

Analysis of Aasgard A FPSO

Assessing the effects of the 2019 Trestakk field development on the FPSO

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Abstract

With developing oil fields in deep seas, crude oil transferring and storage become the main challenges for companies. They need to determine a reliable float storage unit capacity as well as a suitable and economical shuttle/oil tanker carrying the capacity. Scheduling each offloading plan is not accurate because it is likely to be affected by environmental conditions and unstably of production rate due to equipment failure. The main impacts of deviation from scheduled plan is on field crude oil production amount and undesired increase on unit downtime, which directly decreases company's income. A solution to cope with environmental conditions is using floating units. One of the common type among float units, called Floating, Production, Storage, Offloading unit that known FPSO. FPSO is a ship shaped float unit that possible to convert from oil tankers in a short time.

The aim of this thesis is to investigate and evaluate the future and current situation of a floating unit in an offshore field relating to production, storage and offloading operations. It also looks for future situation change and field development that might lead to re-planning in the Norwegian Sea area as a case. The Norwegian Sea is famous with rough environment large waves and sudden high-speed winds, which poses significant risk on offloading operation. Therefore, offloading operations require an accurate predict of wave data and understanding sea dynamics. The Aasgard group oil and gas fields are currently producing oil and gas, diverting crude oil on board a FPSO and storing and exporting form there. The Trestakk project is an example on such development that will join to Aasgard group in 2019. This new field has challenges related to extra crude oil rate to "Aasgard A" FPSO. Already stored oil is exported to market via shuttle tanker directly from the field to the oil terminal at Antwerp port, Belgium. Challenges begin when on one hand extra oil flows to certain storage capacity, and on the other hand, weather restriction extremely affects offloading operation. Reason for work as case study was gathering accurate environmental and operational data of field and exported destination place.

The main research questions were:

1. How increasing crude oil rate can change the offloading schedules?

2. How much shuttle/oil tanker should have the capacity to ensure sufficient crude oil transferring from field to prevent production downtimes?
3. What is the economical scheduling and plan for the field?

The research questions were answered by investigating the Aasgard A data, local met-ocean history and interview by marine sector professionals.

Keywords: *FPSO, Aasgard A, Shuttle Tanker, Offloading, Norwegian Sea*

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Abbreviations

| | |
|--------------|--|
| BBL | Crude Oil Barrel |
| CALM | The Catenary Anchor Leg Mooring |
| Cap_(80%) | 80% of FPSO Storage Capacity |
| CO | Crude Oil |
| D_avr | Average Decreasing rate |
| FLNG | Floating Liquid Natural Gas |
| FPSO | Floating Production storage Unit |
| Hs | Significant wave height |
| LNG | Liquidate Natural Gas |
| N_(off take) | Number of Off take operation |
| NCS | Norwegian continental shelf |
| NS | Norwegian Sea |
| S/OT | Shuttle/Oil Tanker |
| T_(Cargo-h) | Time Takes to Connect Cargo Hose |
| T_(M-line) | Time Takes to Handover Messenger Line |
| T_(P-out) | |
| T_disc | Time of Disconnecting cargo Hose |
| T_Discharge | Time takes to Deliver Cargo |
| T_offtake | Time Takes to Receive the Cargo |
| T_Pilot | Time Takes to Piloting(Towing) the Tanker |
| T_Trip | Time Takes to Sail From/To FPSO To/From Oil Terminal |
| TLP | Tension leg platforms |

Definitions

| | |
|-------------------|---|
| Aasgard | It is the Oil Field at Haltenbanken |
| Aasgard A | Name of FPSO which produced oil from Aasgard Oil Field |
| Cargo hose | Super Thick and High Resistance Hose for Transferring the Oil |
| Haltenbanken | Area located at west of the Trondelag |
| Hawser | Quit Strong Rope for Halter the Shuttle Tanker |
| Heidrun | An Oil Field at Haltenbanken |
| Norwegian Sea | Area at west coastline of the Norway |
| Offloading | Operation for Exporting the Crude Oil From FPSO |
| Shuttle Tanker | Mid-Size Oil Tanker that travelling between to destination |
| Tandem offloading | Type of FPSO/Shuttle tanker connection |
| Tug Boat | Small but Powerful Boat for Towing and Pushing the Vessels |
| turn-around time | |
| Turret Mooring | |
| Speared Mooring | Type of Mooring which Float structure positioned by heavy chain |

1 CHAPTER 1: Introduction

By growing of human population, demand for oil increases continuously, exploration and production of petroleum shifts from shore and shallow water to deep seas and more far away from shore.

Exploration and production of petroleum in deep seas and in harsh environments led to technology in the section develops. FPSO (Floatation, Production, Storage, and Offloading) is a ship shaped floating unit which combine by crude oil process units. It is an outcome of human requirements and economic sagacity.

At all FPSO include similar equipment same a traditional fixed platform but can be relocated to everywhere on oceans where there is not compatible to install oil platform.

The overall aim of this research paper is to evaluate and analyze the challenges and capabilities That can define the critical success factors that associate and influence the selecting of storage and offloading capacity of a FPSO.

This research, demonstrates the significance factors on storage and offloading for oil companies and investors to make best decision on the selecting optimum storage and offloading capacity dependent on field production rate and location. One part of the research is focused on impact of weather conditions and production rate how can impacts on money earning.

1.1 Offshore oil production and transferring background

Two major offshore units can be classified in the offshore Industry, the fixed oil and gas platforms and the floating production units.

1.1.1 Fixed Platforms

In the 1940 world first fixed platform was built for water depth around 10 meters. At the beginning petroleum production in the offshore fields exactly at shallow waters close to shore, fixed platforms were ideal solutions for installing the production modules. This structure built at shore and carried by huge float units and fixed by legs onto the seabed which supports the heavy weight of the topside modules. Even though the offshore oil and gas industry begun more than seven decades ago, it continues to grow (GE, 2014). A fixed platform consists of structure,

utility, process and accommodation section. Structure of platform takes up to 45% of project costs. These types of structures are not economical and safe to use in deep waters and easily can be destroyed by sea waves in worst weather condition.

A pipeline lied down on the sea bed from platform to shore for transferring the produced oil or gas to terminals by pumps or compressors.

1.1.2 Floating units

In addition, by increasing the population and growing industries resulted to consuming more fuel which pushed Exploring & Production companies to discovering the more and more petroleum from deep seas that was inaccessible before. Also undeveloped so tiny and small discovered hydrocarbon resources were unprofitable before, now caught the E&P companies focus. Main reason was the cost of fixed platform that makes uneconomical development projects for small projects. Demand for energy source and increasing the price of energy has led the research and development of different technics for production units such as floating production systems. Now several types of float units developed and “Prosafe” categorized floating production units to four groups:

1.1.2.1 Ship shaped floating units:

These types are very common and handy between the float units. They categorized for two types which mentioned at below:

- FPSO (Floating production, storage and offloading unit): these types of vessels equipped by storage tanks plus topside of a fixed platform to handle the CO from wells. CO stores inside the storage tanks until reach certain amount to exports via independent offloading unit without costly sea line.
- FLNG (Floating Liquefied Gas Units): These types of vessels equipped by liquefied natural gas units (LNG) to handle the gas from wells to carry-able type far away from shore. By developing the technology extracting gas from offshore fields become more economical.

1.1.2.2 Production semis:

Semi-submersible structure contains equipment and machinery on the top deck. It floats via columns (pontoon-type) those are submerged inside the water. By pumping water into the columns structure’s depth can be changed when its movement and transportation.

Positioning of the floating unit is crying out via: anchoring system and the dynamic positioning system. In addition, it can be used both in drilling as in production and storage capacity is small.

1.1.2.3 Spar platforms:

It is a floating caisson, by cylindrical structure which has responsibility to stabilize the structure in the sea, floats vertically, and supports topside structures. This type of platform is capable of operating in ultra-deep waters.

1.1.2.4 TLP:

Tension leg platforms are float structures which moored by cable line on the sea beds that performed by tubular structures, such as tendons, fixed to the seabed by stakes. It is suitable for high deep seas area at oceans. Tension legs allow horizontal movements by wave forces and supports deck platform on top of structure.

1.2 FPSO

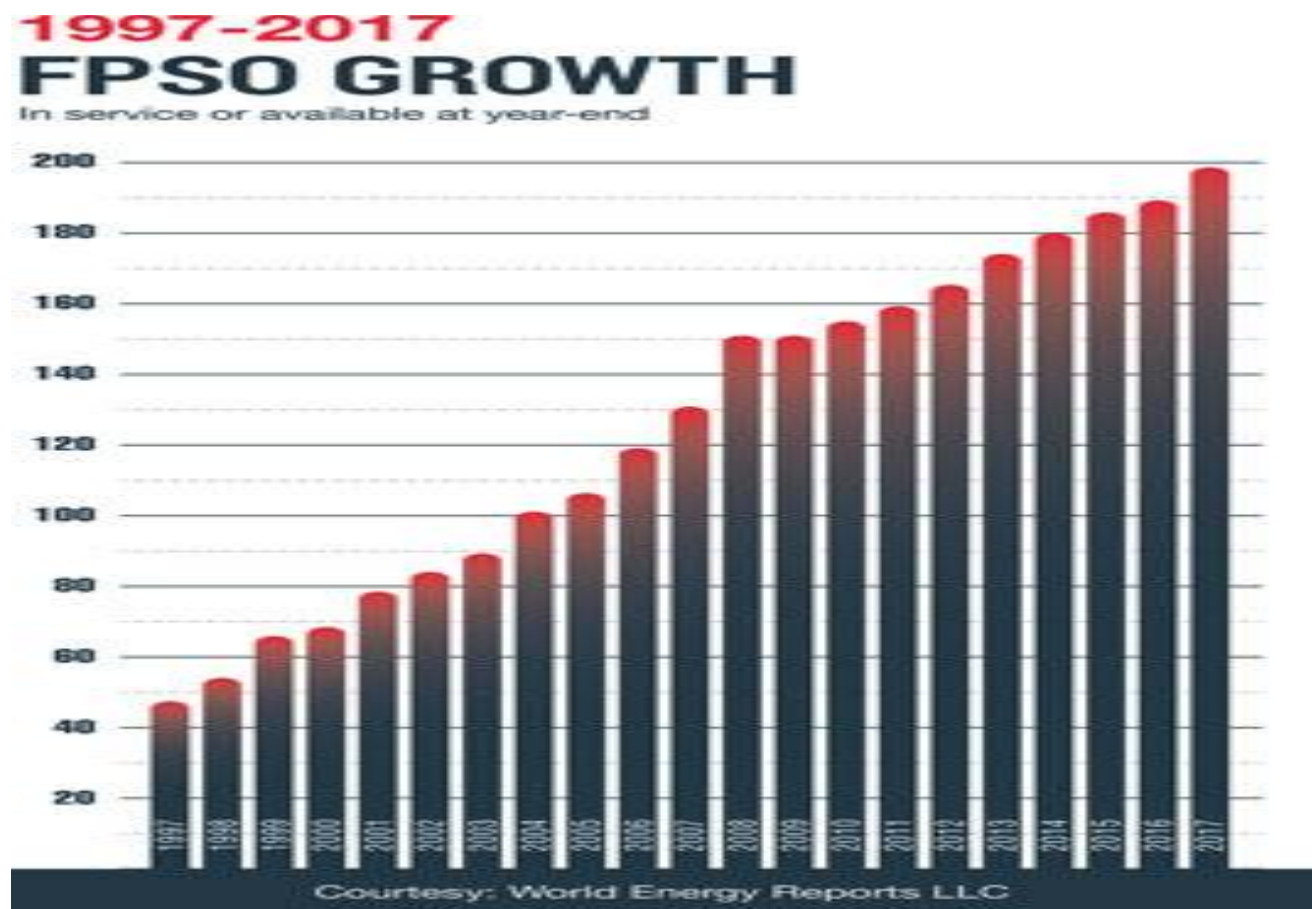
Floating Production Storage and Offloading vessel is a floating systems which equipped by common oil platform facilities on the deck of oil tanker to produce, process and store crude oil on the board. The main characteristic of this type of production unit is the large crude oil storage space as an oil terminal. FPSO is the most economical alternatives for hydrocarbon field developments in deep seas because lower cost to build and develop the projects than traditional platform types. Effectively they are suitable for deep water also for small size hydrocarbon reservoirs due to have option for relocating the FPSO after the decommissioning the fields. The main advantage is that no requires to laying the costly pipelines on the sea bed for transferring the CO. Usually oil tanker converts at dry docks to FPSO vessel via invigoration the deck and installing the equipment by structure as modules for processing the crude oil and storing inside the tanks. CO processing facilities which installs on the FPSO's topside, exactly are same traditional oil platforms. FPSO can relocated or moved to anywhere of the world without difficulties.

Hydrocarbons extracts via the wells and processed through the special facilities to get storage-able CO according the market specification to store in storage tanks of the vessel until that reaches sufficient amount to offload to shuttle/oil tankers. Some of the field equipped by subsea

x-mass type wells which directly flowing through risers to FPSO or in other procedure all wells centered in the structure which called wellhead platform and wells flowing via shared riser. CO which processed on fixed platforms mostly transferred to the shore storage terminals through the pipeline. Shuttle/oil tankers capacity that transfers the CO from FPSO, determined by FPSO storage capacity. Tandem loading is a common off taking crude oil procedure from FPSO to S/O tanker.

Likely FPSOs moored permanently at an oil field location to preventing from movement by sea current or swells (Dutta, 2015)(see Figure bellow). In addition, it is possible in harsh weather condition or in extreme incident at nearby structures to detached FPSOs and move to safe location.

Right now the number of FPSOs are 190 around the world and world energy statistics show growing in numbers from 169 active FPSOs in 2016 to 178 in 2017 (Mag, 2017)



1.2.1 The FPSO outlook

Totally floating production units market has shown an intense growth in the world especially Brazil leading with 24 planned and ordered until 2022 after the South America, Africa follows by 13 planned FPSO (O.T, 2018). The world demand is expected to expand twice in next 10 years.

Therefore, FPSO market outlook might experience attractive market growth in future offshore activities lead more focus in this industry.

1.2.2 Why FPSO?

The question to have answer is: Why FPSOs become more preferable than fixed platforms? By searching in the oil and gas industries, obviously FPSO become popular and at below key drivers mentioned:

- Big opportunity for hydrocarbon production from small size reservoirs which were uneconomical to construct the fixed platforms
- Possibility to retreat produced water from crude oil because of storage tank exist on FPSO, less pollution then fixed platform
- No requires for transfer pipeline to shore
- No requires for underwater structure
- Significantly low cost for abandonment of field.
- Possibility to relocate from duty field to new field development projects.
- Possibility to relocate from field to dry docks for over haul.
- Interfacing by advanced subsea systems
- Very excellent background on safety record, field development time saving, less cost of building.

Comparing between types of the floating production units, ship shaped type especially FPSOs can be easily convert from oil tanker in short time around one year while other types like semisubmersibles take 3 to 4 years.

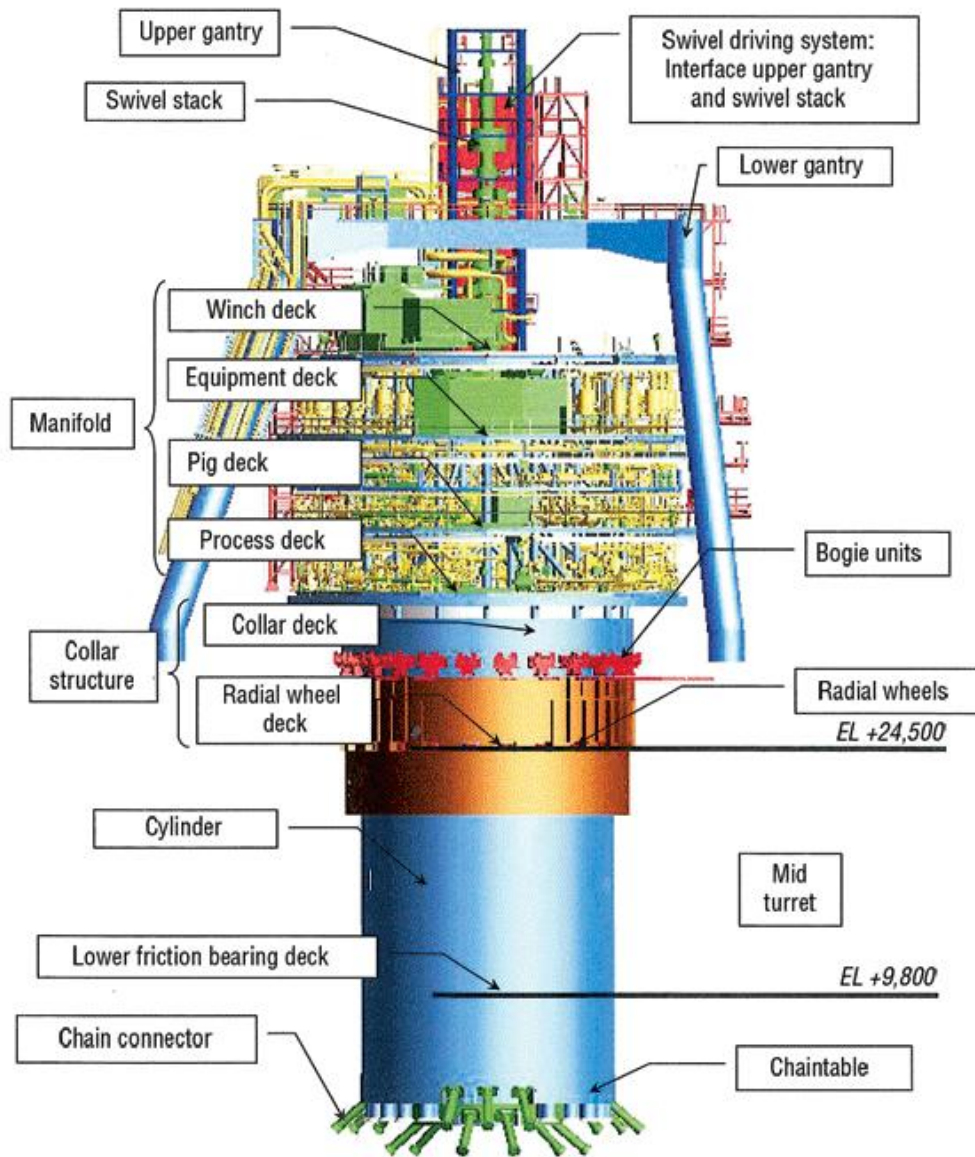
1.2.3 FPSO Mooring

FPSO mooring is a system that installs for positioning the FPSO at suitable location in the field and type of mooring system determined according the field met-ocean and designed according API 2008 standard criteria:

1.2.3.1 Turret Mooring

Turret is a structure that fixed directly in the sea bed or non-directly by strong wires in sea bed for float type turret. Connection between FPSO and turret is same huge hinge that allows to FPSO to adopt by wave direction to reduce the tension and force which spread by swells. In some installation hydrocarbon feeding riser combines by turret system. Most of the converted FPSO connects to turret from the bow externally and some new designed FPSO equipped by internal type at mid of vessel.

arrangement of a turret system (M. naciri, C. Jamet, R. Daran, S. Vedeld, 2011)



1.2.3.2 Spread Mooring

This is a mooring system which in this type FPSO moored from forward and after of vessel by anchors at determined fixed orientation. The orientation determined according the environment and whether condition of the field. Selecting anchor type related to seabed foundation also long time production as permanently or short time production as temporarily mooring decided. Anchors (fluke, plate and suction type) via heavy chains maintain approximately solid location and orientation according the local dominant wind direction which referring location data has

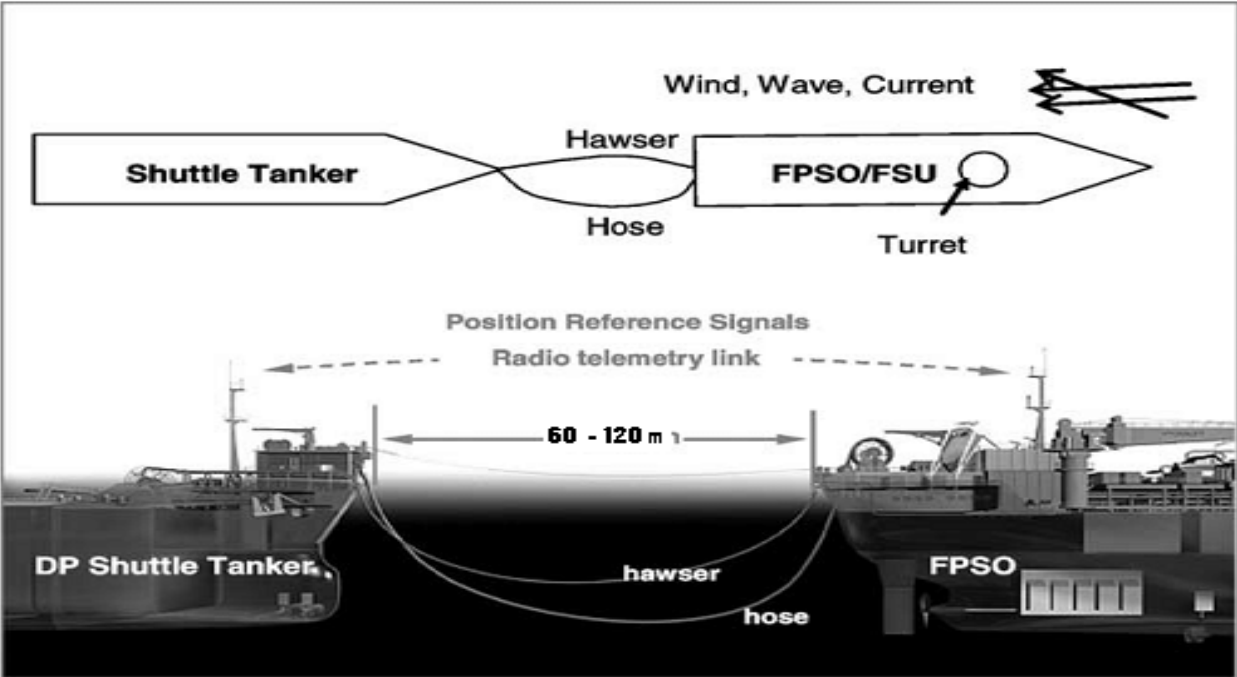
gathered historically. Main advantage of spread mooring is drilling or works over operations can directly carrying out from on board.

1.2.4 FPSO Offloading

Mostly S/O tankers are using for off-take and transporting the crude oil from FPSO to shore terminals. S/O tanker is a liquid carrying vessel that has traveling between FPSOs and oil terminals. Some case oil offloaded to S/O tankers by remote loading buoy which connected to the FPSO via pipeline. The majority offloading system based on direct connected to S/O tanker to off take CO. Other offloading option is side to side offloading, but this configuration is a less-adopted, especially in harsh environments like Norwegian Sea because collisions risk significantly increases due to strong waves. Type of offshore CO transfer systems categorized as below:

1.2.4.1 Tandem Offloading

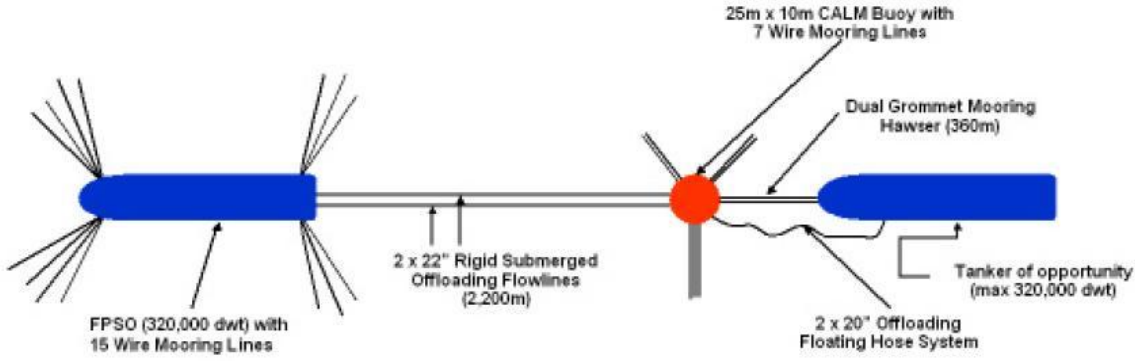
The most common and handy offloading system is the tandem procedure to carry out oil transferring from an FPSO to S/O tankers. In this procedure S/O tanker positioned 80 to 120 meters behind FPSO and connected by hawser line to preventing of S/O tanker slipping far away from certain distance. During the offloading operation, maintaining S/O tanker at a certain position, by using one or two tug boats to pull from stern of vessel or if dynamic positioning system installed on S/O Tanker, by using DP system that keeps vessel at an exact position which has set for it. DP is a system that receives live GPS data from satellite and automatically positioning the vessel by using thruster and main propellers.



1.2.4.2 CALM offloading

The Catenary Anchor Leg Mooring (CALM) system is a buoy structure that moored in shallow water, but now it become popular to use at deep sea in very harsh wavy sea conditions for example at west Africa.

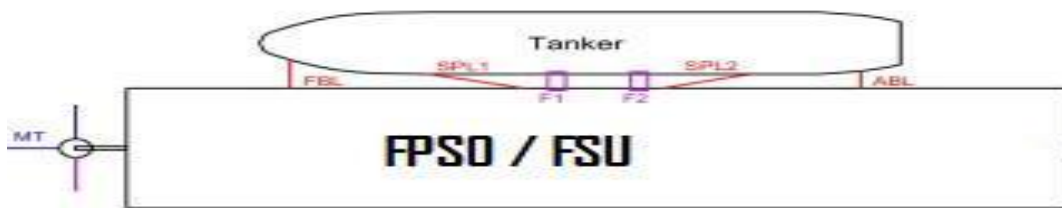
This structure located minimum one nautical mile from FPSO to give secure distance for freely maneuvering of shuttle tankers around CALM. Other advantage is carrying out a fast cargo hose connection between the CALM and tankers and disconnection and adopting toward the wave direction while loading the tanker going on.



1.2.4.3 Side by side offloading

Side by side offloading is an offloading procedure which shuttle tanker approaches alongside of FPSO and tie-up via marine ropes. This methods mostly uses at shallow waters and without wavy environments.

Risk of these methods is quite high due to collision of two vessels especially at deep sea, for that reason companies prefer to avoid from high risky SSD offloading operation and selecting one of two methods, which mentioned above.



2 CHAPTER 2: Research method

The goal of this chapter is to introduce the gathered data from documents, interviews by expertise and witnessing an off take operation.

The secondary data collected and interpreted based from the company's documents and reports, other articles and studies.

2.1 Interview with expertise

Interviews have done during an off take operation in two days by three persons whom involved in operation such as pilot, marine superintendent and operation installation manager about some questions which mentioned below about the operation:

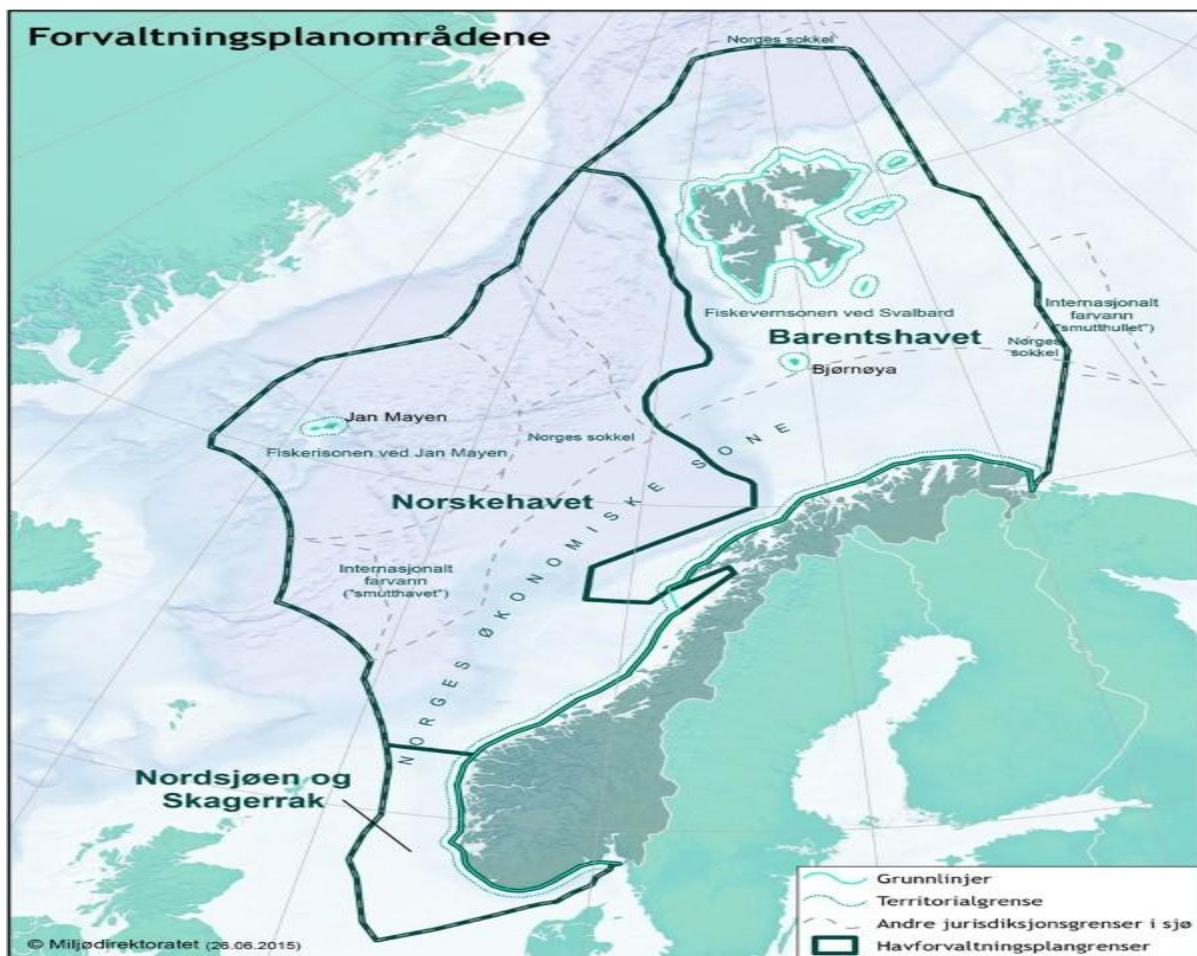
- How an off take operation carrying out?
- What criteria make deviation between planned and real schedule off take operation?
- Open discussion about:
 - o Harsh weather and impact on operation,
 - o Off take crews experience impact on operation,
 - o Damages to environment due to operation,
 - o Challenging time during off take

2.2 Studied area

2.2.1 Norwegian Sea

Norwegian Sea is part of the North Atlantic Ocean, bordered by main land of Norway at East, Greenland and Iceland at west, Barents seas at north and Atlantic Ocean also North Sea at south area. The maximum depth of sea is about 3,970 meters; average depth is about 1,700 meters and shows 35 gram salt in 1 kilograms sea water. Norwegian Sea by 1,380,000 sq km hosts many of oil and gas reservoirs. According the depth of sea, developing the oil and gas fields for production strongly float structures play a dominate role in this period of time also in the future development projects. (team, 2015)

Generally Norwegian Sea is an ice-free area for reason of warm current stream which flows from the open Atlantic to this area.



2.2.2 Nominated Offshore Fields

2.2.2.1 Aasgard Group

The Aasgard fields group includes of six independent hydrocarbon reservoirs. They are known Smorbukk, Smorbukk north, Smorbukk south, S, Midgard and Aasgard (STATOIL). This group has operated by Statoil Petroleum AS alliance. According to "Statoil", the proven volumes in Aasgard group are estimated to be 830 million barrels of oil and gas condensate.

Åsgard field overview

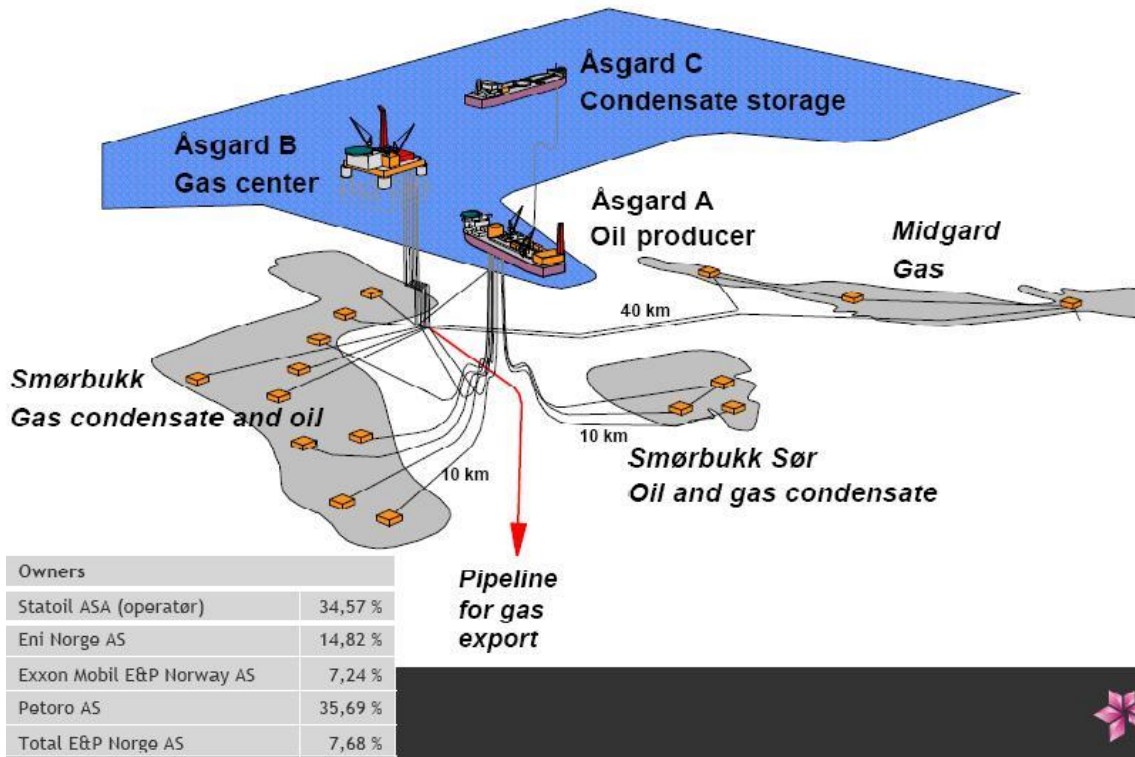


Figure 1: The entire Aasgard field development ranks among the largest developments on the Norwegian continental shelf NCS, embracing a total of 63 production and injection wells drilled through 19 subsea templates (STATOIL)

Statoil has determined to use in a FPSO for production and exporting of hydrocarbons that started production on 19 May 1999 that called Aasgard A and constructed by Aker Solution. The Aasgard A was the world's largest FPSO when it was built, by 276 meters long, 45 meters wide and 26 meters draft. It can handle up to 200,000 barrels per day crude oil and capability to storage 907000 barrel oil. Stored crude oil is off taking to S/O tankers for transport to shore terminals.

The fields are located in blocks 6507/11-1 and 6407/2 around 200 kilometers off middle-Norway and 50 kilometers south of the Heidrun oil field. The water depth in this area is between 240-310 meters.

The location of the fields in Norwegian Sea is with possibilities of strong sea current, height wave that rough environment for any offshore activities.

There is a Tug boat or SBV vessel for casual activities like oil spill response, firefighting capability, towing the S/O tanker to/from the field for off take operations or other jobs related to wells.



2.2.2.2 Trestakk field

Trestakk field was discovered in 1986, and located 27 km from Åsgard field in the Norwegian Sea. According exploration data estimated recoverable crude oil volumes are almost 76 million barrels. The Trestakk field development continues by drilling 3 oil production wells and 2 gas injection wells for maintaining the reservoir pressure and planned to tie up by Assgard group in 2019. Produced crude oil planned to divert directly via a pipeline to store inside the Aasgard A storage tanks (STATOIL).

2.3 Haltenbanken area environment in Norwegian Sea

Any activity in Norwegian Sea is a fight by extreme environmental conditions such as freezing temperature, snow, giant waves, strong ocean currents and stormy winds. Maritime and E&P companies for carrying out any offshore transportation, field deployment or produce oil and gas at this area, every time challenging by emergency response for accidents, safety at field, long distance between field and shore also worst climate.

Haltenbanken environment characters:

2.3.1 Temperature

Usually cold air blows from arctic and frozen Greenland area over the sea surface to this area especially in winter time which makes difficulty for any activity on board of ships or FPSO due to low temperature. Real feeling temperatures vary from -5°C in winter to 13°C in summer times.

2.3.2 Strong current

Ocean currents in sea are like winds in atmosphere. Current made by two sea water zones difference in temperature and density which led to circulating water. These water movements make strong drags at sea level which makes difficult situation for operations. Especially in off take operation huge power requires to countervail this drag force which creates by ocean current.

2.3.3 Wind

Wind made up over the sea due to low pressure and high pressure air circulating. Existing low pressure over NCS makes suitable area for winds. According historical weather data, wind is permanently blowing in this area.

2.3.4 Wave

Wind blowing over the sea led to form wave and height of wave determined by wind blowing speed, length of fetch (distance that wind blows over on) and consistency time of wind. Maximum 17 meter height wave recorded.

Weather conditions in Norwegian Sea vary from the Brent Sea at north to North Sea at south in period by sudden weather changes such as temperatures, snow, wind, ice and fog. In south of Norwegian Sea can to predict the weather and plan operations according that but by moving closer to Brent Sea, weather become unpredictable due to temperature difference between icing area and open water which facing by storms. Wind and waves play major obstacle role for shipping and offshore activities. Accuracy of predicting weather in north of Norwegian Sea is low and companies shall to envisage any surprising.

2.3.4.1 Threat

Accident during offloading may cause oil pollution that can lead a disaster and irreparable damage to environments. The oil spill is huge threat to Norway's fishing industry and wildlife. Carrying safe offloading operation and secure methods and supporting oil spill cleaning research projects which can capable effectively in that condition must become priority for governments and companies which have activity at this area.

2.3.4.2 Consequences

World oil demand continuously increases which pushes exploration and production of petroleum, shifts from shore and shallow water to deep seas and in other hand worldwide hydrocarbon transportation increases.

These activities carry the oil spill risks and mankind has to prepare for this risk. Oil spills depends on place and amount impacts on economy, health, marine biology and environments. For example at 2010 in Gulf of Mexico with exploding semi-submersible Mobile Offshore Drilling Unit exploded 4.9 million barrels of oil were spilt on surface of sea and made a big disaster. In the Norwegian Sea companies have to build more safety policy to ensuring technically low risk and secure operation because consequences are more significant damage in this area and oil may speared hundreds of kilometers that makes impossible situation to protect the areas.



2.4 Aasgard Field Metro Ocean Data

This data record is measured at oceanographic equipment at the Heidrun oil field installation in Haltenbanken area west of Trøndelag province, middle of Norway. Heidrun is the closest official weather station, 39.7 km away from Åsgard A. The station was established in October 1995.

According the Met-ocean data -Appendix 1 (Rae, 2017), below table shows duration which not allowed to carrying out off take operation per month in the field:

| Month | Total Hrs of month | Hrs Waves over 4.5m | Effecting Day |
|-----------------|--------------------|------------------------|---------------|
| October | 744 | 75 | 3D3H |
| November | 720 | 96 | 4D |
| December | 744 | 297 | 12D9H |
| January | 744 | 84 | 3D12H |
| February | 672 | 27 | 1D3H |
| March | 744 | 138 | 5D18 |
| April | 720 | 93 | 3D21H |

1- Bad Weathers Hours per Month Which Stops offloading operation

2.5 Weather Risk Analysis

Wave formation:

Wind blowing over the sea led to form wave and height of wave determined by wind blowing speed, length of fetch(distance that wind blows over on) and consistency time of wind
Significant wave height is an average of one third of Maximum Individual Wave Height

Wind, current and wave drift forces effect on offloading operation safety's and makes it so critical. In Norwegian Sea, there are safety restrictions over significant wave height which below 4.5 meter, pilots allowed to connect the off take cargo hose to S/O tanker and forced to stop the offloading operation when wave height reaches to 5.5 meters.

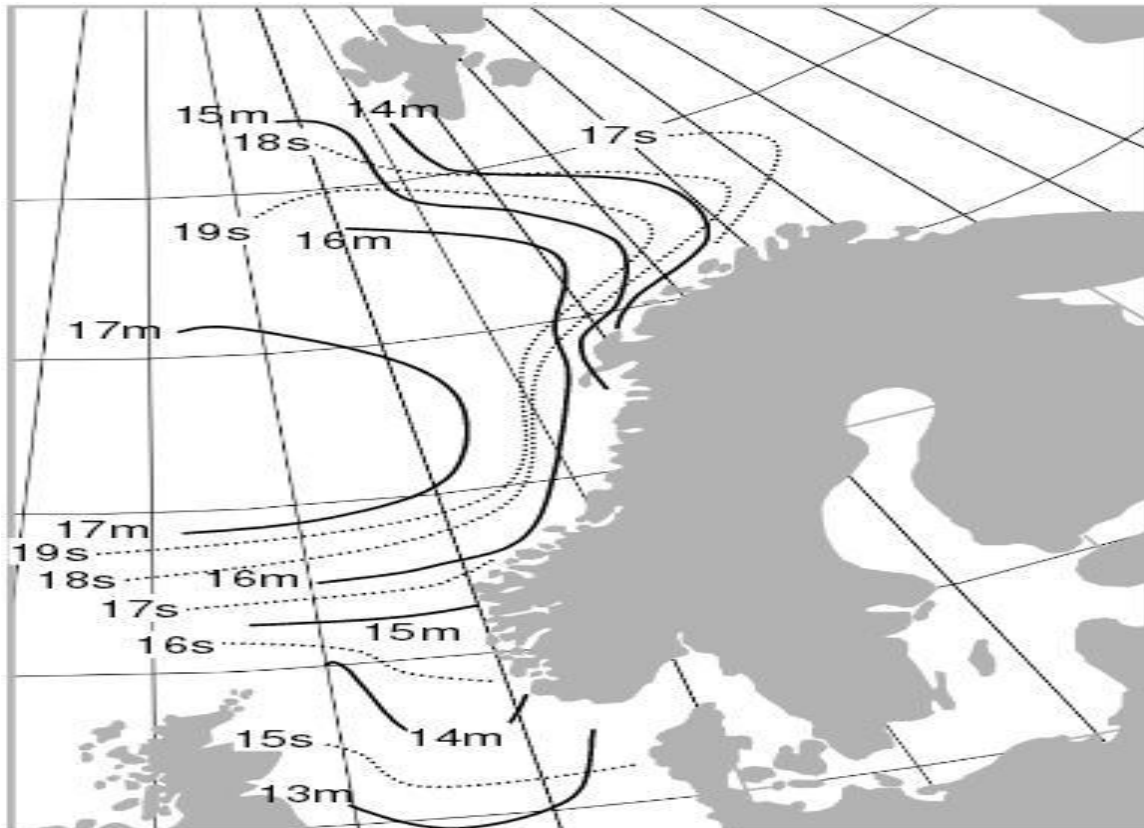


Figure 2: NORsk SOKkels Standards(NORSOK). Significant wave height H_s and related maximum peak period TP with annual probability of exceedance of 10^{-2} for sea-states of 3 h duration. ISO-curves for wave heights are indicated with solid lines while wave period lines are dotted

3 CHAPTER 3: Analysis

3.1 Estimating Aasgard field future production rate

The Aasgard group oil and gas fields are currently producing oil and gas which crude oil diverting on board a FPSO to store and export from there. The Trestakk project is example on such development that will join to Aasgard group in 2019.

3.2 Aasgard FPSO production rate

Planning requires the amount of daily production rate to schedule the off-take operations. Production rate can estimate based on yearly annual production rate history and production drop amount. Production drop yearly continues due to reservoir behavior and characters.

| Year | Production Rate (Norwegian Oil Directorate-2017) | Drop Percent |
|------|--|--------------|
| 2016 | 15827262.8 | 7.9 |
| 2015 | 17186067.1 | 10.4 |
| 2014 | 19185820.9 | 3.6 |
| 2013 | 19911475.2 | |

2- Aasgard Field Production Data history

Average production drop percent:

$$D_{avr} = \frac{7.9 + 10.4 + 3.6}{3} = 7.3 \%$$

Aasgard Estimate Future Crude Oil Production Rate:

| Year | Aasgard Estimate Crude Oil Production Rate | Trestakk Estimate Crude Oil Production Rate | Total Estimate Crude Oil Production Rate |
|------|--|---|--|
| 2017 | 14576910 | 0 | 14576910 |
| 2018 | 13512796 | 0 | 13512796 |
| 2019 | 12526361 | 9855000 | 22381361 |

| | | | |
|------|----------|---------|----------|
| 2020 | 11611937 | 9362250 | 22381361 |
| 2021 | 10764266 | 8894137 | 19658403 |
| 2022 | 9978474 | 8849930 | 18828404 |
| 2023 | 9250046 | 8407434 | 17657480 |

3-Asgard Future Production Rate, Estimate

3.3 Off-take operation

All the operation for transferring the CO from FPSO to S/O tanker called off-take operation and it is an integrated several activities on the board of two vessels and also on the interface of them to carry operation out.

3.3.1 Off-take limitation criteria

There are some limitations which related to operation can affect to every planed off-take operation and during of S/O round trip times. These items reasonably cannot reject in off-take cycle time scheduling:

- FPSO/Shuttle Tanker Draft or stability
- Crude oil washing time of shuttle tanker after discharging of crude oil
- Bunkering time of shuttle tanker
- Heavy current and FPSO and shuttle tanker positioning extra time
- Not sufficient stored CO due to shut downs.

3.3.2 Calculating duration of off take operation

Shuttle tanker loading time

In crude oil transferring operation one hour at startup takes to get CO transferring full rate and one hour at ended takes to slow down the transferring regard to safety and technical issue. Therefore one hour shall add to rectification loading and offloading time. Oil tankers vary in size and storage capacity and based on information and data about Aasgard A FPSO, suitable S/O tanker size for carrying is around 725600 BBL liquid. This type is a medium sized oil tanker with 80000 to 120000 ton which called Aframax. Aframax type tankers are ideal for

medium range transportation and upon the size; most of terminals around world can serve regarding the draft and size.

3.4 Aasgard A:

Loading rate limited by crude transfer pumps capacity which installed on the Aasgard A and the shuttle tanker receiving capacity. The CO Transferring capacity of Aasgard A is around 50000 BBL per day.

$$T_{LA} = \frac{ST_{cap}}{R_L} + 1(Hrs)$$

$$T_{LA} = \frac{725600}{50000} + 1(Hrs) = 15.5 Hrs$$

Shuttle tanker offloading time

$$T_{OA} = \frac{ST_{cap}}{R_O} + 1(Hrs)$$

$$T_{OA} = \frac{725600}{50000} + 1(Hrs) = 15.5 Hrs$$

Shuttle tanker trip time from field to terminal and vers versa

$$T_{Trip} = \frac{D}{V_{ST}}$$

Shuttle tanker positioning time at field

At heavy current situation as worse case causes the positioning the S/O tanker time increases two times more than normal situation and in this calculation worse case is selected. Hull the operation carrying out by tugs boat under the pilot's authorities. Almost, it takes three hours in worse case.

Shuttle tanker positioning time at Terminal

If comparing, between terminal and Norwegian Sea, positioning at the port is quite simple and takes around one hour.

Shuttle tanker cargo hose connecting/disconnecting time at Field/Terminal

In the sea cargo hose lifts by crane of shuttle tanker for connecting on the manifold but at terminal this operation going up by hydraulic arm hose connector so simple and quicker than field and takes around half hour.

Aasgard A filling and off take:

Crude oil storage capacity of this FPSO is 907000 bbl. For planning loading and offloading operation commonly 20% of FPSO capacity assumes as uncertainty of off take time due to shuttle/oil tanker cycle delay or rough weather restrictions which postpone off take operation until favorable condition. This margin is not sufficient to prevents reducing production rate or completely shut down of crude oil production.

$$Cap_{80\%} = 907000 \times 0.8 = 725600 \text{ bbl}$$

Below table shows numbers off take operation required per year for post 2019

$$N_{off\ take} = \frac{Acclumated\ production}{Cap_{80\%}}$$

| Year | Annual production | Number of filling | Off Take every days |
|------|-------------------|-------------------|---------------------|
| 2018 | 13512796 | 18.6 | 19.6 |
| 2019 | 22381361 | 30.8 | 11.8 |
| 2020 | 22381361 | 28.9 | 12.6 |
| 2021 | 19658403 | 27.1 | 13.5 |
| 2022 | 18828404 | 25.9 | 14.1 |

| | | | |
|------|----------|------|----|
| 2023 | 17657480 | 24.3 | 15 |
|------|----------|------|----|

4- Numbers of Off-Take Operation- Post 2019

Asgard FPSO filling time and margin post 2019

| Year | Annual production | Daily rate | Days to fill Margin capacity |
|------|-------------------|------------|------------------------------|
| 2018 | 13512796 | 37021 | 4.9 |
| 2019 | 22381361 | 61319 | 3 |
| 2020 | 20974360 | 57464 | 3.2 |
| 2021 | 19658403 | 53859 | 3.4 |
| 2022 | 18828404 | 51585 | 3.5 |
| 2023 | 17657480 | 48377 | 3.7 |

5- Asgard A FPSO filling Margin (days)-Post 2019

Asgard FPSO filling time after tie up the Trestakk field production to Asgard

Location of Oil Terminal A

The Antwerp oil terminal is current destination for Asgard crude oil where known hub for distribution inside Europe via pipeline or exporting by sea routs. Antwerp oil terminal approximately has 1017 NM distance from Asgard FPSO and it takes 4days and 6 hours for vessels to sail this route. Net rout time for Shuttle/oil tanker to starts from field and sail backs again to field is 8 days and 12 hours.

Shuttle tanker trip time from field to terminal A (Antwerp) and vice versa

$$T_{Trip} = 2x \frac{D}{V_{ST}}$$

$$T_{Trip} = 2x \frac{1017}{10} = 8 \text{ days and } 12 \text{ hours}$$

Location of Oil Terminal B

The Sture oil terminal at Øygarden is an alternative for Aasgard crude oil where known a major oil terminal in Norway to export crude oil by sea routes. The Sture oil terminal approximately has 390 NM distance from Aasgard FPSO and it takes 1 day and 15 hours for vessels to sail this route. Net route time for Shuttle/oil tanker to start from field and sail back again to field is 3 days and 6 hours.

Shuttle tanker trip time from field to terminal B (Sture) and vice versa

$$T_{Trip} = 2x \frac{D}{V_{ST}}$$

$$T_{Trip} = 2x \frac{390}{10} = 3 \text{ days and 6 hours}$$

Piloting time:

It is a time that takes to tow shuttle/oil tanker by offshore tug boats to FPSO location from 2 miles faraway. Usually takes one to three hours depending on sea condition which effect on poisoning of tanker and in this calculation average amount assumed.

$$T_{Pilot} = \frac{1 + 3}{2} = 2 \text{ hrs}$$

Messenger line and hawser connecting time:

The messenger line is a rope connected to hawser which lifted on board of tanker to take over hawser line by winch and prevents from over pulling of cargo hose. Usually this operation takes 45 minutes.

$$T_{M-line} = 45 \text{ min}$$

Cargo hose connecting time:

Cargo hose hand overs on board of tanker via tug boat to connect to tanker loading manifold and approximately takes 45 minutes.

$$T_{\text{Cargo-h}} = 45\text{min}$$

Cargo hose and hawser disconnecting time:

After crude oil transfer completed, cargo hose and hawser must disconnected. These operations going on at same time and take 30 minutes. Hawser will collected through the winch and cargo hose at some place collected by winch and some other place remain float on the level sea.

$$T_{\text{disc}} = 30\text{min}$$

Piloting out:

After disconnecting of cargo hose and hawser, tanker shall tow by tug boats to far 2mil away from FPSO in one hour.

$$T_{P-out} = 1hr$$

Shuttle/oil tanker off take time

It is calculated by time summation every single operation;

$$T_{\text{offtake}} = T_{P-in} + T_{M-line} + T_{\text{Cargo-h}} + T_{LA} + T_{\text{disc}} + T_{P-out} = 2 + 0.75 + 0.75 + 15.5 + 0.5 + 1 = 20.5 \text{ hrs}$$

Shuttle/oil tanker discharge time at oil terminal

Based on port efficiency reports, in Europe Antwerp port for oil tankers recorded approximately 10 hours deviation time from standard average in-port time. Average in-port time for oil tankers in Antwerp port is 25.86 hours.

$$T_{Discharge} = T_{P-in} + T_{Cargo-h} + T_{OA} + T_{disc} + T_{P-out} = 0.5 + 0.25 + 15.5 + 0.25 + 1 = 17.5 \text{ hrs}$$

Ship turn-around time

According the Benchmarking Report; SA Port Terminals (2015/16), turn-around time in Antwerp port is 1 to 2 days. Turn-around time is a waiting time for vessel until the port call time.

One complete cycle time

Duration that takes to transfer and deliver CO parcel from FPSO to Oil Terminal and sail back to field position again;

$$T_{Discharge} = T_{offtake} + T_{Trip} + T_{Discharge} + T_{Turn-around} = 20.5 + 204 + 17.5 + 36 = 278 \text{ hrs} = 11 \text{ days and } 14 \text{ hrs}$$

4 CHAPTER 4: Discussion

4.1 Scenario1

First scenario is continuing the current carrying option which crude oil has exported from the Assgard field to the Antwerp oil terminal by in using an Aframax oil tanker to carrying crude from the field. According the shipping market, daily cost for Aframax is around 15500 USD (Compass Maritime-2018).

Chartering cost of two 80-120DWT tankers rate for one year:

$$\text{Charter cost} = (365 \times 15500\$) = 5657500\$$$

4.2 Scenario 2

Second scenario is using two smaller shuttle tankers at same back to back route to Antwerp oil terminal;

$$N_{off\ take} = \frac{\text{Accmulated production}}{Cap_{Tanker}}$$

| Year | Annual production | Size of shuttle/oil tanker | | | | | | | | | |
|------|-------------------|----------------------------|---------------------|-------------------|---------------------|-------------------|---------------------|-------------------|---------------------|-------------------|---------------------|
| | | 4000000 | | 450000 | | 500000 | | 550000 | | 600000 | |
| | | Number of filling | Off Take every days | Number of filling | Off Take every days | Number of filling | Off Take every days | Number of filling | Off Take every days | Number of filling | Off Take every days |
| 2018 | 13512796 | 33.8 | 10.8 | 30.0 | 12.2 | 27.0 | 13.5 | 24.6 | 14.9 | 22.5 | 16.2 |
| 2019 | 22381361 | 56.0 | 6.5 | 49.7 | 7.3 | 44.8 | 8.2 | 40.7 | 9.0 | 37.3 | 9.8 |
| 2020 | 20974360 | 52.4 | 7.0 | 46.6 | 7.8 | 41.9 | 8.7 | 38.1 | 9.6 | 35.0 | 10.4 |
| 2021 | 19658403 | 49.1 | 7.4 | 43.7 | 8.4 | 39.3 | 9.3 | 35.7 | 10.2 | 32.8 | 11.1 |

| | | | | | | | | | | | |
|------|----------|------|-----|------|-----|------|------|------|------|------|------|
| 2022 | 18828404 | 47.1 | 7.8 | 41.8 | 8.7 | 37.7 | 9.7 | 34.2 | 10.7 | 31.4 | 11.6 |
| 2023 | 17657480 | 44.1 | 8.3 | 39.2 | 9.3 | 35.3 | 10.3 | 32.1 | 11.4 | 29.4 | 12.4 |

6- Numbers of Off-Take for Diffrente Size Tanker

Shuttle tanker loading and offloading time base on capacity of each tanker:

$$T_{LA} = \frac{ST_{cap}}{R_L} + 1(Hrs)$$

| Tanker Capacity (BBL) | Loading/Offloading Time (Hrs) | Field Time (Hrs) | Antwerp port Time (Hrs) | Round Trip Time (Hrs) | Total |
|-----------------------|-------------------------------|------------------|-------------------------|-----------------------|-------------|
| 400000 | 9/9 | 5 | 50 | 204 | 277(11D13H) |
| 450000 | 10/10 | 5 | 50 | 204 | 279(11D15H) |
| 500000 | 11/11 | 5 | 50 | 204 | 281(11D17H) |
| 550000 | 12/12 | 5 | 50 | 204 | 283(11D19H) |
| 600000 | 13/13 | 5 | 50 | 204 | 285(11D21H) |
| 650000 | 14/14 | 5 | 50 | 204 | 287(11D23H) |

7- Complete cycle of tanker- Field to Antwerp

Chartering cost of two 50-80DWT tankers rate for one year:

$$Charter\ cost = 2(365 \times 13750\$) = 10,037,500\$$$

4.3 Scenario 3

Third scenario is nominating a terminal that located near than Antwerp terminal. The Sture oil terminal is an important terminal in Europe and has capability as transit hub for crude oil and condensate which produced in Norwegian Sea or Brent Sea. The Sture oil terminal located at south-west of Norway in Hordaland province. It is a handy port for sending crude oil from the Aasgard field by a shuttle tanker with around 390 NM sea rout. According the shipping market, daily cost for vessel size 50-80 DWT is around 13750 USD (Compass Maritime-2018).

| Tanker Capacity (BBL) | Loading/Offloading Time (Hrs) | Field Time (Hrs) | Sture port Time (Hrs) | Round Trip Time (Hrs) | Total |
|-----------------------|-------------------------------|------------------|-----------------------|-----------------------|------------|
| 400000 | 9/9 | 5 | 14 | 78 | 115(4D19H) |
| 450000 | 10/10 | 5 | 14 | 78 | 117(4D21H) |
| 500000 | 11/11 | 5 | 14 | 78 | 119(4D23H) |
| 550000 | 12/12 | 5 | 14 | 78 | 121(5D1H) |
| 600000 | 13/13 | 5 | 14 | 78 | 123(5D3H) |
| 650000 | 14/14 | 5 | 14 | 78 | 125(5D5H) |
| 700000 | 15/15 | 5 | 14 | 78 | 127(5D7H) |
| 750000 | 16/16 | 5 | 14 | 78 | 129(5D9H) |

8- Complete cycle of tanker- Field to Sture

Chartering cost of vessel size 50-80DWT rate for one year:

$$\text{Charter cost} = 365 \times 13750\$ = 5,018,750\$$$

Time chartering cost of vessel size 80-120DWT(Aframax) rate according the required offloadin which has planned;

5 CHAPTER 5: Conclusion and recommendations for future work

5.1 Conclusion

The above calculation and findings were used for transferring the CO after tie-up the Trestakk oil field and according the table 1 off-take esquence will decrease from every 19.6 days to every 11,8 daysat 2019. In scenario 1 planned chuduale remain behind the cycle time of S/O tanker for the Antwerp oil terminal and without considering the weather conditaion at field regarding to table 1, this scnario for perventing of production down is rejecting to keep production rate as yearly plan. This scenario can be back as alternative from 2022 regarding table 5.

In sceanario 2, according the calculation for using two S/O tankers as back to back to tansffer the CO to the Antwerp oil terminal from possibility view it is possible but by profitability view, chartering the two vessels will increase the charter cost around 77 present. In addition by using the smaller size vessel led to number of off-take operation cost redoubled and filed profitability will negatively affect.

In scenario 3 and transferring the CO to nearby oil terminal which called the Sture oil terminal, makes big advantage according table 8 which shows sufficient time to charter the Aframax type vessel as one week duty and one week off to significantly reduce the chartering cost and this is occurs by co-chartering the vessel together by nearby oil field which leads to a significant saving in operating costs.

5.2 Recommended Future Work

Looking for faraway oil market same America or Asia by bypassing the Europe oil terminals significantly will reduce the costs. For future work recommended the reliability of using the VLCC type oil tanker for transferring the CO for long trip to be studied in the future.

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7 Appendixes

7.1 Appendix1

Buoy Data – Aasgard Field – Year 2016- 2017 (BuoyWeather.com-2017)

| Date | Hours | Wave Height | Wave Period | Wave Direction | Wind Speed | Wind Direction |
|------------|-------|-------------|-------------|----------------|------------|----------------|
| 1 OCT 2016 | 0 | 3.64 | 10.36 | 322.71 | 11.2199 | 309.721 |
| 1 OCT 2016 | 3 | 3.5 | 10.27 | 330.88 | 9.56971 | 304.57 |
| 1 OCT 2016 | 6 | 3.32 | 10.2 | 336.16 | 9.43231 | 294.69 |
| 1 OCT 2016 | 9 | 3.2 | 10.09 | 339.68 | 10.8104 | 281.851 |
| 1 OCT 2016 | 12 | 3.06 | 9.97 | 344.02 | 9.45381 | 285.271 |
| 1 OCT 2016 | 15 | 2.89 | 9.97 | 345.94 | 7.86156 | 292.749 |
| 1 OCT 2016 | 18 | 2.77 | 10.01 | 341.92 | 8.15083 | 295.119 |
| 1 OCT 2016 | 21 | 2.73 | 10.04 | 341.17 | 8.76357 | 294.255 |
| 2 OCT 2016 | 0 | 2.74 | 10.12 | 340.79 | 8.98212 | 291.967 |
| 2 OCT 2016 | 3 | 2.69 | 10.48 | 340.16 | 8.22572 | 290.793 |
| 2 OCT 2016 | 6 | 2.64 | 10.91 | 333.18 | 7.46931 | 303.201 |
| 2 OCT 2016 | 9 | 2.6 | 11.02 | 334.68 | 5.65088 | 300.877 |
| 2 OCT 2016 | 12 | 2.54 | 11.08 | 337.17 | 4.14798 | 290.314 |
| 2 OCT 2016 | 15 | 2.47 | 11.12 | 340.56 | 4.19237 | 262.875 |
| 2 OCT 2016 | 18 | 2.38 | 11.14 | 344.46 | 5.64703 | 248.387 |
| 2 OCT 2016 | 21 | 2.3 | 11.13 | 347.94 | 5.4368 | 253.765 |
| 3 OCT 2016 | 0 | 2.25 | 11.08 | 350.32 | 5.40981 | 249.89 |
| 3 OCT 2016 | 3 | 2.23 | 11.04 | 352.16 | 4.9407 | 257.849 |
| 3 OCT 2016 | 6 | 2.19 | 10.99 | 354.39 | 4.87001 | 269.883 |
| 3 OCT 2016 | 9 | 2.13 | 10.92 | 356.96 | 2.87759 | 282.443 |
| 3 OCT 2016 | 12 | 2.03 | 10.84 | 359.28 | 1.61474 | 242.324 |
| 3 OCT 2016 | 15 | 1.9 | 10.7 | 356.93 | 2.51372 | 164.305 |
| 3 OCT 2016 | 18 | 1.77 | 10.45 | 359.5 | 4.03755 | 148.16 |
| 3 OCT 2016 | 21 | 1.67 | 10.32 | 1.28 | 7.01445 | 146.808 |
| 4 OCT 2016 | 0 | 1.61 | 10.22 | 2.25 | 7.41928 | 153.504 |
| 4 OCT 2016 | 3 | 1.56 | 10.11 | 2.52 | 6.57141 | 162.006 |
| 4 OCT 2016 | 6 | 1.6 | 9.92 | 359.09 | 6.87263 | 164.73 |
| 4 OCT 2016 | 9 | 1.82 | 13.98 | 252.06 | 7.08531 | 173.517 |
| 4 OCT 2016 | 12 | 2.09 | 13.29 | 247.57 | 6.77182 | 183.387 |
| 4 OCT 2016 | 15 | 2.29 | 16.06 | 253.77 | 7.31115 | 190.004 |

| Date | Hours | Wave Height | Wave Period | Wave Direction | Wind Speed | Wind Direction |
|------------|-------|-------------|-------------|----------------|------------|----------------|
| 4 OCT 2016 | 18 | 2.48 | 15.35 | 254.1 | 8.11121 | 196.179 |
| 4 OCT 2016 | 21 | 2.75 | 14.61 | 253.14 | 9.82793 | 205.236 |
| 5 OCT 2016 | 0 | 3.03 | 14.24 | 255.7 | 10.6441 | 217.096 |
| 5 OCT 2016 | 3 | 3.19 | 13.71 | 254.43 | 10.3639 | 222.263 |
| 5 OCT 2016 | 6 | 3.13 | 13.45 | 257.6 | 8.87482 | 225.685 |
| 5 OCT 2016 | 9 | 2.96 | 13.16 | 260.04 | 8.88935 | 224.134 |
| 5 OCT 2016 | 12 | 2.74 | 12.8 | 256.62 | 8.29622 | 231.804 |
| 5 OCT 2016 | 15 | 2.51 | 12.47 | 257.93 | 6.7521 | 232.825 |
| 5 OCT 2016 | 18 | 2.29 | 12.08 | 254.45 | 5.54401 | 224.416 |
| 5 OCT 2016 | 21 | 2.08 | 11.77 | 255.88 | 5.04073 | 214.983 |
| 6 OCT 2016 | 0 | 1.9 | 11.57 | 257.83 | 4.61525 | 213.243 |
| 6 OCT 2016 | 3 | 1.75 | 11.2 | 254.71 | 2.54786 | 184.503 |
| 6 OCT 2016 | 6 | 1.63 | 11.02 | 256.55 | 2.18586 | 122.672 |
| 6 OCT 2016 | 9 | 1.52 | 10.92 | 258.53 | 4.35488 | 114.269 |
| 6 OCT 2016 | 12 | 1.44 | 10.78 | 260.21 | 4.17815 | 111.776 |
| 6 OCT 2016 | 15 | 1.44 | 10.61 | 255.74 | 5.36681 | 106.341 |
| 6 OCT 2016 | 18 | 1.57 | 16.91 | 263.16 | 5.75647 | 97.2853 |
| 6 OCT 2016 | 21 | 1.72 | 16.12 | 263.26 | 6.77106 | 88.9843 |
| 7 OCT 2016 | 0 | 1.8 | 15.2 | 261.92 | 6.82104 | 84.5316 |
| 7 OCT 2016 | 3 | 1.86 | 14.41 | 260.35 | 7.63574 | 79.5876 |
| 7 OCT 2016 | 6 | 1.87 | 13.81 | 258.54 | 7.32069 | 76.8937 |
| 7 OCT 2016 | 9 | 1.84 | 13.46 | 258.41 | 7.72726 | 79.1843 |
| 7 OCT 2016 | 12 | 1.78 | 13.15 | 257.73 | 7.23219 | 83.8083 |
| 7 OCT 2016 | 15 | 1.71 | 12.7 | 255.67 | 7.8578 | 87.4469 |
| 7 OCT 2016 | 18 | 1.63 | 12.49 | 254.97 | 7.22399 | 88.0959 |
| 7 OCT 2016 | 21 | 1.58 | 12.05 | 253.22 | 8.21726 | 96.1475 |
| 8 OCT 2016 | 0 | 1.59 | 11.82 | 252.79 | 8.55688 | 110.595 |
| 8 OCT 2016 | 3 | 1.69 | 11.67 | 252.12 | 9.44562 | 115.995 |
| 8 OCT 2016 | 6 | 1.72 | 11.34 | 251.41 | 8.31015 | 112.275 |
| 8 OCT 2016 | 9 | 1.72 | 11.14 | 251.01 | 9.55848 | 112.514 |
| 8 OCT 2016 | 12 | 1.65 | 11.04 | 250.59 | 8.31173 | 111.75 |
| 8 OCT 2016 | 15 | 1.55 | 10.95 | 250.47 | 8.53868 | 107.798 |
| 8 OCT 2016 | 18 | 1.42 | 10.84 | 251.02 | 7.35397 | 103.526 |
| 8 OCT 2016 | 21 | 1.29 | 10.73 | 251.85 | 7.2878 | 102.682 |
| 9 OCT 2016 | 0 | 1.18 | 10.52 | 249.91 | 6.91616 | 107.937 |
| 9 OCT 2016 | 3 | 1.17 | 10.4 | 249.5 | 7.72706 | 112.283 |
| 9 OCT 2016 | 6 | 1.23 | 10.35 | 248.12 | 7.78438 | 120.749 |
| 9 OCT 2016 | 9 | 1.41 | 5.29 | 113.75 | 9.02416 | 118.24 |
| 9 OCT 2016 | 12 | 1.57 | 5.72 | 115.62 | 9.09455 | 124.109 |
| 9 OCT 2016 | 15 | 1.68 | 5.96 | 119.22 | 9.9005 | 126.291 |

| Date | Hours | Wave Height | Wave Period | Wave Direction | Wind Speed | Wind Direction |
|-------------|-------|-------------|-------------|----------------|------------|----------------|
| 9 OCT 2016 | 18 | 1.6 | 6.03 | 123.54 | 7.99582 | 137.128 |
| 9 OCT 2016 | 21 | 1.42 | 5.99 | 127.09 | 6.03697 | 166.493 |
| 10 OCT 2016 | 0 | 1.26 | 5.89 | 130.54 | 4.65778 | 191.141 |
| 10 OCT 2016 | 3 | 1.21 | 14.28 | 263.59 | 4.40967 | 206.101 |
| 10 OCT 2016 | 6 | 1.24 | 13.42 | 263.17 | 4.60431 | 213.035 |
| 10 OCT 2016 | 9 | 1.27 | 12.66 | 262.63 | 4.25029 | 217.544 |
| 10 OCT 2016 | 12 | 1.24 | 12.11 | 262.08 | 3.23989 | 220.87 |
| 10 OCT 2016 | 15 | 1.17 | 11.71 | 261.81 | 2.82846 | 225.287 |
| 10 OCT 2016 | 18 | 1.08 | 11.5 | 261.62 | 2.28554 | 244.332 |
| 10 OCT 2016 | 21 | 1.02 | 11.12 | 261.43 | 1.72557 | 225.94 |
| 11 OCT 2016 | 0 | 1.02 | 10.95 | 261.56 | 1.69744 | 236.778 |
| 11 OCT 2016 | 3 | 1.08 | 10.57 | 261.75 | 1.21433 | 251.267 |
| 11 OCT 2016 | 6 | 1.19 | 10.24 | 262.37 | 1.41354 | 297.834 |
| 11 OCT 2016 | 9 | 1.27 | 10.04 | 263.04 | 1.23491 | 338.629 |
| 11 OCT 2016 | 12 | 1.29 | 9.69 | 262.62 | 1.01769 | 337.467 |
| 11 OCT 2016 | 15 | 1.25 | 9.53 | 260.77 | 1.46342 | 356.082 |
| 11 OCT 2016 | 18 | 1.19 | 9.43 | 258.84 | 0.812219 | 4.23638 |
| 11 OCT 2016 | 21 | 1.12 | 9.21 | 258.47 | 1.06794 | 46.1381 |
| 12 OCT 2016 | 0 | 1.05 | 9.05 | 257.49 | 1.35326 | 59.8349 |
| 12 OCT 2016 | 3 | 0.99 | 8.97 | 256.7 | 1.74929 | 67.8335 |
| 12 OCT 2016 | 6 | 0.93 | 8.89 | 255.78 | 1.62361 | 62.4879 |
| 12 OCT 2016 | 9 | 0.9 | 8.72 | 257.42 | 1.87182 | 68.369 |
| 12 OCT 2016 | 12 | 0.87 | 8.56 | 257.17 | 2.00878 | 77.3473 |
| 12 OCT 2016 | 15 | 0.85 | 8.49 | 257.19 | 3.10459 | 64.838 |
| 12 OCT 2016 | 18 | 0.85 | 8.4 | 257.28 | 3.94738 | 72.7584 |
| 12 OCT 2016 | 21 | 0.87 | 12.79 | 241.44 | 4.25141 | 80.2495 |
| 13 OCT 2016 | 0 | 0.91 | 12.54 | 240.46 | 4.4641 | 79.5457 |
| 13 OCT 2016 | 3 | 0.95 | 12.1 | 240.26 | 4.38037 | 75.456 |
| 13 OCT 2016 | 6 | 0.97 | 11.91 | 239.27 | 3.82897 | 66.4476 |
| 13 OCT 2016 | 9 | 0.97 | 11.73 | 238.75 | 3.74769 | 67.4035 |
| 13 OCT 2016 | 12 | 0.96 | 11.57 | 238.85 | 2.81155 | 68.7282 |
| 13 OCT 2016 | 15 | 0.95 | 11.41 | 239.38 | 3.33042 | 70.5312 |
| 13 OCT 2016 | 18 | 0.94 | 11.18 | 240.69 | 3.86254 | 87.9226 |
| 13 OCT 2016 | 21 | 0.92 | 11.03 | 242.36 | 4.36835 | 86.4562 |
| 14 OCT 2016 | 0 | 0.92 | 10.93 | 244.39 | 5.1671 | 85.3375 |
| 14 OCT 2016 | 3 | 0.96 | 10.74 | 247.45 | 5.7726 | 83.0348 |
| 14 OCT 2016 | 6 | 1.05 | 10.41 | 251.78 | 6.52559 | 83.2233 |
| 14 OCT 2016 | 9 | 1.14 | 10.31 | 252.99 | 7.09578 | 81.0818 |
| 14 OCT 2016 | 12 | 1.19 | 12.69 | 263.35 | 7.19242 | 83.774 |
| 14 OCT 2016 | 15 | 1.18 | 12.38 | 262.64 | 7.13499 | 83.5621 |

| Date | Hours | Wave Height | Wave Period | Wave Direction | Wind Speed | Wind Direction |
|-------------|-------|-------------|-------------|----------------|------------|----------------|
| 14 OCT 2016 | 18 | 1.17 | 11.9 | 261.33 | 7.38093 | 81.5074 |
| 14 OCT 2016 | 21 | 1.15 | 11.7 | 261.12 | 7.23464 | 86.3543 |
| 15 OCT 2016 | 0 | 1.12 | 11.46 | 260.89 | 6.88887 | 95.2469 |
| 15 OCT 2016 | 3 | 1.08 | 11.07 | 260 | 6.33337 | 105.945 |
| 15 OCT 2016 | 6 | 1.08 | 10.89 | 259.79 | 6.31466 | 116.524 |
| 15 OCT 2016 | 9 | 1.1 | 10.53 | 259.58 | 6.3947 | 112.916 |
| 15 OCT 2016 | 12 | 1.09 | 10.36 | 259.87 | 5.58428 | 111.096 |
| 15 OCT 2016 | 15 | 1.08 | 12.75 | 265.36 | 5.75379 | 107.081 |
| 15 OCT 2016 | 18 | 1.05 | 12.11 | 264.89 | 5.15193 | 116.764 |
| 15 OCT 2016 | 21 | 1.01 | 11.72 | 265.75 | 5.32348 | 113.82 |
| 16 OCT 2016 | 0 | 1 | 11.24 | 265.32 | 5.72543 | 115.446 |
| 16 OCT 2016 | 3 | 0.98 | 11.03 | 265.72 | 5.86346 | 117.308 |
| 16 OCT 2016 | 6 | 0.93 | 12.87 | 265.82 | 4.98968 | 124.136 |
| 16 OCT 2016 | 9 | 0.87 | 12.57 | 266.4 | 4.99813 | 126.457 |
| 16 OCT 2016 | 12 | 0.83 | 12.37 | 266.54 | 4.48326 | 135.542 |
| 16 OCT 2016 | 15 | 0.78 | 11.92 | 266.5 | 3.00761 | 132.709 |
| 16 OCT 2016 | 18 | 0.74 | 11.64 | 265.02 | 2.42539 | 141.192 |
| 16 OCT 2016 | 21 | 0.7 | 11.47 | 258.99 | 1.1908 | 209.148 |
| 17 OCT 2016 | 0 | 0.68 | 11.26 | 252.1 | 0.502096 | 224.193 |
| 17 OCT 2016 | 3 | 0.7 | 10.98 | 239.8 | 1.56646 | 141.74 |
| 17 OCT 2016 | 6 | 0.76 | 10.84 | 230.17 | 1.22332 | 135.331 |
| 17 OCT 2016 | 9 | 0.81 | 10.83 | 224.83 | 2.2062 | 139.596 |
| 17 OCT 2016 | 12 | 0.83 | 10.88 | 219.97 | 2.93602 | 172.366 |
| 17 OCT 2016 | 15 | 0.86 | 11 | 214.04 | 3.3736 | 163.821 |
| 17 OCT 2016 | 18 | 0.93 | 11.18 | 210.51 | 2.93491 | 134.033 |
| 17 OCT 2016 | 21 | 1 | 11.21 | 209.11 | 4.15578 | 101.661 |
| 18 OCT 2016 | 0 | 1.06 | 11.11 | 208.78 | 3.52575 | 122.608 |
| 18 OCT 2016 | 3 | 1.13 | 11.07 | 208.89 | 0.933006 | 199.406 |
| 18 OCT 2016 | 6 | 1.21 | 11.04 | 208.97 | 3.69477 | 117.744 |
| 18 OCT 2016 | 9 | 1.26 | 10.88 | 209.31 | 5.44615 | 151.364 |
| 18 OCT 2016 | 12 | 1.31 | 10.44 | 209.35 | 5.51144 | 158.275 |
| 18 OCT 2016 | 15 | 1.34 | 9.72 | 209.78 | 5.77958 | 159.119 |
| 18 OCT 2016 | 18 | 1.33 | 9.02 | 210.76 | 4.96284 | 173.404 |
| 18 OCT 2016 | 21 | 1.28 | 8.45 | 211.63 | 4.92428 | 173.235 |
| 19 OCT 2016 | 0 | 1.22 | 7.99 | 212.74 | 5.02482 | 163.584 |
| 19 OCT 2016 | 3 | 1.17 | 7.68 | 212.07 | 5.44111 | 178.841 |
| 19 OCT 2016 | 6 | 1.13 | 7.38 | 214.39 | 4.67116 | 199.25 |
| 19 OCT 2016 | 9 | 1.11 | 7.2 | 214.94 | 5.10366 | 207.67 |
| 19 OCT 2016 | 12 | 1.12 | 14.37 | 265.33 | 4.57984 | 207.293 |
| 19 OCT 2016 | 15 | 1.18 | 12.88 | 262.42 | 4.16861 | 222.57 |

| Date | Hours | Wave Height | Wave Period | Wave Direction | Wind Speed | Wind Direction |
|-------------|-------|-------------|-------------|----------------|------------|----------------|
| 19 OCT 2016 | 18 | 1.26 | 11.86 | 259.53 | 3.19376 | 231.228 |
| 19 OCT 2016 | 21 | 1.31 | 11.21 | 258.29 | 1.62459 | 245.644 |
| 20 OCT 2016 | 0 | 1.3 | 10.84 | 260.42 | 0.586941 | 193.8 |
| 20 OCT 2016 | 3 | 1.24 | 10.52 | 259.83 | 1.03942 | 120.018 |
| 20 OCT 2016 | 6 | 1.2 | 10.34 | 261.79 | 1.87779 | 105.442 |
| 20 OCT 2016 | 9 | 1.2 | 10.16 | 263.37 | 3.1777 | 110.83 |
| 20 OCT 2016 | 12 | 1.22 | 9.83 | 262.83 | 4.44146 | 106.884 |
| 20 OCT 2016 | 15 | 1.21 | 9.54 | 263.92 | 4.71934 | 107.129 |
| 20 OCT 2016 | 18 | 1.21 | 13.64 | 258.44 | 5.16342 | 105.732 |
| 20 OCT 2016 | 21 | 1.3 | 18.62 | 261.19 | 6.74633 | 111.659 |
| 21 OCT 2016 | 0 | 1.62 | 17.47 | 261.38 | 6.88838 | 118.909 |
| 21 OCT 2016 | 3 | 2.11 | 16.84 | 261.47 | 6.12066 | 143.972 |
| 21 OCT 2016 | 6 | 2.58 | 16.67 | 261.07 | 5.78005 | 165.266 |
| 21 OCT 2016 | 9 | 2.89 | 16.23 | 261.32 | 5.38182 | 178.509 |
| 21 OCT 2016 | 12 | 2.97 | 15.45 | 260.85 | 5.4478 | 175.367 |
| 21 OCT 2016 | 15 | 2.9 | 15.13 | 260.12 | 5.41166 | 160.46 |
| 21 OCT 2016 | 18 | 2.74 | 14.52 | 259.93 | 7.1917 | 146.398 |
| 21 OCT 2016 | 21 | 2.58 | 14.27 | 259.41 | 7.22676 | 135.336 |
| 22 OCT 2016 | 0 | 2.44 | 14.09 | 259.75 | 7.22407 | 127.123 |
| 22 OCT 2016 | 3 | 2.29 | 13.69 | 260.07 | 5.9079 | 124.308 |
| 22 OCT 2016 | 6 | 2.12 | 13.47 | 260.58 | 4.60405 | 127.143 |
| 22 OCT 2016 | 9 | 1.97 | 13.32 | 261.26 | 4.82958 | 129.623 |
| 22 OCT 2016 | 12 | 1.87 | 13.02 | 260.91 | 6.66219 | 138.895 |
| 22 OCT 2016 | 15 | 1.88 | 12.63 | 260.69 | 8.20343 | 135.889 |
| 22 OCT 2016 | 18 | 1.95 | 12.48 | 260.75 | 9.10108 | 135.667 |
| 22 OCT 2016 | 21 | 2.02 | 12.08 | 259.88 | 9.65052 | 126.276 |
| 23 OCT 2016 | 0 | 2.01 | 11.73 | 259.81 | 8.28976 | 115.05 |
| 23 OCT 2016 | 3 | 1.96 | 11.56 | 259.83 | 8.35566 | 110.821 |
| 23 OCT 2016 | 6 | 1.92 | 11.08 | 257.96 | 8.31636 | 115.117 |
| 23 OCT 2016 | 9 | 2.05 | 10.93 | 257.92 | 10.6018 | 117.894 |
| 23 OCT 2016 | 12 | 2.34 | 6.48 | 121.38 | 12.2052 | 120.094 |
| 23 OCT 2016 | 15 | 2.55 | 6.84 | 124.61 | 12.8433 | 124.692 |
| 23 OCT 2016 | 18 | 2.41 | 6.9 | 127.87 | 10.3275 | 129.578 |
| 23 OCT 2016 | 21 | 2.17 | 6.78 | 129.49 | 8.2866 | 151.61 |
| 24 OCT 2016 | 0 | 2.02 | 6.73 | 130.47 | 6.06531 | 172.992 |
| 24 OCT 2016 | 3 | 1.95 | 6.76 | 134.4 | 5.35061 | 161.361 |
| 24 OCT 2016 | 6 | 1.93 | 13.26 | 267.85 | 4.84257 | 160.33 |
| 24 OCT 2016 | 9 | 1.87 | 12.89 | 266.98 | 4.08795 | 152.62 |
| 24 OCT 2016 | 12 | 1.75 | 12.64 | 266.91 | 2.89841 | 163.565 |
| 24 OCT 2016 | 15 | 1.6 | 12.48 | 266.64 | 2.31465 | 192.476 |

| Date | Hours | Wave Height | Wave Period | Wave Direction | Wind Speed | Wind Direction |
|-------------|-------|-------------|-------------|----------------|------------|----------------|
| 24 OCT 2016 | 18 | 1.46 | 12.3 | 266.33 | 2.84297 | 198.881 |
| 24 OCT 2016 | 21 | 1.33 | 12.01 | 265.88 | 3.71874 | 195.12 |
| 25 OCT 2016 | 0 | 1.23 | 11.83 | 265.57 | 4.80405 | 197.568 |
| 25 OCT 2016 | 3 | 1.17 | 11.74 | 265.45 | 5.45894 | 188.427 |
| 25 OCT 2016 | 6 | 1.17 | 11.69 | 265.52 | 6.66945 | 188.276 |
| 25 OCT 2016 | 9 | 1.26 | 11.64 | 265.81 | 7.7545 | 191.078 |
| 25 OCT 2016 | 12 | 1.48 | 11.57 | 266.23 | 9.31947 | 198.844 |
| 25 OCT 2016 | 15 | 1.88 | 6.16 | 239.65 | 11.5244 | 204.341 |
| 25 OCT 2016 | 18 | 2.41 | 7.16 | 243.82 | 12.3978 | 205.821 |
| 25 OCT 2016 | 21 | 3.02 | 7.87 | 235.88 | 14.4294 | 207.578 |
| 26 OCT 2016 | 0 | 3.42 | 8.32 | 227.78 | 14.6499 | 208.945 |
| 26 OCT 2016 | 3 | 3.99 | 8.83 | 219.89 | 16.9764 | 206.822 |
| 26 OCT 2016 | 6 | 4.54 | 9.47 | 214.75 | 17.3198 | 198.446 |
| 26 OCT 2016 | 9 | 4.86 | 9.95 | 212.95 | 17.9448 | 191.573 |
| 26 OCT 2016 | 12 | 5.02 | 10.27 | 216.91 | 17.4431 | 187.842 |
| 26 OCT 2016 | 15 | 5.08 | 10.62 | 219.66 | 16.4796 | 189.148 |
| 26 OCT 2016 | 18 | 4.65 | 10.79 | 231.23 | 11.7093 | 212.55 |
| 26 OCT 2016 | 21 | 4.2 | 10.53 | 231.03 | 12.3385 | 228.845 |
| 27 OCT 2016 | 0 | 3.95 | 10.31 | 237.61 | 12.0625 | 230.517 |
| 27 OCT 2016 | 3 | 4.14 | 10.23 | 244.72 | 13.4843 | 233.504 |
| 27 OCT 2016 | 6 | 4.77 | 10.9 | 253.16 | 13.4766 | 216.309 |
| 27 OCT 2016 | 9 | 5.77 | 14.34 | 268.02 | 16.188 | 216.991 |
| 27 OCT 2016 | 12 | 6.22 | 14.32 | 266.38 | 15.3294 | 232.368 |
| 27 OCT 2016 | 15 | 6.51 | 13.87 | 264.27 | 16.6913 | 244.141 |
| 27 OCT 2016 | 18 | 6.26 | 12.93 | 260.25 | 13.7517 | 252.567 |
| 27 OCT 2016 | 21 | 5.88 | 12.89 | 259.98 | 14.1282 | 248.666 |
| 28 OCT 2016 | 0 | 5.5 | 12.83 | 259.69 | 12.8474 | 244.752 |
| 28 OCT 2016 | 3 | 5.16 | 12.61 | 260.47 | 12.968 | 245.926 |
| 28 OCT 2016 | 6 | 4.95 | 12.39 | 261.59 | 12.7298 | 252.49 |
| 28 OCT 2016 | 9 | 4.75 | 12.32 | 261.64 | 11.9275 | 261.952 |
| 28 OCT 2016 | 12 | 4.7 | 12.28 | 260.27 | 12.3458 | 274.367 |
| 28 OCT 2016 | 15 | 4.98 | 12.29 | 257.71 | 13.9261 | 277.717 |
| 28 OCT 2016 | 18 | 5.42 | 12.39 | 256.34 | 14.9287 | 281.671 |
| 28 OCT 2016 | 21 | 5.82 | 12.5 | 256.88 | 15.5411 | 285.718 |
| 29 OCT 2016 | 0 | 6.19 | 12.54 | 259.16 | 16.1398 | 283.253 |
| 29 OCT 2016 | 3 | 6.54 | 12.41 | 263.9 | 17.6608 | 285.602 |
| 29 OCT 2016 | 6 | 6.64 | 12.4 | 269.84 | 17.2469 | 292.536 |
| 29 OCT 2016 | 9 | 6.2 | 12.49 | 274.35 | 14.104 | 306.756 |
| 29 OCT 2016 | 12 | 5.39 | 12.35 | 276.07 | 9.26521 | 316.225 |
| 29 OCT 2016 | 15 | 4.64 | 11.94 | 279.71 | 8.75855 | 313.15 |

| Date | Hours | Wave Height | Wave Period | Wave Direction | Wind Speed | Wind Direction |
|-------------|-------|-------------|-------------|----------------|------------|----------------|
| 29 OCT 2016 | 18 | 4.04 | 11.56 | 277.61 | 8.12114 | 305.275 |
| 29 OCT 2016 | 21 | 3.55 | 11.13 | 280.2 | 7.17898 | 300.745 |
| 30 OCT 2016 | 0 | 3.13 | 10.63 | 281.08 | 6.55915 | 299.301 |
| 30 OCT 2016 | 3 | 2.79 | 10.34 | 279.88 | 5.78291 | 297.274 |
| 30 OCT 2016 | 6 | 2.47 | 11.69 | 268.04 | 3.99411 | 287.936 |
| 30 OCT 2016 | 9 | 2.21 | 9.47 | 284.42 | 3.31904 | 257.471 |
| 30 OCT 2016 | 12 | 1.99 | 9.07 | 296.44 | 2.78657 | 226.164 |
| 30 OCT 2016 | 15 | 1.82 | 8.84 | 314.67 | 5.36956 | 161.43 |
| 30 OCT 2016 | 18 | 1.78 | 8.7 | 332.24 | 8.58334 | 166.044 |
| 30 OCT 2016 | 21 | 1.91 | 8.76 | 349.41 | 10.1944 | 150.241 |
| 31 OCT 2016 | 0 | 1.87 | 8.41 | 345.61 | 7.65679 | 175.205 |
| 31 OCT 2016 | 3 | 1.91 | 8.22 | 322.82 | 7.36961 | 264.862 |
| 31 OCT 2016 | 6 | 2.15 | 8.22 | 280.05 | 7.78261 | 282.09 |
| 31 OCT 2016 | 9 | 2.31 | 9.55 | 263.35 | 7.5141 | 280.428 |
| 31 OCT 2016 | 12 | 2.35 | 9.84 | 261.18 | 6.95728 | 274.039 |
| 31 OCT 2016 | 15 | 2.37 | 14.11 | 259.56 | 6.30406 | 257.728 |
| 31 OCT 2016 | 18 | 2.4 | 13.5 | 260.85 | 6.18996 | 242.69 |
| 31 OCT 2016 | 21 | 2.53 | 12.95 | 264.16 | 6.3252 | 238.446 |
| 1 NOV 2016 | 0 | 2.7 | 12.62 | 265.01 | 5.48731 | 225.443 |
| 1 NOV 2016 | 3 | 2.81 | 12.4 | 265.04 | 5.70249 | 214.136 |
| 1 NOV 2016 | 6 | 2.75 | 11.94 | 265.85 | 5.95749 | 207.383 |
| 1 NOV 2016 | 9 | 2.53 | 11.62 | 264.86 | 3.20301 | 192.258 |
| 1 NOV 2016 | 12 | 2.41 | 11.23 | 265.42 | 2.73805 | 126.535 |
| 1 NOV 2016 | 15 | 2.76 | 11.86 | 276.84 | 4.17455 | 125.936 |
| 1 NOV 2016 | 18 | 2.87 | 11.58 | 282.38 | 4.73203 | 76.4334 |
| 1 NOV 2016 | 21 | 2.62 | 11.27 | 282.91 | 5.24218 | 74.8502 |
| 2 NOV 2016 | 0 | 2.34 | 11.02 | 287.69 | 4.36757 | 68.369 |
| 2 NOV 2016 | 3 | 2.09 | 10.55 | 288.31 | 3.13665 | 65.314 |
| 2 NOV 2016 | 6 | 1.87 | 10.18 | 292.08 | 1.90066 | 26.565 |
| 2 NOV 2016 | 9 | 1.71 | 9.77 | 293.71 | 1.33555 | 281.226 |
| 2 NOV 2016 | 12 | 1.59 | 9.49 | 297.67 | 1.70578 | 34.249 |
| 2 NOV 2016 | 15 | 1.49 | 9.09 | 300.22 | 4.19058 | 27.1153 |
| 2 NOV 2016 | 18 | 1.4 | 8.84 | 301.29 | 3.70066 | 1.08384 |
| 2 NOV 2016 | 21 | 1.31 | 8.49 | 304.03 | 3.25185 | 350.798 |
| 3 NOV 2016 | 0 | 1.23 | 8.28 | 302.22 | 3.03982 | 340.194 |
| 3 NOV 2016 | 3 | 1.16 | 7.96 | 308.05 | 2.31741 | 334.983 |
| 3 NOV 2016 | 6 | 1.13 | 16.04 | 266.52 | 1.93569 | 11.0197 |
| 3 NOV 2016 | 9 | 1.13 | 15.44 | 265.96 | 3.46539 | 11.1478 |
| 3 NOV 2016 | 12 | 1.16 | 14.73 | 265.89 | 3.22605 | 24.7379 |
| 3 NOV 2016 | 15 | 1.25 | 14.34 | 264.92 | 4.75079 | 83.4732 |

| Date | Hours | Wave Height | Wave Period | Wave Direction | Wind Speed | Wind Direction |
|-------------|--------------|--------------------|--------------------|-----------------------|-------------------|-----------------------|
| 3 NOV 2016 | 18 | 1.55 | 13.81 | 265.17 | 9.80987 | 92.5705 |
| 3 NOV 2016 | 21 | 1.74 | 13.48 | 264.13 | 10.3471 | 82.5589 |
| 4 NOV 2016 | 0 | 1.76 | 13.22 | 263.09 | 10.153 | 78.8116 |
| 4 NOV 2016 | 3 | 1.77 | 12.83 | 263.76 | 10.289 | 73.3966 |
| 4 NOV 2016 | 6 | 1.82 | 12.57 | 262.72 | 10.986 | 71.202 |
| 4 NOV 2016 | 9 | 1.92 | 12.36 | 261.81 | 11.5202 | 71.4233 |
| 4 NOV 2016 | 12 | 2.01 | 5.96 | 78.76 | 11.5968 | 68.5012 |
| 4 NOV 2016 | 15 | 2.06 | 6.03 | 76.42 | 12.0798 | 65.7051 |
| 4 NOV 2016 | 18 | 2.09 | 6.1 | 74.75 | 12.0483 | 68.6311 |
| 4 NOV 2016 | 21 | 2.13 | 6.27 | 78.59 | 12.0553 | 78.6619 |
| 5 NOV 2016 | 0 | 2.22 | 6.46 | 85.7 | 12.2401 | 85.3606 |
| 5 NOV 2016 | 3 | 2.36 | 6.8 | 92.26 | 12.5501 | 93.2429 |
| 5 NOV 2016 | 6 | 2.48 | 7.04 | 100.7 | 12.4057 | 94.3454 |
| 5 NOV 2016 | 9 | 2.53 | 7.19 | 107.76 | 12.7132 | 92.6146 |
| 5 NOV 2016 | 12 | 2.42 | 7.1 | 110.19 | 11.9162 | 86.1985 |
| 5 NOV 2016 | 15 | 2.36 | 6.81 | 110.44 | 13.0906 | 83.6403 |
| 5 NOV 2016 | 18 | 2.27 | 6.66 | 101.71 | 12.7639 | 78.1088 |
| 5 NOV 2016 | 21 | 2.16 | 6.45 | 100.77 | 12.4488 | 80.0078 |
| 6 NOV 2016 | 0 | 2 | 6.39 | 102.43 | 11.0559 | 80.6823 |
| 6 NOV 2016 | 3 | 1.89 | 6.3 | 105.12 | 10.9178 | 84.6391 |
| 6 NOV 2016 | 6 | 1.75 | 6.17 | 105.48 | 9.72984 | 79.2789 |
| 6 NOV 2016 | 9 | 1.67 | 5.98 | 108.44 | 10.192 | 79.7704 |
| 6 NOV 2016 | 12 | 1.59 | 5.87 | 109.72 | 9.55345 | 82.421 |
| 6 NOV 2016 | 15 | 1.53 | 5.67 | 106.61 | 9.77051 | 90.5862 |
| 6 NOV 2016 | 18 | 1.5 | 5.65 | 109.91 | 9.39232 | 96.0503 |
| 6 NOV 2016 | 21 | 1.48 | 5.7 | 112.94 | 9.24221 | 97.6477 |
| 7 NOV 2016 | 0 | 1.38 | 5.71 | 115.99 | 8.10444 | 97.23 |
| 7 NOV 2016 | 3 | 1.29 | 5.55 | 118.5 | 8.60063 | 97.3479 |
| 7 NOV 2016 | 6 | 1.23 | 5.27 | 114.52 | 8.522 | 96.3325 |
| 7 NOV 2016 | 9 | 1.18 | 5.15 | 115.22 | 8.38237 | 103.522 |
| 7 NOV 2016 | 12 | 1.19 | 5.09 | 114.98 | 8.46141 | 113.323 |
| 7 NOV 2016 | 15 | 1.29 | 5.19 | 115.71 | 9.02621 | 117.587 |
| 7 NOV 2016 | 18 | 1.44 | 5.35 | 118.61 | 9.35252 | 121.667 |
| 7 NOV 2016 | 21 | 1.63 | 5.56 | 124.71 | 10.2617 | 124.96 |
| 8 NOV 2016 | 0 | 1.76 | 5.79 | 126.37 | 10.0819 | 129.405 |
| 8 NOV 2016 | 3 | 1.96 | 5.96 | 127.64 | 11.5721 | 129.495 |
| 8 NOV 2016 | 6 | 2.12 | 6.23 | 124.01 | 11.473 | 131.219 |
| 8 NOV 2016 | 9 | 2.23 | 6.39 | 121.1 | 11.8083 | 128.743 |
| 8 NOV 2016 | 12 | 2.27 | 6.44 | 120.04 | 11.571 | 128.861 |
| 8 NOV 2016 | 15 | 2.35 | 6.49 | 120.45 | 11.912 | 126.947 |

| Date | Hours | Wave Height | Wave Period | Wave Direction | Wind Speed | Wind Direction |
|-------------|-------|-------------|-------------|----------------|------------|----------------|
| 8 NOV 2016 | 18 | 2.43 | 6.7 | 114.3 | 11.6481 | 126.693 |
| 8 NOV 2016 | 21 | 2.66 | 6.86 | 116.13 | 13.4402 | 126.529 |
| 9 NOV 2016 | 0 | 2.83 | 7.3 | 114.05 | 13.106 | 126.905 |
| 9 NOV 2016 | 3 | 3.01 | 7.53 | 121.03 | 14.14 | 133.481 |
| 9 NOV 2016 | 6 | 3.04 | 7.77 | 123.85 | 13.4212 | 140.593 |
| 9 NOV 2016 | 9 | 3.04 | 7.78 | 130.19 | 13.7208 | 136.181 |
| 9 NOV 2016 | 12 | 2.96 | 7.66 | 132.12 | 13.1939 | 128.259 |
| 9 NOV 2016 | 15 | 2.92 | 7.31 | 130.17 | 13.1443 | 123.109 |
| 9 NOV 2016 | 18 | 2.93 | 7.24 | 124.67 | 12.3018 | 117.919 |
| 9 NOV 2016 | 21 | 2.87 | 7.11 | 121.93 | 11.6615 | 115.334 |
| 10 NOV 2016 | 0 | 2.81 | 6.9 | 119.9 | 11.8565 | 117.256 |
| 10 NOV 2016 | 3 | 2.85 | 13.17 | 256.18 | 12.6227 | 122.38 |
| 10 NOV 2016 | 6 | 2.83 | 13.22 | 256.75 | 12.0166 | 125.277 |
| 10 NOV 2016 | 9 | 2.57 | 12.88 | 257.29 | 8.50038 | 134.142 |
| 10 NOV 2016 | 12 | 2.32 | 12.57 | 257.14 | 8.33203 | 151.466 |
| 10 NOV 2016 | 15 | 2.08 | 12.39 | 256.83 | 4.37989 | 204.986 |
| 10 NOV 2016 | 18 | 1.95 | 12.11 | 257.78 | 4.29526 | 254.055 |
| 10 NOV 2016 | 21 | 2.07 | 11.94 | 258.47 | 4.25442 | 265.281 |
| 11 NOV 2016 | 0 | 2.25 | 11.92 | 259.37 | 4.52823 | 216.288 |
| 11 NOV 2016 | 3 | 2.53 | 13.72 | 264.51 | 3.22144 | 222.107 |
| 11 NOV 2016 | 6 | 2.96 | 9.26 | 220.2 | 3.20145 | 248.564 |
| 11 NOV 2016 | 9 | 2.94 | 9.5 | 219.3 | 3.68506 | 258.416 |
| 11 NOV 2016 | 12 | 2.84 | 9.36 | 217.93 | 5.43485 | 231.275 |
| 11 NOV 2016 | 15 | 2.79 | 9.16 | 211.28 | 4.46222 | 230.639 |
| 11 NOV 2016 | 18 | 2.72 | 9.13 | 209.21 | 4.08705 | 220.237 |
| 11 NOV 2016 | 21 | 2.63 | 9.08 | 207.58 | 6.0356 | 227.082 |
| 12 NOV 2016 | 0 | 2.85 | 9.02 | 207.61 | 12.122 | 237.293 |
| 12 NOV 2016 | 3 | 3.69 | 9.33 | 210.73 | 14.4189 | 226.911 |
| 12 NOV 2016 | 6 | 4.19 | 9.7 | 212.89 | 15.3236 | 211.253 |
| 12 NOV 2016 | 9 | 4.39 | 10.33 | 216.89 | 14.3064 | 196.32 |
| 12 NOV 2016 | 12 | 4.33 | 11 | 220.07 | 12.2014 | 172.607 |
| 12 NOV 2016 | 15 | 4.46 | 11.64 | 222.57 | 12.5804 | 179.544 |
| 12 NOV 2016 | 18 | 5.08 | 12.09 | 222.36 | 15.2114 | 188.354 |
| 12 NOV 2016 | 21 | 5.36 | 12.15 | 221.08 | 14.3458 | 200.697 |
| 13 NOV 2016 | 0 | 4.66 | 11.8 | 218.94 | 8.13222 | 231.792 |
| 13 NOV 2016 | 3 | 3.95 | 11.43 | 218.09 | 7.14279 | 232.28 |
| 13 NOV 2016 | 6 | 3.41 | 10.94 | 218.52 | 7.2819 | 239.279 |
| 13 NOV 2016 | 9 | 3.13 | 10.62 | 221.07 | 8.33346 | 231.48 |
| 13 NOV 2016 | 12 | 3.2 | 10.8 | 246.89 | 8.53626 | 228.467 |
| 13 NOV 2016 | 15 | 3.17 | 11.61 | 259.47 | 9.75051 | 216.283 |

| Date | Hours | Wave Height | Wave Period | Wave Direction | Wind Speed | Wind Direction |
|-------------|-------|-------------|-------------|----------------|------------|----------------|
| 13 NOV 2016 | 18 | 3.11 | 11.47 | 259.07 | 11.0886 | 204 |
| 13 NOV 2016 | 21 | 3.56 | 11.11 | 258 | 15.6606 | 199.083 |
| 14 NOV 2016 | 0 | 4.33 | 9.24 | 224.55 | 16.544 | 196.288 |
| 14 NOV 2016 | 3 | 5.35 | 10.46 | 233.36 | 19.1509 | 198.227 |
| 14 NOV 2016 | 6 | 6.17 | 11.28 | 229.19 | 19.4477 | 202.557 |
| 14 NOV 2016 | 9 | 5.82 | 11.63 | 228.38 | 15.0266 | 225.513 |
| 14 NOV 2016 | 12 | 4.74 | 11.33 | 225.59 | 8.32406 | 298.72 |
| 14 NOV 2016 | 15 | 3.95 | 10.9 | 226.56 | 7.44565 | 272.232 |
| 14 NOV 2016 | 18 | 3.46 | 10.39 | 231.37 | 6.969 | 241.081 |
| 14 NOV 2016 | 21 | 3.19 | 10.11 | 242.48 | 8.18889 | 224.308 |
| 15 NOV 2016 | 0 | 3.11 | 11.05 | 259.85 | 9.38889 | 198.184 |
| 15 NOV 2016 | 3 | 3.29 | 11.34 | 260.92 | 13.7802 | 180.291 |
| 15 NOV 2016 | 6 | 4.24 | 8.81 | 235.55 | 16.6003 | 200.193 |
| 15 NOV 2016 | 9 | 5.56 | 10.46 | 243.49 | 18.5343 | 248.377 |
| 15 NOV 2016 | 12 | 6.3 | 11.22 | 254.77 | 18.6475 | 261.24 |
| 15 NOV 2016 | 15 | 5.9 | 11.51 | 259.9 | 15.1118 | 254.612 |
| 15 NOV 2016 | 18 | 5.32 | 11.46 | 261.49 | 13.3797 | 251.389 |
| 15 NOV 2016 | 21 | 4.91 | 11.46 | 258.73 | 12.7682 | 246.849 |
| 16 NOV 2016 | 0 | 4.55 | 11.3 | 255.76 | 12.0061 | 232.854 |
| 16 NOV 2016 | 3 | 4.36 | 11.11 | 254.18 | 12.8295 | 215.995 |
| 16 NOV 2016 | 6 | 4.34 | 10.92 | 253.67 | 12.2451 | 207.005 |
| 16 NOV 2016 | 9 | 4.38 | 10.93 | 253.41 | 12.8446 | 201.752 |
| 16 NOV 2016 | 12 | 4.43 | 10.93 | 252.67 | 14.1701 | 163.982 |
| 16 NOV 2016 | 15 | 4.16 | 11 | 252.28 | 6.96856 | 242.479 |
| 16 NOV 2016 | 18 | 3.78 | 11.7 | 256.56 | 7.88365 | 240.183 |
| 16 NOV 2016 | 21 | 3.6 | 12.12 | 257.78 | 8.0358 | 219.395 |
| 17 NOV 2016 | 0 | 3.58 | 12.83 | 260.61 | 5.94385 | 195.416 |
| 17 NOV 2016 | 3 | 3.69 | 13.64 | 262.81 | 6.01373 | 189.572 |
| 17 NOV 2016 | 6 | 3.84 | 14.3 | 263.77 | 6.41207 | 201.885 |
| 17 NOV 2016 | 9 | 3.96 | 14.76 | 263.22 | 5.58512 | 218.019 |
| 17 NOV 2016 | 12 | 3.99 | 15.28 | 263.65 | 5.99391 | 214.327 |
| 17 NOV 2016 | 15 | 3.92 | 15.39 | 263.9 | 5.61969 | 212.87 |
| 17 NOV 2016 | 18 | 3.77 | 15.19 | 264.33 | 5.49482 | 202.131 |
| 17 NOV 2016 | 21 | 3.57 | 14.88 | 263.58 | 6.08462 | 199.09 |
| 18 NOV 2016 | 0 | 3.32 | 14.5 | 264.28 | 5.1257 | 205.666 |
| 18 NOV 2016 | 3 | 3.04 | 14.12 | 265.29 | 3.79297 | 177.733 |
| 18 NOV 2016 | 6 | 2.78 | 13.61 | 265.04 | 5.46323 | 122.061 |
| 18 NOV 2016 | 9 | 2.6 | 13.29 | 266.94 | 6.7923 | 94.6443 |
| 18 NOV 2016 | 12 | 2.47 | 12.75 | 269.74 | 8.2409 | 95.7104 |
| 18 NOV 2016 | 15 | 2.36 | 12.49 | 270.99 | 8.37101 | 89.11 |

| Date | Hours | Wave Height | Wave Period | Wave Direction | Wind Speed | Wind Direction |
|-------------|-------|-------------|-------------|----------------|------------|----------------|
| 18 NOV 2016 | 18 | 2.21 | 12.25 | 275.27 | 7.94368 | 81.6759 |
| 18 NOV 2016 | 21 | 2.06 | 11.84 | 273.59 | 7.7255 | 71.3538 |
| 19 NOV 2016 | 0 | 1.89 | 11.69 | 272.9 | 6.16945 | 48.3509 |
| 19 NOV 2016 | 3 | 1.7 | 11.55 | 273.17 | 5.06609 | 10.5779 |
| 19 NOV 2016 | 6 | 1.53 | 11.19 | 276.63 | 4.97555 | 344.735 |
| 19 NOV 2016 | 9 | 1.4 | 11 | 276.83 | 3.45081 | 289.643 |
| 19 NOV 2016 | 12 | 1.3 | 8.55 | 316.15 | 4.96235 | 250.579 |
| 19 NOV 2016 | 15 | 1.26 | 8.47 | 315.37 | 6.66037 | 233.733 |
| 19 NOV 2016 | 18 | 1.26 | 10.84 | 292.43 | 6.78735 | 222.552 |
| 19 NOV 2016 | 21 | 1.26 | 10.58 | 299.88 | 6.28905 | 221.778 |
| 20 NOV 2016 | 0 | 1.39 | 10.35 | 302.19 | 5.91899 | 218.69 |
| 20 NOV 2016 | 3 | 1.68 | 6.59 | 234.19 | 7.45266 | 220.702 |
| 20 NOV 2016 | 6 | 1.92 | 6.92 | 222.98 | 8.80047 | 221.315 |
| 20 NOV 2016 | 9 | 2.11 | 7.14 | 219.08 | 10.3552 | 226.409 |
| 20 NOV 2016 | 12 | 2.33 | 7.21 | 215.93 | 12.0414 | 219.136 |
| 20 NOV 2016 | 15 | 2.3 | 7.31 | 215.91 | 10.3712 | 212.878 |
| 20 NOV 2016 | 18 | 2.09 | 7.4 | 220.17 | 8.67439 | 195.719 |
| 20 NOV 2016 | 21 | 1.89 | 7.46 | 224.86 | 7.49466 | 185.513 |
| 21 NOV 2016 | 0 | 1.71 | 7.46 | 228.25 | 6.25272 | 158.811 |
| 21 NOV 2016 | 3 | 1.52 | 7.41 | 235.59 | 4.81749 | 131.465 |
| 21 NOV 2016 | 6 | 1.36 | 7.38 | 259.99 | 3.29389 | 87.2156 |
| 21 NOV 2016 | 9 | 1.27 | 7.47 | 299.23 | 3.81577 | 99.8077 |
| 21 NOV 2016 | 12 | 1.27 | 7.73 | 325.72 | 0.680294 | 155.695 |
| 21 NOV 2016 | 15 | 1.27 | 7.88 | 327.71 | 4.70551 | 288.204 |
| 21 NOV 2016 | 18 | 1.27 | 8.08 | 329.58 | 5.2816 | 268.59 |
| 21 NOV 2016 | 21 | 1.26 | 8.33 | 336.19 | 5.23138 | 268.686 |
| 22 NOV 2016 | 0 | 1.27 | 8.42 | 336.36 | 3.60203 | 260.25 |
| 22 NOV 2016 | 3 | 1.33 | 8.51 | 334.72 | 2.40601 | 232.94 |
| 22 NOV 2016 | 6 | 1.38 | 8.62 | 332.26 | 1.24391 | 155.289 |
| 22 NOV 2016 | 9 | 1.41 | 8.72 | 330.49 | 3.18961 | 73.6103 |
| 22 NOV 2016 | 12 | 1.42 | 8.69 | 329.35 | 3.95601 | 69.2743 |
| 22 NOV 2016 | 15 | 1.4 | 8.56 | 328.98 | 3.6236 | 16.1843 |
| 22 NOV 2016 | 18 | 1.39 | 8.4 | 329.3 | 5.43089 | 14.8294 |
| 22 NOV 2016 | 21 | 1.37 | 8.26 | 329.9 | 4.53072 | 12.1036 |
| 23 NOV 2016 | 0 | 1.33 | 8.04 | 327.32 | 3.43111 | 18.6989 |
| 23 NOV 2016 | 3 | 1.29 | 7.91 | 327.12 | 3.95588 | 14.4929 |
| 23 NOV 2016 | 6 | 1.28 | 7.91 | 326.22 | 2.88113 | 19.2525 |
| 23 NOV 2016 | 9 | 1.27 | 7.99 | 325.05 | 2.43508 | 312.337 |
| 23 NOV 2016 | 12 | 1.26 | 8.04 | 324.54 | 6.00007 | 270.287 |
| 23 NOV 2016 | 15 | 1.4 | 7.95 | 325.04 | 9.21238 | 286.783 |

| Date | Hours | Wave Height | Wave Period | Wave Direction | Wind Speed | Wind Direction |
|-------------|-------|-------------|-------------|----------------|------------|----------------|
| 23 NOV 2016 | 18 | 1.52 | 7.77 | 326.29 | 8.48109 | 293.119 |
| 23 NOV 2016 | 21 | 1.45 | 7.45 | 326.03 | 7.26375 | 288.46 |
| 24 NOV 2016 | 0 | 1.35 | 7.28 | 327.97 | 6.76606 | 310.565 |
| 24 NOV 2016 | 3 | 1.34 | 7.17 | 329.73 | 8.22893 | 309.824 |
| 24 NOV 2016 | 6 | 1.38 | 6.86 | 328.46 | 7.69387 | 292.465 |
| 24 NOV 2016 | 9 | 1.42 | 6.71 | 328.22 | 8.26221 | 277.581 |
| 24 NOV 2016 | 12 | 1.44 | 6.4 | 316.32 | 7.60012 | 277.789 |
| 24 NOV 2016 | 15 | 1.37 | 6.35 | 304.82 | 3.1631 | 267.463 |
| 24 NOV 2016 | 18 | 1.34 | 6.45 | 296.5 | 3.68658 | 145.275 |
| 24 NOV 2016 | 21 | 1.41 | 6.96 | 291.82 | 7.88733 | 166.21 |
| 25 NOV 2016 | 0 | 1.54 | 7.15 | 294.97 | 9.1479 | 177.619 |
| 25 NOV 2016 | 3 | 1.89 | 6.04 | 241.75 | 11.363 | 229.033 |
| 25 NOV 2016 | 6 | 2.56 | 7.19 | 247.7 | 12.7182 | 262.182 |
| 25 NOV 2016 | 9 | 3.27 | 8.42 | 244.93 | 13.0716 | 264.909 |
| 25 NOV 2016 | 12 | 3.66 | 9.42 | 245.98 | 12.078 | 257.034 |
| 25 NOV 2016 | 15 | 3.99 | 10.11 | 253.56 | 13.2654 | 257.284 |
| 25 NOV 2016 | 18 | 4.32 | 10.43 | 257.91 | 14.2917 | 264.258 |
| 25 NOV 2016 | 21 | 4.53 | 10.58 | 261.12 | 14.4325 | 274.889 |
| 26 NOV 2016 | 0 | 4.6 | 10.55 | 261.83 | 14.5629 | 283.34 |
| 26 NOV 2016 | 3 | 4.89 | 10.7 | 261.97 | 15.8873 | 287.283 |
| 26 NOV 2016 | 6 | 5.5 | 11.1 | 263.46 | 16.2253 | 273.781 |
| 26 NOV 2016 | 9 | 5.68 | 11.96 | 267.21 | 10.4483 | 326.873 |
| 26 NOV 2016 | 12 | 6 | 13.03 | 276.63 | 13.1241 | 352.778 |
| 26 NOV 2016 | 15 | 6.01 | 13.59 | 286.6 | 17.5097 | 3.33955 |
| 26 NOV 2016 | 18 | 6.07 | 13.24 | 289.49 | 16.1474 | 1.73892 |
| 26 NOV 2016 | 21 | 6.19 | 11.92 | 328.28 | 14.3134 | 358.759 |
| 27 NOV 2016 | 0 | 5.77 | 11.84 | 341.2 | 13.6701 | 354.627 |
| 27 NOV 2016 | 3 | 5.4 | 11.52 | 349.26 | 15.3598 | 357.948 |
| 27 NOV 2016 | 6 | 4.93 | 10.95 | 356.7 | 13.4356 | 6.83937 |
| 27 NOV 2016 | 9 | 4.32 | 10.57 | 359.53 | 10.8701 | 9.53162 |
| 27 NOV 2016 | 12 | 3.77 | 10.27 | 6.76 | 8.45931 | 6.78896 |
| 27 NOV 2016 | 15 | 3.29 | 10.09 | 10.12 | 5.53014 | 0.414428 |
| 27 NOV 2016 | 18 | 2.91 | 9.93 | 3.81 | 4.03808 | 314.097 |
| 27 NOV 2016 | 21 | 2.59 | 9.72 | 2.24 | 5.74031 | 270.599 |
| 28 NOV 2016 | 0 | 2.36 | 9.61 | 358.97 | 9.78221 | 255.254 |
| 28 NOV 2016 | 3 | 2.48 | 9.47 | 354.68 | 13.4104 | 256.503 |
| 28 NOV 2016 | 6 | 2.97 | 7.13 | 279.85 | 14.4533 | 263.485 |
| 28 NOV 2016 | 9 | 3.37 | 8.22 | 293.57 | 14.1773 | 273.559 |
| 28 NOV 2016 | 12 | 3.61 | 8.78 | 293.23 | 13.8064 | 276.029 |
| 28 NOV 2016 | 15 | 3.57 | 8.98 | 288.99 | 12.1219 | 277.061 |

| Date | Hours | Wave Height | Wave Period | Wave Direction | Wind Speed | Wind Direction |
|-------------|-------|-------------|-------------|----------------|------------|----------------|
| 28 NOV 2016 | 18 | 3.57 | 8.83 | 284.4 | 13.7842 | 265.965 |
| 28 NOV 2016 | 21 | 3.55 | 8.64 | 275.91 | 13.421 | 251.943 |
| 29 NOV 2016 | 0 | 3.35 | 8.48 | 273.81 | 11.9581 | 233.399 |
| 29 NOV 2016 | 3 | 3.42 | 8.06 | 256.63 | 13.5654 | 236.638 |
| 29 NOV 2016 | 6 | 3.92 | 8.38 | 245.37 | 15.3125 | 237.4 |
| 29 NOV 2016 | 9 | 4.81 | 9.1 | 237.77 | 18.5991 | 228.968 |
| 29 NOV 2016 | 12 | 5.08 | 9.84 | 244.93 | 15.262 | 261.143 |
| 29 NOV 2016 | 15 | 5.65 | 10.36 | 258.19 | 18.9488 | 258.833 |
| 29 NOV 2016 | 18 | 5.67 | 10.91 | 264.75 | 16.9522 | 298.697 |
| 29 NOV 2016 | 21 | 5.22 | 10.92 | 263.46 | 14.8608 | 300.534 |
| 30 NOV 2016 | 0 | 4.89 | 10.83 | 261.81 | 14.3944 | 306.44 |
| 30 NOV 2016 | 3 | 4.65 | 10.51 | 270.31 | 13.8363 | 311.455 |
| 30 NOV 2016 | 6 | 4.35 | 10.22 | 273.6 | 12.7126 | 318.221 |
| 30 NOV 2016 | 9 | 4.07 | 9.96 | 290.79 | 11.6057 | 316.082 |
| 30 NOV 2016 | 12 | 3.98 | 9.64 | 297.7 | 12.8253 | 312.472 |
| 30 NOV 2016 | 15 | 3.91 | 9.67 | 308.92 | 11.1243 | 308.797 |
| 30 NOV 2016 | 18 | 3.78 | 9.92 | 317.81 | 9.42175 | 303.353 |
| 30 NOV 2016 | 21 | 3.61 | 10.15 | 316.46 | 8.9522 | 284.424 |
| 1 DEC 2016 | 0 | 3.37 | 10.14 | 317.61 | 8.54347 | 285.061 |
| 1 DEC 2016 | 3 | 3.06 | 9.95 | 323.93 | 3.72743 | 264.458 |
| 1 DEC 2016 | 6 | 2.83 | 9.85 | 323.74 | 2.06693 | 337.529 |
| 1 DEC 2016 | 9 | 2.89 | 11.62 | 330.06 | 8.67523 | 312.851 |
| 1 DEC 2016 | 12 | 3.28 | 11.46 | 339.79 | 9.12969 | 345.279 |
| 1 DEC 2016 | 15 | 3.66 | 11.07 | 333.79 | 13.0682 | 340.65 |
| 1 DEC 2016 | 18 | 3.75 | 10.84 | 328.97 | 12.1615 | 343.323 |
| 1 DEC 2016 | 21 | 3.72 | 10.6 | 343.12 | 10.457 | 351.42 |
| 2 DEC 2016 | 0 | 3.9 | 11.12 | 353.03 | 7.90758 | 354.412 |
| 2 DEC 2016 | 3 | 3.97 | 11.25 | 359.99 | 5.0448 | 2.49941 |
| 2 DEC 2016 | 6 | 3.78 | 11.04 | 359.78 | 7.54672 | 334.827 |
| 2 DEC 2016 | 9 | 3.65 | 10.67 | 356.99 | 11.4639 | 337.484 |
| 2 DEC 2016 | 12 | 3.43 | 9.18 | 345.19 | 10.7661 | 322.928 |
| 2 DEC 2016 | 15 | 3.18 | 9.04 | 346.67 | 10.338 | 314.765 |
| 2 DEC 2016 | 18 | 2.98 | 8.94 | 345.7 | 9.63454 | 313.402 |
| 2 DEC 2016 | 21 | 2.74 | 8.86 | 344.01 | 6.61867 | 308.498 |
| 3 DEC 2016 | 0 | 2.49 | 8.66 | 342.83 | 4.45082 | 283.381 |
| 3 DEC 2016 | 3 | 2.25 | 8.46 | 342.82 | 1.93313 | 157.813 |
| 3 DEC 2016 | 6 | 2.04 | 12.31 | 264.28 | 6.52357 | 158.508 |
| 3 DEC 2016 | 9 | 1.94 | 12.16 | 264.72 | 5.04335 | 221.624 |
| 3 DEC 2016 | 12 | 2.01 | 11.97 | 264.31 | 7.77404 | 261.568 |
| 3 DEC 2016 | 15 | 2.25 | 11.85 | 263.87 | 10.7555 | 266.055 |

| Date | Hours | Wave Height | Wave Period | Wave Direction | Wind Speed | Wind Direction |
|------------|-------|-------------|-------------|----------------|------------|----------------|
| 3 DEC 2016 | 18 | 2.38 | 7.14 | 284.26 | 9.62673 | 267.857 |
| 3 DEC 2016 | 21 | 2.32 | 7.19 | 282.78 | 9.79131 | 269.064 |
| 4 DEC 2016 | 0 | 2.22 | 11.69 | 263.25 | 8.65224 | 273.048 |
| 4 DEC 2016 | 3 | 2.21 | 11.63 | 263.18 | 9.99162 | 262.235 |
| 4 DEC 2016 | 6 | 2.46 | 7.02 | 269.56 | 11.9757 | 253.457 |
| 4 DEC 2016 | 9 | 3.13 | 7.75 | 266.35 | 14.7641 | 268.642 |
| 4 DEC 2016 | 12 | 3.88 | 8.86 | 269.14 | 15.4068 | 272.679 |
| 4 DEC 2016 | 15 | 4.61 | 9.62 | 272.35 | 17.3394 | 272.711 |
| 4 DEC 2016 | 18 | 5.05 | 10.19 | 274.56 | 17.0353 | 277.488 |
| 4 DEC 2016 | 21 | 5.02 | 10.48 | 276.57 | 15.4394 | 297.378 |
| 5 DEC 2016 | 0 | 4.39 | 10.48 | 275.52 | 11.7045 | 337.971 |
| 5 DEC 2016 | 3 | 3.84 | 10.27 | 274.31 | 11.415 | 332.335 |
| 5 DEC 2016 | 6 | 3.49 | 9.85 | 280.14 | 10.373 | 334.596 |
| 5 DEC 2016 | 9 | 3.29 | 9.46 | 294.11 | 9.91212 | 334.547 |
| 5 DEC 2016 | 12 | 3.12 | 9.08 | 318.92 | 9.21742 | 333.935 |
| 5 DEC 2016 | 15 | 2.91 | 8.94 | 326.39 | 8.58866 | 337.765 |
| 5 DEC 2016 | 18 | 2.65 | 8.84 | 331.98 | 6.40429 | 333.875 |
| 5 DEC 2016 | 21 | 2.38 | 8.61 | 334.78 | 3.94588 | 315.616 |
| 6 DEC 2016 | 0 | 2.14 | 8.4 | 336.74 | 4.41418 | 279.783 |
| 6 DEC 2016 | 3 | 1.95 | 8.21 | 338.81 | 5.80334 | 260.278 |
| 6 DEC 2016 | 6 | 1.85 | 8.05 | 339.47 | 7.6324 | 247.669 |
| 6 DEC 2016 | 9 | 1.91 | 8.06 | 341.06 | 9.80176 | 241.945 |
| 6 DEC 2016 | 12 | 2.09 | 8 | 339.8 | 11.1766 | 242.793 |
| 6 DEC 2016 | 15 | 2.36 | 6.53 | 269.04 | 12.5807 | 242.906 |
| 6 DEC 2016 | 18 | 2.43 | 6.89 | 269.92 | 12.0479 | 238.025 |
| 6 DEC 2016 | 21 | 2.38 | 6.82 | 265.9 | 11.8555 | 245.64 |
| 7 DEC 2016 | 0 | 2.34 | 6.78 | 259.18 | 11.4607 | 236.893 |
| 7 DEC 2016 | 3 | 2.18 | 6.85 | 250.84 | 8.82321 | 232.182 |
| 7 DEC 2016 | 6 | 2.3 | 7.12 | 237.11 | 10.8649 | 221.717 |
| 7 DEC 2016 | 9 | 2.67 | 7.95 | 222.2 | 11.7562 | 202.77 |
| 7 DEC 2016 | 12 | 3 | 8.96 | 217.94 | 11.3986 | 172.083 |
| 7 DEC 2016 | 15 | 3.22 | 9.72 | 213.98 | 11.2728 | 168.849 |
| 7 DEC 2016 | 18 | 3.13 | 10.1 | 210.82 | 4.52217 | 215.096 |
| 7 DEC 2016 | 21 | 2.9 | 10.01 | 207.14 | 5.5376 | 256.742 |
| 8 DEC 2016 | 0 | 2.57 | 9.5 | 206.01 | 3.94857 | 273.776 |
| 8 DEC 2016 | 3 | 2.26 | 8.96 | 208.43 | 1.05546 | 332.949 |
| 8 DEC 2016 | 6 | 2.07 | 8.7 | 214.21 | 4.7617 | 29.8493 |
| 8 DEC 2016 | 9 | 1.99 | 8.6 | 219.14 | 4.95682 | 45.0816 |
| 8 DEC 2016 | 12 | 2 | 9.05 | 224.48 | 0.776209 | 21.9384 |
| 8 DEC 2016 | 15 | 2.11 | 9.74 | 225.82 | 5.18374 | 221.873 |

| Date | Hours | Wave Height | Wave Period | Wave Direction | Wind Speed | Wind Direction |
|-------------|-------|-------------|-------------|----------------|------------|----------------|
| 8 DEC 2016 | 18 | 2.38 | 9.86 | 224.91 | 9.77558 | 253.234 |
| 8 DEC 2016 | 21 | 2.43 | 9.77 | 225.19 | 5.89234 | 248.704 |
| 9 DEC 2016 | 0 | 2.35 | 9.62 | 225.9 | 4.09352 | 257.73 |
| 9 DEC 2016 | 3 | 2.35 | 9.34 | 227.14 | 4.22191 | 351.006 |
| 9 DEC 2016 | 6 | 2.58 | 9.31 | 225.22 | 9.90298 | 51.313 |
| 9 DEC 2016 | 9 | 2.75 | 9.68 | 229.54 | 8.35456 | 50.5368 |
| 9 DEC 2016 | 12 | 2.85 | 10.16 | 241.99 | 6.50594 | 44.2526 |
| 9 DEC 2016 | 15 | 2.92 | 10.34 | 257.61 | 6.30087 | 59.1609 |
| 9 DEC 2016 | 18 | 2.9 | 10.15 | 281.38 | 6.86662 | 82.6367 |
| 9 DEC 2016 | 21 | 2.82 | 9.88 | 315.03 | 8.32386 | 95.1693 |
| 10 DEC 2016 | 0 | 2.7 | 9.72 | 334.32 | 9.47372 | 94.0552 |
| 10 DEC 2016 | 3 | 2.57 | 9.6 | 346.72 | 10.1831 | 88.593 |
| 10 DEC 2016 | 6 | 2.46 | 9.47 | 353.72 | 10.9509 | 89.2673 |
| 10 DEC 2016 | 9 | 2.4 | 9.28 | 0.51 | 11.79 | 89.9998 |
| 10 DEC 2016 | 12 | 2.33 | 9.22 | 3.2 | 10.8072 | 86.7641 |
| 10 DEC 2016 | 15 | 2.43 | 9.21 | 4.61 | 12.0078 | 84.8875 |
| 10 DEC 2016 | 18 | 2.73 | 17.47 | 243.65 | 11.467 | 82.9368 |
| 10 DEC 2016 | 21 | 3.14 | 16.59 | 242.79 | 11.3317 | 75.4853 |
| 11 DEC 2016 | 0 | 3.38 | 16.18 | 242.07 | 10.9188 | 70.3037 |
| 11 DEC 2016 | 3 | 3.41 | 15.64 | 241.62 | 11.3754 | 67.2444 |
| 11 DEC 2016 | 6 | 3.33 | 15.43 | 241.78 | 10.9124 | 62.9652 |
| 11 DEC 2016 | 9 | 3.2 | 15.25 | 242.79 | 10.2633 | 66.3321 |
| 11 DEC 2016 | 12 | 2.99 | 14.75 | 243.78 | 8.22333 | 65.1176 |
| 11 DEC 2016 | 15 | 2.79 | 14.37 | 244.84 | 7.53717 | 62.2449 |
| 11 DEC 2016 | 18 | 2.6 | 14.08 | 245.63 | 5.2433 | 72.1178 |
| 11 DEC 2016 | 21 | 2.44 | 13.58 | 245.94 | 4.12098 | 91.2512 |
| 12 DEC 2016 | 0 | 2.3 | 13.37 | 246.62 | 3.97373 | 138.366 |
| 12 DEC 2016 | 3 | 2.17 | 12.94 | 246.65 | 4.39264 | 148.119 |
| 12 DEC 2016 | 6 | 2.04 | 12.58 | 247.96 | 3.69757 | 148.717 |
| 12 DEC 2016 | 9 | 1.89 | 12.19 | 248.4 | 4.47897 | 158.246 |
| 12 DEC 2016 | 12 | 1.76 | 11.77 | 250.29 | 4.77272 | 169.985 |
| 12 DEC 2016 | 15 | 1.67 | 11.46 | 251.46 | 5.04893 | 214.918 |
| 12 DEC 2016 | 18 | 1.7 | 11.05 | 252.88 | 5.62523 | 203.466 |
| 12 DEC 2016 | 21 | 2.03 | 10.84 | 252.12 | 8.7138 | 226.302 |
| 13 DEC 2016 | 0 | 2.73 | 8.41 | 217.66 | 11.7244 | 230.295 |
| 13 DEC 2016 | 3 | 3.16 | 8.82 | 218.73 | 11.1658 | 282.045 |
| 13 DEC 2016 | 6 | 3.16 | 8.86 | 220.12 | 11.7135 | 290.384 |
| 13 DEC 2016 | 9 | 3.33 | 8.51 | 234.17 | 12.813 | 285.11 |
| 13 DEC 2016 | 12 | 3.7 | 13.53 | 267.83 | 11.8176 | 293.224 |
| 13 DEC 2016 | 15 | 3.83 | 12.66 | 266.1 | 10.5345 | 291.963 |

| Date | Hours | Wave Height | Wave Period | Wave Direction | Wind Speed | Wind Direction |
|-------------|-------|-------------|-------------|----------------|------------|----------------|
| 13 DEC 2016 | 18 | 3.64 | 12.15 | 264.48 | 8.26163 | 287.251 |
| 13 DEC 2016 | 21 | 3.4 | 12.14 | 261.98 | 7.60553 | 267.815 |
| 14 DEC 2016 | 0 | 3.22 | 12.71 | 261.52 | 6.95588 | 257.462 |
| 14 DEC 2016 | 3 | 3.14 | 12.76 | 266.92 | 6.97882 | 241.966 |
| 14 DEC 2016 | 6 | 3.08 | 12.68 | 271.38 | 7.75093 | 229.343 |
| 14 DEC 2016 | 9 | 2.9 | 12.52 | 272.2 | 7.96279 | 210.656 |
| 14 DEC 2016 | 12 | 2.71 | 12.67 | 270.16 | 10.1186 | 193.954 |
| 14 DEC 2016 | 15 | 2.74 | 12.77 | 267 | 11.4741 | 208.643 |
| 14 DEC 2016 | 18 | 3.18 | 18.05 | 262.45 | 12.878 | 211.246 |
| 14 DEC 2016 | 21 | 4 | 9.14 | 250.9 | 14.6426 | 210.857 |
| 15 DEC 2016 | 0 | 4.75 | 10.24 | 242.42 | 15.1301 | 208.632 |
| 15 DEC 2016 | 3 | 5.41 | 11.1 | 236.34 | 16.1093 | 216.138 |
| 15 DEC 2016 | 6 | 4.93 | 11.52 | 233.95 | 9.29777 | 254.978 |
| 15 DEC 2016 | 9 | 4.16 | 11.19 | 221.88 | 8.35706 | 241.871 |
| 15 DEC 2016 | 12 | 3.7 | 10.92 | 220.86 | 7.09267 | 227.629 |
| 15 DEC 2016 | 15 | 3.51 | 13.56 | 259.24 | 5.0241 | 189.163 |
| 15 DEC 2016 | 18 | 3.42 | 13.24 | 260.88 | 9.3027 | 216.168 |
| 15 DEC 2016 | 21 | 3.56 | 12.65 | 257.98 | 11.5746 | 216.286 |
| 16 DEC 2016 | 0 | 3.62 | 12.33 | 258.1 | 11.8493 | 218.215 |
| 16 DEC 2016 | 3 | 3.64 | 11.71 | 251.62 | 11.8219 | 219.44 |
| 16 DEC 2016 | 6 | 3.65 | 9.94 | 221.88 | 12.173 | 221.337 |
| 16 DEC 2016 | 9 | 3.64 | 9.95 | 221.05 | 12.1126 | 217.419 |
| 16 DEC 2016 | 12 | 3.64 | 9.99 | 221.06 | 12.1896 | 213.456 |
| 16 DEC 2016 | 15 | 3.8 | 9.93 | 223.64 | 12.6012 | 214.46 |
| 16 DEC 2016 | 18 | 4.11 | 9.8 | 227.19 | 12.9277 | 211.268 |
| 16 DEC 2016 | 21 | 4.53 | 9.71 | 226.97 | 14.2315 | 216.025 |
| 17 DEC 2016 | 0 | 4.48 | 17.57 | 247.35 | 8.21876 | 251.631 |
| 17 DEC 2016 | 3 | 4.23 | 16.81 | 246.82 | 7.35644 | 250.629 |
| 17 DEC 2016 | 6 | 3.91 | 16.3 | 248.12 | 6.88674 | 249.249 |
| 17 DEC 2016 | 9 | 3.65 | 15.54 | 250.63 | 7.21467 | 247.594 |
| 17 DEC 2016 | 12 | 3.51 | 14.9 | 254.58 | 6.89525 | 246.223 |
| 17 DEC 2016 | 15 | 3.39 | 14.28 | 257.45 | 7.04818 | 243.726 |
| 17 DEC 2016 | 18 | 3.19 | 13.9 | 259.62 | 6.25974 | 239.256 |
| 17 DEC 2016 | 21 | 2.93 | 13.76 | 260.73 | 6.82807 | 218.28 |
| 18 DEC 2016 | 0 | 2.77 | 13.5 | 261.3 | 9.03235 | 208.069 |
| 18 DEC 2016 | 3 | 2.9 | 13.24 | 260.95 | 10.6678 | 228.991 |
| 18 DEC 2016 | 6 | 3.19 | 12.73 | 259.82 | 11.5575 | 228.157 |
| 18 DEC 2016 | 9 | 3.69 | 12.36 | 257.52 | 14.4095 | 216.051 |
| 18 DEC 2016 | 12 | 4.07 | 8.94 | 234.81 | 13.8652 | 237.548 |
| 18 DEC 2016 | 15 | 4.21 | 9.43 | 234.19 | 14.0875 | 245.509 |

| Date | Hours | Wave Height | Wave Period | Wave Direction | Wind Speed | Wind Direction |
|-------------|-------|-------------|-------------|----------------|------------|----------------|
| 18 DEC 2016 | 18 | 4.16 | 9.55 | 231.66 | 12.8034 | 249.088 |
| 18 DEC 2016 | 21 | 3.99 | 9.48 | 232.17 | 12.2106 | 245.828 |
| 19 DEC 2016 | 0 | 3.75 | 9.29 | 233.04 | 10.5962 | 241.476 |
| 19 DEC 2016 | 3 | 3.67 | 9.17 | 235.87 | 11.587 | 226.609 |
| 19 DEC 2016 | 6 | 3.9 | 8.99 | 235.92 | 13.9241 | 224.273 |
| 19 DEC 2016 | 9 | 4.32 | 9.13 | 232.93 | 15.6129 | 224.948 |
| 19 DEC 2016 | 12 | 4.5 | 9.77 | 241.24 | 14.2744 | 227.357 |
| 19 DEC 2016 | 15 | 4.48 | 11.32 | 257.36 | 12.5918 | 229.606 |
| 19 DEC 2016 | 18 | 4.33 | 11.63 | 261.52 | 6.67237 | 247.625 |
| 19 DEC 2016 | 21 | 4.33 | 11.83 | 262.23 | 10.3234 | 246.539 |
| 20 DEC 2016 | 0 | 4.7 | 11.81 | 260.99 | 15.3502 | 252.014 |
| 20 DEC 2016 | 3 | 4.89 | 11.53 | 258.98 | 12.6019 | 250.242 |
| 20 DEC 2016 | 6 | 4.7 | 15.46 | 264.77 | 10.6728 | 227.431 |
| 20 DEC 2016 | 9 | 4.66 | 15.8 | 264.66 | 13.733 | 207.872 |
| 20 DEC 2016 | 12 | 5.15 | 16.19 | 264.95 | 17.4393 | 202.772 |
| 20 DEC 2016 | 15 | 6.28 | 10.84 | 248.39 | 21.1855 | 201.139 |
| 20 DEC 2016 | 18 | 7.73 | 12.04 | 241.33 | 23.686 | 208.275 |
| 20 DEC 2016 | 21 | 9.02 | 12.94 | 234.18 | 24.7042 | 207.665 |
| 21 DEC 2016 | 0 | 9.76 | 13.81 | 232.71 | 23.4554 | 202.564 |
| 21 DEC 2016 | 3 | 10.01 | 14.37 | 238.26 | 22.8892 | 202.611 |
| 21 DEC 2016 | 6 | 8.79 | 14.37 | 239.78 | 14.9553 | 220.336 |
| 21 DEC 2016 | 9 | 7.58 | 14.16 | 244 | 12.5248 | 229.826 |
| 21 DEC 2016 | 12 | 6.8 | 14.35 | 249.61 | 11.6623 | 220.863 |
| 21 DEC 2016 | 15 | 6.47 | 15.29 | 257.25 | 13.3091 | 206.7 |
| 21 DEC 2016 | 18 | 6.6 | 15.43 | 258.46 | 16.1001 | 217.048 |
| 21 DEC 2016 | 21 | 7.01 | 15.59 | 258.49 | 17.7879 | 240.423 |
| 22 DEC 2016 | 0 | 6.99 | 15.7 | 258.92 | 14.803 | 234.292 |
| 22 DEC 2016 | 3 | 6.93 | 15.66 | 259.7 | 17.1965 | 234.443 |
| 22 DEC 2016 | 6 | 6.94 | 15.62 | 260.15 | 16.9061 | 238.275 |
| 22 DEC 2016 | 9 | 6.88 | 12.62 | 253.05 | 15.4905 | 239.595 |
| 22 DEC 2016 | 12 | 6.54 | 16.13 | 262.3 | 13.0274 | 240.07 |
| 22 DEC 2016 | 15 | 6.13 | 16.18 | 262.28 | 13.51 | 240.513 |
| 22 DEC 2016 | 18 | 5.83 | 16.07 | 262.07 | 13.041 | 238.675 |
| 22 DEC 2016 | 21 | 5.64 | 15.72 | 261.59 | 12.9787 | 249.289 |
| 23 DEC 2016 | 0 | 5.46 | 15.51 | 262.15 | 12.8137 | 256.506 |
| 23 DEC 2016 | 3 | 5.34 | 15.36 | 262.87 | 12.8309 | 266.023 |
| 23 DEC 2016 | 6 | 5.27 | 15.22 | 263.4 | 11.6805 | 270.54 |
| 23 DEC 2016 | 9 | 5.2 | 15.09 | 263.54 | 11.4393 | 261.048 |
| 23 DEC 2016 | 12 | 5.03 | 14.86 | 261.56 | 9.91704 | 241.316 |
| 23 DEC 2016 | 15 | 4.82 | 14.66 | 261.92 | 9.25601 | 212.918 |

| Date | Hours | Wave Height | Wave Period | Wave Direction | Wind Speed | Wind Direction |
|-------------|-------|-------------|-------------|----------------|------------|----------------|
| 23 DEC 2016 | 18 | 4.71 | 14.56 | 262.5 | 13.0943 | 167.025 |
| 23 DEC 2016 | 21 | 4.97 | 14.27 | 263.13 | 18.4023 | 146.525 |
| 24 DEC 2016 | 0 | 5.62 | 12.41 | 244.81 | 16.2053 | 185.525 |
| 24 DEC 2016 | 3 | 6.33 | 12.33 | 237.81 | 16.991 | 215.224 |
| 24 DEC 2016 | 6 | 7.24 | 13.33 | 242.9 | 16.9075 | 223.275 |
| 24 DEC 2016 | 9 | 7.96 | 14.61 | 243.87 | 15.8169 | 227.332 |
| 24 DEC 2016 | 12 | 8.33 | 15.6 | 243.04 | 14.3567 | 216.304 |
| 24 DEC 2016 | 15 | 8.83 | 16.86 | 248.45 | 14.6952 | 203.757 |
| 24 DEC 2016 | 18 | 8.65 | 17.24 | 253.32 | 9.55641 | 182.099 |
| 24 DEC 2016 | 21 | 8.09 | 16.78 | 252.71 | 2.05995 | 170.217 |
| 25 DEC 2016 | 0 | 7.59 | 16.53 | 251.65 | 0.738241 | 8.56912 |
| 25 DEC 2016 | 3 | 7.12 | 16.42 | 250.55 | 7.78389 | 28.9687 |
| 25 DEC 2016 | 6 | 6.53 | 16.18 | 251.01 | 5.0774 | 32.1249 |
| 25 DEC 2016 | 9 | 5.77 | 15.58 | 253.62 | 3.3669 | 99.574 |
| 25 DEC 2016 | 12 | 4.97 | 15.17 | 255.82 | 7.13067 | 146.265 |
| 25 DEC 2016 | 15 | 4.35 | 14.5 | 257.88 | 11.3914 | 144.901 |
| 25 DEC 2016 | 18 | 4.23 | 14.19 | 259.33 | 15.2177 | 165.306 |
| 25 DEC 2016 | 21 | 5.84 | 10.42 | 238.4 | 20.4429 | 225.377 |
| 26 DEC 2016 | 0 | 7.6 | 12.38 | 245.87 | 20.5938 | 241.394 |
| 26 DEC 2016 | 3 | 9.27 | 14.09 | 244.43 | 21.4538 | 243.985 |
| 26 DEC 2016 | 6 | 10.09 | 15.62 | 244.91 | 17.6925 | 239.986 |
| 26 DEC 2016 | 9 | 10.19 | 16.64 | 249.17 | 16.8151 | 225.241 |
| 26 DEC 2016 | 12 | 9.67 | 16.77 | 251.55 | 14.9461 | 211.01 |
| 26 DEC 2016 | 15 | 8.6 | 16.45 | 251.91 | 3.98453 | 211.975 |
| 26 DEC 2016 | 18 | 7.33 | 15.86 | 251.27 | 15.5427 | 341.39 |
| 26 DEC 2016 | 21 | 7.91 | 15.21 | 253.8 | 20.4413 | 339.526 |
| 27 DEC 2016 | 0 | 7.9 | 12.78 | 316.43 | 16.7582 | 331.447 |
| 27 DEC 2016 | 3 | 7.19 | 12.26 | 322.18 | 16.8297 | 326.537 |
| 27 DEC 2016 | 6 | 6.6 | 11.85 | 334.45 | 13.9663 | 322.769 |
| 27 DEC 2016 | 9 | 5.98 | 15.31 | 257.3 | 11.6642 | 316.494 |
| 27 DEC 2016 | 12 | 5.39 | 15.1 | 256.82 | 9.05391 | 308.047 |
| 27 DEC 2016 | 15 | 4.83 | 14.6 | 260.43 | 6.6652 | 278.021 |
| 27 DEC 2016 | 18 | 4.33 | 14.27 | 260 | 4.72055 | 236.58 |
| 27 DEC 2016 | 21 | 3.93 | 13.73 | 269.75 | 7.39083 | 183.103 |
| 28 DEC 2016 | 0 | 3.72 | 13.42 | 269.92 | 7.47268 | 212.818 |
| 28 DEC 2016 | 3 | 3.79 | 13.32 | 267.83 | 11.42 | 225.32 |
| 28 DEC 2016 | 6 | 4.22 | 14.17 | 262.68 | 13.6115 | 229.111 |
| 28 DEC 2016 | 9 | 5.12 | 9.57 | 259.43 | 17.7912 | 223.338 |
| 28 DEC 2016 | 12 | 6.32 | 10.53 | 249.15 | 20.7504 | 217.737 |
| 28 DEC 2016 | 15 | 7.62 | 11.9 | 251.84 | 21.9012 | 221.984 |

| Date | Hours | Wave Height | Wave Period | Wave Direction | Wind Speed | Wind Direction |
|-------------|-------|-------------|-------------|----------------|------------|----------------|
| 28 DEC 2016 | 18 | 7.5 | 13.59 | 264.55 | 11.9572 | 281.432 |
| 28 DEC 2016 | 21 | 6.92 | 14.11 | 264.94 | 11.662 | 264.588 |
| 29 DEC 2016 | 0 | 6.26 | 15.12 | 262.78 | 9.60635 | 259.322 |
| 29 DEC 2016 | 3 | 5.69 | 15.18 | 261.46 | 9.7656 | 263.356 |
| 29 DEC 2016 | 6 | 5.25 | 14.85 | 259.93 | 9.61087 | 263.548 |
| 29 DEC 2016 | 9 | 5.02 | 14.33 | 259.91 | 10.6318 | 257.507 |
| 29 DEC 2016 | 12 | 4.91 | 14.1 | 260.51 | 9.68814 | 258.69 |
| 29 DEC 2016 | 15 | 4.87 | 13.95 | 264.43 | 6.69989 | 248.183 |
| 29 DEC 2016 | 18 | 4.9 | 14.1 | 269.55 | 8.24039 | 180.557 |
| 29 DEC 2016 | 21 | 5.33 | 14.07 | 272.24 | 16.7949 | 211.04 |
| 30 DEC 2016 | 0 | 6.79 | 11.03 | 228.25 | 19.8922 | 214.162 |
| 30 DEC 2016 | 3 | 7.59 | 11.81 | 230.21 | 21.3246 | 222.549 |
| 30 DEC 2016 | 6 | 7.73 | 12.47 | 243.41 | 18.6104 | 254.926 |
| 30 DEC 2016 | 9 | 8.32 | 13.08 | 251.14 | 20.8191 | 255.11 |
| 30 DEC 2016 | 12 | 8.89 | 13.59 | 257.69 | 20.3129 | 252.288 |
| 30 DEC 2016 | 15 | 10.04 | 14.41 | 263.55 | 22.904 | 253.67 |
| 30 DEC 2016 | 18 | 10.45 | 15.21 | 266.79 | 21.121 | 256.53 |
| 30 DEC 2016 | 21 | 10.83 | 15.32 | 265.7 | 23.4654 | 257.397 |
| 31 DEC 2016 | 0 | 10.97 | 15.42 | 266.14 | 22.1611 | 258.68 |
| 31 DEC 2016 | 3 | 10.81 | 15.33 | 268.62 | 22.8019 | 263.605 |
| 31 DEC 2016 | 6 | 9.79 | 14.8 | 270.12 | 20.2185 | 264.636 |
| 31 DEC 2016 | 9 | 8.7 | 14.06 | 270.63 | 20.0713 | 262.96 |
| 31 DEC 2016 | 12 | 7.44 | 13.24 | 269.65 | 16.9989 | 268.146 |
| 31 DEC 2016 | 15 | 6.2 | 12.6 | 268.82 | 14.3267 | 285.88 |
| 31 DEC 2016 | 18 | 5.45 | 12.06 | 272.72 | 13.0901 | 292.883 |
| 31 DEC 2016 | 21 | 4.99 | 14.09 | 291.82 | 9.23639 | 3.41381 |
| 1 JAN 2017 | 0 | 4.88 | 13.87 | 313.03 | 13.9861 | 16.0635 |
| 1 JAN 2017 | 3 | 5.75 | 12.44 | 336.96 | 17.3817 | 8.73612 |
| 1 JAN 2017 | 6 | 5.86 | 11.66 | 352.53 | 15.7023 | 0.985242 |
| 1 JAN 2017 | 9 | 5.38 | 10.97 | 359.25 | 15.6458 | 355.16 |
| 1 JAN 2017 | 12 | 4.95 | 10.47 | 357.15 | 14.0285 | 345.637 |
| 1 JAN 2017 | 15 | 4.57 | 10.27 | 357.67 | 13.8532 | 347.408 |
| 1 JAN 2017 | 18 | 4.18 | 10.22 | 0.83 | 11.2493 | 339.986 |
| 1 JAN 2017 | 21 | 3.91 | 10.2 | 2.72 | 10.8088 | 341.833 |
| 2 JAN 2017 | 0 | 3.65 | 9.97 | 354.67 | 8.0536 | 339.427 |
| 2 JAN 2017 | 3 | 3.35 | 9.63 | 356.35 | 7.54672 | 340.413 |
| 2 JAN 2017 | 6 | 3.04 | 9.21 | 345.48 | 7.04344 | 345.53 |
| 2 JAN 2017 | 9 | 2.73 | 8.91 | 349.04 | 5.75063 | 345.601 |
| 2 JAN 2017 | 12 | 2.44 | 8.56 | 339.59 | 4.4153 | 332.042 |
| 2 JAN 2017 | 15 | 2.18 | 8.33 | 344.1 | 3.9357 | 303.286 |

| Date | Hours | Wave Height | Wave Period | Wave Direction | Wind Speed | Wind Direction |
|------------|-------|-------------|-------------|----------------|------------|----------------|
| 2 JAN 2017 | 18 | 1.99 | 8.02 | 336.88 | 4.27234 | 261.927 |
| 2 JAN 2017 | 21 | 1.89 | 9.64 | 319.71 | 6.01806 | 253.493 |
| 3 JAN 2017 | 0 | 1.88 | 9.51 | 314.04 | 7.89826 | 248.926 |
| 3 JAN 2017 | 3 | 2.14 | 9.52 | 311.79 | 11.5879 | 247.042 |
| 3 JAN 2017 | 6 | 2.84 | 7.59 | 282.66 | 12.5542 | 286.616 |
| 3 JAN 2017 | 9 | 3.44 | 9.32 | 280.51 | 11.2382 | 286.597 |
| 3 JAN 2017 | 12 | 3.75 | 10.36 | 281.01 | 6.04603 | 311.043 |
| 3 JAN 2017 | 15 | 3.87 | 10.98 | 282.59 | 7.82903 | 349.996 |
| 3 JAN 2017 | 18 | 4.12 | 11.65 | 281.4 | 13.2557 | 39.8276 |
| 3 JAN 2017 | 21 | 4.4 | 12.32 | 282.56 | 14.5501 | 36.6729 |
| 4 JAN 2017 | 0 | 4.12 | 12.39 | 283.28 | 10.809 | 24.9528 |
| 4 JAN 2017 | 3 | 3.74 | 12.03 | 286.12 | 12.4094 | 17.8801 |
| 4 JAN 2017 | 6 | 3.17 | 11.62 | 286.14 | 8.75027 | 18.8697 |
| 4 JAN 2017 | 9 | 2.72 | 11.15 | 288.79 | 7.64987 | 47.2778 |
| 4 JAN 2017 | 12 | 2.46 | 10.84 | 290.24 | 3.95949 | 70.8327 |
| 4 JAN 2017 | 15 | 2.39 | 10.47 | 296.23 | 2.94871 | 44.5877 |
| 4 JAN 2017 | 18 | 2.38 | 10.28 | 298.33 | 5.33376 | 13.3328 |
| 4 JAN 2017 | 21 | 2.37 | 10.13 | 300.25 | 5.40638 | 20.0102 |
| 5 JAN 2017 | 0 | 2.26 | 9.87 | 305.9 | 1.67335 | 342.973 |
| 5 JAN 2017 | 3 | 2.08 | 9.53 | 305.81 | 1.82702 | 264.976 |
| 5 JAN 2017 | 6 | 1.89 | 9.13 | 309.62 | 5.14475 | 227.285 |
| 5 JAN 2017 | 9 | 1.76 | 8.78 | 307.48 | 8.1886 | 225.495 |
| 5 JAN 2017 | 12 | 1.82 | 8.48 | 311.04 | 10.4785 | 226.973 |
| 5 JAN 2017 | 15 | 2.13 | 5.78 | 259.51 | 11.9964 | 240.978 |
| 5 JAN 2017 | 18 | 2.95 | 7.07 | 248.3 | 15.2906 | 230.627 |
| 5 JAN 2017 | 21 | 4.2 | 8.37 | 228.93 | 18.8645 | 218.371 |
| 6 JAN 2017 | 0 | 5.31 | 9.6 | 221.96 | 19.85 | 213.618 |
| 6 JAN 2017 | 3 | 6.58 | 10.69 | 219.59 | 22.5074 | 211.65 |
| 6 JAN 2017 | 6 | 7.1 | 11.51 | 221.38 | 20.7026 | 215.663 |
| 6 JAN 2017 | 9 | 7.36 | 11.77 | 222.54 | 21.266 | 216.973 |
| 6 JAN 2017 | 12 | 7.21 | 11.87 | 224.64 | 18.8374 | 225.172 |
| 6 JAN 2017 | 15 | 6.7 | 11.78 | 226.29 | 17.231 | 249.693 |
| 6 JAN 2017 | 18 | 6.31 | 11.53 | 236.63 | 16.6034 | 274.595 |
| 6 JAN 2017 | 21 | 6.46 | 11.46 | 260.79 | 17.3626 | 281.731 |
| 7 JAN 2017 | 0 | 6.4 | 11.73 | 272.59 | 15.5929 | 291.877 |
| 7 JAN 2017 | 3 | 6.44 | 12.81 | 286.07 | 13.8673 | 293.052 |
| 7 JAN 2017 | 6 | 5.98 | 12.85 | 290.56 | 11.6669 | 292.741 |
| 7 JAN 2017 | 9 | 5.48 | 12.47 | 292.02 | 10.2181 | 290.031 |
| 7 JAN 2017 | 12 | 5.21 | 12.46 | 295 | 9.26743 | 277.877 |
| 7 JAN 2017 | 15 | 4.86 | 12.58 | 306.44 | 9.45085 | 257.037 |

| Date | Hours | Wave Height | Wave Period | Wave Direction | Wind Speed | Wind Direction |
|-------------|-------|-------------|-------------|----------------|------------|----------------|
| 7 JAN 2017 | 18 | 4.41 | 12.31 | 315.81 | 11.694 | 238.213 |
| 7 JAN 2017 | 21 | 4.27 | 11.98 | 316.96 | 14.9798 | 227.76 |
| 8 JAN 2017 | 0 | 4.52 | 9.12 | 263.98 | 16.4681 | 219.703 |
| 8 JAN 2017 | 3 | 5.09 | 9.5 | 254.65 | 18.7942 | 226.488 |
| 8 JAN 2017 | 6 | 5.61 | 10.13 | 252.67 | 18.4118 | 249.36 |
| 8 JAN 2017 | 9 | 6.01 | 10.59 | 258.64 | 18.9407 | 270.484 |
| 8 JAN 2017 | 12 | 5.71 | 10.95 | 273.07 | 15.6315 | 283.805 |
| 8 JAN 2017 | 15 | 5.11 | 10.87 | 277.78 | 14.255 | 275.879 |
| 8 JAN 2017 | 18 | 4.39 | 10.34 | 275.44 | 11.666 | 267.003 |
| 8 JAN 2017 | 21 | 3.9 | 9.87 | 275.71 | 12.2252 | 260.014 |
| 9 JAN 2017 | 0 | 3.59 | 9.54 | 276.9 | 11.1037 | 257.253 |
| 9 JAN 2017 | 3 | 3.33 | 9.53 | 280.73 | 7.57763 | 259.892 |
| 9 JAN 2017 | 6 | 3.1 | 9.77 | 286.51 | 0.813941 | 132.51 |
| 9 JAN 2017 | 9 | 2.89 | 9.75 | 289.96 | 8.03339 | 111.391 |
| 9 JAN 2017 | 12 | 3.44 | 9.12 | 276.01 | 15.8685 | 229.575 |
| 9 JAN 2017 | 15 | 3.9 | 8.83 | 240.03 | 12.948 | 215.126 |
| 9 JAN 2017 | 18 | 3.99 | 9.08 | 229.9 | 13.5471 | 209.934 |
| 9 JAN 2017 | 21 | 3.99 | 9.42 | 233.31 | 12.6556 | 201.314 |
| 10 JAN 2017 | 0 | 3.55 | 9.62 | 239.05 | 7.04642 | 223.16 |
| 10 JAN 2017 | 3 | 3.14 | 9.85 | 257.85 | 5.05455 | 239.834 |
| 10 JAN 2017 | 6 | 2.98 | 10.12 | 308.97 | 7.57486 | 223.77 |
| 10 JAN 2017 | 9 | 3.43 | 18.8 | 253.35 | 8.46187 | 215.137 |
| 10 JAN 2017 | 12 | 4.1 | 17.65 | 255.78 | 9.37926 | 210.996 |
| 10 JAN 2017 | 15 | 4.44 | 16.85 | 257.41 | 11.4693 | 202.451 |
| 10 JAN 2017 | 18 | 4.49 | 16.3 | 259.59 | 11.548 | 173.336 |
| 10 JAN 2017 | 21 | 4.5 | 15.52 | 260.53 | 13.7118 | 175.524 |
| 11 JAN 2017 | 0 | 4.22 | 14.98 | 260.98 | 10.2558 | 230.381 |
| 11 JAN 2017 | 3 | 3.7 | 14.31 | 263.26 | 9.75219 | 234.811 |
| 11 JAN 2017 | 6 | 3.27 | 13.71 | 263.96 | 6.9095 | 195.445 |
| 11 JAN 2017 | 9 | 2.96 | 13.27 | 264.98 | 5.7142 | 166.231 |
| 11 JAN 2017 | 12 | 2.77 | 12.64 | 265.63 | 5.01662 | 220.23 |
| 11 JAN 2017 | 15 | 2.6 | 12.26 | 268.08 | 7.65099 | 289.548 |
| 11 JAN 2017 | 18 | 2.46 | 11.74 | 265.85 | 5.92102 | 271.065 |
| 11 JAN 2017 | 21 | 2.36 | 11.53 | 264.47 | 5.76459 | 230.844 |
| 12 JAN 2017 | 0 | 2.51 | 11.18 | 264.89 | 4.21742 | 183.399 |
| 12 JAN 2017 | 3 | 3.19 | 11.57 | 259.61 | 5.73248 | 143.869 |
| 12 JAN 2017 | 6 | 3.82 | 12.21 | 255.64 | 6.15981 | 134.013 |
| 12 JAN 2017 | 9 | 4.21 | 14.38 | 245.01 | 7.31936 | 160.277 |
| 12 JAN 2017 | 12 | 4.2 | 14.99 | 248.58 | 6.18547 | 182.409 |
| 12 JAN 2017 | 15 | 3.95 | 15.16 | 256.33 | 4.36165 | 215.294 |

| Date | Hours | Wave Height | Wave Period | Wave Direction | Wind Speed | Wind Direction |
|-------------|--------------|--------------------|--------------------|-----------------------|-------------------|-----------------------|
| 12 JAN 2017 | 18 | 3.77 | 14.8 | 261 | 3.33024 | 37.558 |
| 12 JAN 2017 | 21 | 3.85 | 14.45 | 265.7 | 10.3383 | 29.8136 |
| 13 JAN 2017 | 0 | 4.1 | 12.21 | 323.09 | 10.0355 | 10.1006 |
| 13 JAN 2017 | 3 | 4.61 | 11.86 | 330.36 | 11.5787 | 11.407 |
| 13 JAN 2017 | 6 | 5.23 | 11.33 | 340.35 | 15.5962 | 7.2936 |
| 13 JAN 2017 | 9 | 5.19 | 10.86 | 344.93 | 15.5561 | 355.132 |
| 13 JAN 2017 | 12 | 4.57 | 10.26 | 349.26 | 13.6985 | 346.146 |
| 13 JAN 2017 | 15 | 3.93 | 9.78 | 350.26 | 11.3419 | 348.145 |
| 13 JAN 2017 | 18 | 3.43 | 9.41 | 351.15 | 8.64567 | 341.523 |
| 13 JAN 2017 | 21 | 3.16 | 9.08 | 346.45 | 7.90205 | 335.316 |
| 14 JAN 2017 | 0 | 3.11 | 9.1 | 338.88 | 6.29598 | 324.568 |
| 14 JAN 2017 | 3 | 3.16 | 10.27 | 320.19 | 6.99498 | 319.639 |
| 14 JAN 2017 | 6 | 3.18 | 10.29 | 322.94 | 7.10294 | 311.861 |
| 14 JAN 2017 | 9 | 3.22 | 10.28 | 325.59 | 9.02557 | 324.743 |
| 14 JAN 2017 | 12 | 3.57 | 10.47 | 327.76 | 10.2718 | 331.888 |
| 14 JAN 2017 | 15 | 4.1 | 11.58 | 332.46 | 12.2906 | 322.571 |
| 14 JAN 2017 | 18 | 4.37 | 11.86 | 335.93 | 11.9785 | 302.523 |
| 14 JAN 2017 | 21 | 4.85 | 12.34 | 340.46 | 13.172 | 305.452 |
| 15 JAN 2017 | 0 | 5.11 | 12.53 | 342.09 | 11.7736 | 307.824 |
| 15 JAN 2017 | 3 | 4.84 | 12.48 | 345.12 | 11.1091 | 304.548 |
| 15 JAN 2017 | 6 | 4.49 | 12.3 | 348.28 | 11.3226 | 311.957 |
| 15 JAN 2017 | 9 | 4.19 | 11.91 | 347.56 | 10.4346 | 319.041 |
| 15 JAN 2017 | 12 | 3.97 | 11.69 | 349.82 | 10.1249 | 322.383 |
| 15 JAN 2017 | 15 | 3.76 | 11.47 | 351.33 | 8.928 | 334.526 |
| 15 JAN 2017 | 18 | 3.48 | 11.04 | 349.32 | 7.13734 | 339.839 |
| 15 JAN 2017 | 21 | 3.09 | 10.7 | 346.68 | 4.1068 | 330.376 |
| 16 JAN 2017 | 0 | 2.66 | 10.18 | 344.68 | 1.95359 | 248.689 |
| 16 JAN 2017 | 3 | 2.27 | 9.71 | 344.16 | 6.62945 | 207.88 |
| 16 JAN 2017 | 6 | 2.06 | 9.43 | 341.61 | 10.769 | 206.351 |
| 16 JAN 2017 | 9 | 2.21 | 9.13 | 344.76 | 13.4127 | 203.928 |
| 16 JAN 2017 | 12 | 2.8 | 6.63 | 228.84 | 15.3462 | 202.772 |
| 16 JAN 2017 | 15 | 3.9 | 8.56 | 248.98 | 17.142 | 211.474 |
| 16 JAN 2017 | 18 | 4.94 | 9.85 | 246.53 | 18.0617 | 225.898 |
| 16 JAN 2017 | 21 | 4.41 | 10.15 | 244.4 | 9.95615 | 261.626 |
| 17 JAN 2017 | 0 | 3.87 | 9.97 | 231.9 | 8.35251 | 262.986 |
| 17 JAN 2017 | 3 | 3.71 | 10.01 | 231.23 | 9.18117 | 255.041 |
| 17 JAN 2017 | 6 | 3.74 | 10.2 | 229.37 | 10.3388 | 254.862 |
| 17 JAN 2017 | 9 | 3.73 | 10.12 | 230.1 | 11.324 | 260.238 |
| 17 JAN 2017 | 12 | 3.8 | 9.76 | 232.97 | 12.0895 | 267.725 |
| 17 JAN 2017 | 15 | 4.03 | 11.92 | 275.38 | 10.2832 | 279.234 |

| Date | Hours | Wave Height | Wave Period | Wave Direction | Wind Speed | Wind Direction |
|-------------|-------|-------------|-------------|----------------|------------|----------------|
| 17 JAN 2017 | 18 | 4.25 | 12.86 | 286.52 | 8.08451 | 271.914 |
| 17 JAN 2017 | 21 | 4.23 | 13.14 | 290.74 | 5.86218 | 239.673 |
| 18 JAN 2017 | 0 | 4.1 | 13.02 | 288.34 | 8.559 | 183.819 |
| 18 JAN 2017 | 3 | 4.3 | 12.87 | 287.31 | 15.5759 | 226.509 |
| 18 JAN 2017 | 6 | 5.29 | 12.49 | 285.07 | 18.6749 | 232.572 |
| 18 JAN 2017 | 9 | 6 | 10.52 | 251.25 | 18.5433 | 239.577 |
| 18 JAN 2017 | 12 | 6.49 | 11.23 | 256.66 | 18.5707 | 244.346 |
| 18 JAN 2017 | 15 | 7.05 | 11.76 | 261.99 | 19.9317 | 258.335 |
| 18 JAN 2017 | 18 | 6.52 | 11.99 | 264 | 15.3655 | 271.529 |
| 18 JAN 2017 | 21 | 5.78 | 11.87 | 262.48 | 14.5974 | 258.221 |
| 19 JAN 2017 | 0 | 5.59 | 11.68 | 258.2 | 16.7489 | 249.813 |
| 19 JAN 2017 | 3 | 6.1 | 11.37 | 257.32 | 18.8916 | 256.376 |
| 19 JAN 2017 | 6 | 6.46 | 11.51 | 259.32 | 18.7565 | 275.814 |
| 19 JAN 2017 | 9 | 6.34 | 11.5 | 263.5 | 17.8769 | 291.873 |
| 19 JAN 2017 | 12 | 5.74 | 11.25 | 270.8 | 14.5216 | 297.077 |
| 19 JAN 2017 | 15 | 5.13 | 11.06 | 276.87 | 11.2725 | 297.816 |
| 19 JAN 2017 | 18 | 4.68 | 10.95 | 284.14 | 9.78045 | 281.62 |
| 19 JAN 2017 | 21 | 4.3 | 10.86 | 287.78 | 8.03702 | 277.939 |
| 20 JAN 2017 | 0 | 4.01 | 10.79 | 287.47 | 6.87905 | 263.154 |
| 20 JAN 2017 | 3 | 3.72 | 10.64 | 292.82 | 5.67127 | 271.213 |
| 20 JAN 2017 | 6 | 3.42 | 10.43 | 289.95 | 1.63248 | 273.161 |
| 20 JAN 2017 | 9 | 3.2 | 10.04 | 286.27 | 3.8176 | 318.292 |
| 20 JAN 2017 | 12 | 3.21 | 9.77 | 285.53 | 4.81553 | 315.421 |
| 20 JAN 2017 | 15 | 3.21 | 9.57 | 276.79 | 6.51345 | 299.123 |
| 20 JAN 2017 | 18 | 3.13 | 9.35 | 285.39 | 6.85018 | 285.842 |
| 20 JAN 2017 | 21 | 3 | 9.27 | 287.1 | 5.74282 | 268.204 |
| 21 JAN 2017 | 0 | 2.87 | 9.34 | 286.91 | 5.50091 | 232.089 |
| 21 JAN 2017 | 3 | 2.76 | 10.74 | 259.62 | 6.22354 | 231.197 |
| 21 JAN 2017 | 6 | 2.85 | 10.72 | 259.38 | 10.5859 | 265.992 |
| 21 JAN 2017 | 9 | 3.32 | 8.28 | 276.93 | 13.1732 | 257.283 |
| 21 JAN 2017 | 12 | 3.54 | 8.06 | 264.24 | 13.3885 | 253.244 |
| 21 JAN 2017 | 15 | 3.57 | 8.13 | 260.95 | 12.5968 | 252.443 |
| 21 JAN 2017 | 18 | 3.47 | 8.39 | 261.42 | 11.0124 | 240.875 |
| 21 JAN 2017 | 21 | 3.48 | 8.46 | 260.75 | 11.8969 | 242.681 |
| 22 JAN 2017 | 0 | 3.54 | 13.33 | 255.15 | 10.9598 | 247.976 |
| 22 JAN 2017 | 3 | 3.72 | 13.4 | 255.92 | 12.8067 | 246.338 |
| 22 JAN 2017 | 6 | 3.97 | 13.87 | 257.72 | 13.0679 | 243.063 |
| 22 JAN 2017 | 9 | 4.36 | 8.99 | 254.36 | 15.3642 | 240.181 |
| 22 JAN 2017 | 12 | 4.43 | 9.73 | 260.05 | 12.813 | 259.295 |
| 22 JAN 2017 | 15 | 4.24 | 10.09 | 265.58 | 12.721 | 262.775 |

| Date | Hours | Wave Height | Wave Period | Wave Direction | Wind Speed | Wind Direction |
|-------------|-------|-------------|-------------|----------------|------------|----------------|
| 22 JAN 2017 | 18 | 4.14 | 10.13 | 264.93 | 12.9888 | 256.692 |
| 22 JAN 2017 | 21 | 4.18 | 9.53 | 262.88 | 14.3226 | 262.498 |
| 23 JAN 2017 | 0 | 4.19 | 9.21 | 261.64 | 13.9973 | 274.713 |
| 23 JAN 2017 | 3 | 4.09 | 9.07 | 264.84 | 14.1386 | 276.416 |
| 23 JAN 2017 | 6 | 4.04 | 9.02 | 270.15 | 14.3192 | 287.98 |
| 23 JAN 2017 | 9 | 3.77 | 9.07 | 276.71 | 11.6655 | 299.532 |
| 23 JAN 2017 | 12 | 3.39 | 9.01 | 284.17 | 10.1566 | 303.596 |
| 23 JAN 2017 | 15 | 2.99 | 8.81 | 290.21 | 8.70472 | 301.901 |
| 23 JAN 2017 | 18 | 2.62 | 11.07 | 262.65 | 6.74526 | 293.411 |
| 23 JAN 2017 | 21 | 2.32 | 10.95 | 262.53 | 6.40726 | 265.794 |
| 24 JAN 2017 | 0 | 2.1 | 10.75 | 262.48 | 6.74479 | 237.842 |
| 24 JAN 2017 | 3 | 1.96 | 10.48 | 263.76 | 8.43446 | 216.272 |
| 24 JAN 2017 | 6 | 2.01 | 10.32 | 264.64 | 10.1375 | 214.145 |
| 24 JAN 2017 | 9 | 2.45 | 6.58 | 240.65 | 13.5295 | 211.059 |
| 24 JAN 2017 | 12 | 3.62 | 7.88 | 228.58 | 17.9424 | 206.837 |
| 24 JAN 2017 | 15 | 4.7 | 9.26 | 223.97 | 18.437 | 212.958 |
| 24 JAN 2017 | 18 | 4.8 | 10.05 | 228.16 | 14.2495 | 225.768 |
| 24 JAN 2017 | 21 | 5.36 | 10.42 | 232.38 | 16.5535 | 221.645 |
| 25 JAN 2017 | 0 | 6.1 | 10.85 | 242.91 | 18.4711 | 221.049 |
| 25 JAN 2017 | 3 | 6.84 | 11.28 | 237.88 | 20.7073 | 222.652 |
| 25 JAN 2017 | 6 | 7.21 | 11.76 | 240.24 | 19.9324 | 226.423 |
| 25 JAN 2017 | 9 | 7.37 | 11.95 | 238.12 | 20.054 | 225.364 |
| 25 JAN 2017 | 12 | 7.13 | 12.07 | 239.18 | 17.9587 | 227.121 |
| 25 JAN 2017 | 15 | 7.19 | 11.97 | 241.19 | 20.0292 | 223.867 |
| 25 JAN 2017 | 18 | 7.2 | 12.13 | 241.5 | 18.5859 | 228.687 |
| 25 JAN 2017 | 21 | 6.99 | 12.04 | 240.86 | 18.1316 | 229.855 |
| 26 JAN 2017 | 0 | 6.5 | 11.93 | 240.07 | 15.2838 | 230.07 |
| 26 JAN 2017 | 3 | 6.32 | 11.8 | 239.57 | 16.6842 | 231.571 |
| 26 JAN 2017 | 6 | 6.28 | 11.8 | 238.16 | 15.959 | 232.025 |
| 26 JAN 2017 | 9 | 6.44 | 11.79 | 237.07 | 17.7921 | 231.894 |
| 26 JAN 2017 | 12 | 6.67 | 11.85 | 235.5 | 17.934 | 233.252 |
| 26 JAN 2017 | 15 | 6.54 | 11.92 | 234.65 | 16.7904 | 231.117 |
| 26 JAN 2017 | 18 | 6.07 | 11.95 | 235.93 | 14.1404 | 228.01 |
| 26 JAN 2017 | 21 | 5.67 | 11.94 | 238.67 | 14.0367 | 225.549 |
| 27 JAN 2017 | 0 | 5.46 | 11.95 | 239.21 | 12.3827 | 220.185 |
| 27 JAN 2017 | 3 | 5.33 | 11.97 | 237.81 | 12.8535 | 222.478 |
| 27 JAN 2017 | 6 | 5.3 | 11.88 | 236.39 | 13.3793 | 226.969 |
| 27 JAN 2017 | 9 | 5.21 | 11.82 | 235.45 | 13.0629 | 226.148 |
| 27 JAN 2017 | 12 | 4.96 | 11.77 | 234.77 | 11.9524 | 222.729 |
| 27 JAN 2017 | 15 | 4.65 | 11.66 | 233.79 | 10.9229 | 220.061 |

| Date | Hours | Wave Height | Wave Period | Wave Direction | Wind Speed | Wind Direction |
|-------------|-------|-------------|-------------|----------------|------------|----------------|
| 27 JAN 2017 | 18 | 4.23 | 11.44 | 230.26 | 9.2176 | 207.177 |
| 27 JAN 2017 | 21 | 3.77 | 11.27 | 230.27 | 8.67135 | 198.979 |
| 28 JAN 2017 | 0 | 3.53 | 11.08 | 231.32 | 11.4831 | 214.355 |
| 28 JAN 2017 | 3 | 4.33 | 10.39 | 227.79 | 15.5567 | 220.098 |
| 28 JAN 2017 | 6 | 4.87 | 10.86 | 225.72 | 14.5742 | 224.417 |
| 28 JAN 2017 | 9 | 4.59 | 10.94 | 222.69 | 13.2147 | 218.024 |
| 28 JAN 2017 | 12 | 4.22 | 10.7 | 220.3 | 13.1799 | 211.315 |
| 28 JAN 2017 | 15 | 3.78 | 10.43 | 223.24 | 10.6939 | 194.569 |
| 28 JAN 2017 | 18 | 3.39 | 10.47 | 227.56 | 7.93228 | 181.373 |
| 28 JAN 2017 | 21 | 3.27 | 10.72 | 236.01 | 9.80013 | 192.973 |
| 29 JAN 2017 | 0 | 3.59 | 10.81 | 235.81 | 12.5944 | 197.371 |
| 29 JAN 2017 | 3 | 4.21 | 10.78 | 233.09 | 14.7474 | 204.776 |
| 29 JAN 2017 | 6 | 4.5 | 10.87 | 230.28 | 14.7492 | 218.393 |
| 29 JAN 2017 | 9 | 4.33 | 10.75 | 230.15 | 14.7492 | 222.005 |
| 29 JAN 2017 | 12 | 3.95 | 10.48 | 226.27 | 12.7579 | 235.152 |
| 29 JAN 2017 | 15 | 3.41 | 10.21 | 227.36 | 6.77222 | 306.413 |
| 29 JAN 2017 | 18 | 2.92 | 9.88 | 226.05 | 9.48853 | 336.326 |
| 29 JAN 2017 | 21 | 2.65 | 9.53 | 226.53 | 10.1955 | 339.503 |
| 30 JAN 2017 | 0 | 2.67 | 9.38 | 242.8 | 9.74257 | 319.788 |
| 30 JAN 2017 | 3 | 2.99 | 10.11 | 301.48 | 9.13764 | 317.528 |
| 30 JAN 2017 | 6 | 3.07 | 10.25 | 314.95 | 8.49207 | 317.291 |
| 30 JAN 2017 | 9 | 3.03 | 10.33 | 323.57 | 6.56567 | 324.422 |
| 30 JAN 2017 | 12 | 3.08 | 10.57 | 332.28 | 4.98691 | 316.544 |
| 30 JAN 2017 | 15 | 3.11 | 11.88 | 349.55 | 1.85397 | 317.186 |
| 30 JAN 2017 | 18 | 3.04 | 11.75 | 356.19 | 1.71657 | 264.987 |
| 30 JAN 2017 | 21 | 2.86 | 11.53 | 2.37 | 2.98839 | 193.153 |
| 31 JAN 2017 | 0 | 2.61 | 11.2 | 5.59 | 5.05253 | 196.678 |
| 31 JAN 2017 | 3 | 2.37 | 10.98 | 10.39 | 6.41313 | 198.266 |
| 31 JAN 2017 | 6 | 2.18 | 10.83 | 14.48 | 7.47333 | 207.148 |
| 31 JAN 2017 | 9 | 2.08 | 10.62 | 15.55 | 8.53879 | 216.092 |
| 31 JAN 2017 | 12 | 2.11 | 10.42 | 18.4 | 9.60252 | 224.916 |
| 31 JAN 2017 | 15 | 2.3 | 10.3 | 20.47 | 10.1904 | 218.546 |
| 31 JAN 2017 | 18 | 2.53 | 7.88 | 236.75 | 10.3057 | 208.58 |
| 31 JAN 2017 | 21 | 2.9 | 9.52 | 246.16 | 8.7286 | 185.391 |
| 1 FEB 2017 | 0 | 3.38 | 10.58 | 237.22 | 8.25955 | 173.115 |
| 1 FEB 2017 | 3 | 3.75 | 11.17 | 233.35 | 9.21158 | 191.396 |
| 1 FEB 2017 | 6 | 4.25 | 11.56 | 233.08 | 11.5898 | 192.154 |
| 1 FEB 2017 | 9 | 4.91 | 11.88 | 230 | 14.3878 | 193.505 |
| 1 FEB 2017 | 12 | 5.27 | 11.96 | 226.4 | 15.0586 | 204.063 |
| 1 FEB 2017 | 15 | 5.06 | 11.82 | 223.94 | 13.9463 | 210.795 |

| Date | Hours | Wave Height | Wave Period | Wave Direction | Wind Speed | Wind Direction |
|------------|-------|-------------|-------------|----------------|------------|----------------|
| 1 FEB 2017 | 18 | 4.49 | 11.63 | 223.69 | 12.039 | 206.438 |
| 1 FEB 2017 | 21 | 3.88 | 11.44 | 221.14 | 9.85256 | 189.759 |
| 2 FEB 2017 | 0 | 3.37 | 11.28 | 224.18 | 8.10856 | 162.19 |
| 2 FEB 2017 | 3 | 3.02 | 12.6 | 244.7 | 7.88396 | 159.197 |
| 2 FEB 2017 | 6 | 2.92 | 12.43 | 242.51 | 8.61307 | 165.27 |
| 2 FEB 2017 | 9 | 3.17 | 12.17 | 231.82 | 9.18037 | 185.376 |
| 2 FEB 2017 | 12 | 3.58 | 11.65 | 228.46 | 9.01468 | 185.028 |
| 2 FEB 2017 | 15 | 3.63 | 11.48 | 225.75 | 7.53117 | 176.879 |
| 2 FEB 2017 | 18 | 3.34 | 11.35 | 220.69 | 6.69487 | 160.996 |
| 2 FEB 2017 | 21 | 3.03 | 11.26 | 222.18 | 7.34246 | 151.62 |
| 3 FEB 2017 | 0 | 2.83 | 11.36 | 224.05 | 8.3557 | 140.098 |
| 3 FEB 2017 | 3 | 2.67 | 11.94 | 231.65 | 7.93393 | 153.984 |
| 3 FEB 2017 | 6 | 2.53 | 12.08 | 233.29 | 6.92776 | 154.063 |
| 3 FEB 2017 | 9 | 2.46 | 11.94 | 233.17 | 6.93488 | 145.278 |
| 3 FEB 2017 | 12 | 2.45 | 11.74 | 231.86 | 8.31714 | 139.241 |
| 3 FEB 2017 | 15 | 2.35 | 11.61 | 231.36 | 7.90516 | 139.823 |
| 3 FEB 2017 | 18 | 2.25 | 11.63 | 230.71 | 4.56686 | 160.692 |
| 3 FEB 2017 | 21 | 2.27 | 11.61 | 228.13 | 3.61386 | 157.551 |
| 4 FEB 2017 | 0 | 2.45 | 11.48 | 224.79 | 2.33927 | 154.42 |
| 4 FEB 2017 | 3 | 2.59 | 11.21 | 219.64 | 2.25763 | 123.619 |
| 4 FEB 2017 | 6 | 2.53 | 11.02 | 219.51 | 5.20009 | 97.9585 |
| 4 FEB 2017 | 9 | 2.43 | 16.43 | 247.41 | 8.51524 | 98.5771 |
| 4 FEB 2017 | 12 | 2.42 | 15.67 | 247.1 | 10.0595 | 98.4601 |
| 4 FEB 2017 | 15 | 2.52 | 15.05 | 249.49 | 10.9208 | 98.5305 |
| 4 FEB 2017 | 18 | 2.56 | 14.45 | 248.32 | 10.4167 | 110.453 |
| 4 FEB 2017 | 21 | 2.56 | 14.15 | 251.58 | 10.2627 | 127.517 |
| 5 FEB 2017 | 0 | 2.43 | 14.17 | 254.6 | 7.16415 | 167.341 |
| 5 FEB 2017 | 3 | 2.25 | 14.16 | 256.37 | 4.53442 | 210.921 |
| 5 FEB 2017 | 6 | 2.09 | 13.86 | 255.01 | 4.20098 | 229.828 |
| 5 FEB 2017 | 9 | 2.1 | 13.23 | 254.74 | 3.67234 | 255.169 |
| 5 FEB 2017 | 12 | 2.25 | 11.66 | 239.1 | 2.80829 | 133.413 |
| 5 FEB 2017 | 15 | 2.25 | 11.1 | 232.89 | 5.5148 | 129.26 |
| 5 FEB 2017 | 18 | 2.09 | 10.64 | 229.56 | 4.45862 | 112.135 |
| 5 FEB 2017 | 21 | 1.92 | 10.31 | 234.43 | 5.41503 | 100.749 |
| 6 FEB 2017 | 0 | 1.84 | 10 | 229.33 | 6.6369 | 118.727 |
| 6 FEB 2017 | 3 | 1.87 | 9.63 | 237.2 | 5.51838 | 138.452 |
| 6 FEB 2017 | 6 | 1.88 | 10.91 | 253.97 | 4.49782 | 174.897 |
| 6 FEB 2017 | 9 | 1.79 | 8.02 | 206.01 | 4.0426 | 189.253 |
| 6 FEB 2017 | 12 | 1.67 | 11.83 | 256.73 | 5.43493 | 185.491 |
| 6 FEB 2017 | 15 | 1.61 | 11.66 | 255.87 | 6.11523 | 209.164 |

| Date | Hours | Wave Height | Wave Period | Wave Direction | Wind Speed | Wind Direction |
|-------------|-------|-------------|-------------|----------------|------------|----------------|
| 6 FEB 2017 | 18 | 1.64 | 11.27 | 254.75 | 5.19851 | 202.866 |
| 6 FEB 2017 | 21 | 1.77 | 13.28 | 256.33 | 7.75362 | 136.777 |
| 7 FEB 2017 | 0 | 2.23 | 6.68 | 162.15 | 10.3005 | 127.426 |
| 7 FEB 2017 | 3 | 2.52 | 7.2 | 146.35 | 7.98944 | 152.087 |
| 7 FEB 2017 | 6 | 2.69 | 7.84 | 155.71 | 8.45982 | 160.815 |
| 7 FEB 2017 | 9 | 2.7 | 11.11 | 229.41 | 7.23285 | 158.081 |
| 7 FEB 2017 | 12 | 2.68 | 11.56 | 227.29 | 7.3309 | 145.616 |
| 7 FEB 2017 | 15 | 2.76 | 11.77 | 222.74 | 6.37227 | 137.926 |
| 7 FEB 2017 | 18 | 2.85 | 12.12 | 219.28 | 5.00819 | 142.626 |
| 7 FEB 2017 | 21 | 3.04 | 13.25 | 229.11 | 4.08769 | 134.009 |
| 8 FEB 2017 | 0 | 3.31 | 18.4 | 255.65 | 4.95035 | 130.576 |
| 8 FEB 2017 | 3 | 3.52 | 17.66 | 255.23 | 5.00716 | 145.167 |
| 8 FEB 2017 | 6 | 3.56 | 17.34 | 255.29 | 5.04343 | 155.518 |
| 8 FEB 2017 | 9 | 3.45 | 16.72 | 255.04 | 5.11669 | 154.286 |
| 8 FEB 2017 | 12 | 3.36 | 16.47 | 255.78 | 6.011 | 168.484 |
| 8 FEB 2017 | 15 | 3.36 | 16.31 | 256.78 | 6.51566 | 167.862 |
| 8 FEB 2017 | 18 | 3.35 | 16.24 | 258.13 | 6.18156 | 170.126 |
| 8 FEB 2017 | 21 | 3.23 | 15.86 | 258.17 | 4.5954 | 151.538 |
| 9 FEB 2017 | 0 | 3.04 | 15.5 | 258.62 | 4.25575 | 141.487 |
| 9 FEB 2017 | 3 | 2.83 | 15.26 | 257.9 | 3.05531 | 117.907 |
| 9 FEB 2017 | 6 | 2.65 | 14.81 | 258.02 | 3.29087 | 96.4553 |
| 9 FEB 2017 | 9 | 2.53 | 14.6 | 258.05 | 3.17586 | 105.524 |
| 9 FEB 2017 | 12 | 2.44 | 14.44 | 257.91 | 3.11893 | 125.473 |
| 9 FEB 2017 | 15 | 2.37 | 14.19 | 257.53 | 3.95578 | 130.899 |
| 9 FEB 2017 | 18 | 2.33 | 13.91 | 257.38 | 4.37374 | 129.805 |
| 9 FEB 2017 | 21 | 2.37 | 13.84 | 256.34 | 5.73223 | 125.27 |
| 10 FEB 2017 | 0 | 2.54 | 13.76 | 254.89 | 6.49945 | 112.145 |
| 10 FEB 2017 | 3 | 2.76 | 16.66 | 262.03 | 7.72241 | 118.29 |
| 10 FEB 2017 | 6 | 2.94 | 16.24 | 261.91 | 9.24297 | 131.71 |
| 10 FEB 2017 | 9 | 2.98 | 15.73 | 260.61 | 8.76968 | 137.541 |
| 10 FEB 2017 | 12 | 2.87 | 15.35 | 260.27 | 6.35932 | 148.634 |
| 10 FEB 2017 | 15 | 2.74 | 15.16 | 259.82 | 3.55124 | 198.384 |
| 10 FEB 2017 | 18 | 2.63 | 14.87 | 257.74 | 4.53084 | 242.53 |
| 10 FEB 2017 | 21 | 2.52 | 14.66 | 258.33 | 5.54698 | 248.755 |
| 11 FEB 2017 | 0 | 2.41 | 14.43 | 259.32 | 5.97054 | 231.46 |
| 11 FEB 2017 | 3 | 2.3 | 14.19 | 259.76 | 6.6181 | 235.59 |
| 11 FEB 2017 | 6 | 2.19 | 13.74 | 257.04 | 6.45645 | 237.91 |
| 11 FEB 2017 | 9 | 2.07 | 13.53 | 257.78 | 5.91219 | 243.262 |
| 11 FEB 2017 | 12 | 1.98 | 13.35 | 258.58 | 6.76947 | 241.694 |
| 11 FEB 2017 | 15 | 1.96 | 13.02 | 256.06 | 8.12294 | 237.621 |

| Date | Hours | Wave Height | Wave Period | Wave Direction | Wind Speed | Wind Direction |
|-------------|-------|-------------|-------------|----------------|------------|----------------|
| 11 FEB 2017 | 18 | 1.99 | 12.82 | 257.28 | 8.68499 | 245.294 |
| 11 FEB 2017 | 21 | 2.05 | 12.71 | 258.67 | 9.21169 | 241.042 |
| 12 FEB 2017 | 0 | 2.19 | 12.58 | 260.05 | 10.4032 | 244.248 |
| 12 FEB 2017 | 3 | 2.52 | 12.37 | 261.14 | 12.0946 | 237.94 |
| 12 FEB 2017 | 6 | 2.95 | 7.66 | 265.05 | 13.6787 | 239.123 |
| 12 FEB 2017 | 9 | 3.48 | 8.35 | 263.04 | 15.4763 | 244.511 |
| 12 FEB 2017 | 12 | 3.81 | 8.91 | 263.42 | 14.9805 | 252.158 |
| 12 FEB 2017 | 15 | 3.8 | 9.02 | 262.72 | 14.449 | 256.676 |
| 12 FEB 2017 | 18 | 3.56 | 8.97 | 264.03 | 12.9555 | 262.683 |
| 12 FEB 2017 | 21 | 3.36 | 8.76 | 265.64 | 12.8108 | 261.2 |
| 13 FEB 2017 | 0 | 3.37 | 8.51 | 263.73 | 13.2529 | 259.962 |
| 13 FEB 2017 | 3 | 3.62 | 8.55 | 264.93 | 14.0036 | 260.713 |
| 13 FEB 2017 | 6 | 3.9 | 9.15 | 274.76 | 14.2473 | 262.336 |
| 13 FEB 2017 | 9 | 3.98 | 9.74 | 285.95 | 13.6017 | 262.99 |
| 13 FEB 2017 | 12 | 3.82 | 9.77 | 287.39 | 12.3541 | 267.263 |
| 13 FEB 2017 | 15 | 3.56 | 9.65 | 287.38 | 11.5669 | 271.982 |
| 13 FEB 2017 | 18 | 3.28 | 9.5 | 285.7 | 10.0877 | 277.118 |
| 13 FEB 2017 | 21 | 3.04 | 9.41 | 284.03 | 9.09438 | 274.984 |
| 14 FEB 2017 | 0 | 2.9 | 9.7 | 284.3 | 8.18416 | 276.596 |
| 14 FEB 2017 | 3 | 2.79 | 11.16 | 291.57 | 7.1501 | 273.047 |
| 14 FEB 2017 | 6 | 2.64 | 10.95 | 290.83 | 6.5213 | 268.858 |
| 14 FEB 2017 | 9 | 2.45 | 10.76 | 286.8 | 5.78364 | 260.847 |
| 14 FEB 2017 | 12 | 2.27 | 10.15 | 286.89 | 4.98342 | 258.307 |
| 14 FEB 2017 | 15 | 2.12 | 9.43 | 290.23 | 3.25632 | 244.537 |
| 14 FEB 2017 | 18 | 2 | 8.9 | 298.55 | 2.81713 | 187.958 |
| 14 FEB 2017 | 21 | 1.88 | 12.27 | 268.03 | 3.83678 | 172.06 |
| 15 FEB 2017 | 0 | 1.78 | 11.97 | 268.72 | 4.77909 | 172.666 |
| 15 FEB 2017 | 3 | 1.68 | 11.77 | 268.27 | 5.18703 | 184.645 |
| 15 FEB 2017 | 6 | 1.6 | 11.63 | 267.76 | 6.27709 | 208.239 |
| 15 FEB 2017 | 9 | 1.6 | 11.38 | 271.19 | 7.47086 | 221.908 |
| 15 FEB 2017 | 12 | 1.71 | 11.14 | 270.31 | 8.45334 | 228.693 |
| 15 FEB 2017 | 15 | 1.86 | 6.31 | 246.37 | 8.82149 | 229.322 |
| 15 FEB 2017 | 18 | 2.01 | 7.01 | 233.06 | 8.00628 | 230.525 |
| 15 FEB 2017 | 21 | 2.12 | 7.56 | 221.54 | 7.29565 | 230.506 |
| 16 FEB 2017 | 0 | 2.2 | 7.9 | 215.06 | 7.44043 | 233.746 |
| 16 FEB 2017 | 3 | 2.23 | 8.12 | 211.22 | 8.66304 | 244.056 |
| 16 FEB 2017 | 6 | 2.2 | 8.22 | 208.87 | 8.78154 | 248.138 |
| 16 FEB 2017 | 9 | 2.06 | 8.14 | 207.1 | 7.40509 | 252.96 |
| 16 FEB 2017 | 12 | 1.87 | 7.9 | 206.06 | 6.29987 | 260.867 |
| 16 FEB 2017 | 15 | 1.76 | 7.65 | 206.16 | 8.04699 | 261.568 |

| Date | Hours | Wave Height | Wave Period | Wave Direction | Wind Speed | Wind Direction |
|-------------|-------|-------------|-------------|----------------|------------|----------------|
| 16 FEB 2017 | 18 | 1.81 | 7.16 | 214.28 | 9.85431 | 261.656 |
| 16 FEB 2017 | 21 | 1.91 | 6.25 | 252.38 | 9.51874 | 285.102 |
| 17 FEB 2017 | 0 | 1.91 | 6.5 | 263.43 | 9.32363 | 308.861 |
| 17 FEB 2017 | 3 | 1.9 | 6.51 | 272.48 | 9.36278 | 315.692 |
| 17 FEB 2017 | 6 | 1.89 | 6.51 | 283.59 | 8.68014 | 316.727 |
| 17 FEB 2017 | 9 | 1.96 | 6.65 | 295.83 | 9.18321 | 303.361 |
| 17 FEB 2017 | 12 | 2.14 | 6.98 | 308.56 | 10.1145 | 293.295 |
| 17 FEB 2017 | 15 | 2.28 | 7.49 | 324.66 | 10.1467 | 287.257 |
| 17 FEB 2017 | 18 | 2.22 | 7.86 | 334.54 | 7.08246 | 266.601 |
| 17 FEB 2017 | 21 | 2.28 | 8.1 | 336.79 | 10.5301 | 266.461 |
| 18 FEB 2017 | 0 | 2.53 | 8.35 | 338.46 | 10.2746 | 276.427 |
| 18 FEB 2017 | 3 | 2.58 | 8.66 | 332.57 | 7.40049 | 280.354 |
| 18 FEB 2017 | 6 | 2.57 | 8.93 | 335.15 | 3.07766 | 278.973 |
| 18 FEB 2017 | 9 | 2.67 | 8.58 | 308.44 | 1.34201 | 163.996 |
| 18 FEB 2017 | 12 | 3.16 | 8.64 | 242.21 | 8.81769 | 247.39 |
| 18 FEB 2017 | 15 | 3.82 | 9.19 | 223.64 | 13.0689 | 246.888 |
| 18 FEB 2017 | 18 | 4 | 9.59 | 214.81 | 10.4374 | 253.354 |
| 18 FEB 2017 | 21 | 3.8 | 9.59 | 216.7 | 5.77832 | 273.076 |
| 19 FEB 2017 | 0 | 3.52 | 9.22 | 229.79 | 2.35637 | 305.849 |
| 19 FEB 2017 | 3 | 3.27 | 8.77 | 249.25 | 2.73761 | 16.1178 |
| 19 FEB 2017 | 6 | 3.12 | 8.52 | 247.97 | 7.90545 | 67.6197 |
| 19 FEB 2017 | 9 | 2.99 | 8.61 | 260.82 | 7.20251 | 37.554 |
| 19 FEB 2017 | 12 | 2.84 | 8.62 | 272.42 | 8.91372 | 27.3124 |
| 19 FEB 2017 | 15 | 2.68 | 8.46 | 276.11 | 6.55613 | 17.5782 |
| 19 FEB 2017 | 18 | 2.51 | 15.03 | 257.02 | 4.19202 | 54.9071 |
| 19 FEB 2017 | 21 | 2.39 | 14.62 | 258.42 | 7.36729 | 74.8129 |
| 20 FEB 2017 | 0 | 2.36 | 14.3 | 257.24 | 9.7234 | 68.7127 |
| 20 FEB 2017 | 3 | 2.31 | 14.04 | 256.66 | 8.5061 | 54.9085 |
| 20 FEB 2017 | 6 | 2.24 | 13.49 | 257.06 | 7.56335 | 62.52 |
| 20 FEB 2017 | 9 | 2.17 | 13.29 | 257.07 | 6.41487 | 80.6696 |
| 20 FEB 2017 | 12 | 2.08 | 12.77 | 257.49 | 3.70567 | 99.0045 |
| 20 FEB 2017 | 15 | 2.01 | 12.51 | 257.58 | 5.02415 | 99.8558 |
| 20 FEB 2017 | 18 | 2.05 | 12.33 | 257.38 | 7.12778 | 108.486 |
| 20 FEB 2017 | 21 | 2.13 | 10.15 | 257.66 | 8.26226 | 111.067 |
| 21 FEB 2017 | 0 | 2.19 | 9.71 | 269.05 | 7.6331 | 96.0913 |
| 21 FEB 2017 | 3 | 2.29 | 9.7 | 282.3 | 8.65834 | 92.5152 |
| 21 FEB 2017 | 6 | 2.48 | 11.02 | 321.35 | 8.81327 | 88.4393 |
| 21 FEB 2017 | 9 | 2.69 | 11.01 | 330.07 | 7.43311 | 98.0427 |
| 21 FEB 2017 | 12 | 3 | 11.18 | 308.75 | 7.67109 | 114.326 |
| 21 FEB 2017 | 15 | 3.27 | 11.55 | 274.77 | 8.85341 | 124.228 |

| Date | Hours | Wave Height | Wave Period | Wave Direction | Wind Speed | Wind Direction |
|-------------|-------|-------------|-------------|----------------|------------|----------------|
| 21 FEB 2017 | 18 | 3.29 | 11.54 | 271.81 | 9.31238 | 126.353 |
| 21 FEB 2017 | 21 | 3.17 | 11.53 | 272.01 | 8.26644 | 135.539 |
| 22 FEB 2017 | 0 | 3.06 | 11.48 | 274.22 | 11.7316 | 120.193 |
| 22 FEB 2017 | 3 | 3.02 | 11.32 | 292.34 | 14.2599 | 113.167 |
| 22 FEB 2017 | 6 | 3.18 | 10.89 | 287.61 | 13.1837 | 87.3913 |
| 22 FEB 2017 | 9 | 3.4 | 10.27 | 287.51 | 13.9234 | 59.7701 |
| 22 FEB 2017 | 12 | 3.96 | 9.38 | 305.03 | 16.2924 | 44.5025 |
| 22 FEB 2017 | 15 | 4.99 | 8.68 | 6.73 | 16.5583 | 20.9853 |
| 22 FEB 2017 | 18 | 5.18 | 14.39 | 253.13 | 14.9674 | 4.56017 |
| 22 FEB 2017 | 21 | 4.68 | 14.22 | 255.39 | 13.9227 | 4.98577 |
| 23 FEB 2017 | 0 | 4 | 9.13 | 353.21 | 8.88001 | 0.0645221 |
| 23 FEB 2017 | 3 | 3.56 | 13.56 | 259.4 | 9.90099 | 354.785 |
| 23 FEB 2017 | 6 | 3.59 | 9.06 | 342.89 | 11.6992 | 352.535 |
| 23 FEB 2017 | 9 | 3.83 | 12.47 | 291.6 | 11.7886 | 356.011 |
| 23 FEB 2017 | 12 | 4.29 | 11.46 | 335.95 | 14.2717 | 359.117 |
| 23 FEB 2017 | 15 | 4.69 | 10.8 | 353.41 | 15.2405 | 12.6593 |
| 23 FEB 2017 | 18 | 4.34 | 10.93 | 356.65 | 10.9975 | 24.8406 |
| 23 FEB 2017 | 21 | 4.02 | 10.87 | 359.04 | 12.0774 | 11.8495 |
| 24 FEB 2017 | 0 | 3.87 | 10.75 | 1.35 | 11.5844 | 6.04524 |
| 24 FEB 2017 | 3 | 3.77 | 10.75 | 2.51 | 10.9097 | 2.41655 |
| 24 FEB 2017 | 6 | 3.96 | 10.82 | 1.58 | 13.071 | 0.701365 |
| 24 FEB 2017 | 9 | 4.35 | 10.77 | 0.63 | 14.1411 | 2.26955 |
| 24 FEB 2017 | 12 | 4.5 | 10.86 | 1.86 | 13.5975 | 2.90869 |
| 24 FEB 2017 | 15 | 4.3 | 10.96 | 3.87 | 11.4218 | 358.997 |
| 24 FEB 2017 | 18 | 4.02 | 10.98 | 5.33 | 9.51002 | 359.88 |
| 24 FEB 2017 | 21 | 3.67 | 10.92 | 5.93 | 5.81378 | 3.94518 |
| 25 FEB 2017 | 0 | 3.31 | 10.75 | 5.4 | 2.63518 | 335.088 |
| 25 FEB 2017 | 3 | 2.98 | 10.48 | 5.03 | 0.382753 | 250.145 |
| 25 FEB 2017 | 6 | 2.71 | 10.35 | 3.2 | 4.56213 | 126.443 |
| 25 FEB 2017 | 9 | 2.52 | 10.29 | 0.8 | 8.90637 | 122.994 |
| 25 FEB 2017 | 12 | 2.47 | 10.26 | 359.88 | 12.5431 | 122.233 |
| 25 FEB 2017 | 15 | 2.69 | 10.32 | 1.31 | 14.9683 | 117.969 |
| 25 FEB 2017 | 18 | 3.01 | 10.44 | 348.28 | 14.2196 | 125.266 |
| 25 FEB 2017 | 21 | 3.36 | 11.07 | 245.3 | 10.9292 | 128.946 |
| 26 FEB 2017 | 0 | 3.45 | 11.04 | 231.72 | 4.68241 | 149.875 |
| 26 FEB 2017 | 3 | 3.44 | 10.78 | 238.56 | 7.47525 | 279.626 |
| 26 FEB 2017 | 6 | 3.58 | 11.5 | 251.75 | 8.90484 | 285.035 |
| 26 FEB 2017 | 9 | 3.65 | 11.87 | 252.12 | 8.47432 | 284.348 |
| 26 FEB 2017 | 12 | 3.54 | 12.08 | 253.11 | 5.04096 | 290.556 |
| 26 FEB 2017 | 15 | 3.35 | 12.32 | 254.16 | 2.64433 | 291.52 |

| Date | Hours | Wave Height | Wave Period | Wave Direction | Wind Speed | Wind Direction |
|-------------|-------|-------------|-------------|----------------|------------|----------------|
| 26 FEB 2017 | 18 | 3.14 | 12.4 | 255.13 | 1.51053 | 88.4824 |
| 26 FEB 2017 | 21 | 2.9 | 12.41 | 256.1 | 5.26745 | 86.9527 |
| 27 FEB 2017 | 0 | 2.66 | 12.41 | 257.03 | 7.84737 | 87.5166 |
| 27 FEB 2017 | 3 | 2.5 | 12.35 | 257.84 | 9.8656 | 79.4872 |
| 27 FEB 2017 | 6 | 2.47 | 12.34 | 259 | 10.4308 | 79.6164 |
| 27 FEB 2017 | 9 | 2.56 | 12.88 | 260.21 | 9.45969 | 93.697 |
| 27 FEB 2017 | 12 | 2.63 | 12.99 | 260.39 | 6.23924 | 108.696 |
| 27 FEB 2017 | 15 | 2.96 | 12.54 | 261.08 | 1.51347 | 111.309 |
| 27 FEB 2017 | 18 | 3.49 | 11.97 | 254.78 | 1.65858 | 231.61 |
| 27 FEB 2017 | 21 | 3.63 | 11.51 | 256 | 1.47353 | 209.697 |
| 28 FEB 2017 | 0 | 3.53 | 11.17 | 258.47 | 2.02766 | 145.447 |
| 28 FEB 2017 | 3 | 3.35 | 11.07 | 268.98 | 3.95545 | 80.3946 |
| 28 FEB 2017 | 6 | 3.2 | 11.11 | 283.32 | 9.15802 | 45.8405 |
| 28 FEB 2017 | 9 | 3.12 | 11.14 | 303.2 | 11.6865 | 51.2176 |
| 28 FEB 2017 | 12 | 2.98 | 11.15 | 330.89 | 10.6259 | 61.0709 |
| 28 FEB 2017 | 15 | 2.9 | 11.11 | 351.41 | 12.0929 | 63.795 |
| 28 FEB 2017 | 18 | 2.9 | 10.94 | 0.67 | 12.2095 | 74.7571 |
| 28 FEB 2017 | 21 | 2.84 | 10.61 | 8.23 | 11.6119 | 88.9635 |
| 1 MAR 2017 | 0 | 2.73 | 6.79 | 87.28 | 11.2809 | 95.4425 |
| 1 MAR 2017 | 3 | 2.75 | 6.88 | 89.64 | 11.9588 | 93.2115 |
| 1 MAR 2017 | 6 | 2.73 | 6.94 | 91.14 | 11.22 | 90.1019 |
| 1 MAR 2017 | 9 | 2.74 | 6.77 | 92.2 | 11.984 | 88.5175 |
| 1 MAR 2017 | 12 | 2.69 | 9.61 | 9.21 | 10.7714 | 109.074 |
| 1 MAR 2017 | 15 | 2.62 | 9.72 | 9.45 | 7.16777 | 137.091 |
| 1 MAR 2017 | 18 | 2.66 | 9.6 | 8.63 | 4.9422 | 143.64 |
| 1 MAR 2017 | 21 | 2.66 | 9.53 | 7.98 | 1.92234 | 112.964 |
| 2 MAR 2017 | 0 | 2.6 | 9.75 | 10.01 | 3.8426 | 60.3659 |
| 2 MAR 2017 | 3 | 2.48 | 10.19 | 12.48 | 4.912 | 72.7084 |
| 2 MAR 2017 | 6 | 2.35 | 10.25 | 13.84 | 4.86146 | 64.0146 |
| 2 MAR 2017 | 9 | 2.25 | 10.17 | 13.96 | 5.13546 | 67.0796 |
| 2 MAR 2017 | 12 | 2.18 | 10.04 | 13.33 | 3.65558 | 65.2575 |
| 2 MAR 2017 | 15 | 2.14 | 9.85 | 14.86 | 3.24304 | 59.0058 |
| 2 MAR 2017 | 18 | 2.18 | 9.66 | 14.54 | 7.40072 | 46.9711 |
| 2 MAR 2017 | 21 | 2.35 | 9.43 | 13.99 | 9.88278 | 36.1509 |
| 3 MAR 2017 | 0 | 2.41 | 9.05 | 15.26 | 9.10578 | 34.2135 |
| 3 MAR 2017 | 3 | 2.39 | 8.79 | 15.35 | 9.75379 | 34.8957 |
| 3 MAR 2017 | 6 | 2.37 | 8.43 | 16.67 | 10.4878 | 40.2042 |
| 3 MAR 2017 | 9 | 2.34 | 8.19 | 16.92 | 10.6276 | 47.0589 |
| 3 MAR 2017 | 12 | 2.23 | 7.94 | 16.78 | 9.39517 | 54.6182 |
| 3 MAR 2017 | 15 | 2.13 | 7.79 | 16 | 9.68694 | 62.9851 |

| Date | Hours | Wave Height | Wave Period | Wave Direction | Wind Speed | Wind Direction |
|------------|-------|-------------|-------------|----------------|------------|----------------|
| 3 MAR 2017 | 18 | 2.08 | 7.65 | 15.26 | 9.81772 | 68.1117 |
| 3 MAR 2017 | 21 | 2.03 | 12.48 | 256.8 | 9.65128 | 71.64 |
| 4 MAR 2017 | 0 | 1.98 | 11.98 | 256.62 | 9.95426 | 75.3354 |
| 4 MAR 2017 | 3 | 1.97 | 11.74 | 258.34 | 10.8378 | 77.4767 |
| 4 MAR 2017 | 6 | 2.02 | 5.61 | 75.7 | 11.5543 | 81.5892 |
| 4 MAR 2017 | 9 | 2.11 | 5.85 | 82.09 | 12.172 | 85.2401 |
| 4 MAR 2017 | 12 | 2.3 | 6.14 | 90.1 | 13.475 | 85.3174 |
| 4 MAR 2017 | 15 | 2.45 | 6.45 | 93.25 | 13.7214 | 87.6608 |
| 4 MAR 2017 | 18 | 2.5 | 6.57 | 95.35 | 13.7823 | 88.9604 |
| 4 MAR 2017 | 21 | 2.53 | 6.64 | 97.43 | 14.0435 | 93.9604 |
| 5 MAR 2017 | 0 | 2.54 | 6.76 | 100.64 | 13.8194 | 92.1147 |
| 5 MAR 2017 | 3 | 2.66 | 6.87 | 102.79 | 14.5198 | 97.9569 |
| 5 MAR 2017 | 6 | 2.65 | 7.11 | 106.14 | 13.42 | 99.6516 |
| 5 MAR 2017 | 9 | 2.7 | 7.19 | 111.72 | 14.2504 | 99.125 |
| 5 MAR 2017 | 12 | 2.67 | 7.23 | 114.68 | 13.609 | 98.1954 |
| 5 MAR 2017 | 15 | 2.77 | 7.27 | 117.13 | 14.4148 | 105.656 |
| 5 MAR 2017 | 18 | 2.93 | 7.42 | 118.02 | 14.7021 | 107.905 |
| 5 MAR 2017 | 21 | 3.22 | 7.72 | 122.96 | 16.2877 | 112.755 |
| 6 MAR 2017 | 0 | 3.48 | 7.98 | 124.95 | 16.6133 | 123.585 |
| 6 MAR 2017 | 3 | 3.29 | 8.26 | 128.71 | 13.8983 | 129.072 |
| 6 MAR 2017 | 6 | 2.83 | 8.2 | 129.43 | 11.4991 | 137.22 |
| 6 MAR 2017 | 9 | 2.39 | 7.88 | 129.96 | 9.28679 | 140.636 |
| 6 MAR 2017 | 12 | 2.16 | 7.68 | 130.97 | 8.94437 | 141.81 |
| 6 MAR 2017 | 15 | 2.06 | 7.54 | 130.84 | 6.1359 | 139.56 |
| 6 MAR 2017 | 18 | 2.03 | 17.94 | 260.01 | 5.76945 | 138.935 |
| 6 MAR 2017 | 21 | 2.11 | 17.36 | 259.9 | 6.08185 | 139.868 |
| 7 MAR 2017 | 0 | 2.25 | 16.61 | 260 | 5.43482 | 149.235 |
| 7 MAR 2017 | 3 | 2.36 | 16.08 | 260.73 | 6.07184 | 156.305 |
| 7 MAR 2017 | 6 | 2.4 | 15.59 | 260.58 | 6.49303 | 148.733 |
| 7 MAR 2017 | 9 | 2.34 | 15.37 | 261.54 | 6.30448 | 143.839 |
| 7 MAR 2017 | 12 | 2.24 | 15.15 | 262.09 | 6.73134 | 149.167 |
| 7 MAR 2017 | 15 | 2.21 | 14.81 | 261.07 | 8.43979 | 146.159 |
| 7 MAR 2017 | 18 | 2.17 | 14.6 | 261.83 | 8.58157 | 157.529 |
| 7 MAR 2017 | 21 | 2.13 | 14.42 | 262.3 | 7.62182 | 159.734 |
| 8 MAR 2017 | 0 | 2.12 | 14.24 | 262.48 | 5.94307 | 160.437 |
| 8 MAR 2017 | 3 | 2.11 | 14.01 | 260.48 | 5.2292 | 148.529 |
| 8 MAR 2017 | 6 | 2.1 | 13.68 | 259.19 | 4.37352 | 161.192 |
| 8 MAR 2017 | 9 | 2.06 | 13.43 | 258.18 | 2.91899 | 144.622 |
| 8 MAR 2017 | 12 | 2.04 | 13.12 | 258.82 | 3.24649 | 120.752 |
| 8 MAR 2017 | 15 | 2.06 | 12.72 | 256.1 | 3.80533 | 123.314 |

| Date | Hours | Wave Height | Wave Period | Wave Direction | Wind Speed | Wind Direction |
|-------------|-------|-------------|-------------|----------------|------------|----------------|
| 8 MAR 2017 | 18 | 2.07 | 12.48 | 257.9 | 3.6842 | 126.279 |
| 8 MAR 2017 | 21 | 2.05 | 12.3 | 258.6 | 3.51434 | 103.996 |
| 9 MAR 2017 | 0 | 2.04 | 11.5 | 246.38 | 3.97247 | 92.0195 |
| 9 MAR 2017 | 3 | 1.98 | 10.85 | 232.4 | 4.00196 | 76.415 |
| 9 MAR 2017 | 6 | 1.85 | 10.25 | 224.78 | 4.75613 | 71.8696 |
| 9 MAR 2017 | 9 | 1.79 | 9.84 | 221.14 | 5.66768 | 62.1236 |
| 9 MAR 2017 | 12 | 1.82 | 12.2 | 250.07 | 5.20612 | 48.3481 |
| 9 MAR 2017 | 15 | 1.91 | 12.28 | 247.41 | 5.23582 | 35.3595 |
| 9 MAR 2017 | 18 | 2 | 12.24 | 245.09 | 3.7476 | 17.7097 |
| 9 MAR 2017 | 21 | 2.01 | 11.95 | 243.92 | 3.15778 | 332.461 |
| 10 MAR 2017 | 0 | 1.91 | 11.86 | 244.85 | 4.35993 | 300.153 |
| 10 MAR 2017 | 3 | 1.78 | 11.91 | 246.98 | 5.50117 | 294.142 |
| 10 MAR 2017 | 6 | 1.65 | 11.81 | 248.84 | 4.97575 | 308.39 |
| 10 MAR 2017 | 9 | 1.55 | 11.65 | 249.94 | 3.58208 | 323.514 |
| 10 MAR 2017 | 12 | 1.51 | 11.34 | 250.19 | 3.68403 | 314.89 |
| 10 MAR 2017 | 15 | 1.54 | 11.08 | 250.67 | 4.0302 | 307.439 |
| 10 MAR 2017 | 18 | 1.58 | 10.97 | 250.6 | 3.69141 | 311.376 |
| 10 MAR 2017 | 21 | 1.58 | 12.53 | 255.23 | 3.14668 | 279.882 |
| 11 MAR 2017 | 0 | 1.58 | 12.35 | 255.69 | 3.62817 | 258.876 |
| 11 MAR 2017 | 3 | 1.59 | 11.89 | 253.79 | 3.2922 | 236.648 |
| 11 MAR 2017 | 6 | 1.59 | 11.72 | 253.89 | 3.74065 | 208.415 |
| 11 MAR 2017 | 9 | 1.58 | 11.58 | 253.42 | 5.69225 | 178.389 |
| 11 MAR 2017 | 12 | 1.61 | 11.16 | 256.95 | 7.24034 | 179.446 |
| 11 MAR 2017 | 15 | 1.7 | 10.9 | 272.67 | 7.73109 | 180.964 |
| 11 MAR 2017 | 18 | 1.84 | 8.97 | 338.01 | 8.73066 | 195.82 |
| 11 MAR 2017 | 21 | 2.27 | 8.37 | 323.72 | 11.8209 | 190.036 |
| 12 MAR 2017 | 0 | 3.32 | 8.97 | 246.54 | 13.6628 | 206.097 |
| 12 MAR 2017 | 3 | 3.48 | 9.58 | 232.35 | 10.7877 | 244.172 |
| 12 MAR 2017 | 6 | 3.17 | 9.58 | 225.29 | 9.82211 | 251.787 |
| 12 MAR 2017 | 9 | 2.89 | 9.48 | 225.14 | 8.84012 | 244.972 |
| 12 MAR 2017 | 12 | 2.66 | 9.26 | 223.8 | 8.50652 | 244.068 |
| 12 MAR 2017 | 15 | 2.49 | 9.11 | 229.11 | 7.40441 | 233.734 |
| 12 MAR 2017 | 18 | 2.36 | 9.1 | 237.43 | 7.55816 | 213.123 |
| 12 MAR 2017 | 21 | 2.46 | 9.48 | 251.7 | 11.3933 | 205.306 |
| 13 MAR 2017 | 0 | 2.9 | 8.73 | 226.27 | 12.143 | 181.274 |
| 13 MAR 2017 | 3 | 3.87 | 9.88 | 225.6 | 15.2398 | 192.121 |
| 13 MAR 2017 | 6 | 4.7 | 10.58 | 221.03 | 15.4527 | 211.962 |
| 13 MAR 2017 | 9 | 4.22 | 10.73 | 216.37 | 11.4401 | 223.123 |
| 13 MAR 2017 | 12 | 3.9 | 10.25 | 212.87 | 13.1245 | 216.355 |
| 13 MAR 2017 | 15 | 3.94 | 9.77 | 212.75 | 13.6496 | 211 |

| Date | Hours | Wave Height | Wave Period | Wave Direction | Wind Speed | Wind Direction |
|-------------|-------|-------------|-------------|----------------|------------|----------------|
| 13 MAR 2017 | 18 | 3.61 | 9.65 | 215.73 | 9.8195 | 220.292 |
| 13 MAR 2017 | 21 | 3.27 | 9.5 | 223.52 | 10.9244 | 245.617 |
| 14 MAR 2017 | 0 | 3.34 | 9.12 | 228.45 | 12.65 | 238.019 |
| 14 MAR 2017 | 3 | 4.22 | 9.05 | 230.42 | 16.5888 | 209.347 |
| 14 MAR 2017 | 6 | 5.49 | 10.37 | 231.84 | 18.6017 | 219.372 |
| 14 MAR 2017 | 9 | 6.05 | 11.06 | 236.14 | 18.1001 | 238.787 |
| 14 MAR 2017 | 12 | 6.25 | 11.76 | 246.15 | 16.0423 | 235.181 |
| 14 MAR 2017 | 15 | 6.75 | 12.42 | 250.96 | 18.3102 | 229.63 |
| 14 MAR 2017 | 18 | 7.74 | 13.07 | 248.69 | 20.091 | 226.735 |
| 14 MAR 2017 | 21 | 8.47 | 13.86 | 251.92 | 19.4631 | 271.031 |
| 15 MAR 2017 | 0 | 8.98 | 15.12 | 252.9 | 19.8096 | 282.093 |
| 15 MAR 2017 | 3 | 8.86 | 16.19 | 257.02 | 18.8619 | 287.59 |
| 15 MAR 2017 | 6 | 8.13 | 16.07 | 258.01 | 16.5791 | 290.293 |
| 15 MAR 2017 | 9 | 7.46 | 15.3 | 256.09 | 16.6453 | 286.976 |
| 15 MAR 2017 | 12 | 6.88 | 15.13 | 256.11 | 15.7155 | 281.861 |
| 15 MAR 2017 | 15 | 6.31 | 15.08 | 255.99 | 14.4139 | 294.076 |
| 15 MAR 2017 | 18 | 5.98 | 15.15 | 256.25 | 14.0955 | 300.058 |
| 15 MAR 2017 | 21 | 5.75 | 15.17 | 257.4 | 11.5317 | 295.365 |
| 16 MAR 2017 | 0 | 5.48 | 15.18 | 259.26 | 9.29114 | 287.928 |
| 16 MAR 2017 | 3 | 5.14 | 15.14 | 260.92 | 7.32462 | 249.041 |
| 16 MAR 2017 | 6 | 4.77 | 15.03 | 262.27 | 8.08309 | 208.848 |
| 16 MAR 2017 | 9 | 4.56 | 14.55 | 265.44 | 13.838 | 181.947 |
| 16 MAR 2017 | 12 | 5.03 | 14.29 | 270.25 | 15.8545 | 228.043 |
| 16 MAR 2017 | 15 | 5.3 | 10.2 | 258.62 | 14.196 | 233.017 |
| 16 MAR 2017 | 18 | 5.29 | 10.4 | 250.64 | 14.4337 | 229.102 |
| 16 MAR 2017 | 21 | 5.43 | 10.48 | 247.94 | 16.1052 | 221.35 |
| 17 MAR 2017 | 0 | 5.68 | 11.08 | 253.67 | 15.7427 | 229.328 |
| 17 MAR 2017 | 3 | 5.78 | 11.87 | 253.23 | 13.7037 | 227.603 |
| 17 MAR 2017 | 6 | 5.69 | 12.71 | 251.16 | 7.67088 | 290.609 |
| 17 MAR 2017 | 9 | 5.4 | 12.85 | 252.51 | 14.7048 | 331.396 |
| 17 MAR 2017 | 12 | 5.96 | 12.2 | 286.53 | 15.3864 | 339.692 |
| 17 MAR 2017 | 15 | 5.86 | 11.49 | 312.8 | 14.5504 | 335.214 |
| 17 MAR 2017 | 18 | 5.37 | 11.4 | 337.01 | 11.1571 | 337.665 |
| 17 MAR 2017 | 21 | 4.97 | 11.31 | 343.77 | 10.3434 | 354.174 |
| 18 MAR 2017 | 0 | 4.57 | 11.16 | 347.19 | 8.79466 | 354.912 |
| 18 MAR 2017 | 3 | 4.17 | 10.92 | 347.64 | 9.36233 | 345.4 |
| 18 MAR 2017 | 6 | 3.79 | 10.47 | 351.95 | 10.0162 | 328.389 |
| 18 MAR 2017 | 9 | 3.42 | 10.15 | 350.34 | 7.93153 | 331.044 |
| 18 MAR 2017 | 12 | 3.14 | 9.87 | 353.09 | 5.54982 | 341.728 |
| 18 MAR 2017 | 15 | 2.98 | 11.63 | 297.89 | 3.00648 | 11.123 |

| Date | Hours | Wave Height | Wave Period | Wave Direction | Wind Speed | Wind Direction |
|-------------|-------|-------------|-------------|----------------|------------|----------------|
| 18 MAR 2017 | 18 | 2.83 | 11.02 | 329.2 | 1.54434 | 172.184 |
| 18 MAR 2017 | 21 | 2.63 | 10.84 | 324.61 | 6.47114 | 250.501 |
| 19 MAR 2017 | 0 | 2.46 | 10.73 | 320.41 | 8.0673 | 251.049 |
| 19 MAR 2017 | 3 | 2.27 | 10.48 | 335.29 | 4.8974 | 221.109 |
| 19 MAR 2017 | 6 | 2.13 | 10.36 | 331.27 | 3.03041 | 119.018 |
| 19 MAR 2017 | 9 | 2.14 | 10.3 | 330.99 | 4.69669 | 186.112 |
| 19 MAR 2017 | 12 | 2.41 | 10.3 | 333.44 | 11.4657 | 156.945 |
| 19 MAR 2017 | 15 | 2.81 | 10.33 | 332.78 | 13.1975 | 160.755 |
| 19 MAR 2017 | 18 | 3.57 | 10.33 | 256.18 | 14.13 | 180.082 |
| 19 MAR 2017 | 21 | 4.51 | 10.45 | 230.15 | 15.6248 | 196.127 |
| 20 MAR 2017 | 0 | 4.12 | 10.47 | 221.43 | 10.887 | 223.325 |
| 20 MAR 2017 | 3 | 3.69 | 10.22 | 221.11 | 11.717 | 211.316 |
| 20 MAR 2017 | 6 | 3.48 | 9.62 | 217.93 | 10.7909 | 222.86 |
| 20 MAR 2017 | 9 | 3.38 | 9.09 | 218.19 | 11.2944 | 228.051 |
| 20 MAR 2017 | 12 | 3.38 | 8.89 | 228.58 | 11.2923 | 234.297 |
| 20 MAR 2017 | 15 | 3.48 | 13.21 | 262.8 | 11.0748 | 225.951 |
| 20 MAR 2017 | 18 | 3.46 | 12.78 | 261.37 | 8.60243 | 217.443 |
| 20 MAR 2017 | 21 | 3.38 | 12.52 | 264.8 | 8.87169 | 184.008 |
| 21 MAR 2017 | 0 | 3.19 | 12.33 | 269.82 | 5.04232 | 173.509 |
| 21 MAR 2017 | 3 | 3.11 | 12.13 | 283.75 | 6.08135 | 210.867 |
| 21 MAR 2017 | 6 | 3.24 | 11.78 | 302.46 | 3.27318 | 191.276 |
| 21 MAR 2017 | 9 | 3.37 | 11.49 | 317.53 | 5.47837 | 349.695 |
| 21 MAR 2017 | 12 | 3.44 | 11.24 | 330.69 | 10.3056 | 10.2849 |
| 21 MAR 2017 | 15 | 3.26 | 11.12 | 329.6 | 6.63819 | 334.67 |
| 21 MAR 2017 | 18 | 3.14 | 11.14 | 325.47 | 5.72983 | 285.176 |
| 21 MAR 2017 | 21 | 3.2 | 11.39 | 322.95 | 5.82481 | 280.886 |
| 22 MAR 2017 | 0 | 3.4 | 11.74 | 322.16 | 10.2304 | 322.626 |
| 22 MAR 2017 | 3 | 4.07 | 11.59 | 322.41 | 13.0991 | 312.03 |
| 22 MAR 2017 | 6 | 4.81 | 11.17 | 323.85 | 15.6716 | 311.43 |
| 22 MAR 2017 | 9 | 5.14 | 11.12 | 326.09 | 14.5145 | 313.548 |
| 22 MAR 2017 | 12 | 5.02 | 11.08 | 329.36 | 14.4172 | 307.617 |
| 22 MAR 2017 | 15 | 4.84 | 10.92 | 331.64 | 13.8265 | 307.359 |
| 22 MAR 2017 | 18 | 4.59 | 10.72 | 331.18 | 13.0391 | 275.457 |
| 22 MAR 2017 | 21 | 4.44 | 10.41 | 327.1 | 13.6228 | 278.868 |
| 23 MAR 2017 | 0 | 4.16 | 10.19 | 325.87 | 12.3968 | 304.716 |
| 23 MAR 2017 | 3 | 3.89 | 9.79 | 323.2 | 12.9692 | 308.142 |
| 23 MAR 2017 | 6 | 3.79 | 9.68 | 327.58 | 12.1545 | 312.299 |
| 23 MAR 2017 | 9 | 3.72 | 9.93 | 331.74 | 10.6206 | 302.972 |
| 23 MAR 2017 | 12 | 3.65 | 10.34 | 340.22 | 10.6408 | 294.012 |
| 23 MAR 2017 | 15 | 3.51 | 10.44 | 342.56 | 10.2472 | 284.294 |

| Date | Hours | Wave Height | Wave Period | Wave Direction | Wind Speed | Wind Direction |
|-------------|-------|-------------|-------------|----------------|------------|----------------|
| 23 MAR 2017 | 18 | 3.27 | 10.47 | 344.42 | 8.86948 | 272.65 |
| 23 MAR 2017 | 21 | 3.04 | 10.49 | 345.63 | 9.06104 | 252.465 |
| 24 MAR 2017 | 0 | 2.87 | 10.51 | 346.08 | 10.0464 | 227.865 |
| 24 MAR 2017 | 3 | 2.84 | 10.52 | 345.81 | 11.9677 | 213.757 |
| 24 MAR 2017 | 6 | 2.99 | 6.98 | 251.39 | 12.745 | 229.838 |
| 24 MAR 2017 | 9 | 3.48 | 8.03 | 257.85 | 14.3439 | 255.547 |
| 24 MAR 2017 | 12 | 3.98 | 9.05 | 260.62 | 13.9535 | 261.22 |
| 24 MAR 2017 | 15 | 4.49 | 9.64 | 261.41 | 15.8119 | 265.357 |
| 24 MAR 2017 | 18 | 5.01 | 10.33 | 267.72 | 15.42 | 280.122 |
| 24 MAR 2017 | 21 | 5.2 | 10.99 | 274 | 15.2 | 283.662 |
| 25 MAR 2017 | 0 | 5.06 | 11.15 | 274.15 | 14.2773 | 281.515 |
| 25 MAR 2017 | 3 | 4.8 | 11.16 | 273.41 | 13.1684 | 279.441 |
| 25 MAR 2017 | 6 | 4.52 | 11.2 | 273.6 | 11.0103 | 269.584 |
| 25 MAR 2017 | 9 | 4.28 | 11.65 | 273.6 | 11.1921 | 244.717 |
| 25 MAR 2017 | 12 | 4.11 | 11.7 | 276.51 | 11.1757 | 237.163 |
| 25 MAR 2017 | 15 | 4.07 | 11.47 | 279.46 | 13.3404 | 243.608 |
| 25 MAR 2017 | 18 | 4.07 | 10.99 | 281.95 | 13.2553 | 252.618 |
| 25 MAR 2017 | 21 | 4.13 | 10.36 | 281.96 | 14.3805 | 255.462 |
| 26 MAR 2017 | 0 | 4.19 | 10.06 | 280.35 | 13.261 | 264.07 |
| 26 MAR 2017 | 3 | 4.3 | 10.08 | 278.21 | 13.7577 | 277.812 |
| 26 MAR 2017 | 6 | 4.31 | 10.46 | 275.95 | 12.4827 | 283.057 |
| 26 MAR 2017 | 9 | 4.15 | 10.4 | 273.48 | 12.5848 | 287.384 |
| 26 MAR 2017 | 12 | 4.06 | 10.43 | 273.95 | 11.0776 | 288.746 |
| 26 MAR 2017 | 15 | 4.03 | 11.79 | 284.8 | 9.26072 | 281.019 |
| 26 MAR 2017 | 18 | 3.99 | 11.8 | 288.83 | 7.9879 | 263.098 |
| 26 MAR 2017 | 21 | 3.87 | 11.68 | 288.24 | 9.91553 | 235.894 |
| 27 MAR 2017 | 0 | 3.97 | 11.54 | 284.29 | 14.4622 | 256.973 |
| 27 MAR 2017 | 3 | 4.38 | 9.43 | 288.02 | 15.5686 | 260.387 |
| 27 MAR 2017 | 6 | 4.83 | 9.61 | 282.82 | 16.2671 | 278.698 |
| 27 MAR 2017 | 9 | 4.7 | 10.15 | 286.21 | 12.7986 | 320.389 |
| 27 MAR 2017 | 12 | 4.35 | 10.45 | 293.41 | 10.4665 | 325.156 |
| 27 MAR 2017 | 15 | 4.11 | 10.36 | 301.67 | 10.6701 | 320.896 |
| 27 MAR 2017 | 18 | 3.92 | 10.17 | 313.56 | 10.5951 | 320.285 |
| 27 MAR 2017 | 21 | 3.76 | 10.11 | 326.7 | 9.26206 | 323.341 |
| 28 MAR 2017 | 0 | 3.57 | 10.13 | 335.67 | 8.55641 | 325.957 |
| 28 MAR 2017 | 3 | 3.37 | 10.19 | 343 | 8.17373 | 329.325 |
| 28 MAR 2017 | 6 | 3.17 | 10.22 | 349.14 | 8.60556 | 330.098 |
| 28 MAR 2017 | 9 | 2.98 | 10.21 | 352.06 | 8.36646 | 335.947 |
| 28 MAR 2017 | 12 | 2.82 | 10.18 | 353.07 | 7.33501 | 338.402 |
| 28 MAR 2017 | 15 | 2.65 | 10.16 | 352.41 | 3.65821 | 291.656 |

| Date | Hours | Wave Height | Wave Period | Wave Direction | Wind Speed | Wind Direction |
|-------------|-------|-------------|-------------|----------------|------------|----------------|
| 28 MAR 2017 | 18 | 2.58 | 10.12 | 350.27 | 11.3355 | 247.598 |
| 28 MAR 2017 | 21 | 2.66 | 10.05 | 349.44 | 10.163 | 349.11 |
| 29 MAR 2017 | 0 | 2.57 | 9.97 | 357.07 | 9.30415 | 12.6023 |
| 29 MAR 2017 | 3 | 2.44 | 9.92 | 356.93 | 8.48034 | 15.0358 |
| 29 MAR 2017 | 6 | 2.28 | 9.84 | 357.48 | 7.44453 | 17.7534 |
| 29 MAR 2017 | 9 | 2.11 | 9.74 | 358.71 | 4.98001 | 29.6021 |
| 29 MAR 2017 | 12 | 1.97 | 9.63 | 0.17 | 4.14098 | 358.755 |
| 29 MAR 2017 | 15 | 1.86 | 9.51 | 1.46 | 4.07774 | 354.653 |
| 29 MAR 2017 | 18 | 1.76 | 9.37 | 2.62 | 3.73387 | 2.60952 |
| 29 MAR 2017 | 21 | 1.67 | 9.24 | 5.04 | 2.03002 | 36.5876 |
| 30 MAR 2017 | 0 | 1.58 | 9.19 | 6.21 | 1.38636 | 116.565 |
| 30 MAR 2017 | 3 | 1.5 | 9.15 | 7.44 | 2.51803 | 111.674 |
| 30 MAR 2017 | 6 | 1.43 | 9.11 | 8.69 | 3.55449 | 108.027 |
| 30 MAR 2017 | 9 | 1.38 | 9.06 | 9.85 | 5.32504 | 85.6919 |
| 30 MAR 2017 | 12 | 1.39 | 8.98 | 10.95 | 7.38817 | 84.1735 |
| 30 MAR 2017 | 15 | 1.42 | 8.88 | 12.04 | 8.07666 | 77.9942 |
| 30 MAR 2017 | 18 | 1.42 | 8.73 | 11.16 | 7.34277 | 78.292 |
| 30 MAR 2017 | 21 | 1.37 | 14.47 | 254.94 | 6.76462 | 79.4374 |
| 31 MAR 2017 | 0 | 1.31 | 13.98 | 255.83 | 5.65085 | 86.4488 |
| 31 MAR 2017 | 3 | 1.25 | 13.61 | 254.24 | 6.24673 | 92.6607 |
| 31 MAR 2017 | 6 | 1.22 | 13.39 | 253.08 | 6.41752 | 103.884 |
| 31 MAR 2017 | 9 | 1.19 | 13.06 | 253.6 | 6.44922 | 115.929 |
| 31 MAR 2017 | 12 | 1.15 | 12.73 | 252.81 | 5.8644 | 111.402 |
| 31 MAR 2017 | 15 | 1.13 | 12.53 | 252.6 | 5.28916 | 106.927 |
| 31 MAR 2017 | 18 | 1.11 | 12.33 | 252.75 | 4.70958 | 102.383 |
| 31 MAR 2017 | 21 | 1.12 | 11.97 | 250.78 | 6.05007 | 89.7157 |
| 1 APR 2017 | 0 | 1.19 | 11.82 | 250.71 | 7.94529 | 87.9081 |
| 1 APR 2017 | 3 | 1.28 | 11.81 | 250.47 | 8.08381 | 94.3985 |
| 1 APR 2017 | 6 | 1.32 | 11.96 | 249.13 | 8.19625 | 82.71 |
| 1 APR 2017 | 9 | 1.36 | 12.14 | 246.83 | 8.09022 | 90.4247 |
| 1 APR 2017 | 12 | 1.68 | 12.06 | 243.66 | 8.91637 | 93.4719 |
| 1 APR 2017 | 15 | 2.24 | 9.07 | 214.53 | 11.3587 | 76.612 |
| 1 APR 2017 | 18 | 2.64 | 9.05 | 209.86 | 13.2341 | 57.8109 |
| 1 APR 2017 | 21 | 2.57 | 8.9 | 208.84 | 9.76725 | 51.6516 |
| 2 APR 2017 | 0 | 2.35 | 7.36 | 19.34 | 5.65364 | 38.2482 |
| 2 APR 2017 | 3 | 2.17 | 7.36 | 15.68 | 3.19462 | 24.8001 |
| 2 APR 2017 | 6 | 1.99 | 7.23 | 7.05 | 1.44031 | 358.807 |
| 2 APR 2017 | 9 | 1.79 | 7.06 | 11.67 | 0.573847 | 221.468 |
| 2 APR 2017 | 12 | 1.6 | 6.93 | 4.23 | 3.27061 | 208.289 |
| 2 APR 2017 | 15 | 1.44 | 11.47 | 239.12 | 5.17557 | 227.898 |

| Date | Hours | Wave Height | Wave Period | Wave Direction | Wind Speed | Wind Direction |
|------------|-------|-------------|-------------|----------------|------------|----------------|
| 2 APR 2017 | 18 | 1.39 | 11.21 | 239.14 | 7.84712 | 255.008 |
| 2 APR 2017 | 21 | 1.43 | 11.08 | 239.05 | 7.97797 | 248.839 |
| 3 APR 2017 | 0 | 1.54 | 11 | 239.2 | 9.40967 | 226.895 |
| 3 APR 2017 | 3 | 1.86 | 5.66 | 230.13 | 11.6711 | 217.656 |
| 3 APR 2017 | 6 | 2.56 | 6.76 | 230.72 | 14.3569 | 214.443 |
| 3 APR 2017 | 9 | 3.62 | 8.26 | 237.37 | 16.389 | 222.206 |
| 3 APR 2017 | 12 | 4.21 | 9.33 | 235.9 | 15.1319 | 227.464 |
| 3 APR 2017 | 15 | 4.32 | 9.61 | 238.46 | 15.4288 | 223.293 |
| 3 APR 2017 | 18 | 4.38 | 9.69 | 237.56 | 15.1017 | 220.811 |
| 3 APR 2017 | 21 | 4.87 | 10.07 | 238.44 | 17.0564 | 220.292 |
| 4 APR 2017 | 0 | 5.28 | 10.45 | 231.44 | 16.9885 | 214.86 |
| 4 APR 2017 | 3 | 5.68 | 10.82 | 231.07 | 18.0873 | 212.996 |
| 4 APR 2017 | 6 | 6.11 | 11.09 | 225.68 | 18.755 | 218.832 |
| 4 APR 2017 | 9 | 5.54 | 11.19 | 226.39 | 14.6334 | 240.93 |
| 4 APR 2017 | 12 | 5.12 | 11.04 | 231.29 | 14.544 | 234.769 |
| 4 APR 2017 | 15 | 5.2 | 11.09 | 240.46 | 14.9351 | 231.634 |
| 4 APR 2017 | 18 | 5.3 | 11.74 | 248.47 | 13.9061 | 231.746 |
| 4 APR 2017 | 21 | 5.33 | 12.31 | 252.45 | 12.5144 | 231.619 |
| 5 APR 2017 | 0 | 5.25 | 12.6 | 252.96 | 9.59633 | 241.085 |
| 5 APR 2017 | 3 | 5.35 | 13.2 | 253.17 | 4.58862 | 247.851 |
| 5 APR 2017 | 6 | 5.59 | 14.73 | 255.04 | 4.43806 | 352.491 |
| 5 APR 2017 | 9 | 5.59 | 15.37 | 257.36 | 8.68514 | 352.458 |
| 5 APR 2017 | 12 | 5.35 | 15.41 | 258.26 | 7.36887 | 331.731 |
| 5 APR 2017 | 15 | 5.02 | 15.22 | 259.79 | 7.58103 | 315.855 |
| 5 APR 2017 | 18 | 4.62 | 14.86 | 258.95 | 6.99488 | 297.225 |
| 5 APR 2017 | 21 | 4.25 | 14.38 | 261.25 | 8.60232 | 268.668 |
| 6 APR 2017 | 0 | 3.97 | 13.99 | 261.56 | 9.75593 | 268.003 |
| 6 APR 2017 | 3 | 3.8 | 13.45 | 262.79 | 11.1558 | 276.227 |
| 6 APR 2017 | 6 | 3.53 | 13.15 | 263.95 | 7.842 | 285.685 |
| 6 APR 2017 | 9 | 3.19 | 12.57 | 263.57 | 4.83721 | 298.526 |
| 6 APR 2017 | 12 | 2.82 | 12.35 | 263.95 | 4.88374 | 27.0372 |
| 6 APR 2017 | 15 | 2.48 | 11.8 | 264.1 | 4.85732 | 30.1545 |
| 6 APR 2017 | 18 | 2.21 | 11.62 | 263.53 | 3.47807 | 31.3592 |
| 6 APR 2017 | 21 | 2.05 | 11.15 | 261.71 | 2.71662 | 30.5296 |
| 7 APR 2017 | 0 | 2.07 | 10.79 | 256 | 3.29803 | 16.0169 |
| 7 APR 2017 | 3 | 2.12 | 10.3 | 253.48 | 4.80635 | 7.05107 |
| 7 APR 2017 | 6 | 2.13 | 10.09 | 254.84 | 6.84249 | 11.2935 |
| 7 APR 2017 | 9 | 2.11 | 10.2 | 256.91 | 5.15539 | 17.3805 |
| 7 APR 2017 | 12 | 2.08 | 10.31 | 258.5 | 3.1737 | 34.9919 |
| 7 APR 2017 | 15 | 2.05 | 10.36 | 259.73 | 2.43852 | 97.0665 |

| Date | Hours | Wave Height | Wave Period | Wave Direction | Wind Speed | Wind Direction |
|-------------|-------|-------------|-------------|----------------|------------|----------------|
| 7 APR 2017 | 18 | 2.01 | 10.42 | 260.71 | 6.01839 | 155.351 |
| 7 APR 2017 | 21 | 2.03 | 10.48 | 261.25 | 9.34345 | 148.657 |
| 8 APR 2017 | 0 | 2.31 | 10.59 | 261.71 | 14.4974 | 144.687 |
| 8 APR 2017 | 3 | 2.34 | 10.81 | 263.45 | 8.34621 | 223.641 |
| 8 APR 2017 | 6 | 2.68 | 6.99 | 250.8 | 11.6456 | 240.243 |
| 8 APR 2017 | 9 | 3.17 | 7.84 | 255.43 | 13.2444 | 242.332 |
| 8 APR 2017 | 12 | 3.45 | 8.44 | 256.29 | 13.3215 | 240.549 |
| 8 APR 2017 | 15 | 3.41 | 8.78 | 260.56 | 11.5057 | 248.162 |
| 8 APR 2017 | 18 | 3.32 | 9.02 | 259.87 | 10.1706 | 258.889 |
| 8 APR 2017 | 21 | 3.29 | 9.17 | 257.99 | 9.48637 | 259.922 |
| 9 APR 2017 | 0 | 3.38 | 9.27 | 251.41 | 9.30528 | 257.652 |
| 9 APR 2017 | 3 | 3.55 | 9.34 | 243.38 | 9.75574 | 260.084 |
| 9 APR 2017 | 6 | 3.49 | 9.42 | 246.15 | 8.772 | 253.714 |
| 9 APR 2017 | 9 | 3.35 | 11.95 | 258.82 | 8.86996 | 244.562 |
| 9 APR 2017 | 12 | 3.24 | 12.05 | 259.82 | 7.42634 | 235.09 |
| 9 APR 2017 | 15 | 3.24 | 11.77 | 259.13 | 8.96223 | 243.206 |
| 9 APR 2017 | 18 | 3.26 | 11.6 | 258.72 | 10.0627 | 243.945 |
| 9 APR 2017 | 21 | 3.23 | 11.52 | 259.86 | 9.55362 | 252.077 |
| 10 APR 2017 | 0 | 3.06 | 11.55 | 261.75 | 8.42926 | 263.803 |
| 10 APR 2017 | 3 | 2.78 | 11.53 | 262.89 | 8.12326 | 268.378 |
| 10 APR 2017 | 6 | 2.57 | 11.18 | 261.12 | 10.338 | 320.613 |
| 10 APR 2017 | 9 | 2.87 | 7.22 | 287.94 | 13.8014 | 344.665 |
| 10 APR 2017 | 12 | 3.4 | 8.52 | 327.6 | 12.4575 | 346.633 |
| 10 APR 2017 | 15 | 3.42 | 8.72 | 342.72 | 13.093 | 350.149 |
| 10 APR 2017 | 18 | 3.37 | 8.79 | 347.5 | 12.774 | 339.182 |
| 10 APR 2017 | 21 | 3.26 | 8.76 | 351.96 | 12.4115 | 332.609 |
| 11 APR 2017 | 0 | 3.26 | 8.68 | 352.52 | 12.5514 | 329.819 |
| 11 APR 2017 | 3 | 3.23 | 8.72 | 349.78 | 11.8084 | 335.323 |
| 11 APR 2017 | 6 | 3.01 | 8.75 | 346 | 9.4033 | 340.428 |
| 11 APR 2017 | 9 | 2.71 | 8.7 | 349.44 | 6.19935 | 342.734 |
| 11 APR 2017 | 12 | 2.5 | 8.71 | 350.15 | 4.5401 | 332.306 |
| 11 APR 2017 | 15 | 2.36 | 8.84 | 353.07 | 2.56821 | 21.4699 |
| 11 APR 2017 | 18 | 2.23 | 9.05 | 355.93 | 4.70792 | 81.8181 |
| 11 APR 2017 | 21 | 2.1 | 9.18 | 357.92 | 6.41078 | 90.8936 |
| 12 APR 2017 | 0 | 1.99 | 9.16 | 359.74 | 7.83237 | 86.7794 |
| 12 APR 2017 | 3 | 1.89 | 9.06 | 1.55 | 8.35594 | 76.6454 |
| 12 APR 2017 | 6 | 1.81 | 8.92 | 2.84 | 8.06132 | 72.3066 |
| 12 APR 2017 | 9 | 1.74 | 8.73 | 2.17 | 7.75281 | 68.0338 |
| 12 APR 2017 | 12 | 1.74 | 8.49 | 1.97 | 7.45066 | 63.7099 |
| 12 APR 2017 | 15 | 1.89 | 8.38 | 356.04 | 8.49108 | 59.418 |

| Date | Hours | Wave Height | Wave Period | Wave Direction | Wind Speed | Wind Direction |
|-------------|-------|-------------|-------------|----------------|------------|----------------|
| 12 APR 2017 | 18 | 2.13 | 12.04 | 259.23 | 8.22856 | 53.7984 |
| 12 APR 2017 | 21 | 2.25 | 12.14 | 260.91 | 7.6622 | 48.9687 |
| 13 APR 2017 | 0 | 2.24 | 12.27 | 262.2 | 7.20428 | 49.2778 |
| 13 APR 2017 | 3 | 2.14 | 12.38 | 262.6 | 6.73898 | 49.5738 |
| 13 APR 2017 | 6 | 2 | 12.3 | 262.97 | 6.28797 | 49.9026 |
| 13 APR 2017 | 9 | 1.84 | 11.94 | 262.82 | 5.70678 | 54.9174 |
| 13 APR 2017 | 12 | 1.7 | 11.71 | 263.43 | 5.34329 | 41.206 |
| 13 APR 2017 | 15 | 1.58 | 11.47 | 263.72 | 5.59604 | 30.7354 |
| 13 APR 2017 | 18 | 1.45 | 11.06 | 264.08 | 5.12001 | 34.0935 |
| 13 APR 2017 | 21 | 1.35 | 10.87 | 265.06 | 4.49624 | 38.6796 |
| 14 APR 2017 | 0 | 1.26 | 10.47 | 268.2 | 2.20658 | 46.1016 |
| 14 APR 2017 | 3 | 1.22 | 10.24 | 272.81 | 0.427551 | 280.784 |
| 14 APR 2017 | 6 | 1.19 | 10.04 | 278.9 | 1.71397 | 245.529 |
| 14 APR 2017 | 9 | 1.15 | 9.71 | 292.56 | 2.33343 | 263.85 |
| 14 APR 2017 | 12 | 1.09 | 9.51 | 292.41 | 1.34004 | 0.427572 |
| 14 APR 2017 | 15 | 1.02 | 9.35 | 286.14 | 1.87641 | 16.4067 |
| 14 APR 2017 | 18 | 0.96 | 9.2 | 294.82 | 2.36002 | 359.757 |
| 14 APR 2017 | 21 | 0.91 | 9.23 | 284.31 | 2.75224 | 351.222 |
| 15 APR 2017 | 0 | 0.9 | 9.37 | 269.27 | 3.02764 | 333.52 |
| 15 APR 2017 | 3 | 0.97 | 9.33 | 274.37 | 4.41454 | 71.647 |
| 15 APR 2017 | 6 | 1.18 | 10.24 | 264.1 | 8.91569 | 75.7142 |
| 15 APR 2017 | 9 | 1.39 | 5.11 | 63.27 | 8.76298 | 68.0892 |
| 15 APR 2017 | 12 | 1.53 | 5.37 | 75.03 | 9.06987 | 86.2067 |
| 15 APR 2017 | 15 | 1.61 | 5.52 | 75.02 | 9.36464 | 82.761 |
| 15 APR 2017 | 18 | 1.59 | 10.34 | 263.52 | 8.56862 | 80.8673 |
| 15 APR 2017 | 21 | 1.53 | 10.31 | 263.96 | 8.14924 | 71.765 |
| 16 APR 2017 | 0 | 1.42 | 10.33 | 264.07 | 6.9677 | 63.7658 |
| 16 APR 2017 | 3 | 1.31 | 10.41 | 263.58 | 6.99272 | 65.0473 |
| 16 APR 2017 | 6 | 1.26 | 10.39 | 263.29 | 7.06219 | 64.233 |
| 16 APR 2017 | 9 | 1.25 | 10.28 | 264.15 | 7.58544 | 69.3907 |
| 16 APR 2017 | 12 | 1.25 | 10.17 | 265.41 | 6.7639 | 74.5664 |
| 16 APR 2017 | 15 | 1.2 | 5.25 | 84.94 | 6.45827 | 62.7206 |
| 16 APR 2017 | 18 | 1.08 | 9.74 | 266.31 | 5.76535 | 57.8259 |
| 16 APR 2017 | 21 | 0.94 | 9.58 | 267 | 5.55404 | 52.903 |
| 17 APR 2017 | 0 | 0.86 | 9.38 | 268.56 | 5.82864 | 43.4705 |
| 17 APR 2017 | 3 | 0.86 | 9.02 | 274.3 | 6.46778 | 40.6108 |
| 17 APR 2017 | 6 | 0.88 | 4.22 | 74.71 | 6.41589 | 46.5788 |
| 17 APR 2017 | 9 | 0.97 | 4.18 | 66.15 | 7.49646 | 51.6624 |
| 17 APR 2017 | 12 | 1.11 | 4.32 | 61.43 | 8.29946 | 61.7365 |
| 17 APR 2017 | 15 | 1.21 | 4.56 | 59.01 | 8.35407 | 60.7654 |

| Date | Hours | Wave Height | Wave Period | Wave Direction | Wind Speed | Wind Direction |
|-------------|-------|-------------|-------------|----------------|------------|----------------|
| 17 APR 2017 | 18 | 1.19 | 7.07 | 341.95 | 7.16964 | 56.6644 |
| 17 APR 2017 | 21 | 1.11 | 6.92 | 341.11 | 6.04239 | 51.5178 |
| 18 APR 2017 | 0 | 1 | 6.85 | 345.39 | 4.41255 | 45.5508 |
| 18 APR 2017 | 3 | 0.9 | 6.91 | 350.98 | 3.2379 | 30.8423 |
| 18 APR 2017 | 6 | 0.82 | 7 | 355.18 | 2.09976 | 18.6075 |
| 18 APR 2017 | 9 | 0.77 | 7.01 | 359.28 | 1.08784 | 29.1568 |
| 18 APR 2017 | 12 | 0.72 | 6.95 | 3 | 0.0223607 | 333.435 |
| 18 APR 2017 | 15 | 0.67 | 6.86 | 5.36 | 2.24591 | 169.74 |
| 18 APR 2017 | 18 | 0.62 | 6.77 | 6.21 | 3.52512 | 183.09 |
| 18 APR 2017 | 21 | 0.67 | 6.74 | 5.43 | 6.32286 | 181.722 |
| 19 APR 2017 | 0 | 0.84 | 6.93 | 1.25 | 7.36644 | 213.539 |
| 19 APR 2017 | 3 | 1.3 | 4.47 | 236.84 | 10.6614 | 215.957 |
| 19 APR 2017 | 6 | 2.01 | 5.94 | 231.98 | 13.0371 | 212.788 |
| 19 APR 2017 | 9 | 3.07 | 7.43 | 229.63 | 15.7444 | 219.149 |
| 19 APR 2017 | 12 | 3.54 | 8.45 | 233.34 | 13.5272 | 246.657 |
| 19 APR 2017 | 15 | 3.64 | 8.77 | 241.96 | 13.6307 | 256.249 |
| 19 APR 2017 | 18 | 3.41 | 8.7 | 244.4 | 11.8845 | 253.929 |
| 19 APR 2017 | 21 | 3.17 | 8.37 | 245.86 | 12.8716 | 229.38 |
| 20 APR 2017 | 0 | 3.66 | 8.27 | 240.52 | 16.2094 | 226 |
| 20 APR 2017 | 3 | 4.43 | 9.24 | 245.21 | 16.5106 | 251.203 |
| 20 APR 2017 | 6 | 4.65 | 9.84 | 252.82 | 14.7772 | 271.784 |
| 20 APR 2017 | 9 | 4.93 | 10.15 | 262.2 | 16.443 | 264.241 |
| 20 APR 2017 | 12 | 5.42 | 10.53 | 267.21 | 17.2809 | 264.121 |
| 20 APR 2017 | 15 | 6.25 | 11.11 | 272.33 | 19.5559 | 268.594 |
| 20 APR 2017 | 18 | 6.67 | 11.81 | 276.06 | 17.9708 | 270.542 |
| 20 APR 2017 | 21 | 7.05 | 12.29 | 280.27 | 19.328 | 276.059 |
| 21 APR 2017 | 0 | 6.66 | 12.36 | 281.21 | 16.476 | 282.265 |
| 21 APR 2017 | 3 | 5.96 | 11.87 | 279.92 | 15.7953 | 281.467 |
| 21 APR 2017 | 6 | 5.43 | 11.57 | 277.28 | 14.6355 | 292.412 |
| 21 APR 2017 | 9 | 5.13 | 11.11 | 278.28 | 14.704 | 289.507 |
| 21 APR 2017 | 12 | 4.76 | 11 | 273.89 | 12.6945 | 306.383 |
| 21 APR 2017 | 15 | 4.41 | 11.12 | 271.15 | 12.4863 | 352.175 |
| 21 APR 2017 | 18 | 4.53 | 10.95 | 274.49 | 14.5325 | 351.691 |
| 21 APR 2017 | 21 | 5.15 | 10.86 | 313.12 | 14.0633 | 350.009 |
| 22 APR 2017 | 0 | 5.41 | 11.34 | 334.61 | 13.694 | 346.4 |
| 22 APR 2017 | 3 | 5.04 | 11.45 | 344.03 | 12.0611 | 341.835 |
| 22 APR 2017 | 6 | 4.42 | 11.19 | 352.03 | 9.77325 | 334.484 |
| 22 APR 2017 | 9 | 3.9 | 10.92 | 358.16 | 8.53408 | 326.422 |
| 22 APR 2017 | 12 | 3.59 | 10.74 | 1.89 | 9.69701 | 319.014 |
| 22 APR 2017 | 15 | 3.52 | 10.67 | 0.88 | 10.5534 | 318.303 |

| Date | Hours | Wave Height | Wave Period | Wave Direction | Wind Speed | Wind Direction |
|-------------|-------|-------------|-------------|----------------|------------|----------------|
| 22 APR 2017 | 18 | 3.68 | 10.72 | 359.71 | 10.9805 | 320.395 |
| 22 APR 2017 | 21 | 3.99 | 10.87 | 357.06 | 12.283 | 317.805 |
| 23 APR 2017 | 0 | 4.26 | 10.99 | 354.03 | 13.0815 | 313.111 |
| 23 APR 2017 | 3 | 4.4 | 10.96 | 350.14 | 13.6054 | 311.753 |
| 23 APR 2017 | 6 | 4.44 | 10.83 | 346.81 | 14.2952 | 311.114 |
| 23 APR 2017 | 9 | 4.33 | 10.57 | 339.78 | 13.3753 | 308.138 |
| 23 APR 2017 | 12 | 4.03 | 10.31 | 340.26 | 12.6611 | 306.101 |
| 23 APR 2017 | 15 | 3.57 | 10.12 | 340.78 | 10.4394 | 301.406 |
| 23 APR 2017 | 18 | 3.14 | 9.74 | 336.96 | 9.76534 | 297.904 |
| 23 APR 2017 | 21 | 2.8 | 9.48 | 337.11 | 8.59679 | 297.579 |
| 24 APR 2017 | 0 | 2.56 | 9.18 | 333.1 | 8.81385 | 292.55 |
| 24 APR 2017 | 3 | 2.37 | 8.96 | 333.58 | 7.41082 | 286.381 |
| 24 APR 2017 | 6 | 2.16 | 8.77 | 334.91 | 3.96093 | 247.903 |
| 24 APR 2017 | 9 | 1.97 | 8.49 | 334.37 | 3.37083 | 200.855 |
| 24 APR 2017 | 12 | 1.83 | 8.32 | 336.73 | 4.24417 | 153.857 |
| 24 APR 2017 | 15 | 1.78 | 8.17 | 339.7 | 2.04431 | 149.42 |
| 24 APR 2017 | 18 | 1.88 | 8.14 | 342.41 | 3.52841 | 37.7467 |
| 24 APR 2017 | 21 | 2.04 | 8.4 | 348.73 | 7.54456 | 37.5685 |
| 25 APR 2017 | 0 | 2.1 | 8.54 | 351.36 | 7.17056 | 44.3219 |
| 25 APR 2017 | 3 | 2.04 | 8.43 | 352.95 | 7.4415 | 39.766 |
| 25 APR 2017 | 6 | 2.03 | 8.29 | 353.3 | 8.6181 | 26.0893 |
| 25 APR 2017 | 9 | 2.07 | 8.21 | 350.91 | 8.39145 | 25.4046 |
| 25 APR 2017 | 12 | 2.06 | 8.29 | 346.53 | 7.52325 | 16.05 |
| 25 APR 2017 | 15 | 2.08 | 8.55 | 341.86 | 7.15052 | 10.9642 |
| 25 APR 2017 | 18 | 2.26 | 8.77 | 334.41 | 7.68146 | 1.11891 |
| 25 APR 2017 | 21 | 2.47 | 8.78 | 334.13 | 9.38631 | 352.224 |
| 26 APR 2017 | 0 | 2.55 | 8.59 | 337.76 | 9.39012 | 348.451 |
| 26 APR 2017 | 3 | 2.49 | 8.34 | 341.76 | 10.9172 | 347.784 |
| 26 APR 2017 | 6 | 2.33 | 7.99 | 343.35 | 10.1254 | 347.103 |
| 26 APR 2017 | 9 | 2.03 | 7.62 | 342.79 | 7.89415 | 336.878 |
| 26 APR 2017 | 12 | 1.71 | 7.34 | 349.46 | 5.1514 | 318.699 |
| 26 APR 2017 | 15 | 1.46 | 7.07 | 346.21 | 3.58352 | 326.842 |
| 26 APR 2017 | 18 | 1.27 | 6.92 | 354.62 | 0.964624 | 19.3741 |
| 26 APR 2017 | 21 | 1.19 | 6.83 | 357.84 | 5.12096 | 38.817 |
| 27 APR 2017 | 0 | 1.38 | 7.05 | 347.32 | 6.70009 | 21.3567 |
| 27 APR 2017 | 3 | 1.63 | 7.23 | 330.67 | 7.63263 | 13.8724 |
| 27 APR 2017 | 6 | 1.73 | 7.06 | 343.37 | 7.35612 | 20.2825 |
| 27 APR 2017 | 9 | 1.69 | 7.03 | 343.78 | 5.96273 | 29.1012 |
| 27 APR 2017 | 12 | 1.63 | 7.11 | 343.55 | 6.79768 | 48.9963 |
| 27 APR 2017 | 15 | 1.62 | 7.19 | 335.52 | 7.99876 | 42.3651 |

| Date | Hours | Wave Height | Wave Period | Wave Direction | Wind Speed | Wind Direction |
|-------------|-------|-------------|-------------|----------------|------------|----------------|
| 27 APR 2017 | 18 | 1.64 | 7.09 | 346.03 | 7.48086 | 49.2823 |
| 27 APR 2017 | 21 | 1.6 | 6.99 | 348.55 | 6.99085 | 59.767 |
| 28 APR 2017 | 0 | 1.5 | 8.44 | 294.66 | 5.70419 | 77.5473 |
| 28 APR 2017 | 3 | 1.36 | 8.33 | 290.54 | 4.87641 | 87.0611 |
| 28 APR 2017 | 6 | 1.24 | 8.19 | 288.97 | 4.97989 | 98.8946 |
| 28 APR 2017 | 9 | 1.18 | 7.93 | 292.01 | 6.55806 | 110.065 |
| 28 APR 2017 | 12 | 1.14 | 7.8 | 290.71 | 6.06506 | 113.31 |
| 28 APR 2017 | 15 | 1.16 | 7.71 | 287.4 | 7.68464 | 106.713 |
| 28 APR 2017 | 18 | 1.22 | 7.59 | 292.8 | 8.03443 | 107.082 |
| 28 APR 2017 | 21 | 1.4 | 4.68 | 104.5 | 9.99528 | 113.59 |
| 29 APR 2017 | 0 | 1.64 | 5.29 | 109.44 | 10.9567 | 114.249 |
| 29 APR 2017 | 3 | 1.87 | 5.79 | 114.07 | 11.7631 | 115.693 |
| 29 APR 2017 | 6 | 1.86 | 6.03 | 116.13 | 10.2822 | 117.263 |
| 29 APR 2017 | 9 | 1.82 | 5.99 | 116.24 | 10.4289 | 118.211 |
| 29 APR 2017 | 12 | 1.71 | 6.01 | 114.01 | 8.60021 | 118.472 |
| 29 APR 2017 | 15 | 1.54 | 5.94 | 110.8 | 7.29847 | 112.559 |
| 29 APR 2017 | 18 | 1.37 | 9.78 | 262.44 | 4.34632 | 104.388 |
| 29 APR 2017 | 21 | 1.33 | 12.6 | 265.16 | 3.78001 | 102.529 |
| 30 APR 2017 | 0 | 1.39 | 12.3 | 263.48 | 1.70751 | 84.6231 |
| 30 APR 2017 | 3 | 1.43 | 11.83 | 261.76 | 1.96787 | 62.7837 |
| 30 APR 2017 | 6 | 1.42 | 11.53 | 260.21 | 3.07026 | 61.1809 |
| 30 APR 2017 | 9 | 1.41 | 11.09 | 258.81 | 2.81192 | 48.3156 |
| 30 APR 2017 | 12 | 1.46 | 10.94 | 257.93 | 2.67619 | 16.9453 |
| 30 APR 2017 | 15 | 1.54 | 14.11 | 264.69 | 2.25719 | 4.57391 |
| 30 APR 2017 | 18 | 1.6 | 13.6 | 264.75 | 3.10556 | 313.304 |
| 30 APR 2017 | 21 | 1.61 | 13.08 | 264.73 | 3.43111 | 304.431 |
| 1 MAY 2017 | 0 | 1.58 | 12.7 | 264.82 | 3.79722 | 295.755 |
| 1 MAY 2017 | 6 | 1.38 | 12.04 | 262.2 | 4.6379 | 299.163 |
| 1 MAY 2017 | 12 | 1.22 | 11.52 | 256.33 | 2.4052 | 279.815 |
| 1 MAY 2017 | 18 | 1.09 | 10.86 | 252.98 | 0.942022 | 279.163 |
| 2 MAY 2017 | 0 | 0.98 | 10.34 | 252.1 | 2.65277 | 54.5124 |
| 2 MAY 2017 | 6 | 1.01 | 9.63 | 252.53 | 3.11448 | 47.6025 |
| 2 MAY 2017 | 12 | | | | | |
| 2 MAY 2017 | 18 | 1.25 | 8.33 | 13.8 | 2.88361 | 66.2794 |
| 3 MAY 2017 | 0 | 1.25 | 8.55 | 17.7 | 3.68209 | 52.7254 |
| 3 MAY 2017 | 6 | 1.21 | 8.82 | 19.3 | 5.08178 | 48.9094 |
| 3 MAY 2017 | 12 | | | | | |
| 3 MAY 2017 | 18 | 1.03 | 8.71 | 18.66 | 5.26758 | 57.245 |
| 4 MAY 2017 | 0 | | | | | |
| 4 MAY 2017 | 6 | 0.95 | 12.19 | 255.81 | 2.9111 | 23.4828 |

| Date | Hours | Wave Height | Wave Period | Wave Direction | Wind Speed | Wind Direction |
|-------------|-------|-------------|-------------|----------------|------------|----------------|
| 4 MAY 2017 | 12 | 1.06 | 12.39 | 248.84 | 2.10038 | 268.909 |
| 4 MAY 2017 | 18 | 1.21 | 11.89 | 247.78 | 5.23508 | 280.344 |
| 5 MAY 2017 | 0 | 1.41 | 13.23 | 245.98 | 6.56186 | 276.475 |
| 5 MAY 2017 | 6 | 1.55 | 12.88 | 244.56 | 6.03878 | 293.211 |
| 5 MAY 2017 | 12 | | | | | |
| 5 MAY 2017 | 18 | 1.41 | 11.98 | 242.63 | 5.26031 | 312.149 |
| 6 MAY 2017 | 0 | | | | | |
| 6 MAY 2017 | 6 | 1.66 | 8.3 | 326.89 | 8.5164 | 51.7709 |
| 6 MAY 2017 | 12 | 1.77 | 7.79 | 321.86 | 9.0076 | 42.8855 |
| 6 MAY 2017 | 18 | 1.79 | 6.21 | 13.36 | 8.91738 | 29.1232 |
| 7 MAY 2017 | 0 | 1.86 | 6.54 | 8.71 | 9.43663 | 24.0118 |
| 7 MAY 2017 | 6 | 1.85 | 7.01 | 2.43 | 9.16773 | 17.9803 |
| 7 MAY 2017 | 12 | 2.03 | 6.87 | 5.25 | 10.4374 | 16.6466 |
| 7 MAY 2017 | 18 | 2.31 | 7.44 | 13.61 | 10.7413 | 11.3831 |
| 8 MAY 2017 | 0 | | | | | |
| 8 MAY 2017 | 6 | 1.97 | 8.5 | 18.01 | 5.38799 | 355.316 |
| 8 MAY 2017 | 12 | 1.73 | 8.46 | 15.77 | 6.95221 | 342.764 |
| 8 MAY 2017 | 18 | 1.57 | 8.3 | 16.43 | 6.82144 | 358.824 |
| 9 MAY 2017 | 0 | | | | | |
| 9 MAY 2017 | 6 | 1.33 | 8.31 | 19.08 | 5.15476 | 39.8055 |
| 9 MAY 2017 | 12 | 1.21 | 8.29 | 19.37 | 5.0316 | 73.726 |
| 9 MAY 2017 | 18 | 1.17 | 8.2 | 18.86 | 6.89046 | 57.3246 |
| 10 MAY 2017 | | | | | | |
| 10 MAY 2017 | 6 | 1.42 | 7.73 | 16.3 | 8.48401 | 75.6687 |
| 10 MAY 2017 | 12 | 1.5 | 7.42 | 11.16 | 8.2632 | 67.0653 |
| 10 MAY 2017 | 18 | 1.5 | 7.48 | 9.71 | 8.69503 | 58.8327 |
| 11 MAY 2017 | 0 | | | | | |
| 11 MAY 2017 | 6 | 1.44 | 7.44 | 13.03 | 7.74974 | 51.9174 |
| 11 MAY 2017 | 12 | 1.35 | 7.41 | 14.65 | 6.66601 | 53.2331 |
| 11 MAY 2017 | 18 | 1.2 | 7.28 | 15.24 | 6.15314 | 46.1851 |
| 12 MAY 2017 | 0 | 1.08 | 7.05 | 13.68 | 6.02992 | 47.4194 |
| 12 MAY 2017 | 6 | 1.03 | 7.31 | 1.44 | 5.43033 | 53.7631 |
| 12 MAY 2017 | 12 | 0.98 | 7.24 | 359.11 | 5.60247 | 56.2814 |
| 12-May-17 | 18 | 0.92 | 7 | 2.56 | 5.26339 | 59.3908 |
| 13 MAY 2017 | 0 | 0.88 | 6.82 | 5.23 | 6.01838 | 59.7708 |
| 13 MAY 2017 | 6 | 0.89 | 6.62 | 4.6 | 6.69931 | 63.2053 |
| 13 MAY 2017 | 12 | 1.03 | 6.48 | 6.21 | 7.86634 | 69.5376 |
| 13 MAY 2017 | 18 | 1.38 | 4.89 | 75.49 | 10.4293 | 63.8279 |
| 14 MAY 2017 | 0 | 1.8 | 5.8 | 66.44 | 11.7824 | 68.3339 |
| 14 MAY 2017 | 6 | 2.03 | 6.35 | 57.29 | 11.9244 | 66.3154 |

| Date | Hours | Wave Height | Wave Period | Wave Direction | Wind Speed | Wind Direction |
|-------------|-------|-------------|-------------|----------------|------------|----------------|
| 14 MAY 2017 | 12 | 1.89 | 6.42 | 49.88 | 10.4649 | 63.1899 |
| 14 MAY 2017 | 18 | 1.65 | 6.15 | 45.16 | 9.12513 | 67.9886 |
| 15 MAY 2017 | 0 | | | | | |

7.2 Appendix 2

Asgard A FPSO

