

# Infrastructure Code of Practice

## Judy/Joanne



The **Judy** and **Joanne** fields are located in Quadrant 30 of the United Kingdom Continental Shelf, approximately 150 miles south-east of Aberdeen. Hydrocarbons were first discovered in the Joanne field in 1980 and in 1992 extensive geological work determined that development should be pursued. Commercial oil production and gas from Judy/Joanne began in 1997. After being processed on the Judy Platform, gas is transported through the Central Area Transmission System (CATS) pipeline and liquids are transported to Teesside through the Norpipe system.

<b>KEY FACTS</b>	
Field	Judy/Joanne
Block	30/7a, 30/12a, 30/6a, 30/13d, 30/7c
Sector	UK central North Sea
Approx. distance to land	209 kilometres (130 nautical miles) south-east of Aberdeen
Water depth	Judy Platform – 75 metres (246 feet) Joanne Manifold – 79 metres (259 feet)
Hydrocarbons produced	Gas and oil/liquids
Export method	Gas - goes to Teesside via the CATS pipeline Liquids – go to Teesside via the Norpipe system
Manned/unmanned	Manned
Operated/non-operated	Operated
% of Harbour equity	67.0%
First production	June 1997
Accommodation onboard	101
Key commercial terms	There are currently no agreements in place for third party operated fields for the processing or transportation of product via the Judy Platform. However, there are third parties who have tied directly into the J-Block Spurline for onward transportation to Norpipe. (See Infrastructure Access Agreement Summaries).

<b>Infrastructure information</b>	
Entry specification:	The entry specification for any future third-party production is dependent upon the point at which such production would enter the Judy facilities and the composition of production already being processed at that time. The entry specification will cover areas that affect onward transportation as well as those which impact the Judy platform itself e.g. slugging limitations and contaminants.
Exit specification:	Liquids – any liquids processed on the Judy facilities would be transported to Teesside through the J-Block Spur to the Norpipe System. The exit specification from the Judy facilities is the Norpipe entry specification, which is directly negotiable between any prospective user and the Norpipe operator. However, any exit specification must be achievable with the processing facilities available on Judy. Gas – any gas processed on the Judy facilities would be transported through the CATS Pipeline via the T6 entry point. The exit specification from the Judy facilities is the CATS entry specification which is directly negotiable between any prospective user and the CATS operator. However, any exit specification must be achievable with the processing facilities available on Judy. Following on from transportation through CATS further processing would be required at either the CATS processing facility or TGPP.

Outline details of primary separation processing facilities:	Primary oil and gas separation is achieved by HP separators. The oil is conditioned by a second stage LP separator to the pipeline entry specification (145 psia true vapour pressure at 100oF) prior to export.
Outline details of gas treatment facilities:	The gas from the separators is compressed and dehydrated by a triethylene glycol system to achieve a maximum water content of 15kg per million cubic metres. The hydrocarbon dewpoint of -2oC at all pressures greater than 92 barg is achieved by NGL removal at the suction scrubbers of the second compression stage. Judy has limited H2S removal facilities.

High-Level Capacity Information						
Judy Platform firm processing capacity available	Ullage as % of system capacity					Comment
	2021	2022	2023	2024	2025	
Oil export capacity (1)	●	●	●	●	●	
Oil export pipeline capacity (1)	●	●	●	●	●	
Gas compression capacity (2, 3)	●	●	●	●	●	
Gas export capacity	●	●	●	●	●	
Gas export pipeline capacity	●	●	●	●	●	
Gas lift capacity (4)	●	●	●	●	●	
Produced-water handling capacity (6)	●	●	●	●	●	
Dehydration capacity (5)	●	●	●	●	●	
H2S removal capacity	●	●	●	●	●	
Water injection capacity						

## Notes:

(1) The design capacity of the Judy oil export system is 100,000 bbls/d from two booster and main oil line pumps. However, there is also the ability to tie directly into the J-Block Spur, then onwards to the Norpipe system. The capacity of the J-Block spur line is dependent on the combined throughputs of the J-Block spur and Norpipe trunk line.

(2) Two compression trains. With both trains operating, the system has a total capacity of 320 MMSCFD at 15.5 barg separator pressure.

(3) Compressor optimisation was implemented in Q2 2017, re-wheeling both compression trains to reduce the separator pressures. Post-optimisation, the compressors can deliver 320 MMSCFD at 15.5 barg separator pressure. The nameplate capacity of 450 MMSCFD is maintained at around 26 barg separator pressure.

(4) Gas is available at compressor second stage discharge pressure, typically about 150 barg. A gas lift manifold was installed in 2018 with capacity to inject to six wells. Gas lift is currently only provided to one of the Judy wells.

(5) Achieves a maximum water content of 15 kg per million cubic metres.

(6) Produced water is separated at the LP separator; the system has a hydraulic capacity of 12,000 bbl/day. Treatment is by hydro cyclones, compact flotation unit and a degasser. There are no reinjection facilities. Additional produced water capacity may be available via the Jasmine hydro cyclones on JURP however these have yet to be commissioned. Please note, modifications required on Judy for new business may be limited due to facilities constraints.

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