

# **DOCUMENT CONTROL SHEET**

**Document Title:** Seabird Data Summary West Hercules: Cambriol J-31A and Cambriol G-92 Wellsites May 12, 2022, to July 25, 2022

**Project/Document Number:** IES-BMM-EQU-9999-24-2023

**Document Description:** An overview of all seabird and mammal observations recorded on the West Hercules from May 12, 2022 to July 25, 2022

Number of Pages: 34 Level of Control: Uncontrolled

# **Version History**

| Version | Date             | Revised by      | Summary of Changes         |
|---------|------------------|-----------------|----------------------------|
| 00      | January 06, 2023 | Kelsey McCarthy | Original Published Version |
|         |                  |                 |                            |
|         |                  |                 |                            |

| Prepared by                   | Approved by                   |
|-------------------------------|-------------------------------|
| Name: Kelsey McCarthy         | Name: Jonathan Chatman        |
| Title: Onshore Lead           | Title: Manager of Operations  |
| <b>Date:</b> January 06, 2023 | <b>Date:</b> January 06, 2023 |

## Circulation

| Recipient     | Total Hard Copies | Total Digital Copies |
|---------------|-------------------|----------------------|
| Equinor       | 0                 | 1                    |
| PAL Aerospace | 0                 | 1                    |
|               |                   |                      |
|               |                   |                      |

Document Control Sheet Page 1 of 1
Doc: AD-016 Rev: 14-Jul-17





# Seabird Data Summary West Hercules: Cambriol J-31A and Cambriol G-92 Wellsites May 12, 2022, to July 25, 2022

**Vessel:** West Hercules

**Position:** 47°50.57′ North, 047°05.09′ West (Cambriol J-31A)

47°51.29' North, 046°59.11' West (Cambriol G-92)

**Prepared for:** Equinor Canada

2 Steers Cove

St. John's, Newfoundland and Labrador

A1C 6J5

Prepared by: PAL Aerospace

Ice and Environmental Services

PO Box 29030

St. John's, Newfoundland and Labrador

A1A 5B5

**CWS Permit Number:** LS2766

Document Ref #: IES-BMM-EQU-9999-24-2023

**Submitted:** January 06, 2023

Version: 00





## **Document Control Log**

| Document Title:           |                  | Seabird Data Summary – West Hercules: Cambriol J-31A and |                            |  |  |
|---------------------------|------------------|----------------------------------------------------------|----------------------------|--|--|
|                           |                  | Cambriol G-92 Wellsites                                  |                            |  |  |
| PAL Aerospace Document #: |                  | IES-BI                                                   | IES-BMM-EQU-9999-24-2023   |  |  |
| Initial Date:             |                  | Janua                                                    | January 06, 2023           |  |  |
| Record of Revisions       |                  |                                                          |                            |  |  |
| Revision #                | Date             |                                                          | Reason for Revision        |  |  |
| 00                        | January 06, 2023 |                                                          | Original Published Version |  |  |
|                           |                  |                                                          |                            |  |  |
|                           |                  |                                                          |                            |  |  |
|                           |                  |                                                          |                            |  |  |
|                           |                  |                                                          |                            |  |  |
|                           |                  |                                                          |                            |  |  |





| Table (    | of Contents                                                                         |              |
|------------|-------------------------------------------------------------------------------------|--------------|
| 1.0        | Introduction                                                                        | 4            |
| 2.0        | Summary of Seabird Monitoring and Recovery                                          | 6            |
| 2.1        | Surveys from Moving Platforms                                                       | 7            |
| 2.2        | Surveys from Stationary Platforms                                                   | 8            |
| 2.3        | Stranded Seabird Search Procedures                                                  | 9            |
| 2.4        | Summary of Marine Mammal and Sea Turtle Monitoring                                  | 11           |
| 3.0        | Results                                                                             | 11           |
| 3.1        | Seabird Sightings                                                                   | 11           |
| 3.2        | Stranded Seabird Searches                                                           | 18           |
| 3.3        | Marine Mammal and Sea Turtle Monitoring                                             | 32           |
| 4.0        | Supplementary Digital Data                                                          | 35           |
| 5.0        | Sources Cited                                                                       | 35           |
| List of    | Tables                                                                              |              |
|            | Seabird Sightings in transit to the Cambriol J-31A Well Site                        | 12           |
|            | Seabird Sightings for the Cambriol J-31A Well Site                                  |              |
|            | Seabird Sightings for the Cambriol G-92 Well Site                                   |              |
|            | Seabird Strandings while in Transit to the Cambriol J-31A Well Site                 |              |
|            | Seabird Strandings for the Cambriol J-31A Well Site                                 |              |
|            | Seabird Strandings (1/2)                                                            |              |
|            | Seabird Strandings (2/2)                                                            |              |
|            | Seabird Strandings for the Cambriol G-92 Well Site                                  |              |
|            | Marine Mammal Sightings for the Cambriol J-31A Well Site                            |              |
| rable 3.   | Warme Warman Signangs for the Cambridge 317 Well Site                               | 33           |
|            | Figures                                                                             |              |
| _          | : Cambriol J-31A Well Site Location (47°50.57'N, 047°05.09'W)                       |              |
| Figure 2   | : Cambriol G-92 Well Site Location (47°51.29'N, 046°59.11'W)                        | 5            |
| Figure 3   | : West Hercules                                                                     | 6            |
| Figure 4   | : Survey Method using a 90° Scan. Source: Seabird Survey, Handling, and Observation | Protocol.    |
| Equinor    | Canada Ltd. Newfoundland                                                            | 7            |
| Figure 5   | : 180° Survey from a Stationary Platform. Source: Seabird Survey, Handling, and Ok  | servation    |
|            | . Equinor Canada Ltd. Newfoundland                                                  |              |
|            | : West Hercules Search plan (750 Metres)                                            | 10           |
|            | ATA SUMMARY – WEST HERCULES: CAMBRIOL J-31A AND CAMBRIOL G-92 WELLSITES             | PAGE         |
| DOC: IES-E | 3MM-EQU-9999-24-2023                                                                | REV: 06-JAN- |





| Figure 7: Seabird Sightings in transit to the Cambriol J-31A Well Site | 12 |
|------------------------------------------------------------------------|----|
| Figure 8: Seabird Sightings for the Cambriol J-31A Well Site           | 15 |
| Figure 9: Seabird Sightings for the Cambriol G-92 Well Site            |    |
| Figure 10: Total Time of Stranded Seabird Searches in Transit          | 18 |
| Figure 11: Stationary Stranded Search Effort                           | 19 |
| Figure 12: Leach's Storm-Petrel – June 10, 2022                        | 24 |
| Figure 13: American Pipit – June 13, 2022                              | 25 |
| Figure 14: Unidentified Passerine – June 18, 2022                      | 25 |
| Figure 15: Leach's Storm Petrel – June 20, 2022                        | 26 |
| Figure 16: Unidentified Passerine – July 07, 2022                      | 26 |
| Figure 17: Unidentified Passerine – July 07, 2022                      | 27 |
| Figure 18: Unidentified Passerine – July 07, 2022                      | 27 |
| Figure 19: Leach's Storm Petrel – July 09, 2022                        | 28 |
| Figure 20: Leach's Storm Petrel – July 09, 2022                        | 28 |
| Figure 21: Leach's Storm Petrel – July 09, 2022                        | 29 |
| Figure 22: Leach's Storm Petrel – July 09, 2022                        | 29 |
| Figure 23: Total Time of Stationary Stranded Seabird Searches          | 30 |
| Figure 24: Stationary Stranded Search Effort                           | 31 |
| Figure 25: Marine Mammals Identified                                   | 34 |
|                                                                        |    |





### 1.0 Introduction

Equinor Canada Ltd. (Equinor) contracted PAL Aerospace (PAL) Ice and Environmental Services (IES) to provide seabird and marine mammal monitoring services in support of operations for the West Hercules in transit to and on the Cambriol J-31A and Cambriol G-92 wellsites. The West Hercules departed Bay Bulls, NL, on May 12, 2022, at 1815z. It arrived on the Cambriol J-31A wellsite (*Figure 1*) on May 15, 2022, at 2130z, remaining there until July 25, 2022, at 0022z. Afterwards, the Mobile Offshore Drilling Unit (MODU) moved to the Cambriol G-92 wellsite (*Figure 2*), arriving on July 25, 2022, at 0057z and departing on July 25, 2022, at 1826z.

The West Hercules platform (*Figure 3: West Hercules*) was staffed with two PAL Marine Mammal & Seabird Observers (MMSOs) from May 12, 2022 (when the West Hercules left Bay Bulls), to July 25, 2022, providing 24-hour coverage. In addition, the MMSOs conducted hourly seabird surveys each day and visual observations of marine mammals.

One exception occurred from June 23 through June 25, 2022. This was due to a logistics issue with Seadrill Limited. The overnight MMSO was sent home by helicopter on June 23 at 1940z, while the Atlantic Kestrel with the rotation crew was approaching the West Hercules. The vessel encountered engine problems and had to return to St. John's, NL, with all passengers onboard. This resulted in missing overnight observations on June 23, June 24, and June 25. On June 26, 2022, the crew arrived onboard the West Hercules, and 24-hour observations recommenced.

The PAL MMSOs were responsible for systematic searches for stranded seabirds on the Cambriol J-31A and Cambriol G-92 wellsites.

All data collected on the West Hercules was delivered to and stored in a local database at PAL and used to compile this report. For environmental data comparison, all times and dates are in Coordinated Universal Time (UTC).





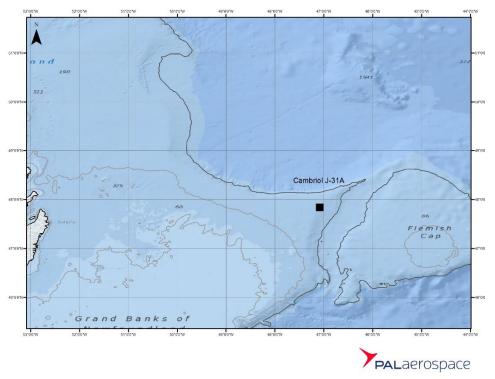


Figure 1: Cambriol J-31A Well Site Location (47°50.57'N, 047°05.09'W)

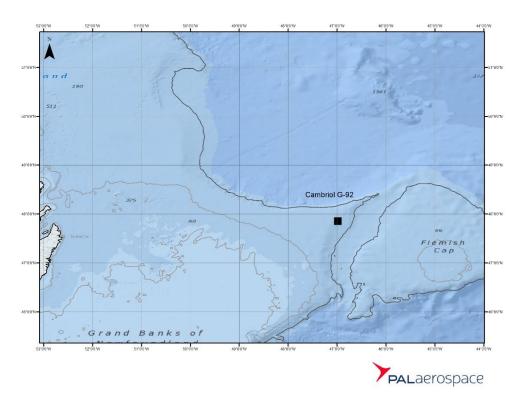


Figure 2: Cambriol G-92 Well Site Location (47°51.29'N, 046°59.11'W)

SEABIRD DATA SUMMARY – WEST HERCULES: CAMBRIOL J-31A AND CAMBRIOL G-92 WELLSITES DOC: IES-BMM-EQU-9999-24-2023

PAGE 5 REV: 06-JAN-23







Figure 3: West Hercules

# 2.0 Summary of Seabird Monitoring and Recovery

Equinor conducted a seabird monitoring program on both the Cambriol J-31A and Cambriol G-92 wellsites from May 15, 2022, to July 25, 2022, when the West Hercules left for the Sitka wellsites. In addition, both stationary and moving seabird surveys were completed once the West Hercules left Bay Bulls, until arrival on the Cambriol J-31A wellsite on May 15, 2022, at 2130z.

MMSOs arrived onboard the West Hercules on May 11, 2022. Observations were not completed on May 11 and May 12 due to MMSOs completing orientation, safety protocols, as well as setting up equipment. Stationary surveys were taken on May 13, 2022, from 0730z to 1648z, due to the MODU moving at less than 4 knots (*Seabird Survey, Handling, and Observation Protocol, Equinor,* 2022). At this point, PAL personnel contacted Equinor to inquire if stationary surveys would be the preferred data collection method. Equinor personnel requested moving seabird observations to be completed at this time. PAL personnel communicated this immediately to the onboard MMSO. Moving seabird observations commenced at 1822z on May 13, 2022, until arrival on Cambriol J-31A. Stationary seabird observations were taken once the West Hercules arrived at the Cambriol J-31A wellsite.

The West Hercules then moved to the Cambriol G-92 wellsite on July 25, 2022, at 0022z, until July 25, 2022, at 1826z. In addition, the onboard MMSO conducted stationary observations on the West Hercules.

SEABIRD DATA SUMMARY – WEST HERCULES: CAMBRIOL J-31A AND CAMBRIOL G-92 WELLSITES DOC: IES-BMM-EQU-9999-24-2023

REV: 06-JAN-23





These observations were completed per the Seabird Survey, Handling, and Observation Protocol (Equinor, 2022).

## 2.1 Surveys from Moving Platforms

Multiple moving platform surveys were conducted on the West Hercules while in transit to the Cambriol J-31A wellsite.

No moving surveys were completed while in transit to the Cambriol G-92 wellsite, as the MODU's steaming speed was less than 4 knots. Instead, stationary observations continued through the transit period and when the West Hercules arrived at the Cambriol G-92 well site. Therefore, there was no requirement for movement once the MODU arrived on site (*Seabird Survey, Handling, and Observation Protocol, Equinor,* 2022).

When moving platform surveys were conducted, the MMSO was trained to carry out surveys looking forward on the vessel, scanning at a 90° angle from either the port or starboard side of the vessel, covering a 300-metre band (*Figure 4*).

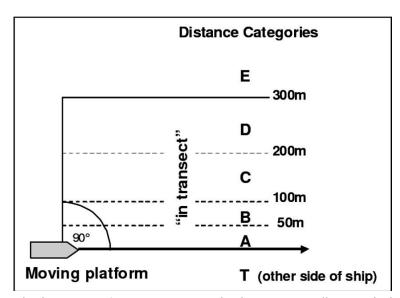


Figure 4: Survey Method using a 90° Scan. Source: Seabird Survey, Handling, and Observation Protocol.

Equinor Canada Ltd. Newfoundland

MMSOs complete scanning using the naked eye. Binoculars are used to confirm species and other details (i.e. moult, age, and carrying fish). However, when large concentrations of birds occur in the survey area and birds fly away as the vessel approaches, binoculars are to be used to count individuals.

The MMSO would also scan ahead regularly to increase the likelihood of detecting birds prone to diving as the vessel approached.

SEABIRD DATA SUMMARY – WEST HERCULES: CAMBRIOL J-31A AND CAMBRIOL G-92 WELLSITES PAGE 7

DOC: IES-BMM-EQU-9999-24-2023 REV: 06-JAN-23





## 2.2 Surveys from Stationary Platforms

MMSOs onboard the offshore platform, while it was on location, conducted observations using instantaneous counts, or snapshots, of birds within a 300m radius semi-circle area off the port side of the helideck that is scanned at regular intervals throughout the day. These surveys lasted only a few seconds.

MMSOs conducted observations over 12-hour shifts, beginning at dawn each day and finishing at dusk. Any observation during the shift would be recorded and logged digitally in the provided Canadian Wildlife Services (CWS) Access database and recorded physically on the record sheet for a stationary platform survey.

The surveys were conducted outdoors whenever possible, as close to the MODU's edge as permitted. In addition, MMSOs scanned from the same location each time to increase the comparability among scans.

Surveys are conducted by scanning a 180° arc, prioritizing birds within a 300 m semi-circle (*Figure 5*).

The semi-circle is divided into five zones

- A: 0 50m
- B: 50 100m
- C: 100 200m
- D: 200 300m
- E: >300m

The MMSO visually swept the area once per scan, from one side to the other. All birds on the water and in flight were systematically recorded then. In addition, the distance of birds from the observer were estimated and recorded for all birds. As necessary, binoculars and spotting scopes were utilized to confirm species identification and other details.

SEABIRD DATA SUMMARY – WEST HERCULES: CAMBRIOL J-31A AND CAMBRIOL G-92 WELLSITES DOC: IES-BMM-EQU-9999-24-2023

REV: 06-JAN-23





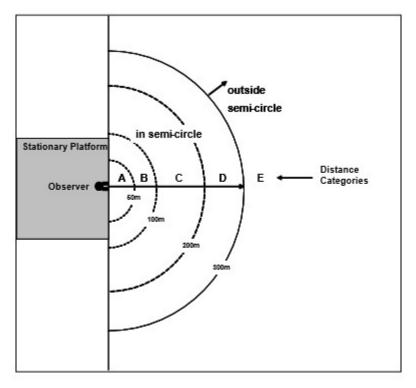


Figure 5: 180° Survey from a Stationary Platform. Source: Seabird Survey, Handling, and Observation

Protocol. Equinor Canada Ltd. Newfoundland

The same area was surveyed once every hour during daylight hours, regardless of if birds were present or not while at the Cambriol J-31A and the Cambriol G-92 wellsite. When the entire width of the 300-metre semi-circle was not visible, the observer indicated the limit of visibility on the datasheet. When no birds were detected during a scan, the MMSO recorded the whole observation, leaving any bird information blank. Any gaps between observations would be due to the requirement of helicopter observations, crew changes, onboard operation (i.e. drills), or when the weather was too bad to complete the observation (i.e. no visibility due to fog.)

#### 2.3 Stranded Seabird Search Procedures

The PAL MMSO checked the decks for stranded and dead birds at least once daily. All crew members were also requested to alert the MMSO if stranded birds were found. The MMSO conducts daily inspections to search for potentially stranded birds, utilizing the pattern identified in *Figure 6*. The area covers 630 metres on the main deck, an additional 90 metres on the navigation deck, and an additional 30 metres on the bridge top deck, totalling 750 metres, as indicated by the line in the figure below. This survey quantifies species numbers and status (alive or dead) and the timing of migratory bird strandings in the area. In addition, this survey outlines the area searched and all findings in the search.

SEABIRD DATA SUMMARY – WEST HERCULES: CAMBRIOL J-31A AND CAMBRIOL G-92 WELLSITES DOC: IES-BMM-EQU-9999-24-2023





The capture and handling of migratory birds requires authorization under the *Migratory Birds Convention Act* (1994) and *Migratory Bird Regulations* (2022). Equinor has obtained a Capture and Handling of Migratory Birds Permit and has met the Canadian Wildlife Service requirements for permit issuance.

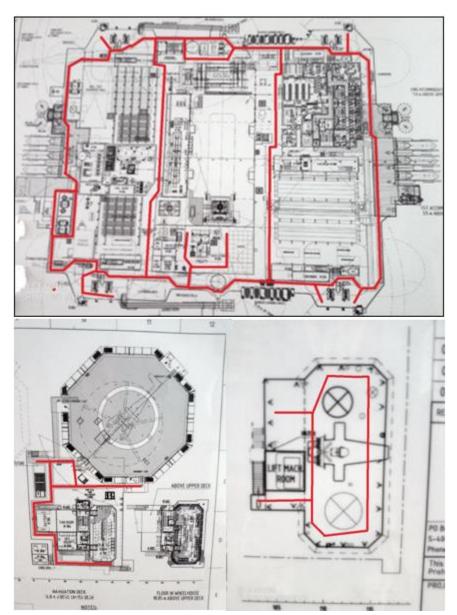


Figure 6: West Hercules Search plan (750 Metres)

SEABIRD DATA SUMMARY – WEST HERCULES: CAMBRIOL J-31A AND CAMBRIOL G-92 WELLSITES DOC: IES-BMM-EQU-9999-24-2023

REV: 06-JAN-23

PAGE 10





## 2.4 Summary of Marine Mammal and Sea Turtle Monitoring

The onboard MMSO conducted visual marine mammal and sea turtle observations on the West Hercules. They acted as qualified MMSOs, primarily from the bridge wings during daylight hours. Several marine mammal sightings were observed throughout the project period amongst the various wellsites.

Visual scans were made with the naked eye and with 10x50 binoculars with a range reticule. The detection cues that were used were the presence of groups of birds, unexpected splashes, blows, and black objects breaking the surface. Whenever possible, sightings would have been photographed to aid species identification.

Species are identified based on physical characteristics and behaviours. Identification is facilitated by consulting relevant field guides and by observer experience.

#### 3.0 Results

The following sections outline the results from stationary seabird surveys, moving seabird surveys, stranded seabird searches, and marine mammals or sea turtles identified throughout the project.

## 3.1 Seabird Sightings

#### 3.1.1 Seabird Sightings in Transit to Cambriol J-31A

PAL MMSOs conducted seabird monitoring services in transit to the Cambriol J-31A well site from May 13, 2022, at 1648z to May 15, 2022, at 2109z. During this period, a total of 132 seabird observations recorded 165 individual seabirds. Of these, 83 observations (62.9% of all observations) resulted in no seabirds identified in the observer's facility's viewing distance.

The most frequent seabird sighting was the Herring Gull, with 72 birds sighted (43.6% of all birds sighted), followed by the Black-legged Kittiwake and the Northern Fulmar, with 43 individual birds sighted for each (26.1% of all birds sighted each).

SEABIRD DATA SUMMARY – WEST HERCULES: CAMBRIOL J-31A AND CAMBRIOL G-92 WELLSITES DOC: IES-BMM-EQU-9999-24-2023





Table 1 and *Figure 7* summarize all seabird observations recorded in transit to the Cambriol J-31A Well Site location from May 13, 2022, to May 15, 2022.



Table 1: Seabird Sightings in transit to the Cambriol J-31A Well Site

| Species                  | Number |
|--------------------------|--------|
| Black-legged Kittiwake   | 43     |
| Glaucous Gull            | 3      |
| Herring Gull             | 72     |
| Leach's Storm-Petrel     | 2      |
| Lesser Black-backed Gull | 1      |
| Northern Fulmar          | 43     |
| South Polar Skua         | 1      |
| Total                    | 165    |

| Observation        | Number |
|--------------------|--------|
| Total Observations | 132    |
| No Birds           | 83     |

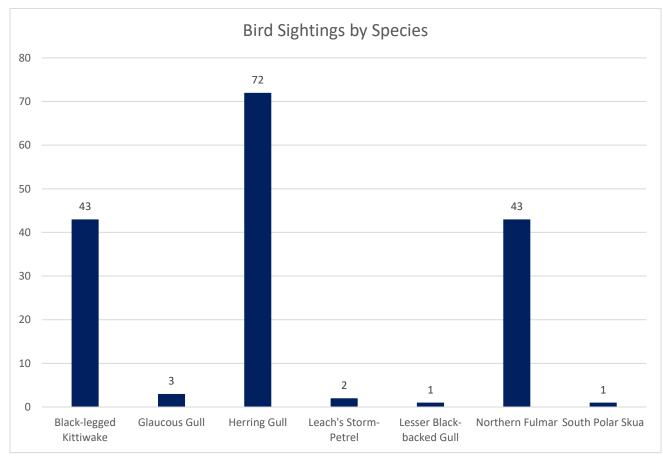


Figure 7: Seabird Sightings in transit to the Cambriol J-31A Well Site

SEABIRD DATA SUMMARY – WEST HERCULES: CAMBRIOL J-31A AND CAMBRIOL G-92 WELLSITES DOC: IES-BMM-EQU-9999-24-2023





#### 3.1.2 Seabird Sightings on Cambriol J-31A

PAL MMSOs conducted seabird monitoring services on the Cambriol J-31A well site from May 15, 2022, at 2130z, to July 25, 2022, at 0022z. During this period, 2,464 seabird observations recorded 26,243 individual seabirds. Of these, 368 observations (14.9% of all observations) resulted in no seabirds identified in the observer's facility's viewing distance.

The most frequent individual seabird sighting was the Northern Fulmar (22,347) individual birds sighted (85.2% of all birds sighted), followed by Great Shearwater (3,313) individual birds sighted (12.6% of all birds sighted).

*Table 2* and *Figure 8* summarize all seabird observations recorded on the Cambriol J-31A Well Site location from May 15, 2022, to July 25, 2022.

REV: 06-JAN-23

PAGE 14





Table 2: Seabird Sightings for the Cambriol J-31A Well Site

| Species                                      | Number |
|----------------------------------------------|--------|
| Atlantic Puffin                              | 3      |
| Black-legged Kittiwake                       | 30     |
| Common Murre                                 | 1      |
| Family: Hydrobatid Storm-Petrels             | 4      |
| Genus: Murres                                | 5      |
| Genus: Shearwaters (Puffinus or Calonectris) | 4      |
| Genus: Skuas                                 | 1      |
| Glaucous Gull                                | 4      |
| Great Black-backed Gull                      | 16     |
| Great Shearwater                             | 3,313  |
| Herring Gull                                 | 364    |
| Iceland Gull                                 | 1      |
| Leach's Storm-Petrel                         | 129    |
| Lesser Black-backed Gull                     | 2      |
| Manx Shearwater                              | 1      |
| Northern Fulmar                              | 22,347 |
| Northern Gannet                              | 1      |
| Sooty Shearwater                             | 13     |
| Thick-billed Murre                           | 1      |
| White-Throated Sparrow                       | 2      |
| Yellow Warbler                               | 1      |
| Total                                        | 26,243 |

| Observation        | Number |
|--------------------|--------|
| Total Observations | 2464   |
| No Birds           | 368    |





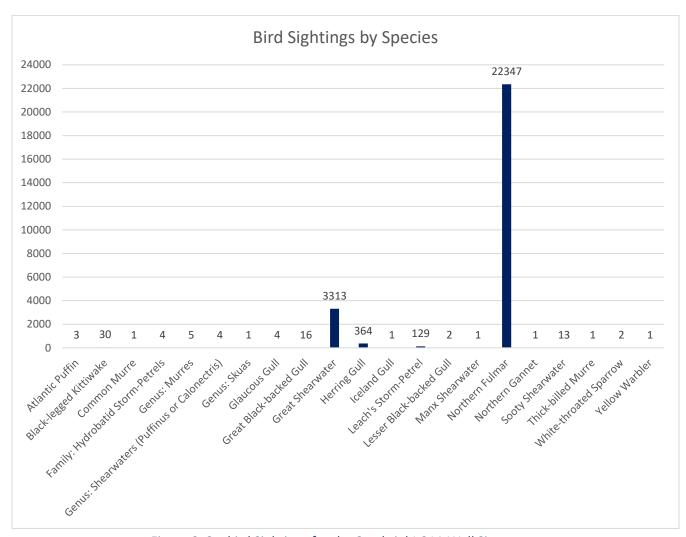


Figure 8: Seabird Sightings for the Cambriol J-31A Well Site

#### 3.1.3 Seabird Sightings in Transit to Cambriol G-92

While in transit from the Cambriol J-31A wellsite to the Cambriol G-92 well site, no moving seabird observations were taken. This was due to the drillship moving at less than 4 knots per hour. The West Hercules left Cambriol J-31A on July 25, 2022, at 0022z and arrived on Cambriol G-92 on the same day, 35 minutes later, at 0057z.





#### 3.1.4 Seabird Sightings on Cambriol G-92

PAL MMSOs conducted seabird monitoring services on the Cambriol G-92 well site from July 25, 2022, at 0022z, to July 25, 2022, at 1826z. During this period, 33 seabird surveys recorded 33 individual seabirds. Of these, 4 observations (12.1% of all observations) resulted in no seabirds identified in the MMSOs facility's viewing distance.

The most frequent individual seabird sighting was the Northern Fulmar (25 birds sighted, 75.8% of all birds sighted), followed by the Great Shearwater (8 birds sighted, 24.2% of all birds sighted).

*Table 3* and *Figure 9* summarize all seabird observations recorded on the Cambriol G-92 location on July 25, 2022.

Table 3: Seabird Sightings for the Cambriol G-92 Well Site

| Species          | Number |
|------------------|--------|
| Great Shearwater | 8      |
| Northern Fulmar  | 25     |
| Total            | 33     |

| Observation        | Number |
|--------------------|--------|
| Total Observations | 33     |
| No Birds           | 4      |

REV: 06-JAN-23

**PAGE 17** 





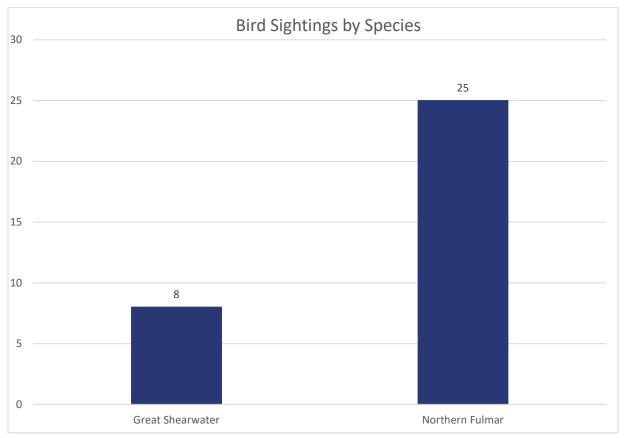


Figure 9: Seabird Sightings for the Cambriol G-92 Well Site

PAGE 18 REV: 06-JAN-23





## 3.2 Stranded Seabird Searches

#### 3.2.1 Stranded Seabird Searches In Transit to Cambriol J-31A

Throughout the time that the West Hercules was in transit to the Cambriol J-31A well site, from May 13, 2022, at 1648z to May 15, 2022, at 2109z, there were a total of 4 stranded seabird searches. All 4 (100% of all searches) had no seabirds found. *Table 4* outlines the number and the results of the searches.

Table 4: Seabird Strandings while in Transit to the Cambriol J-31A Well Site

| Total Stranded Seabird Searches | No Seabirds Present | One Seabird Present | Multiple Seabirds<br>Present |  |
|---------------------------------|---------------------|---------------------|------------------------------|--|
| 4                               | 4                   | 0                   | 0                            |  |
|                                 | 100%                | 0%                  | 0%                           |  |

Figure 10 identifies the total time the MMSO spent during their stranded search while in transit. The longest searches lasted 40 minutes on the morning of May 13, 2022, and May 15, 2022. The shortest lasted 32 minutes on the evening of May 13, 2022.

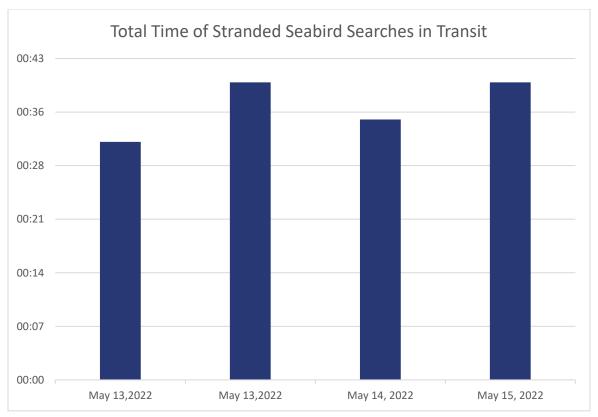


Figure 10: Total Time of Stranded Seabird Searches in Transit

SEABIRD DATA SUMMARY – WEST HERCULES: CAMBRIOL J-31A AND CAMBRIOL G-92 WELLSITES DOC: IES-BMM-EQU-9999-24-2023





Figure 11 below identifies the total area covered for the stranded seabird searches while in transit, based on the outline in Figure 6. Of the 4 stranded bird surveys in transit, all 4 (100%) covered 625m of the possible 750m path due to safety barriers being temporarily in place along the path route.

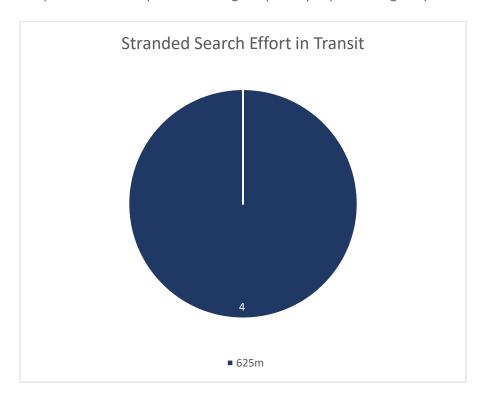


Figure 11: Stationary Stranded Search Effort

#### 3.2.2 Stranded Seabird Searches on Cambriol J-31A

Throughout the time that the West Hercules was in operation on the Cambriol J-31A well site, from May 15, 2022, at 2130z to July 25, 2022, at 0022z, there were a total of 85 stranded seabird searches. 71 (83% of all searches) had no seabirds found. 10 (12% of all searches) had one seabird present. Finally, 4 (5% of all searches) identified more than one seabird during the search. *Table 5* outlines the number and the results of the searches.

Table 5: Seabird Strandings for the Cambriol J-31A Well Site

| Total Stranded<br>Seabird Searches | No Seabirds Present | One Seabird Present | Multiple Seabirds<br>Present |  |
|------------------------------------|---------------------|---------------------|------------------------------|--|
| 85                                 | 71                  | 10                  | 4                            |  |
|                                    | 83%                 | 12%                 | 5%                           |  |

SEABIRD DATA SUMMARY – WEST HERCULES: CAMBRIOL J-31A AND CAMBRIOL G-92 WELLSITES

DOC: IES-BMM-EQU-9999-24-2023

REV: 06-JAN-23





The Leach's Storm-Petrel was the most commonly identified stranding, accounting for 9 (45%) of all identified birds found, followed by the Unidentified Passerine, accounting for five (25%) of all identified birds. Please see *Table 6* and *Table 7* for reference to all findings.





Table 6: Seabird Strandings (1/2)

| Date (yyyy-mm-dd)                         |                                           |                               | 2022-05-21                    | 2022-05-22                   | 2022-05-27                 | 2022-05-30                | 2022-06-04                  | 2022-06-10        | 2022-06-13                  | 2022-06-14                  | 2022-06-15 |   |
|-------------------------------------------|-------------------------------------------|-------------------------------|-------------------------------|------------------------------|----------------------------|---------------------------|-----------------------------|-------------------|-----------------------------|-----------------------------|------------|---|
| Location of stranding (Lat/Long, or Name) |                                           | 47 50.59'N                    | 47 50.59'N                    | 47°50.59′N                   | Grid #9                    | Bridge Top                | Main Deck                   | Nav Deck          | Main Deck                   | Main Deck                   |            |   |
| Location of                               | Location of Stranding (Lat/Long, Of Name) |                               | 47 05.08'W                    | 47 05.08'W                   | 047°05.08′W                | Oria #5                   | Deck                        | (2D)              | (NC2)                       | (2D)                        | (4C)       |   |
| Bird Species                              |                                           | White-<br>throated<br>sparrow | White-<br>throated<br>sparrow | Yellow-<br>rumped<br>Warbler | Leach's<br>Storm<br>Petrel | Unidentified<br>Passerine | Leach's<br>Storm-<br>Petrel | American<br>Pipit | Leach's<br>Storm-<br>Petrel | Leach's<br>Storm-<br>Petrel |            |   |
| То                                        | otal # of Stra                            | nded Birds                    | 1                             | 1                            | 1                          | 1                         | 1                           | 1                 | 1                           | 1                           | 1          |   |
|                                           |                                           | # Oiled                       | 0                             | 0                            | 0                          | 0                         | 0                           | 0                 | 0                           | 0                           | 0          |   |
| Found<br>Dead                             | Fate                                      | # Disposed of at<br>Sea       | 1                             | 1                            | 1                          | 0                         | 1                           | 0                 | 0                           | 0                           | 0          |   |
|                                           |                                           | # Send Ashore                 | 0                             | 0                            | 0                          | 0                         | 0                           | 0                 | 0                           | 0                           | 1          |   |
|                                           |                                           | # Died in Care                | 0                             | 0                            | 0                          | 0                         | 0                           | 0                 | 0                           | 0                           | 0          |   |
|                                           | Oiled                                     | # Released Alive              | 0                             | 0                            | 0                          | 0                         | 0                           | 0                 | 0                           | 0                           | 0          |   |
| Captured                                  |                                           |                               | # Sent Ashore                 | 0                            | 0                          | 0                         | 0                           | 0                 | 0                           | 0                           | 0          | 0 |
| Alive                                     |                                           | # Died in Care                | 0                             | 0                            | 0                          | 0                         | 0                           | 0                 | 1                           | 0                           | 0          |   |
|                                           | Not<br>Oiled                              | # Released Alive              | 0                             | 0                            | 0                          | 1                         | 0                           | 1                 | 0                           | 1                           | 0          |   |
|                                           |                                           | # Sent Ashore                 | 0                             | 0                            | 0                          | 0                         | 0                           | 0                 | 0                           | 0                           | 0          |   |
|                                           | Fog (y/n)                                 |                               | Υ                             | Υ                            | N                          | N                         | N                           | N                 | Υ                           | Υ                           | N          |   |
|                                           | Rain (y/n)                                |                               | Y                             | N                            | N                          | N                         | Y                           | N                 | N                           | N                           | N          |   |





Table 7: Seabird Strandings (2/2)

| Date (yyyy-mm-dd)                         |                           |                                                   | 2022-06-18                  | 2022-06-20                | 2022-07-07                        | 2022-07-<br>09              | 2022-07-<br>09 |
|-------------------------------------------|---------------------------|---------------------------------------------------|-----------------------------|---------------------------|-----------------------------------|-----------------------------|----------------|
| Location of stranding (Lat/Long, or Name) |                           |                                                   |                             | Main deck                 | Upper<br>derrick                  | Grid #A4                    | Grid #D2       |
|                                           |                           |                                                   | West Hercules               | 2C                        | (above C3)/<br>Nav. Deck<br>(ND2) |                             |                |
| Bird Species                              |                           | Unidentified<br>Passerine/Leach's<br>Storm-Petrel | Leach's<br>Storm-<br>Petrel | Unidentified<br>Passerine | Leach's<br>Storm-<br>Petrel       | Leach's<br>Storm-<br>Petrel |                |
| Tot                                       | Total # of Stranded Birds |                                                   | 3                           | 1                         | 3                                 | 1                           | 1              |
|                                           | # Oiled                   |                                                   | 0                           | 0                         | 0                                 | 0                           | 0              |
| Found<br>Dead                             | Fate                      | # Disposed of at<br>Sea                           | 1                           | 0                         | 3                                 | 0                           | 0              |
|                                           |                           | # Send Ashore                                     | 0                           | 1                         | 0                                 | 0                           | 0              |
|                                           | Oiled                     | # Died in Care                                    | 0                           | 0                         | 0                                 | 0                           | 0              |
|                                           |                           | # Released Alive                                  | 0                           | 0                         | 0                                 | 0                           | 0              |
| Captured                                  |                           | # Sent Ashore                                     | 0                           | 0                         | 0                                 | 0                           | 0              |
| Alive                                     | Not<br>Oiled              | # Died in Care                                    | 0                           | 0                         | 0                                 | 0                           | 0              |
|                                           |                           | # Released Alive                                  | 2                           | 0                         | 0                                 | 1                           | 1              |
|                                           | 55                        | # Sent Ashore                                     | 0                           | 0                         | 0                                 | 0                           | 0              |
| Fog (y/n)                                 |                           | Υ                                                 | Y N                         |                           | N                                 | N                           |                |
| Rain (y/n)                                |                           |                                                   | N                           | Υ                         | N                                 | N                           | N              |





On May 21, 2022, at 0730z, a White-throated Sparrow was found deceased by a crew member. The carcass was disposed of at sea. A Peregrine Falcon was seen by crew members during this search, indicating that this may have been a predation event. In addition to the presence of a Peregrine Falcon, evidence of a predation event also included having multiple feathers on the vessel's port side and the sparrow remains found.

The next day, on May 22, 2022, at 0730z, another White-throated Sparrow was found deceased by the crew. The remains were tucked in by a container on the port side. The carcass was disposed of at sea. One Great Black-backed Gull was sitting on the helipad during this survey. However, there was no evidence of a predation event in this case.

On May 27, 2022, at 1035z, a Yellow-Rumped Warbler was found dead. The remains were found on the platform's starboard side and disposed of at sea.

On May 30, 2022, at 1330z, a Leach's Storm-Petrel was found in the Moonpool area in wet condition. A call was received on the bridge about a stranding. After the bird was rehabilitated, it was released and flew away unharmed.

On June 04, 2022, at 0715z, an Unidentified Passerine (of starling size) was found dead at an advanced stage of decomposition. It was disposed of at sea.

On June 10, 2022, at 0610z, a Leach's Storm-Petrel was reported by the crew. It was captured and placed in a recovery box, then released in good condition at 1050z. See *Figure 12* below for the image.

On June 13, 2022, at 0930z, an American Pipit that was observed flying close to the bridge was later found sleeping on the deck and was very weak. The bird was placed in a recovery box and died in care before being sent ashore and disposed of at sea. See *Figure 13* below for the image.

The following day, on June 14, 2022, at 0550z, the crew reported a Leach's Storm-Petrel in the blow-out preventer (BOP) garage. It was then captured and released immediately.

On June 15, 2022, at 1815z, a Leach's Storm-Petrel was found deceased by the crew. The carcass was sent ashore by helicopter on June 16, 2022, to be received by CWS.

On June 18, 2022, a Leach's Storm-Petrel was found at 0345Z, put into a box and released at 0645Z. Another Leach's Storm-Petrel was found stranded in the moon pool area in good condition and released immediately. Finally, an unidentified passerine was found deceased and disposed of at 0230z. See *Figure 14* below.

On June 20, 2022, at 1545z, a Leach's Storm-Petrel was found dead and awaited shipment onshore to CWS. See *Figure 15* below.

SEABIRD DATA SUMMARY – WEST HERCULES: CAMBRIOL J-31A AND CAMBRIOL G-92 WELLSITES DOC: IES-BMM-EQU-9999-24-2023





On July 07, 2022, at 1100z, the crew found two unidentifiable passerines, highly decomposed beneath grates in the derrick. They were disposed of at sea. Another Unidentifiable Passerine was found at 1530Z. The carcass appeared to have been blown from the superstructure in gale-force winds. Its carcass was also disposed of at sea. See *Figure 16*, *Figure 17*, and *Figure 18* below.

On July 09, 2022, between 0510z and 0520z, a crew member found a Leach's Storm-Petrel port-forward of the moon pool. It was placed into a box to dry and was later released at 0700Z in good condition. See *Figure 19* and *Figure 20* below. A second Leach's Storm-Petrel was found in good condition at 0730z outside the welding shop and released immediately. See *Figure 21* and *Figure 22* below.



Figure 12: Leach's Storm-Petrel – June 10, 2022

REV: 06-JAN-23

PAGE 25







Figure 13: American Pipit – June 13, 2022



Figure 14: Unidentified Passerine – June 18, 2022

PAGE 26







Figure 15: Leach's Storm Petrel – June 20, 2022



Figure 16: Unidentified Passerine – July 07, 2022

PAGE 27







Figure 17: Unidentified Passerine – July 07, 2022



Figure 18: Unidentified Passerine – July 07, 2022







Figure 19: Leach's Storm Petrel – July 09, 2022



Figure 20: Leach's Storm Petrel – July 09, 2022







Figure 21: Leach's Storm Petrel – July 09, 2022



Figure 22: Leach's Storm Petrel – July 09, 2022

Figure 23 identifies the total time the MMSO spent searching during their stranded seabird search. The longest stranded seabird search lasted 50 minutes on May 26, 2022. The shortest search lasted 5 minutes on June 08 and June 20, 2022, where a portion of the deck was inaccessible due to ongoing crane operations.

SEABIRD DATA SUMMARY – WEST HERCULES: CAMBRIOL J-31A AND CAMBRIOL G-92 WELLSITES DOC: IES-BMM-EQU-9999-24-2023

REV: 06-JAN-23





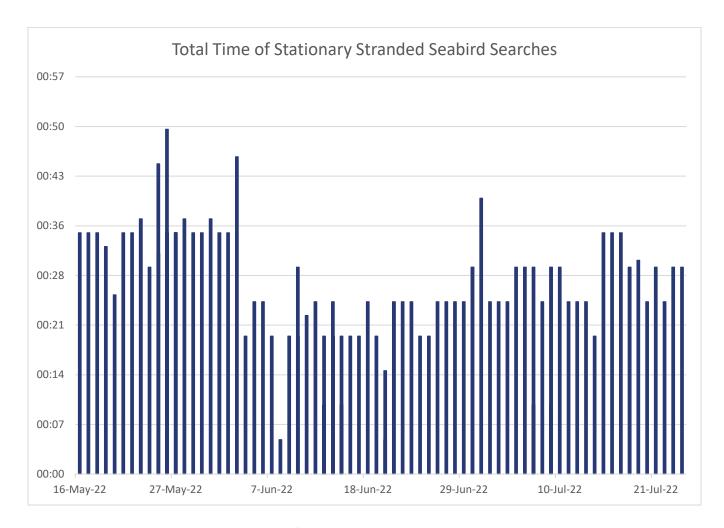


Figure 23: Total Time of Stationary Stranded Seabird Searches

Figure 24 below identifies the total area covered for the stationary stranded seabird searches based on the outline in Figure 6. Of the 73 stationary stranded bird surveys, 35 (48%) covered the entire 750m path. There were instances where sections could not be reached due to operations in those areas.

REV: 06-JAN-23

PAGE 31





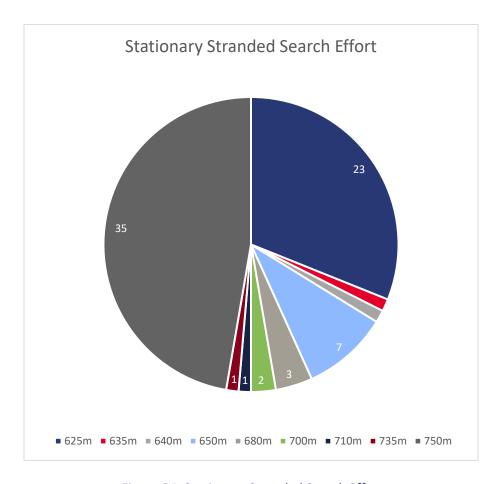


Figure 24: Stationary Stranded Search Effort

#### 3.2.3 Stranded Seabird Searches In Transit to Cambriol G-92

Due to darkness, as well as the MODU moving at less than 4 knots, there were no stranded seabird searches required while in transit to the Cambriol G-92 wellsite on July 25, 2022, from 0022z to 0057z.

#### 3.2.4 Stranded Seabird Searches for Cambriol G-92

Throughout the time that the West Hercules was in operation on the Cambriol G-92 well site, from July 25, 2022, at 0022z, to July 25, 2022, at 1826z, there was one stranded seabird search. The search had no seabirds found.





PAGE 33

REV: 06-JAN-23

Table 8 outlines the number and the results of the search.





Table 8: Seabird Strandings for the Cambriol G-92 Well Site

| Total Stranded Seabird<br>Searches | No Seabirds Present | One Seabird Present | Multiple Seabirds<br>Present |  |
|------------------------------------|---------------------|---------------------|------------------------------|--|
| 1                                  | 1                   | 0                   | 0                            |  |
|                                    | 100%                | 0%                  | 0%                           |  |

The total time the MMSO spent on the singular stranded seabird search was 30 minutes. The MMSO found no seabirds. The search covered 750m, indicating the entire survey route of the West Hercules was searched.

## 3.3 Marine Mammal and Sea Turtle Monitoring

#### 3.3.1 Marine Mammal and Sea Turtle Monitoring in Transit to Cambriol J-31A

There were no marine mammal sightings during the transit to the Cambriol J-31A wellsite.

#### 3.3.2 Marine Mammal and Sea Turtle Monitoring on Cambriol J-31A





*Table* 9 and *Figure 25* outline all marine mammals identified along with their activity and distance to the facility, from May 13, 2022, to July 25, 2022, on the Cambriol J-31A wellsite.

REV: 06-JAN-23

PAGE 35





Table 9: Marine Mammal Sightings for the Cambriol J-31A Well Site

| Month | Day | Year | Time (UTC) | Species                   | Number | Activity                                                                       | Distance<br>(m) |
|-------|-----|------|------------|---------------------------|--------|--------------------------------------------------------------------------------|-----------------|
| 06    | 14  | 2022 | 0715       | Seal                      | 1      | Travelling SW                                                                  | 100             |
| 07    | 03  | 2022 | 0740       | Unidentified Baleen Whale | 1      | Travelling in an unknown direction                                             | 2000            |
| 07    | 05  | 2022 | 2150       | Minke Whale               | 1      | Travelling NW,<br>observed by facility<br>personnel                            | 200             |
| 07    | 06  | 2022 | 2140       | Unidentified Baleen Whale | 1      | N/A, observed by facility personnel                                            | N/A             |
| 07    | 07  | 2022 | 0725       | Unidentified Baleen Whale | 1      | Windswept columnar spot observed during stranded bird search, travelling North | 3000            |
| 07    | 10  | 2022 | 1110       | Long-finned Pilot Whale   | 15     | Travelling NE with at least 2 juveniles in the pod                             | 1800            |





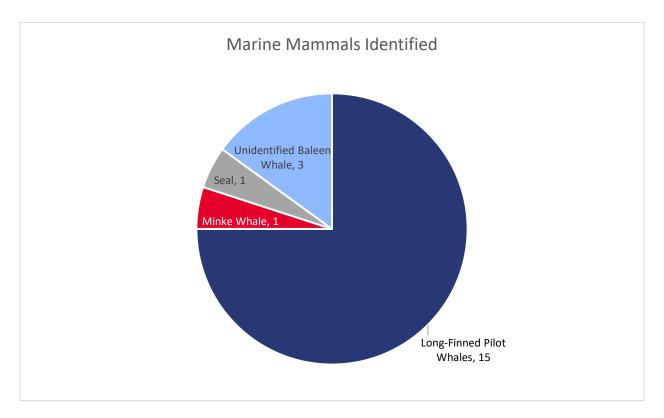


Figure 25: Marine Mammals Identified

#### 3.3.3 Marine Mammal and Sea Turtle Monitoring in Transit to Cambriol G-92

There were no marine mammal sightings in transit to the Cambriol G-92 wellsite from the Cambriol J-31A wellsite.

#### 3.3.4 Marine Mammal and Sea Turtle Monitoring for Cambriol G-92

There were no marine mammal sightings during the entirety of the West Hercules' time on the Cambriol G-92 wellsite.





# 4.0 Supplementary Digital Data

The following data has also been provided for this report:

- ECSAS Wildlife Survey spreadsheet (West Hercules 2022): Spreadsheet outlining all data recorded (May 13, 2022 – July 25, 2022);
- Daily Seabird Observation Report: Forms identifying the number of seabirds recorded daily during the Cambriol J-31A and Cambriol G-92 projects.
- Weekly Seabird Observation Report: Forms identifying the number of seabirds recorded for the week during the Cambriol J-31A and Cambriol G-92 projects.
- Stranded Bird Search and Encounter Datasheet (Environment and Climate Change Canada):
   Forms identifying numbers for seabird searches performed and the seabirds identified on these searches

## 5.0 Sources Cited

Equinor Canada Ltd. Newfoundland (2022). Seabird Survey, Handling, and Observation Protocol.

Migratory Birds Convention Act, SCC 1994, c. 22.

Migratory Birds Regulations, SORC 2022, c. 105.

REV: 06-JAN-23

PAGE 38