REPSOL SINOPEC
Resources UK

REPSOL SINOPEC RESOURCES UK

2019 ENVIRONMENTAL STATEMENT

CONTENTS

Repsol Sinopec Resources UK Limited strives to provide a safe, reliable and efficient energy supply, and to continuously improve to meet the demands of the current challenges within the oil and gas industry whilst delivering environmental performance that meets or exceeds regulation.

In 2019, we improved nearly all aspects of the business; including safety, environmental performance, production efficiency and lifting costs.

Overall greenhouse gases (expressed as CO_2 equivalent) reduced in 2019, due to several factors, such as a continuation of improvements to operational stability, power sharing between installations, reduced flaring (by 80 % on one installation), and a production decline.

We have also set ourselves a target to reduce CO_2e emissions by 26,500 tonnes in 2020, with subsequent targets year on year thereafter.

During 2019, we saw an increase in water cut from our ageing wells. This is turn has led to an increase in the amount of produced water and mass of oil going to sea. However, our oil in water performance remains well below regulatory limits. In parallel, we are moving ahead with several facilities improvements to improve water management across our assets.

In 2019, our mass of chemicals discharged to sea reduced overall. Also, while the number of accidental oil and chemical spill incidents increased, the total cumulative mass of these spills reduced significantly in comparison to 2018. It should be noted that a significant proportion of this is due to subsea hydraulic control chemicals that, by design, are likely to have little or no environmental impact.

Throughout 2019 we continued to engage and work closely with our waste management vendor and their subcontractors to help drive waste improvements and continue to raise awareness on our installations. Our achievements in reduction of single use plastics were presented by one of our Environmental Representatives at an industry led E-Reps Forum. Ultimately, our level of waste is linked to the level and type of operations conducted. Whilst 2019 was a busy year, which included major shutdowns, a successful well workover, maintenance and modifications campaigns, we successfully reduced the volume of waste sent to landfill.

Overall, we continue to operate a challenging portfolio of ageing assets, while continuing to deliver year on year performance improvements across the business. Our environmental performance continues to remain central to this.

Darren Stoker

Chief Technical Officer

UK OPERATIONS

Fields and Installations

Our principal UK operating areas, (shown below) encompasses a total of 51 fields, 11 operated assets and two onshore teminals detailed in Tables 1 and 2.

FLOTTA

PIPER

CLAYMORE

SALTIRE

TARTAN

BLEO HOLM

BEATRICE

NIGG

MONTROSE

ARBROATH

ABERDEEN

CLYDE

FULMAR

AUK

Oil & gas production

Oil reservoirs contain a mixture of oil, water and natural gas. A primary purpose of an offshore production platform is to separate out the extracted 'well fluids' into these three separate components using separation vessels. Once the oil has been separated from the gas and water, it is pumped to shore via subsea pipelines; or, in the case of oil from the Ross and Blake fields, shipped to shore. The gas is dried and then compressed. Some of the gas, where possible, is used to generate power to run the process equipment on site and the remainder of the gas is exported via pipeline to the UK mainland (see Table 1), used for gas lift, or flared.

The proportion of oil, gas and water produced from reservoirs changes over time. Oil and gas production will decrease and the volume of water will increase. The separated water, known as produced water, is managed, cleaned and processed to reduce oil droplets prior to discharge to sea.

Drilling

As the fields mature and more information about the reservoirs becomes available, more wells may be drilled or existing wells may be revisited. This can be done either from the platform, or with mobile drilling rigs. Geological information and production tests determine how many wells are needed to produce the oil and gas efficiently.

HYDROCARBON EXPORT ROUTES Table 1

Installation	Oil	Gas
Arbroath	Via Montrose	Via Montrose
Auk	Via Fulmar	N/A
Beatrice	Nigg Oil Terminal	N/A
Bleo Holm	Shuttle Tanker	Frigg Pipeline
Buchan#	Forties Pipeline	N/A
Claymore	Flotta Pipeline	N/A
Clyde	Norpipe Pipeline	St Fergus Line
Fulmar	Norpipe Pipeline	St Fergus Line
Montrose	Forties Pipeline	CATS Pipeline
Piper B	Flotta Pipeline	Frigg Pipeline
Saltire	Via Piper B	Via Piper B
Tartan	Flotta Pipeline	Frigg Pipeline

FIELDS & INSTALLATIONS Table 2

FIELD	BLOCK	INSTALLATION
Arbroath	22/18	Arbroath
Arkwright	22/23a	Arbroath
Auk	30/16	Auk
Auk North	30/16n,t	Fulmar
Beatrice	11/30a	Beatrice Complex
Beauly*	16/21	Balmoral*
Blake	13/24b	Bleo Holm
Brechin	22/23	Montrose
Buchan	21/01	Buchan#
Burghley*	16/22	Balmoral*
Carnoustie	22/17	Arbroath
Cayley	22/17s	Montrose
Chanter	15/17	Piper B
Claymore 14/19	14/19	Claymore
Claymore 14/20b	14/20b	Claymore
Clyde	30/17b	Clyde
Duart	14/20b	Tartan
Enoch*	16/13a	Brae*
Fulmar	30/16	Fulmar
Galley	15/23	Tartan
Godwin	22/17n & 22/17s	Arbroath
Halley	30/12b	Fulmar
Hannay	20/05c	Buchan#
Highlander	14/20	Tartan Alpha
Iona	15/17	Piper B
Leven	30/17b	Clyde
Medwin	30/17b	Clyde
Montrose	22/17	Montrose
Nethan	30/17b	Clyde
Orion	30/18	Clyde
Petronella	14/20	Tartan
Piper	15/17	Piper B
Ross	13/29	Bleo Holm
Saltire	15/17	Saltire
Scapa	14/19	Claymore
Shaw	22/22a	Montrose
Tartan	15/16	Tartan Alpha
Tartan North Terrace	15/16b	Tartan Alpha
Tweedsmuir	21/01a	Piper B
Wood	22/18	Montrose
Affleck*	30/19a	Clyde via Janice FPU*#
Andrew*	16/27a	Andrew*
Balmoral*	16/21b,c	Balmoral*
Blane*	30/03	Ula*
Cawdor*	30/13 & 30/14	Clyde
Flyndre*	30/13 & 30/14	Clyde
Glamis*	16/21a	Balmoral*
MacCulloch*	15/24b	North Sea Producer*#
Stirling*	16/21b,c	Balmoral*
Wareham*	98/06a,07a	Onshore
Wytch Farm*	98/06a,07a	Onshore

* Not operated by the company therefore data is not included in this report.
\# Installation no longer at location

ENVIRONMENTAL MANAGEMENT

The company has an integrated Safety and Environmental Management System (SEMS). The environmental elements of the system have been independently verified as meeting the requirements of the Oslo-Paris Convention (OSPAR) Recommendation 2003/5 to promote the use and implementation of Environmental Management Systems by the offshore industry.

Minimise impact and continuous improvement

Our environmental commitment, as outlined in our corporate HSE policy, is to minimise our impacts and always comply with the law or the company's standards, whichever are higher. All environmental aspects including climate change, air quality, water quality and waste are issues that receive constant attention to minimise our environmental impacts. The environmental impacts from oil and gas exploration and production activities have been minimised as far as practicable through the design of the installations and subsequent modifications made to plant and process.

We follow a 2-phase environmental management strategy

The first phase consists of the identification and characterisation of our environmental impacts to determine their significance and how to manage them. This considers local environmental sensitivities, company and legislative performance standards and stakeholder concerns.

The second phase involves the development and implementation of environmental management strategies that are integrated with business and operational systems, and are integral to all company performance improvement objectives: such as safety, installation integrity and security of supply.

Targets and objectives

Our Executive Committee sets annual environmental targets against which performance is tracked. Each is set with a view to achieving the overarching objective of continuous improvement. To ensure all of our installations work towards achieving the targets, a performance contract is agreed with the site leadership team and company personnel.


REPSOL SINOPEC

CORE VALUES

HEALTH, SAFETY & ENVIRONMENT POLICY

The Company Policy is to conduct our business in a manner that ensures we:

- cause no harm to people;
- minimise our impact on the environment;
- comply with regulatory requirements;
- choose safety over operational results;
- maintain a state of emergency preparedness.

The objectives of this Policy are to ensure we:

- always comply with the law or company standards, whichever is of a higher standard;
- operate our business to ensure proactive risk mitigation and continuous improvement;
- set goals and targets, and measure performance against them;
- communicate openly with those who may be affected by our activities;
- strive to prevent all accidents and incidents, prevent pollution, use resources sustainably and capitalise on lessons learned;
- are able to respond to any foreseeable emergency.

SAFE OPERATIONS IN ALL COMPANY ACTIVITIES IS A CORE VALUE

If operational results ever conflict with this Policy, we all have a responsibility to choose compliance with this Policy over operational results and Repsol Sinopec Resources UK Limited will support that choice.

Jose Luis Mínguez
CEO

Our Corporate HSE Policy

Permits and consents

Our conduct in the North Sea is governed by a range of legislation and we are required to hold a number of permits and consents that authorise our operations. These permits and consents come with detailed operating conditions to which we must adhere.

We track and investigate non-compliance (permit breaches) to measure and continually improve the effectiveness of our systems, processes and procedures.

ENVIRONMENTAL MANAGEMENT BY DESIGN AND MAINTENANCE

Our installations are designed and maintained to minimise their environmental impact.

Primary impact mitigation measures have been integrated into the design of the facilities and include:

- Closed system processes to safely contain reservoir fluids in vessels and flow lines under all process conditions.
- Pressure, temperature, flow control and shutdown systems to maintain safe operating conditions at all times.
- Bunding of areas with a potential for spills.

Secondary defence measures are those that relate to the operation of the facilities and include:

- Corrosion prevention and monitoring programmes and preventative maintenance programmes ensure that vessels, flow lines, valves, fittings and equipment remain in a safe operating condition.
- Consideration of all potential accidental/emergency scenarios to ensure procedures and resources are in place for prevention, control and mitigation.
- Procedures to minimise operational leaks and spills and ensure availability of clean-up equipment to deal with spillages.
- Training of personnel to operate and maintain the above safeguards in good working order.

ENVIRONMENTAL PERFORMANCE

EMISSIONS TO ATMOSPHERE OF GREENHOUSE GASSES

The Company operates within the UK regulatory framework and supports sensible, economic measures that will improve energy efficiency and reduce atmospheric emissions #.

Throughout 2019 the Company was actively engaged with Oil and Gas UK (OGUK), and others, as our industry focuses in on the challenges and opportunities posed by the 2050 Net Zero target.

The extraction and processing of oil and gas is energy intensive. During normal operations, installations burn natural gas and diesel for power. In addition, any natural gas extracted from the reservoir, that cannot be used or exported, has to be flared for safety reasons. Notwithstanding, the company has committed itself to make substantial reductions in its Green House Gasses (GHG) such as CO_2 and Methane. In 2019 this commitment to continual improvement has seen daily flaring on Clyde reduce by nearly 80 %. It also led to the commissioning of an electrical supply to Auk which has the potential to reduce CO_2 emissions from the Auk by 25,000 tonnes in 2020.

The level to which different GHG's contribute to Climate Change depends on the gas. For example, 1 tonne of methane (CH_4) has a much higher global warming potential than CO_2. To fully reflect the impact of our operations, GHGs are combined and expressed as tonnes of CO_2 equivalent (CO_2e). In this report all references to CO_2e figures assume one tonne of CH_4 to be equivalent to 25 tonnes of CO_2. This is an increase from the multiple of 21 used in previous years. We also use Production Carbon Intensity, that is, the tonnes of CO_2e produced per unit of production (1000 Barrels Oil Equivalent) as a measure of production efficiency from a climate change perspective.

Figure 1

CO_2 Equivalent emissions and production intensity annual trend (2017-2019)

Through a number of measures, a decrease in company level CO_2e emissions has been achieved by more than 100,000 tonnes in 2019. CO_2e emissions from 10 of our thirteen installations in the portfolio contributing to this improvement. However, due to a small reduction in BOE exported our carbon intensity remained static at 35 tonnes of CO_2e emissions per 1000 barrel of oil equivalent sold.

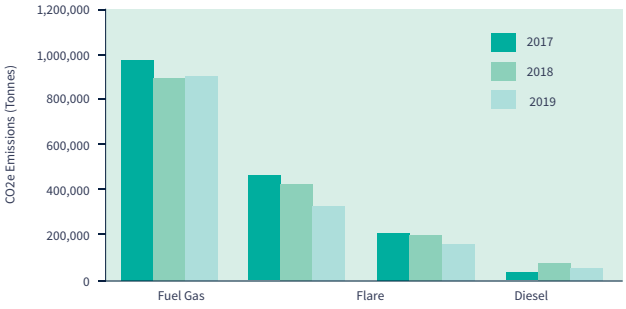

Figure 2

CO_2 Equivalent emissions by source stream (2017-2019)

Figure 2 shows the contribution of CO_2e from each source stream over the last 3 years. Improved uptime for asset turbines on natural gas has led to a small uptick in this measurement. This is gas, which in many cases would otherwise have had to be flared. The statistics show a significant drop in flaring in 2019. Note: "Other" includes emissions from venting and fugitive emissions.

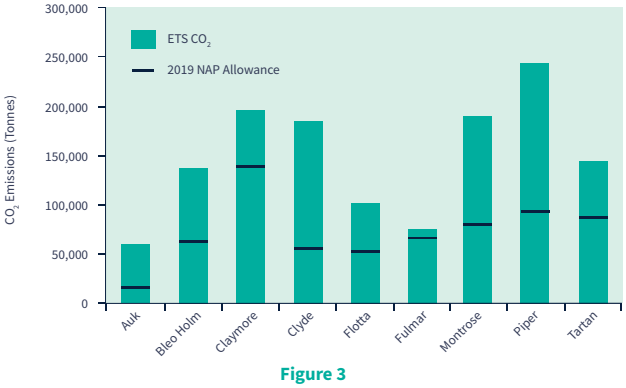

Figure 3

2019 EU ETS CO_2 emissions and allowance per installation

The European Union Emissions Trading Scheme (EU ETS) is the primary financial means used across the EU to incentivise the reduction of CO_2 emissions from larger industrial installations. The basic principal is that at the end of each year qualifying installations must surrender an "emissions allowance" for each tonne of CO_2 emitted. Some emission allowances are issued free of charge to the installation at the beginning of the year with the remainder required to be purchased. **Figure 3** shows total installation emissions against the total free allowance provision.

Unless otherwise stated the information above summarises emissions as reported to the Environmental Emissions Monitoring System (EEMS) from offshore activities, and equivalent figures for our two onshore terminals. Production data is total gross throughput from all out operated assets, including Flotta Terminal (adjusted to avoid double counting), calculated at the point of sale.

DISCHARGES TO SEA

OIL IN PRODUCED WATER (OIW)

The fluid extracted from our oil wells contains a mixture of oil, entrained gas and water. The primary function of our offshore installations is to separate the oil, gas and water, before sending the oil onshore and either reusing the produced gas as fuel, using it to aid lift in wells, or combusting it in the flare. The water is treated before safely discharging it to sea. The treated water may still contain some oil at the point of discharge.

To protect the marine environment, industry regulators place strict limitations on both the concentration and quantity of oil discharged in produced water, with a drive towards minimising these discharge concentrations. At these low concentrations, the entrained oil quickly disperses and is broken down by weathering and biodegraded by marine microorganisms. The UK government enforces a standard, internationally agreed emission limit value of 30 mg of oil per litre of produced water discharged (flow weighted average over one month), to which all our offshore installations are permitted.

Figure 4 shows an increase in the total mass of oil discharged to sea in 2019. This increase in mass is directly linked to not only the volume of produced water discharged, but also the concentration of oil within each discharge stream. Across a number of our installations we saw approximately a 30 % uplift in produced water volume on the previous year. This can be linked back to increased water cut from aging wells and the return of a field that had been shut in for a number of years. **Figure 4** also shows a small increase in the Company average discharge concentration for 2019. This increase can be attributed to the accumulation, throughout the year, of numerous instances where sample discharges of more than 100 mg/litre were recorded. Such discharges are notified to the environmental regulator and are generally attributed to process upsets and/or poor separation facilities linked to deteriorating weather (in the case of our Bleo Holm FPSO). Although there was an increase in the annual average OIW discharge concentration, at a Company level, the average concentration remains significantly below the permitted limit.

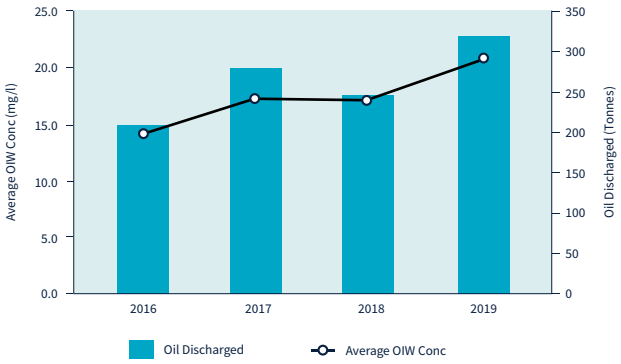

Figure 4
Annual Total Oil and Produced Water to Sea

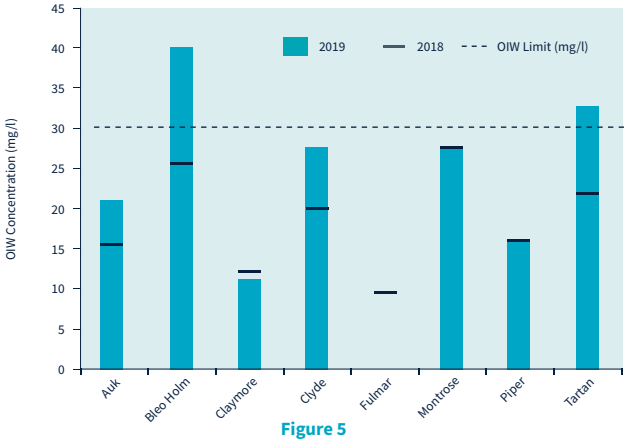

Figure 5
Installation Oil in Produced Water Performance

Figure 5 illustrates the annual average OIW concentrations for each operating installation in 2019 with 2018 as a comparison. With the exception of Bleo Holm and Tartan, all other installations achieved better than the 30 mg/l threshold for discharges to sea in 2019.

The North Sea is a harsh environment and inclement weather/sea states are not uncommon, during such instances the Bleo Holm FPSO experiences vessel rolling. The rolling motion has a consequence on the effectiveness of the separation system resulting in the inability to efficiently polish the discharge stream. As a result, during such periods, higher than normal concentrations of oil are discharged within the produced water stream. This ultimately has a knock-on effect to the annual average OIW concentration for the installation, which for 2019 was 39.6 mg/l.

In 2019, Tartan marginally peaked over the threshold with an annual average OIW concentration of 32.6 mg/l. This can be attributed back to the reinstatement of a field that had been shut-in for a number of years. Slugging issues of the returned cold fluids in the process system upset separation resulting in instances of higher than normal oil discharge concentrations until sustained process uptime was achieved.

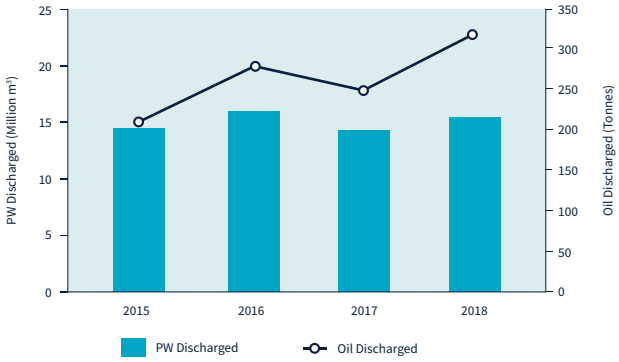

Figure 6
Annual Discharge Mass of Oil and Volume of Produced Water

As outlined with **Figure 4** above the mass of oil discharged to sea is directly correlated to the volume of water and the concentration of oil within the discharge stream. Higher than normal concentrations of oil in the discharge stream result in increased oil mass discharged to sea.

Figure 6 highlights an increase in mass of oil discharged throughout 2019 in comparison to 2018; however, the increase in volume of produced water discharged is not as significant at 1,000,000 m^3. Therefore, the uptick of mass of oil discharged in 2019 can be correlated directly to the higher annual average oil in water concentrations exhibited at Auk, Bleo Holm, Clyde and Tartan as highlighted in **Figure 5** above when compared to **2018.**

Due to the nature of produced water, discharges can occasionally give rise to an oil sheen on the sea surface around the installation. Periodically, either due to poor plant performance resulting in sustained higher oil in waters, or calm weather, sheens can extend some distance from the discharge point. Any notifications of sheens reported on our installations are investigated, and, if necessary, steps taken to rectify the cause. Where these sheens are considered more significant than normal, and extend outside the platform 500 m zone, we are required to notify the environmental regulator. During 2019, the Company raised one such notification.

PRODUCTION CHEMICALS

The Company utilise a variety of chemicals within the offshore production process; chemicals are used to maintain and operate subsea infrastructure, improve the flow of fluids from the reservoir, aid separation, prevent corrosion and remove deposited solids within vessels. Production chemicals are then either exported with oil to shore, or discharged to sea from the produced water stream.

The use and discharge of production chemicals offshore is heavily regulated through the approval of a chemical permit for each installation, as well as the use of pipeline or well intervention chemical permits, these incorporate regulatory limits for each chemical used and discharged. Chemical use and discharge offshore is regulated through the Offshore Chemicals Regulation (OCR) 2002 (as amended). These regulations implement the OSPAR Decision 2000/2 on a Harmonised Mandatory Control System (HMCS) for the Use and Reduction of the Discharge of Offshore Chemicals on the UK Continental Shelf. The HMCS details requirements for the comprehensive testing, ranking, hazard assessment and risk management of chemicals and, in addition, the substitution of certain chemicals by less hazardous alternatives. The Company ensures all chemicals used during our offshore operations are covered, including the use and discharge, by a relevant chemical permit. The quantity of chemicals used and discharged is then reported quarterly to the environmental regulator.

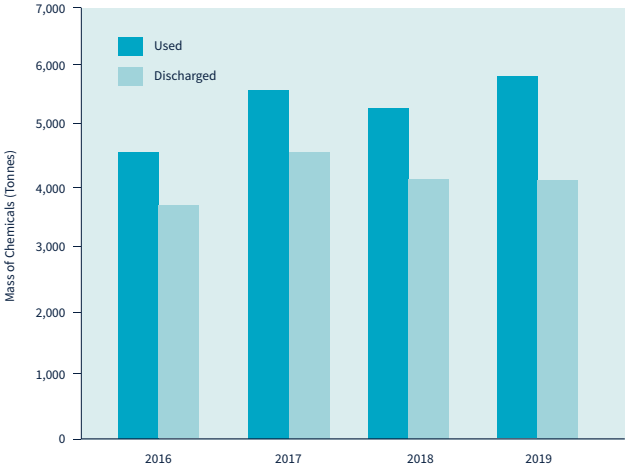

Figure 7

Tonnage of Production Chemicals Used and Discharged per year

Figure 7 illustrates that there has been a slight increase in production chemical use with a minor decrease on chemical discharge in 2019, when compared to 2018. This increase is primarily linked to an upsurge in installation activity which included; successful completion of well workovers returning old wells back into duty, reinstatement of a long term field shut-in and the addition of a new production well. Each of these scenarios brings about an increase of both production chemical use and discharge in order to maintain effective and stabilised production. As per 2018, the Company maintained steady production uptime across the fleet reducing inefficient chemical use for start-ups and shutdowns during which large quantities can be utilised to maintain or help stabilise the process.

Throughout 2019, the Company continued to maintain its Decommissioning portfolio where, in 2018, two installations were fully converted into Not Normally Attended (NNA) mode and a further installation was converted into a pumping station to support other installations within our fleet. As a result, production chemical use on these three installations has either ceased or reduced significantly since 2018.

Some production chemicals used have a substitution (SUB) warning, meaning they contain a component that may present a hazard to the marine environment. An important part of the HMCS is the phased replacement of these harmful chemicals.

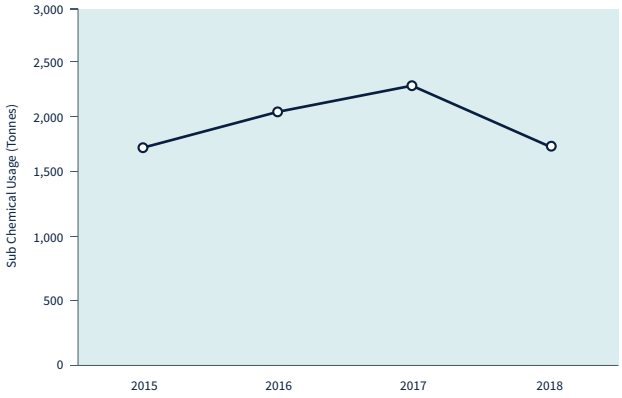

Figure 8

Usage of Chemicals with Substitution Warning 2016 - 2019

Figure 8 shows a decrease in substitution chemical usage in 2019 compared to previous years across all the company's activities. As with other production chemicals, the use of SUB chemicals is directly attributable to production uptime of the installations rather than the addition of new chemicals with a substitution warning. The use of SUB chemicals in production activities has remained consistent in 2019 when compared to the previous two years.

The decrease in SUB chemical usage in 2019 is directly correlated to; a reduction in Well Intervention and Drilling activities resulting in less utilisation of chemicals including the use of chemicals with SUB warnings in comparison to 2018.

To reduce the number of SUB chemicals used on our installations, we work in conjunction with our chemical vendors to seek alternatives, which do not compromise on production optimisation or carry SUB warnings and trial them on our installations.

The Company actively reviews each installation's chemical permit application on a regular basis and removes unused products, to ensure our permits remain current. Furthermore, on an annual basis, the Company reviews the use of substitution chemicals with chemical vendors to identify priority chemicals for swap out for the coming year. Chemicals identified and agreed for swap out are then added as a KPI to the chemical vendor's annual contract. To ensure a continued focus on this issue throughout the year, these KPIs are monitored at project-specific and quarterly business review meetings. However, swapping out long term bespoke chemicals, which have acquired a substitution warning, comes with its own challenges and whilst best endeavours are made, they are not always successful, because of their uniqueness.

Despite these challenges, in 2019, the Company successfully swapped out two production chemicals to 'greener' alternatives, which did not carry a SUB warning. Additionally two further substitution checmicals were removed from permitry as no longer required.

DRILLING, WELL INTERVENTION AND PIPELINE CHEMICALS

An array of chemicals are used to facilitate the safe handling of Wells during Drilling, Well Interventions and Pipeline Operations. Chemicals are specifically selected to optimise operations, integrity and performance - greener chemistries are introduced and brought into use where these aspects are not compromised.

As can be seen from **Figure 9**, chemical use in 2019 has returned to levels comparable with 2016 and 2017 and is almost half of that used in 2018. This is a direct reflection of less drilling activity and fewer vessel campaigns. However, it should be noted that the discharge of chemicals has increased compared to 2018. This increase in chemical discharge can be attributed to an increase in platform based well intervention campaigns inclusive of; scale squeezes and scale soaks, flushing of lines, annulus top ups and pressure testing. These campaigns involve injecting chemicals to improve performance and ensure integrity of wells. For the large majority of campaigns chemicals injected into wells return back to the platform with hydrocarbons and will be routed through the production process system. Water soluble chemicals are modelled for approved overboard discharge to sea along with any produced water.

In early 2019 a Mobile Offshore Drilling Unit (MODU) was contracted to redrill an abandoned well and bring it into production. The drilling activity involved a shorter drill path as only a sidetrack was required and the well clean-up operation involved chemicals which were not discharged to sea due to use of oil based mud (OBM). During the course of the drilling operations the OBM is continually circulated through a closed system and maintained to the required specification. Once drilling operations are completed the OBM is returned to the drilling fluid provider where it is treated and recycled.

Furthermore, in 2019 there was a higher number of plugging and abandonment operations than 2018, this included a five month five well Jack-Up Rig supported campaign at the Fulmar AD Platform.

Additional pipeline and well intervention operations were conducted throughout 2019 to reinstate, maintain, and enhance well performance through planned improvement opportunities. Such operations were undertaken to remove blockages caused by scale build up and to reduce pitting and maintain pipeline integrity cause by corrosion. As assets increase with age and reservoirs produce higher water volumes, there is an increased risk of corrosion. In response there is an increased requirement for well interventions and assurance to protect the well, infrastructure and environment.

Figure 10, demonstrates the marked contrast in quantities of chemicals used and discharged when Pipeline, Well intervention and Drilling activities are compared separately. Drilling operations use large quantities of chemicals but only a small proportion are discharged to sea. This is, in part, due to the fact that Oil Base Muds (OBMs) are shipped onshore for treatment to recover the base oil which is then recycled. Pipeline operations in contrast, will discharge most chemicals through flushing and barrier testing operations but the quantities involved are significantly low compared to well operations. Whilst well intervention

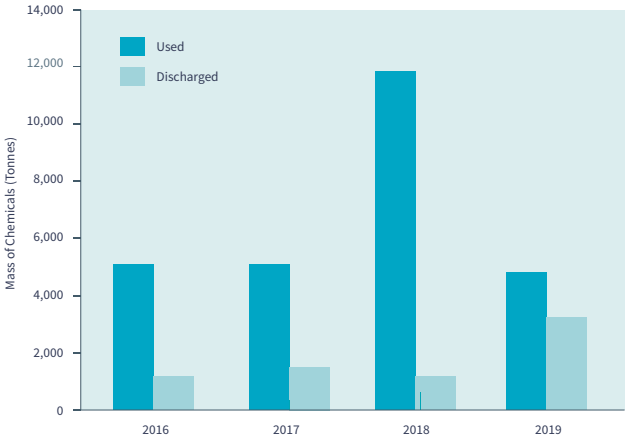

Figure 9

Total Chemicals Used and Discharged During Drilling, Well Intervention and Pipeline Operations

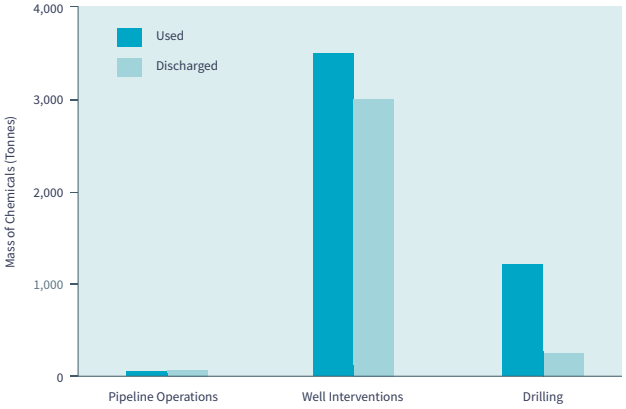

Figure 10

2019 Chemical Use and Discharge by Operation

chemicals are generally routed back to the production installation, where discharge occurs at the host installation along with the produced water.

As with the production related chemicals, reducing the number of substitution chemicals used during drilling operations, including platform drilling, is an area of focus. Due to the very specialist nature of chemicals used during these complex activities, alternative chemistries which provide the same or improved performance are often limited. The Company continues to work closely with chemical vendors and drilling contractors to test and replace substitution chemical products where it is operationally feasible to do so.

ACCIDENTAL RELEASES

Preventing oil, gas and chemical leaks is the Company's first Golden Rule. Assuring plant integrity is critical to the prevention of spills across our assets, in combination with raising awareness of spill risks, ensuring individuals are competent to perform their duties, and adhering to the Company operating procedures and our environmental permit requirements. If spills do occur, they are thoroughly investigated and corrective actions instigated.

In 2019, there was an increase in the overall number of spills reportable to the regulator, with the number of oil spills remaining relatively consistent. **Figure 11** shows the total volume released from such reportable incidents has decreased, even though there has been an uptick in number of incidents.

The overall decrease in spill volume in 2019 can be directly related back to a reduction in the mass of hydraulic fluid losses when compared to 2018, which saw significantly higher volumes of losses from subsea infrastructure..

Uncontrolled releases of hydraulic control fluid from our subsea systems contributed a significant number of our reportable incidents, and were responsible for 95 % of the tonnage released from spills in 2019 (See Table 3). This high volume of hydraulic fluid lost can be attributed to ageing systems and their design (these systems are designed to be operated to failure). Although any uncontrolled releases from these systems are reportable to the environmental regulator as a spill, under normal operations, these systems discharge 100 % of their control fluids. Environmental impact assessments, which include computer modelling of the loss, have illustrated that several hundred tonnes would have to be released instantaneously to have a discernible impact on the environment (as hydraulic fluids comprise mainly of water). The uncontrolled releases of these chemicals from the Company's assets in 2019 occurred over a protracted period of time; therefore they are predicted to have no significant impact on the receiving marine environment, as illustrated by modelling for environmental risk assessments. Furthermore, during any period of an ongoing release, the Company is fully engaged with the regulator and corrective action plans are communicated, along with timescales for rectification.

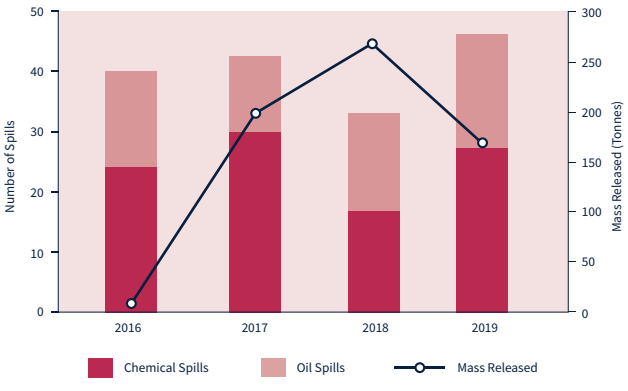

Figure 11

Overall total number of oil and chemical spills, and mass released 2016 - 2019

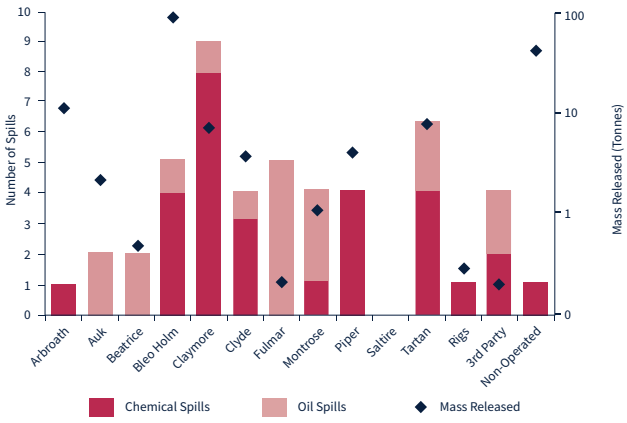

Figure 12

Number of oil and chemical spills and mass released to sea in 2019

Figure 12, Bleo Holm had four chemical spills with a total mass released of 92.35 tonnes of subsea hydraulic control fluid, two of which incidents were > 1 tonne (See Table 3 below for Ross & Blake). Claymore, meanwhile, had nine accidental releases in total (one oil and eight chemical). Three of the accidental chemical releases were reported as > 1 tonne as outlined in Table 3 below (Claymore & Scapa). However, the total accumulated mass released of the remaining six incidents associated with Claymore equates to 0.68 tonnes, and no individual incident was > 1 tonne.

ACCIDENTAL RELEASES

Table 3 - 2019 Spill Incidents Greater than 1 Tonne

Location	Brief Details	Hydrocarbon / Chemical	Mass Released (Tonnes)
Orion Field	Subsea release of hydraulic control fluid from the LP-B supply system to Orion well.	Chemical	11.59
Enoch Field	Subsea release of hydraulic control fluid to Enoch EN1 well.	Chemical	39.42
Claymore Installation	Subsea release of hydraulic control fluid from the supply system to the subsea Emergency Shutdown Valve ESV5660.	Chemical	2.29
Tweedsmuir Field	Subsea release of hydraulic control fluid to Tweedsmuir TW1 well.	Chemical	1.52
Claymore Installations	Subsea release of hydraulic control fluid fed by the Claymore Areas Sea Water Injection (CASWI) Hydraulic Pressure Unit (HPU) pumps. Losses from the Scapa subsea umbilical ring mains.	Chemical	1.23
Arkwright Field	Subsea release of hydraulic control fluid at the Arkwright CO2 well.	Chemical	10.83
Galley Field	Loss of subsea hydraulic control fluid whilst exercising valves on the Galley G3 well. Potential losses to the Down Hole Safety Valve (DHSV) and to the reservoir.	Chemical	1.76
Auk Installations	Failure of seal oil cooler O rings and seal of the PAL pump allowing crossover of the higher pressure seal oil system fluid into the cooling water side of the cooler. Seawater used for cooling is returned to sea via the Grey water caisson therefore providing a discharge route for the hydraulic oil.	Oil	2.44
Blake Field	Subsea release of hydraulic control fluid from faulty Subsea Control Module (SCM) at the Blake B1 well.	Chemical	90.43
Clyde Installations	Loss of Flyndre produced water from the overflow of the Clyde Closed Drains Vessel (CDV).	Oil	1.95
Scapa Field	Subsea release of hydraulic control fluid detected during General Visual Inspection (GVI) at the Scapa E09 well between the supply hose at the tree and the Subsea Control Module (SCM).	Chemical	3.89
Tartan Installation	PON1 Permitted Discharge Notification (PDN) for the discharge of > 1 tonne of oil in a 12 hour period.	Oil	1.1
Tweedsmuir Field	Subsea release of hydraulic control fluid from faulty Subsea Control Module (SCM) at the Tweedsmuir SP1 well.	Chemical	2.95
Ross Fields	Subsea release of hydraulic control fluid when the quick dump valves (QDV's) failed to reseat after a Production shutdown on the Ross field.	Chemical	1.4
Galley Field	Subsea leak of hydraulic control fluid during diving operations at the Galley Field Subsea Protection Structure (SPS) from a hydraulic hose.	Chemical	2.52

ACCIDENTAL RELEASES

As well as operating offshore installations, the Company operates two onshore terminals, which also experience environmental incidents on occasion. Such incidents are reported to and regulated by the Onshore Environmental Regulator, Scottish Environment Protection Agency (SEPA). 2019 saw such one reportable incident at the Company's Flotta Oil Terminal as outlined in Table 4 below.

Table 4 - 2019 Onshore Release Incidents Greater than 1 Tonne

Location	Brief Details	Hydrocarbon / Chemical	Mass Released (Tonnes)	Mass Recovered (Tonnes)
Flotta Oil Terminal	Loss of Diesel to ground from tank D318 – Return line failure caused aggregate impingement on pipework externally with potential vibration from pump house agitating sand against buried pipework.	Oil	7.7	2.2

ENVIRONMENTAL PERFORMANCE

WASTE MANAGEMENT

Waste Management is a key topic for the Company and energy industry as a whole. Through the Company's activities of extracting oil and gas and decommissioning the Company will utilise materials, consume energy and generate waste.

In conjunction with our environmental policy, we work to move our waste up the waste hierarchy and take advantage of opportunities to reduce, reuse, recycle, recover energy, or responsibly dispose of to aid a reduction of the waste we produce going to landfill.

Waste is generated from a variety of sources including; our onshore office, offshore accommodation facilities, maintenance, replacement and repairs, drilling activities and the packaging of consumable products.

The waste materials generated offshore are segregated by type and shipped to shore for treatment, reuse, recycling, and safe disposal by licensed waste companies.

In compliance with legislation and best practice, the company has controls in place for the safe handling, storage, treatment and disposal of waste arising from activities. We aim to continually improve in this area by minimising the associated impacts related to waste generation. The company actively seeks to reduce the total volume of waste generated where possible by applying the waste management hierarchy and extracting the maximum practical benefits from waste material, to minimise the use of energy and minimise the volume of material disposed of.

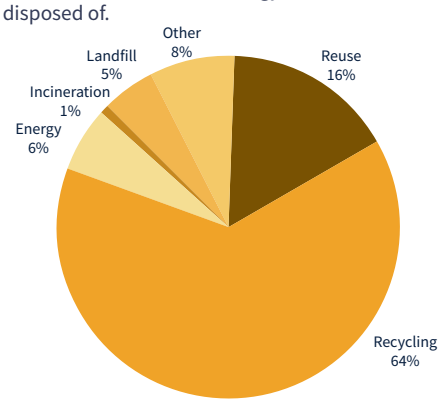

Figure 13

2019 Percentage of Waste by Disposal Routes

Figure 13 represents the percentage of waste sent through disposal routes for the total volume of waste generated offshore in 2019, with 64 % of all company waste being recycled, compared with 41 % in 2018. The chart includes both operational and decommissioning waste.

There are many factors which influence the quantity of waste from our business entering the various disposal routes. Such influencing factors include any new installation or commissioning work and the duration and frequency of planned shutdowns on installations, during such times significant work is undertaken in upgrading the installation and equipment. The number of personnel onboard the installations can fluctuate throughout the year depending upon planned operations, as can the number of rigs and vessels engaged in activities through the Company. The volumes of recycled and reused waste generated from decommissioning activities can be significant as this waste is often heavy scrap metal.

Figures 14 shows a comparison over a 4 year period of the total waste generated by the Company's offshore activities.

The overall waste generated in 2019 has decreased marginally in comparison to 2018. This decrease was certainly influenced by less drilling activity and fewer and shorter annual shutdowns of installations throughout the year. However platform and rig based plug and abandonment activity was higher in 2019 compared to 2018 with a rig on contract and additional personnel likely contributing to the volume of non-hazardous waste generated.

In 2019 the company had a decrease in the volume of hazardous waste being treated onshore as shown in **Figure 14**. This decrease can be attributed to fewer drilling campaigns, which generate larger volumes of special waste requiring onshore treatment ahead of disposal.

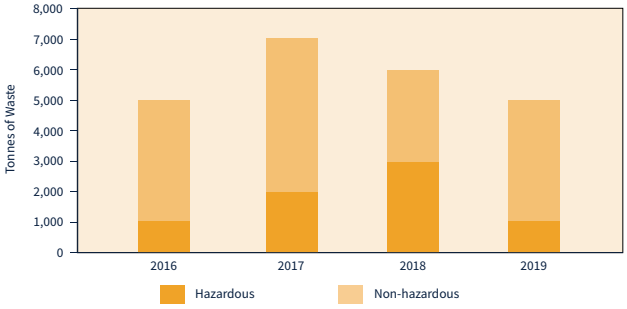

Figure 14

Total Hazardous and Non-hazardous Waste Produced 2016 - 2019

As shown in **Figure 15**, the proportion of waste material sent to landfill in 2019 has decreased significantly compared to the previous year. This reduction is linked to the decrease in volumes of hazardous waste returned to shore for treatment prior to disposal and also an increase in segregated waste for reuse and recycling.

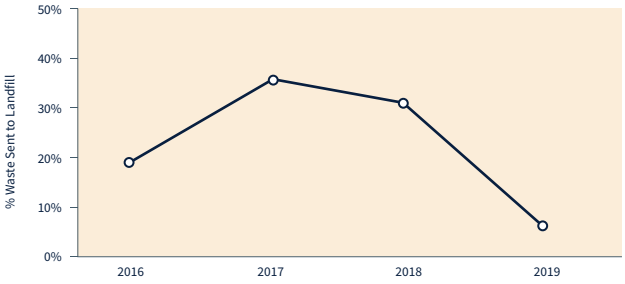

Figure 15

5% Waste Sent to Landfill

Continuous Improvement: Each of our offshore installations has appointed and competent personnel managing the backloading of waste to shore. All personnel working offshore on behalf of the Company are required to undertake waste awareness training. The Company has a number of active Environmental Representatives on all sites who have been instrumental at an installation level in steering improvement initiatives throughout 2019; including the removal of single use plastic consumables and raising awareness of waste management and waste reduction.

We continue to work closely with our waste management contractors, sharing best practice and driving improvements in reuse and waste disposal. In 2019 a number of Environmental Representatives were invited to participate in waste handling facility tours. Additionally they attended and presented at the Industry EReps 2019 Forum where they shared initiatives undertaken at their sites with delegates at the conference. Furthermore, feedback from proactive assurance checks such as; compliance monitoring at a site level and quarterly general waste skip audits help to ensure and promote compliance whilst driving improvements in waste segregation.

Maximising the potential of waste can bring benefits in reuse and thus reducing the demand on resources. Waste can have economic value and options for realising this are considered where possible. Improved segregation and management of waste also brings financial benefits due to the higher levies placed on waste going to landfill in comparison to recycling and waste to energy disposal routes.

APPENDICES

GLOSSARY

CH_4	Methane
CO	Carbon monoxide
CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalent
CoP	Ceasation of Production
EU ETS	European Union Emissions Trading Scheme
FPSO	Floating Production, Storage, Offload vessel
GHG	Greenhouse Gas
HMCS	Harmonised Mandatory Control System
KPI	Key Performance Indicator
N_2O	Oxides of Nitrogen
NM VOC	Non-Methane Volatile Organic Compounds
NOx	Nitrogen Oxide
OBM	Oil Based Mud
OCR	Offshore Chemicals Regulation 2002
OPRED	Offshore Petroleum Regulator for Environment and Decommissioning
OSPAR	The Convention for the Protection of the marine Environment of the North East Atlantic.
SEMS	Safety and Environmental Management System
SOx	Oxides of Sulphur
SUB	Substitution
The Company	Repsol Sinopec Resources UK
The Regulator	Department for Business, Energy & Industrial Strategy (OPRED)

2019 DATA TABLES

2019 Data Table 1	Atmospheric Emissions (Tonnes)						
SITE	CO_2	Nox	N_2O	SO_x	CO	CH_4	NMVOC
Arbroath Platform	8,916	181	1	2	27	53	9
Auk A Platform	65,127	182	3	18	97	1,128	5,259
Beatrice	498	10	0	0	0	4	1
Blane	-	-	-	-	-	-	-
Buchan A Platform	-	-	-	-	-	-	-
Claymore A Platform	192,378	744	15	2	454	240	168
Clyde Platform	173,457	253	10	6	392	482	539
Flotta Terminal	112,732	261	8	10	164	58	224
Fulmar A Platform	80,388	100	6	6	160	73	53
Montrose A Platform	181,361	823	12	12	404	289	210
Nigg Terminal	498	10	0	0	1	4	1
Piper B Platform	256,124	424	18	3	631	496	101
Ross FPSO Bleo Holm	132,585	671	9	28	242	146	65
Saltire A Platform	566	11	0	1	3	0	0
Tartan A Platform	147,159	252	11	2	346	780	720
Pipeline Operations	-	-	-	-	-	-	-
Mobile Drilling / Well Interventions	8,940	142	1	7	45	11	15
Non Operated Subsea Tiebacks	-	-	-	-	-	-	-
Total	**1,360,728**	**4064**	**93**	**98**	**2,966**	**3,763**	**7,365**

2019 Data Table 2	Produced Water			Chemicals (Tonnes)		Waste Generated (Tonnes)		Accidental Releases		
SITE	Average Oil In Water (mg/l)	Total Water Volume (m^3)	Oil Discharged Weight (Te)	Used	Discharged	Hazardous	Non-Hazardous	# Oil Spills	# Chemical Spills	Mass Released (Te)
Arbroath Platform	-	-	-	339	17	24	87	-	1	10.83
Auk A Platform	22	1,234,692	27	84	57	20	92	2	-	2.51
Beatrice	-	-	-	-	-	28	22	2	-	0.50
Blane	-	-	-	0	2	-	-	-	-	-
Buchan A Platform	-	-	-	-	-	2	1,310	-	-	-
Claymore A Platform	13	4,402,833	55	1,211	839	92	397	1	8	8.14
Clyde Platform	27	1,050,057	28	707	396	28	541	1	3	3.90
Flotta Terminal	4	6,940,668	27	-	n/a	4	253	1	-	5.50
Fulmar A Platform	-	-	-	25	9	70	219	5	-	0.19
Montrose A Platform	26	1,317,867	34	499	420	91	275	3	1	0.88
Nigg Terminal	-	-	-	-	-	72	114	-	-	-
Piper B Platform	18	5,180,620	95	897	541	67	308	-	4	4.49
Ross FPSO Bleo Holm	40	1,470,238	58	1,534	1,372	46	157	1	4	92.35
Saltire A Platform	-	-	-	1	0	6	21	-	-	-
Tartan A Platform	33	640,624	21	533	352	65	205	2	4	5.92
Pipeline Operations	-	-	-	49	55	-	-	-	-	-
Mobile Drilling / Well Interventions	-	-	-	4,675	3,226	362	544	-	1	0.30
Non Operated Subsea Tiebacks	-	-	-	-	-	-	-	-	**1**	**39.42**
Total	**21**	**15,296,931**	**319**	**10,554**	**7,286**	**977**	**4,544**	**18**	**27**	**174.93**

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