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Metocean Monitoring Buoy Final Data Report Walker Ridge Block 29, Gulf of Mexico

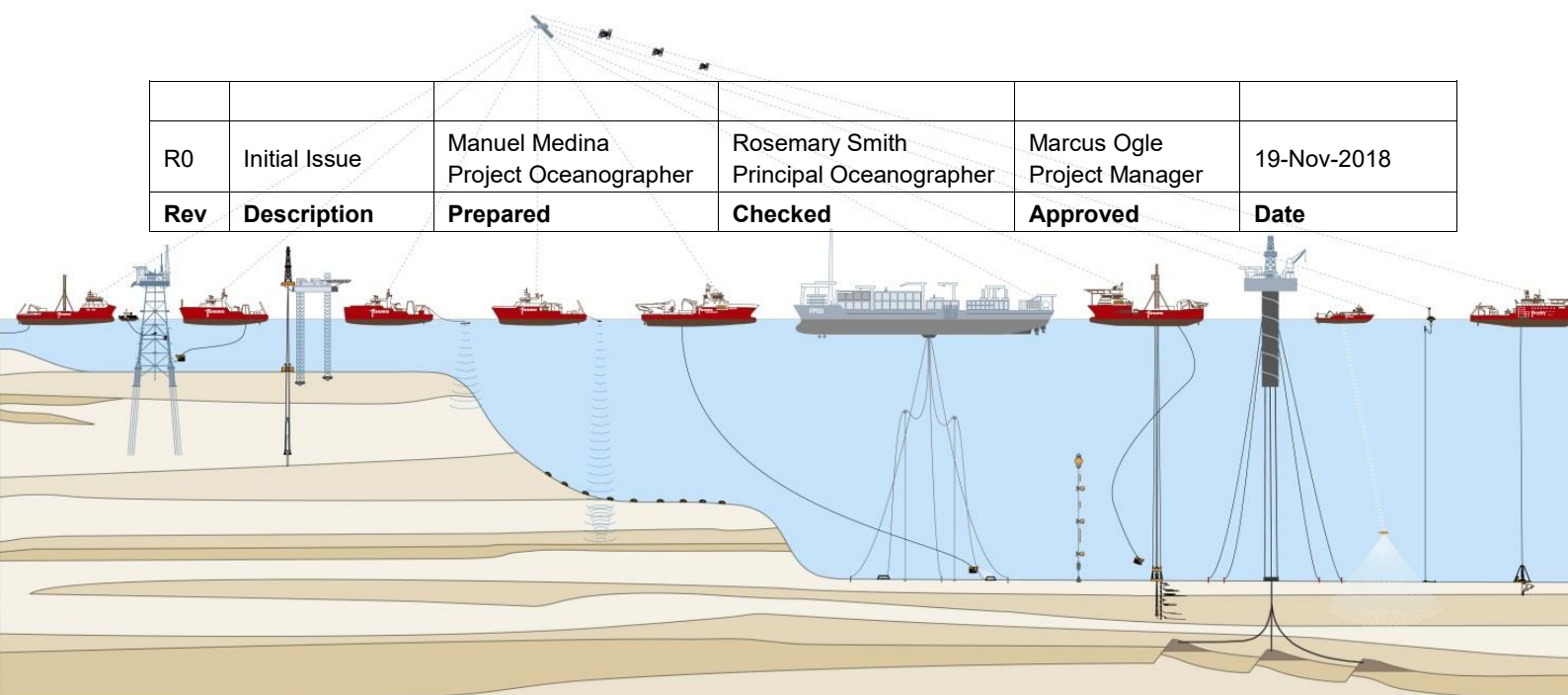
18 December 2017 to 20 October 2018
Fugro Project No.: 112564-0158-R0

Chevron USA Inc.



Volume 1 of 1

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ABBREVIATIONS

Abbreviations used in this report are defined below:

ADCP	Acoustic Doppler Current Profiler
ASB	Above Seabed
CDT	Central Daylight Time
DORT	Deep Oceanographic Release Transponder
FAT	Factory Acceptance Test
FPSO	Floating Production Storage and Offloading
GPS	Global Positioning System
HSEQ	Health, Safety, Environment and Quality
JSA	Job Safety Analysis
LC	Loop Current
LCE	Loop Current Eddy
LUMCON	Louisiana Universities Marine Consortium
MSL	Mean Sea Level
PMU	Power Management Unit
QC	Quality Control
R/V	Research Vessel
TBT	Toolbox Talk
UTC	Coordinated Universal Time
WGS84	World Geodetic System, 1984

EXECUTIVE SUMMARY

Fugro is pleased to provide this metocean measurement data report to Chevron USA Inc, hereafter referred to as the Client, for the provision of a buoy-based metocean monitoring system to monitor near-surface Loop Current and Loop Current Eddy and near bottom current conditions in the Walker Ridge area of the US Gulf of Mexico (GoM).

These measurements were made over a period of 10 months to provide weather monitoring support to the Big Foot Development located in the Walker Ridge area, Block 29 of the US GoM. Mobilisation of the metocean instrumentation took place on 18 December 2017, with the demobilisation on 20 October 2017. A service visit was undertaken at approximately 4 months, between 7 and 9 April 2018. Throughout the course of the first four-month measurement phase beginning on 18 December 2017, one contingency visit was completed. The visit, from 27 to 29 December 2017, was to get the near bed 300 kHz and 600 kHz ADCPs to transmit in real time. Throughout the course of the second six-month measurement phase beginning on 9 April 2018, one contingency visit was completed. The visit, from 13 to 14 June 2018, was to change the batteries of the modems.

Summary Table i: Measurement Location

Time of Deployment	Deployment Position [WGS84]		Water Depth [m]	Deployment Period
	Latitude	Longitude		
18-Dec-2017	26° 54' 2.58"	90° 29' 7.62"	2032	18-Dec-2017 22:45 to 07-Apr-2018 14:30
09-Apr-2018	26° 54' 57.18"	90° 30' 7.14"	1971	09-Apr-2018 20:30 to 20-Oct-2018 15:00

The metocean monitoring instrumentation comprised both surface and subsea instruments. At the surface was a Wavescan buoy with a meteorological mast. In the hull of the wavescan buoy, the mooring had an Aquadopp, then at 10 m depth, a downward oriented 75 kHz ADCP. Close to the seabed was an upward oriented 300 kHz ADCP at 24 m above sea bed (asb), and a downward oriented 600 kHz ADCP at 22 m asb. Summary Table 3.1 within section 3 summarizes the specifications of the mooring instrumentation.

The Wavescan buoy was configured to measure wave height, period and direction. The meteorological sensors measured air temperature, wind speed, and direction at 4 m height. The Aquadopp, at 1 m depth, measured current speed and direction from 6 to 82 m below the surface. The downward-looking 75 kHz ADCP, at 10 m depth, measured current speed and direction from 42 m to approximately 422 m below surface. The upward-looking 300 kHz ADCP, at 1947 m depth and the downward-looking 600 kHz ADCP, at 1949 m depth, measured current speed and direction for the lower 150 m above sea bed.

The maximum current speed during the 10 months of measurements was 1.28 m/s recorded by the Aquadopp at 22 m below MSL on 28-Mar-2018 at 12:30 UTC with an associated direction of 341°T. The current maxima had associated directions towards the north-northwest. Mean current speed at this level was 0.34 m/s with mean speeds gradually decreasing down the water column to 0.1 m/s at 1966 m. Overall current progression was towards the northwest to southwest throughout the full water column.

In the lower 100 m of the water column, multiple high current speed events were observed. These events are likely attributed to topographic rossby waves influencing the site. The maximum current speed observed during such an event was 0.68 m/s recorded by the 300 kHz ADCP at 1998 m below MSL (34 m above the seabed) on 28-Mar-2018 at 02:00 UTC with an associated direction of 207°T

Summary Table ii: Statistics of Current Parameters

Bin Number	Depth Below MSL [m]	Current Speed [m/s]		Direction of Maximum [° T]	Date and Time of Maximum (UTC)
		Maximum	Mean		
1	6	1.20	0.32	346	28-Mar-2018 12:30
5	22	1.28	0.34	341	28-Mar-2018 12:30
15	62	1.20	0.34	339	19-Mar-2018 09:30
21	102	1.15	0.42	330	21-Mar-2018 07:20
28	242	0.65	0.28	338	14-Apr-2018 13:10
33	342	0.57	0.23	331	07-Apr-2018 09:10
42	1914	0.63	0.12	217	20-Mar-2018 09:00
46	1934	0.67	0.13	207	20-Mar-2018 03:00
50	1954	0.66	0.13	210	20-Mar-2018 02:00
59	1963	0.64	0.12	210	20-Mar-2018 02:00

The maximum significant wave height was 5.7 m and the maximum Hmax was 9.4 m. Waves were predominantly from the southeast, with the highest wave heights coming from the southeast.

Summary Table iii: Statistics of Wave Parameters

Wave Parameter	Max	Mean	Min	Direction at Time of Max [° T]	Date and Time of Max (UTC)	Date and Time of Min (UTC)
Hmax [m]	9.4	1.6	0.3	107	10-Oct-2018 03:00	29-Apr-2018 13:00
Hs [m]	5.7	1.0	0.1	107	10-Oct-2018 03:00	19-Sep-2018 11:00
Tp [s]	14.3	5.9	2.1	-	10-Oct-2018 04:00	14-Jul-2018 09:00
Tz [s]	10.2	4.4	2.7	-	10-Oct-2018 06:00	14-Jul-2018 12:30

The maximum measured wind speed was 16.8 m/s, from the north direction. The predominant wind direction was from the southeast, although winds were variable in nature, with a fairly even directional spread of the higher winds.

Summary Table iii: Statistics of Meteorological Parameters

Met Parameter (at measured height)	Max	Mean	Min	Direction at Time of Max [° T]	Date and Time of Max (UTC)	Date and Time of Min (UTC)
10-min Wind Speed at 10 m [m/s]	16.8	6.1	0.1	004	03-Jan-2018 11:30	06-May-2018 11:00
Wind Gust at 10 m [m/s]	23.7	8.0	0.7	-	12-Jan-2018 06:30	08-May-2018 06:30
Air Temp [°C]	25.5	21.8	10.1	-	18-Mar-2018 17:00	17-Jan-2018 20:30

Ranging between 33.2°C and 22.6°C, the temperature of the surface waters reflects the seasonal change of winter and summer as the weather patterns change and temperatures warm.

Summary Table iv: Statistics of Seawater Temperature

Instrument	Depth below MSL [m]	Seawater Temperature			Date and Time of Maximum (UTC)	Date and Time of Minimum (UTC)
		Max	Mean	Min		
Aquadopp	0.5	33.2	27.3	22.6	16-Jul-2018 22:20	17-Jan-2018 13:00
75 kHz ADCP	10	30.2	25.8	22.5	17-Jul-2018 04:40	17-Jan-2018 13:20
300 kHz ADCP	1947	4.2	4.2	4.1	14-Mar-2018 03:30	16-Apr-2018 17:30
600 kHz ADCP	1949	4.3	4.2	4.2	20-Sep-2018 18:00	10-Jan-2018 11:00



FRONTISPIECE

1. INTRODUCTION

1.1 Background

Fugro is pleased to provide this metocean measurement data report to Chevron USA Inc, hereafter referred to as the Client, for the provision of a buoy-based metocean monitoring system to monitor near-surface Loop Current and Loop Current Eddy and near bottom current conditions in the Walker Ridge area of the US Gulf of Mexico (GoM).

The surface Wavescan buoy was configured to measure wind speed and direction, wind gust, air temperature, and sea surface current speed and direction, in addition to measuring wave parameters. Below the buoy, a downward-looking Aquadopp, at 1 m depth, measured current speed and direction from 6 to 82 m below the surface. The downward-looking 75 kHz ADCP, at 10 m depth, measured current speed and direction from 42 m to approximately 422 m below surface. The upward-looking 300 kHz ADCP, at 2008 m depth and the downward-looking 600 kHz ADCP, at 2010 m depth. Near real-time data were set to transmit hourly from the buoy via Iridium with Inmarsat as backup. The data linked to the Fugro Metis website and was accessible worldwide with privileged access.

During the mobilization in December 2017, the mooring was anchored at position 26° 54' 2.58"N, 090° 29' 7.62" W in a water depth of 2032 m. Throughout the course of this six-month measurement phase, one contingency visit was completed. The visit, from 27 to 29 December 2017, was to get the near bed 300 kHz and 600 kHz ADCPs to transmit in real time. Figure 1 shows the as-laid mooring location.

Summary Table 1.1 Measurement Locations

Time of Deployment	Deployment Position [WGS84]		Water Depth [m]	Deployment Period [UTC]
	Latitude [N]	Longitude [W]		
18-Dec-2017	26° 54' 2.58"	90° 29' 7.62"	2032	18-Dec-2017 22:45 to 07-Apr-2018 14:30
09-Apr-2018	26° 54' 57.18"	90° 30' 7.14"	1971	09-Apr-2018 20:30 to 20-Oct-2018 15:00

1.2 Report Structure

This report is presented in accordance with the specification set out in the Fugro recommendations for standard presentation and reporting of measured metocean data.

Units, conventions and other parameter definitions used in this report are described in Section 2. Instrumentation, operations are described in Section 3. Section 4 outlines the methods employed in analysing the data, as well as instrument performance and post QC data return. Section 5 details the presentations. An initial discussion of the data is given in Section 6. Tables and figures are included after the main body of the text, preceded by the list of contents. Specific technical details are presented in a series of appendices, which conclude this report.



2. FRAME OF REFERENCE

2.1 Units and Conventions

The following list outlines the units and conventions used in this study. Where possible, units have been expressed using SI convention.

- Wind speeds are expressed in metres per second (m/s).
- Wind directions are expressed as compass points (N, NNE, NE, etc) or in degrees, measured clockwise from True North (unless otherwise stated), and describe the direction **from** which the wind is flowing.
- Vertical elevations in the water column are expressed in metres (m). Depths are quoted below Mean Sea Level (MSL) and heights are quoted above the seabed (ASB).
- Wave heights are expressed in metres (m).
- Wave directions are expressed in degrees, measured clockwise **from** true north (unless otherwise stated), and describe the direction **from** which the waves are propagating.
- Current speeds are expressed in metres per second (m/s).
- Current directions are expressed as compass points (N, NNE, NE etc) or in degrees, measured clockwise from True North (unless otherwise stated), and describe the direction **towards** which the current is flowing.
- Seawater temperatures are expressed in degrees Celsius (°C).
- All times are quoted in UTC.
- All positions are relative to the World Geodetic System, 1984 (WGS84).

2.2 Parameter Descriptions

The following section provides summary descriptions of all parameters measured during the survey program.

Summary Table 2.1 Parameter Definitions

Parameter	Units	Comments
Wind Speed	m/s	Mean wind speed from specified sensor corrected to 10 m above sea level.
Wind Direction	from	Mean wind direction from specified sensor.
Wind Gust	m/s	Highest 60-second wind speed in 10 min averaging period from specified sensor corrected to 10m above sea level.
Air Temperature	°C	Ambient air temperature.
Significant Wave Height (Hs)	m	Average of highest one-third of all waves.
Maximum Wave Height (Hmax)	m	Height of highest wave in averaging period.
Mean Wave Direction (Mdir)	from	Mean wave direction.
Mean Wave Direction, high frequencies (ThHf)	from	Mean direction of high-frequency band (wind-sea waves).
Mean Wave Direction at Tp (ThTp)	from	Direction of peak period wave.
Zero Upcrossing Period (Tz)	s	Mean zero crossing period of all waves.
Peak Period (Tp)	s	Peak wave period.
Directional Wave Spread (SprTp/Speak)	from	Directional wave spreading at Tp.
Current Speed	m/s	Mean current speed at specified depths.
Current Direction	towards	Mean current direction at specified depths.

3. DESCRIPTION OF OPERATIONS

3.1 Instrumentation

During the mobilization in December 2017, the mooring was anchored at position 26° 54' 2.58"N, 090° 29' 7.62" W in a water depth of 2032 m. The mooring was redeployed at position 26° 54' 57.18 "N, 090° 30 ' 7.14" W in a water depth of 1971 m to measure current, wave and wind parameters and seawater temperature. Summary Table 3.1 below shows the instruments deployed along with the deployment depth, sampling interval and parameters measured for the mooring.

Summary Table 3.1 Instrument Details

	Instrument	Depth below /Height above MSL [m]	Height ASB [m]	Sampling Period [seconds]	Averaging Period [minutes]	Recording Interval [minutes]	Measured Parameters
Wavescan	Gill Wind Sonic	4.0	-	600, 60 (gust)	10	10	Wind Speed/Direction
	Oceanor Air 588	4.0	-	2	2	10	Air Temperature
	Wavesense	0	2032	1	34	60	Waves
Subsea	400kHz Aquadopp	1.0	2031	600	6	10	Current Speed/Direction, Temperature
	RDI Longranger 75kHz	10	2023	600	10	10	Current Speed/Direction, Temperature
	RDI Workhorse 300kHz	2008	24	1800	30	30	Current Speed/Direction, Temperature
	RDI Workhorse 600kHz	2010	22	1800	30	30	Current Speed/Direction, Temperature

Measurement location is shown in the Frontispiece and Figure 1, with the mooring configuration shown in Figure 2. The instrument logsheets are presented in Appendix A.



4. DATA ANALYSIS AND QUALITY CONTROL

4.1 Quality Control

Data were transferred to the Fugro GEOS server for quality control, processing, and analysis. The main features of the routine data quality control procedures are outlined in this section. For this report, the following have been undertaken on each dataset:

- Application of amended start and end times to remove invalid data recorded during mooring deployment, drift, and recovery.
- Comparison of valid data with logsheet start and end times to ensure no timing drifts occurred.
- Application of 0.38°W for magnetic declination to convert all directional data from magnetic to True North.
- Removal of all zeros.
- Final inspection of data quality by an experienced oceanographer to identify and remove any remaining anomalous values outside of the physical limits of the region.

Typically, quality control parameters for the ADCP data are included in the raw dataset. These parameters include error and vertical velocity, percent good pings, echo intensity and beam correlation values.

4.2 Instrument Performance

The table below provides the post QC data return percentages from 18 December 2017 to 20 October 2018.

Summary Table 4.1 Post QC Data Return Rates

Instrument or Parameter	Post QC Data Return [%]
Air Temperature	99.1
Aquadopp	95.7
75 kHz ADCP	92.4
300 kHz ADCP	82.4
600 kHz ADCP	86.5
Wave Parameters	99.8
Wind Parameters	99.1

5. PRESENTATION OF RESULTS

Quality controlled data for all instruments are presented in this report. Error flagged records have been removed from all data analyses and presentations.

Summary Table 5.1 Summary of Presentations

Table/Figure	Description
Table 1	Summary Statistics of Current Measurements
Table 2	Summary Statistics of Meteorological, Wave and Sea Temperature Parameters
Table 3.1 to 3.10	Joint Frequency Distributions of Current Speed and Direction (10 selected levels)
Tables 4.1	Joint Frequency Distributions of Wind Speed and Direction
Tables 5.1 to 5.2	Joint Frequency Distributions of Wave Parameters
Figure 1	Mooring Location Map
Figure 2	Mooring Configuration Diagram
Figures 3.1.1 to 3.11.6	Time Series of Composite Current Speed and Direction (10 selected levels)
Figures 4.1 to 4.11	Colour Flood Plot of Current Speed and Direction
Figures 5.1 to 5.10	Current Rose Plot (10 selected levels)
Figures 6.1 to 6.10	Current Polar Scatter Plot (10 selected levels)
Figures 7.1 to 7.11	Time Series of Meteorological Parameters
Figures 8.1	Wind Rose Plot
Figures 9.1 to 9.11	Time Series of Wave Parameters
Figures 10.1	Wave Rose Plot
Figures 11.1 to 11.8	Time Series of QC Parameters for 75 kHz ADCP
Figures 12.1 to 12.11	Time Series of QC Parameters for 300 kHz ADCP
Figures 13.1 to 13.11	Time Series of QC Parameters for 600 kHz ADCP

6. DISCUSSION

6.1 Regional Description

The currents in the Gulf of Mexico are dominated by the Loop Current (LC) with its associated eddies. The LC is an area of warm water that typically flows northward between Cuba and the Yucatan Peninsula into the Gulf, loops in a clockwise direction to the east and south, and finally exits via the Florida Straits to join the Gulf Stream. The general position of the LC is variable with maximum current speeds exceeding 2 m/s. Even more variable are the large warm-core eddies that separate from the main LC and propagate westward towards the continental shelf. Monitoring these Loop Current Eddies (LCE) and their predicted paths are of great importance to the offshore industry.

Although average winds are lower during the spring and summer than during the autumn and winter, tropical storms can occur generating extreme conditions, typically between July and November. Most hurricanes form out in the western Atlantic and move into the Gulf region if the right conditions prevail. However, a small percentage of hurricanes are generated within the Gulf itself; these are commonly known as sudden hurricanes. Between October and February, 'northers' can occur, where cold air from the Rocky Mountains moves south and out over the Gulf.

Most of the waves in the northern Gulf are less than 5 m in height, with periods usually below 8 secs. This, together with the tendency for the wave direction to follow that of the wind, suggests that the waves are generated locally rather than produced by distant storms. Severe storms can result in wave heights exceeding 10 m in the northern Gulf.

6.2 Results

The maximum current speed during the ten months of measurements was 1.28 m/s recorded by the Aquadopd at 22 m below MSL on 28-Mar-2018 at 12:30 UTC with an associated direction of 341°T. The current maxima had associated directions towards the north-northwest. Mean current speed at this level was 0.41 m/s with mean speeds gradually decreasing down the water column to 0.1 m/s at 1966 m. Overall current progression was towards the northwest to southwest throughout the full water column. Looking at both sea surface temperature and sea surface height satellite data during the same timeframe suggests a Loop Current eddy (LCE) was responsible for the current speed maximum.

In the lower 100 m of the water column, multiple high current speed events were observed. These events are likely attributed to topographic rossby waves influencing the site. The maximum current speed observed during such an event was 0.68 m/s recorded by the 300 kHz ADCP at 1998 m below MSL (34 m above the seabed) on 28-Mar-2018 at 02:00 UTC with an associated direction of 207°T

Summary Table 6.1 Statistics of Current Parameters [Selected bins]

Bin Number	Depth Below MSL [m]	Current Speed [m/s]		Direction of Maximum [° T]	Date and Time of Maximum (UTC)
		Maximum	Mean		
1	6	1.20	0.32	346	28-Mar-2018 12:30
5	22	1.28	0.34	341	28-Mar-2018 12:30
15	62	1.20	0.34	339	19-Mar-2018 09:30

21	102	1.15	0.42	330	21-Mar-2018 07:20
28	242	0.65	0.28	338	14-Apr-2018 13:10
33	342	0.57	0.23	331	07-Apr-2018 09:10
42	1914	0.63	0.12	217	20-Mar-2018 09:00
46	1934	0.67	0.13	207	20-Mar-2018 03:00
50	1954	0.66	0.13	210	20-Mar-2018 02:00
59	1963	0.64	0.12	210	20-Mar-2018 02:00

The maximum significant wave height was 5.7 m and the maximum Hmax was 9.4 m. Waves were predominantly from the southeast, with the highest wave heights coming from the southeast. Comparing the associated dates and times of these parameter maximums with other meteorological parameters, such as wind gusts, the results suggest the maximums are generated by fronts passing through the region.

Summary Table 6.2 Statistics of Wave Parameters

Wave Parameter	Max	Mean	Min	Direction at Time of Max [° T]	Date and Time of Max (UTC)	Date and Time of Min (UTC)
Hmax [m]	9.4	1.6	0.3	107	10-Oct-2018 03:00	29-Apr-2018 13:00
Hs [m]	5.7	1.0	0.1	107	10-Oct-2018 03:00	19-Sep-2018 11:00
Tp [s]	14.3	5.9	2.1	-	10-Oct-2018 04:00	14-Jul-2018 09:00
Tz [s]	10.2	4.4	2.7	-	10-Oct-2018 06:00	14-Jul-2018 12:30

The maximum measured wind speed was 16.8 m/s, from the north direction. The predominant wind direction was from the southeast, although winds were variable in nature, with a fairly even directional spread of the higher winds.

Summary Table 6.3 Statistics of Meteorological Parameters

Met Parameter (at measured height)	Max	Mean	Min	Direction at Time of Max [° T]	Date and Time of Max (UTC)	Date and Time of Min (UTC)
10-min Wind Speed at 10 m [m/s]	16.8	6.1	0.1	004	03-Jan-2018 11:30	06-May-2018 11:00
Wind Gust at 10 m [m/s]	23.7	8.0	0.7	-	12-Jan-2018 06:30	08-May-2018 06:30
Air Temp [°C]	25.5	21.8	10.1	-	18-Mar-2018 17:00	17-Jan-2018 20:30



Ranging between 33.2°C and 22.6°C, the temperature of the surface waters reflects the seasonal change of winter and summer as the weather patterns change and temperatures warm.

Summary Table 6.4 Statistics of Seawater Temperature

Instrument	Depth below MSL [m]	Seawater Temperature [° C]			Date and Time of Maximum (UTC)	Date and Time of Minimum (UTC)
		Max	Mean	Min		
Aquadopp	0.5	33.2	27.3	22.6	16-Jul-2018 22:20	17-Jan-2018 13:00
75 kHz ADCP	10	30.2	25.8	22.5	17-Jul-2018 04:40	17-Jan-2018 13:20
300 kHz ADCP	1947	4.2	4.2	4.1	14-Mar-2018 03:30	16-Apr-2018 17:30
600 kHz ADCP	1949	4.3	4.2	4.2	20-Sep-2018 18:00	10-Jan-2018 11:00

TABLES

Current Summary Statistics

Table 1: Current Speed and Direction, 18-Dec-2017 to 20-Oct-2018

Metocean Parameter Statistics

Table 2: Metocean Parameters, 18-Dec-2017 to 20-Oct-2018

Joint Frequency Distribution of Current Speed and Direction

Table 3.1: Level 1 (6 m below MSL, 1965 m above Seabed)

Table 3.2: Level 5 (22 m below MSL, 1949 m above Seabed)

Table 3.3: Level 15 (62 m below MSL, 1909 m above Seabed)

Table 3.4: Level 21 (102 m below MSL, 1869 m above Seabed)

Table 3.5: Level 28 (242 m below MSL, 1729 m above Seabed)

Table 3.6: Level 33 (342 m below MSL, 1629 m above Seabed)

Table 3.7: Level 42 (1914 m below MSL, 57 m above Seabed)

Table 3.8: Level 46 (1934 m below MSL, 37 m above Seabed)

Table 3.9: Level 50 (1954 m below MSL, 17 m above Seabed)

Table 3.10: Level 59 (1963 m below MSL, 8 m above Seabed)

Joint Frequency Distribution of Meteorological Parameters

Table 4.1: Wind Speed and Direction, 18-Dec-2017 to 20-Oct-2018

Joint Frequency Distribution of Wave Parameters

Table 5.1: Significant Wave Height/Mean Wave Direction, 18-Dec-2017 to 20-Oct-2018

Table 5.2: Significant Wave Height/Peak Period, 18-Dec-2017 to 20-Oct-2018



Current Summary Statistics

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Level	Depth below MSL [m]	Height above Bed [m]	Current Speed [m/s]			Direction of Current Max [°True]	Date and Time of Max Current	% Post QC Data Return
			Max	Mean	STD			
1	6	1965	1.20	0.32	0.21	346	28-Mar-2018 12:30	94.4
2	10	1961	1.04	0.30	0.21	332	07-Mar-2018 12:00	91.5
3	14	1957	1.18	0.34	0.23	339	28-Mar-2018 09:50	95.5
4	18	1953	1.24	0.34	0.23	342	28-Mar-2018 12:20	95.5
5	22	1949	1.28	0.34	0.23	341	28-Mar-2018 12:30	95.7
6	26	1945	1.22	0.34	0.23	338	25-Mar-2018 12:50	95.8
7	30	1941	1.22	0.34	0.23	339	25-Mar-2018 12:00	95.9
8	34	1937	1.23	0.34	0.22	336	25-Mar-2018 10:20	95.9
9	38	1933	1.24	0.34	0.22	336	25-Mar-2018 10:10	96.2
10	42	1929	1.24	0.34	0.22	335	25-Mar-2018 10:30	96.4
11	46	1925	1.23	0.34	0.22	333	25-Mar-2018 10:00	96.3
12	50	1921	1.23	0.34	0.23	334	25-Mar-2018 10:30	96.3
13	54	1917	1.22	0.34	0.23	338	19-Mar-2018 10:10	96.4
14	58	1913	1.22	0.34	0.22	340	19-Mar-2018 09:00	96.8
15	62	1909	1.20	0.34	0.22	339	19-Mar-2018 09:30	96.8
16	66	1905	1.18	0.33	0.22	348	22-Mar-2018 03:30	97.0
17	70	1901	1.16	0.33	0.22	347	22-Mar-2018 03:30	96.4
18	74	1897	1.27	0.32	0.22	273	26-Mar-2018 07:40	95.5
19	78	1893	1.20	0.32	0.21	266	26-Mar-2018 07:50	95.0
20	82	1889	1.24	0.31	0.20	247	26-Mar-2018 08:10	94.5
21	102	1869	1.15	0.42	0.21	330	21-Mar-2018 07:20	67.0
22	122	1849	0.99	0.40	0.19	328	21-Mar-2018 11:00	67.3
23	142	1829	0.90	0.37	0.17	332	24-Mar-2018 22:40	67.5
24	162	1809	0.86	0.35	0.15	112	20-May-2018 18:10	67.2
25	182	1789	0.85	0.33	0.14	111	20-May-2018 14:40	67.1
26	202	1769	0.77	0.31	0.13	110	20-May-2018 14:30	67.8
27	222	1749	0.70	0.30	0.12	338	14-Apr-2018 13:10	67.9
28	242	1729	0.65	0.28	0.11	338	14-Apr-2018 13:10	67.9
29	262	1709	0.63	0.27	0.10	339	14-Apr-2018 13:10	67.8
30	282	1689	0.61	0.26	0.10	339	14-Apr-2018 13:10	67.9
31	302	1669	0.61	0.24	0.09	350	08-Jan-2018 13:50	67.8
32	322	1649	0.57	0.24	0.09	341	14-Apr-2018 13:10	67.8

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BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



33	342	1629	0.57	0.23	0.09	331	07-Apr-2018 09:10	67.9
34	362	1609	0.55	0.22	0.08	346	14-Apr-2018 13:10	67.5
35	382	1589	0.61	0.21	0.08	012	08-Jan-2018 17:50	65.6
36	402	1569	0.60	0.20	0.08	329	15-Apr-2018 08:50	51.2
37	422	1549	0.44	0.15	0.09	030	14-Jan-2018 04:20	10.4
38	1894	77	0.60	0.19	0.13	216	20-Mar-2018 09:00	19.1
39	1899	72	0.62	0.15	0.11	206	20-Mar-2018 05:00	42.6
40	1904	67	0.63	0.14	0.11	216	20-Mar-2018 09:00	71.6
41	1909	62	0.63	0.12	0.11	217	20-Mar-2018 09:00	96.3
42	1914	57	0.63	0.12	0.11	216	20-Mar-2018 09:00	99.1
43	1919	52	0.64	0.12	0.11	216	20-Mar-2018 09:00	99.1
44	1924	47	0.64	0.13	0.11	216	20-Mar-2018 09:00	99.1
45	1929	42	0.65	0.13	0.11	208	20-Mar-2018 02:30	99.1
46	1934	37	0.67	0.13	0.11	207	20-Mar-2018 03:00	99.1
47	1939	32	0.67	0.13	0.11	207	20-Mar-2018 02:00	99.1
48	1952	19	0.66	0.13	0.11	210	20-Mar-2018 02:30	99.1
49	1953	18	0.67	0.13	0.11	210	20-Mar-2018 02:00	99.1
50	1954	17	0.66	0.13	0.11	210	20-Mar-2018 02:00	99.1
51	1955	16	0.65	0.13	0.11	209	20-Mar-2018 02:00	99.1
52	1956	15	0.66	0.13	0.11	209	20-Mar-2018 02:00	99.1
53	1957	14	0.65	0.13	0.11	209	20-Mar-2018 02:00	99.1
54	1958	13	0.65	0.13	0.11	209	20-Mar-2018 02:00	99.1
55	1959	12	0.65	0.13	0.11	210	20-Mar-2018 02:00	99.1
56	1960	11	0.64	0.13	0.11	210	20-Mar-2018 02:00	99.1
57	1961	10	0.64	0.13	0.10	209	20-Mar-2018 02:00	99.1
58	1962	9	0.65	0.13	0.10	209	20-Mar-2018 02:30	99.0
59	1963	8	0.64	0.12	0.10	210	20-Mar-2018 02:00	95.5
60	1964	7	0.62	0.12	0.10	205	19-Mar-2018 21:30	72.4
61	1966	5	0.40	0.10	0.08	210	26-Dec-2017 03:00	34.5
62	1967	4	0.38	0.11	0.08	235	18-Jul-2018 09:30	55.1
63	1968	3	0.36	0.11	0.07	234	18-Jul-2018 09:30	34.8

Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: Aquadopp, 75kHz ADCP, 600kHz ADCP, 300kHz ADCP	
Notes:		

Table 1: Current Speed and Direction, 18-Dec-2017 to 20-Oct-2018

Metocean Parameter Statistics

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



Parameter	Max	Mean	Min	STD	Direction of Max [°True]	Date and Time of Max	Date and Time of Min	% Post QC Data Return
Wind Speed Sensor [m/s] at 10 m	16.8	6.1	0.1	2.86	004	03-Jan-2018 11:30	06-May-2018 11:00	99.1
Wind Gust Sensor [m/s] at 10 m*	23.7	8.0	0.7	3.59	-	12-Jan-2018 06:30	08-May-2018 06:30	99.1
Air Temperature [°C] (Elev: 4)	25.5	21.8	10.1	3.40	-	18-Mar-2018 17:00	17-Jan-2018 20:30	100.0
Hmax [m]	9.4	1.6	0.3	1.01	107	10-Oct-2018 03:00	29-Apr-2018 13:00	97.1
Hs [m]	5.7	1.0	0.1	0.66	107	10-Oct-2018 03:00	19-Sep-2018 11:00	99.1
Tp [s]	14.3	5.9	2.1	1.47	-	10-Oct-2018 04:00	14-Jul-2018 09:00	99.1
Tz [s]	10.2	4.4	2.7	0.80	-	10-Oct-2018 06:00	14-Jul-2018 12:30	99.1
Sea Temperature [°C] (Depth: 0.5)	33.2	27.3	22.6	2.71	-	16-Jul-2018 22:20	17-Jan-2018 13:00	98.1
Sea Temperature [°C] (Depth: 10)	30.2	25.8	22.5	2.09	-	17-Jul-2018 04:40	17-Jan-2018 13:20	67.9
Sea Temperature [°C] (Depth: 1947)	4.2	4.2	4.1	0.03	-	14-Mar-2018 03:30	16-Apr-2018 17:30	99.1
Sea Temperature [°C] (Depth: 1949)	4.3	4.2	4.2	0.02	-	20-Sep-2018 18:00	10-Jan-2018 11:00	99.1

Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: Mets, Wavescan, Aquadopp, 75kHz ADCP, 600kHz ADCP, 300kHz ADCP	
Notes:		

Table 2: Metocean Parameters, 18-Dec-2017 to 20-Oct-2018

Joint Frequency Distribution of Current Speed and Direction

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



Total	16.72	9.78	4.74	8.77	8.83	6.13	5.97	6.95	6.36	5.22	4.65	15.89	100.00	
1.2	<0.01												<0.01	
1.1	0.02											0.04	0.06	0.06
1.0	0.09											0.09	0.18	0.24
0.9	0.12							0.08	0.04			0.32	0.56	0.80
0.8	0.24			0.01				0.09	0.15			1.01	1.50	2.31
0.7	0.60	0.04		0.19	0.10	0.03		0.25	0.14		0.02	1.54	2.91	5.21
0.6	1.80	0.13	0.04	1.01	0.67	0.24		0.32	0.22	0.04	0.07	1.25	5.79	11.01
0.5	2.70	0.16	0.24	1.75	1.60	0.70	0.03	0.50	0.26	0.07	0.03	1.94	9.96	20.97
0.4	3.54	0.83	0.45	1.34	1.85	0.55	0.35	0.53	0.60	0.27	0.15	2.51	12.98	33.95
0.3	2.01	2.26	0.45	1.24	1.32	0.61	0.50	0.67	0.82	1.01	0.76	1.88	13.53	47.48
0.2	2.14	2.81	0.89	0.74	0.71	0.85	1.43	1.30	1.07	1.21	1.15	2.13	16.43	63.91
0.1	1.97	2.28	1.48	1.05	1.09	1.63	1.88	1.64	1.79	1.30	1.43	1.95	19.48	83.39
0.0	1.49	1.27	1.19	1.43	1.50	1.51	1.78	1.57	1.27	1.33	1.04	1.23	16.61	
	345	015	045	075	105	135	165	195	225	255	285	315	Total %	Exceed %
	Direction [°True]													

Location: Bigfoot Wavescan	Valid records: 41539
Position: 26° 54.954' N, 090° 30.120' W	Missing records: 2479
Instrument type: Aquadopp	Calms/below threshold: 7
Analysis period: 18-Dec-2017 22:50:00 to 20-Oct-2018 15:00:00	Water depth: 1971 m
Notes:	

Table 3.1: Level 1 (6 m below MSL, 1965 m above Seabed)

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



Total	15.62	8.07	4.79	8.30	9.10	7.02	7.45	8.82	6.17	4.74	4.21	15.71	100.00	
1.2	<0.01											<0.01	0.01	0.01
1.1	0.04											0.12	0.16	0.18
1.0	0.10											0.41	0.51	0.69
0.9	0.14							<0.01	0.01			0.93	1.09	1.78
0.8	0.19			0.12	0.12			0.14	0.10		<0.01	1.56	2.23	4.01
0.7	1.03			0.35	0.42	0.06		0.21	0.15			2.02	4.23	8.24
0.6	1.33	0.08	0.07	1.05	1.10	0.25		0.36	0.25	<0.01	0.02	1.76	6.27	14.51
0.5	3.41	0.26	0.15	1.69	1.70	0.37	0.06	0.39	0.36	0.12	0.05	1.67	10.23	24.74
0.4	3.39	1.19	0.67	1.28	1.98	1.00	0.28	0.40	0.49	0.49	0.15	1.55	12.85	37.59
0.3	1.82	2.01	0.65	0.71	1.07	1.01	0.71	0.89	0.47	0.92	0.59	1.38	12.22	49.81
0.2	1.61	2.03	0.73	0.79	0.62	1.02	1.61	2.27	1.17	0.97	1.24	1.76	15.83	65.64
0.1	1.71	1.71	1.43	1.14	0.80	1.88	3.25	2.83	2.01	1.21	1.34	1.72	21.04	86.68
0.0	0.84	0.78	1.08	1.19	1.30	1.43	1.55	1.34	1.15	1.02	0.82	0.83	13.32	
	345	015	045	075	105	135	165	195	225	255	285	315	Total %	Exceed %
	Direction [°True]													

Location: Bigfoot Wavescan	Valid records: 42122
Position: 26° 54.954' N, 090° 30.120' W	Missing records: 1896
Instrument type: Aquadopp	Calms/below threshold: 3
Analysis period: 18-Dec-2017 22:50:00 to 20-Oct-2018 15:00:00	Water depth: 1971 m
Notes:	

Table 3.2: Level 5 (22 m below MSL, 1949 m above Seabed)

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BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT

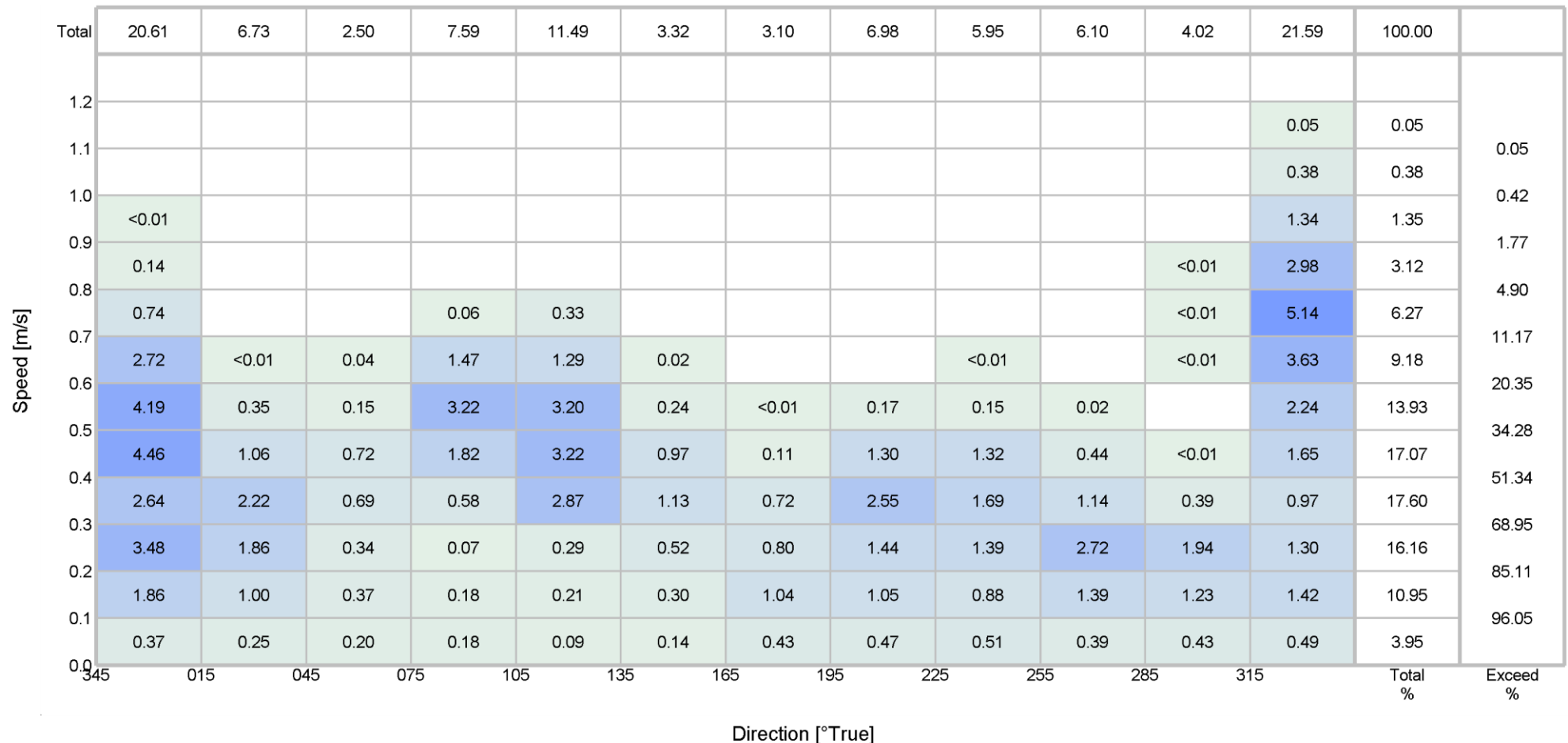


Total	15.36	7.50	5.64	7.40	9.97	5.73	6.52	9.46	5.04	5.10	5.51	16.77	100.00	
1.2	0.03											0.08	0.11	0.11 0.49 1.52 3.85 7.24 13.32 23.17 36.87 49.25 64.38 86.61
1.1	0.01									<0.01	0.02	0.35	0.38	
1.0	0.04									0.01	<0.01	0.97	1.03	
0.9	0.15								<0.01	0.02	0.06	2.10	2.33	
0.8	0.51			0.28	0.13			0.03	<0.01	0.03	0.09	2.31	3.39	
0.7	1.63		0.04	1.43	0.49		<0.01	0.13	0.03	0.02	0.08	2.23	6.08	
0.6	2.47	0.21	0.25	1.54	2.77	0.40	0.06	0.30	0.26	0.01	0.03	1.54	9.84	
0.5	3.63	1.01	0.53	1.28	2.23	0.86	0.24	1.48	0.72	0.18	0.09	1.46	13.71	
0.4	1.60	1.72	0.57	0.41	1.62	0.69	0.50	1.47	0.65	1.47	0.55	1.11	12.38	
0.3	2.24	1.97	1.43	0.28	0.37	0.58	1.08	1.82	0.89	1.16	1.78	1.54	15.13	
0.2	2.09	1.83	1.85	0.98	1.15	1.77	2.85	3.03	1.58	1.32	1.76	1.99	22.22	86.61
0.1	0.95	0.76	0.96	1.20	1.21	1.42	1.79	1.20	0.90	0.88	1.04	1.08	13.39	
0.0	345	015	045	075	105	135	165	195	225	255	285	315	Total %	Exceed %
Direction [°True]														

Location: Bigfoot Wavescan	Valid records: 42602
Position: 26° 54.954' N, 090° 30.120' W	Missing records: 1416
Instrument type: Aquadopp	Calms/below threshold: 4
Analysis period: 18-Dec-2017 22:50:00 to 20-Oct-2018 15:00:00	Water depth: 1971 m
Notes:	

Table 3.3: Level 15 (62 m below MSL, 1909 m above Seabed)

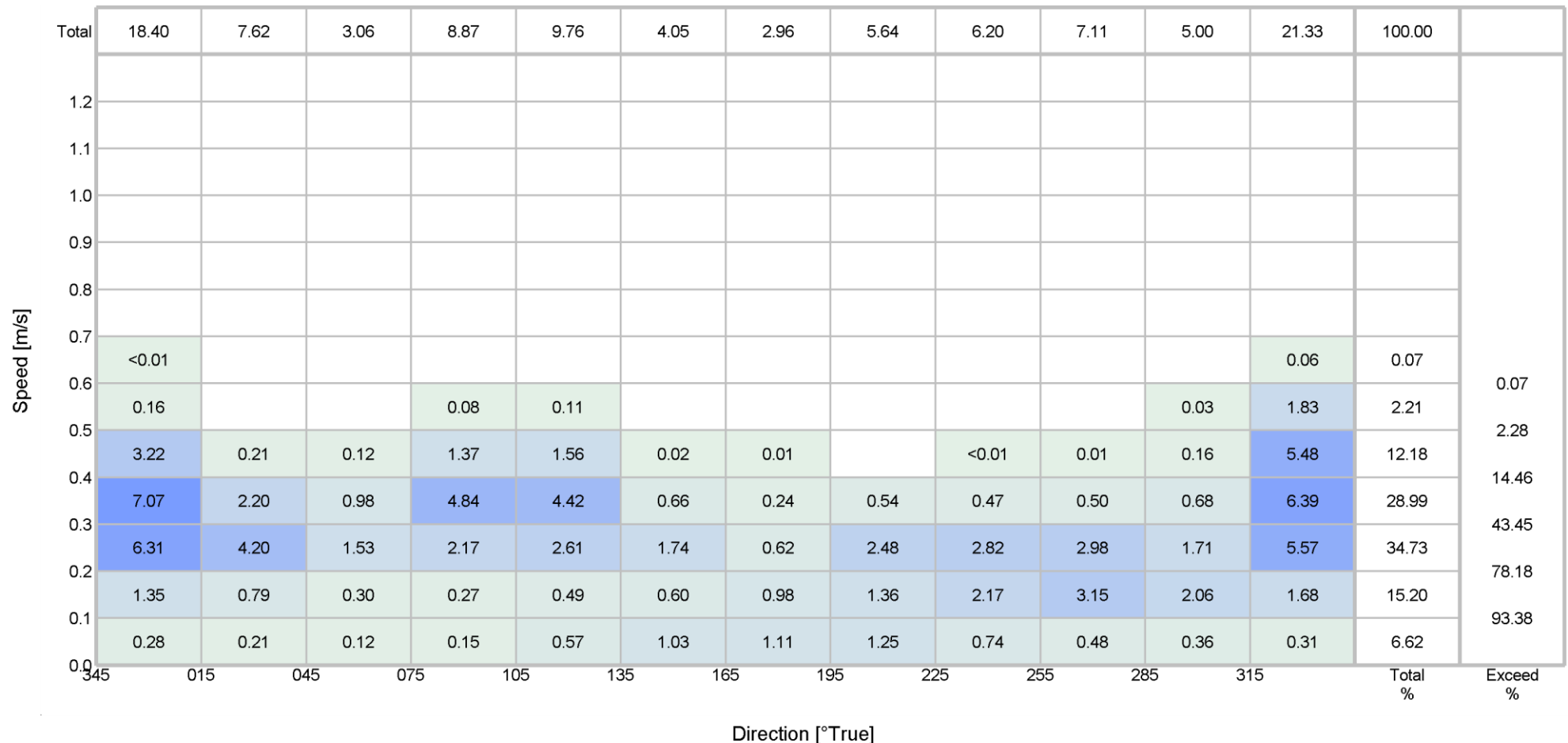
CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



Location: Bigfoot Wavescan	Valid records: 29474
Position: 26° 54.954' N, 090° 30.120' W	Missing records: 14544
Instrument type: 75kHz ADCP	Calms/below threshold: 0
Analysis period: 18-Dec-2017 22:50:00 to 20-Oct-2018 15:00:00	Water depth: 1971 m
Notes:	

Table 3.4: Level 21 (102 m below MSL, 1869 m above Seabed)

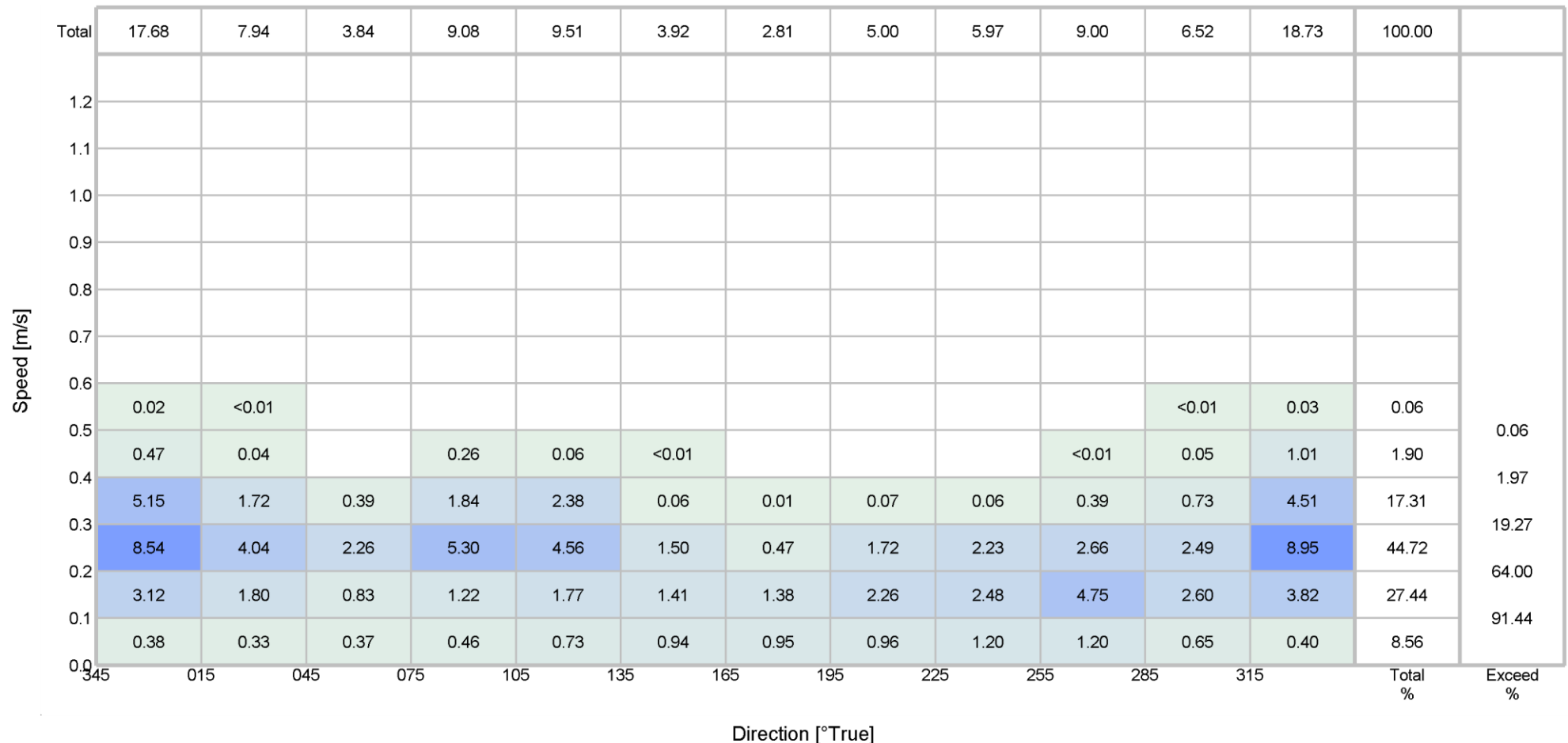
CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



Location: Bigfoot Wavescan	Valid records: 29875
Position: 26° 54.954' N, 090° 30.120' W	Missing records: 14143
Instrument type: 75kHz ADCP	Calms/below threshold: 0
Analysis period: 18-Dec-2017 22:50:00 to 20-Oct-2018 15:00:00	Water depth: 1971 m
Notes:	

Table 3.5: Level 28 (242 m below MSL, 1729 m above Seabed)

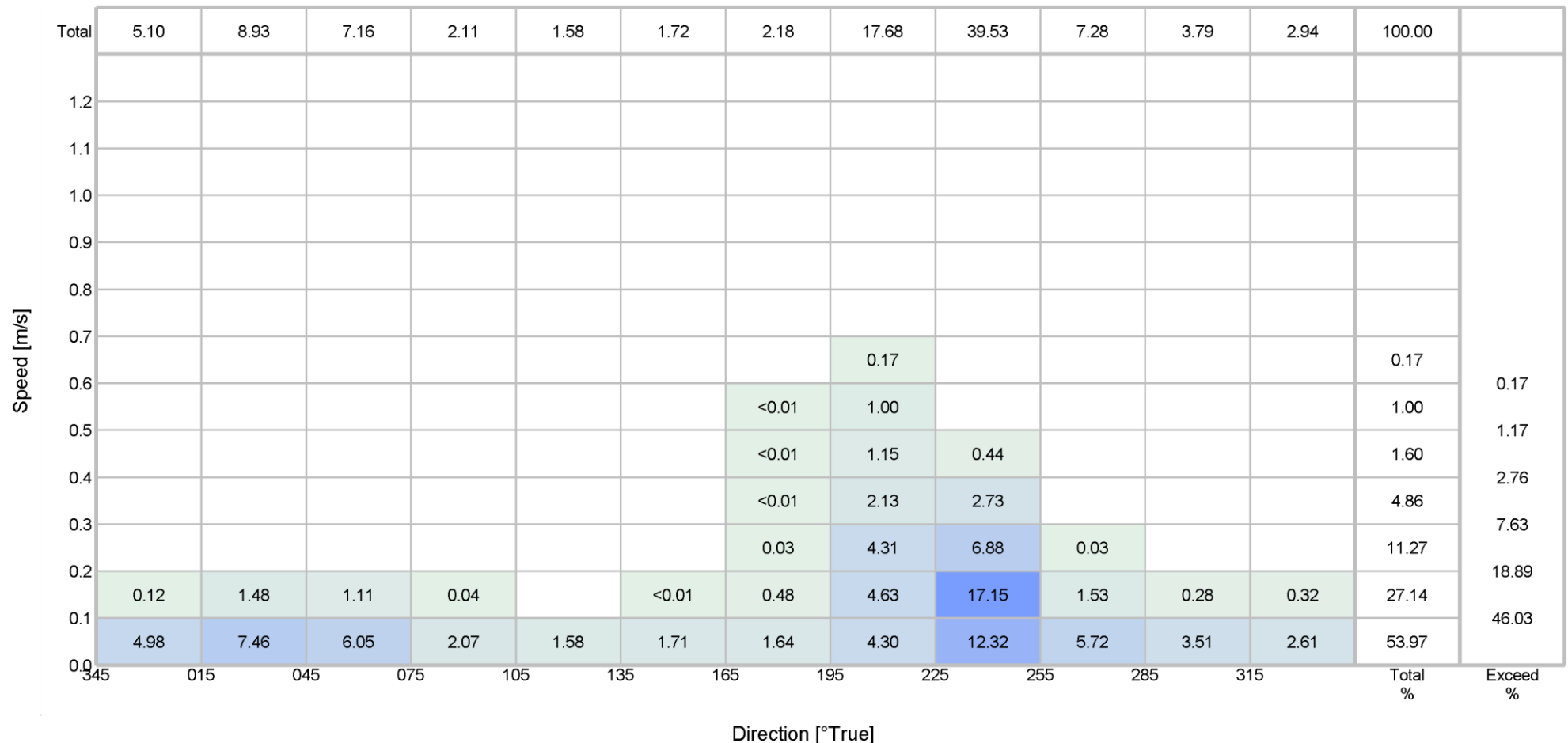
CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



Location: Bigfoot Wavescan	Valid records: 29869
Position: 26° 54.954' N, 090° 30.120' W	Missing records: 14149
Instrument type: 75kHz ADCP	Calms/below threshold: 0
Analysis period: 18-Dec-2017 22:50:00 to 20-Oct-2018 15:00:00	Water depth: 1971 m
Notes:	

Table 3.6: Level 33 (342 m below MSL, 1629 m above Seabed)

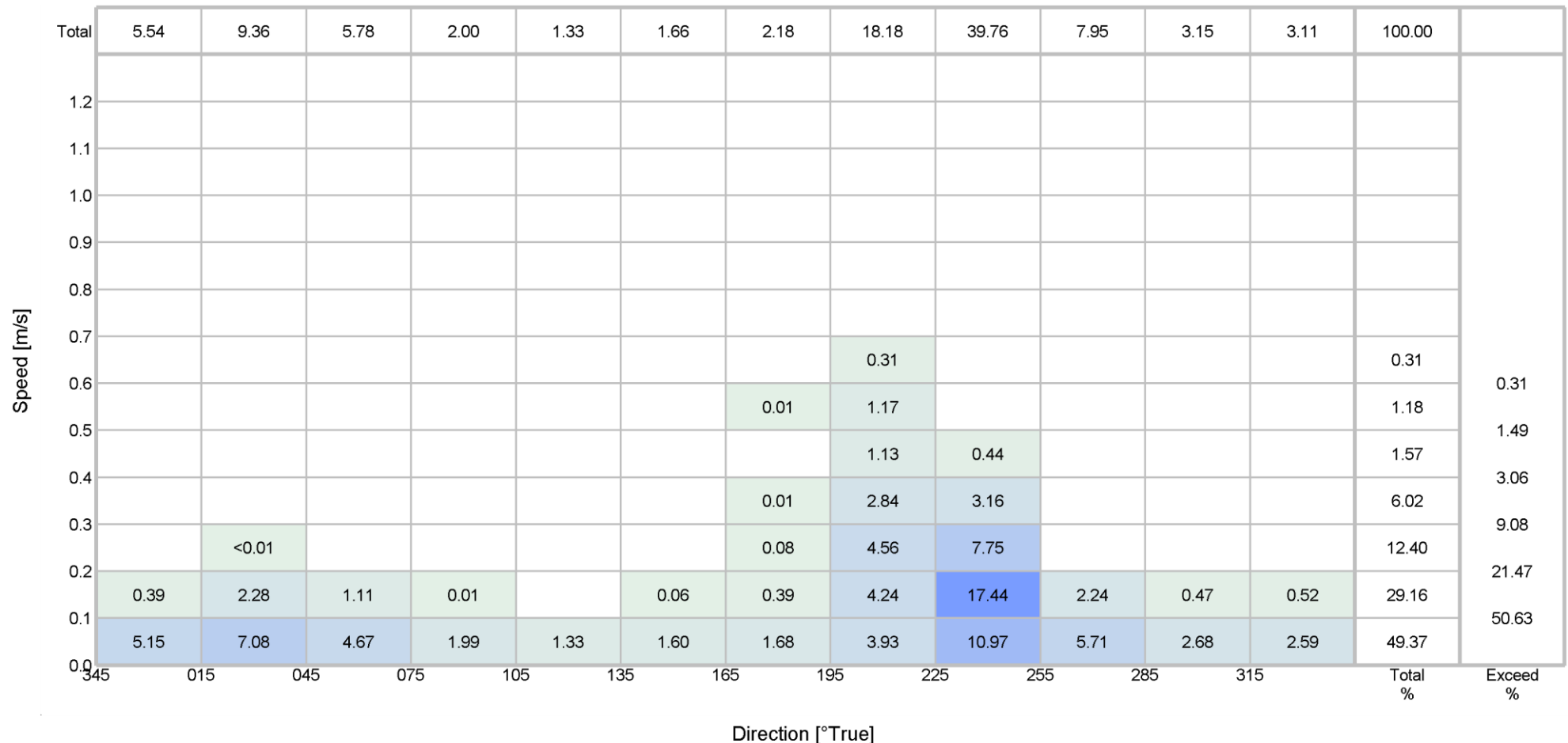
CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



Location: Bigfoot Wavescan	Valid records: 14539
Position: 26° 54.954' N, 090° 30.120' W	Missing records: 134
Instrument type: 300kHz ADCP	Calms/below threshold: 1
Analysis period: 18-Dec-2017 22:50:00 to 20-Oct-2018 15:00:00	Water depth: 1971 m
Notes:	

Table 3.7: Level 42 (1914 m below MSL, 57 m above Seabed)

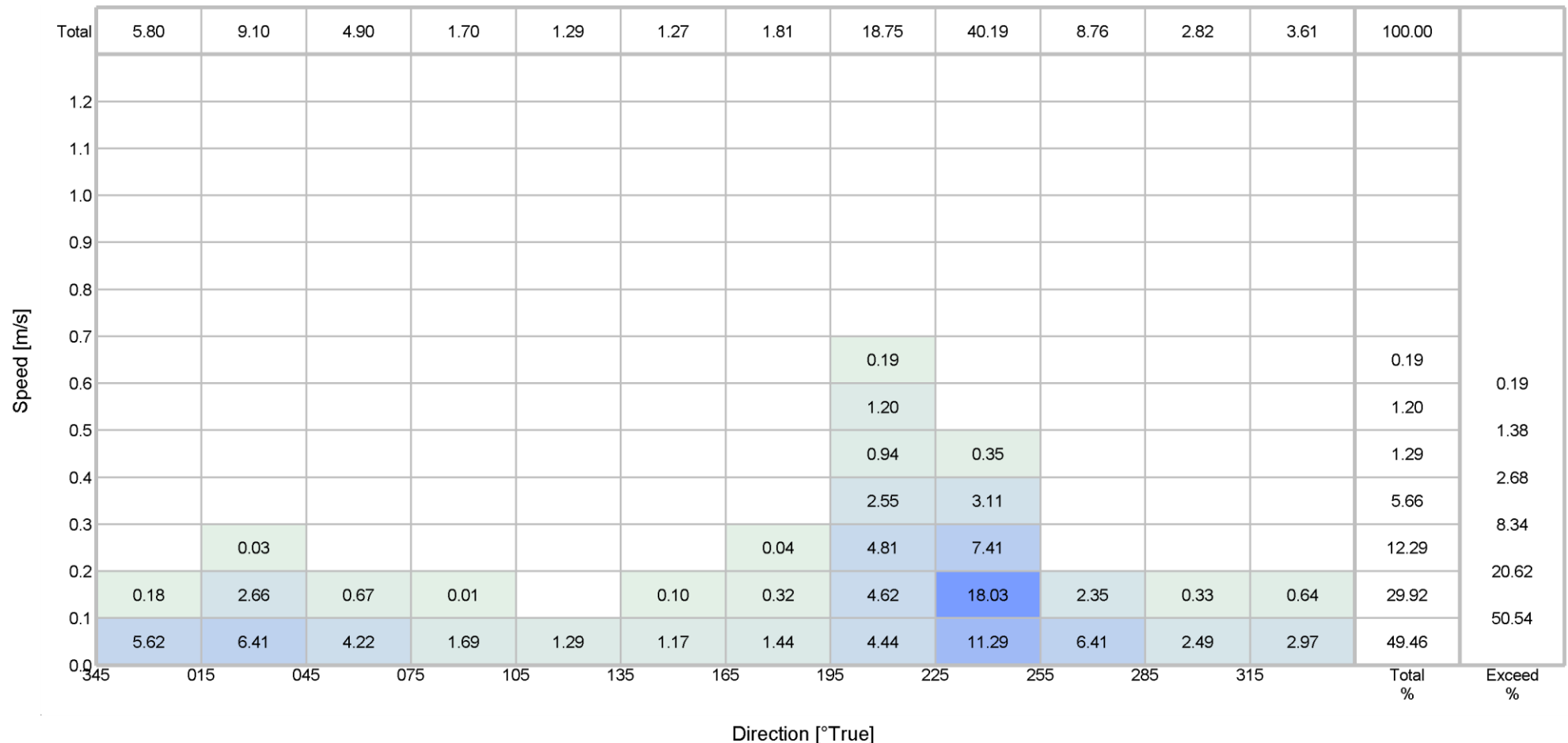
CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



Location: Bigfoot Wavescan	Valid records: 14538
Position: 26° 54.954' N, 090° 30.120' W	Missing records: 135
Instrument type: 300kHz ADCP	Calms/below threshold: 1
Analysis period: 18-Dec-2017 22:50:00 to 20-Oct-2018 15:00:00	Water depth: 1971 m
Notes:	

Table 3.8: Level 46 (1934 m below MSL, 37 m above Seabed)

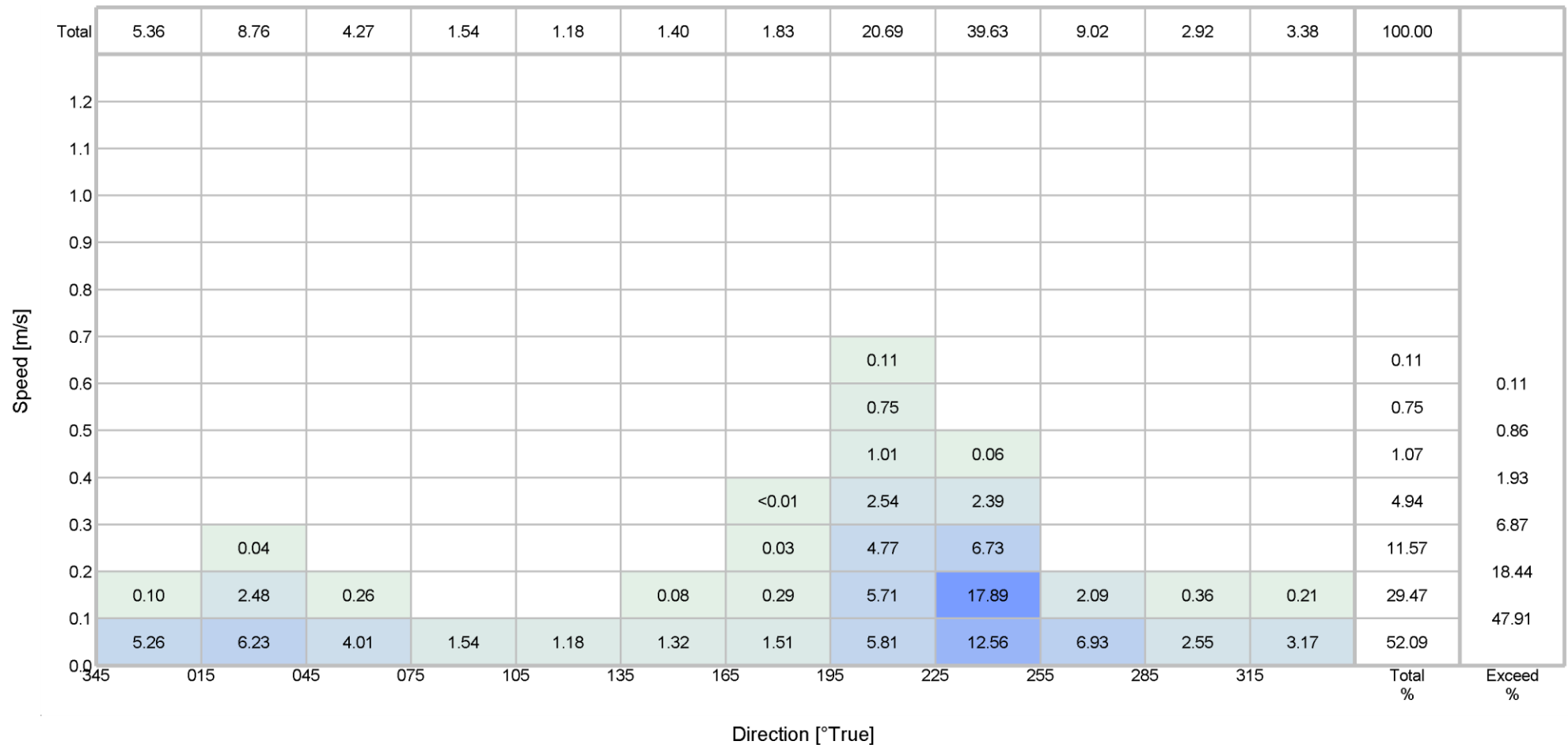
CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



Location: Bigfoot Wavescan	Valid records: 14536
Position: 26° 54.954' N, 090° 30.120' W	Missing records: 137
Instrument type: 600kHz ADCP	Calms/below threshold: 0
Analysis period: 18-Dec-2017 22:50:00 to 20-Oct-2018 15:00:00	Water depth: 1971 m
Notes:	

Table 3.9: Level 50 (1954 m below MSL, 17 m above Seabed)

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



Location: Bigfoot Wavescan	Valid records: 14018
Position: 26° 54.954' N, 090° 30.120' W	Missing records: 655
Instrument type: 600kHz ADCP	Calms/below threshold: 0
Analysis period: 18-Dec-2017 22:50:00 to 20-Oct-2018 15:00:00	Water depth: 1971 m
Notes:	

Table 3.10: Level 59 (1963 m below MSL, 8 m above Seabed)



Joint Frequency Distribution of Meteorological Parameters

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



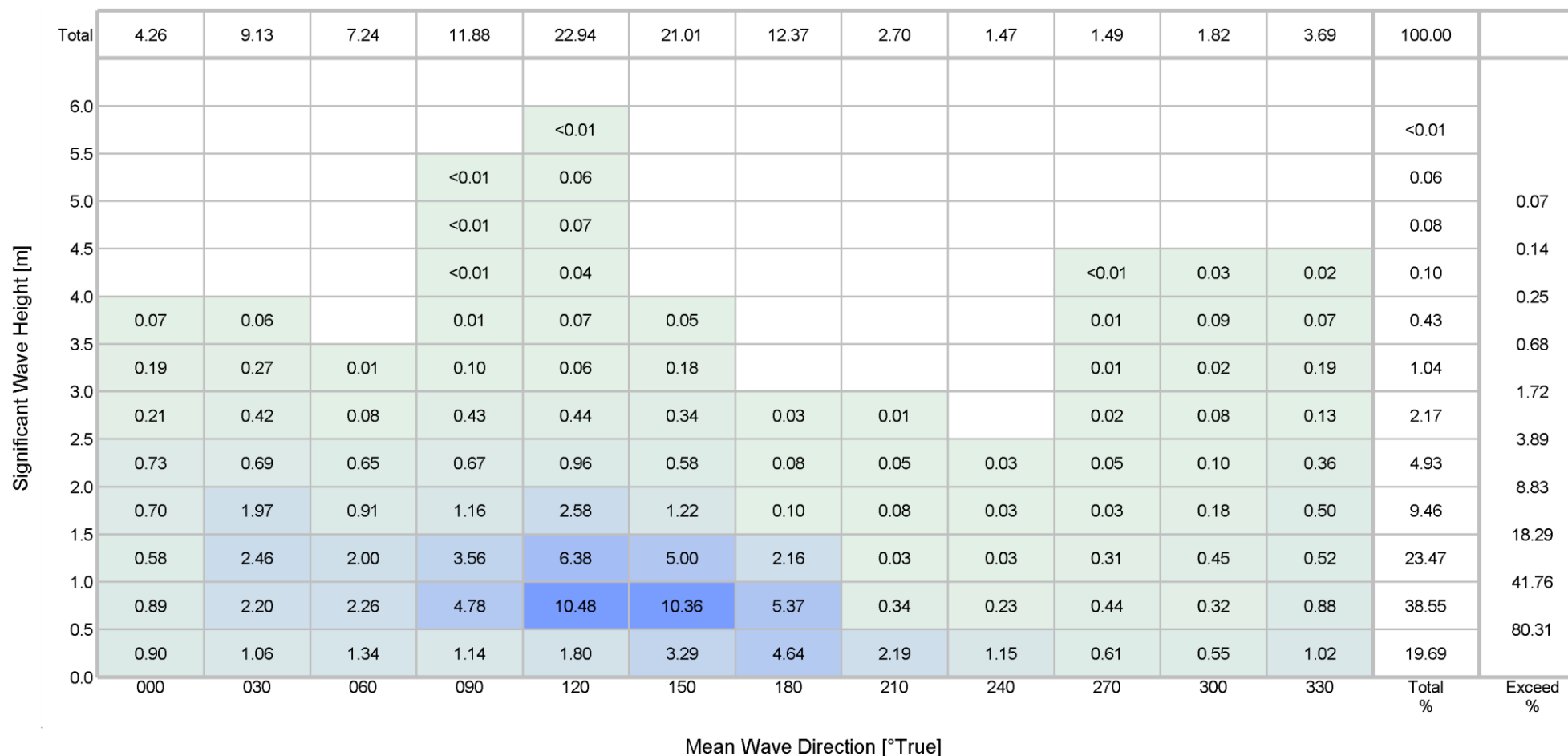
Total	5.90	7.94	7.52	13.23	17.48	16.98	12.19	5.70	3.49	2.74	2.74	4.08	100.00	
22														
20														
18														
16	0.01											<0.01	0.02	0.02
14	0.01	0.03		<0.01	<0.01	0.19	0.02	<0.01	<0.01	0.02	0.03	0.06	0.39	0.41
12	0.25	0.43	0.05	0.03	0.39	0.52	0.08	0.07	<0.01		0.13	0.20	2.15	2.56
10	0.91	1.09	0.80	0.61	0.91	1.20	0.93	0.10	0.06	0.06	0.09	0.41	7.19	9.75
8	0.81	1.66	1.05	2.31	3.15	2.78	2.09	0.33	0.11	0.32	0.16	0.53	15.30	25.05
6	1.17	1.78	1.73	4.36	5.96	4.79	2.74	0.62	0.44	0.41	0.41	0.55	24.96	50.01
4	1.22	1.19	1.98	3.33	4.14	4.06	3.22	1.92	1.03	0.74	0.63	0.98	24.43	74.45
2	0.98	1.20	1.30	1.97	2.26	2.72	2.49	2.09	1.36	0.80	0.84	0.96	18.96	93.41
0	0.52	0.56	0.61	0.61	0.65	0.74	0.62	0.56	0.48	0.39	0.45	0.39	6.59	
	000	030	060	090	120	150	180	210	240	270	300	330	Total %	Exceed %
Direction [°True]														

Location: Bigfoot Wavescan	Valid records: 14538
Position: 26° 54.954' N, 090° 30.120' W	Missing records: 135
Instrument type: Mets	Calms/below threshold: 0
Analysis period: 18-Dec-2017 23:00:00 to 20-Oct-2018 15:00:00	Water depth: 1971 m
Notes:	

Table 4.1: Wind Speed and Direction, 18-Dec-2017 to 20-Oct-2018

Joint Frequency Distribution of Wave Parameters

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT

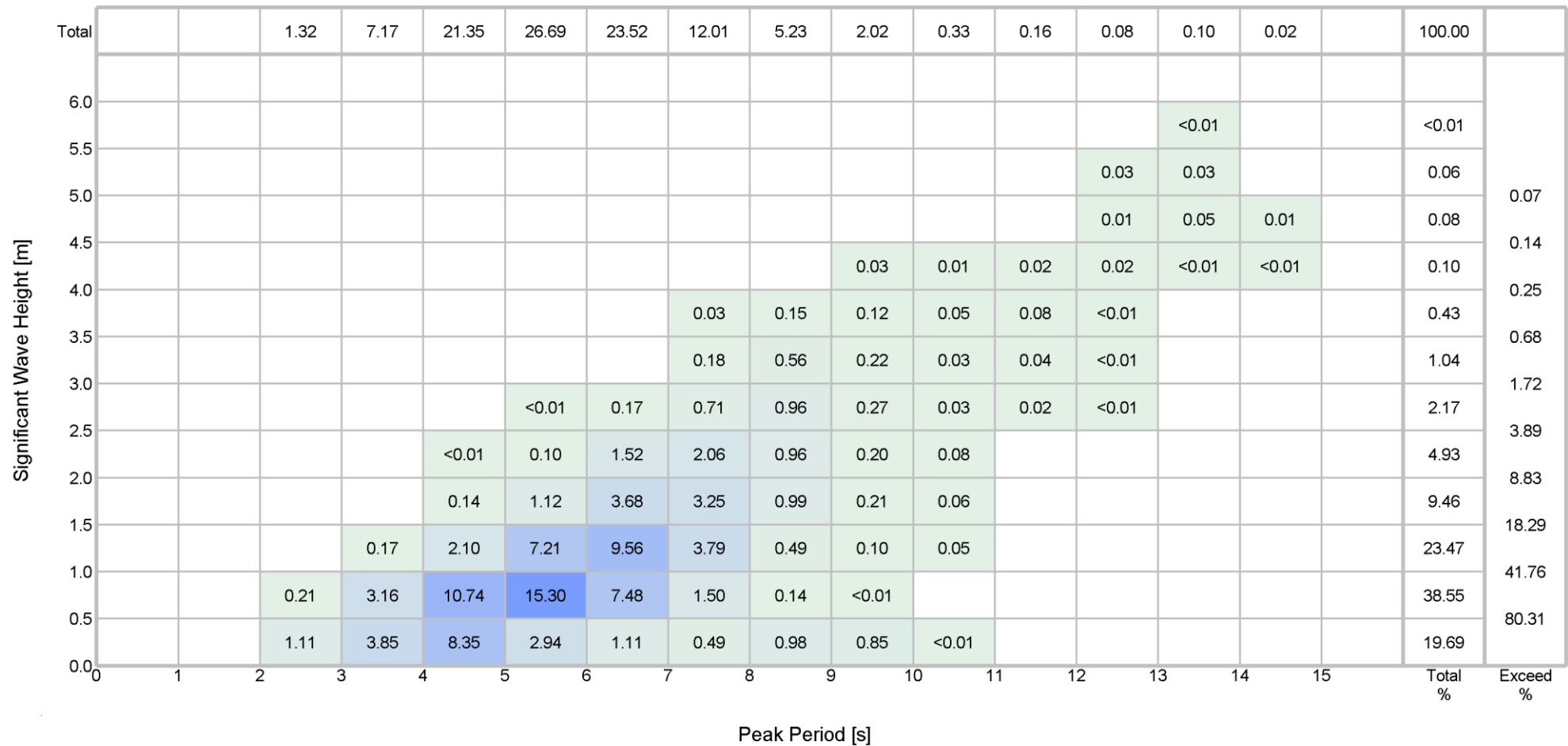


14-Nov-18 15:10:08

Location: Bigfoot Wavescan	Valid records: 14538
Position: 26° 54.954' N, 090° 30.120' W	Missing records: 135
Instrument type: Wavescan	Calms/below threshold:
Analysis period: 18-Dec-2017 23:00:00 to 20-Oct-2018 15:00:00	Water depth: 1971 m
Notes:	

Table 5.1: Significant Wave Height/Mean Wave Direction, 18-Dec-2017 to 20-Oct-2018

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:10:09

Location: Bigfoot Wavescan	Valid records: 14538
Position: 26° 54.954' N, 090° 30.120' W	Missing records: 135
Instrument type: Wavescan	Calms/below threshold:
Analysis period: 18-Dec-2017 23:00:00 to 20-Oct-2018 15:00:00	Water depth: 1971 m
Notes:	

Table 5.2: Significant Wave Height/Peak Period, 18-Dec-2017 to 20-Oct-2018

FIGURES

Mooring Location Map

Figure 1: Mooring Location Map – As Recovered and Redeployed (Feb 2016)

Mooring Configuration Diagram

Figure 2: Mooring Configuration Diagram

Time Series of Composite Current Speed and Direction

Figure 3.1.1: Selected Levels, 18-Dec-17 to 31-Dec-17

Figure 3.1.2: Selected Levels, 18-Dec-17 to 31-Dec-17

Figure 3.1.3: Selected Levels, 18-Dec-17 to 31-Dec-17

Figure 3.1.4: Selected Levels, 18-Dec-17 to 31-Dec-17

Figure 3.1.5: Selected Levels, 18-Dec-17 to 31-Dec-17

Figure 3.1.6: Selected Levels, 18-Dec-17 to 31-Dec-17

Figure 3.2.1: Selected Levels, 01-Jan-18 to 31-Jan-18

Figure 3.2.2: Selected Levels, 01-Jan-18 to 31-Jan-18

Figure 3.2.3: Selected Levels, 01-Jan-18 to 31-Jan-18

Figure 3.2.4: Selected Levels, 01-Jan-18 to 31-Jan-18

Figure 3.2.5: Selected Levels, 01-Jan-18 to 31-Jan-18

Figure 3.2.6: Selected Levels, 01-Jan-18 to 31-Jan-18

Figure 3.3.1: Selected Levels, 01-Feb-18 to 28-Feb-18

Figure 3.3.2: Selected Levels, 01-Feb-18 to 28-Feb-18

Figure 3.3.3: Selected Levels, 01-Feb-18 to 28-Feb-18

Figure 3.3.4: Selected Levels, 01-Feb-18 to 28-Feb-18

Figure 3.3.5: Selected Levels, 01-Feb-18 to 28-Feb-18

Figure 3.3.6: Selected Levels, 01-Feb-18 to 28-Feb-18

Figure 3.4.1: Selected Levels, 01-Mar-18 to 31-Mar-18

Figure 3.4.2: Selected Levels, 01-Mar-18 to 31-Mar-18

Figure 3.4.3: Selected Levels, 01-Mar-18 to 31-Mar-18

Figure 3.4.4: Selected Levels, 01-Mar-18 to 31-Mar-18

Figure 3.4.5: Selected Levels, 01-Mar-18 to 31-Mar-18

Figure 3.4.6: Selected Levels, 01-Mar-18 to 31-Mar-18

Figure 3.5.1: Selected Levels, 01-Apr-18 to 30-Apr-18

Figure 3.5.2: Selected Levels, 01-Apr-18 to 30-Apr-18

Figure 3.5.3: Selected Levels, 01-Apr-18 to 30-Apr-18

Figure 3.5.4: Selected Levels, 01-Apr-18 to 30-Apr-18

Figure 3.5.5: Selected Levels, 01-Apr-18 to 30-Apr-18

Figure 3.5.6: Selected Levels, 01-Apr-18 to 30-Apr-18

Figure 3.6.1: Selected Levels, 01-May-18 to 31-May-18

Figure 3.6.2: Selected Levels, 01-May-18 to 31-May-18

Figure 3.6.3: Selected Levels, 01-May-18 to 31-May-18

Figure 3.6.4: Selected Levels, 01-May-18 to 31-May-18

Figure 3.6.5: Selected Levels, 01-May-18 to 31-May-18

Figure 3.6.6: Selected Levels, 01-May-18 to 31-May-18

Figure 3.7.1: Selected Levels, 01-Jun-18 to 30-Jun-18

Figure 3.7.2: Selected Levels, 01-Jun-18 to 30-Jun-18

Figure 3.7.3: Selected Levels, 01-Jun-18 to 30-Jun-18

Figure 3.7.4: Selected Levels, 01-Jun-18 to 30-Jun-18

Figure 3.7.5: Selected Levels, 01-Jun-18 to 30-Jun-18

Figure 3.7.6: Selected Levels, 01-Jun-18 to 30-Jun-18

Figure 3.8.1: Selected Levels, 01-Jul-18 to 31-Jul-18

Figure 3.8.2: Selected Levels, 01-Jul-18 to 31-Jul-18

Figure 3.8.3: Selected Levels, 01-Jul-18 to 31-Jul-18

Figure 3.8.4: Selected Levels, 01-Jul-18 to 31-Jul-18

Figure 3.8.5: Selected Levels, 01-Jul-18 to 31-Jul-18

Figure 3.8.6: Selected Levels, 01-Jul-18 to 31-Jul-18

Figure 3.9.1: Selected Levels, 01-Aug-18 to 31-Aug-18

Figure 3.9.2: Selected Levels, 01-Aug-18 to 31-Aug-18

Figure 3.9.3: Selected Levels, 01-Aug-18 to 31-Aug-18

Figure 3.9.4: Selected Levels, 01-Aug-18 to 31-Aug-18

Figure 3.9.5: Selected Levels, 01-Aug-18 to 31-Aug-18

Figure 3.9.6: Selected Levels, 01-Aug-18 to 31-Aug-18

Figure 3.10.1: Selected Levels, 01-Sep-18 to 30-Sep-18

Figure 3.10.2: Selected Levels, 01-Sep-18 to 30-Sep-18

Figure 3.10.3: Selected Levels, 01-Sep-18 to 30-Sep-18

Figure 3.10.4: Selected Levels, 01-Sep-18 to 30-Sep-18

Figure 3.10.5: Selected Levels, 01-Sep-18 to 30-Sep-18

Figure 3.10.6: Selected Levels, 01-Sep-18 to 30-Sep-18

Figure 3.11.1: Selected Levels, 01-Oct-18 to 20-Oct-18

Figure 3.11.2: Selected Levels, 01-Oct-18 to 20-Oct-18

Figure 3.11.3: Selected Levels, 01-Oct-18 to 20-Oct-18

Figure 3.11.4: Selected Levels, 01-Oct-18 to 20-Oct-18

Figure 3.11.5: Selected Levels, 01-Oct-18 to 20-Oct-18

Figure 3.11.6: Selected Levels, 01-Oct-18 to 20-Oct-18

Colour Flood Plot

Figure 4.1: 18-Dec-17 to 31-Dec-17

Figure 4.2: 01-Jan-18 to 31-Jan-18

Figure 4.3: 01-Feb-18 to 28-Feb-18

Figure 4.4: 01-Mar-18 to 31-Mar-18

Figure 4.5: 01-Apr-18 to 30-Apr-18

Figure 4.6: 01-May-18 to 31-May-18

Figure 4.7: 01-Jun-18 to 30-Jun-18

Figure 4.8: 01-Jul-18 to 31-Jul-18

Figure 4.9: 01-Aug-18 to 31-Aug-18

Figure 4.10: 01-Sep-18 to 30-Sep-18

Figure 4.11: 01-Oct-18 to 20-Oct-18

Current Rose of Current Speed and Direction

Figure 5.1: Level 1 (6 m below MSL, 1965 m above Seabed)

Figure 5.2: Level 5 (22 m below MSL, 1949 m above Seabed)

Figure 5.3: Level 15 (62 m below MSL, 1909 m above Seabed)

Figure 5.4: Level 21 (102 m below MSL, 1869 m above Seabed)

Figure 5.5: Level 28 (242 m below MSL, 1729 m above Seabed)

Figure 5.6: Level 33 (342 m below MSL, 1629 m above Seabed)

Figure 5.7: Level 42 (1914 m below MSL, 57 m above Seabed)

Figure 5.8: Level 46 (1934 m below MSL, 37 m above Seabed)

Figure 5.9: Level 50 (1954 m below MSL, 17 m above Seabed)

Figure 5.10: Level 59 (1963 m below MSL, 8 m above Seabed)

Polar Scatter Plot

Figure 6.1: Level 1 (6 m below MSL, 1965 m above Seabed)

Figure 6.2: Level 5 (22 m below MSL, 1949 m above Seabed)

Figure 6.3: Level 15 (62 m below MSL, 1909 m above Seabed)

Figure 6.4: Level 21 (102 m below MSL, 1869 m above Seabed)

Figure 6.5: Level 28 (242 m below MSL, 1729 m above Seabed)

Figure 6.6: Level 33 (342 m below MSL, 1629 m above Seabed)

Figure 6.7: Level 42 (1914 m below MSL, 57 m above Seabed)

Figure 6.8: Level 46 (1934 m below MSL, 37 m above Seabed)

Figure 6.9: Level 50 (1954 m below MSL, 17 m above Seabed)

Figure 6.10: Level 59 (1963 m below MSL, 8 m above Seabed)

Meteorological Parameters

Figure 7.1 Level 1, 18-Dec-2017 23:00:00 - 31-Dec-2017 23:50:00 (UTC)
Figure 7.2 Level 1, 01-Jan-2018 00:00:00 - 31-Jan-2018 23:50:00 (UTC)
Figure 7.3 Level 1, 01-Feb-2018 00:00:00 - 28-Feb-2018 23:50:00 (UTC)
Figure 7.4 Level 1, 01-Mar-2018 00:00:00 - 31-Mar-2018 23:50:00 (UTC)
Figure 7.5 Level 1, 01-Apr-2018 00:00:00 - 30-Apr-2018 23:50:00 (UTC)
Figure 7.6 Level 1, 01-May-2018 00:00:00 - 31-May-2018 23:50:00 (UTC)
Figure 7.7 Level 1, 01-Jun-2018 00:00:00 - 30-Jun-2018 23:50:00 (UTC)
Figure 7.8 Level 1, 01-Jul-2018 00:00:00 - 31-Jul-2018 23:50:00 (UTC)
Figure 7.9 Level 1, 01-Aug-2018 00:00:00 - 31-Aug-2018 23:50:00 (UTC)
Figure 7.10 Level 1, 01-Sep-2018 00:00:00 - 30-Sep-2018 23:50:00 (UTC)
Figure 7.11 Level 1, 01-Oct-2018 00:00:00 - 20-Oct-2018 15:00:00 (UTC)

Wind Rose

Figure 8.1: Wind Speed and Direction, 18-Dec-2017 to 20-Oct-2018

Wave Parameters

Figure 9.1 Level 1, 18-Dec-2017 23:00:00 - 31-Dec-2017 23:30:00 (UTC)
Figure 9.2 Level 1, 01-Jan-2018 00:00:00 - 31-Jan-2018 23:30:00 (UTC)
Figure 9.3 Level 1, 01-Feb-2018 00:00:00 - 28-Feb-2018 23:30:00 (UTC)
Figure 9.4 Level 1, 01-Mar-2018 00:00:00 - 31-Mar-2018 23:30:00 (UTC)
Figure 9.5 Level 1, 01-Apr-2018 00:00:00 - 30-Apr-2018 23:30:00 (UTC)
Figure 9.6 Level 1, 01-May-2018 00:00:00 - 31-May-2018 23:30:00 (UTC)
Figure 9.7 Level 1, 01-Jun-2018 00:00:00 - 30-Jun-2018 23:30:00 (UTC)
Figure 9.8 Level 1, 01-Jul-2018 00:00:00 - 31-Jul-2018 23:30:00 (UTC)
Figure 9.9 Level 1, 01-Aug-2018 00:00:00 - 31-Aug-2018 23:30:00 (UTC)
Figure 9.10 Level 1, 01-Sep-2018 00:00:00 - 30-Sep-2018 23:30:00 (UTC)
Figure 9.11 Level 1, 01-Oct-2018 00:00:00 - 20-Oct-2018 15:00:00 (UTC)

Wave Rose

Figure 10.1.1: Significant Wave Height/Mean Wave Direction, 18-Dec-2017 to 20-Oct-2018

QC Plots - 75 kHz ADCP

Figure 11.1 Level 1-20, 17-Dec-2017 20:55:11 - 31-Dec-2017 23:55:11 (UTC)
Figure 11.2 Level 1-20, 01-Jan-2018 00:05:11 - 31-Jan-2018 23:55:11 (UTC)
Figure 11.3 Level 1-20, 01-Feb-2018 00:05:11 - 28-Feb-2018 23:55:11 (UTC)
Figure 11.4 Level 1-20, 01-Mar-2018 00:05:11 - 31-Mar-2018 23:55:11 (UTC)
Figure 11.5 Level 1-20, 01-Apr-2018 00:05:11 - 30-Apr-2018 23:50:00 (UTC)



Figure 11.6 Level 1-20, 01-May-2018 00:00:00 - 31-May-2018 23:50:00 (UTC)

Figure 11.7 Level 1-20, 01-Jun-2018 00:00:00 - 30-Jun-2018 23:50:00 (UTC)

Figure 11.8 Level 1-20, 01-Jul-2018 00:00:00 - 17-Jul-2018 12:00:00 (UTC)

QC Plots - 300 kHz ADCP

Figure 12.1 Level 1-25, 18-Dec-2017 15:02:32 - 31-Dec-2017 23:32:32 (UTC)

Figure 12.2 Level 1-25, 01-Jan-2018 00:02:32 - 31-Jan-2018 23:32:32 (UTC)

Figure 12.3 Level 1-25, 01-Feb-2018 00:02:32 - 28-Feb-2018 23:32:32 (UTC)

Figure 12.4 Level 1-25, 01-Mar-2018 00:02:32 - 31-Mar-2018 23:32:32 (UTC)

Figure 12.5 Level 1-25, 01-Apr-2018 00:02:32 - 30-Apr-2018 23:30:00 (UTC)

Figure 12.6 Level 1-25, 01-May-2018 00:00:00 - 31-May-2018 23:30:00 (UTC)

Figure 12.7 Level 1-25, 01-Jun-2018 00:00:00 - 30-Jun-2018 23:30:00 (UTC)

Figure 12.8 Level 1-25, 01-Jul-2018 00:00:00 - 31-Jul-2018 23:30:00 (UTC)

Figure 12.9 Level 1-25, 01-Aug-2018 00:00:00 - 31-Aug-2018 23:30:00 (UTC)

Figure 12.10 Level 1-25, 01-Sep-2018 00:00:00 - 30-Sep-2018 23:30:00 (UTC)

Figure 12.11 Level 1-25, 01-Oct-2018 00:00:00 - 20-Oct-2018 21:30:00 (UTC)

QC Plots - 600 kHz ADCP

Figure 13.1 Level 1-25, 18-Dec-2017 12:15:08 - 31-Dec-2017 23:34:32 (UTC)

Figure 13.2 Level 1-25, 01-Jan-2018 00:04:32 - 31-Jan-2018 23:34:32 (UTC)

Figure 13.3 Level 1-25, 01-Feb-2018 00:04:32 - 28-Feb-2018 23:34:32 (UTC)

Figure 13.4 Level 1-25, 01-Mar-2018 00:04:32 - 31-Mar-2018 23:34:32 (UTC)

Figure 13.5 Level 1-25, 01-Apr-2018 00:04:32 - 30-Apr-2018 23:45:00 (UTC)

Figure 13.6 Level 1-25, 01-May-2018 00:15:00 - 31-May-2018 23:45:00 (UTC)

Figure 13.7 Level 1-25, 01-Jun-2018 00:15:00 - 30-Jun-2018 23:45:00 (UTC)

Figure 13.8 Level 1-25, 01-Jul-2018 00:15:00 - 31-Jul-2018 23:45:00 (UTC)

Figure 13.9 Level 1-25, 01-Aug-2018 00:15:00 - 31-Aug-2018 23:45:00 (UTC)

Figure 13.10 Level 1-25, 01-Sep-2018 00:15:00 - 30-Sep-2018 23:45:27 (UTC)

Figure 13.11 Level 1-25, 01-Oct-2018 00:15:27 - 20-Oct-2018 20:15:27 (UTC)



Mooring Location Map

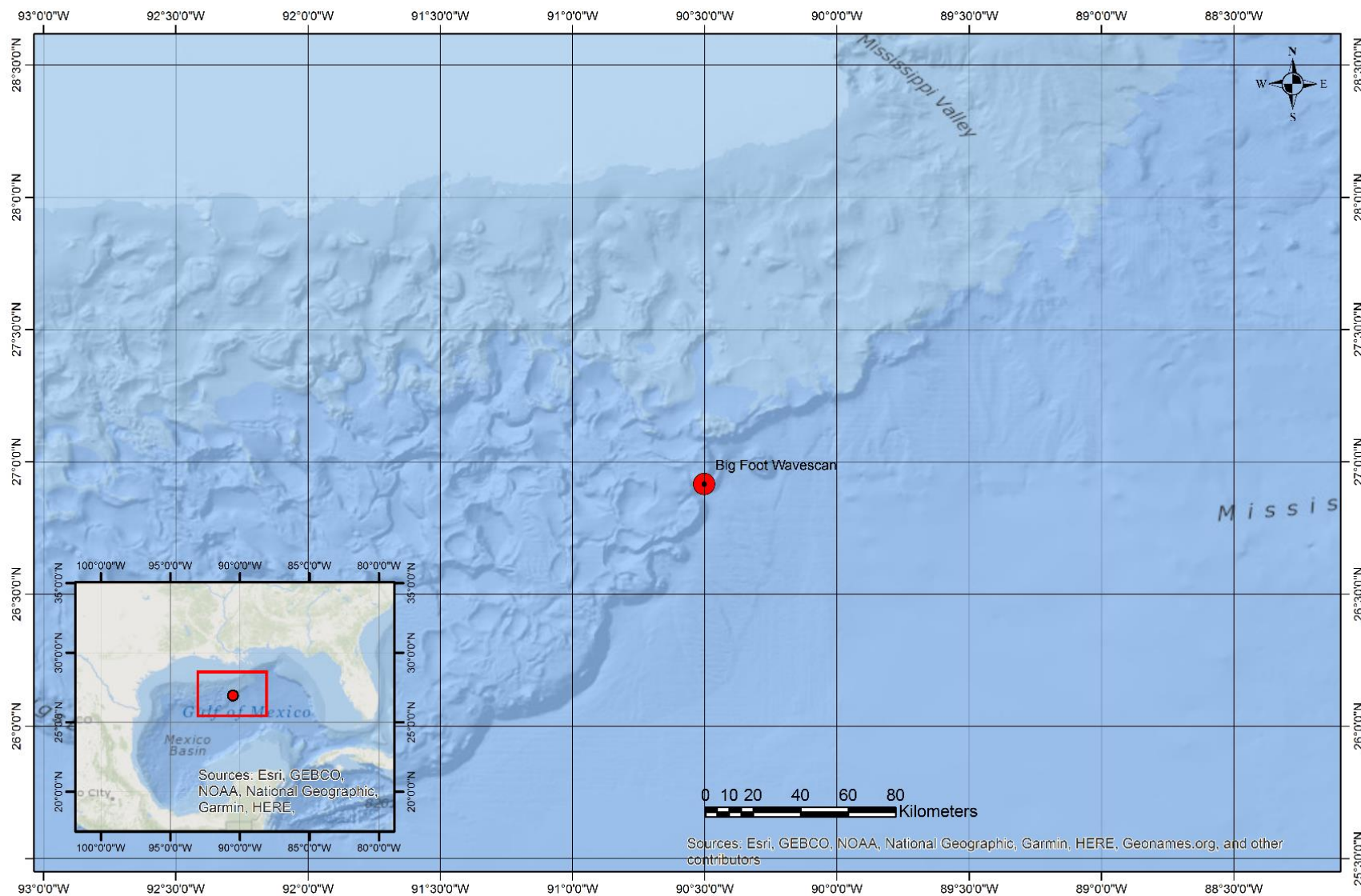


Figure 1: Mooring Location Map – As Recovered and Redepolyed (Feb 2016)



Mooring Configuration Diagram

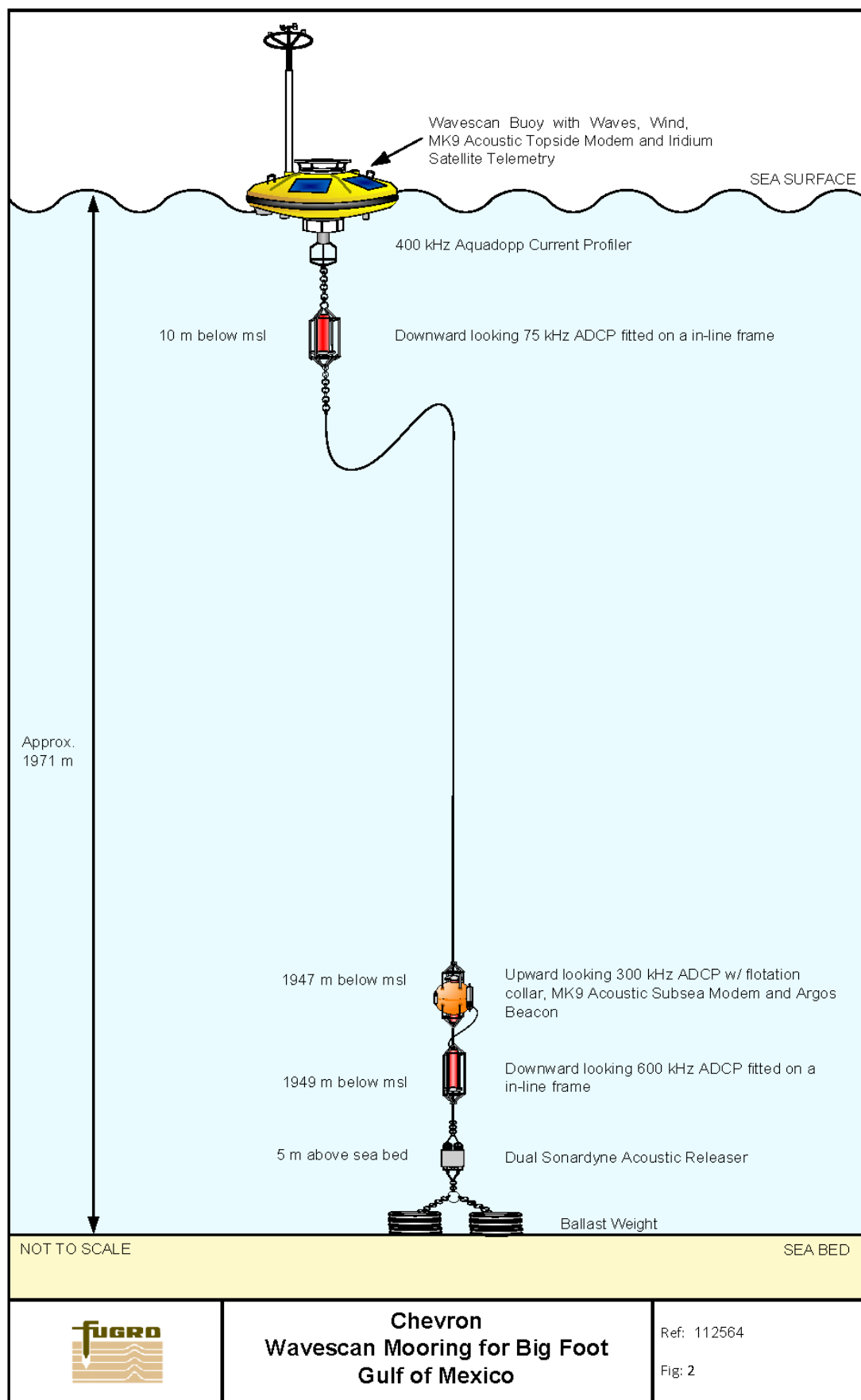


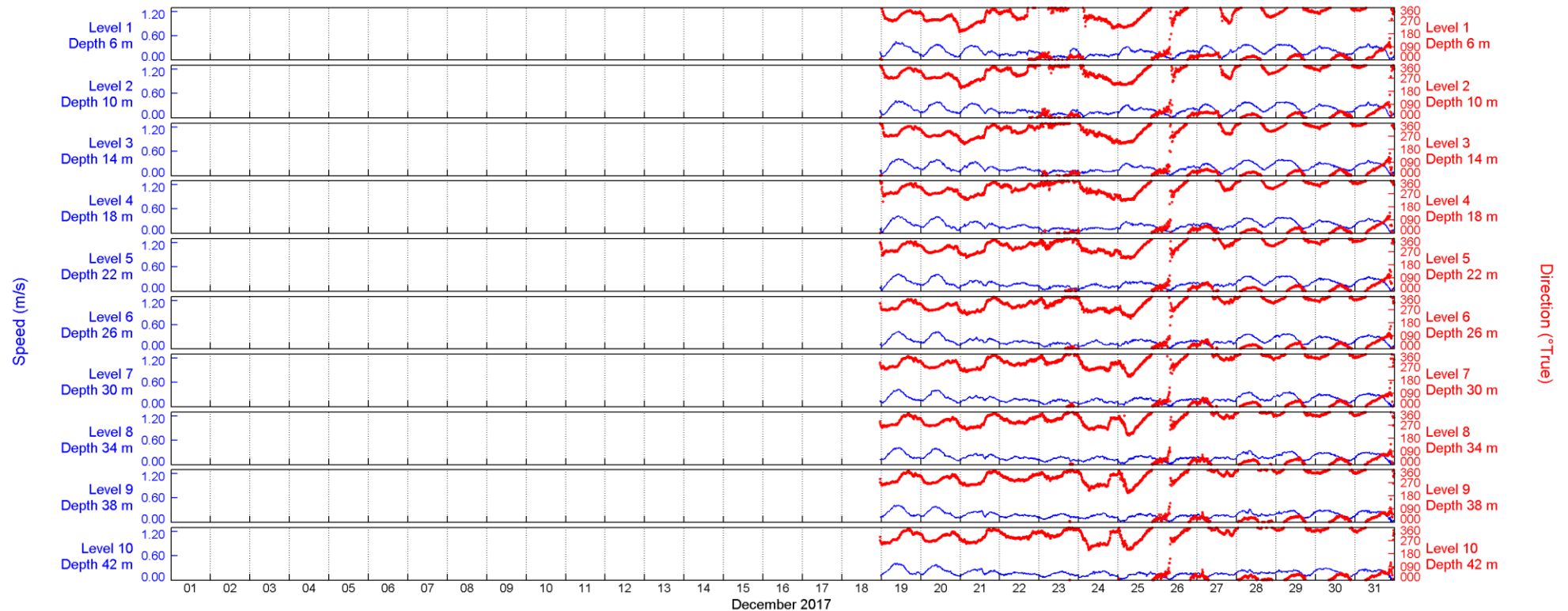
Figure 2: Mooring Configuration Diagram

Time Series of Composite Current Speed and Direction

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:10:12



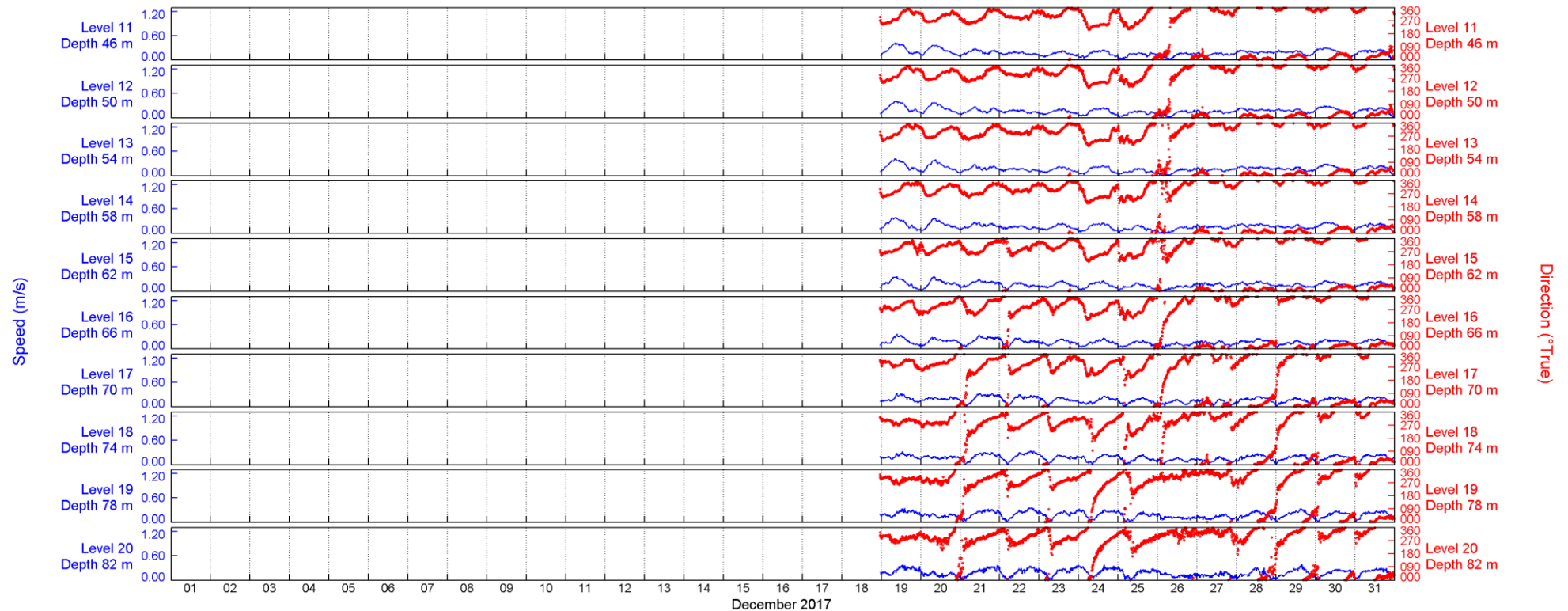
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: Aquadopp	
Notes:		

Figure 3.1.1: Selected Levels, 18-Dec-17 to 31-Dec-17

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:10:15



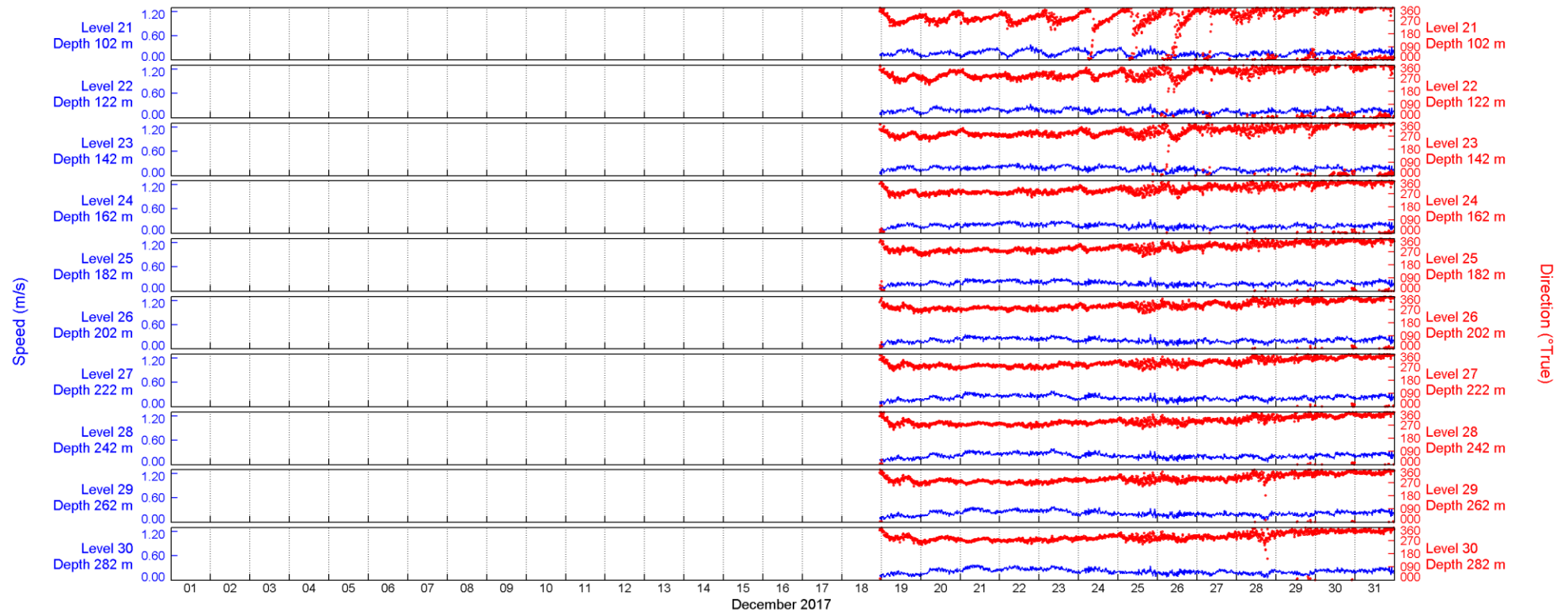
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: Aquadopp	
Notes:		

Figure 3.1.2: Selected Levels, 18-Dec-17 to 31-Dec-17

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:10:18



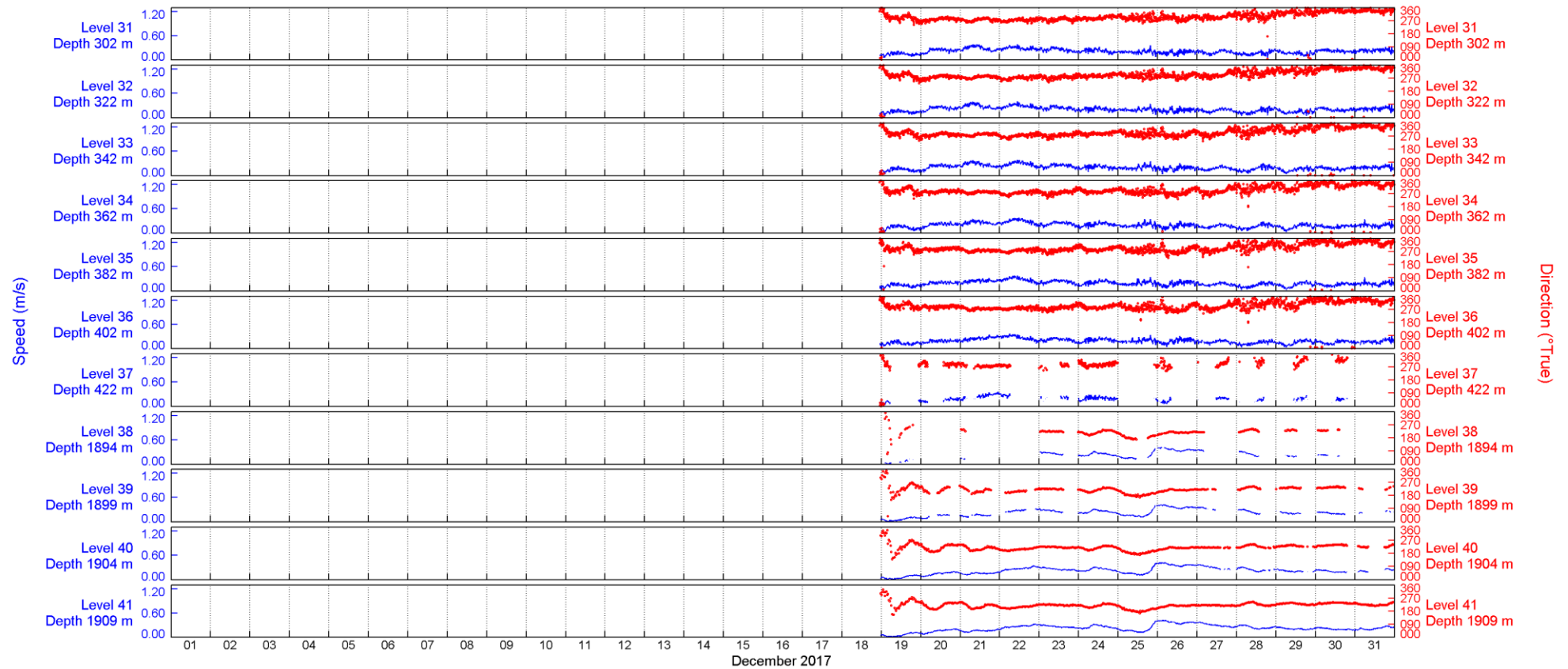
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 75kHz ADCP	
Notes:		

Figure 3.1.3: Selected Levels, 18-Dec-17 to 31-Dec-17

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:10:20



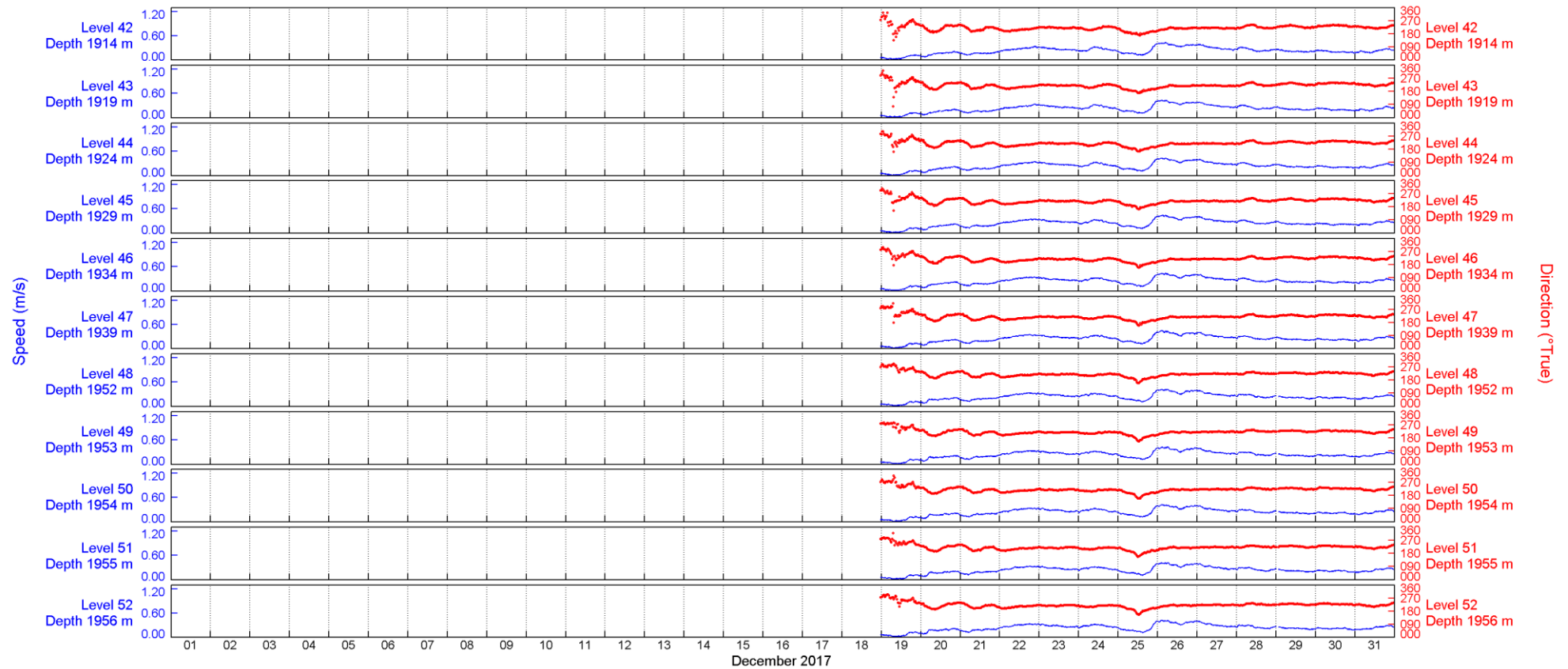
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 75kHz ADCP, 300kHz ADCP	
Notes:		

Figure 3.1.4: Selected Levels, 18-Dec-17 to 31-Dec-17

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:10:23



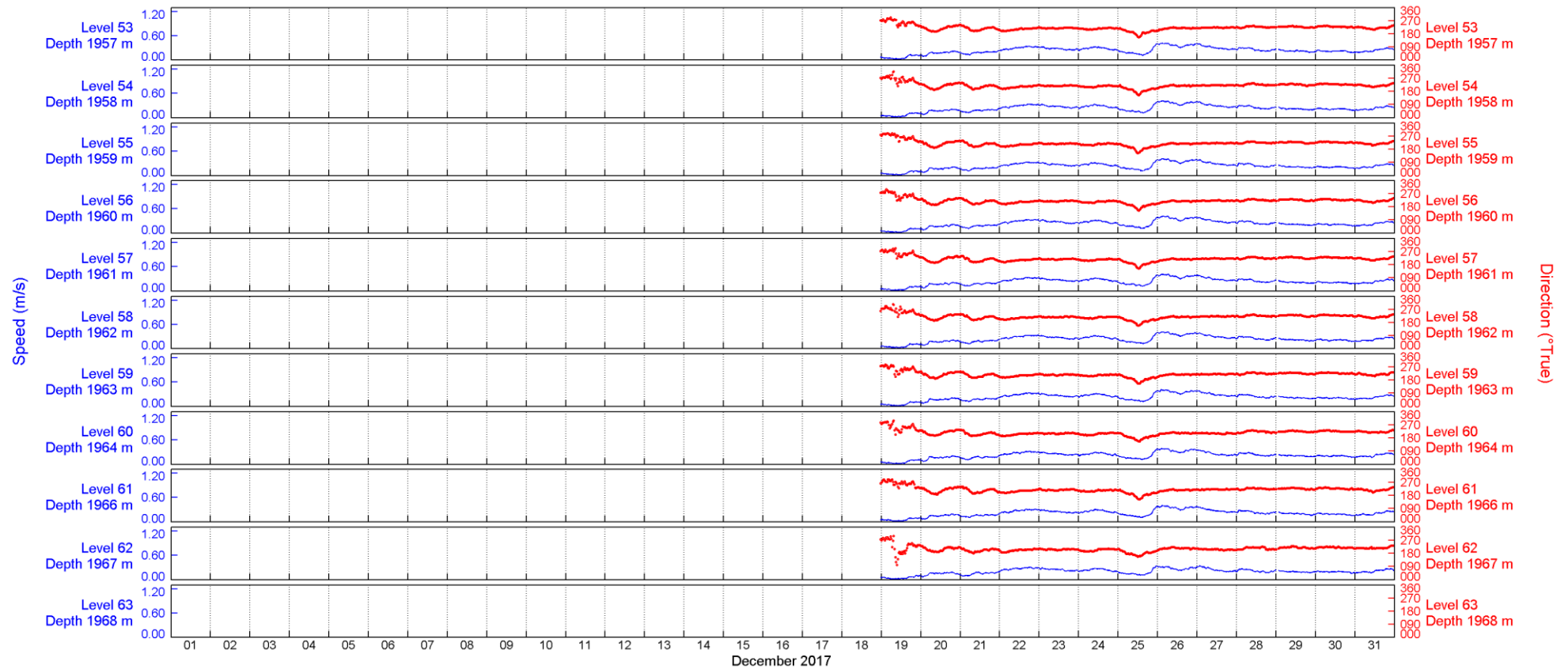
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 600kHz ADCP, 300kHz ADCP	
Notes:		

Figure 3.1.5: Selected Levels, 18-Dec-17 to 31-Dec-17

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:10:26



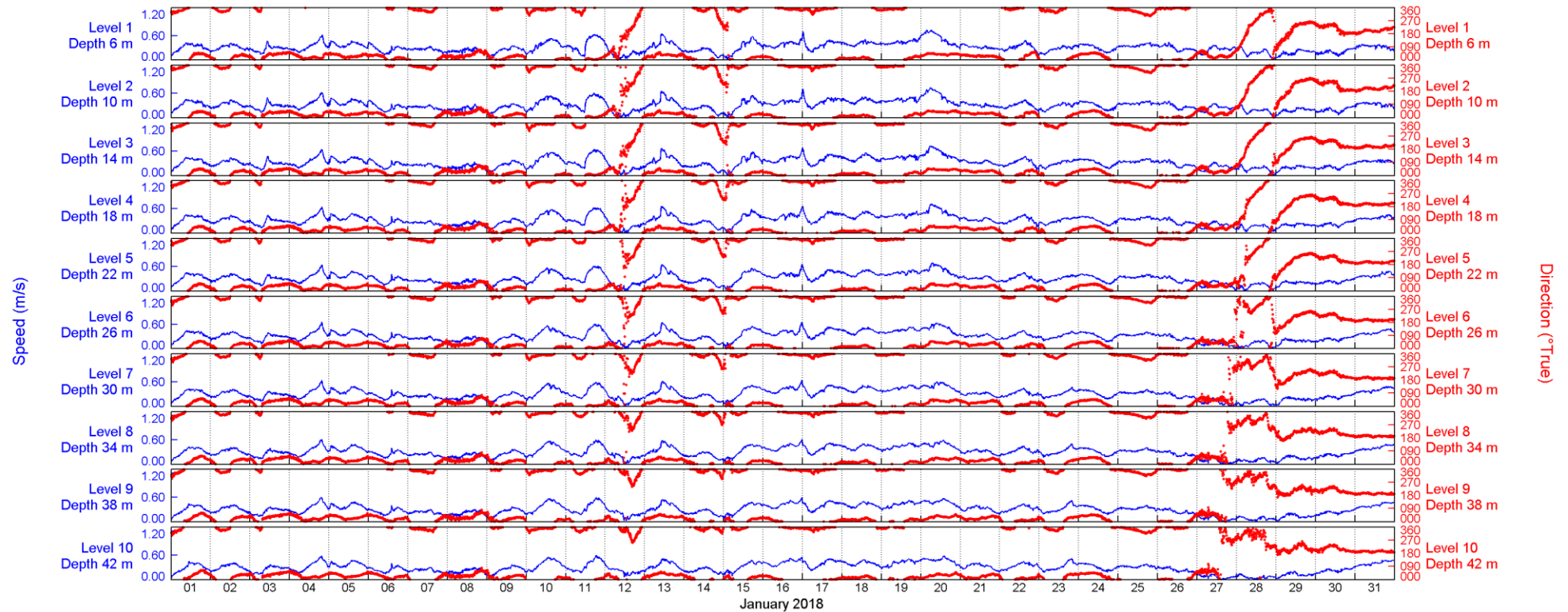
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 600kHz ADCP	
Notes:		

Figure 3.1.6: Selected Levels, 18-Dec-17 to 31-Dec-17

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:10:29



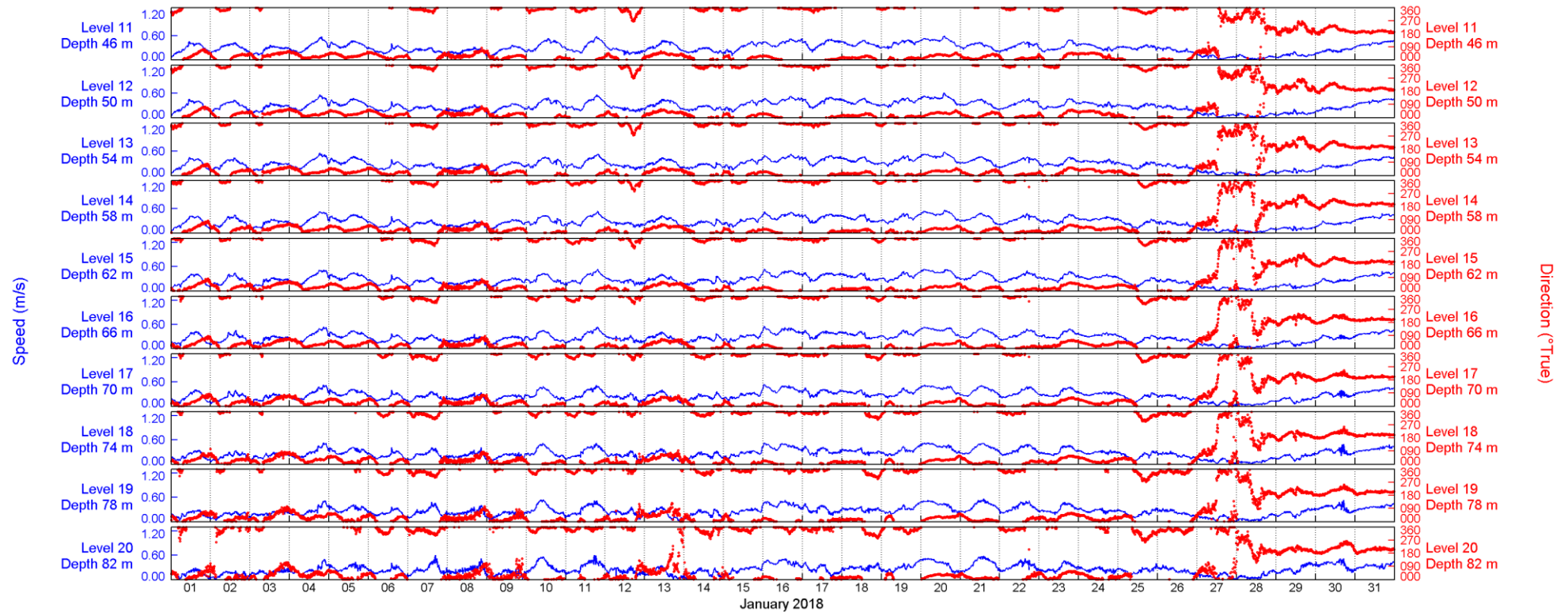
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: Aquadopp	
Notes:		

Figure 3.2.1: Selected Levels, 01-Jan-18 to 31-Jan-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:10:32



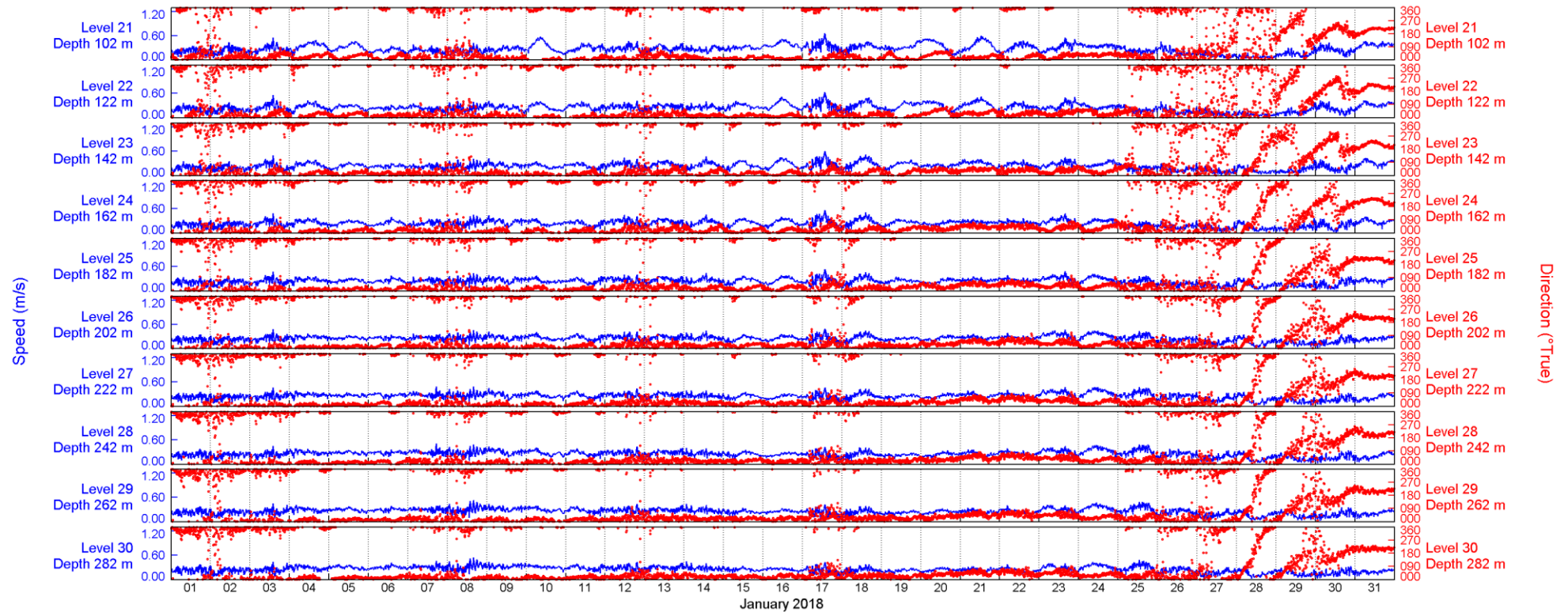
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: Aquadopp	
Notes:		

Figure 3.2.2: Selected Levels, 01-Jan-18 to 31-Jan-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:10:35



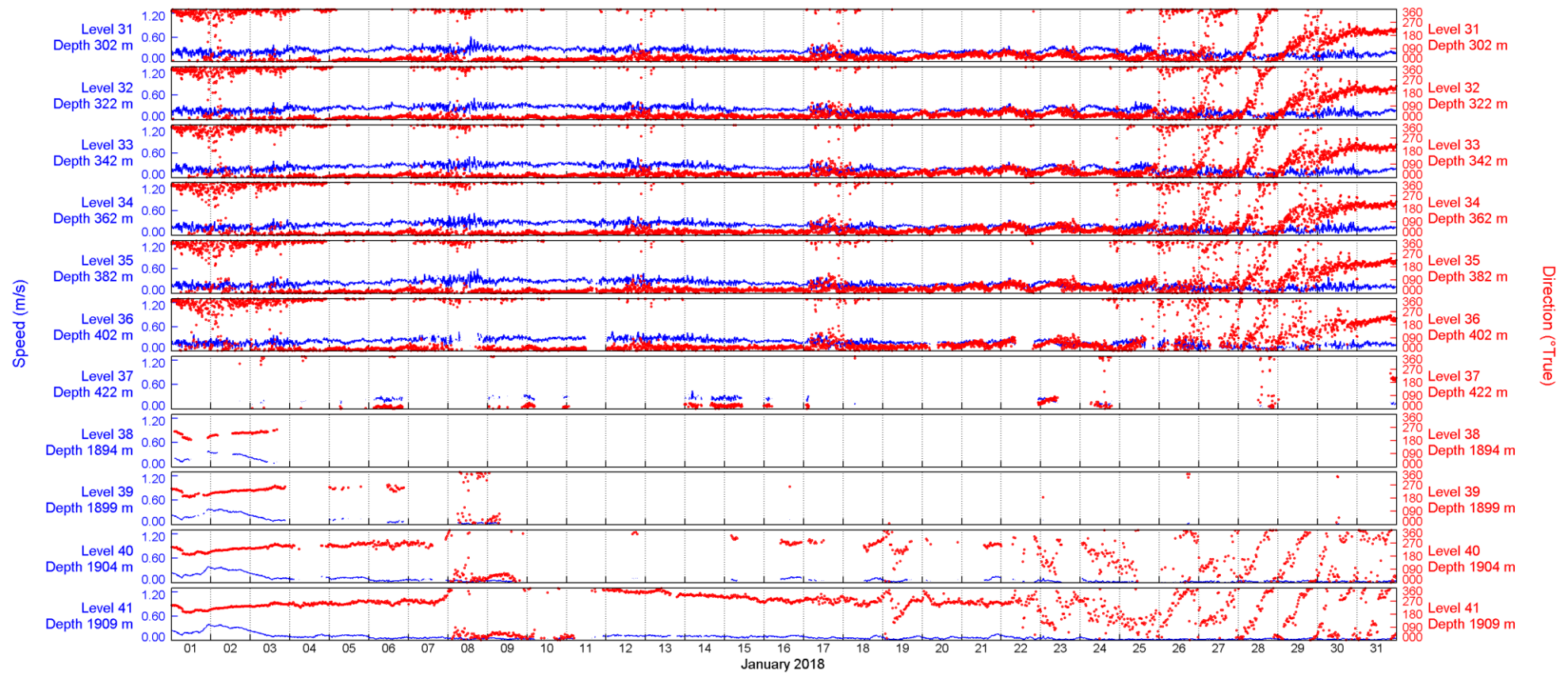
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 75kHz ADCP	
Notes:		

Figure 3.2.3: Selected Levels, 01-Jan-18 to 31-Jan-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:10:38



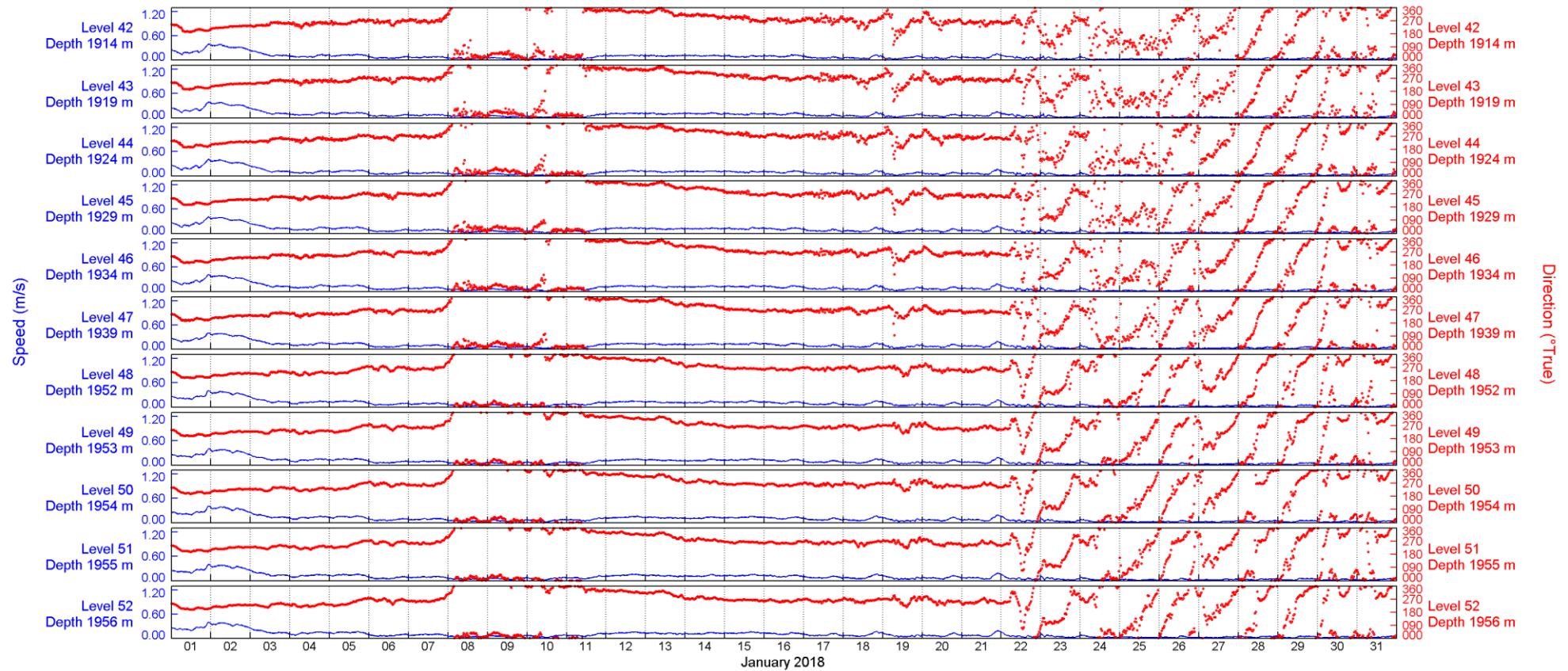
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 75kHz ADCP, 300kHz ADCP	
Notes:		

Figure 3.2.4: Selected Levels, 01-Jan-18 to 31-Jan-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:10:41



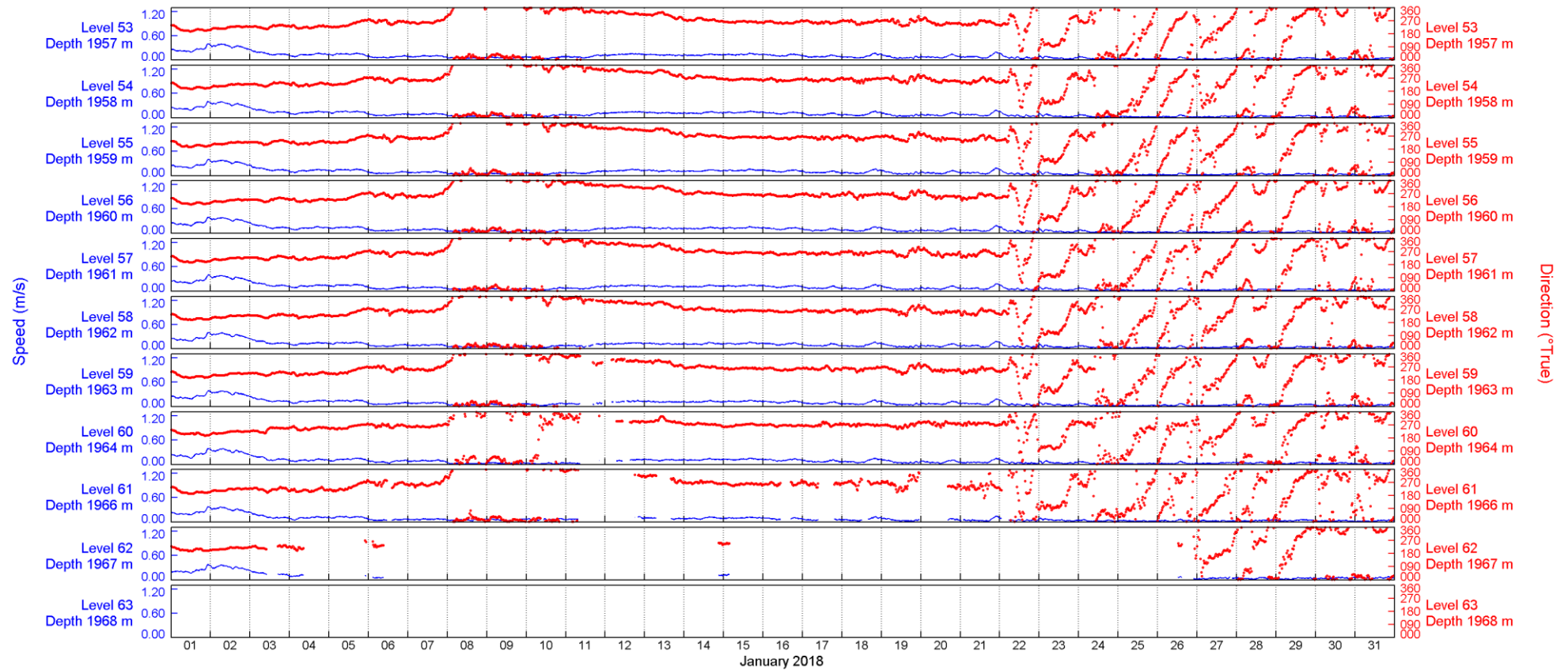
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 600kHz ADCP, 300kHz ADCP	
Notes:		

Figure 3.2.5: Selected Levels, 01-Jan-18 to 31-Jan-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:10:44



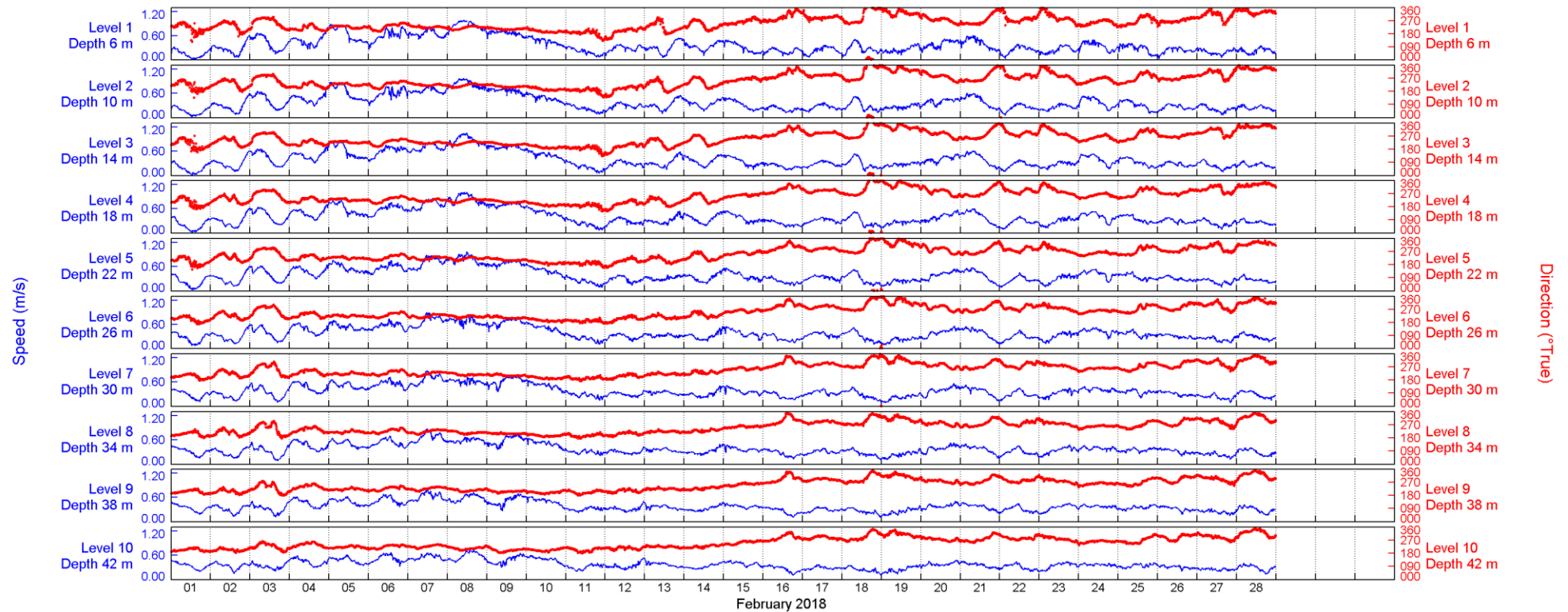
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 600kHz ADCP	
Notes:		

Figure 3.2.6: Selected Levels, 01-Jan-18 to 31-Jan-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:10:47



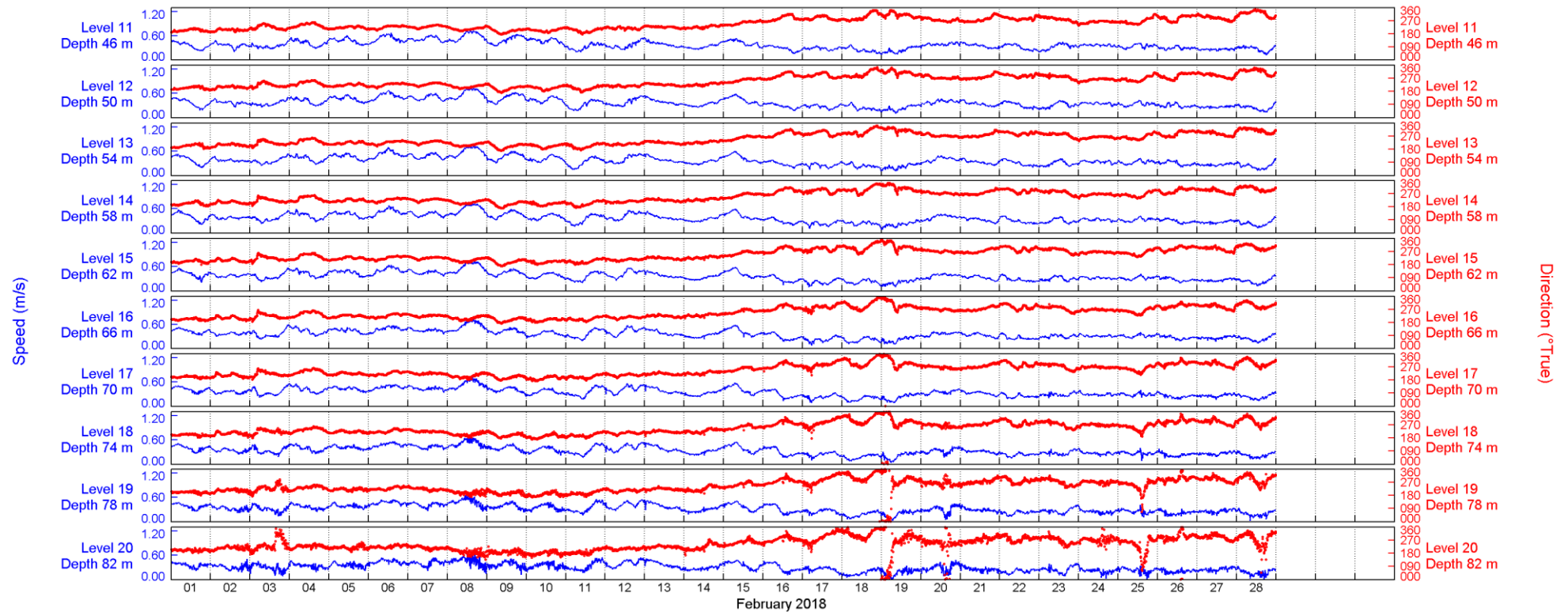
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: Aquadopp	
Notes:		

Figure 3.3.1: Selected Levels, 01-Feb-18 to 28-Feb-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:10:50



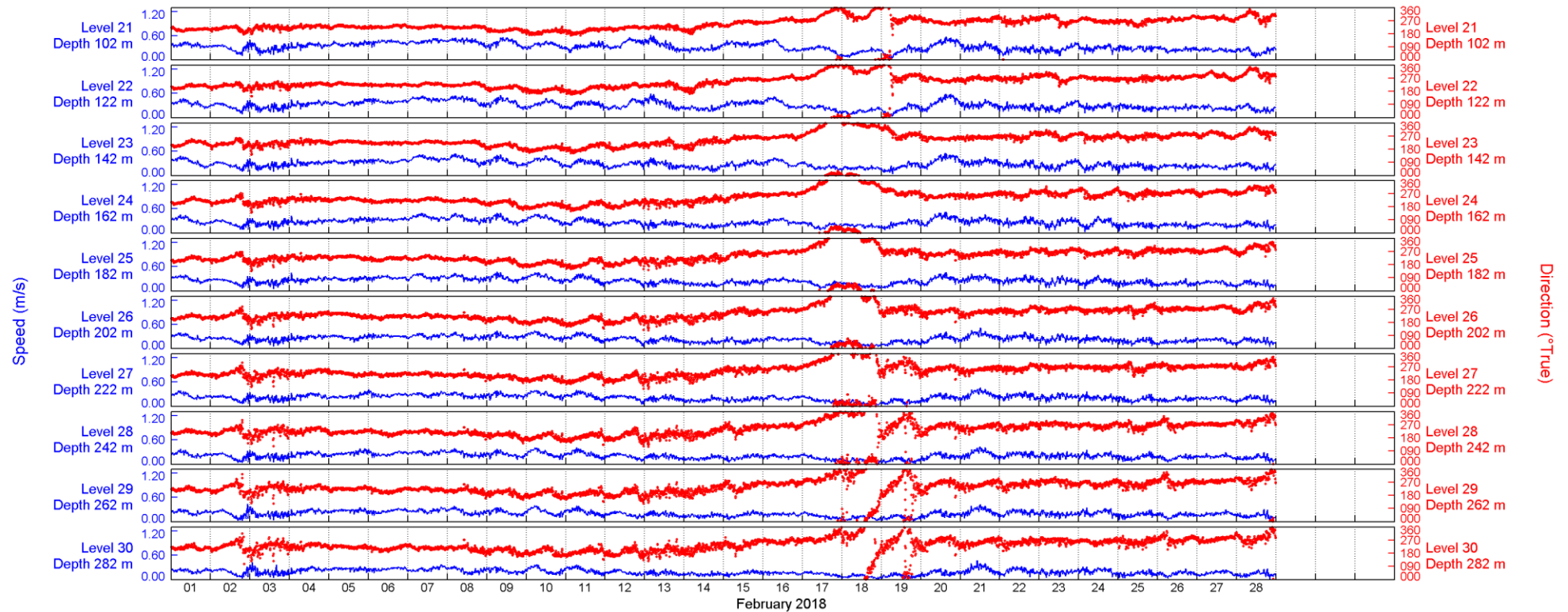
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: Aquadopp	
Notes:		

Figure 3.3.2: Selected Levels, 01-Feb-18 to 28-Feb-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:10:53



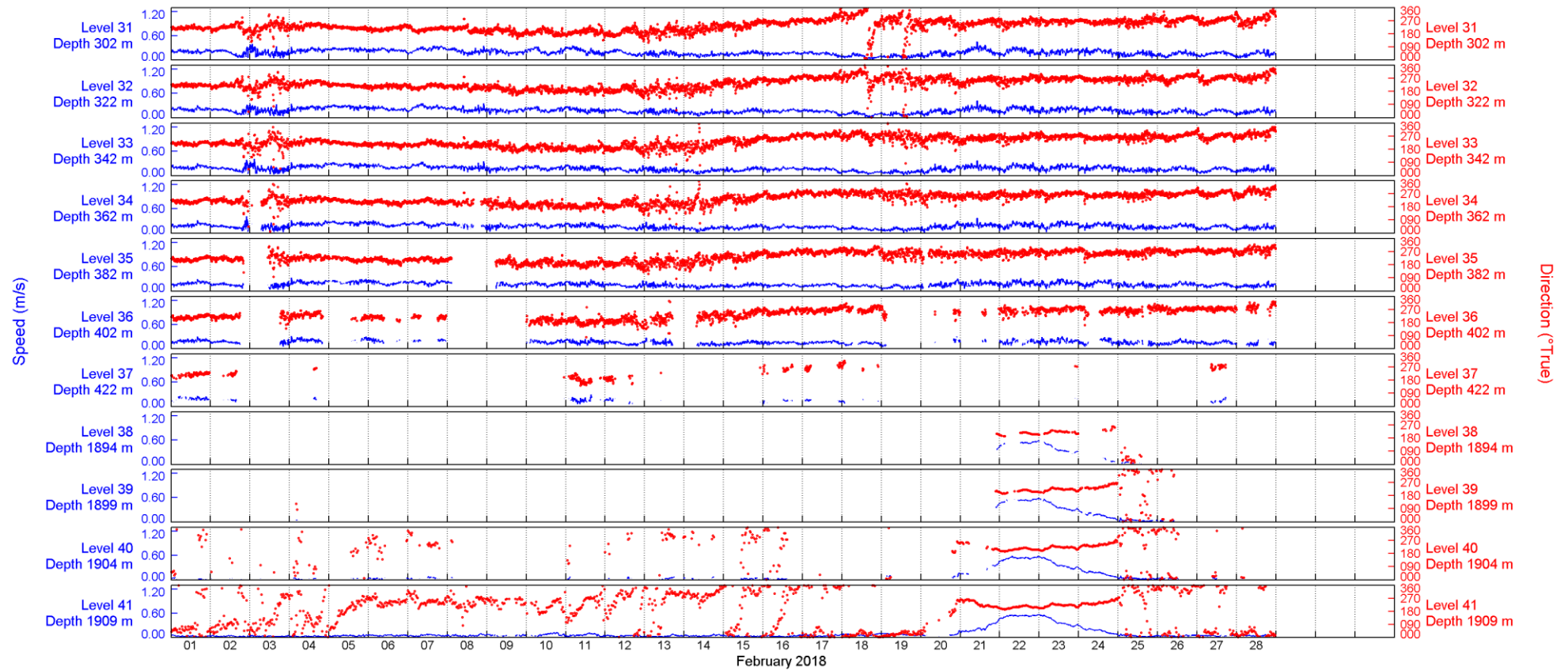
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 75kHz ADCP	
Notes:		

Figure 3.3.3: Selected Levels, 01-Feb-18 to 28-Feb-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:10:56



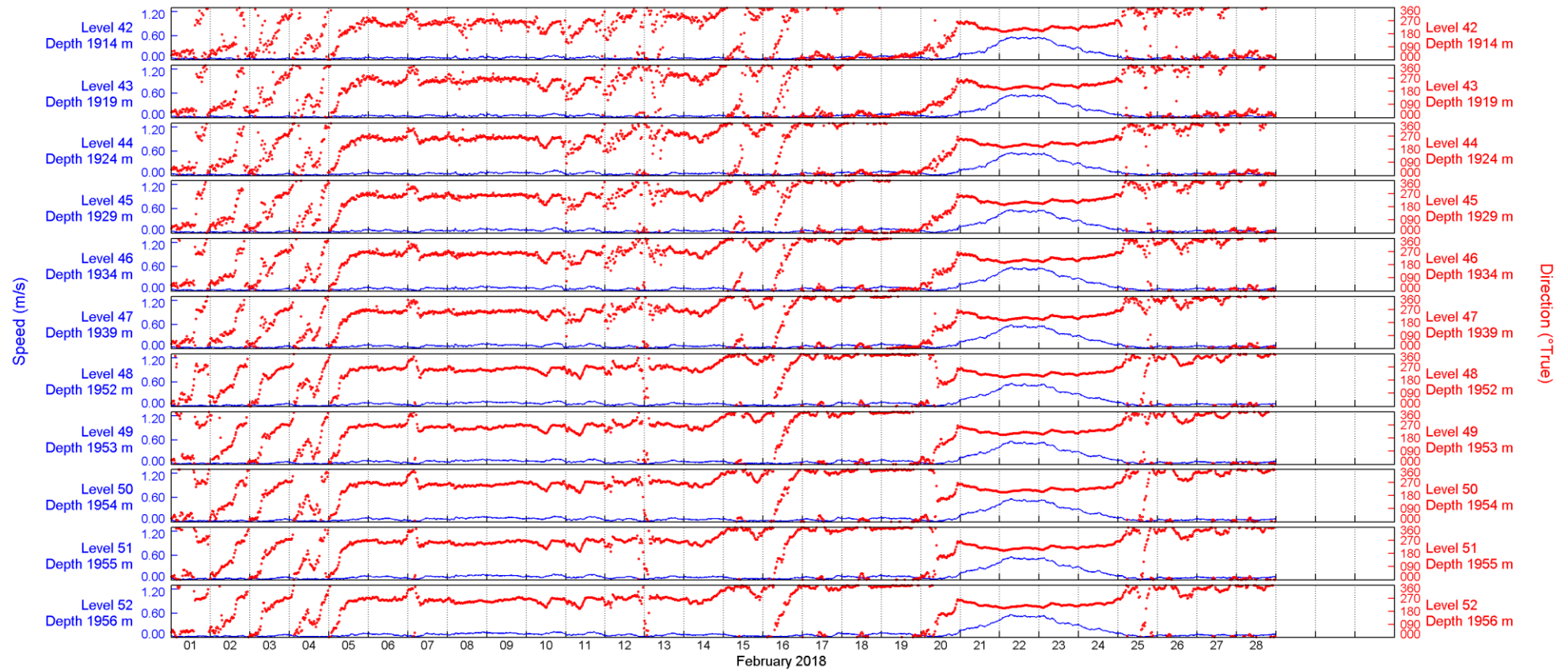
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 75kHz ADCP, 300kHz ADCP	
Notes:		

Figure 3.3.4: Selected Levels, 01-Feb-18 to 28-Feb-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:10:59



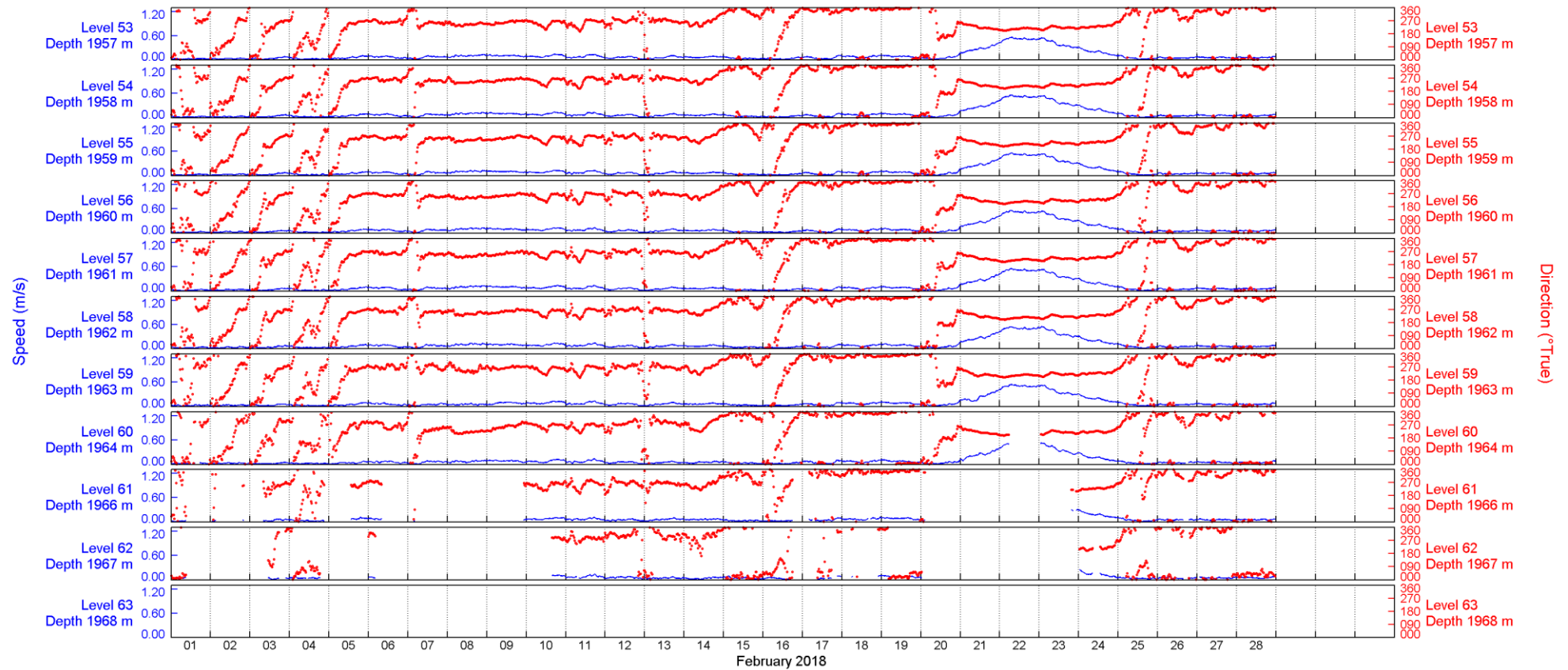
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 600kHz ADCP, 300kHz ADCP	
Notes:		

Figure 3.3.5: Selected Levels, 01-Feb-18 to 28-Feb-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:11:02



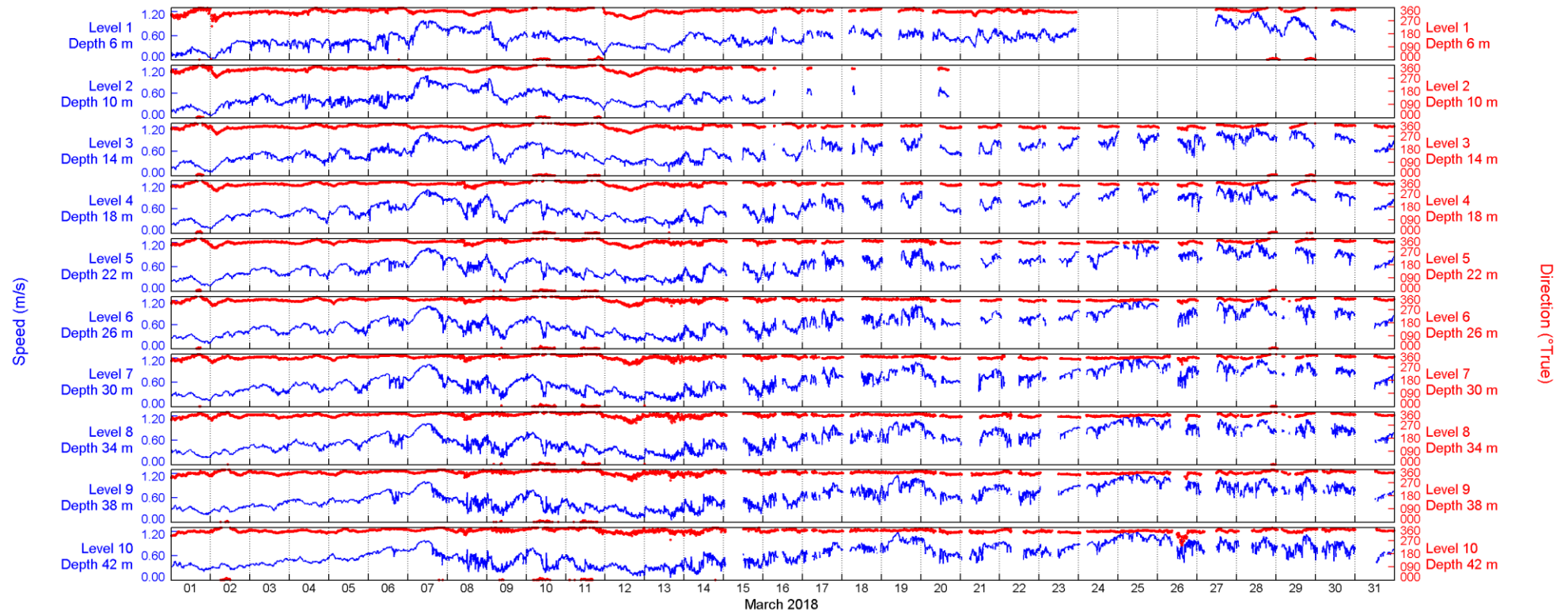
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 600kHz ADCP	
Notes:		

Figure 3.3.6: Selected Levels, 01-Feb-18 to 28-Feb-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:11:05



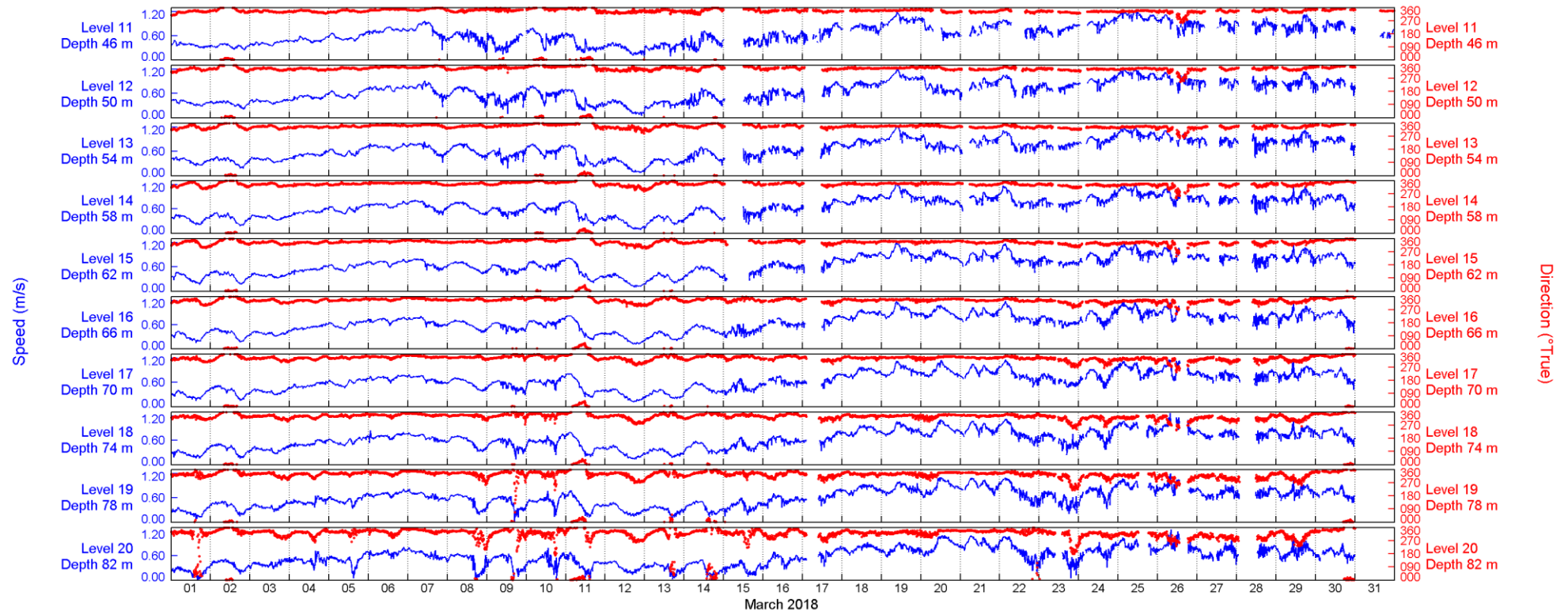
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: Aquadopp	
Notes:		

Figure 3.4.1: Selected Levels, 01-Mar-18 to 31-Mar-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:11:08



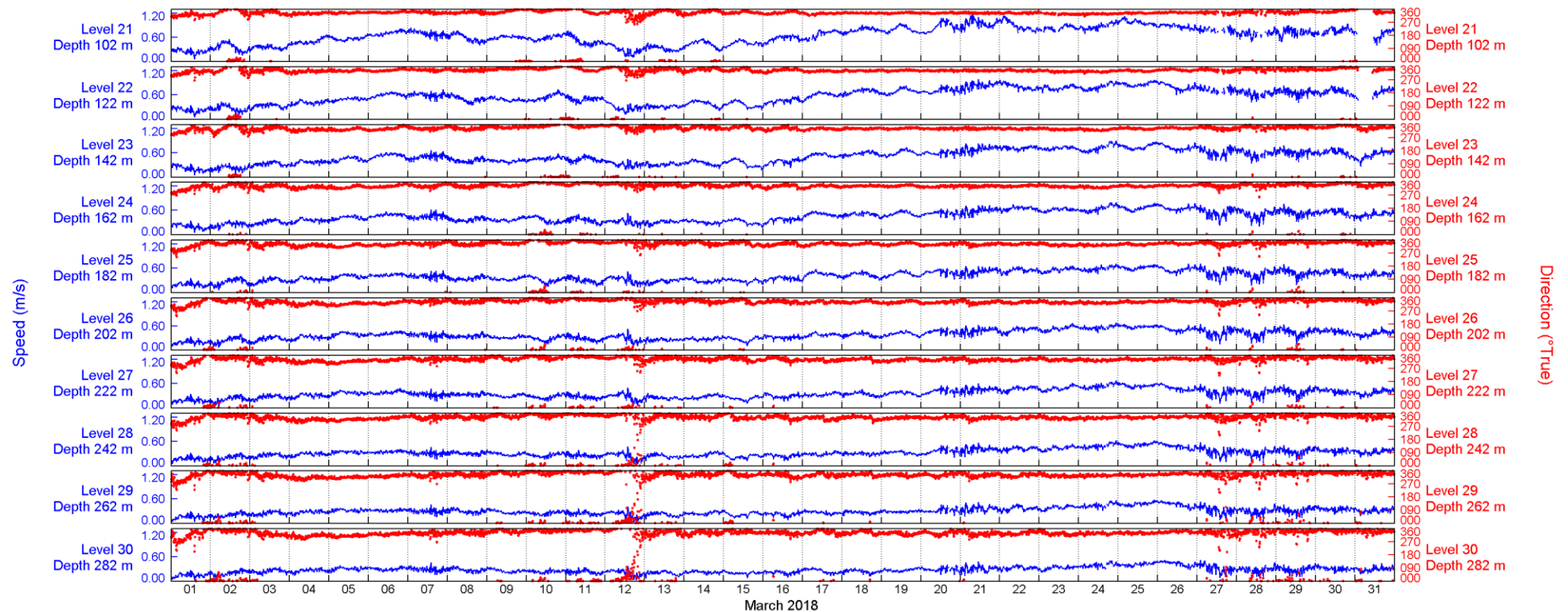
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: Aquadopp	
Notes:		

Figure 3.4.2: Selected Levels, 01-Mar-18 to 31-Mar-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:11:11



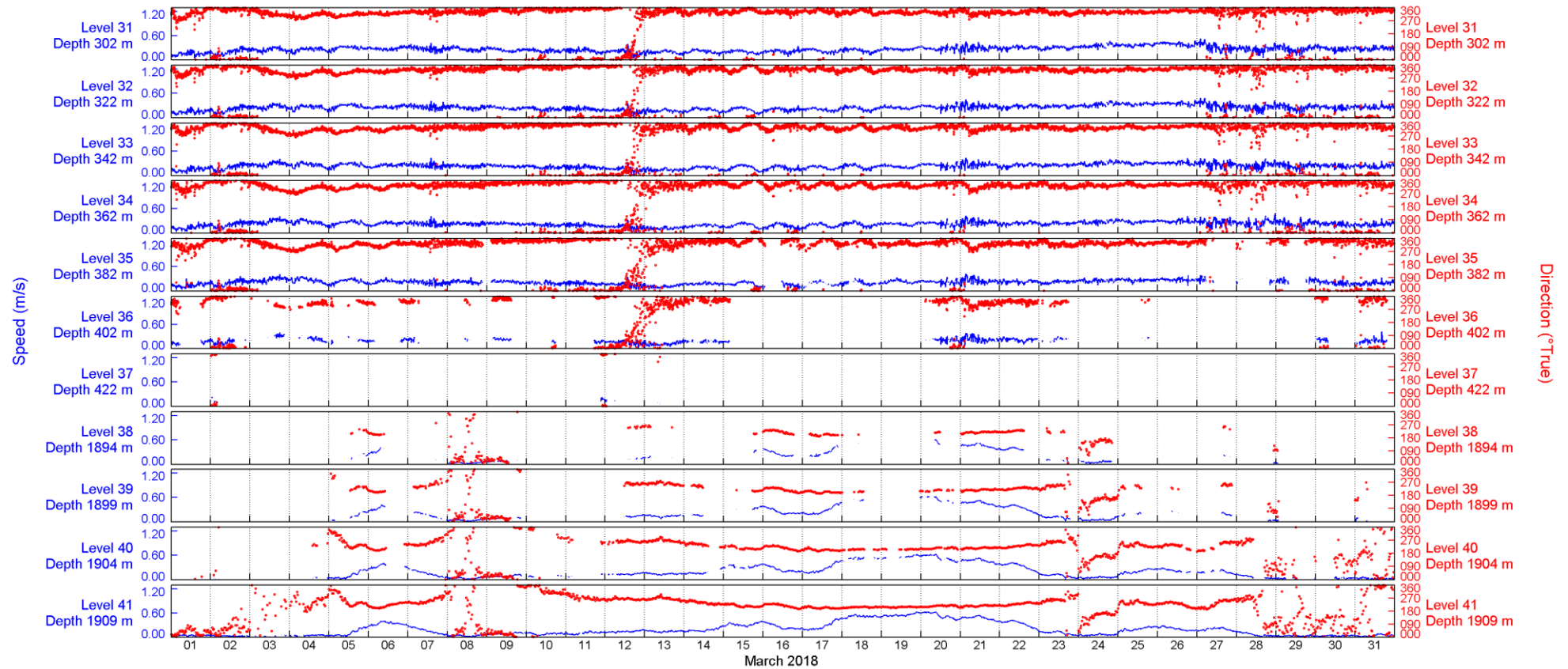
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 75kHz ADCP	
Notes:		

Figure 3.4.3: Selected Levels, 01-Mar-18 to 31-Mar-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:11:14



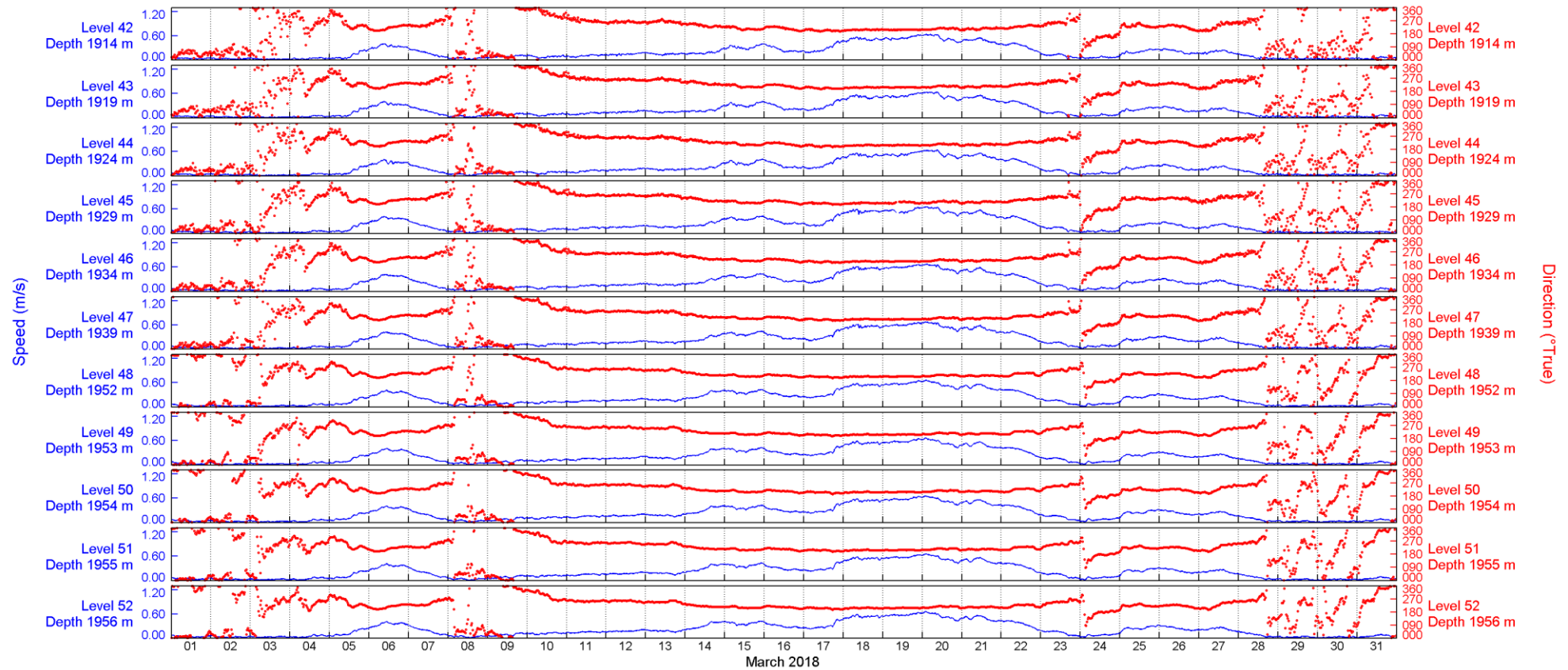
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 75kHz ADCP, 300kHz ADCP	
Notes:		

Figure 3.4.4: Selected Levels, 01-Mar-18 to 31-Mar-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:11:17



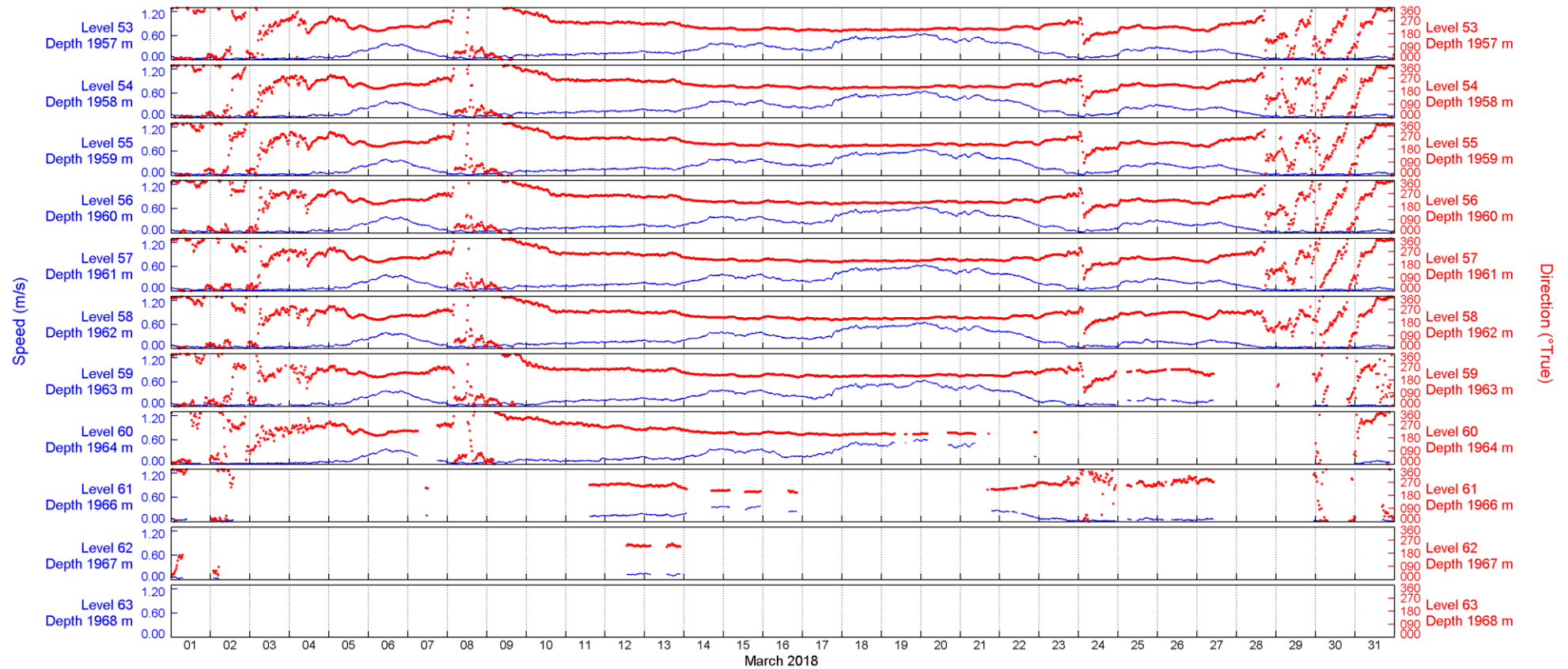
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 600kHz ADCP, 300kHz ADCP	
Notes:		

Figure 3.4.5: Selected Levels, 01-Mar-18 to 31-Mar-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:11:20



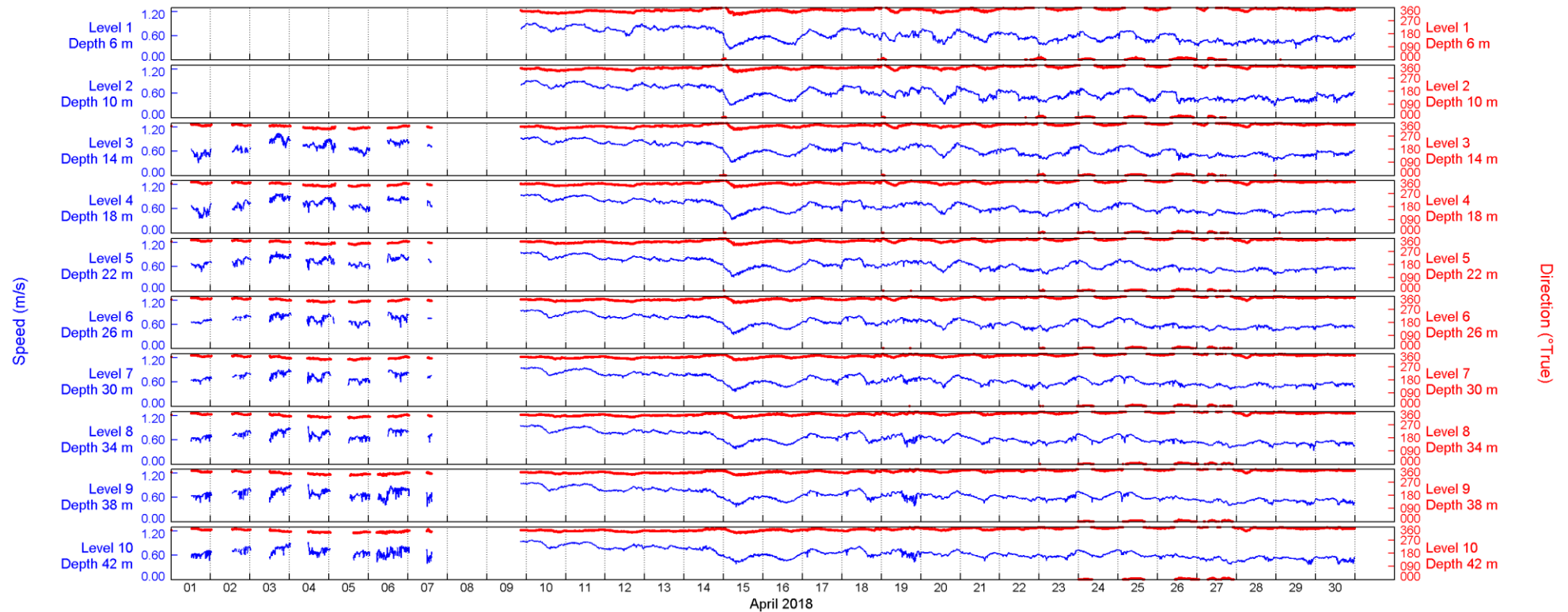
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 600kHz ADCP	
Notes:		

Figure 3.4.6: Selected Levels, 01-Mar-18 to 31-Mar-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:11:23



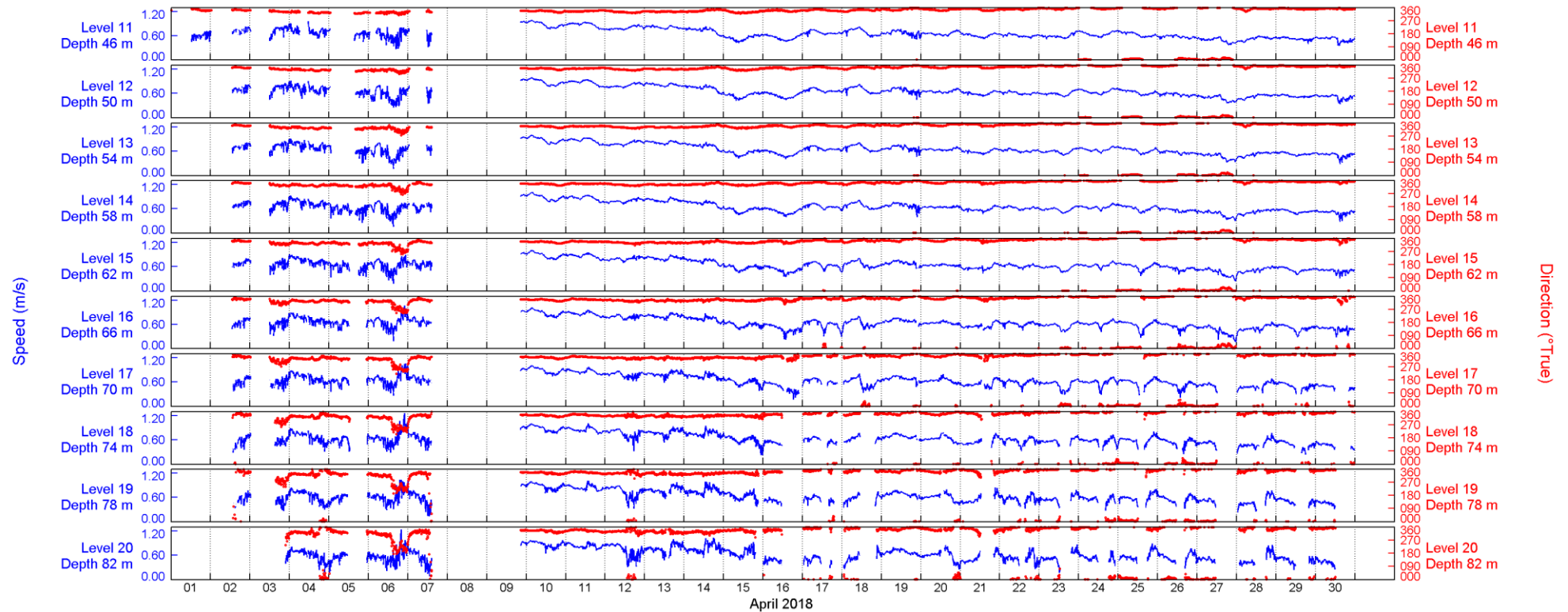
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: Aquadopp	
Notes:		

Figure 3.5.1: Selected Levels, 01-Apr-18 to 30-Apr-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:11:26



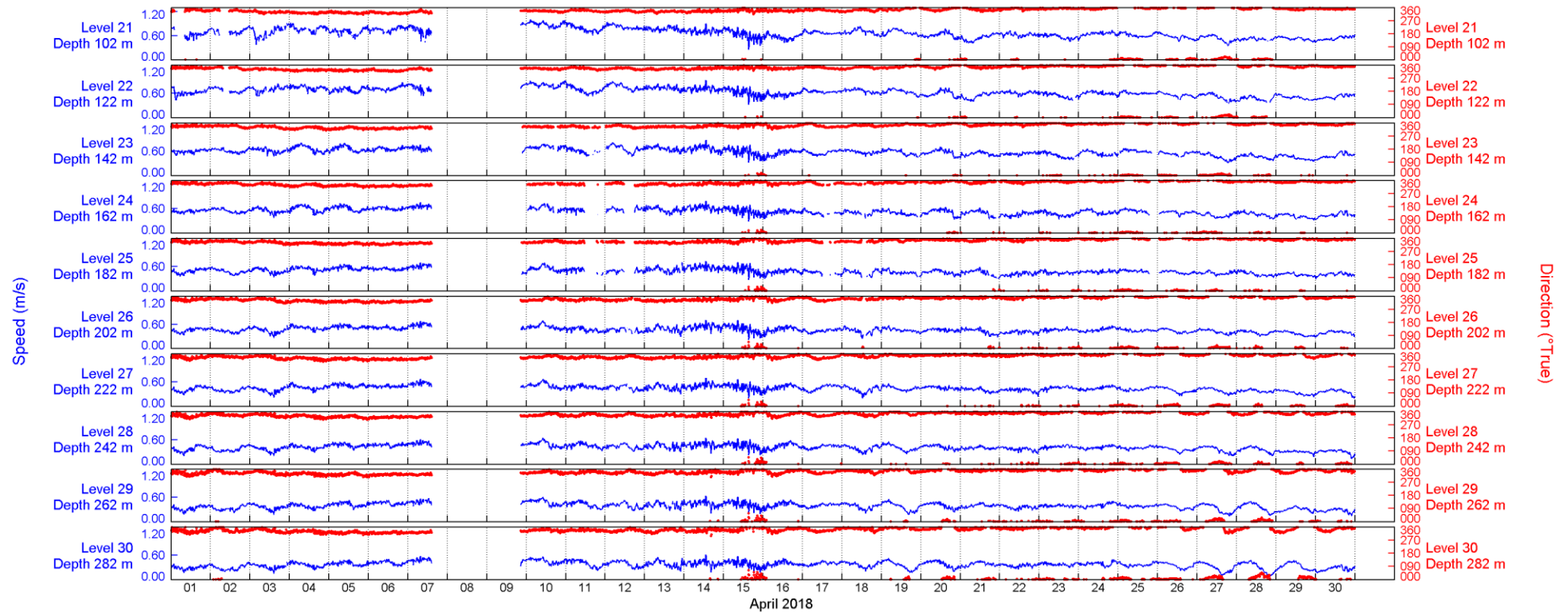
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: Aquadopp	
Notes:		

Figure 3.5.2: Selected Levels, 01-Apr-18 to 30-Apr-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:11:29



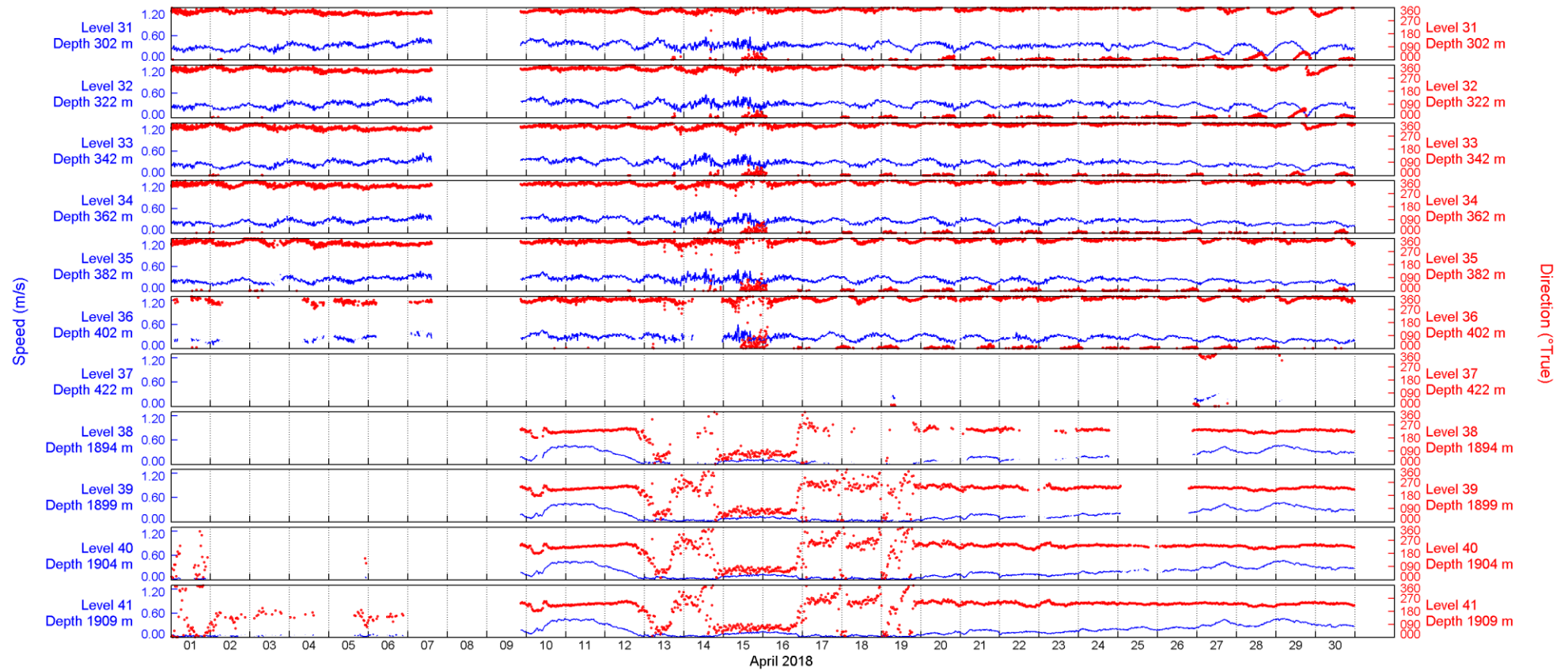
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 75kHz ADCP	
Notes:		

Figure 3.5.3: Selected Levels, 01-Apr-18 to 30-Apr-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:11:32



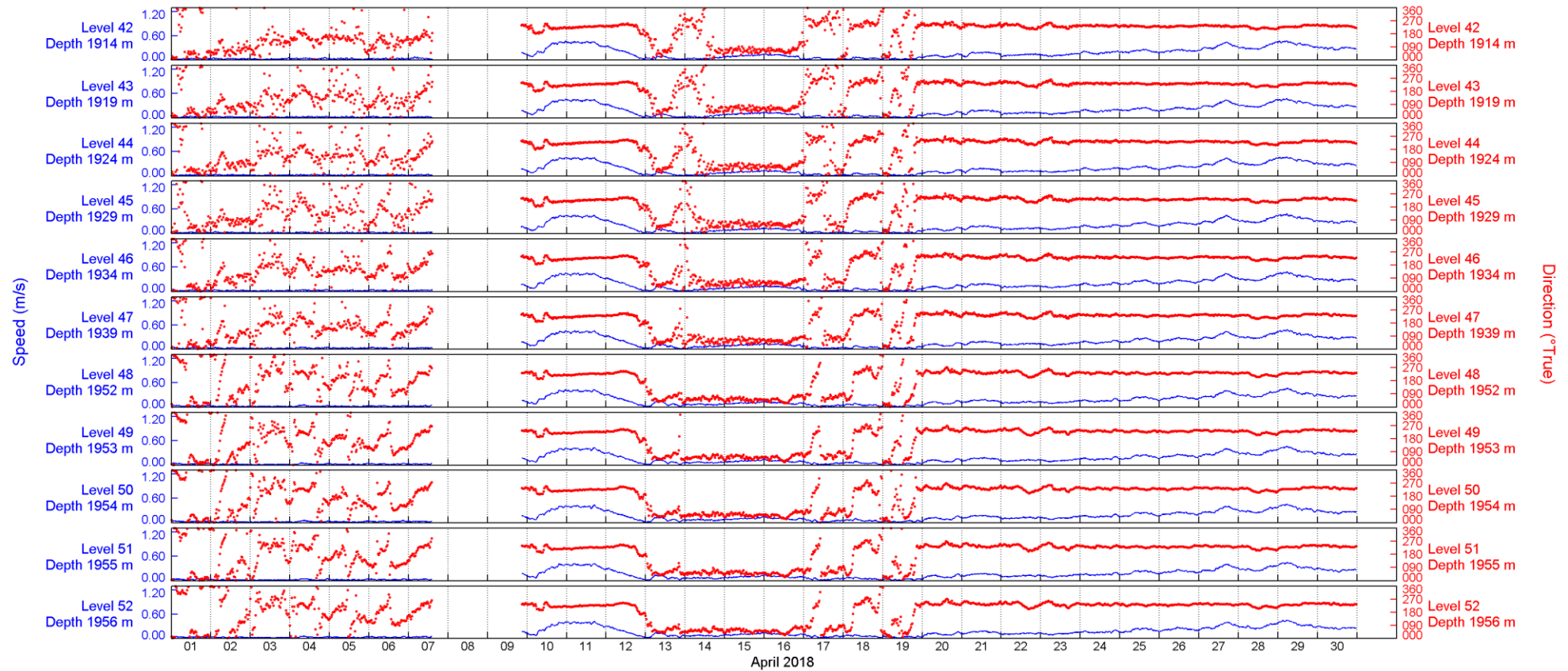
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 75kHz ADCP, 300kHz ADCP	
Notes:		

Figure 3.5.4: Selected Levels, 01-Apr-18 to 30-Apr-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:11:35



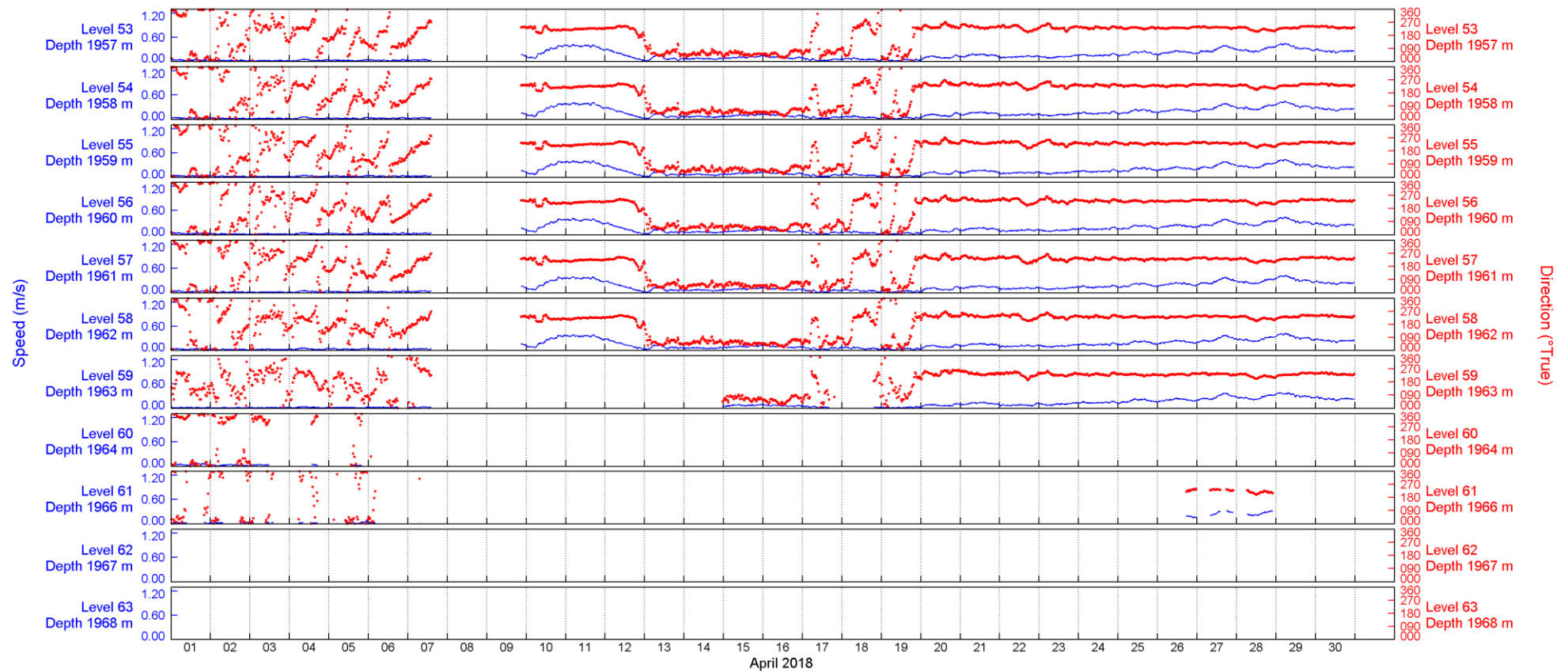
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 600kHz ADCP, 300kHz ADCP	
Notes:		

Figure 3.5.5: Selected Levels, 01-Apr-18 to 30-Apr-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:11:38



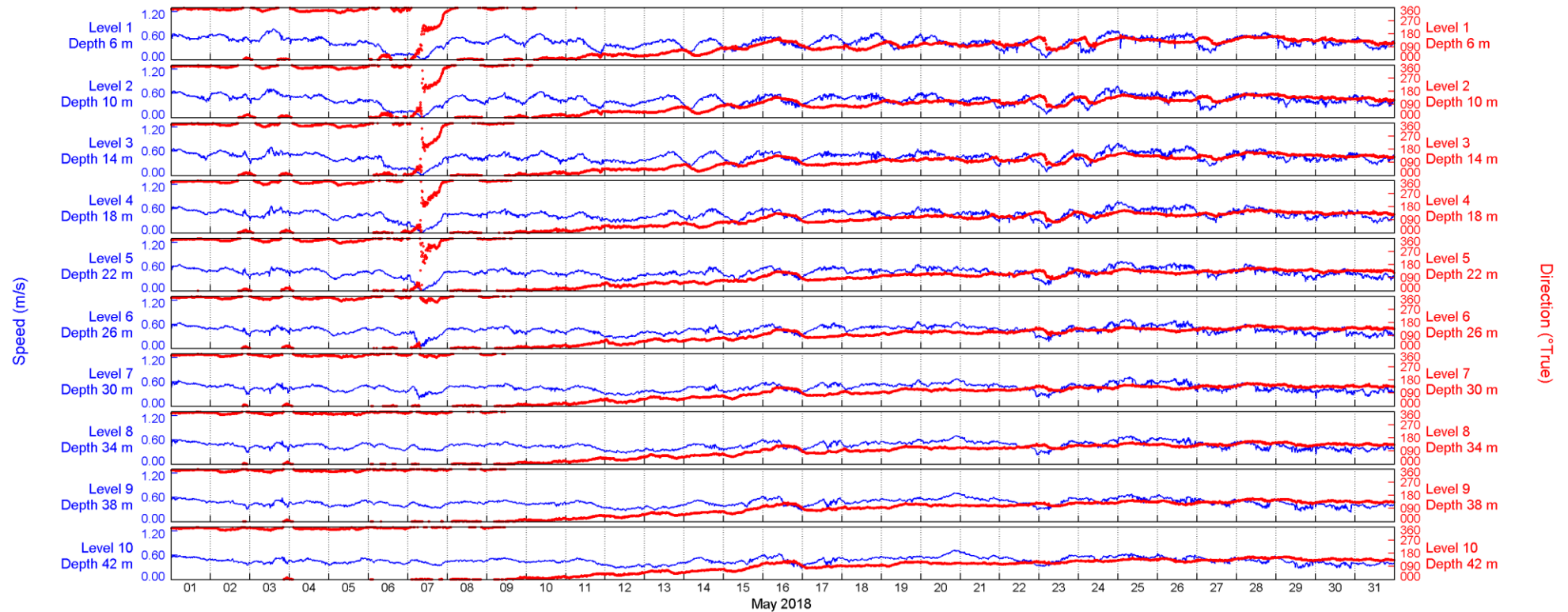
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 600kHz ADCP	
Notes:		

Figure 3.5.6: Selected Levels, 01-Apr-18 to 30-Apr-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:11:41



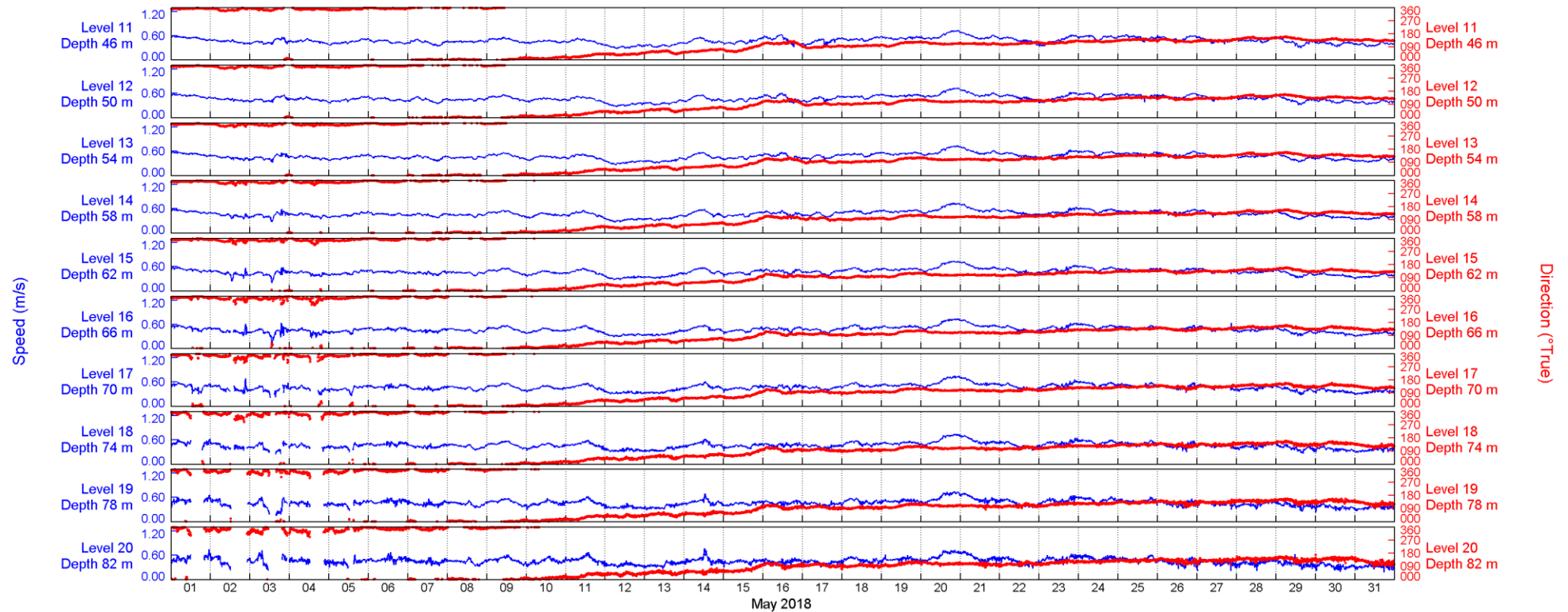
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: Aquadopp	
Notes:		

Figure 3.6.1: Selected Levels, 01-May-18 to 31-May-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:11:44



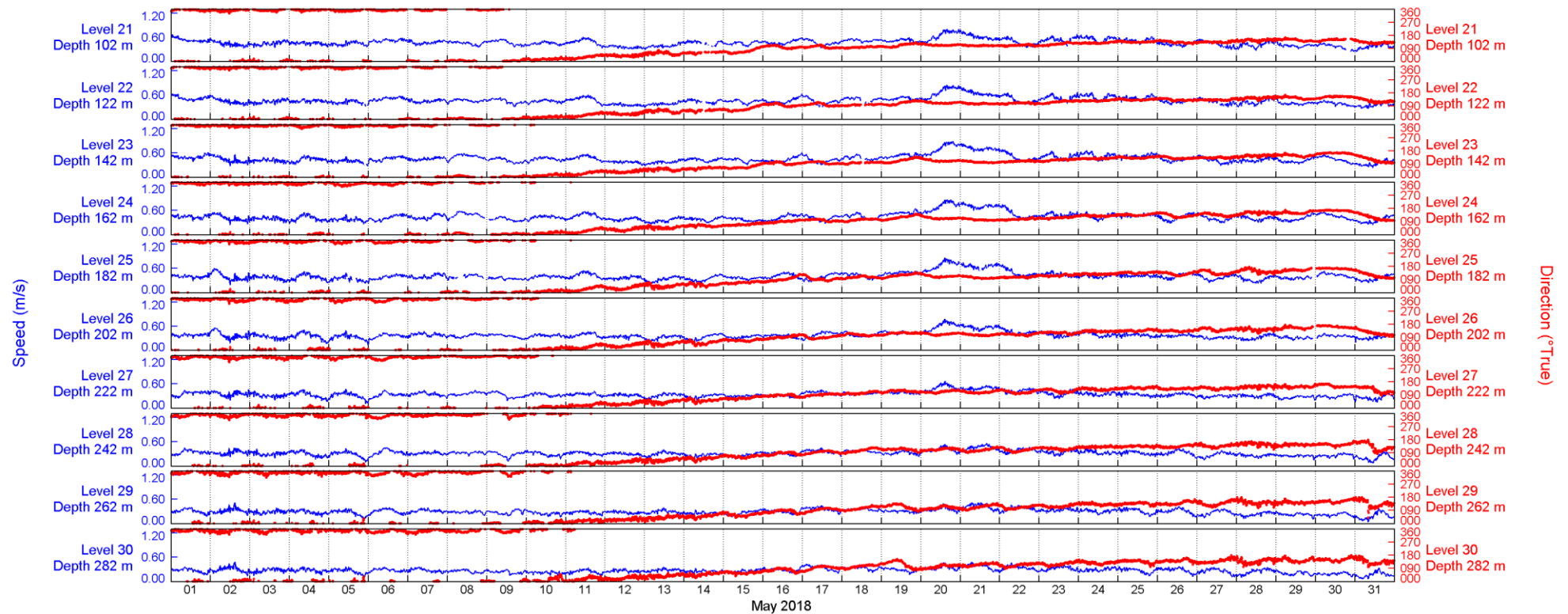
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: Aquadopp	
Notes:		

Figure 3.6.2: Selected Levels, 01-May-18 to 31-May-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:11:47



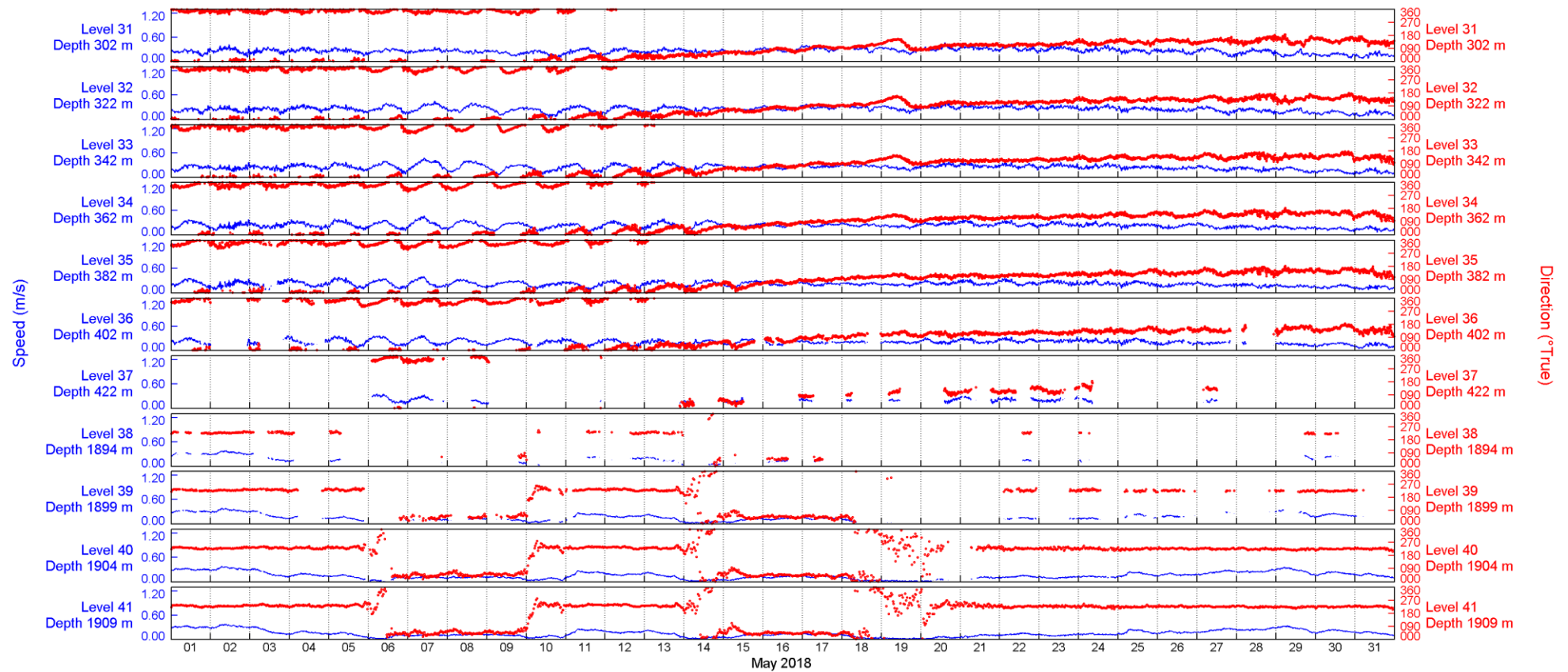
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 75kHz ADCP	
Notes:		

Figure 3.6.3: Selected Levels, 01-May-18 to 31-May-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:11:50



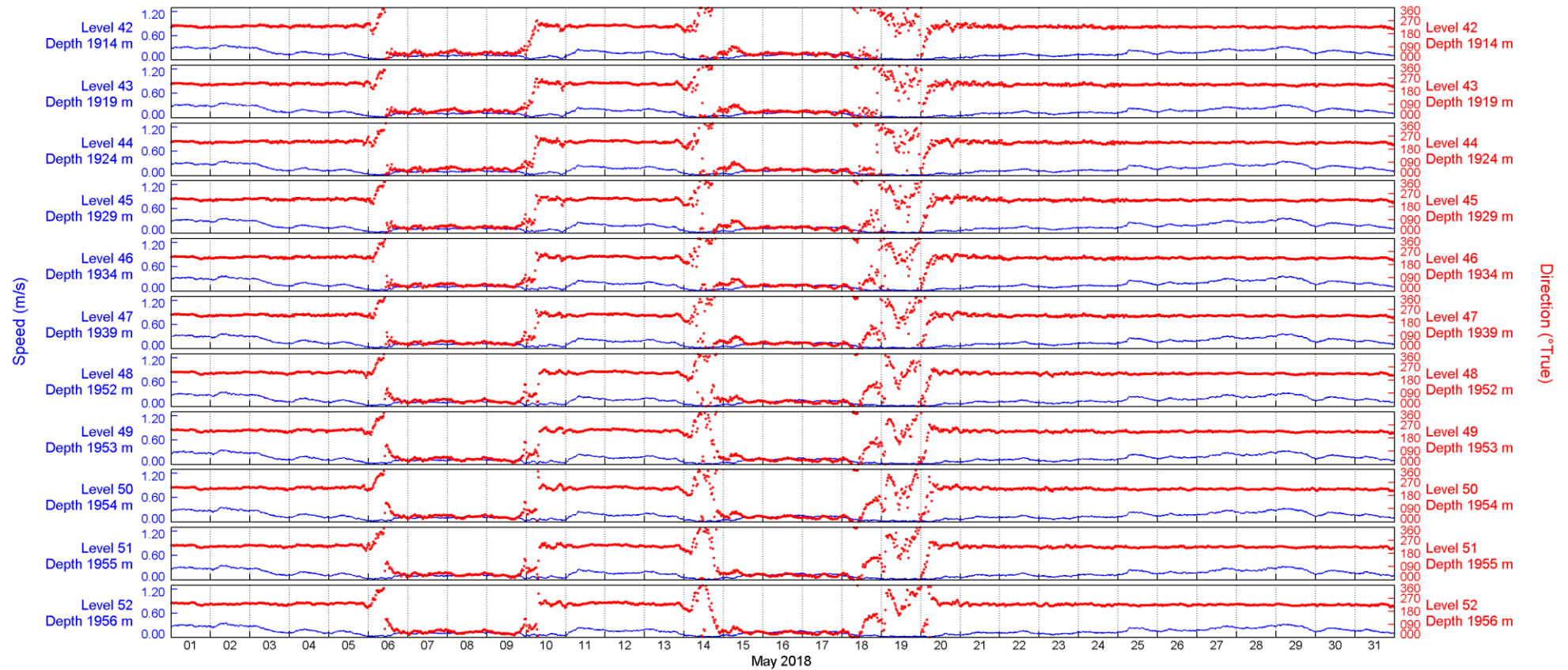
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 75kHz ADCP, 300kHz ADCP	
Notes:		

Figure 3.6.4: Selected Levels, 01-May-18 to 31-May-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:11:53



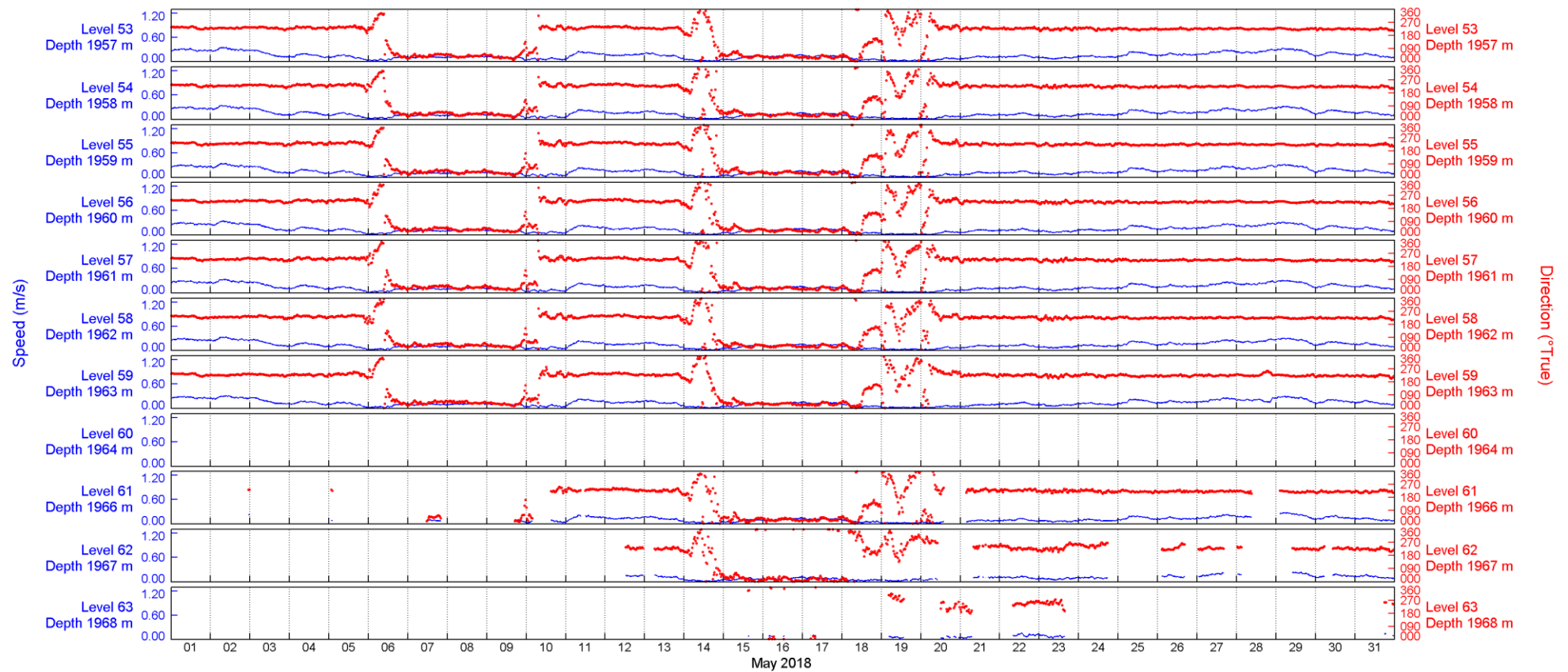
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 600kHz ADCP, 300kHz ADCP	
Notes:		

Figure 3.6.5: Selected Levels, 01-May-18 to 31-May-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:11:56



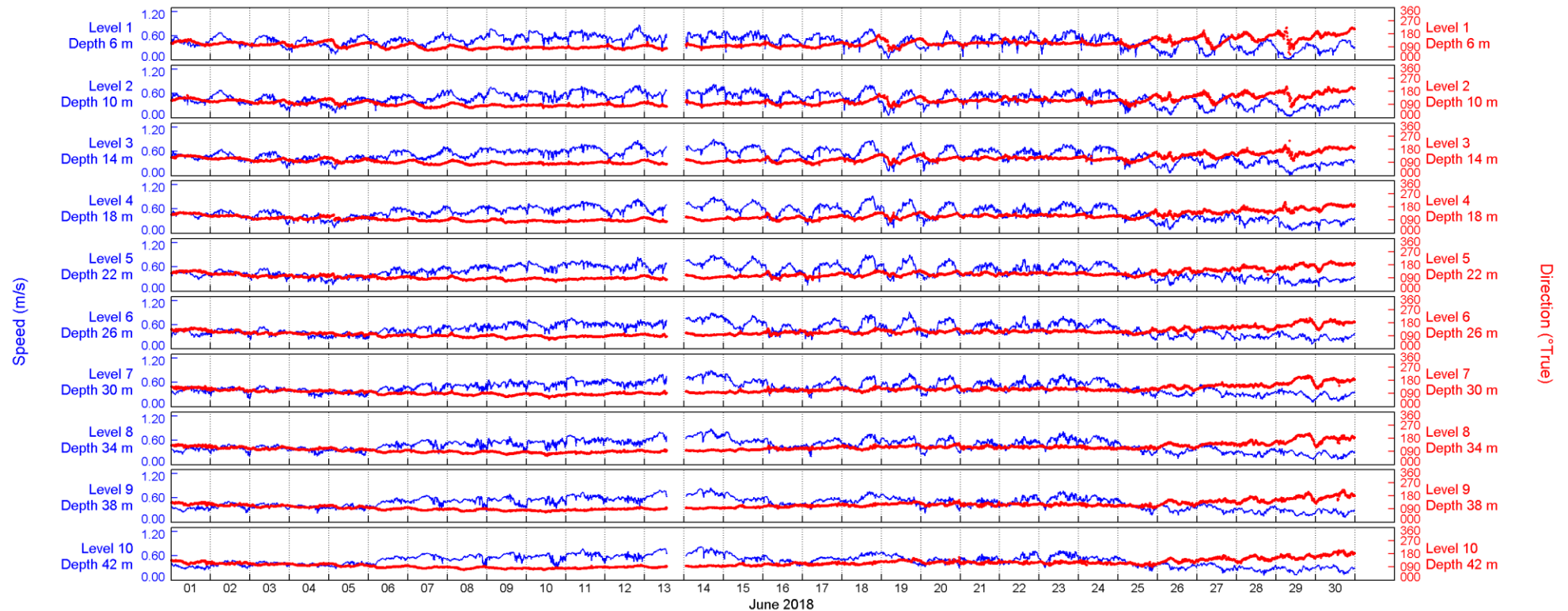
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 600kHz ADCP	
Notes:		

Figure 3.6.6: Selected Levels, 01-May-18 to 31-May-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:11:59



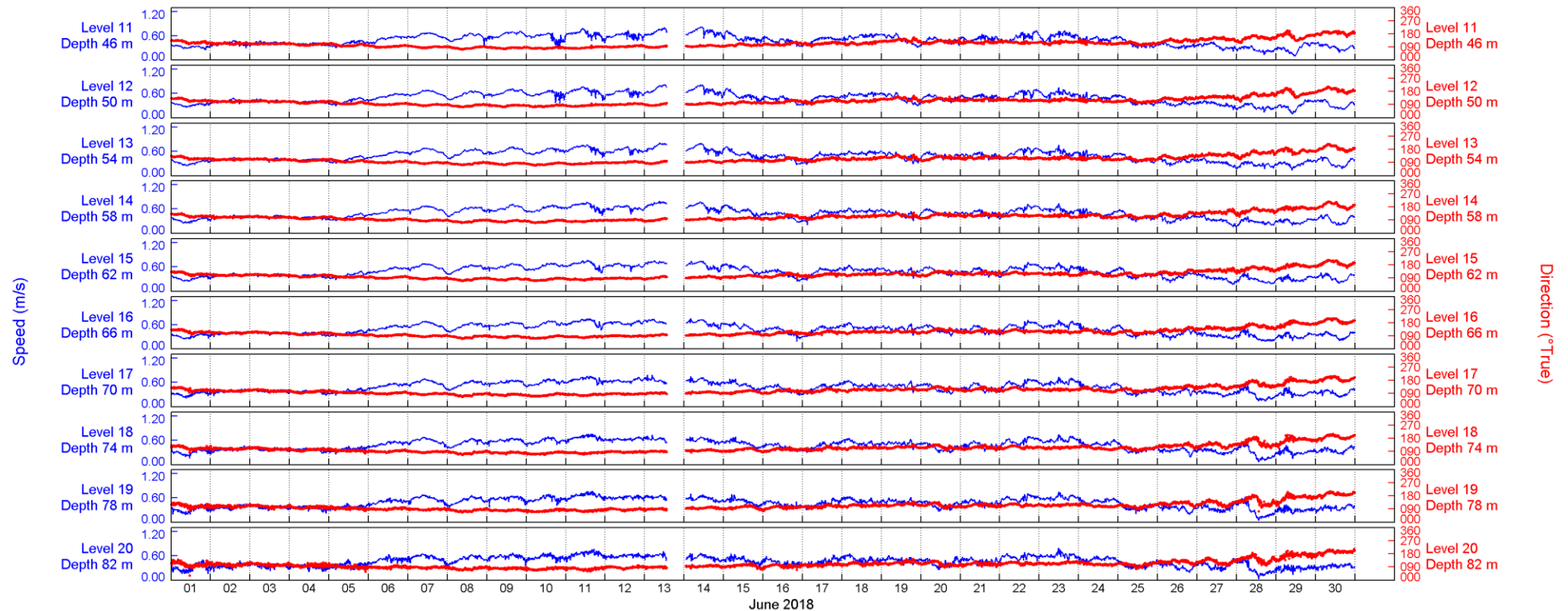
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: Aquadopp	
Notes:		

Figure 3.7.1: Selected Levels, 01-Jun-18 to 30-Jun-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:12:02



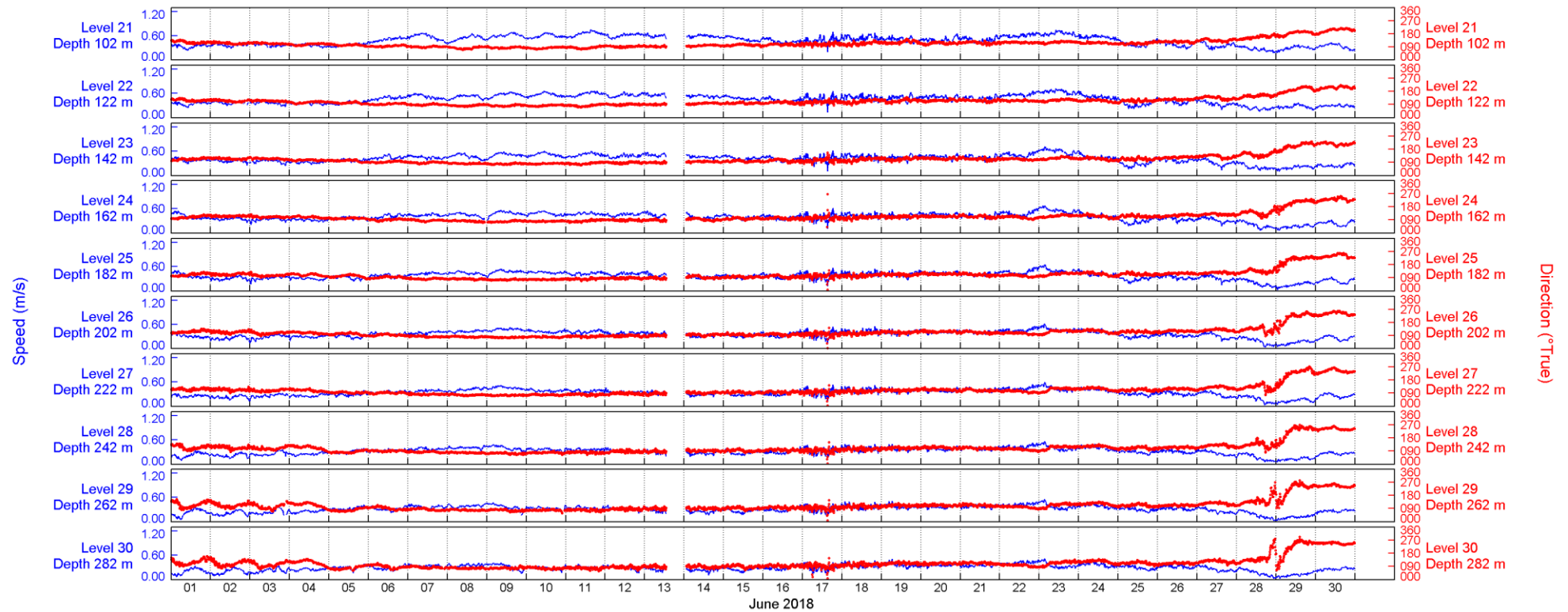
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: Aquadopp	
Notes:		

Figure 3.7.2: Selected Levels, 01-Jun-18 to 30-Jun-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:12:05



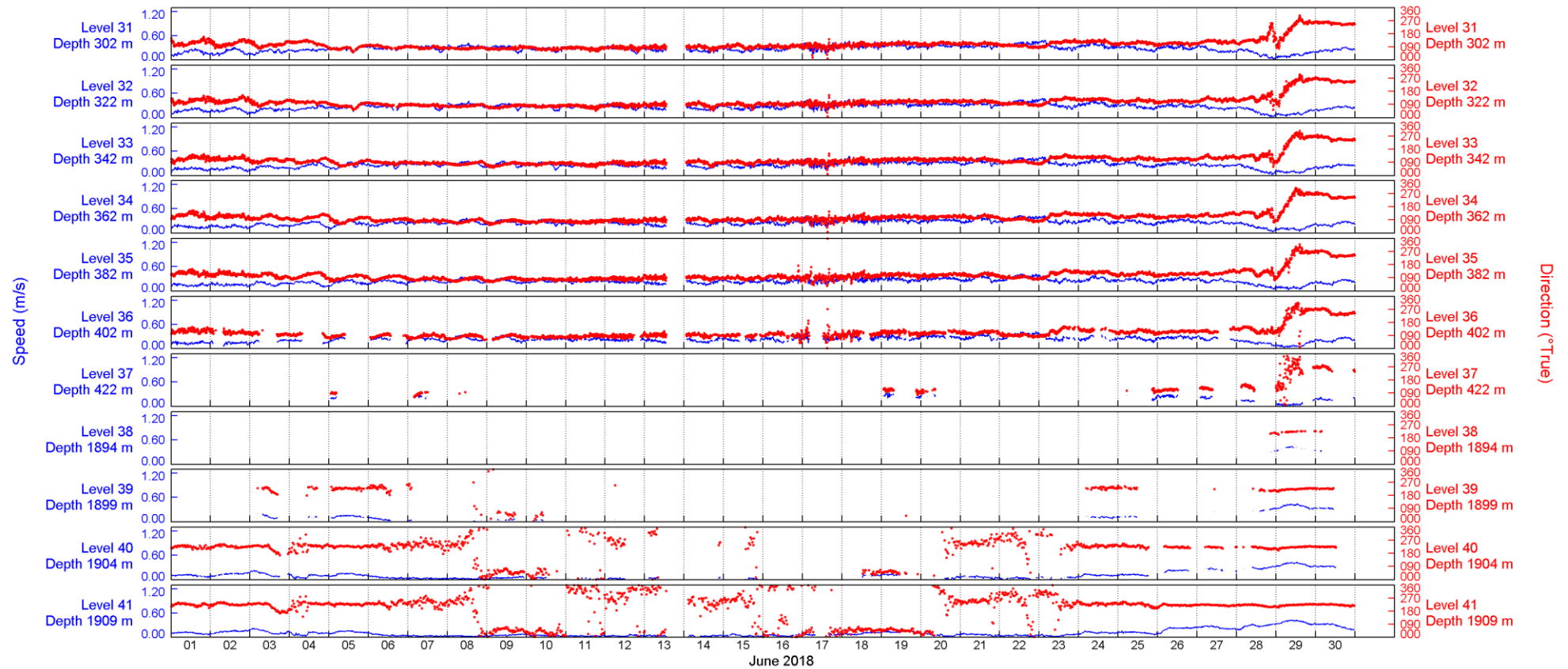
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 75kHz ADCP	
Notes:		

Figure 3.7.3: Selected Levels, 01-Jun-18 to 30-Jun-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:12:08



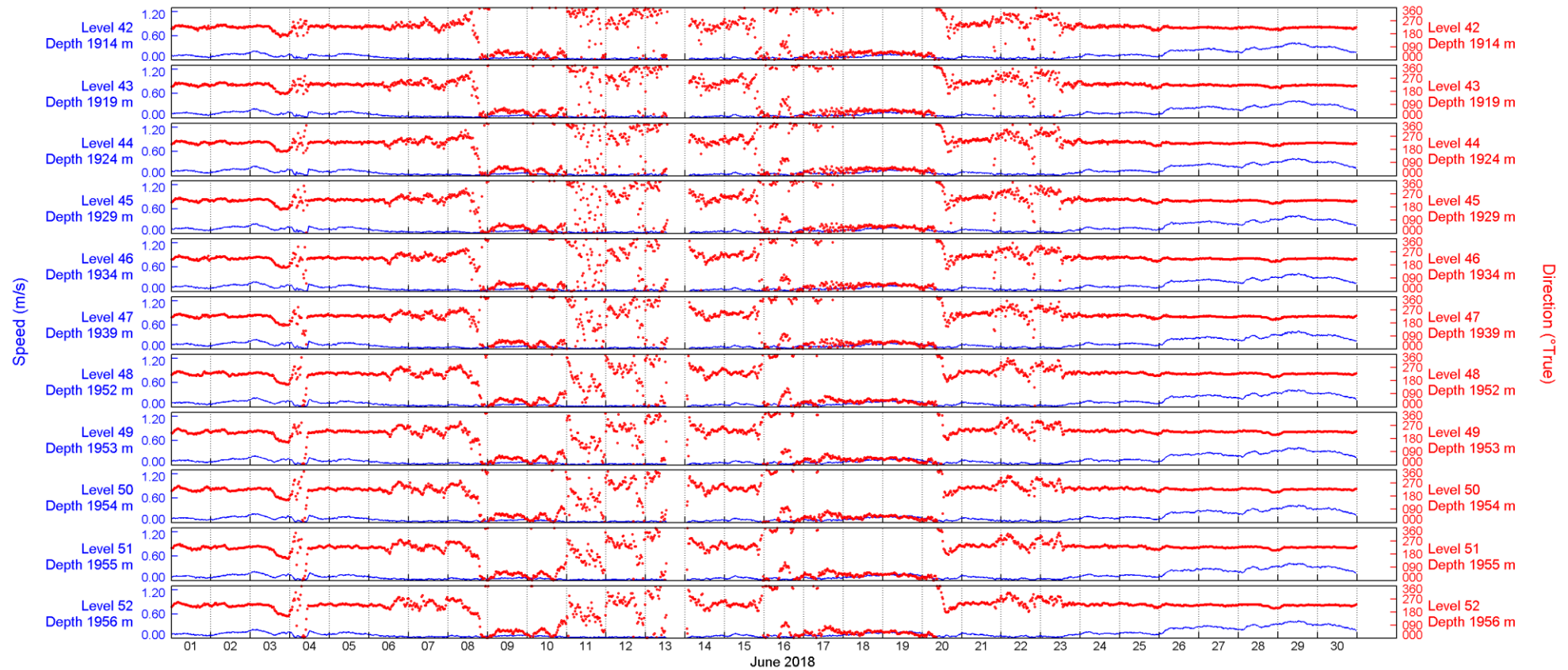
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 75kHz ADCP, 300kHz ADCP	
Notes:		

Figure 3.7.4: Selected Levels, 01-Jun-18 to 30-Jun-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:12:11



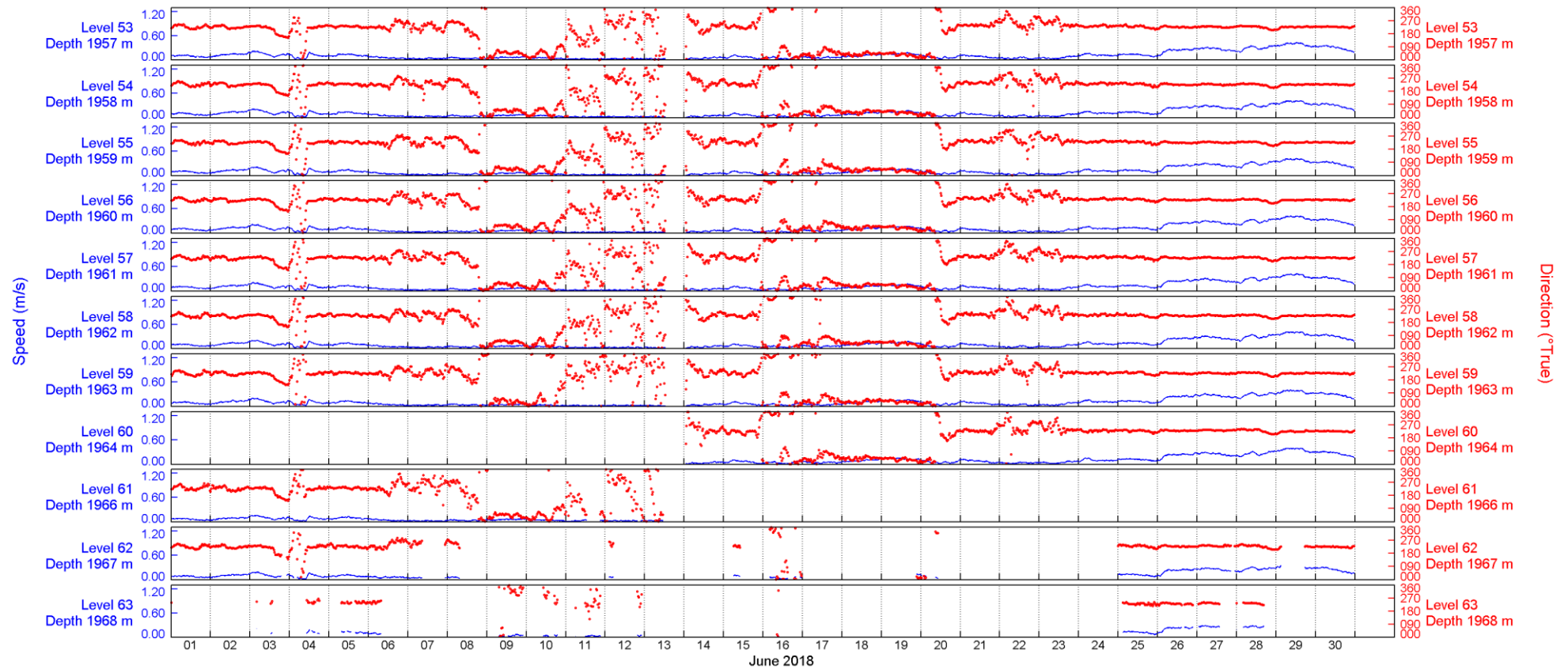
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 600kHz ADCP, 300kHz ADCP	
Notes:		

Figure 3.7.5: Selected Levels, 01-Jun-18 to 30-Jun-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:12:14



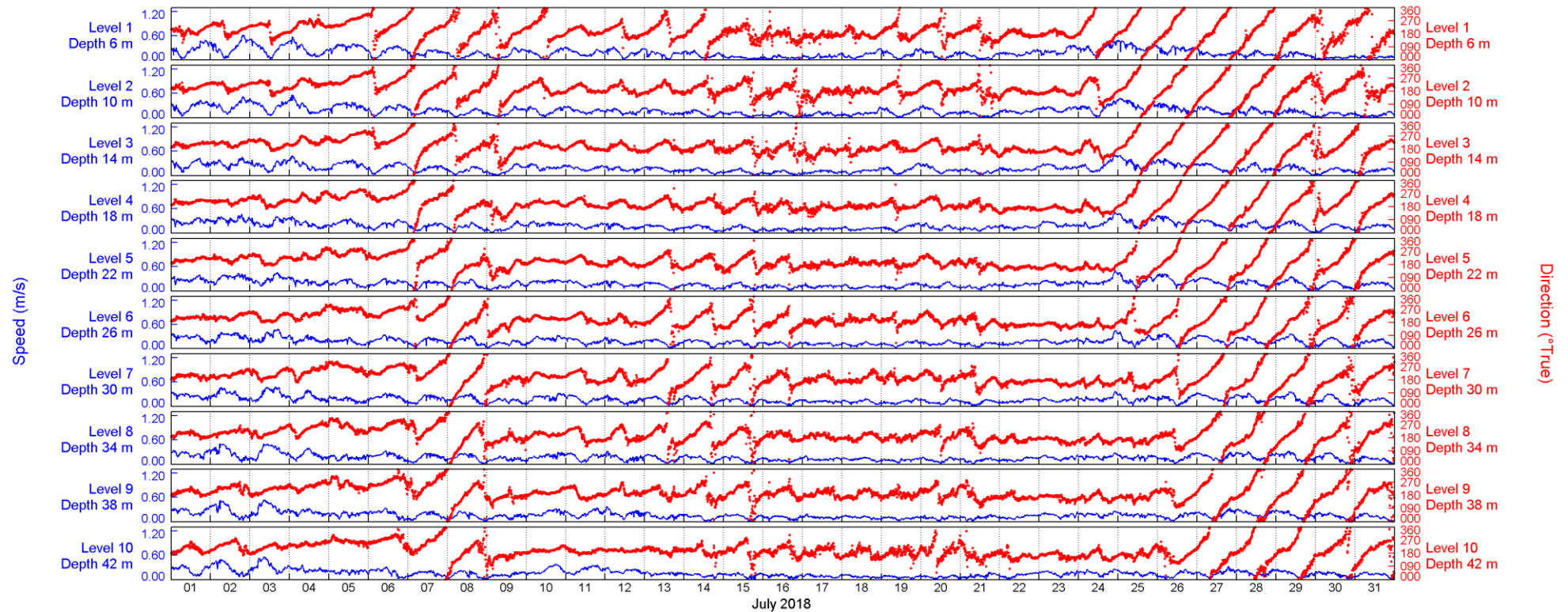
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 600kHz ADCP	
Notes:		

Figure 3.7.6: Selected Levels, 01-Jun-18 to 30-Jun-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:12:17



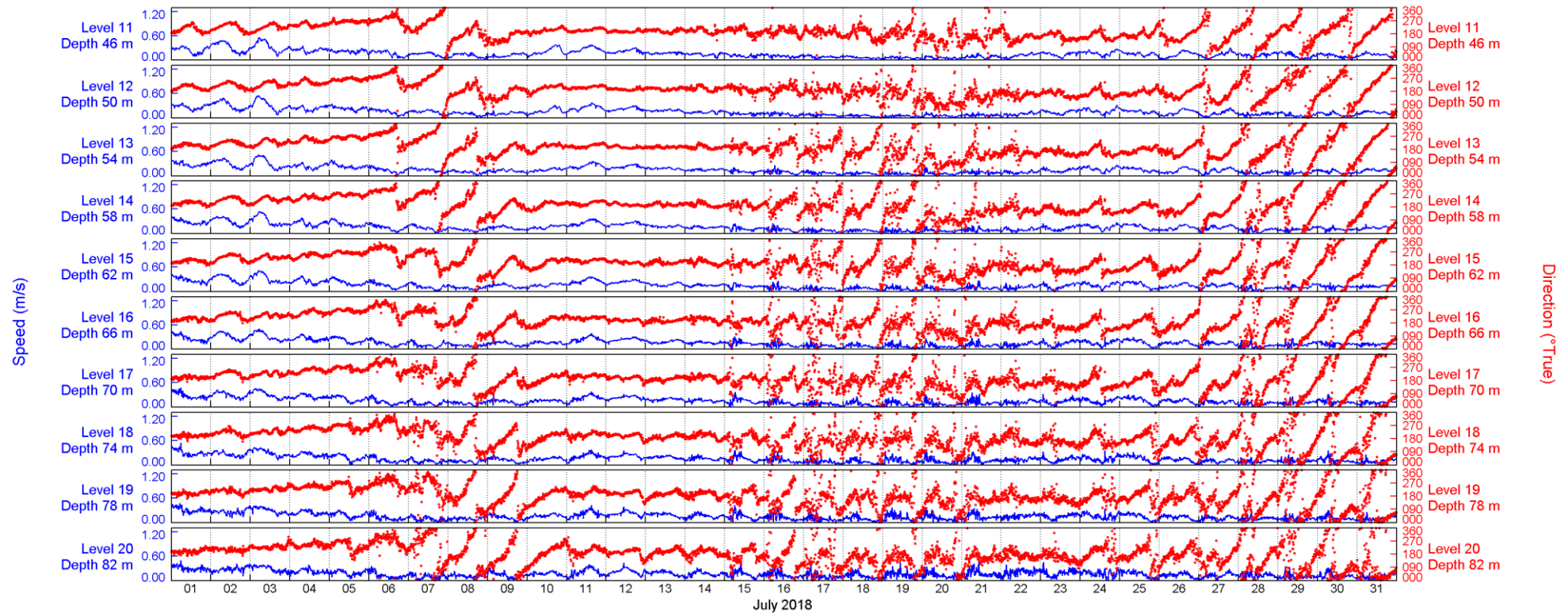
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: Aquadopp	
Notes:		

Figure 3.8.1: Selected Levels, 01-Jul-18 to 31-Jul-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:12:20



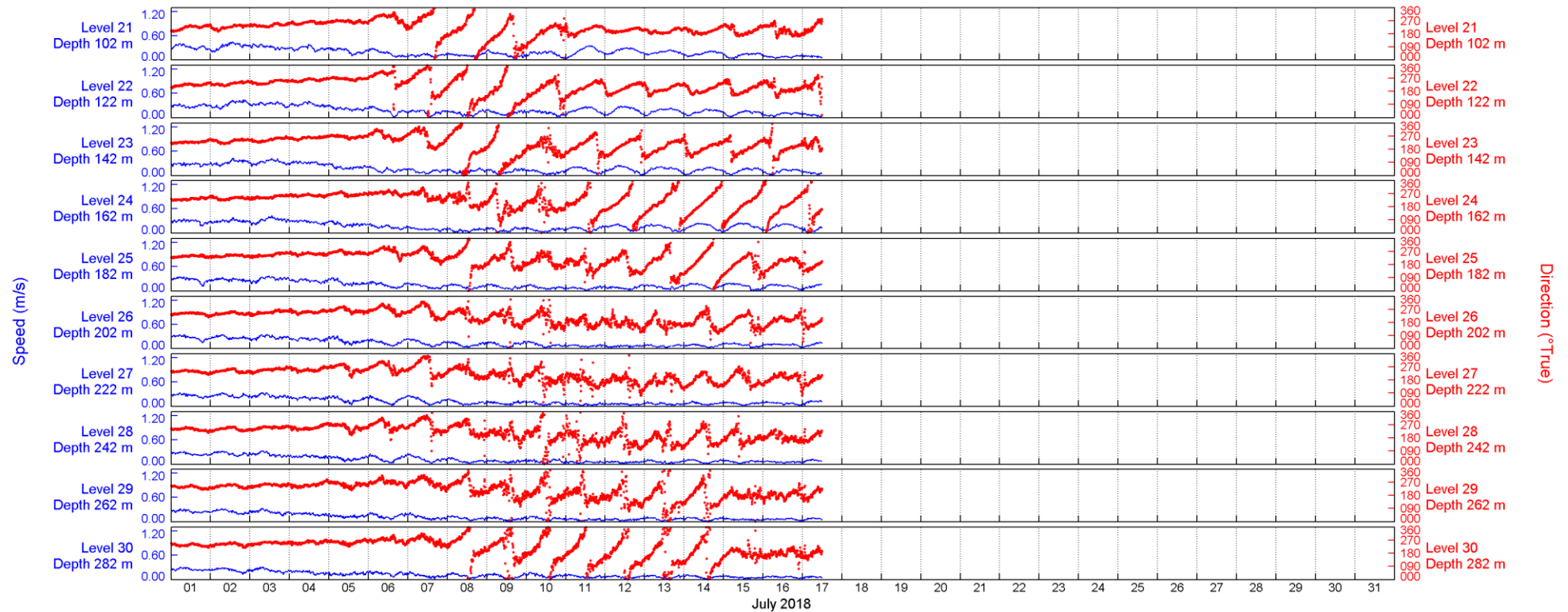
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: Aquadopp	
Notes:		

Figure 3.8.2: Selected Levels, 01-Jul-18 to 31-Jul-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:12:23



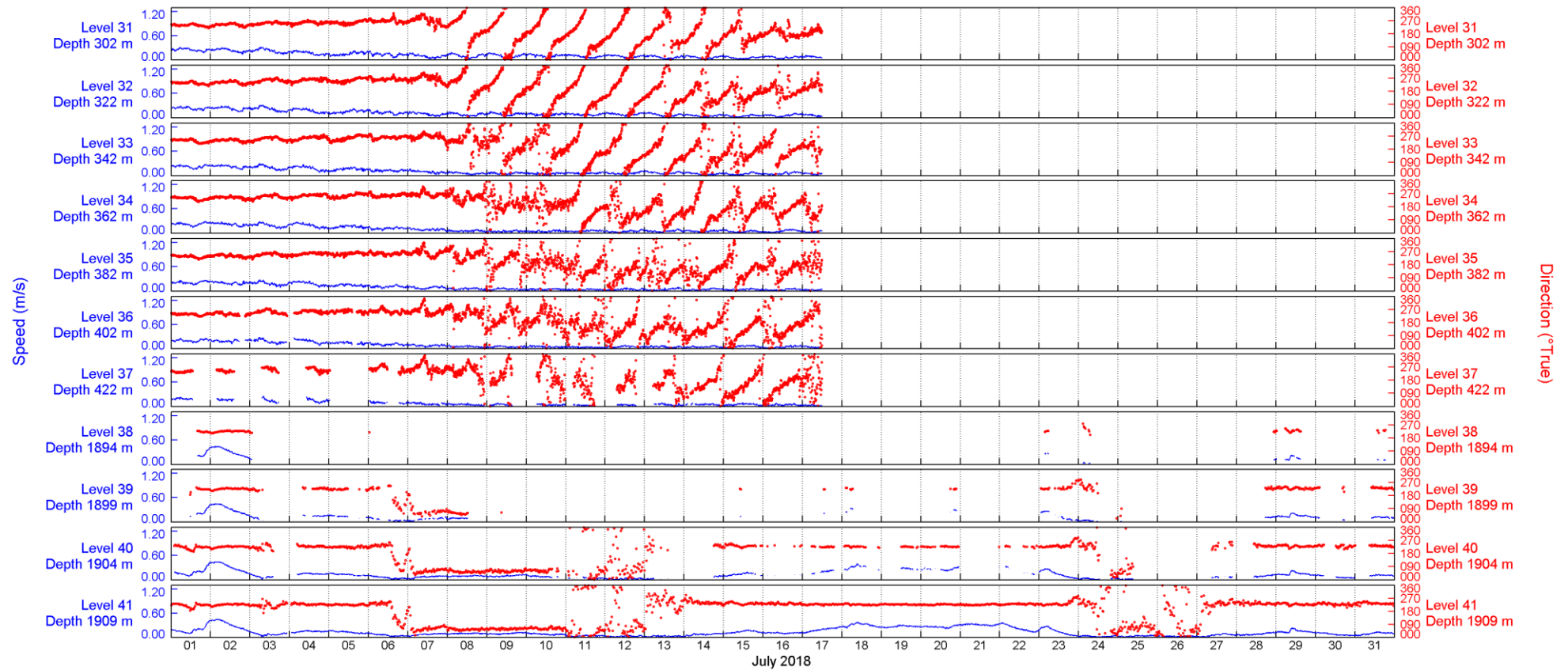
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 75kHz ADCP	
Notes:		

Figure 3.8.3: Selected Levels, 01-Jul-18 to 31-Jul-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:12:26



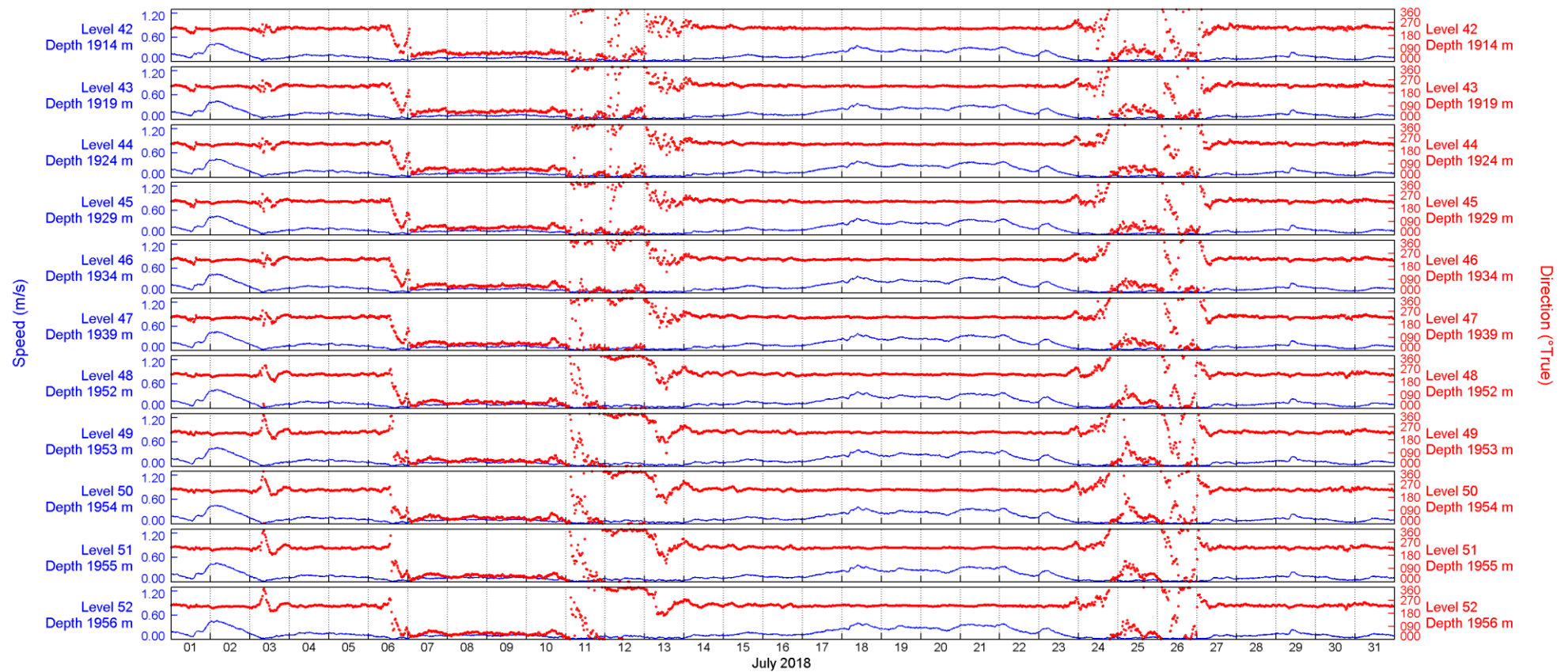
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 75kHz ADCP, 300kHz ADCP	
Notes:		

Figure 3.8.4: Selected Levels, 01-Jul-18 to 31-Jul-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:12:29



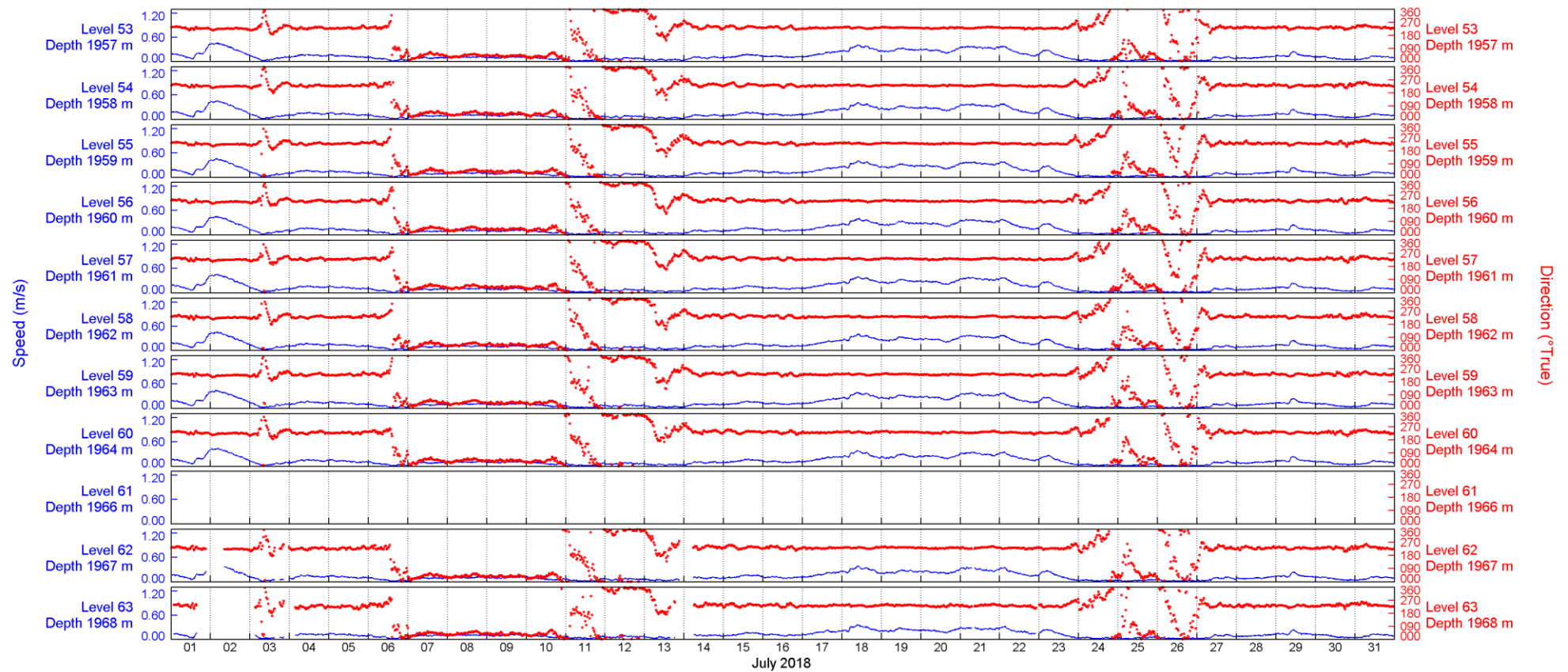
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 600kHz ADCP, 300kHz ADCP	
Notes:		

Figure 3.8.5: Selected Levels, 01-Jul-18 to 31-Jul-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:12:32



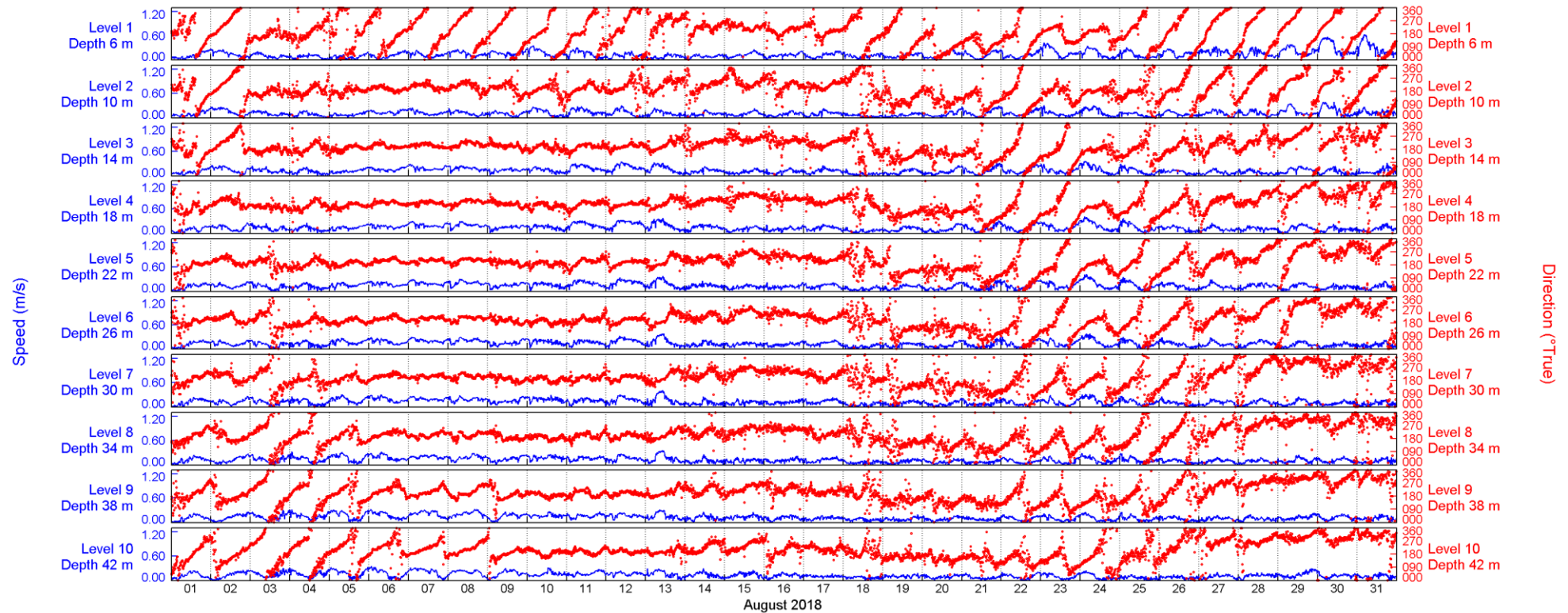
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 600kHz ADCP	
Notes:		

Figure 3.8.6: Selected Levels, 01-Jul-18 to 31-Jul-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:12:35



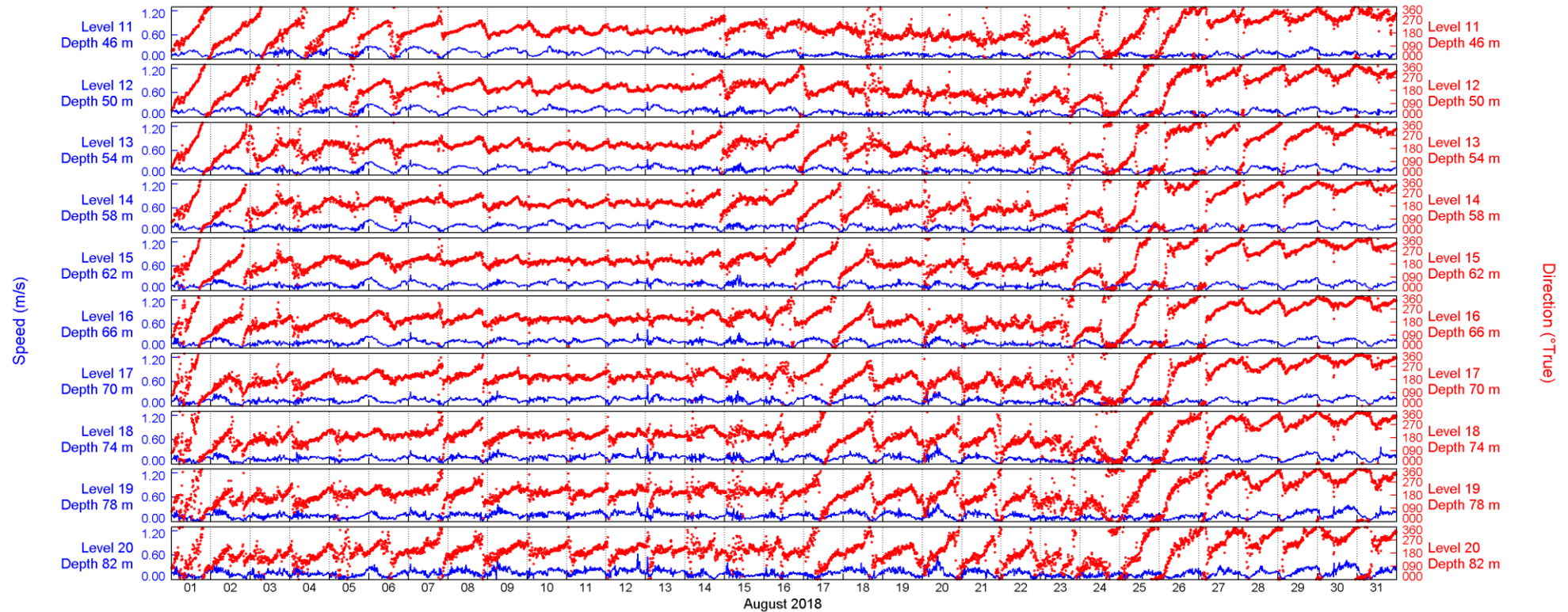
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: Aquadopp	
Notes:		

Figure 3.9.1: Selected Levels, 01-Aug-18 to 31-Aug-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:12:38



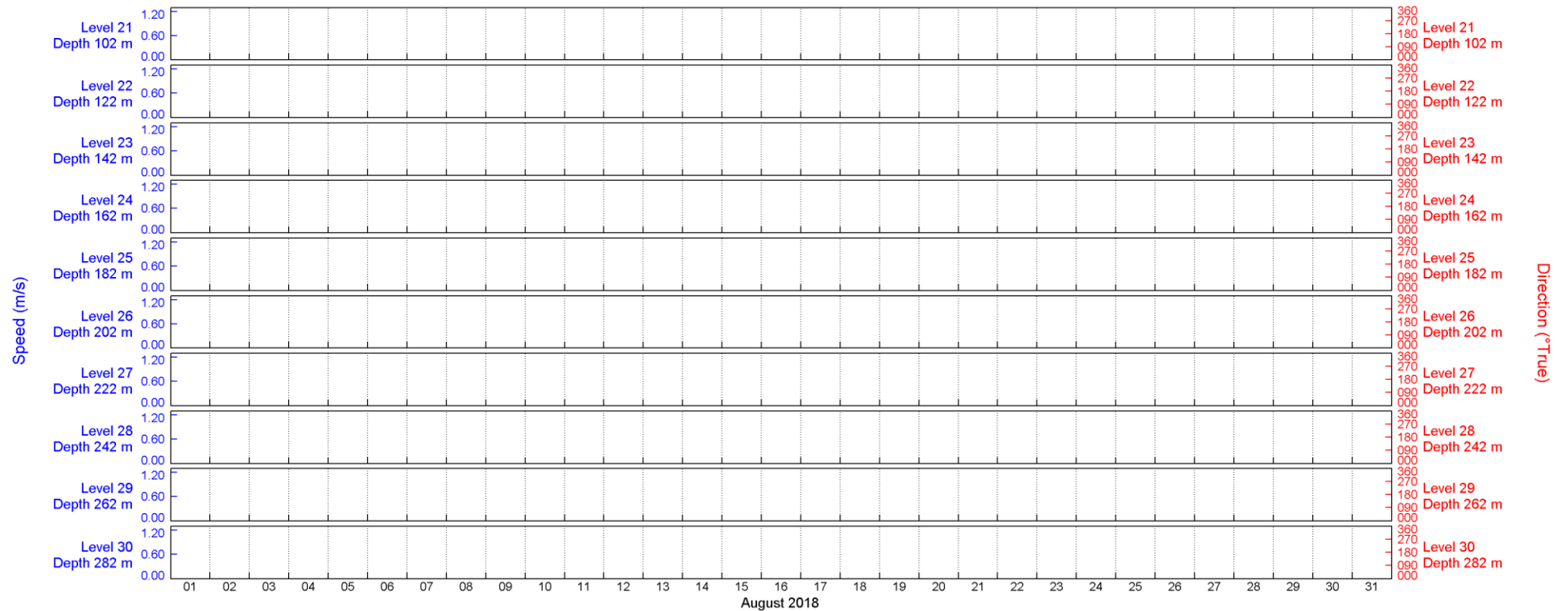
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: Aquadopp	
Notes:		

Figure 3.9.2: Selected Levels, 01-Aug-18 to 31-Aug-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:12:41



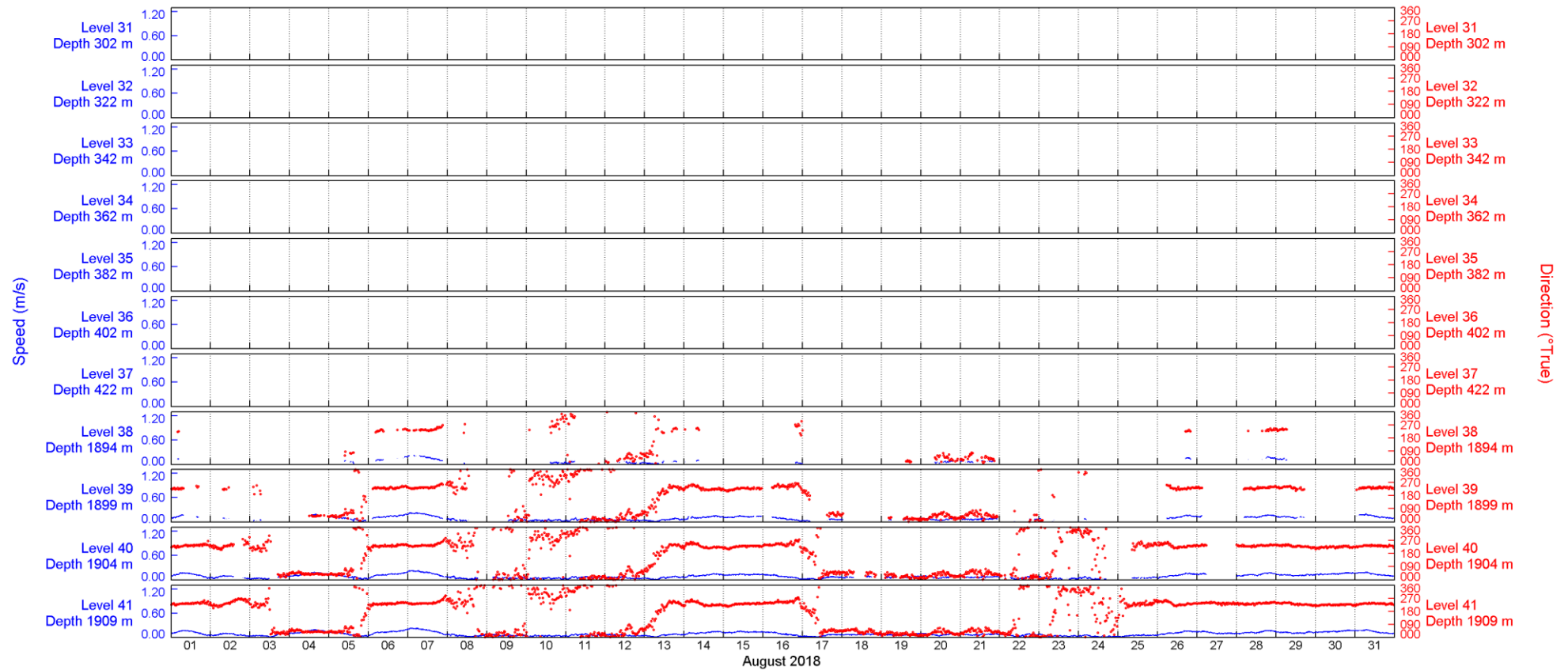
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 75kHz ADCP	
Notes:		

Figure 3.9.3: Selected Levels, 01-Aug-18 to 31-Aug-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:12:44



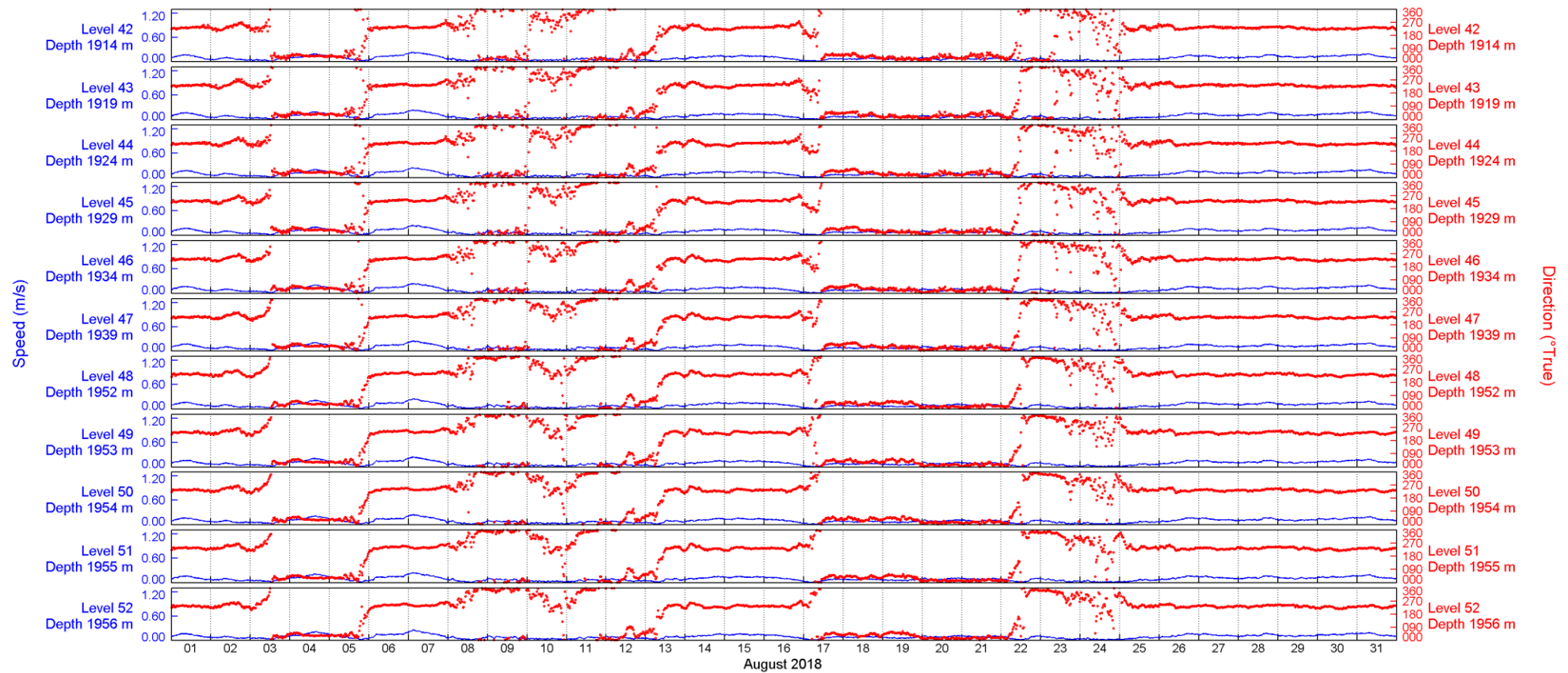
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 75kHz ADCP, 300kHz ADCP	
Notes:		

Figure 3.9.4: Selected Levels, 01-Aug-18 to 31-Aug-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:12:47



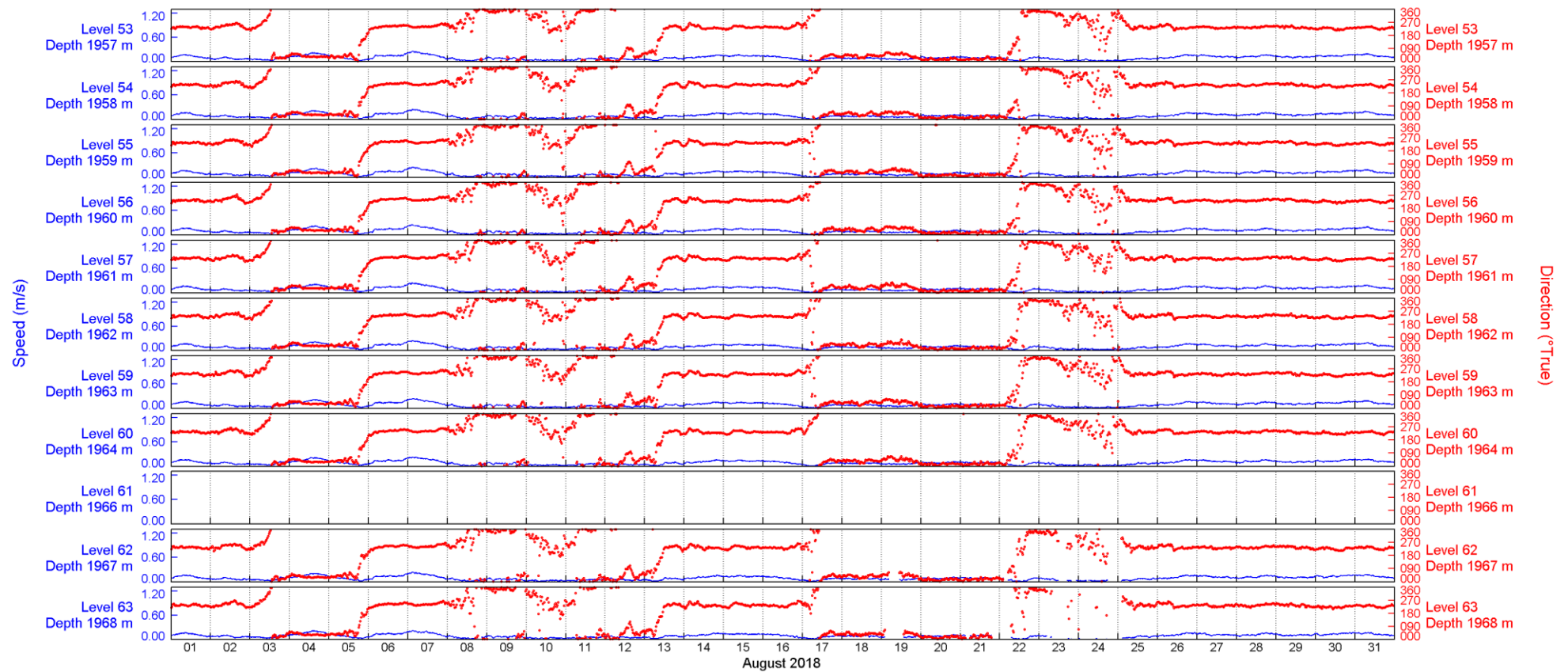
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 600kHz ADCP, 300kHz ADCP	
Notes:		

Figure 3.9.5: Selected Levels, 01-Aug-18 to 31-Aug-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:12:50



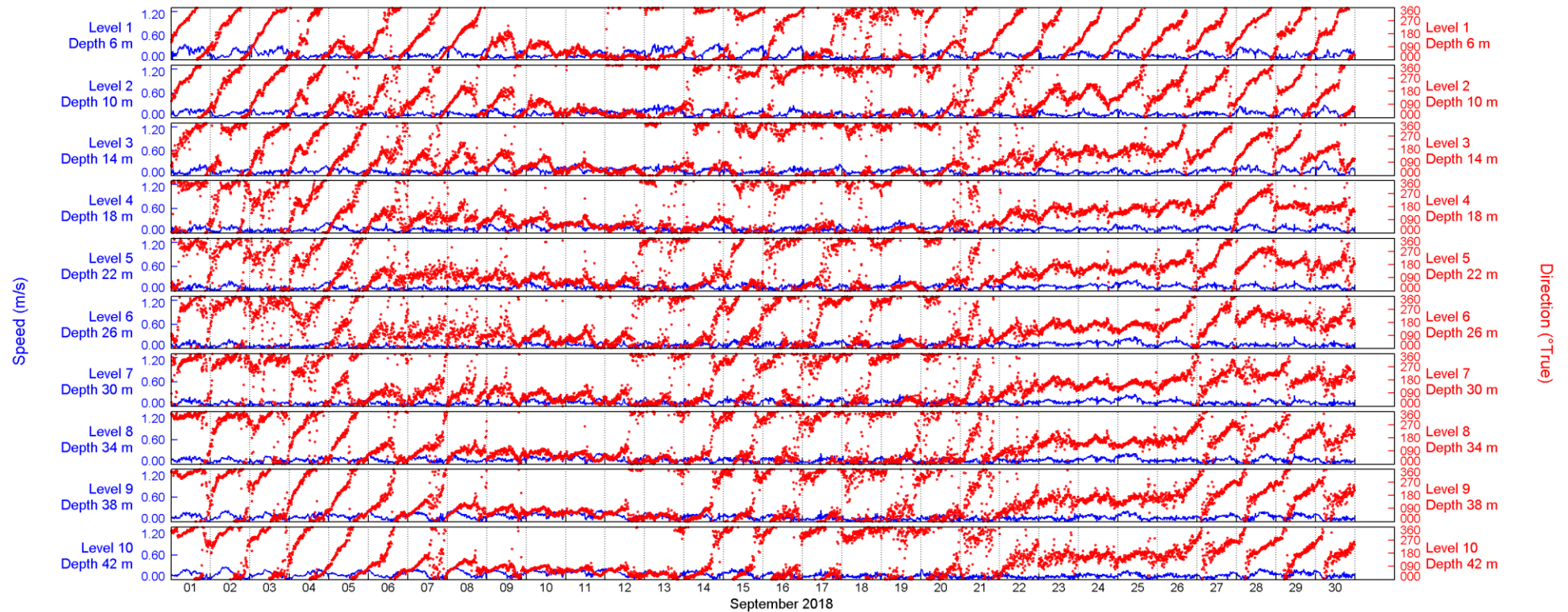
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 600kHz ADCP	
Notes:		

Figure 3.9.6: Selected Levels, 01-Aug-18 to 31-Aug-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:12:53



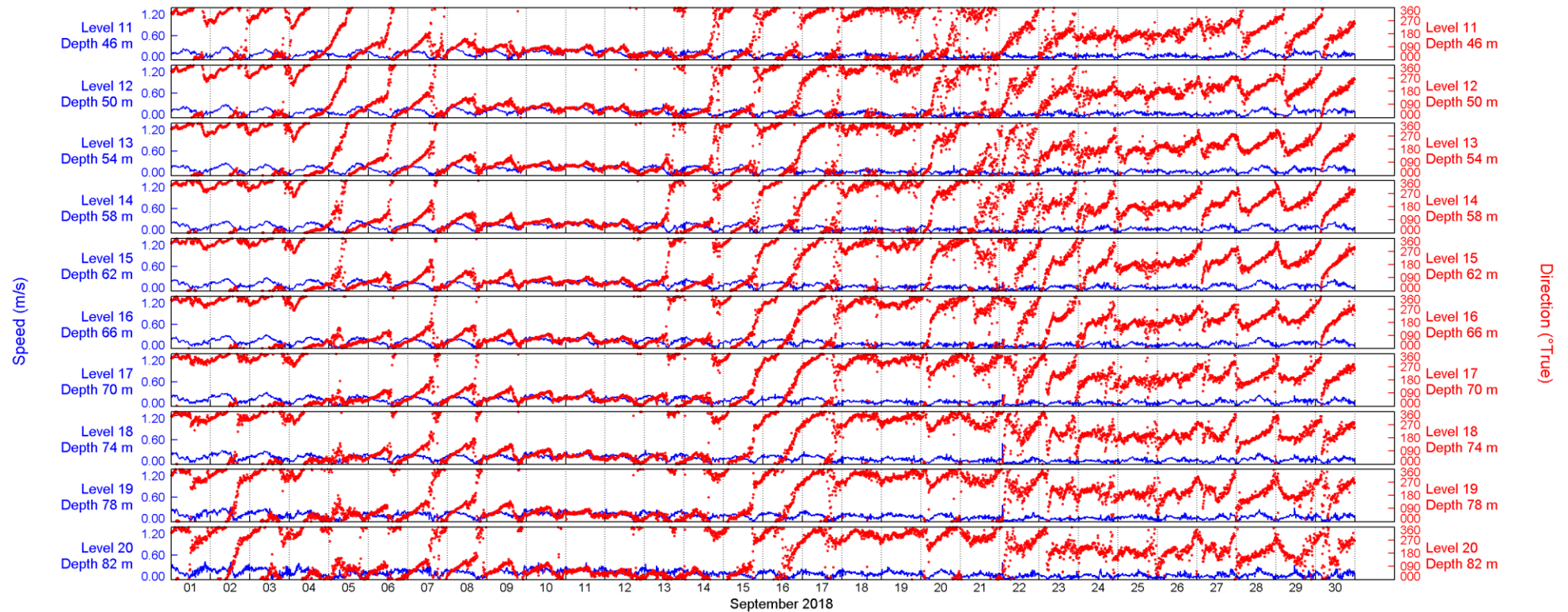
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: Aquadopp	
Notes:		

Figure 3.10.1: Selected Levels, 01-Sep-18 to 30-Sep-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:12:56



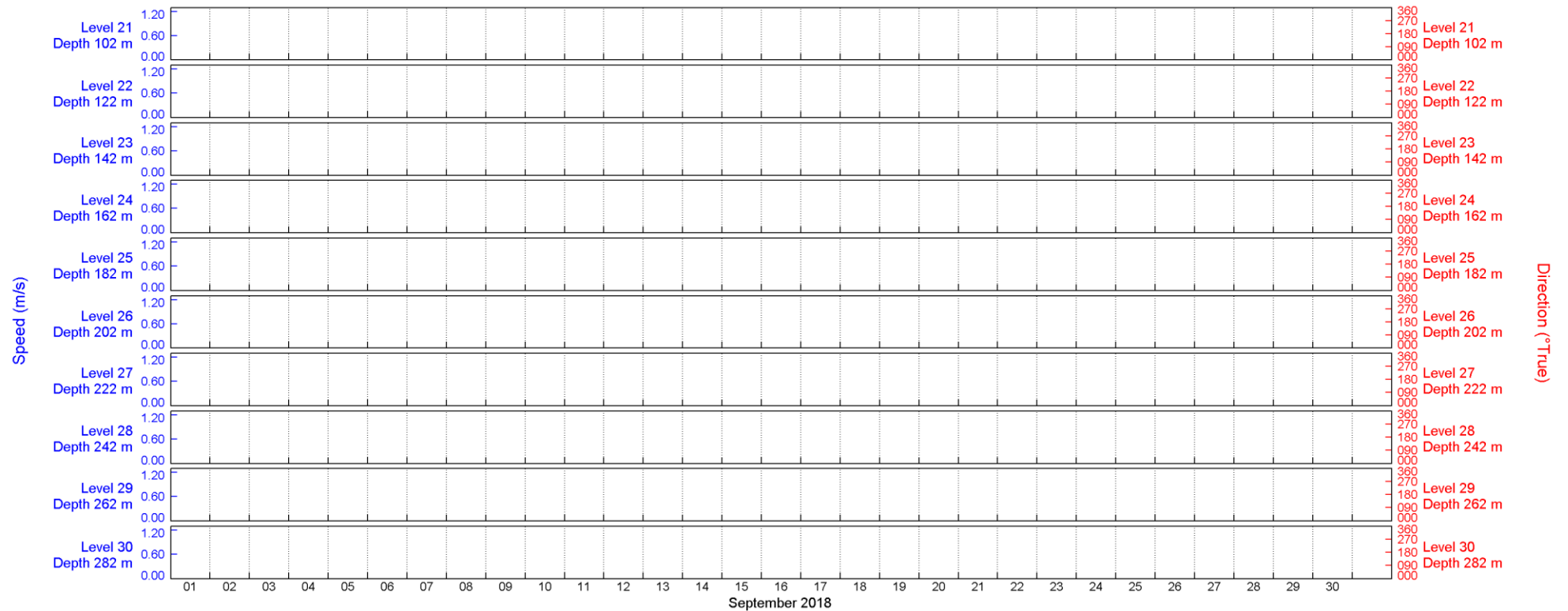
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: Aquadopp	
Notes:		

Figure 3.10.2: Selected Levels, 01-Sep-18 to 30-Sep-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:12:59



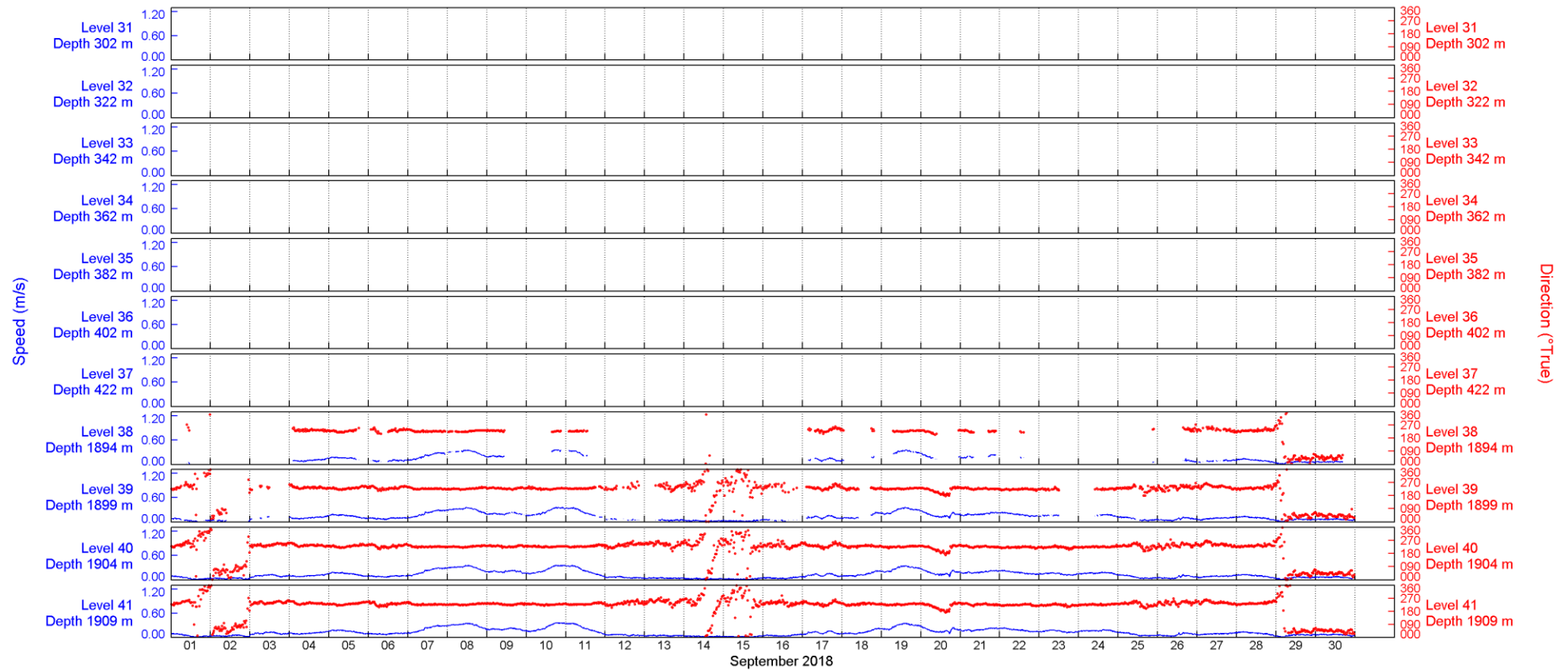
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 75kHz ADCP	
Notes:		

Figure 3.10.3: Selected Levels, 01-Sep-18 to 30-Sep-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:13:02



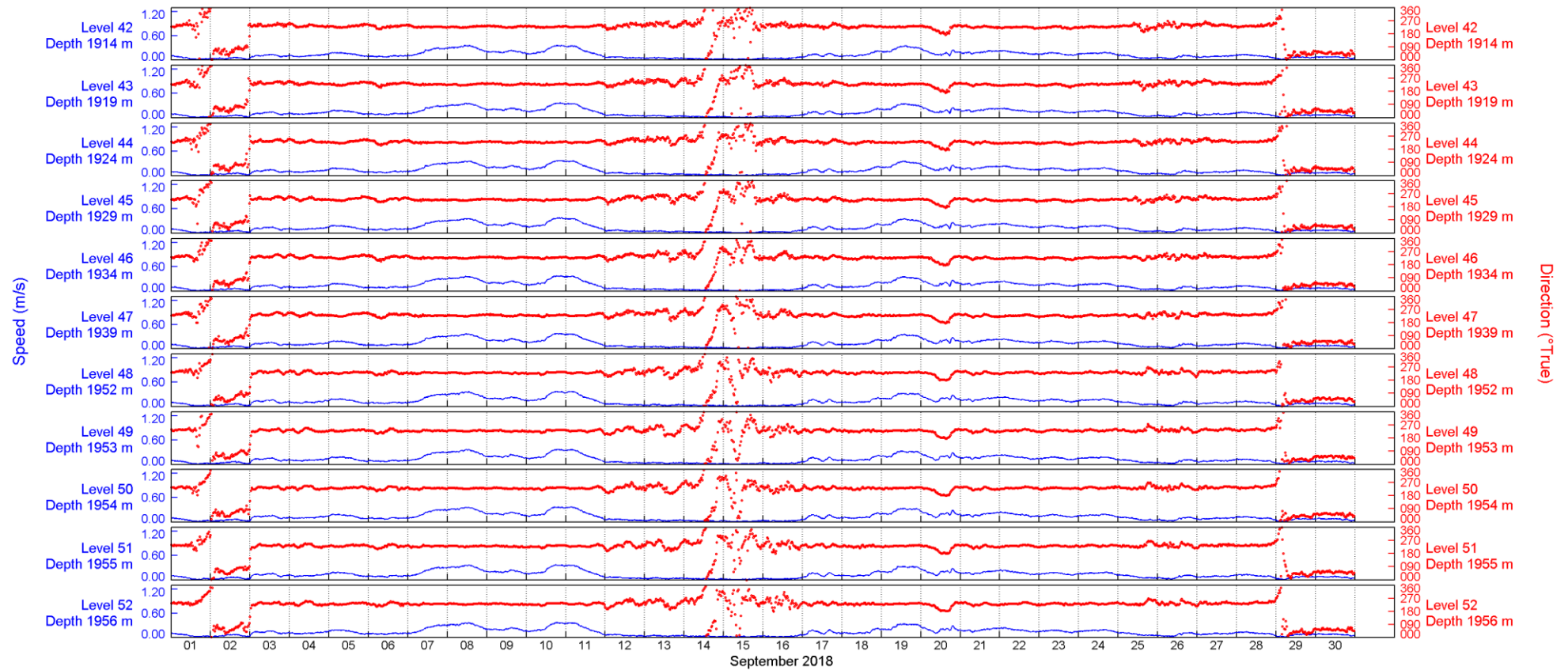
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 75kHz ADCP, 300kHz ADCP	
Notes:		

Figure 3.10.4: Selected Levels, 01-Sep-18 to 30-Sep-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:13:05



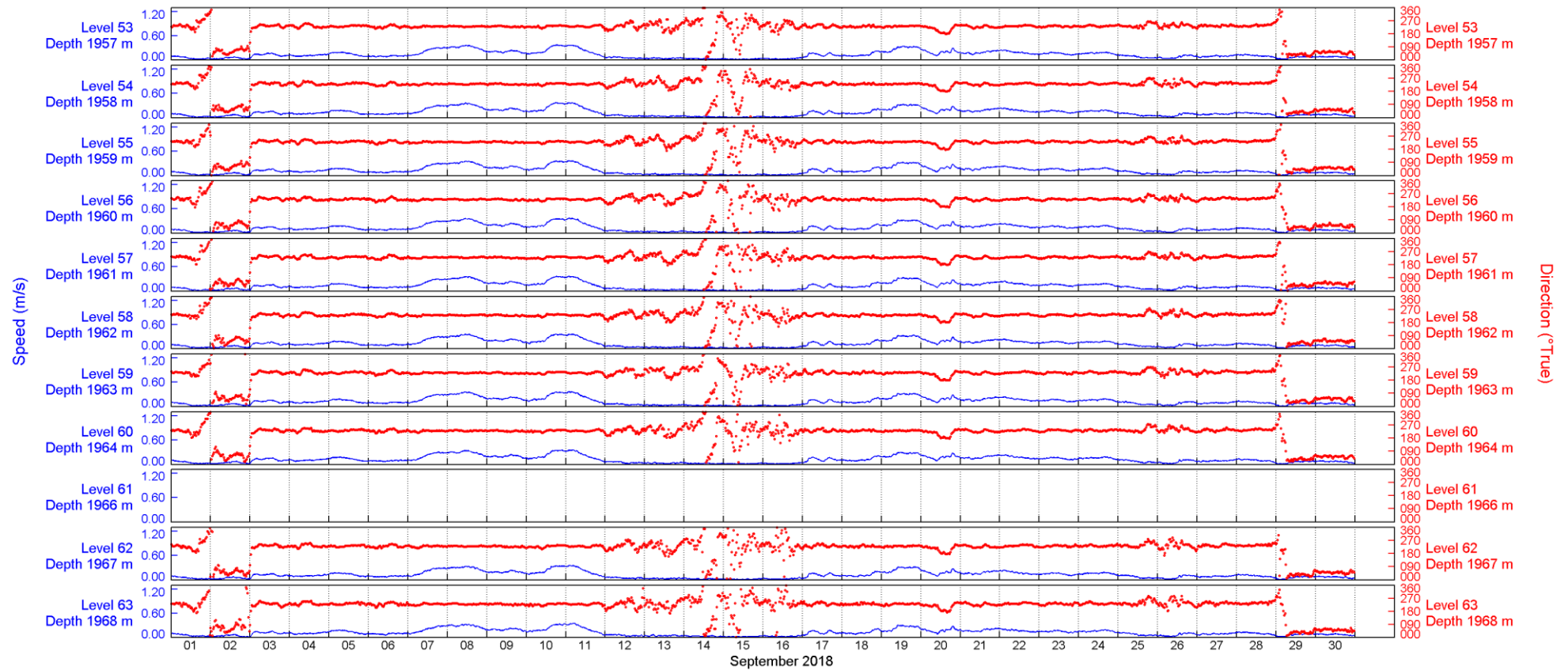
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 600kHz ADCP, 300kHz ADCP	
Notes:		

Figure 3.10.5: Selected Levels, 01-Sep-18 to 30-Sep-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:13:08



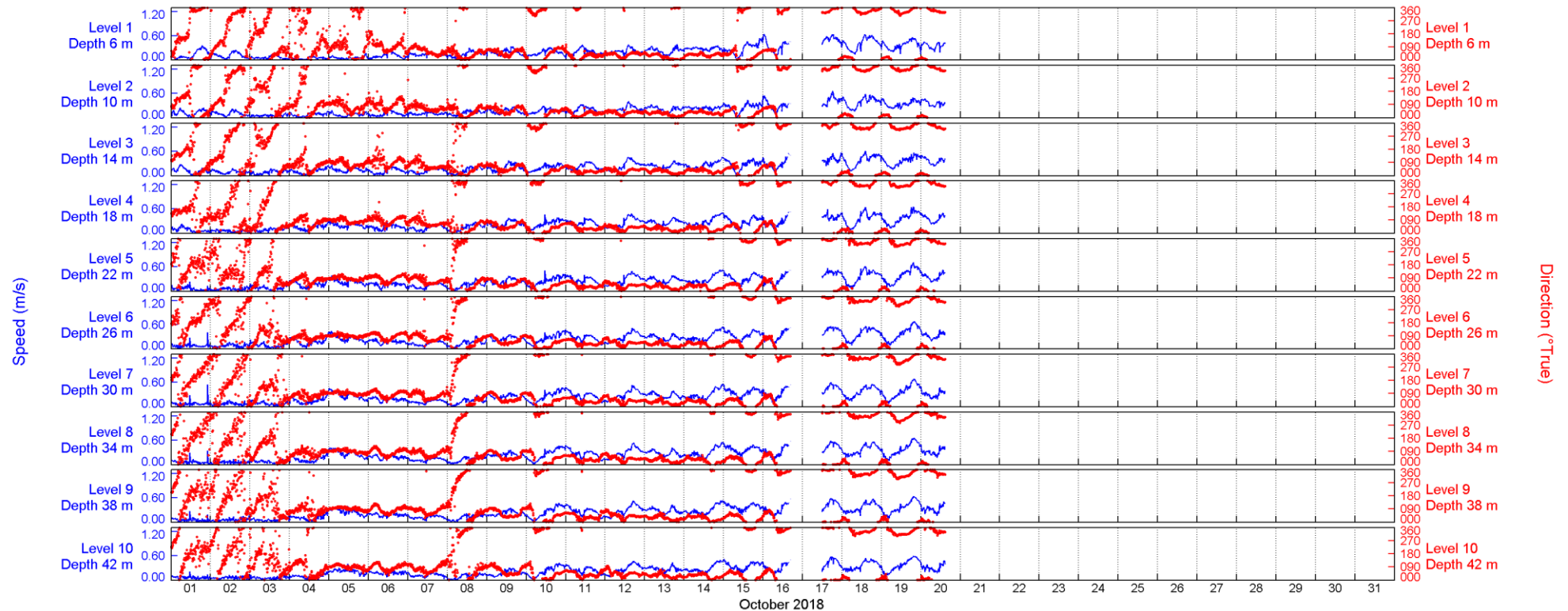
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 600kHz ADCP	
Notes:		

Figure 3.10.6: Selected Levels, 01-Sep-18 to 30-Sep-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:13:11



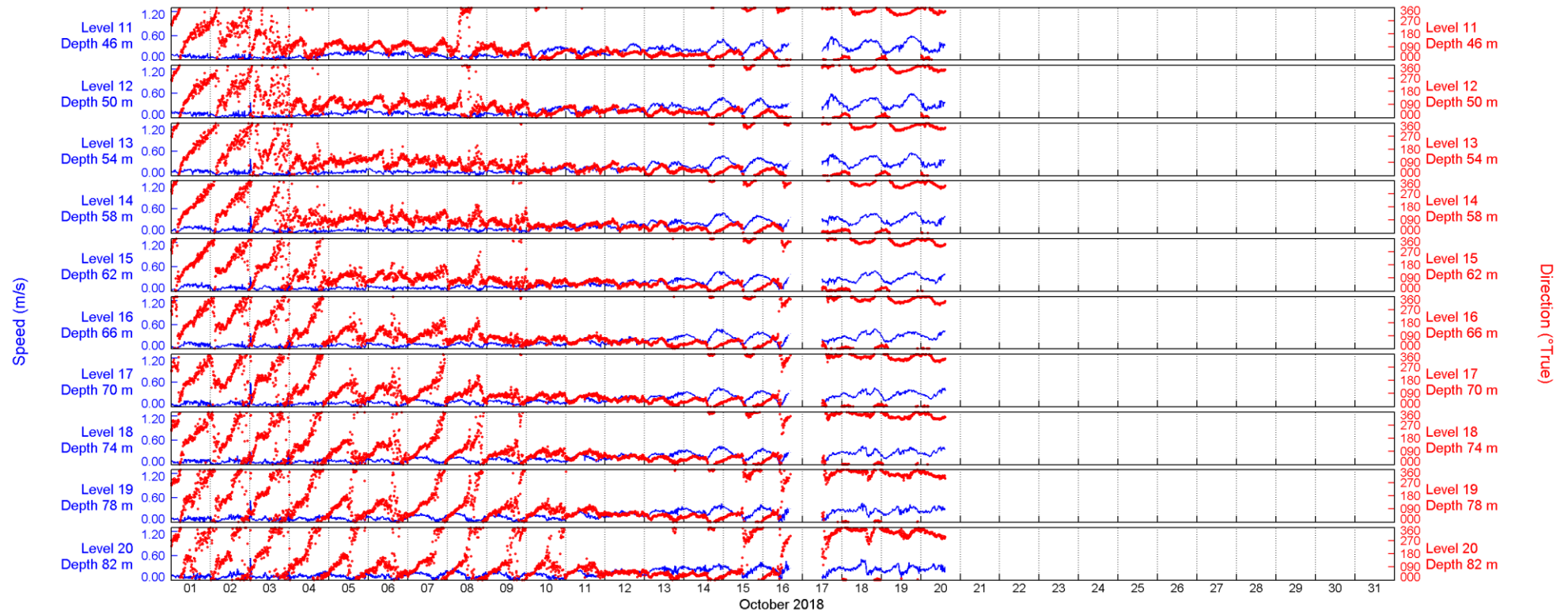
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: Aquadopp	
Notes:		

Figure 3.11.1: Selected Levels, 01-Oct-18 to 20-Oct-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:13:14



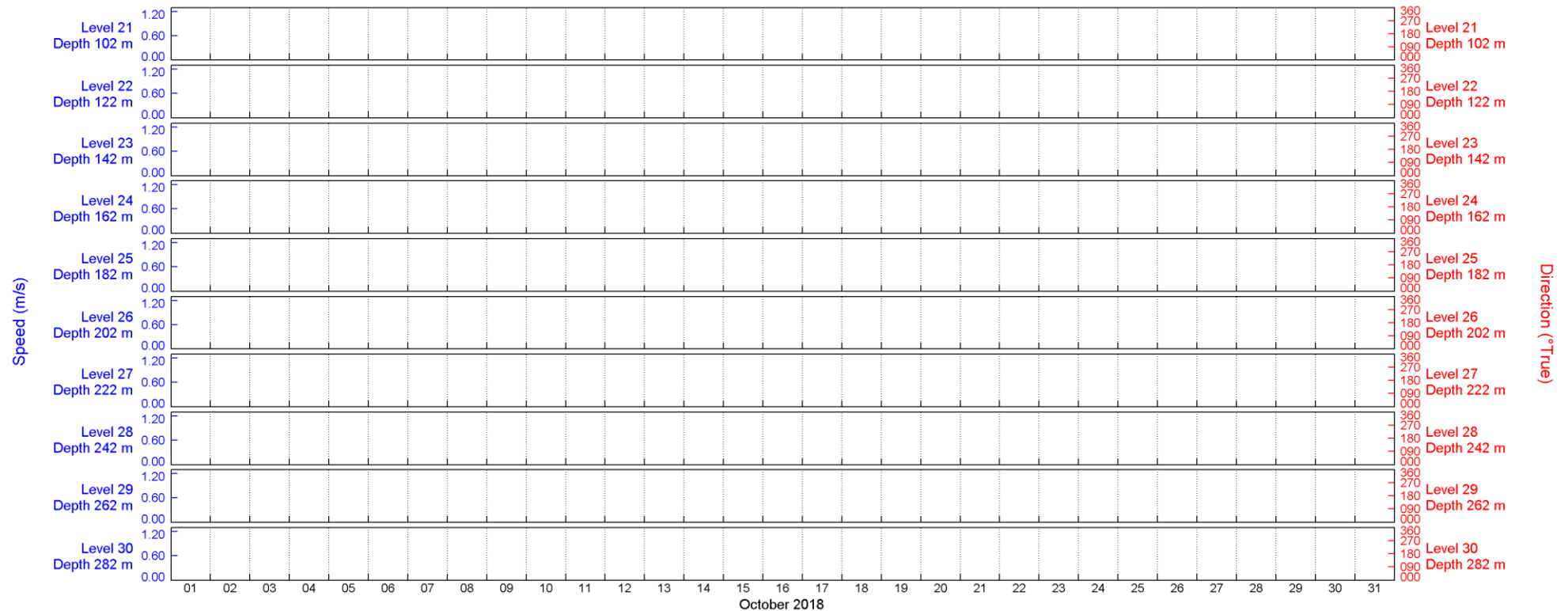
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: Aquadopp	
Notes:		

Figure 3.11.2: Selected Levels, 01-Oct-18 to 20-Oct-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:13:16



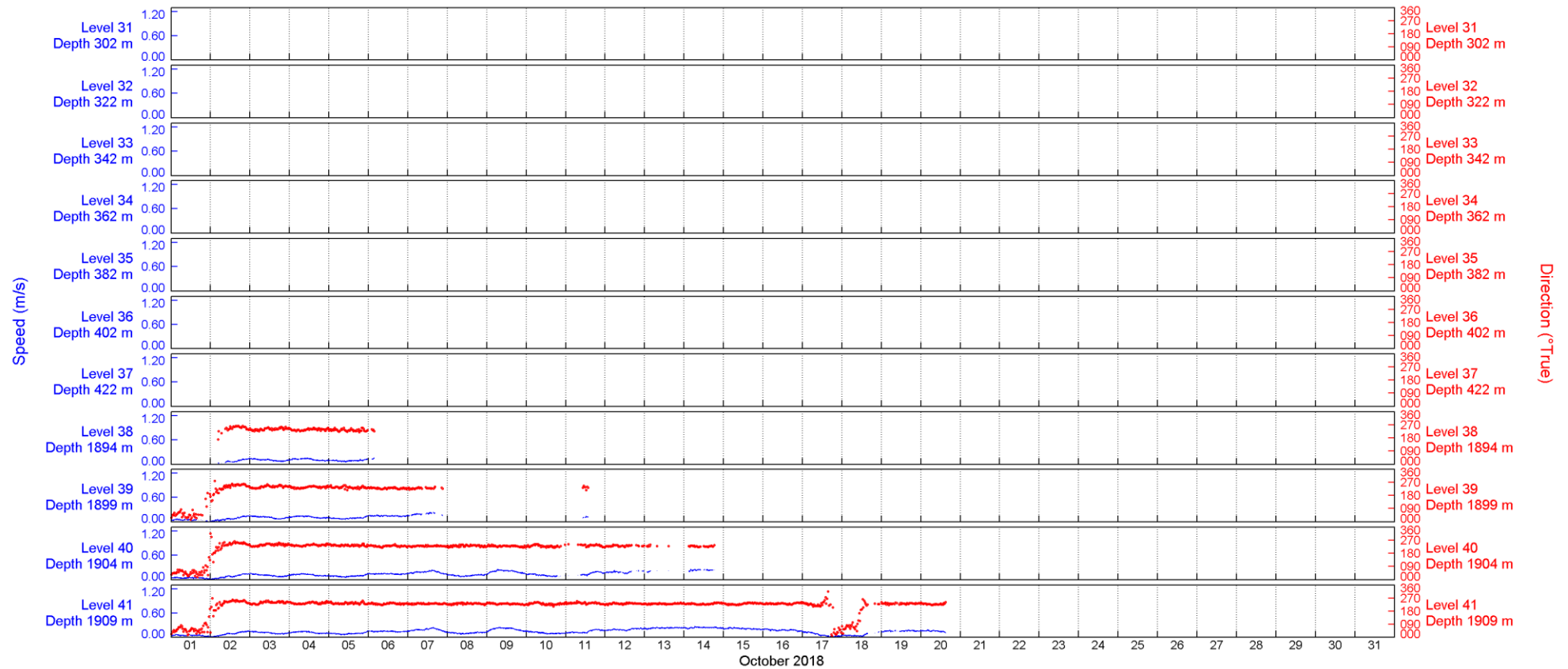
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 75kHz ADCP	
Notes:		

Figure 3.11.3: Selected Levels, 01-Oct-18 to 20-Oct-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:13:19



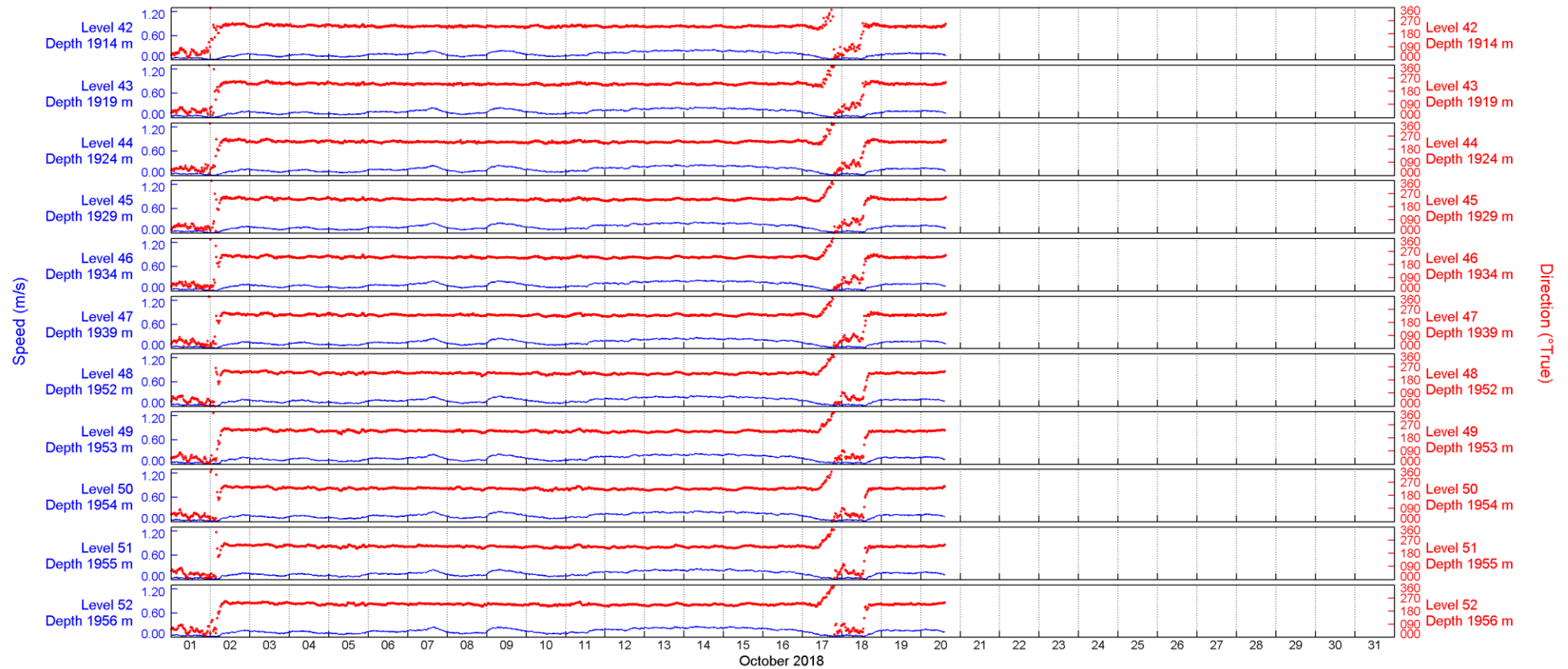
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 75kHz ADCP, 300kHz ADCP	
Notes:		

Figure 3.11.4: Selected Levels, 01-Oct-18 to 20-Oct-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:13:22



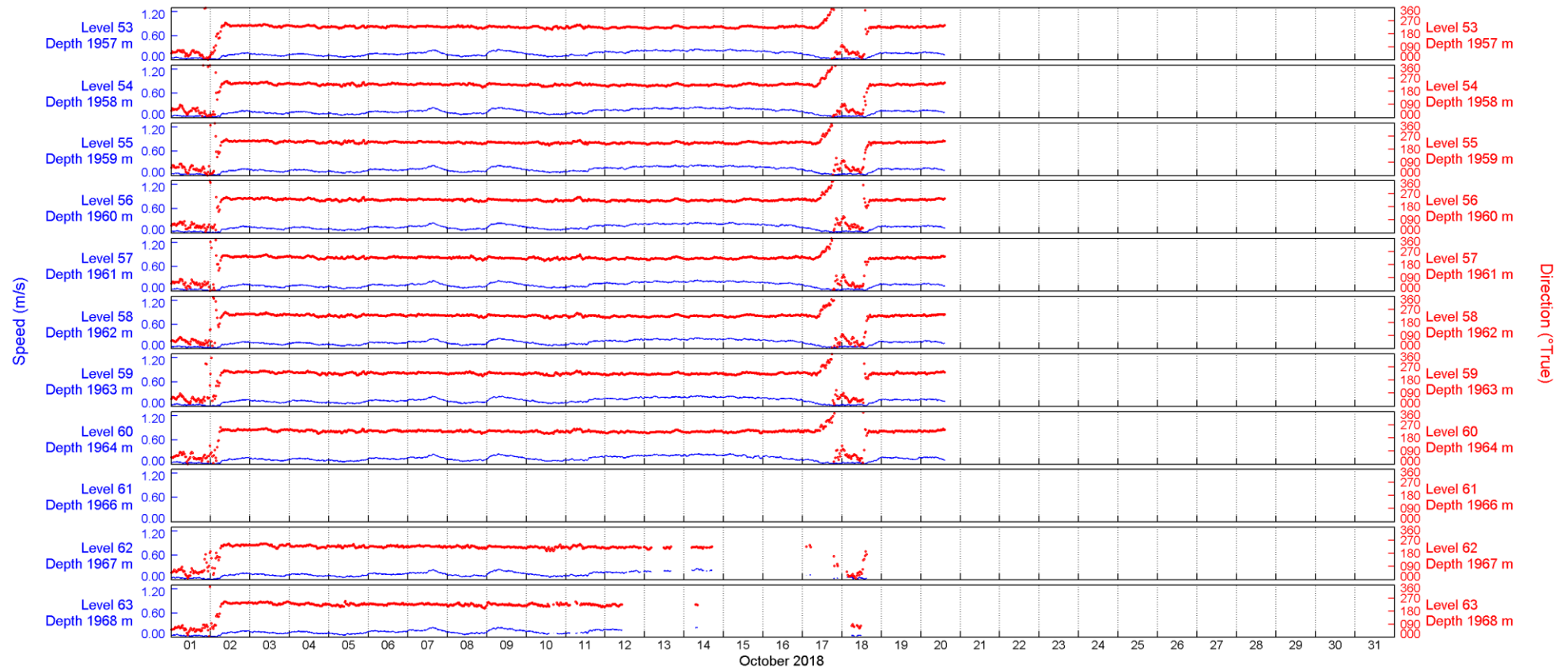
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 600kHz ADCP, 300kHz ADCP	
Notes:		

Figure 3.11.5: Selected Levels, 01-Oct-18 to 20-Oct-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:13:25



Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 600kHz ADCP	
Notes:		

Figure 3.11.6: Selected Levels, 01-Oct-18 to 20-Oct-18

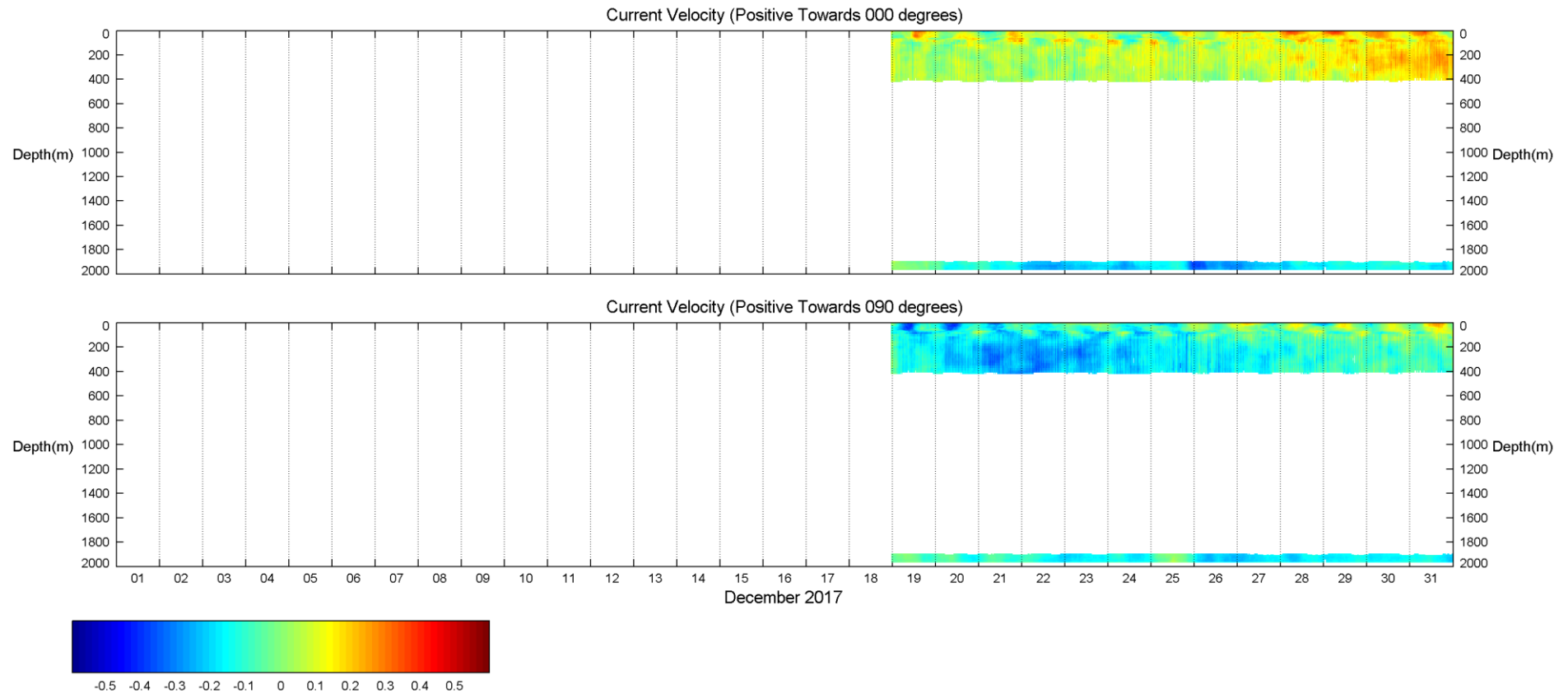


Colour Flood Plot

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:13:28



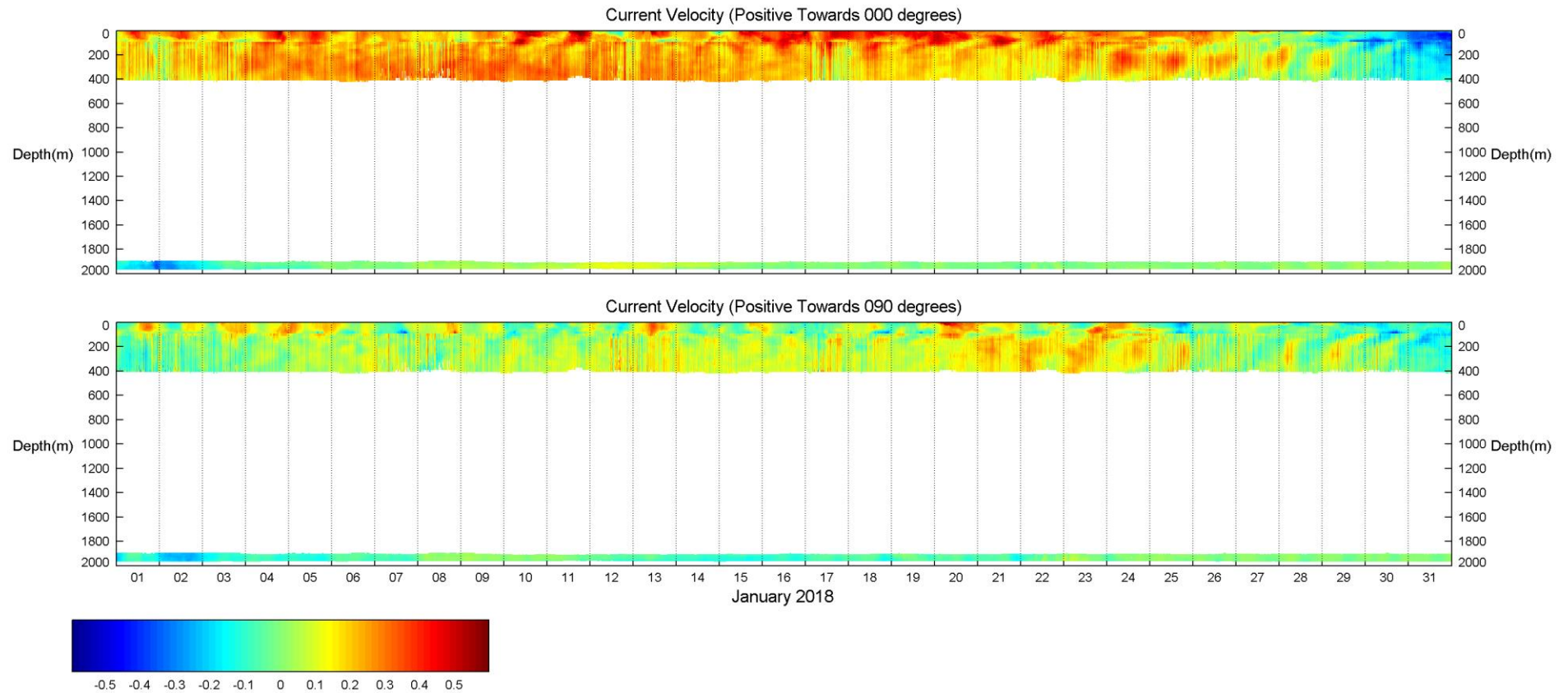
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: Aquadopp, 75kHz ADCP, 600kHz ADCP, 300kHz ADCP	
Notes:		

Figure 4.1: 18-Dec-17 to 31-Dec-17

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:13:29



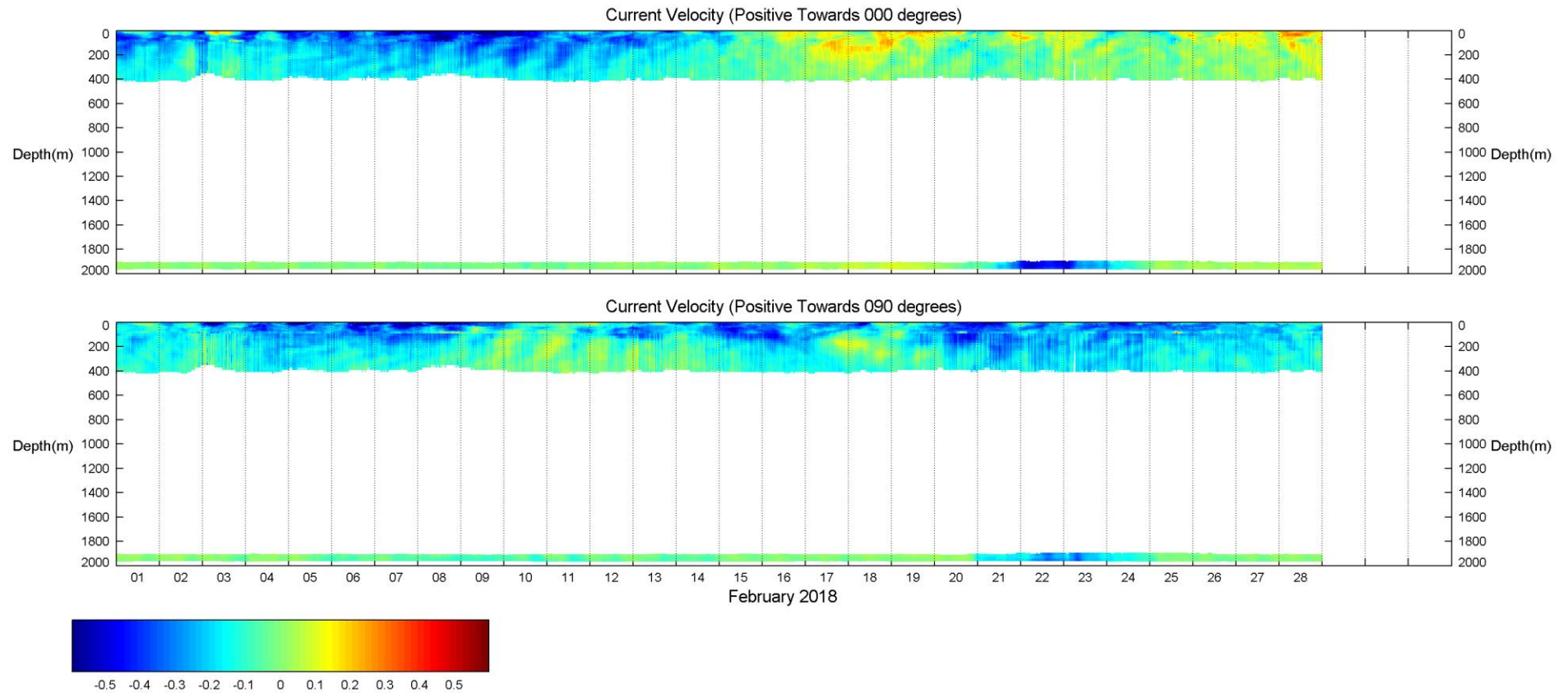
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: Aquadopp, 75kHz ADCP, 600kHz ADCP, 300kHz ADCP	
Notes:		

Figure 4.2: 01-Jan-18 to 31-Jan-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:13:31



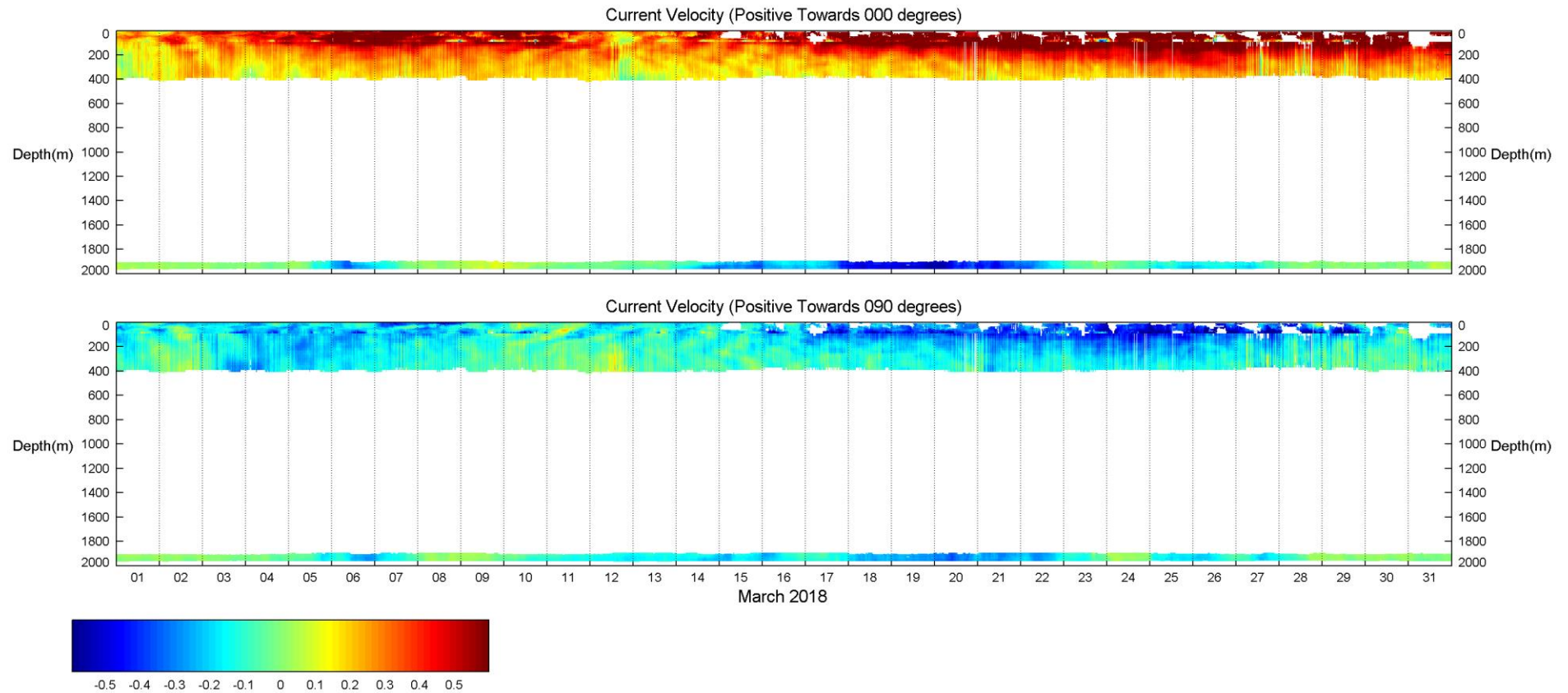
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: Aquadopp, 75kHz ADCP, 600kHz ADCP, 300kHz ADCP	
Notes:		

Figure 4.3: 01-Feb-18 to 28-Feb-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:13:33



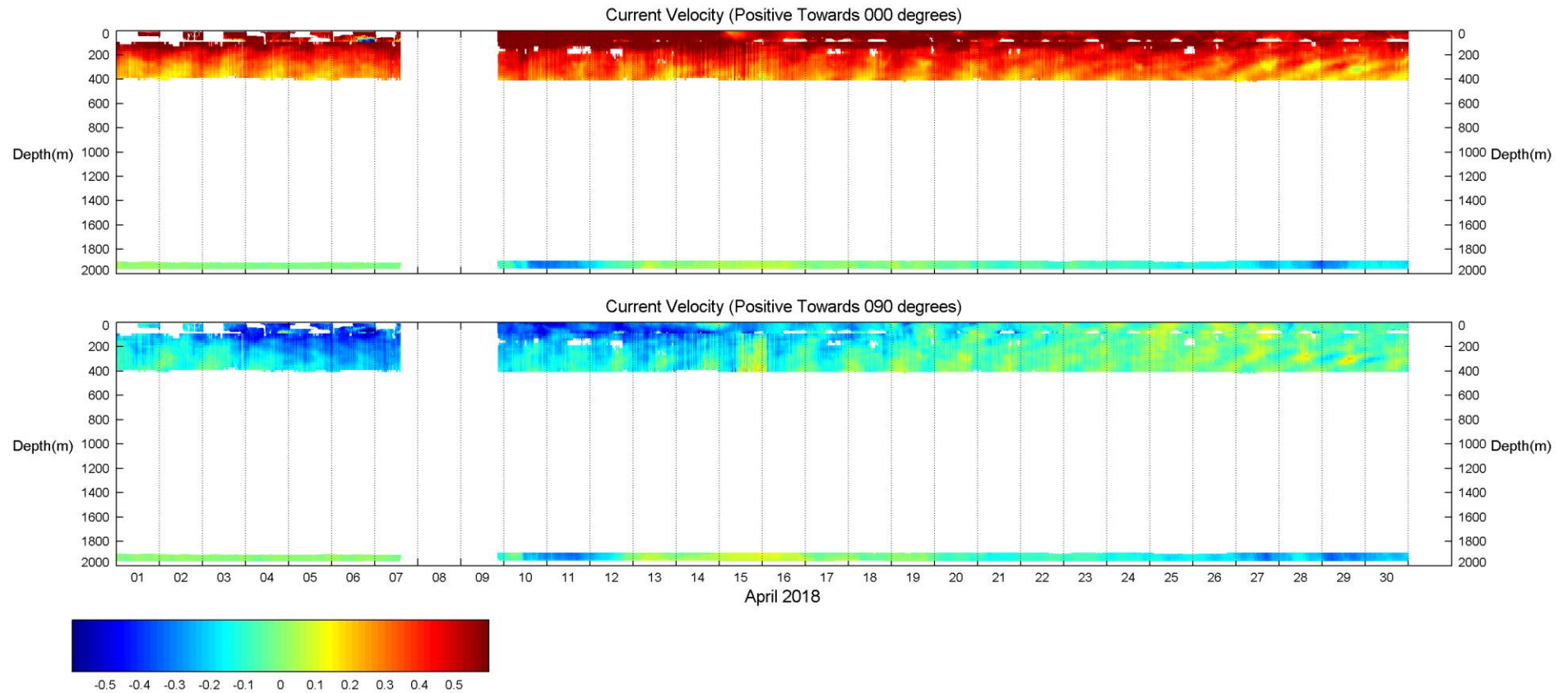
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: Aquadopp, 75kHz ADCP, 600kHz ADCP, 300kHz ADCP	
Notes:		

Figure 4.4: 01-Mar-18 to 31-Mar-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:13:35



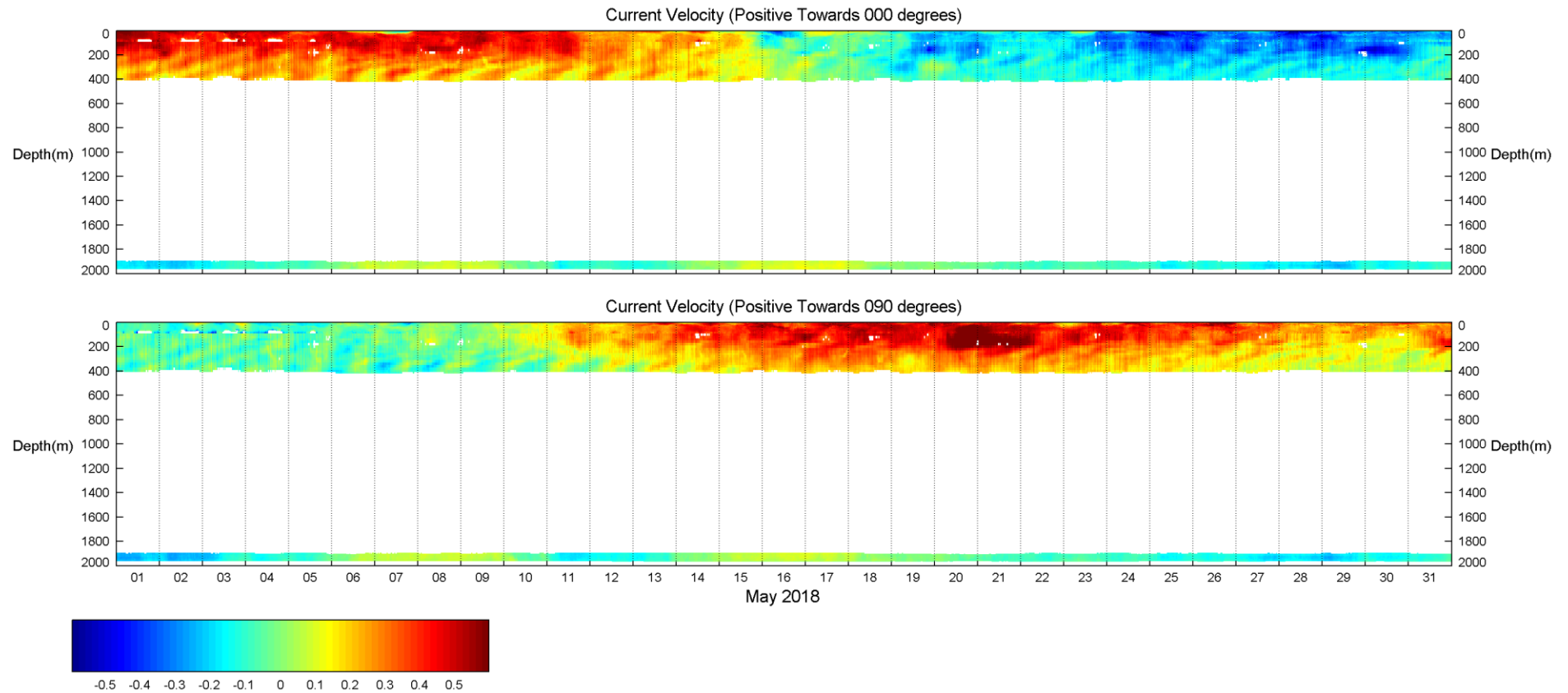
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: Aquadopp, 75kHz ADCP, 600kHz ADCP, 300kHz ADCP	
Notes:		

Figure 4.5: 01-Apr-18 to 30-Apr-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:13:36



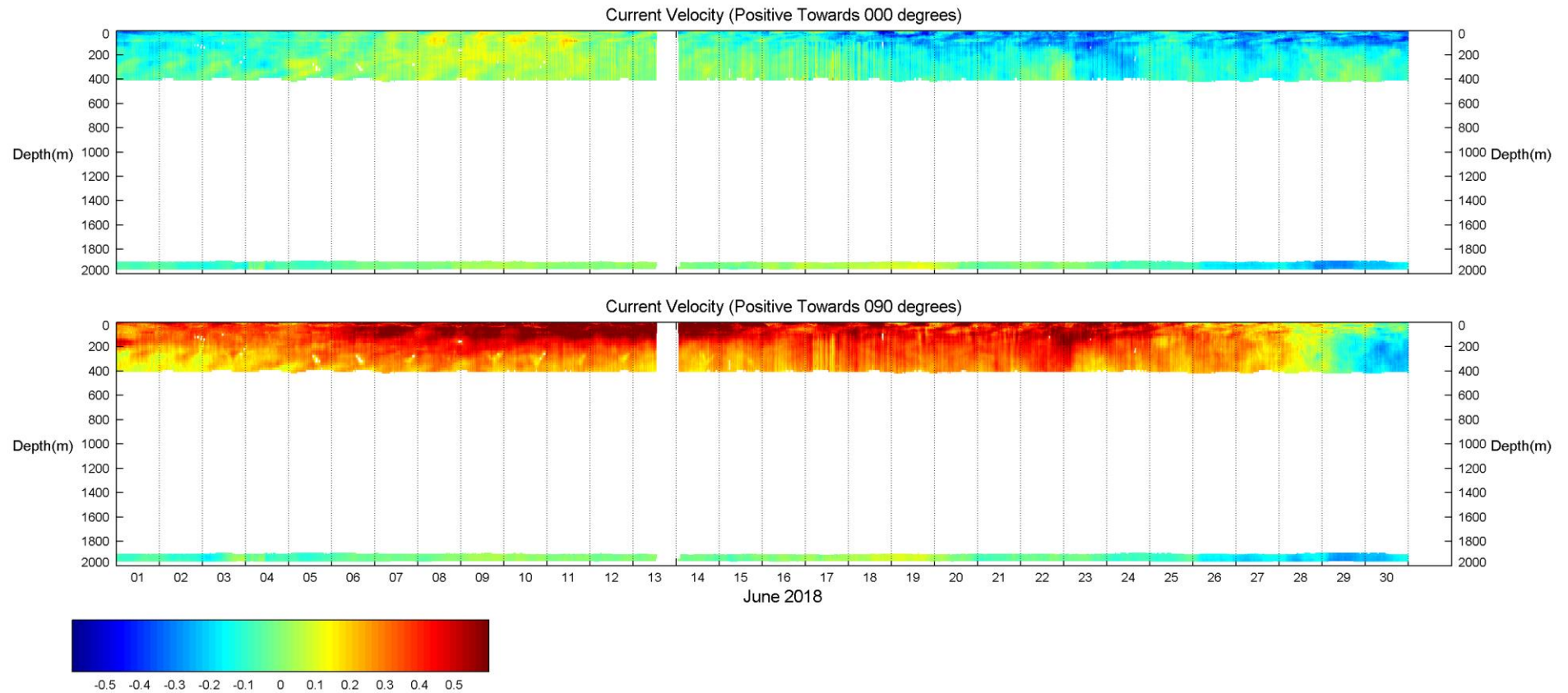
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: Aquadopp, 75kHz ADCP, 600kHz ADCP, 300kHz ADCP	
Notes:		

Figure 4.6: 01-May-18 to 31-May-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:13:38



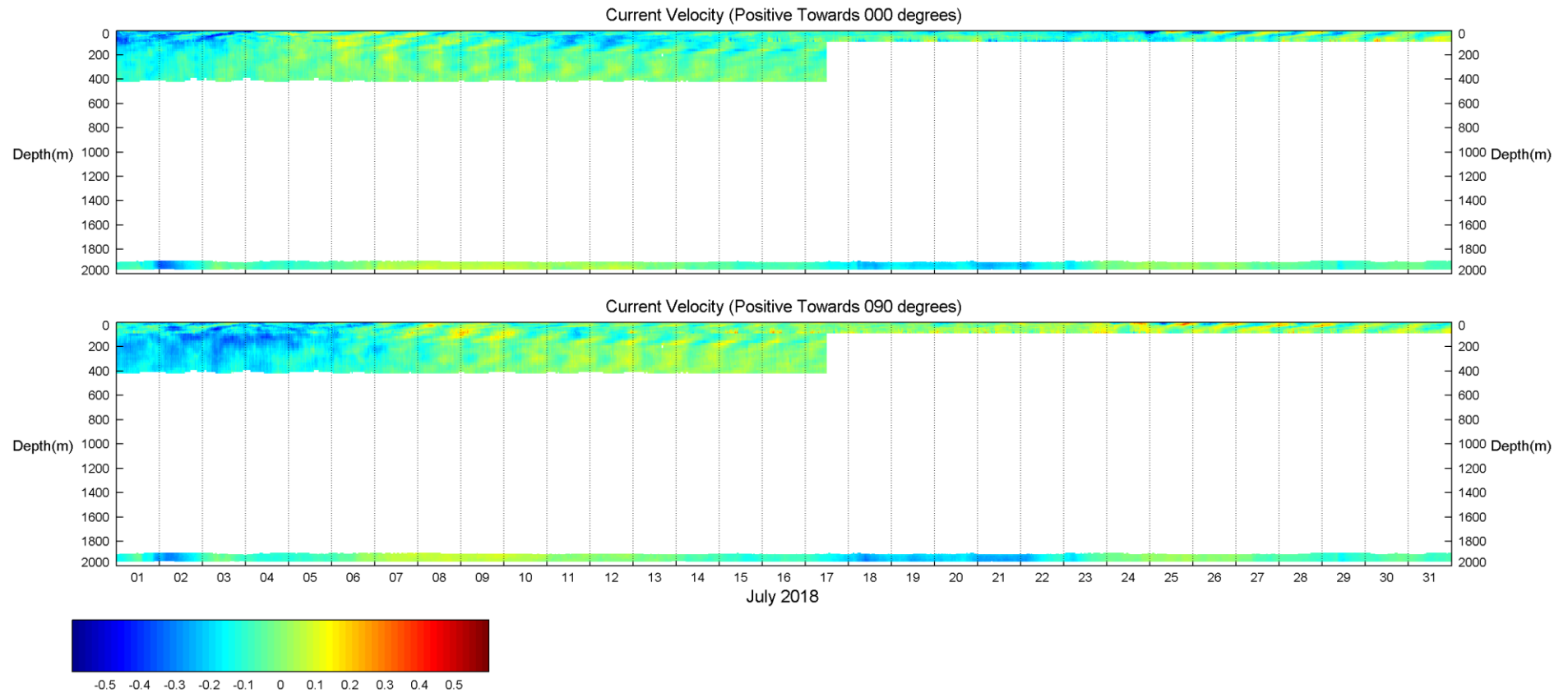
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: Aquadopp, 75kHz ADCP, 600kHz ADCP, 300kHz ADCP	
Notes:		

Figure 4.7: 01-Jun-18 to 30-Jun-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:13:40



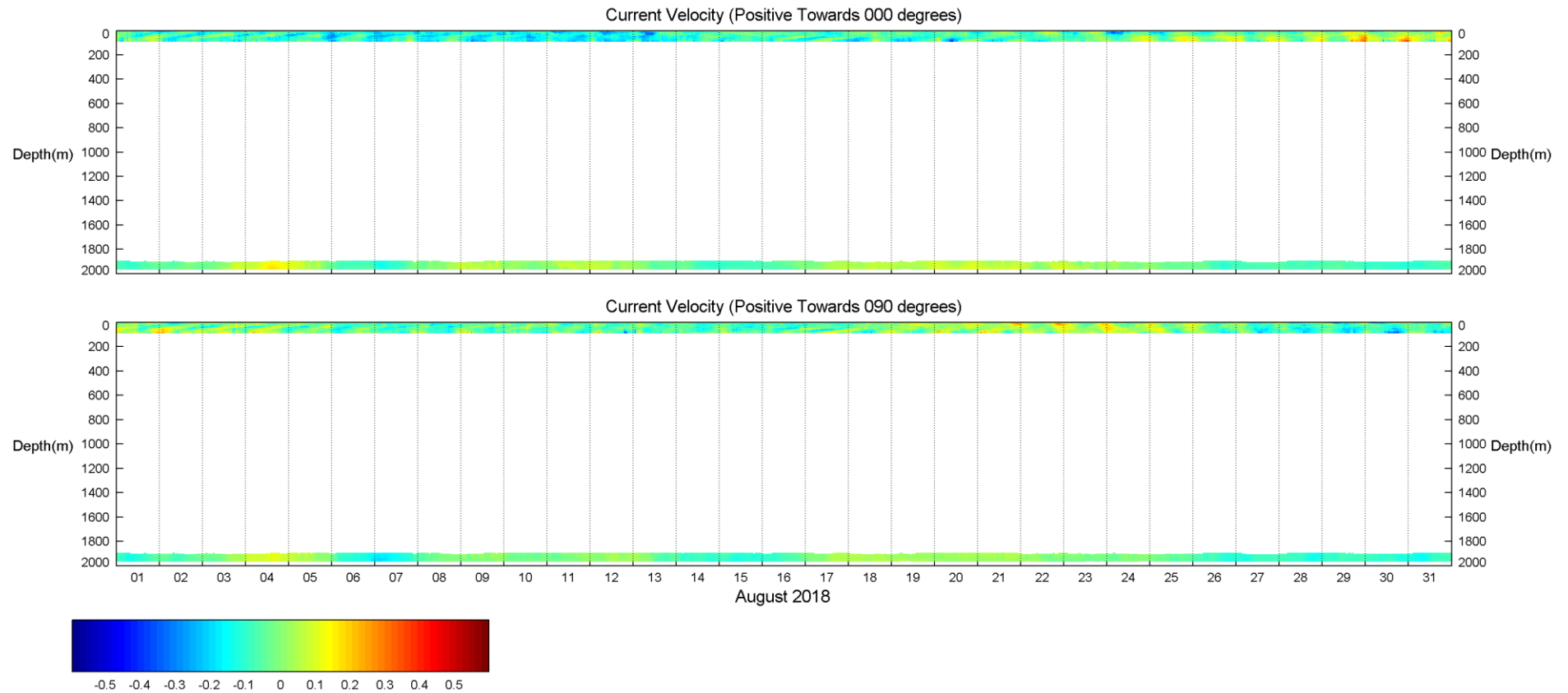
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: Aquadopp, 75kHz ADCP, 600kHz ADCP, 300kHz ADCP	
Notes:		

Figure 4.8: 01-Jul-18 to 31-Jul-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:13:42



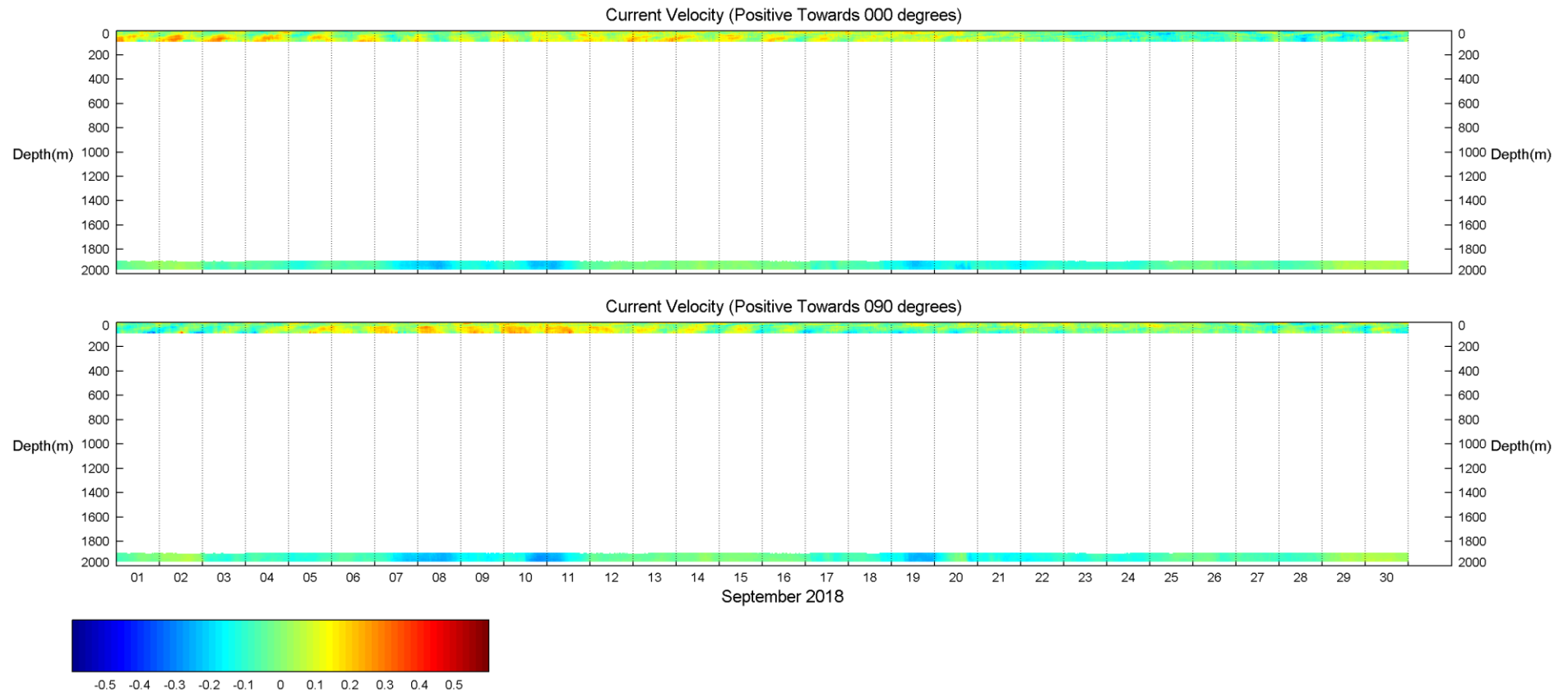
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: Aquadopp, 75kHz ADCP, 600kHz ADCP, 300kHz ADCP	
Notes:		

Figure 4.9: 01-Aug-18 to 31-Aug-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



14-Nov-18 15:13:44



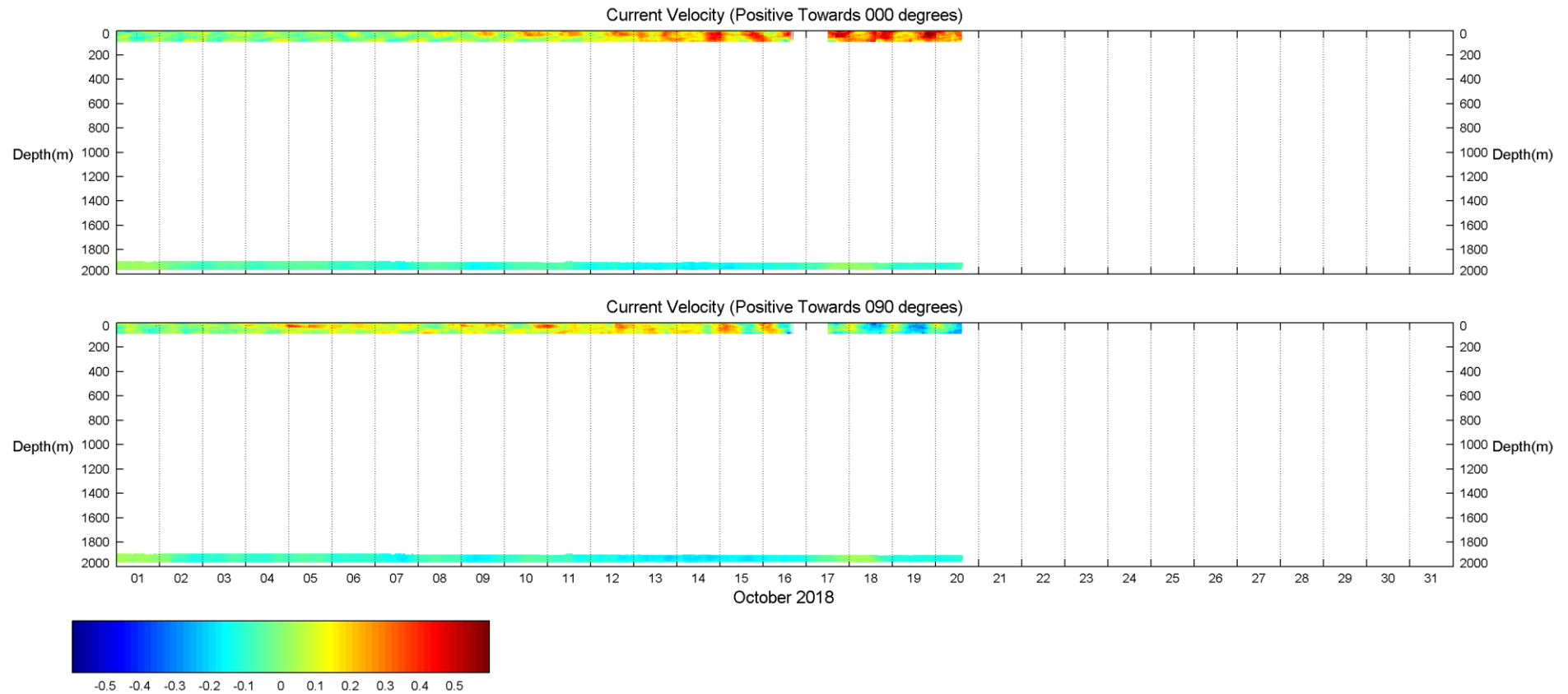
Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: Aquadopp, 75kHz ADCP, 600kHz ADCP, 300kHz ADCP	
Notes:		

Figure 4.10: 01-Sep-18 to 30-Sep-18

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



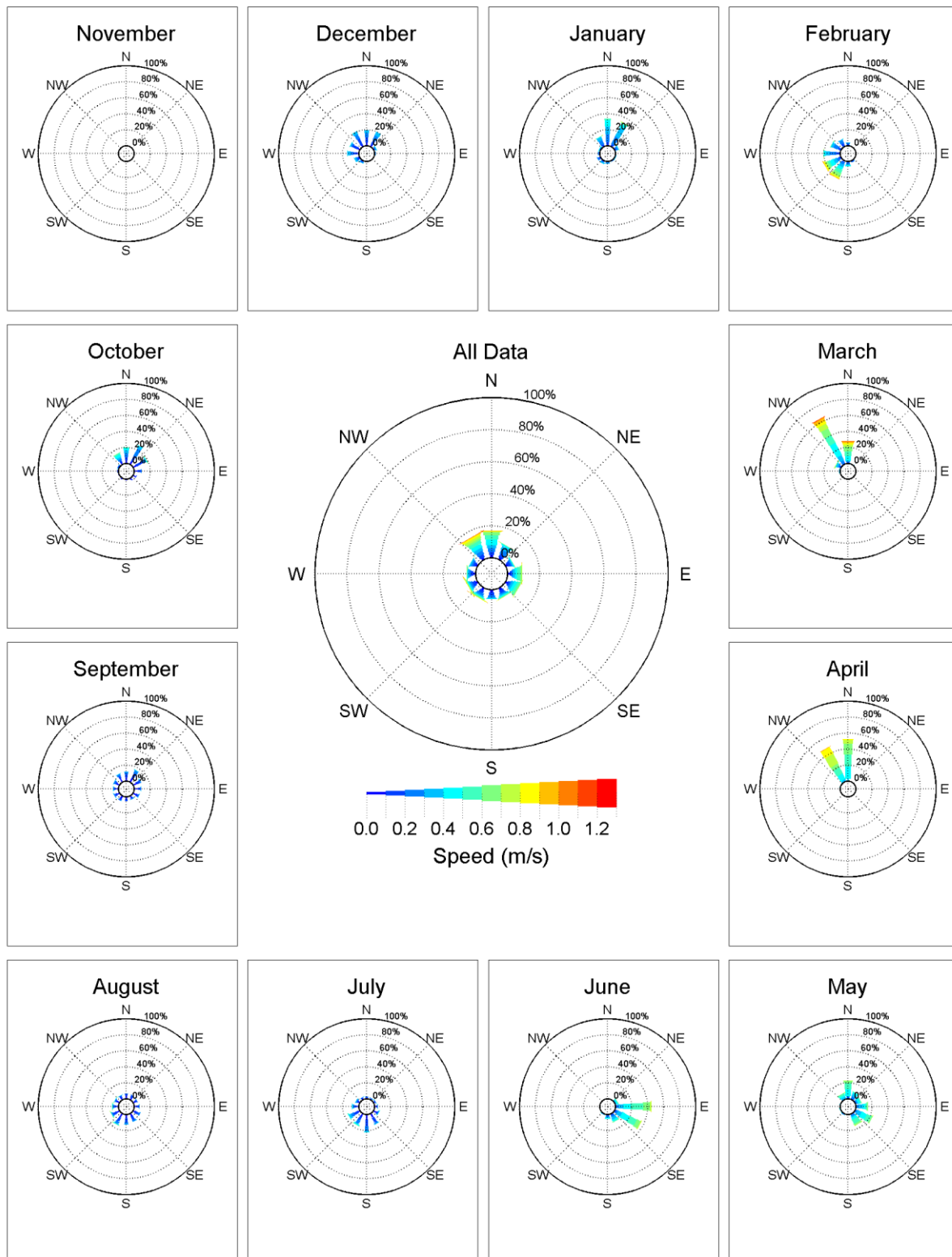
14-Nov-18 15:13:46



Location: Bigfoot Wavescan	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: Aquadopp, 75kHz ADCP, 600kHz ADCP, 300kHz ADCP	
Notes:		

Figure 4.11: 01-Oct-18 to 20-Oct-18

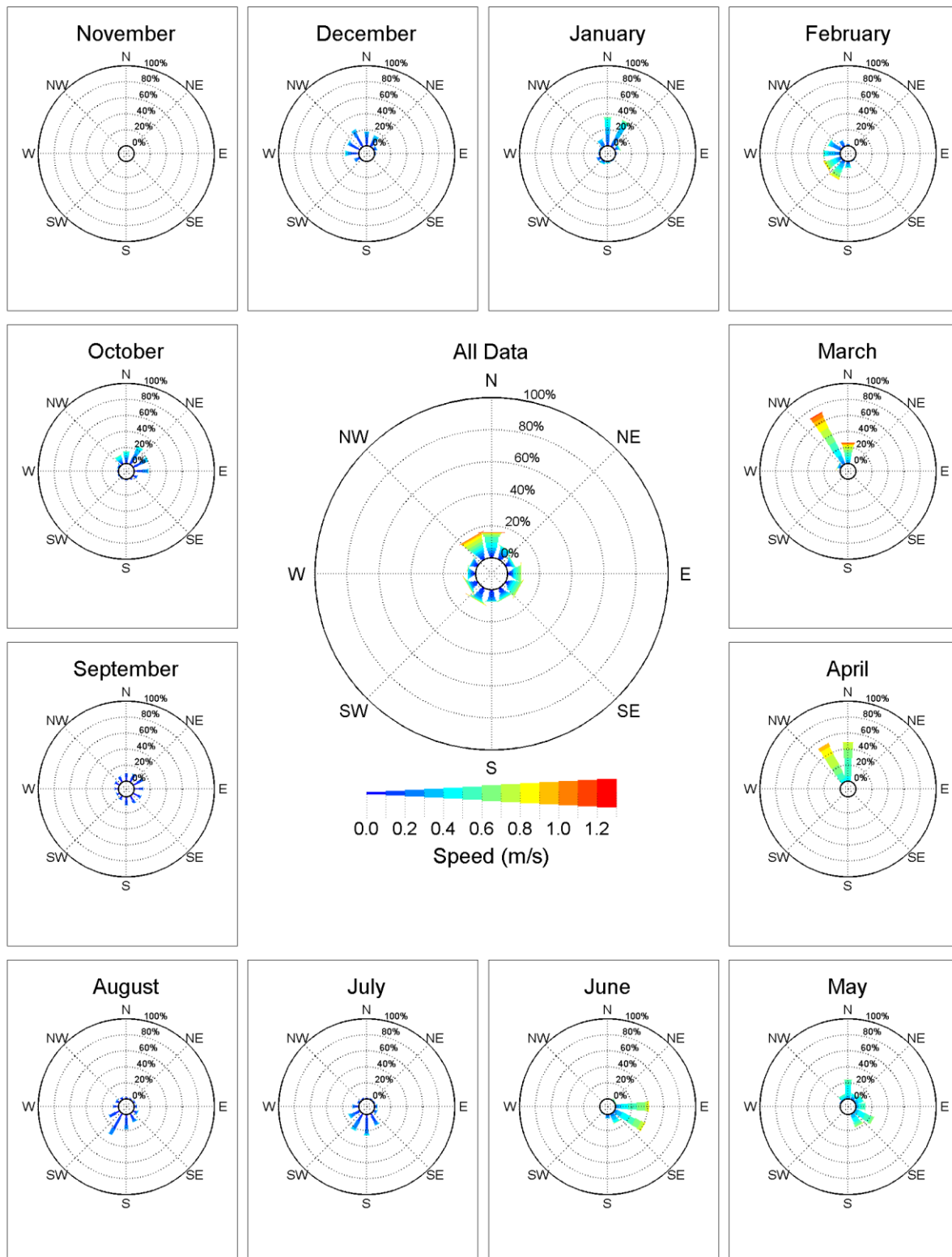
Current Rose of Current Speed and Direction



14-Nov-18 15:13:55

Location: Bigfoot Wavescan	Valid records: 41539
Position: 26° 54.954' N, 090° 30.120' W	Missing records: 2479
Instrument type: Aquadopp	Calms/below threshold: 7
Analysis period: 18-Dec-2017 22:50:00 to 20-Oct-2018 15:00:00	Water depth: 1971 m
Notes:	

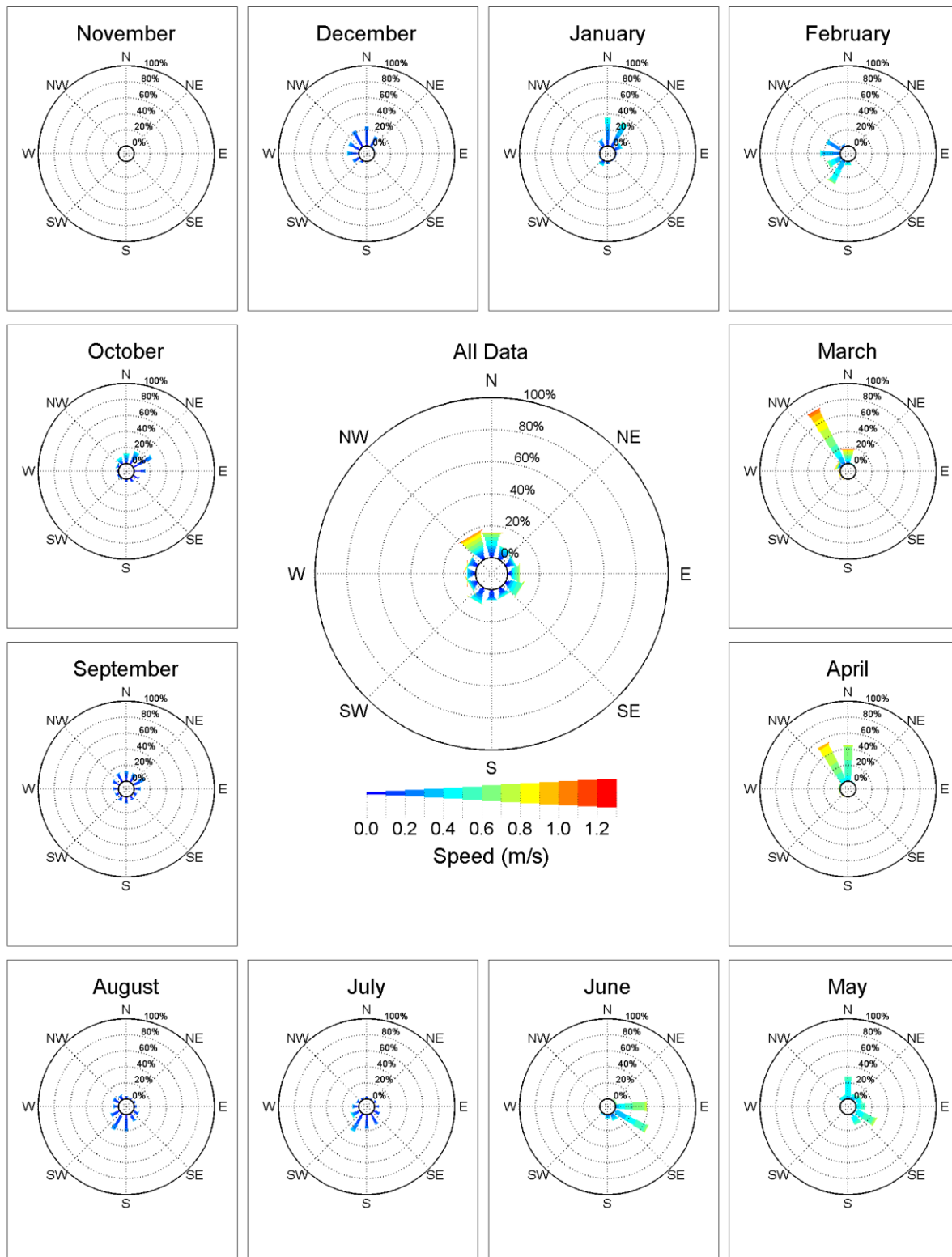
Figure 5.1: Level 1 (6 m below MSL, 1965 m above Seabed)



14-Nov-18 15:14:00

Location: Bigfoot Wavescan	Valid records: 42122
Position: 26° 54.954' N, 090° 30.120' W	Missing records: 1896
Instrument type: Aquadopp	Calms/below threshold: 3
Analysis period: 18-Dec-2017 22:50:00 to 20-Oct-2018 15:00:00	Water depth: 1971 m
Notes:	

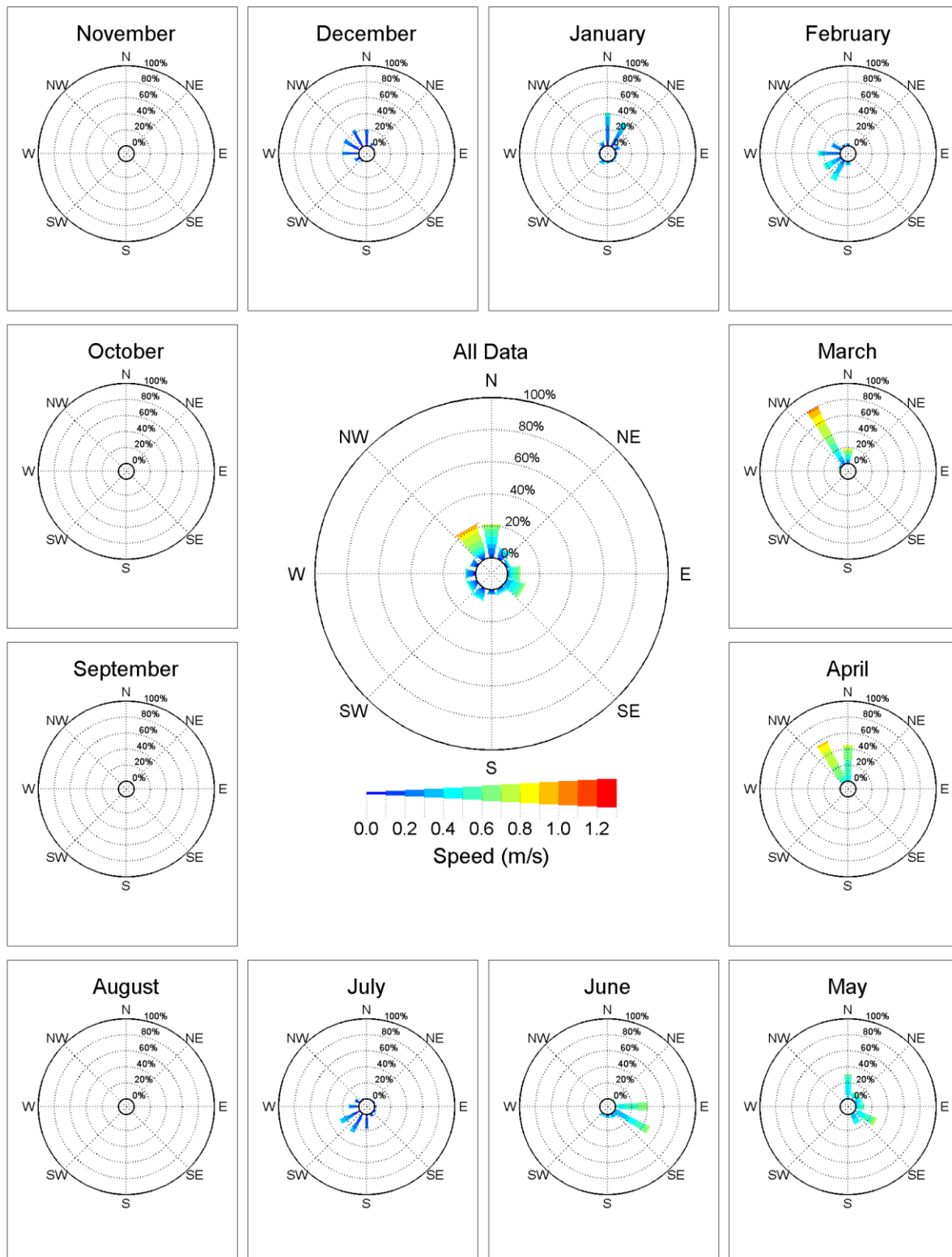
Figure 5.2: Level 5 (22 m below MSL, 1949 m above Seabed)



14-Nov-18 15:14:05

Location: Bigfoot Wavescan	Valid records: 42602
Position: 26° 54.954' N, 090° 30.120' W	Missing records: 1416
Instrument type: Aquadopp	Calms/below threshold: 4
Analysis period: 18-Dec-2017 22:50:00 to 20-Oct-2018 15:00:00	Water depth: 1971 m
Notes:	

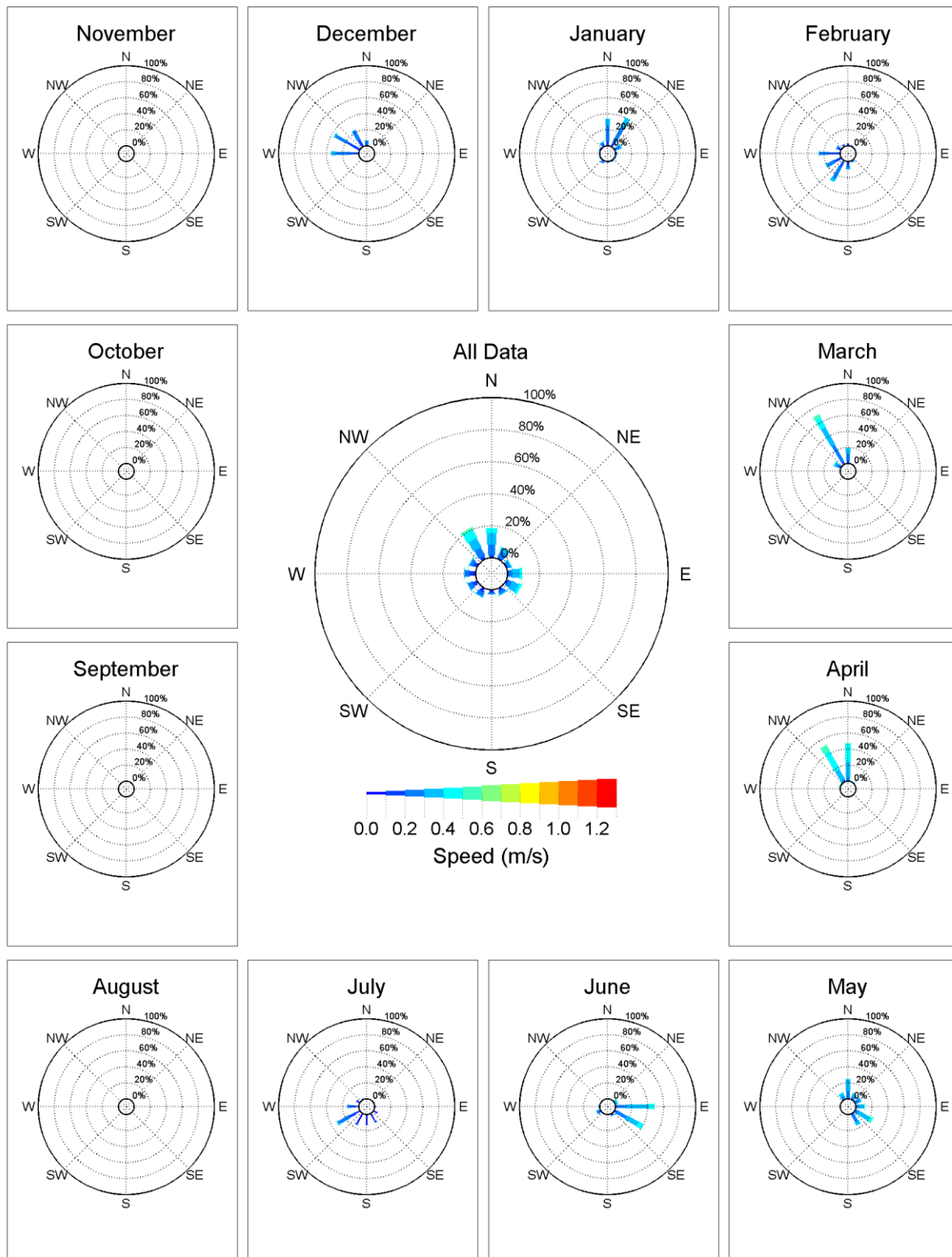
Figure 5.3: Level 15 (62 m below MSL, 1909 m above Seabed)



14-Nov-18 15:14:10

Location: Bigfoot Wavescan	Valid records: 29474
Position: 26° 54.954' N, 090° 30.120' W	Missing records: 14544
Instrument type: 75kHz ADCP	Calms/below threshold: 0
Analysis period: 18-Dec-2017 22:50:00 to 20-Oct-2018 15:00:00	Water depth: 1971 m
Notes:	

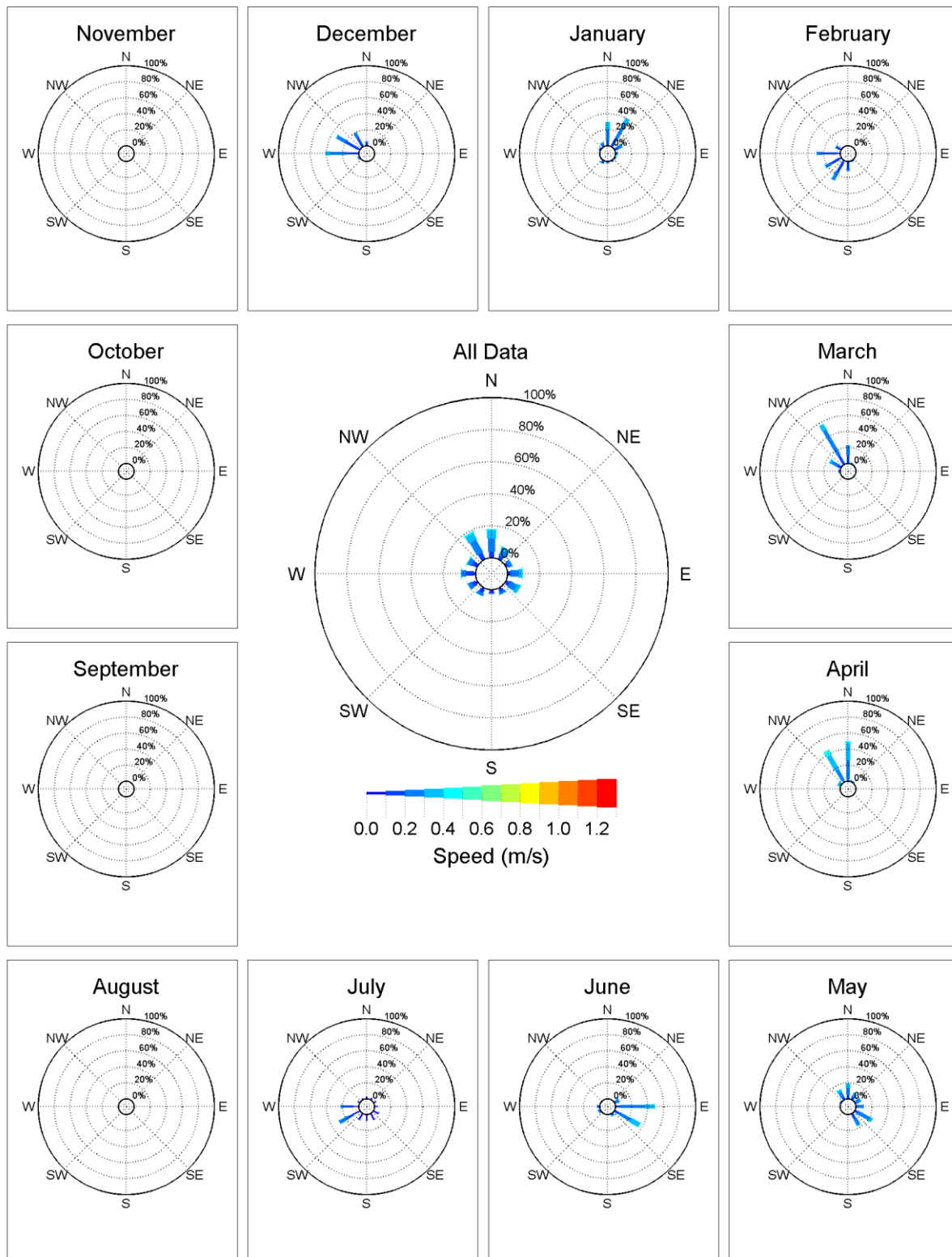
Figure 5.4: Level 21 (102 m below MSL, 1869 m above Seabed)



14-Nov-18 15:14:16

Location: Bigfoot Wavescan	Valid records: 29875
Position: 26° 54.954' N, 090° 30.120' W	Missing records: 14143
Instrument type: 75kHz ADCP	Calms/below threshold: 0
Analysis period: 18-Dec-2017 22:50:00 to 20-Oct-2018 15:00:00	Water depth: 1971 m
Notes:	

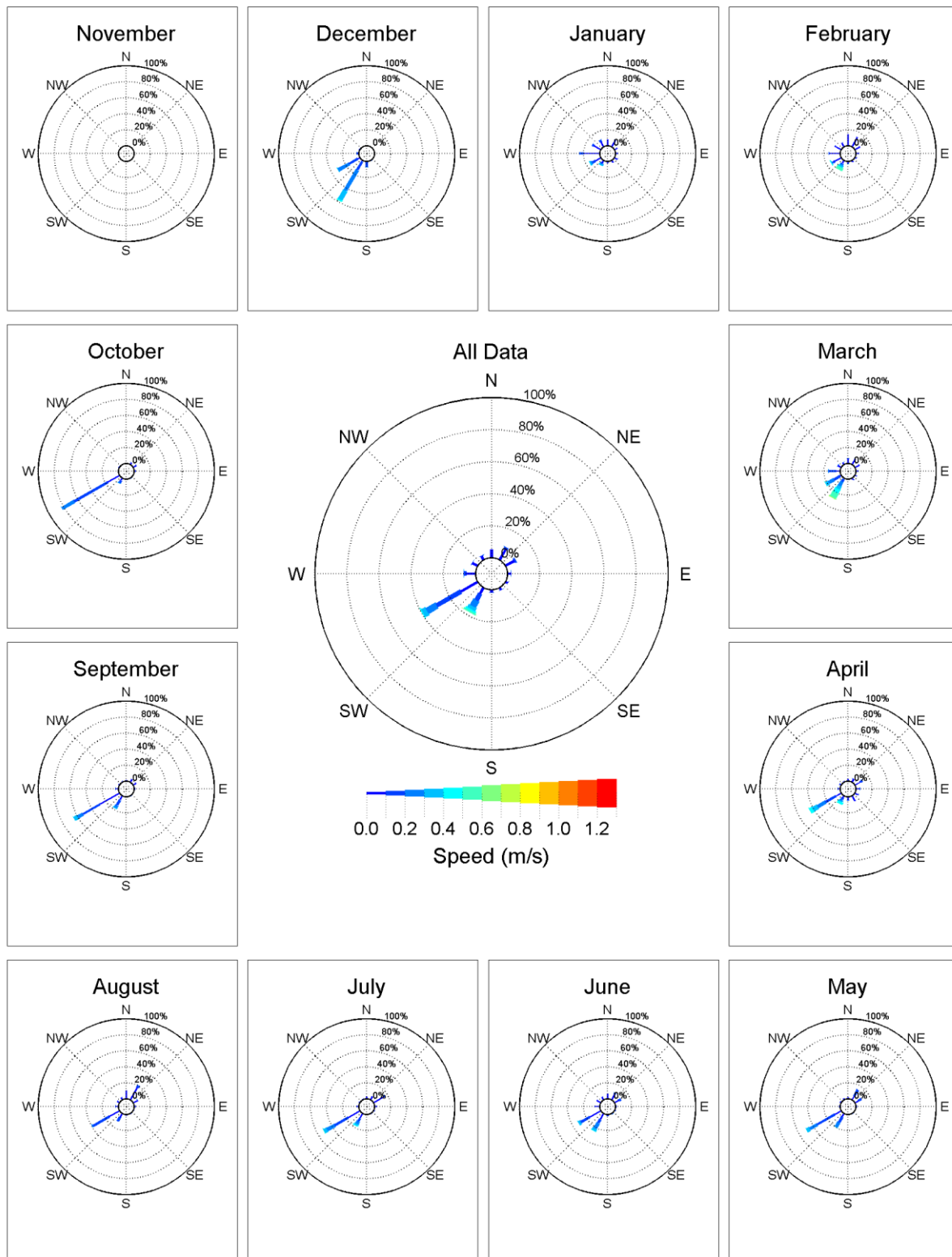
Figure 5.5: Level 28 (242 m below MSL, 1729 m above Seabed)



14-Nov-18 15:14:22

Location: Bigfoot Wavescan	Valid records: 29869
Position: 26° 54.954' N, 090° 30.120' W	Missing records: 14149
Instrument type: 75kHz ADCP	Calms/below threshold: 0
Analysis period: 18-Dec-2017 22:50:00 to 20-Oct-2018 15:00:00	Water depth: 1971 m
Notes:	

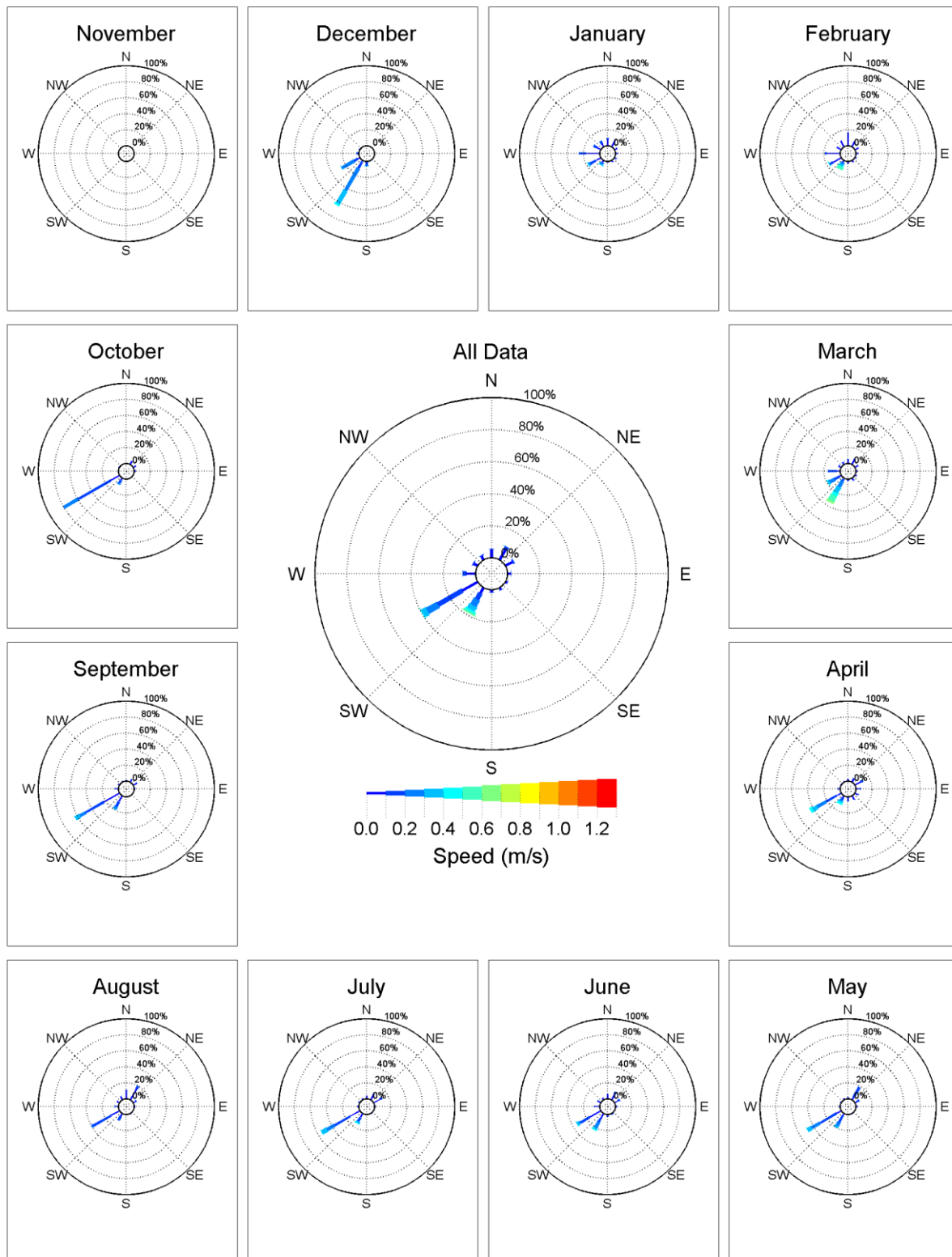
Figure 5.6: Level 33 (342 m below MSL, 1629 m above Seabed)



14-Nov-18 15:14:29

Location: Bigfoot Wavescan	Valid records: 14539
Position: 26° 54.954' N, 090° 30.120' W	Missing records: 134
Instrument type: 300kHz ADCP	Calms/below threshold: 1
Analysis period: 18-Dec-2017 22:50:00 to 20-Oct-2018 15:00:00	Water depth: 1971 m
Notes:	

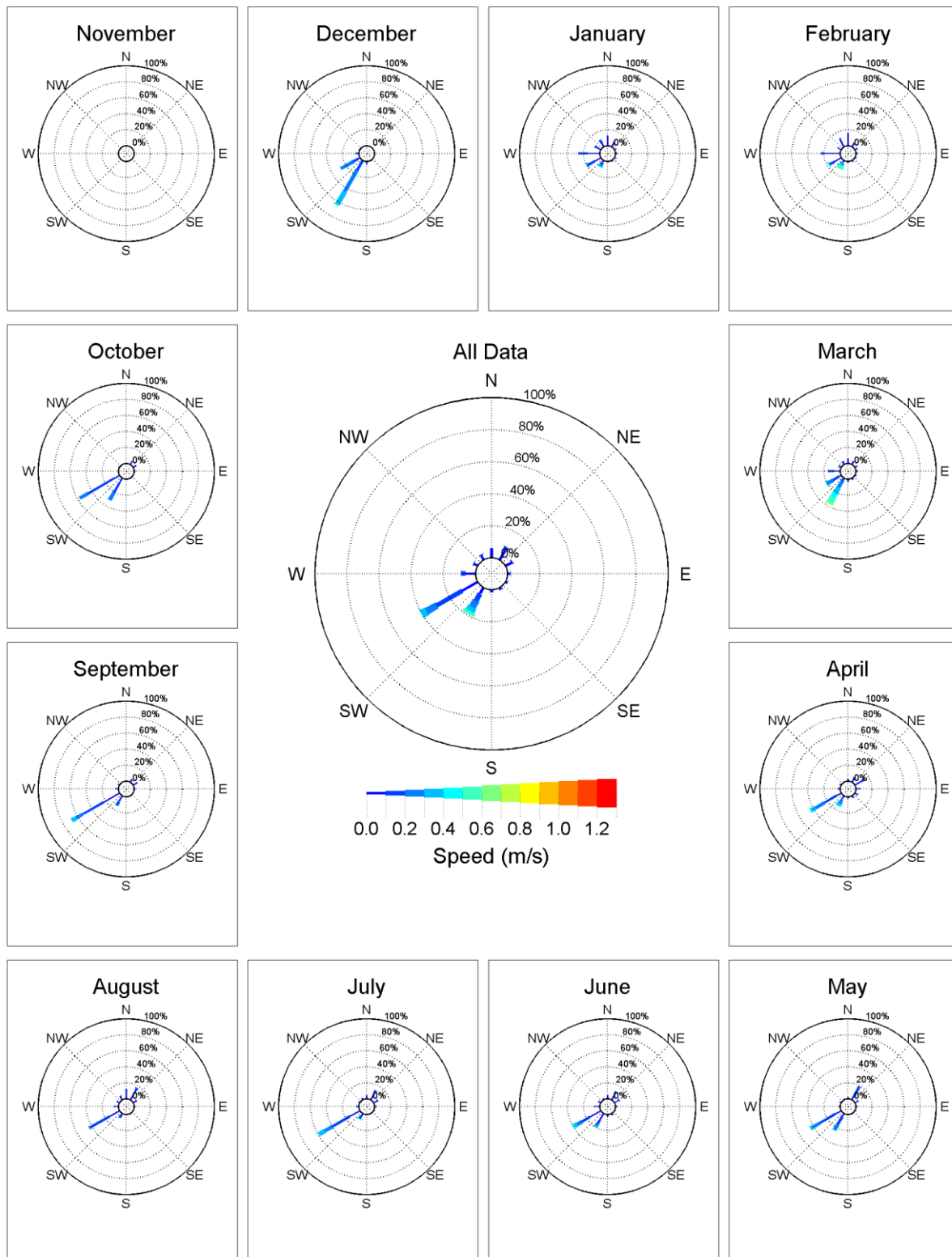
Figure 5.7: Level 42 (1914 m below MSL, 57 m above Seabed)



14-Nov-18 15:14:33

Location: Bigfoot Wavescan	Valid records: 14538
Position: 26° 54.954' N, 090° 30.120' W	Missing records: 135
Instrument type: 300kHz ADCP	Calms/below threshold: 1
Analysis period: 18-Dec-2017 22:50:00 to 20-Oct-2018 15:00:00	Water depth: 1971 m
Notes:	

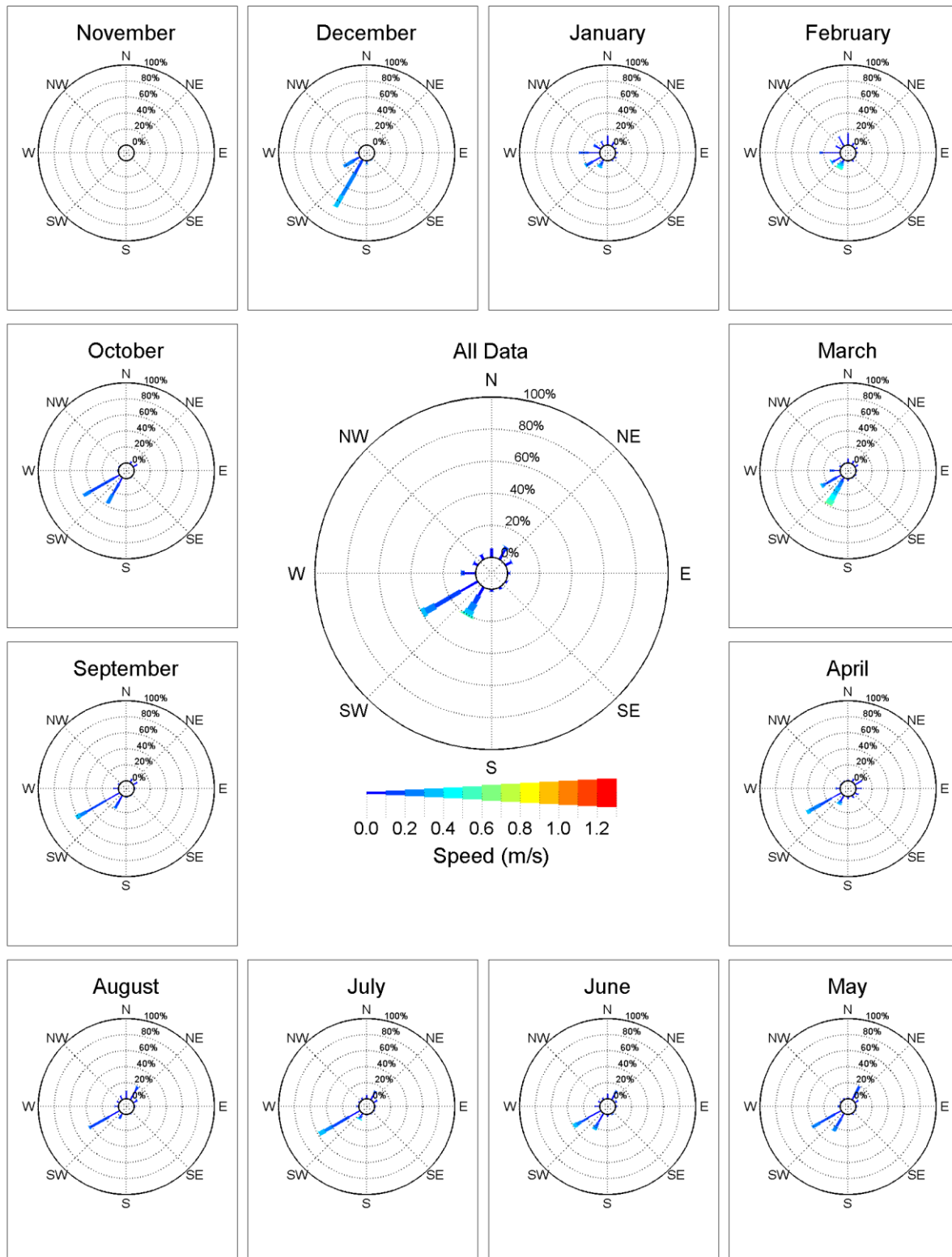
Figure 5.8: Level 46 (1934 m below MSL, 37 m above Seabed)



14-Nov-18 15:14:37

Location: Bigfoot Wavescan	Valid records: 14536
Position: 26° 54.954' N, 090° 30.120' W	Missing records: 137
Instrument type: 600kHz ADCP	Calms/below threshold: 0
Analysis period: 18-Dec-2017 22:50:00 to 20-Oct-2018 15:00:00	Water depth: 1971 m
Notes:	

Figure 5.9: Level 50 (1954 m below MSL, 17 m above Seabed)

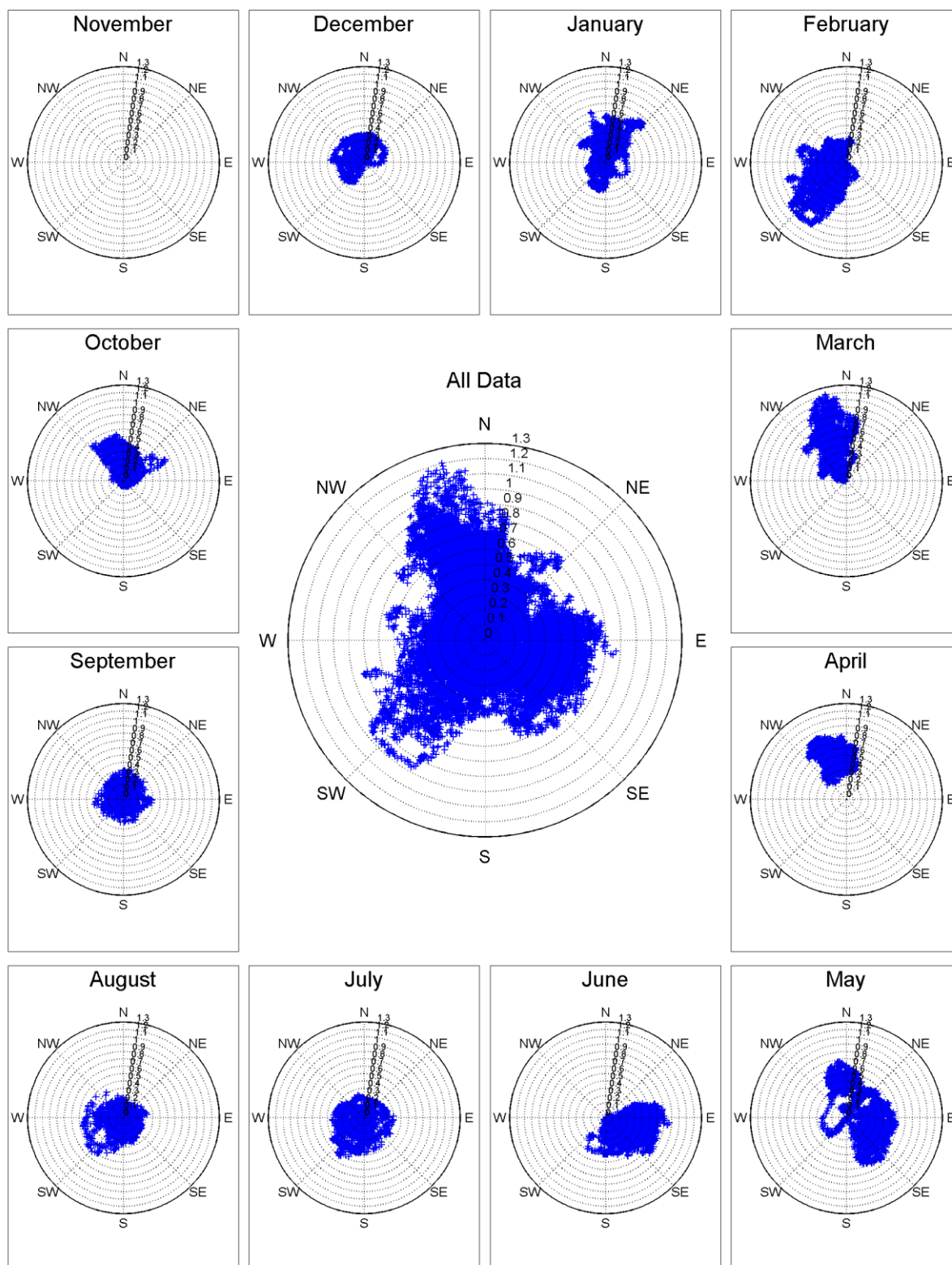


14-Nov-18 15:14:42	
Location: Bigfoot Wavescan	Valid records: 14018
Position: 26° 54.954' N, 090° 30.120' W	Missing records: 655
Instrument type: 600kHz ADCP	Calms/below threshold: 0
Analysis period: 18-Dec-2017 22:50:00 to 20-Oct-2018 15:00:00	Water depth: 1971 m
Notes:	

Figure 5.10: Level 59 (1963 m below MSL, 8 m above Seabed)



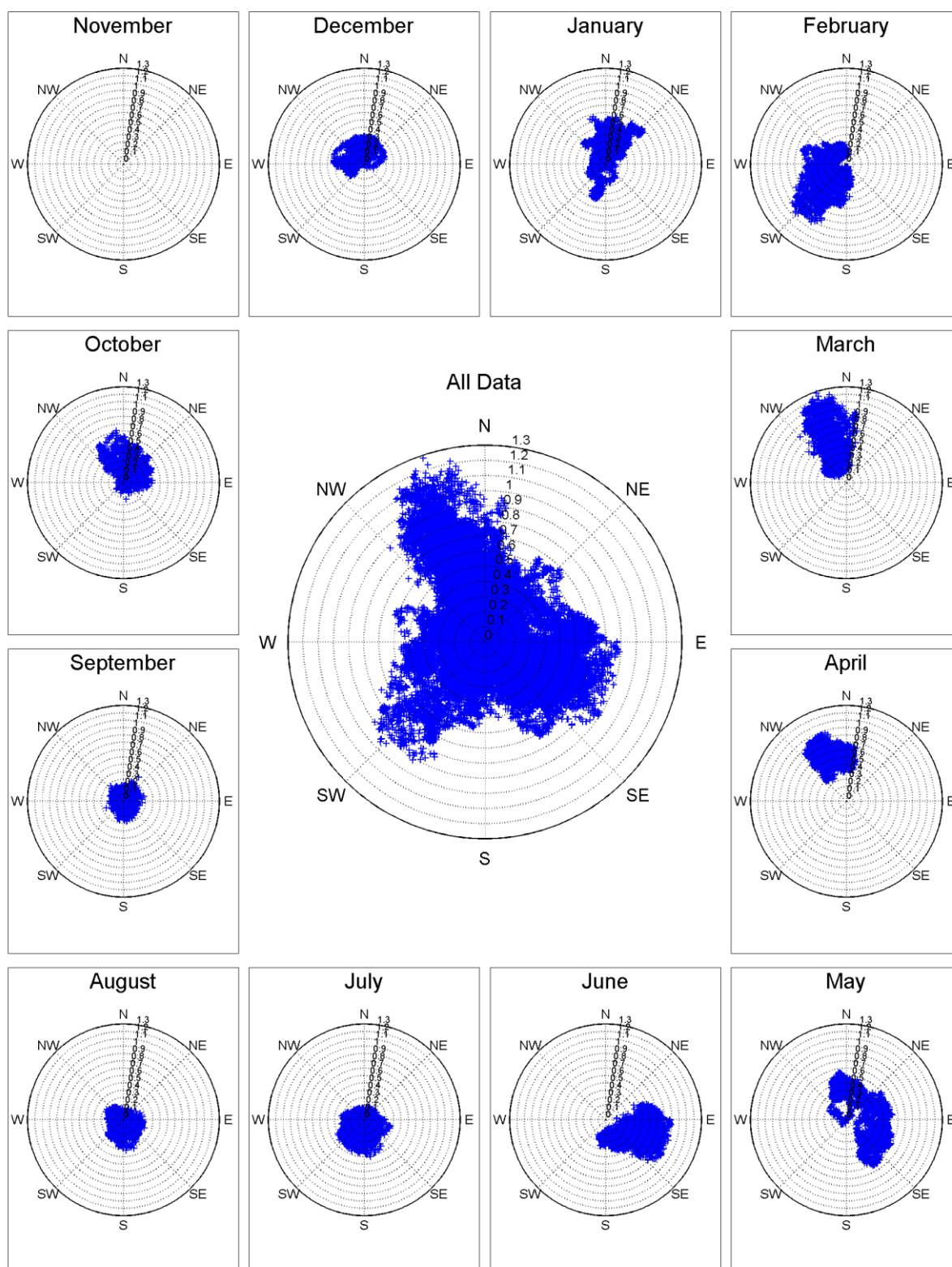
Polar Scatter Plot



14-Nov-18 15:14:47

Location: Bigfoot Wavescan	Valid records: 41539
Position: 26° 54.954' N, 090° 30.120' W	Missing records: 2479
Instrument type: Aquadopp	Calms/below threshold: 7
Analysis period: 18-Dec-2017 22:50:00 to 20-Oct-2018 15:00:00	Water depth: 1971 m
Notes:	

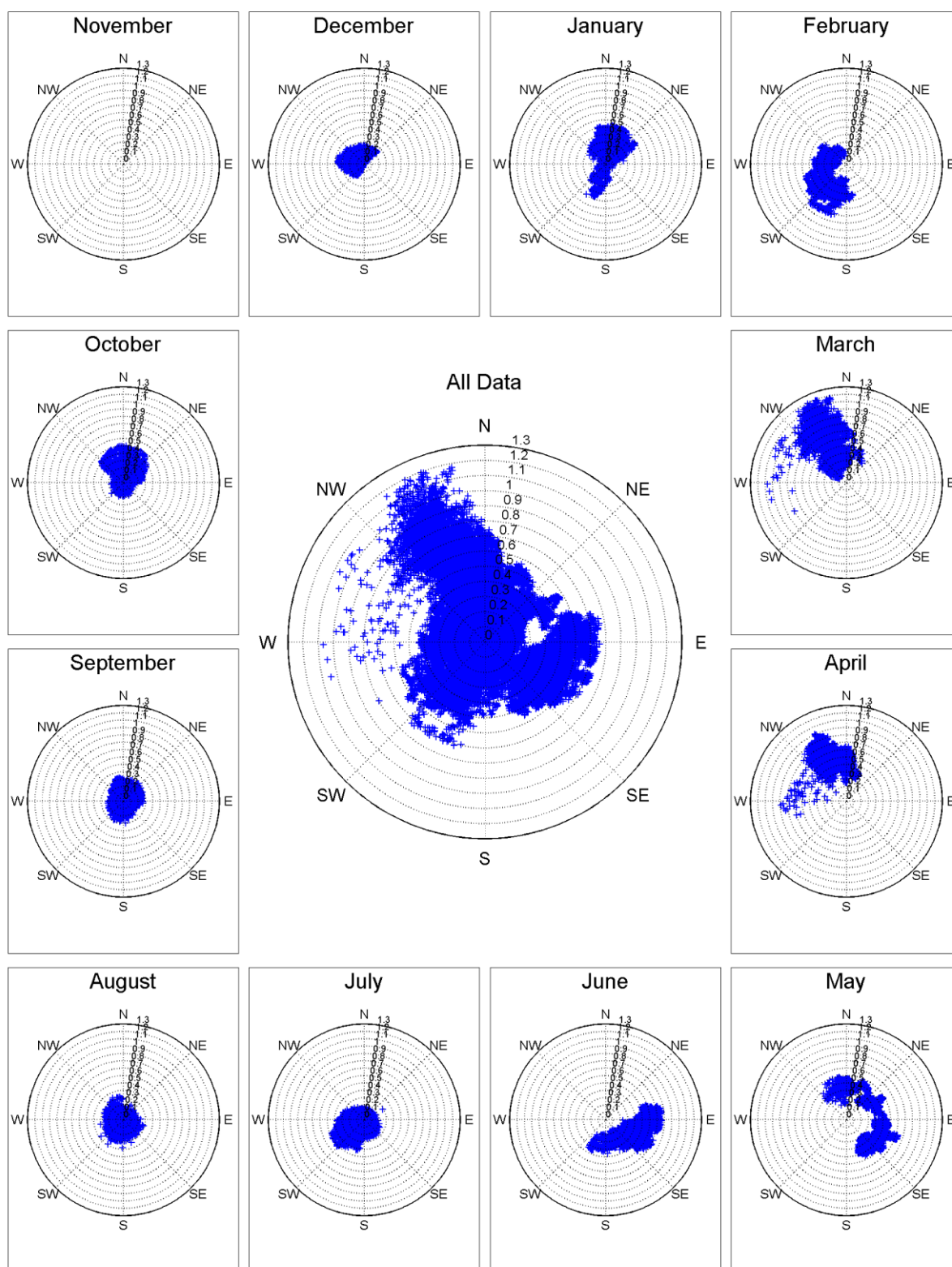
Figure 6.1: Level 1 (6 m below MSL, 1965 m above Seabed)



14-Nov-18 15:14:50

Location: Bigfoot Wavescan	Valid records: 42122
Position: 26° 54.954' N, 090° 30.120' W	Missing records: 1896
Instrument type: Aquadopp	Calms/below threshold: 3
Analysis period: 18-Dec-2017 22:50:00 to 20-Oct-2018 15:00:00	Water depth: 1971 m
Notes:	

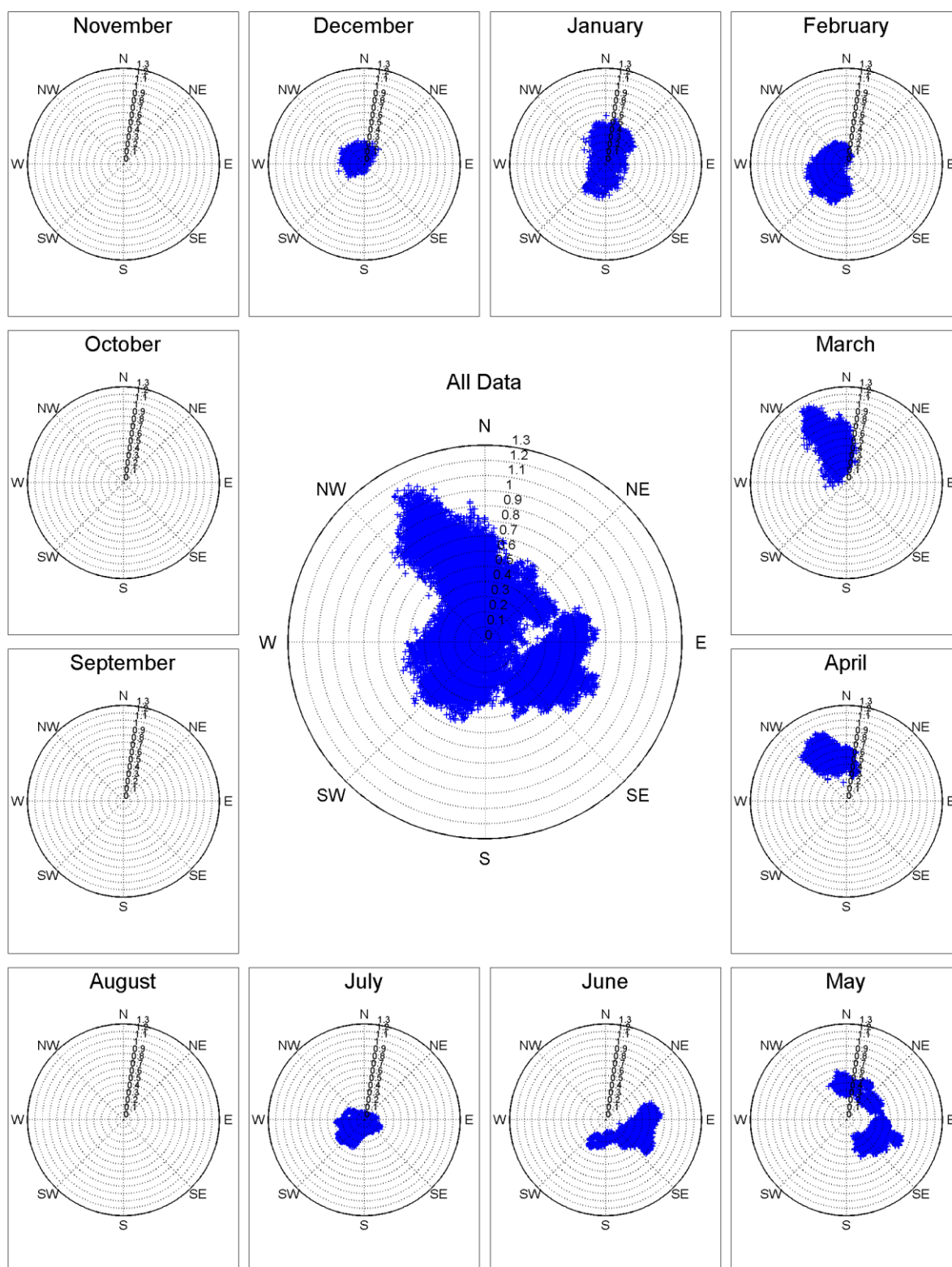
Figure 6.2: Level 5 (22 m below MSL, 1949 m above Seabed)



14-Nov-18 15:14:53

Location: Bigfoot Wavescan	Valid records: 42602
Position: 26° 54.954' N, 090° 30.120' W	Missing records: 1416
Instrument type: Aquadopp	Calms/below threshold: 4
Analysis period: 18-Dec-2017 22:50:00 to 20-Oct-2018 15:00:00	Water depth: 1971 m
Notes:	

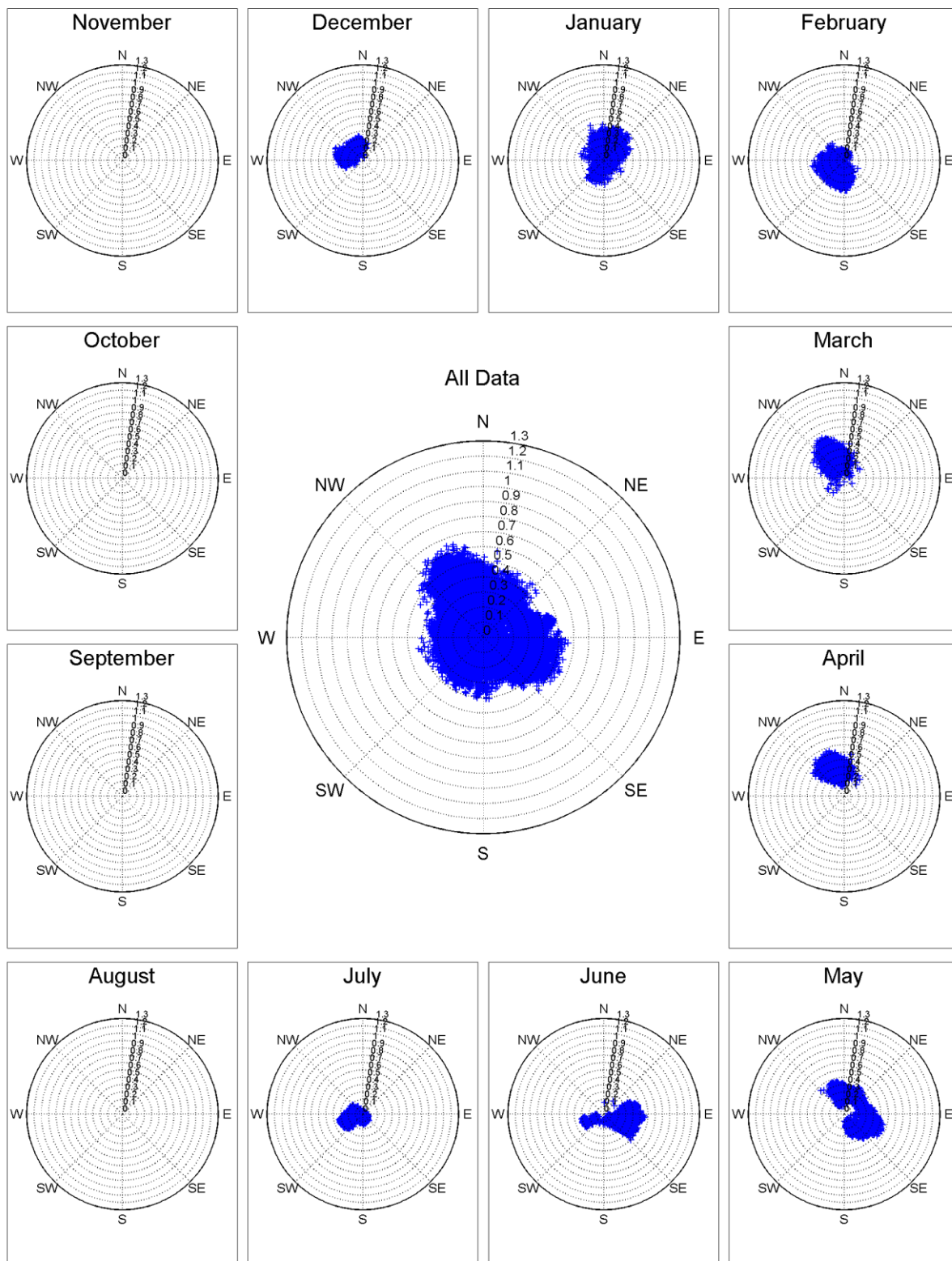
Figure 6.3: Level 15 (62 m below MSL, 1909 m above Seabed)



14-Nov-18 15:14:56

Location: Bigfoot Wavescan	Valid records: 29474
Position: 26° 54.954' N, 090° 30.120' W	Missing records: 14544
Instrument type: 75kHz ADCP	Calms/below threshold: 0
Analysis period: 18-Dec-2017 22:50:00 to 20-Oct-2018 15:00:00	Water depth: 1971 m
Notes:	

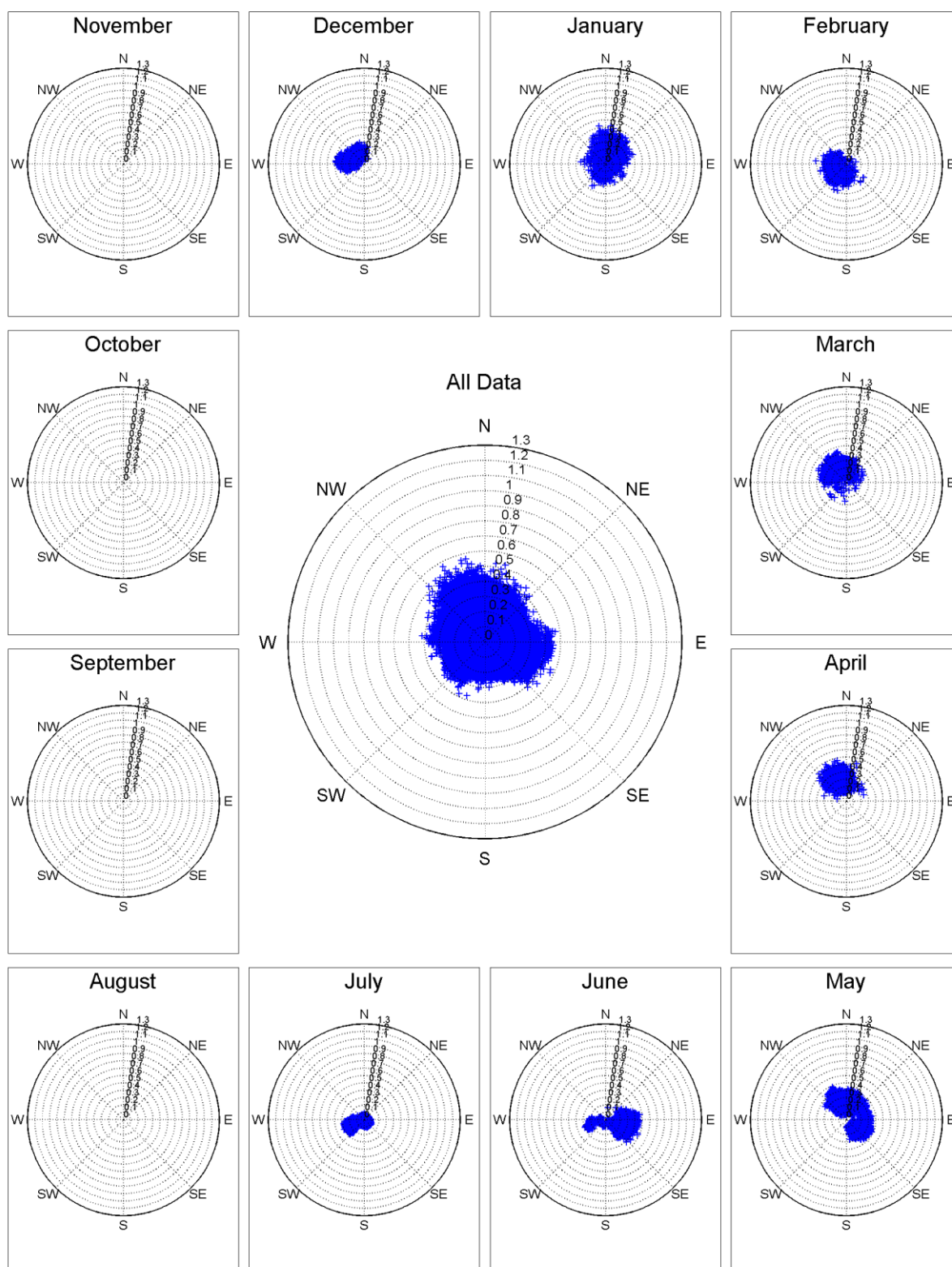
Figure 6.4: Level 21 (102 m below MSL, 1869 m above Seabed)



14-Nov-18 15:14:59

Location: Bigfoot Wavescan	Valid records: 29875
Position: 26° 54.954' N, 090° 30.120' W	Missing records: 14143
Instrument type: 75kHz ADCP	Calms/below threshold: 0
Analysis period: 18-Dec-2017 22:50:00 to 20-Oct-2018 15:00:00	Water depth: 1971 m
Notes:	

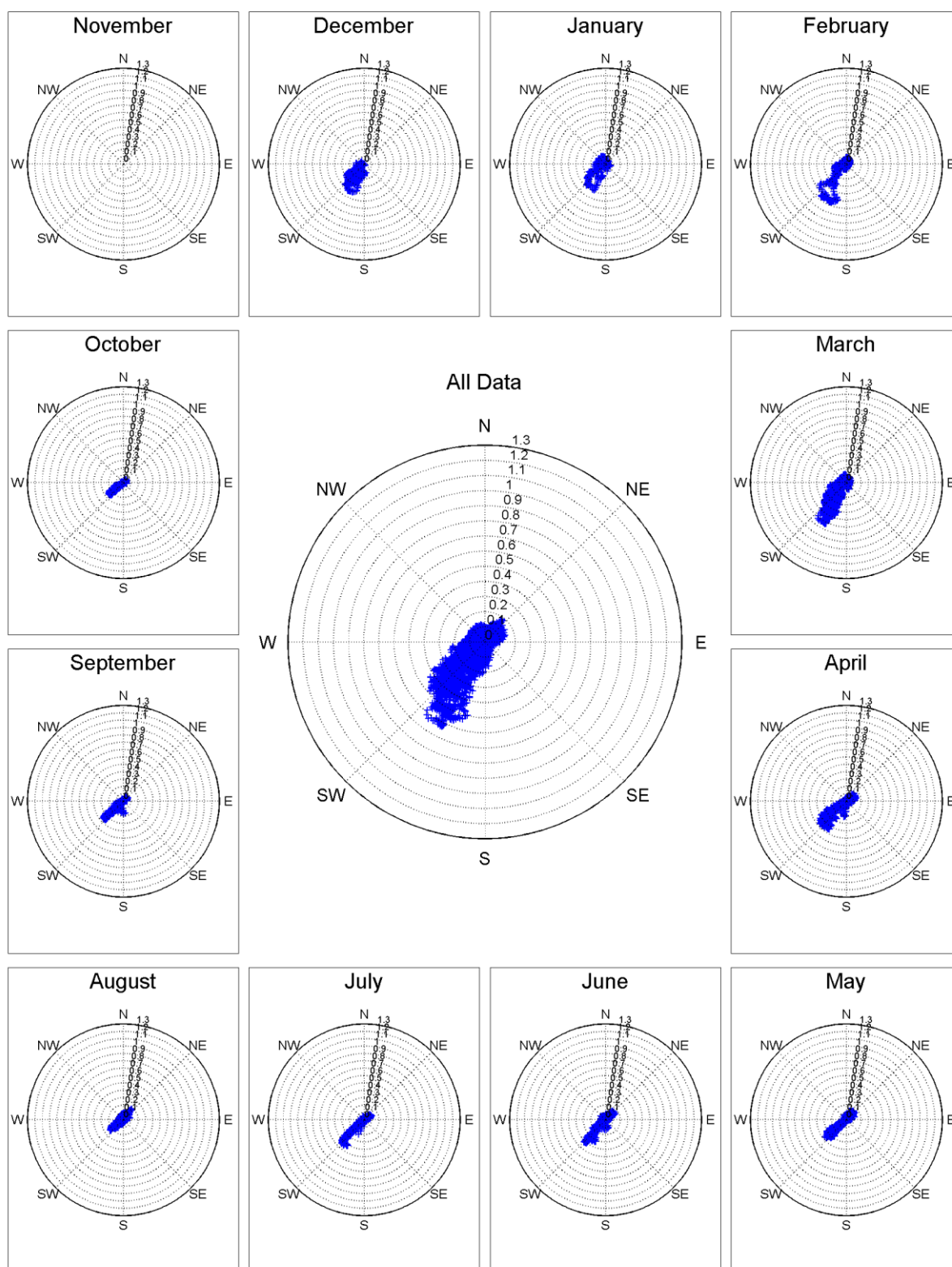
Figure 6.5: Level 28 (242 m below MSL, 1729 m above Seabed)



14-Nov-18 15:15:02

Location: Bigfoot Wavescan	Valid records: 29869
Position: 26° 54.954' N, 090° 30.120' W	Missing records: 14149
Instrument type: 75kHz ADCP	Calms/below threshold: 0
Analysis period: 18-Dec-2017 22:50:00 to 20-Oct-2018 15:00:00	Water depth: 1971 m
Notes:	

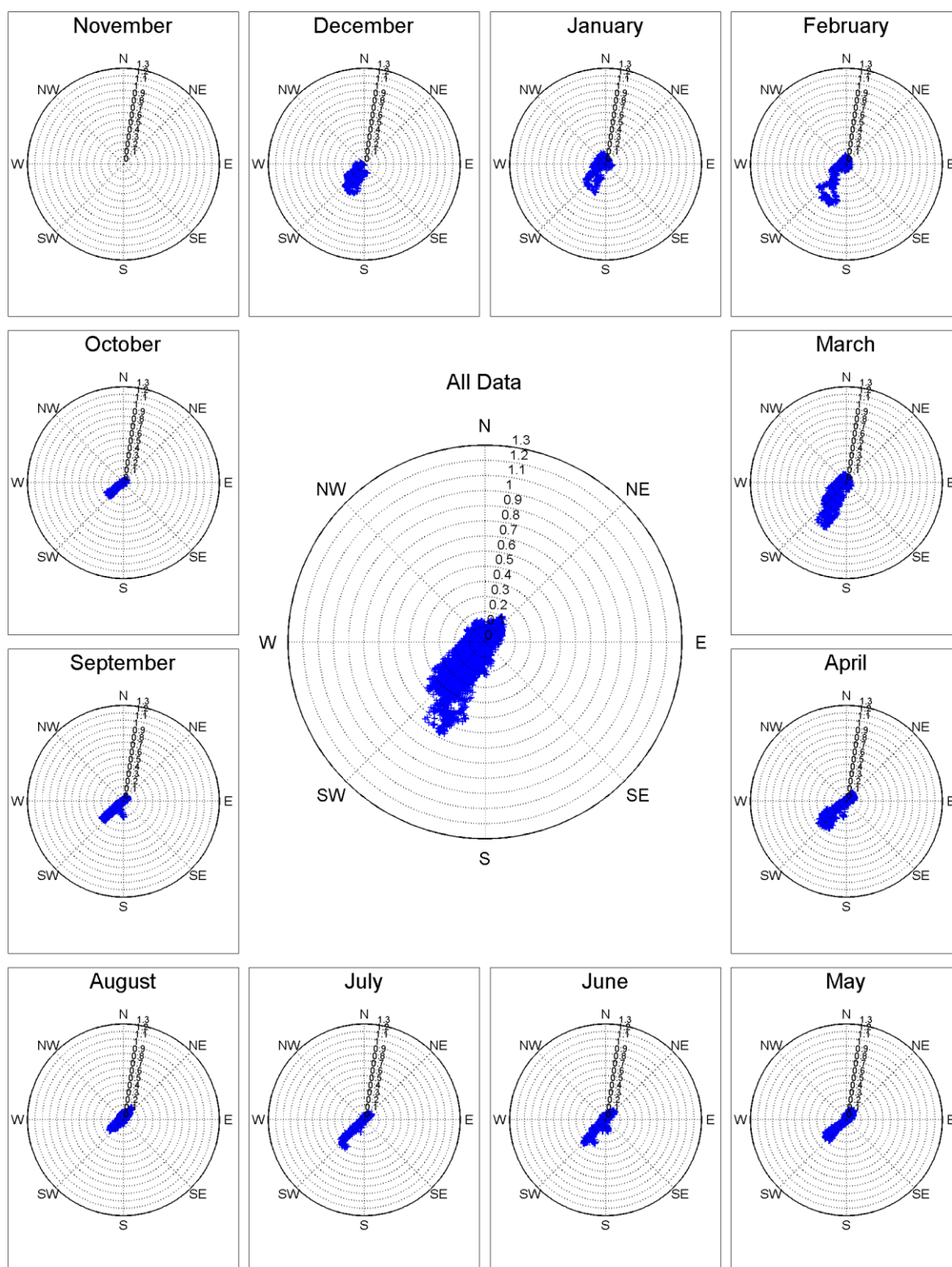
Figure 6.6: Level 33 (342 m below MSL, 1629 m above Seabed)



14-Nov-18 15:15:05

Location: Bigfoot Wavescan	Valid records: 14539
Position: 26° 54.954' N, 090° 30.120' W	Missing records: 134
Instrument type: 300kHz ADCP	Calms/below threshold: 1
Analysis period: 18-Dec-2017 22:50:00 to 20-Oct-2018 15:00:00	Water depth: 1971 m
Notes:	

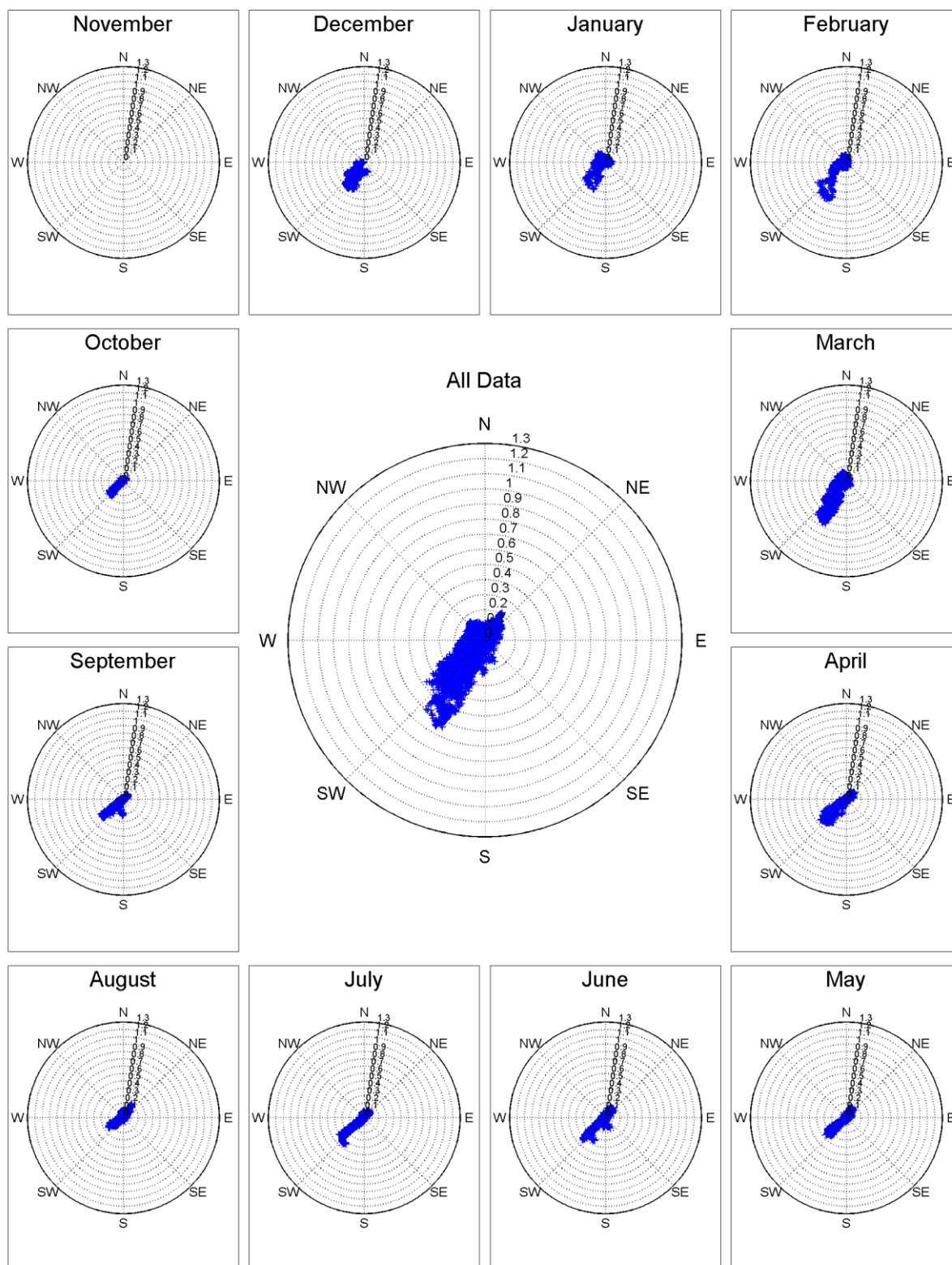
Figure 6.7: Level 42 (1914 m below MSL, 57 m above Seabed)



14-Nov-18 15:15:08

Location: Bigfoot Wavescan	Valid records: 14538
Position: 26° 54.954' N, 090° 30.120' W	Missing records: 135
Instrument type: 300kHz ADCP	Calms/below threshold: 1
Analysis period: 18-Dec-2017 22:50:00 to 20-Oct-2018 15:00:00	Water depth: 1971 m
Notes:	

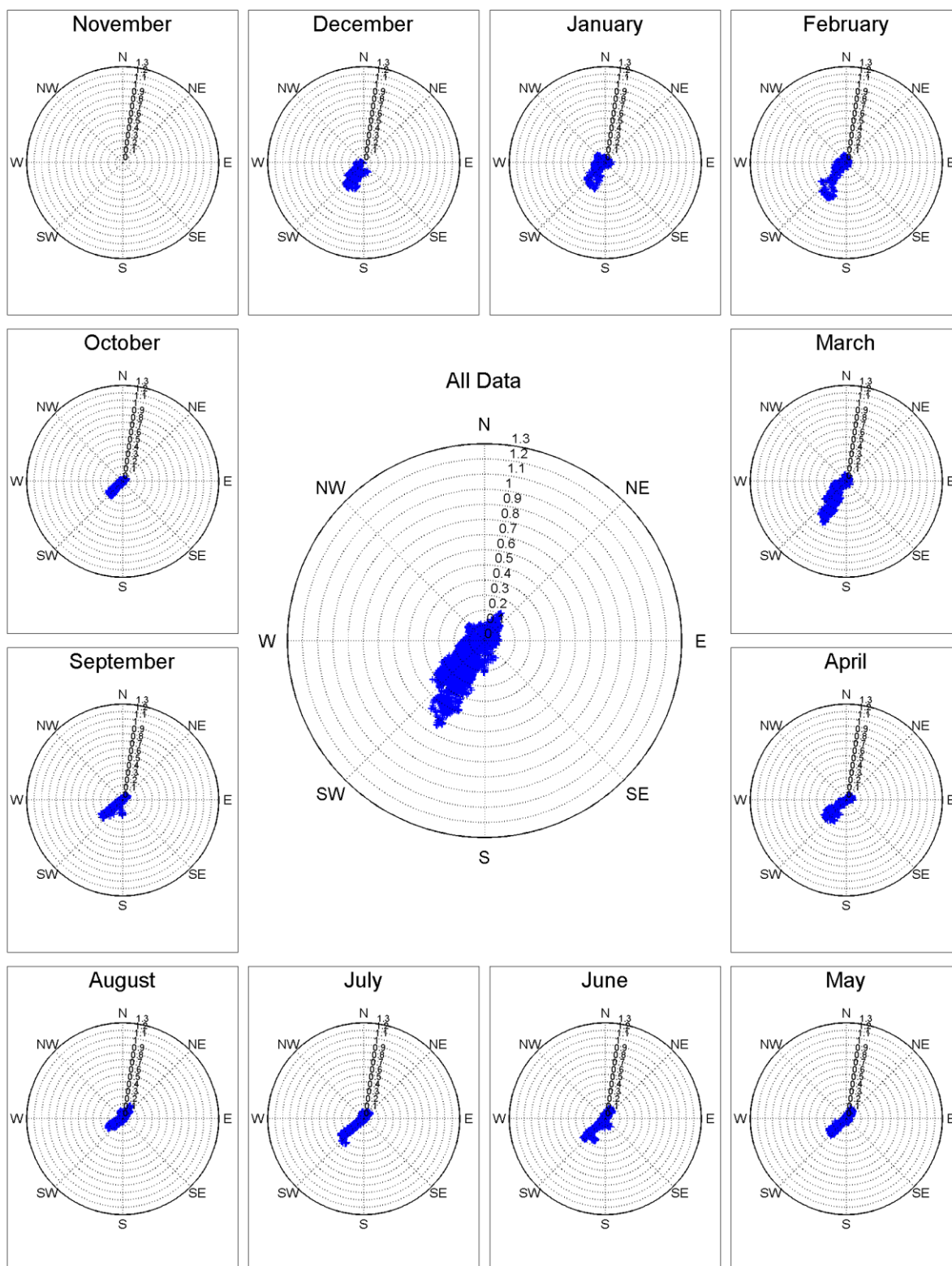
Figure 6.8: Level 46 (1934 m below MSL, 37 m above Seabed)



14-Nov-18 15:15:11

Location: Bigfoot Wavescan	Valid records: 14536
Position: 26° 54.954' N, 090° 30.120' W	Missing records: 137
Instrument type: 600kHz ADCP	Calms/below threshold: 0
Analysis period: 18-Dec-2017 22:50:00 to 20-Oct-2018 15:00:00	Water depth: 1971 m
Notes:	

Figure 6.9: Level 50 (1954 m below MSL, 17 m above Seabed)



14-Nov-18 15:15:13

Location: Bigfoot Wavescan	Valid records: 14018
Position: 26° 54.954' N, 090° 30.120' W	Missing records: 655
Instrument type: 600kHz ADCP	Calms/below threshold: 0
Analysis period: 18-Dec-2017 22:50:00 to 20-Oct-2018 15:00:00	Water depth: 1971 m
Notes:	

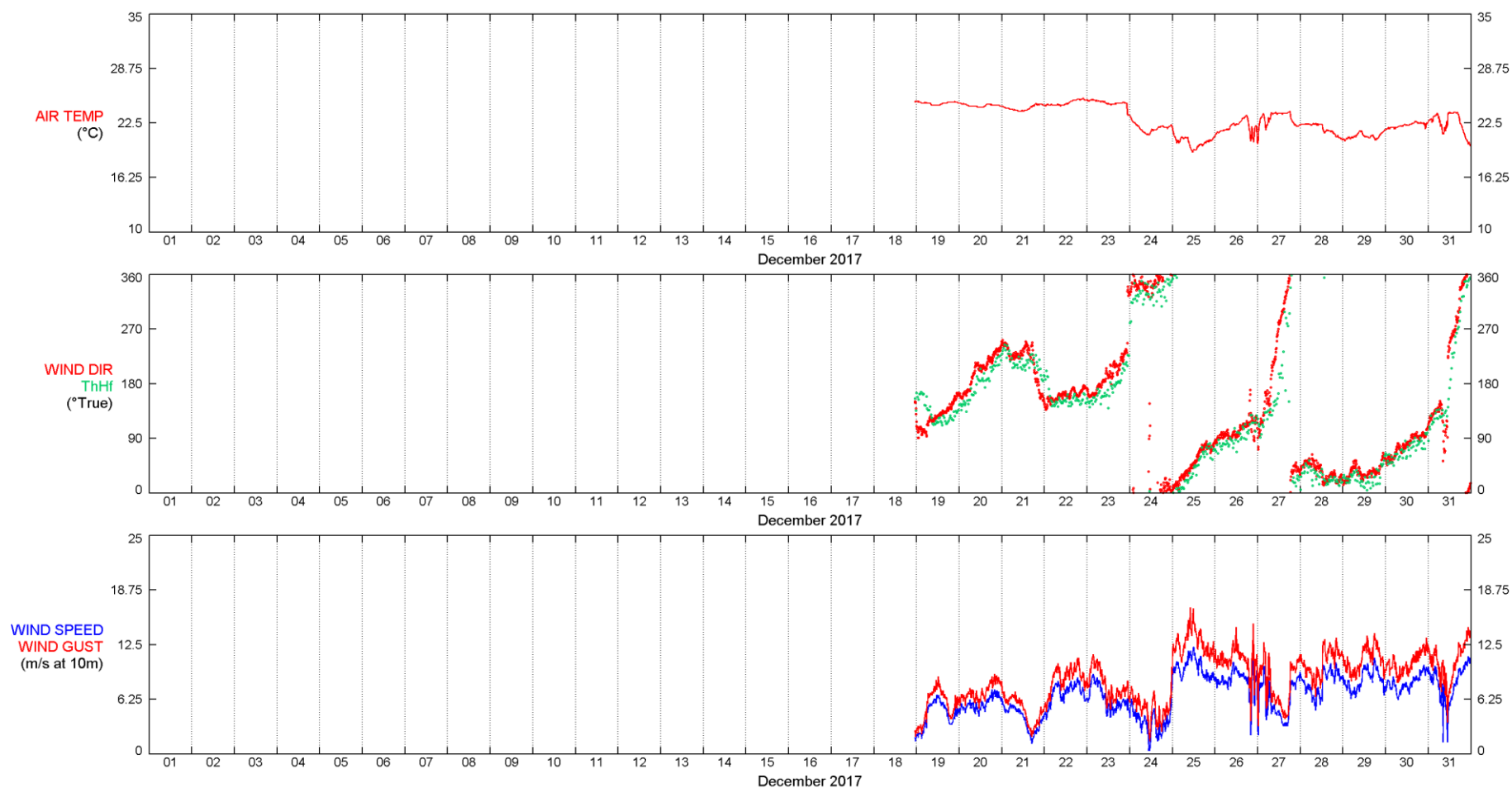
Figure 6.10: Level 59 (1963 m below MSL, 8 m above Seabed)



CHEVRON USA INC.
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT

Meteorological Parameters

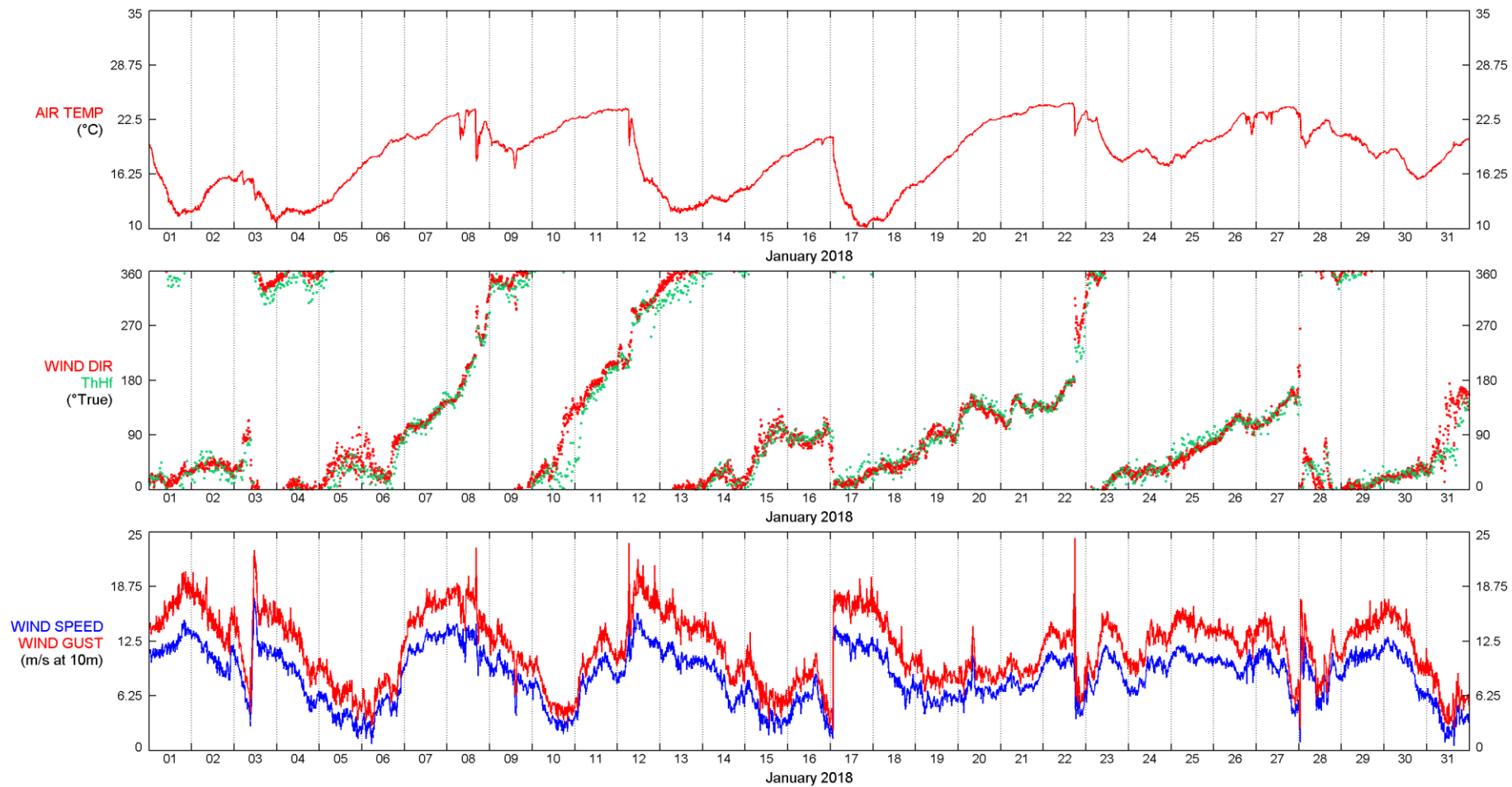
CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



Location: Bigfoot	Valid records: 8138
Position: 26° 54.954' N, 090° 30.120' W	Missing records: 0
Instrument type: Mets, Wavescan	Calms/below threshold:
Analysis period: 18-Dec-2017 23:00:00 - 31-Dec-2017 23:50:00 (UTC)	Water depth: 1971 m
Notes:	

Figure 7.1 Level 1, 18-Dec-2017 23:00:00 - 31-Dec-2017 23:50:00 (UTC)

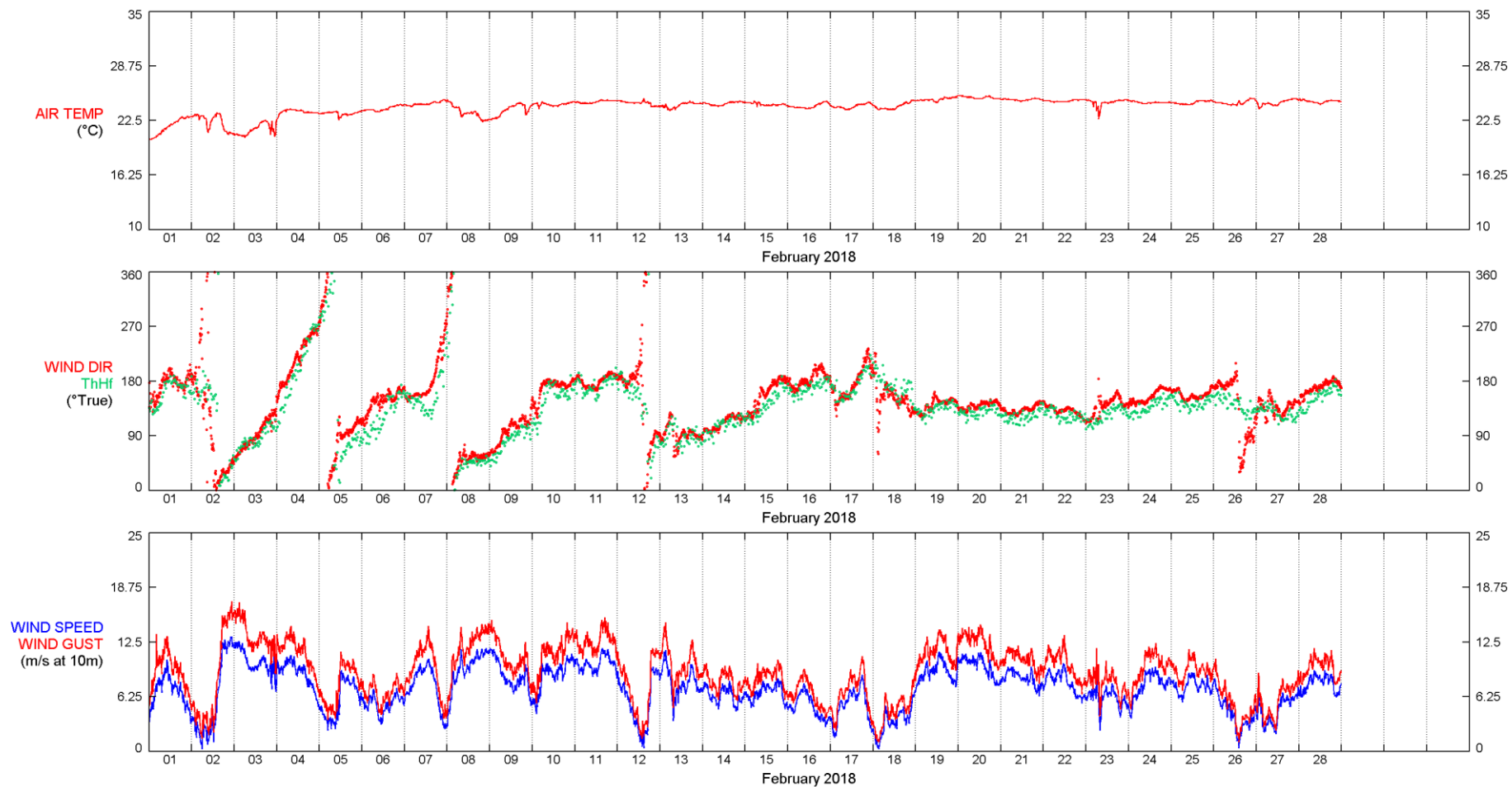
CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



Location: Bigfoot	Valid records: 19344
Position: 26° 54.954' N, 090° 30.120' W	Missing records: 0
Instrument type: Mets, Wavescan	Calms/below threshold:
Analysis period: 01-Jan-2018 00:00:00 - 31-Jan-2018 23:50:00 (UTC)	Water depth: 1971 m
Notes:	

Figure 7.2 Level 1, 01-Jan-2018 00:00:00 - 31-Jan-2018 23:50:00 (UTC)

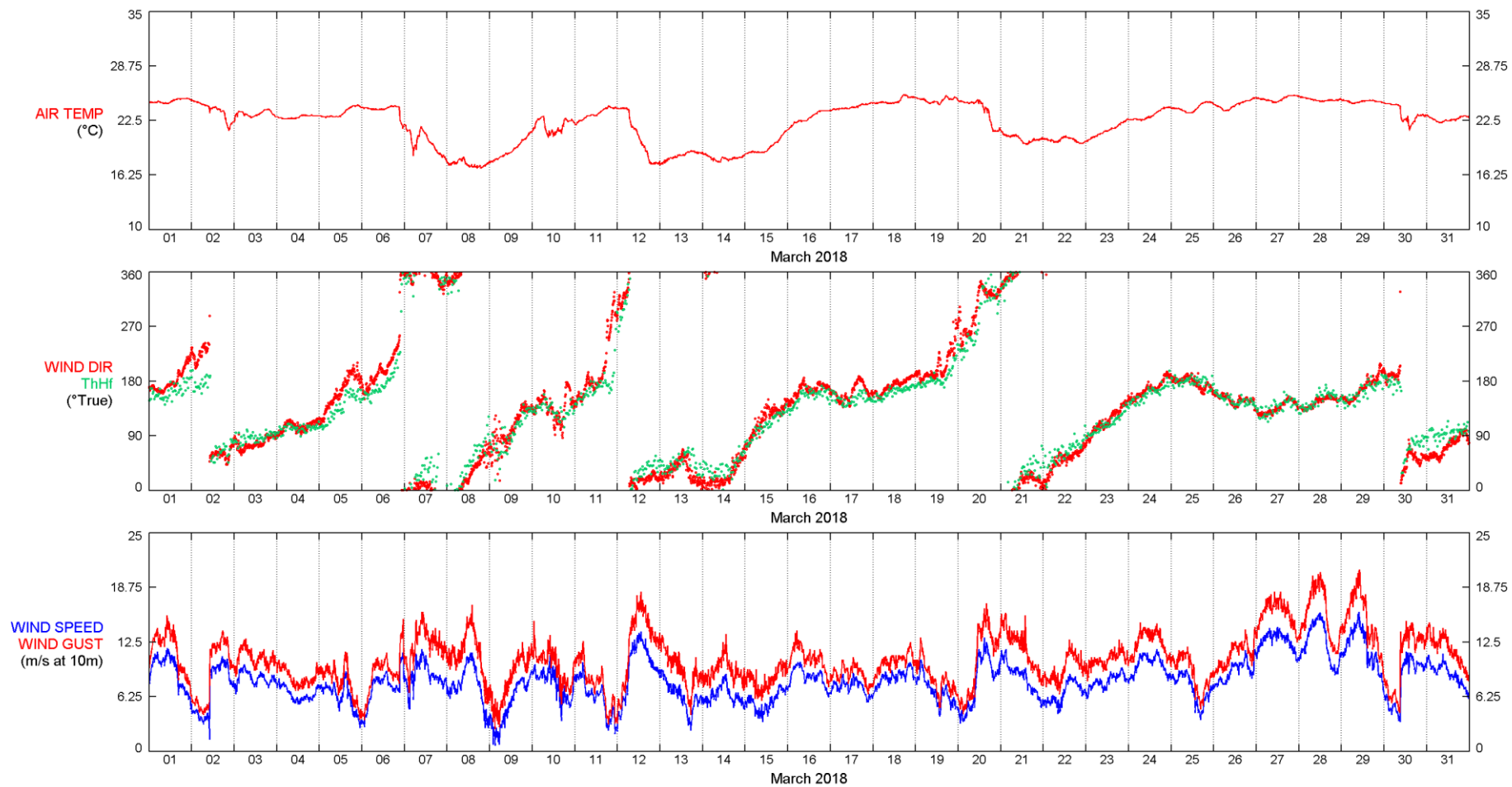
CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



Location: Bigfoot	Valid records: 17472
Position: 26° 54.954' N, 090° 30.120' W	Missing records: 0
Instrument type: Mets, Wavescan	Calms/below threshold:
Analysis period: 01-Feb-2018 00:00:00 - 28-Feb-2018 23:50:00 (UTC)	Water depth: 1971 m
Notes:	

Figure 7.3 Level 1, 01-Feb-2018 00:00:00 - 28-Feb-2018 23:50:00 (UTC)

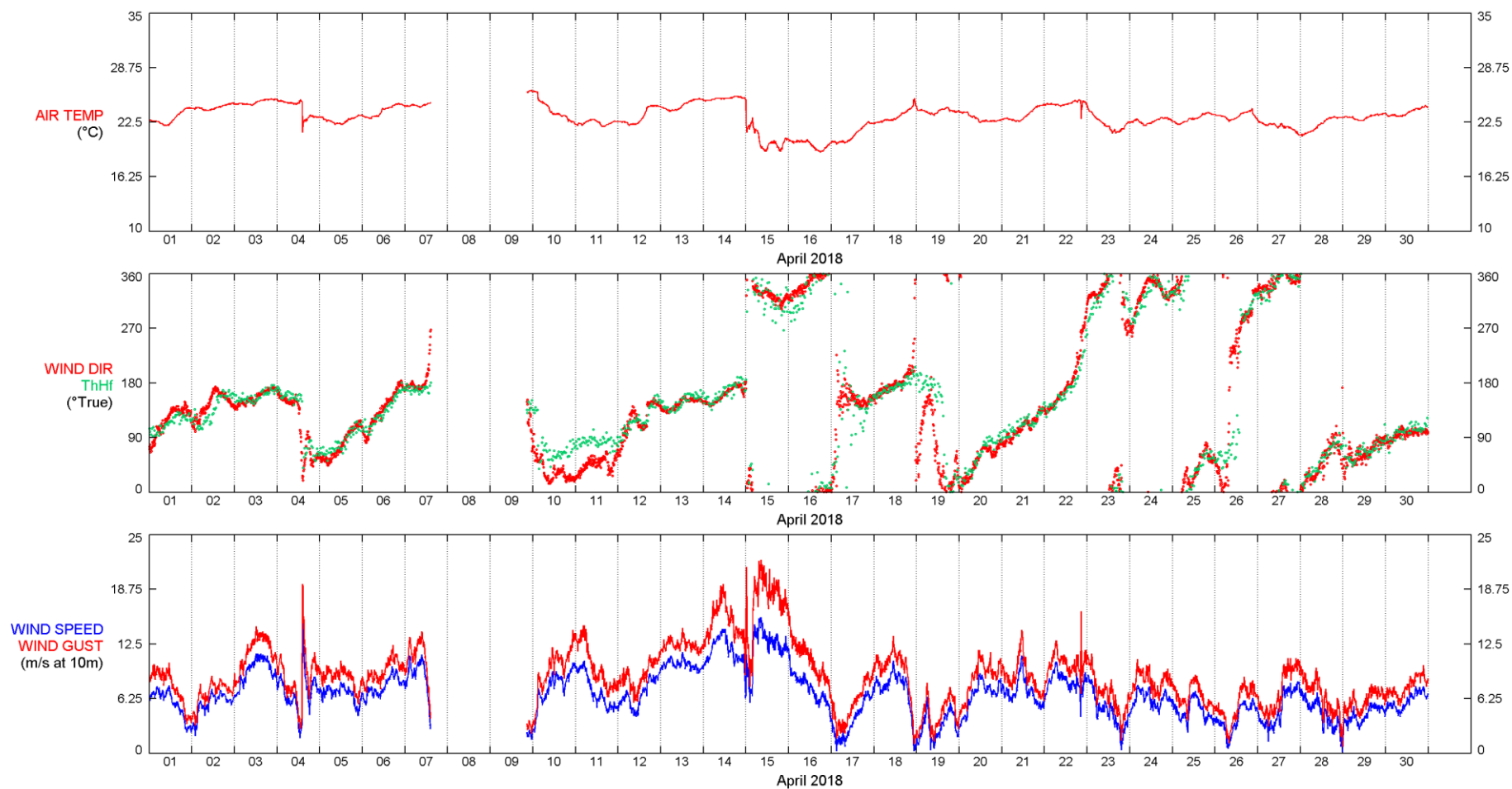
CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



Location: Bigfoot	Valid records: 19344
Position: 26° 54.954' N, 090° 30.120' W	Missing records: 0
Instrument type: Mets, Wavescan	Calms/below threshold:
Analysis period: 01-Mar-2018 00:00:00 - 31-Mar-2018 23:50:00 (UTC)	Water depth: 1971 m
Notes:	

Figure 7.4 Level 1, 01-Mar-2018 00:00:00 - 31-Mar-2018 23:50:00 (UTC)

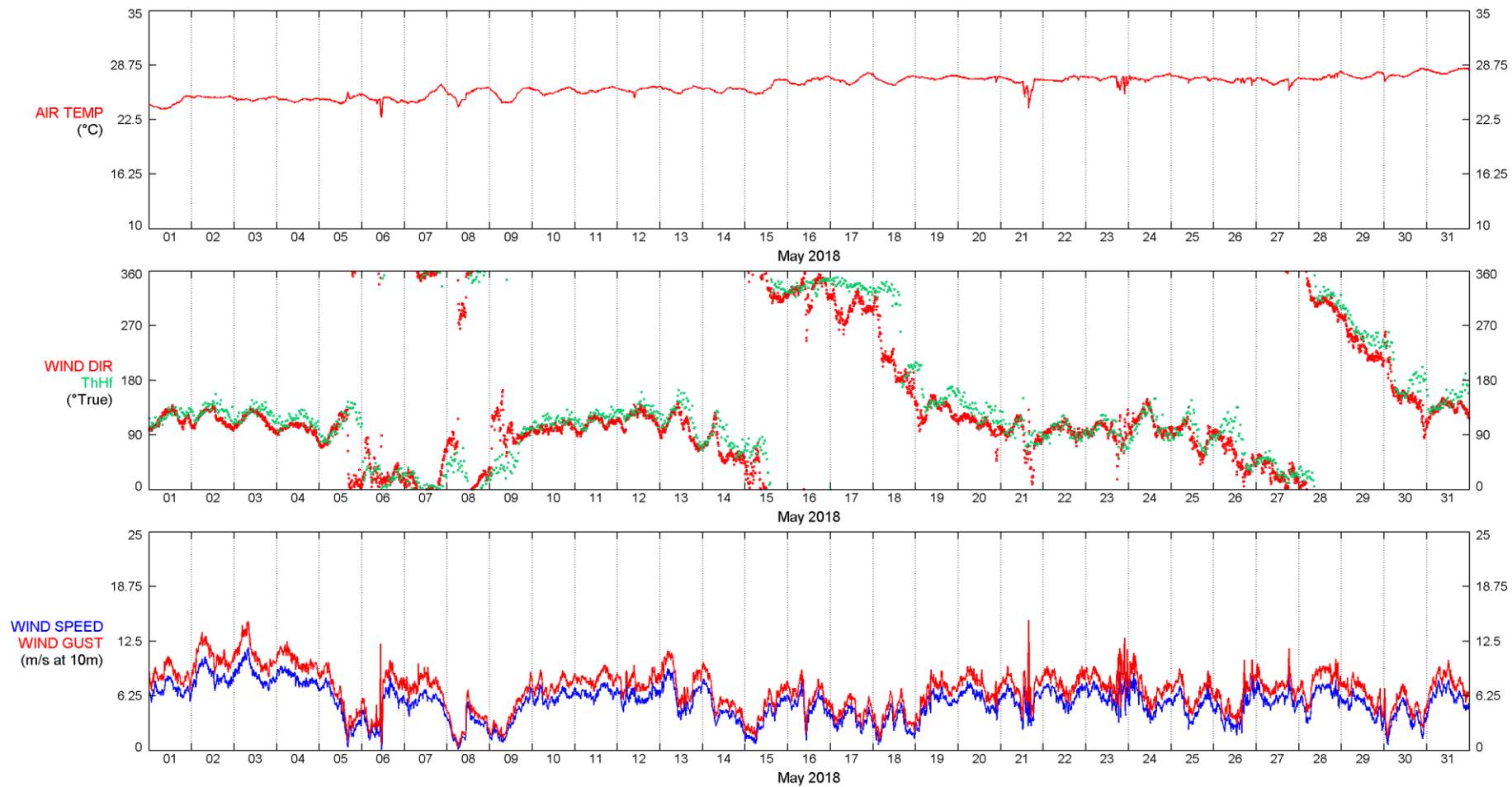
CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



Location: Bigfoot	Valid records: 17321
Position: 26° 54.954' N, 090° 30.120' W	Missing records: 1399
Instrument type: Mets, Wavescan	Calms/below threshold:
Analysis period: 01-Apr-2018 00:00:00 - 30-Apr-2018 23:50:00 (UTC)	Water depth: 1971 m
Notes:	

Figure 7.5 Level 1, 01-Apr-2018 00:00:00 - 30-Apr-2018 23:50:00 (UTC)

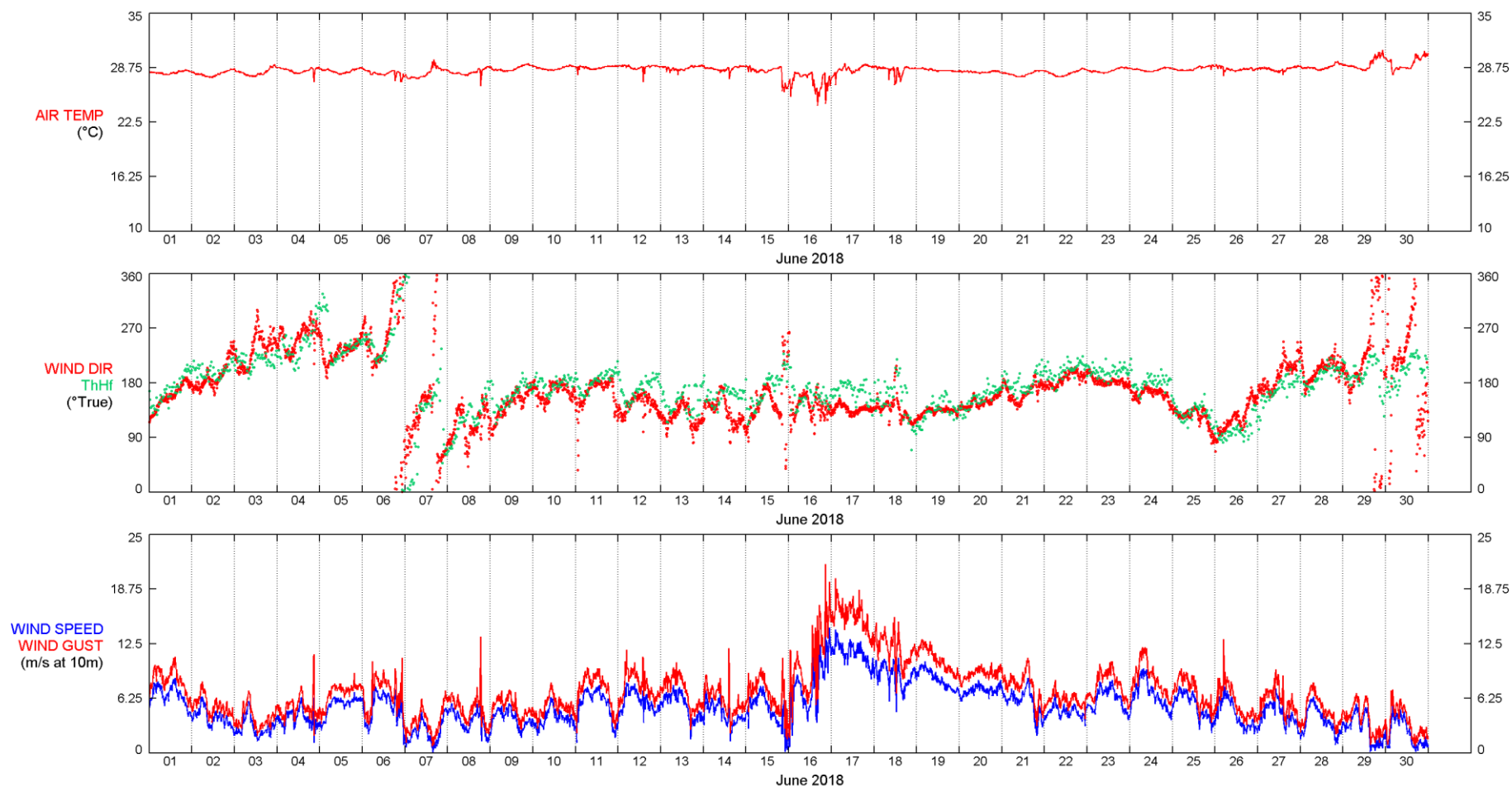
CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



Location: Bigfoot	Valid records: 19344
Position: 26° 54.954' N, 090° 30.120' W	Missing records: 0
Instrument type: Mets, Wavescan	Calms/below threshold:
Analysis period: 01-May-2018 00:00:00 - 31-May-2018 23:50:00 (UTC)	Water depth: 1971 m
Notes:	

Figure 7.6 Level 1, 01-May-2018 00:00:00 - 31-May-2018 23:50:00 (UTC)

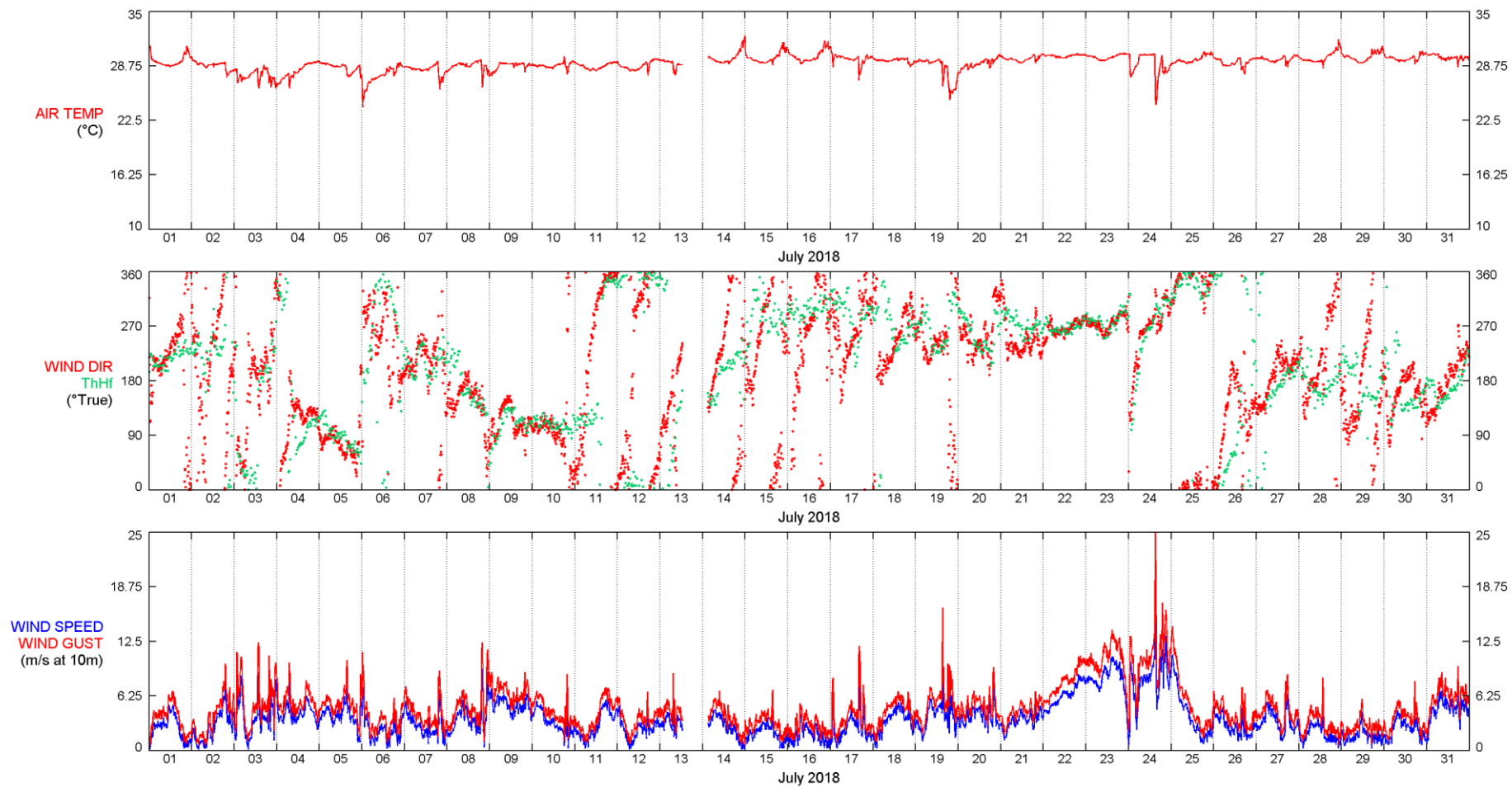
CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



Location: Bigfoot	Valid records: 18720
Position: 26° 54.954' N, 090° 30.120' W	Missing records: 0
Instrument type: Mets, Wavescan	Calms/below threshold:
Analysis period: 01-Jun-2018 00:00:00 - 30-Jun-2018 23:50:00 (UTC)	Water depth: 1971 m
Notes:	

Figure 7.7 Level 1, 01-Jun-2018 00:00:00 - 30-Jun-2018 23:50:00 (UTC)

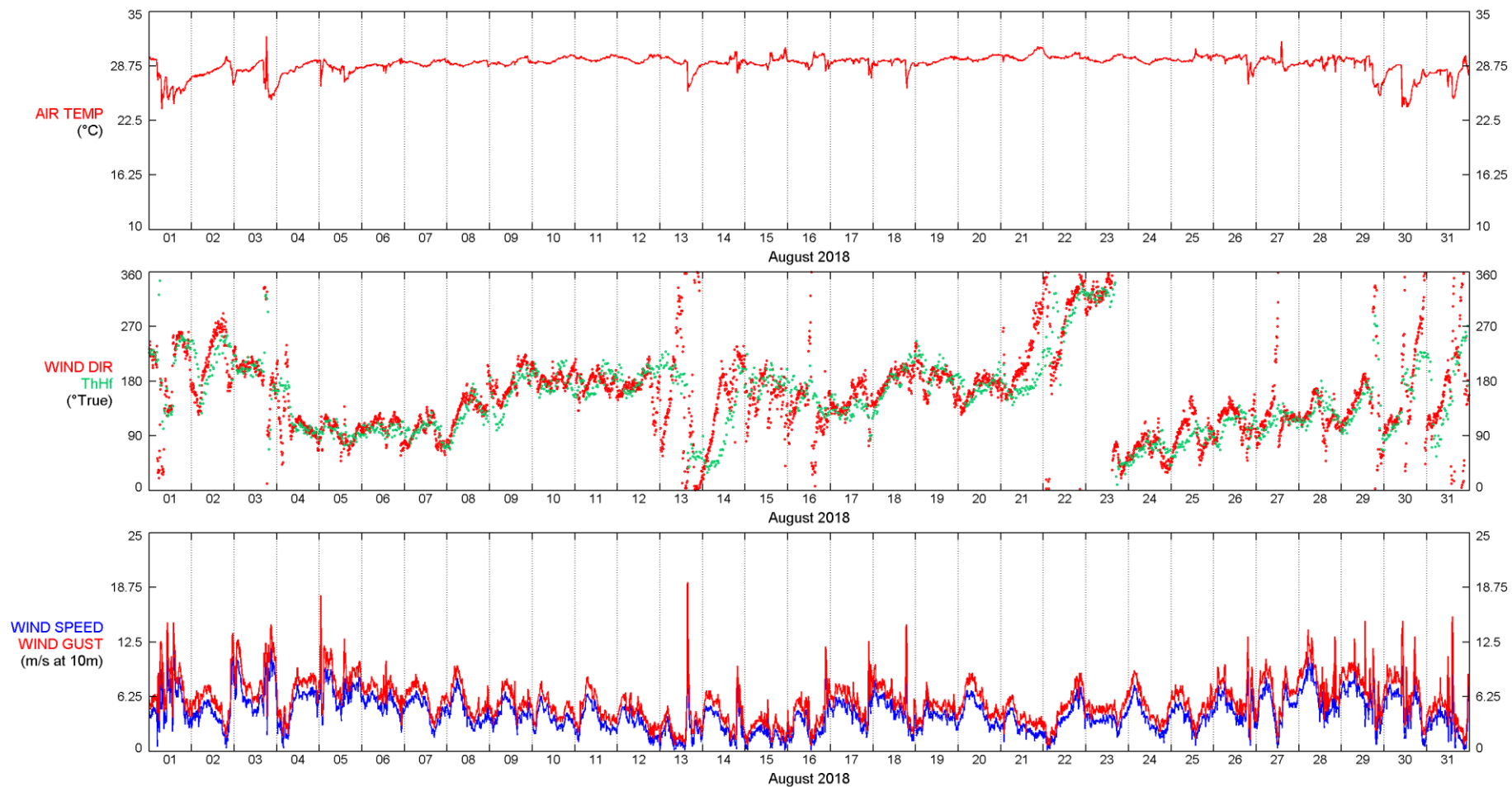
CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



Location: Bigfoot	Valid records: 18972
Position: 26° 54.954' N, 090° 30.120' W	Missing records: 372
Instrument type: Mets, Wavescan	Calms/below threshold:
Analysis period: 01-Jul-2018 00:00:00 - 31-Jul-2018 23:50:00 (UTC)	Water depth: 1971 m
Notes:	

Figure 7.8 Level 1, 01-Jul-2018 00:00:00 - 31-Jul-2018 23:50:00 (UTC)

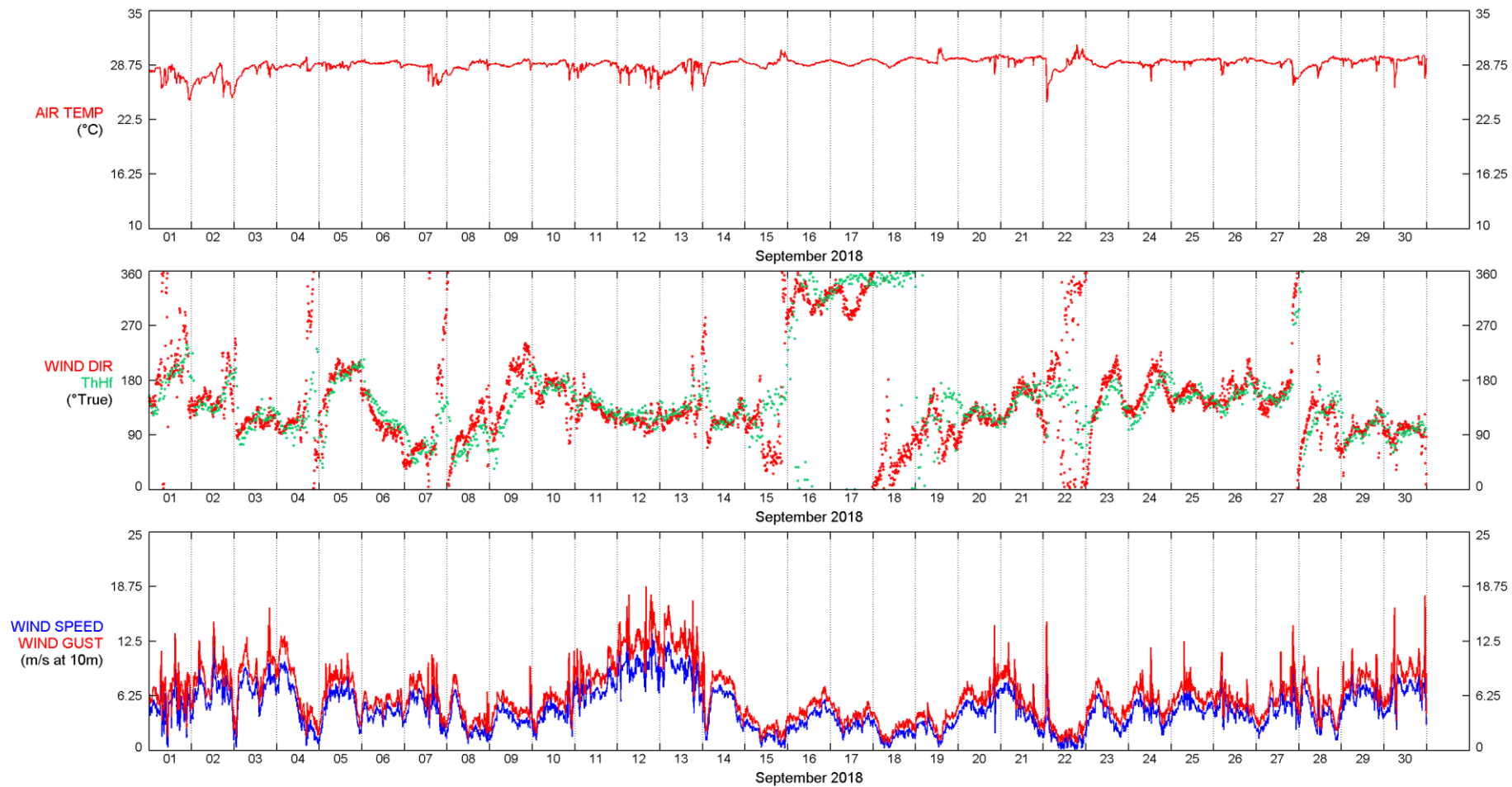
CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



Location: Bigfoot	Valid records: 19344
Position: 26° 54.954' N, 090° 30.120' W	Missing records: 0
Instrument type: Mets, Wavescan	Calms/below threshold:
Analysis period: 01-Aug-2018 00:00:00 - 31-Aug-2018 23:50:00 (UTC)	Water depth: 1971 m
Notes:	

Figure 7.9 Level 1, 01-Aug-2018 00:00:00 - 31-Aug-2018 23:50:00 (UTC)

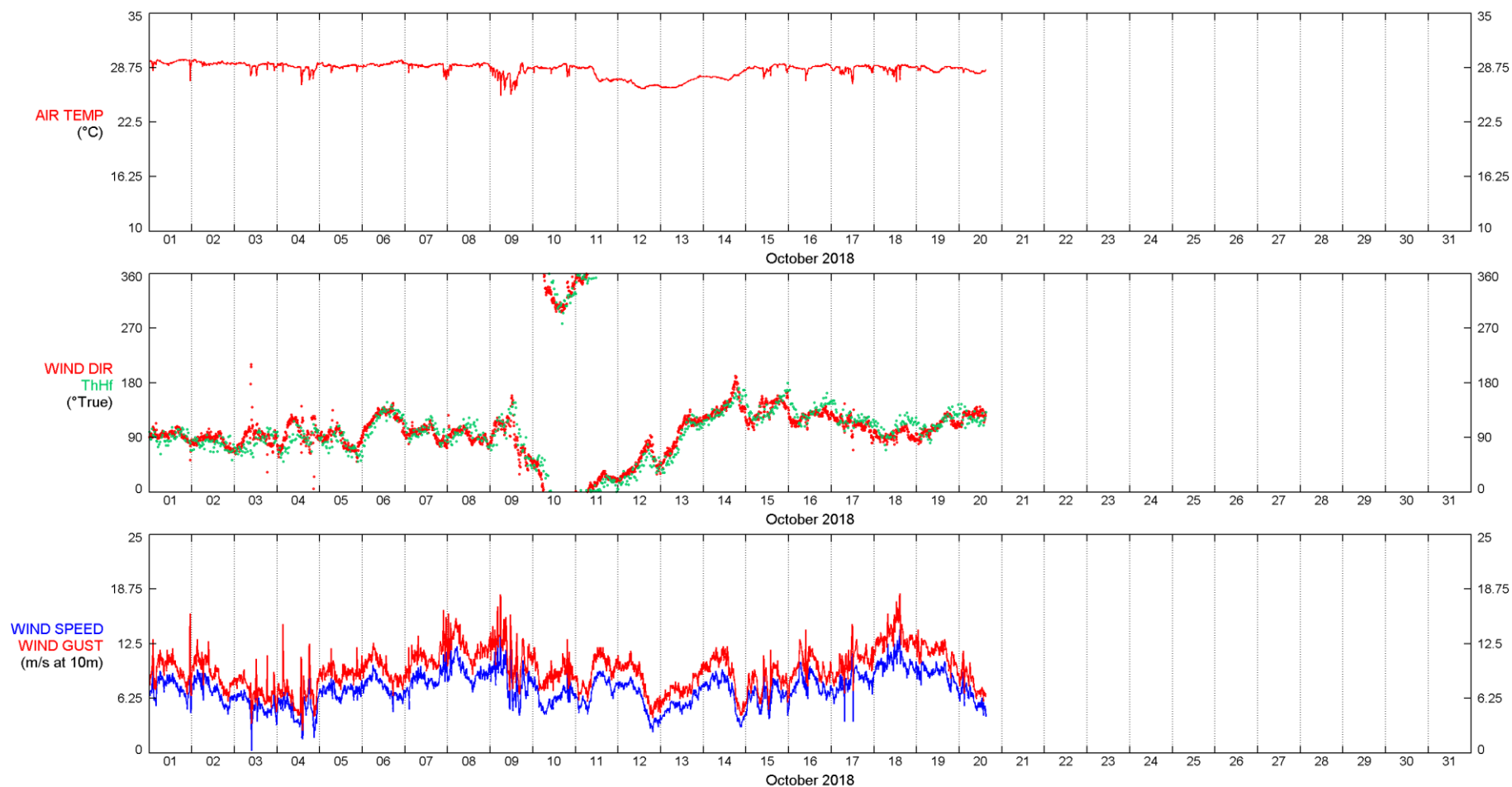
CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



Location: Bigfoot	Valid records: 18720
Position: 26° 54.954' N, 090° 30.120' W	Missing records: 0
Instrument type: Mets, Wavescan	Calms/below threshold:
Analysis period: 01-Sep-2018 00:00:00 - 30-Sep-2018 23:50:00 (UTC)	Water depth: 1971 m
Notes:	

Figure 7.10 Level 1, 01-Sep-2018 00:00:00 - 30-Sep-2018 23:50:00 (UTC)

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT

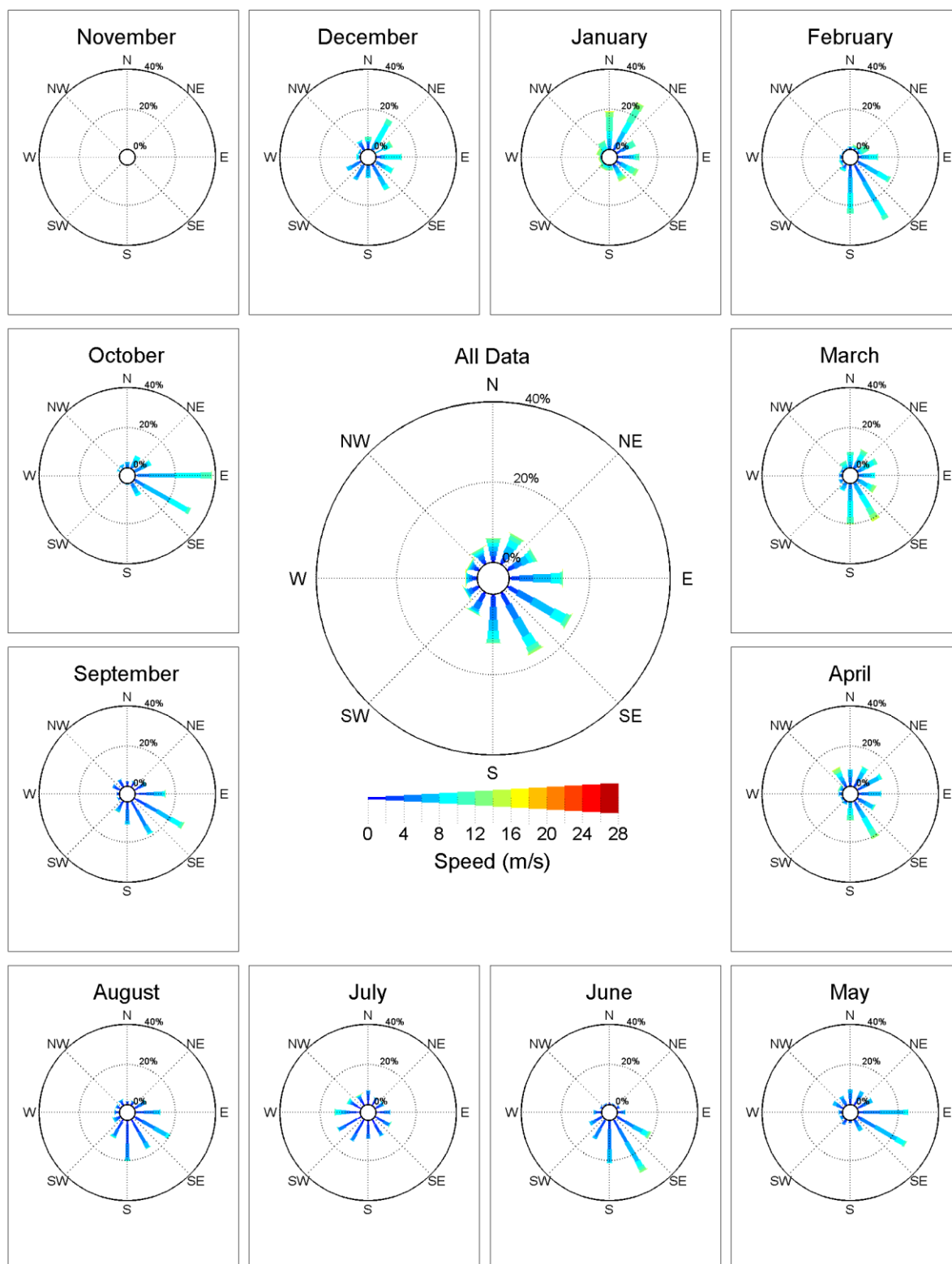


Location: Bigfoot	Valid records: 12251
Position: 26° 54.954' N, 090° 30.120' W	Missing records: 0
Instrument type: Mets, Wavescan	Calms/below threshold:
Analysis period: 01-Oct-2018 00:00:00 - 20-Oct-2018 15:00:00 (UTC)	Water depth: 1971 m
Notes:	

Figure 7.11 Level 1, 01-Oct-2018 00:00:00 - 20-Oct-2018 15:00:00 (UTC)



Wind Rose

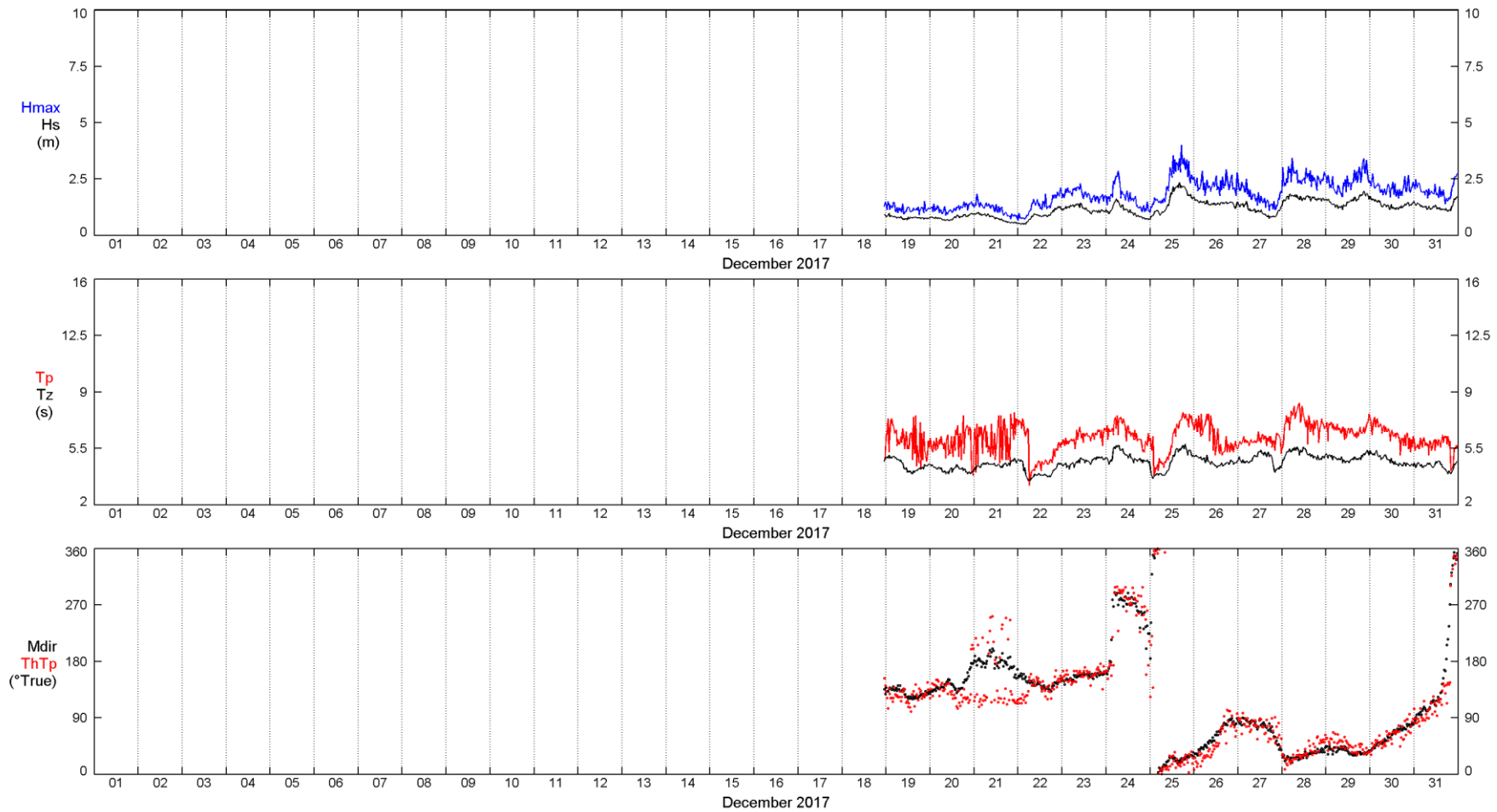


Location: Bigfoot Wavescan	Valid records: 14538
Position: 26° 54.954' N, 090° 30.120' W	Missing records: 135
Instrument type: Mets	Calms/below threshold: 0
Analysis period: 18-Dec-2017 23:00:00 to 20-Oct-2018 15:00:00	Water depth: 1971 m
Notes:	

Figure 8.1: Wind Speed and Direction, 18-Dec-2017 to 20-Oct-2018

Wave Parameters

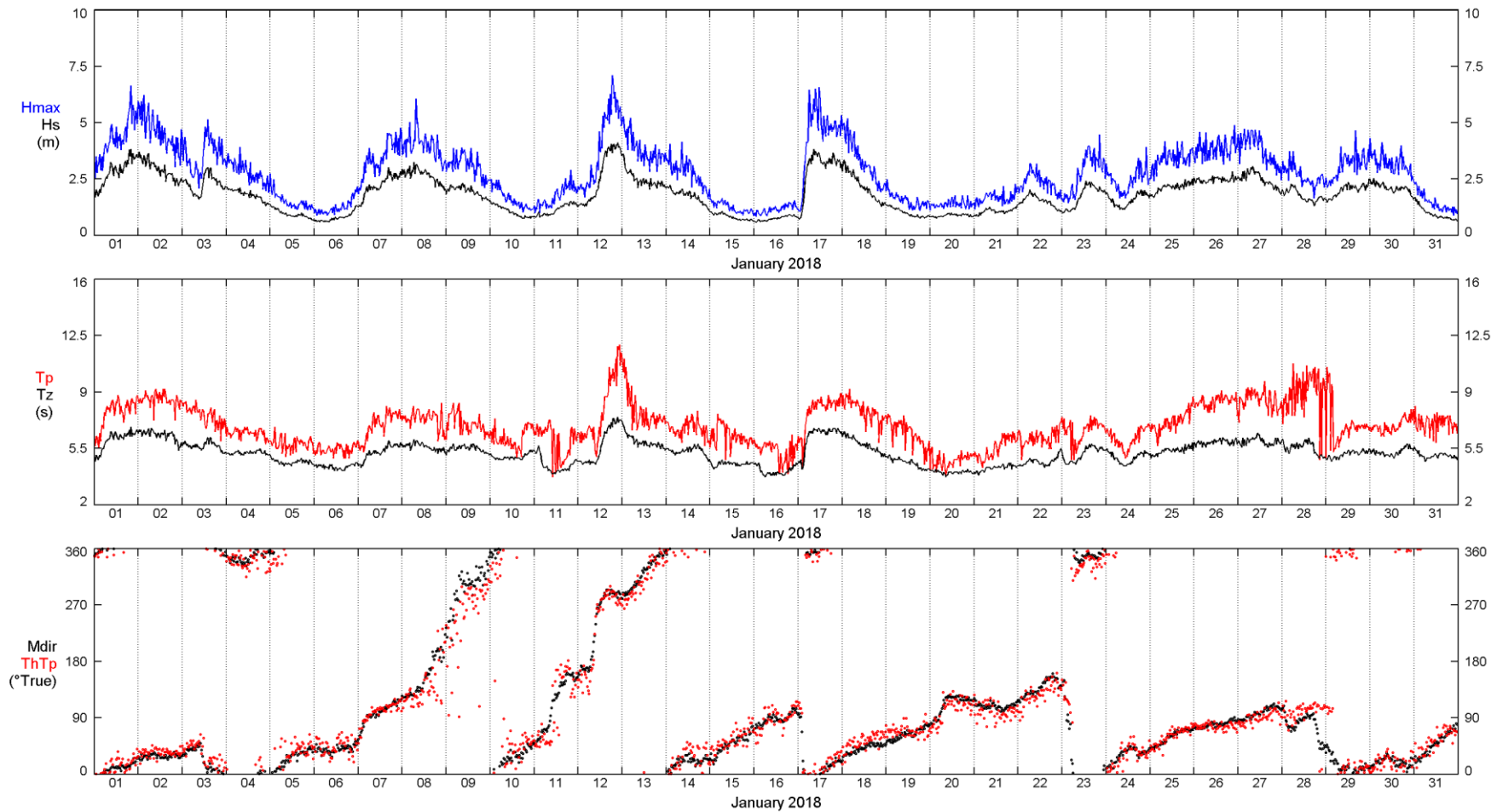
CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



Location: Bigfoot	Valid records: 3756
Position: 26° 54.954' N, 090° 30.120' W	Missing records: 0
Instrument type: Wavescan	Calms/below threshold:
Analysis period: 18-Dec-2017 23:00:00 - 31-Dec-2017 23:30:00 (UTC)	Water depth: 1971 m
Notes:	

Figure 9.1 Level 1, 18-Dec-2017 23:00:00 - 31-Dec-2017 23:30:00 (UTC)

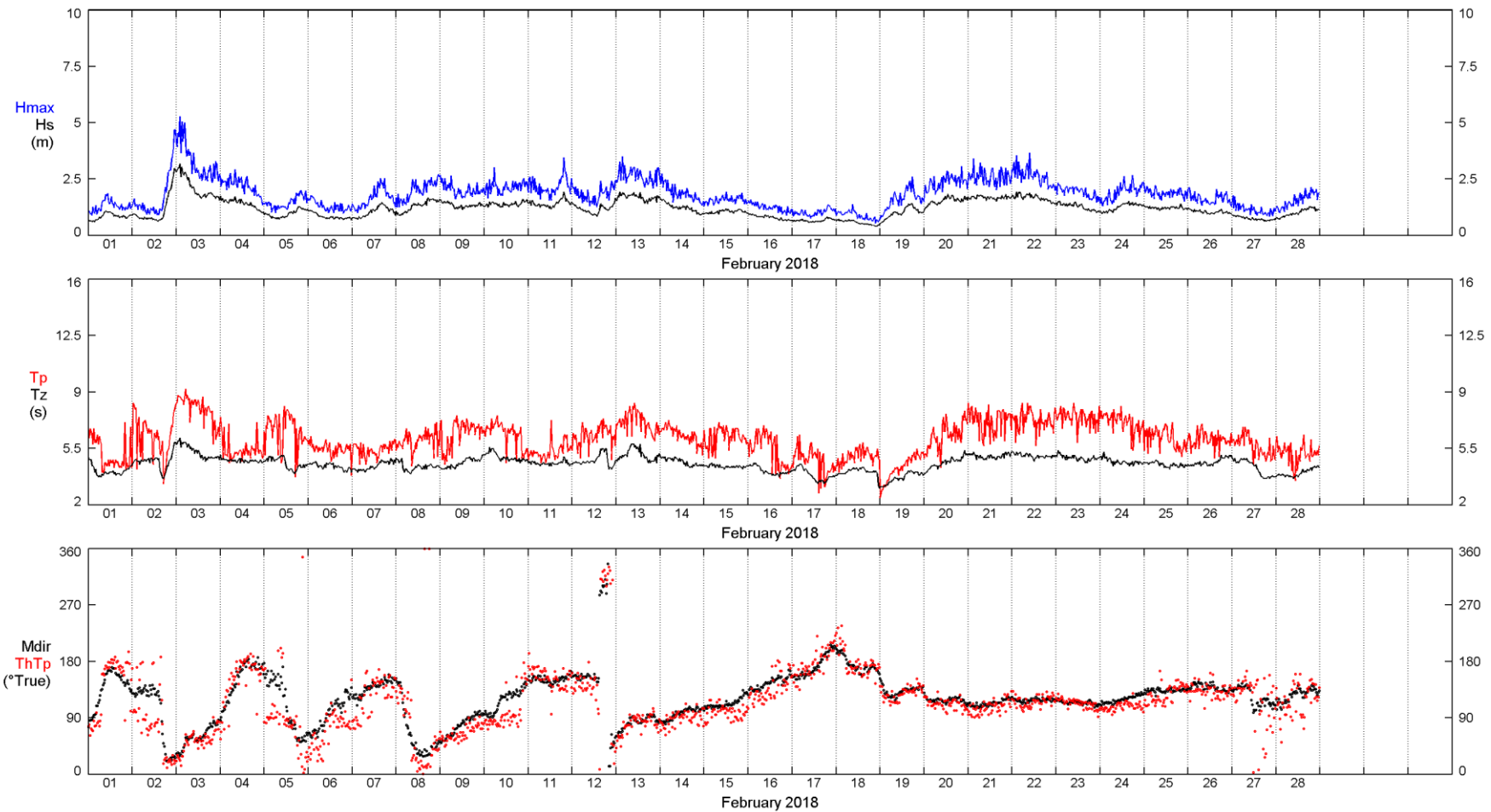
CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



Location: Bigfoot	Valid records: 8928
Position: 26° 54.954' N, 090° 30.120' W	Missing records: 0
Instrument type: Wavescan	Calms/below threshold:
Analysis period: 01-Jan-2018 00:00:00 - 31-Jan-2018 23:30:00 (UTC)	Water depth: 1971 m
Notes:	

Figure 9.2 Level 1, 01-Jan-2018 00:00:00 - 31-Jan-2018 23:30:00 (UTC)

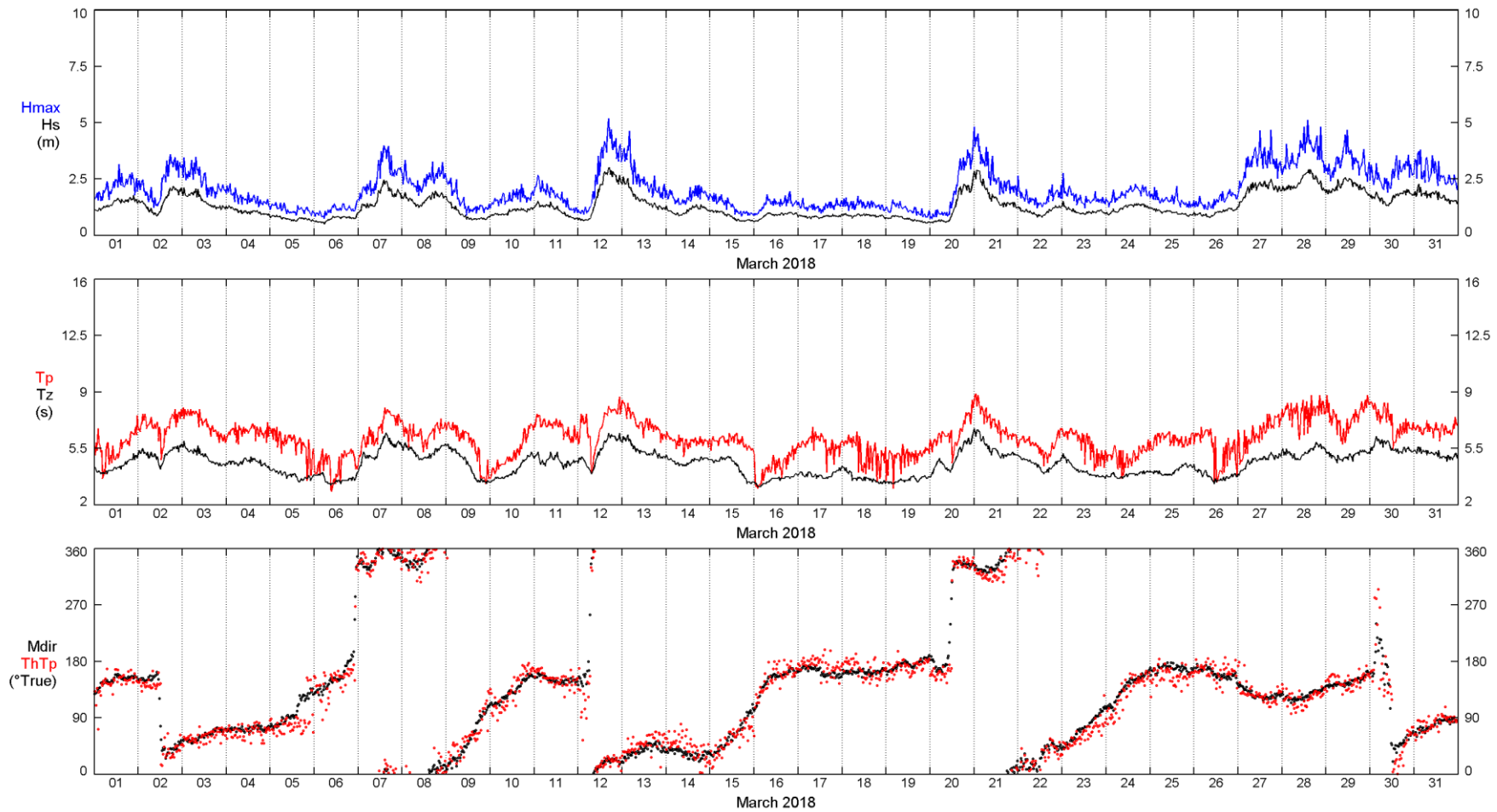
CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



Location: Bigfoot	Valid records: 8064
Position: 26° 54.954' N, 090° 30.120' W	Missing records: 0
Instrument type: Wavescan	Calms/below threshold:
Analysis period: 01-Feb-2018 00:00:00 - 28-Feb-2018 23:30:00 (UTC)	Water depth: 1971 m
Notes:	

Figure 9.3 Level 1, 01-Feb-2018 00:00:00 - 28-Feb-2018 23:30:00 (UTC)

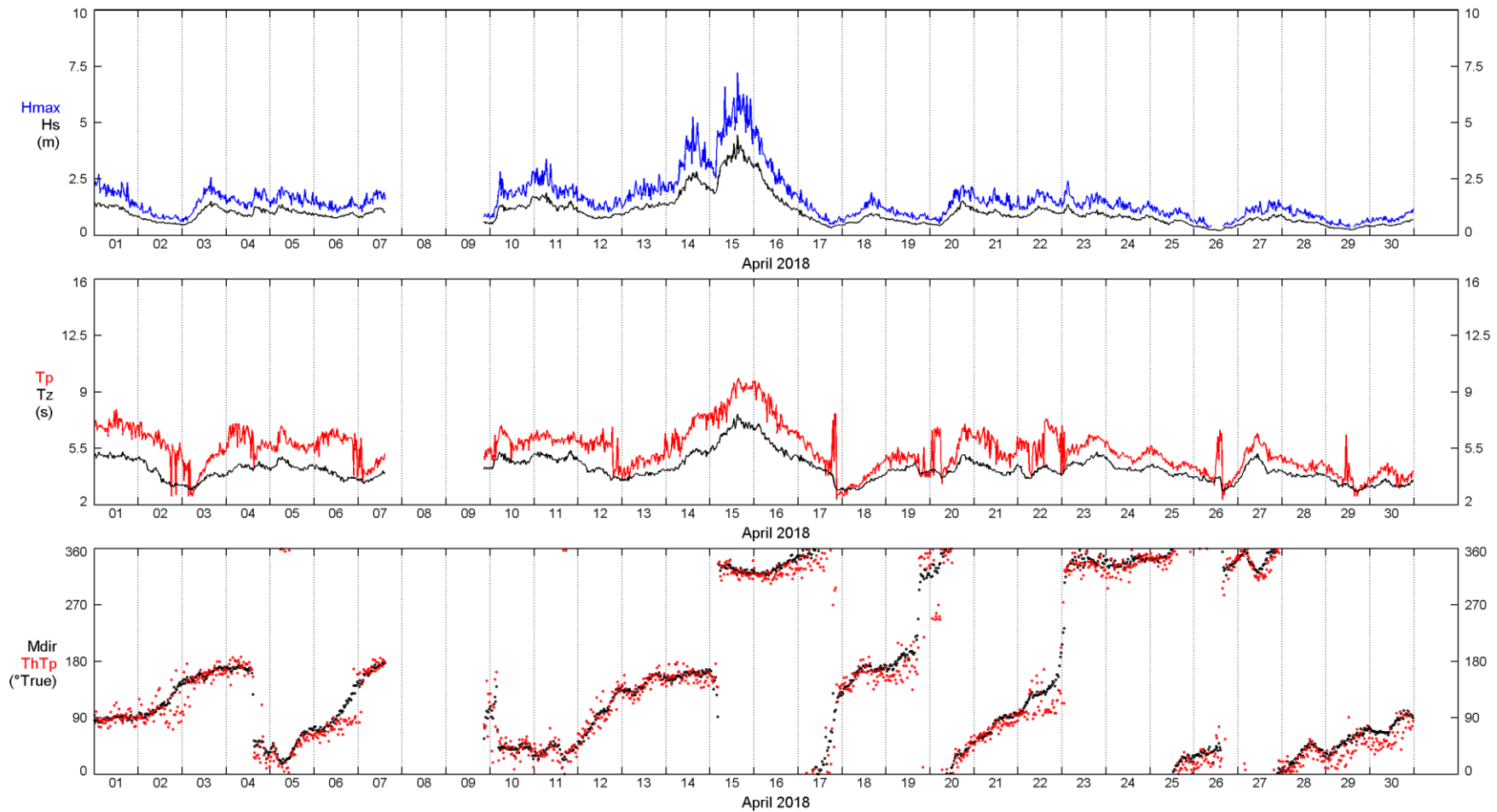
CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



Location: Bigfoot	Valid records: 8928
Position: 26° 54.954' N, 090° 30.120' W	Missing records: 0
Instrument type: Wavescan	Calms/below threshold:
Analysis period: 01-Mar-2018 00:00:00 - 31-Mar-2018 23:30:00 (UTC)	Water depth: 1971 m
Notes:	

Figure 9.4 Level 1, 01-Mar-2018 00:00:00 - 31-Mar-2018 23:30:00 (UTC)

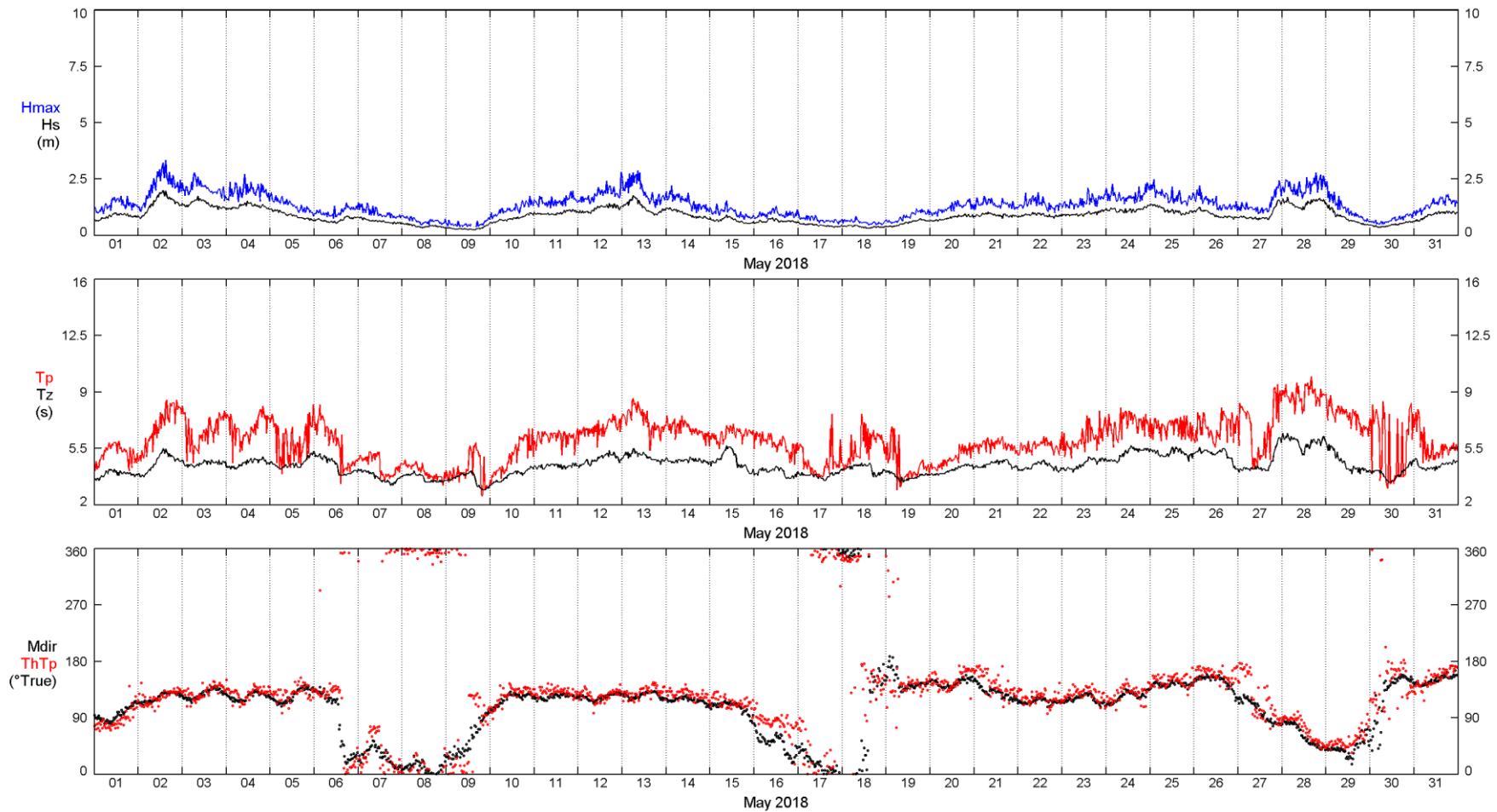
CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



Location: Bigfoot	Valid records: 7982
Position: 26° 54.954' N, 090° 30.120' W	Missing records: 658
Instrument type: Wavescan	Calms/below threshold:
Analysis period: 01-Apr-2018 00:00:00 - 30-Apr-2018 23:30:00 (UTC)	Water depth: 1971 m
Notes:	

Figure 9.5 Level 1, 01-Apr-2018 00:00:00 - 30-Apr-2018 23:30:00 (UTC)

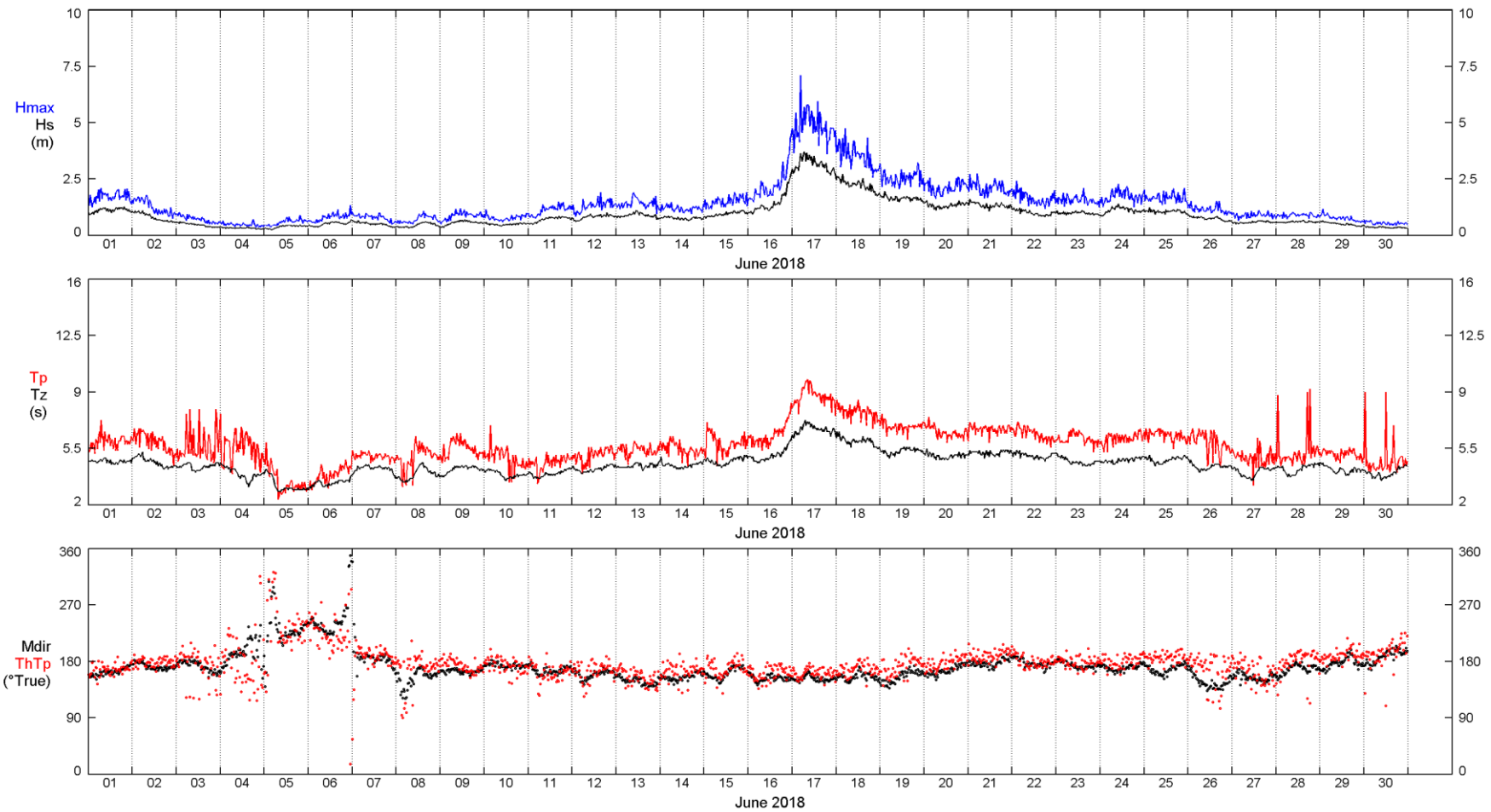
CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



Location: Bigfoot	Valid records: 8923
Position: 26° 54.954' N, 090° 30.120' W	Missing records: 5
Instrument type: Wavescan	Calms/below threshold:
Analysis period: 01-May-2018 00:00:00 - 31-May-2018 23:30:00 (UTC)	Water depth: 1971 m
Notes:	

Figure 9.6 Level 1, 01-May-2018 00:00:00 - 31-May-2018 23:30:00 (UTC)

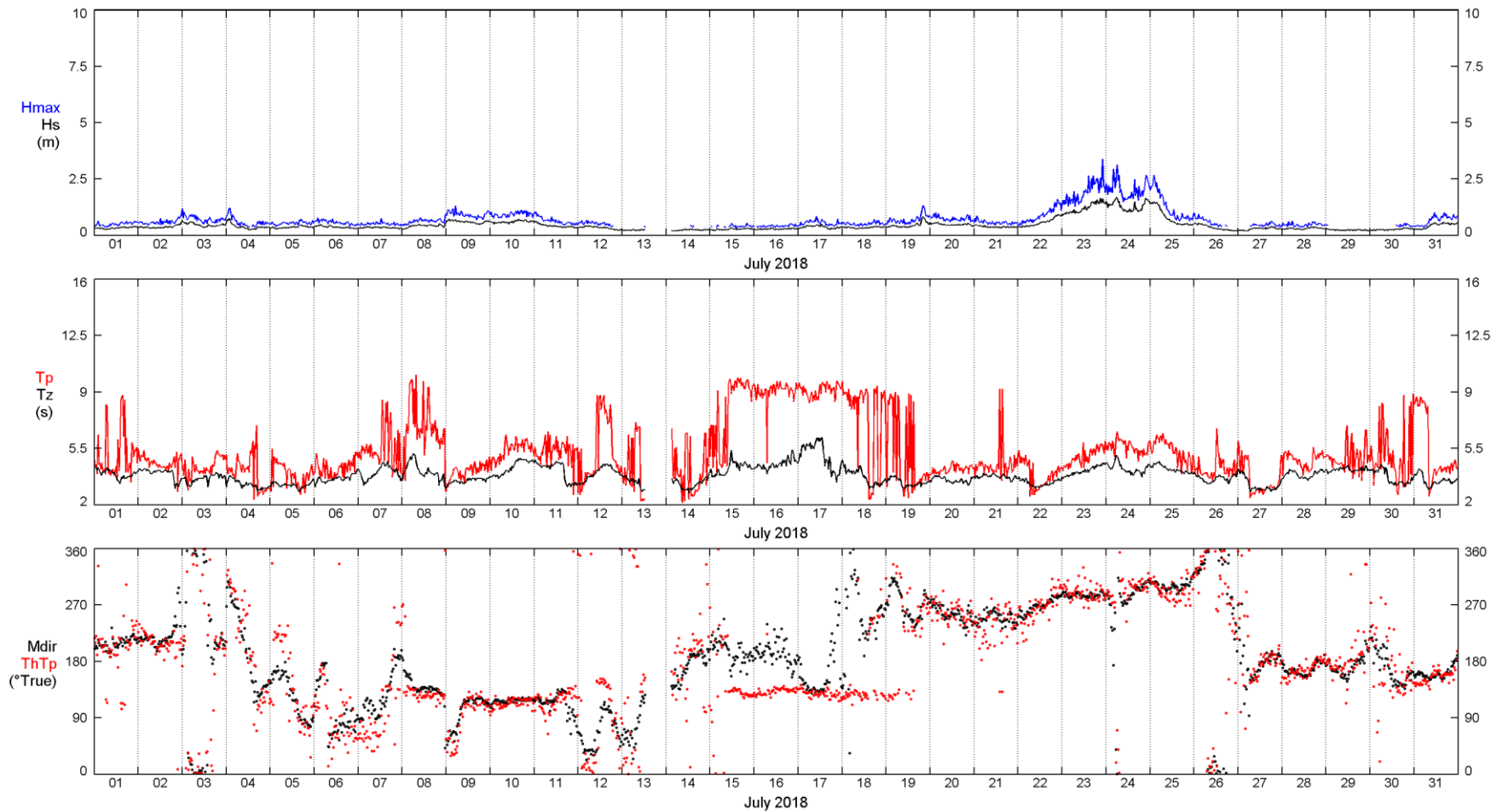
CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



Location: Bigfoot	Valid records: 8639
Position: 26° 54.954' N, 090° 30.120' W	Missing records: 1
Instrument type: Wavescan	Calms/below threshold:
Analysis period: 01-Jun-2018 00:00:00 - 30-Jun-2018 23:30:00 (UTC)	Water depth: 1971 m
Notes:	

Figure 9.7 Level 1, 01-Jun-2018 00:00:00 - 30-Jun-2018 23:30:00 (UTC)

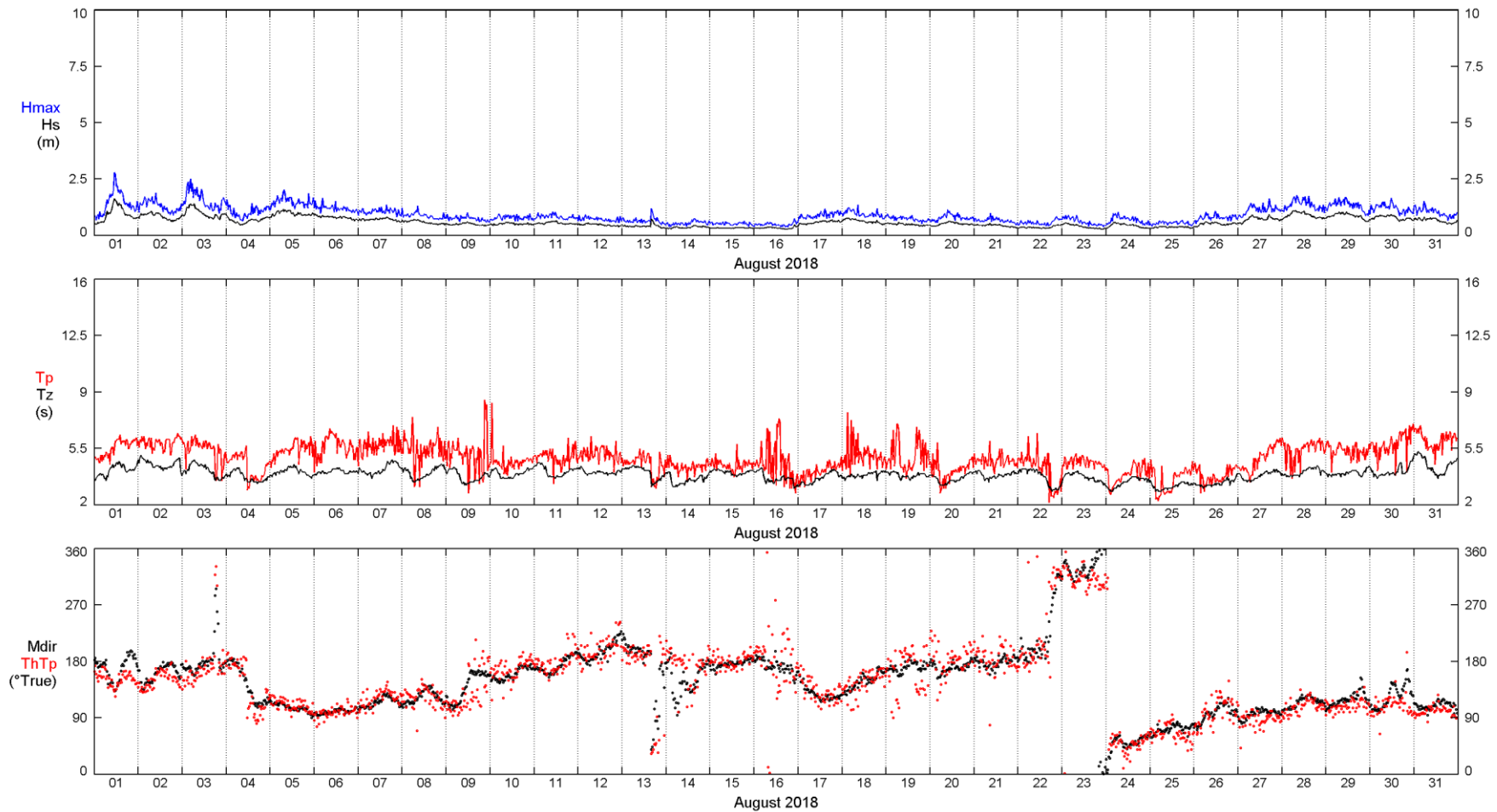
CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



Location: Bigfoot	Valid records: 8560
Position: 26° 54.954' N, 090° 30.120' W	Missing records: 368
Instrument type: Wavescan	Calms/below threshold:
Analysis period: 01-Jul-2018 00:00:00 - 31-Jul-2018 23:30:00 (UTC)	Water depth: 1971 m
Notes:	

Figure 9.8 Level 1, 01-Jul-2018 00:00:00 - 31-Jul-2018 23:30:00 (UTC)

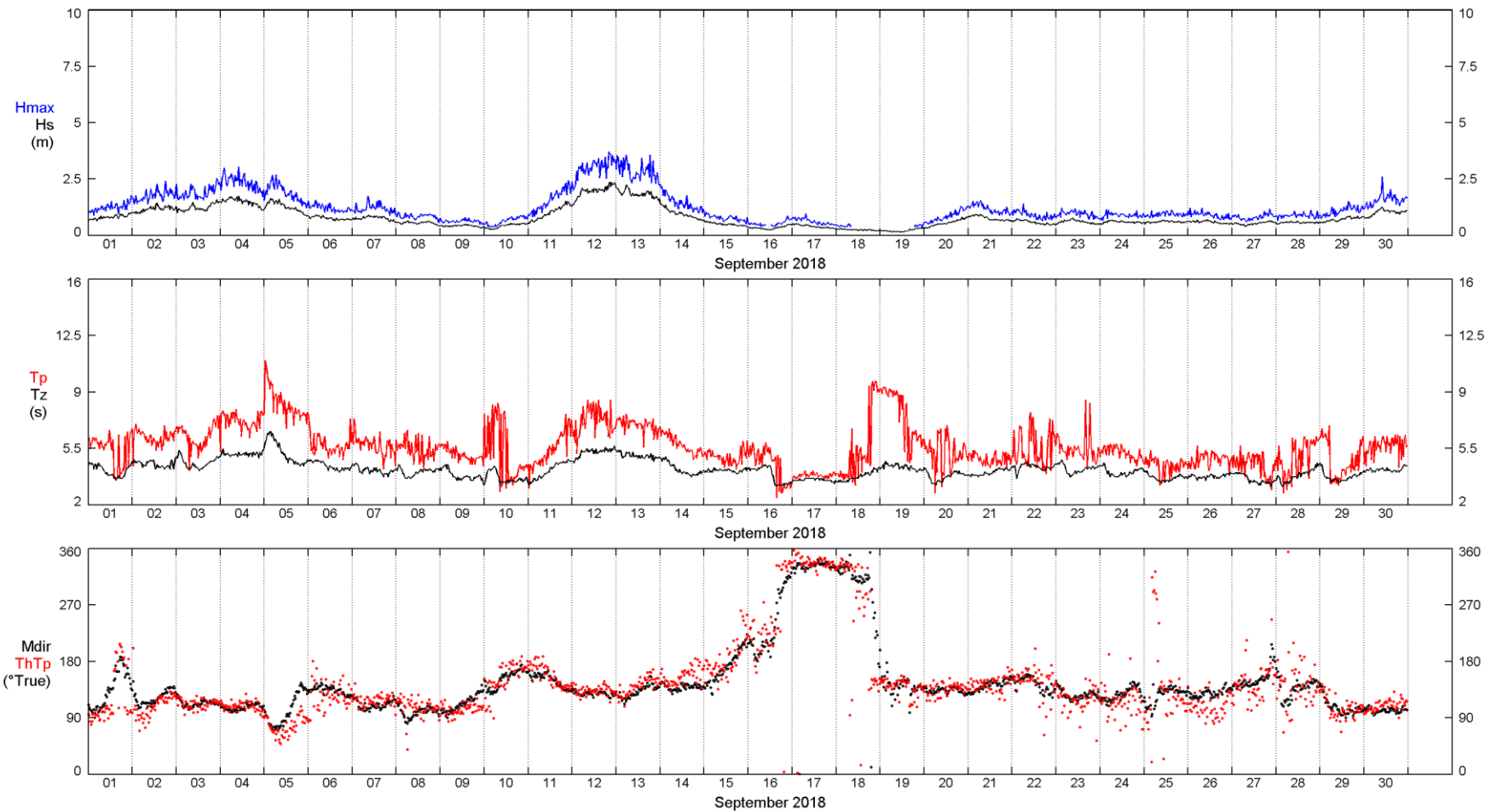
CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



Location: Bigfoot	Valid records: 8928
Position: 26° 54.954' N, 090° 30.120' W	Missing records: 0
Instrument type: Wavescan	Calms/below threshold:
Analysis period: 01-Aug-2018 00:00:00 - 31-Aug-2018 23:30:00 (UTC)	Water depth: 1971 m
Notes:	

Figure 9.9 Level 1, 01-Aug-2018 00:00:00 - 31-Aug-2018 23:30:00 (UTC)

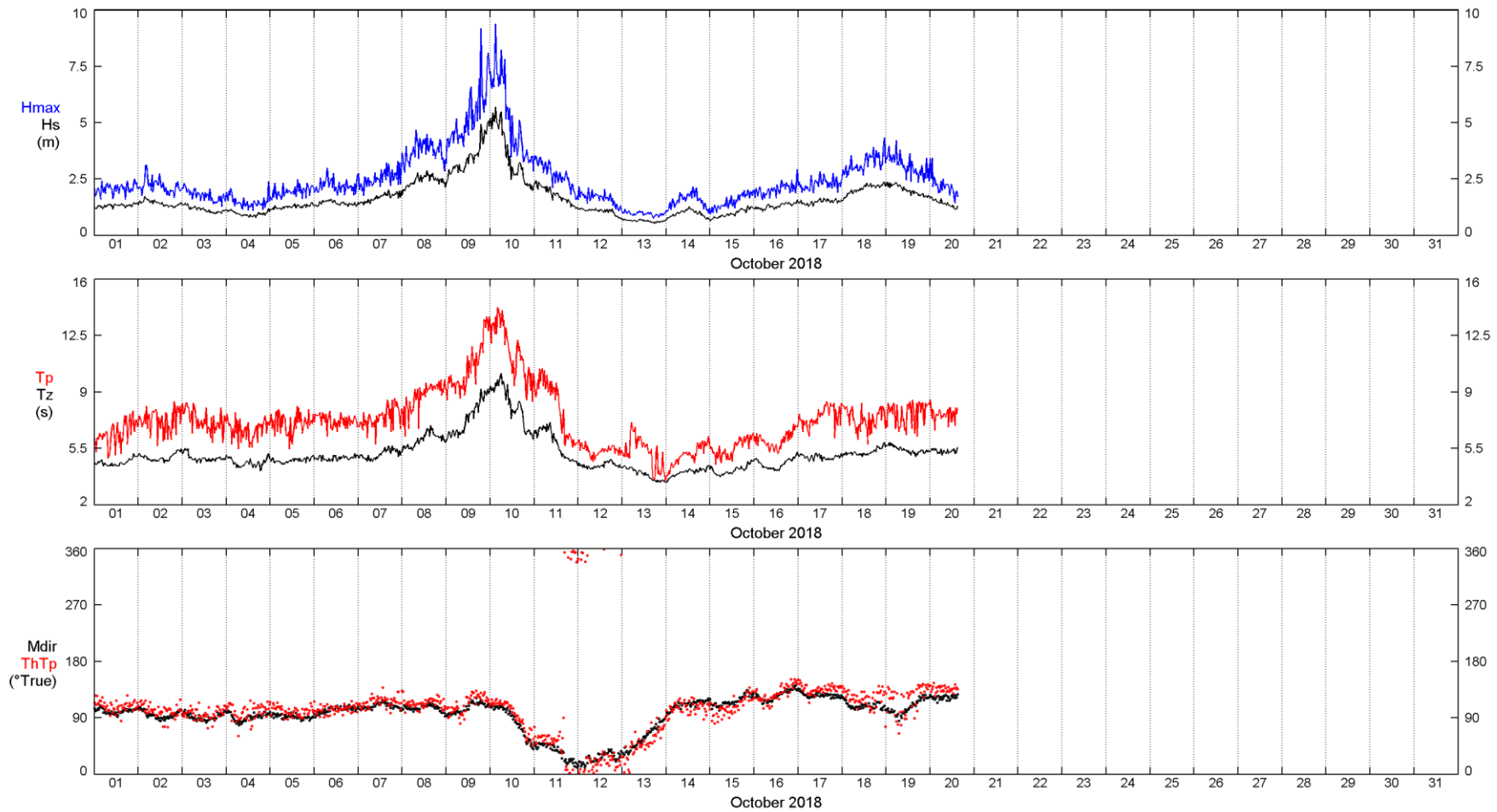
CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



Location: Bigfoot	Valid records: 8567
Position: 26° 54.954' N, 090° 30.120' W	Missing records: 73
Instrument type: Wavescan	Calms/below threshold:
Analysis period: 01-Sep-2018 00:00:00 - 30-Sep-2018 23:30:00 (UTC)	Water depth: 1971 m
Notes:	

Figure 9.10 Level 1, 01-Sep-2018 00:00:00 - 30-Sep-2018 23:30:00 (UTC)

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



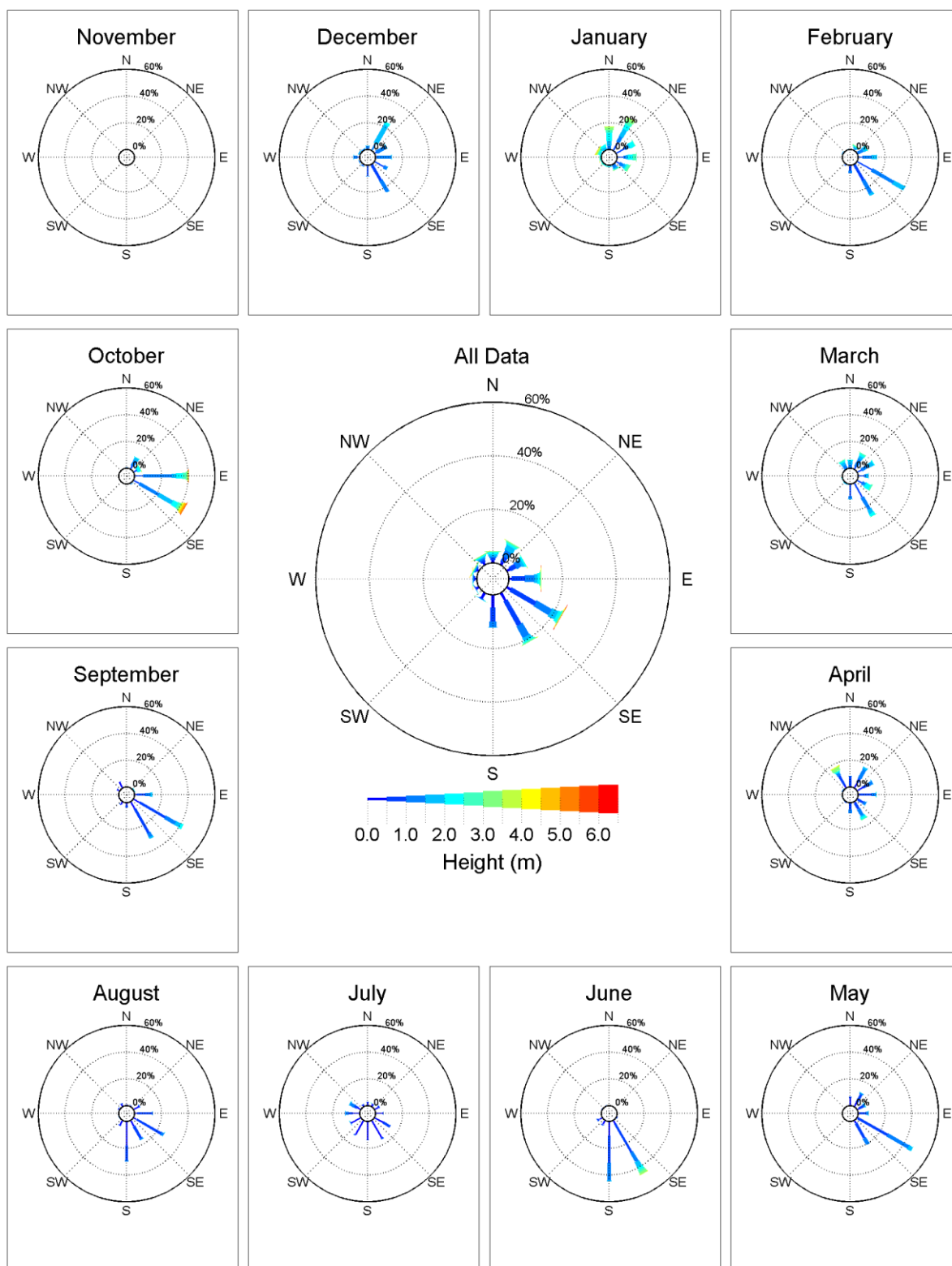
Location: Bigfoot	Valid records: 5658
Position: 26° 54.954' N, 090° 30.120' W	Missing records: 0
Instrument type: Wavescan	Calms/below threshold:
Analysis period: 01-Oct-2018 00:00:00 - 20-Oct-2018 15:00:00 (UTC)	Water depth: 1971 m
Notes:	

Figure 9.11 Level 1, 01-Oct-2018 00:00:00 - 20-Oct-2018 15:00:00 (UTC)



CHEVRON USA INC.
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT

Wave Rose



14-Nov-18 15:15:26

Location: Bigfoot Wavescan	Valid records: 14538
Position: 26° 54.954' N, 090° 30.120' W	Missing records: 135
Instrument type: Wavescan	Calms/below threshold: 0
Analysis period: 18-Dec-2017 23:00:00 to 20-Oct-2018 15:00:00	Water depth: 1971 m
Notes:	

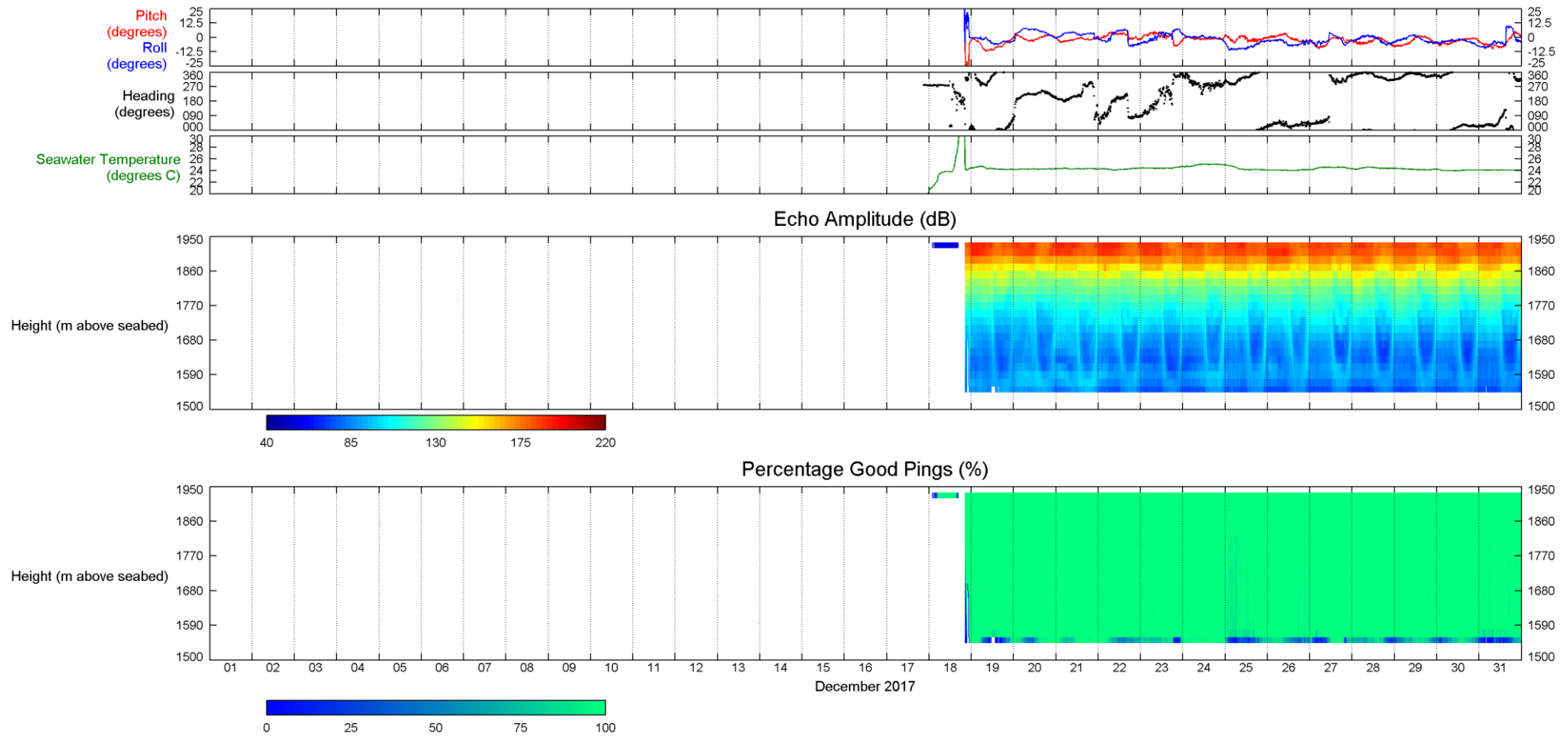
Figure 10.1.1: Significant Wave Height/Mean Wave Direction, 18-Dec-2017 to 20-Oct-2018



CHEVRON USA INC.
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT

QC Plots - 75 kHz ADCP

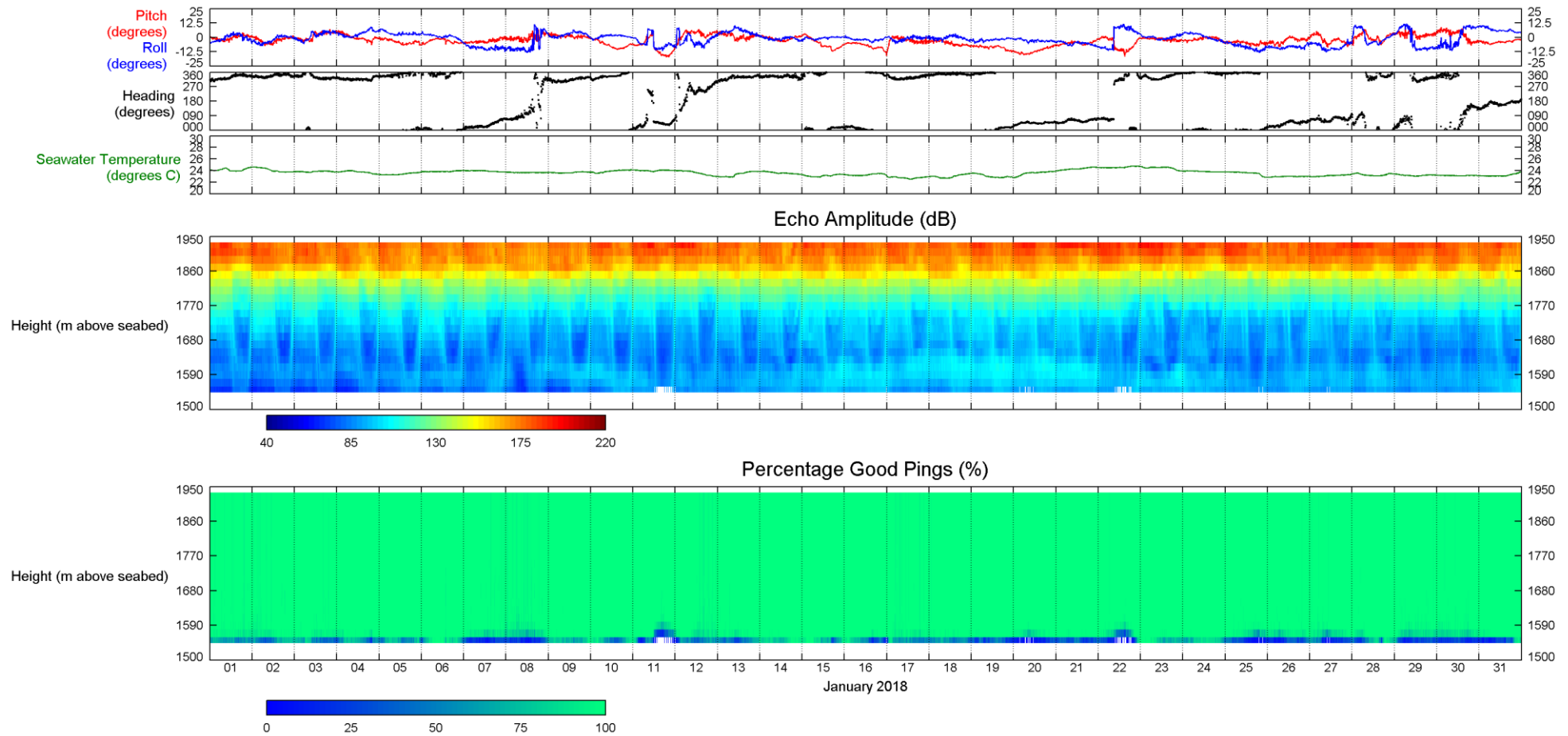
CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



Location: Bigfoot	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 75-kHz SYSTEM	
Notes:		

Figure 11.1 Level 1-20, 17-Dec-2017 20:55:11 - 31-Dec-2017 23:55:11 (UTC)

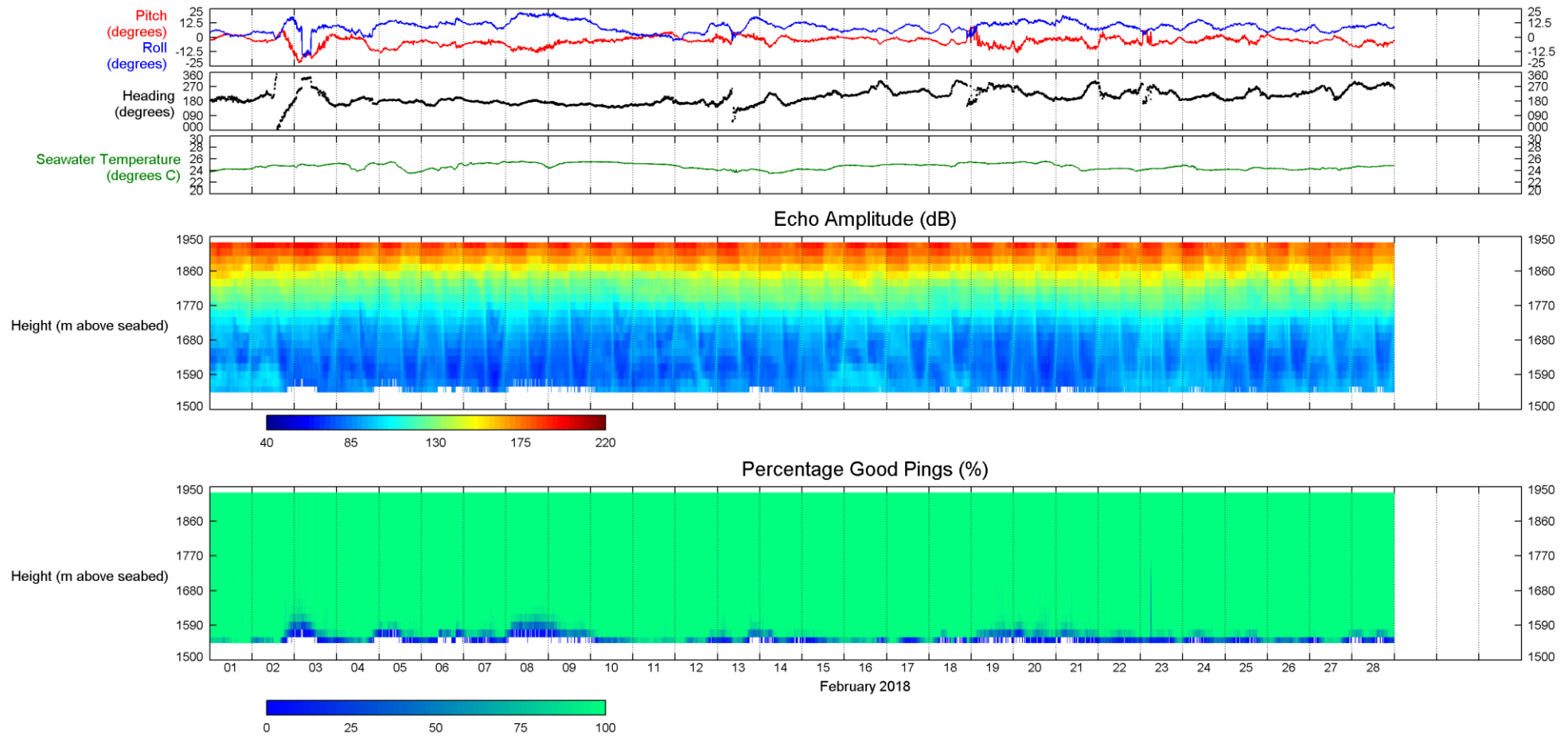
CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



Location: Bigfoot	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 75-kHz SYSTEM	
Notes:		

Figure 11.2 Level 1-20, 01-Jan-2018 00:05:11 - 31-Jan-2018 23:55:11 (UTC)

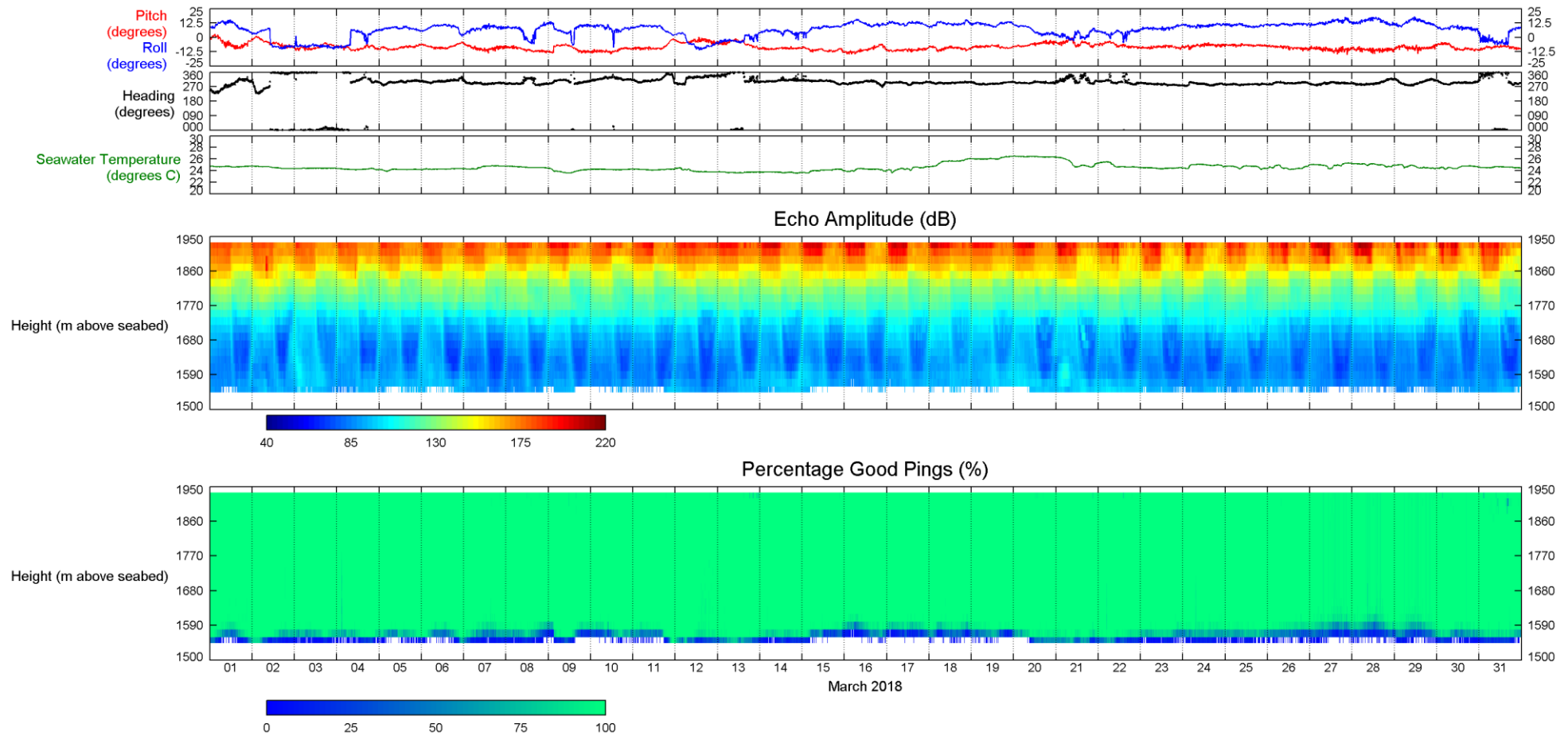
CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



Location: Bigfoot	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 75-kHz SYSTEM	
Notes:		

Figure 11.3 Level 1-20, 01-Feb-2018 00:05:11 - 28-Feb-2018 23:55:11 (UTC)

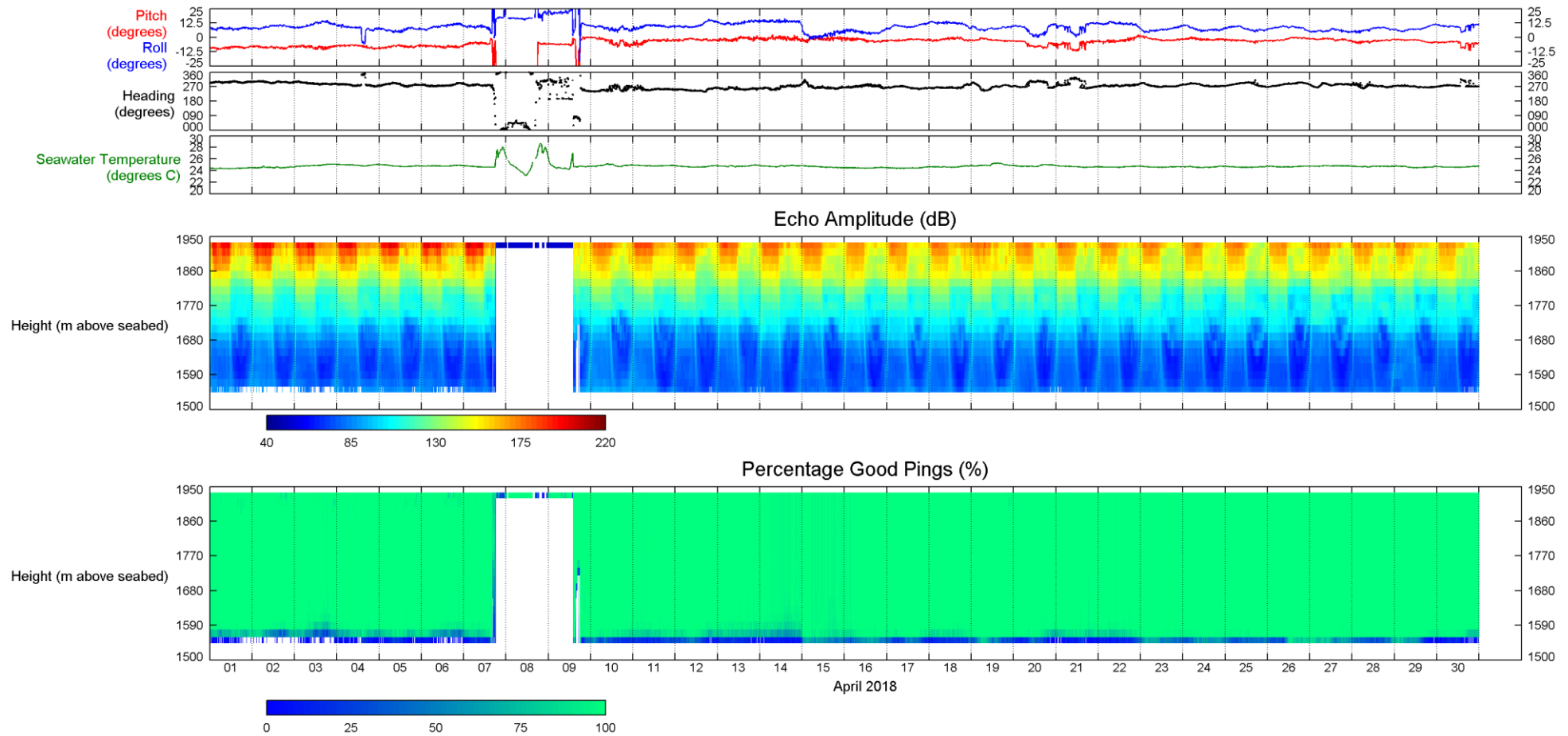
CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



Location: Bigfoot	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 75-kHz SYSTEM	
Notes:		

Figure 11.4 Level 1-20, 01-Mar-2018 00:05:11 - 31-Mar-2018 23:55:11 (UTC)

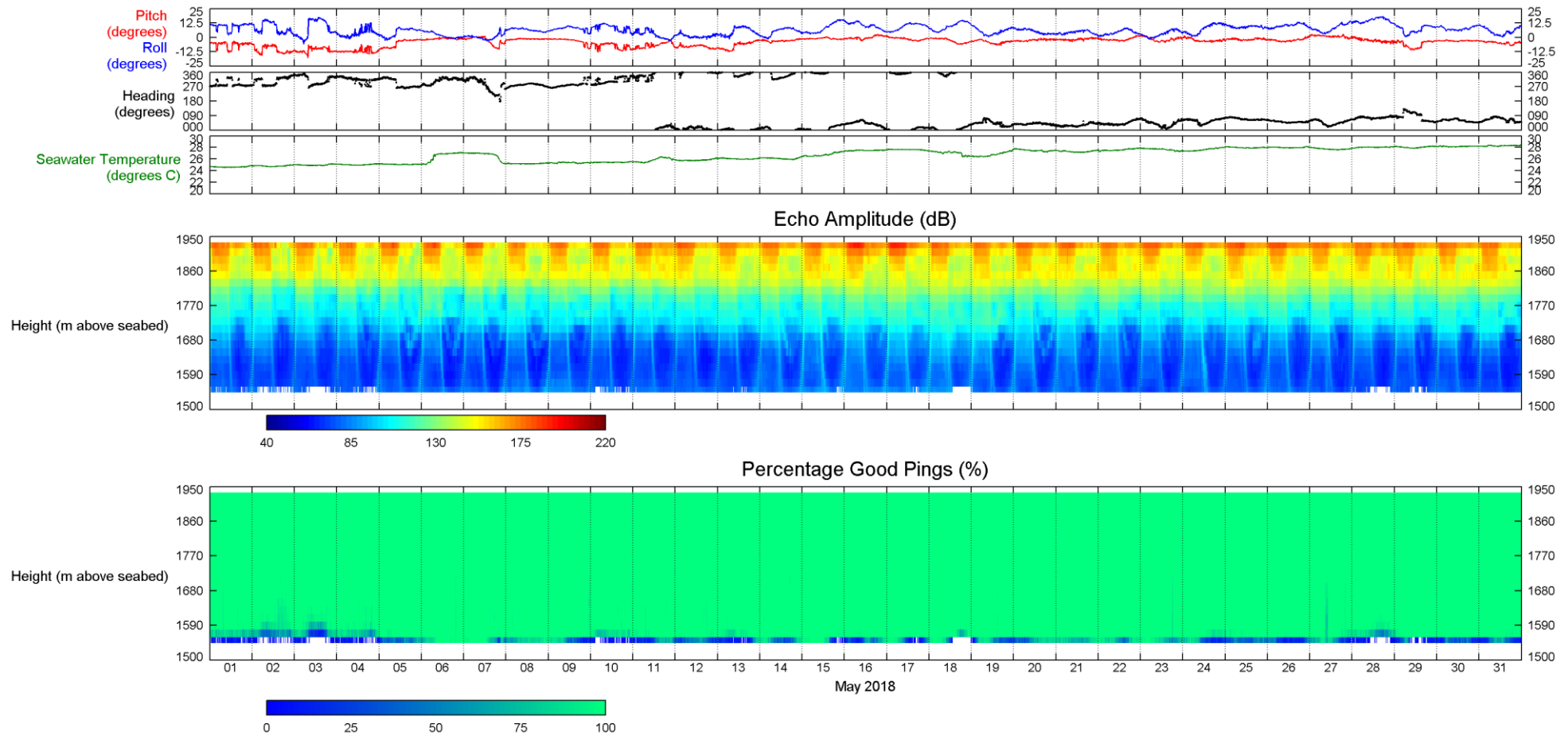
CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



Location: Bigfoot	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 75-kHz SYSTEM	
Notes:		

Figure 11.5 Level 1-20, 01-Apr-2018 00:05:11 - 30-Apr-2018 23:50:00 (UTC)

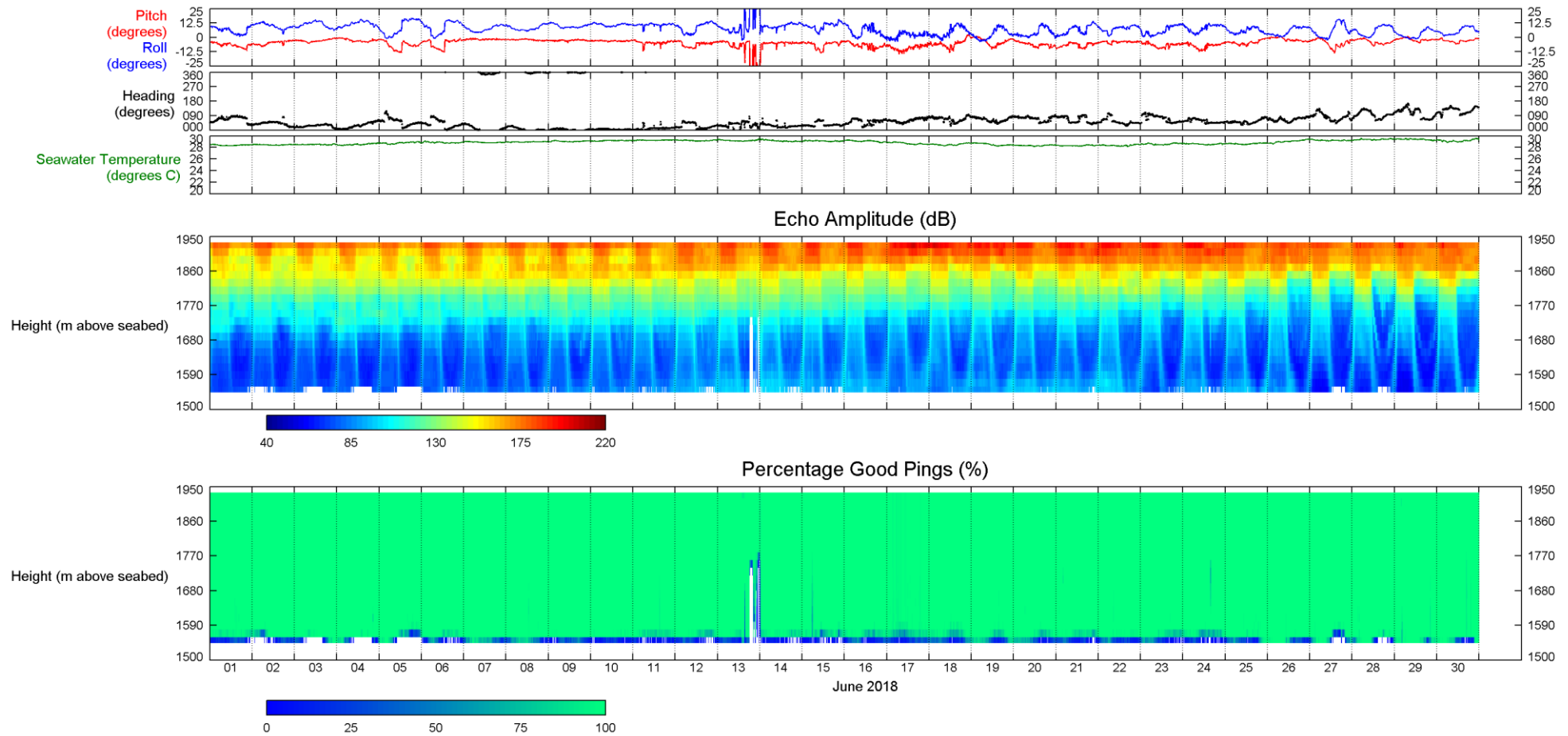
CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



Location: Bigfoot	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 75-kHz SYSTEM	
Notes:		

Figure 11.6 Level 1-20, 01-May-2018 00:00:00 - 31-May-2018 23:50:00 (UTC)

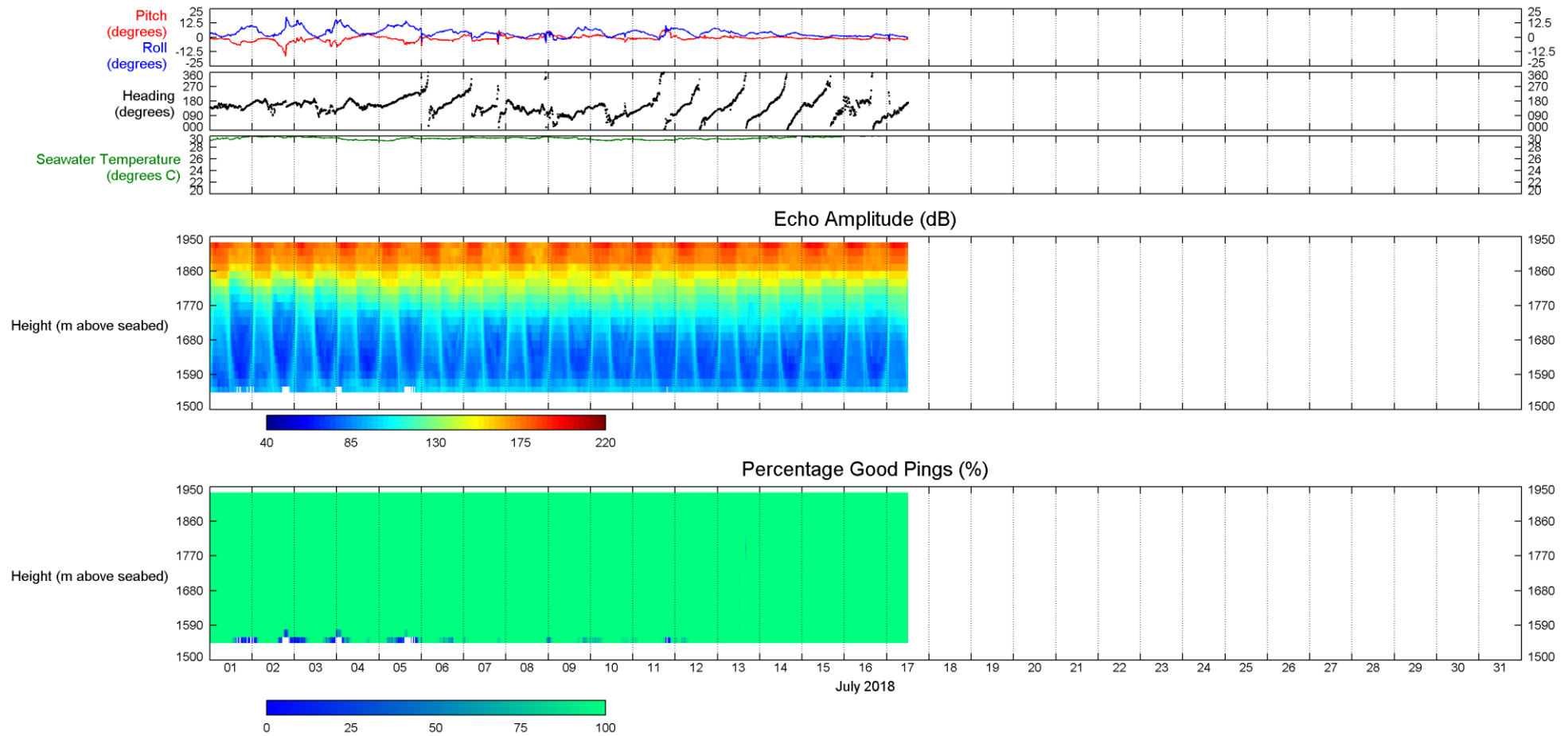
CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



Location: Bigfoot	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 75-kHz SYSTEM	
Notes:		

Figure 11.7 Level 1-20, 01-Jun-2018 00:00:00 - 30-Jun-2018 23:50:00 (UTC)

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



Location: Bigfoot	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 75-kHz SYSTEM	
Notes:		

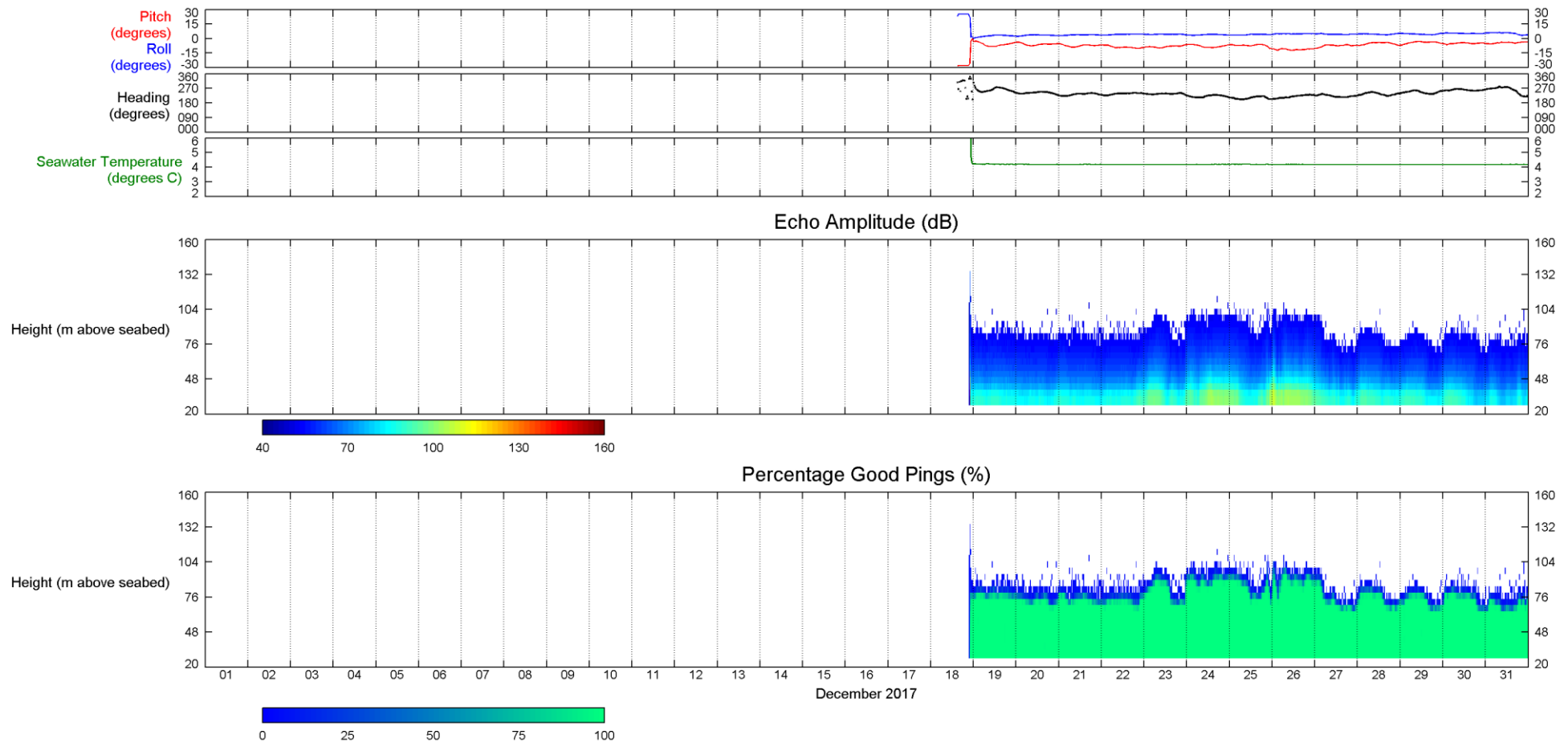
Figure 11.8 Level 1-20, 01-Jul-2018 00:00:00 - 17-Jul-2018 12:00:00 (UTC)



CHEVRON USA INC.
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT

QC Plots - 300 kHz ADCP

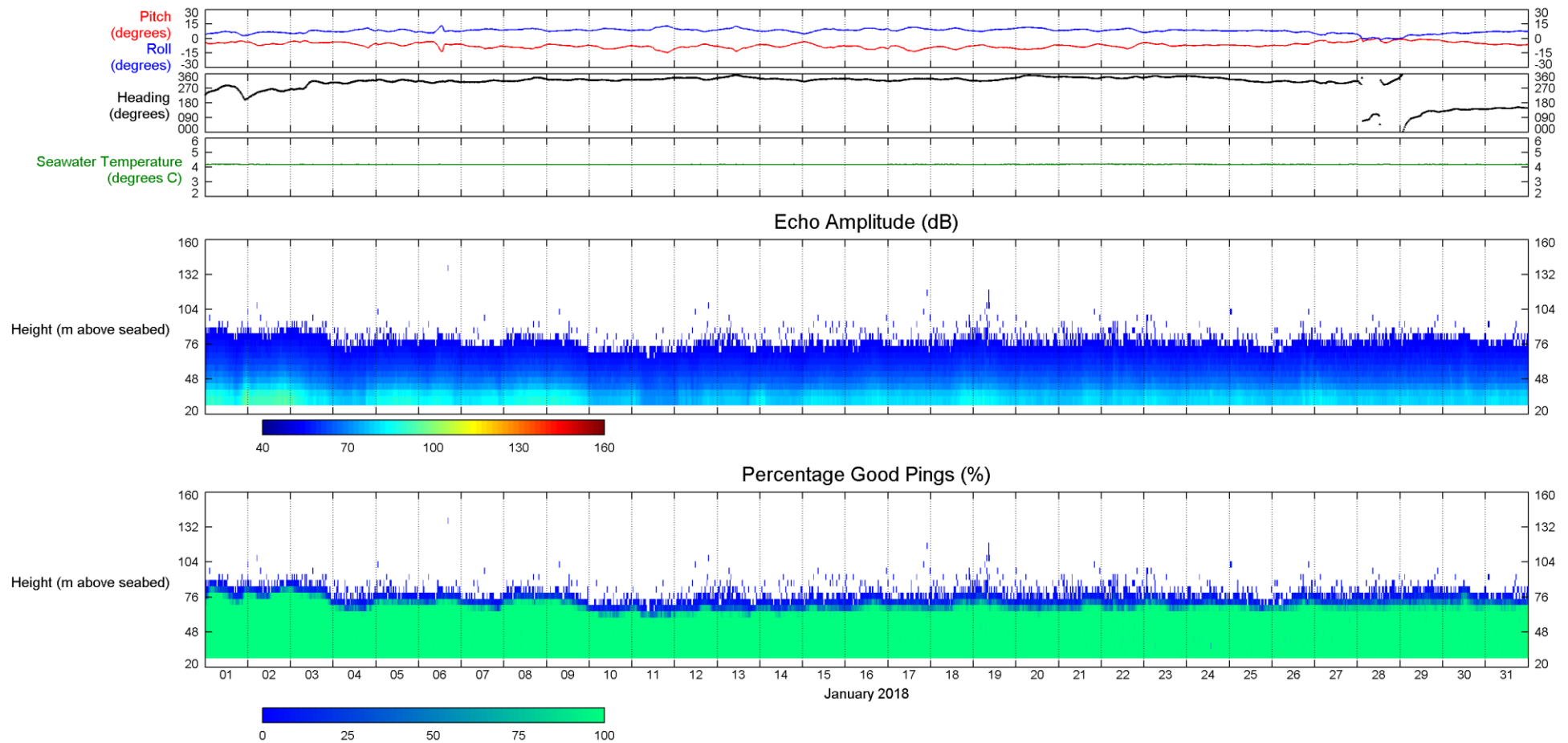
CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



Location: Bigfoot	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 300-kHz SYSTEM	
Notes:		

Figure 12.1 Level 1-25, 18-Dec-2017 15:02:32 - 31-Dec-2017 23:32:32 (UTC)

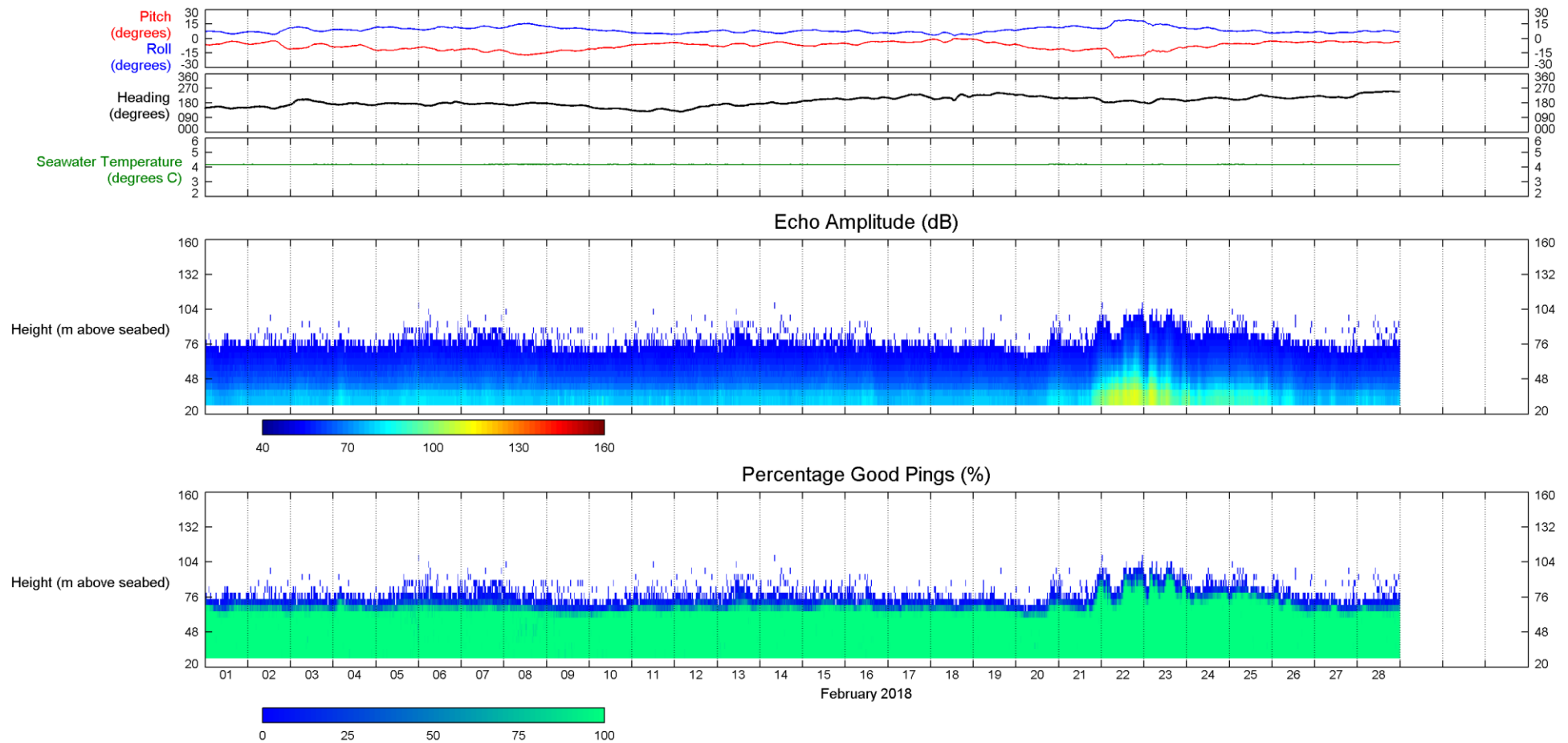
CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



Location: Bigfoot	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 300-kHz SYSTEM	
Notes:		

Figure 12.2 Level 1-25, 01-Jan-2018 00:02:32 - 31-Jan-2018 23:32:32 (UTC)

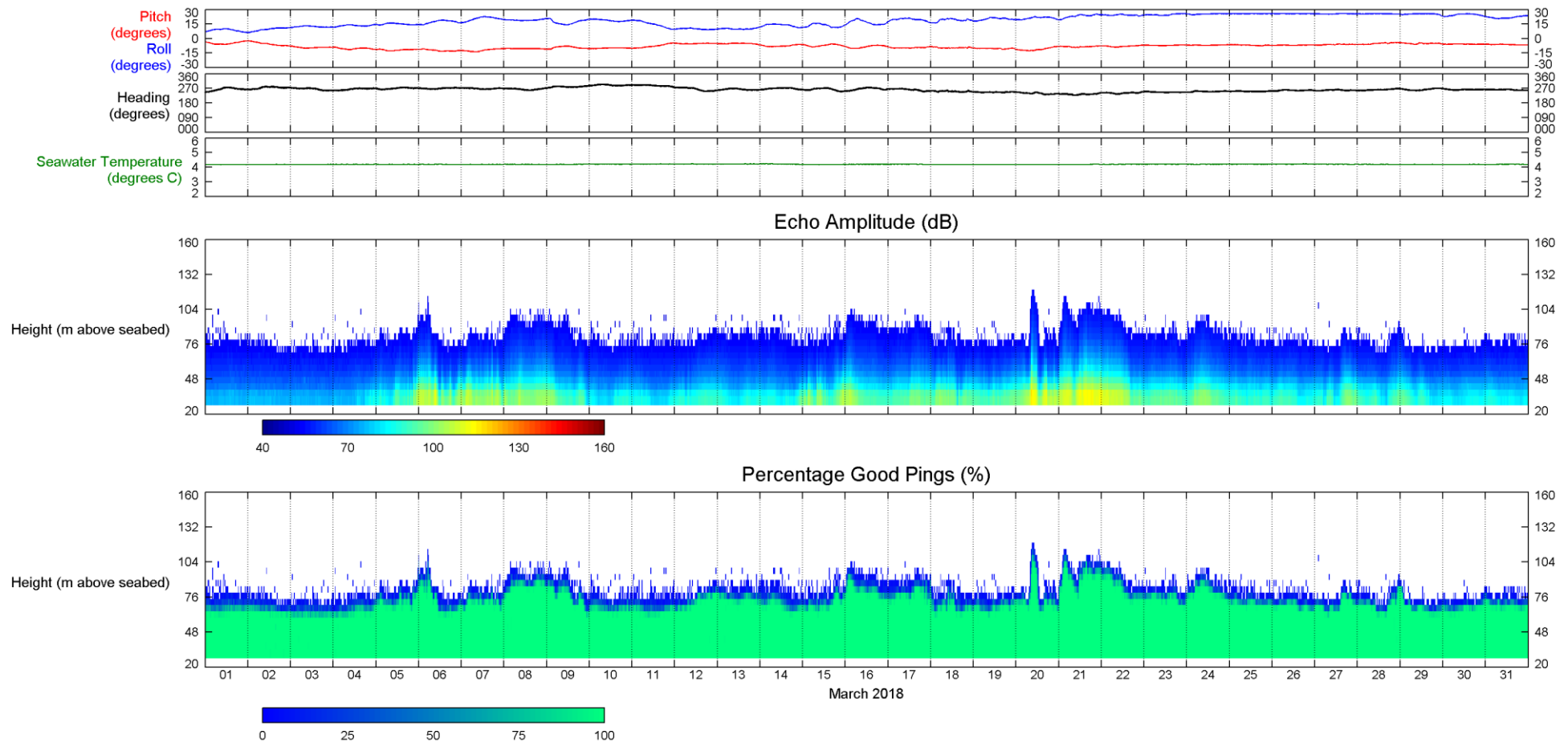
CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



Location: Bigfoot	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 300-kHz SYSTEM	
Notes:		

Figure 12.3 Level 1-25, 01-Feb-2018 00:02:32 - 28-Feb-2018 23:32:32 (UTC)

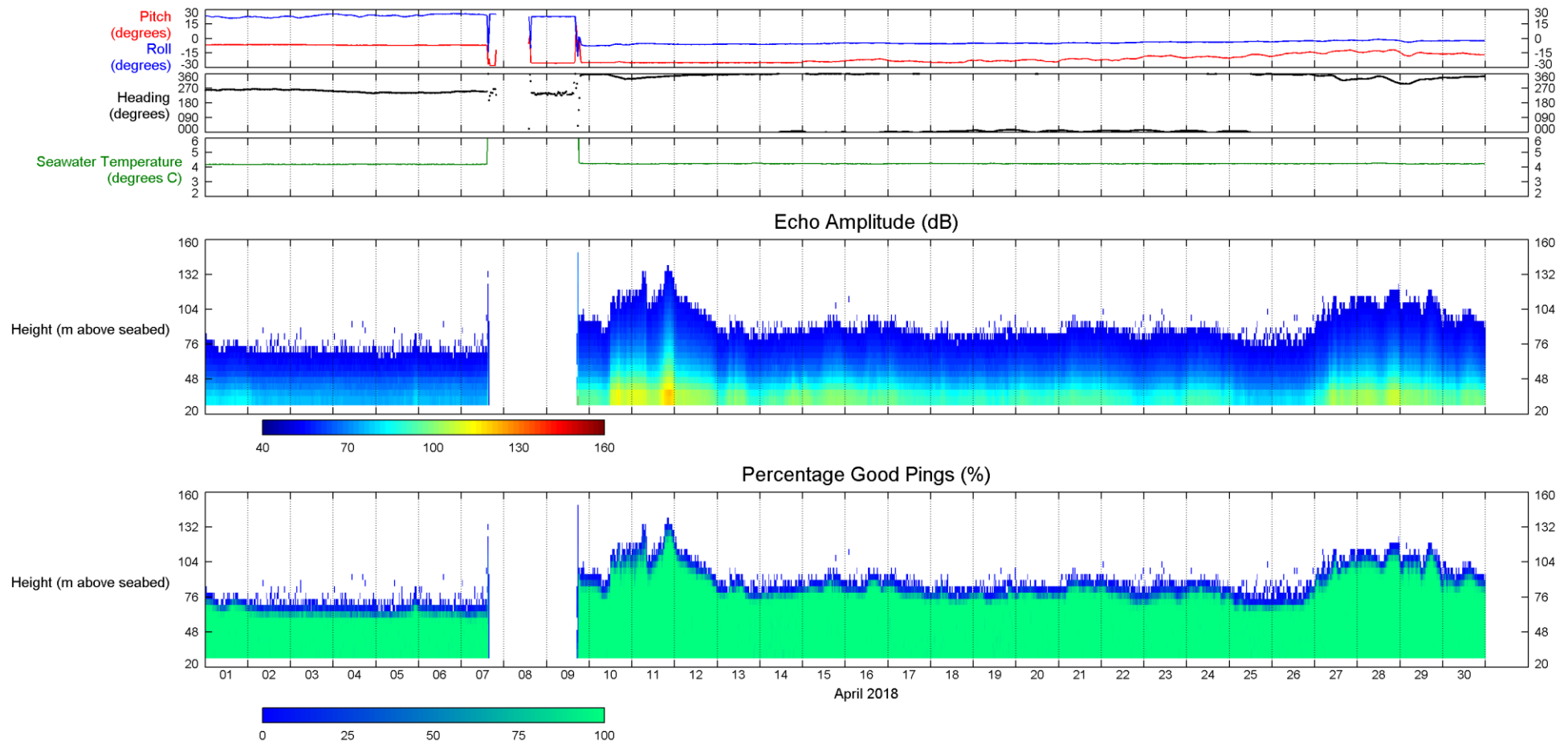
CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



Location: Bigfoot	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 300-kHz SYSTEM	
Notes:		

Figure 12.4 Level 1-25, 01-Mar-2018 00:02:32 - 31-Mar-2018 23:32:32 (UTC)

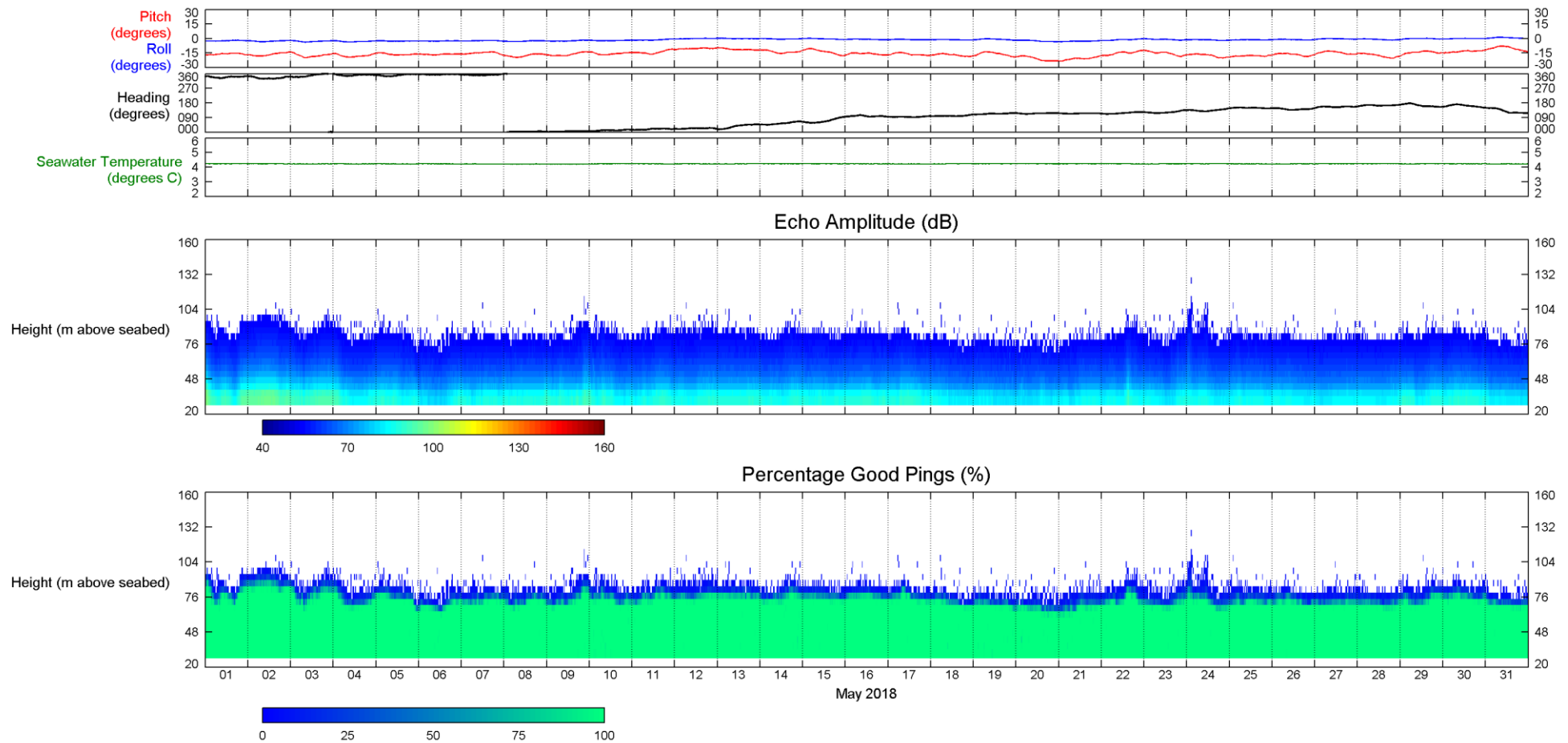
CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



Location: Bigfoot	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 300-kHz SYSTEM	
Notes:		

Figure 12.5 Level 1-25, 01-Apr-2018 00:02:32 - 30-Apr-2018 23:30:00 (UTC)

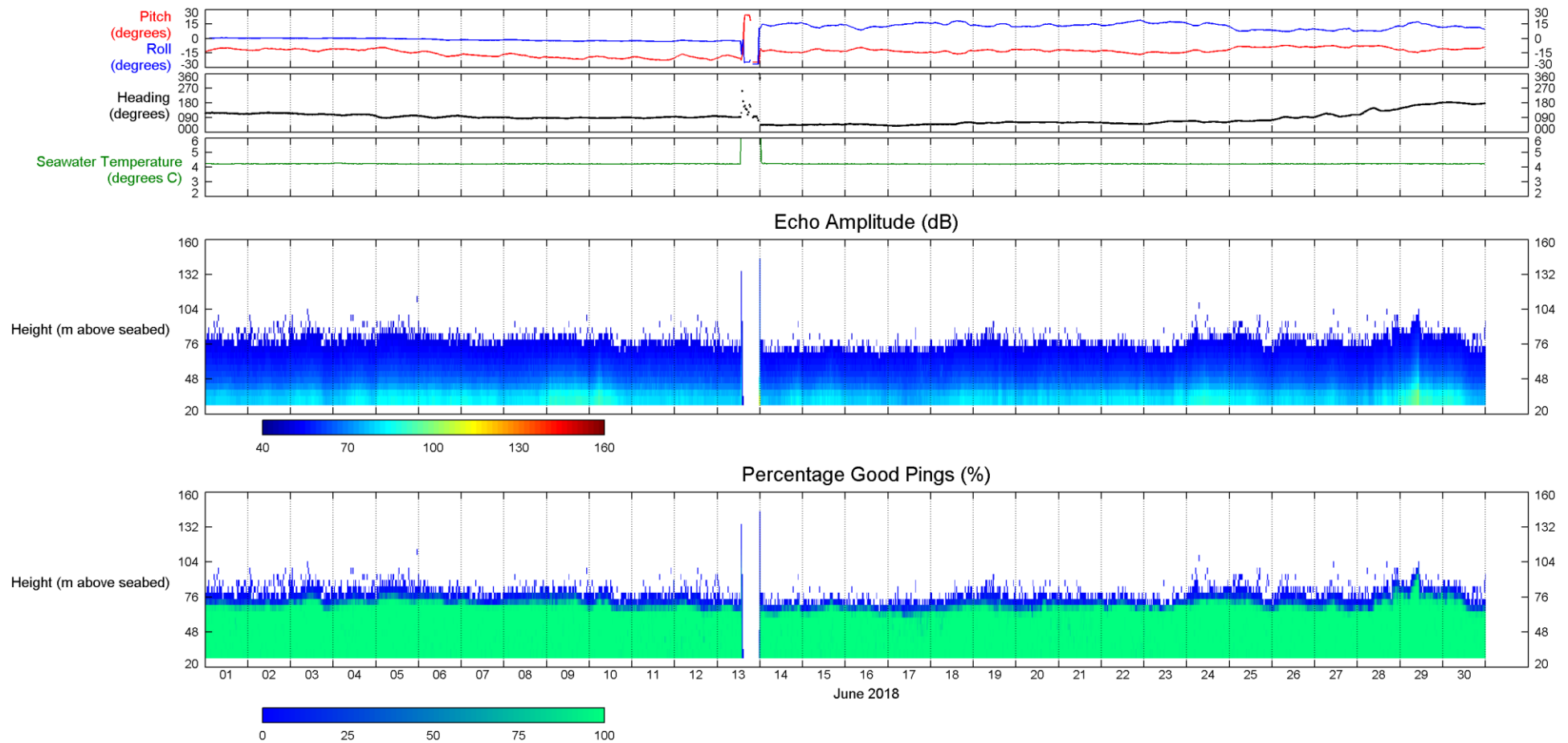
CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



Location: Bigfoot	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 300-kHz SYSTEM	
Notes:		

Figure 12.6 Level 1-25, 01-May-2018 00:00:00 - 31-May-2018 23:30:00 (UTC)

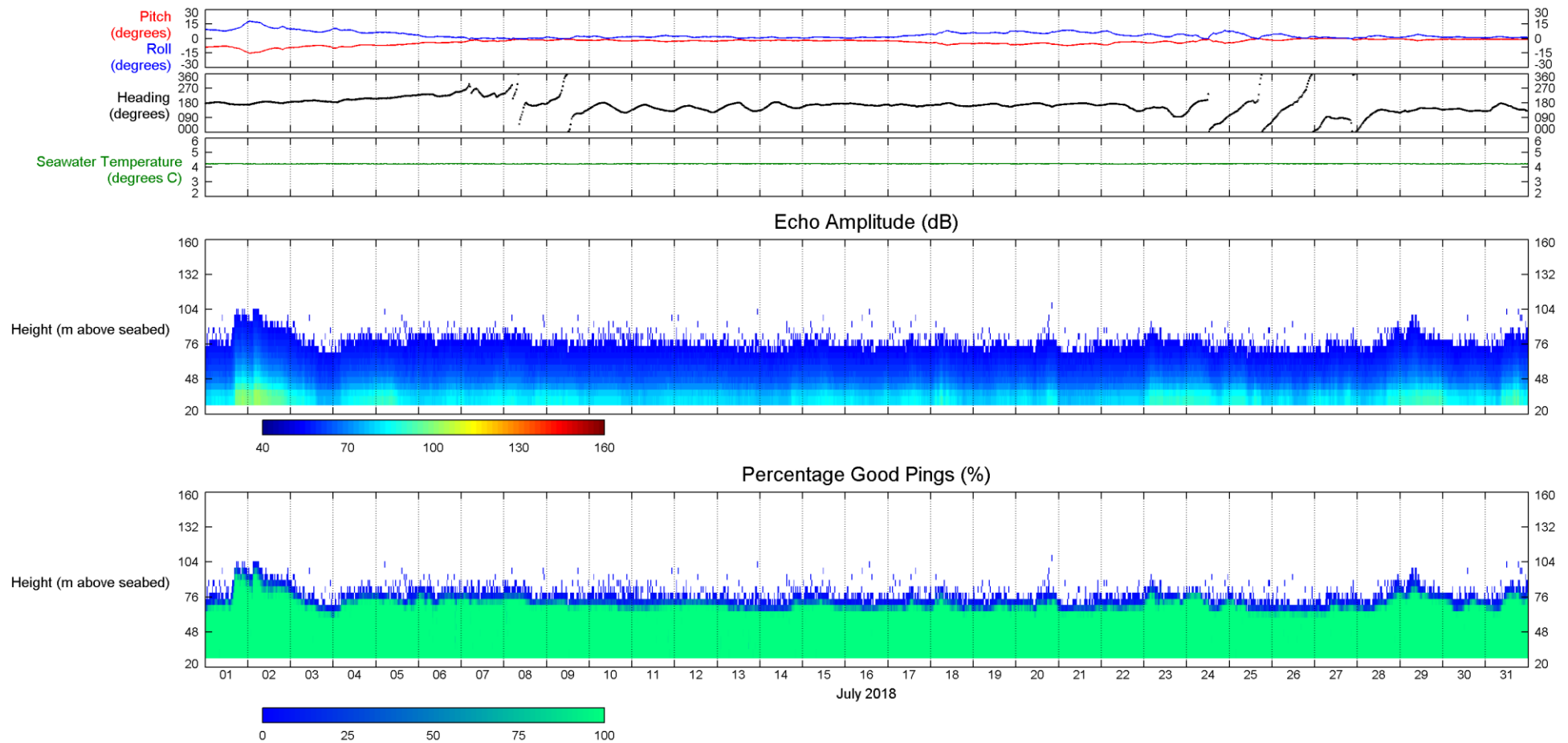
CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



Location: Bigfoot	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 300-kHz SYSTEM	
Notes:		

Figure 12.7 Level 1-25, 01-Jun-2018 00:00:00 - 30-Jun-2018 23:30:00 (UTC)

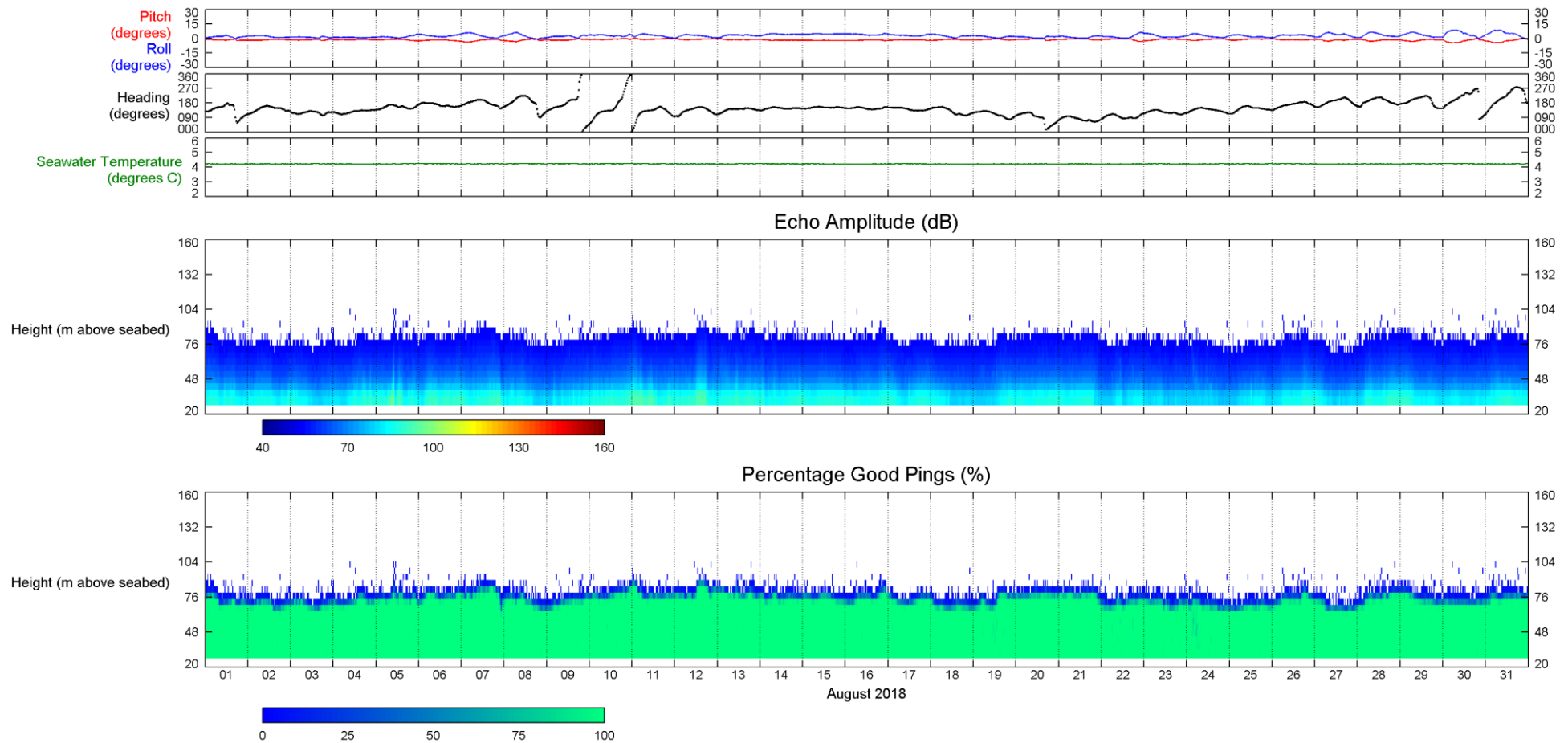
CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



Location: Bigfoot	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 300-kHz SYSTEM	
Notes:		

Figure 12.8 Level 1-25, 01-Jul-2018 00:00:00 - 31-Jul-2018 23:30:00 (UTC)

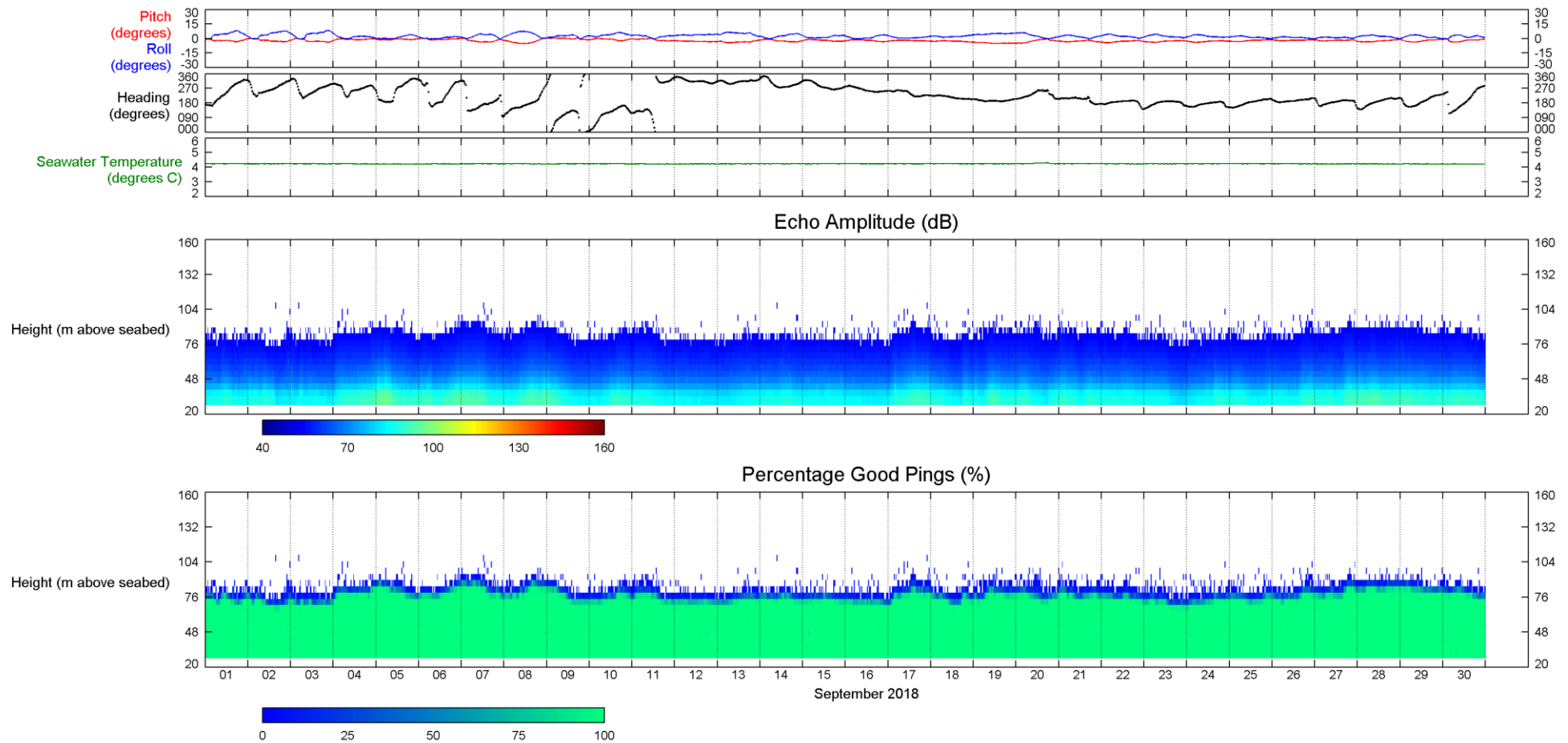
CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



Location: Bigfoot	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 300-kHz SYSTEM	
Notes:		

Figure 12.9 Level 1-25, 01-Aug-2018 00:00:00 - 31-Aug-2018 23:30:00 (UTC)

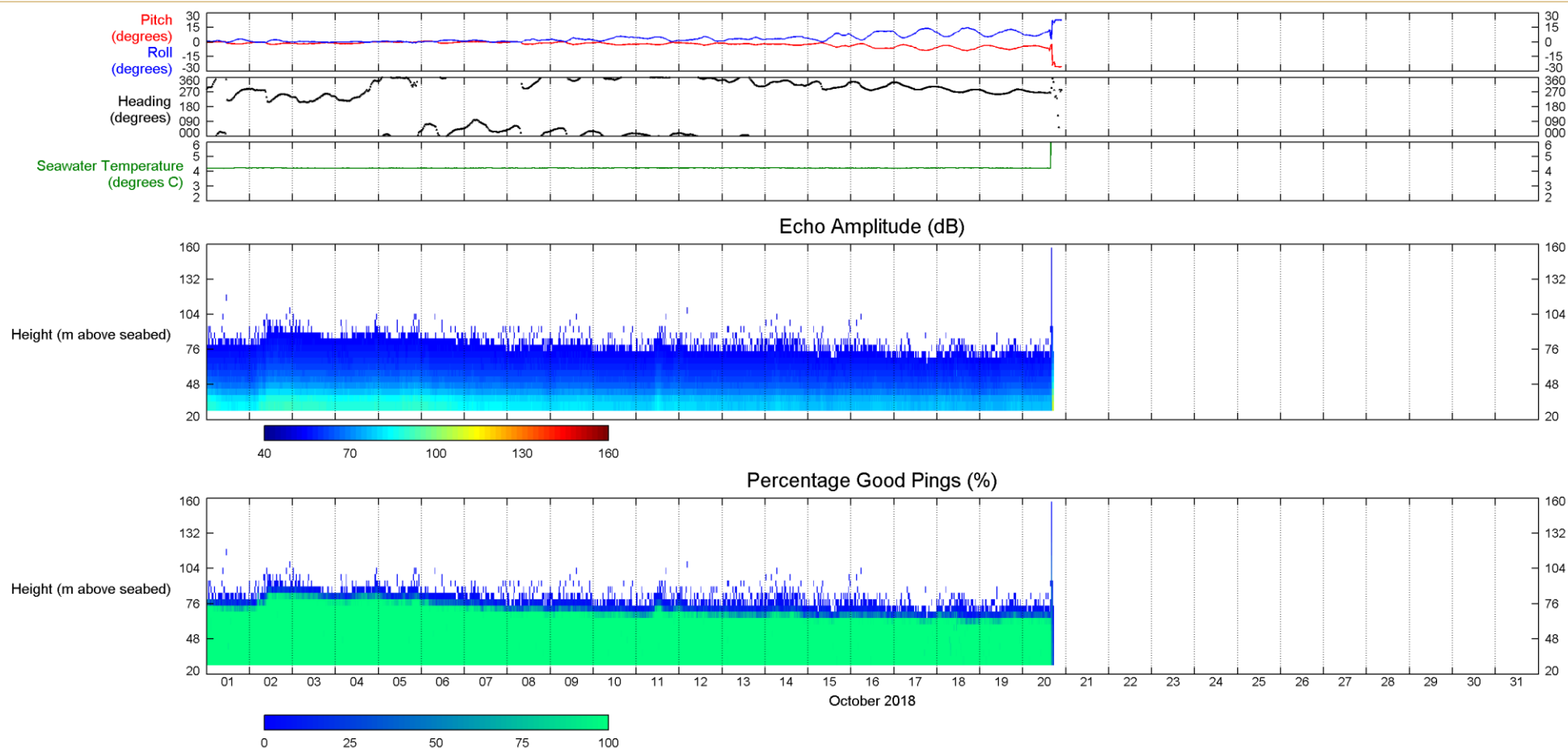
CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



Location: Bigfoot	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 300-kHz SYSTEM	
Notes:		

Figure 12.10 Level 1-25, 01-Sep-2018 00:00:00 - 30-Sep-2018 23:30:00 (UTC)

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



Location: Bigfoot	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 300-kHz SYSTEM	
Notes:		

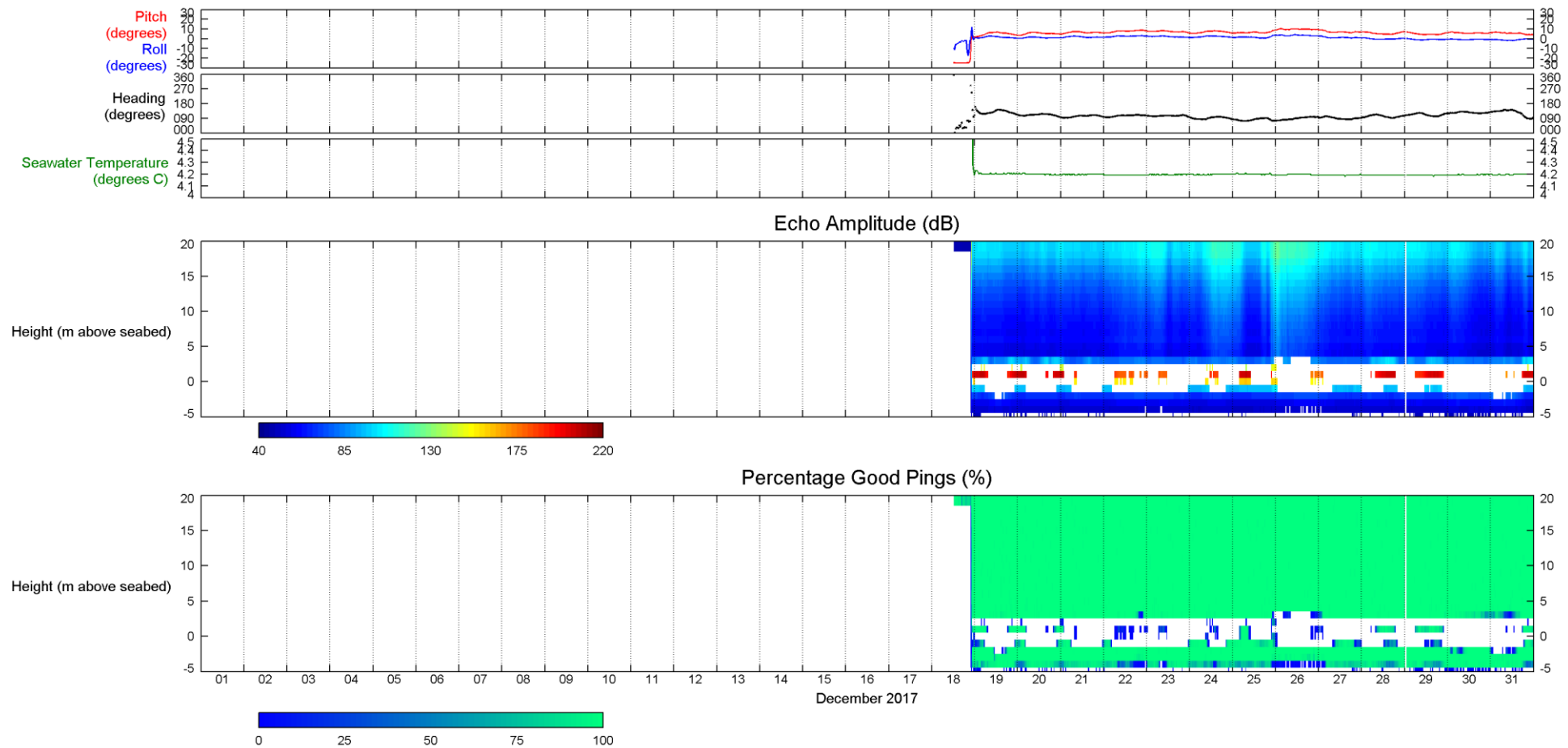
Figure 12.11 Level 1-25, 01-Oct-2018 00:00:00 - 20-Oct-2018 21:30:00 (UTC)



CHEVRON USA INC.
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT

QC Plots - 600 kHz ADCP

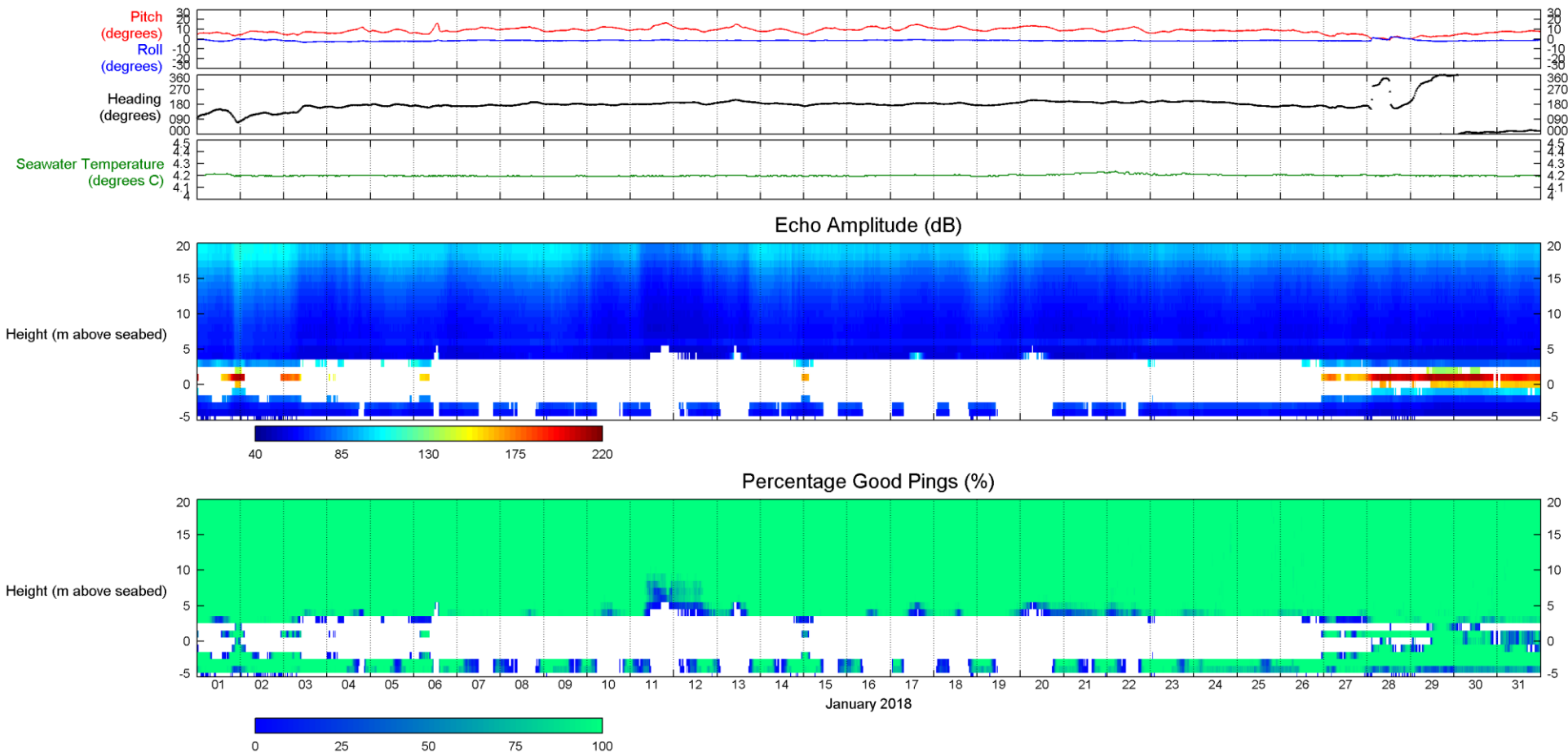
CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



Location: Bigfoot	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 600-kHz SYSTEM	
Notes:		

Figure 13.1 Level 1-25, 18-Dec-2017 12:15:08 - 31-Dec-2017 23:34:32 (UTC)

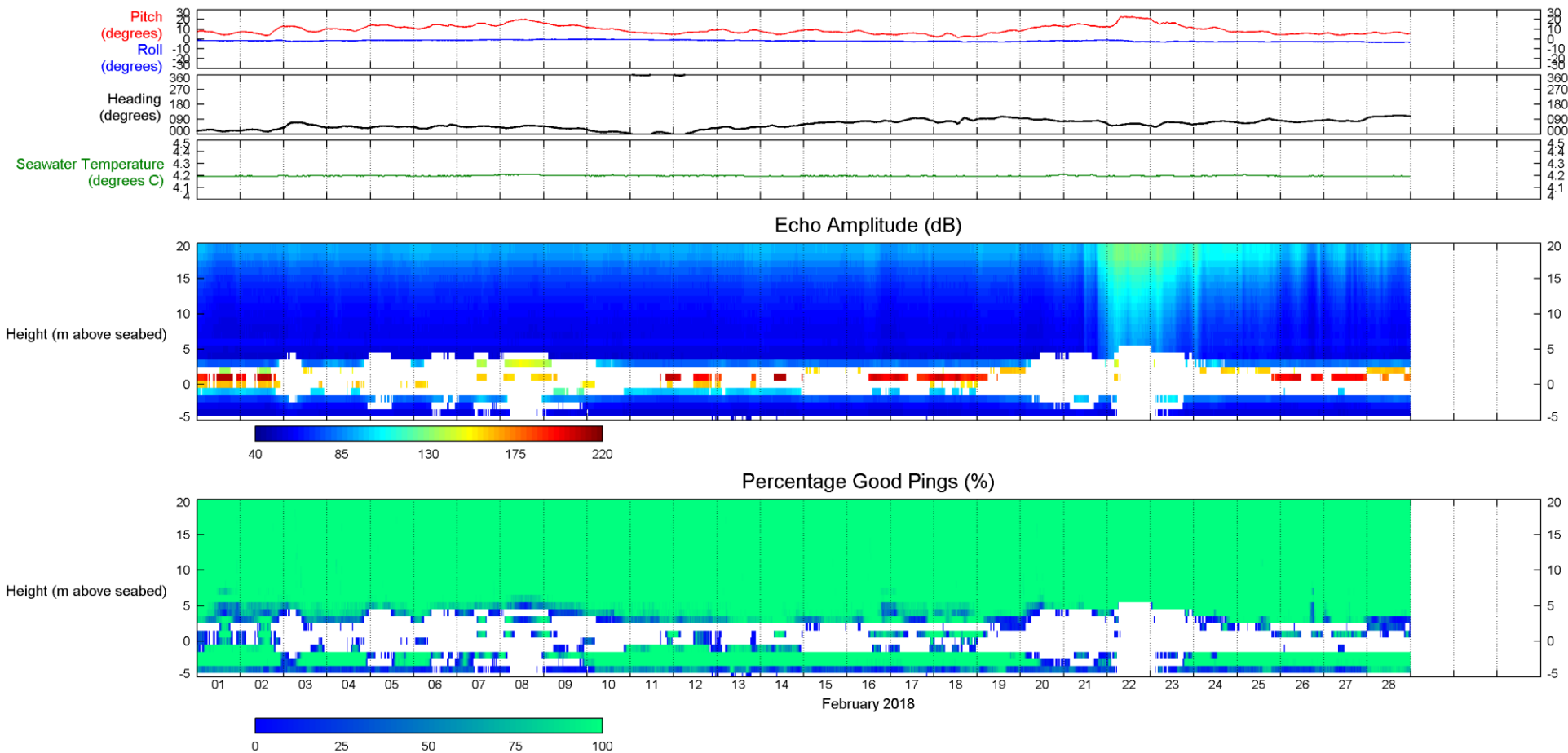
CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



Location: Bigfoot	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 600-kHz SYSTEM	
Notes:		

Figure 13.2 Level 1-25, 01-Jan-2018 00:04:32 - 31-Jan-2018 23:34:32 (UTC)

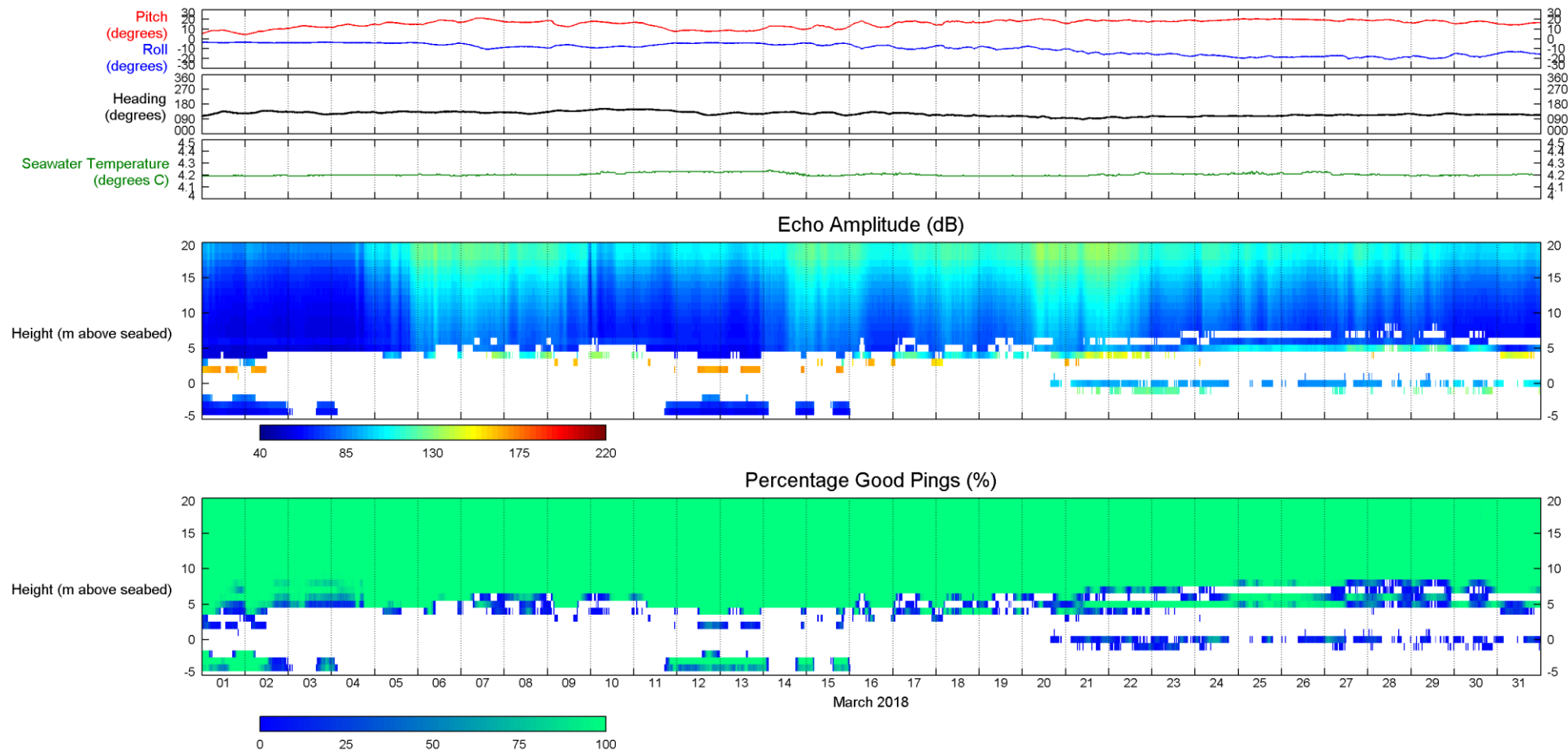
CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



Location: Bigfoot	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 600-kHz SYSTEM	
Notes:		

Figure 13.3 Level 1-25, 01-Feb-2018 00:04:32 - 28-Feb-2018 23:34:32 (UTC)

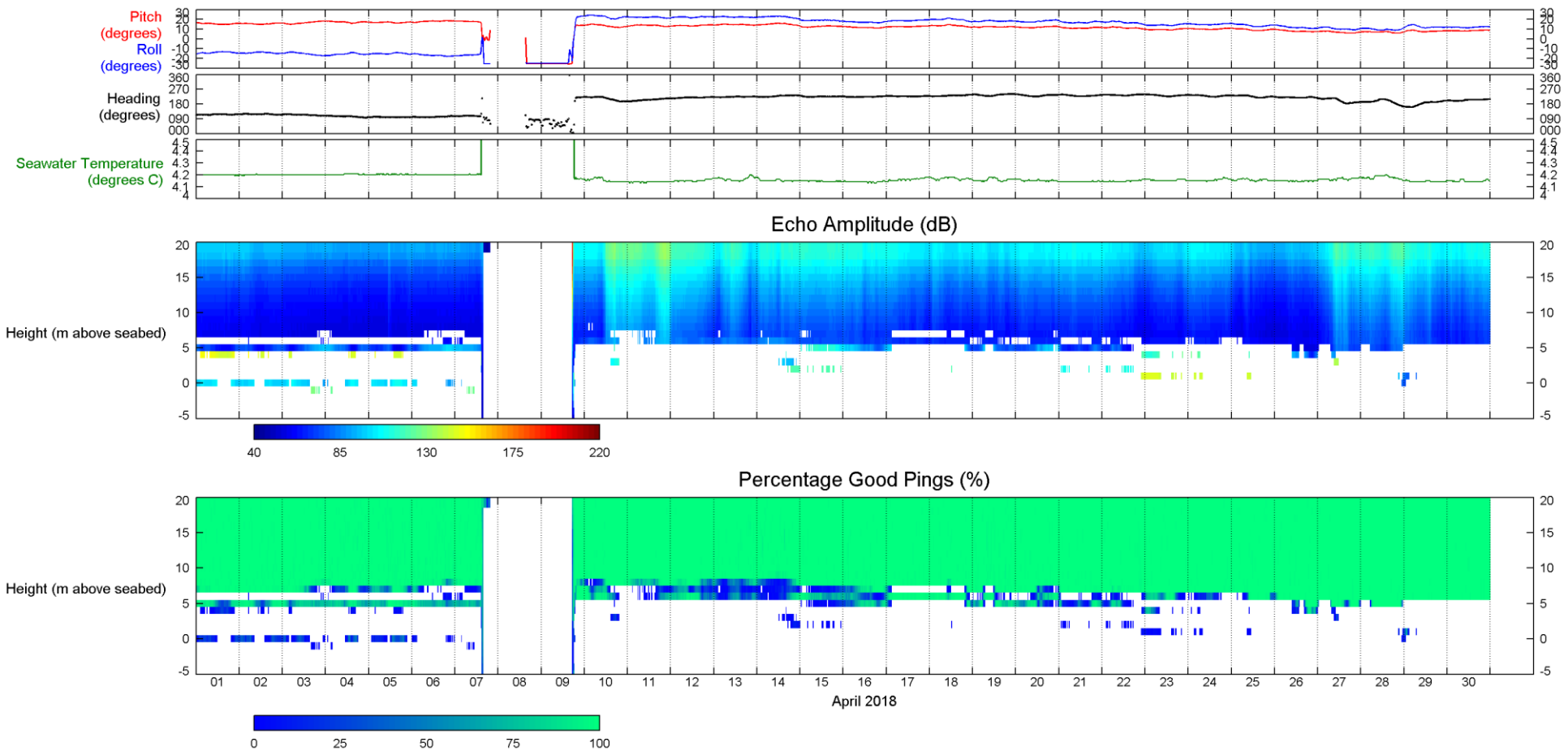
CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



Location: Bigfoot	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 600-kHz SYSTEM	
Notes:		

Figure 13.4 Level 1-25, 01-Mar-2018 00:04:32 - 31-Mar-2018 23:34:32 (UTC)

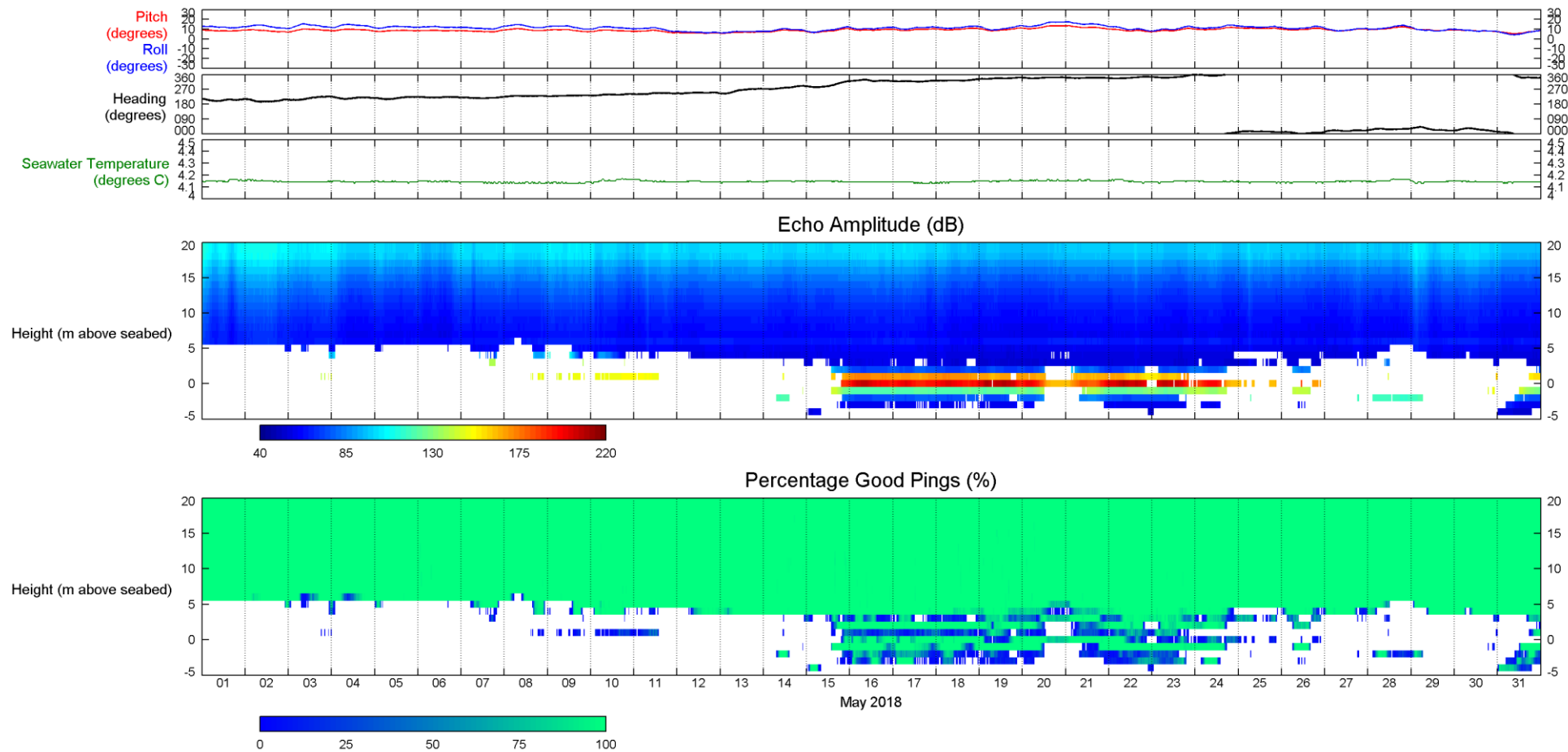
CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



Location: Bigfoot	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 600-kHz SYSTEM	
Notes:		

Figure 13.5 Level 1-25, 01-Apr-2018 00:04:32 - 30-Apr-2018 23:45:00 (UTC)

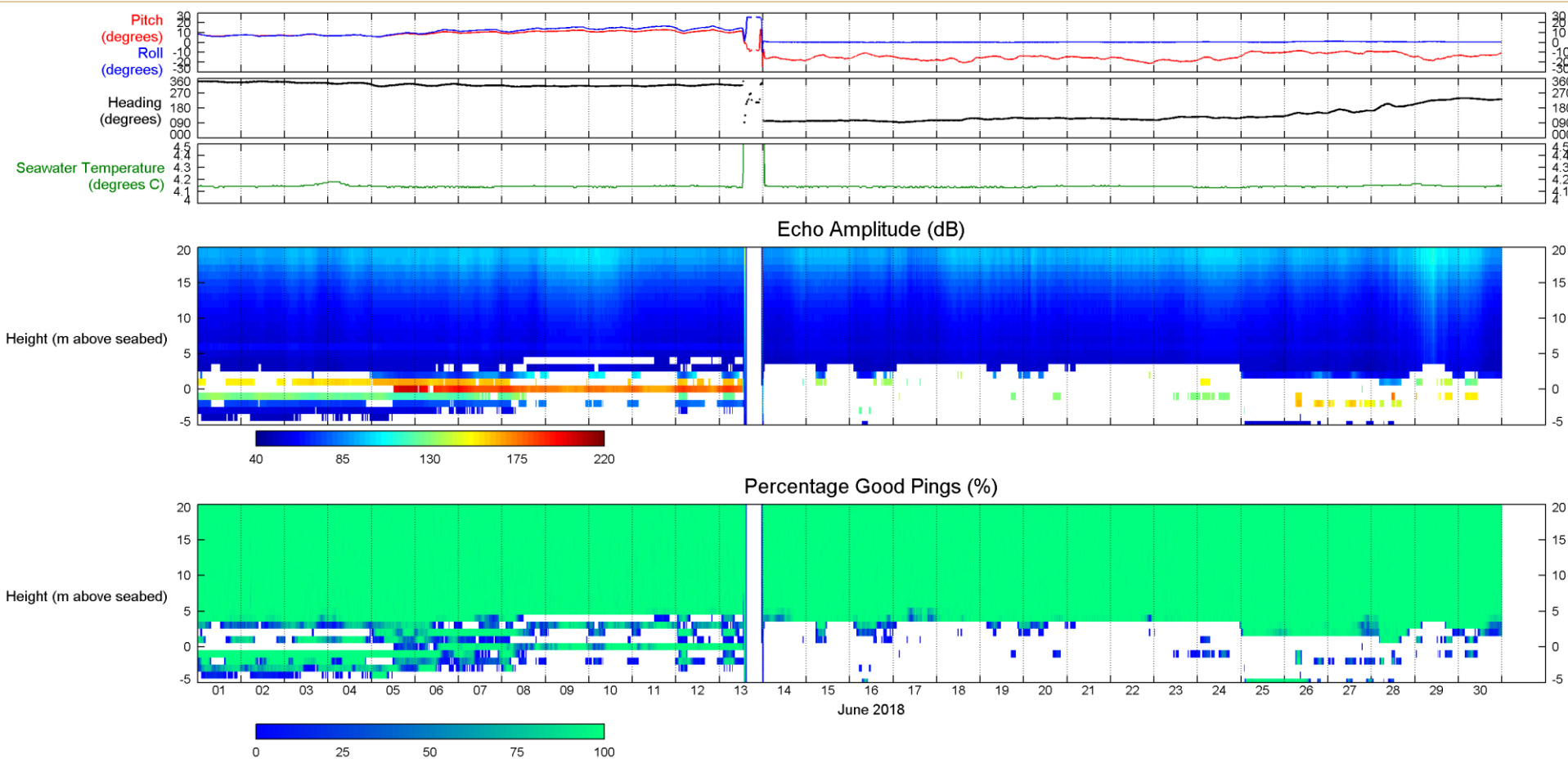
CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



Location: Bigfoot	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 600-kHz SYSTEM	
Notes:		

Figure 13.6 Level 1-25, 01-May-2018 00:15:00 - 31-May-2018 23:45:00 (UTC)

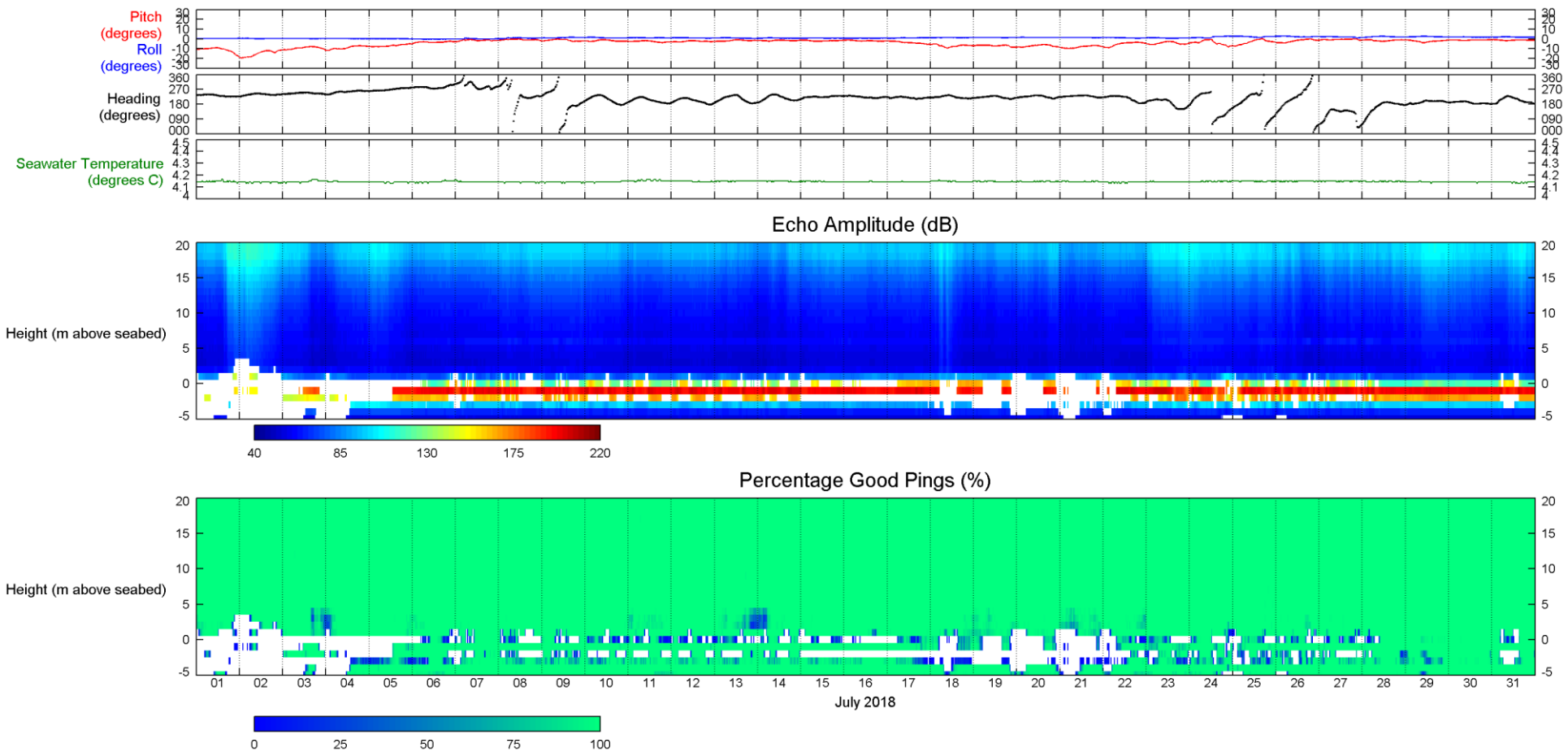
CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



Location: Bigfoot	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 600-kHz SYSTEM	
Notes:		

Figure 13.7 Level 1-25, 01-Jun-2018 00:15:00 - 30-Jun-2018 23:45:00 (UTC)

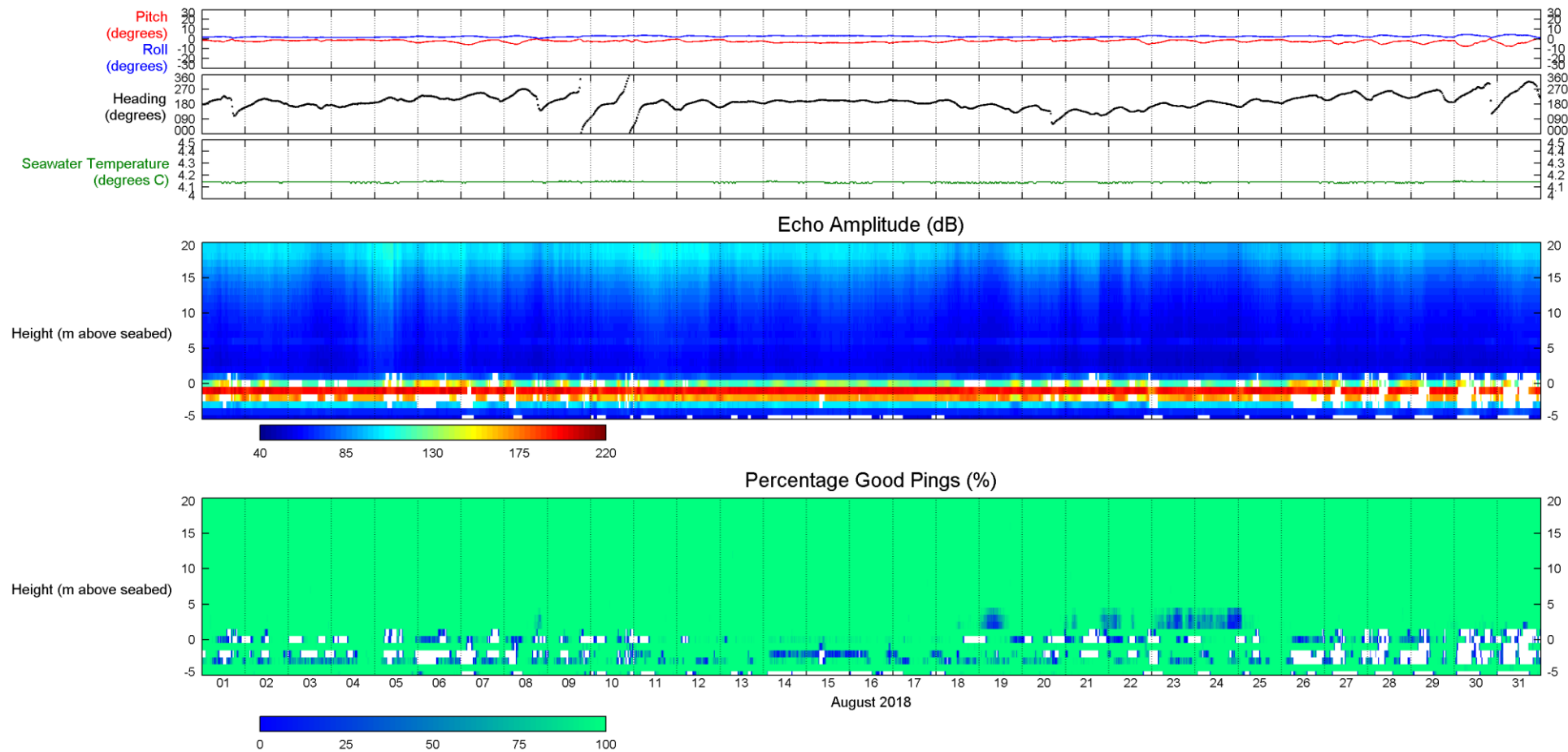
CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



Location: Bigfoot	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 600-kHz SYSTEM	
Notes:		

Figure 13.8 Level 1-25, 01-Jul-2018 00:15:00 - 31-Jul-2018 23:45:00 (UTC)

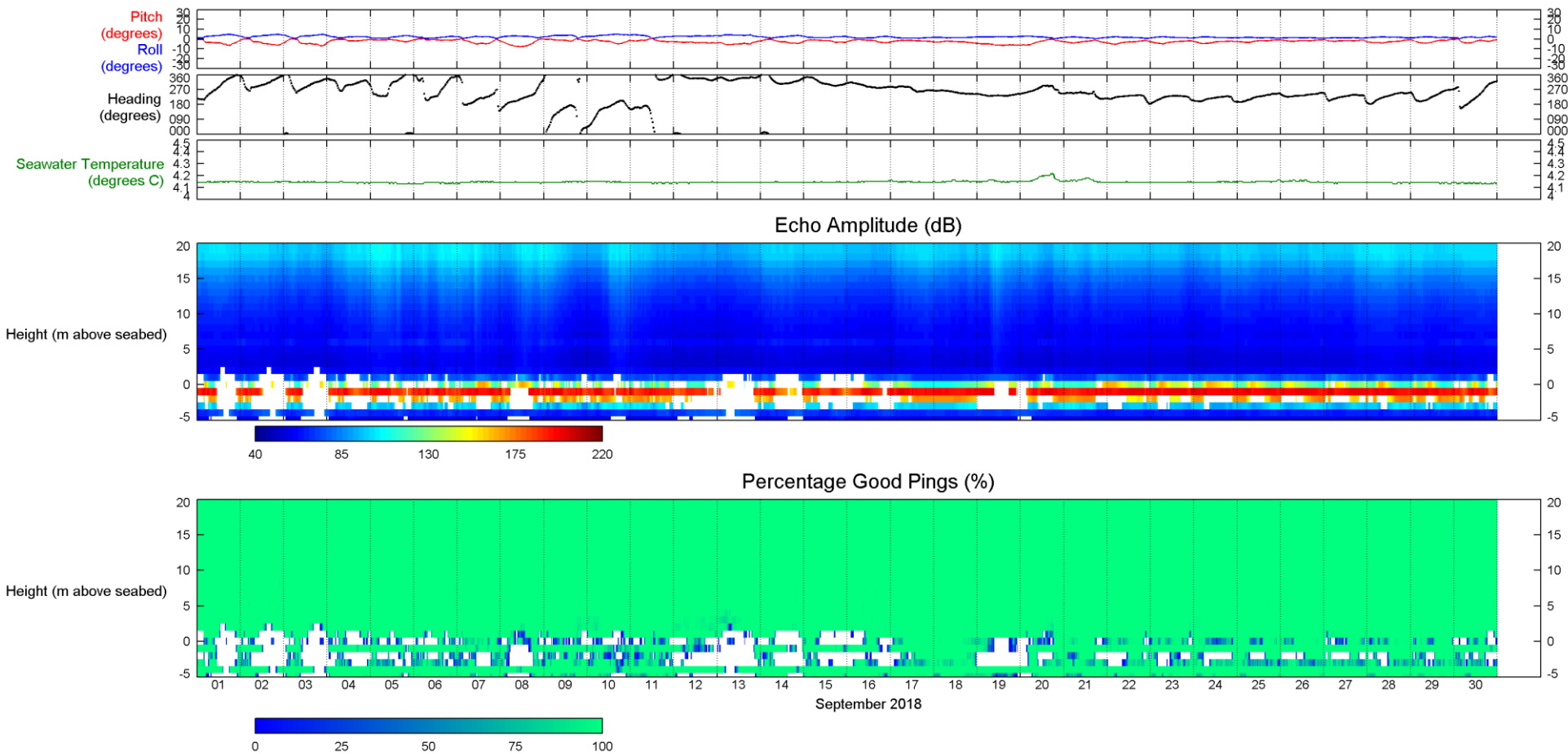
CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



Location: Bigfoot	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 600-kHz SYSTEM	
Notes:		

Figure 13.9 Level 1-25, 01-Aug-2018 00:15:00 - 31-Aug-2018 23:45:00 (UTC)

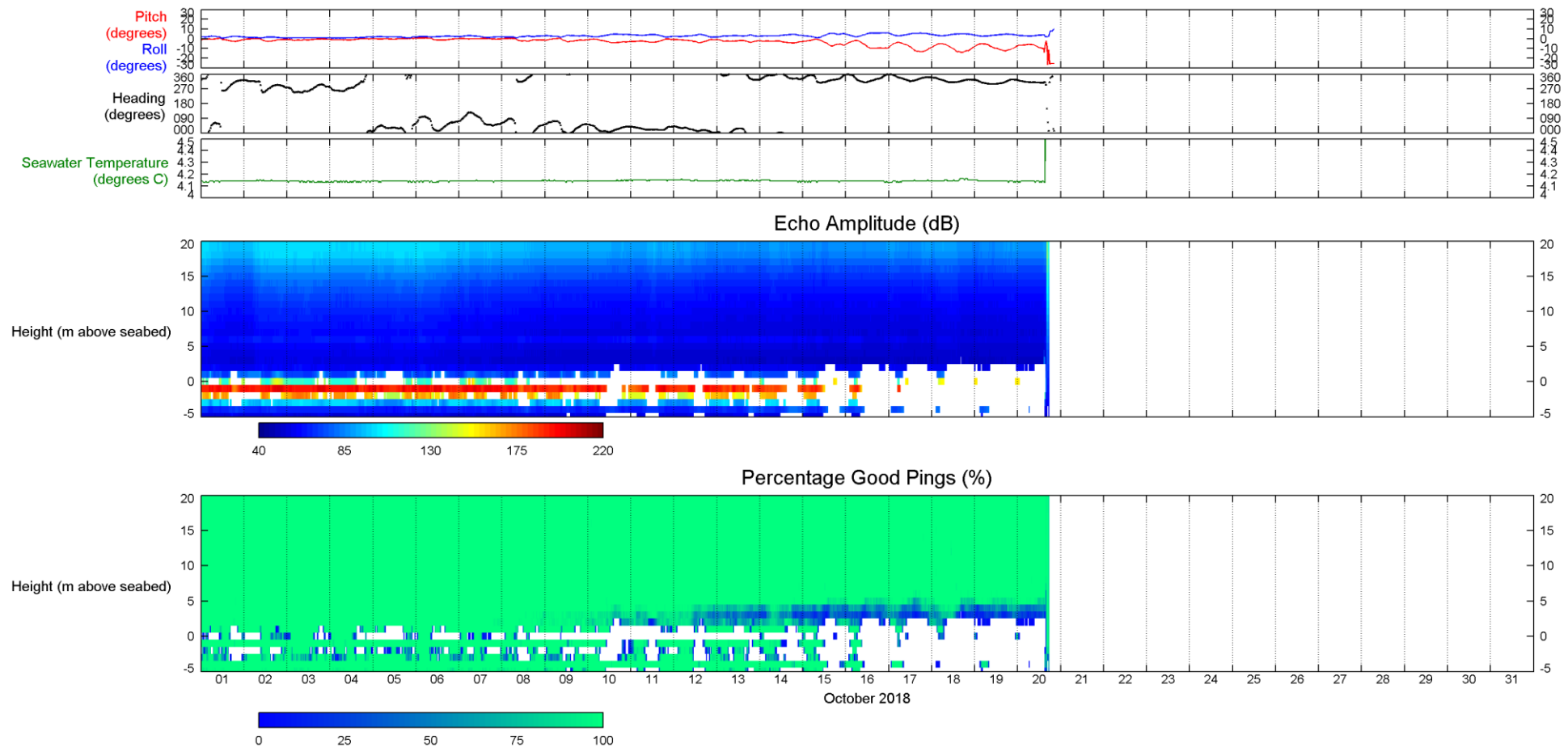
CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



Location: Bigfoot	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 600-kHz SYSTEM	
Notes:		

Figure 13.10 Level 1-25, 01-Sep-2018 00:15:00 - 30-Sep-2018 23:45:27 (UTC)

CHEVRON USA
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



Location: Bigfoot	Position: 26° 54.954' N, 090° 30.120' W	Datum: MSL
Water depth: 1971 m	Instrument type: 600-kHz SYSTEM	
Notes:		

Figure 13.11 Level 1-25, 01-Oct-2018 00:15:27 - 20-Oct-2018 20:15:27 (UTC)



APPENDICES

A. MOORING AND INSTRUMENT LOGSHEETS

- A.1 Mooring and Instrument Logsheets – Demob Recovery
- A.2 Mooring and Instrument Logsheets – Service Visit 1 Recovery
- A.3 Mooring and Instrument Logsheets – Service Visit 1 Deployment

B. ATTACHED DATA FILES

C. CTD PROFILES

A. MOORING AND INSTRUMENT LOGSHEETS



A.1 MOORING AND INSTRUMENT LOGSHEETS – DEMOB RECOVERY

FUGRO GEOS		FUGRO	
Site Log Sheet			
MOORING			
IDENTIFICATION (Essential reference to instrument log sheet) Contract No. <u>112564</u> Contract Name <u>Chevron Bigfoot</u> Mooring Name <u>NS053</u> Phase <u>SVI deploy</u>			
ANCILARY DETAILS			
ARGOS BEACONS (mark position on mooring diagram) ADCP Floatation Collar (top) ID No. <u>2004340623591</u> Ser No. <u>343</u> SIM500./SIM2000 ADCP Floatation Collar (bottom) ID No. <u>343</u> Ser No. <u>343</u> SIM500./SIM2000 In line/CRP80 Deep/Normal ID No. Ser No. SIM500./SIM2000 In line/CRP80 Deep/Normal ID No. Ser No. SIM500./SIM2000			
ACOUSTIC RELEASES DORT / ORT / LRT Address <u>BB</u> GEOS No. <u>2006471</u> Battery fitted date <u>7 APR 2018</u> DORT / ORT / LRT Address <u>9C</u> GEOS No. <u>200A2469</u> Battery fitted date <u>7 APR 2018</u>			
Mooring spreadsheet stored in contract file <input type="checkbox"/> Mooring spreadsheet filename..... Mooring analysis results stored in contract file <input type="checkbox"/> Mooring analysis filename..... Antifouling applied <input type="checkbox"/> Dissimilar metals isolated <input checked="" type="checkbox"/>			
DEPLOYMENT			
Safety/Operations briefing carried out <input checked="" type="checkbox"/> Sheet No 2 details completed <input checked="" type="checkbox"/> Release batteries ok post deployment <input checked="" type="checkbox"/> Releases not tilted post deployment <input checked="" type="checkbox"/> Argos details sent to GEOS <input checked="" type="checkbox"/> Box in done <input checked="" type="checkbox"/>			
Date time of deployment GMT (release from vessel) <u>09 APR 2018 @ 1750 GMT</u> Box in filename <u>112564 - BOXIN_WS - SVI Deploy 09 APR 18</u>			
Target Latitude <u>26° 54.990</u> Actual Latitude <u>26° 55.02956</u> Target Longitude <u>-90° 30.1698</u> Actual Longitude <u>-90° 30.21161</u> Depth (m) <u>1954m (CTD)</u> <u>1959m (C/M/T)</u> <u>1934 (DORT)</u>			
RECOVERY			
Release batteries ok pre recovery <input checked="" type="checkbox"/> Releases not tilted pre recovery <input checked="" type="checkbox"/> Date/time of release of mooring GMT <u>09 APR 2018 @ 1750 GMT</u>			
NOTES			
<u>New Location - shallower depth</u> <u>* Demob</u> <u>Mooring released @ 1057 LT/1557 GMT on 20072018</u>			

Every field must be complete and all boxes must be ticked. Circle selected options and strikethrough others.

Further details of each step in Site Technical Instructions (TI)

..\\Site Technical Instructions\\Site\\TI_RDI_BB_ADCP_SC.doc

CHEVRON USA INC.
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



FUGRO GEOS		FUGRO	
Site Log Sheet			
OCEANOR WAVESCAN BUOY			
1. IDENTIFICATION (Essential to reference individual sensor log sheets deployed with Wavescan) Contract No. <u>112564</u> Contract Name <u>CHEVRON BIG FOOT</u> Mooring Name <u>WS053</u> Phase <u>DEMOB</u>			
2. INSTRUMENT SPECIFICATION AND CONFIGURATION			
Wavescan serial no. <u>WS053</u>	XML latitude <u>26</u>		
Geni/Wavesense type & No <u>2000 / 3</u>	XML longitude <u>95</u>		
PMU no. <u>180</u>	Water depth (m) <u>2000M</u>		
TCM Compass present <u>(Y) N</u> SN: <u>1032124</u>	Transmitter type <u>idium / VHF</u>		
IMEI No. / Radio Freq <u>300625410726900</u>	Details of modem sent to GEOS and activated <input checked="" type="checkbox"/>		
XMLs prepared and tech checked <input checked="" type="checkbox"/> <u>new XMLS</u>	Wavescan weight on load cell <u>Y</u> <u>(1)</u>		
CLS tracker on <u>(Y) N</u> CLS rebatteried <u>Y</u> N CLS tracker No <u>3006340622975</u>	Mast cable No.		
Battery stack total capacity (excl. active radar) no.	Lead		
No. of batteries installed	Lith (excl. active radar)		
Lead voltages (no charging)	Lithium voltages		
3. SETUP & TESTING			
Waves <u>(Y) N</u>	Met Sensors	Model & SN	Sampling int.
Sample interval: <u>30mins</u>	Atmospheric press	<u>PTB 330 / J332008</u>	<u>3s not configured</u>
Samples per burst: <u>1024 / 2048</u>	Wind speed & dir	<u>GILL WINDSONIC 14410059</u>	
Duration of burst: <u>17-mins / 34-mins</u>	Air temperature	<u>Oceanor #588</u>	
Aquadopp <u>(Y) N</u>	Humidity	<u>N/A</u>	
Type: <u>400kHz / 600kHz / 1Hz / 2Hz</u>	Air temp & humid	<u>RS232/485</u>	<u>N/A</u>
SN: <u>6670 / 9582</u>	Solar radiation	<u>N/A</u>	
Opposite rudder & x-beam away from keel <input checked="" type="checkbox"/>	Active radar	<u>N/A</u>	
AQD log sheet completed <input checked="" type="checkbox"/>	Passive radar	<u>UCOMAT</u>	
ADCP <u>(Y) N</u> <u>X 3</u>	Flashlight	<u>yes</u>	
SN <u>20877 / 20237 / 17588</u>	Other (specify)		
Frequen: <u>300 / 600 / 75 KHz</u>	WLR <u>(Y) N</u> SN <u>17588</u>		
ADCP log sheet completed <input checked="" type="checkbox"/>	WLR log sheet completed <input checked="" type="checkbox"/>		
SBE <u>Y</u> <u>(N)</u>	Benthos modem <u>(Y) N</u> SN <u>52680 (TOP)</u>		
SN	Modem log sheet completed <input type="checkbox"/> <u>50084 (BOT)</u>		
Type	<u>57435</u> min (UPPER) <u>57436</u> min (LOWER)		
SBE log sheet completed <input type="checkbox"/>	Complete page 2 servicing & testing checklist <input type="checkbox"/>		
Initials	Date		
4. START UP & DEPLOYMENT			
Data, log & xmls copied & backed up <input checked="" type="checkbox"/>	Sensor cables secure <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> Oring seated correctly	<input checked="" type="checkbox"/>
Data & log files cleared <input checked="" type="checkbox"/>	Mast cable tightened <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> Oring not pinched	<input checked="" type="checkbox"/>
New xmls uploaded & buoy restarted <input checked="" type="checkbox"/>	Bird spikes attached <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> Buoy turned on	<input checked="" type="checkbox"/>
Name of new xmls <u>DE-WS053 XML 8 Feb 2018</u>	Weather or security cover installed <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> Date/time deployed GMT	
Lead acid batteries recharged <input checked="" type="checkbox"/>	Canister filled with nitrogen <input checked="" type="checkbox"/>		
All lid bolts secured <input checked="" type="checkbox"/>	Initials <u>PVGW</u>	Date <u>09 APR 18</u>	
5. RECOVERY			
Date/Time of recovery GMT <u>2009 2018 1557</u>	Downloaded data/pff files <input checked="" type="checkbox"/>	File name <u>PFF</u>	
Condition	Downloaded Syslog <input checked="" type="checkbox"/>	File name <u>PTTAL log</u>	
Purged with nitrogen <input checked="" type="checkbox"/> Purge date <u>2009 18</u>	Downloaded xmls <input checked="" type="checkbox"/>	File name <u>CFGs and</u>	
Wavescan weight on load cell <u>X</u>	All files backed up <input checked="" type="checkbox"/>		
Initials <u>PVGW</u>	Date <u>20 09 2018</u>		
NOTES <u>new Geni Fitted</u> <u>2 additional mid water modems</u> <u>new Lower modem fitted #50084 (model 965 LFCMNT)</u> <u>new 300+600 ADCP's SWAPPED</u> <u>FAIM 200 18019</u>			

Every field must be complete and all boxes must be ticked. Circle selected options and strikethrough others.

Further details of each step in Site Technical Instructions (TI) \Site_Technical_Instructions\SiteTI_Wavescan



FUGRO GEOS		FUGRO	
Site Log Sheet			
NORTEK AQUADOPP			
1. IDENTIFICATION (record all details on this log sheet - separate mooring log sheet not to be used) Contract No. <u>11284</u> Contract Name <u>CHEVRON BIGFOOT</u> Mooring Name <u>NS 653</u> Buoy no <u>WSS</u> Phase <u>547</u> <u>From 295 A 2144</u> <u>Yench</u> <u>Serial head A&D 9582</u> <u>Head Number 6670</u>			
2. INSTRUMENT SPECIFICATION Type: <u>(400kHz / 600kHz / 1Hz / 2Hz)</u> Serial no. <u>#6670</u> Head no. <u>Serial head A&D 9582</u> Firmware <u>Head Number 6670</u> Housing depth rating <u>3 Meg</u> Memory <u>3 Meg</u> Pressur Sensor rating <u>3 Meg</u>			
3. BATTERIES AND ASSEMBLY Battery Voltage: <u>11V</u> Battery Type: <u>Alkaline / Lithium</u> New batteries fitted <u>YES / NO</u> Cell make: <u>Alkaline</u> O rings prepared <u>YES</u> Silica pack installed <u>YES</u>			
4. AQUADOPP SETUP Baud rate set to 9600 <u>YES</u> Deployment file used <u>Y</u> N Dep file name <u>#6670 coil</u> Standard settings Freq <u>400</u> Mounting: <u>Buoy / Mooring line / Fixed</u> Profile interval (s) <u>600</u> No. of cells <u>20</u> Cell size (m) <u>4</u> Env: <u>Coastal / River / Deep (>300m) / Open ocean</u> Use Advanced Settings <u>YES</u> Advanced settings Avg interval (s) <u>600</u> Blanking distance (m) <u>1.48</u> Compass upd rate (s) <u>1</u> Coord: <u>ENU / XYZ / Beam</u> Power level: Low / <u>High</u> File wrapping <u>NO</u> Measured sal value (ppt) <u>35</u> Or Fixed value (m/s) <u>None</u> Wave bursts <u>None</u> Cell size (m) <u>None</u> No. of samples <u>None</u> Sampling rate <u>None</u> Interval (s) <u>None</u> Analog input 1 <u>None</u> Analog input 2 <u>None</u>			
DEPLOYMENT Check transducer heads are clean <u>YES</u> Pressure sensor checked and clean <u>YES</u> Start time and date <u>08 APR 18 @ 18:10</u> Configuration file name <u>#6670 dp</u> Set clock to GMT <u>YES</u> Verified audible click <u>YES</u> Secured in buoy <u>Y</u> N Secured opposite rudder and x-beam is angled away from keel weight <u>YES</u> If secured / mounted otherwise, please specify <u>clock error = zero</u> Initials <u>PUGW</u> Date <u>08 APR 18</u>			
5. RECOVERY Date and time of recovery (GMT) <u>20 OCT 2018 @ 15:57</u> Data downloaded <u>YES</u> File name <u>6670BF02</u> Stopped logging at (GMT) <u>20 OCT 2018 19:50 Buoy off</u> Data converted <u>YES</u> Time difference <u>2157 Insured off</u> Data backed up <u>YES</u> <u>5930276</u> Condition of sensor <u>Good</u> + emailed <u>5,66 Meg</u> Initials <u>PUGW</u> Date <u>20 OCT 2018</u>			
6. NOTES <u>Transducer head has slight crack - see photo</u> <u>clock - 3 min @ Recovery</u>			

Every field must be complete and all boxes must be ticked. Circle selected options and strikethrough others.
Further details of each step in Site Technical Instructions (TI)





FUGRO GEOS *raise EPR*

Site Log Sheet

RD1 LONGRANGER ADCP (SELF CONTAINED) *Demob*

1. IDENTIFICATION (Essential reference to mooring log sheet with deployment details)
Contract No. *112564* Contract Name *CHEVRON BIGFOOT* Mooring Name *W5053* Phase *SVI Deploy*

2. INSTRUMENT SPECIFICATION AND CONFIGURATION *FAIR 295. A 2095*

ADCP serial no. <i>17588</i>	No. of battery packs <i>4</i>	Battery packs secured <input checked="" type="checkbox"/>
CPU Firmware version <i>50.4</i>	Battery supplier <i>RD1 / A1M / Consolidated</i>	O rings prepared <input checked="" type="checkbox"/>
Memory fitted (MB) <i>256</i>	New battery capacity (Wh) <i>210</i>	Silica gel applied <input checked="" type="checkbox"/>
Head depth rating (m) <i>1500</i>	New batteries fitted <input checked="" type="radio"/> Y <input type="radio"/> N	ADCP correctly fitted in frame <input checked="" type="checkbox"/>
Housing depth rating (m) <i>1500m</i>	Remaining battery life (days) <i>210</i>	Planned orientation <i>upward</i> <input type="radio"/> <i>downward</i> <input checked="" type="radio"/>
Battery type <i>alk / lith</i>	Measured voltage <i>44.8v</i>	Comms settings e.g. RS232, 9600, N, 8, 1 <i>✓</i>

3. PLAN

Power *High / Low* Mode *Narrow / Wide* Data storage *Internal / External* *enabled serial ✓*

Choices	Consequences
Deployment Duration (days) <i>210</i>	First Bin Range (m) <i>30</i>
Interval (hh:mm:ss) <i>10min</i>	Last Bin Range (m) <i>410</i>
Salinity (ppt) <i>35</i>	Max range (m) <i>414.33</i>
Temperature <i>20</i>	Battery Usage (Wh) <i>(1513) 3.46ah</i>
Pings Per Ensemble <i>40</i>	Temperature (Deg C) <i>20</i>
Number of Bins <i>20</i>	Standard Deviation (cm/s) <i>0.97</i>
Bin Size (m) <i>20</i>	Byte Ensembles <i>554</i>
	Storage Required (MB) <i>15.98</i>

Advanced settings

Transducer Depth (m) <i>10</i>	Expert settings
Magnetic Variation (deg) <i>0</i>	Blank after transmit (m) <i>10.31</i>
Ping interval (secs) <i>15</i>	Ambiguity velocity <i>1.75</i>
Ping immediately After Deployment <i>Y</i> <input checked="" type="radio"/> <input type="radio"/> N	
Time and Date of 1st ping <i>08 APR 18 @ 1630 GMT</i>	

4. START UP

Set ADCP's Clock - set to GMT <input checked="" type="checkbox"/>	Commands sent to ADCP <input checked="" type="checkbox"/>	Details on mooring log sheet <input checked="" type="checkbox"/>
Compass Verification <input checked="" type="checkbox"/>	ADCP pinging audible <input checked="" type="radio"/> Y <input type="radio"/> N	
Pre-deployment Tests <input checked="" type="checkbox"/>	Final .whp filename <i>BGF-7</i>	
zero pressure sensor <input checked="" type="checkbox"/>	Files backed up <input checked="" type="radio"/> Y <input type="radio"/> N	
Memory erased <input checked="" type="checkbox"/>	In water test conducted <input checked="" type="radio"/> Y <input type="radio"/> N	Initials <i>PVGW</i> Date <i>8 APR 18</i>

5. RECOVERY

Switch off date and time (GMT) <i>12 PM 2018 2048 UTC</i>	Data filename <i>BGF-7000</i>	Data backed up <input checked="" type="checkbox"/>
SC data recovered <input checked="" type="checkbox"/>	Internal clock error <i>12 min</i>	
	Data inspected and satisfactory <input checked="" type="checkbox"/>	Initials <i>NIR</i> Date <i>20 OCT 2018</i>

NOTES

START ON THE HOUR / OR 10 MIN

** STOPPED ON 17TH JULY 2018 **

Every field must be complete and all boxes must be ticked. Circle selected options and strikethrough others.

Further details of each step in Site Technical Instructions (TI) [\Site_Technical_Instructions\SiteTI_RD1_LR_ADCP_SC.doc](#)



FUGRO GEOS

Site Log Sheet



RDI WORKHORSE ADCP (SELF CONTAINED)

Demob

1. IDENTIFICATION (Essential reference to mooring log sheet with deployment details)			
Contract No. <u>112564</u>	Contract Name <u>Chevron Big Foot</u>	Mooring Name <u>Big Foot</u>	Phase <u>MOOR SWAP</u>
2. INSTRUMENT SPECIFICATION			
Serial no. <u>20237</u>	Bottom track fitted <u>Y</u> <input checked="" type="radio"/> <u>N</u>	Memory fitted (MB) <u>512</u>	
Frequency (kHz) <u>600 kHz</u>	Waves capability <u>Y</u> <input checked="" type="radio"/> <u>N</u>	Planned orientation <u>upward</u> <input checked="" type="radio"/> <u>downward</u>	
CPU Firmware version <u>50.4</u>	Housing depth rating (m) <u>600</u>		
3. PLAN ABCDE			
Deployment/CMD name <u>600 mhp</u>			
Choices			
No of bins <u>25</u>	First depth cell (m) <u>3</u>	Wave commands <u>Y</u> <input checked="" type="radio"/> <u>N</u>	
Bin size (m) <u>1</u>	Last depth cell (m) <u>27</u>	Burst Duration (min)	
Pings per ensemble <u>90</u>	Predicted max range (m) <u>455</u>	Burst Interval (min)	
Ensemble Interval <u>30 min</u>	Energy required @C <u>182.08</u>	Samples per Burst	
Deployment duration (days) <u>200</u>	Days spare (see Table 1) <u>74</u>	Collect Motion Data <u>Y</u> <input checked="" type="radio"/> <u>N</u>	
Depth of transducer (m) <u>1980</u>	Velocity std dev (cm/s) <u>5.99</u>	Other commands	
Water salinity (ppt) <u>35</u>	Memory required (MB) <u>5.99</u>		
Magnetic variation set to 0 <input checked="" type="checkbox"/>			
Date & time first ping <u>13 JUN 2018 20:15:00</u>			
Record data internally <input checked="" type="checkbox"/>			
Send data out serial port <input checked="" type="checkbox"/>			
4. BATTERIES AND ASSEMBLY			
Battery type <u>alk / lith</u>	Measured voltage	Silica descent installed <input type="checkbox"/>	
Battery supplier <u>RDI / A1M / Consolidated</u>	New battery capacity (Wh)	Battery connected <input type="checkbox"/>	
No. of battery packs	New batteries fitted <u>Y</u> <input checked="" type="radio"/> <u>N</u>	Instrument sealed <input type="checkbox"/>	
	Comms switch <u>RS232</u> <u>RS422</u>		
5. DEPLOY			
In water test? <u>Y</u> <input checked="" type="radio"/> <u>N</u>	DEPLOY to send CMD file to ADCP <input checked="" type="checkbox"/>	Dummy plug greased & replaced <input checked="" type="checkbox"/>	
Computer clock set to GMT <input checked="" type="checkbox"/>	Start date and time (GMT) <u>13 JUN 2018 20:15:00</u>	Dummy plug tied in <u>Y</u> <input checked="" type="radio"/> <u>N</u>	
TESTADCP filename	Deployment log filename <u>0613.DLG</u>	ADCP pinging audible <input checked="" type="checkbox"/>	
Memory erased <input checked="" type="checkbox"/>	CMD and log files backed up <input checked="" type="checkbox"/>	Chilli applied to Tx <input checked="" type="checkbox"/>	
Pressure sensor zeroed (AZ) <input checked="" type="checkbox"/>		Initials <u>NH2</u> Date <u>13 JUN 2018</u>	
6. RECOVER			
Still pinging? <u>Y</u> <input checked="" type="radio"/> <u>N</u>	Physical condition? <u>Veg Good</u>		
Switch off date and time <u>20092018 @ 2052 GMT</u>	Clock error <u>3 min</u>		
Data recovered <u>Y</u> <input checked="" type="radio"/> <u>N</u>	Data inspected <input checked="" type="checkbox"/>		
Data filename <u>06-13000.000</u>	Data backed up <input checked="" type="checkbox"/>		
	Initials <u>PVGW</u> Date <u>20 JUN 2018</u>		
NOTES			

Every field must be complete and all boxes must be ticked. Circle selected options and strikethrough others.

Further details of each step in Site Technical Instructions (TI)

..Site Technical Instructions\SiteTI RDI WH ADCP SC.doc





FUGRO GEOS

Site Log Sheet

RDI WORKHORSE ADCP (SELF CONTAINED)

Deuch

1. IDENTIFICATION (Essential reference to mooring log sheet with deployment details)
Contract No. 112564 Contract Name Chenier Big Foot Mooring Name Big Foot Phase MOOR SWAP

2. INSTRUMENT SPECIFICATION
Serial no. 20877-17588 Bottom track fitted Y ☒ Memory fitted (MB) 256
Frequency (kHz) 3.00 Waves capability Y ☒ Planned orientation upward ☐ downward ☐
CPU Firmware version 50.4 Housing depth rating (m) 6000

3. PLAN ABCDE Deployment/CMD name 300 whp
Choices
No of bins 25 Consequences
Bin size (m) 5 First depth cell (m) 10
Pings per ensemble 50 Last depth cell (m) 130
Ensemble interval 30 min Predicted max range (m) 120.85
Deployment duration (days) 210 Energy required @C 271.27
Depth of transducer (m) 1990 Days spare (see Table 1)
Water salinity (ppt) 35 Velocity std dev (cm/s) 40
Magnetic variation set to 0 ☐ Memory required (MB) 6.28
Date & time first ping 13 JUN 2018 20:30:00 GMT Other commands
Record data internally ☒
Send data out serial port ☒

4. BATTERIES AND ASSEMBLY
Battery type alk / lith Measured voltage Silica decesent installed ☐
Battery supplier RDI / A1M / Consolidated New battery capacity (Wh) Battery connected ☐
No. of battery packs New batteries fitted Y ☐ N ☐ Instrument sealed ☐
Comms switch RS232 ☐ RS422 ☐

5. DEPLOY
In water test? Y ☒ DEPLOY to send CMD file to ADCP ☒ Dummy plug greased & replaced ☐
Computer clock set to GMT ☒ Start date and time (GMT) 13 JUN 2018 Dummy plug tied in Y ☐ N ☐
TESTADCP filename Deployment log filenameDLG ADCP pinging audible ☐
Memory erased ☒ CMD and log files backed up ☐ Chilli applied to Tx ☐
Pressure sensor zeroed (AZ) ☒ Initials NH2 Date 13 JUN 2018

6. RECOVER
Still pinging? ☒ Y ☐ N Physical condition? Good
Switch off date and time 20 OCT 2018 22:12 UTC Clock error -1min 35sec
Data recovered ☒ Y ☐ N Data inspected ☒
Data filename 0122-000.000 Data backed up ☒
Initials NH2 Date 20 OCT 2018

NOTES 300kHz was swapped out at this mooring visit because it was giving a download issue. Instrument returned to Techstop for downloading -> ?

Every field must be complete and all boxes must be ticked. Circle selected options and strike through others.

Further details of each step in Site Technical Instructions (TI)

\\Site_Technical_Instructions\\SiteTI_RDI_WH_ADCP_SC.doc



A.2 MOORING AND INSTRUMENT LOGSHEETS – SERVICE VISIT 1 RECOVERY

FUGRO GEOS		FUGRO	
Site Log Sheet			
MOORING			
IDENTIFICATION (Essential reference to instrument log sheet) Contract No. <u>112564</u> Contract Name <u>BIG FOOT</u> Mooring Name <u>WS 053</u> Phase <u>MOB SVI Recover</u>			
ANCILARY DETAILS ARGOS BEACONS (mark position on mooring diagram) ADCP Floatation Collar (top) ID No. <u>30043462359</u> Ser No. <u>349</u> SIM500 / SIM2000 Tested <input checked="" type="checkbox"/> Recharged? <input checked="" type="checkbox"/> No ADCP Floatation Collar (bottom) ID No. <u>30043462359</u> Ser No. <u>349</u> SIM500 / SIM2000 Tested <input checked="" type="checkbox"/> Recharged? <input checked="" type="checkbox"/> Yes/No In line/CRP80 Deep/Normal ID No. <u>30043462359</u> Ser No. <u>349</u> SIM500 / SIM2000 Tested <input type="checkbox"/> Recharged? <input type="checkbox"/> Yes/No In line/CRP80 Deep/Normal ID No. <u>30043462359</u> Ser No. <u>349</u> SIM500 / SIM2000 Tested <input type="checkbox"/> Recharged? <input type="checkbox"/> Yes/No			
ACOUSTIC RELEASES DORT / DORT / LRT Address <u>BB</u> GEOS No. <u>200.04171</u> Battery fitted date <u>15 DEC 2017</u> Tested <input checked="" type="checkbox"/> Recharged? <input checked="" type="checkbox"/> Yes/No Batt type? <u>Alk / Lith</u> DORT / DORT / LRT Address <u>99</u> GEOS No. <u>200.42649</u> Battery fitted date <u>15 DEC 2017</u> Tested <input checked="" type="checkbox"/> Recharged? <input checked="" type="checkbox"/> Yes/No Batt type? <u>Alk / Lith</u>			
Mooring spreadsheet stored in contract file <input checked="" type="checkbox"/> Mooring spreadsheet filename <u>?</u> Mooring analysis results stored in contract file <input checked="" type="checkbox"/> Mooring analysis filename <u>?</u> Antifouling applied <input checked="" type="checkbox"/> Dissimilar metals isolated <input checked="" type="checkbox"/>			
DEPLOYMENT Safety/Operations briefing carried out <input checked="" type="checkbox"/> Date time of deployment GMT (release from vessel) <u>2232 GMT</u> Sheet No.2 details completed <input checked="" type="checkbox"/> Release batteries ok post deployment <input checked="" type="checkbox"/> Releases not tilted post deployment <input checked="" type="checkbox"/> Argos details sent to GEOS <input checked="" type="checkbox"/> Box in done <input checked="" type="checkbox"/> Target Latitude <u>26° 54.004741' N</u> Actual Latitude <u>26° 54.0079' N</u> Target Longitude <u>90° 29.113565' W</u> Actual Longitude <u>90° 29.11043' W</u> Depth (m) <u>2</u> Box in filename <u>112564_Box-1N-WAVESCAN-MOBILIZATION 18 DEC 2017</u>			
RECOVERY Release batteries ok pre recovery <input checked="" type="checkbox"/> Date/ time of release of mooring GMT <u>07 APR 2018 @ 1502 GMT</u> Releases not tilted pre recovery <input checked="" type="checkbox"/>			
NOTES <u>Position will move @ SVI deploy</u>			

Every field must be complete and all boxes must be ticked. Circle selected options and strikethrough others.

Further details of each step in Site Technical Instructions (TI)

[\Site_Technical_Instructions\SiteTI_RDI_BB_ADCP_SC.doc](#)

FUGRO GEOS

Site Log Sheet

MOORING



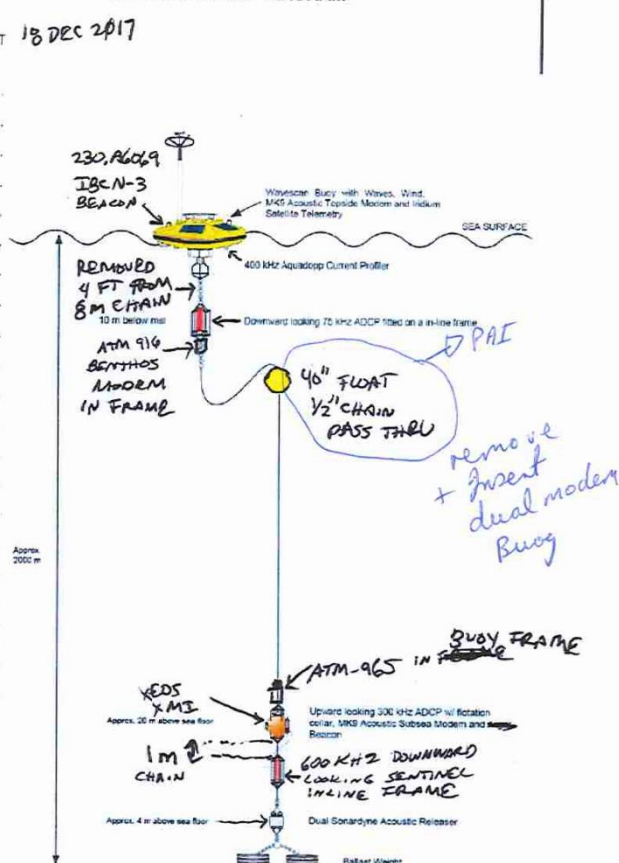
IDENTIFICATION (Essential reference to instrument log sheet)

Contract No. 112564 Contract Name CHEVRON B.16.160T Mooring Name WS 053 Phase MoB

AS LAID MOORING CONFIGURATION

AS LAID MOORING DIAGRAM

Instrument/ buoyancy Type	Serial/geos address number	Height above bed	Depth below msl	In water date/time GMT
WS 053			1820	18 DEC 2017
AQUADOP	66.70		1830	
WHLR	17500		1820	
MODEM ATM-916	52680	✓	1820	
MODEM ATM-916	52510088			
FLAT	HMB-40	51728-001		
Buoy ADCP 40"	525.06159			
RDI WHS 300	21714		2232	
BENTHOS ATM-916	51365	+	2232	
XEOS XMI	23006176		2232	
WH FRAME	525.A3828		2232	
WHS 600KHZ	295.A3459		2232	
DORT	200.04171	(BB)		
DORT	200.A2049	(99)		



Every field must be complete and all boxes must be ticked. Circle selected options and strikethrough others.

Further details of each step in Site Technical Instructions (TI)

\\Site Technical Instructions\\SiteTI RDI BB ADCP SC.doc





FUGRO GEOS		FUGRO	
Site Log Sheet			
OCEANOR WAVESCAN BUOY			
1. IDENTIFICATION (Essential to reference individual sensor log sheets deployed with Wavescan)			
Contract No. 112564		Contract Name <u>CHARVON BIG FOOT</u> Mooring Name <u>WS53</u> Phase <u>MAINT</u>	
2. INSTRUMENT SPECIFICATION AND CONFIGURATION			
Wavescan serial no. <u>WS53</u>		XML latitude <u>26</u>	
Geni/Wavesense type & No 2000 / 3 <u>180</u>		XML longitude <u>-95</u>	
PMU no. <u>180</u>		Water depth (m) <u>2000 m</u>	
TCM Compass present <input checked="" type="checkbox"/> N SN: <u>1032124</u>		Transmitter type <u>Iridium / VHF</u>	
IMEI No. / Radio Freq <u>36025819126900</u>		Details of modem sent to GEOS and activated <input checked="" type="checkbox"/>	
XMLs prepared and tech checked <input checked="" type="checkbox"/>		Wavescan weight on load cell Y <input checked="" type="checkbox"/>	
CLS tracker on <input checked="" type="checkbox"/> N <u>new</u> CLS rebatteried <input checked="" type="checkbox"/> N		CLS tracker No. <u>300434622915</u> Mast cable No. <u>4</u>	
Battery stack total capacity (excl. active radar) no. <u>4</u> Lead <u>4</u> Lithium <u>4</u>		Extra lith for active radar Y <input checked="" type="checkbox"/> (N)	
No. of batteries installed Lead <u>4</u> Lith (excl. active radar) <u>0</u>		Lithium voltages <u>0</u>	
Lead voltages (no charging) <u>13.4</u>			
3. SETUP & TESTING			
Waves <input checked="" type="checkbox"/> N		Met Sensors	
Sample interval: <u>2 Hz</u>		Model & SN	
Samples per burst: 1024 (2048)		Sampling int.	
Duration of burst: 17-mins (34-mins)		Atmospheric press <u>PTB 3335 3320003 3s</u>	
Aquadopp <input checked="" type="checkbox"/> N		Wind speed & dir <u>GILL WINDS 1.5 14110050</u>	
Type: 400kHz / 600kHz / 1Hz / 2Hz		Air temperature <u>OCEANOR AIR 586</u>	
SN: <u>667019582</u>		Humidity <u>N/A</u>	
Opposite rudder & x-beam away from keel <input checked="" type="checkbox"/>		Air temp & humid <u>RS232/485</u>	
AQD log sheet completed <input type="checkbox"/>		Solar radiation <u>N/A</u>	
ADCP <input checked="" type="checkbox"/> N		Active radar <u>N/A</u>	
SN <u>21714/20241</u>		Passive radar <u>ECHOMAX</u>	
Frequency <u>300 / 600 KHz</u>		Flashlight <u>YUP</u>	
ADCP log sheet completed <input type="checkbox"/> ~0		Other (specify) <u>YUP</u>	
SBE Y <input checked="" type="checkbox"/> N		WLR <input checked="" type="checkbox"/> N SN <u>17588</u>	
SN <u>21714/20241</u>		WLR log sheet completed <input checked="" type="checkbox"/>	
Type <u>ADCP</u>		Benthos modem <input checked="" type="checkbox"/> N SN <u>52365 (BOTTOM)</u>	
SBE log sheet completed <input type="checkbox"/>		Modem log sheet completed <input type="checkbox"/> <u>52680 (TOP)</u>	
		DONT NAV	
		Complete page 2 servicing & testing checklist <input checked="" type="checkbox"/>	
		Initials <u>cam</u> Date <u>18 DEC 2017</u>	
4. START UP & DEPLOYMENT			
Data, log & xmls copied & backed up <input checked="" type="checkbox"/>		Sensor cables secure <input checked="" type="checkbox"/>	
Data & log files cleared <input checked="" type="checkbox"/>		Mast cable tightened <input checked="" type="checkbox"/>	
New xmls uploaded & buoy restarted <input checked="" type="checkbox"/>		Bird spikes attached <input checked="" type="checkbox"/>	
Name of new xmls <u>WS_53_MTO_15 DEC 17</u>		Weather or security cover installed <input checked="" type="checkbox"/>	
Lead acid batteries recharged <input checked="" type="checkbox"/>		Canister filled with nitrogen <input checked="" type="checkbox"/>	
		All lid bolts secured <input checked="" type="checkbox"/>	
		Oring seated correctly <input checked="" type="checkbox"/>	
		Oring not pinched <input checked="" type="checkbox"/>	
		Buoy turned on <input checked="" type="checkbox"/>	
		Date/time deployed GMT <input checked="" type="checkbox"/>	
		Initials <u>cam</u> Date <u>18 DEC 2017</u>	
5. RECOVERY			
Date/Time of recovery GMT <u>7 APR 18 15029MT</u>		Downloaded data/pff files <input checked="" type="checkbox"/>	
Condition <u>GOOD</u>		Downloaded Syslog <input checked="" type="checkbox"/>	
Purged with nitrogen <input checked="" type="checkbox"/>		Downloaded xmls <input checked="" type="checkbox"/>	
Purge date <u>7 APR 18</u>		All files backed up <input checked="" type="checkbox"/>	
Wavescan weight on load cell <u>1002LT</u>		Initials <u>PVCH</u> Date <u>7 APR 2018</u>	
NOTES <u>GPS was missing at recovery - pulled off by fishermen</u> <u>Fishing line and hook around shawlbulb @ 751412 adcp</u>			

Every field must be complete and all boxes must be ticked. Circle selected options and strikethrough others.

Further details of each step in Site Technical Instructions (TI) ..Site_Technical_Instructions\SiteTI_Wavescan



FUGRO GEOS

Site Log Sheet

WAVESCAN MOORING SERVICING CHECKLIST

IDENTIFICATION (Essential reference to instrument log sheet)

Contract No. 112564 Contract Name Chevron Mooring Name MS053 Phase Mob

1. VISUAL INSPECTION / CHECKS:

Visual inspection for damage / corrosion
Purged with nitrogen / air / checklist complete
Solar panels inspected / cleaned
Mast inspected / cleaned
Check & clean mast cable and mast connection orings
Sensor ring inspected / cleaned
Lid clamps in good condition. Anti-seize lid bolts.
Keel plate inspected / cleaned
Keel weight inspected for damage / cracks
Floatation clamps inspected / replaced
Clear float vent holes
External / subsea cables inspected for damage
Rudder in place / securing OK
Tag line points in place / securing OK
Lifting ring inspected
Mast bolts replaced, tighten to 70Nm (max)
Sensor ring bolts replaced, tighten to 40Nm (max)
Sensor / mast ring repainted
Wind sensor aligned to buoy north

Aquadopp opposite rudder / x-beam away from keel
Lid o-ring replaced & greased.
Lid o-ring seated correctly and not pinched
Connectors on lid inspected / cleaned
Dummy / blanking plugs present
Internal cables inspected
Internal units aligned to buoy north
Ext TCM compass present, aligned to buoy north
Anodes replaced on keel / canister
Floatation weighed (< 150kg each)
Floatation cleaned & antifouled
GEOS contact details present
Check battery stack cable & fuses
Air pressure / vent hoses clear
Extended purge system present / installed
Pressure relief valve present / installed
Check DC/DC convertor & cable screws
Desiccant bag in electronics can
Amalgamate GPS and Iridium mast connections
Mast cable tightened

2. SYSTEM TESTS / PROCEDURES:

Old data, log & xmls downloaded, cleared & backed-up
New xmls loaded. Name:
Wind adjustment channel set to Compass Correction
Real-time data observed in 'Display / Menu'

Real-time data observed transmitting
Set system & hardware clocks to GMT
Solar panels charging batteries
GPS values correct

3. SENSOR TESTS:

	Predeployment values			Post deployment values		
	Date & time (GMT)	Buoy	Test instrument	Date & time (GMT)	Buoy (Tx data)	Test instrument
Air pressure (hPa)						
Air temperature (°C)						
Air humidity (%)						
Wind speed (~m/s)						
Wind dir 1						
Wind dir 1 +90°				N/A		
Ext Compass dir 1			N/A	N/A		
Ext Compass dir 1+90°			N/A	N/A		
AQD speed (Bin1)			N/A			N/A
AQD dir (Bin1)			N/A			N/A
AQD temp (°C)			N/A			N/A
Hs			N/A			N/A
Tp			N/A			N/A
Mdir			N/A			N/A
Wavesense Compass			N/A			
Heave			N/A	Do these change when the buoy is moved? Y N		
Pitch			N/A			
Roll			N/A			
Initials				Date		

NOTES



FUGRO GEOS		FUGRO	
Site Log Sheet			
RDI LONGRANGER ADCP (DIRECT READING)			
1. IDENTIFICATION (Essential reference to Rig/Drillship Installation log sheet with deployment details)			
Contract No. 112564	Contract Name BIG FOOT		
Rig/Installation WSP53	Visit No. MOB SVI Recovery		
2. INSTRUMENT DETAILS			
Instrument s/n 17588	RDI Firmware Version 50.40		
Frequency (kHz) 75	Planned Orientation Upward / Downward		
Beam angle (degrees) 20 / 30	Depth rating - Transducer/housing 1500m		
Housing length cms	Comms Settings (e.g. 9600,n,8,1?) 9600 n 8 1		
	Coms switch set to RS232 RS422		
3. TESTING			
Run built in tests (TestADCP)	Y / N	Clock set to correct date/time (GMT)	Y / N
Printout Attached ?	Y / N	Backed up testlog files	Y / N
Passed all tests ?	Y / N		
4. PRE-DEPLOYMENT CHECKS SERVICED IN SHOP			
O' rings checked ?	Y / N	Anodes checked ?	Y / N
Silica gel fitted ?	Y / N	Transducer faces OK	Y / N
Connector OK ?	Y / N	Rigadcp cfg file stored	Y / N
Anode test - check for continuity between the head anodes and the end cap anode			
ADCP isolation test - With the ADCP lifted off or isolated from the deck, ensure that there is no continuity between the deck and instrument.			
5. DATE / TIME DETAILS (GMT)			
ADCP deployed	Date / Time 213 DEC 2017 (IN SHOP)	Operator Initials	
Rig ADCP switched on	Date / Time	Operator Initials	
Rig ADCP switched off	Date / Time 7 APR 18 @ 1500GMT	Operator Initials	
ADCP Recovery OFF	Date / Time 8 APR 18 @ 1527GMT	Operator Initials	PVGW
6. RigADCP Software Setup			
Settings	QC Options		
Rig ADCP Version Number	% Good (Display Threshold)	Y / N	
Operating Mode Broadband (Longranger) NB	% Good Minimum		
Power Low / High	Check ADCP Type Ticked ?	Y / N	
Bin Length	Set PC Time to ADCP's	Y / N	
No of Bins	Serial Ports		
Blank after Transmit	ADCP Settings (eg COM1, 9600)		
Transducer Depth	Raw Data Broadcast	Dissabled / enabled	
Default Pitch/Roll	Raw Data Broadcast Settings		
Default Heading	Predicted Data Broadcast		
Ensemble Interval	Predicted Broadcast Settings	Dissabled / enabled	
Time between pings	No of forecast bins		
Pings per ensemble	File Locations		
% Good Minimum	File Stem		
Default Water Temp	Raw Data Storage (e.g. C:/)		
Default Salinity	Summary Data (e.g. C:/)		
Extra Commands Y / N	Password Protected	Y / N	
List Extra Commands	Password		
	Status Bar Message		





A.3 MOORING AND INSTRUMENT LOGSHEETS – SERVICE VISIT 1 DEPLOYMENT

FUGRO GEOS		FUGRO	
Site Log Sheet			
MOORING			
IDENTIFICATION (Essential reference to instrument log sheet)			
Contract No. <u>112564</u>	Contract Name <u>Chevron Bigfoot</u>	Mooring Name <u>WS053</u>	Phase <u>SVI deploy</u>
ANCILARY DETAILS			
ARGOS BEACONS (mark position on mooring diagram)		Tested	Rebattered?
ADCP Floatation Collar (top) ID No. <u>300434062359</u> Ser No. <u>343</u>	SIM500./SIM2000	<input type="checkbox"/>	Yes/No
ADCP Floatation Collar (bottom) ID No. <u>300434062359</u> Ser No. <u>343</u>	SIM500./SIM2000	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> Yes/No
In line/CRP80 Deep/Normal ID No. Ser No.	SIM500./SIM2000	<input type="checkbox"/>	Yes/No
In line/CRP80 Deep/Normal ID No. Ser No.	SIM500./SIM2000	<input type="checkbox"/>	Yes/No
ACOUSTIC RELEASES		Tested	Rebattered? Batt type?
<input checked="" type="checkbox"/> DORT / ORT / LRT Address <u>BB</u> GEOS No. <u>200 04171</u> Battery fitted date <u>7 APR 2018</u>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> Yes/No <input checked="" type="checkbox"/> Alk Lith
<input checked="" type="checkbox"/> DORT / ORT / LRT Address <u>99</u> GEOS No. <u>200 A2449</u> Battery fitted date <u>7 APR 2018</u>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> Yes/No <input checked="" type="checkbox"/> Alk Lith
Mooring spreadsheet stored in contract file <input type="checkbox"/>	Mooring spreadsheet filename.....		
Mooring analysis results stored in contract file <input type="checkbox"/>	Mooring analysis filename.....		
Antifouling applied <input type="checkbox"/>	Dissimilar metals isolated <input checked="" type="checkbox"/>		
DEPLOYMENT			
Safety/Operations briefing carried out <input checked="" type="checkbox"/>	Date time of deployment GMT (release from vessel)		
Sheet No 2 details completed <input checked="" type="checkbox"/>	<u>09 APR 2018 @ 1750 GMT</u>		
Release batteries ok post deployment <input checked="" type="checkbox"/>			
Releases not tilted post deployment <input checked="" type="checkbox"/>	Box in filename <u>112564 - Boxin WS - SVI Deploy</u>		
Argos details sent to GEOS <input checked="" type="checkbox"/>	<u>09 APR 2018</u>		
Box in done <input checked="" type="checkbox"/>			
Target Latitude <u>26° 54.990</u>	Actual Latitude <u>26° 55.02956</u>		
Target Longitude <u>-90° 30.1678</u>	Actual Longitude <u>-90° 30.21161</u>		
Depth (m) <u>1954m (CTD)</u>	<u>1959m (CTD) 1934 (DORT)</u>		
RECOVERY			
Release batteries ok pre recovery <input checked="" type="checkbox"/>	Date/ time of release of mooring GMT		
Releases not tilted pre recovery <input checked="" type="checkbox"/>	<u>09 APR 2018 @ 1750 GMT</u>		
NOTES <u>New location - shallower depth</u>			

Every field must be complete and all boxes must be ticked. Circle selected options and strikethrough others.

Further details of each step in Site Technical Instructions (TI)

..Site Technical Instructions\SiteTI RDI BB ADCP SC.doc



FUGRO GEOS



Site Log Sheet

MOORING

IDENTIFICATION (Essential reference to instrument log sheet)				
Contract No. 112544		Contract Name CHEVRON Bigfoot		Mooring Name WS053
		Phase SVI deploy		
AS LAID MOORING CONFIGURATION		AS LAID MOORING DIAGRAM		
Instrument/ buoyancy Type	Serial/geos address number	Height above bed	Depth below msl	In water date/time GMT
WS053				
ARUNDP	#6670/295.A2144			
WHLR	#17588/295.A2095			
MODEM ATM 916	#52689			
INLINE FRAME	#525-10088			
* = new instruments				
* UP Modem	#57435			
ATM 925-LS1-B				
* 40 Modem Buoy	J06911-004			
(750m - no FAIM)				
* Down Modem	#57436			
ATM 925 LS1-B				
Buoy 40"	525.06159			
* WH 300KHz	#20877/295.A3689			
* BENTROS ATM	#52680 50084/200.1B019			
XEOS XMT	236.D6176			
WH INLINE FRAME	525.A3828			
* WH 600KHz	#20237/295.A3455			
DORT	200.04171 (BB)			
DORT	200.A2049 (99)			
BALLAST	2X 4RL			

Every field must be complete and all boxes must be ticked. Circle selected options and strikethrough others.

Further details of each step in Site Technical Instructions (TI)

\\Site Technical Instructions\\SiteTI_RDI_BB_ADCP_SC.doc



CHEVRON USA INC.
BIG FOOT METOCEAN MEASUREMENT STUDY FINAL DATA REPORT



FUGRO GEOS		FUGRO	
Site Log Sheet			
OCEANOR WAVESCAN BUOY			
1. IDENTIFICATION (Essential to reference individual sensor log sheets deployed with Wavescan)			
Contract No. <u>112564</u>		Contract Name <u>CHEVRON BIGFOOT</u> Mooring Name <u>WS053</u> Phase <u>SVI Deploy</u>	
2. INSTRUMENT SPECIFICATION AND CONFIGURATION <u>GENI FAIR SID. A6096</u>			
Wavescan serial no. <u>WS053</u>		XML latitude <u>26</u>	
Geni/Wavesense type & No <u>2000 / 3</u>		XML longitude <u>-95</u>	
PMU no. <u>180</u>		Water depth (m) <u>2000M</u>	
TCM Compass present <u>Y</u> N SN: <u>1032124</u>		Transmitter type <u>idium</u> / VHF	
IMEI No. / Radio Freq <u>300025010726900</u>		Details of modem sent to GEOS and activated <input checked="" type="checkbox"/>	
XMLs prepared and tech checked <input checked="" type="checkbox"/> <u>new XMLS</u>		Wavescan weight on load cell <u>Y</u> N	
CLS tracker on <u>Y</u> N <u>CLs rebatteried</u> Y N CLS tracker No. <u>3004340622975</u> Mast cable No. <u>22975</u>			
Battery stack total capacity (excl. active radar) no. <u>Lead</u> Lithium			
No. of batteries installed <u>Lead</u> Lith (excl. active radar)		Extra lith for active radar Y N	
Lead voltages (no charging)		Lithium voltages	
3. SETUP & TESTING			
Waves <u>Y</u> N		Met Sensors Model & SN Sampling int.	
Sample interval: <u>30mins</u>		Atmospheric press <u>PTB 330 / J332000 / 3 not configured</u>	
Samples per burst: 1024 / <u>2048</u>		Wind speed & dir <u>GILL WINDSONIC 14410050</u>	
Duration of burst: 17-mins / <u>34-mins</u>		Air temperature <u>Oceanor #588</u>	
Aquadopp <u>Y</u> N		Humidity <u>N/A</u>	
Type: 400kHz / 600kHz / 1Hz / 2Hz		Air temp & humid <u>RS232/485 N/A</u>	
SN: <u>6570 / 9582</u>		Solar radiation <u>N/A</u>	
Opposite rudder & x-beam away from keel <input checked="" type="checkbox"/>		Active radar <u>N/A</u>	
AQD log sheet completed <input checked="" type="checkbox"/>		Passive radar <u>UCOMAX</u>	
ADCP <u>Y</u> N <u>x3</u>		Flashlight <u>yes</u>	
SN <u>20877 / 20237 / 17588</u>		Other (specify)	
Frequency <u>300 / 600 / 75 KHz</u>		WLR <u>Y</u> N SN <u>17588</u>	
ADCP log sheet completed <input checked="" type="checkbox"/>		WLR log sheet completed <input checked="" type="checkbox"/>	
SBE <u>Y</u> N <input type="checkbox"/>		Benthos modem <u>Y</u> N SN <u>52600 (TOP)</u>	
SN <u>50084 (BOT)</u>		Modem log sheet completed <input type="checkbox"/>	
Type <u>300 / 600 / 75 KHz</u>		<u>57435 mid (UPPER)</u>	
SBE log sheet completed <input type="checkbox"/>		<u>57436 MID LOWER</u>	
Complete page 2 servicing & testing checklist <input type="checkbox"/>			
Initials <u>PUGW</u> Date <u>09 APR 18</u>			
4. START UP & DEPLOYMENT			
Sensor cables secure <input checked="" type="checkbox"/>		<input checked="" type="checkbox"/> Oring seated correctly	
Data, log & xmls copied & backed up <input checked="" type="checkbox"/>		<input checked="" type="checkbox"/> Oring not pinched	
Data & log files cleared <input checked="" type="checkbox"/>		<input checked="" type="checkbox"/> Buoy turned on	
New xmls uploaded & buoy restarted <input checked="" type="checkbox"/>		<input checked="" type="checkbox"/> Date/time deployed GMT	
Name of new xmls <u>WS053 XML 8/18/2018</u>		<input checked="" type="checkbox"/>	
Lead acid batteries recharged <input checked="" type="checkbox"/>		All lid bolts secured <input checked="" type="checkbox"/>	
Initials <u>PUGW</u> Date <u>09 APR 18</u>			
5. RECOVERY			
Downloaded data/pff files <input type="checkbox"/>		File name	
Date/Time of recovery GMT		Downloaded Syslog <input type="checkbox"/>	
Condition		Downloaded xmls <input type="checkbox"/>	
Purged with nitrogen <input type="checkbox"/>		Purge date	
All files backed up <input type="checkbox"/>		Date	
Wavescan weight on load cell		Initials	
NOTES <u>new GENI FITTED</u> <u>2 additional mid water moderns</u>			
<u>new Lower modem fitted #50084 (model 965 LF OMNI)</u>			
<u>new 300+600 ADCPs SWAPPED FAIR 200.18019</u>			

Every field must be complete and all boxes must be ticked. Circle selected options and strikethrough others.

Further details of each step in Site Technical Instructions (TI) ..Site_Technical_Instructions\SiteTI_Wavescan



FUGRO GEOS

Site Log Sheet



WAVESCAN MOORING SERVICING CHECKLIST

IDENTIFICATION (Essential reference to instrument log sheet)

Contract No. 112564 Contract Name Chevron Bigfoot Mooring Name Bigfoot Phase Service

1. VISUAL INSPECTION / CHECKS:

Visual inspection for damage / corrosion	<input checked="" type="checkbox"/>	Aquadopp opposite rudder / x-beam away from keel	<input checked="" type="checkbox"/>
Purged with nitrogen / air / checklist complete	<input checked="" type="checkbox"/>	Lid o-ring replaced & greased.	<input checked="" type="checkbox"/>
Solar panels inspected / cleaned	<input checked="" type="checkbox"/>	Lid o-ring seated correctly and not pinched	<input checked="" type="checkbox"/>
Mast inspected / cleaned	<input checked="" type="checkbox"/>	Connectors on lid inspected / cleaned	<input checked="" type="checkbox"/>
Check & clean mast cable and mast connection orings	<input checked="" type="checkbox"/>	Dummy / blanking plugs present	<input checked="" type="checkbox"/>
Sensor ring inspected / cleaned	<input checked="" type="checkbox"/>	Internal cables inspected	<input checked="" type="checkbox"/>
Lid clamps in good condition. Anti-seize lid bolts.	<input checked="" type="checkbox"/>	Internal units aligned to buoy north	<input checked="" type="checkbox"/>
Keel plate inspected / cleaned	<input checked="" type="checkbox"/>	Ext TCM compass present, aligned to buoy north	<input checked="" type="checkbox"/>
Keel weight inspected for damage / cracks	<input checked="" type="checkbox"/>	Anodes replaced on keel / canister <u>Struggled</u>	<input checked="" type="checkbox"/>
Floatation clamps inspected / <u>replaced</u>	<input checked="" type="checkbox"/>	Floatation weighed (< 150kg each)	<input checked="" type="checkbox"/>
Clear float vent holes	<input checked="" type="checkbox"/>	Floatation cleaned & antifouled	<input checked="" type="checkbox"/>
External / subsea cables inspected for damage	<input checked="" type="checkbox"/>	GEOS contact details present	<input checked="" type="checkbox"/>
Rudder in place / securing OK	<input checked="" type="checkbox"/>	Check battery stack cable & fuses	<input checked="" type="checkbox"/>
Tag line points in place / securing OK	<input checked="" type="checkbox"/>	Air pressure / vent hoses clear	<input checked="" type="checkbox"/>
Lifting ring inspected	<input checked="" type="checkbox"/>	Extended purge system present / installed	<input checked="" type="checkbox"/>
Mast bolts replaced, tighten to 70Nm (max)	<input checked="" type="checkbox"/>	Pressure relief valve present / installed	<input checked="" type="checkbox"/>
Sensor ring bolts replaced, tighten to 40Nm (max)	<input checked="" type="checkbox"/>	Check DC/DC convertor & cable screws	<input checked="" type="checkbox"/>
Sensor / mast ring repainted	<input checked="" type="checkbox"/>	Desiccant bag in electronics can	<input checked="" type="checkbox"/>
Wind sensor aligned to buoy north	<input checked="" type="checkbox"/>	Amalgamate GPS and Iridium mast connections	<input checked="" type="checkbox"/>
	<input checked="" type="checkbox"/>	Mast cable tightened	<input checked="" type="checkbox"/>

2. SYSTEM TESTS / PROCEDURES:

Old data, log & xmls downloaded, cleared & backed-up	<input checked="" type="checkbox"/>	Real-time data observed transmitting	<input checked="" type="checkbox"/>
New xmls loaded. Name: <u>WSS3_XML_8Feb18</u>	<input checked="" type="checkbox"/>	Set system & hardware clocks to GMT	<input checked="" type="checkbox"/>
Wind adjustment channel set to Compass Correction	<input checked="" type="checkbox"/>	Solar panels charging batteries	<input checked="" type="checkbox"/>
Real-time data observed in 'Display / Menu'	<input checked="" type="checkbox"/>	GPS values correct	<input checked="" type="checkbox"/>

3. SENSOR TESTS:							
Predeployment values				Post deployment values			
	Date & time (GMT)	Buoy	Test instrument		Date & time (GMT)	Buoy (Tx data)	Test instrument
Air pressure (hPa)							
Air temperature (°C)							
Air humidity (%)							
Wind speed (~m/s)							
Wind dir 1							
Wind dir 1 +90°							
Ext Compass dir 1			N/A				N/A
Ext Compass dir 1+90°			N/A				N/A
AQD speed (Bin1)			N/A				N/A
AQD dir (Bin1)			N/A				N/A
AQD temp (°C)			N/A				N/A
Hs			N/A				N/A
Tp			N/A				N/A
Mdir			N/A				N/A
Wavesense Compass			N/A				N/A
Heave			N/A				N/A
Pitch			N/A				N/A
Roll			N/A				N/A

Do these change when the buoy is moved? Y N

NOTES





FUGRO GEOS Site Log Sheet NORTEK AQUADOPP					
1. IDENTIFICATION (record all details on this log sheet - separate mooring log sheet not to be used)					
Contract No. <u>11254</u> Contract Name <u>Chevron Bigfoot</u> Mooring Name <u>NSB53</u> Buoy no. <u>WSS</u> Phase <u>SVI deploy</u>					
2. INSTRUMENT SPECIFICATION					
Type: <u>400kHz</u> / 600kHz / 1Hz / 2Hz Serial no. <u>#6670</u> Head no. Pressur Sensor rating Firmware Housing depth rating Memory <u>3 meg</u>					
3. BATTERIES AND ASSEMBLY					
Battery Type: <u>Alkaline</u> / Lithium New batteries fitted <u>YES</u> / NO Battery Voltage: <u>11V</u> Cell make: O rings prepared <input checked="" type="checkbox"/> Silica pack installed <input checked="" type="checkbox"/>					
4. AQUADOPP SETUP					
Baud rate set to 9600 <input checked="" type="checkbox"/> Deployment file used <u>Y</u> Dep file name <u>#6670 coil</u>					
<table style="width: 100%; border: none;"> <tr> <td style="width: 33%; vertical-align: top;"> Standard settings Freq <u>400</u> Mounting: <u>Buoy</u> / Mooring line / Fixed Profile interval (s) <u>600</u> No. of cells <u>20</u> Cell size (m) <u>4</u> Env: <u>Coastal</u> / River / Deep (>300m) / Open ocean Use Advanced Settings <input checked="" type="checkbox"/> </td> <td style="width: 33%; vertical-align: top;"> Advanced settings Avg interval (s) <u>600</u> Blanking distance (m) <u>1.48</u> Compass upd rate (s) <u>1</u> Coord: <u>ENU</u> / XYZ / Beam Power level: Low / <u>High</u> File wrapping <input type="checkbox"/> <u>none</u> Measured sal value (ppt) <u>35</u> Or Fixed value (m/s) </td> <td style="width: 33%; vertical-align: top;"> Wave bursts <input type="checkbox"/> <u>none</u> Cell size (m) No. of samples Sampling rate Interval (s) Analog input 1 <u>None</u> Analog input 2 <u>None</u> </td> </tr> </table>			Standard settings Freq <u>400</u> Mounting: <u>Buoy</u> / Mooring line / Fixed Profile interval (s) <u>600</u> No. of cells <u>20</u> Cell size (m) <u>4</u> Env: <u>Coastal</u> / River / Deep (>300m) / Open ocean Use Advanced Settings <input checked="" type="checkbox"/>	Advanced settings Avg interval (s) <u>600</u> Blanking distance (m) <u>1.48</u> Compass upd rate (s) <u>1</u> Coord: <u>ENU</u> / XYZ / Beam Power level: Low / <u>High</u> File wrapping <input type="checkbox"/> <u>none</u> Measured sal value (ppt) <u>35</u> Or Fixed value (m/s)	Wave bursts <input type="checkbox"/> <u>none</u> Cell size (m) No. of samples Sampling rate Interval (s) Analog input 1 <u>None</u> Analog input 2 <u>None</u>
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DEPLOYMENT					
<table style="width: 100%; border: none;"> <tr> <td style="width: 33%;"> Check transducer heads are clean <input checked="" type="checkbox"/> Start time and date <u>08 APR 18 @ 18:10</u> Set clock to GMT <input checked="" type="checkbox"/> Secured in buoy <u>Y</u> Secured opposite rudder and x-beam is angled away from keel weight <input checked="" type="checkbox"/> If secured / mounted otherwise, please specify Initials <u>PUGW</u> Date <u>08 APR 18</u> </td> <td style="width: 33%;"> Pressure sensor checked and clean <input checked="" type="checkbox"/> Configuration file name <u>#6670.dcp</u> Verified audible click <input checked="" type="checkbox"/> </td> <td style="width: 33%;"> Erased recorder <input checked="" type="checkbox"/> Enable serial output / TellTale <input type="checkbox"/> Verified logging internally <input checked="" type="checkbox"/> </td> </tr> </table>			Check transducer heads are clean <input checked="" type="checkbox"/> Start time and date <u>08 APR 18 @ 18:10</u> Set clock to GMT <input checked="" type="checkbox"/> Secured in buoy <u>Y</u> Secured opposite rudder and x-beam is angled away from keel weight <input checked="" type="checkbox"/> If secured / mounted otherwise, please specify Initials <u>PUGW</u> Date <u>08 APR 18</u>	Pressure sensor checked and clean <input checked="" type="checkbox"/> Configuration file name <u>#6670.dcp</u> Verified audible click <input checked="" type="checkbox"/>	Erased recorder <input checked="" type="checkbox"/> Enable serial output / TellTale <input type="checkbox"/> Verified logging internally <input checked="" type="checkbox"/>
Check transducer heads are clean <input checked="" type="checkbox"/> Start time and date <u>08 APR 18 @ 18:10</u> Set clock to GMT <input checked="" type="checkbox"/> Secured in buoy <u>Y</u> Secured opposite rudder and x-beam is angled away from keel weight <input checked="" type="checkbox"/> If secured / mounted otherwise, please specify Initials <u>PUGW</u> Date <u>08 APR 18</u>	Pressure sensor checked and clean <input checked="" type="checkbox"/> Configuration file name <u>#6670.dcp</u> Verified audible click <input checked="" type="checkbox"/>	Erased recorder <input checked="" type="checkbox"/> Enable serial output / TellTale <input type="checkbox"/> Verified logging internally <input checked="" type="checkbox"/>			
5. RECOVERY					
<table style="width: 100%; border: none;"> <tr> <td style="width: 33%;"> Date and time of recovery (GMT) Stopped logging at (GMT) Time difference Condition of sensor Initials Date </td> <td style="width: 33%;"> Data downloaded <input type="checkbox"/> Data converted <input type="checkbox"/> Data backed up <input type="checkbox"/> </td> <td style="width: 33%;"> File name </td> </tr> </table>			Date and time of recovery (GMT) Stopped logging at (GMT) Time difference Condition of sensor Initials Date	Data downloaded <input type="checkbox"/> Data converted <input type="checkbox"/> Data backed up <input type="checkbox"/>	File name
Date and time of recovery (GMT) Stopped logging at (GMT) Time difference Condition of sensor Initials Date	Data downloaded <input type="checkbox"/> Data converted <input type="checkbox"/> Data backed up <input type="checkbox"/>	File name			
6. NOTES					
<u>Transducer head has slight crack - see photos</u> <u>clock - 3 mins @ Recovery</u>					

Every field must be complete and all boxes must be ticked. Circle selected options and strikethrough others.
Further details of each step in Site Technical Instructions (TI)





FUGRO GEOS



Site Log Sheet

TDI LONGRANGER ADCP (SELF CONTAINED)

1. IDENTIFICATION (Essential reference to mooring log sheet with deployment details)			
Contract No.	112564	Contract Name	CHEVRON BIGFOOT
Mooring Name	WS053	Phase	SVI Deploy
2. INSTRUMENT SPECIFICATION AND CONFIGURATION			
ADCP serial no.	17588	No. of battery packs	4
CPU Firmware version	50.4	Battery supplier	RD1 / A1M / Consolidated
Memory fitted (MB)	256	New battery capacity (Wh)	
Head depth rating (m)	1500	New batteries fitted	Y N
Housing depth rating (m)	1500m	Remaining battery life (days)	210
Battery type	alk / lith	Measured voltage	44.8v
		Planned orientation	upward downward
		Comms settings e.g. RS232, 9600, N, 8, 1	
3. PLAN			
Power	High / Low	Mode	Narrow / Wide
		Data storage	Internal / External
Choices		Consequences	
Deployment Duration (days)	210	First Bin Range (m)	30
Interval (hh:mm:ss)	10min	Last Bin Range (m)	410
Salinity (ppt)	35	Max range (m)	411.33
Temperature	20	Battery Usage (Wh)	1513
Pings Per Ensemble	40	Temperature (Deg C)	20
Number of Bins	20	Standard Deviation (cm/s)	0.97
Bin Size (m)	20	Byte Ensembles	554
		Storage Required (MB)	15.98
Advanced settings		Expert settings	
Transducer Depth (m)	10	Blank after transmit (m)	10.31
Magnetic Variation (deg)	0	Ambiguity velocity	1.75
Ping interval (secs)	15		
Ping immediately After Deployment	Y N		
Time and Date of 1st ping	08 APR 18 @ 1630 GMT		
4. START UP			
Set ADCP's Clock - set to GMT	<input checked="" type="checkbox"/>	Commands sent to ADCP	<input checked="" type="checkbox"/>
Compass Verification	<input checked="" type="checkbox"/>	ADCP pinging audible	Y N
Pre-deployment Tests	<input checked="" type="checkbox"/>	Final .whp filename	BCE-7
zero pressure sensor	<input checked="" type="checkbox"/>	Files backed up	Y N
Memory erased	<input checked="" type="checkbox"/>	In water test conducted	Y N
		Initials	PVGZ
		Date	8 APR 18
5. RECOVERY			
Switch off date and time (GMT)		Data filename	
		Data backed up	<input type="checkbox"/>
		Internal clock error	
SC data recovered	<input type="checkbox"/>	Data inspected and satisfactory	<input type="checkbox"/>
		Initials	
		Date	
NOTES			
START ON THE HOUR / OR 10MINS			

Every field must be complete and all boxes must be ticked. Circle selected options and strikethrough others.

Further details of each step in Site Technical Instructions (TI) [\Site Technical Instructions\SiteTI_RDI_LR_ADCP_SC.doc](#)





FUGRO GEOS



Site Log Sheet

RED WORKHORSE ADCP (SELF CONTAINED)

300KHz

1. IDENTIFICATION (Essential reference to mooring log sheet with deployment details)			
Contract No.	112564	Contract Name	BIGFOOT CHEVRON
Mooring Name	BEWS	Phase	SVI Deploy
2. INSTRUMENT SPECIFICATION			
Serial no.	20877	Bottom track fitted	Y <input checked="" type="radio"/> N
Frequency (kHz)	300	Waves capability	Y <input checked="" type="radio"/> N
CPU Firmware version	50.41	Housing depth rating (m)	6000m
Memory fitted (MB)	256	Planned orientation	upward downward
3. PLAN ABCDE			
Deployment/CMD name	BFT-3		
Choices	Consequences	Wave commands	Y <input checked="" type="radio"/> N
No of bins	25	First depth cell (m)	10m
Bin size (m)	5m	Last depth cell (m)	130m
Pings per ensemble	50	Predicted max range (m)	120m
Ensemble Interval	30 mins	Energy required @ 271W	0.6 Batts
Deployment duration (days)	210	Days spare (see Table 1)	-
Depth of transducer (m)	1990	Velocity std dev (cm/s)	0.40
Water salinity (ppt)	35	Memory required (MB)	6.28
Magnetic variation set to 0	<input checked="" type="checkbox"/>	Other commands	mode=1
Date & time first ping	08 APR 2018 @ 1400 GMT		
Record data internally	<input checked="" type="checkbox"/>	CF = 1111	
Send data out serial port	<input checked="" type="checkbox"/>	BLANK = 4.6m	
	TP = 36s	Ambiguity = 1.75m/s	
4. BATTERIES AND ASSEMBLY			
Measured voltage	Fitted Ted Ship		
Battery type	alk / lith	Silica decesent installed	<input checked="" type="checkbox"/>
Battery supplier	RDI / A1M / Consolidated	Battery connected	<input checked="" type="checkbox"/>
No. of battery packs	one	Instrument sealed	PWG <input checked="" type="checkbox"/>
New battery capacity (Wh)			
New batteries fitted	Y <input checked="" type="radio"/> N		
Comms switch	RS232	RS422	
5. DEPLOY			
In water test?	Y <input checked="" type="radio"/> N	DEPLOY to send CMD file to ADCP	<input checked="" type="checkbox"/>
Computer clock set to GMT	<input checked="" type="checkbox"/>	Start date and time (GMT)	08 APR 18 @ 1400 GMT
TESTADCP filename		Deployment log filename	BFT-3
Memory erased	<input checked="" type="checkbox"/>	ADCP pinging audible	<input checked="" type="checkbox"/>
Pressure sensor zeroed (AZ)	<input checked="" type="checkbox"/>	Chilli applied to Tx	<input checked="" type="checkbox"/>
		Initials	PWG
		Date	08 APR 18
6. RECOVER			
Still pinging?	Y <input type="radio"/> N	Physical condition?	
Switch off date and time		Clock error	
Data recovered	Y <input type="radio"/> N	Data inspected	<input type="checkbox"/>
Data filename		Data backed up	<input type="checkbox"/>
		Initials	
		Date	
NOTES			
PING ON THE HOUR			

Every field must be complete and all boxes must be ticked. Circle selected options and strikethrough others.

Further details of each step in Site Technical Instructions (TI)

..Site Technical Instructions\SiteTI RDI WH ADCP SC.doc





FUGRO GEOS



Site Log Sheet

RDI WORKHORSE ADCP (SELF CONTAINED)

600KHz

1. IDENTIFICATION (Essential reference to mooring log sheet with deployment details) <i>WS053</i>			
Contract No. <i>112864</i>	Contract Name <i>CHEVRON BIGFOOT</i>	Mooring Name <i>BIGFOOT</i>	Phase <i>SVI</i> <i>Deploy</i>
2. INSTRUMENT SPECIFICATION			
Serial no. <i># 20237</i>	Bottom track fitted <i>Y</i> <input checked="" type="radio"/> <i>N</i>	Memory fitted (MB) <i>512</i>	
Frequency (kHz) <i>(20°) 600KHz</i>	Waves capability <i>Y</i> <input checked="" type="radio"/> <i>N</i>	Planned orientation <i>upward</i> <input checked="" type="radio"/> <i>downward</i>	
CPU Firmware version <i>50.40</i>	Housing depth rating (m) <i>6000m</i>		
3. PLAN ABCDE			
Deployment/CMD name <i>BGF-6</i>			
Choices	Consequences	Wave commands	<i>Y</i> <input checked="" type="radio"/> <i>N</i>
No of bins <i>25</i>	First depth cell (m) <i>30</i>	Burst Duration (min)	
Bin size (m) <i>10m</i>	Last depth cell (m) <i>270</i>	Burst Interval (min)	
Pings per ensemble <i>90</i>	Predicted max range (m) <i>455</i>	Samples per Burst	
Ensemble Interval <i>30mins</i>	Energy required @C <i>182Wh/0.4</i>	Collect Motion Data <i>Y</i> <input checked="" type="radio"/> <i>N</i>	
Deployment duration (days) <i>200</i>	Days spare (see Table 1)		
Depth of transducer (m) <i>1980</i>	Velocity std dev (cm/s) <i>0.74</i>	Other commands <i>Water Profile ✓</i>	
Water salinity (ppt) <i>35</i>	Memory required (MB) <i>5.99</i>	<i>CF 1111</i>	
Magnetic variation set to 0 <input checked="" type="checkbox"/>	<i>T.P = 20secs</i>	<i>BLANK = 1.78m</i>	
Date & time first ping <i>08 APR 18 @ 15.15 GMT</i>		<i>AMBIGUITY = 1.75m/s</i>	
Record data internally <input checked="" type="checkbox"/>	<i>STORE INTERNAL AND REAL TIME</i>	<i>WIDE BW</i>	
Send data out serial port <input checked="" type="checkbox"/>		<i>WM15 - MASTER (N/A)</i>	
4. BATTERIES AND ASSEMBLY			
Measured voltage <i>45.1V</i>	Silica decesent installed <input checked="" type="checkbox"/>		
Battery type <i>alk / lith</i>	New battery capacity (Wh)	Battery connected <input checked="" type="checkbox"/>	
Battery supplier <i>RDI / A1M / Consolidated</i>	New batteries fitted <i>TECHNIP</i> <i>Y</i> <input checked="" type="radio"/> <i>N</i>	Instrument sealed <input checked="" type="checkbox"/>	
No. of battery packs <i>one</i>	Comms switch <i>RS232</i> <i>RS422</i>		
5. DEPLOY			
In water test? <i>Y</i> <input checked="" type="radio"/> <i>N</i>	DEPLOY to send CMD file to ADCP <input checked="" type="checkbox"/>	Dummy plug greased & replaced <input checked="" type="checkbox"/>	
Computer clock set to GMT <input checked="" type="checkbox"/>	Start date and time (GMT) <i>08 APR 18 @ 15.15 GMT</i>	Dummy plug tied in <i>Modern</i> <i>Y</i> <input checked="" type="radio"/> <i>N</i>	
TESTADCP filename	Deployment log filename <i>BGF.6.DLG</i>	ADCP pinging audible <input checked="" type="checkbox"/>	
Memory erased <input checked="" type="checkbox"/>	.CMD and log files backed up <input checked="" type="checkbox"/>	Chilli applied to Tx <input checked="" type="checkbox"/>	
Pressure sensor zeroed (AZ) <input checked="" type="checkbox"/>		Initials <i>P.V.G.W.</i> Date <i>08 APR 18</i>	
6. RECOVER			
Still pinging? <i>Y</i> <input checked="" type="radio"/> <i>N</i>	Physical condition?		
Switch off date and time.....	Clock error		
Data recovered <i>Y</i> <input checked="" type="radio"/> <i>N</i>	Data inspected <input type="checkbox"/>		
Data filename	Data backed up <input type="checkbox"/>		
	Initials	Date	
NOTES <i>PING 15 MINS PAST THE HOUR</i>			

Every field must be complete and all boxes must be ticked. Circle selected options and strikethrough others.

Further details of each step in Site Technical Instructions (TI)

..\\Site Technical Instructions\\SiteTI RDI WH ADCP SC.doc





B. ATTACHED DATA FILES

Files containing ASCII listings of raw and quality controlled data retrieved from the instrumentation during the service visits are provided with this report. All data files span the period from 18 December 2017 22:45 UTC to 7 April 2018 14:30 UTC. The following table provides the names of the files and describes the parameters included in each.

FILENAME	DESCRIPTION
Aqua_RAW_Ph2.LIS	Raw surface current speed and direction from all bins; surface water temperature
75kHz_RAW_Ph2.LIS	Raw (transmitted) current speed and direction from all bins, sea water temperature, pitch, roll, and heading at 10 m depth
300kHz_RAW_Ph2.LIS	Raw (transmitted) current speed and direction from all bins, sea water temperature, pitch, roll, and heading at 2008 m depth
600kHz_RAW_Ph2.LIS	Raw (transmitted) current speed and direction from all bins, sea water temperature, pitch, roll, and heading at 2010 m depth
Waves_RAW_Ph2.LIS	Raw wave parameters – Significant Wave Height (Hm0), Maximum Wave Height (Hmax), Mean Wave Direction (Mdir), Directional Wave Spread at Tp (SprTp), Mean Direction at High Freq Band (Thhf), Mean Wave Direction at Tp (ThTp), Mean Wave Period (Tz), Peak Wave Period (Tp)
Mets_RAW_Ph2.LIS	Raw wind speed, direction, and gust at 4 m above MSL, air temperature
Compass_Ph2.txt	Raw compass data from Wavesense
Heave_Ph2.txt	Raw heave data from Wavesense
Pitch_Ph2.txt	Raw pitch data from Wavesense
Roll_Ph2.txt	Raw roll data from Wavesense
Aqua_QC_Ph2.LIS	QC surface current speed and direction from all bins; surface water temperature
75kHz_QC_Ph2.LIS	QC (transmitted) current speed and direction from all bins, sea water temperature, pitch, roll, and heading at 10 m depth
300kHz_QC_Ph2.LIS	QC (transmitted) current speed and direction from all bins, sea water temperature, pitch, roll, and heading at 2008 m depth
600kHz_QC_Ph2.LIS	QC (transmitted) current speed and direction from all bins, sea water temperature, pitch, roll, and heading at 2010 m depth
Waves_QC_Ph2.LIS	QC wave parameters – Significant Wave Height (Hm0), Maximum Wave Height (Hmax), Mean Wave Direction (Mdir), Directional Wave Spread at Tp (SprTp), Mean Direction at High Freq Band (Thhf), Mean Wave Direction at Tp (ThTp), Mean Wave Period (Tz), Peak Wave Period (Tp)
Mets_QC_Ph2.LIS	QC wind speed, direction, and gust at 4 m and corrected to 10 m above MSL, air temperature



C. CTD PROFILES

