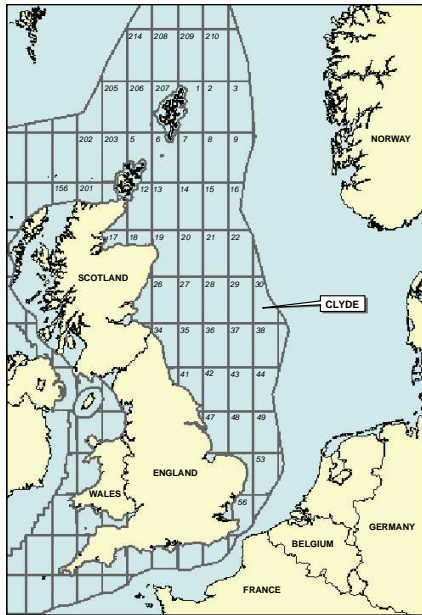


CLYDE



Last Updated:

May 2017

The Clyde platform was installed in 1986 with first oil production in 1987. The installation is located approximately 175 miles south east of Aberdeen. It is an eight-leg fixed steel jacket and module support frame has facilities for drilling, production, accommodation and associated utilities.

The Clyde platform's processing facilities separate production from the Clyde, Levin, Medwin and Nethan fields, and the Orion and Flyndre subsea tiebacks, into oil and dried natural gas.

Oil is transported to the Fulmar platform and exported via the Norpipe system for onward delivery to the Teesside terminal.

Gas export from the Clyde platform is transported via the Fulmar platform to the Fulmar gas pipeline which runs into the SEGAL system to the St Fergus terminal.

OPERATIONAL INFORMATION

| | |
|------------------------------|-------------------------------------------------------|
| Licence | P.266 |
| Licensees | Repsol Sinopec Resources UK Limited (Op) 100% |
| Platform Type | Eight-leg fixed steel jacket and module support frame |
| Platform Weight | Topsides: 25,764Tonnes Jacket: 10,700 Tonnes |
| Drilling | Well Slots: 30 |
| Wells | Production: 23 Injection: 5 |
| Nearest Installations | Fulmar: 11 km Auk: 13 km |

CAPACITY PROJECTION

The platform process system is nominally designed for the following quantities:

| Description | Unit | Max. Cap. | Projected Ullage (% of maximum capacity) | | | | |
|---------------------------------|--------|-----------|------------------------------------------|------|------|------|------|
| | | | 2017 | 2018 | 2019 | 2020 | 2021 |
| 1 st Stage Separator | BPD | 122,000 | ● | ● | ● | ● | ● |
| 2 nd Stage Separator | BPD | 95,000 | ● | ● | ● | ● | ● |
| Orion Separator | BPD | 10,265 | ● | ● | ● | ● | ● |
| 3 rd Stage Separator | BPD | 60,000 | ● | ● | ● | ● | ● |
| Oil Export | BPD | 60,000 | ● | ● | ● | ● | ● |
| Produced Water Treatment | BPD | 97,000 | ● | ● | ● | ● | ● |
| Water Injection | BPD | 73,000 | ● | ● | ● | ● | ● |
| LP Compressor | MMscfd | 11.4 | ● | ● | ● | ● | ● |
| IP Compressor | MMscfd | 22.7 | ● | ● | ● | ● | ● |
| HP Compressor | MMscfd | 42 | ● | ● | ● | ● | ● |
| Gas Dehydration | MMscfd | 42 | ● | ● | ● | ● | ● |
| Export/Lift Compressors | MMscfd | 35 | ● | ● | ● | ● | ● |
| Flyndre Separator | BPD | 17,600 | ● | ● | ● | ● | ● |
| Flyndre Produced Water | BPD | 10,000 | ● | ● | ● | ● | ● |

No dedicated H₂S facilities installed

| | | |
|-----------------------|---|-----------|
| Available Capacities: | ● | > 25% |
| | ● | 5% to 25% |
| | ● | < 5% |

PIPELINES

Oil Export 16-inch * 11 km oil export pipeline from Clyde to Fulmar platform
Oil is then routed via the Norpipe system to the Teesside Terminal

Gas Export 16-inch * 11 km gas export pipeline from Clyde to Fulmar platform
Gas is then routed via the “SEGAL” system to the St. Fergus Terminal

Clyde / Orion Interfield 10 inch * 16.3 km subsea production pipeline from Orion to Clyde

Flyndre Interfield 8^{1/2} inch 20km subsea production pipeline from Flyndre to Clyde

ENTRY / EXIT SPECIFICATION

| | | |
|----------------------------|----------------------------|-------------------------------|
| Crude Mixture Entry | Flowing Wellhead | up to 121°C up to 140 bara |
| Crude Oil Export | TVP (True Vapour Pressure) | 145 psia @ 100°F |
| | Base Sediment & Water | 2 % vol |
| | Salt | 250 lb/Mbbl |
| | H ₂ S | 10 ppm wt |
| | Total Sulphur | 0.19 % wt |
| | Nickel | 10 ppm wt |
| | Vanadium | 10 ppm wt |
| | Viscosity | 20 cP @ 3°C |
| | pH | > 5 |
| Mercury | 10 ppb wt | |
| Gas Export | Water Content | 35 ppm vol |
| | Cricondenbar | < 105 bara |
| | Total Sulphur | 15 ppm vol |
| | CO ₂ | 1.6 % mol |
| | O ₂ | 10 ppm vol |
| Produced Water | | <30 ppm oil in water |