 0 | 19 | 2.5 | | | | | |
| 35 | 19.01 | 2930 | 1.78 | 53 | 30.5 | 22 | 17 | 15/80 | 9.3 | 1 | 31 | 9.2 | 21 | 1680 | .05 | Tr | 24.4 | 0 | 18 | 2.0 | | | | | |
| 36 | 20.01 | 2990 | 1.79 | 54 | 31 | 22 | 18 | 16/87 | 8.8 | 1 | 28 | 9.2 | 21 | 1680 | .05 | Tr | 25 | 0 | 21 | 2.3 | | | | | |
| 37 | 21.01 | 3033 | 1.79 | 53 | 28.5 | 21 | 15 | 9/60 | 9.0 | 2 | 28 | 9.5 | 21 | 1480 | .1 | Tr | 25 | 0 | 21 | 3.0 | | | | | |
| 38 | 22.01 | 3109 | 1.79 | 51 | 29.5 | 20 | 19 | 17/78 | 9.6 | 2 | 31 | 9.2 | 21 | 1680 | .05 | Tr | 25 | 0 | 18 | 2.1 | | | | | |
| 39 | 23.01 | 3145 | 1.79 | 53 | 29.5 | 21 | 17 | 12/70 | 9.5 | 2 | 33 | 9 | 21 | 1600 | .05 | Tr | 25 | Tr | 18 | 2.3 | | | | | |
| 40 | 24.01 | 3197 | 1.79 | 50 | 29.5 | 21 | 17 | 10/65 | 9.2 | 2 | 31 | 8.8 | 21 | 1540 | .05 | Tr | 27 | Tr | 20 | 2.3 | | | | | |
| 41 | 25.01 | 3222 | 1.79 | 54 | 27.5 | 19 | 17 | 10/66 | 8.8 | 2 | 30 | 9.2 | 21 | 1600 | .05 | 0 | 28 | Tr | 20 | 2.1 | | | | | |
| 42 | 26.01 | 3249 | 1.79 | 53 | 27 | 19 | 16 | 12/57 | 9.4 | 2 | 32 | 9.7 | 21 | 1560 | .15 | 0 | 27 | Tr | 18 | 2.5 | | | | | |

REMARKS

