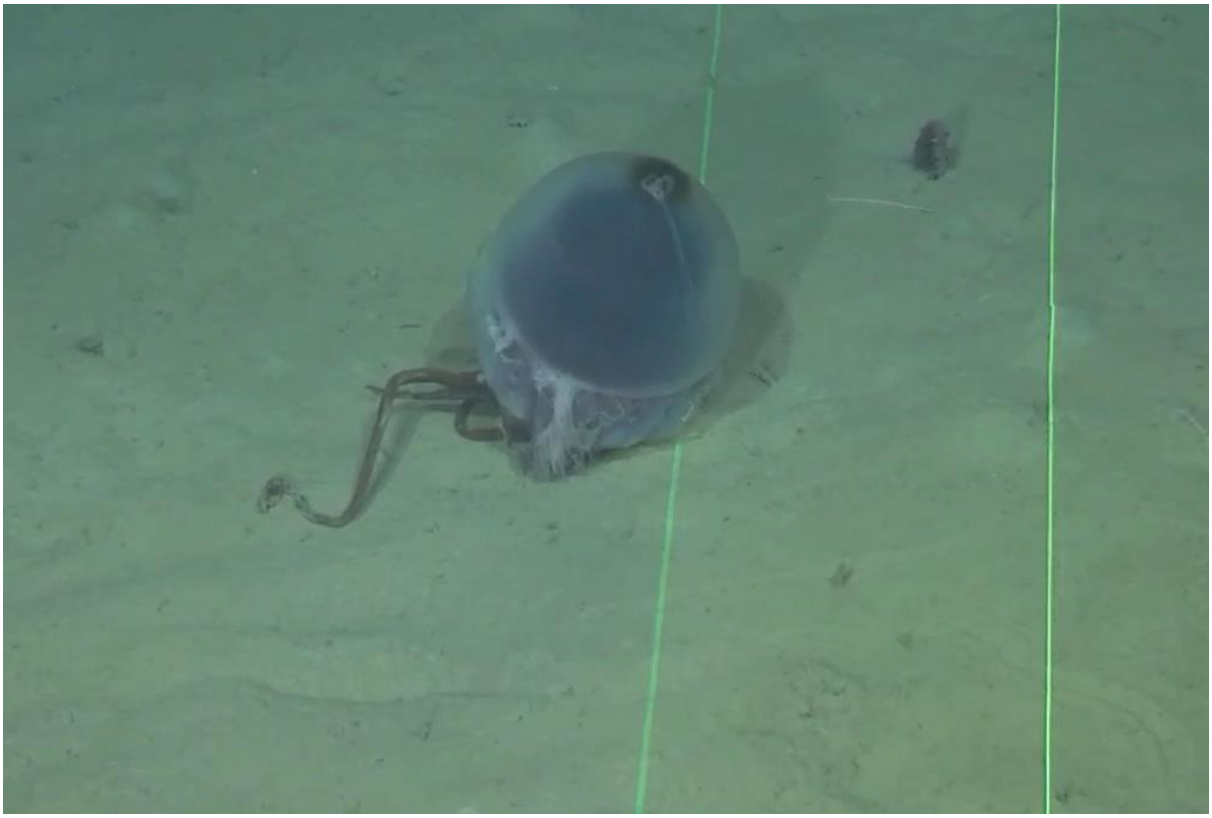
EQUINOR CANADA LTD.

POST-DRILLING ENVIRONMENTAL SEABED SURVEY PROGRAM

SITKA AND CAPPAHAYDEN 2024 REPORT

JULY 03, 2025



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SITKA AND CAPPAHAYDEN 2024 REPORT

EQUINOR CANADA LTD.

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TABLE OF CONTENTS

1 INTRODUCTION 1

1.1 Project Location 1

1.2 Previous Surveys 2

1.2.1 Surveys Prior to 2023 2

1.2.2 2023 Pre-Drilling Surveys 3

1.3 Survey Scope and Regulatory Guidance 3

1.4 Drill Cuttings Dispersion Modelling 4

2 METHODOLOGY 7

2.1 Field Survey 7

2.2 Drill Cuttings Deposition 11

2.2.1 Visual Extent 11

2.2.2 Sediment Coring 11

2.3 Visual Analysis 12

2.3.1 Surficial Substrate 13

2.3.2 Coral and Sponge 13

2.3.3 Fish and Other Invertebrates 15

2.3.4 Other Observations 15

2.4 Mapping 15

2.5 Statistical Analysis 16

3 SITKA RESULTS 17

3.1 ROV Altitude and Velocity 17

3.2 Surficial Substrate 17

3.3 Drill Cuttings Deposition 20

3.3.1 Extent 20

3.3.2 Thickness 23

3.3.3 Chemical Analysis 25

3.3.3.1 Barium 27

3.3.3.2 Lead 29

3.3.3.3 Hydrocarbons 29

3.4 Benthic Fauna 35

3.4.1 Coral Functional Groups 35

3.4.2 Sponge Morphological Groups 48

3.4.3 Fish Functional Groups 55

3.4.4 Invertebrate (non-Coral and Sponge) Taxa 58

3.5 Other Observations 61
3.5.1 Anthropogenic debris 61

4 CAPPAHAYDEN RESULTS 63

4.1 ROV Speed and Altitude 63

4.2 Surficial Substrate 63

4.3 Drill Cuttings Deposition 65
4.3.1 Extent 65
4.3.2 Thickness 68
4.3.3 Chemical Analysis 70
4.3.3.1 Barium 72
4.3.3.2 Hydrocarbons 74

4.4 Benthic Fauna 79
4.4.1 Coral Functional Groups 79
4.4.2 Sponge Morphological Groups 93
4.4.3 Fish Functional Groups 110
4.4.4 Invertebrate (non-Coral and Sponge) Taxa 113

4.5 Other Observations 116

5 SUMMARY AND CONCLUSIONS 118

5.1 Summary and Discussion 118
5.1.1 Sitka 118
5.1.1.1 Drill Cuttings Deposition Extent and Thickness 118
5.1.1.2 Benthic Fauna Surveys 119
5.1.1.3 Comparison with Environmental Assessment Predictions 119
5.1.2 Cappahayden 120
5.1.2.1 Drill Cuttings Deposition Extent and Thickness 120
5.1.2.2 Benthic Fauna Surveys 121
5.1.2.3 Comparison with Environmental Assessment Predictions 121

5.2 Conclusion 122
5.2.1 Sitka 122
5.2.2 Cappahayden 122

6 REFERENCES 124

TABLES

Table 1-1 Coordinates for each well site. 2
Table 1-2 EIS Decision Statement Conditions. 4
Table 1-3 Modelled drill cuttings material settled by distance (adapted from Statoil 2017). 5
Table 1-4 Distribution of modelled drill cutting thickness by distance summary (adapted from Statoil 2017). 6
Table 2-1 Surficial substrate categories used to categorize benthic environment (Wentworth 1922). 13
Table 2-2 Coral and sponge functional groups with example taxa (Annex A of DFO 2022). 14
Table 2-3 Coral and sponge condition categories with descriptions (Annex C of DFO 2022). 14
Table 2-4 Summary table of fish functional groups. 15
Table 3-1 Summary of ROV altitude and velocity during the Sitka survey. 17
Table 3-2 Core sample recovery and cuttings thickness at Sitka post-drill. 23
Table 3-3 Sitka sediment chemistry summary statistics. 25
Table 3-4 Comparison of barium, lead, and >C_{10}-C_{32} hydrocarbons concentrations across stations at Sitka, with values above two standard deviations over the reference areas' mean highlighted blue. 26
Table 3-5 Summary statistics (abundance and density) of coral functional groups from the pre- and post-drilling surveys at Sitka. 47
Table 3-6 Coral functional group condition in the pre- and post-drilling surveys at Sitka. 48
Table 3-7 Summary statistics (abundance and density) of sponge morphological groups from the pre- and post-drilling surveys at Sitka. 53
Table 3-8 Sponge morphological group conditions in the pre- and post-drilling surveys at Sitka. 54
Table 3-9 Summary statistics (abundance and density) of fish functional groups from the pre- and post-drilling surveys at Sitka. 57
Table 3-10 Summary statistics (abundance and density) of invertebrate (non-coral and sponge) taxa from the pre- and post-drilling surveys at Sitka. 60
Table 4-1 Summary of ROV altitude and velocity during the Cappahayden survey. 63
Table 4-2 Core sample recovery and cuttings thickness at Cappahayden. 68
Table 4-3 Cappahayden sediment chemistry summary statistics. 70
Table 4-4 Comparison of barium and >C_{10}-C_{32} hydrocarbons concentrations across stations at Cappahayden, with values above two standard deviations over the reference areas' mean highlighted blue. 71
Table 4-5 Summary statistics (abundance and density) of coral functional groups from the Cappahayden pre- and post-drilling surveys. 80
Table 4-6 Coral functional group condition in the pre- and post-drilling surveys at Cappahayden. 82
Table 4-7 Summary statistics (abundance and density) of sponge morphological groups from the pre- and post-drilling surveys at Cappahayden. 94
Table 4-8 Sponge morphological group conditions in the pre- and post-drilling surveys at Cappahayden. 96
Table 4-9 Summary statistics (abundance and density) of fish functional groups from the pre- and post-drilling surveys at Cappahayden. 111
Table 4-10 Summary statistics (abundance and density) of invertebrate (non-coral and sponge) taxa from the pre- and post-drilling surveys at Cappahayden. 114

FIGURES

Figure 1-1 2024 survey area polygon, well site areas, and special areas (including 2019 VME delineation). 2
Figure 1-2 Predicted combined drill cuttings footprint (WBMs and SBMs) for exploratory well sites (summer/fall scenarios). 6
Figure 2-1 Bourbon ROV with attached core rack used for the post-drilling surveys. 8
Figure 2-2 The Sitka well site post-drilling benthic survey pattern, with sediment sampling locations represented by black solid squares. 9
Figure 2-3 The Cappahayden well site post-drilling benthic survey pattern, with sediment sampling locations represented by black solid squares. 10
Figure 2-4 Representative photos of the core sampling process: A) core rack attached to ROV with sediment samples coming onboard, B) cores in rack ready for processing, C) drained core with ruler, and D) extruded sediment prior to homogenization and sampling. 12
Figure 3-1 Examples of surficial substrate observed in the post-drilling survey: A) fine-grained substrate, B) medium sized grain, C) coarse grain, D) fine-grained piled substrate, E) shell substrate comprised of urchin tests. Green scaling lasers are 22 cm apart. 18
Figure 3-2 Predominant substrate category in each 50 m transect section from the Sitka pre- and post-drilling surveys. 19
Figure 3-3 Examples of cuttings observed in post-drilling survey: A-C) thick cuttings with varied textures, with a patch of green tracer-dyed glycol in C, D) thin cuttings, E) star-like cuttings, and F) cuttings clump. Green scaling lasers are 22 cm apart. 21
Figure 3-4 Predicted (shaded areas) and observed (blue and taupe coloured lines) drill cuttings extent at the Sitka well site. 22
Figure 3-5 Sitka sediment core sampling locations with cuttings thickness (mm). Sample duplicates are jittered to show both sets of results. 24
Figure 3-6 Barium concentration (mg/kg) in sediment cores taken at varying distances from the Sitka well centre. The blue line is a linear regression model, with the grey area as a 95% confidence interval. 27
Figure 3-7 Barium concentration (mg/kg) from each sediment core sampling location within the Sitka survey area. Sample duplicates are jittered to show both sets of results. 28
Figure 3-8 Lead concentration (mg/kg) in sediment cores taken at varying distances from the Sitka well centre. The blue line is a linear regression model, with the grey area as a 95% confidence interval. 29
Figure 3-9 Lower fuel range hydrocarbon concentration (mg/kg) in sediment cores taken at varying distances from the Sitka well centre. The blue line is a linear regression model, with the grey area as a 95% confidence interval. Values have been $\log_{10}$ transformed for graphing. 30
Figure 3-10 Upper fuel range hydrocarbon concentration (mg/kg) in sediment cores taken at varying distances from the Sitka well centre. The blue line is a linear regression model, with the grey area as a 95% confidence interval. Values have been $\log_{10}$ transformed for graphing. 31
Figure 3-11 Lube range hydrocarbon concentration (mg/kg) in sediment cores taken at varying distances from the Sitka well centre. The blue line is a linear regression model, with

the grey area as a 95% confidence interval. Values have been log_{10} transformed for graphing. 31
Figure 3-12 Sitka sediment core sampling locations with lower fuel range hydrocarbon concentration (mg/kg). Sample duplicates are jittered to show both sets of results. 32
Figure 3-13 Sitka sediment core sampling locations with upper fuel range hydrocarbon concentration (mg/kg). Sample duplicates are jittered to show both sets of results. 33
Figure 3-14 Sitka sediment core sampling locations with lube range hydrocarbon concentration (mg/kg). Sample duplicates are jittered to show both sets of results. 34
Figure 3-15 Representative photos of corals observed in the Sitka post-drilling survey: A-C) sea pens (likely *Halipteris* sp. [A], *Anthoptilum* sp. [B], and *Pennatula* sp. [C]), D) small gorgonian (*Acanella* sp.), E) soft coral (likely *Duva* sp.), and F) small gorgonian (*Radicipes* sp.). Green scaling lasers are 22 cm apart. 36
Figure 3-16 Representative photos of coral conditions in the Sitka post-drilling survey: A) 'Good' condition sea pen (*Pennatula* sp.), B) 'Poor/Damaged' sea pen (*Anthoptilum* sp.), C) 'Dead' sea pen, D) 'Good' small gorgonian (*Radicipes* sp.), E) 'Poor/Damaged' small gorgonian, F) 'Dead' small gorgonian, G) 'Good' small gorgonian (*Acanella* sp.), H) 'Poor/Damaged' small gorgonian, and I) 'Dead' small gorgonian. Green scaling lasers are 22 cm apart. 37
Figure 3-17 All corals abundance (individuals) observed in the Sitka pre- and post-drilling surveys. 38
Figure 3-18 All corals density (individuals per m^2) observed in the Sitka pre- and post-drilling surveys. 39
Figure 3-19 Sea pen abundance (individuals) observed in the Sitka pre- and post-drilling surveys. 40
Figure 3-20 Sea pen density (individuals per m^2) observed in the Sitka pre- and post-drilling surveys. 41
Figure 3-21 Small gorgonian abundance (individuals) observed in the Sitka pre- and post-drilling surveys. 42
Figure 3-22 Small gorgonian density (individuals per m^2) observed in the Sitka pre- and post-drilling surveys. 43
Figure 3-23 Other coral abundance (individuals) observed in the Sitka pre- and post-drilling surveys. 44
Figure 3-24 Other coral density (individuals per m^2) observed in the Sitka pre- and post-drilling surveys. 45
Figure 3-25 All coral condition (percent good) observed in the Sitka pre- and post-drilling surveys. 46
Figure 3-26 Representative photos of sponge morphological groups observed in the Sitka post-drilling survey: A) round sponge with projections, B) encrusting sponge, C) solid/massive sponge. Green scaling lasers are 22 cm apart. 49
Figure 3-27 All sponge abundance (individuals) observed in the Sitka pre- and post-drilling surveys. 50
Figure 3-28 All sponge density (individuals per m^2) observed in the Sitka pre- and post-drilling surveys. 51
Figure 3-29 All sponge condition (percent good) observed in the Sitka pre- and post-drilling surveys. 52
Figure 3-30 Representative photos of fish observed in the Sitka post-drilling survey: A) benthivore (sculpin), B) benthivore (grenadier), C) planktivore (lanternfish), D) piscivore (Greenland halibut), E) piscivore (hake), F) benthivore (Northern wolffish),

G) benthivore (shortnose eel), and H) benthivore (rockling). Green scaling lasers are 22 cm apart. 56
Figure 3-31 Representative photos of invertebrate taxa observed in the Sitka post-drilling survey: A) mollusc (squid), B) cnidaria (anemone), C) echinoderm (urchin), D) mollusc (gastropod), E) echinoderm (sea star), F) annelid, G) arthropod (shrimp), and H) cnidarian (jellyfish). Green scaling lasers are 22 cm apart. 59
Figure 3-32 Examples of anthropogenic debris observed during the post-drilling survey: A) rust flakes, B) trail of rust flakes, C) mass of rusty metal shavings, D) metal grate, E) sheet plastic debris, and F) zip-tie. Green scaling lasers are 22 cm apart....62
Figure 4-1 Examples of the surficial substrate observed in the Cappahayden post-drilling survey: A-D) fine sediment, C-D) troughs and piles of sediment observed occasionally. Scaling lasers are 22 cm apart. 63
Figure 4-2 Predominant substrate category in each 50 m transect section from the Cappahayden pre- and post-drilling surveys. 64
Figure 4-3 Examples of cuttings observed in the Cappahayden post-drilling survey: A-C) thick cuttings (no natural sediment visible) with varied textures, D-F) thin cuttings (some natural sediment visible). Green scaling lasers are 20 cm apart. 66
Figure 4-4 Predicted (shaded areas) and observed (blue and taupe coloured lines) drill cuttings extent at the Cappahayden well site. 67
Figure 4-5 Cappahayden sediment core sampling locations with cuttings thickness (mm). Sample duplicates are jittered to show both sets of results. 69
Figure 4-6 Barium concentration (mg/kg) in sediment cores taken at varying distances from the Cappahayden well centre. The blue line is a linear regression model, with the grey area as a 95% confidence interval. 72
Figure 4-7 Barium concentration (mg/kg) from each sediment core sampling location within the Cappahayden survey area. Sample duplicates are jittered to show both sets of results. 73
Figure 4-8 Lower fuel range hydrocarbon concentration (mg/kg) in sediment cores taken at varying distances from the Cappahayden well centre. The blue line is a linear regression model, with the grey area as a 95% confidence interval. Values have been log_{10} transformed for graphing. 74
Figure 4-9 Upper fuel range hydrocarbon concentration (mg/kg) in sediment cores taken at varying distances from the Cappahayden well centre. The blue line is a linear regression model, with the grey area as a 95% confidence interval. Values have been log_{10} transformed for graphing. 75
Figure 4-10 Lube range hydrocarbon concentration (mg/kg) in sediment cores taken at varying distances from the Cappahayden well centre. The blue line is a linear regression model, with the grey area as a 95% confidence interval. Values have been log_{10} transformed for graphing. 75
Figure 4-11 Cappahayden sediment core sampling locations with lower fuel range hydrocarbon concentration (mg/kg). Sample duplicates are jittered to show both sets of results. 76
Figure 4-12 Cappahayden sediment core sampling locations with upper fuel range hydrocarbon concentration (mg/kg). Sample duplicates are jittered to show both sets of results. 77
Figure 4-13 Cappahayden sediment core sampling locations with lube range hydrocarbon concentration (mg/kg). Sample duplicates are jittered to show both sets of results. 78
Figure 4-14 Examples of the coral functional groups observed in the Cappahayden post-drilling survey: A-C) sea pens, D) small gorgonian, E) soft coral. Scaling lasers are 20 cm apart. 80

Figure 4-15 Examples of coral condition observed in the Cappahayden post-drilling survey: A) 'good' condition sea pens, B) 'poor' condition sea pen, C) 'dead' sea pen (dislodged and completely tipped over), D) 'good' soft coral, E) 'poor' soft coral. F) 'good' small gorgonian, G) 'poor' small gorgonian, H) 'dead' small gorgonian (dislodged and laying in the sediment). Scaling lasers are 20 cm apart. 82
Figure 4-16 All coral abundance (individuals) observed in the Cappahayden pre- and post-drilling surveys. 84
Figure 4-17 All coral density (individuals per m^2) observed in the Cappahayden pre- and post-drilling surveys. 85
Figure 4-18 Sea pen abundance (individuals) observed in the Cappahayden pre- and post-drilling surveys. 86
Figure 4-19 Sea pen density (individuals per m^2) observed in the Cappahayden pre- and post-drilling surveys. 87
Figure 4-20 Small gorgonian abundance (individuals) observed in the Cappahayden pre- and post-drilling surveys. 88
Figure 4-21 Small gorgonian density (individuals per m^2) observed in the Cappahayden pre- and post-drilling surveys 89
Figure 4-22 Other coral abundance (individuals) observed in the Cappahayden pre- and post-drilling surveys. 90
Figure 4-23 Other coral density (individuals per m^2) observed in the Cappahayden pre- and post-drilling surveys 91
Figure 4-24 All coral condition (percent good) observed in the Cappahayden post-drilling survey. 92
Figure 4-25 Representative photos of three of the sponge morphological groups observed in the Cappahayden post-drilling survey: A) solid/massive sponge, B) round with projections sponge, C) leaf/vase shaped sponge. Green scaling lasers are 20 cm apart. 93
Figure 4-26 All sponge abundance (individuals) observed in the Cappahayden pre- and post-drilling surveys. 97
Figure 4-27 All sponge density (individuals per m^2) observed in the Cappahayden pre- and post-drilling surveys. 98
Figure 4-28 Leaf / vase shaped sponge abundance (individuals) observed in the Cappahayden pre- and post-drilling surveys. 99
Figure 4-29 Leaf / vase shaped sponge density (individuals per m^2) observed in the Cappahayden pre- and post-drilling surveys. 100
Figure 4-30 Round with projections sponge abundance (individuals) observed in the Cappahayden pre- and post-drilling surveys. 101
Figure 4-31 Round with projections sponge density (individuals per m^2) observed in the Cappahayden pre- and post-drilling surveys. 102
Figure 4-32 Solid / massive sponge abundance (individuals) observed in the Cappahayden pre- and post-drilling surveys. 103
Figure 4-33 Solid / massive sponge density (individuals per m^2) observed in the Cappahayden pre- and post-drilling surveys. 104
Figure 4-34 Stalked sponge abundance (individuals) observed in the Cappahayden pre- and post-drilling surveys. 105
Figure 4-35 Stalked sponge density (individuals per m^2) observed in the Cappahayden pre- and post-drilling surveys. 106
Figure 4-36 Thin-walled, complex sponge abundance (individuals) observed in the Cappahayden pre- and post-drilling surveys. 107

Figure 4-37 Thin-walled, complex sponge density (individuals per m^2) observed in the Cappahayden pre- and post-drilling surveys. 108
Figure 4-38 All sponge condition (percent good) observed in the Cappahayden post-drilling survey. 109
Figure 4-39 Examples of the fish functional groups observed in the Cappahayden post-drilling survey: A-D) benthivores, E-F) piscivores, G) planktivore, H) plank-piscivore. 111
Figure 4-40 Examples of non-coral and sponge invertebrate fauna observed in the Cappahayden post-drilling survey: A-B) molluscs, C-D) cnidaria, E-F) echinoderms, G) arthropod, and H) annelid. 114
Figure 4-41 Examples of anthropogenic debris observed in the Cappahayden post-drilling survey: A) hard plastic, B) aggregation of rusting metal shavings, C) wood board, and D-E) rope. Green scaling lasers are 20 cm apart. 117

APPENDICES

APPENDIX A Sitka Well Site Datasheets
APPENDIX B Cappahayden Well Site Datasheets
APPENDIX C ROV Specifications
APPENDIX D Sediment Core Photos
APPENDIX E Chemical Analysis Results
APPENDIX F Coral and Sponge Condition Maps
APPENDIX G Fish and Invertebrate Abundance and Density Maps
APPENDIX H Statistical Comparison Tables

ABBREVIATIONS

AUV	Autonomous underwater vehicle
C-NLOER	Canada-Newfoundland & Labrador Offshore Energy Regulator
CBD	Convention on Biological Diversity
DFO	Fisheries and Oceans Canada
DVL	Doppler velocity log
EA	Environmental assessment
EBSA	Ecologically or Biologically Significant Area
EIS	Environmental impact statement
EL	Exploration license
EPA	Eastern Project Area
ESRI	Environmental Systems Research Institute
GIS	Geographic Information System
HC	Hydrocarbons
HD	High definition
HiPAP	High precision acoustic positioning
IAAC	Impact Assessment Agency of Canada
NAD 83	North American Datum 1983
NAFO	Northwest Atlantic Fisheries Organization
PNET	Predicted-no-effect threshold
PSA	Particle size analysis
RDL	Reported Detection Limit
ROV	Remotely operated vehicle
SAR	Species at Risk
SBM	Synthetic-based mud
SDL	Significant discover license
sp.	Species
St. dev.	Standard deviation
UTM	Universal Transverse Mercator
VME	Vulnerable Marine Ecosystems
WBM	Water-based mud
Units	
%	percent
°C	degrees Celsius
cm	centimeters

ind.	individual
kg	kilograms
km	kilometers
m	meters
mg	milligrams
mm	millimeters
n	number

1 INTRODUCTION

Equinor Canada Ltd. (herein referred to as Equinor) undertook a post-drilling seabed survey in the Flemish Pass area offshore Newfoundland and Labrador (NL) in September and October of 2024. WSP Canada Inc. (WSP) was contracted by Equinor to provide onboard biologists and analyze and report on the survey program.

The scope of the post-drilling monitoring was conducted to satisfy the requirement of the Flemish Pass Environmental Assessment Decision Statement (CEAA 2019) Condition 3.12.2 for well or wells drilled during the 2024 drilling campaign (i.e., Sitka C-02 and Cappahayden C-85). Equinor developed a post-drilling Plan (WSP 2024a) in consultation with Fisheries and Oceans Canada (DFO) and the Canada-Newfoundland and Labrador Offshore Energy Regulator (C-NLOER; previously the Canada-Newfoundland and Labrador Offshore Petroleum Board (C-NLOPB)). The Plan considered the most recent guidance for protecting corals and sponges for offshore Newfoundland (DFO 2024), the pre-drilling seabed investigation plan (WSP 2023), and the results of that survey (WSP 2024b). This Post-Drilling Environmental Seabed Survey Program Report discusses the follow-up program for fish and fish habitat and drill cuttings for well sites Sitka C-02 and Cappahayden C-85.

1.1 PROJECT LOCATION

The Project Area is approximately 500 km east of St. John's in the Flemish Pass with the well site locations (marked with an X in Figure 1-1) in approximately 900 m of water depth. The Sitka C-02 well site is located in Exploration Licence EL1156 and Cappahayden C-85 well site is located in Significant Discovery License (SDL) 1059. The well site locations (Figure 1-1, Table 1-1) are outside of any North Atlantic Fisheries Organization (NAFO) Closure Area or any coral and sponge Vulnerable Marine Ecosystem (VME). Both sites are within an Ecologically or Biologically Significant Area (EBSA) as established by the Convention on Biological Diversity (CBD) called the Slopes of the Flemish Cap and Grand Bank, which is a large area around the Flemish Cap and Pass that includes all current NAFO closures to protect corals and sponges.

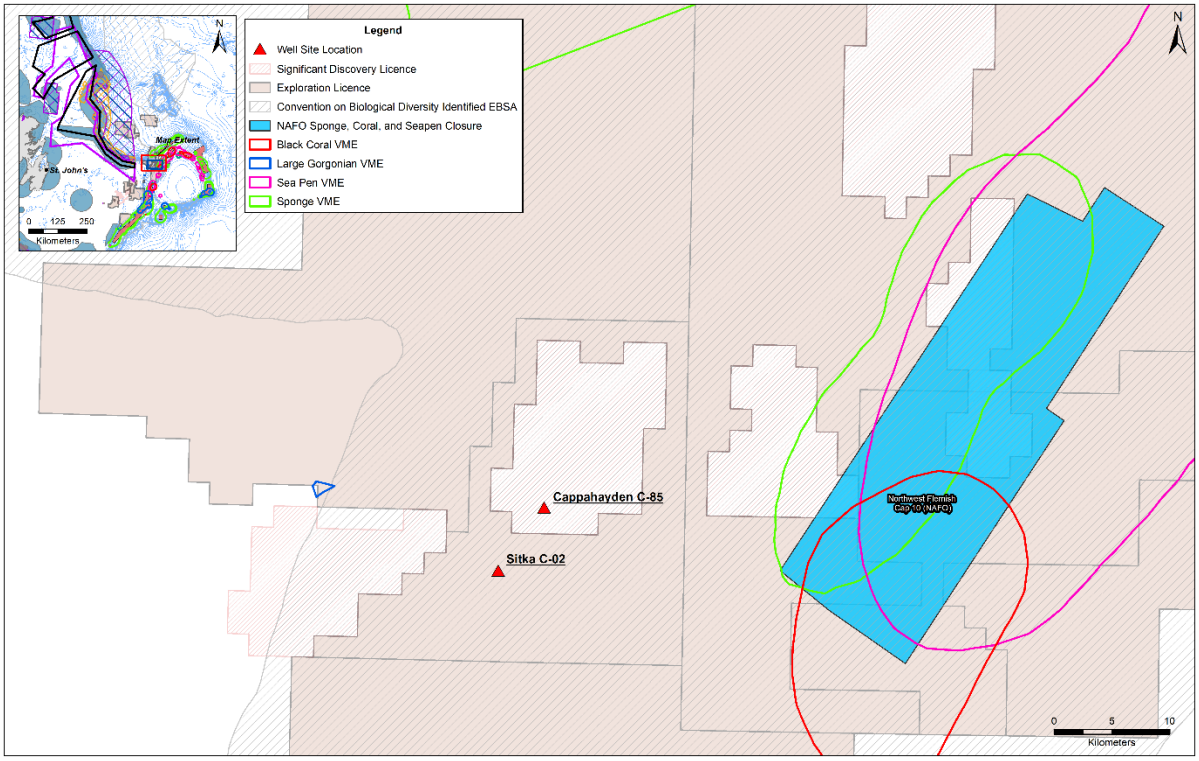

Figure 1-1 2024 survey area polygon, well site areas, and special areas (including 2019 VME delineation).

Table 1-1 Coordinates for each well site.

Well Site	Coordinates
Sitka C-02	368125.19 E / 5301559.31 N
Cappahayden C-85	371965.1 E / 5306982.1 N
Note: All coordinates listed are in UTM NAD 83 Zone 23 N.	

1.2 PREVIOUS SURVEYS

1.2.1 SURVEYS PRIOR TO 2023

Equinor previously conducted seabed surveys in the Flemish Pass in 2018, 2019, and 2021. These surveys utilized both autonomous underwater vehicles (AUV) and remotely operated vehicles (ROV).

- 2018 Bay du Nord AUV/ROV Seabed Surveys (Equinor 2020, Wood 2020a),
- 2019 Exploration Drilling ROV Surveys (Wood 2019, 2020b, 2020b),

- 2019 Geotechnical Program ROV Seabed Inspection (Fugro 2020).
- 2021 Coral, Sponge, and Fish Habitat Survey (Wood 2022a, 2022b).

These previous reports identified several coral and sponge taxa within the Project Area (Equinor 2020, Wood 2020a). Coral taxa typically observed included sea pens (mainly *Pennatula* sp.), large gorgonians, small gorgonians (mainly *Acanella* sp.), and soft corals. Corals rarely observed in those survey areas included black corals and solitary stony corals. Various sponges were also observed including encrusting sponges, round with projections sponges, and solid/massive sponges. The abundance of coral and sponge taxa varied per site and some distributions were influenced by surficial substrate present. Some species of corals and sponges only occur on large grain hard substrates.

In addition to corals and sponges, several taxa of fish and marine invertebrates were also observed in those surveys. Commonly observed fish species included grenadiers, blue hake, and longnose eels. Echinoderms such as sea stars, brittle stars, and sea urchins were the most frequently observed marine invertebrates (excluding corals and sponges).

1.2.2 2023 PRE-DRILLING SURVEYS

Prior to the start of drilling, a baseline seabed survey was conducted in June 2023 at EL 1156 and SDL 1159, at the proposed locations of the Sitka and Cappahayden well sites. The survey objective was to collect pre-drilling seabed video imagery to confirm the presence or absence of any aggregations of habitat-forming corals or sponges and identify any other environmentally sensitive habitats within the predicted drill cuttings deposition footprint. The pre-drilling survey at Sitka consisted of a 500 m by 500 m grid centered on the drill centre with 21 transects spaced 25 m apart, guardrails to the east and west of three grid lines, as well as three additional 500 m lines both above and below the grid lines. The well site design for Cappahayden had not yet been finalized during the pre-drilling survey, and so a large trapezoidal area centered around potential centre points was conducted. The 37 lines within this trapezoid varied in length from 50 m to 1,200 m in length, with 25 m spacing between lines.

Three coral functional groups were noted: other corals, small gorgonians, and sea pens. Sponges were rare in the pre-drilling survey. Based on the results from the pre-drilling survey, DFO advised C-NLOER that both well sites had aggregations of habitat forming sea pens and constituted sensitive fish habitat.

The results from the pre-drilling survey are discussed below in comparison with the results from the follow-up survey. Full results from the pre-drilling survey are presented in the pre-drilling environmental seabed survey program report (WSP 2024b). Coral and sponge condition was presented in the pre-drilling report based on the overall group (no differentiation for functional/morphological group). This report presents the coral and sponge condition during the post-drilling surveys by functional and morphological groups based on feedback from DFO in the pre-drilling survey report comments.

1.3 SURVEY SCOPE AND REGULATORY GUIDANCE

The purpose of the 2024 post-drilling survey program was to fulfill follow-up monitoring requirements described in Condition 3.12.2 of the 2019 Decision Statement (CEAA 2019) issued for the project EIS titled Flemish Pass Exploration Drilling Project (Statoil 2017) (Table 1-2).

Table 1-2 EIS Decision Statement Conditions.

Condition	Condition Details	Report Section
3.12	The Proponent shall develop and implement follow-up requirements, pursuant to condition 2.4, to verify the accuracy of the predictions made during the environmental assessment as it pertains to fish and fish habitat, including marine mammals and sea turtles, and to determine the effectiveness of mitigation measures identified under conditions 3.1 to 3.11. As part of these follow-up requirements, for the duration of the drilling program, the Proponent shall:	This Report
3.12.2	for the first well in each exploration licence, and for any well where drilling is undertaken in an area determined by coral and sponge surveys to be sensitive benthic habitat, and for any well located within a special area designated as such due to the presence of sensitive coral and sponge species, or a location near a special area where drill cuttings dispersion modelling predicts that drill cuttings deposition may have adverse effects, develop and implement, in consultation with Fisheries and Oceans Canada and the Board, follow-up requirements to verify the accuracy of the environmental assessment and effectiveness of mitigation measures as they pertain to the effects of cuttings discharges on benthic habitat. Follow-up shall include:	This Report
3.12.2.1	measurement of sediment deposition extent and thickness post-drilling to verify the drill waste deposition modeling predictions;	3.3, 4.3
3.12.2.2	benthic fauna surveys to verify the effectiveness of mitigation measures; and	3.4, 4.4
3.12.2.3	The Proponent shall report the information collected, as identified in conditions 3.12.2.1 and 3.12.2.2, including a comparison of modelling results to in situ results, to the Board within 60 days following the drilling of the first well in each exploration licence; and	3.2, 3.4, 4.2, 4.4, 5

1.4 DRILL CUTTINGS DISPERSION MODELLING

The dispersion and deposition of the drill cuttings was modelled to provide the spatial extent of likely effects to fish habitat from exploration drilling activities as described in the environmental assessment (Statoil 2017). The post-drilling seabed survey plan was designed around the drill cuttings dispersion model results for the summer (June) and fall (September) months as described in the Environmental Assessment (EA), as drilling would be carried out from July to the end of October. The Eastern Project Area (EPA) dispersion model was chosen to inform the survey designs due to its proximity to the proposed drilling locations (Sitka and Cappahayden sites) and similar depth range (model: 1,100 m water depth, potential well sites: approximately 900 m).

The EPA drill cutting model included the combined deposition distribution of both water-based mud (WBM) and synthetic-based mud (SBM) discharges. To capture the seasonal variation in ocean currents

experienced over the course of a year, modelling was conducted for four different 'scenarios' (for March, June, September, and December). For the 2024 drilling campaign, drilling occurred primarily in the summer and fall months, from July to end of October, therefore the June and September scenarios represented planned drilling activities.

In the Flemish Pass EIS (Statoil 2017), to assess the potential impacts of drill cuttings on benthic fauna, a threshold of 6.5 mm predicted no effect threshold (PNET) was used as a threshold of species tolerance of burial based on a variety of coastal species (Kjeilen-Eilertsen et al. 2004). The Regional Guidance on Measures to Protect Corals and Sponges (DFO 2024) recommends a more conservative 1.5 mm threshold for sensitive benthic species, such as corals and sponges; As such, these two values are used throughout this report as the deposition area cutoff values.

Table 1-3 summarizes the modelled accumulations of drill cuttings with proximity to the well site based on the PNET levels stated in the EIS. Table 1-4 summarizes the percent of depositional area each thickness category covers. Figure 1-2 visually depicts the predicted distribution of drill cuttings for both well sites. WBM cuttings deposition comprise the majority of the potential zone of influence on the benthic environment (Table 1-3) with discharged SBM cuttings predicted to result in accumulations of less than 0.5 mm thickness.

Table 1-3 Modelled drill cuttings material settled by distance (adapted from Statoil 2017).

Eastern Project Area Model		**Distance from Well Site**									
		<10 m	**10-100 m**	**100-200 m**	**200-500 m**	**500-1 km**	**1-2 km**	**2-4 km**	**4-5 km**	**5-31 km**	**>31 km**
Cuttings Type	Metric	Cuttings Thickness (mm)									
March											
WBM	Mean	41	10	1	1	-	-	-	-	-	-
	Maximum	58	88 [1]	4	1	-	-	-	-	-	-
SBM	Mean	-	<0.01	0.01	0.02	0.03	0.02	-	-	0.01	0.03
	Maximum	-	<0.01	0.04	0.1	0.1	0.1	-	-	0.05	0.3
June											
WBM	Mean	20	8	3	1	-	-	-	-	-	-
	Maximum	35	97 [2]	28	1	-	-	-	-	-	-
SBM	Mean	-	-	-	<0.01	0.01	0.02	-	-	-	-
	Maximum	-	-	-	0.01	0.1	0.12	-	-	-	-
September											
WBM	Mean	10	6	6	1	-	-	-	-	-	-
	Maximum	25	80 [3]	40	9	-	-	-	-	-	-
SBM	Mean	<0.01	0.03	0.05	0.02	<0.01	<0.01	-	-	0.03	-
	Maximum	0.01	0.13	0.19	0.15	0.06	0.02	-	-	0.4	-
December											
WBM	Mean	17	12	2	1	-	-	-	-	-	-
	Maximum	37	116 [4]	17	2	-	-	-	-	-	-
SBM	Mean	<0.01	<0.01	<0.01	0.02	0.02	<0.01	-	-	0.06	-
	Maximum	<0.01	0.02	0.06	0.10	0.10	0.05	-	-	0.4	-

[1] maximum located (at 0.02 km, 0°), [2] at (0.02 km, 292°), [3] at (0.05 km, 35°), [4] at (0.06 km, 151°)

Table 1-4 Distribution of modelled drill cutting thickness by distance summary (adapted from Statoil 2017).

Drill Cutting Thicknesses	Depositional Area (%)	
	Within 500 m	Total Predicted Drill Cuttings Footprint
0 mm (outside of footprint)	39.4	-
0 < x < 1.5 mm (Below PNET)	53.2	87.6
1.5 < x< 6.5 mm (PNET range)	2.7	4.4
6.5 < x < 10 mm (Above PNET)	0.8	1.3
10 mm < x (Above PNET)	4.0	6.6

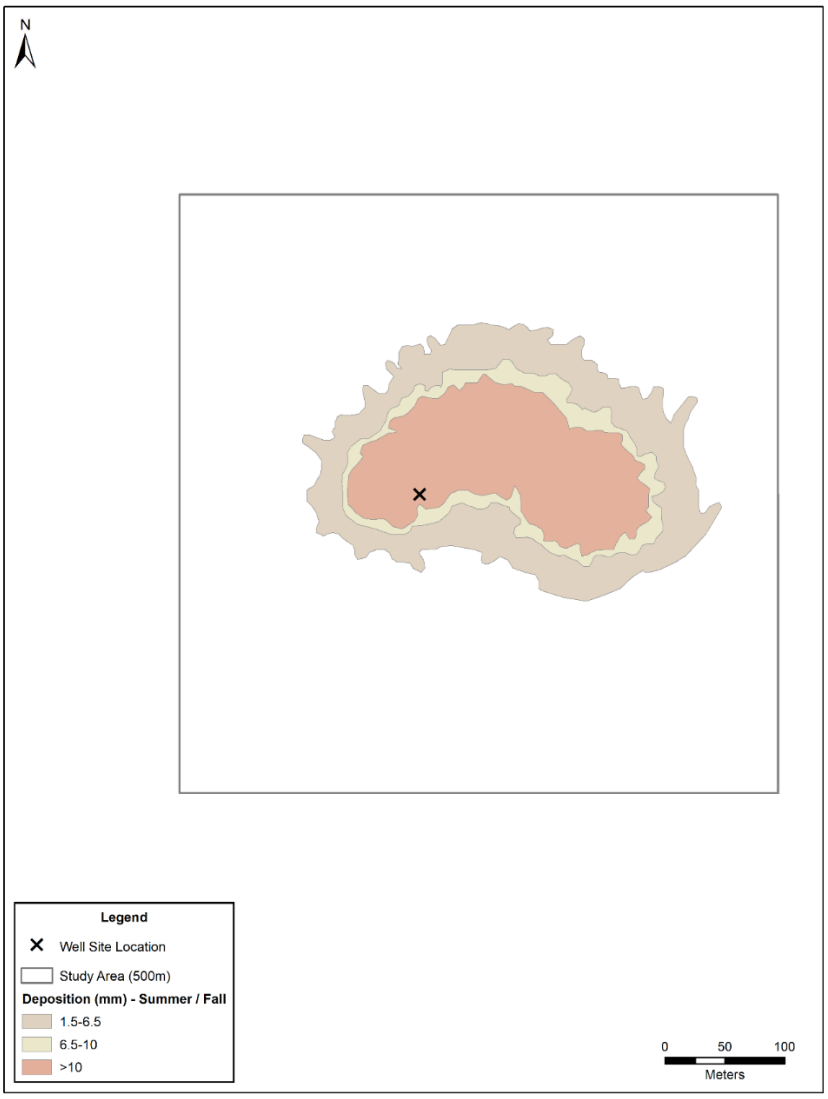

Figure 1-2 Predicted combined drill cuttings footprint (WBMs and SBMs) for exploratory well sites (summer/fall scenarios).

2 METHODOLOGY

2.1 FIELD SURVEY

The 2024 program surveys were conducted between September 26th and October 1st, 2024, for Sitka and between October 26th and 31st, 2024, for Cappahayden aboard the *MV Horizon Arctic* (operated by Horizon Maritime). Video and still imagery were collected using an ROV operated by Bourbon Offshore. Geo-referencing services were provided by SeaForth GeoSurveys. WSP provided onboard biologists to offer direction related to collecting appropriate data as described in the survey plan (WSP 2024a). Equinor was responsible for chartering the vessel and hiring the subcontractors.

The ROV was equipped with a forward-facing pan/tilt/zoom high-definition (HD) camera which was used to collect HD video (1920x1080p) during the duration of the survey (Figure 2-1). Video and still imagery were used to identify benthic fauna (including corals and sponges). The survey video and still imagery were geo-referenced using the ship's high precision acoustic positioning (HiPAP) system. The HD video was encoded with a digital overlay that displayed laser distance, depth (m), coordinates (easting and northing NAD83), heading, date and time (Newfoundland Standard Time), and altitude (m) above the seafloor. Still images were encoded with a date/time stamp and numbered sequentially. The ROV travelled at an altitude <1 m above the seafloor and at speeds of <0.5 knots. The estimated field of view for the Sitka surveys were 1.74 m to 2.89 m, and for the Cappahayden surveys 1.72 m to 2.50 m, in the pre- and post-drilling surveys, respectively. Scaling line lasers were spaced 22 cm (Sitka pre- and post-drill, and Cappahayden pre-drilling survey) and 20 cm apart (Cappahayden post-drilling survey). Colour checks were completed on deck prior to descent and at depth as per the survey plan.

The ROV also was equipped with a removable core rack holding 12 sediment sampling cores (Figure 2-1). The ROV used its manipulator arm to push the clear sided sediment cores into the substrate, carefully retracted the core, placed it in a basket, and samples were then processed aboard the vessel. Visual survey lines and core sampling locations for Sitka and Cappahayden can be found in Figure 2-2 and Figure 2-3, respectively.

Figure 2-1 Bourbon ROV with attached core rack used for the post-drilling surveys.

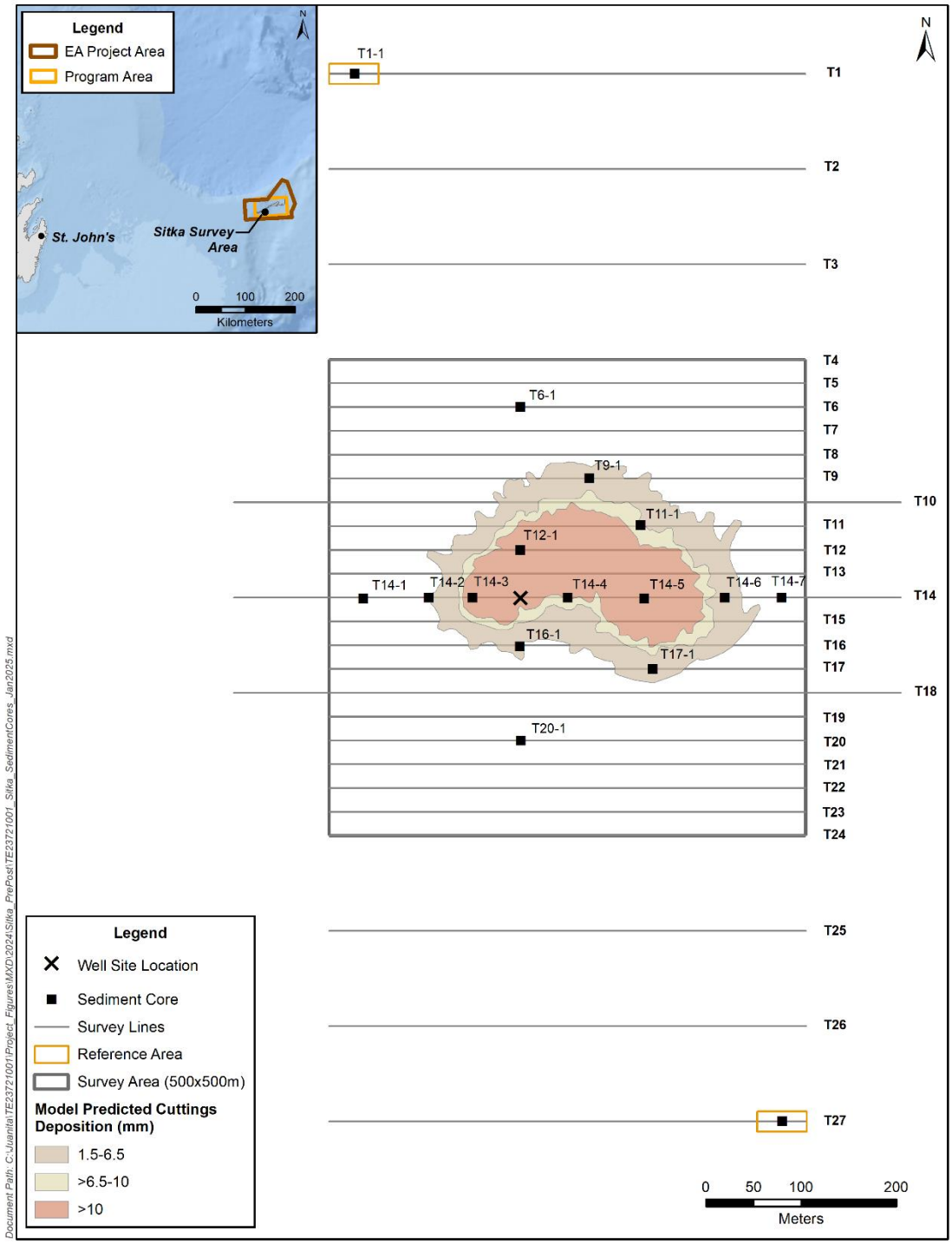

Figure 2-2 The Sitka well site post-drilling benthic survey pattern, with sediment sampling locations represented by black solid squares.

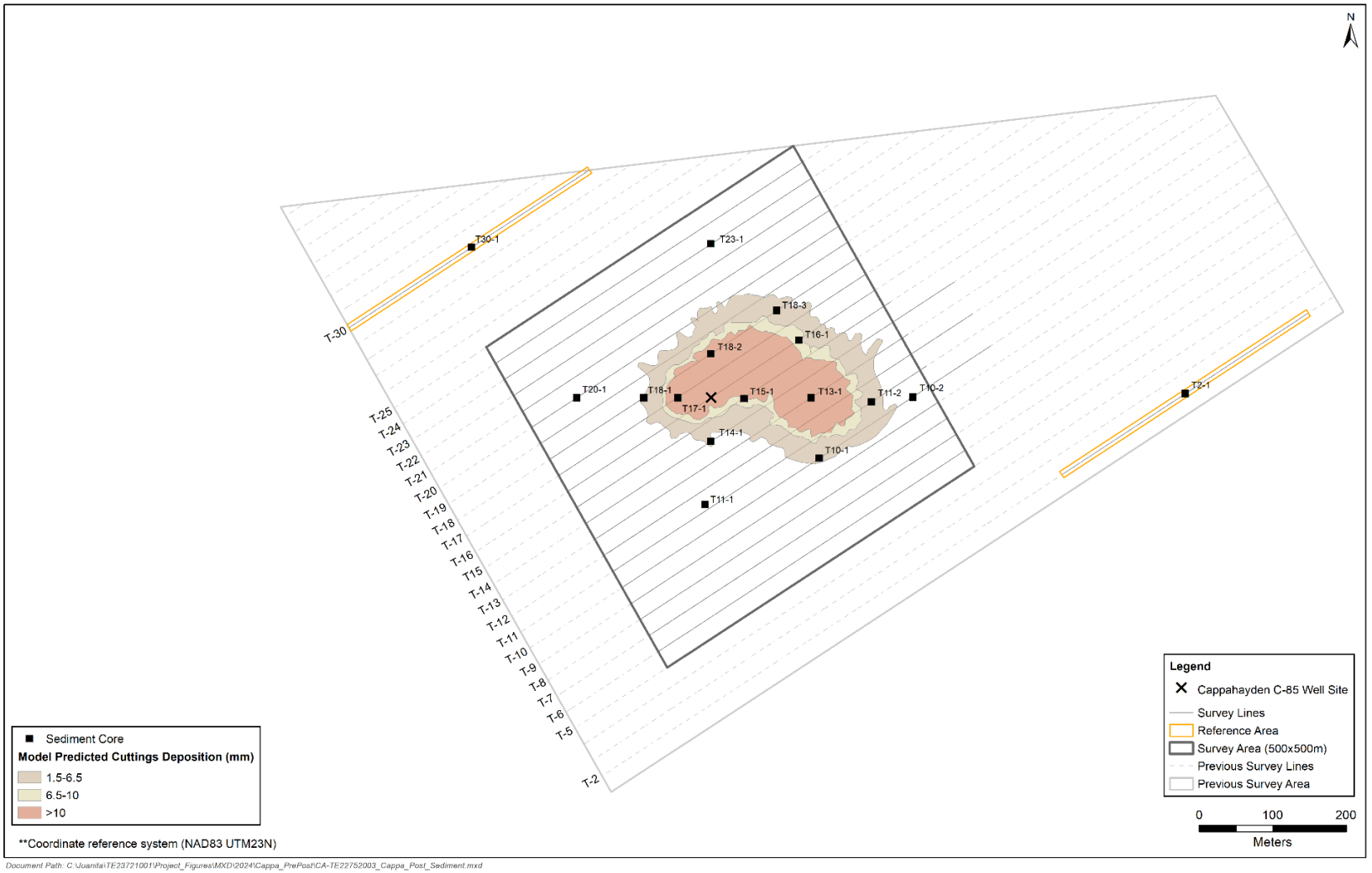

Figure 2-3 The Cappahayden well site post-drilling benthic survey pattern, with sediment sampling locations represented by black solid squares.

2.2 DRILL CUTTINGS DEPOSITION

Condition 3.12.2.1 requires measuring the extent and thickness of the cuttings deposition in order to verify the drill cuttings dispersion modelling predictions. The extent of cuttings was assessed visually using video collected by the ROV, and thickness was assessed using sediment core samples.

The cuttings being assessed visually (especially fine cuttings) can be a very thin but noticeable layer on the seabed. There may be differences between the visual and chemical analysis as this layer can be disturbed by the coring process; either by water exiting the top of the core tube or by cuttings being pushed down the sides of the core. During coring, the ROV settling on the seafloor may also disturb the surficial sediment layer. Cuttings may be buried beneath natural sediment that has covered the surface of the seafloor during or after drilling. This can lead to differences between the ROV visual survey and the sediment core observations. While coring locations were typically near the visual survey lines, the ROV may sample a small distance away from the line, due to either geopositioning errors or the avoidance of rocks or fauna by the ROV to settle for coring.

2.2.1 VISUAL EXTENT

Throughout the post-drilling seabed survey video review, the presence of cuttings (typically an off-white or brownish-grey colour) was noted. Cuttings were categorized based on their appearance, though these categories may not be entirely discrete:

- Star-like: presence of small (typically <2 cm), pale-coloured flocculant cuttings. These are likely surface released cuttings that flocculate together as they descend. They can be spread across an area in varying densities or observed in singular instances.
- Clumps: relatively larger pale-coloured rock-shaped aggregations of cuttings, typically seen individually and not continuous. They may be a large flocculation of surface released cuttings, or a large clump of bottom released cuttings.
- Thin: ongoing presence of discoloured or unnaturally textured bottom, with at least some of the natural substrate visible. Thin cuttings included localized cuttings clumps and small white cuttings clumps (gravel to cobble sized) of cuttings distributed along the sediment. This category likely encompasses the majority of the Transition Zone as described in Cochrane et al. (2019).
- Thick: ongoing continuous presence of a discoloured or unnaturally textured bottom, with no natural substrate visible. This category encompasses the categories Smothered and Visible Deposition and likely part of the Transition Zone as described in Cochrane et al. (2019).

The start and end coordinates of continuous cuttings were extracted from the ROV track file using the recorded time on the overlay.

2.2.2 SEDIMENT CORING

Sediment cores were taken in duplicate from 16 stations (32 samples total) at each survey site (Figure 2-2 and Figure 2-3). Cores were processed onboard to record cuttings thickness and packaged for laboratory chemical analysis (Figure 2-4). All core tubes were wiped clear of any moisture prior to being

visually assessed and photographed for the purpose of measuring the depth of cuttings. The top 15 cm of each core was extruded and homogenized before being placed into pre-labelled sampling jars. Sample jars were stored onboard the vessel at <10°C and delivered to the laboratory in coolers with ice or cooling packs. Cores were analyzed by an accredited analytical laboratory for hydrocarbons, particle size, and acid-extract---able metals. The summary results and discussion are focused on >C_{10}-C_{21} hydrocarbons that are associated with SBM fluid and barium (barite) – a tracer for the presence of WBM cuttings.

Figure 2-4 Representative photos of the core sampling process: A) core rack attached to ROV with sediment samples coming onboard, B) cores in rack ready for processing, C) drained core with ruler, and D) extruded sediment prior to homogenization and sampling.

2.3 VISUAL ANALYSIS

Similar to the pre-drilling analysis, transects were binned into 50-m sections. Post-survey, biologists were responsible for reviewing the acquired imagery and documenting the following:

- Surficial Substrate Description (Sections 3.2 and 4.2),
- Drill cuttings extent (Sections 3.3.1 and 4.3.1),
- Functional/Morphological Groups of corals and sponges (Section 3.4.1, 3.4.2, 4.4.1, and 4.4.2),
- Coral and Sponge Condition (Section 3.4.1, 3.4.2, 4.4.1, and 4.4.2),

- General observations of marine fish and invertebrates (Section 3.4.3, 3.4.4, 4.4.3, and 4.4.4),
- Species at Risk,
- Other observations (e.g., evidence of trawl fishing; Section 3.5, and 4.5).

2.3.1 SURFICIAL SUBSTRATE

Surficial substrate was described per transect using the definitions described in Table 2-1. Surficial substrates present (percent coverage of primary and secondary substrates) were described per transect sub-section using the Udden-Wentworth scale (Wentworth 1922). All substrate classes were recorded in 5% intervals, so the presence of a sediment grain larger than fine was recorded as 5%. The largest substrate size class present in each section was mapped.

Table 2-1 Surficial substrate categories used to categorize benthic environment (Wentworth 1922).

Substrate Class	Substrate Type	Definition
Bedrock		Continuous solid bedrock
Coarse	Boulder	Rocks greater than 250 mm
	Rubble	Rocks ranging from 130 mm to 250 mm
Medium	Cobble	Rocks ranging from 30 mm to 130 mm
	Gravel	Granule size or coarser, 2 mm to 30 mm
Fine	Sand	Fine deposits ranging from 0.06 mm to 2 mm
	Mud	Material encompassing both silt and clay < 0.06 mm
Organic/Detritus		A soft material containing 85 percent or more organic materials
Shells		Calcareous remains of shellfish or invertebrates containing shells

2.3.2 CORAL AND SPONGE

Corals and sponges were identified visually using a Northwest Atlantic Fisheries Organization (NAFO) area guide (Kenchington et al. 2015) (Table 2-2) and classified by functional group based on the DFO guidance (DFO 2024). The abundance (individuals) and density (ind./m^2) of each coral and sponge functional group were mapped per transect section. The abundance and density distribution for each functional group is discussed with comparisons to the pre-drilling survey. The condition of individual corals and sponges was also assessed during the post-survey analysis using the condition categories described in Table C1 of Annex C in DFO (2024) (Table 2-3). This categorization factored in if observed individuals were alive, had visible damage (e.g., broken skeletons, polyps were missing, or pieces of the sponge body were missing), had visible layers of sediment or drill cuttings, or if they were dead (corals only). The post-drilling coral and sponge condition data was compared to the pre-drilling data as combined coral functional groups and sponge morphological groups. A further breakdown of coral and sponge condition by functional/morphological groups will be provided for the post-drilling reporting only, per Equinor responses to the pre-drilling survey and plan.

Photos were taken of representative taxa for each coral functional group and sponge morphological group encountered during the survey. The on-board biologist selected the individuals to be photographed. A minimum of three (when possible) high-resolution, good-quality photographs were

taken of each individual, including i) the entire organism/colony, ii) a close-up of the attachment point to the substrate, iii) a close-up of the polyps (corals only), or body wall tissue (sponges only).

Table 2-2 Coral and sponge functional groups with example taxa (Annex A of DFO 2022).

Functional / Morphological Groups	Example Taxa
Corals	
Black Corals	*Stauropathes* sp.
Small Gorgonians	*Acanella* sp.
Large Gorgonians	*Paragorgia* sp.
Sea Pens	*Anthoptilum* sp.
Other (e.g., Soft corals, Hard Corals)	*Duva* sp., *Desmophyllum dianthus*
Sponges	
Solid/Massive	*Geodia* sp.
Thin-walled, Complex.	*Asconema* sp.
Leaf/Vase Shaped	*Phakellia* sp.
Round with Projections	*Polymastia* sp.
Stalked Sponge	*Stylocordyla* sp.
Other Sponge (encrusting, finger)	*Homaxinella* sp.
Note: Species identifications based on Kenchington et al. (2015)	

Table 2-3 Coral and sponge condition categories with descriptions (Annex C of DFO 2022).

Coral Condition		Sponge Condition	
Condition	**Description**	**Condition**	**Description**
Good (G)	Coral is oriented upright (or expected orientation for species), with no breakage, No polyp loss, No discoloration, No visual signs of parasitic or mucus covering the colony or hydroids covering parts of the colony, No visual sedimentation.	Good (G)	No signs of dislodgement, usually clean surface (i.e., no visual signs of sedimentation) and a tight shape.
Damaged (Dm)	Partially covered/visible layer of sediment/drill cuttings, A portion of the coral is bent or has breakage of branches/polyps, some polyps missing, Skeleton partially exposed, partial necrosis, Lack of tissue/tissue destroyed, Some visible discoloration, Presence of parasites such as zoanthids or hydroids overgrowing the colony, Mucus clearly visible on surface of coral.	Poor / Damaged	Broken, exposed tissue, fragmented, or tipped/flipped over, Partially covered/visible layer of sediment/drill cuttings, Branched sponge laying on the seafloor, Evidence of necrosis, Presence of white mats covering parts of the sponge, Sponge appears deflated, losing its firmness, Sponge looks to be disintegrating,

Coral Condition		Sponge Condition	
Condition	**Description**	**Condition**	**Description**
			Surface appears fuzzy, Discoloration, many times appearing brown.
Dead (D)	Dead, partially dead, or broke. Some indications may include: toppled, dislodged, skeleton visible with little to no living tissue, or coral skeleton with few or no polyps, Tipped colony with growth re-oriented upwards-most of the colony dead, Loss of color.	Unable to determine if a sponge is dead with visual survey alone.	

2.3.3 FISH AND OTHER INVERTEBRATES

Invertebrates and fish were identified to taxa group (invertebrates) and functional group (fish) (Table 2-4). All marine fauna were enumerated and presented in maps as abundances and densities per transect bin. Representative photos of taxa groups observed during the survey were taken opportunistically. While the survey was not specifically designed to assess the presence of Species at Risk (SAR), they were also identified whenever possible.

Table 2-4 Summary table of fish functional groups.

Functional Groups	Example Taxa
Benthivore	Wolffish, grenadiers
Piscivore	Greenland halibut
Planktivore	Lanternfish
Plank-piscivore	Redfish
Unknown Fish	Fish unable to be identified to a particular functional group
Note: Functional groups are based on Ollerhead et al. (2017) and Wells et al. (2021)	

2.3.4 OTHER OBSERVATIONS

Other observations, including trawl marks, hazards, or debris were recorded and photographed where noted.

2.4 MAPPING

All datasets (transect positioning, and survey observations) were plotted using GIS software ArcGIS (ESRI 2016) in NAD83 UTM datum zone 23. Mapping primary substrates alone does not show the full extent of substrates present, as fine-grained substrates dominate a majority of the seafloor in the area. The largest substrate observed with the highest percent coverage for each transect section was mapped to better depict the distribution of hard substrates present. Cuttings were plotted using the categories

listed above as either continuous or point data, using the coordinates from the overlay. Coral and sponge data (abundance, density, and condition) were mapped per each transect section. Condition of coral and sponge functional groups were mapped by percent 'Good' present in each transect section. Note that abundance data include only the alive individuals observed, while the condition data include the percent of individuals rated 'Good' out of all observations (dead and alive).

2.5 STATISTICAL ANALYSIS

Statistical comparisons between surveys (pre-drilling and post-drilling) and between areas (grid lines and reference areas) were carried out using two-way ANOVAs. These comparisons were carried out for all corals, all sponges, and coral groups detected in both surveys using their density values. Density data was used for analysis because it corrects for variations in the area of individual sections, as opposed to abundance. Comparisons were carried out using R studio (Posit Team 2023) running R version 4.3.1 (R Core Team 2023).

3 SITKA RESULTS

3.1 ROV ALTITUDE AND VELOCITY

ROV altitude and velocity remained relatively constant throughout the seabed survey at the Sitka well site. ROV altitude is measured by the ROV itself and was very accurate to what the biologists in the field noted. The ROV remained below a meter in altitude except for occasional rises to avoid obstacles on the seabed or to manage the ROV's tether (Table 3-1). ROV velocity was recorded as speed over ground by the surveyors using the beacons position as recorded by the vessels HiPAP. This recorded velocity spiked due to positional uncertainty of the ROV while moving on the survey lines (Table 3-1). The biologists in the field monitored the ROV's Doppler velocity log (DVL; not shown here), which gave a consistent velocity of 0.3-0.5 knots throughout the survey area.

Table 3-1 Summary of ROV altitude and velocity during the Sitka survey.

Category	Unit	Mean	St. Dev.	Median	Minimum	Maximum
ROV Altitude	m	0.88	0.05	0.9	0.5	1.6
ROV Velocity	knots	0.44	0.30	0.38	0.19	7.78
Note: Altitude and velocity were recorded in two second intervals throughout the survey (n=44,874)						

3.2 SURFICIAL SUBSTRATE

The predominant substrate at Sitka was fine grained (either natural or cuttings) with uncommon secondary substrates consisting of medium or coarse substrate or shell fragments (Figure 3-1). Figure 3-2 shows the distribution of the largest secondary substrate in each 50 m survey section. A greater proportion of lines in the post-drilling survey had shell entered as a secondary substrate, which was largely dead urchin tests (Figure 3-2). Reference area lines had similar substrate to the rest of the survey line sections.

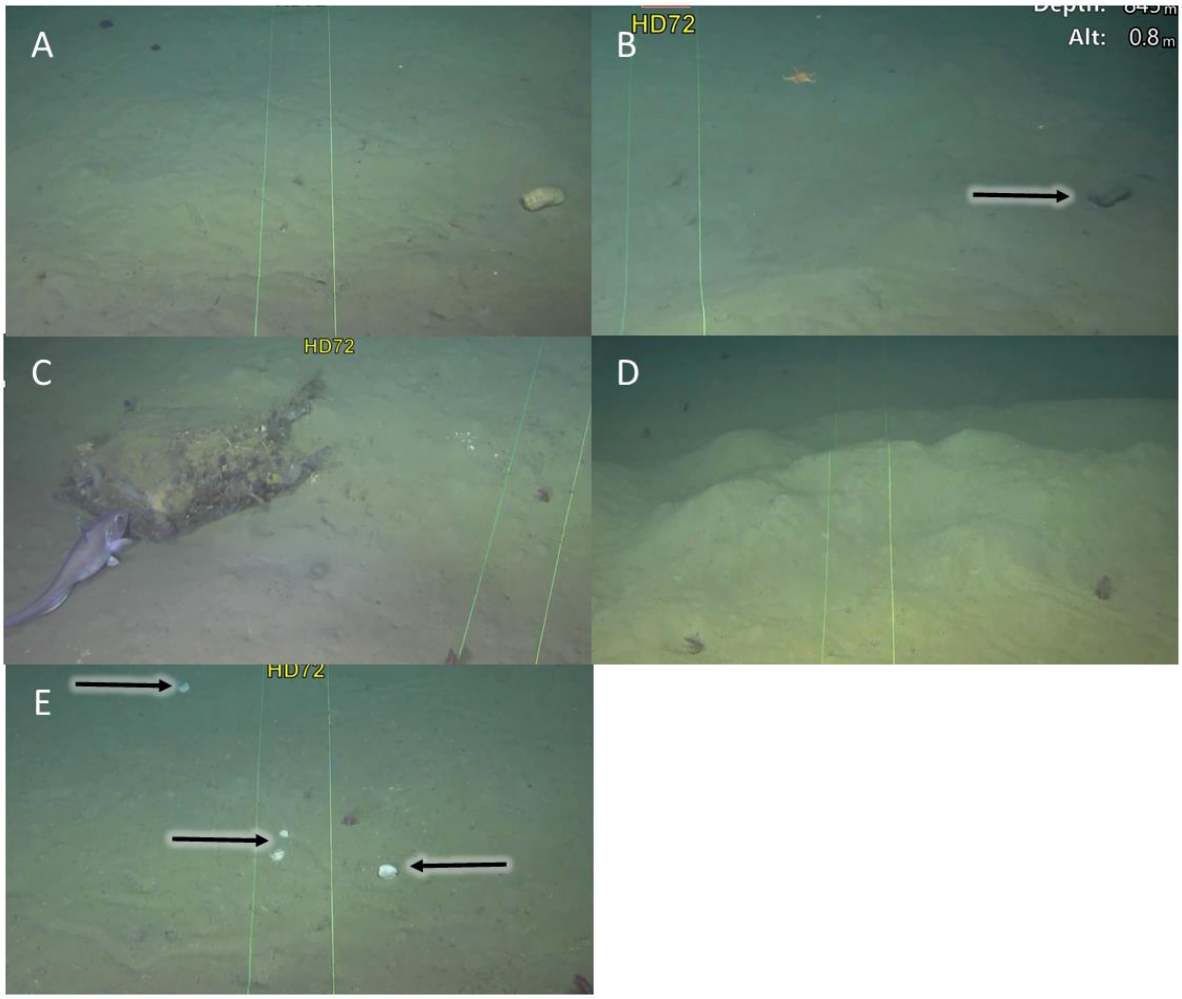

Figure 3-1 Examples of surficial substrate observed in the post-drilling survey: A) fine-grained substrate, B) medium sized grain, C) coarse grain, D) fine-grained piled substrate, E) shell substrate comprised of urchin tests. Green scaling lasers are 22 cm apart.

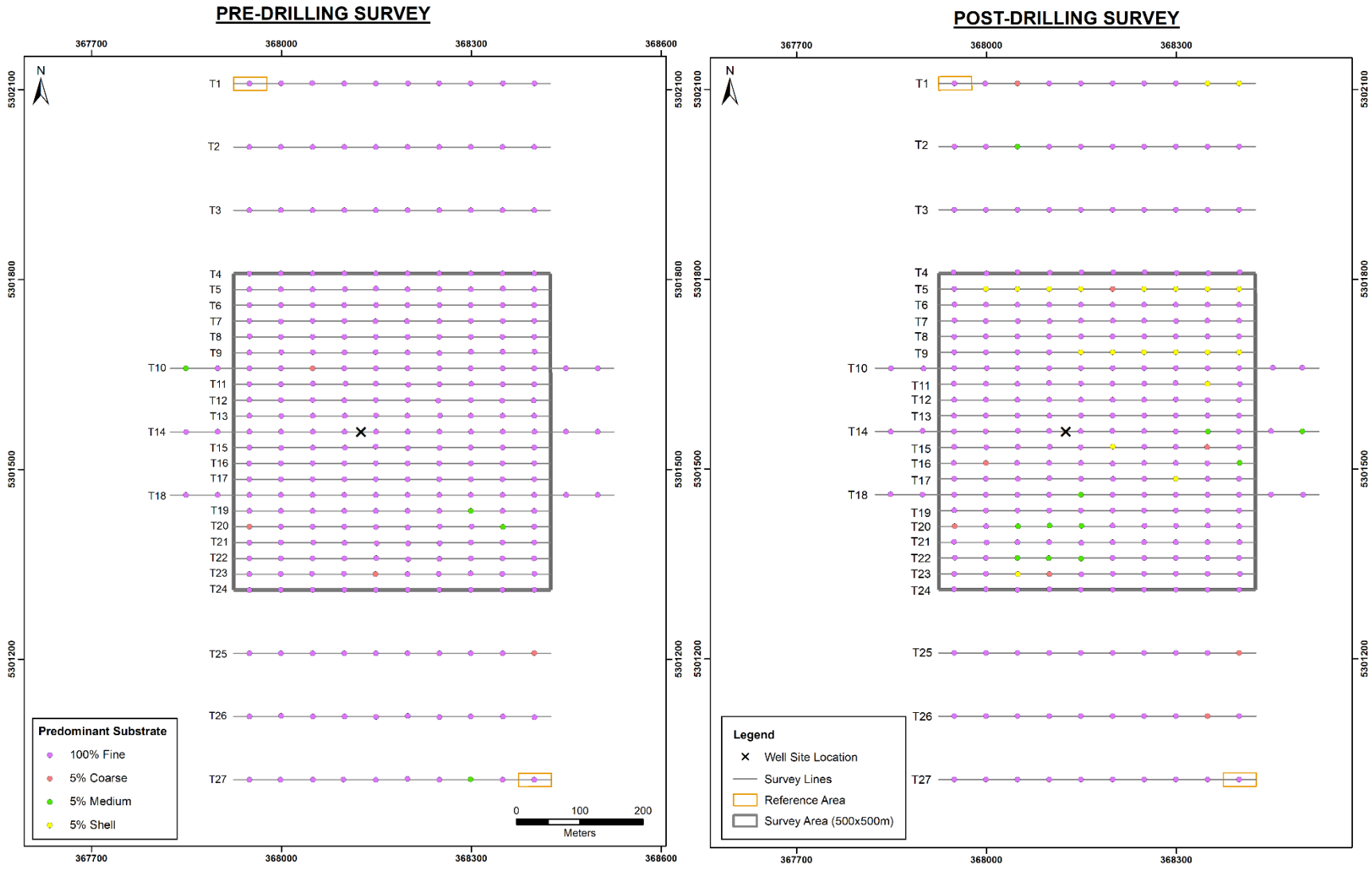

Figure 3-2 Predominant substrate category in each 50 m transect section from the Sitka pre- and post-drilling surveys.

3.3 DRILL CUTTINGS DEPOSITION

3.3.1 EXTENT

As listed in Table 1-3 and Table 1-4, the majority of drill cuttings were predicted to be within 200 m of the well centre, with some additional cuttings out to 300 m. Figure 1-2 shows that the cut-off for the 1.5 mm PNET was predicted to be within the grid box area, and generally predictions had cuttings travelling to the east of the well site.

Visual results from the post-drilling survey show that the majority of thin patchy and thick continuous cuttings drifted southwest of the drill centre (Figure 3-3, Figure 3-4). Continuous cuttings were observed approximately 20 m north along T13. Areas of thin patchy cuttings were found mainly on T11 (up to approximately 110 m away) and T12 (up to approximately 230 m away), with a small area located on T1 (550 m away). Isolated areas of clumps and star-like cuttings were observed north of the drill center up to 550 m away along T1.

Thick continuous cuttings were observed extending east of the well site along T14 up to approximately 250 m away and approximately 20 m beyond the predicted cuttings footprint. Thin cuttings were observed as far as approximately 370 m towards the east, approximately 140 m beyond the predicted footprint.

The areas of cuttings deposition based on visual observations were in a southwest trajectory from the well site along transects T15 to T27. Thick cuttings were observed along T27, approximately 560 m from the well site and 510 m beyond the model area. Thin cuttings were observed up to approximately 580 m from the well site and 530 m beyond the model area.

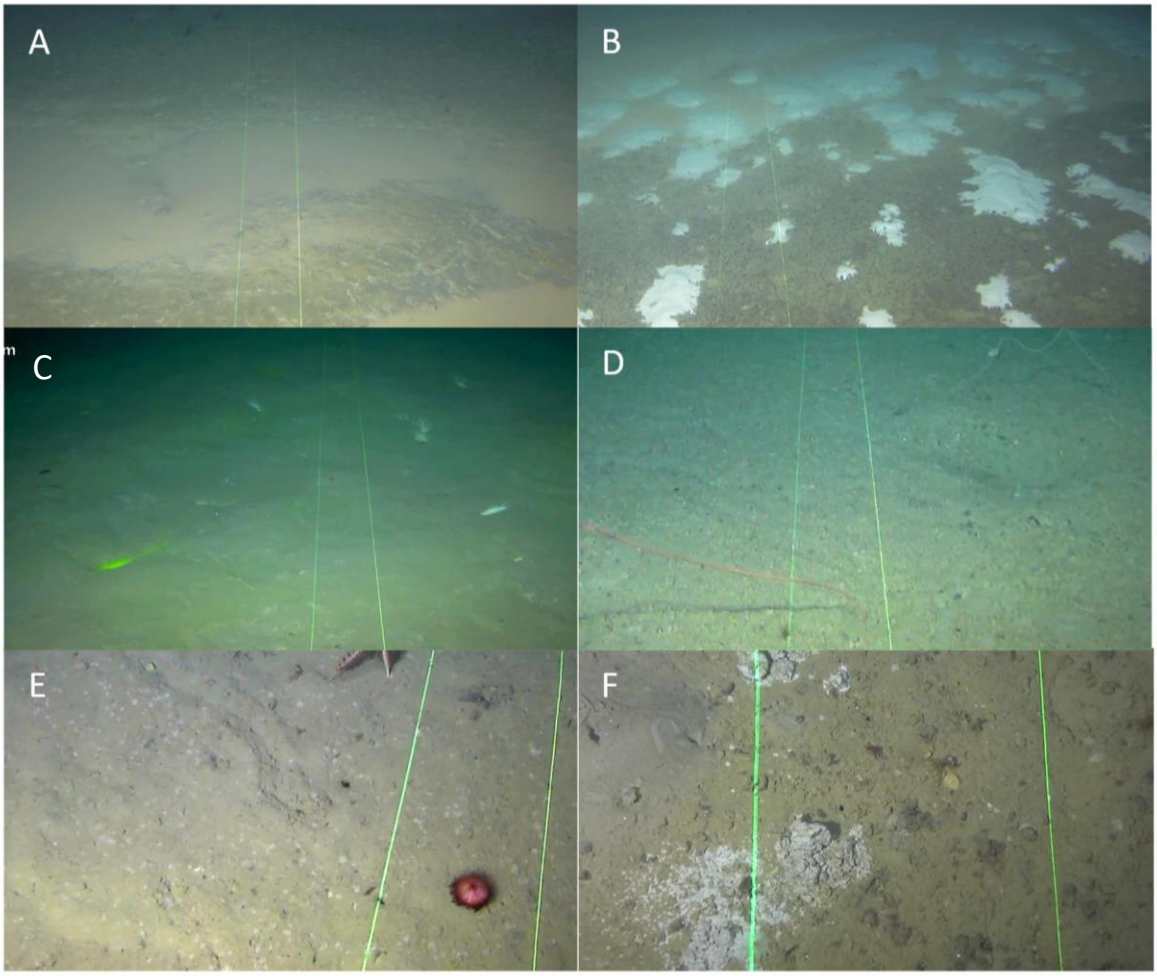

Figure 3-3 Examples of cuttings observed in post-drilling survey: A-C) thick cuttings with varied textures, with a patch of green tracer-dyed glycol in C, D) thin cuttings, E) star-like cuttings, and F) cuttings clump. Green scaling lasers are 22 cm apart.

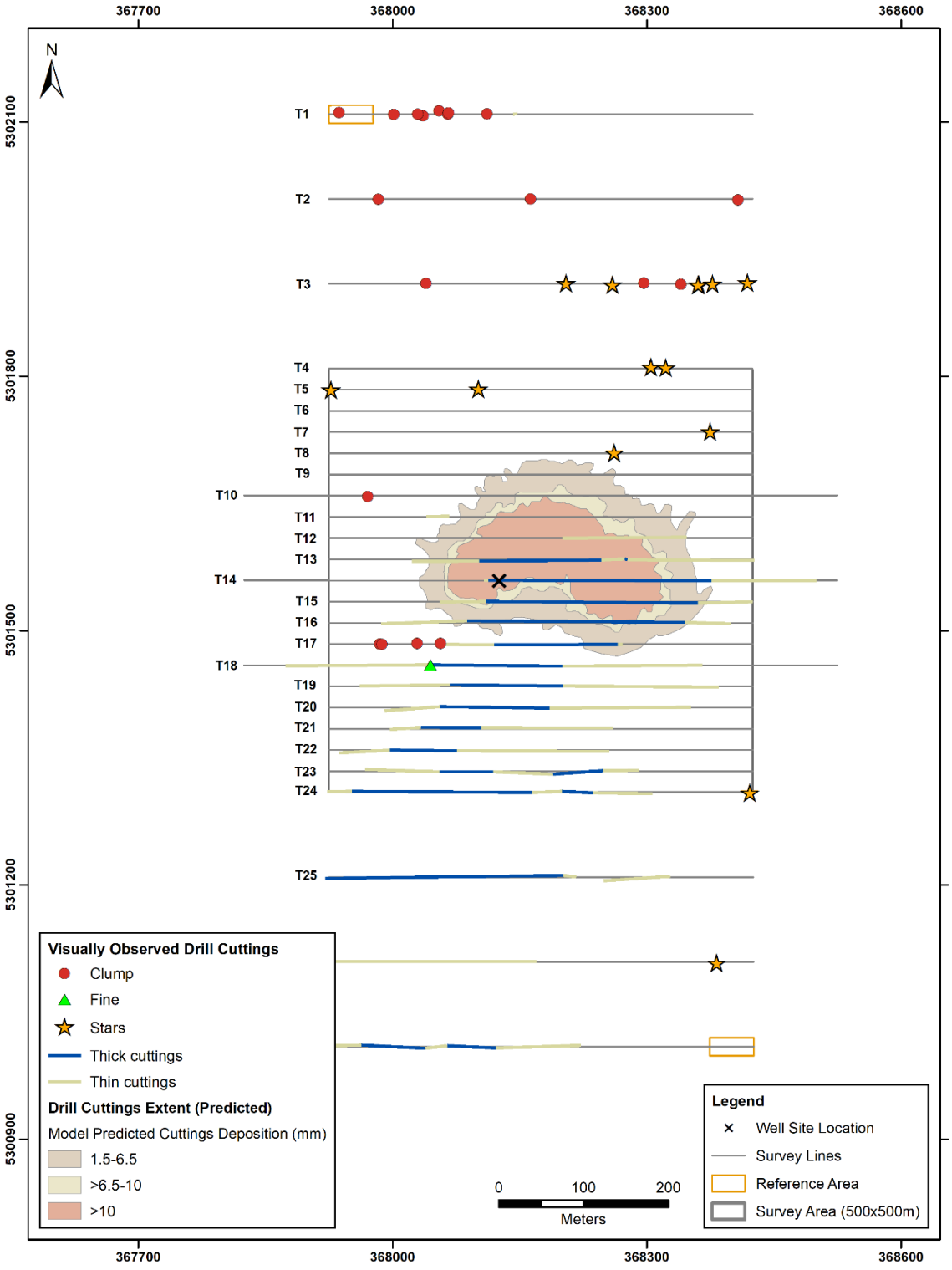

Figure 3-4 Predicted (shaded areas) and observed (blue and taupe coloured lines) drill cuttings extent at the Sitka well site.

3.3.2 THICKNESS

Sediment cores were taken at 16 stations in duplicate (32 total samples) throughout the Sitka seabed survey area (Table 3-2, Figure 3-5). Samples were documented and processed onboard the vessel shortly after retrieval. The seafloor sediment consisted of olive clay with no sulphurous odours. Cores were made of clear plexiglass, and the total sediment recovery and the thickness of cuttings were measured using a ruler held next to the core (Table 3-2). Cores were described with particular attention to the colouration near the sediment/water interface at the top of the core. Several cores were noted to have a grey slurry at the surface of the core, which matched the appearance of cuttings on the seabed. Many cores had pink-orange flecks or clumps either at the surface or just below the surface of the sediment. This appearance is consistent with barite, which has a pink colour and could form small clumps after treatment and discharge. Image plates for all sediment samples recovered are presented in Appendix D.

Overall sediment recovery ranged from 10 to 28.5 cm, with >15 cm as the ideal recovery for analytical sampling. A single core had <15 cm at a reference station (10 cm recovery at T1-1). As no cuttings were expected at this station, the core was sampled as it still met mass requirements for the laboratory. During the survey several cores were washed out during recovery and re-sampled. Cuttings thickness ranged from 0 mm (not present) to 110 mm (T17-1B, 159 m from the well centre) (Table 3-2). Cuttings thickness is measured by the deepest point in the core that cuttings are visible; this value does not necessarily represent a consistent layer of cuttings from the sediment core surface. Furthermore, the pink and orange cuttings are of clay consistency and may have been pushed down into the sediment via the sampling process.

Table 3-2 Core sample recovery and cuttings thickness at Sitka post-drill.

Station	Distance from well centre (m)	Modelled Thickness (mm)	Recovery (cm)		Cuttings (mm)		Core Description
			A	B	A	B	
T1-1	579	0	10	23.5	0	0	-
T6-1	202	0	24	22	0	0	-
T9-1	146	1.5-6.5	21	14	0	0	-
T11-1	147	6.5-10	28.5	15	0	0	-
T12-1	48	>10	26	19	50	20	Orange flecks at top
T14-1	160	0	23. 5	21	0	0	-
T14-2	95	1.5-6.5	23.5	26	0	0	-
T14-3	55	>10	23	24	75	0	Grey cuttings at top (slurry)
T14-4	52	>10	25.5	21	55	30	Grey slurry / pink flecks at top
T14-5	128	>10	23	25	20	40	Pale pink blobs near top
T14-6	217	1.5-6.5	17	18	10	1	Pink flecks at surface
T14-7	276	0	16	14	0	0	-
T16-1	52	1.5-6.5	18.5	19	0	30	Grey cuttings and orange flecks at top
T17-1	159	1.5-6.5	25	25	65	110	Many orange flecks at surface
T20-1	152	0	24.5	19.5	30	50	Orange flecks at surface
T27-1	616	0	27	28	0	0	-

Notes:
"-" indicates samples with a normal background colour and consistency (typically an olive colour with no smell)
Cells with a pink colouration indicate the potential presence of barite based on visual assessment, while cells with a grey colouration indicate the presence of cuttings similar to those visible on the seabed surface.
Sediment Recovery was measured from the top of the rubber base plug (plug thickness is 4 cm) to the top of the sediment.

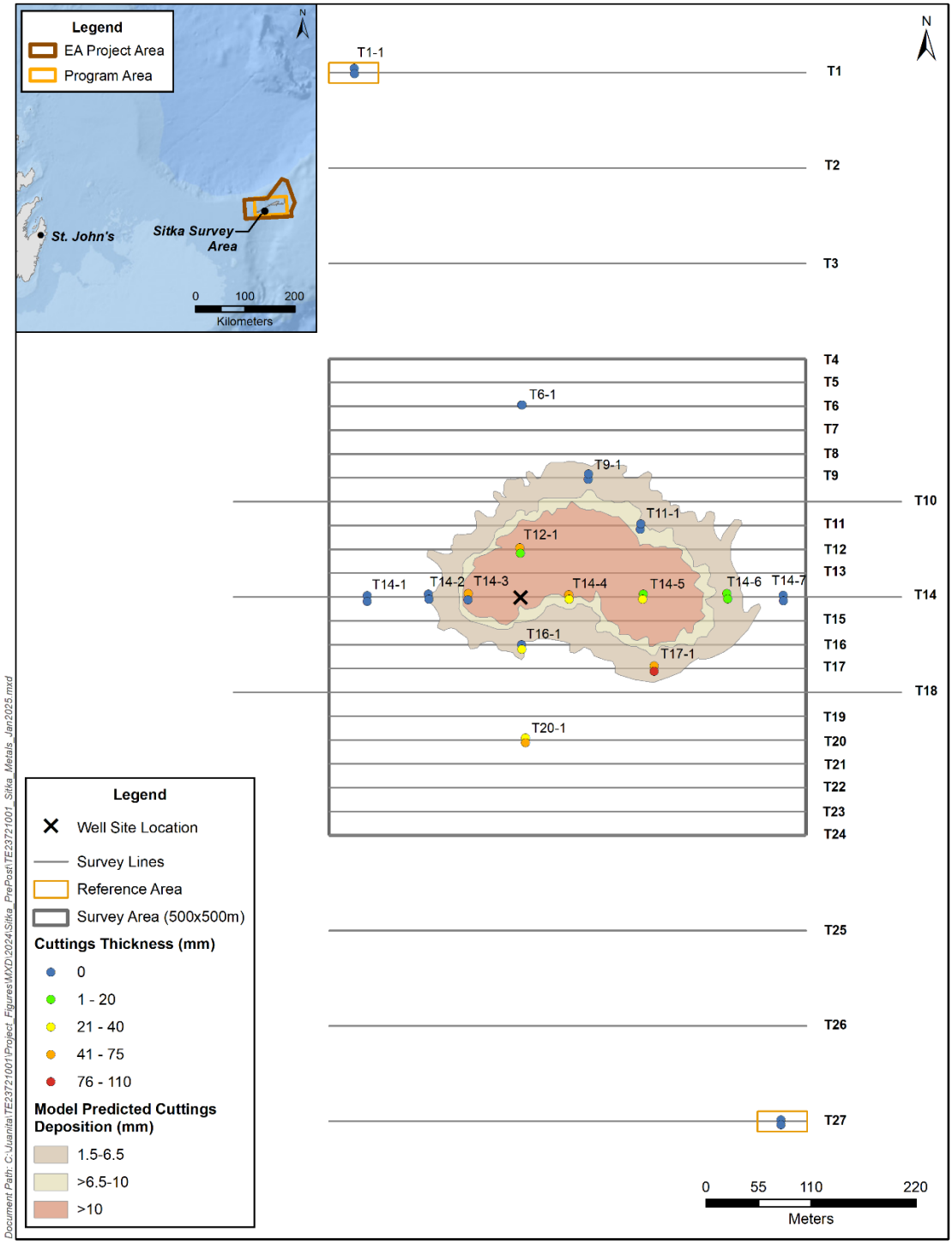

Figure 3-5 Sitka sediment core sampling locations with cuttings thickness (mm). Sample duplicates are jittered to show both sets of results.

3.3.3 CHEMICAL ANALYSIS

Sediment cores were taken at 16 stations in duplicate (32 total samples) throughout the Sitka seabed survey area (Figure 3-5). Samples were processed aboard the vessel, kept frozen, and sampled by a laboratory for particle size analysis (PSA), acid extractable metals, and hydrocarbons. Summary statistics for each analyte can be found in Table 3-3, and analytes of interest are further discussed in the sections below. Table 3-4 provides a comparison of cuttings and analytes of interest between the reference and non-reference stations. Raw laboratory chemistry results can be found in Appendix E.

Analytes of interest were determined based on the known contents of WBM cuttings (barium), SBM cuttings (hydrocarbons), or analytes for which very large standard deviations or maximum values were noted (lead).

Table 3-3 Sitka sediment chemistry summary statistics.

Analyte	RDL	Unit	# of samples	# above RDL	Mean	St. dev.	Median	Min.	Max
Particle Size Analysis									
Gravel	0.10	%	32	1	0.10	<0.01	<RDL	<RDL	0.12
Sand	0.10	%	32	32	10.76	2.31	10.5	7.9	16
Silt	0.10	%	32	32	65.09	1.94	65.5	60	70
Clay	0.10	%	32	32	24.13	3.01	24.5	16	32
Acid Extractable Metals									
Aluminum	10	mg/kg	32	32	9116	809	9400	6700	11000
Antimony	2.0	mg/kg	32	0	<RDL				
Arsenic	2.0	mg/kg	32	19	2.3	0.6	2.0	<RDL	4.9
Barium	5.0	mg/kg	32	32	768	658	480	11	2600
Beryllium	0.5*	mg/kg	32	0	<RDL				
Bismuth	2.0	mg/kg	32	0	<RDL				
Boron	50	mg/kg	32	1	50	2	<RDL	<RDL	60
Cadmium	0.30	mg/kg	32	0	<RDL				
Chromium	2.0	mg/kg	32	32	28.1	4.9	29	4.7	33
Cobalt	1.0	mg/kg	32	32	5.2	0.5	5.35	3.8	6.0
Copper	2.0	mg/kg	32	32	13	2.8	13	8.7	25
Iron	50	mg/kg	32	32	16781	1408	17000	13000	19000
Lead	0.50	mg/kg	32	32	8.3	9.8	5.3	3.8	57
Lithium	2.0	mg/kg	32	32	15	2	15	11	20
Manganese	2.0	mg/kg	32	32	209	86	190	150	680
Mercury	0.10	mg/kg	32	1	0.1	<0.01	<RDL	<RDL	0.1
Molybdenum	2.0	mg/kg	32	0	<RDL				
Nickel	2.0	mg/kg	32	32	18	3	19	5.8	21
Rubidium	2.0	mg/kg	32	32	20	4	21	2.6	25
Selenium	0.50	mg/kg	32	22	0.53	0.04	0.53	<RDL	0.62
Silver	0.50	mg/kg	32	1	0.5	0.01	<RDL	<RDL	0.58
Strontium	5.0	mg/kg	32	32	62	18	58	11	110
Thallium	0.10	mg/kg	32	27	0.12	0.02	0.12	<RDL	0.17

Analyte	RDL	Unit	# of samples	# above RDL	Mean	St. dev.	Median	Min.	Max
Tin	1.0	mg/kg	32	0	<RDL				
Uranium	0.10	mg/kg	32	32	0.83	0.14	0.86	0.39	1.1
Vanadium	2.0	mg/kg	32	32	31	4	33	11	36
Zinc	5.0	mg/kg	32	32	44	12	42.5	29	100
Hydrocarbons									
Benzene	0.0050*	mg/kg	32	0	<RDL				
Toluene	0.050*	mg/kg	32	0	<RDL				
Ethylbenzene	0.010*	mg/kg	32	0	<RDL				
Xylenes	0.050*	mg/kg	32	0	<RDL				
C_6 - C_{10} (less BTEX)	2.5*	mg/kg	32	0	<RDL				
>C_{10}-C_{16}	0.25*	mg/kg	32	32	145.1	468.1	14.5	0.45	2700
>C_{16}-C_{21}	0.25*	mg/kg	32	32	52.5	158.0	7.9	0.6	910
>C_{21}-C_{32}	0.25*	mg/kg	32	32	4.3	5.1	3.0	1.9	32

Notes: Values below RDL are presented as RDL value for comparative purposes.
*RDL occasionally higher than reported due to limited sample amounts, matrix interference, or sample dilution

Table 3-4 Comparison of barium, lead, and >C_{10}-C_{32} hydrocarbons concentrations across stations at Sitka, with values above two standard deviations over the reference areas' mean highlighted blue.

Station	Distance to Well Centre (m)	Cuttings (mm)		Barium (mg/kg)		Lead (mg/kg)		>C_{10}-C_{16} HC (mg/kg)		>C_{16}-C_{21} HC (mg/kg)		>C_{21}-C_{32} HC (mg/kg)	
		A	B	A	B	A	B	A	B	A	B	A	B
T1-1 (ref)	579	0	0	110	110	3.8	4.0	0.45	0.47	0.62	0.6	2.7	2.3
T6-1	202	0	0	11	260	5.6	4.3	1.8	12	1.1	6.4	1.9	2.8
T9-1	146	0	0	300	430	4.8	4.9	14	12	7.4	6.9	2.8	3.1
T11-1	147	0	0	150	190	4.3	4.6	1.4	15	1.2	8.4	3	5.1
T12-1	48	50	20	1400	1600	7.5	8.4	2.3	6.3	2	3	2.8	2.8
T14-1	160	0	0	450	350	4.3	4.1	29	4.1	13	3.2	3.2	3
T14-2	95	0	0	530	390	4.8	5.4	3.1	5.8	2	3.9	2.7	2.8
T14-3	55	75	0	510	300	5.5	4.2	4.1	1.3	2.4	1.4	2.8	2.6
T14-4	52	55	30	1200	1300	57	9.8	55	21	14	9.6	5.7	3.7
T14-5	128	20	40	1200	2600	7	19	230	110	90	41	4	3.2
T14-6	217	10	1	1500	830	7.1	5.5	270	35	110	15	4.4	2.8
T14-7	276	0	0	420	530	4.8	5.1	26	42	11	17	2.7	2.8
T16-1	52	0	30	720	440	6.4	5.6	270	120	99	56	5.9	4.7
T17-1	159	65	110	1700	2400	9.3	25	2700	230	910	86	32	4.3
T20-1	152	30	50	1400	380	8.6	4.7	320	83	120	31	4.4	2.9
T27-1 (ref)	616	0	0	660	200	4.9	4.9	14	4.6	5.8	2	2.9	3.3

Notes: HC = Hydrocarbons
Cells with a pink colouration indicate the potential presence of barite based on visual assessment, cells with a grey colouration indicate the presence of cuttings similar to those visible on the seabed surface.
Cells with a blue colouration indicate values greater than two standard deviations from the reference area mean
Barium reference area mean: 270 ± 228 mg/kg
Lead reference area mean: 4.40 ± 0.51 mg/kg
>C_{10}-C_{16} Hydrocarbon reference area mean: 4.88 ± 5.53 mg/kg
>C_{16}-C_{21} Hydrocarbon reference area mean: 2.26 ± 2.12 mg/kg
>C_{21}-C_{32} Hydrocarbon reference area mean: 2.80 ± 0.36 mg/kg

3.3.3.1 *BARIUM*

As the mineral barite is a component of WBMs, it is often used as a tracer for the presence of WBM cuttings. The average barium value of the reference areas (stations T1-1 and T27-1) was 270 mg/kg (±228 mg/kg), which likely represents the background concentration for the area, as these stations are 579 m and 616 m from the well centre, respectively. This average is slightly higher than barium concentrations reported in other offshore post-drilling surveys (141.5 mg/kg in bp 2024); however that survey was located in deeper water and farther north.

As shown in Table 3-4, several stations had barium concentrations above two standard deviations of the mean at the reference stations. Cores with elevated concentration aligned closely with sites that had visible cuttings at the surface. The most distant station with elevated concentration was 217 m (T14-6) from the well centre. Cores from sites very close to the drill centre had elevated concentrations, along with some sites to the south and east (Figure 3-7). A regression comparing barium concentration with distance from the well centre found a negative correlation, though the correlation coefficient was weak (R=-0.31) (Figure 3-6).

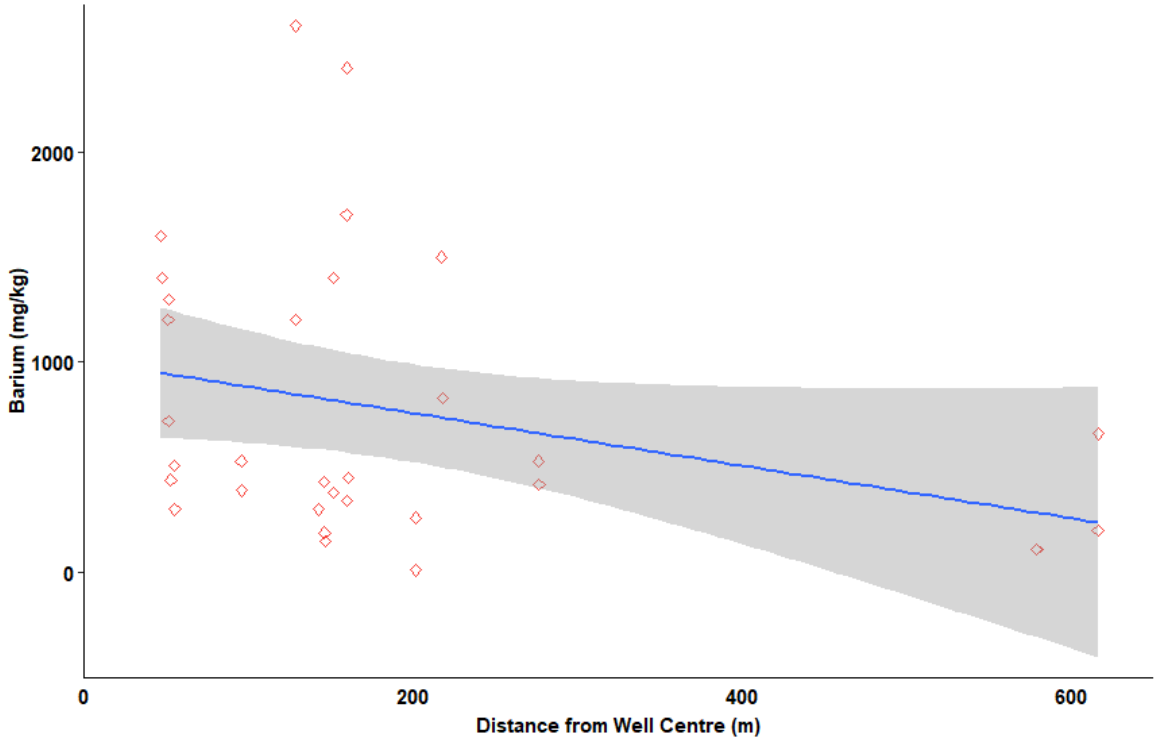

Figure 3-6 Barium concentration (mg/kg) in sediment cores taken at varying distances from the Sitka well centre. The blue line is a linear regression model, with the grey area as a 95% confidence interval.

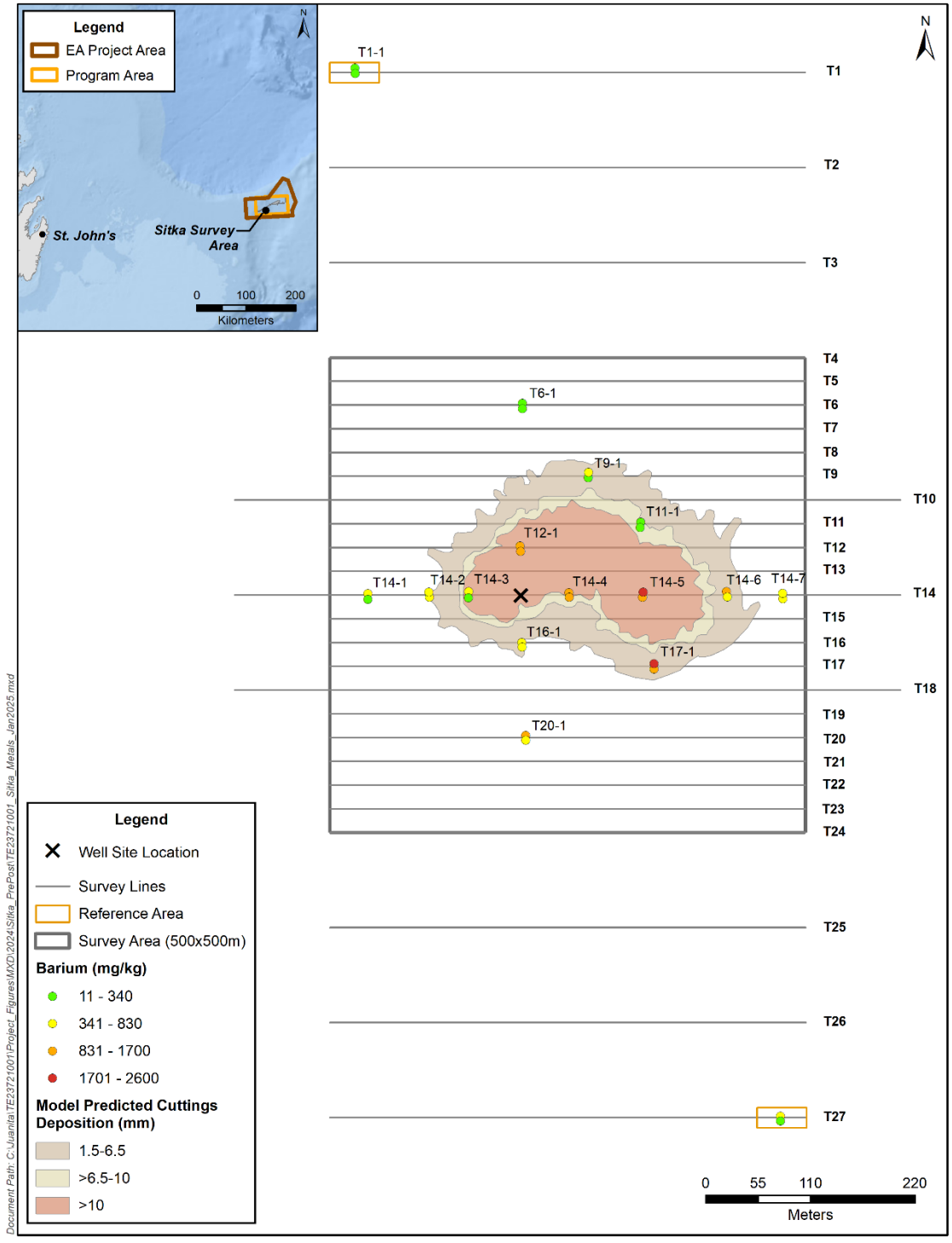

Figure 3-7 Barium concentration (mg/kg) from each sediment core sampling location within the Sitka survey area. Sample duplicates are jittered to show both sets of results.

3.3.3.2 *LEAD*

Lead was included as an analyte of interest due to elevated concentrations at specific stations where cuttings were noted. A similar trend of lead being included as an analyte of interest was noted in bp (2024) as well. Elevated lead levels have been associated with barite, a component of drill mud (Edge et al. 2016). The average lead concentration at the reference areas (stations T1-1 and T27-1) was 4.40 mg/kg (±0.51 mg/kg), which was used as the baseline value for the area. This concentration is nearly identical to that noted in bp (2024) as a baseline value (4.3 mg/kg).

As shown in Table 3-4, several stations had lead concentrations above two standard deviations of the mean at the reference stations. Similar to results for barium, this closely aligns with cores that had visible cuttings at the surface. The same distant station (T14-6, 217 m from well centre) was the most distant station with an elevated lead concentration. A regression comparing lead concentration with distance from the well centre found a negative correlation, though the correlation coefficient was weak (R=-0.23) (Figure 3-8).

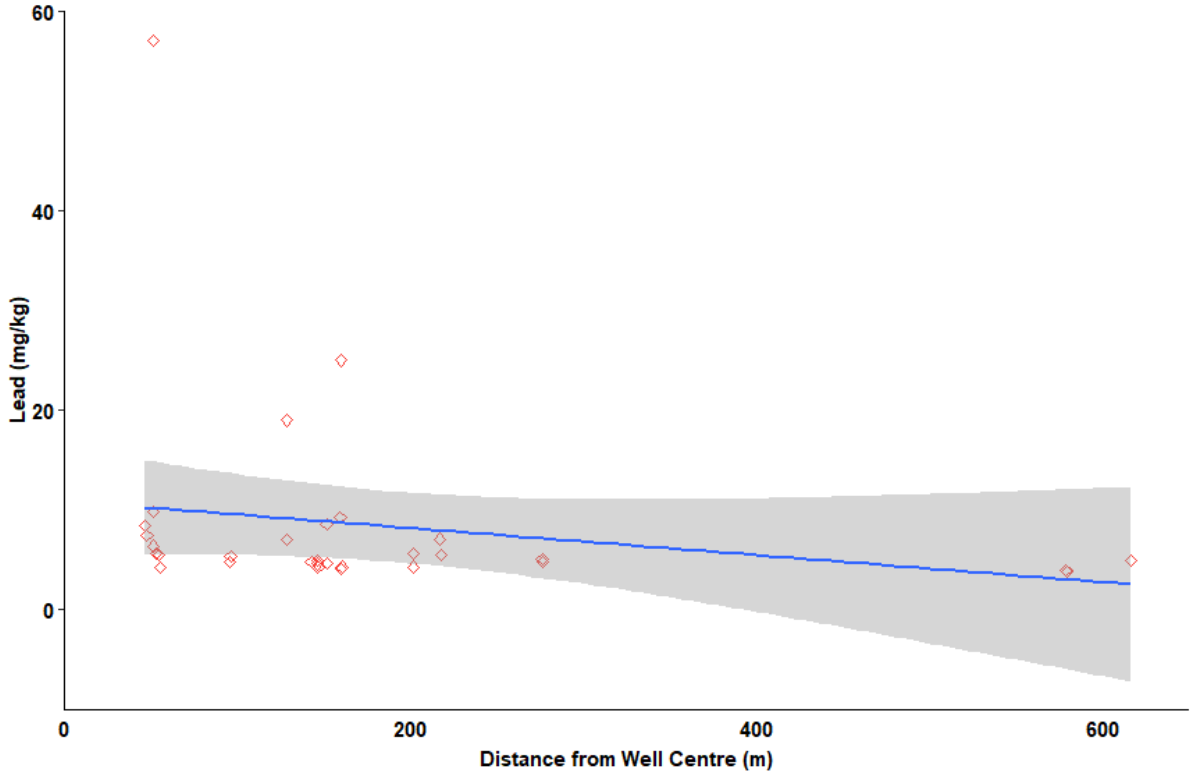

Figure 3-8 Lead concentration (mg/kg) in sediment cores taken at varying distances from the Sitka well centre. The blue line is a linear regression model, with the grey area as a 95% confidence interval.

3.3.3.3 *HYDROCARBONS*

While a wide range of hydrocarbons were tested, only those in the lower fuel range (>C_{10}-C_{16} hydrocarbons), upper fuel range (>C_{16}-C_{21} hydrocarbons), and lube range (>C_{21}-C_{32} hydrocarbons) were detected above their RDLs (Table 3-3). Baseline values for these ranges from the reference areas

(stations T1-1 and T27-1) were 4.88 ± 5.53 mg/kg (>C_{10}-C_{16} hydrocarbons), 2.26 ± 2.12 mg/kg (>C_{16}-C_{21} hydrocarbons), and 2.80 ± 0.36 mg/kg (>C_{21}-C_{32} hydrocarbons). Background levels recorded in previous surveys (bp 2024) were all below RDL for hydrocarbons, though much higher RDLs of 10-15 mg/kg were used during that survey. As this RDL exceeds the values recorded here as background, these values are likely similar to those recorded in bp (2024).

As shown in Table 3-4, several stations had hydrocarbon concentrations above two standard deviations of the mean at the reference stations. Cores with elevated values closely matched those with visible cuttings at the surface, with some exceptions to the north of the well centre. Stations T9-1, T11-1, and T14-1 had no visible cuttings in cores but had elevated hydrocarbon values. Lower and upper fuel range hydrocarbons had a similar trend, where cores directly adjacent to the well centre did not have elevated values (aside from stations T14-1 and T16-1), while more distant cores to the south and east did (Figure 3-12, Figure 3-13). Lube range hydrocarbons had slightly elevated values throughout the sampling area, with a very small standard deviation overall (Figure 3-14). Hydrocarbons (>C_{10}-C_{21}) are a component in SBM cuttings. A regression comparing hydrocarbon concentrations with distance from the well centre found a negative correlation, though the correlation coefficient was very weak for all three categories (R=-0.07, -0.08, and -0.09 respectively) (Figure 3-9, Figure 3-10, Figure 3-11).

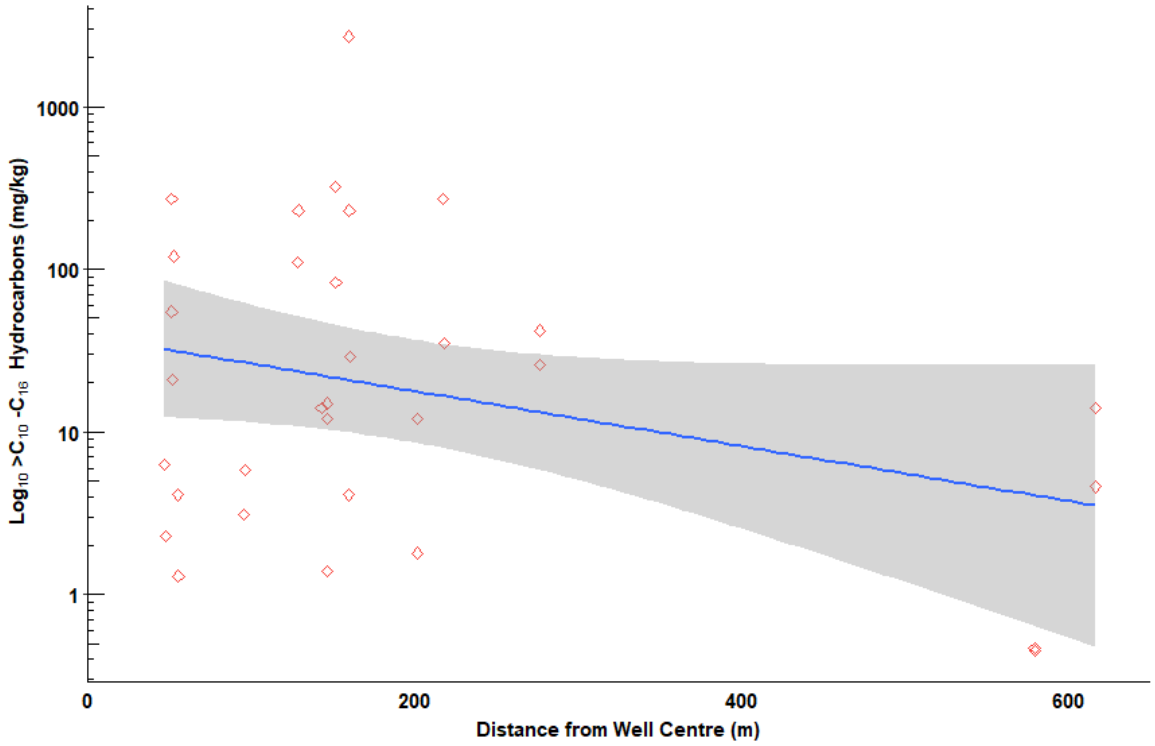

Figure 3-9 Lower fuel range hydrocarbon concentration (mg/kg) in sediment cores taken at varying distances from the Sitka well centre. The blue line is a linear regression model, with the grey area as a 95% confidence interval. Values have been log_{10} transformed for graphing.

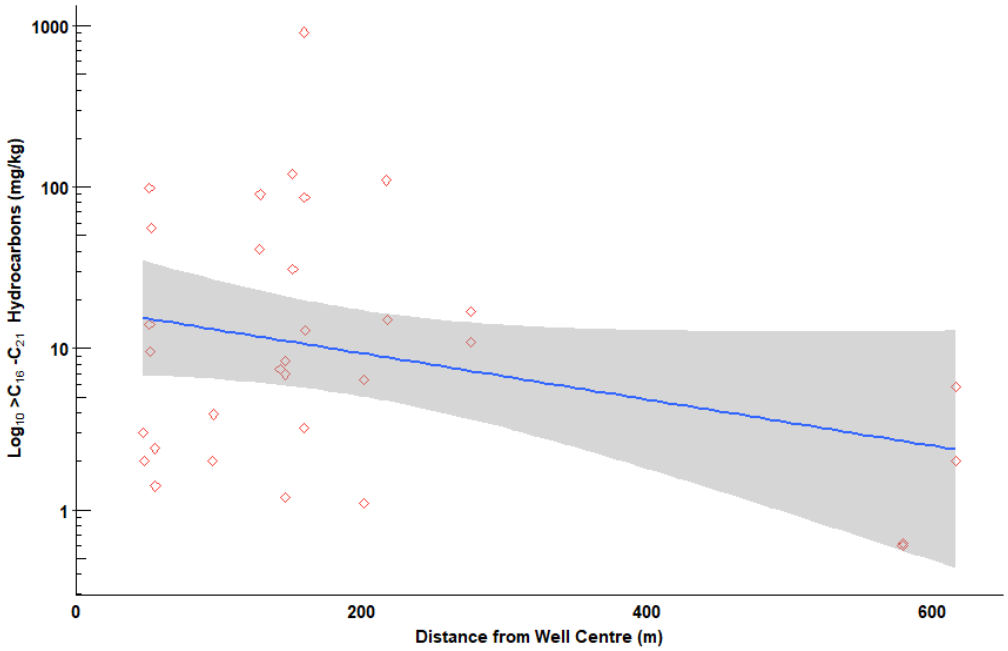

Figure 3-10 Upper fuel range hydrocarbon concentration (mg/kg) in sediment cores taken at varying distances from the Sitka well centre. The blue line is a linear regression model, with the grey area as a 95% confidence interval. Values have been log_{10} transformed for graphing.

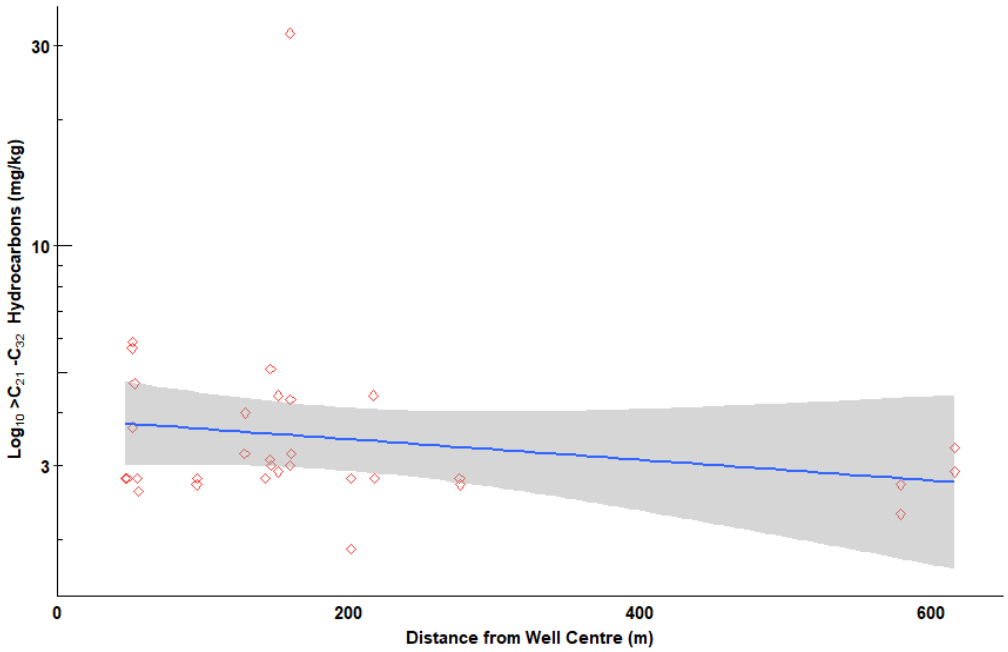

Figure 3-11 Lube range hydrocarbon concentration (mg/kg) in sediment cores taken at varying distances from the Sitka well centre. The blue line is a linear regression model, with the grey area as a 95% confidence interval. Values have been log_{10} transformed for graphing.

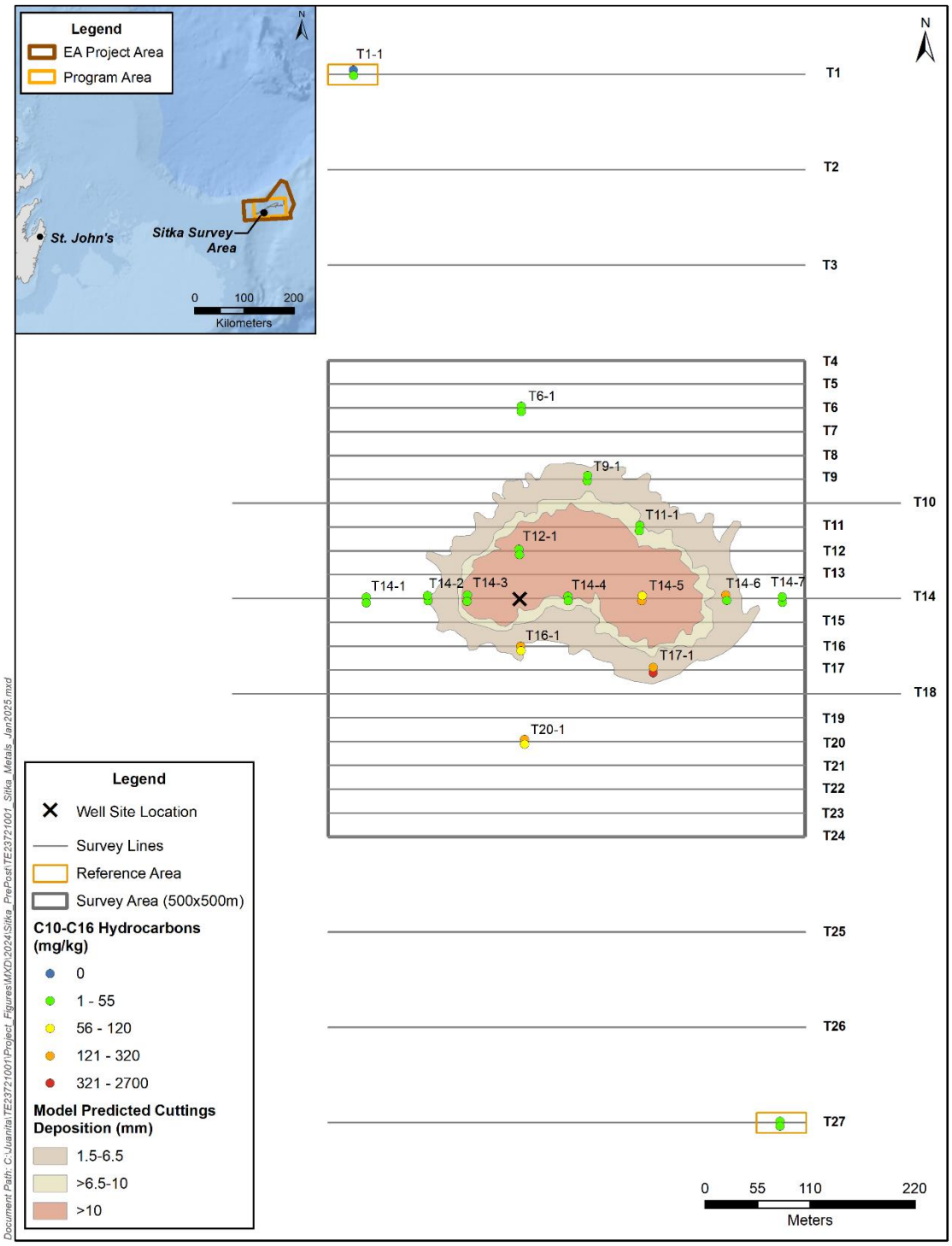

Figure 3-12 Sitka sediment core sampling locations with lower fuel range hydrocarbon concentration (mg/kg). Sample duplicates are jittered to show both sets of results.

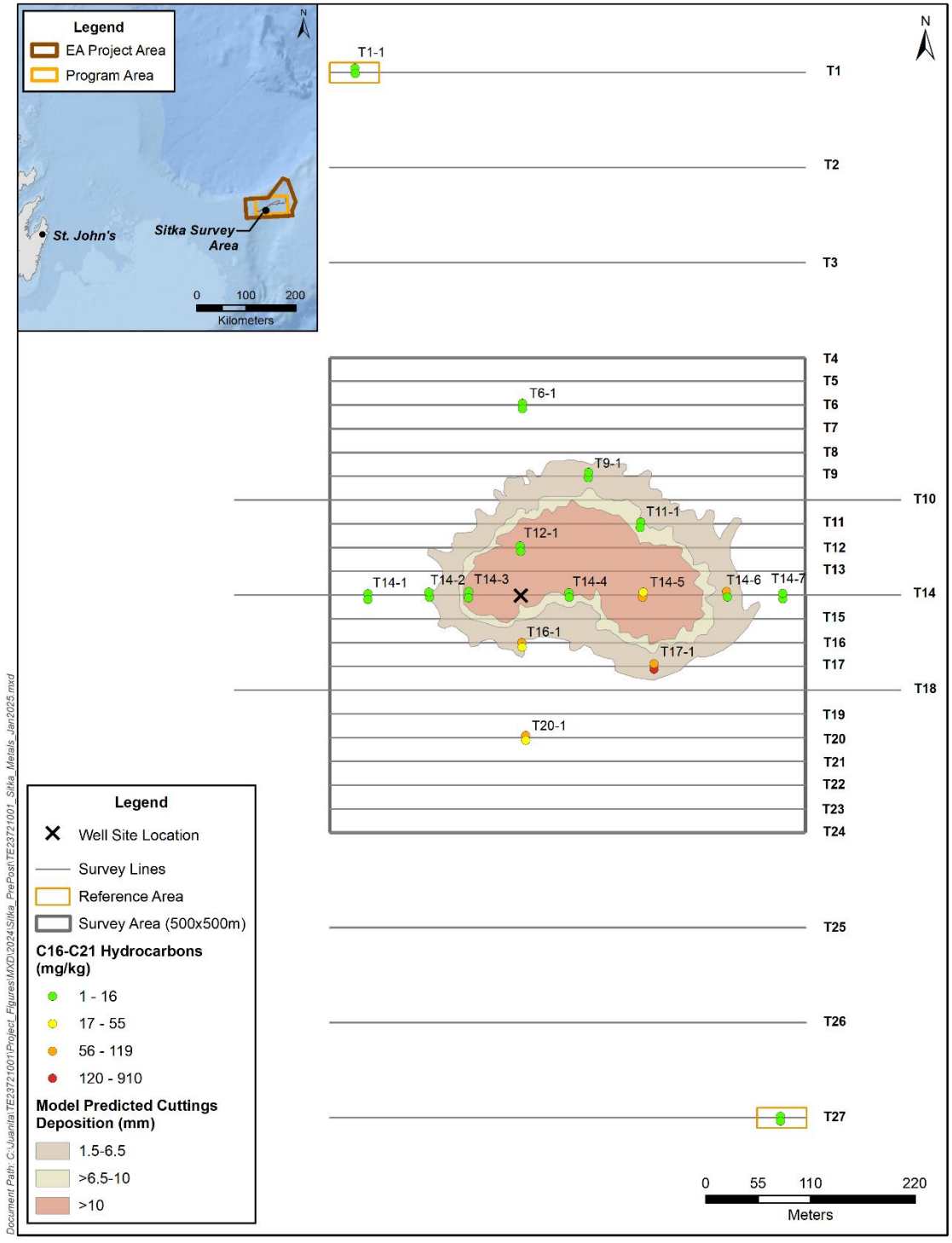

Figure 3-13 Sitka sediment core sampling locations with upper fuel range hydrocarbon concentration (mg/kg). Sample duplicates are jittered to show both sets of results.

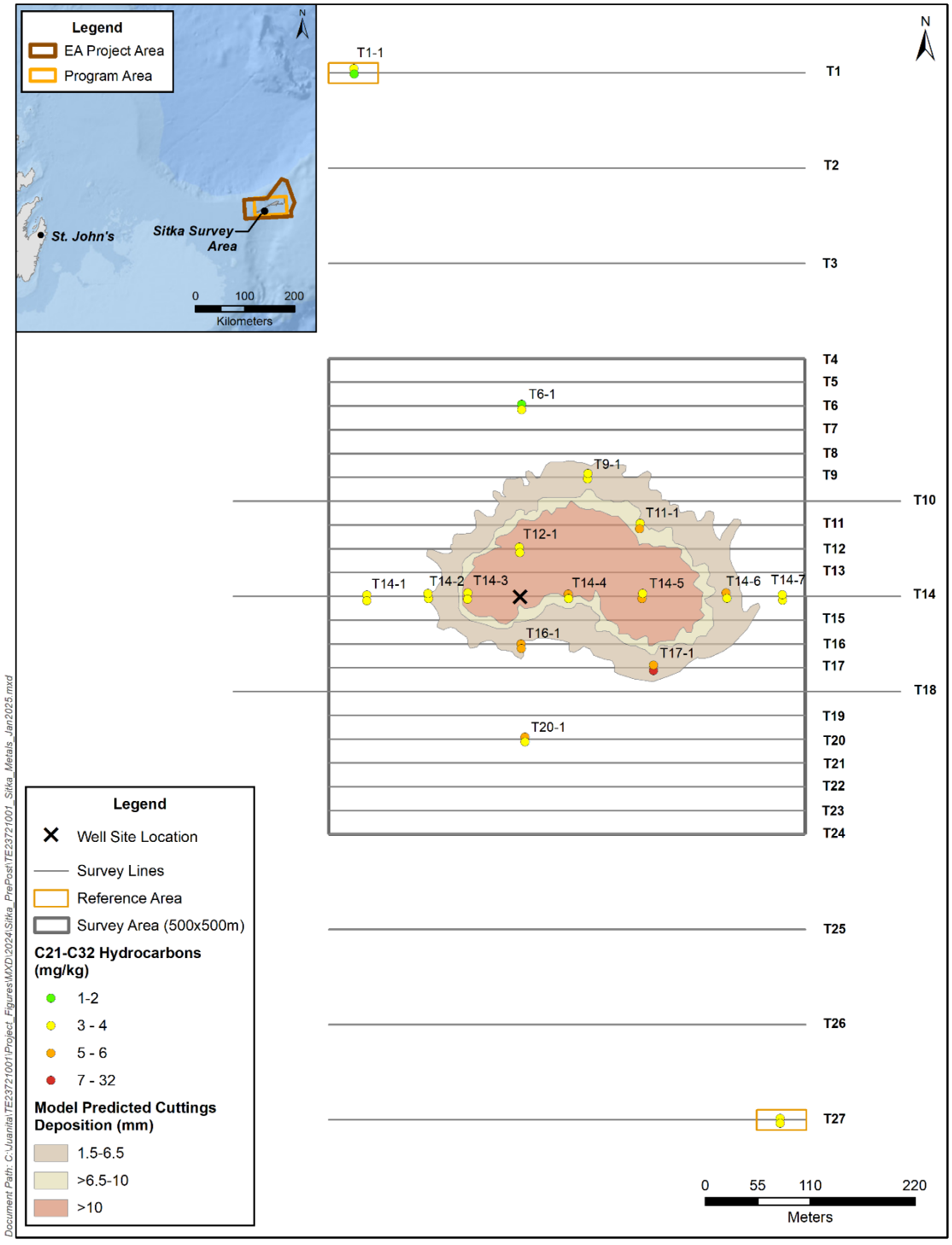

Figure 3-14 Sitka sediment core sampling locations with lube range hydrocarbon concentration (mg/kg). Sample duplicates are jittered to show both sets of results.

3.4 BENTHIC FAUNA

3.4.1 CORAL FUNCTIONAL GROUPS

Three coral functional groups were observed in the post-drilling survey at Sitka: other corals, sea pens, and small gorgonians (Figure 3-15). These same groups were recorded during the pre-drilling survey at Sitka. Other corals observed were all soft corals, including family Nephtheidae (possibly *Duva sp.*), and *Heteropolypus sp*. (Figure 3-15 E). Small gorgonians observed included *Radicipes* sp. or a similar whip-like coral, and *Acanella sp.* (Figure 3-15 D, F). Sea pens observed were *Pennatula sp., Anthoptilum sp.*, and *Halipteris sp.* (Figure 3-15 A-C). Statistical comparisons of coral functional group density found that both small gorgonians and other corals had no significant difference between surveys (pre- and post-) and between areas (grid lines and the reference areas) (Table 3-5). Sea pens showed a significant decrease in densities from the pre- to post-drilling survey in all areas ($p<0.001$) (mean densities of 2.75 ind./m² and 0.60 ind./m², respectively), but no significant difference between the grid and reference area in the post-drilling survey (Table 3-5). All coral group density together significantly differed between the pre- and post-drilling survey, with no significant difference between the grid lines and the reference area and no significant interaction term. See Appendix H for all statistical comparisons. Visual comparisons between the pre- and post-drilling survey show lower abundances and density of corals across the entire grid area, especially to the east of the well centre (Figure 3-17 to Figure 3-24)

Coral condition for all individuals was assigned by one of three categories: good, damaged/poor, or dead (Figure 3-16). Overall, corals showed a decrease in percent of individuals rated as ‘good’ from 99.87% good in the pre-drilling survey, to 86.4% good in the post-drilling survey. Coral condition data for the pre-drilling survey are aggregated, but post-drilling survey data show that small gorgonians were rated the lowest for condition (73.5% good in the grid and 66.4% good in the reference area post-drill), than other corals (80.2% good in the grid and 66.7% good in the reference area), and sea pens were rated highest (88.0% good in the grid and 81.5% good in the reference area) (Table 3-6). Coral condition (especially sea pen condition) was lower near to, and south of, the well centre; while transects 1 through 10 all had 75% and above percent good condition (Figure 3-25). See Appendix G for all coral functional groups condition maps.

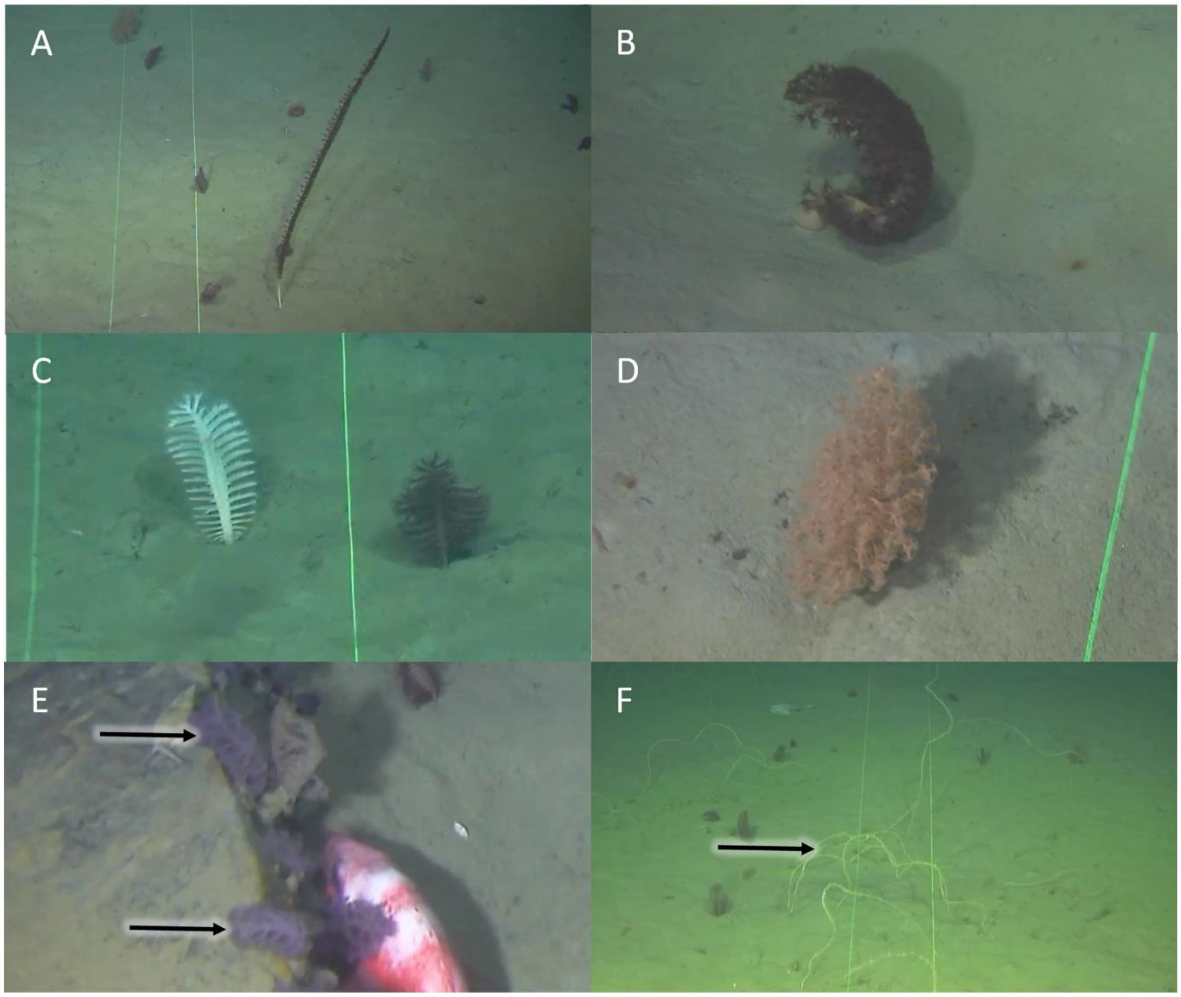

Figure 3-15 Representative photos of corals observed in the Sitka post-drilling survey: A-C) sea pens (likely *Halipteris* sp. [A], *Anthoptilum* sp. [B], and *Pennatula* sp. [C]), D) small gorgonian (*Acanella* sp.), E) soft coral (likely *Duva* sp.), and F) small gorgonian (*Radicipes* sp.). Green scaling lasers are 22 cm apart.

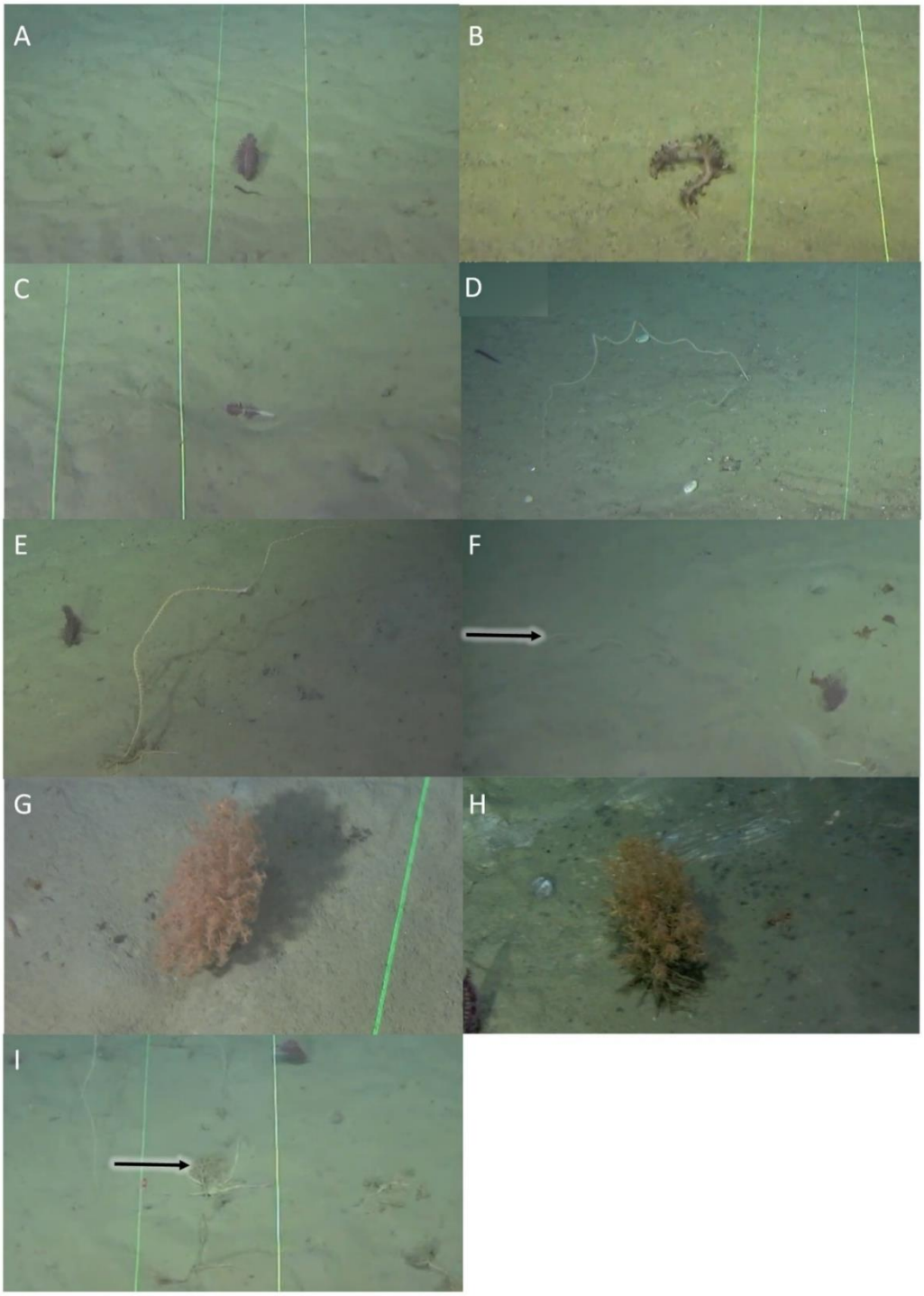

Figure 3-16 Representative photos of coral conditions in the Sitka post-drilling survey: A) 'Good' condition sea pen (*Pennatula* sp.), B) 'Poor/Damaged' sea pen (*Anthoptilum* sp.), C) 'Dead' sea pen, D) 'Good' small gorgonian (*Radicipes* sp.), E) 'Poor/Damaged' small gorgonian, F) 'Dead' small gorgonian, G) 'Good' small gorgonian (*Acanella* sp.), H) 'Poor/Damaged' small gorgonian, and I) 'Dead' small gorgonian. Green scaling lasers are 22 cm apart.

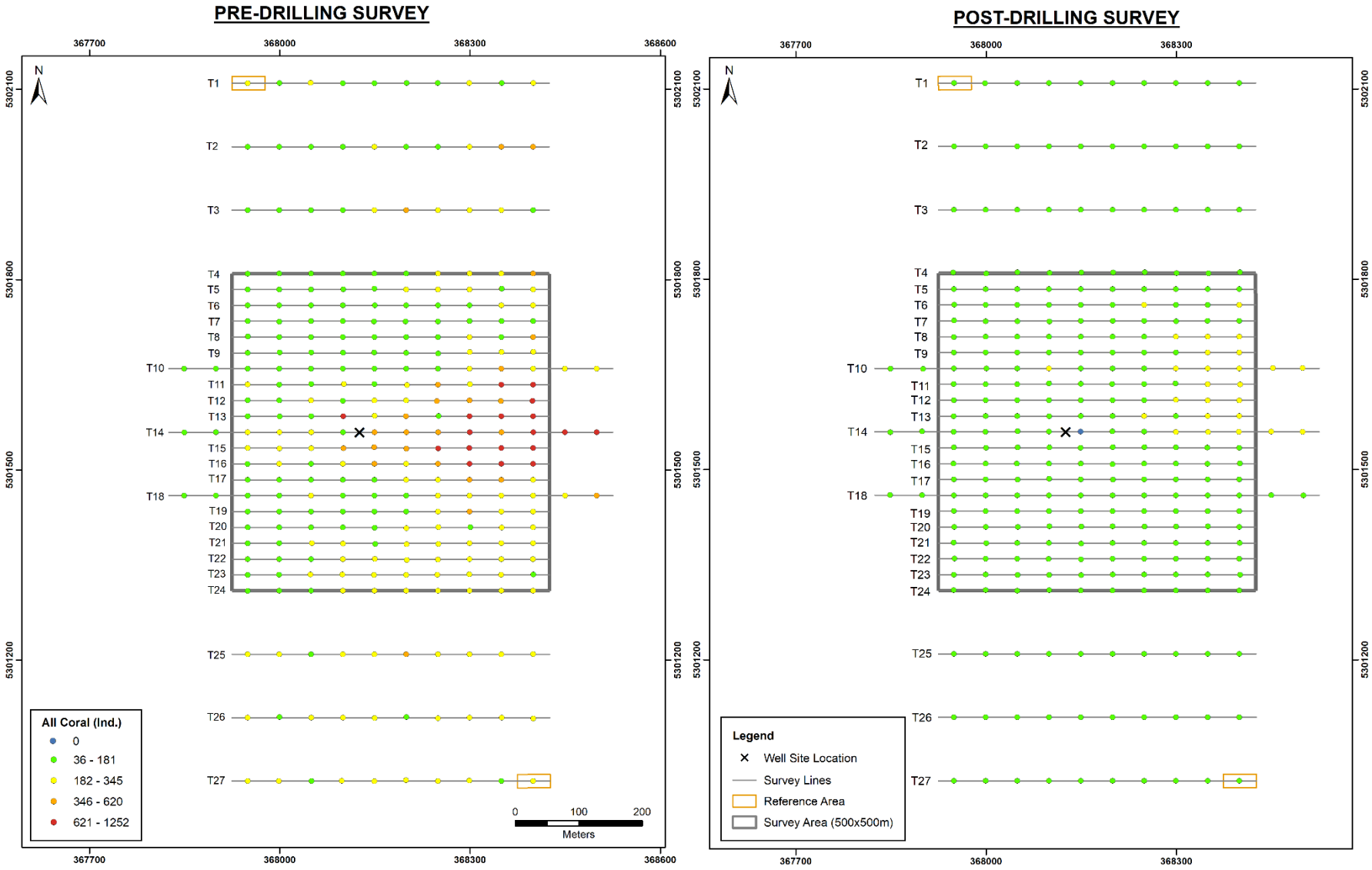

Figure 3-17 All corals abundance (individuals) observed in the Sitka pre- and post-drilling surveys.

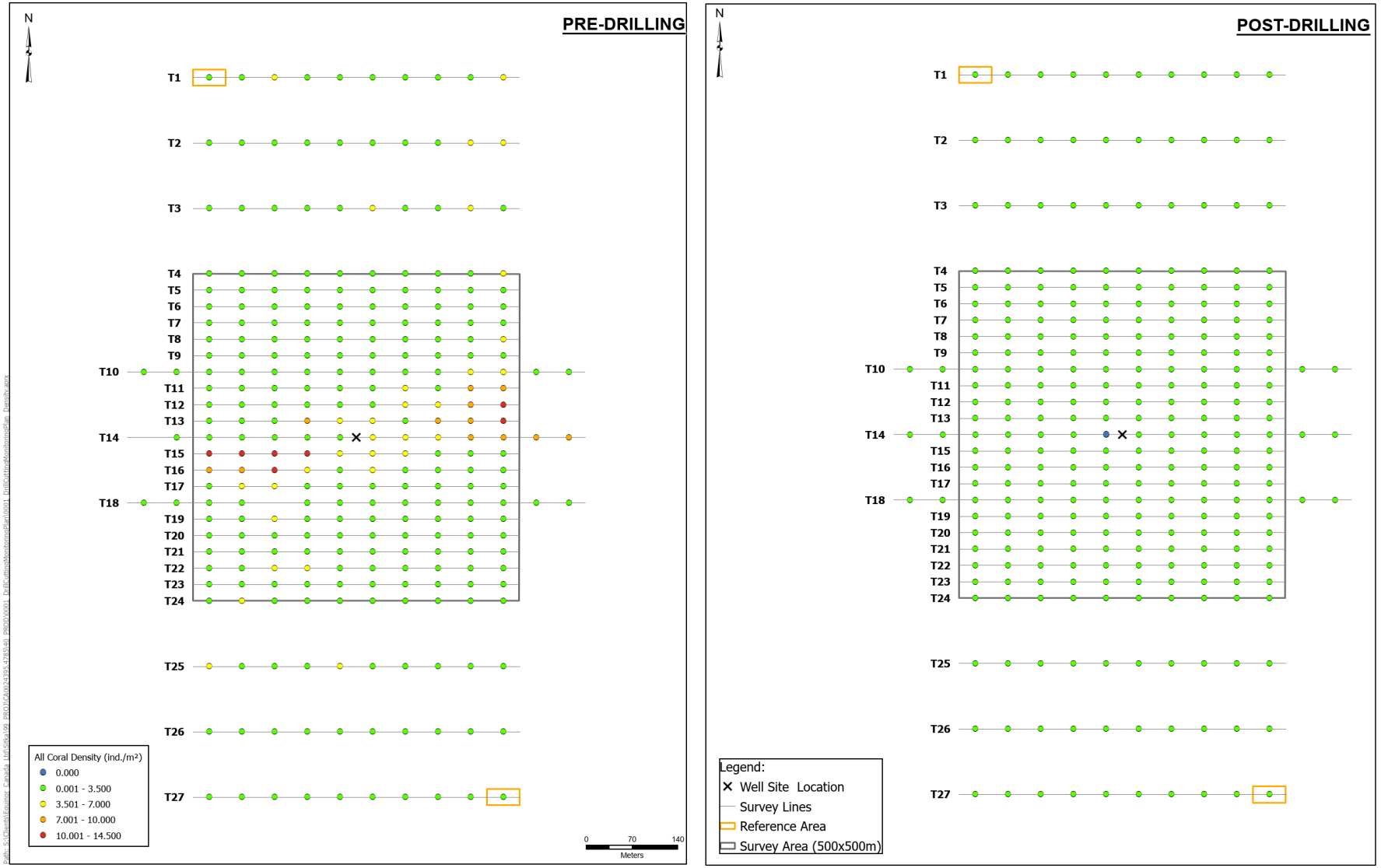

Figure 3-18 All corals density (individuals per m²) observed in the Sitka pre- and post-drilling surveys.

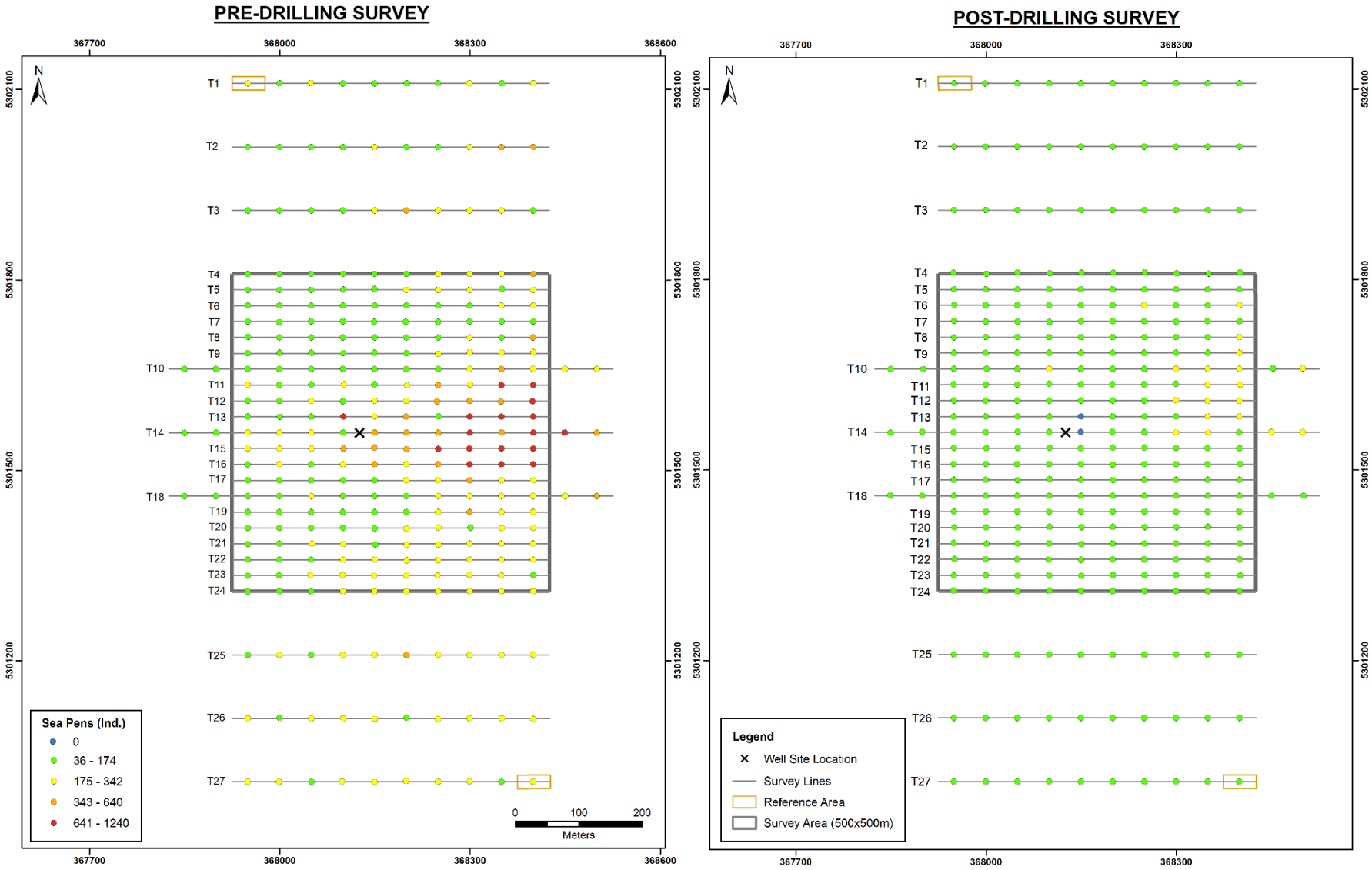

Figure 3-19 Sea pen abundance (individuals) observed in the Sitka pre- and post-drilling surveys.

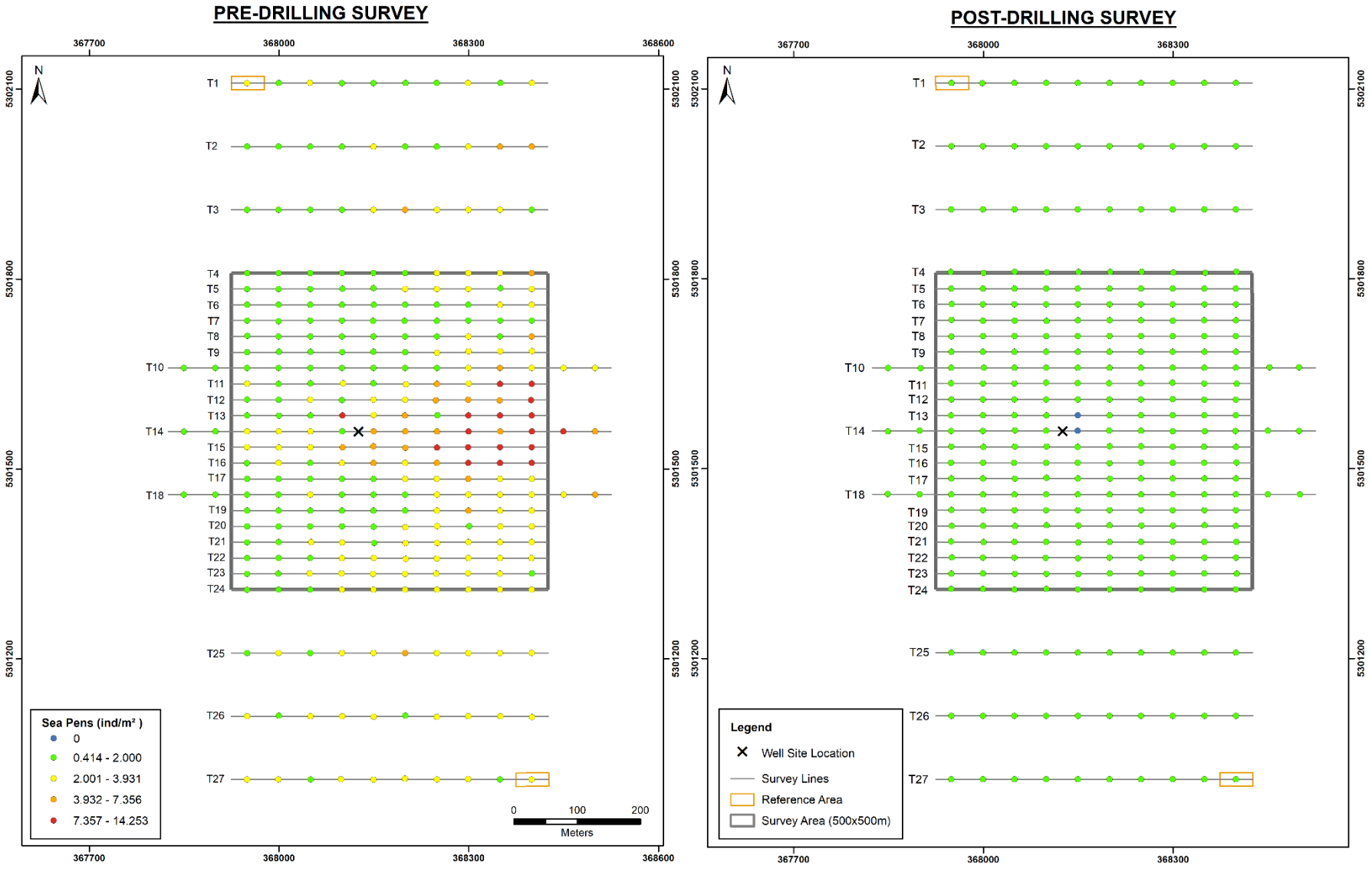

Figure 3-20 Sea pen density (individuals per m²) observed in the Sitka pre- and post-drilling surveys.

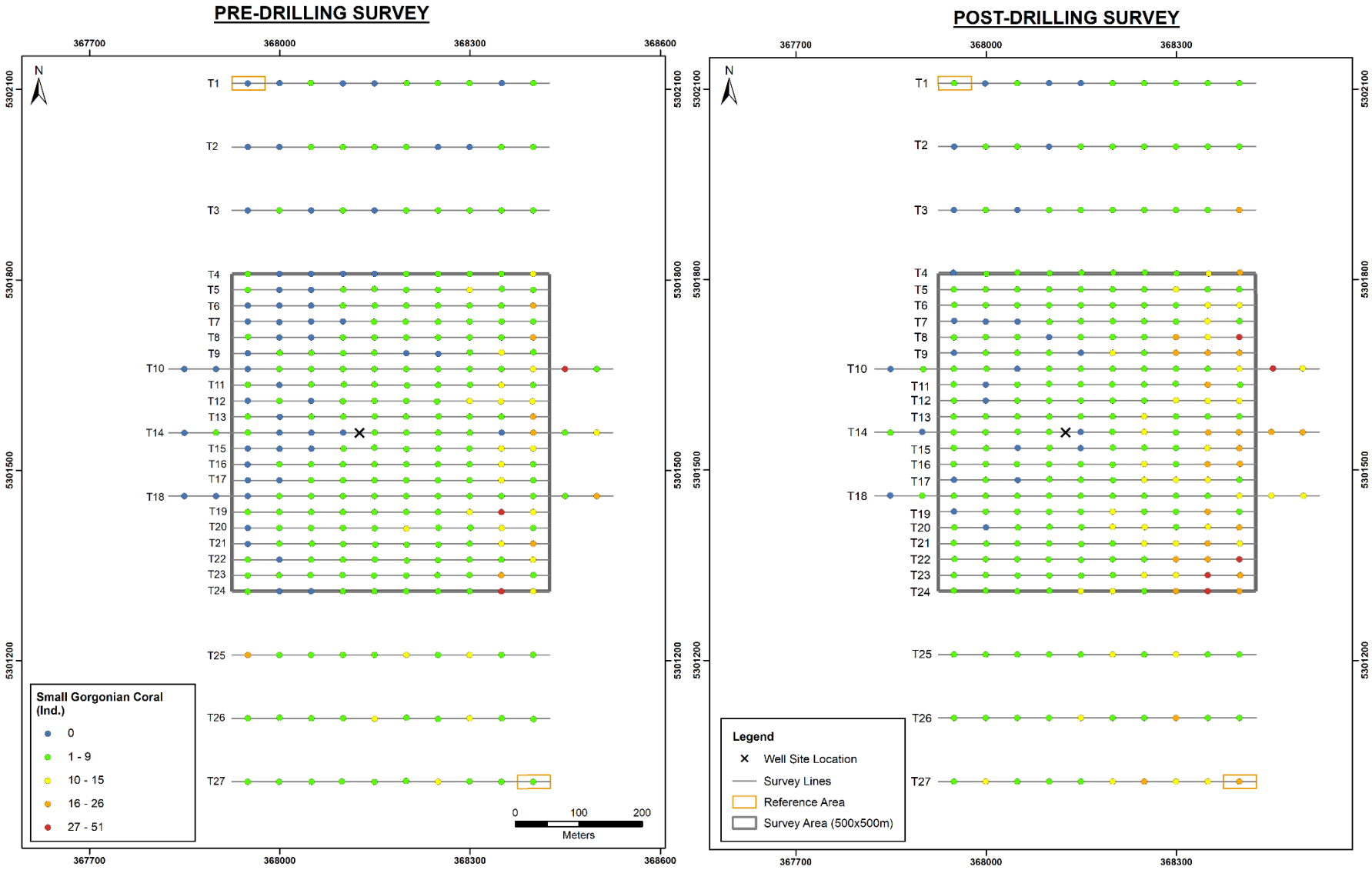

Figure 3-21 Small gorgonian abundance (individuals) observed in the Sitka pre- and post-drilling surveys.

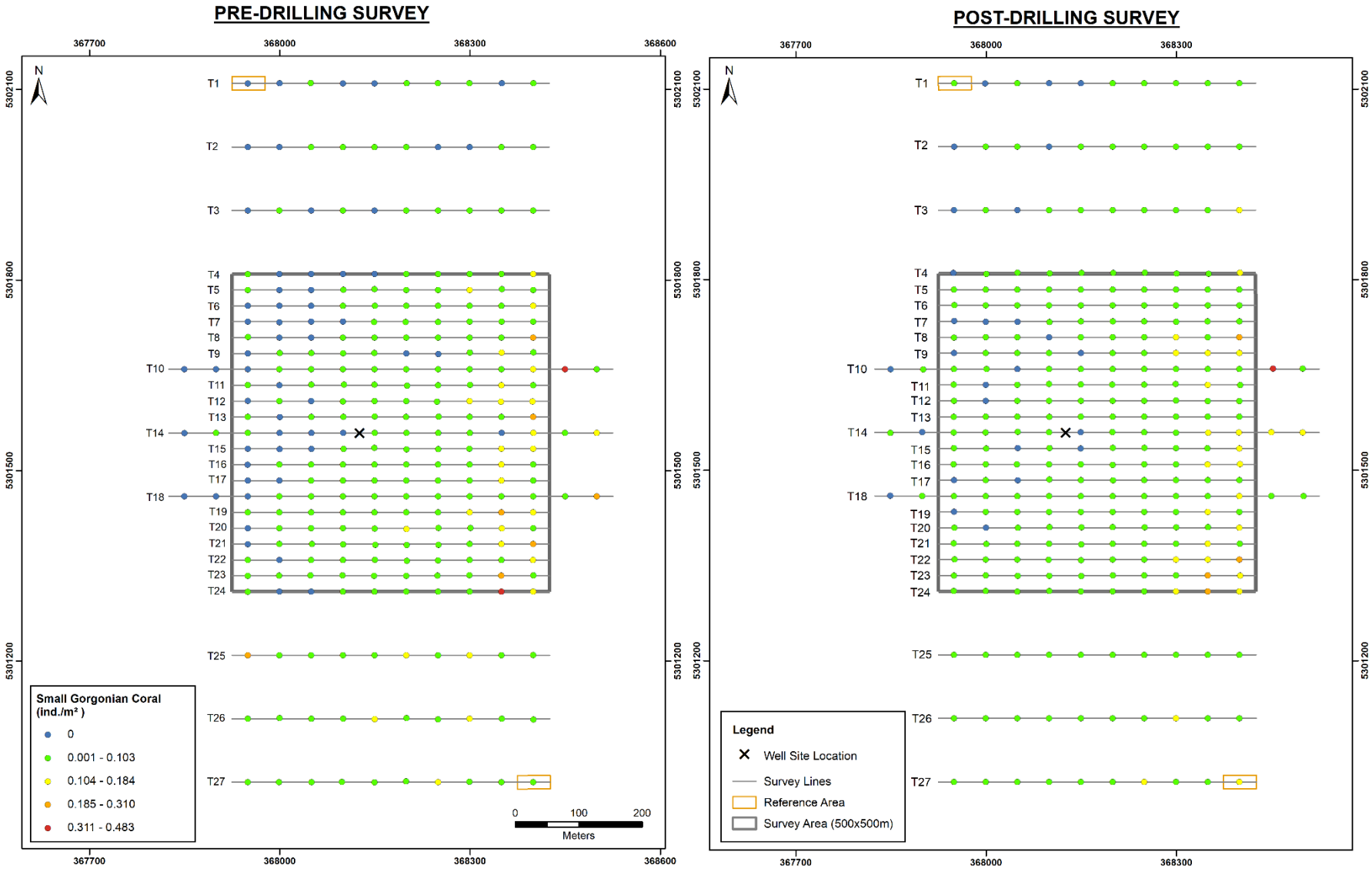

Figure 3-22 Small gorgonian density (individuals per m²) observed in the Sitka pre- and post-drilling surveys.

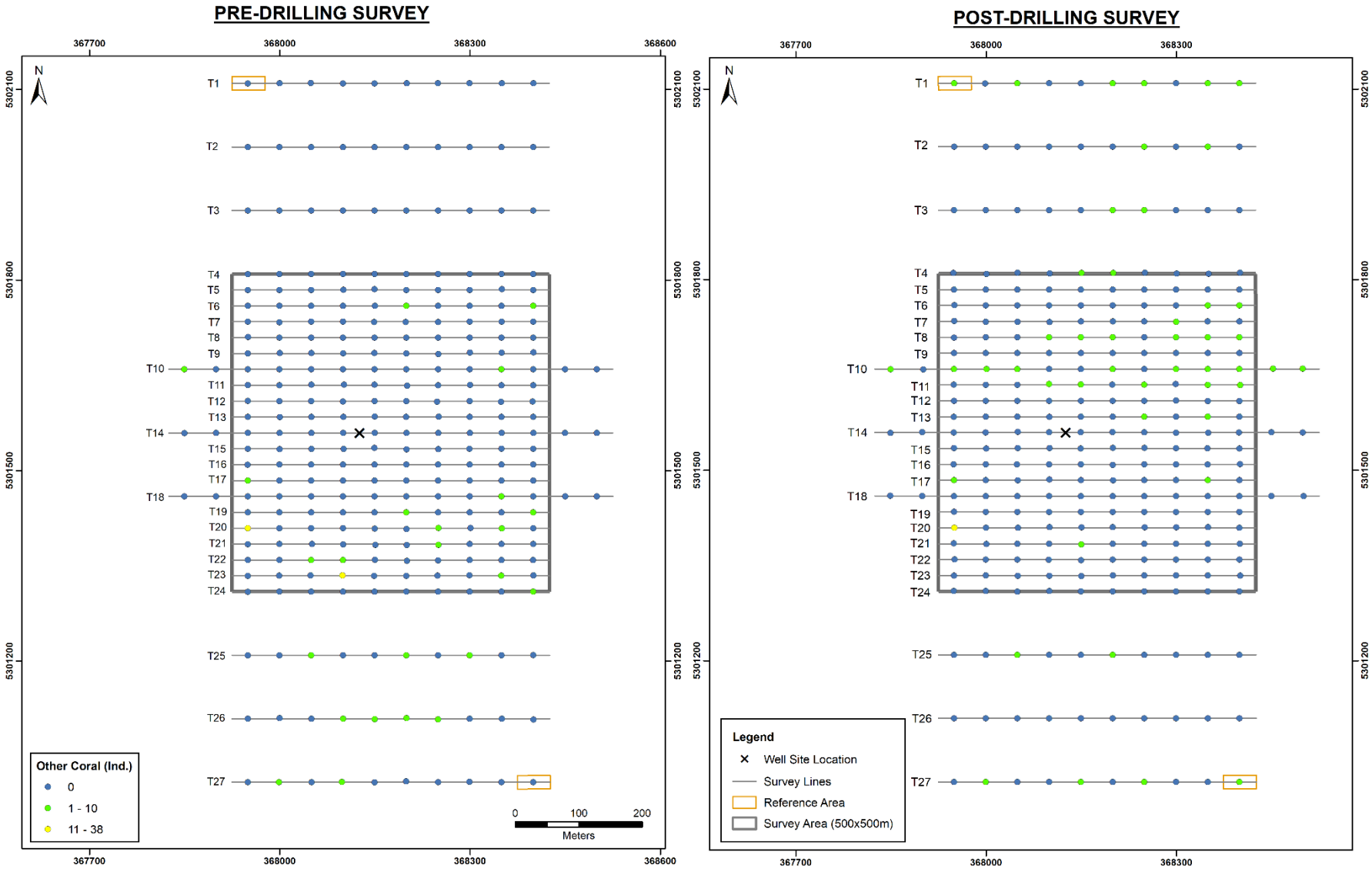

Figure 3-23 Other coral abundance (individuals) observed in the Sitka pre- and post-drilling surveys.

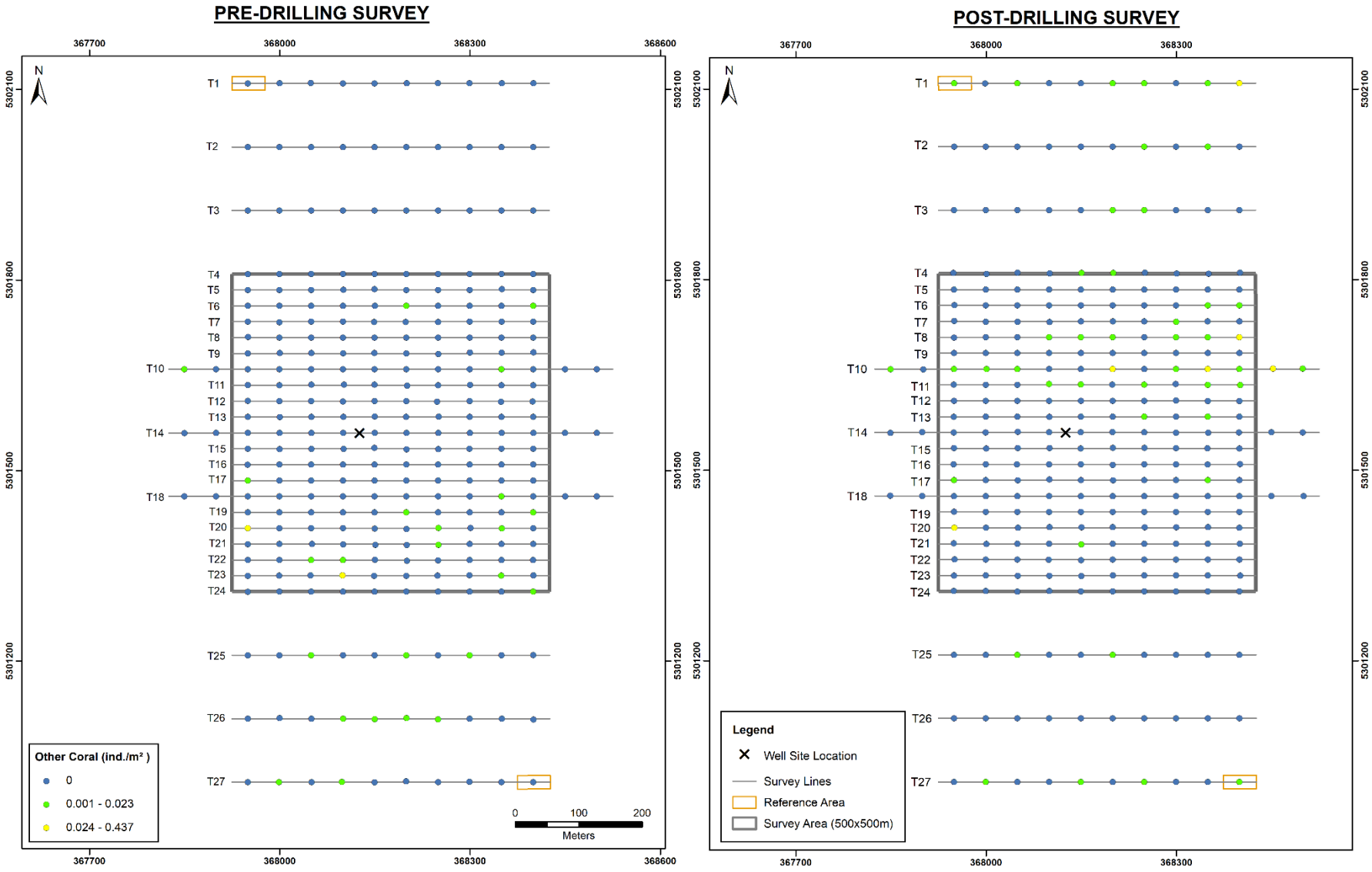

Figure 3-24 Other coral density (individuals per m²) observed in the Sitka pre- and post-drilling surveys.

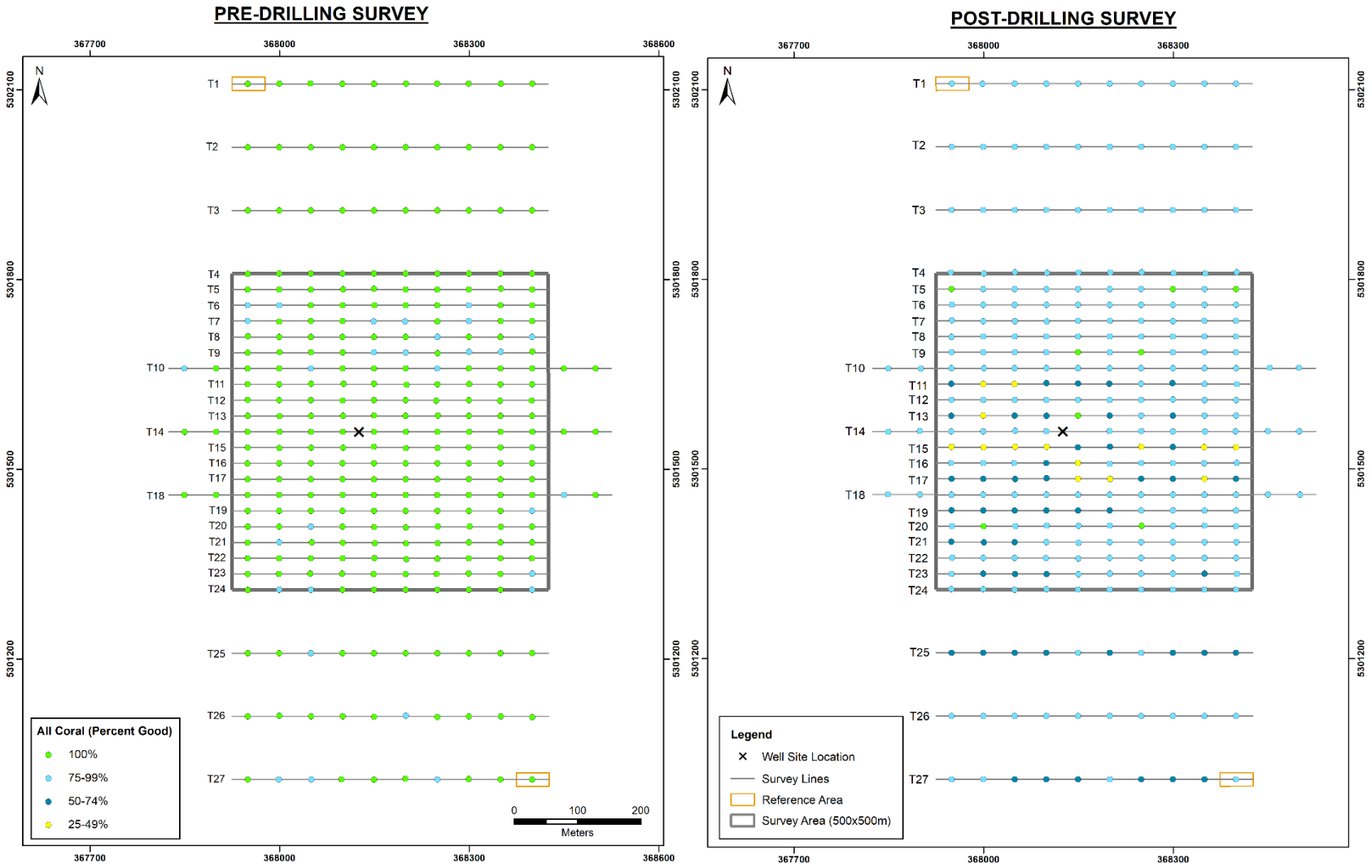

Figure 3-25 All coral condition (percent good) observed in the Sitka pre- and post-drilling surveys.

Table 3-5 Summary statistics (abundance and density) of coral functional groups from the pre- and post-drilling surveys at Sitka.

Category	Taxa	Survey	Area[1]	Mean	St. dev.	Median	Min[2]	Max
Abundance	Other Corals	Pre	Grid	0.32	2.69	0.0	1	38
			Ref	0.10	0.31	0.0	1	1
		Post	Grid	0.34	1.44	0.0	1	17
			Ref	1.05	1.28	0.0	1	4
	Small Gorgonian	Pre	Grid	4.80	5.62	3.0	1	42
			Ref	3.95	3.89	2.0	1	14
		Post	Grid	6.83	7.18	5.0	1	51
			Ref	6.5	5.29	6.0	1	18
	Sea Pen	Pre	Grid	242.37	197.10	189.0	36	1240
			Ref	195.85	78.46	196.50	54	333
		Post	Grid	88.83	52.40	78.0	2	266
			Ref	71.90	28.43	69.50	29	138
Density	Other Corals	Pre	Grid	<0.01	0.03	0.00	0.01	0.44
			Ref	<0.01	<0.01	0.00	0.01	0.01
		Post	Grid	<0.01	0.01	0.00	0.01	0.12
			Ref	0.01	0.01	0.00	0.01	0.02
	Small Gorgonian	Pre	Grid	0.06	0.06	0.03	0.01	0.48
			Ref	0.05	0.04	0.02	0.01	0.01
		Post	Grid	0.05	0.049	0.03	0.01	0.36
			Ref	0.04	0.04	0.04	0.01	0.12
	Sea Pen	Pre	Grid	2.79	2.27	2.17	0.41	14.25
			Ref	2.25	0.90	2.26	0.62	3.83
		Post	Grid	0.61	0.36	0.53	0.01	1.76
			Ref	0.49	0.19	0.48	0.20	0.95

Notes:
[1] Grid = Grid Area Lines, Ref = Reference Areas (Lines T1 and T27)
[2] Minimum density is the lowest non-zero value.
Mean is the average of either the abundance or density of a coral functional group within a given survey (pre- or post-drilling) and area (grid lines or reference areas). Dead corals were not included as part of abundance and density summary statistics. The other summary statistics were similarly calculated.
Total number of survey sections: Pre-drilling survey grid lines n=262, reference areas n=20, post-drilling survey area grid lines n=262, reference areas n=20.
Sections were approximately 50 m linear distance with an average field of view of 1.74 m in pre-drilling survey and 2.89 m in the post-drilling survey.
Totals: Pre-drilling - Other corals n=86, small gorgonians n=1337, and sea pens n=67,418.
Post-drilling - Other corals n=111, small gorgonians n=1920, and sea pens n=24,712.

Table 3-6 Coral functional group condition in the pre- and post-drilling surveys at Sitka.

Taxa	Survey	Area[1]	Percentage (%)		
			Good	Poor	Dead[2]
All Corals	Pre	Grid	99.86	0.13	<0.01
		Ref	99.84	0.15	<0.01
	Post	Grid	86.91	11.63	1.45
		Ref	80.00	17.78	2.22
Other Corals	Pre	Grid	-	-	-
		Ref	-	-	-
	Post	Grid	80.22	18.68	1.10
		Ref	66.67	33.33	0.00
Small Gorgonian	Pre	Grid	-	-	-
		Ref	-	-	-
	Post	Grid	73.46	19.86	6.67
		Ref	66.43	24.48	9.09
Sea Pen	Pre	Grid	-	-	-
		Ref	-	-	-
	Post	Grid	88.04	10.93	1.03
		Ref	81.52	16.91	1.57

Notes:
[1] Grid = Grid Lines Area, Ref = Reference Areas (Lines T1 and T27)
[2] Dead individuals are included as part of condition assessment but are not included in the abundance and density summaries.
Total number of survey sections: Pre-drilling survey grid lines n=262, reference areas n=20, post-drilling survey area grid lines n=262, reference areas n=20.
Sections were approximately 50 m linear distance with an average field of view of 1.74 m in pre-drilling survey and 2.89 m in the post-drilling survey.

3.4.2 SPONGE MORPHOLOGICAL GROUPS

In the post-drilling survey, six morphological groups of sponges were recorded: solid/massive, thin-walled complex, round with projections, leaf/vase shaped, stalked, and other sponges (including encrusting and finger sponges). The pre-drilling survey recorded only two groups: solid/massive and thin-walled complex. Aggregated sponge data showed a significant increase in density from the pre- to post-drilling survey. The abundance of all sponges increased by 33 individuals across the grid and reference areas (Table 3-7). There was no significant difference in sponge density between areas (grid lines and the reference areas) (Figure 3-26) (see Appendix H for all statistical comparisons). The increase in abundance of sponges across the grid and reference area showed no apparent pattern in relation to the drill cuttings footprint (Figure 3-27 and 3-28). This increase does not likely represent the growth of new sponges, but rather a slightly varied track pattern by the ROV from the pre-drilling survey. Geopositioning at this depth has a margin of error around 1%, which translates to around 10 m for these sites; it is possible the ROV passed over rocks not captured in the pre-drill survey, thus new morphological groups were noted

All individual sponges were categorized for their condition as ‘good’, or ‘damaged/poor’. Aggregated sponge condition data showed a decrease from 94.4% good in the pre-drilling survey to 40% good in the post-drilling survey (Table 3-8). The general decrease in sponge condition from pre- to post-drilling survey was spread across the survey area (Figure 3-29). Additional sponge condition data can be found in Table 3-8; however, the low abundance of sponges across all groups mean that comparisons between the grid and reference area and pre- and post-drilling surveys should be made with caution. See Appendix G for maps of all sponge morphological groups condition from the pre- and post-drilling surveys.

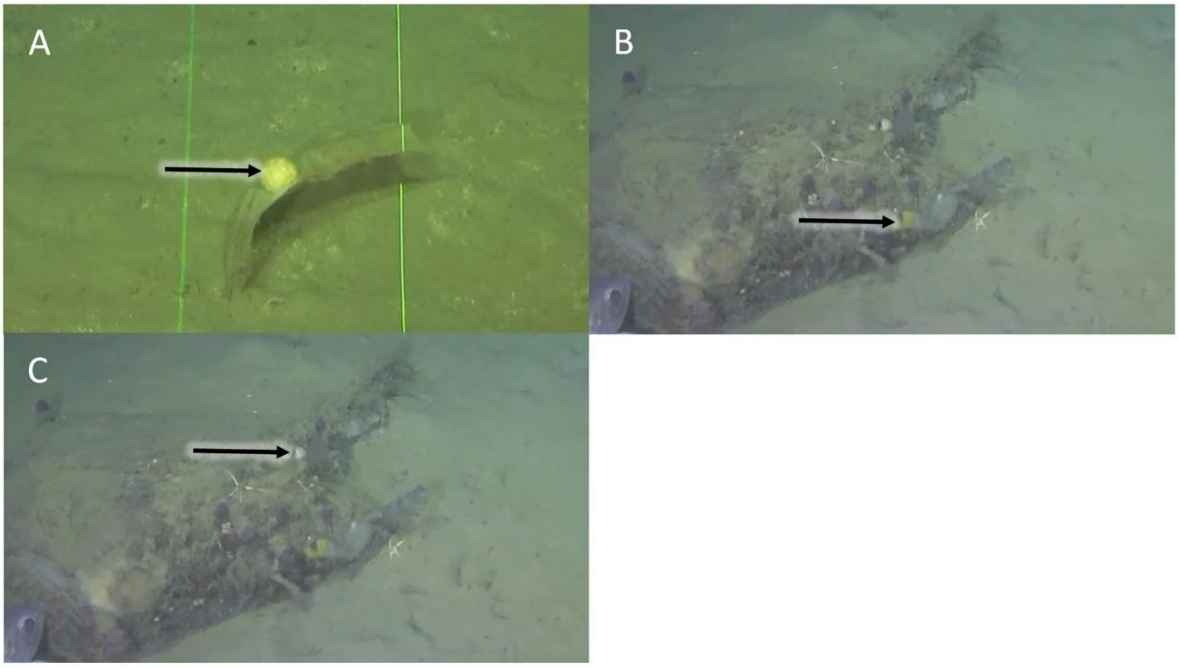

Figure 3-26 Representative photos of sponge morphological groups observed in the Sitka post-drilling survey: A) round sponge with projections, B) encrusting sponge, C) solid/massive sponge. Green scaling lasers are 22 cm apart.

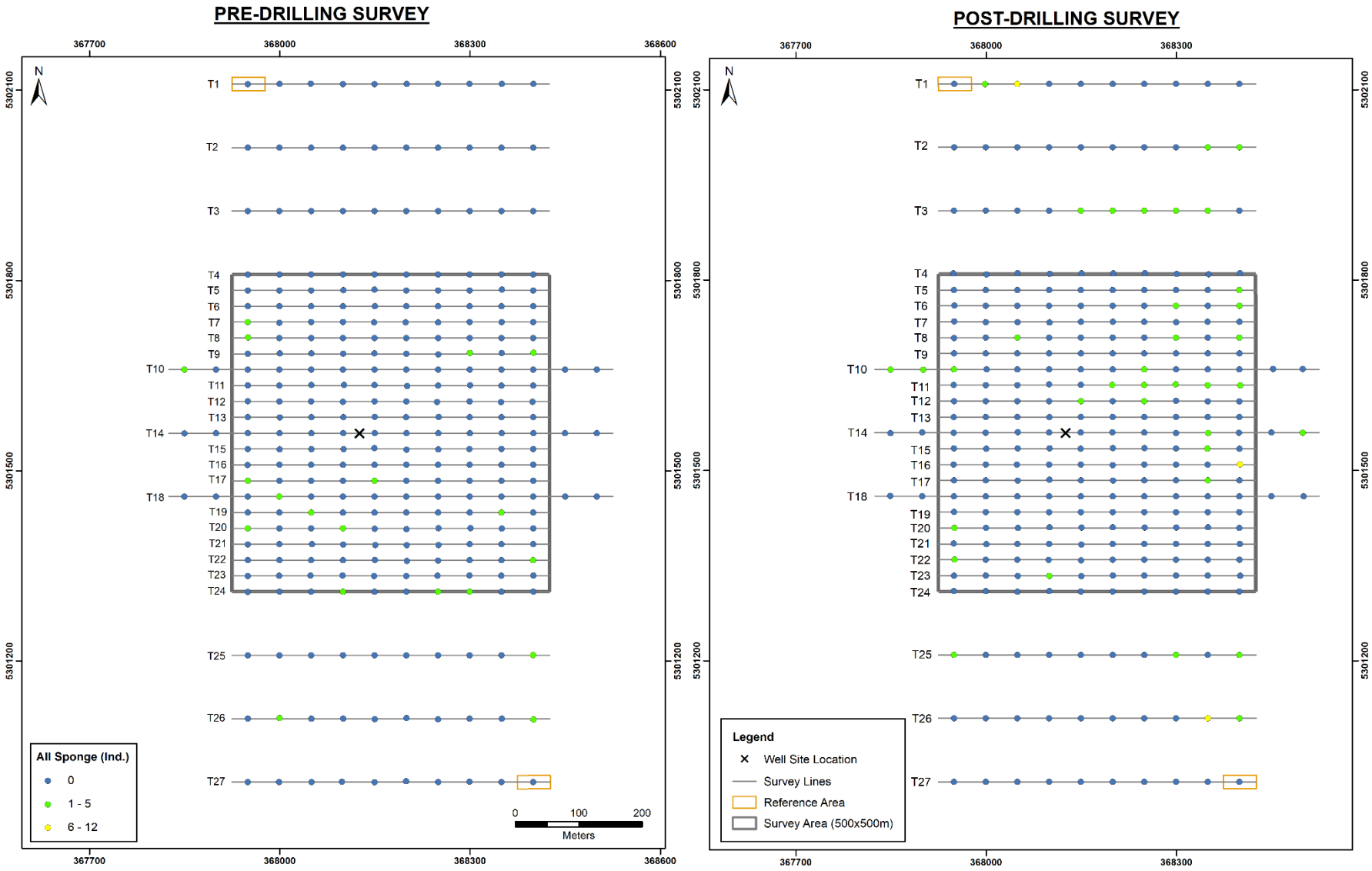

Figure 3-27 All sponge abundance (individuals) observed in the Sitka pre- and post-drilling surveys.

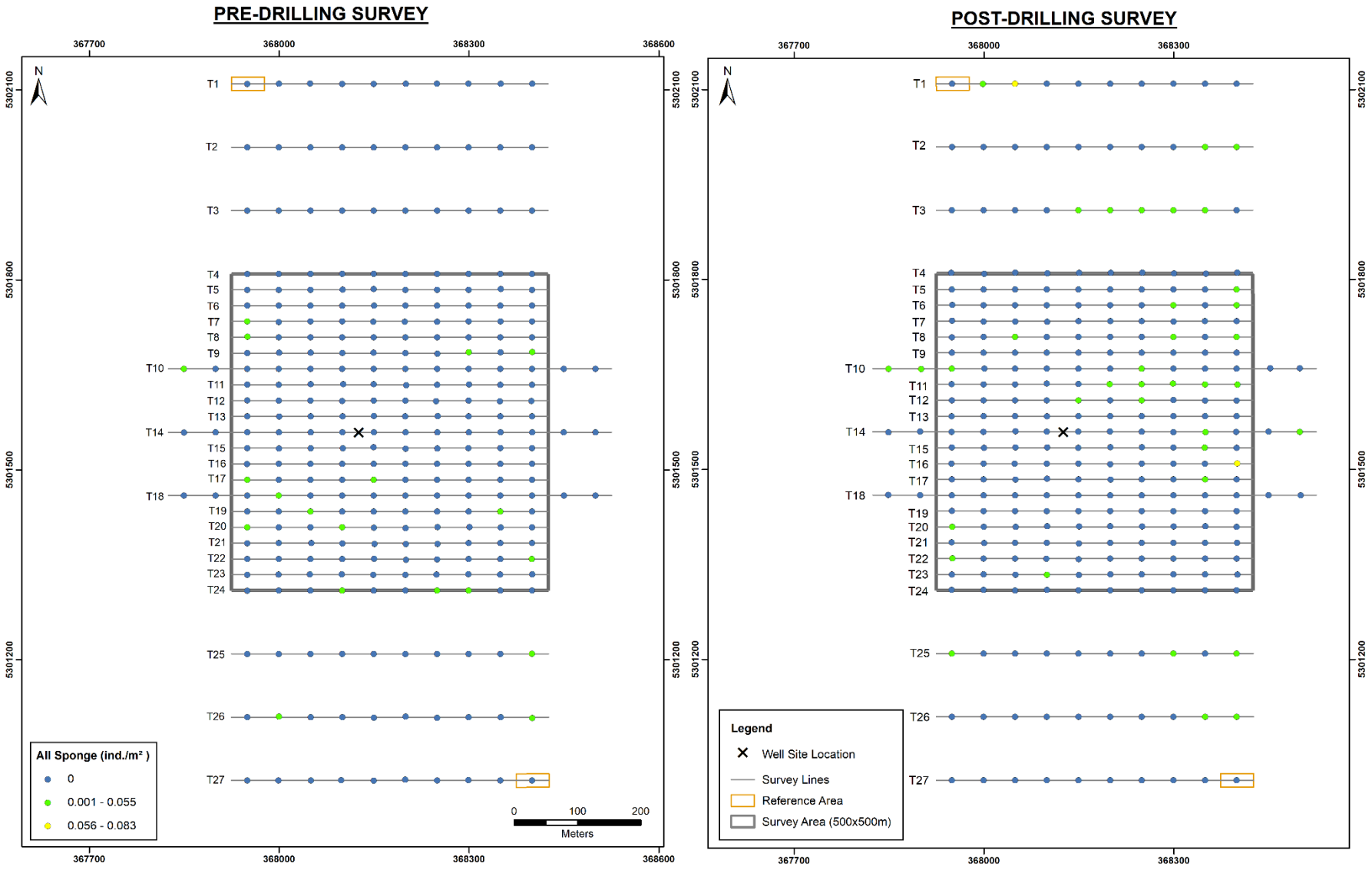

Figure 3-28 All sponge density (individuals per m²) observed in the Sitka pre- and post-drilling surveys.

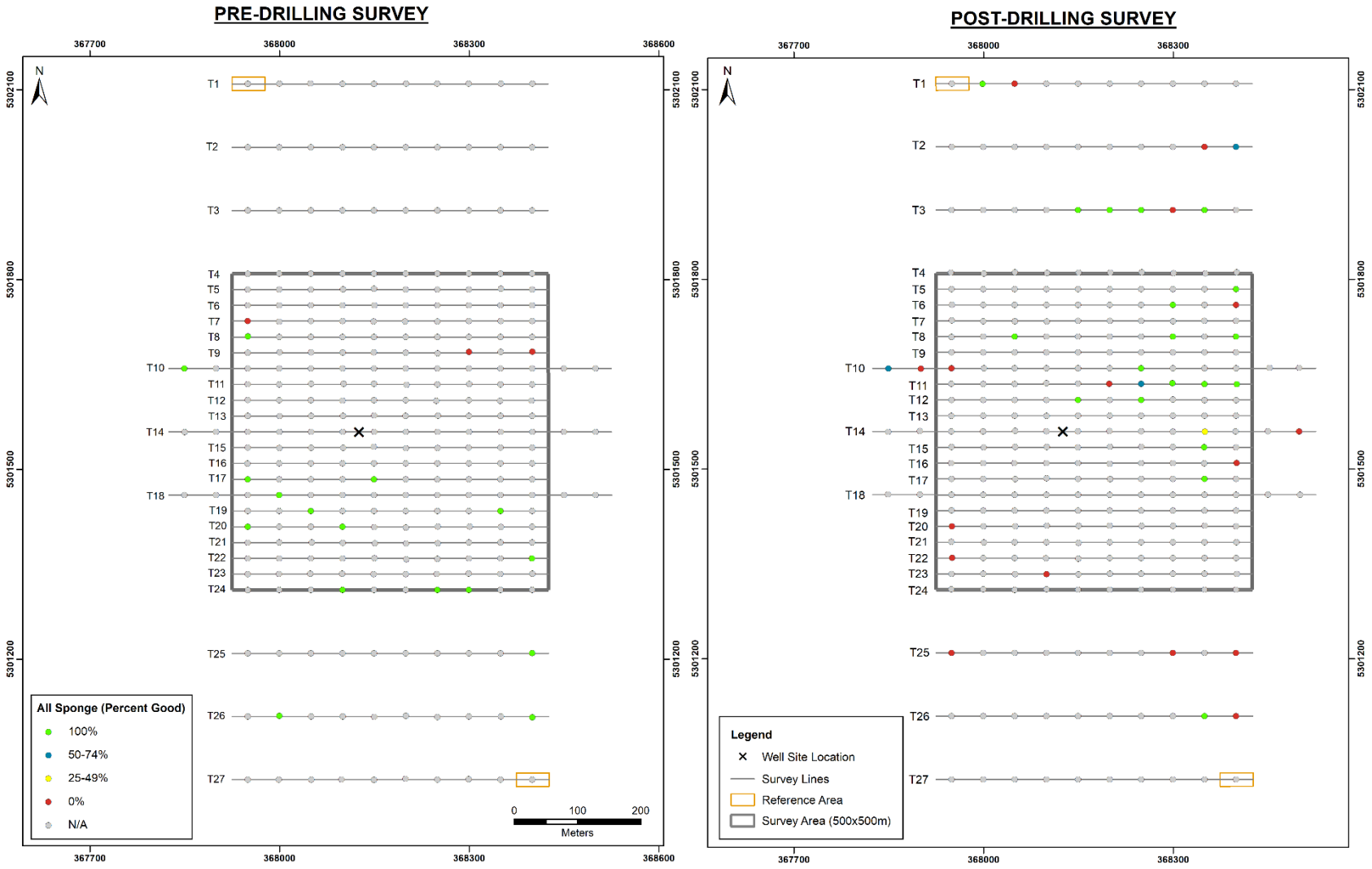

Figure 3-29 All sponge condition (percent good) observed in the Sitka pre- and post-drilling surveys.

Table 3-7 Summary statistics (abundance and density) of sponge morphological groups from the pre- and post-drilling surveys at Sitka.

Category	Taxa	Survey	Area[1]	Mean	St. dev.	Median	Min[2]	Max
Abundance	Solid / Massive	Pre	Grid	0.07	0.25	0	1	1
			Ref	-	-	-	-	-
		Post	Grid	0.16	0.73	0	1	10
			Ref	0.10	0.30	0	1	1
	Thin-Walled, Complex	Pre	Grid	<0.01	0.06	0	1	1
			Ref	-	-	-	-	-
		Post	Grid	<0.01	0.06	0	1	1
			Ref	-	-	-	-	-
	Round with Projections	Pre	Grid	-	-	-	-	-
			Ref	-	-	-	-	-
		Post	Grid	0.02	0.15	0	1	2
			Ref	-	-	-	-	-
	Leaf / Vase Shaped	Pre	Grid	-	-	-	-	-
			Ref	-	-	-	-	-
		Post	Grid	<0.01	0.06	0	1	1
			Ref	-	-	-	-	-
	Stalked	Pre	Grid	-	-	-	-	-
			Ref	-	-	-	-	-
		Post	Grid	0.03	0.23	0	1	2
			Ref	0.00	0.00	0	-	0.00
	Other Sponge	Pre	Grid	-	-	-	-	-
			Ref	-	-	-	-	-
		Post	Grid	0.06	0.54	0	1	7
			Ref	0.55	2.46	0	11	11
Density	Solid / Massive	Pre	Grid	<0.01	<0.01	0.00	0.01	0.01
			Ref	-	-	-	-	-
		Post	Grid	<0.01	<0.01	0.00	0.01	0.06
			Ref	<0.01	<0.01	0.00	0.01	0.01
	Thin-Walled, Complex	Pre	Grid	<0.01	<0.01	0.00	0.01	0.01
			Ref	-	-	-	-	-
		Post	Grid	<0.01	<0.01	0.00	0.01	0.01
			Ref	-	-	-	-	-
	Round with Projections	Pre	Grid	-	-	-	-	-
			Ref	-	-	-	-	-
		Post	Grid	<0.01	<0.01	0.00	0.01	0.01
			Ref	-	-	-	-	-
	Leaf / Vase Shaped	Pre	Grid	-	-	-	-	-
			Ref	-	-	-	-	-
		Post	Grid	<0.01	<0.01	0.00	0.01	0.01
			Ref	-	-	-	-	-
	Stalked	Pre	Grid	-	-	-	-	-
			Ref	-	-	-	-	-

Category	Taxa	Survey	Area[1]	Mean	St. dev.	Median	Min[2]	Max
		Post	Grid	<0.01	<0.01	0.00	0.01	0.01
			Ref	-	-	-	-	-
	Other Sponge	Pre	Grid	-	-	-	-	-
			Ref	-	-	-	-	-
		Post	Grid	<0.01	<0.01	0.00	0.01	0.05
			Ref	<0.01	0.01	0.00	0.08	0.08

Notes:
[1] Grid = Grid Area Lines, Ref = Reference Areas (Lines T1 and T27)
[2] Minimum density is the lowest non-zero value.
Mean is the average of either the abundance or density of a sponge morphological group within a given survey (pre- or post-drilling) and area (grid lines or reference areas). The other summary statistics were similarly calculated.
Total number of survey sections: Pre-drilling survey grid lines n=262, reference areas n=20, post-drilling survey area grid lines n=262, reference areas n=20.
Sections were approximately 50 m linear distance with an average field of view of 1.74 m in pre-drilling survey and 2.89 m in the post-drilling survey.

Totals: Pre-drilling - Solid / massive n=18, thin-walled complex n=1, round with projections n=1.
Post-drilling - Solid / massive n=44, thin-walled complex n=1, round with projections n=4, leaf / vase shaped n=1, stalked n=8, and other sponge n=27

Table 3-8 Sponge morphological group conditions in the pre- and post-drilling surveys at Sitka.

Taxa	Survey	Area[1]	Percentage (%)	
			Good	Poor
All	Pre	Grid	94.44	5.56
		Ref	-	-
	Post	Grid	45.83	54.17
		Ref	7.69	92.31
Solid / Massive	Pre	Grid	-	-
		Ref	-	-
	Post	Grid	40.48	59.52
		Ref	50.00	50.00
Thin-Walled, Complex	Pre	Grid	-	-
		Ref	-	-
	Post	Grid	100.00	0.00
		Ref	-	-
Round with Projections	Pre	Grid	-	-
		Ref	-	-
	Post	Grid	25.00	75.00
		Ref	-	-
Leaf / Vase Shaped	Pre	Grid	-	-
		Ref	-	-
	Post	Grid	100.00	0.00
		Ref	-	-
Stalked	Pre	Grid	-	-
		Ref	-	-
	Post	Grid	75.00	25.00

Taxa	Survey	Area[1]	Percentage (%)	
			Good	Poor
		Ref	-	-
Other Sponge	Pre	Grid	-	-
		Ref	-	-
	Post	Grid	43.75	56.25
		Ref	0.00	100.00

Notes:
[1] Grid = Grid Lines Area, Ref = Reference Areas (Lines T1 and T27)
Total number of survey sections: Pre-drilling survey grid lines n=262, reference areas n=20, post-drilling survey area grid lines n=262, reference areas n=20.
Sections were approximately 50 m linear distance with an average field of view of 1.74 m in pre-drilling survey and 2.89 m in the post-drilling survey.

3.4.3 FISH FUNCTIONAL GROUPS

Five functional groups of fishes were recorded during the post-drilling survey: benthivores, piscivores, planktivores, plank-piscivores, and unknown fish (Figure 3-30). Benthivores were dominated by grenadier and longnose eels, Northern wolffish and rocklings common, eelpout and sculpin occasional, and spotted wolffish and skates rare.

Grenadiers and longnose eel were the majority of fish observations in the pre-drilling survey. The post-drilling survey was dominated by grenadiers, longnose eels and lanternfish. Lanternfish were abundant in the post-drilling survey but were rarely observed in the pre-drilling survey. Unknown fish were those unable to be identified to a functional group – typically small fast-moving individuals that enter and exit the camera frame rapidly, and juveniles.

Overall, fish abundance and density remained very similar pre- and post-drilling with planktivores exhibiting a slight increase in density post-drilling (Table 3-9).

Wolffish were observed throughout the post-drilling survey (observed at 16 out of 27 transects), oftentimes on multiple consecutive transect sections. It was not possible to differentiate between individuals, so the maximum number observed at once for each transect section was used to report their abundance. Wolffish were observed at 83 transect sections and were usually observed in pairs or individually. Spotted and Northern Wolffish were both observed; however, Northern wolffish were much more common with observations recorded at 80 sections, versus seven different sections for Spotted wolffish. The wolffish were observed predating on cephalopods and other fish.

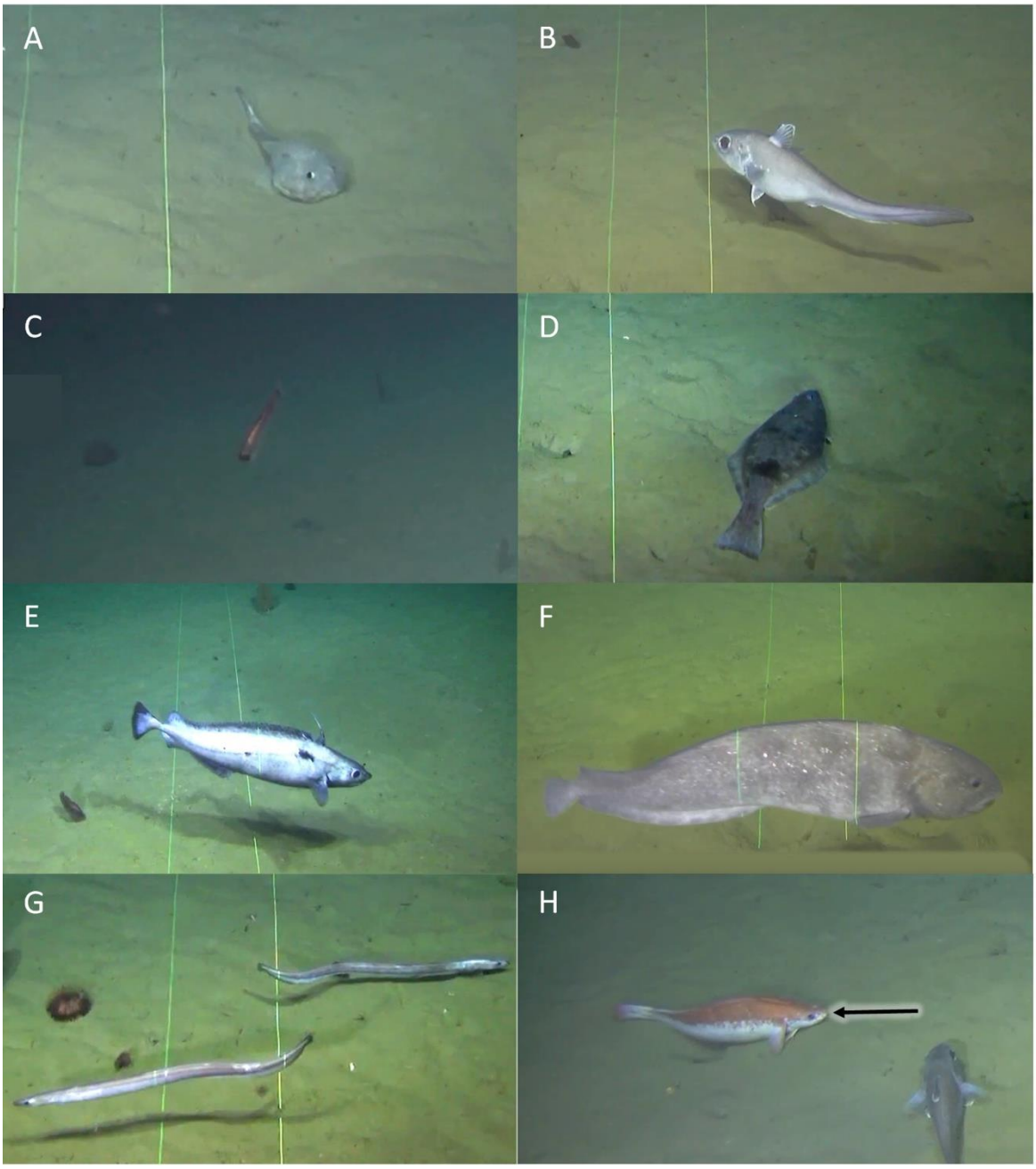

Figure 3-30 Representative photos of fish observed in the Sitka post-drilling survey: A) benthivore (sculpin), B) benthivore (grenadier), C) planktivore (lanternfish), D) piscivore (Greenland halibut), E) piscivore (hake), F) benthivore (Northern wolffish), G) benthivore (shortnose eel), and H) benthivore (rockling). Green scaling lasers are 22 cm apart.

Table 3-9 Summary statistics (abundance and density) of fish functional groups from the pre- and post-drilling surveys at Sitka.

Category	Taxa	Survey	Area[1]	Mean	St. dev.	Median	Min[2]	Max
Abundance	Benthivores	Pre	Grid	4.93	3.00	4.0	1	20
			Ref	7.65	3.56	7.0	3	15
		Post	Grid	7.68	4.23	7.0	1	38
			Ref	8.40	3.68	7.0	2	15
	Piscivores	Pre	Grid	0.02	0.14	0.0	1	1
			Ref	-	-	-	-	-
		Post	Grid	0.45	0.83	0.0	1	6
			Ref	0.15	0.36	0.0	1	1
	Unknown	Pre	Grid	0.28	0.65	0.0	1	4
			Ref	0.35	0.67	0.0	1	15
		Post	Grid	0.42	0.73	0.0	1	3
			Ref	0.30	0.57	0.0	1	2
	Planktivores	Pre	Grid	0.01	0.09	0.0	1	1
			Ref	-	-	-	-	-
		Post	Grid	2.15	2.54	2.0	1	31
			Ref	3.30	2.47	3.0	1	8
	Plank-piscivores	Pre	Grid	0.01	0.01	0.0	1	1
			Ref	0.00	0.00	0.0	-	0.00
		Post	Grid	0.00	0.00	0.0	-	0.00
			Ref	0.00	0.00	0.0	-	0.00
Density	Benthivores	Pre	Grid	0.6	0.03	0.04	0.01	0.23
			Ref	0.09	0.04	0.08	0.03	0.17
		Post	Grid	0.05	0.03	0.04	0.01	0.22
			Ref	0.06	0.02	0.05	0.01	0.10
	Piscivores	Pre	Grid	<0.01	<0.01	0.00	0.01	0.01
			Ref	-	-	-	-	-
		Post	Grid	<0.01	<0.01	0.00	0.01	0.04
			Ref	<0.01	<0.01	0.00	0.01	0.01
	Unknown	Pre	Grid	<0.01	<0.01	0.00	0.01	0.05
			Ref	<0.01	<0.01	0.00	0.01	0.02
		Post	Grid	<0.01	<0.01	0.00	0.01	0.02
			Ref	<0.01	<0.01	0.00	0.01	0.01
	Planktivores	Pre	Grid	<0.01	<0.01	0.00	0.01	0.01
			Ref	-	-	-	-	-
		Post	Grid	0.01	0.02	0.01	0.01	0.18
			Ref	0.02	0.02	0.02	0.01	0.06
	Plank-piscivores	Pre	Grid	<0.01	<0.01	0.00	0.01	0.01
			Ref	-	-	-	-	-
		Post	Grid	-	-	-	-	-
			Ref	-	-	-	-	-

Notes:
[1] Grid = Grid Area Lines, Ref = Reference Areas (Lines T1 and T27)
[2] Minimum density is the lowest non-zero value.
Mean is the average of either the abundance or density of a fish functional group within a given survey (pre- or post-drilling) and area (grid lines or reference areas). The other summary statistics were similarly calculated.
Total number of survey sections: Pre-drilling survey grid lines n=262, reference areas n=20, post-drilling survey area grid lines n=262, reference areas n=20.
Sections were approximately 50 m linear distance with an average field of view of 1.74 m in pre-drilling survey and 2.89 m in the post-drilling survey.

Totals: Pre-drilling - Benthivores n=1445, piscivores n=5, and unknown fish n=80,
Post-drilling - Benthivores n=2180, piscivores n=121, and unknown fish n=166.

3.4.4 INVERTEBRATE (NON-CORAL AND SPONGE) TAXA

Non-coral and sponge invertebrates were recorded in five main taxa: echinoderms, cnidarians, arthropods, annelids and molluscs. An additional group, other invertebrates, was added to encompass ctenophores, bryozoans, and chordates (tunicates). These groups had very low numbers of individuals overall with no bryozoans recorded. Echinoderms were the most numerous fauna group observed in both the pre- and post-drilling surveys, and was comprised mainly of sea urchins, brittle stars, and sea stars (Table 3-10). Cnidarians were the next most populous group, with anemones and hydroids as the most numerous taxa (Figure 3-31). Arthropods were the next group, followed closely by Molluscs, both having small numbers overall (Table 3-10). The Arthropods were comprised almost entirely of shrimp with small numbers of crab, while Molluscs were comprised of mainly gastropods and cephalopods with small numbers of bivalves. Annelids had the overall lowest numbers and were comprised of annelids and polychaetes (Table 3-10)

In general, abundance and density of invertebrate groups was similar between pre- and post-drilling surveys, with some variation between groups (Table 3-10). Echinoderms saw the largest decrease in density and abundance, with the sections around the drill centre experiencing these effects the most (Appendix G). Cnidarians, Arthropods, Annelids, and Molluscs all saw an increase in density and abundance with Cnidarians exhibiting the largest increase. Cnidarian density increased at both the grid and reference sites by 0.01 ind./m² each. The increase in Cnidarian density was mainly driven by an increase in observations of sea anemones and hydroids. Maps showing the abundance and density of invertebrate groups can be found in Appendix G.

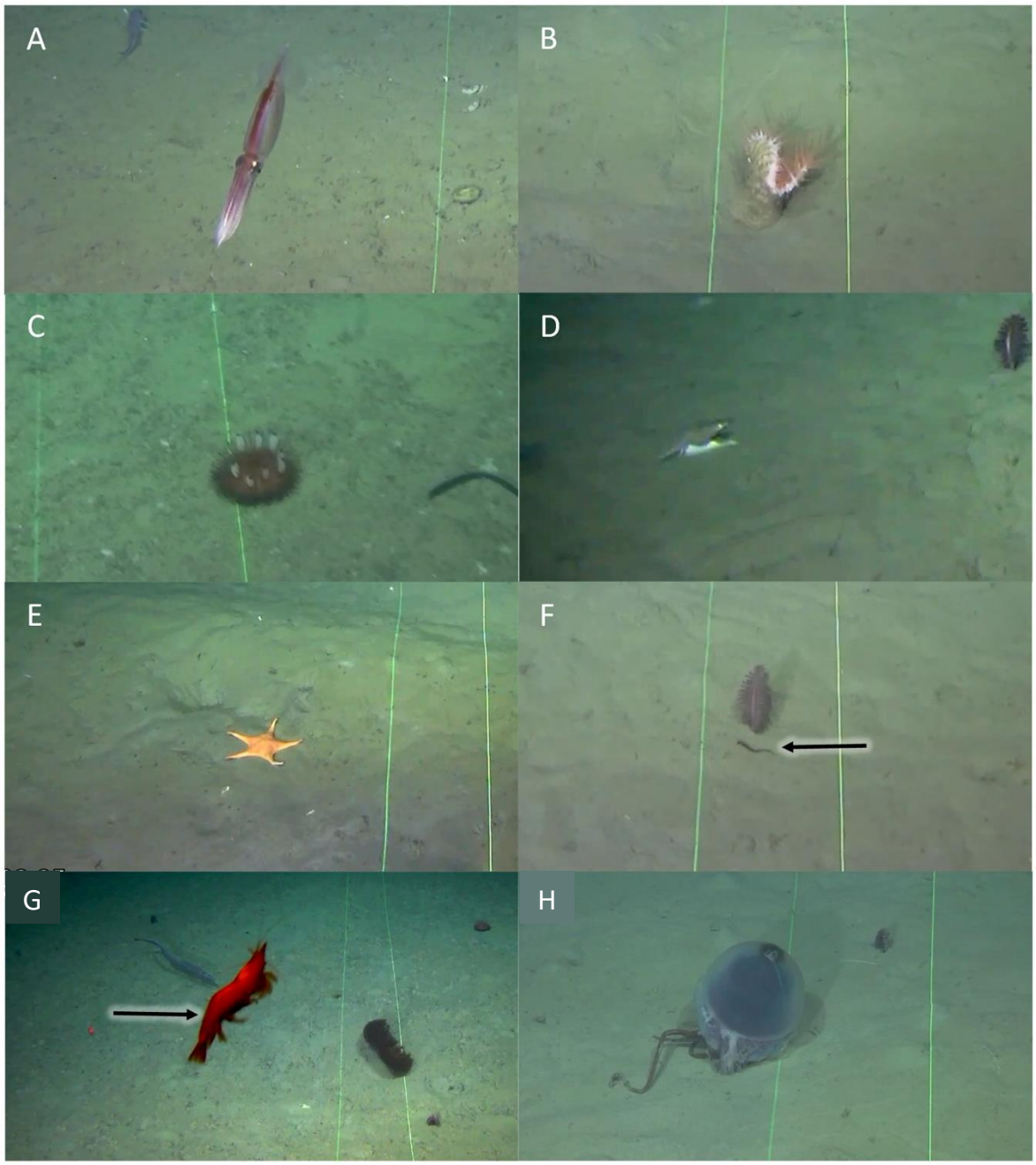

Figure 3-31 Representative photos of invertebrate taxa observed in the Sitka post-drilling survey: A) mollusc (squid), B) cnidaria (anemone), C) echinoderm (urchin), D) mollusc (gastropod), E) echinoderm (sea star), F) annelid, G) arthropod (shrimp), and H) cnidarian (jellyfish). Green scaling lasers are 22 cm apart.

Table 3-10 Summary statistics (abundance and density) of invertebrate (non-coral and sponge) taxa from the pre- and post-drilling surveys at Sitka.

Category	Taxa	Survey	Area[1]	Mean	St. dev.	Median	Min[2]	Max
Abundance	Echinoderms	Pre	Grid	29.83	13.39	28.0	4	81
			Ref	28.05	7.98	28.0	15	48
		Post	Grid	26.91	13.05	25.0	1	74
			Ref	32.05	15.55	33.5	10	59
	Cnidarians	Pre	Grid	1.46	1.78	1.0	1	9
			Ref	1.35	1.60	0.5	1	4
		Post	Grid	12.75	12.44	10.0	1	84
			Ref	11.25	11.90	6.0	1	41
	Arthropods	Pre	Grid	0.23	0.53	0.0	1	2
			Ref	0.15	0.49	0.0	1	2
		Post	Grid	3.26	3.48	2.0	1	17
			Ref	2.8	2.23	2.5	1	7
	Molluscs	Pre	Grid	0.86	1.06	1.0	1	5
			Ref	0.8	1.61	0.0	1	6
		Post	Grid	1.52	2.03	1.0	1	12
			Ref	2.75	2.59	2.0	1	11
	Annelids	Pre	Grid	0.02	0.15	0.0	1	2
			Ref	-	-	-	-	-
		Post	Grid	0.70	1.52	0.0	1	10
			Ref	0.15	0.49	0.0	1	2
	Other Invertebrates	Pre	Grid	-	-	-	-	-
			Ref	-	-	-	-	-
		Post	Grid	0.35	0.76	0.0	1	5
			Ref	0.5	0.83	0.0	1	2
Density	Echinoderms	Pre	Grid	0.34	0.15	0.32	0.05	0.93
			Ref	0.32	0.09	0.32	0.17	0.55
		Post	Grid	0.18	0.09	0.17	0.01	0.93
			Ref	0.21	0.11	0.23	0.07	0.39
	Cnidarians	Pre	Grid	0.02	0.02	0.01	0.01	0.10
			Ref	0.01	0.01	0.00	0.01	0.05
		Post	Grid	0.09	0.08	0.06	0.01	0.58
			Ref	0.08	0.08	0.04	0.01	0.28
	Arthropods	Pre	Grid	<0.01	0.01	0.00	0.01	0.02
			Ref	0.00	0.01	0.00	0.01	0.02
		Post	Grid	0.02	0.02	0.01	0.01	0.12
			Ref	0.02	0.02	0.02	0.01	0.05
	Molluscs	Pre	Grid	0.01	0.01	0.01	0.01	0.06
			Ref	0.01	0.02	0.00	0.01	0.07
		Post	Grid	0.01	0.01	0.01	0.01	0.08
			Ref	0.02	0.02	0.01	0.01	0.07
	Annelids	Pre	Grid	<0.01	<0.01	0.00	0.01	0.02
			Ref	-	-	-	-	-

Category	Taxa	Survey	Area[1]	Mean	St. dev.	Median	Min[2]	Max
		Post	Grid	<0.01	0.01	0.00	0.01	0.07
			Ref	<0.01	<0.01	0.00	0.01	0.01
	Other Invertebrates	Pre	Grid	-	-	-	-	-
			Ref	-	-	-	-	-
		Post	Grid	<0.01	0.01	0.00	0.01	0.03
			Ref	<0.01	0.01	0.00	0.01	0.01

Notes:
[1] Grid = Grid Area Lines, Ref = Reference Areas (Lines T1 and T27)
[2] Minimum density is the lowest non-zero value.
Mean is the average of either the abundance or density of a taxonomic group within a given survey (pre- or post-drilling) and area (grid lines or reference areas). The other summary statistics were similarly calculated.
Total number of survey sections: Pre-drilling survey grid lines n=262, reference areas n=20, post-drilling survey area grid lines n=262, reference areas n=20.
Sections were approximately 50 m linear distance with an average field of view of 1.74 m in pre-drilling survey and 2.89 m in the post-drilling survey.

Totals: Pre-drilling - Echinoderms n=8,377, cnidarians n=1,410, arthropods n=63, molluscs n=242,
Post-drilling - Echinoderms n=7,693, cnidarians n=3,567, arthropods n=909, molluscs n=452, and other n=102.

3.5 OTHER OBSERVATIONS

3.5.1 ANTHROPOGENIC DEBRIS

Anthropogenic debris were noted throughout the post-drilling survey area. Observations included rust and rusting metal (Figure 3-32 A-C), large metal grate (Figure 3-32 D), and zip-ties and other plastic debris (Figure 3-32 E-F). Some anthropogenic activity marks (such as trawling or ROV tether lines; not shown here) or non-natural piles and divots in the sediment were also noted (Figure 3-1 D). These may be due to previous trawling activity in the area, or possibly ROV tethers; but no trawl mark origins can be confirmed.

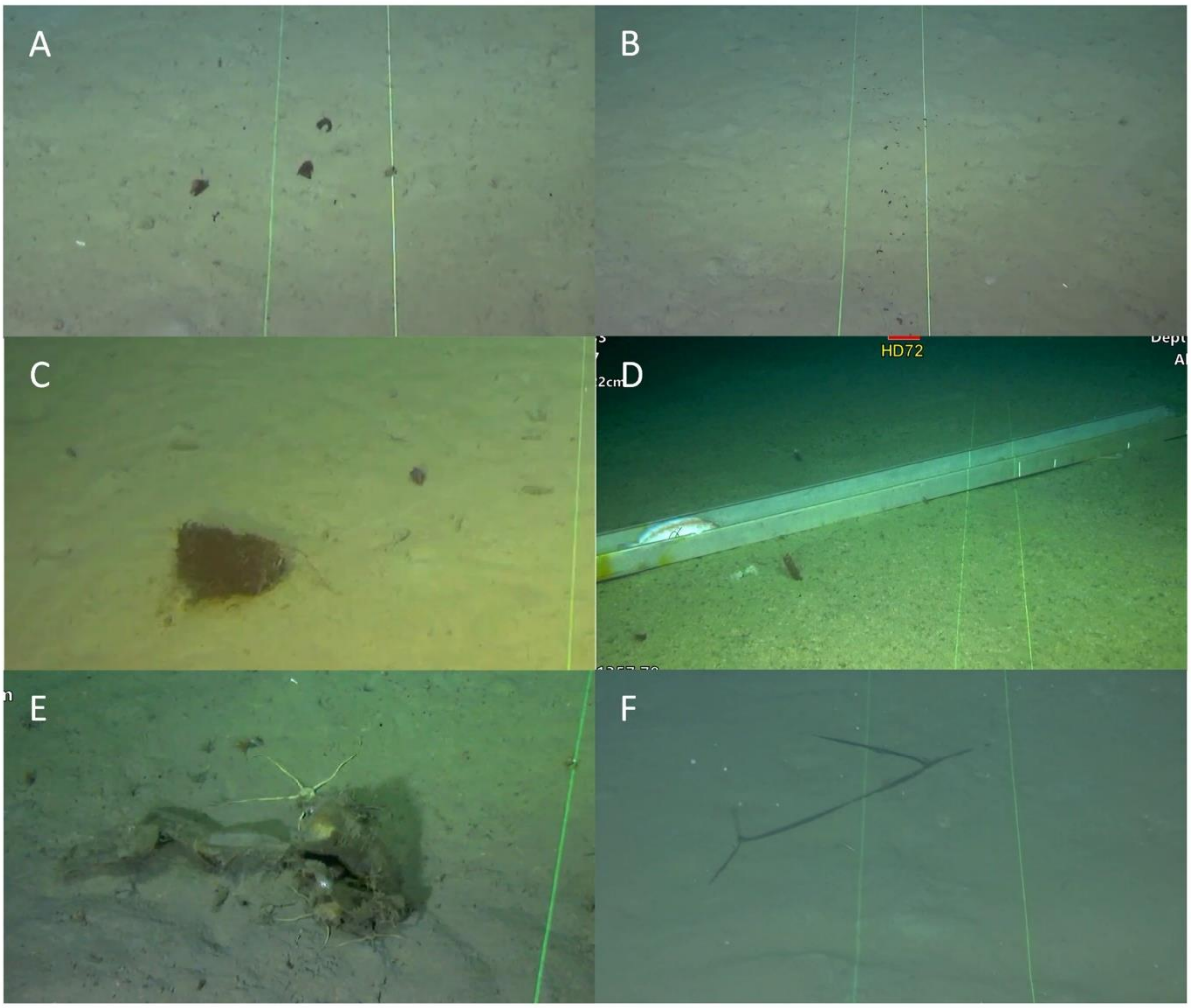

Figure 3-32 Examples of anthropogenic debris observed during the post-drilling survey: A) rust flakes, B) trail of rust flakes, C) mass of rusty metal shavings, D) metal grate, E) sheet plastic debris, and F) zip-tie. Green scaling lasers are 22 cm apart.

4 CAPPAHAYDEN RESULTS

4.1 ROV SPEED AND ALTITUDE

ROV altitude and velocity remained relatively constant throughout the seabed survey at the Cappahayden well site. ROV altitude is measured by the ROV itself and was very accurate to what the biologists in the field noted. The ROV remained below a meter in altitude except for occasional rises to avoid obstacles on the seabed or to manage the ROV's tether (Table 4-1). ROV velocity was recorded as speed over ground by the surveyors using the beacons position as recorded by the vessels HiPAP. Similar to Sitka, this recorded velocity spiked due to positional uncertainty of the ROV while moving on the survey lines (Table 4-1). The biologists in the field monitored the ROV's Doppler velocity log (DVL; not shown here), which gave a consistent velocity of 0.3-0.5 knots throughout the survey area.

Table 4-1 Summary of ROV altitude and velocity during the Cappahayden survey.

Category	Unit	Mean	St. Dev.	Median	Min	Max
ROV Altitude	m	0.89	0.10	0.9	0.7	1.7
ROV Velocity	knots	0.67	0.89	0.47	0.19	10.68

4.2 SURFICIAL SUBSTRATE

The entire area in the post-drilling survey was recorded as 100% fine substrate, which was only a small change from the pre-drilling survey in which one section was recorded as 5% medium (Figure 4-1, Figure 4-2).

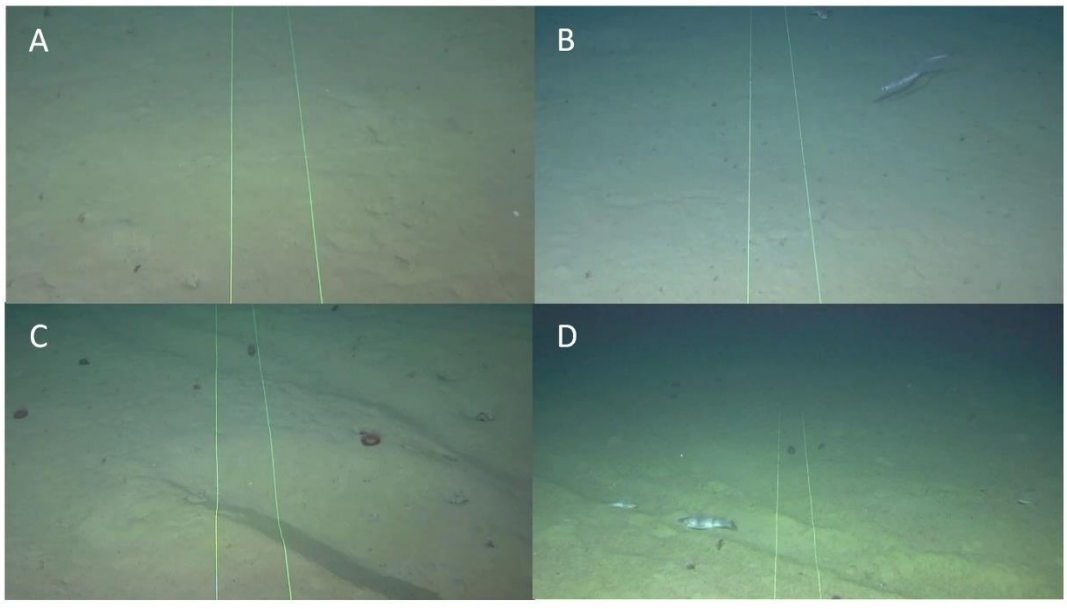

Figure 4-1 Examples of the surficial substrate observed in the Cappahayden post-drilling survey: A-D) fine sediment, C-D) troughs and piles of sediment observed occasionally. Scaling lasers are 22 cm apart.

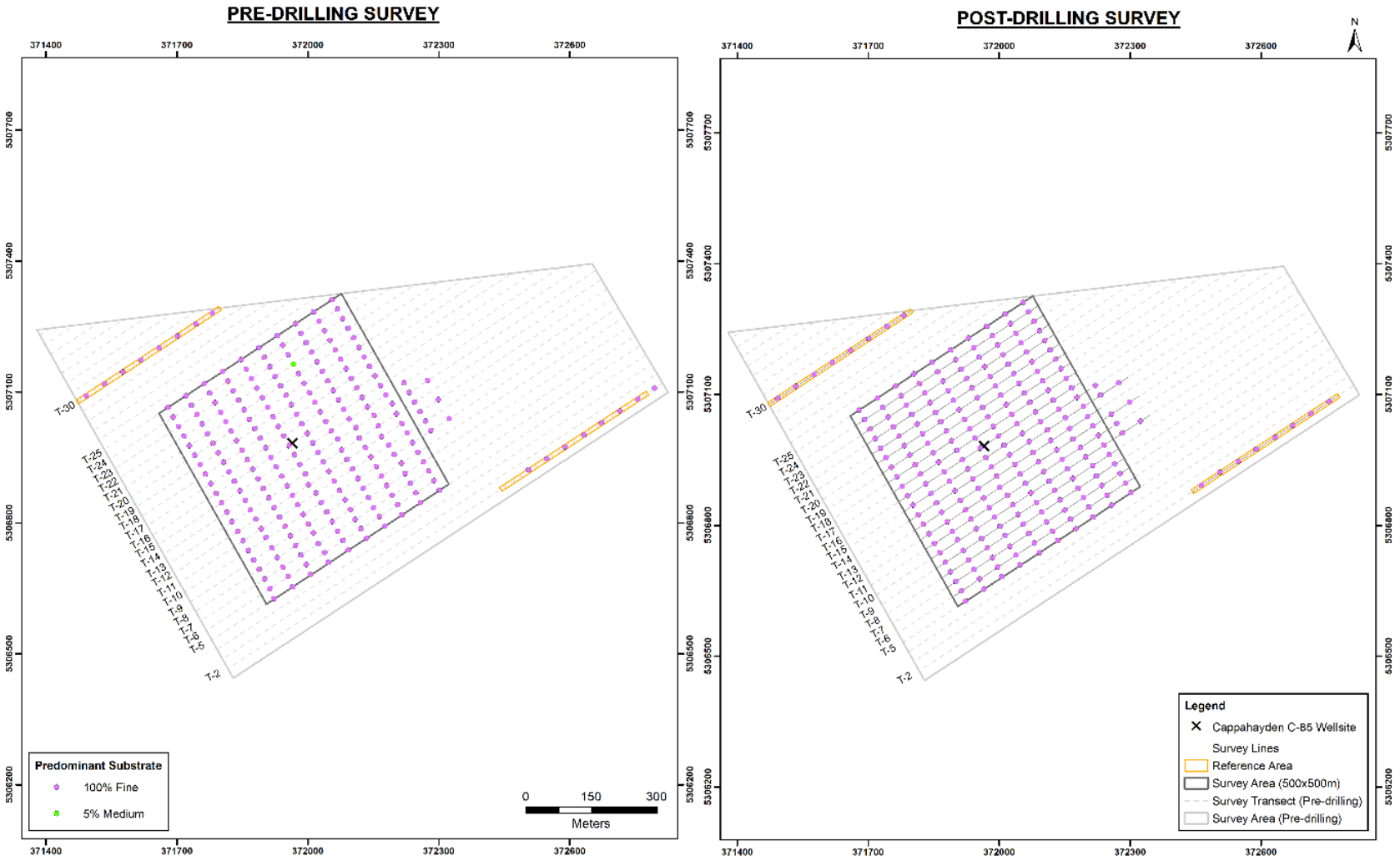

Figure 4-2 Predominant substrate category in each 50 m transect section from the Cappahayden pre- and post-drilling surveys.

4.3 DRILL CUTTINGS DEPOSITION

4.3.1 EXTENT

As shown in Table 1-3 and Table 1-4, the majority of drill cuttings were predicted to be within 200 m of the well centre, with some additional cuttings out to 300 m. Figure 1-2 shows that the cut-off for the 1.5 mm PNET was predicted to be within the grid box area, and generally predictions had cuttings travelling to the east of the well site. Cuttings below this thickness are predicted to travel out to a kilometer and beyond from the well centre.

Post-drilling survey results at Cappahayden had cuttings divided into two categories – thin and thick cuttings (Figure 4-3). The observed visual extent of cuttings found that a portion of cuttings drifted to the east of the well site, with thick and thin cuttings roughly corresponding to the model predictions – thick cuttings on transects T10 to T19 (Figure 4-4). However, cuttings also travelled directly south of the drill centre with thin cuttings covering up to half of the length of many southern transect lines (T-5 to T-15) and some thick cuttings distributed in this area as well (T5 to T-9). A small area (approximately 70 m long) of thin cuttings was observed at the eastern end of T-5. Cuttings were observed at the terminus of transects T-5 to T-15, indicating cuttings beyond the grid box. The observation of thick cuttings in the southern region of the grid was approximately 140m from the wellsite at the nearest point along T-9, and approximately 300 m at the farthest point along T-5. These thick cuttings likely correspond to the WBM cuttings released at the seabed, as they originate at the well head, while thin cuttings may be a transition zone at the edge of WBM cuttings extent, or SBM cuttings released from the surface and that descend the water column and settle more broadly.

The visual survey showed the substrate distant from the wellsite with thick cuttings still had the presence of live corals and sponges (some with surficial coverage of sediment), while substrate nearest to the well with the same thick cuttings category had no living sessile organisms.

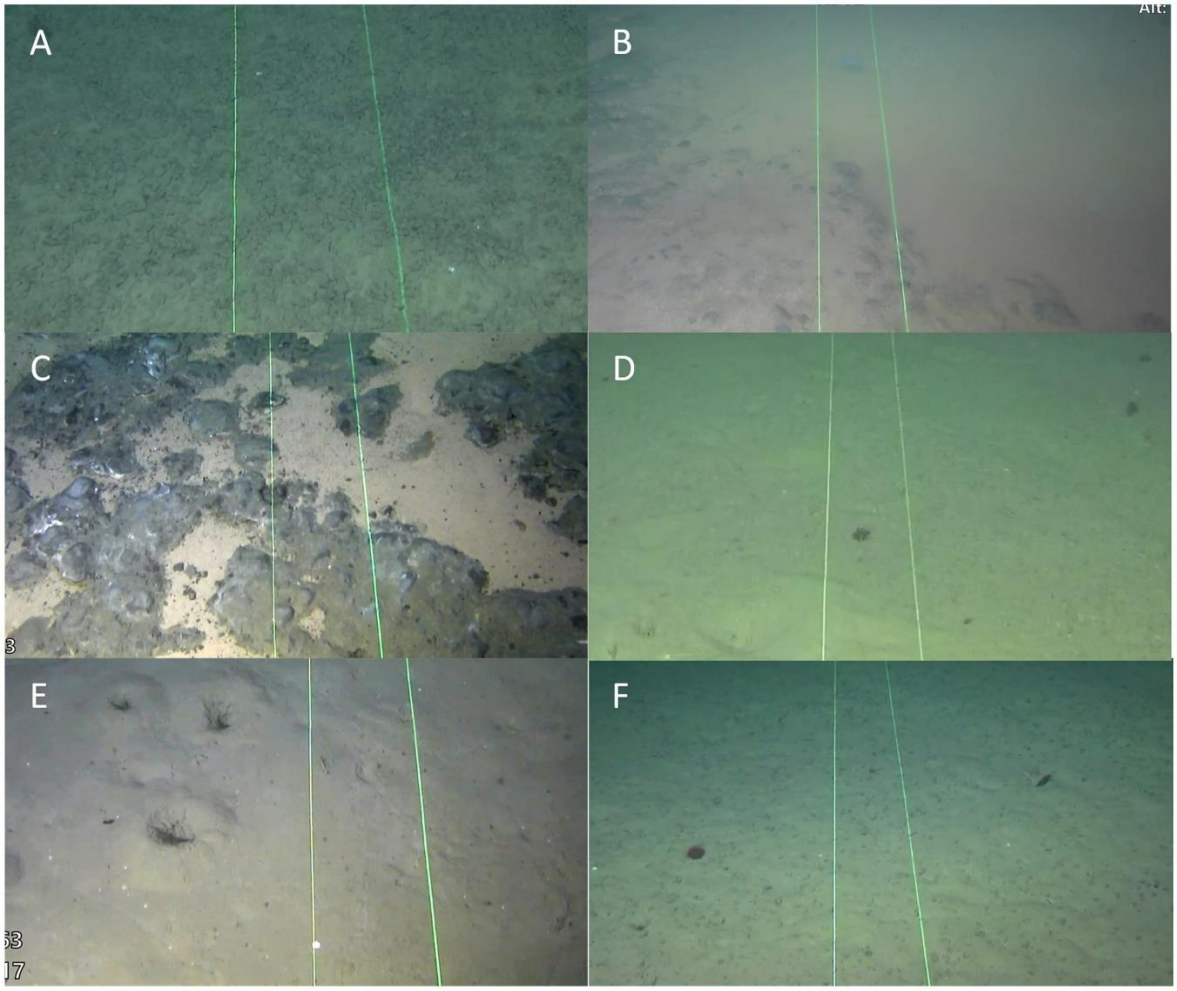

Figure 4-3 Examples of cuttings observed in the Cappahayden post-drilling survey: A-C) thick cuttings (no natural sediment visible) with varied textures, D-F) thin cuttings (some natural sediment visible). Green scaling lasers are 20 cm apart.

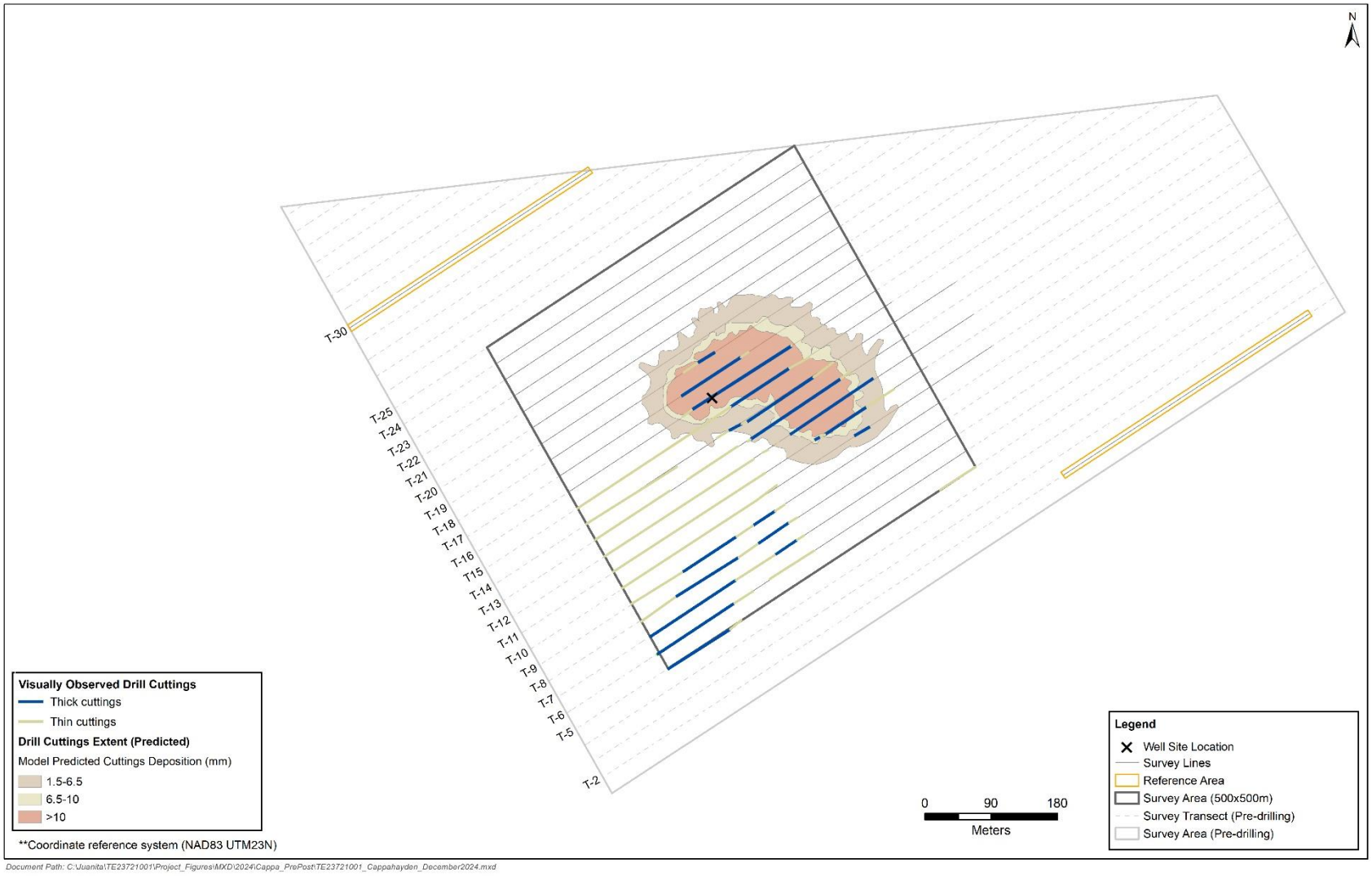

Figure 4-4 Predicted (shaded areas) and observed (blue and taupe coloured lines) drill cuttings extent at the Cappahayden well site.

4.3.2 THICKNESS

Sediment cores were taken at 16 stations in duplicate (32 total samples) throughout the Cappahayden seabed survey area (Table 4-2, Figure 4-5). Samples were documented and processed onboard the vessel shortly after retrieval. The seafloor sediment consisted of olive clay with no sulphurous odours. Cores were made of clear plexiglass, and the total sediment recovery and the thickness of cuttings were measured using a ruler held next to the core (Table 4-2). Cores were also described, with particular attention to colouration near the sediment/water interface at the top of the core. Many cores had pink-orange gelatinous clumps either at the surface or below the surface of the sediment. This appearance is consistent with barite, which has a pink colour and could form small clumps after treatment and discharge. Image plates for all sediment samples recovered are presented in Appendix D.

Overall recovery ranged from 10 to 30 cm, with an ideal recovery of >15 cm. A single core that had <15 cm, 10 cm recovery (T30-1), at the reference station, and as no cuttings were expected, the core was sampled as it still met mass requirements for the laboratory. During the survey, one set of cores (T17-1) was washed out during recovery and re-sampled. Cuttings thickness ranged from 0 mm (not present) to 110 mm (T14-1B, 59 m from the well centre) (Table 4-2).

Table 4-2 Core sample recovery and cuttings thickness at Cappahayden.

Station	Distance from well centre (m)	Modelled Thickness (mm)	Recovery (cm)		Cuttings (cm)		Core Description
			A	B	A	B	
T2-1	645	0	25	30	0	0	-
T10-1	168	1.5-6.5	23	16	0	0	-
T10-2	275	0	25	28	0	0	Small orange flecks on top
T11-1	148	0	25	20	0	0	-
T11-2	218	1.5-6.5	27	26	0	0	Small orange flecks on top
T13-1	137	>10	25	18	70	50	Orange on surface
T14-1	59	1.5-6.5	22	20	100	110	Orange 10-11cm down
T15-1	44	>10	22	21	30	50	Orange on surface
T16-1	141	6.5-10	21	27	0	0	Orange flecks on top (B)
T17-1	46	>10	23	29	0	0	Orange flecks on top (A)
T18-1	95	1.5-6.5	24	28	0	0	-
T18-2	58	>10	20	21	10	10	Orange on surface
T18-3	145	1.5-6.5	23	24	0	0	-
T20-1	184	0	27	27	0	0	-
T23-1	205	0	22	14	0	0	-
T30-1	389	0	10	23	0	0	-

Note: "-" indicates samples with a normal background colour and consistency (typically an olive colour with no smell)
Cells with a pink colouration indicate the potential presence of barite based on visual assessment.
Sediment Recovery was measured from the top of the rubber base plug (plug thickness is 4 cm) to the top of the sediment.

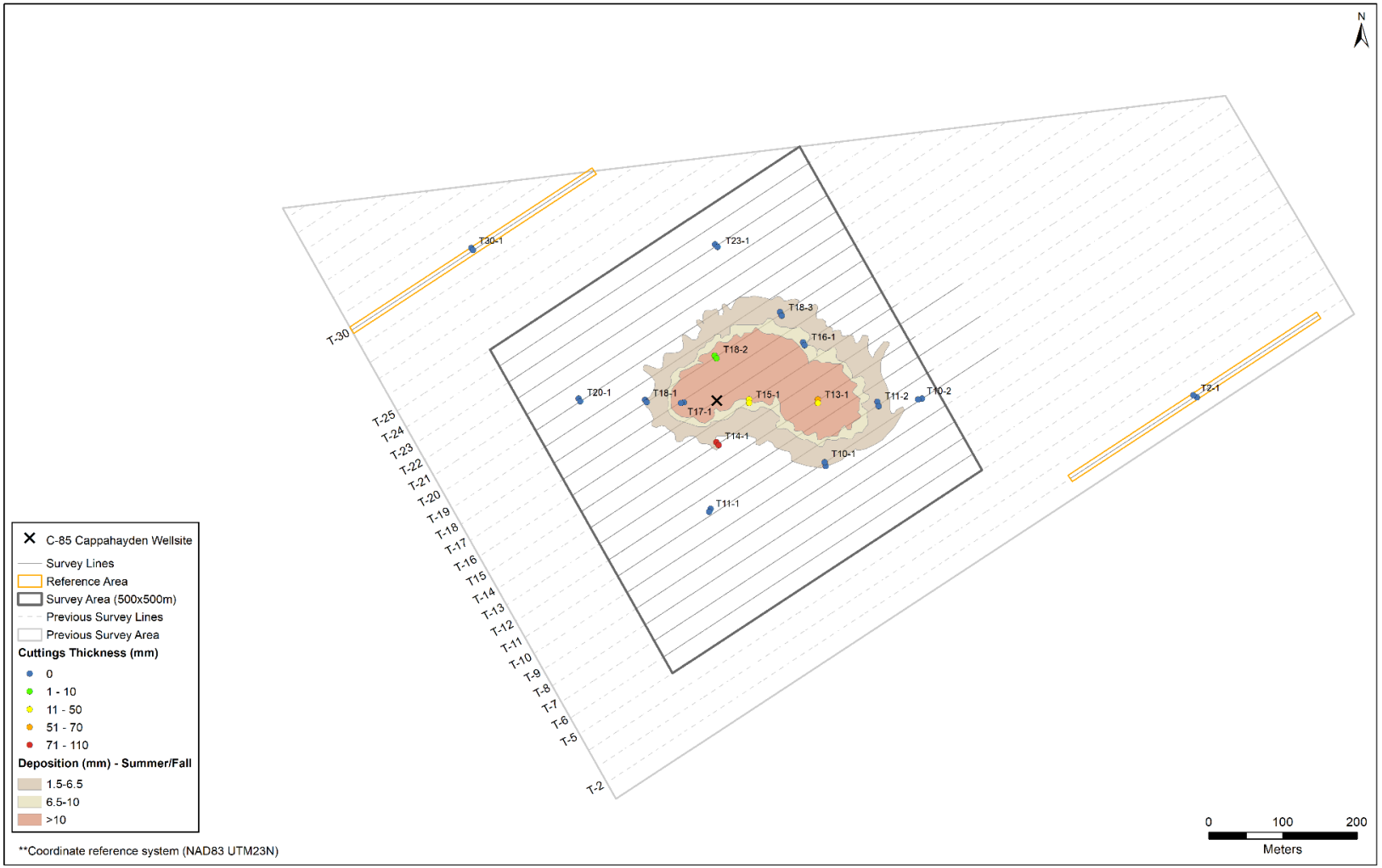

Figure 4-5 Cappahayden sediment core sampling locations with cuttings thickness (mm). Sample duplicates are jittered to show both sets of results.

4.3.3 CHEMICAL ANALYSIS

Sediment cores were taken at 16 stations in duplicate (32 total samples) throughout the Cappahayden seabed survey area (Figure 4-5). Samples were processed aboard the vessel, kept frozen, and sampled by a laboratory for particle size analysis (PSA), acid extractable metals, and hydrocarbons. Summary statistics for each analyte can be found in Table 4-3, and analytes of interest are further discussed in the sections below. Table 4-4 provides a comparison of cuttings and analytes of interest between the reference and non-reference stations. Raw laboratory chemistry results can be found in Appendix E.

Analytes of interest were determined based on the known contents of WBM cuttings (barium), SBM cuttings (hydrocarbons). Unlike the chemical results for Sitka (Table 4-4), lead was not elevated overall at Cappahayden and is not discussed further, though two stations near the well site location were slightly elevated (stations T13-1 and T15-1).

Table 4-3 Cappahayden sediment chemistry summary statistics.

Analyte	RDL	Unit	# of samples	# above RDL	Mean	St. dev.	Median	Min.	Max
Particle Size Analysis									
Gravel	0.10	%	32	1	0.10	0.02	<RDL	<RDL	0.21
Sand	0.10	%	32	32	3.51	0.52	3.55	2.4	4.9
Silt	0.10	%	32	32	66.75	2.50	67	62	72
Clay	0.10	%	32	32	29.66	2.78	30	24	35
Acid Extractable Metals									
Aluminum	10	mg/kg	32	32	10266	856	10000	8700	12000
Antimony	2.0	mg/kg	32	0	<RDL				
Arsenic	2.0	mg/kg	32	10	2.03	0.07	<RDL	<RDL	2.2
Barium	5.0	mg/kg	32	32	454	445	280	120	1700
Beryllium	0.5	mg/kg	32	0	<RDL				
Bismuth	2.0	mg/kg	32	0	<RDL				
Boron	50	mg/kg	32	0	<RDL				
Cadmium	0.30	mg/kg	32	0	<RDL				
Chromium	2.0	mg/kg	32	32	32.7	2.3	33	28	39
Cobalt	1.0	mg/kg	32	32	5.8	0.43	5.8	5.1	7
Copper	2.0	mg/kg	32	32	13.9	1.12	14	12	16
Iron	50	mg/kg	32	32	18406	1246	18000	16000	22000
Lead	0.50	mg/kg	32	32	5.85	2.55	5	4.3	13
Lithium	2.0	mg/kg	32	32	16.8	1.25	17	15	20
Manganese	2.0	mg/kg	32	32	205	11.5	210	180	240
Mercury	0.10	mg/kg	32	0	<RDL				
Molybdenum	2.0	mg/kg	32	0	<RDL				
Nickel	2.0	mg/kg	32	32	20.4	1.43	20	18	24
Rubidium	2.0	mg/kg	32	32	24.4	2.16	24	20	30
Selenium	0.50	mg/kg	32	24	0.57	0.04	0.56	<RDL	0.67
Silver	0.50	mg/kg	32	0	<RDL				
Strontium	5.0	mg/kg	32	32	62.1	10.51	59.5	50	89

Analyte	RDL	Unit	# of samples	# above RDL	Mean	St. dev.	Median	Min.	Max
Thallium	0.10	mg/kg	32	31	0.12	0.01	0.12	<RDL	0.14
Tin	1.0	mg/kg	32	0	<RDL				
Uranium	0.10	mg/kg	32	32	0.83	0.11	0.83	0.67	1.1
Vanadium	2.0	mg/kg	32	32	34.8	2.47	35	31	42
Zinc	5.0	mg/kg	32	32	45.3	3.92	45	39	54
Hydrocarbons									
Benzene	0.0050*	mg/kg	32	0	<RDL				
Toluene	0.050*	mg/kg	32	0	<RDL				
Ethylbenzene	0.010*	mg/kg	32	0	<RDL				
Xylenes	0.050*	mg/kg	32	0	<RDL				
C_6 - C_{10} (less BTEX)	2.5*	mg/kg	32	0	<RDL				
>C_{10}-C_{16}	0.25*	mg/kg	32	18	6.73	10.70	0.86	<RDL	41
>C_{16}-C_{21}	0.25*	mg/kg	32	26	2.75	3.67	0.75	<RDL	16
>C_{21}-C_{32}	0.25*	mg/kg	32	32	2.58	0.42	2.5	1.8	3.5

Values below RDL are presented as RDL value for comparative purposes.
*RDL occasionally higher than reported due to limited sample amounts, matrix interference, or sample dilution

Table 4-4 Comparison of barium and >C_{10}-C_{32} hydrocarbons concentrations across stations at Cappahayden, with values above two standard deviations over the reference areas' mean highlighted blue.

Station	Distance to Well Centre (m)	Cuttings (mm)		Barium (mg/kg)		>C_{10}-C_{16} HC (mg/kg)		>C_{16}-C_{21} HC (mg/kg)		>C_{21}-C_{32} HC (mg/kg)	
		A	B	A	B	A	B	A	B	A	B
T2-1 (ref)	645	0	0	140	140	<0.71	<0.59	<0.71	<0.59	2.9	2.4
T10-1	168	0	0	460	330	<0.28	<0.48	0.54	<0.48	1.9	1.8
T10-2	275	0	0	420	690	<0.25	<0.29	0.53	0.66	2.2	2.5
T11-1	148	0	0	510	240	41	4.2	16	2.4	3.3	2.5
T11-2	218	0	0	130	340	<0.28	0.49	0.52	0.62	2.3	2.3
T13-1	137	70	50	1700	1600	19	34	6.3	11	2.6	3.0
T14-1	59	100	110	610	480	16	8.2	5.9	3.5	2.7	2.4
T15-1	44	30	50	1400	1400	14	30	5.0	10	2.4	2.4
T16-1	141	0	0	230	320	<0.33	<0.31	0.60	0.52	2.1	2.4
T17-1	46	0	0	390	140	18	1.0	6.9	0.74	3.5	2.4
T18-1	95	0	0	220	190	1.8	2.1	1.3	1.4	2.6	3.1
T18-2	58	10	10	600	770	8.7	8.0	3.1	3.1	2.6	3.2
T18-3	145	0	0	130	130	<0.36	0.47	0.69	0.76	2.9	3.1
T20-1	184	0	0	130	120	0.57	1.7	0.54	1.2	1.9	3.1
T23-1	205	0	0	140	150	<0.27	<0.38	0.57	<0.38	2.5	2.3
T30-1 (ref)	389	0	0	150	130	<0.31	<1.2	<0.31	<1.2	2.3	3.0

HC = Hydrocarbons
Cells with a pink colouration indicate the potential presence of barite based on visual assessment.
Cells with a blue colouration indicate values greater than two standard deviations from the reference area mean
Barium reference area mean: 140 ± 7.1 mg/kg
>C_{10}-C_{16} Hydrocarbon reference area mean: 0.70 ± 0.32 mg/kg (using full RDL value, as all values were <RDL)
>C_{16}-C_{21} Hydrocarbon reference area mean: 0.70 ± 0.32 mg/kg (using full RDL value, as all values were <RDL)
>C_{21}-C_{32} Hydrocarbon reference area mean: 2.65 ± 0.30 mg/kg

4.3.3.1 *BARIUM*

As the mineral barite is a component of WBMs, it is often used as a tracer for the presence of WBM cuttings. The average barium value of the reference areas (stations T2-1 and T30-1) was 140 mg/kg (±7.1 mg/kg), which likely represents the background concentration for the area, as these stations are 645 m and 389 m from the well centre, respectively. This average is essentially identical to barium concentrations reported in other offshore post-drilling surveys (141.5 mg/kg in bp 2024).

As shown in Table 4-4, several stations had barium concentrations above two standard deviations of the mean at the reference stations. Cores with elevated concentration aligned closely with sites that had visible cuttings at the surface. The most distant station with elevated concentration was 275 m (T10-2) from the well centre. Cores from sites very close to the drill centre had elevated concentrations, along with some sites to the south and east (Figure 4-7). A regression comparing barium concentration with distance from the well centre found a negative correlation, though the correlation coefficient was weak (R=-0.35) (Figure 4-6).

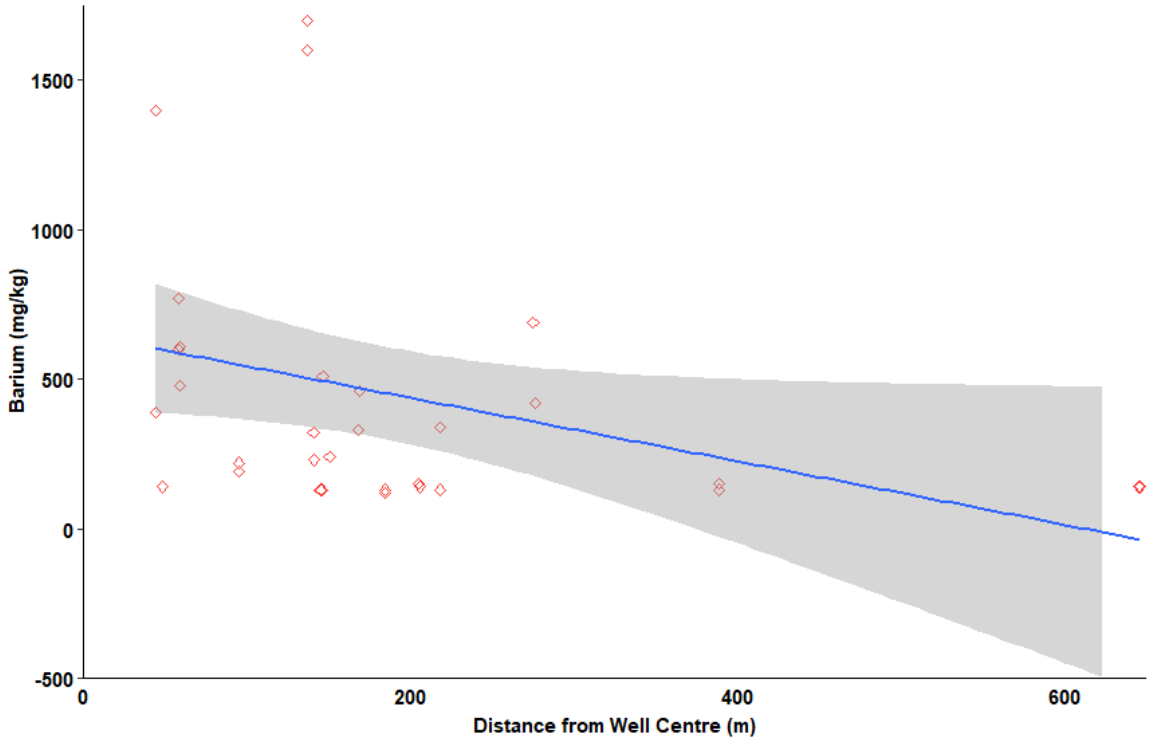

Figure 4-6 Barium concentration (mg/kg) in sediment cores taken at varying distances from the Cappahayden well centre. The blue line is a linear regression model, with the grey area as a 95% confidence interval.

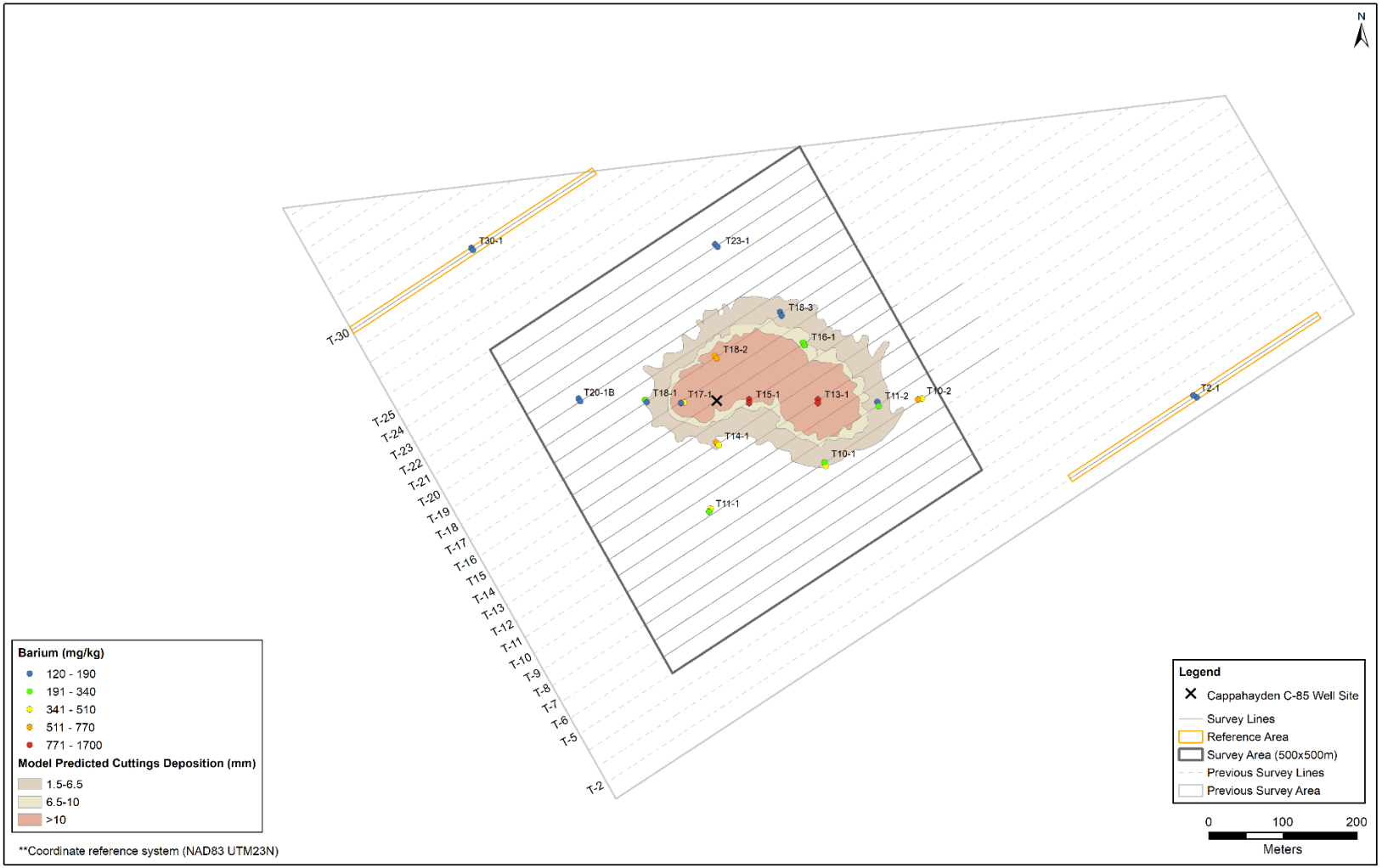

Figure 4-7 Barium concentration (mg/kg) from each sediment core sampling location within the Cappahayden survey area. Sample duplicates are jittered to show both sets of results.

4.3.3.2 *HYDROCARBONS*

While a wide range of hydrocarbons were tested, only those in the lower fuel range (>C_{10}-C_{16} hydrocarbons), upper fuel range (>C_{16}-C_{21} hydrocarbons), and lube range (>C_{21}-C_{32} hydrocarbons) were detected above their RDLs in at least 50% of samples (Table 4-4). Baseline values for these ranges from the reference areas (stations T2-1 and T30-1) were 0.70 ± 0.32 mg/kg (>C_{10}-C_{16} and >C_{16}-C_{21} hydrocarbons), and 2.65 ± 0.30 mg/kg (>C_{21}-C_{32} hydrocarbons). For both fuel range hydrocarbons, no samples at the reference stations exceeded their RDLs, and the reported average is based on using the RDL value. Background levels recorded in previous surveys (bp 2024) were similarly all below RDL for hydrocarbons, though much higher RDLs of 10-15 mg/kg were used during that survey. As this RDL exceeds the values recorded here as background, these values are likely similar to those recorded in bp (2024).

As shown in Table 4-4, several stations had hydrocarbon concentrations above two standard deviations of the mean at the reference stations. Cores with elevated values closely matched those with visible cuttings at the surface, with some exceptions. Stations T11-1, T18-1, and T20-1 had no visible cuttings in cores but had elevated hydrocarbon values. Lower and upper fuel range hydrocarbons had a similar trend, with elevated values near the well site and lower values at distance (Figure 4-11, Figure 4-12). Lube range hydrocarbons had slightly elevated values in only two samples, with a very small standard deviation overall (Figure 4-13). Hydrocarbons (>C_{10}-C_{21}) are a component in SBM cuttings. A regression comparing hydrocarbon concentrations with distance from the well centre found a negative correlation, though the correlation coefficient was weak for fuel range hydrocarbons and very weak for lube range hydrocarbons (R=-0.35, -0.34, and -0.09 respectively) (Figure 4-8, Figure 4-9, Figure 4-10).

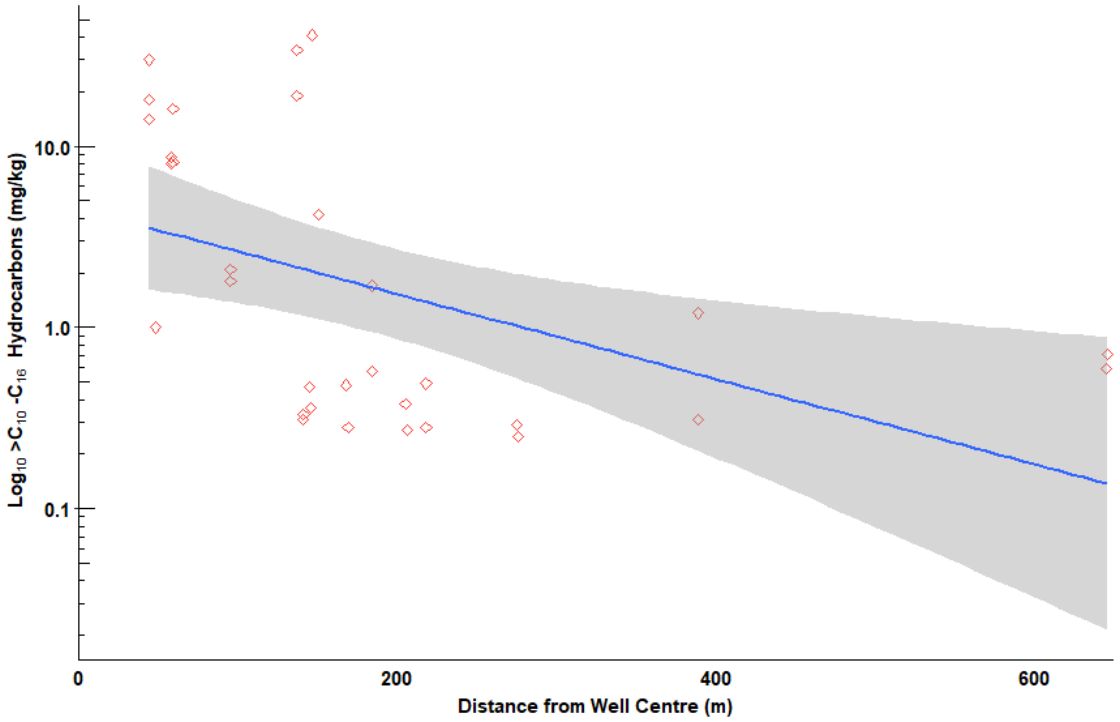

Figure 4-8 Lower fuel range hydrocarbon concentration (mg/kg) in sediment cores taken at varying distances from the Cappahayden well centre. The blue line is a linear regression model, with the grey area as a 95% confidence interval. Values have been log_{10} transformed for graphing.

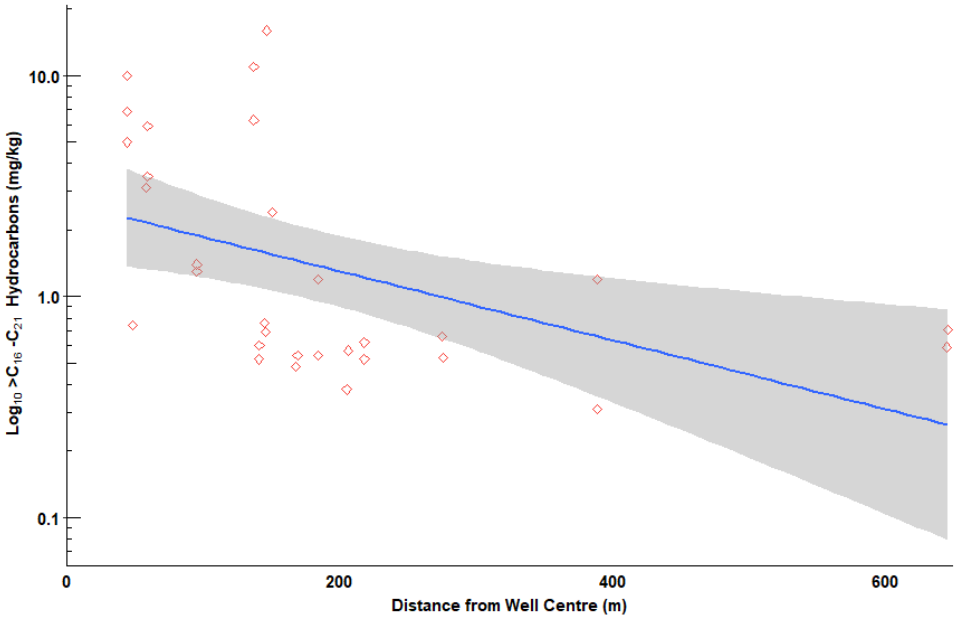

Figure 4-9 **Upper fuel range hydrocarbon concentration (mg/kg) in sediment cores taken at varying distances from the Cappahayden well centre. The blue line is a linear regression model, with the grey area as a 95% confidence interval. Values have been log_{10} transformed for graphing.**

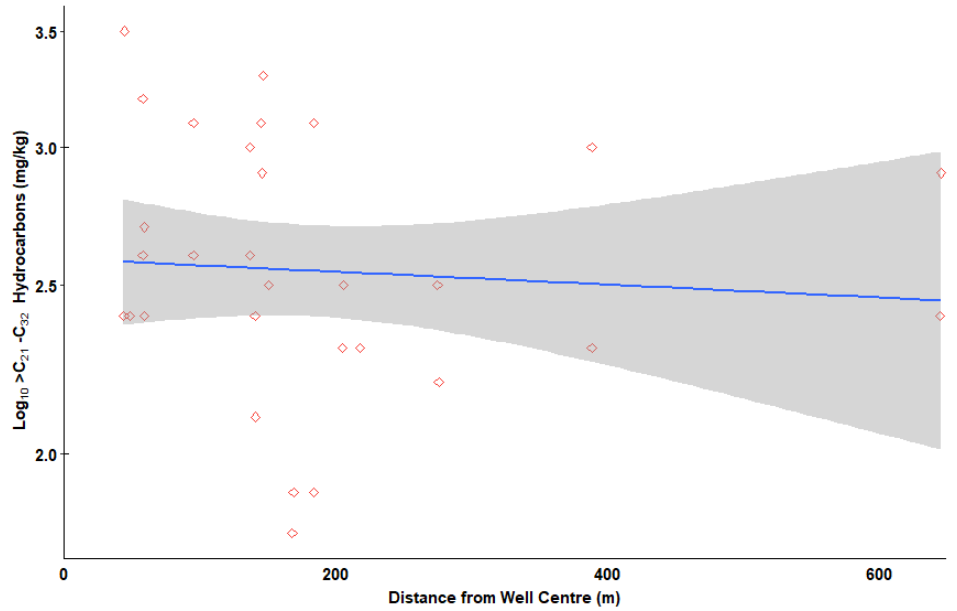

Figure 4-10 **Lube range hydrocarbon concentration (mg/kg) in sediment cores taken at varying distances from the Cappahayden well centre. The blue line is a linear regression model, with the grey area as a 95% confidence interval. Values have been log_{10} transformed for graphing.**

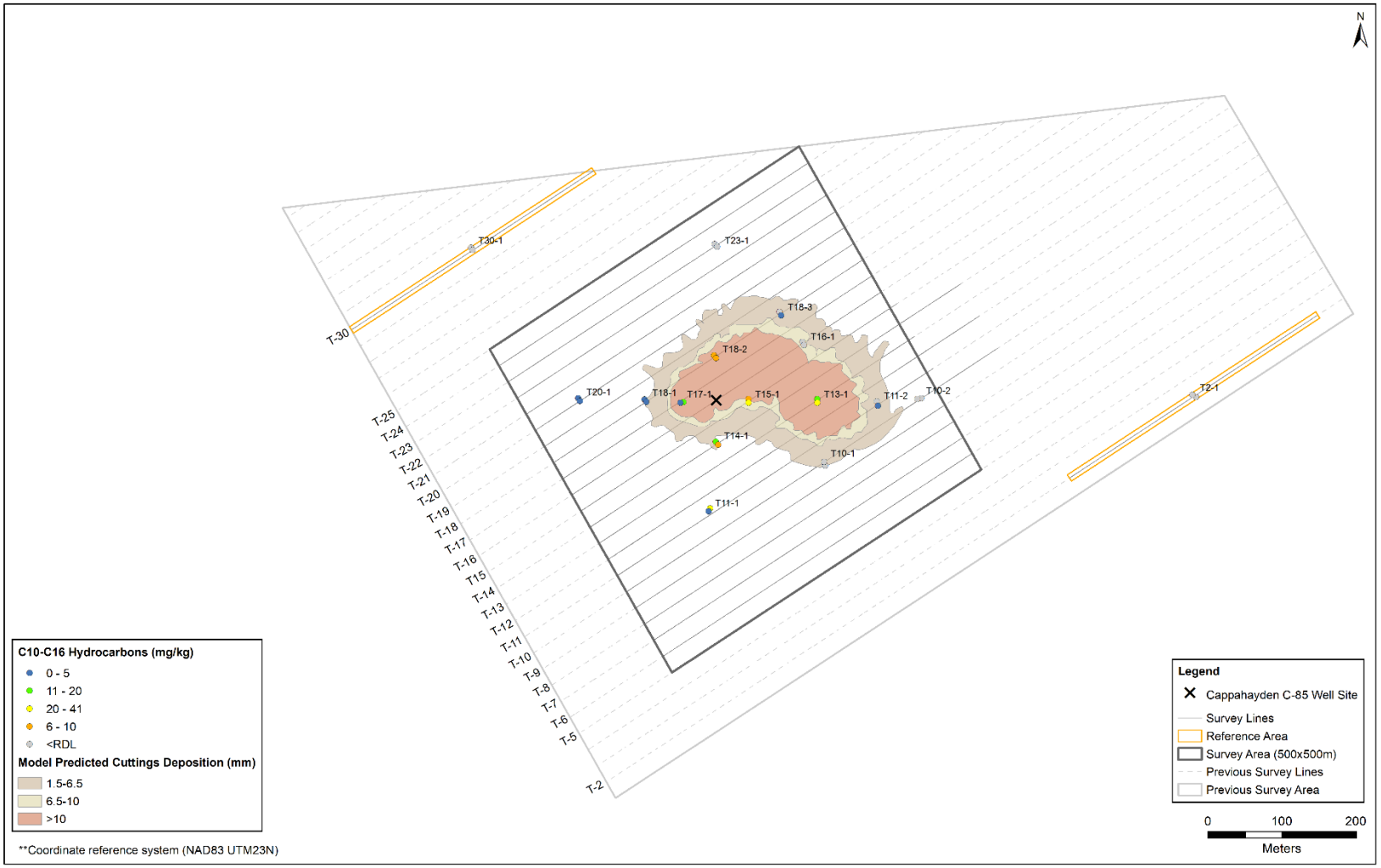

Figure 4-11 Cappahayden sediment core sampling locations with lower fuel range hydrocarbon concentration (mg/kg). Sample duplicates are jittered to show both sets of results.

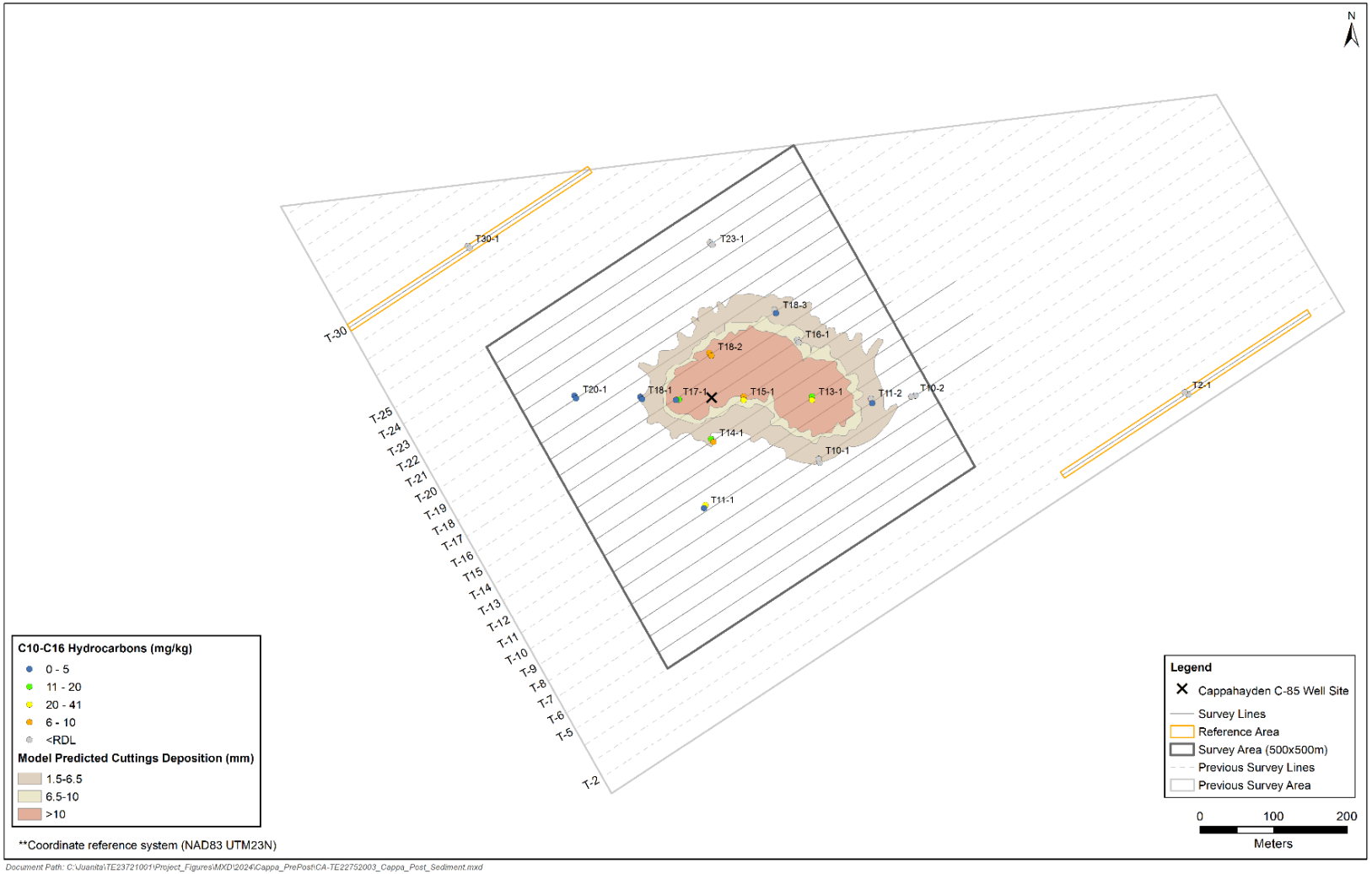

Figure 4-12 Cappahayden sediment core sampling locations with upper fuel range hydrocarbon concentration (mg/kg). Sample duplicates are jittered to show both sets of results.

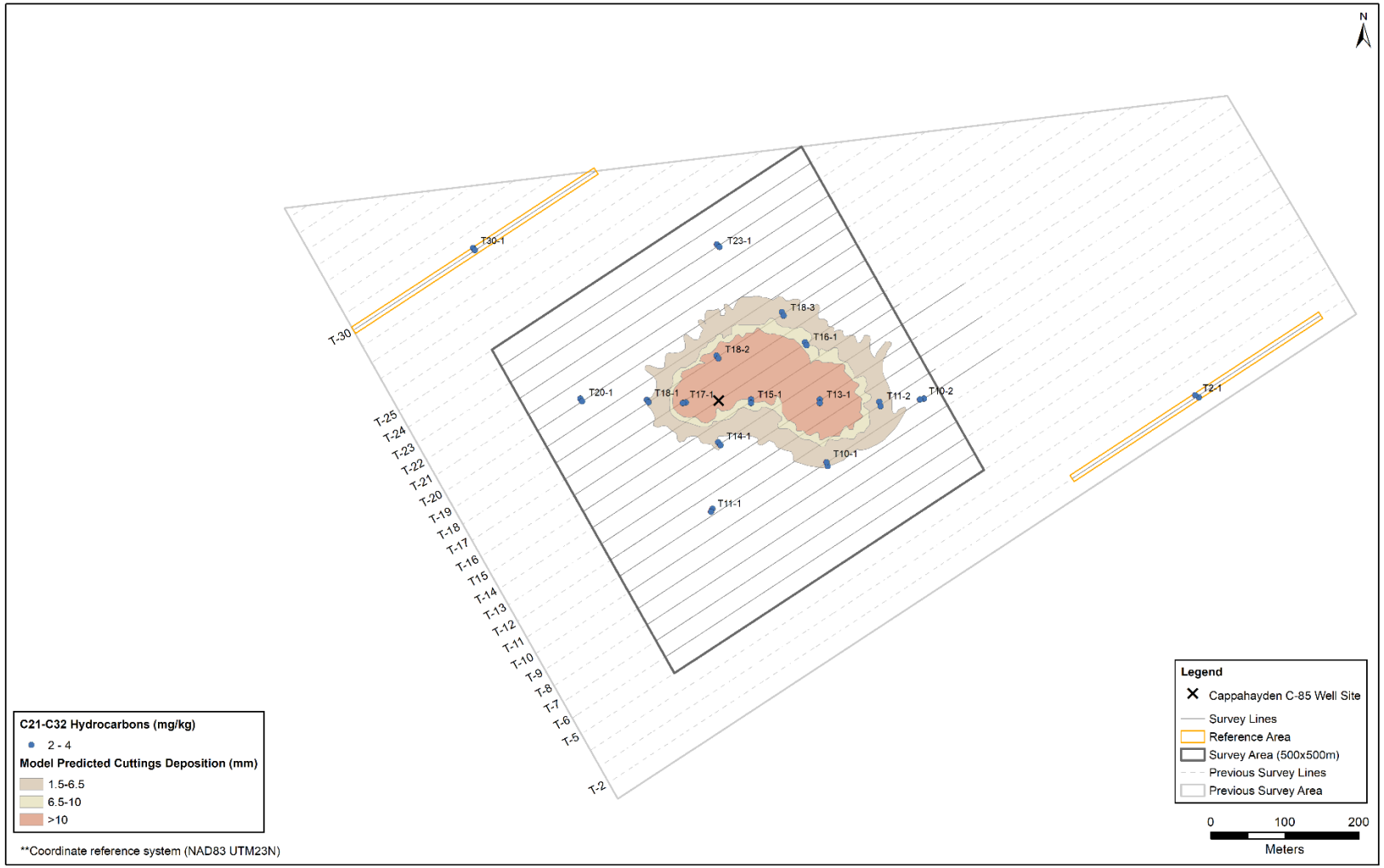

Figure 4-13 Cappahayden sediment core sampling locations with lube range hydrocarbon concentration (mg/kg). Sample duplicates are jittered to show both sets of results.

4.4 BENTHIC FAUNA

4.4.1 CORAL FUNCTIONAL GROUPS

Three coral groups were observed during pre- and post-drilling at Cappahayden: other corals, sea pens, and small gorgonians (Figure 4-14). Other corals observed were all soft corals, including *Heteropolypus sp*. (Figure 4-14 E). Small gorgonians observed included *Acanella sp.* (Figure 4-14 D). Sea pens observed were *Pennatula* sp.*, Anthoptilum* sp., and *Halipteris* sp. (Figure 4-14 A-C). Sea pens were the most abundant coral functional group in both the pre- and post-drilling surveys (Table 4-5).

Statistical comparisons found that sea pen density decreased significantly (p-value <0.001) from pre- to post-drilling survey (from 1.54 ind./m^2 to 0.59 ind./m^2 in the grid area), with no significant difference between grid lines and reference areas (Table 4-5). Density of other corals and small gorgonians were also significantly different between pre- and post- drilling surveys (p-values <0.001 and 0.003, respectively), but in these cases their mean densities increased from <0.01 ind./m^2 to 0.01 ind./m^2 for both groups. There were no significant differences in the densities of other corals or small gorgonians between the grid lines and reference areas. There was a significant difference in the density of all coral groups together between pre- and post-drilling surveys (p-value <0.0001, and from 1.57 ind./m^2 to 0.60 ind./m^2), but not between grid lines and references areas and no significant interaction term (Figure 4-17). Full statistical results are presented in Appendix H. Visual comparison of the pre- and post-drilling surveys show lower abundance and density of corals across the entire grid area, especially to the immediate east of the well centre (Figure 4-16 to Figure 4-24).

Coral condition for all individuals was assigned one of three categories: good, damaged/poor, or dead (Table 4-6). Overall, corals showed a decrease in condition from pre- to post-drilling surveys: individuals ranked as ‘good’ dropped from approximately 99.9% to 90%. The decrease in the condition of corals was aligned with the presence of thick cuttings, with fewer individuals rated as ‘Good’ (Figure 4-24). Coral condition data for the pre-drilling survey are aggregated, but post-drilling survey data show that small gorgonians were rated the lowest for condition with 74.5% good in the grid lines and 69.2% good in the reference areas. Other corals were the group with the highest condition rating, with 91.8% good in the grid lines and 100% good in the reference areas. Sea pens were rated at 90.7% good in the grid lines and 88.4% good in the reference areas (Table 4-6). Lower coral conditions visually align with the thick cuttings’ extent, where the transects with lower percent good condition ratings overlap with thick cuttings, especially to the east/southeast of the well centre, and in the south/southwest portion of the grid lines (Figure 4-4 and Figure 4-24).

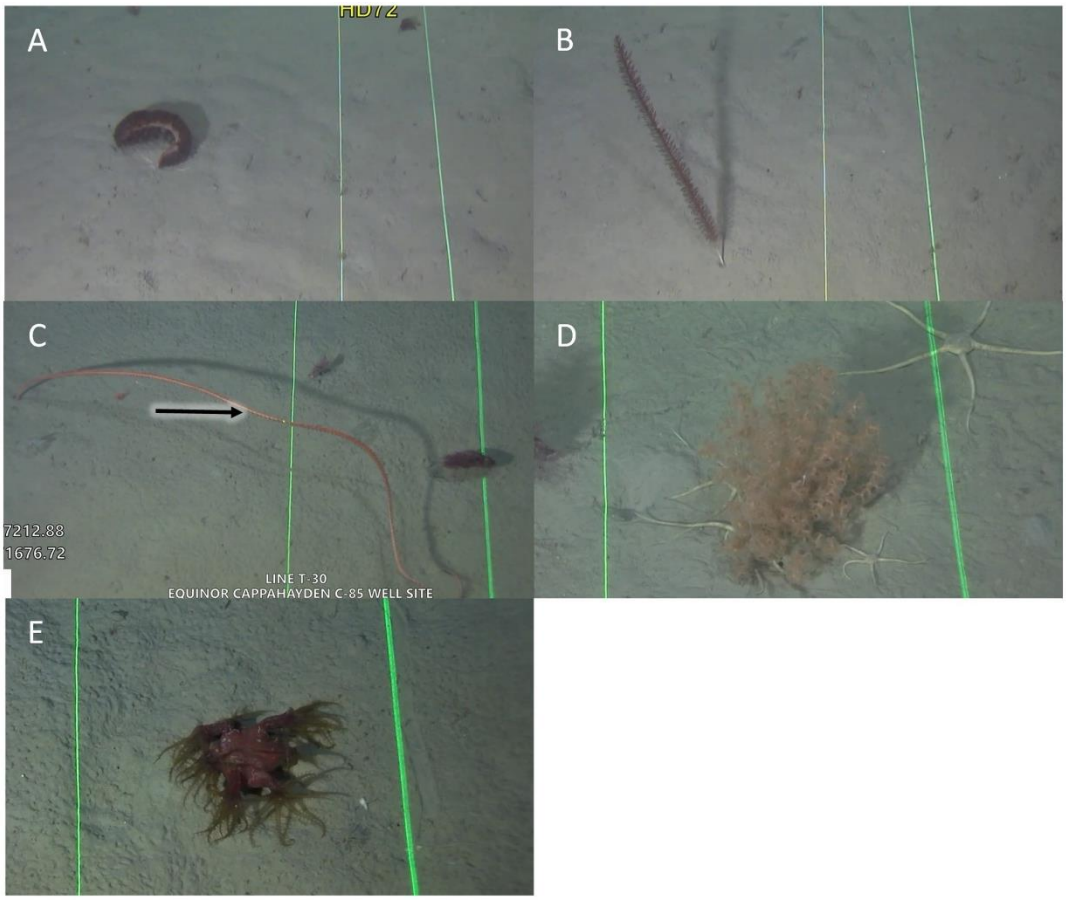

Figure 4-14 Examples of the coral functional groups observed in the Cappahayden post-drilling survey: A-C) sea pens, D) small gorgonian, E) soft coral. Scaling lasers are 20 cm apart.

Table 4-5 Summary statistics (abundance and density) of coral functional groups from the Cappahayden pre- and post-drilling surveys.

Category	Taxa	Survey	Area[1]	Mean	St. dev.	Median	Min[2]	Max
Abundance	Other Corals	Pre	Grid	0.24	0.54	0	1	3
			Ref	0.19	0.40	0	1	1
		Post	Grid	0.07	1.04	0	1	6
			Ref	0.75	0.93	0.5	1	3
	Small Gorgonian	Pre	Grid	0.40	0.72	0	1	5
			Ref	0.19	0.40	0	1	1
		Post	Grid	0.83	1.08	1	1	7
			Ref	0.75	1.18	0	1	4
	Sea Pen	Pre	Grid	132.32	55.36	121	40	434
			Ref	151.8	52.48	132	74	268
		Post	Grid	73.35	40.31	68	1	251
			Ref	57.93	23.57	57.5	23	103

Category	Taxa	Survey	Area[1]	Mean	St. dev.	Median	Min[2]	Max
Density	Other Corals	Pre	Grid	<0.01	0.01	0	0.01	0.03
			Ref	<0.01	<0.01	0	0.01	0.01
		Post	Grid	0.01	0.01	0.00	<0.01	0.05
			Ref	0.01	0.01	<0.01	0.01	0.02
	Small Gorgonian	Pre	Grid	<0.01	0.01	0	0.01	0.06
			Ref	<0.01	<0.01	0	0.01	0.01
		Post	Grid	0.01	0.01	0.01	0.01	0.05
			Ref	0.01	0.01	0	0.01	0.03
	Sea Pen	Pre	Grid	1.54	0.64	1.45	0.47	5.05
			Ref	1.78	0.61	1.53	0.86	3.12
		Post	Grid	0.59	0.32	0.54	0.01	2.04
			Ref	0.47	0.19	0.46	0.18	0.82

Notes:
[1] Grid = Grid Area Lines, Ref = Reference Areas (Lines T2 and T30)
[2] Minimum density is the lowest non-zero value.
Mean is the average of either the abundance or density of a coral functional group within a given survey (pre- or post-drilling) and area (grid lines or reference areas). Dead corals were not included as part of abundance and density summary statistics. The other summary statistics were similarly calculated.
Notes:
Total number of survey sections: Pre-drilling survey grid lines n=219, reference areas n=16, post-drilling survey area grid lines n=218, reference areas n=16.
Sections were approximately 50 m linear distance with an average field of view of 1.72 m in pre-drilling survey and 2.50 m in the post-drilling survey. Totals: Pre-drilling - Other corals n=55, small gorgonians n=89, and sea pens n=31,407.
Post-drilling - Other corals n=158, small gorgonians n=194, and sea pens n=16,918.

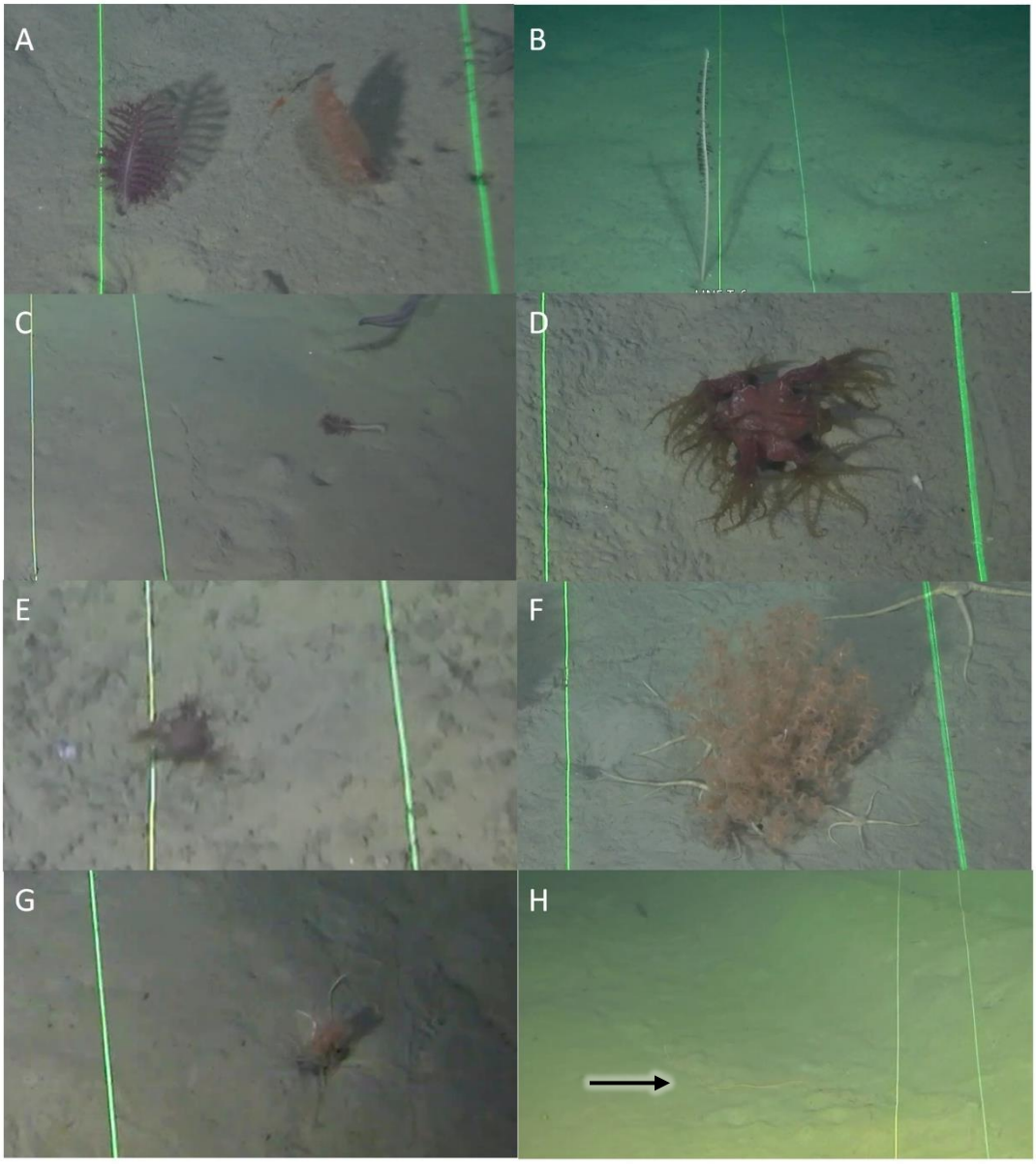

Figure 4-15 Examples of coral condition observed in the Cappahayden post-drilling survey: A) 'good' condition sea pens, B) 'poor' condition sea pen, C) 'dead' sea pen (dislodged and completely tipped over), D) 'good' soft coral, E) 'poor' soft coral. F) 'good' small gorgonian, G) 'poor' small gorgonian, H) 'dead' small gorgonian (dislodged and laying in the sediment). Scaling lasers are 20 cm apart.

Table 4-6 Coral functional group condition in the pre- and post-drilling surveys at Cappahayden.

Taxa	Survey	Area[1]	Percentage (%)		
			Good	Poor	Dead[2]
All Corals	Pre	Grid	99.76	0.22	0.03
		Ref	99.84	0.16	0.00

Taxa	Survey	Area[1]	Percentage (%)		
			Good	Poor	Dead[2]
	Post	Grid	90.55	8.45	1.00
		Ref	88.28	11.19	0.52
Other Corals	Pre	Grid	-	-	-
		Ref	-	-	-
	Post	Grid	91.78	8.22	0.00
		Ref	100.00	0.00	0.00
Small Gorgonian	Pre	Grid	-	-	-
		Ref	-	-	-
	Post	Grid	74.50	16.50	9.00
		Ref	69.23	23.08	7.69
Sea Pen	Pre	Grid	-	-	-
		Ref	-	-	-
	Post	Grid	90.74	8.35	0.91
		Ref	88.40	11.17	0.43

Notes:
[1] Grid = Grid Lines Area, Ref = Reference Areas (Lines T2 and T30)
[2] Dead individuals are included as part of condition assessment but are not included in the abundance and density summaries.
Total number of survey sections: Pre-drilling survey grid lines n=219, reference areas n=16, post-drilling survey area grid lines n=218, reference areas n=16.
Sections were approximately 50 m linear distance with an average field of view of 1.72 m in pre-drilling survey and 2.50 m in the post-drilling survey.

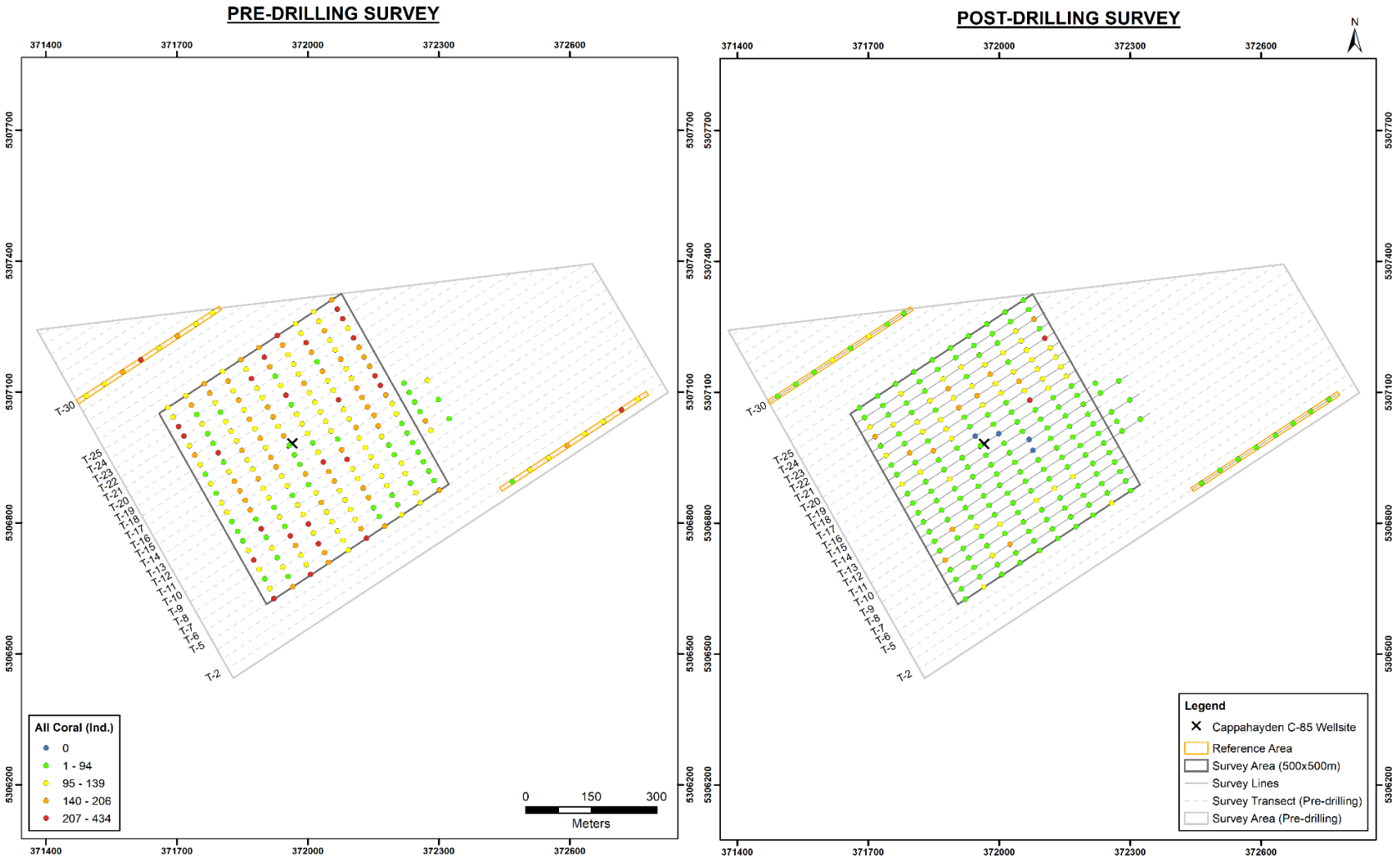

Figure 4-16 All coral abundance (individuals) observed in the Cappahayden pre- and post-drilling surveys.

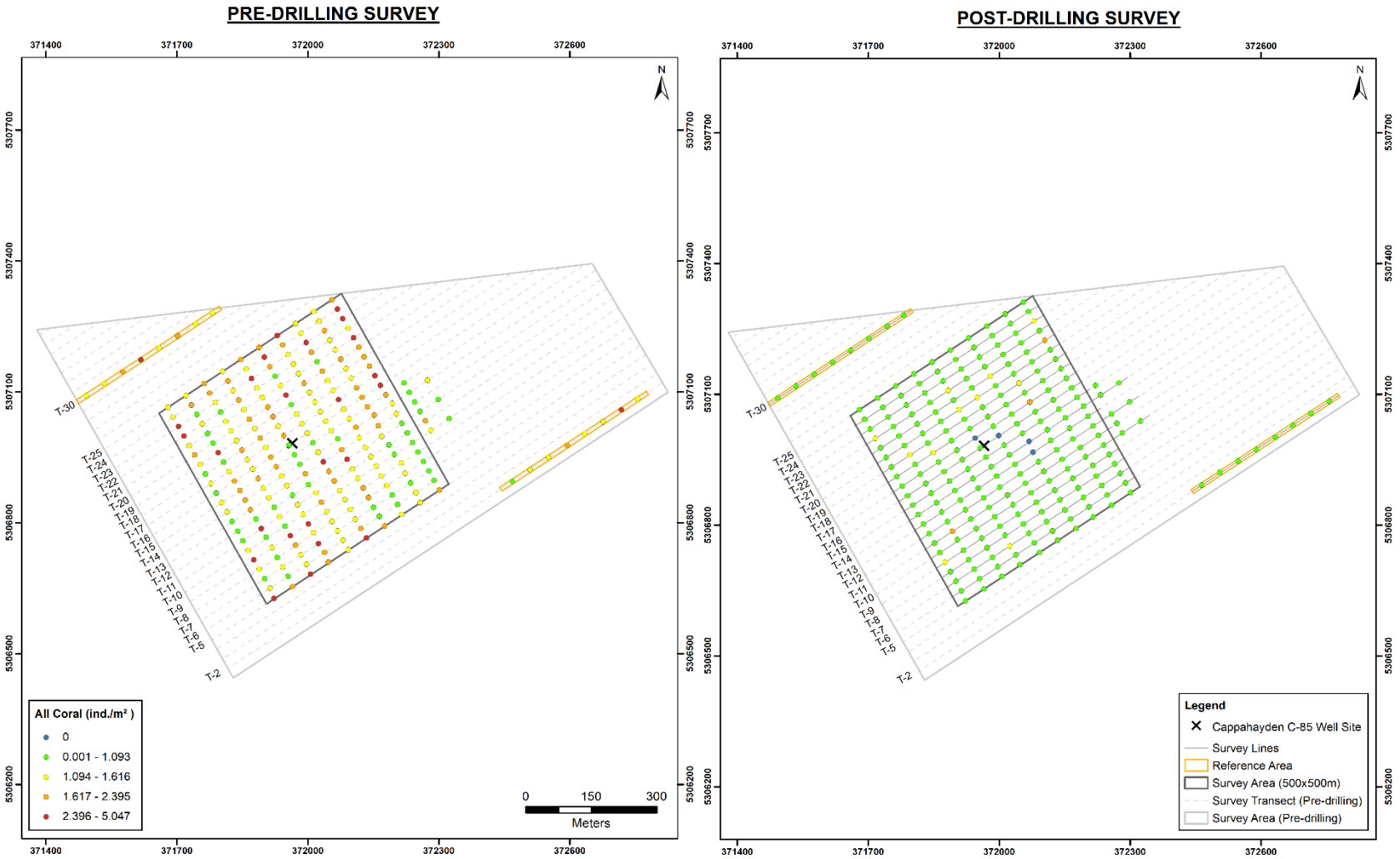

Figure 4-17 All coral density (individuals per m²) observed in the Cappahayden pre- and post-drilling surveys.

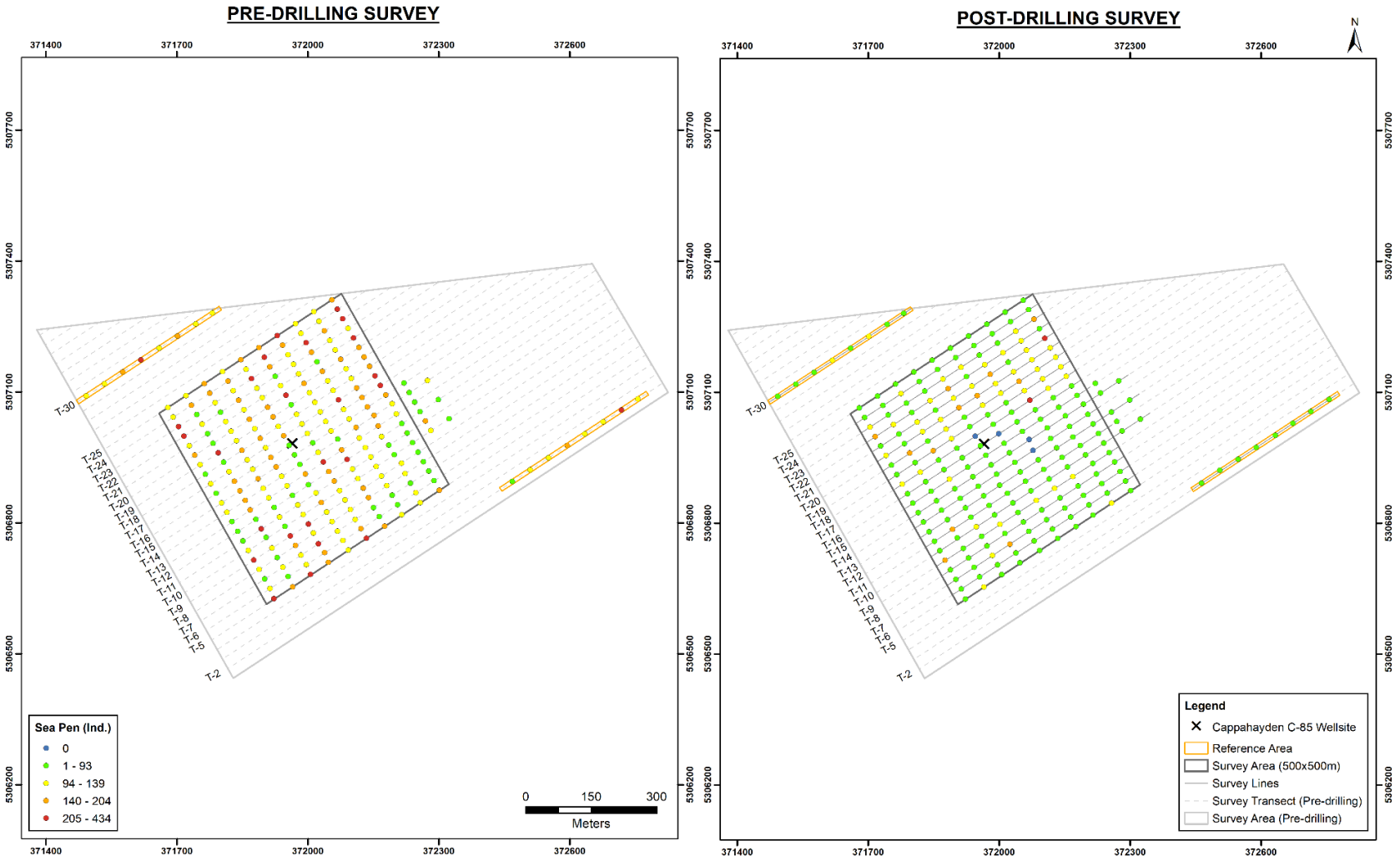

Figure 4-18 Sea pen abundance (individuals) observed in the Cappahayden pre- and post-drilling surveys.

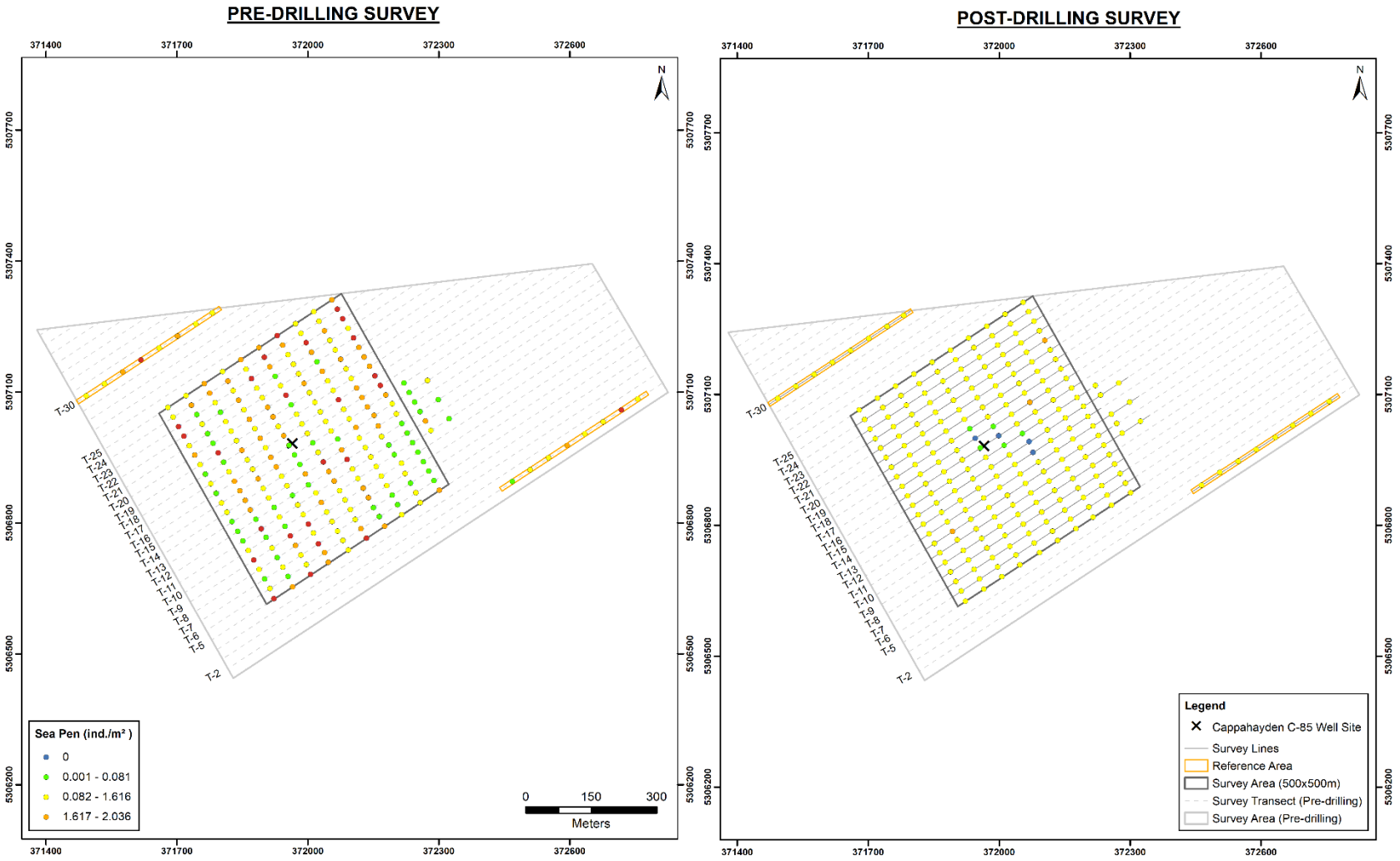

Figure 4-19 Sea pen density (individuals per m²) observed in the Cappahayden pre- and post-drilling surveys.

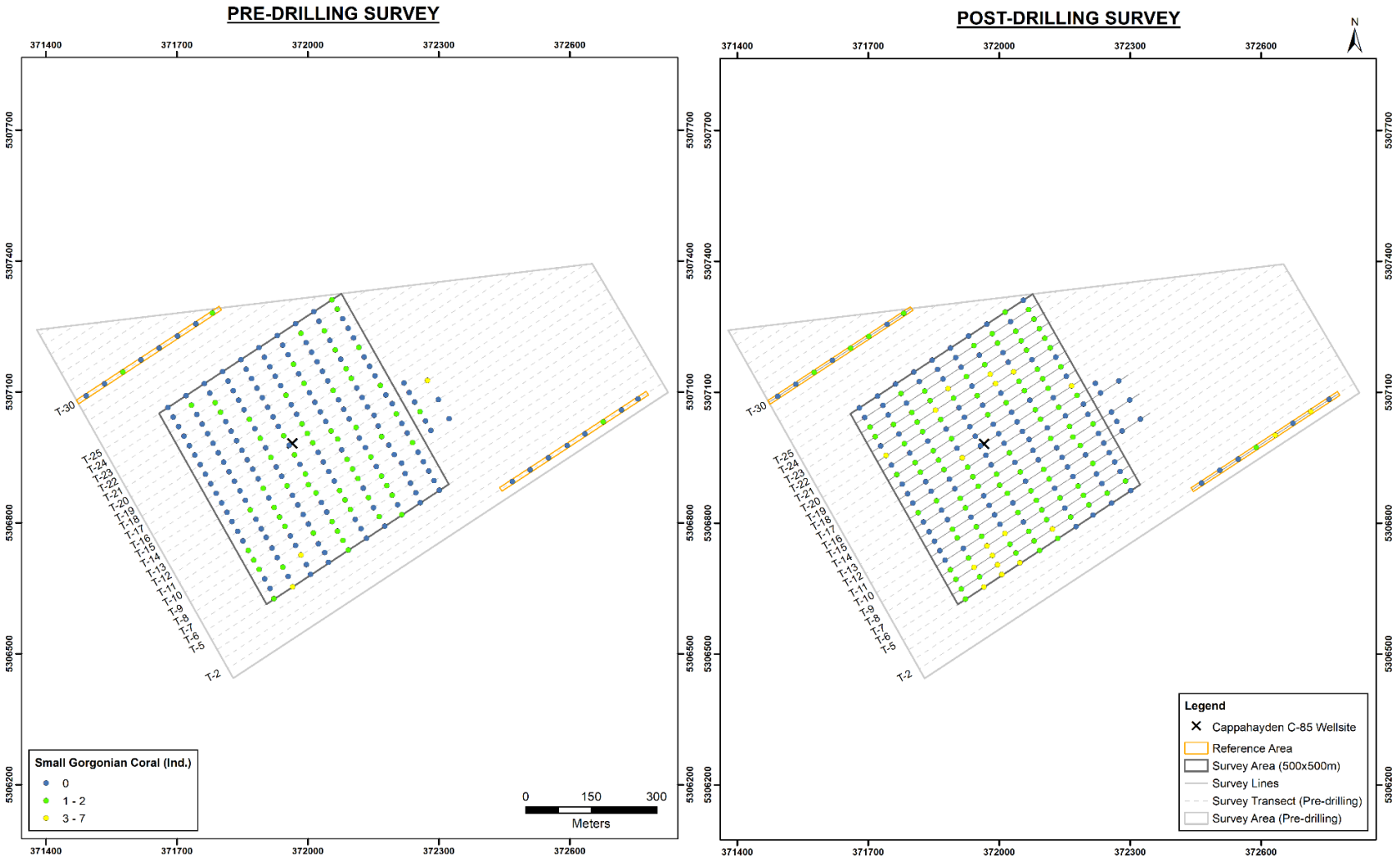

Figure 4-20 Small gorgonian abundance (individuals) observed in the Cappahayden pre- and post-drilling surveys.

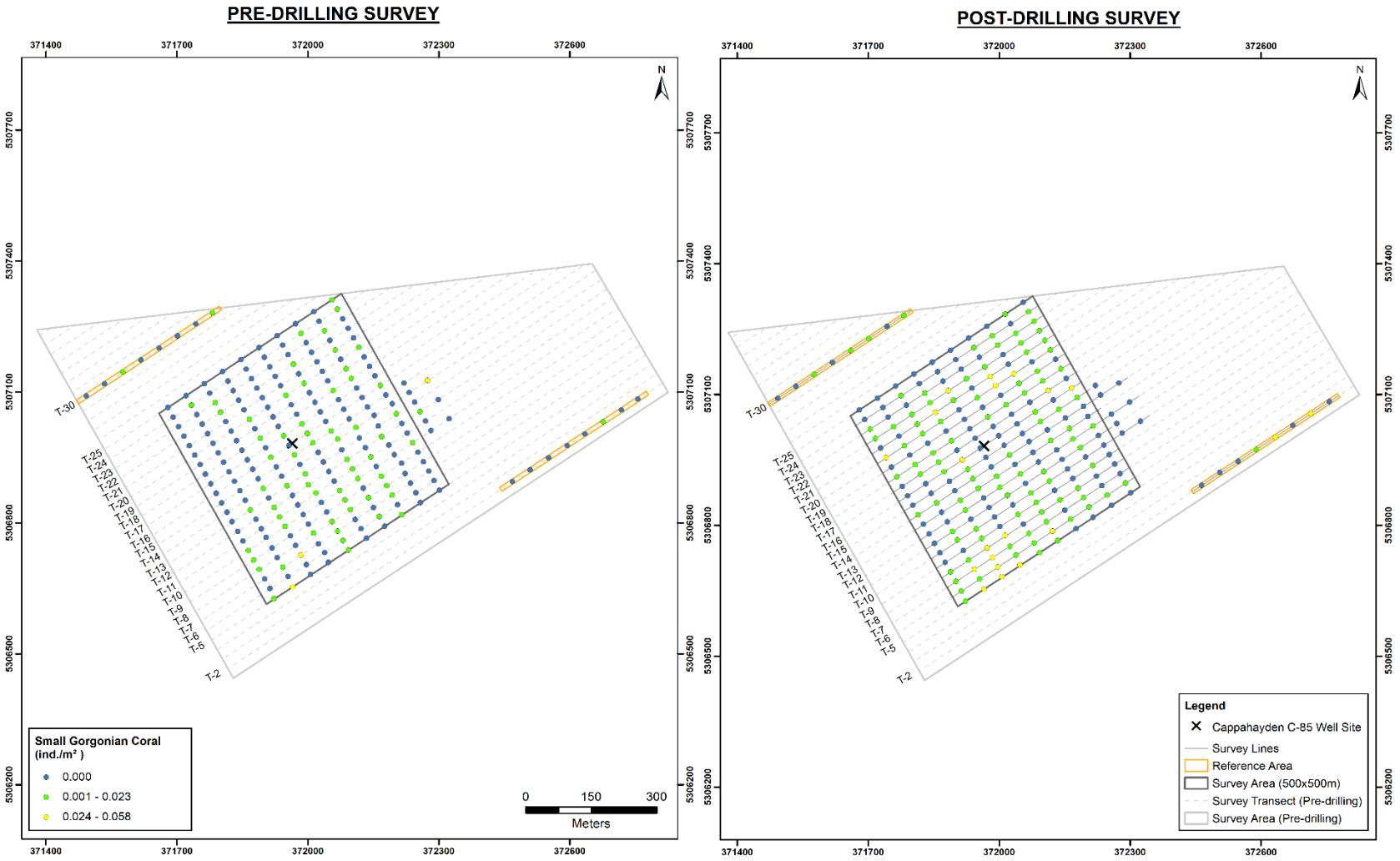

Figure 4-21 Small gorgonian density (individuals per m²) observed in the Cappahayden pre- and post-drilling surveys

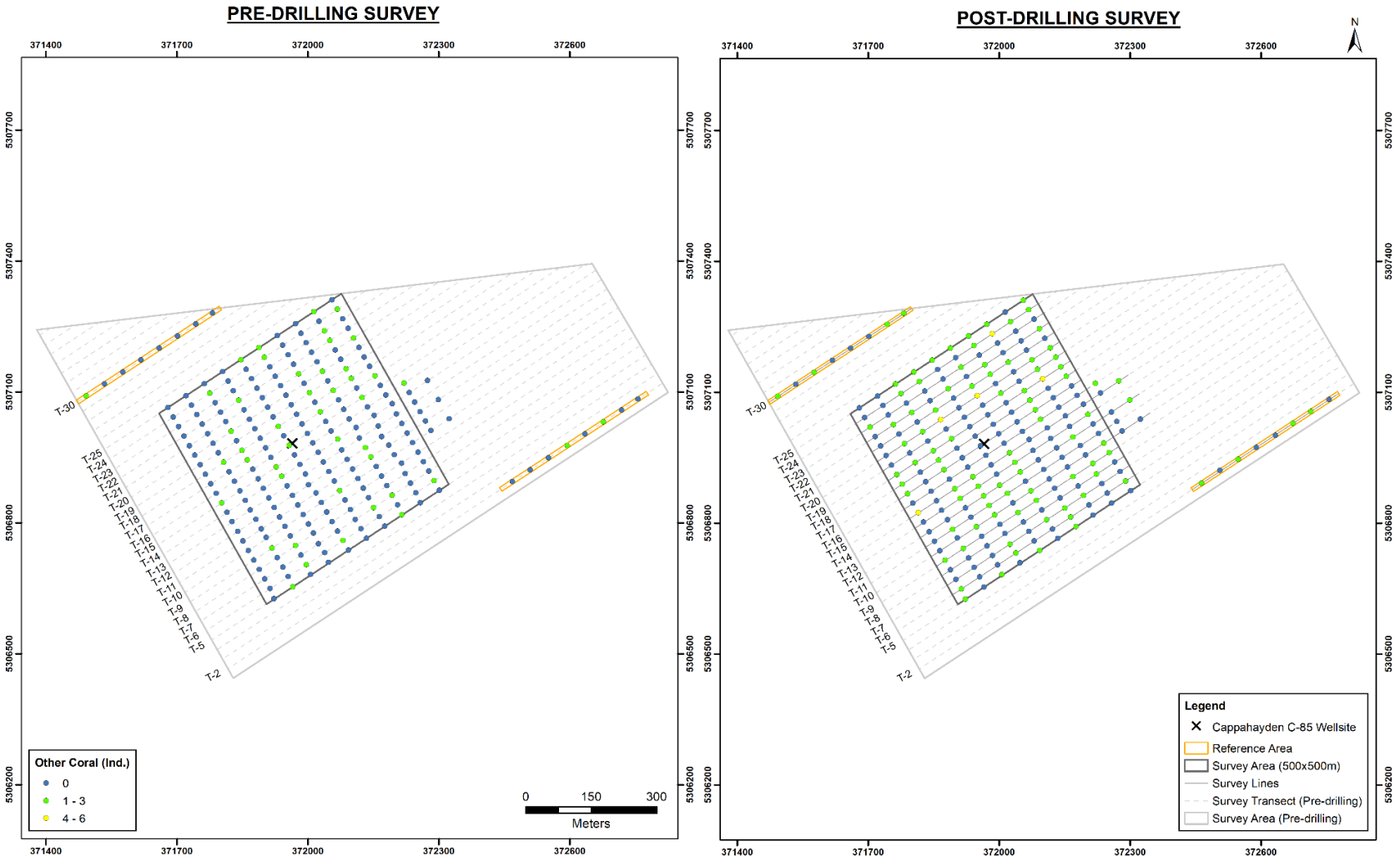

Figure 4-22 Other coral abundance (individuals) observed in the Cappahayden pre- and post-drilling surveys.

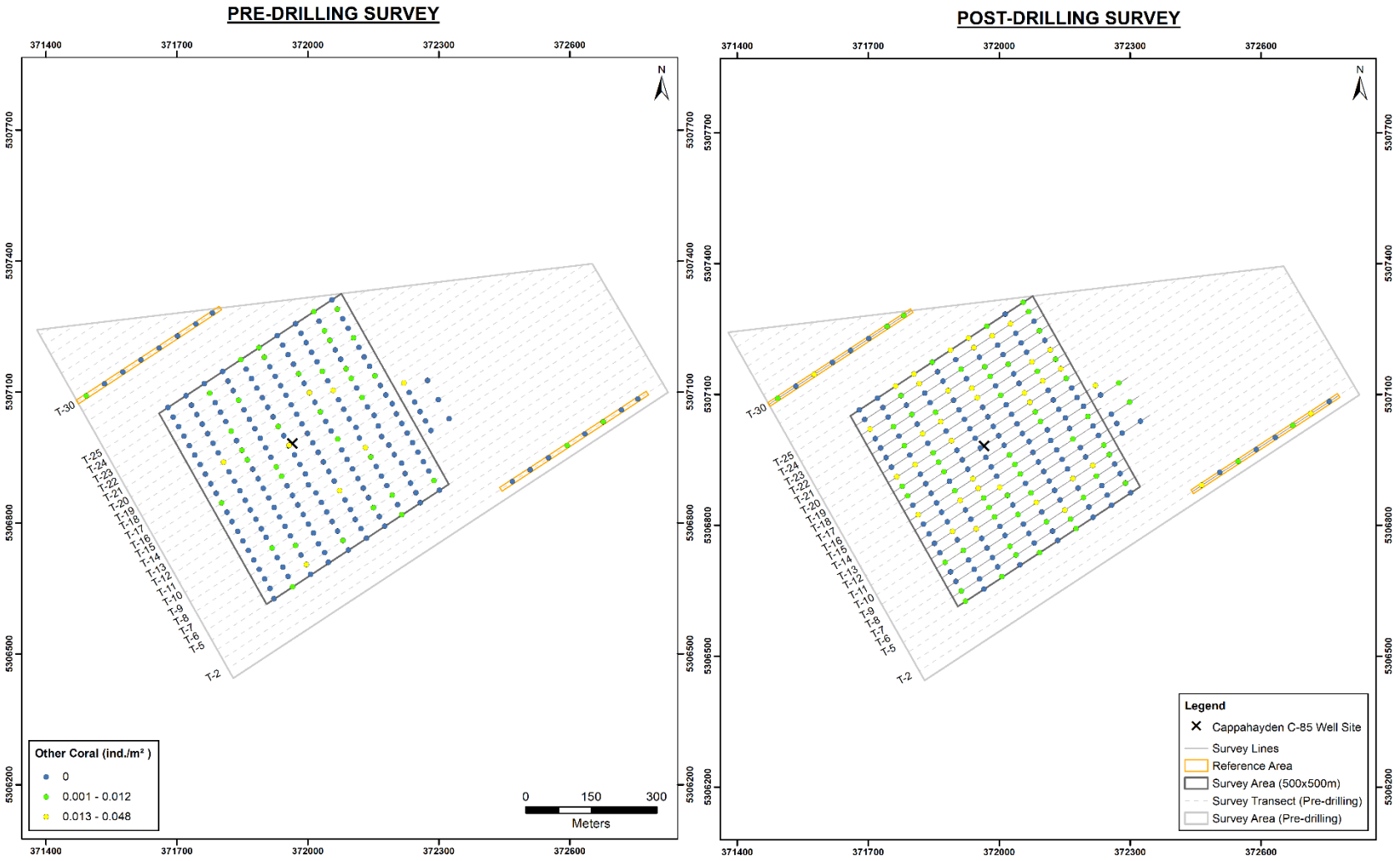

Figure 4-23 Other coral density (individuals per m²) observed in the Cappahayden pre- and post-drilling surveys

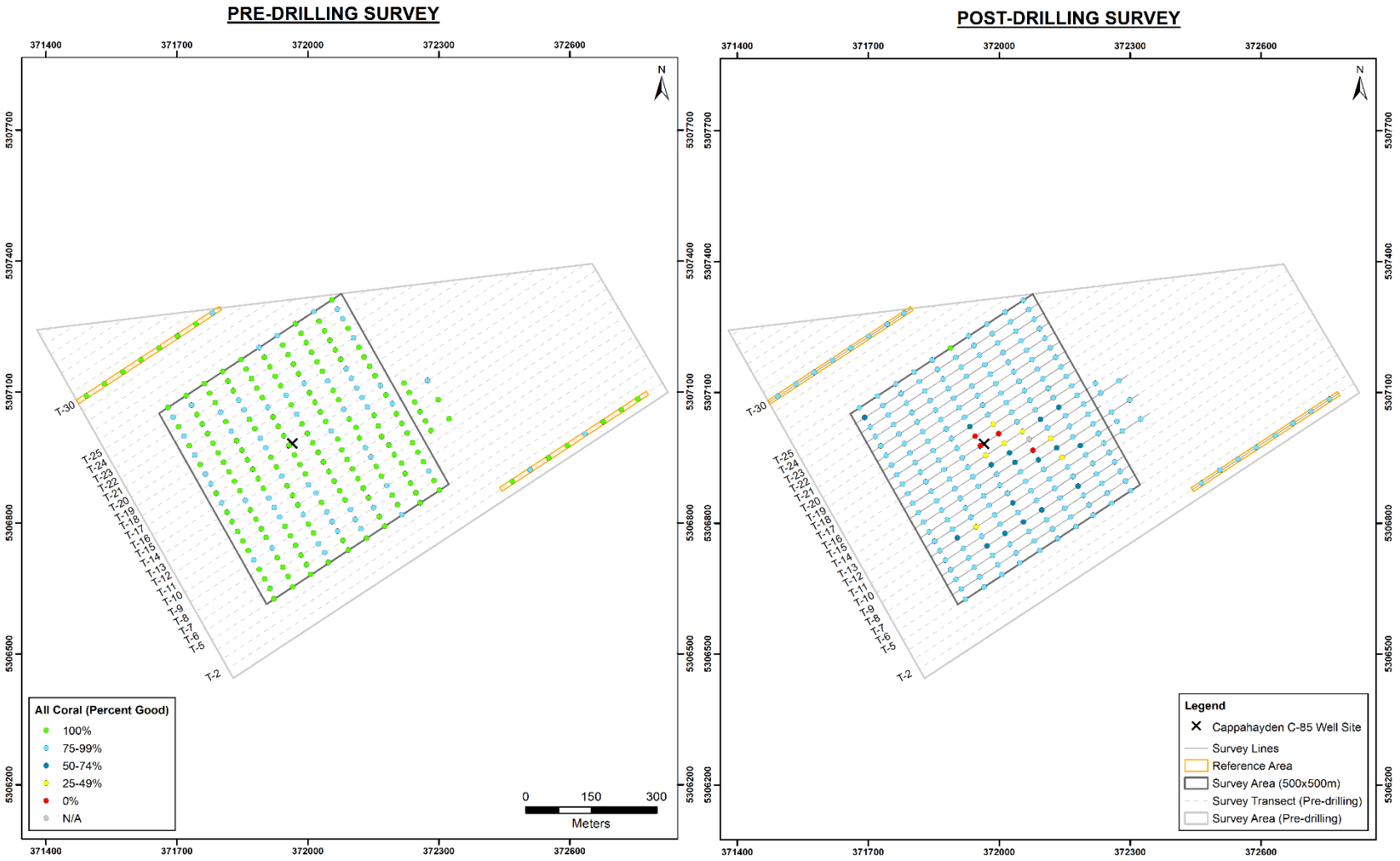

Figure 4-24 All coral condition (percent good) observed in the Cappahayden post-drilling survey.

4.4.2 SPONGE MORPHOLOGICAL GROUPS

The post-drilling survey recorded sponges from five morphological groups: solid/massive, thin-walled complex, round with projections, leaf/vase shaped, and stalked (Figure 4-25, Table 4-7). The pre-drilling survey recorded no sponges. There was no significant difference in the density of sponges observed between the two survey areas (p-value 0.84), however there was a significant increase in sponges observed in the post-drilling survey (p-value <0.001) (Appendix H for full statistical results). The increase in abundance of sponges across the grid and reference area showed no apparent pattern in relation to the drill cuttings footprint (Figure 4-4, Figure 4-26). This increase does not likely represent the growth of new sponges, but rather a slightly varied track pattern by the ROV from the pre-drilling survey. Geopositioning at this depth has a margin of error around 1%, which translates to around 10 m for these sites; it is possible the ROV passed over rocks not captured in the pre-drill survey, thus new morphological groups were noted. The sponges observed in the post-drilling survey were distributed across the grid and reference areas, with a gap in observations on transects near to the well site (transects 14 to 19) (see Figure 4-26 and Figure 4-27 for all sponge observations aggregated, and Figure 4-28 to Figure 4-37 for individual morphological groups).

Sponges observed in the post-drilling survey were categorized as ‘good’ or ‘damaged/poor’. Sponge conditions were approximately 36% good in the grid and 40% good in the reference area. Solid/massive sponges were rated 38% good in the grid lines area, and 25% good in the reference areas, though few individuals were noted overall. Sponge condition data showed no apparent relation to the location of cuttings across the survey area (Figure 4-38).

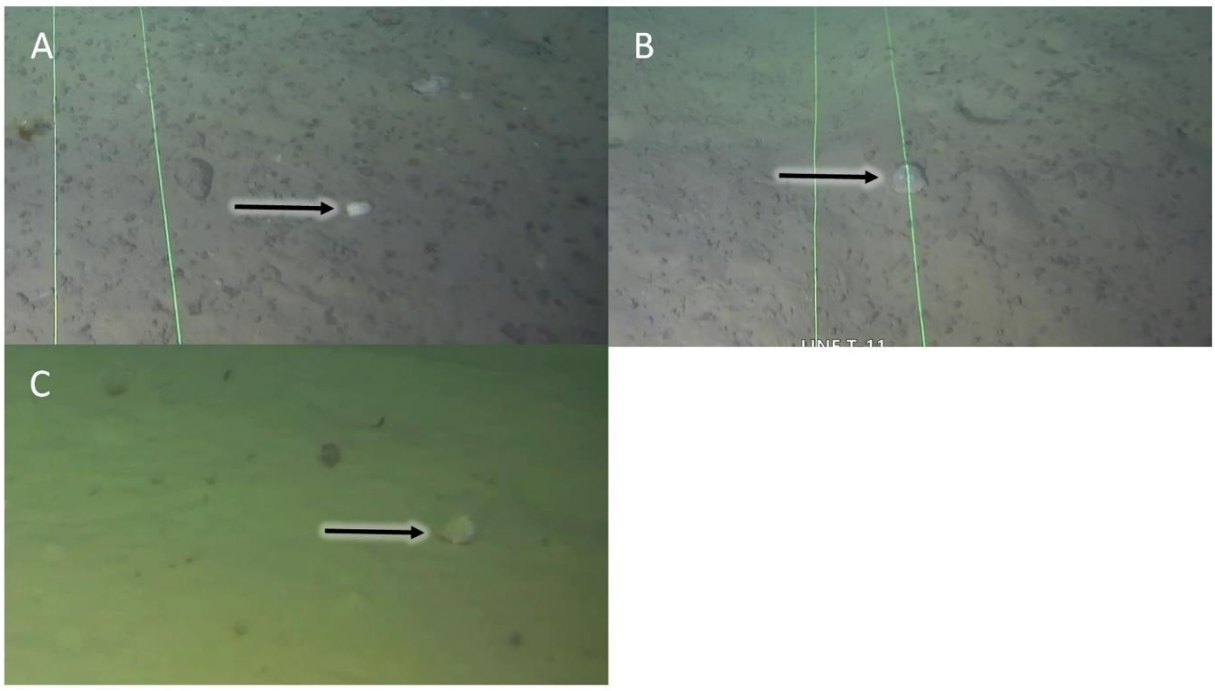

Figure 4-25 Representative photos of three of the sponge morphological groups observed in the Cappahayden post-drilling survey: A) solid/massive sponge, B) round with projections sponge, C) leaf/vase shaped sponge. Green scaling lasers are 20 cm apart.

Table 4-7 Summary statistics (abundance and density) of sponge morphological groups from the pre- and post-drilling surveys at Cappahayden.

Category	Taxa	Survey	Area[1]	Mean	St. dev.	Median	Min[2]	Max
Abundance	Solid / Massive	Pre	Grid	-	-	-	-	-
			Ref	-	-	-	-	-
		Post	Grid	0.21	0.53	0	1	3
			Ref	0.25	0.45	0	1	1
	Thin-Walled, Complex	Pre	Grid	-	-	-	-	-
			Ref	-	-	-	-	-
		Post	Grid	-	-	-	-	-
			Ref	0.06	0.25	0	1	1
	Round with Projections	Pre	Grid	-	-	-	-	-
			Ref	-	-	-	-	-
		Post	Grid	0.01	0.10	0	1	1
			Ref	-	-	-	-	-
	Leaf / Vase Shaped	Pre	Grid	-	-	-	-	-
			Ref	-	-	-	-	-
		Post	Grid	0.03	0.16	0	1	1
			Ref	-	-	-	-	-
	Stalked	Pre	Grid	-	-	-	-	-
			Ref	-	-	-	-	-
		Post	Grid	0.04	0.21	0	1	2
			Ref	-	-	-	-	-
Density	Solid / Massive	Pre	Grid	-	-	-	-	-
			Ref	-	-	-	-	-
		Post	Grid	<0.01	<0.01	0	<0.01	0.02
			Ref	<0.01	<0.01	0	0.01	0.01
	Thin-Walled, Complex	Pre	Grid	-	-	-	-	-
			Ref	-	-	-	-	-
		Post	Grid	-	-	-	-	-
			Ref	<0.01	<0.01	0	0.01	0.01
	Round with Projections	Pre	Grid	-	-	-	-	-
			Ref	-	-	-	-	-
		Post	Grid	<0.01	<0.01	0	0.01	0.01
			Ref	-	-	-	-	-
	Leaf / Vase Shaped	Pre	Grid	-	-	-	-	-
			Ref	-	-	-	-	-
		Post	Grid	<0.01	<0.01	0	0.01	0.01
			Ref	-	-	-	-	-

Category	Taxa	Survey	Area[1]	Mean	St. dev.	Median	Min[2]	Max
	Stalked	Pre	Grid	-	-	-	-	-
			Ref	-	-	-	-	-
		Post	Grid	<0.01	<0.01	0	0.01	0.02
			Ref	-	-	-	-	-

Notes:
[1] Grid = Grid Area Lines, Ref = Reference Areas (Lines T2 and T30)
[2] Minimum density is the lowest non-zero value.
Mean is the average of either the abundance or density of a sponge morphological group within a given survey (pre- or post-drilling) and area (grid lines or reference areas). The other summary statistics were similarly calculated.
Total number of survey sections: Pre-drilling survey grid lines n=219, reference areas n=16, post-drilling survey area grid lines n=218, reference areas n=16.
Sections were approximately 50 m linear distance with an average field of view of 1.72 m in pre-drilling survey and 2.50 m
Totals: Pre-drilling - Solid / massive n=0, thin-walled complex n=0, round with projections n=0.
Post-drilling - Solid / massive n=49, thin-walled complex n=1, round with projections n=2, leaf / vase shaped n=6, stalked n=8, and other sponge n=0

Table 4-8 Sponge morphological group conditions in the pre- and post-drilling surveys at Cappahayden.

Taxa	Survey	Area[1]	Percentage (%)	
			Good	Poor
All	Pre	Grid	-	-
		Ref	-	-
	Post	Grid	36.07	63.93
		Ref	40.00	60.00
Solid / Massive	Pre	Grid	-	-
		Ref	-	-
	Post	Grid	38	62
		Ref	25.00	75.00
Thin-Walled, Complex	Pre	Grid	-	-
		Ref	-	-
	Post	Grid	-	-
		Ref	100	0
Round with Projections	Pre	Grid	-	-
		Ref	-	-
	Post	Grid	50.00	50.00
		Ref	-	-
Leaf / Vase Shaped	Pre	Grid	-	-
		Ref	-	-
	Post	Grid	17	83
		Ref	-	-
Stalked	Pre	Grid	-	-
		Ref	-	-
	Post	Grid	38	63
		Ref	-	-

Notes:
[1] Grid = Grid Lines Area, Ref = Reference Areas (Lines T2 and T30)
Total number of survey sections: Pre-drilling survey grid lines n=219, reference areas n=16, post-drilling survey area grid lines n=218, reference areas n=16.
Sections were approximately 50 m linear distance with an average field of view of 1.72 m in pre-drilling survey and 2.50 m

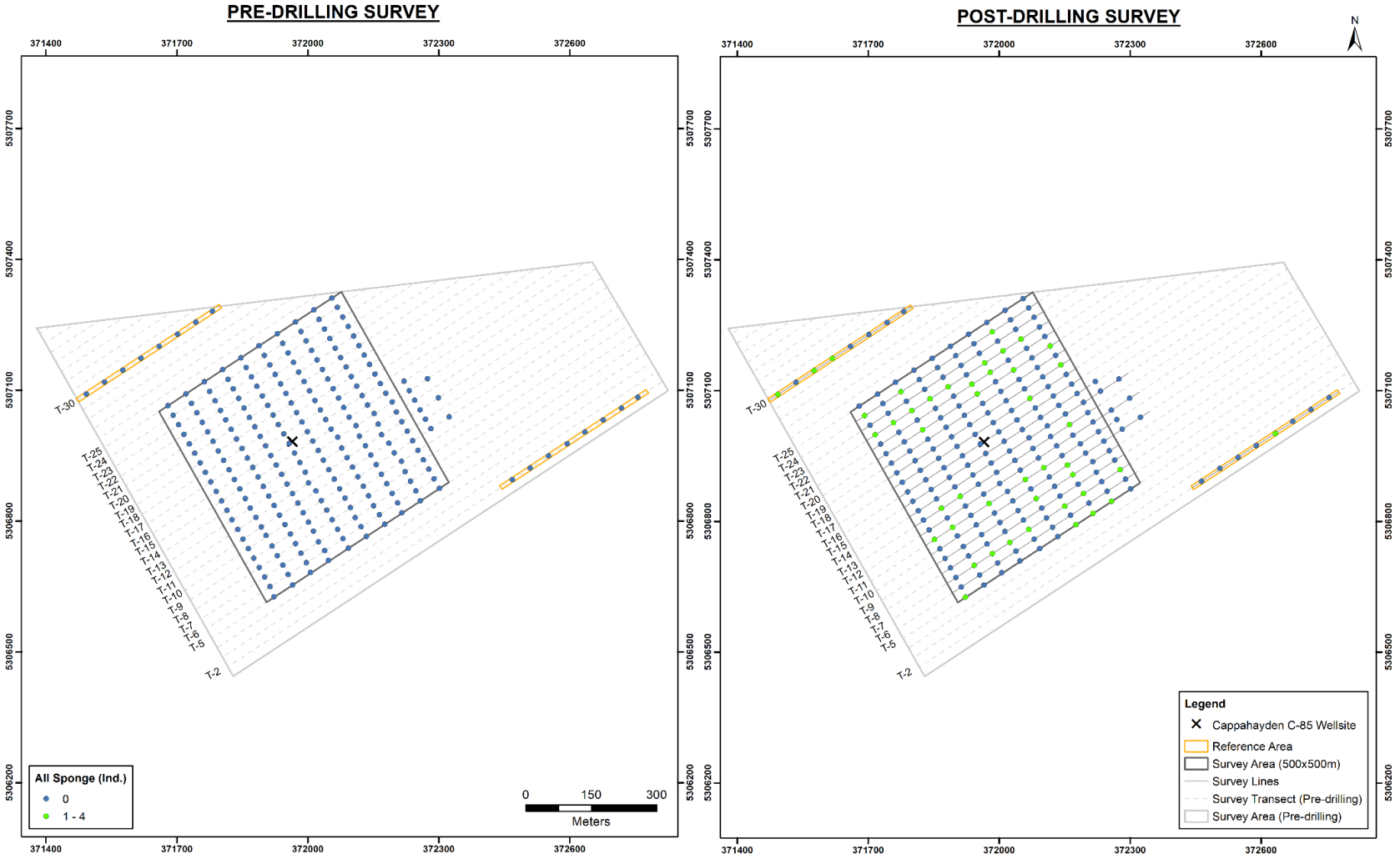

Figure 4-26 All sponge abundance (individuals) observed in the Cappahayden pre- and post-drilling surveys.

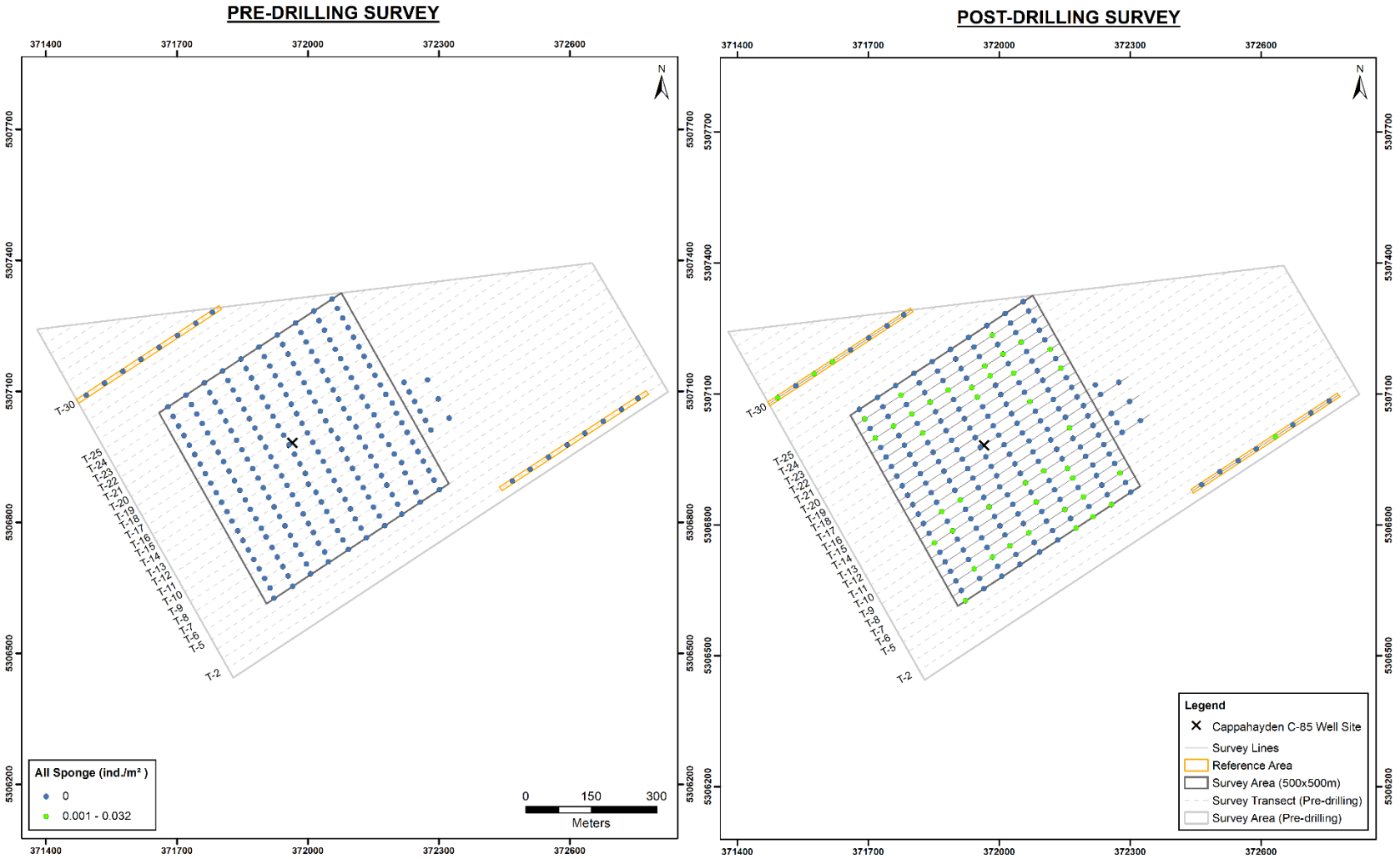

Figure 4-27 All sponge density (individuals per m²) observed in the Cappahayden pre- and post-drilling surveys.

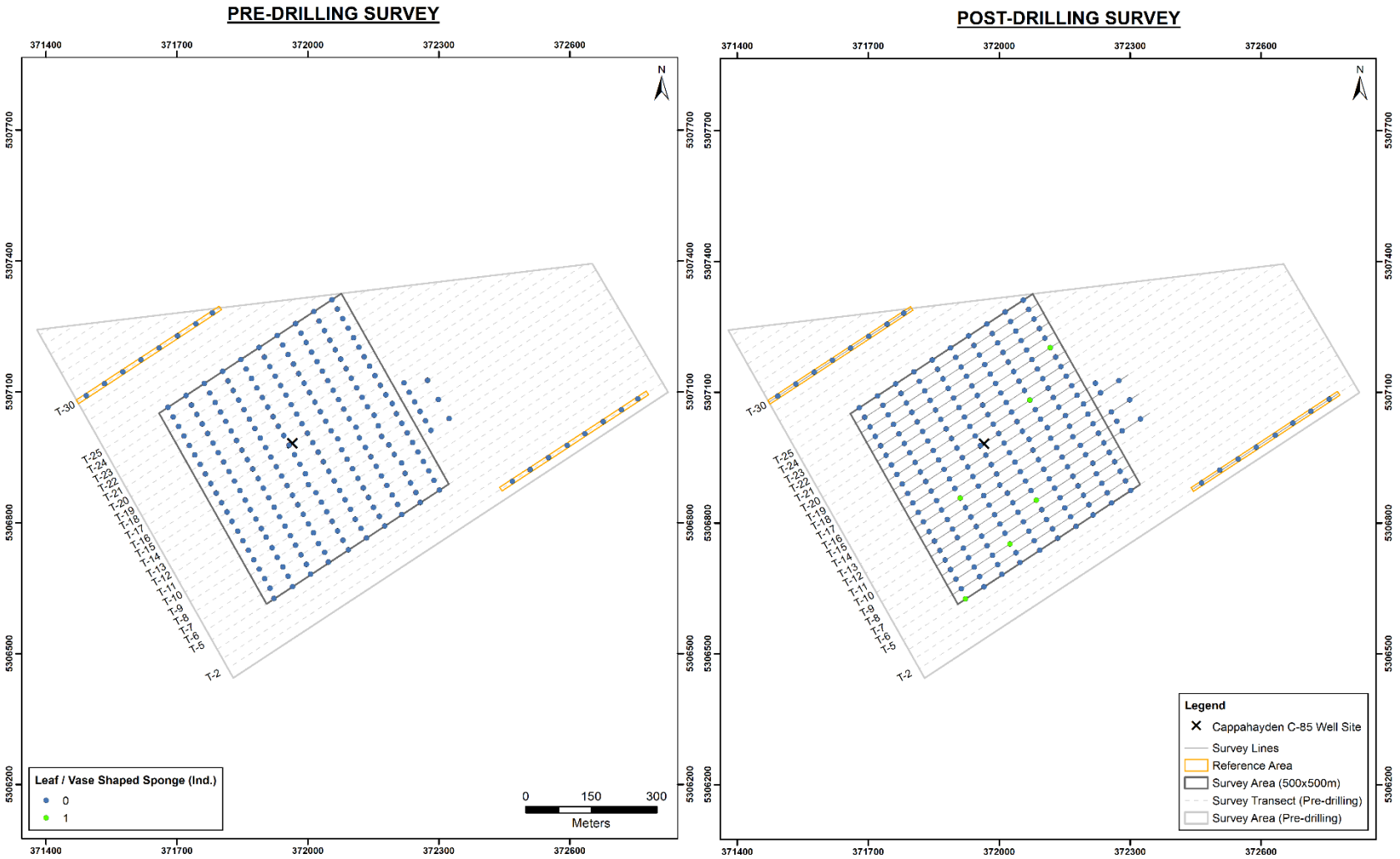

Figure 4-28 Leaf / vase shaped sponge abundance (individuals) observed in the Cappahayden pre- and post-drilling surveys.

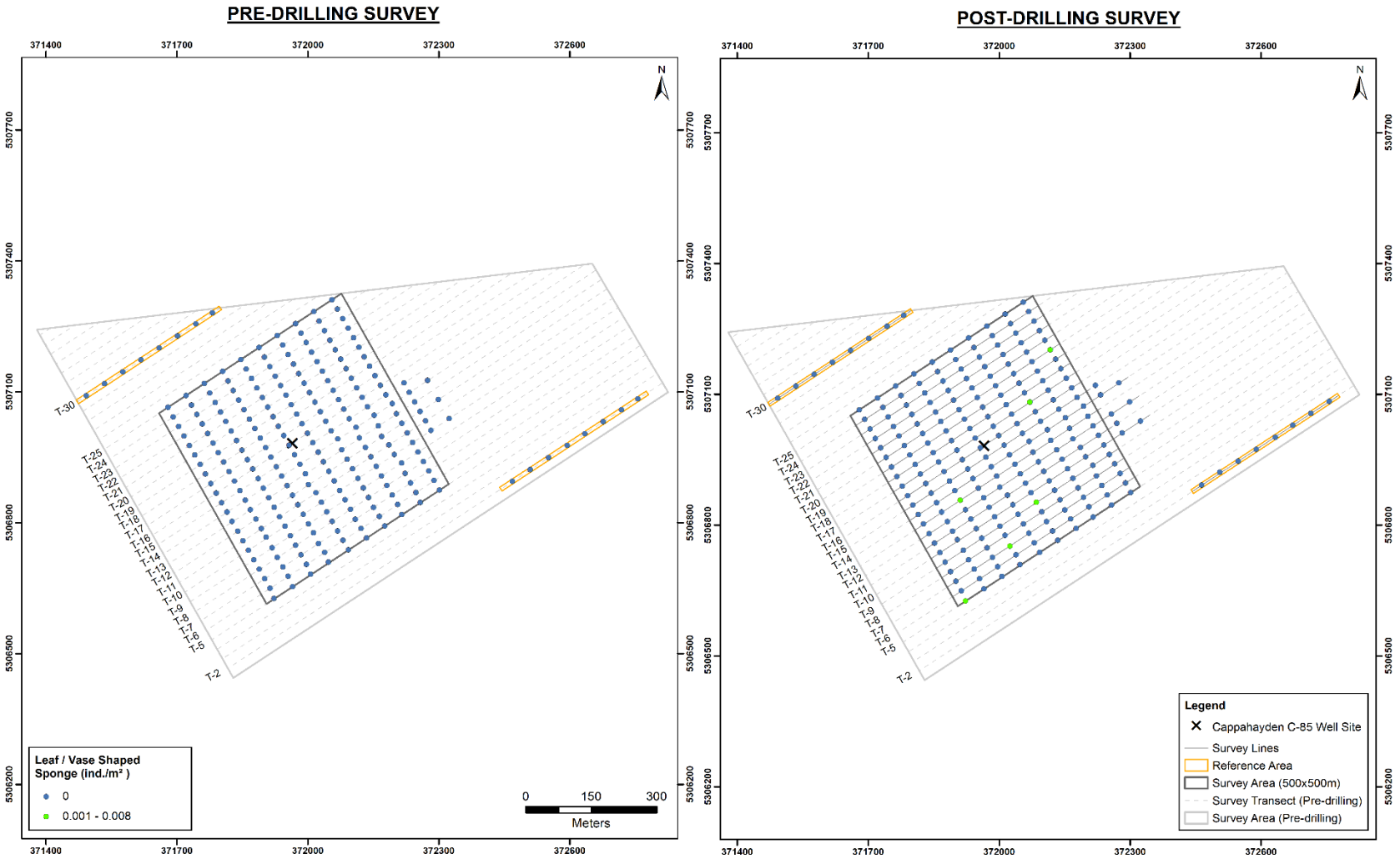

Figure 4-29 Leaf / vase shaped sponge density (individuals per m²) observed in the Cappahayden pre- and post-drilling surveys.

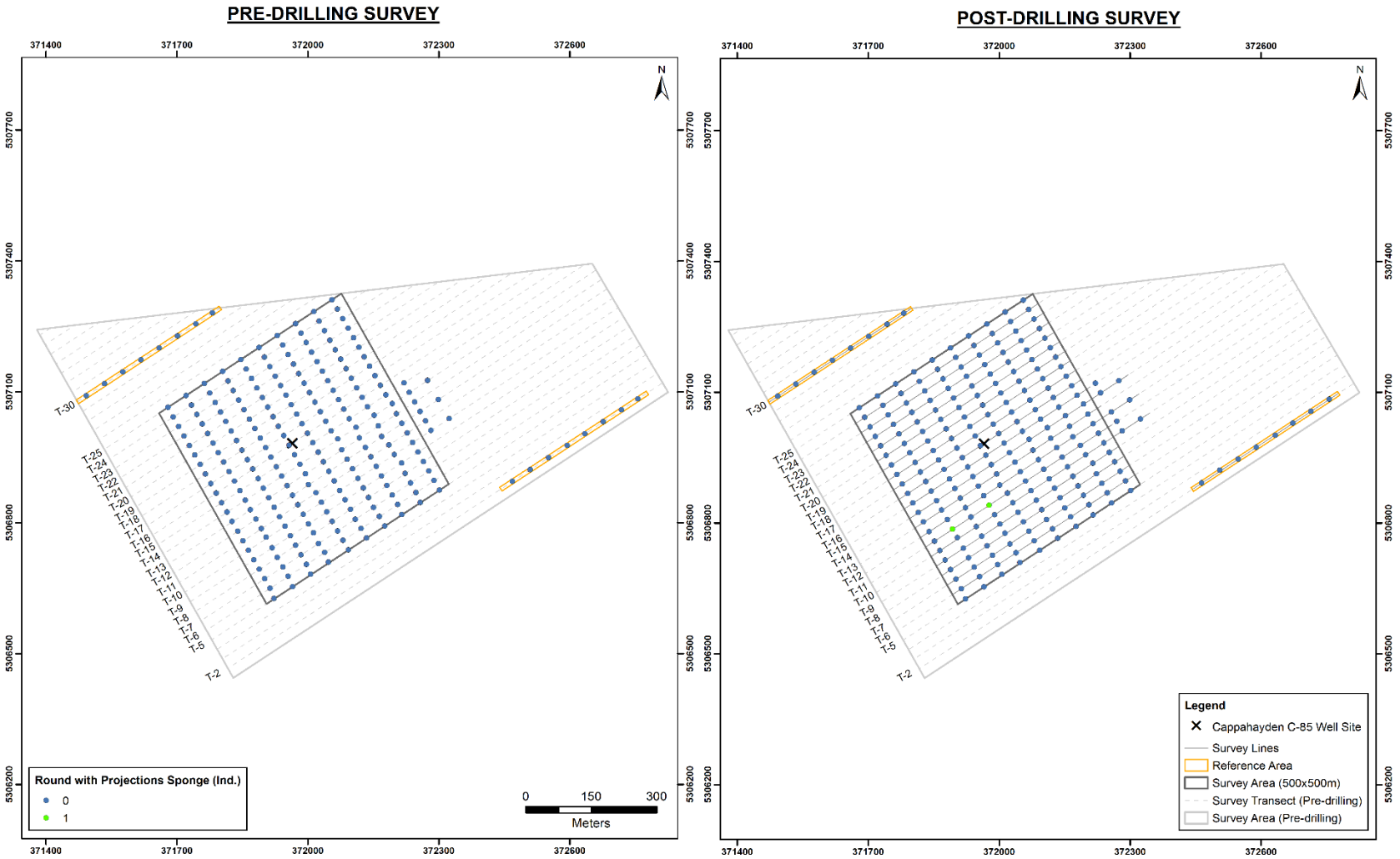

Figure 4-30 Round with projections sponge abundance (individuals) observed in the Cappahayden pre- and post-drilling surveys.

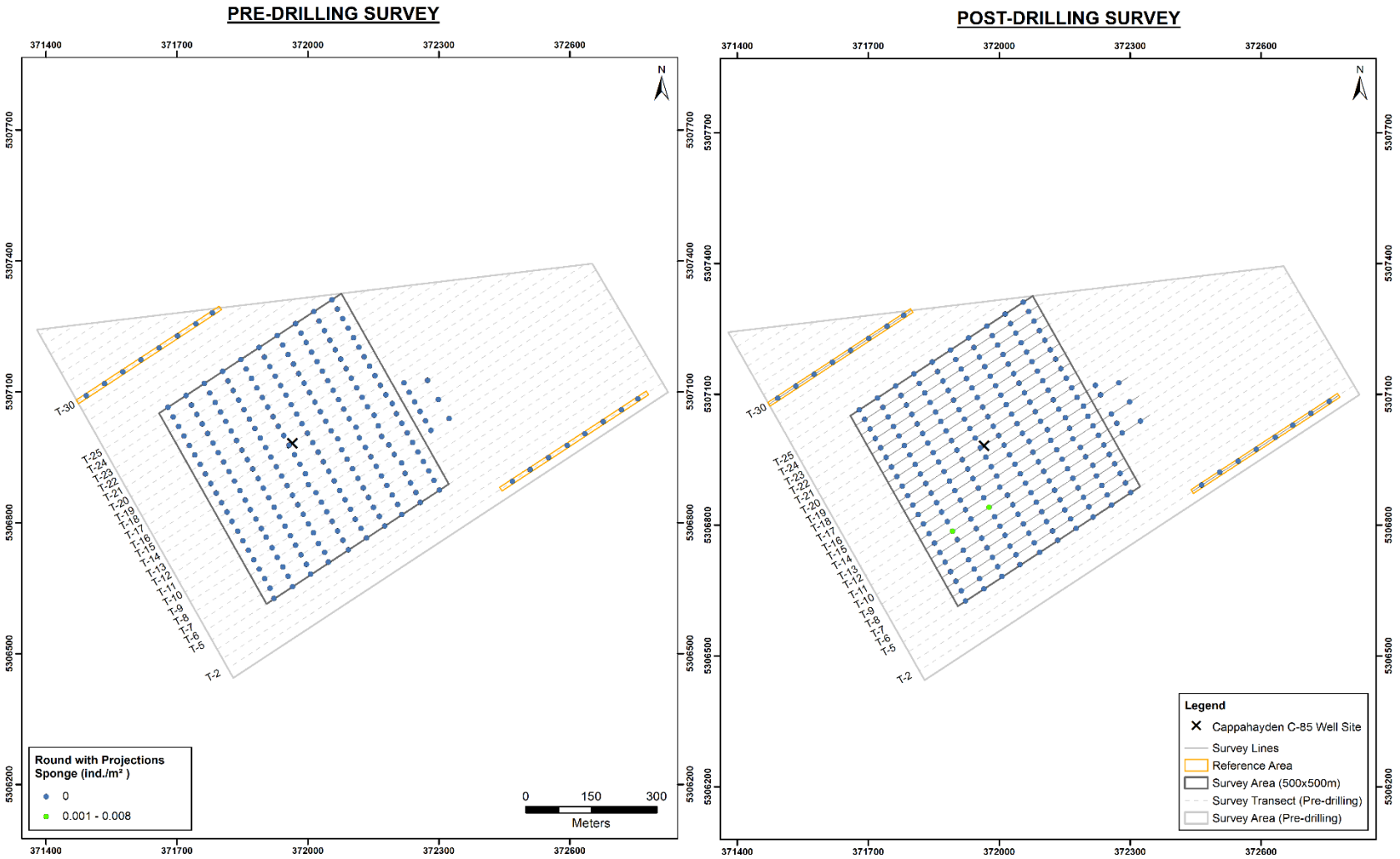

Figure 4-31 Round with projections sponge density (individuals per m²) observed in the Cappahayden pre- and post-drilling surveys.

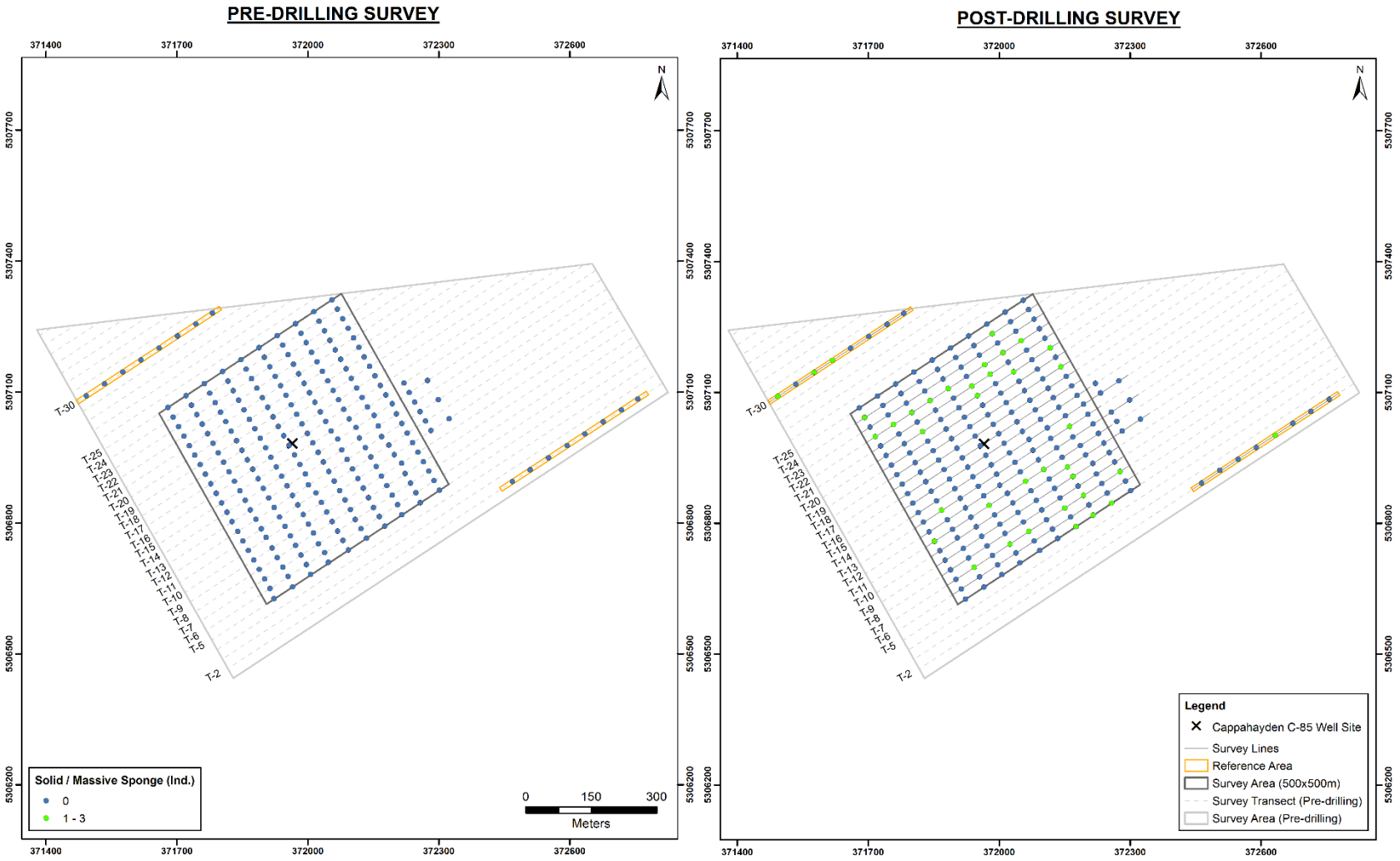

Figure 4-32 Solid / massive sponge abundance (individuals) observed in the Cappahayden pre- and post-drilling surveys.

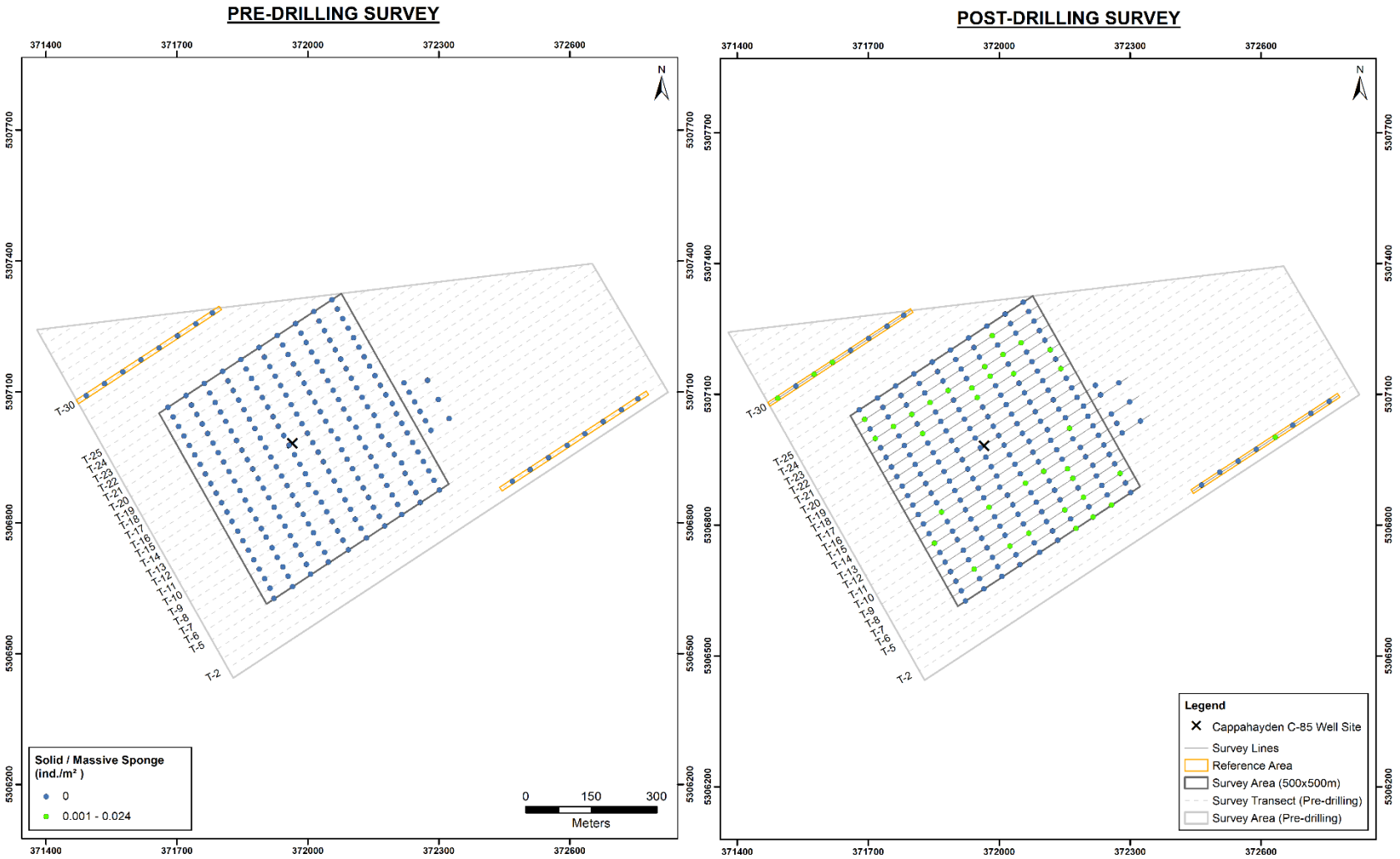

Figure 4-33 Solid / massive sponge density (individuals per m²) observed in the Cappahayden pre- and post-drilling surveys.

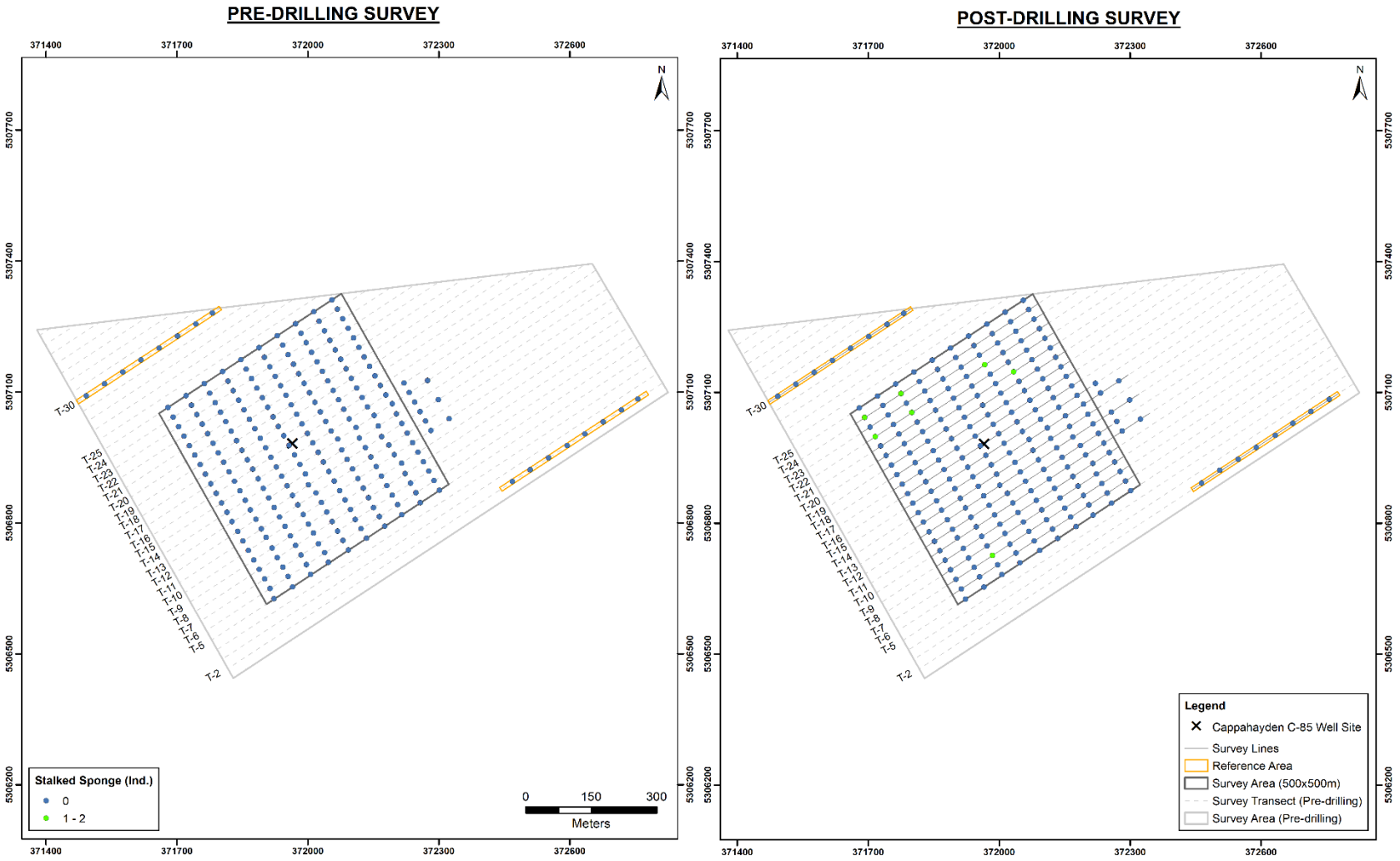

Figure 4-34 Stalked sponge abundance (individuals) observed in the Cappahayden pre- and post-drilling surveys.

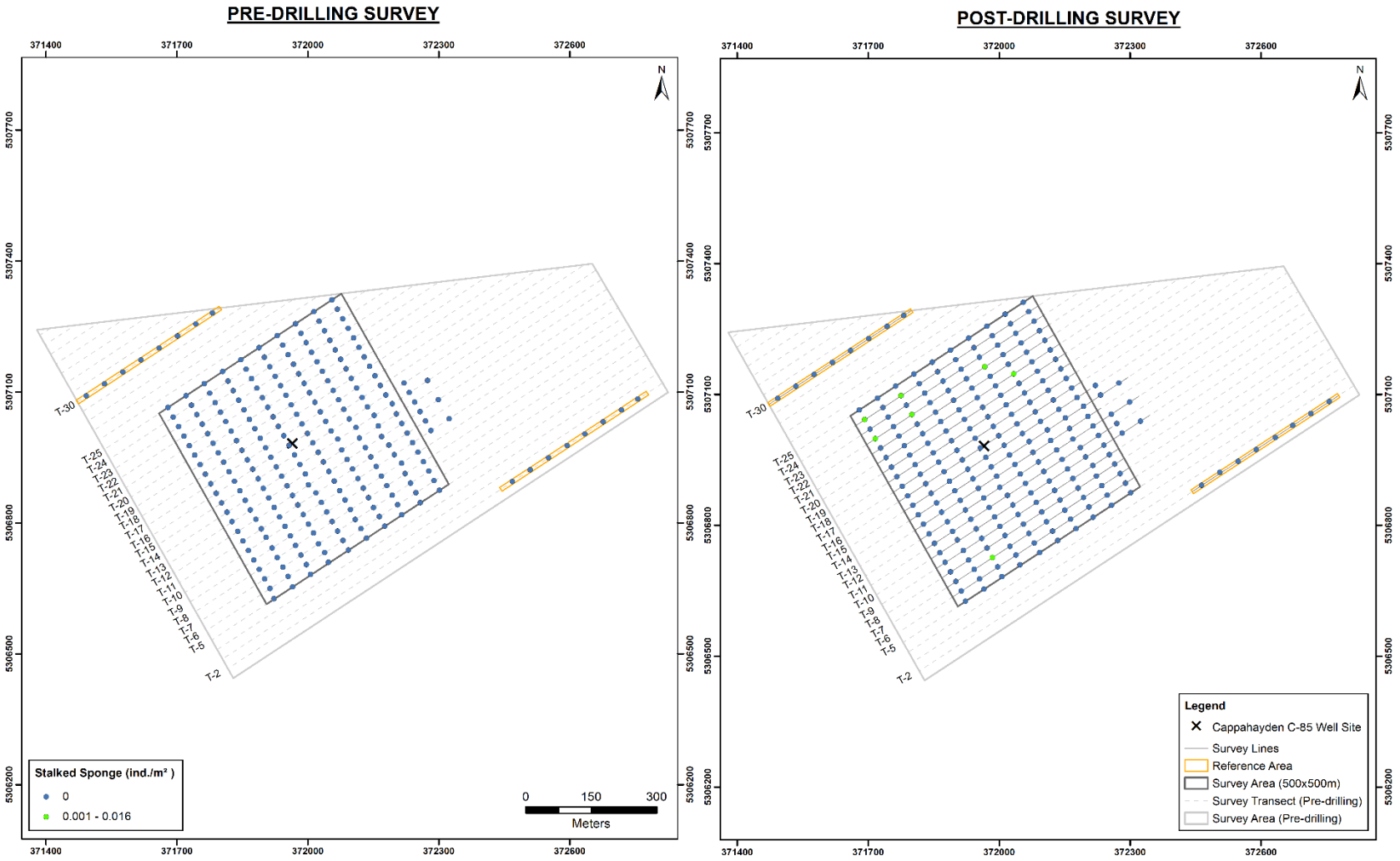

Figure 4-35 Stalked sponge density (individuals per m²) observed in the Cappahayden pre- and post-drilling surveys.

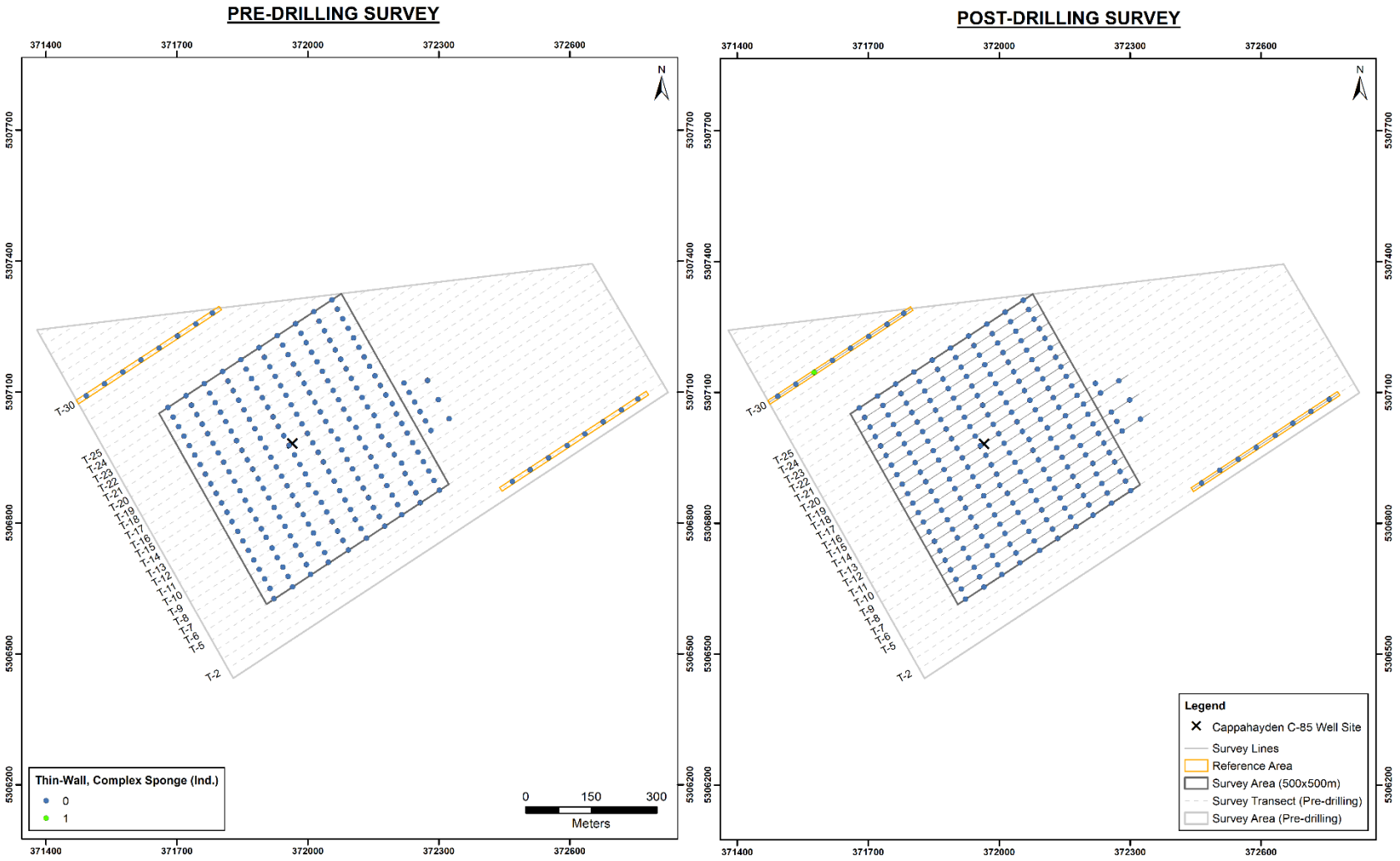

Figure 4-36 Thin-walled, complex sponge abundance (individuals) observed in the Cappahayden pre- and post-drilling surveys.

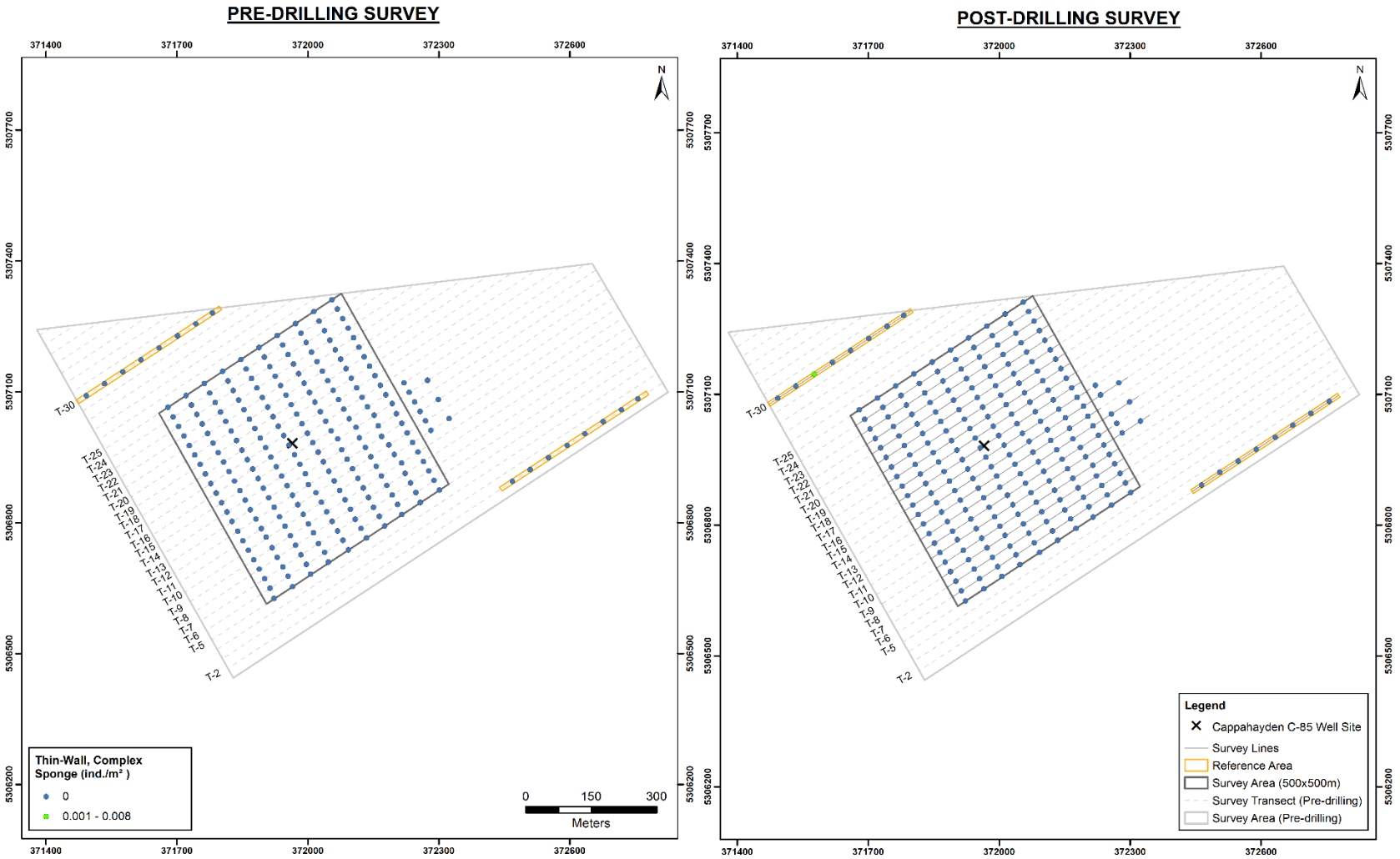

Figure 4-37 Thin-walled, complex sponge density (individuals per m²) observed in the Cappahayden pre- and post-drilling surveys.

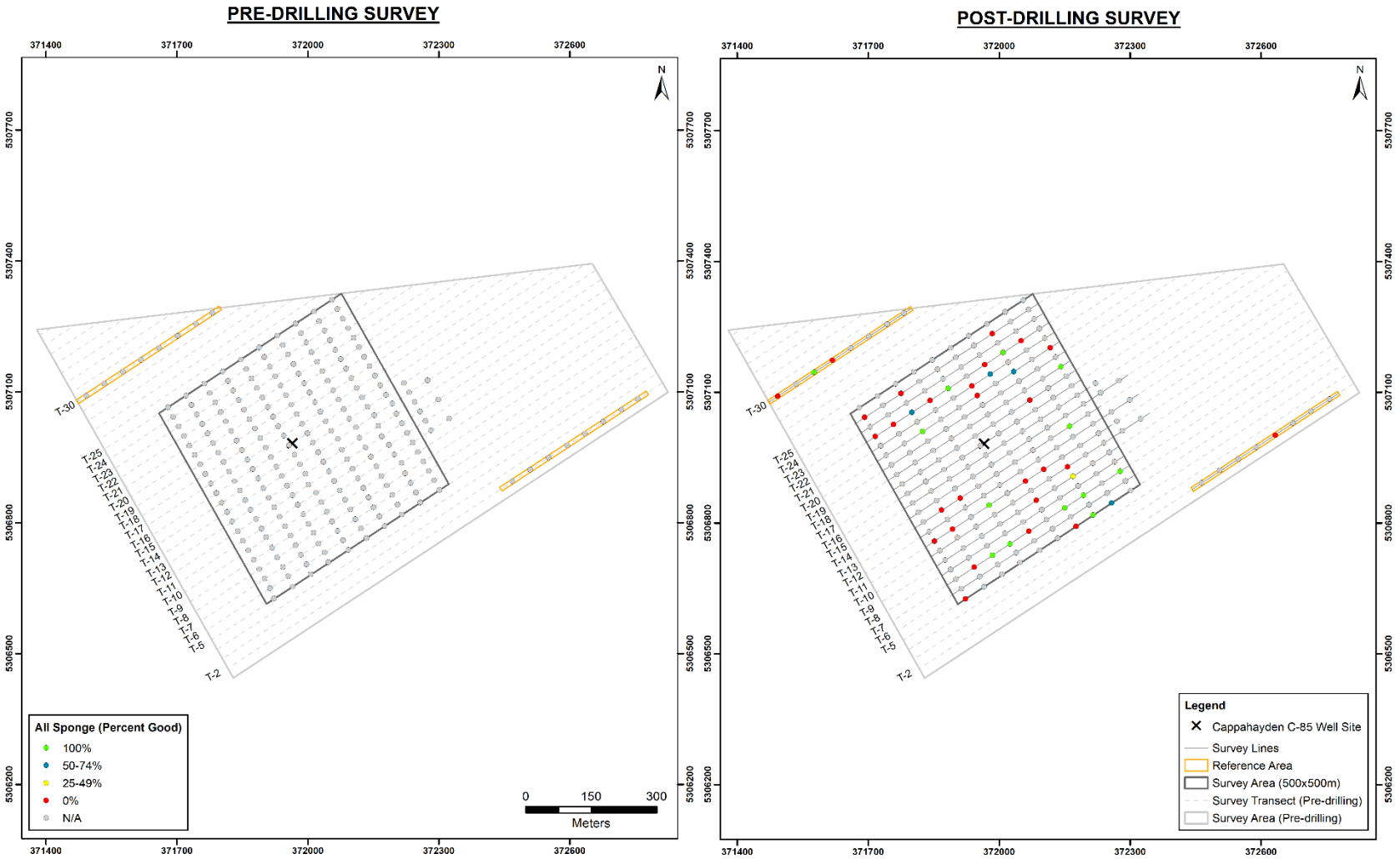

Figure 4-38 All sponge condition (percent good) observed in the Cappahayden post-drilling survey.

4.4.3 FISH FUNCTIONAL GROUPS

Five functional groups of fishes were recorded during the Cappahayden post-drilling survey: benthivores, piscivores, planktivores, plank-piscivores, and unknown fish (Figure 4-39). Benthivores were comprised mainly of grenadiers, longnose eel, and blue hake. Rocklings and lanternfish were also commonly spotted.

In general, density and abundance remained similar in pre- and post-drilling surveys with a slight increase overall aside from unknown fish which had a very slight decrease in abundance (Table 4-9). Unknown fish were those which could not be identified, including poorly seen fish and juveniles. All abundance and density maps for invertebrate taxa are available in Appendix G.

Atlantic wolfish, Northern wolffish, and Spotted wolffish were all observed in the post-drilling survey. Northern wolffish were the most commonly observed (22 sections), followed by Atlantic wolffish (9 sections), and spotted wolffish (4 sections). It was not feasible to differentiate between individuals and they moved in and out of frame and typically followed the ROV, so the maximum number observed at once for each transect section was used to report abundance.

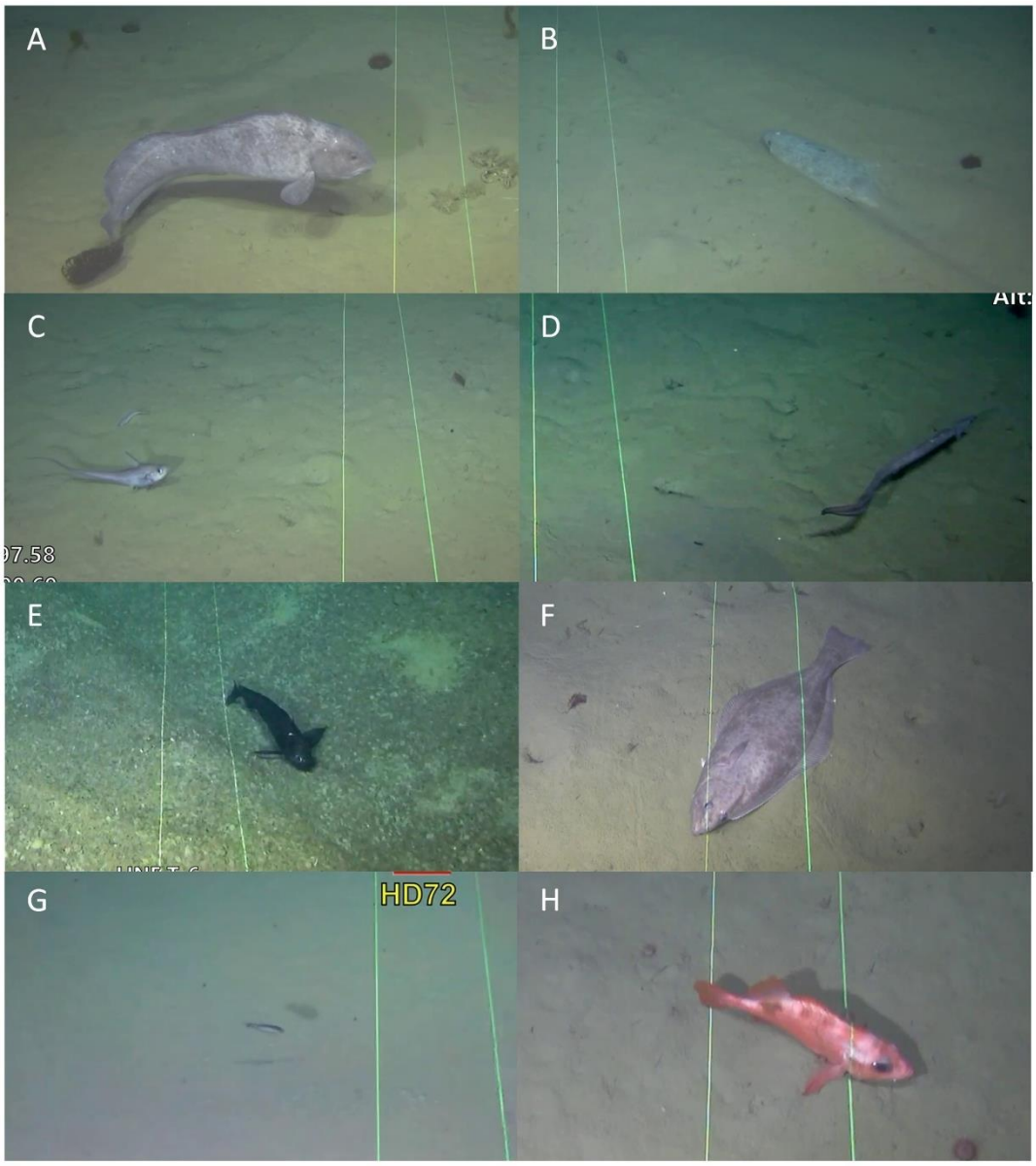

Figure 4-39 Examples of the fish functional groups observed in the Cappahayden post-drilling survey: A-D) benthivores, E-F) piscivores, G) planktivore, H) plank-piscivore.

Table 4-9 Summary statistics (abundance and density) of fish functional groups from the pre- and post-drilling surveys at Cappahayden.

Category	Taxa	Survey	Area[1]	Mean	St. dev.	Median	Min[2]	Max
Abundance	Benthivores	Pre	Grid	3.73	2.02	3	1	9
			Ref	2.19	1.33	2	1	5
		Post	Grid	4.83	2.90	4	1	15
			Ref	3.06	2.17	3	1	7

Category	Taxa	Survey	Area[1]	Mean	St. dev.	Median	Min[2]	Max
	Piscivores	Pre	Grid	0.02	0.15	0	1	1
			Ref	0.06	0.25	0	1	1
		Post	Grid	1.18	1.13	1	1	6
			Ref	1.06	1.18	1	1	4
	Unknown	Pre	Grid	0.32	0.57	0	1	4
			Ref	0.38	0.62	0	1	2
		Post	Grid	0.29	0.63	0	1	3
			Ref	0.38	0.62	0	1	2
	Planktivores	Pre	Grid	0.07	0.25	0	1	1
			Ref	0.19	0.54	0	1	2
		Post	Grid	0.54	0.80	0	1	4
			Ref	1.06	1.12	1	1	3
	Plank-piscivores	Pre	Grid	0.01	0.1	0	1	1
			Ref	-	-	-	-	-
		Post	Grid	0.01	0.12	0	1	1
			Ref	-	-	-	-	-
Density	Benthivores	Pre	Grid	0.04	0.02	0.03	0.01	0.10
			Ref	0.03	0.02	0.02	0.01	0.06
		Post	Grid	0.04	0.02	0.03	0.01	0.12
			Ref	0.03	0.02	0.02	0.01	0.07
	Piscivores	Pre	Grid	<0.01	<0.01	0	0.01	0.01
			Ref	<0.01	<0.01	0	0.01	0.01
		Post	Grid	0.01	0.01	0.01	0.01	0.05
			Ref	0.01	0.01	0.01	0.01	0.03
	Unknown	Pre	Grid	<0.01	<0.01	0	0.01	0.05
			Ref	<0.01	0.01	0	0.01	0.02
		Post	Grid	<0.01	0.01	0	0.01	0.02
			Ref	<0.01	<0.01	0	0.01	0.02
	Planktivores	Pre	Grid	<0.01	<0.01	0	0.01	0.01
			Ref	<0.01	<0.01	0	0.01	0.02
		Post	Grid	<0.01	<0.01	0	0.01	0.03
			Ref	0.01	0.01	0.01	0.01	0.03
	Plank-piscivores	Pre	Grid	<0.01	<0.01	0	0.01	0.01
			Ref	-	-	-	-	-
		Post	Grid	<0.01	<0.01	0	0.01	0.01
			Ref	-	-	-	-	-

Category	Taxa	Survey	Area[1]	Mean	St. dev.	Median	Min[2]	Max

Notes:
[1] Grid = Grid Area Lines, Ref = Reference Areas (Lines T2 and T30)
[2] Minimum density is the lowest non-zero value.
Mean is the average of either the abundance or density of a fish functional group within a given survey (pre- or post-drilling) and area (grid lines or reference areas). The other summary statistics were similarly calculated.
Total number of survey sections: pre-drilling survey grid lines n=219, reference areas n=16, post-drilling survey area grid lines n=218, reference areas n=16.
Sections were approximately 50 m linear distance with an average field of view of 1.72 m in pre-drilling survey and 2.50 m.
Totals: Pre-drilling - benthivores n=852, piscivores n=5, planktivores n=18, plank-piscivores n=2, and unknown fish n=75
Post-drilling - benthivores n=1,103, piscivores n=275, planktivores n=134, plank-piscivores n=3, and unknown fish n=69

4.4.4 INVERTEBRATE (NON-CORAL AND SPONGE) TAXA

Non-coral and sponge invertebrates were recorded in five main taxa: echinoderms, cnidarians, arthropods, annelids and molluscs (Table 4-10). An additional group, other invertebrates, was added to encompass chordates (tunicates) and ctenophores, which had low numbers. Echinoderms were the most numerous taxa observed and comprised of sea urchins, sea stars, and brittle stars. Cnidarians were the next most abundant comprised of sea anemones, jellyfish, and hydroids. High numbers of hydroids were observed in the post-drilling survey, with very low numbers pre-drilling. Arthropods and Molluscs had small numbers overall. Arthropods were primarily shrimp, while molluscs were primarily gastropods and cephalopods. Annelids had the lowest abundance overall and were comprised of annelids and polychaetes.

In general, non-coral and sponge invertebrate abundance and density remained similar between pre- and post-drilling surveys with a slight increase in arthropod and annelid density and a slight decrease in echinoderm and mollusc density (Table 4-10). Echinoderms exhibited the largest change in density, decreasing by 0.2 ind./ m^2 (Table 4-10). Other invertebrates were not recorded in the pre-drilling survey and therefore they are excluded from this comparison. All abundance and density maps for invertebrate taxa are available in Appendix G.

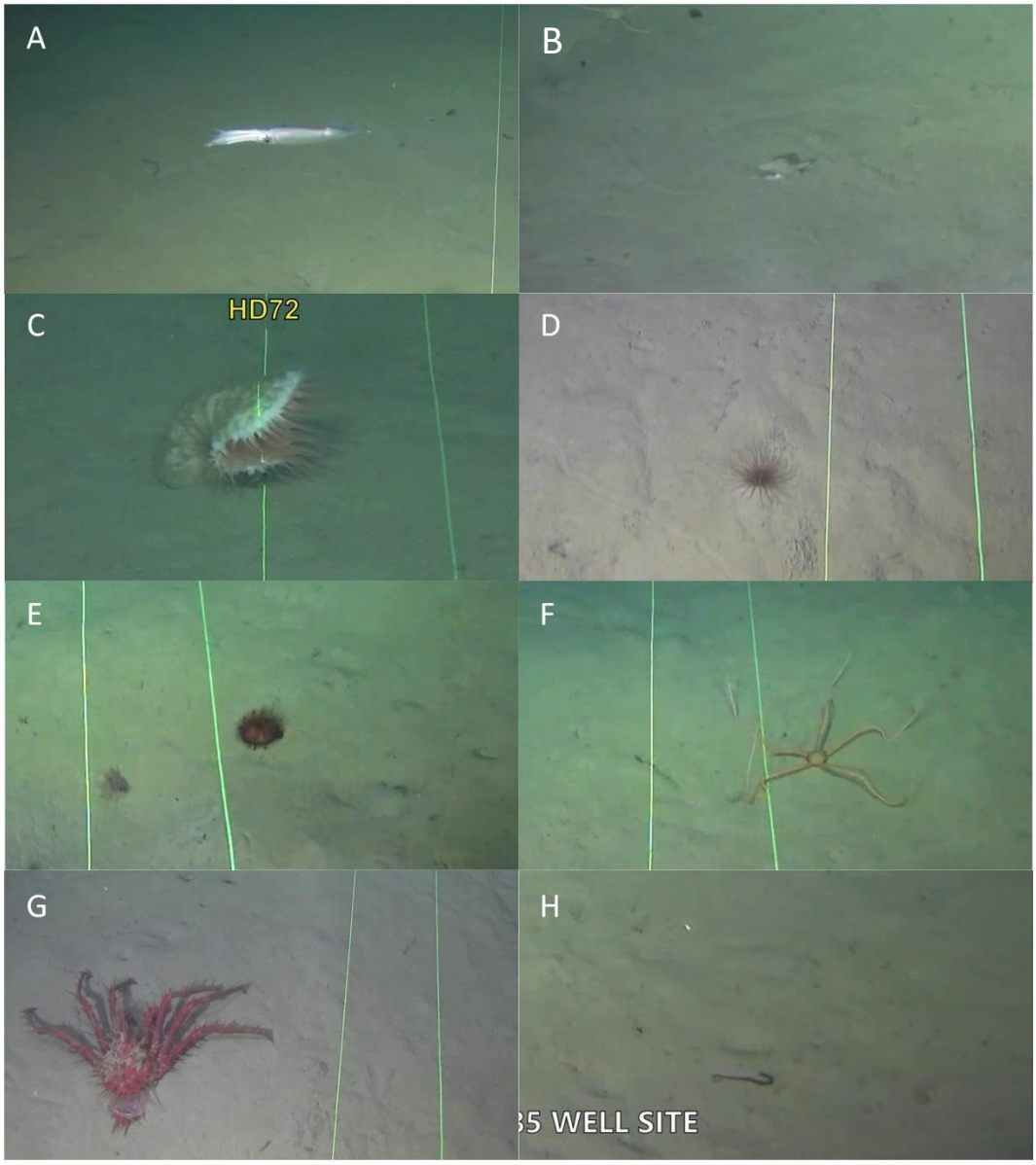

Figure 4-40 Examples of non-coral and sponge invertebrate fauna observed in the Cappahayden post-drilling survey: A-B) molluscs, C-D) cnidaria, E-F) echinoderms, G) arthropod, and H) annelid.

Table 4-10 Summary statistics (abundance and density) of invertebrate (non-coral and sponge) taxa from the pre- and post-drilling surveys at Cappahayden.

Category	Taxa	Survey	Area[1]	Mean	St. dev.	Median	Min[2]	Max
Abundance	Echinoderms	Pre	Grid	33.61	10.43	33	11	61
			Ref	35.88	14.79	35.5	17	71
		Post	Grid	23.31	18.92	20	1	114

Category	Taxa	Survey	Area[1]	Mean	St. dev.	Median	Min[2]	Max
			Ref	28.13	15.60	27.5	6	53
	Cnidarians	Pre	Grid	5.51	4.34	5	1	20
			Ref	7.31	3.20	7	3	15
		Post	Grid	14.57	31.00	6	1	275
			Ref	4.25	2.27	3.5	1	8
	Arthropods	Pre	Grid	0.30	0.56	0	0	3
			Ref	0.19	0.40	0	1	1
		Post	Grid	0.97	2.51	0	1	32
			Ref	1.63	3.65	1	1	15
	Molluscs	Pre	Grid	1.29	1.14	1	1	6
			Ref	1.69	1.85	1	1	5
		Post	Grid	0.92	1.25	0	1	7
			Ref	1.625	1.45	1	1	4
	Annelids	Pre	Grid	0.03	0.18	0	1	1
			Ref	-	-	-	-	-
		Post	Grid	0.34	0.90	0	1	6
			Ref	-	-	-	-	-
	Other Invertebrates	Pre	Grid	-	-	-	-	-
			Ref	-	-	-	-	-
		Post	Grid	0.06	0.29	0	1	2
			Ref	0.13	0.34	0	1	1
Density	Echinoderms	Pre	Grid	0.39	0.12	0.38	0.13	0.71
			Ref	0.42	0.17	0.41	0.20	0.83
		Post	Grid	0.19	0.15	0.16	0.01	0.89
			Ref	0.23	0.13	0.22	0.05	0.42
	Cnidarians	Pre	Grid	0.06	0.05	0.06	0.01	0.23
			Ref	0.09	0.04	0.08	0.03	0.17
		Post	Grid	0.117	0.28	0.05	0.01	2.19
			Ref	0.03	0.02	0.03	0.01	0.06
	Arthropods	Pre	Grid	<0.01	0.01	0	0.01	0.03
			Ref	<0.01	<0.01	0	0.01	0.01
		Post	Grid	0.01	0.02	0	0.01	0.26
			Ref	0.01	0.03	0.01	0.01	0.12
	Molluscs	Pre	Grid	0.01	0.01	0.01	0.01	0.01
			Ref	0.02	0.02	0.01	0.01	0.06
		Post	Grid	0.01	0.01	0	0.01	0.06
			Ref	0.01	0.01	0.01	0.01	0.03
	Annelids	Pre	Grid	<0.01	<0.01	0	0.01	0.01
			Ref	-	-	-	-	-
		Post	Grid	0.01	0.01	0	0.01	0.13
			Ref	-	-	-	-	-

Category	Taxa	Survey	Area[1]	Mean	St. dev.	Median	Min[2]	Max
	Other Invertebrates	Pre	Grid	-	-	-	-	-
			Ref	-	-	-	-	-
		Post	Grid	<0.01	<0.01	0	0.01	0.02
			Ref	<0.01	<0.01	0	0.01	0.01

Notes:
[1] Grid = Grid Area Lines, Ref = Reference Areas (Lines T2 and T30)
[2] Minimum density is the lowest non-zero value.
Mean is the average of either the abundance or density of a taxonomic group within a given survey (pre- or post-drilling) and area (grid lines or reference areas). The other summary statistics were similarly calculated.
Total number of survey sections: Pre-drilling survey grid lines n=219, reference areas n=16, post-drilling survey area grid lines n=218, reference areas n=16.
Sections were approximately 50 m linear distance with an average field of view of 1.72 m in pre-drilling survey and 2.50 m
Totals: Pre-drilling - echinoderms n=7,935, cnidarians n=1,324, molluscs n=309, arthropods n=68, annelids n=7,
Post-drilling – echinoderms n=5,531, cnidarians n=3,245, molluscs n=226, arthropods n=237, annelids n=75

4.5 OTHER OBSERVATIONS

Some anthropogenic debris was observed in the Cappahayden post-drilling survey including small plastic debris, metal shavings, a wooden board, and rope (Figure 4-41). There was also piling and long cuts in the sediment (Figure 4-41 C-D), which could indicate previous trawling or other equipment contact.

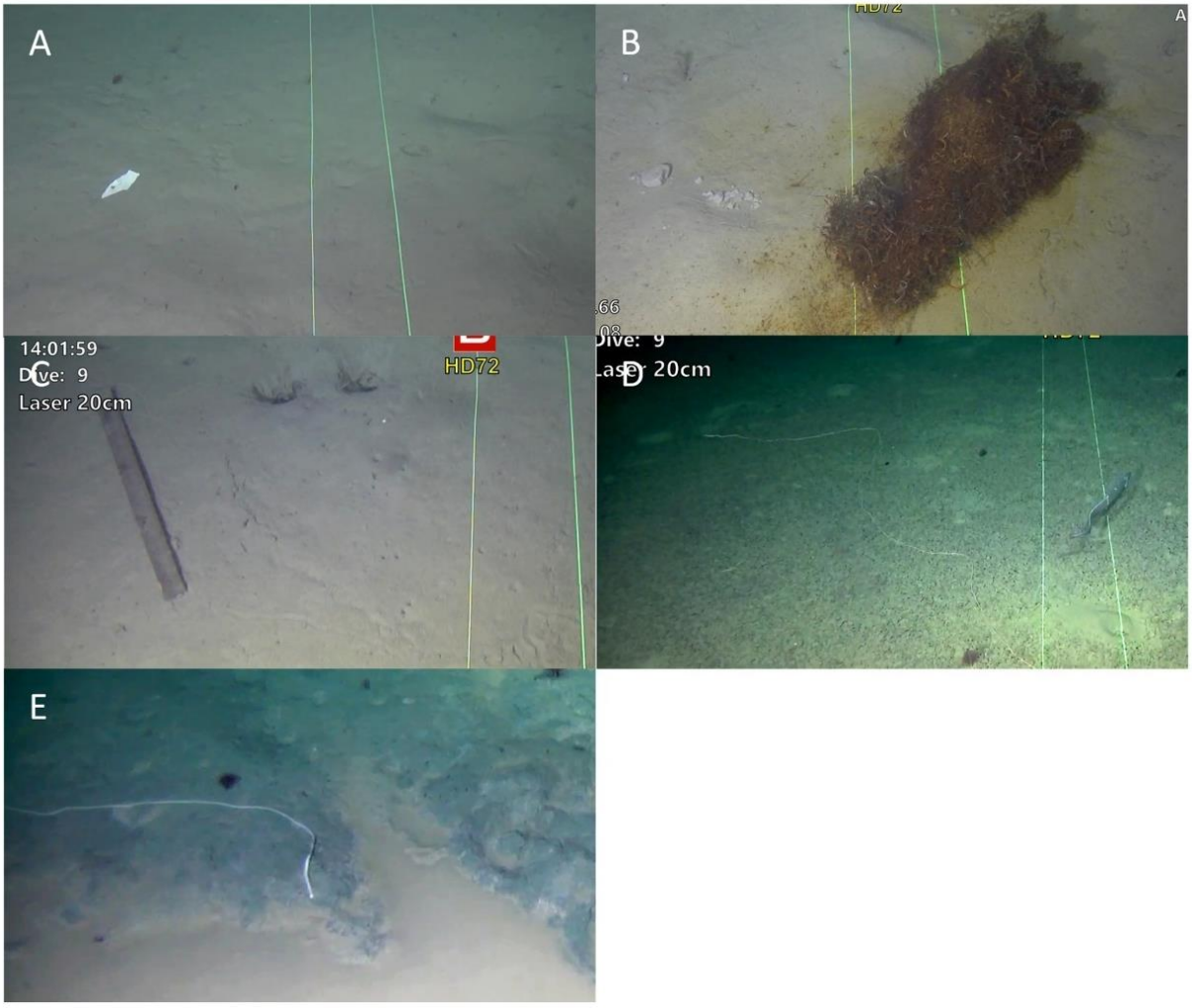

Figure 4-41 Examples of anthropogenic debris observed in the Cappahayden post-drilling survey: A) hard plastic, B) aggregation of rusting metal shavings, C) wood board, and D-E) rope. Green scaling lasers are 20 cm apart.

5 SUMMARY AND CONCLUSIONS

5.1 SUMMARY AND DISCUSSION

This report describes the follow-up monitoring program pursuant to conditions 3.12.2, including a comparison of modelling results and EA predictions to *in situ* results.

5.1.1 SITKA

5.1.1.1 *DRILL CUTTINGS DEPOSITION EXTENT AND THICKNESS*

The post-drilling sediment deposition extent and thickness (*Condition 3.12.2.1*) was assessed through a combination of visual observations of drill cuttings extent, measured cuttings thickness in sediment cores, and sediment chemistry and pre-established locations based on the modelling (EPA release site scenario).

Drill Cuttings Extent (Underwater Visual Observations and Sediment Chemistry): The deposition extent for drill cuttings was farther than predicted based on both the visual observations and sediment chemistry. The cuttings deposition area was largely to the south of the well site and beyond the model predictions for continuous cuttings areas. North of the well site, visually distinct and continuous cuttings areas were within model predictions with a layer of continuous cuttings approximately 20 m north along T13. East of the well site, continuous cuttings were observed extending approximately 250 m along T14 which is approximately 20 m beyond the predicted deposition. Visually distinct and continuous cuttings areas were observed up to 560 m southwest of the well site along T27 to the boundary of the survey area. The cuttings along T27 were 510 m beyond the predicted deposition footprint.

Areas of thin patchy cuttings were observed in a similar southward trajectory as the continuous cuttings. Isolated instances of clump and star-like cuttings were also observed mainly north of the well site up to 550 m away along T1.

The sediment core chemistry results indicated that the cuttings deposition was distributed towards the east and south. Barium, lead, and hydrocarbons, parameters associated with drill cuttings, generally decreased with distance from the well site though the statistical correlation was weak. Stations with higher measured levels across drill cuttings associated parameters (barium, lead, hydrocarbons) included T14-4, T14-5, and T14-6 located east of the well site, station T17-1 southeast of the well site, and T20-1 south of the well site. This coincides with areas where continuous cuttings were visually observed. The majority of drill cuttings parameters (lead and hydrocarbons) were also elevated at T16-1 where an area of continuous visual cuttings was also observed. North of the well site, sediment samples show occasional elevated levels of drill cuttings parameters, but this was not consistent across the analytes measured. The monitoring plan placed sediment core stations within the predicted cuttings deposition area, and as such no stations were located in the areas where cuttings were observed on T27. The reference area sample on line T27 had slightly elevated barium in sample A, however no other parameters were elevated. Overall, the chemistry results corroborate the visual observations of continuous drill cuttings deposition.

Drill Cuttings Thickness (Sediment Core Measurements): Sediment cores with observed drill cuttings were measured for the drill cuttings thickness. The drill cuttings were observed as either a grey slurry or

pink or orange flecks in the sediment. The sediment cores where the pink and orange flecks were observed coincided with detected drill cuttings parameters. The measured thickness of drill cuttings in the sediment cores collected approximately 50 m away from the well site (T12-1, T14-3, T14-4, T16-1, up to 75 mm) were consistent with the predicted deposition thickness at these stations (>10 mm). Sediment cores located 128 m to 217 m away (T14-5, T14-6, T17-1, T20-1) had higher cuttings thickness (up to 110 mm) relative to the model predictions (<6.5 mm). It should be noted that the measured thickness may represent the deepest the cuttings were observed within a core sample and is not necessarily an even or consistent layer from the sample surface. For example, the sampling station core with the highest cuttings depth of 65 mm to 110 mm was 159 m away from the well site (T17-1) and had unevenly distributed cuttings within the core (see photos in Appendix D). In sample cores where no cuttings were observed within the core sample, the drill cuttings thickness was either consistent or lower than the model predictions. While not sampled by sediment core, the largest volume of cuttings was present directly adjacent to the well head, as measured against the well itself and visually (all sessile fauna completely absent).

5.1.1.2 *BENTHIC FAUNA SURVEYS*

Benthic fauna surveys (*Condition 3.12.2.2*) showed an overall decline in densities compared to the pre-drilling survey. Sea pens, echinoderms (mainly sea urchins and sea stars) and benthivores (mainly grenadiers) were the dominant taxa observed at the site during the pre-drilling survey. Some variability in benthic fauna presence, abundance, and densities is expected between surveys due to geopositioning variability and changes over time. However, these taxa groups all had declines in overall density across the survey area.

The effects of drill cuttings on benthic fauna densities were most notable nearest the well site. There was an absence of sea pens within approximately 60 m of the well site along eastern sections of T13 and T14 (Figure 3-17) and an absence of echinoderms within approximately 110 of the well site from the northeast to the south along sections of T13, T14, T15, and T16 (Appendix G). While the declines in invertebrate densities may be due to effects from the drill cuttings deposition, there were declines across the survey area and outside of the deposition areas. Similar declines in benthivore fish densities may be due to a redistribution with the decline in potential prey species as these fish are highly mobile.

Coral (all groups) condition declined relative to the pre-drilling survey, mainly surrounding the well site and to the south (Figure 3-23). Corals (all groups) had low condition (25-49% good) between T11 and T17, up to 300 m from the well site. Sections with moderate condition (50-74% good) for corals extended south to T27, up to 590 m away from the well site. While trends in condition decline were also in a south and southwestern pattern similar to the drill cuttings deposition, these trends were not exactly aligned with visual cuttings observations.

5.1.1.3 *COMPARISON WITH ENVIRONMENTAL ASSESSMENT PREDICTIONS*

The drill cuttings modelling predicted cuttings would be highest within 100 m of the well site and lesser accumulations up to two kilometers away (Statoil 2018). This was anticipated to have localized habitat disturbances less than two kilometers from the well site. The extent of cuttings deposition differed in trajectory from the modelled predictions, with cuttings extending to transect (T27) that was 550 m south of the well site.

The EIS (Statoil 2018) predicted that that drill cuttings discharge would have biological effects due to the sedimentation and burial from the discharge of drilling fluids and associated cuttings. The benthic fauna densities decreased throughout the survey area relative to the pre-drilling survey, however the highest

declines were mainly within 150 m from the well site. Lower coral condition was generally lower in areas with observed drill cuttings, but this was not consistent across the area.

The overall effect on the benthic environment remains adverse as predicted in the EIS (Statoil 2018). While the footprint of observed cuttings differs from the model predictions, the geographic extent remains localized to within the EIS Project Area. The duration of the effect considering the observed species and results from other monitoring programs is likely long-term as predicted with eventual recovery (Statoil 2018).

5.1.2 CAPPAHAYDEN

5.1.2.1 DRILL CUTTINGS DEPOSITION EXTENT AND THICKNESS

The post-drilling sediment deposition extent and thickness (*Condition 3.12.2.1*) was assessed through a combination of visual observations of drill cuttings extent, measured cuttings thickness in sediment cores, and sediment chemistry and pre-established locations based on the modelling (EPA release site scenario).

Drill Cuttings Extent (Underwater Visual Observations and Sediment Chemistry): The deposition extent for drill cuttings was farther than predicted based on both the visual observations and sediment chemistry. The cuttings deposition area was partially to the east of the well site and within the model predictions, while another portion was largely to the south of the well site and beyond the model predictions for continuous cuttings areas (Figure 4-4). The portion near the well centre closely matches the model, with thick cuttings near the well and to the east ranging from transects T10 to T18. However, another area of continuous thin and thick cuttings was observed up to 354 m south of the well site with cuttings reaching the edges of transects T15 through to T5. An area of thin patchy cuttings was observed in a southeastward direction. No visible cuttings were noted on either reference area line.

The sediment core chemistry results indicated that the cuttings deposition was distributed towards the north, east, and south near the well centre (Figure 4-5). Barium and hydrocarbons, parameters associated with drill cuttings, generally decreased with distance from the well site though the statistical correlation was weak. Stations with higher measured levels across drill cuttings associated parameters (barium and hydrocarbons) were predominantly those to the east and south, with nearby cores to the north and west as well. This coincides with areas where continuous cuttings were visually observed. The sediment core stations were located within the predicted model area as outlined in the monitoring plan and do not extend to areas where cuttings were observed on transect lines T9 through T5. Samples at both reference areas had lower barium and hydrocarbon values compared to Sitka, with values in line with previous projects in the Newfoundland offshore area. Overall, the chemistry results corroborate the visual observations of continuous drill cuttings deposition.

Drill Cuttings Thickness (Sediment Core Measurements): Sediment cores with observed drill cuttings were used as an indicator for the drill cuttings thickness measurements. The drill cuttings were observed as pink or orange flecks in the sediment. The sediment cores where the pink and orange flecks were observed largely coincided with detected drill cuttings parameters, though some cores had no visible cuttings and had elevated chemistry values. The measured thickness of drill cuttings in the sediment cores collected less than 60 m from the well site (T14-1, T15-1, T18-2, up to 110 mm) were consistent with the predicted deposition thickness at these stations (>10 mm). The only other cores with visible cuttings thickness were at station T13-1 located 137 m from the well centre. This site is within the predicted cuttings deposition to the east, though the thickness exceeded the modeled maximum

predicted thickness. It should be noted that the measured thickness represents the deepest point where the cuttings were observed within a core and is not necessarily an even or continuous layer. While not sampled by sediment core, the largest volume of cuttings was present directly adjacent to the well head, as measured against the well itself and visually (all sessile fauna completely absent).

5.1.2.2 *BENTHIC FAUNA SURVEYS*

Benthic fauna surveys (*Condition 3.12.2.2*) showed either an overall decrease, a small increase, or minimal change for various taxa. Sea pens, echinoderms (mainly sea urchins and sea stars) and benthivores (mainly grenadiers) were the dominant taxa observed at the site during the pre-drilling survey. Some variability in benthic fauna presence, abundance, and densities is expected between surveys due to geopositioning variability and changes over time.

The effects of drill cuttings on benthic fauna densities were most notable nearest the well site. Some areas to the east of the well site had absences of sea pens and other benthic fauna. While the declines in invertebrate densities may be due to effects from the drill cuttings deposition, there were declines across the survey area and outside of the deposition areas, especially for sea pens. However, other groups such as small gorgonians and other corals, had small increases in the post-drilling survey. Invertebrates and fish groups experienced minimal changes overall, while sponges had a large increase as none were noted in the pre-drilling survey.

Coral (all groups) condition declined relative to the pre-drilling survey, mainly surrounding the well site and to the south. Several sections near and to the east of the well site had 0% Good rated corals, and sections just beyond had generally <50% Good condition. These declines were generally localized to survey sections where cuttings were visible including some sections to the south of the well site, with overall condition in the grid lines area decreasing from 99.76% in the pre-drilling to 90.55% in the post-drilling survey.

5.1.2.3 *COMPARISON WITH ENVIRONMENTAL ASSESSMENT PREDICTIONS*

The drill cuttings modelling predicted cuttings would be highest within 100 m of the well site and lesser accumulations up to two kilometers away (Statoil 2018). This was anticipated to have localized habitat disturbances less than two kilometers from the well site. The areas of cuttings deposition differed in trajectory from the modelled predictions, with cuttings extending to transect T5 that was 354 m south of the well site.

The EIS (Statoil 2018) predicted that that drill cuttings discharge would have biological effects due to the sedimentation and burial from the discharge of drilling fluids and associated cuttings. Some benthic fauna densities decreased throughout the survey area relative to the pre-drilling survey, however the highest declines were mainly within 150 m from the well site. Lower coral condition was generally lower in areas with observed drill cuttings.

The overall effect on the benthic environment remains adverse as predicted in the EIS (Statoil 2018). While the footprint of observed cuttings differs from the model predictions, the geographic extent remains localized to within the EIS Project Area. The duration of the effect considering the observed species and results from other monitoring programs is likely long-term as predicted, with eventual recovery (Statoil 2018).

5.2 CONCLUSION

The purpose of the 2024 post-drilling survey program was to fulfill follow-up monitoring requirements described in Condition 3.12 of the 2019 Decision Statement (CEAA 2019) issued for the project EIS titled Flemish Pass Exploration Drilling Project (Statoil 2017) (Table 1-2). The following summarizes the follow-up monitoring results with the specific conditions for both the Sitka C-02 and Cappahayden C-85 well sites.

5.2.1 SITKA

Condition 3.12.2.1 - measurement of sediment deposition extent and thickness post-drilling to verify the drill waste deposition modeling predictions;

Overall, the extent of drill cuttings based on underwater visual observations and sediment chemistry is beyond the predicted deposition. The continuous visual cuttings extend up to the survey boundaries approximately 560 m away along T27. Sediment chemistry results, including tracers such as barium and hydrocarbon levels, are elevated outside the predicted cuttings footprint. The drill cuttings thickness, however, was consistent with model predictions approximately 50 m from the well site, but variable farther away from the well site.

Condition 3.12.2.2 benthic fauna surveys to verify the effectiveness of mitigation measures;

Benthic fauna surveys were conducted to monitor the benthic species in accordance with a prepared monitoring plan. There were declines in observed benthic fauna densities across the survey area with an absence of taxa groups near the well site. The lower coral conditions to the south and southwest support a south and southwest trajectory for drill cuttings dispersion.

Condition 3.12.2.3 - The Proponent shall report the information collected, as identified in conditions 3.12.2.1 and 3.12.2.2, including a comparison of modelling results to in situ results, to the Board within 60 days following the drilling of the first well in each exploration licence

This report describes the information collected pursuant to conditions 3.12.2.1 and 3.12.2.2, including a comparison of modelling results to *in situ* results and is submitted to the Board within 60 days following the abandonment of the Sitka C-02 well.

5.2.2 CAPPAHAYDEN

Condition 3.12.2.1 - measurement of sediment deposition extent and thickness post-drilling to verify the drill waste deposition modeling predictions;

Overall, the extent of drill cuttings based on underwater visual observations and sediment chemistry is beyond the predicted deposition. The continuous cuttings extend up to the survey boundaries approximately 354 m away along T5. Sediment chemistry results, including tracers such as barium and hydrocarbon levels, are elevated outside the predicted cuttings footprint. The drill cuttings thickness, however, was consistent with model predictions approximately 50 m from the well site, but variable farther away from the well site.

Condition 3.12.2.2 benthic fauna surveys to verify the effectiveness of mitigation measures;

Benthic fauna surveys were conducted to monitor the benthic species in accordance with a prepared monitoring plan. There were declines in some benthic fauna densities across the survey area with an absence of taxa groups near the well site. The lower coral conditions to the south and east support a south and east trajectory for drill cuttings dispersion.

Condition 3.12.2.3 - The Proponent shall report the information collected, as identified in conditions 3.12.2.1 and 3.12.2.2, including a comparison of modelling results to in situ results, to the Board within 60 days following the drilling of the first well in each exploration licence

This report describes the information collected pursuant to conditions 3.12.2.1 and 3.12.2.2, including a comparison of modelling results to *in situ* results and is submitted to the Board within 60 days following the abandonment of the Cappahayden C-85 well.

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APPENDIX

A SITKA WELL SITE DATASHEETS

APPENDIX

Table A-1 Post-drilling Sitka benthic survey observations.

| | | | | | | | | | | | | Sediment | | | | Corals | | | | | | | | | Sponges | | | | | | | | | | | |

APPENDIX

Table A-1 Post-drilling Sitka benthic survey observations.

| | | | | | | | | | | | | Sediment | | | | Corals | | | | | | | | | Sponges | | | | | | | | | | | |

APPENDIX

Table A-1 Post-drilling Sitka benthic survey observations.

| | | | | | | | | | | | | Sediment | | | | Corals | | | | | | | | | Sponges | | | | | | | | | | | |

APPENDIX

Table A-1 Post-drilling Sitka benthic survey observations.

| | | | | | | | | | | | | | Sediment | | | | Corals | | | | | | | | | Sponges | | | | | | | | | | | | |

APPENDIX

Table A-1 Post-drilling Sitka benthic survey observations.

| | | | | | | | | | | | | | Sediment | | | | Corals | | | | | | | | | Sponges | | | | | | | | | | | | |

APPENDIX

Table A-1 Post-drilling Sitka benthic survey observations.

| | | | | | | | | | | | | Sediment | | | | Corals | | | | | | | | | Sponges | | | | | | | | | | | |

APPENDIX

Table A-1 Post-drilling Sitka benthic survey observations.

| | | | | | | | | | | | | Sediment | | | | Corals | | | | | | | | | Sponges | | | | | | | | | | | |

APPENDIX

B CAPPAHAYDEN WELL SITE DATASHEETS

APPENDIX

Table B-1 Post-drilling Cappahayden benthic survey observations.

| | | | | | | | | | | | | | Sediment | Corals (Individuals) | | | | | | | | Sponges (Individuals) | | | | | | | | | | | | |

APPENDIX

Table B-1 Post-drilling Cappahayden benthic survey observations.

| | | | | | | | | | | | | | Sediment | Corals (Individuals) | | | | | | | | Sponges (Individuals) | | | | | | | | | | | | |

APPENDIX

Table B-1 Post-drilling Cappahayden benthic survey observations.

| | | | | | | | | | | | | | Sediment | Corals (Individuals) | | | | | | | | | Sponges (Individuals) | | | | | | | | | | | | |

APPENDIX

Table B-1 Post-drilling Cappahayden benthic survey observations.

| | | | | | | | | | | | | | Sediment | Corals (Individuals) | | | | | | | | | Sponges (Individuals) | | | | | | | | | | | | |

APPENDIX

Table B-1 Post-drilling Cappahayden benthic survey observations.

| | | | | | | | | | | | | | | Sediment | Corals (Individuals) | | | | | | | | | Sponges (Individuals) | | | | | | | | | | | | | |

APPENDIX

C ROV SPECIFICATIONS

HD WROV SYSTEM

Class III Remotely Operated Vehicle

Innovative features in the frame design and modular subsystems produce a high performance vehicle suitable for IMR, drill support, and construction operations, while maintaining a compact system footprint.

BOURBON-OFFSHORE-DNT.IT

Bourbon Offshore DNT

HD WROV SYSTEM

150HP OF HYDRAULIC POWER

- Separate hydraulic circuits: main for propulsion and manipulators, auxiliary for tooling
- Automatic heading, depth, altitude, attitude, auto-tuning, and StationKeep
- AutoTrack utility to control vehicle through survey coordinates
- Digital Telemetry System: serial, video, Ethernet through Gigabit backbone
- Optional 1080i FULL-HD video capability on multiple cameras
- New-generation FMC Schilling "Hammerhead" operating system

GENERAL SPECIFICATIONS

Depth rating (msw):	3000
Dimensions (L x W x H - m):	2.5 x 1.7 x 1.9
Weight in air (Ton):	3.4
Through-frame lift (Ton):	up to 3.0

PERFORMANCE

Power (hp):	150
Thrusters (horizontal/vertical):	4 x SA380 / 3 x SA380
Forward, Aft, Lateral bollard (Kgf):	750
Vertical down/up bollard (Kgf):	750 / 720
Forward, aft speed (knots):	3.0
Lateral, vertical speed (knots):	2.2

AUTO FUNCTION CONTROL

Auto heading (deg):	± 2
Auto depth (cm):	± 15
Auto altitude (cm):	± 15
Station keep (m):	± 0.3
Displacement (m):	± 0.15

SENSORS

Fibre optic gyro heading sensor:	CDL TOGS 0.5 deg accuracy 0.1 deg RMS pitch / roll
Depth Sensor:	Digiquartz 8000 1 x 10-8 resolution
DVL:	1200KHz Workhorse ±0.2% bottom velocity
Sonar:	Tritech Super Seaking

CAMERAS AND LIGHTS

First Pan & Tilt unit:	1 x electric FMC Schilling
Second Pan & Tilt unit:	Optional
Low light B/W:	1
Color CCD zoom:	1
Color CCD fixed focus:	1
Titan 4 wrist camera:	Optional
LED lights:	8

HYDRAULIC SPECIFICATIONS

Maximum main/aux pressure (bar):	207 / 207
Maximum main/aux flow (lpm):	240 / 80
8-F valve packs:	2 x Sub-Atlantic GFV*
8-F valve packs max flow (lpm):	12
8-F valve packs max pressure (bar):	207
3-F manifold:	1 x FMC Schilling
3-F manifold max flow (bar):	160**
3-F manifold max pressure (bar):	207

*5 functions are reserved for Rig-Master movements

**Limited by aux circuit flow

MANIPULATORS

7 functions:	FMC Schilling Titan 4
5 functions grabber:	FMC Schilling Rig-Master

TELEMETRY SYSTEM

Standard channel types*:	10 / 100 Ethernet, RS232, PAL video, 1080p HD-video
Subsea power outputs:	110VAC, 48VDC, 24VDC
Gigabit multiplexer:	Optional

*Setup and quantity may be reconfigured

TOP HAT TETHER MANAGEMENT SYSTEM

Dimensions (Ø x H - m)*:	1.9 x 2.2 / 2.3 x 2.2
Weight in air (Ton):	3.0 / 3.1
Tether length max capacity (m)*:	425 / 850
Pan & Tilt:	1 x electric Schilling
Depth Sensor:	Digiquartz 8000
Color CCD Zoom Camera:	2
HID lights:	2

*Actual specifications may vary depending on ROV unit

CONTROL VAN, WORKSHOP AND STORAGE

2 x ISO 20' containers + 1 x 10' container

TELESCOPIC LAUNCH & RECOVERY SYSTEM

Telescoping A-Frame (L x W x H - m):	8.3 x 2.5 x 3.1
A-frame maximum height (m):	9.6
A-Frame weight (Ton):	22
Winch (L x W x H - m):	3.8 x 2.2 x 3.0
Winch weight (Ton):	22
Levelwind (L x W x H - m):	3.8 x 2.2 x 2.0
Levelwind weight (Ton):	7
Levelwind + winch (L x W x H - m):	3.8 x 2.2 x 5.0*
Levelwind + winch weight (Ton):	29*
Winch max umbilical capacity (m):	3300
HPU (L x W x H - m):	1.4 x 2.4 x 2.4
HPU weight (Ton):	4.2

*Not meant to be lifted as a single piece. Figures to be used for deck layout only.

STANDARD OPERATIONAL LIMITS

Beaufort:	6

ELECTRICAL REQUIREMENTS

ROV, control van:	380 / 480 VAC, 50 / 60Hz, 3PH, 630A
LARS:	440 VAC ±10%, 60Hz, 3PH, 400A

ROAD TRANSPORTATION

Number of trucks:	5 (approximately)

BOURBON-OFFSHORE-DNT.IT
DNT@BOURBON-ONLINE.COM

BOURBON

All particulars believed to be correct but not guaranteed. All equipment stated in the brochure might be replaced with better or equivalent parts.
Version 02 — Original date: 17/03/2015 — Version date: 02/03/2015

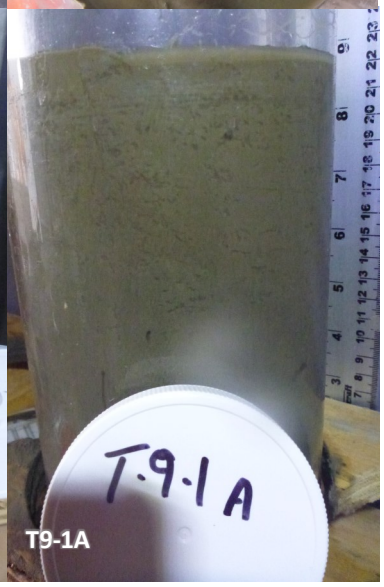
APPENDIX

D SEDIMENT CORE PHOTOS

T1-1A
T-1-1A

T1-1B

T6-1B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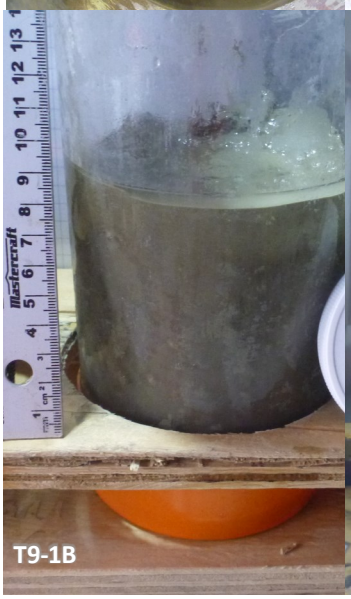
T-9-1 A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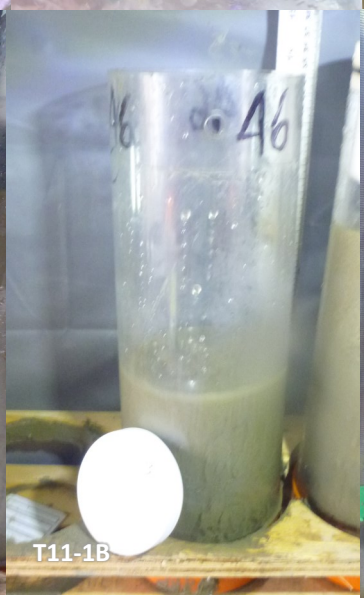
T11-1A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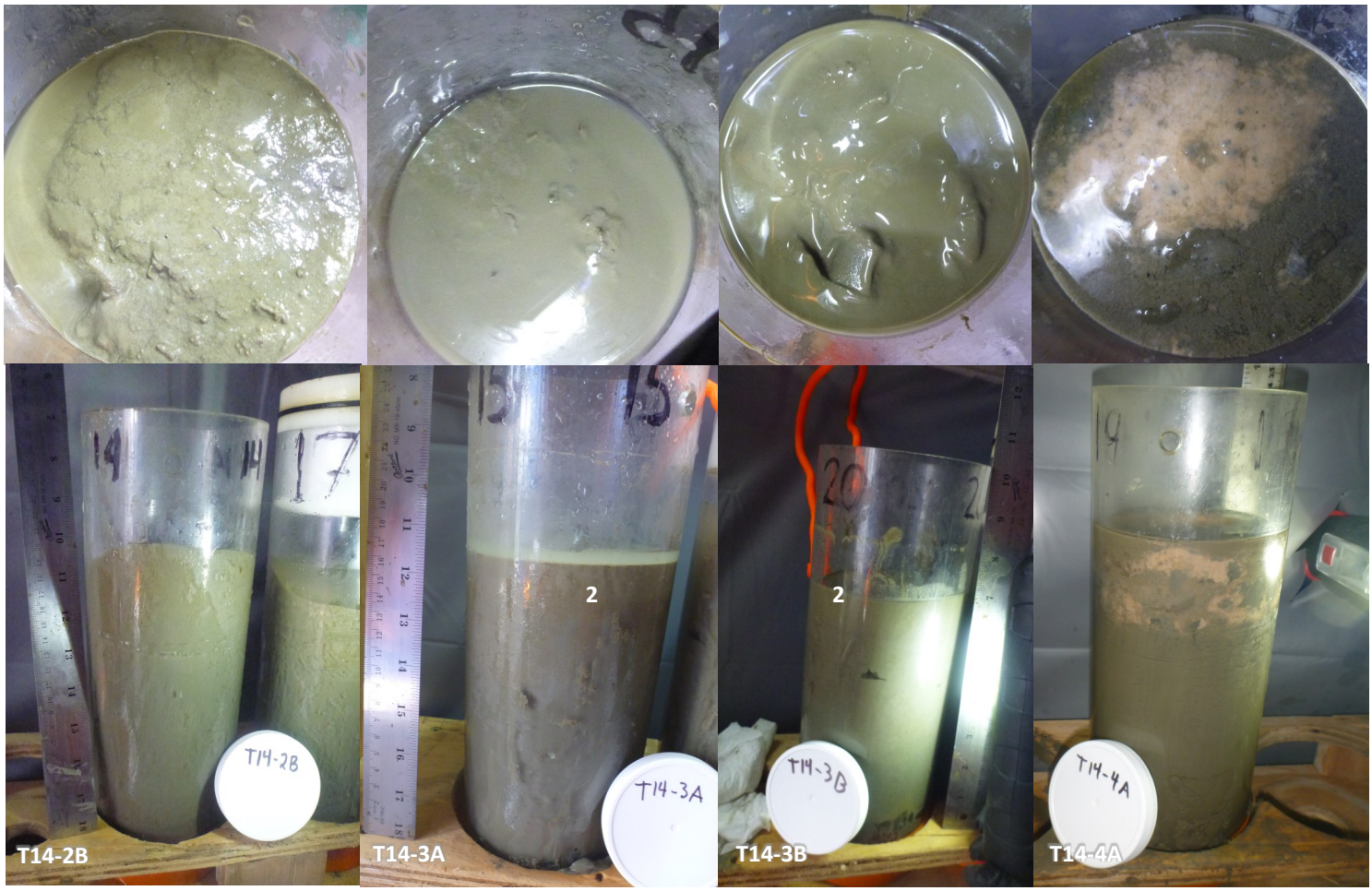
T12-1A
T-12-1A

T12-1B
T14-1A
T14-1B
T14-2A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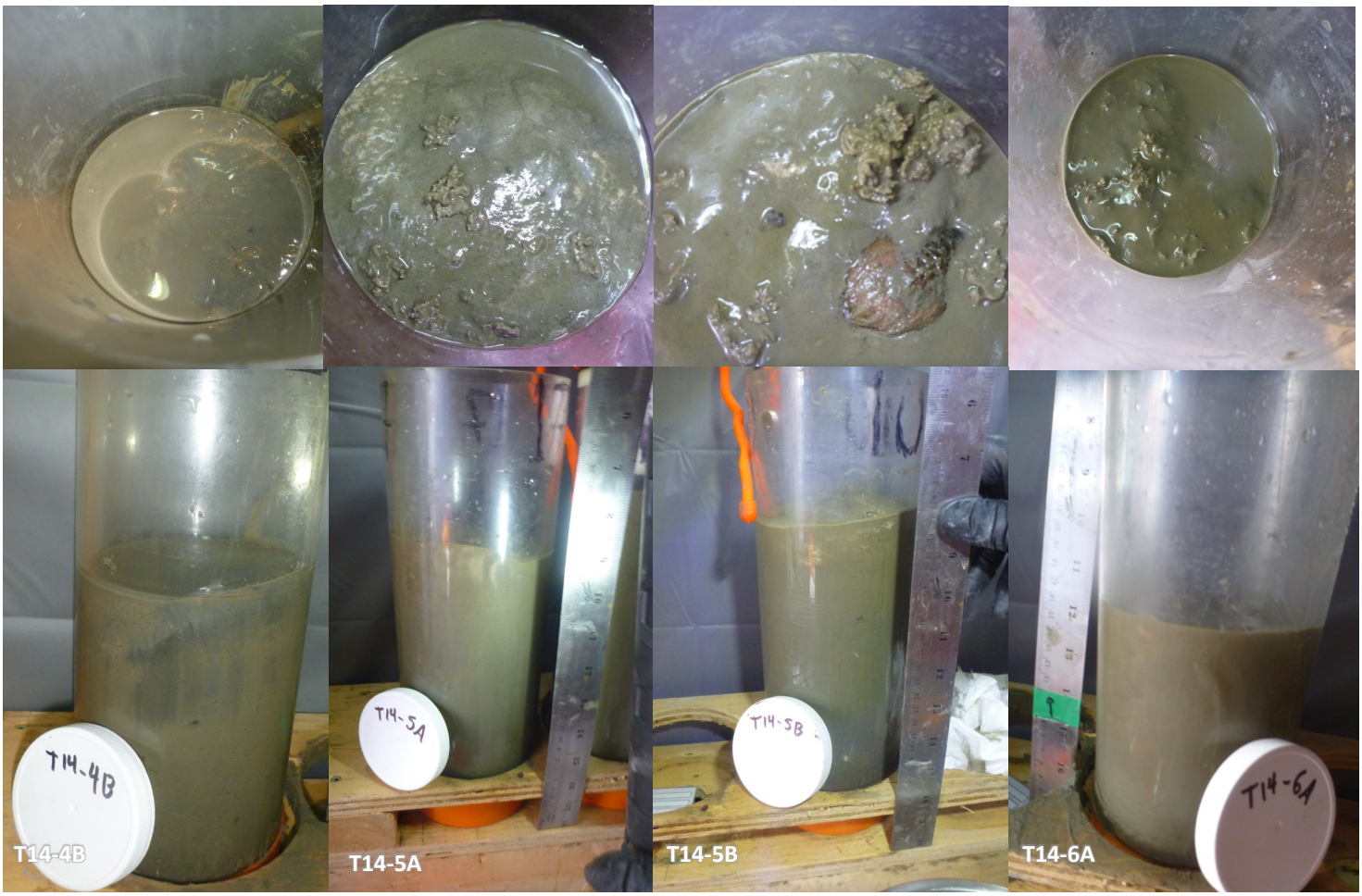
T14-3B
T14-4A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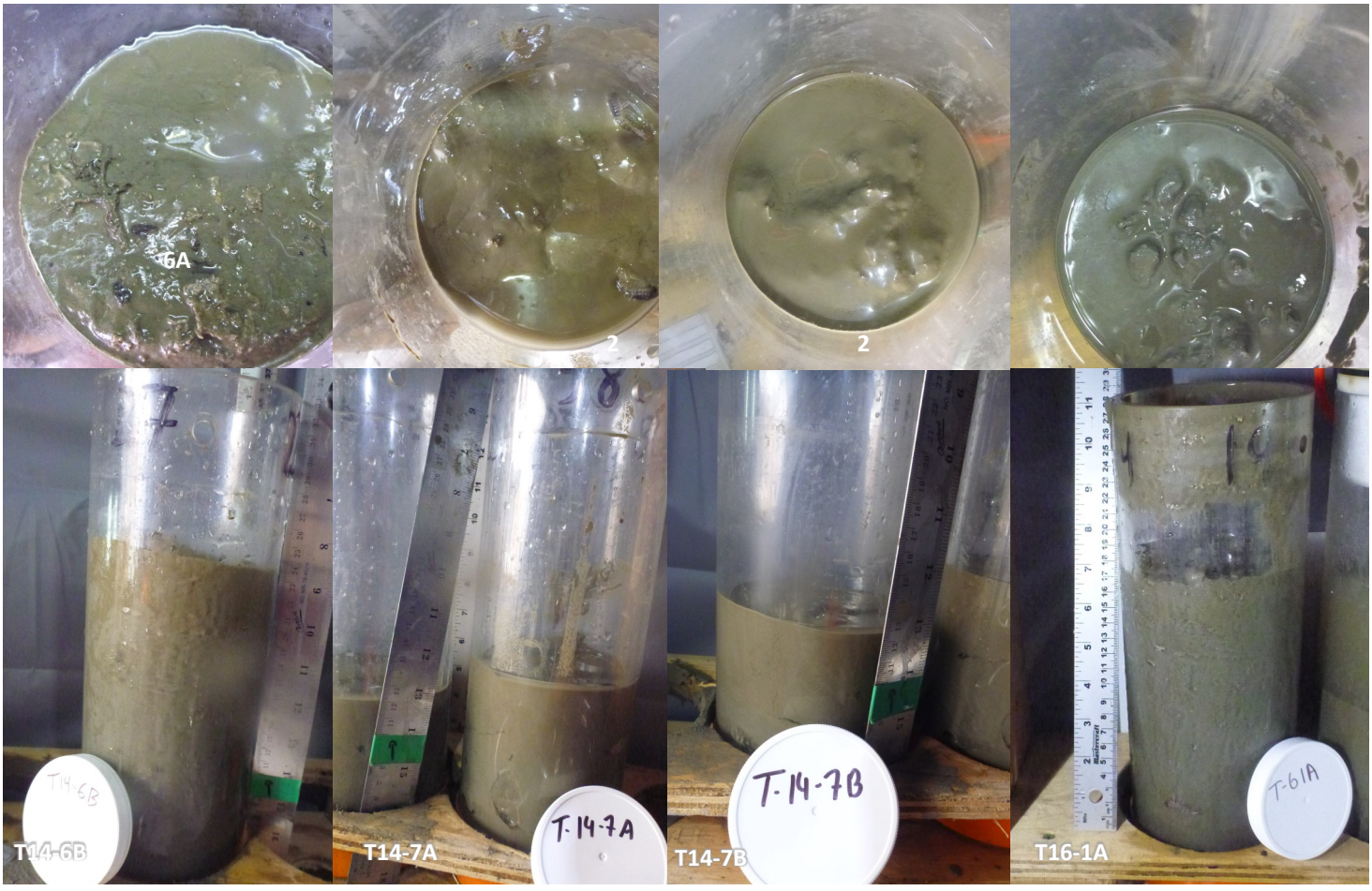
T14-6A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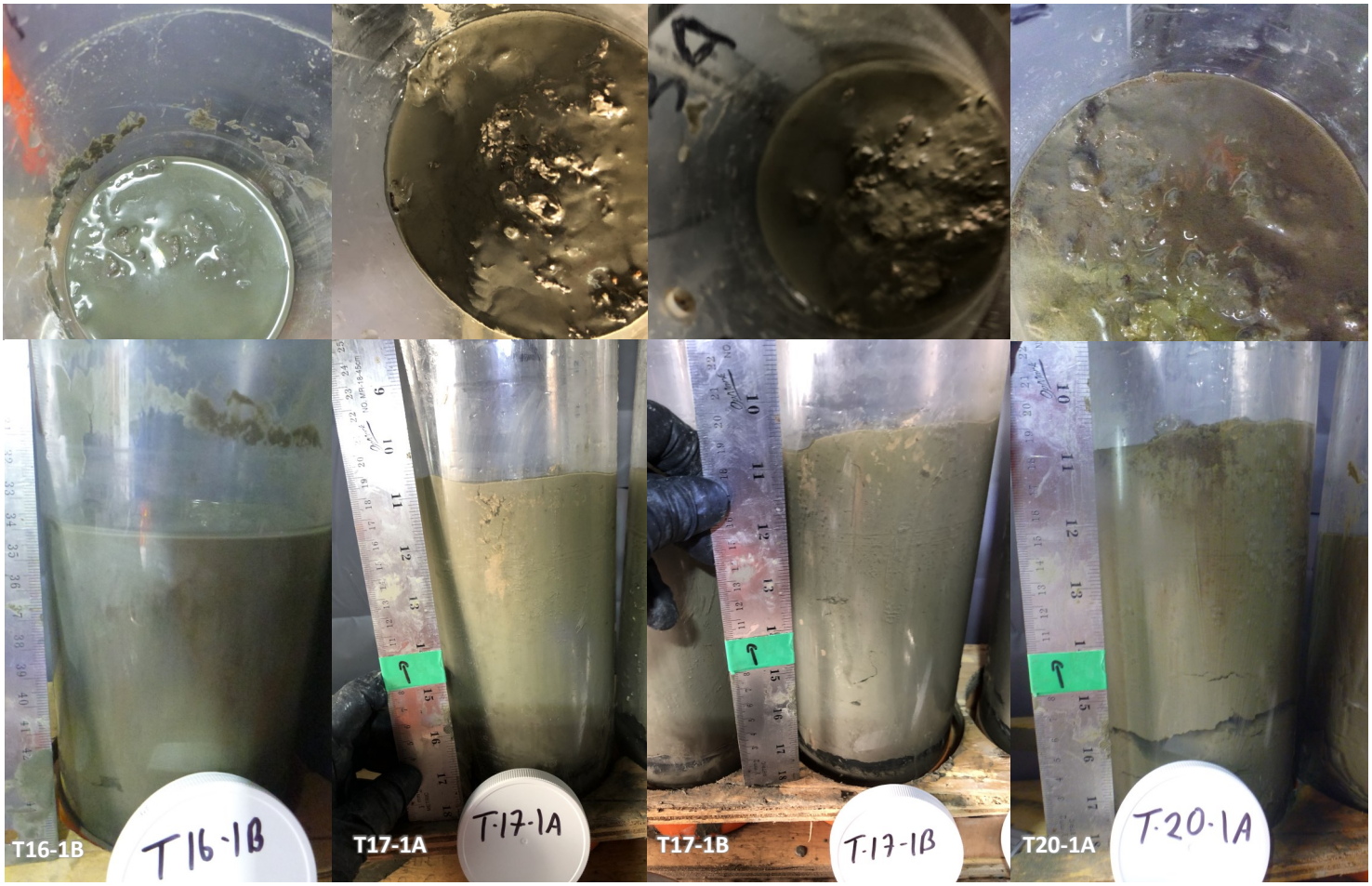
T14-7B
T16-1A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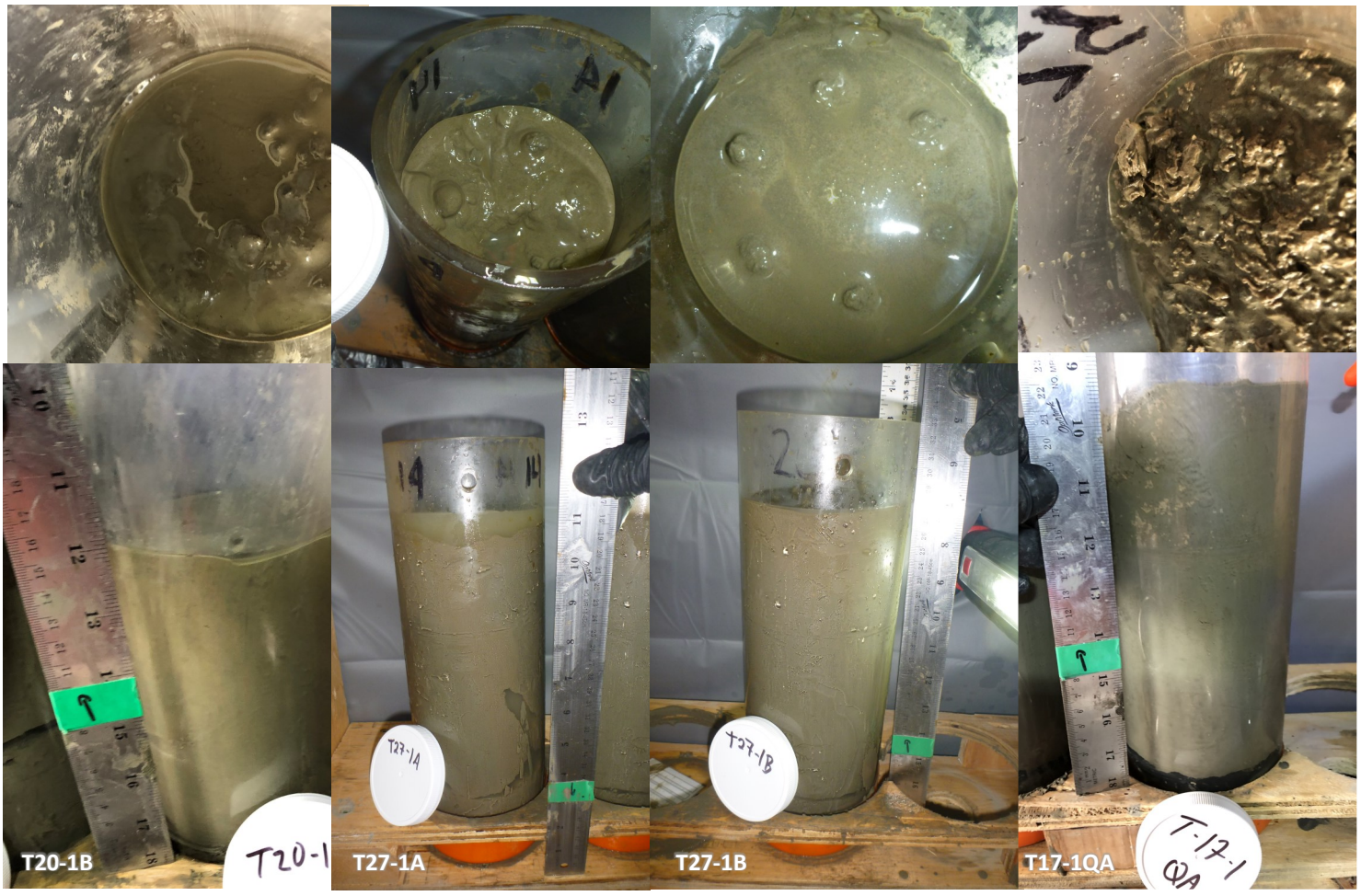
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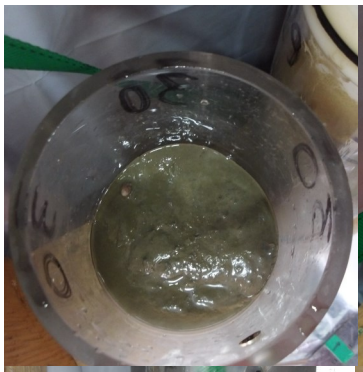
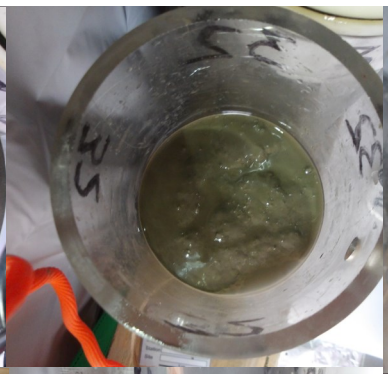
T17-1QA

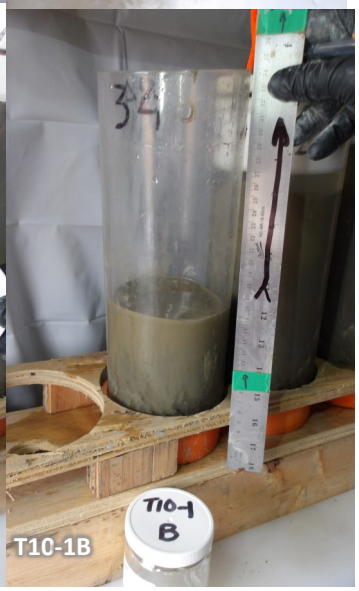




T2-1A

T2-1B

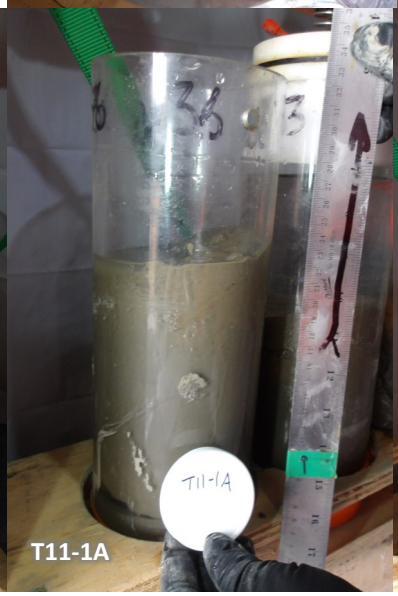
T10-1A



T10-1B

T10-2A

T10-2B

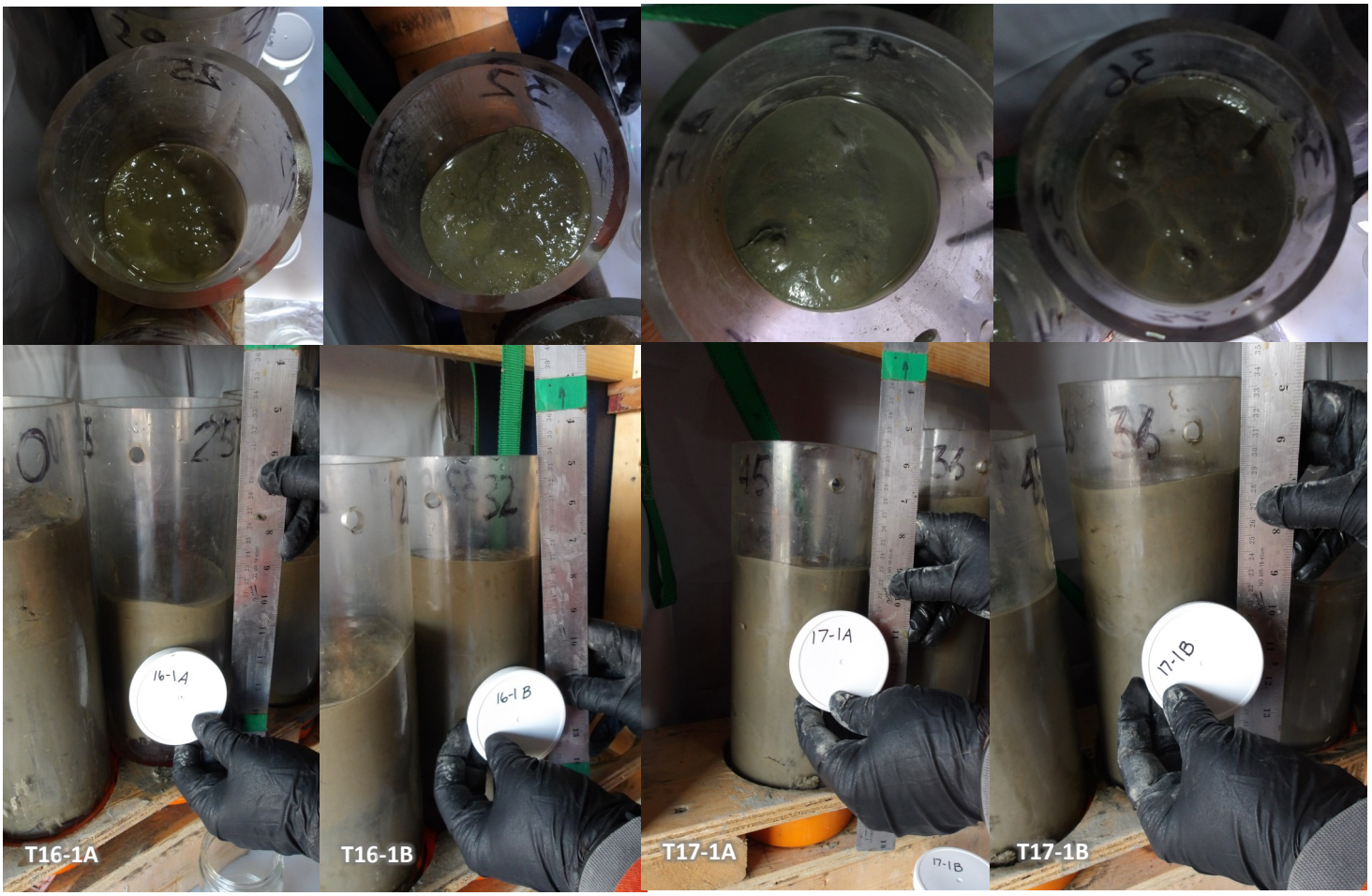


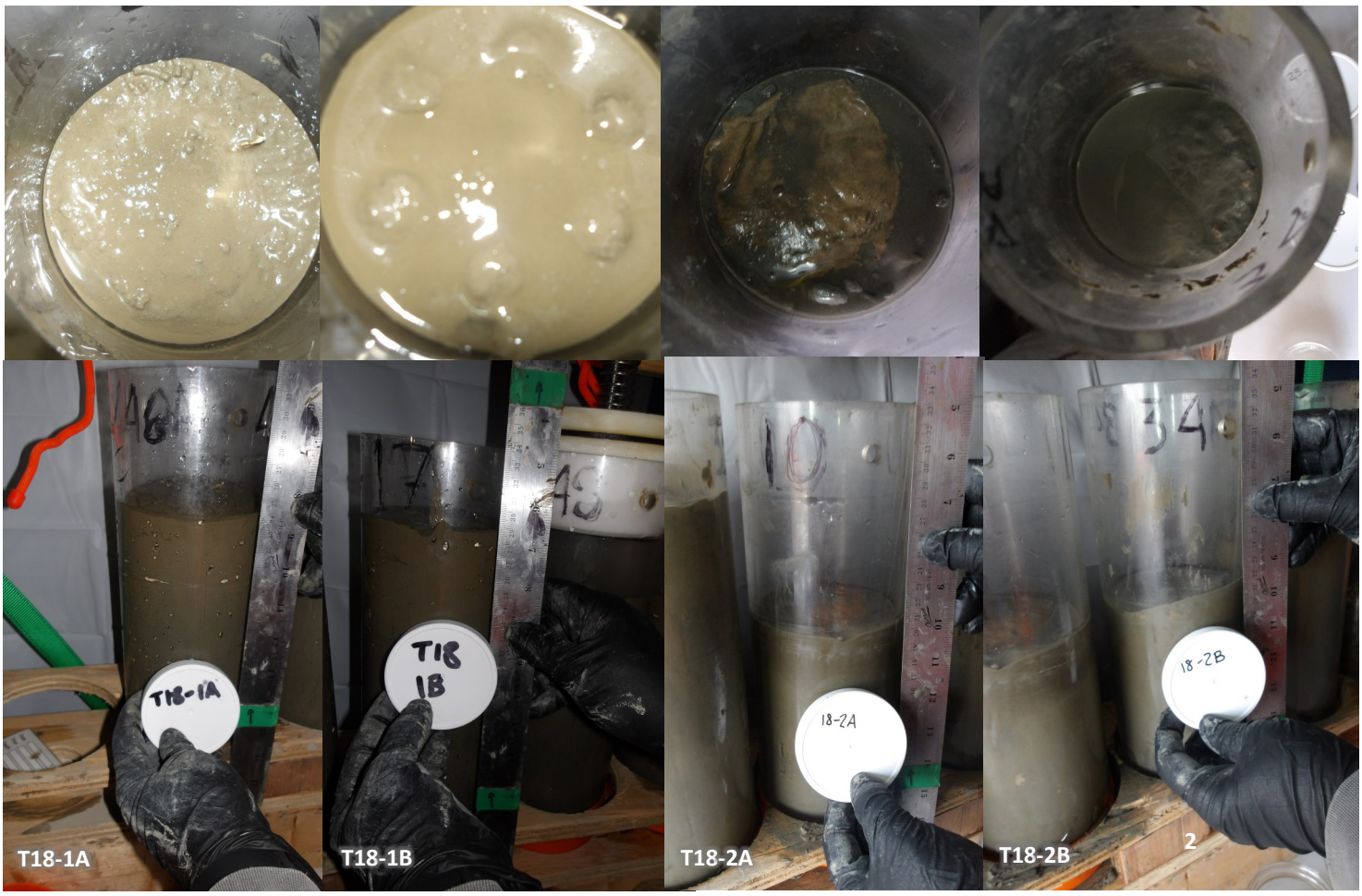
T11-1A

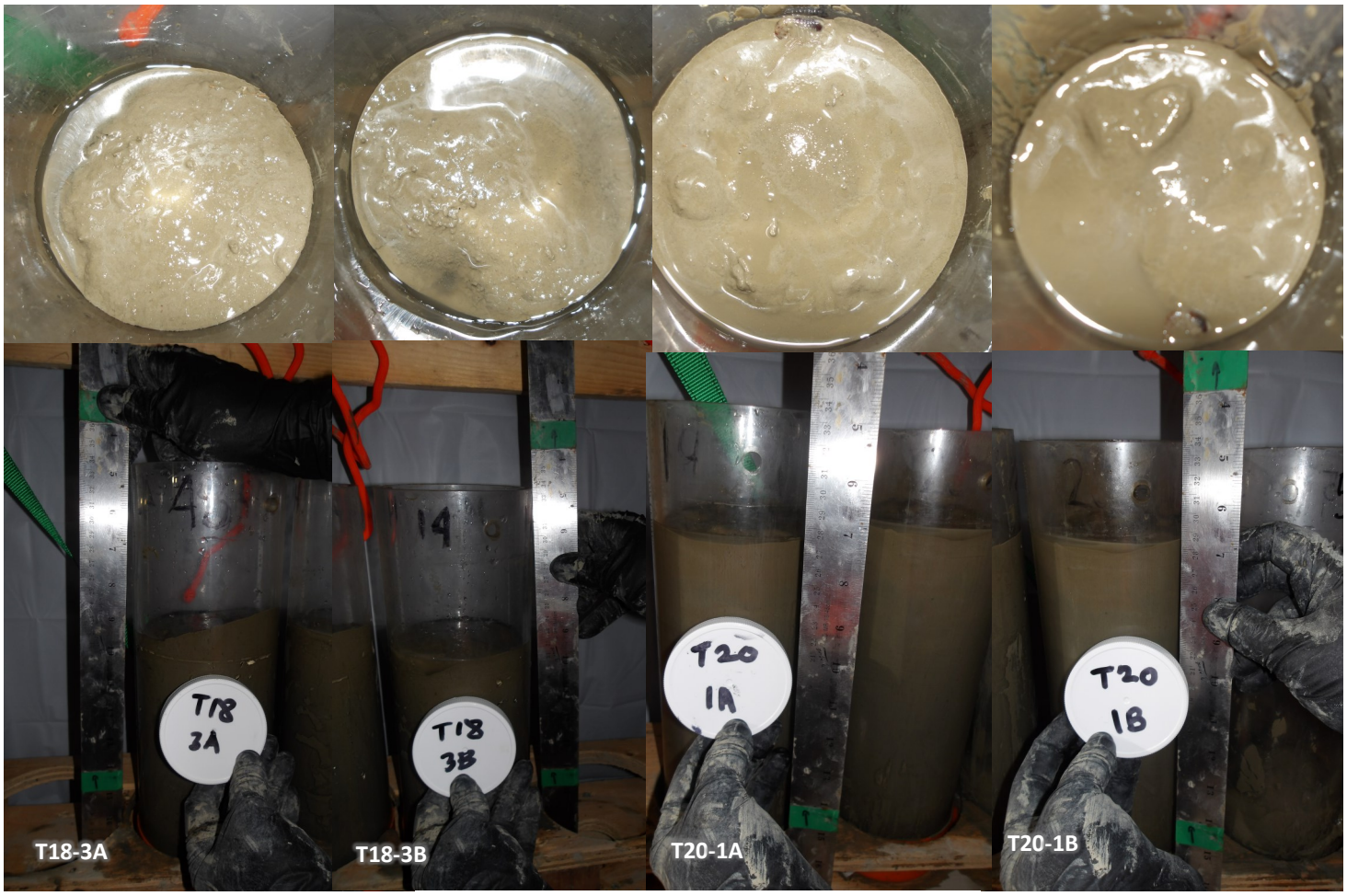
T11-1B

T11-2A
T11-2B
T13-1A
T13-1B

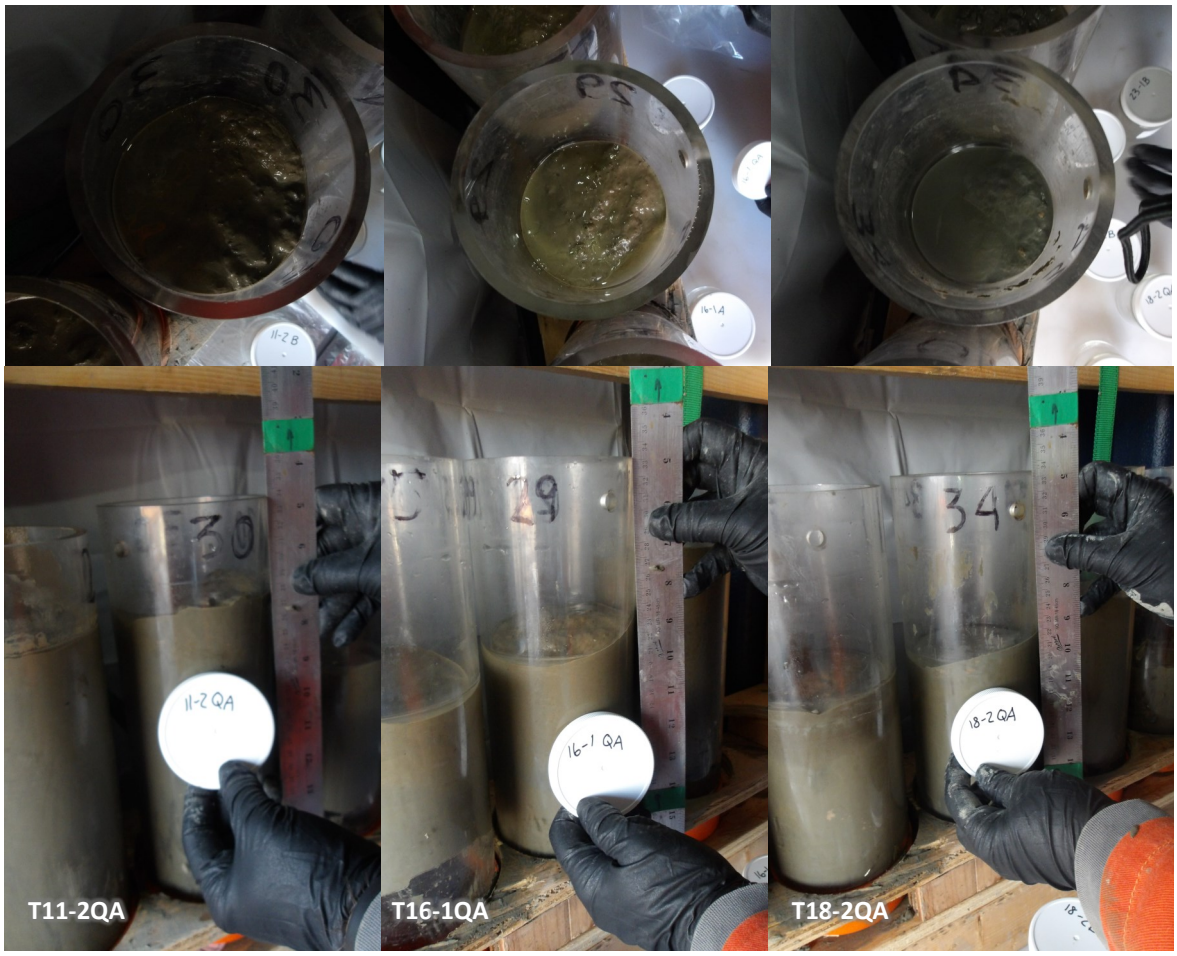
T14-1A
T14-1B
T15-1A
T15-1B


T16-1A
T16-1B
T17-1A
T17-1B


T18-1A
T18-1B
T18-2A
T18-2B


T18 3A
T18 3B
T20 1A
T20 1B
T18-3A
T18-3B
T20-1A
T20-1B

23-1A
23-1B
T30 1A
T30 1B
T23-1A
T23-1B
T30-1A
T30-1B


T11-2QA
T16-1QA
T18-2QA

APPENDIX

E CHEMICAL ANALYSIS RESULTS

Your P.O. #: CA00024395.4785
Your Project #: CA00024395.4785
Your C.O.C. #: C#101301-01-01

Attention: Kyle Millar

WSP Canada Inc.
36 Pippy Place
PO Box 13216
St John's , NL
CANADA A1B 3X2

Report Date: 2025/01/17
Report #: R8471897
Version: 3 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C4U8544
Received: 2024/10/02, 09:24

Sample Matrix: Sediment
Samples Received: 35

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
TEH in Soil (Low Level PIRI) (1)	10	2024/10/11	2024/10/23	ATL SOP 00111	Atl. RBCA v3.1 m
TEH in Soil (Low Level PIRI) (1)	14	2024/10/18	2024/10/23	ATL SOP 00111	Atl. RBCA v3.1 m
TEH in Soil (Low Level PIRI) (1)	3	2024/10/18	2024/10/24	ATL SOP 00111	Atl. RBCA v3.1 m
TEH in Soil (Low Level PIRI) (1)	5	2024/10/18	2024/10/25	ATL SOP 00111	Atl. RBCA v3.1 m
TEH in Soil (Low Level PIRI) (1)	1	2024/10/18	2024/10/28	ATL SOP 00111	Atl. RBCA v3.1 m
TEH in Soil (Low Level PIRI) (1)	2	2024/10/07	2024/10/23	ATL SOP 00111	Atl. RBCA v3.1 m
Metals Solids Acid Extr. ICPMS	10	2024/10/07	2024/10/07	ATL SOP 00058	EPA 6020B R2 m
Metals Solids Acid Extr. ICPMS	8	2024/10/08	2024/10/08	ATL SOP 00058	EPA 6020B R2 m
Metals Solids Acid Extr. ICPMS	17	2024/10/09	2024/10/09	ATL SOP 00058	EPA 6020B R2 m
Moisture	35	N/A	2024/10/08	ATL SOP 00001	OMOE Handbook 1983 m
Particle size in solids (pipette&sieve) (2)	12	N/A	2024/10/15	ATL SOP 00012	MSAMS'78/WREP-125R3m
Particle size in solids (pipette&sieve) (2)	13	N/A	2024/10/16	ATL SOP 00012	MSAMS'78/WREP-125R3m
Particle size in solids (pipette&sieve) (2)	10	N/A	2024/10/17	ATL SOP 00012	MSAMS'78/WREP-125R3m
VPH in Soil (PIRI) - Field Preserved (3)	15	N/A	2024/10/07	ATL SOP 00119	Atl. RBCA v3.1 m
VPH in Soil (PIRI) - Field Preserved (3)	20	N/A	2024/10/09	ATL SOP 00119	Atl. RBCA v3.1 m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the

Your P.O. #: CA00024395.4785
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PO Box 13216
St John's , NL
CANADA A1B 3X2

Report Date: 2025/01/17
Report #: R8471897
Version: 3 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C4U8544
Received: 2024/10/02, 09:24
customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) Soils are reported on a dry weight basis unless otherwise specified.
(2) Note: Graphical representation of larger fractions (PHI-4, PHI -3 and PHI -2) not applicable unless these optional parameters are specifically requested.
(3) No lab extraction date is given for C6-C10/BTEX and VOC samples that are field preserved with methanol. Extraction date is date sampled unless otherwise stated.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:
Maryann Comeau, Customer Experience Supervisor/PM
Email:
Phone# (902)420-0203 Ext:298
==========
Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Suzanne Rogers, General Manager responsible for Nova Scotia Environmental laboratory operations.

Bureau Veritas Job #: C4U8544
Report Date: 2025/01/17

WSP Canada Inc.
Client Project #: CA00024395.4785
Your P.O. #: CA00024395.4785

RESULTS OF ANALYSES OF SEDIMENT

Bureau Veritas ID		AEPE90	AEPE90	AEPE91	AEPE92	AEPE93			
Sampling Date		2024/09/28	2024/09/28	2024/09/28	2024/09/28	2024/09/28			
COC Number		C#101301-01-01	C#101301-01-01	C#101301-01-01	C#101301-01-01	C#101301-01-01			
	UNITS	T1-1A	T1-1A Lab-Dup	T1-1B	T6-1A	T6-1B	RDL	MDL	QC Batch
Inorganics									
Moisture	%	32	N/A	31	32	35	1.0	0.20	9686109
< -1 Phi (2 mm)	%	100	100 (1)	100	100 (2)	100	0.10	N/A	9686206
< 0 Phi (1 mm)	%	100	99	100	100	100	0.10	N/A	9686206
< +1 Phi (0.5 mm)	%	99	99	100	100	100	0.10	N/A	9686206
< +2 Phi (0.25 mm)	%	99	99	99	100	100	0.10	N/A	9686206
< +3 Phi (0.12 mm)	%	97	97	97	98	98	0.10	N/A	9686206
< +4 Phi (0.062 mm)	%	84	84	85	89	89	0.10	N/A	9686206
< +5 Phi (0.031 mm)	%	54	53	55	59	61	0.10	N/A	9686206
< +6 Phi (0.016 mm)	%	36	36	37	42	41	0.10	N/A	9686206
< +7 Phi (0.0078 mm)	%	24	24	24	24	27	0.10	N/A	9686206
< +8 Phi (0.0039 mm)	%	22	22	22	26	25	0.10	N/A	9686206
< +9 Phi (0.0020 mm)	%	18	18	18	20	21	0.10	N/A	9686206
Gravel	%	<0.10	0.35 (3)	<0.10	<0.10	<0.10	0.10	N/A	9686206
Sand	%	16	16	15	11	11	0.10	N/A	9686206
Silt	%	62	62	63	63	64	0.10	N/A	9686206
Clay	%	22	22	22	26	25	0.10	N/A	9686206

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) PSA sample observation comment: Fraction contained 1 large rock.
(2) PSA sample observation comment: Fraction contained organic matter.
(3) %RPD acceptable. Duplicate values agree within 10% absolute.

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Bureau Veritas Job #: C4U8544
Report Date: 2025/01/17

WSP Canada Inc.
Client Project #: CA00024395.4785
Your P.O. #: CA00024395.4785

RESULTS OF ANALYSES OF SEDIMENT

Bureau Veritas ID		AEPE94		AEPE95	AEPE95	AEPE96			
Sampling Date		2024/09/29		2024/09/28	2024/09/28	2024/09/28			
COC Number		C#101301-01-01		C#101301-01-01	C#101301-01-01	C#101301-01-01			
	UNITS	T9-1A	QC Batch	T9-1B	T9-1B Lab-Dup	T9-1B QAQC	RDL	MDL	QC Batch
Inorganics									
Moisture	%	35	9686109	37	37	37	1.0	0.20	9686544
< -1 Phi (2 mm)	%	100	9686206	100	N/A	100	0.10	N/A	9686206
< 0 Phi (1 mm)	%	100	9686206	100	N/A	100	0.10	N/A	9686206
< +1 Phi (0.5 mm)	%	100	9686206	100	N/A	100	0.10	N/A	9686206
< +2 Phi (0.25 mm)	%	100	9686206	100	N/A	100	0.10	N/A	9686206
< +3 Phi (0.12 mm)	%	99	9686206	99	N/A	99	0.10	N/A	9686206
< +4 Phi (0.062 mm)	%	90	9686206	91	N/A	91	0.10	N/A	9686206
< +5 Phi (0.031 mm)	%	60	9686206	67	N/A	65	0.10	N/A	9686206
< +6 Phi (0.016 mm)	%	41	9686206	44	N/A	46	0.10	N/A	9686206
< +7 Phi (0.0078 mm)	%	27	9686206	28	N/A	31	0.10	N/A	9686206
< +8 Phi (0.0039 mm)	%	24	9686206	25	N/A	28	0.10	N/A	9686206
< +9 Phi (0.0020 mm)	%	20	9686206	20	N/A	23	0.10	N/A	9686206
Gravel	%	<0.10	9686206	<0.10	N/A	<0.10	0.10	N/A	9686206
Sand	%	10	9686206	8.9	N/A	9.3	0.10	N/A	9686206
Silt	%	66	9686206	66	N/A	63	0.10	N/A	9686206
Clay	%	24	9686206	25	N/A	28	0.10	N/A	9686206

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

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RESULTS OF ANALYSES OF SEDIMENT

Bureau Veritas ID		AEPE97	AEPE98	AEPE99	AEPF00	AEPF01			
Sampling Date		2024/09/29	2024/09/29	2024/09/28	2024/09/28	2024/09/29			
COC Number		C#101301-01-01	C#101301-01-01	C#101301-01-01	C#101301-01-01	C#101301-01-01			
	UNITS	T11-1A	T11-1B	T12-1A	T12-1B	T14-1A	RDL	MDL	QC Batch
Inorganics									
Moisture	%	33	35	35	33	30	1.0	0.20	9686544
< -1 Phi (2 mm)	%	100	100	100	100	100	0.10	N/A	9686206
< 0 Phi (1 mm)	%	100	100	100	100	100	0.10	N/A	9686206
< +1 Phi (0.5 mm)	%	100	100	100	100	100	0.10	N/A	9686206
< +2 Phi (0.25 mm)	%	100	100	100	100	100	0.10	N/A	9686206
< +3 Phi (0.12 mm)	%	99	99	99	98	98	0.10	N/A	9686206
< +4 Phi (0.062 mm)	%	89	91	88	86	85	0.10	N/A	9686206
< +5 Phi (0.031 mm)	%	63	65	61	53	51	0.10	N/A	9686206
< +6 Phi (0.016 mm)	%	43	45	41	34	32	0.10	N/A	9686206
< +7 Phi (0.0078 mm)	%	29	30	26	22	20	0.10	N/A	9686206
< +8 Phi (0.0039 mm)	%	26	27	24	19	18	0.10	N/A	9686206
< +9 Phi (0.0020 mm)	%	22	22	20	16	15	0.10	N/A	9686206
Gravel	%	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	N/A	9686206
Sand	%	11	9.2	12	14	15	0.10	N/A	9686206
Silt	%	64	64	64	66	67	0.10	N/A	9686206
Clay	%	26	27	24	19	18	0.10	N/A	9686206

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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RESULTS OF ANALYSES OF SEDIMENT

Bureau Veritas ID		AEPF02	AEPF03	AEPF04	AEPF05	AEPF06			
Sampling Date		2024/09/29	2024/09/29	2024/09/29	2024/09/29	2024/09/29			
COC Number		C#101301-01-01	C#101301-01-01	C#101301-01-01	C#101301-01-01	C#101301-01-01			
	UNITS	T14-1B	T14-2A	T14-2B	T14-3A	T14-3B	RDL	MDL	QC Batch
Inorganics									
Moisture	%	30	33	34	34	32	1.0	0.20	9686544
< -1 Phi (2 mm)	%	100	100	100	100	100	0.10	N/A	9688294
< 0 Phi (1 mm)	%	100	100	100	100	100	0.10	N/A	9688294
< +1 Phi (0.5 mm)	%	100	100	100	100	100	0.10	N/A	9688294
< +2 Phi (0.25 mm)	%	100	100	100	100	100	0.10	N/A	9688294
< +3 Phi (0.12 mm)	%	98	99	98	99	98	0.10	N/A	9688294
< +4 Phi (0.062 mm)	%	85	89	86	89	88	0.10	N/A	9688294
< +5 Phi (0.031 mm)	%	49	57	58	60	57	0.10	N/A	9688294
< +6 Phi (0.016 mm)	%	30	40	42	46	39	0.10	N/A	9688294
< +7 Phi (0.0078 mm)	%	18	27	26	28	25	0.10	N/A	9688294
< +8 Phi (0.0039 mm)	%	16	24	22	25	22	0.10	N/A	9688294
< +9 Phi (0.0020 mm)	%	14	20	19	20	18	0.10	N/A	9688294
Gravel	%	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	N/A	9688294
Sand	%	15	11	14	11	12	0.10	N/A	9688294
Silt	%	69	65	63	64	66	0.10	N/A	9688294
Clay	%	16	24	22	25	22	0.10	N/A	9688294

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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RESULTS OF ANALYSES OF SEDIMENT

Bureau Veritas ID		AEPF07	AEPF08	AEPF09		AEPF10			
Sampling Date		2024/09/30	2024/09/30	2024/09/28		2024/09/29			
COC Number		C#101301-01-01	C#101301-01-01	C#101301-01-01		C#101301-01-01			
	UNITS	T14-4A	T14-4B	T14-4B QAQC	QC Batch	T14-5A	RDL	MDL	QC Batch
Inorganics									
Moisture	%	47	39	40	9686544	35	1.0	0.20	9686493
< -1 Phi (2 mm)	%	100	100 (1)	100 (2)	9688294	100	0.10	N/A	9688294
< 0 Phi (1 mm)	%	100	100	100 (3)	9688294	100 (3)	0.10	N/A	9688294
< +1 Phi (0.5 mm)	%	100	100	100	9688294	100	0.10	N/A	9688294
< +2 Phi (0.25 mm)	%	100	99	100	9688294	100	0.10	N/A	9688294
< +3 Phi (0.12 mm)	%	99	98	99	9688294	99	0.10	N/A	9688294
< +4 Phi (0.062 mm)	%	92	91	90	9688294	91	0.10	N/A	9688294
< +5 Phi (0.031 mm)	%	70	67	65	9688294	66	0.10	N/A	9688294
< +6 Phi (0.016 mm)	%	52	45	45	9688294	44	0.10	N/A	9688294
< +7 Phi (0.0078 mm)	%	36	31	29	9688294	29	0.10	N/A	9688294
< +8 Phi (0.0039 mm)	%	32	26	25	9688294	26	0.10	N/A	9688294
< +9 Phi (0.0020 mm)	%	15	22	22	9688294	22	0.10	N/A	9688294
Gravel	%	<0.10	<0.10	0.15	9688294	<0.10	0.10	N/A	9688294
Sand	%	8.0	8.6	9.6	9688294	8.5	0.10	N/A	9688294
Silt	%	60	65	65	9688294	66	0.10	N/A	9688294
Clay	%	32	26	25	9688294	26	0.10	N/A	9688294

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) PSA sample observation comment: Fraction contained a small rock.
(2) PSA sample observation comment: Fraction contained rocks and shells.
(3) PSA sample observation comment: Fraction contained shells.

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RESULTS OF ANALYSES OF SEDIMENT

Bureau Veritas ID		AEPF10	AEPF11	AEPF12	AEPF13	AEPF14			
Sampling Date		2024/09/29	2024/09/29	2024/09/29	2024/09/29	2024/09/29			
COC Number		C#101301-01-01	C#101301-01-01	C#101301-01-01	C#101301-01-01	C#101301-01-01			
	UNITS	T14-5A Lab-Dup	T14-5B	T14-6A	T14-6B	T14-7A	RDL	MDL	QC Batch
Inorganics									
Moisture	%	35	34	37	36	35	1.0	0.20	9686493
< -1 Phi (2 mm)	%	100	100 (1)	100	100	100 (2)	0.10	N/A	9688294
< 0 Phi (1 mm)	%	100 (2)	100	100	100	100	0.10	N/A	9688294
< +1 Phi (0.5 mm)	%	100	100	100	100	100	0.10	N/A	9688294
< +2 Phi (0.25 mm)	%	100	99	100	100	100	0.10	N/A	9688294
< +3 Phi (0.12 mm)	%	99	98	98	99	99	0.10	N/A	9688294
< +4 Phi (0.062 mm)	%	92	91	89	91	91	0.10	N/A	9688294
< +5 Phi (0.031 mm)	%	64	66	59	67	66	0.10	N/A	9688294
< +6 Phi (0.016 mm)	%	45	44	39	43	47	0.10	N/A	9688294
< +7 Phi (0.0078 mm)	%	30	29	24	28	31	0.10	N/A	9688294
< +8 Phi (0.0039 mm)	%	26	26	22	24	27	0.10	N/A	9688294
< +9 Phi (0.0020 mm)	%	22	22	18	21	23	0.10	N/A	9688294
Gravel	%	<0.10	0.12	<0.10	<0.10	<0.10	0.10	N/A	9688294
Sand	%	8.4	8.7	11	8.7	9.3	0.10	N/A	9688294
Silt	%	65	66	67	67	63	0.10	N/A	9688294
Clay	%	26	26	22	24	27	0.10	N/A	9688294

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) PSA sample observation comment: Fraction contained rocks and shells.
(2) PSA sample observation comment: Fraction contained shells.

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RESULTS OF ANALYSES OF SEDIMENT

Bureau Veritas ID		AEPF16	AEPF17	AEPF19	AEPF21	AEPF22			
Sampling Date		2024/09/29	2024/09/29	2024/09/29	2024/09/29	2024/09/29			
COC Number		C#101301-01-01	C#101301-01-01	C#101301-01-01	C#101301-01-01	C#101301-01-01			
	UNITS	**T14-7B**	**T16-1A**	**T16-1B**	**T17-1A**	**T17-1A-QAQC**	**RDL**	**MDL**	**QC Batch**
Inorganics									
Moisture	%	37	37	37	36	36	1.0	0.20	9686544
< -1 Phi (2 mm)	%	100 (1)	100	100	100	100	0.10	N/A	9691195
< 0 Phi (1 mm)	%	100	100	100	100	100	0.10	N/A	9691195
< +1 Phi (0.5 mm)	%	100	100	100	100	100	0.10	N/A	9691195
< +2 Phi (0.25 mm)	%	100	100	100	100	100	0.10	N/A	9691195
< +3 Phi (0.12 mm)	%	99	99	99	99	99	0.10	N/A	9691195
< +4 Phi (0.062 mm)	%	90	90	89	91	92	0.10	N/A	9691195
< +5 Phi (0.031 mm)	%	63	63	61	64	66	0.10	N/A	9691195
< +6 Phi (0.016 mm)	%	41	42	40	43	46	0.10	N/A	9691195
< +7 Phi (0.0078 mm)	%	27	31	26	27	29	0.10	N/A	9691195
< +8 Phi (0.0039 mm)	%	24	25	23	25	26	0.10	N/A	9691195
< +9 Phi (0.0020 mm)	%	12	21	20	21	17	0.10	N/A	9691195
Gravel	%	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	N/A	9691195
Sand	%	9.8	10	11	9.3	8.2	0.10	N/A	9691195
Silt	%	66	65	66	66	66	0.10	N/A	9691195
Clay	%	24	25	23	25	26	0.10	N/A	9691195

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) PSA sample observation comment: Fraction contained a rock.

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RESULTS OF ANALYSES OF SEDIMENT

Bureau Veritas ID		AEPF23	AEPF24	AEPF25	AEPF26	AEPF27			
Sampling Date		2024/09/29	2024/09/29	2024/09/29	2024/09/30	2024/09/30			
COC Number		C#101301-01-01	C#101301-01-01	C#101301-01-01	C#101301-01-01	C#101301-01-01			
	UNITS	T17-1B	T20-1A	T20-1B	T27-1A	T27-1B	RDL	MDL	QC Batch
Inorganics									
Moisture	%	36	34	33	34	34	1.0	0.20	9686493
< -1 Phi (2 mm)	%	100	100	100	100	100	0.10	N/A	9691195
< 0 Phi (1 mm)	%	100	100	100	100	100	0.10	N/A	9691195
< +1 Phi (0.5 mm)	%	100	100	100	100	100	0.10	N/A	9691195
< +2 Phi (0.25 mm)	%	100	100	100	100	100	0.10	N/A	9691195
< +3 Phi (0.12 mm)	%	99	98	98	99	99	0.10	N/A	9691195
< +4 Phi (0.062 mm)	%	92	92	88	92	91	0.10	N/A	9691195
< +5 Phi (0.031 mm)	%	66	58	58	69	66	0.10	N/A	9691195
< +6 Phi (0.016 mm)	%	45	39	38	47	45	0.10	N/A	9691195
< +7 Phi (0.0078 mm)	%	29	25	24	31	30	0.10	N/A	9691195
< +8 Phi (0.0039 mm)	%	26	22	22	28	27	0.10	N/A	9691195
< +9 Phi (0.0020 mm)	%	22	19	18	23	22	0.10	N/A	9691195
Gravel	%	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	N/A	9691195
Sand	%	8.2	8.0	12	7.9	9.2	0.10	N/A	9691195
Silt	%	66	70	66	64	64	0.10	N/A	9691195
Clay	%	26	22	22	28	27	0.10	N/A	9691195

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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RESULTS OF ANALYSES OF SEDIMENT

Bureau Veritas ID		AEPF27			
Sampling Date		2024/09/30			
COC Number		C#101301-01-01			
	UNITS	T27-1B Lab-Dup	RDL	MDL	QC Batch
Inorganics					
< -1 Phi (2 mm)	%	100	0.10	N/A	9691195
< 0 Phi (1 mm)	%	100	0.10	N/A	9691195
< +1 Phi (0.5 mm)	%	100	0.10	N/A	9691195
< +2 Phi (0.25 mm)	%	100	0.10	N/A	9691195
< +3 Phi (0.12 mm)	%	99	0.10	N/A	9691195
< +4 Phi (0.062 mm)	%	92	0.10	N/A	9691195
< +5 Phi (0.031 mm)	%	68	0.10	N/A	9691195
< +6 Phi (0.016 mm)	%	45	0.10	N/A	9691195
< +7 Phi (0.0078 mm)	%	30	0.10	N/A	9691195
< +8 Phi (0.0039 mm)	%	27	0.10	N/A	9691195
< +9 Phi (0.0020 mm)	%	22	0.10	N/A	9691195
Gravel	%	<0.10	0.10	N/A	9691195
Sand	%	8.4	0.10	N/A	9691195
Silt	%	65	0.10	N/A	9691195
Clay	%	27	0.10	N/A	9691195

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

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ELEMENTS BY ATOMIC SPECTROSCOPY (SEDIMENT)

Bureau Veritas ID		AEPE90	AEPE91	AEPE92	AEPE93			
Sampling Date		2024/09/28	2024/09/28	2024/09/28	2024/09/28			
COC Number		C#101301-01-01	C#101301-01-01	C#101301-01-01	C#101301-01-01			
	UNITS	T1-1A	T1-1B	T6-1A	T6-1B	RDL	MDL	QC Batch
Metals								
Acid Extractable Aluminum (Al)	mg/kg	8300	8500	9500	9100	10	N/A	9685719
Acid Extractable Antimony (Sb)	mg/kg	<2.0	<2.0	<2.0	<2.0	2.0	N/A	9685719
Acid Extractable Arsenic (As)	mg/kg	<2.0	<2.0	4.2	<2.0	2.0	N/A	9685719
Acid Extractable Barium (Ba)	mg/kg	110	110	11	260	5.0	N/A	9685719
Acid Extractable Beryllium (Be)	mg/kg	<1.0	<1.0	<1.0	<1.0	1.0	N/A	9685719
Acid Extractable Bismuth (Bi)	mg/kg	<2.0	<2.0	<2.0	<2.0	2.0	N/A	9685719
Acid Extractable Boron (B)	mg/kg	<50	<50	<50	<50	50	N/A	9685719
Acid Extractable Cadmium (Cd)	mg/kg	<0.30	<0.30	<0.30	<0.30	0.30	N/A	9685719
Acid Extractable Chromium (Cr)	mg/kg	26	27	4.7	29	2.0	N/A	9685719
Acid Extractable Cobalt (Co)	mg/kg	4.7	4.8	5.3	5.1	1.0	N/A	9685719
Acid Extractable Copper (Cu)	mg/kg	11	11	11	12	2.0	N/A	9685719
Acid Extractable Iron (Fe)	mg/kg	15000	15000	18000	16000	50	N/A	9685719
Acid Extractable Lead (Pb)	mg/kg	3.8	4.0	5.6	4.3	0.50	N/A	9685719
Acid Extractable Lithium (Li)	mg/kg	14	15	20	15	2.0	N/A	9685719
Acid Extractable Manganese (Mn)	mg/kg	180	180	680	190	2.0	N/A	9685719
Acid Extractable Mercury (Hg)	mg/kg	<0.10	<0.10	<0.10	<0.10	0.10	N/A	9685719
Acid Extractable Molybdenum (Mo)	mg/kg	<2.0	<2.0	<2.0	<2.0	2.0	N/A	9685719
Acid Extractable Nickel (Ni)	mg/kg	17	18	5.8	19	2.0	N/A	9685719
Acid Extractable Rubidium (Rb)	mg/kg	19	20	2.6	21	2.0	N/A	9685719
Acid Extractable Selenium (Se)	mg/kg	<0.50	0.52	<0.50	0.50	0.50	N/A	9685719
Acid Extractable Silver (Ag)	mg/kg	<0.50	<0.50	<0.50	<0.50	0.50	N/A	9685719
Acid Extractable Strontium (Sr)	mg/kg	48	48	11	54	5.0	N/A	9685719
Acid Extractable Thallium (Tl)	mg/kg	0.11	0.12	<0.10	0.11	0.10	N/A	9685719
Acid Extractable Tin (Sn)	mg/kg	<1.0	<1.0	<1.0	<1.0	1.0	N/A	9685719
Acid Extractable Uranium (U)	mg/kg	0.90	0.98	0.39	1.0	0.10	N/A	9685719
Acid Extractable Vanadium (V)	mg/kg	30	31	11	33	2.0	N/A	9685719
Acid Extractable Zinc (Zn)	mg/kg	35	38	49	40	5.0	N/A	9685719

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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ELEMENTS BY ATOMIC SPECTROSCOPY (SEDIMENT)

Bureau Veritas ID		AEPE94	AEPE95		AEPE96	AEPE97			
Sampling Date		2024/09/29	2024/09/28		2024/09/28	2024/09/29			
COC Number		C#101301-01-01	C#101301-01-01		C#101301-01-01	C#101301-01-01			
	UNITS	T9-1A	T9-1B	QC Batch	T9-1B QAQC	T11-1A	RDL	MDL	QC Batch
Metals									
Acid Extractable Aluminum (Al)	mg/kg	9700	11000	9685719	9600	9400	10	N/A	9687745
Acid Extractable Antimony (Sb)	mg/kg	<2.0	<2.0	9685719	<2.0	<2.0	2.0	N/A	9687745
Acid Extractable Arsenic (As)	mg/kg	2.0	2.0	9685719	2.0	<2.0	2.0	N/A	9687745
Acid Extractable Barium (Ba)	mg/kg	300	430	9685719	160	150	5.0	N/A	9687745
Acid Extractable Beryllium (Be)	mg/kg	<1.0	<1.0	9685719	<1.0	<1.0	1.0	N/A	9687745
Acid Extractable Bismuth (Bi)	mg/kg	<2.0	<2.0	9685719	<2.0	<2.0	2.0	N/A	9687745
Acid Extractable Boron (B)	mg/kg	<50	<50	9685719	<50	<50	50	N/A	9687745
Acid Extractable Cadmium (Cd)	mg/kg	<0.30	<0.30	9685719	<0.30	<0.30	0.30	N/A	9687745
Acid Extractable Chromium (Cr)	mg/kg	30	32	9685719	31	30	2.0	N/A	9687745
Acid Extractable Cobalt (Co)	mg/kg	5.4	5.5	9685719	5.6	5.4	1.0	N/A	9687745
Acid Extractable Copper (Cu)	mg/kg	13	14	9685719	13	13	2.0	N/A	9687745
Acid Extractable Iron (Fe)	mg/kg	17000	18000	9685719	17000	17000	50	N/A	9687745
Acid Extractable Lead (Pb)	mg/kg	4.8	4.9	9685719	4.5	4.3	0.50	N/A	9687745
Acid Extractable Lithium (Li)	mg/kg	16	17	9685719	17	16	2.0	N/A	9687745
Acid Extractable Manganese (Mn)	mg/kg	200	210	9685719	200	190	2.0	N/A	9687745
Acid Extractable Mercury (Hg)	mg/kg	<0.10	<0.10	9685719	<0.10	<0.10	0.10	N/A	9687745
Acid Extractable Molybdenum (Mo)	mg/kg	<2.0	<2.0	9685719	<2.0	<2.0	2.0	N/A	9687745
Acid Extractable Nickel (Ni)	mg/kg	20	20	9685719	20	19	2.0	N/A	9687745
Acid Extractable Rubidium (Rb)	mg/kg	23	23	9685719	23	22	2.0	N/A	9687745
Acid Extractable Selenium (Se)	mg/kg	0.54	0.62	9685719	0.57	0.54	0.50	N/A	9687745
Acid Extractable Silver (Ag)	mg/kg	<0.50	<0.50	9685719	<0.50	<0.50	0.50	N/A	9687745
Acid Extractable Strontium (Sr)	mg/kg	60	61	9685719	52	49	5.0	N/A	9687745
Acid Extractable Thallium (Tl)	mg/kg	0.13	0.12	9685719	0.12	0.13	0.10	N/A	9687745
Acid Extractable Tin (Sn)	mg/kg	<1.0	<1.0	9685719	<1.0	<1.0	1.0	N/A	9687745
Acid Extractable Uranium (U)	mg/kg	1.1	0.87	9685719	1.0	0.90	0.10	N/A	9687745
Acid Extractable Vanadium (V)	mg/kg	35	36	9685719	34	33	2.0	N/A	9687745
Acid Extractable Zinc (Zn)	mg/kg	43	45	9685719	43	42	5.0	N/A	9687745

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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ELEMENTS BY ATOMIC SPECTROSCOPY (SEDIMENT)

Bureau Veritas ID		AEPE98	AEPE99		AEPF00	AEPF01			
Sampling Date		2024/09/29	2024/09/28		2024/09/28	2024/09/29			
COC Number		C#101301-01-01	C#101301-01-01		C#101301-01-01	C#101301-01-01			
	UNITS	T11-1B	T12-1A	QC Batch	T12-1B	T14-1A	RDL	MDL	QC Batch
Metals									
Acid Extractable Aluminum (Al)	mg/kg	9500	9500	9687745	8000	7500	10	N/A	9685719
Acid Extractable Antimony (Sb)	mg/kg	<2.0	<2.0	9687745	<2.0	<2.0	2.0	N/A	9685719
Acid Extractable Arsenic (As)	mg/kg	<2.0	2.1	9687745	<2.0	<2.0	2.0	N/A	9685719
Acid Extractable Barium (Ba)	mg/kg	190	1400	9687745	1600	450	5.0	N/A	9685719
Acid Extractable Beryllium (Be)	mg/kg	<1.0	<1.0	9687745	<1.0	<1.0	1.0	N/A	9685719
Acid Extractable Bismuth (Bi)	mg/kg	<2.0	<2.0	9687745	<2.0	<2.0	2.0	N/A	9685719
Acid Extractable Boron (B)	mg/kg	<50	<50	9687745	<50	<50	50	N/A	9685719
Acid Extractable Cadmium (Cd)	mg/kg	<0.30	<0.30	9687745	<0.30	<0.30	0.30	N/A	9685719
Acid Extractable Chromium (Cr)	mg/kg	30	31	9687745	25	24	2.0	N/A	9685719
Acid Extractable Cobalt (Co)	mg/kg	5.4	5.4	9687745	4.4	4.2	1.0	N/A	9685719
Acid Extractable Copper (Cu)	mg/kg	13	13	9687745	11	9.7	2.0	N/A	9685719
Acid Extractable Iron (Fe)	mg/kg	17000	17000	9687745	15000	14000	50	N/A	9685719
Acid Extractable Lead (Pb)	mg/kg	4.6	7.5	9687745	8.4	4.3	0.50	N/A	9685719
Acid Extractable Lithium (Li)	mg/kg	16	16	9687745	13	12	2.0	N/A	9685719
Acid Extractable Manganese (Mn)	mg/kg	200	200	9687745	180	170	2.0	N/A	9685719
Acid Extractable Mercury (Hg)	mg/kg	<0.10	<0.10	9687745	<0.10	<0.10	0.10	N/A	9685719
Acid Extractable Molybdenum (Mo)	mg/kg	<2.0	<2.0	9687745	<2.0	<2.0	2.0	N/A	9685719
Acid Extractable Nickel (Ni)	mg/kg	20	19	9687745	16	15	2.0	N/A	9685719
Acid Extractable Rubidium (Rb)	mg/kg	22	21	9687745	17	17	2.0	N/A	9685719
Acid Extractable Selenium (Se)	mg/kg	0.55	0.53	9687745	<0.50	<0.50	0.50	N/A	9685719
Acid Extractable Silver (Ag)	mg/kg	<0.50	<0.50	9687745	<0.50	<0.50	0.50	N/A	9685719
Acid Extractable Strontium (Sr)	mg/kg	51	73	9687745	75	50	5.0	N/A	9685719
Acid Extractable Thallium (Tl)	mg/kg	0.13	0.12	9687745	<0.10	<0.10	0.10	N/A	9685719
Acid Extractable Tin (Sn)	mg/kg	<1.0	<1.0	9687745	<1.0	<1.0	1.0	N/A	9685719
Acid Extractable Uranium (U)	mg/kg	0.91	0.89	9687745	0.74	0.63	0.10	N/A	9685719
Acid Extractable Vanadium (V)	mg/kg	33	34	9687745	29	27	2.0	N/A	9685719
Acid Extractable Zinc (Zn)	mg/kg	47	44	9687745	39	32	5.0	N/A	9685719

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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ELEMENTS BY ATOMIC SPECTROSCOPY (SEDIMENT)

Bureau Veritas ID		AEPF02	AEPF03		AEPF04	AEPF05			
Sampling Date		2024/09/29	2024/09/29		2024/09/29	2024/09/29			
COC Number		C#101301-01-01	C#101301-01-01		C#101301-01-01	C#101301-01-01			
	UNITS	T14-1B	T14-2A	QC Batch	T14-2B	T14-3A	RDL	MDL	QC Batch
Metals									
Acid Extractable Aluminum (Al)	mg/kg	6700	8200	9685719	8800	9100	10	N/A	9687745
Acid Extractable Antimony (Sb)	mg/kg	<2.0	<2.0	9685719	<2.0	<2.0	2.0	N/A	9687745
Acid Extractable Arsenic (As)	mg/kg	<2.0	<2.0	9685719	<2.0	2.0	2.0	N/A	9687745
Acid Extractable Barium (Ba)	mg/kg	340	530	9685719	390	510	5.0	N/A	9687745
Acid Extractable Beryllium (Be)	mg/kg	<1.0	<1.0	9685719	<1.0	<1.0	1.0	N/A	9687745
Acid Extractable Bismuth (Bi)	mg/kg	<2.0	<2.0	9685719	<2.0	<2.0	2.0	N/A	9687745
Acid Extractable Boron (B)	mg/kg	<50	<50	9685719	<50	<50	50	N/A	9687745
Acid Extractable Cadmium (Cd)	mg/kg	<0.30	<0.30	9685719	<0.30	<0.30	0.30	N/A	9687745
Acid Extractable Chromium (Cr)	mg/kg	21	26	9685719	28	29	2.0	N/A	9687745
Acid Extractable Cobalt (Co)	mg/kg	3.8	4.5	9685719	4.8	5.1	1.0	N/A	9687745
Acid Extractable Copper (Cu)	mg/kg	8.7	11	9685719	11	12	2.0	N/A	9687745
Acid Extractable Iron (Fe)	mg/kg	13000	15000	9685719	16000	17000	50	N/A	9687745
Acid Extractable Lead (Pb)	mg/kg	4.1	4.8	9685719	5.4	5.5	0.50	N/A	9687745
Acid Extractable Lithium (Li)	mg/kg	11	14	9685719	15	15	2.0	N/A	9687745
Acid Extractable Manganese (Mn)	mg/kg	150	170	9685719	190	190	2.0	N/A	9687745
Acid Extractable Mercury (Hg)	mg/kg	<0.10	<0.10	9685719	<0.10	<0.10	0.10	N/A	9687745
Acid Extractable Molybdenum (Mo)	mg/kg	<2.0	<2.0	9685719	<2.0	<2.0	2.0	N/A	9687745
Acid Extractable Nickel (Ni)	mg/kg	14	17	9685719	17	19	2.0	N/A	9687745
Acid Extractable Rubidium (Rb)	mg/kg	15	18	9685719	20	21	2.0	N/A	9687745
Acid Extractable Selenium (Se)	mg/kg	<0.50	<0.50	9685719	<0.50	0.57	0.50	N/A	9687745
Acid Extractable Silver (Ag)	mg/kg	<0.50	<0.50	9685719	<0.50	<0.50	0.50	N/A	9687745
Acid Extractable Strontium (Sr)	mg/kg	46	54	9685719	52	59	5.0	N/A	9687745
Acid Extractable Thallium (Tl)	mg/kg	<0.10	0.10	9685719	0.11	0.12	0.10	N/A	9687745
Acid Extractable Tin (Sn)	mg/kg	<1.0	<1.0	9685719	<1.0	<1.0	1.0	N/A	9687745
Acid Extractable Uranium (U)	mg/kg	0.65	0.78	9685719	0.74	0.88	0.10	N/A	9687745
Acid Extractable Vanadium (V)	mg/kg	24	29	9685719	31	33	2.0	N/A	9687745
Acid Extractable Zinc (Zn)	mg/kg	29	36	9685719	38	41	5.0	N/A	9687745

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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ELEMENTS BY ATOMIC SPECTROSCOPY (SEDIMENT)

Bureau Veritas ID		AEPF06	AEPF07		AEPF08			
Sampling Date		2024/09/29	2024/09/30		2024/09/30			
COC Number		C#101301-01-01	C#101301-01-01		C#101301-01-01			
	UNITS	T14-3B	T14-4A	QC Batch	T14-4B	RDL	MDL	QC Batch
Metals								
Acid Extractable Aluminum (Al)	mg/kg	8500	9500	9687745	9600	10	N/A	9690472
Acid Extractable Antimony (Sb)	mg/kg	<2.0	<2.0	9687745	<2.0	2.0	N/A	9690472
Acid Extractable Arsenic (As)	mg/kg	<2.0	4.9	9687745	2.1	2.0	N/A	9690472
Acid Extractable Barium (Ba)	mg/kg	300	1200	9687745	1300	5.0	N/A	9690472
Acid Extractable Beryllium (Be)	mg/kg	<1.0	<1.0	9687745	<1.0	1.0	N/A	9690472
Acid Extractable Bismuth (Bi)	mg/kg	<2.0	<2.0	9687745	<2.0	2.0	N/A	9690472
Acid Extractable Boron (B)	mg/kg	<50	60	9687745	<50	50	N/A	9690472
Acid Extractable Cadmium (Cd)	mg/kg	<0.30	<0.30	9687745	<0.30	0.30	N/A	9690472
Acid Extractable Chromium (Cr)	mg/kg	27	29	9687745	31	2.0	N/A	9690472
Acid Extractable Cobalt (Co)	mg/kg	4.9	5.7	9687745	5.6	1.0	N/A	9690472
Acid Extractable Copper (Cu)	mg/kg	11	25	9687745	14	2.0	N/A	9690472
Acid Extractable Iron (Fe)	mg/kg	16000	19000	9687745	18000	50	N/A	9690472
Acid Extractable Lead (Pb)	mg/kg	4.2	57	9687745	9.8	0.50	N/A	9690472
Acid Extractable Lithium (Li)	mg/kg	14	17	9687745	15	2.0	N/A	9690472
Acid Extractable Manganese (Mn)	mg/kg	180	220	9687745	200	2.0	N/A	9690472
Acid Extractable Mercury (Hg)	mg/kg	<0.10	<0.10	9687745	0.10	0.10	N/A	9690472
Acid Extractable Molybdenum (Mo)	mg/kg	<2.0	<2.0	9687745	<2.0	2.0	N/A	9690472
Acid Extractable Nickel (Ni)	mg/kg	17	21	9687745	20	2.0	N/A	9690472
Acid Extractable Rubidium (Rb)	mg/kg	20	21	9687745	23	2.0	N/A	9690472
Acid Extractable Selenium (Se)	mg/kg	<0.50	0.53	9687745	0.57	0.50	N/A	9690472
Acid Extractable Silver (Ag)	mg/kg	<0.50	0.58	9687745	<0.50	0.50	N/A	9690472
Acid Extractable Strontium (Sr)	mg/kg	51	87	9687745	66	5.0	N/A	9690472
Acid Extractable Thallium (Tl)	mg/kg	0.11	0.17	9687745	0.14	0.10	N/A	9690472
Acid Extractable Tin (Sn)	mg/kg	<1.0	<1.0	9687745	<1.0	1.0	N/A	9690472
Acid Extractable Uranium (U)	mg/kg	0.77	0.74	9687745	0.87	0.10	N/A	9690472
Acid Extractable Vanadium (V)	mg/kg	31	33	9687745	34	2.0	N/A	9690472
Acid Extractable Zinc (Zn)	mg/kg	37	100	9687745	47	5.0	N/A	9690472

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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ELEMENTS BY ATOMIC SPECTROSCOPY (SEDIMENT)

Bureau Veritas ID		AEPF08	AEPF09	AEPF10		AEPF11			
Sampling Date		2024/09/30	2024/09/28	2024/09/29		2024/09/29			
COC Number		C#101301-01-01	C#101301-01-01	C#101301-01-01		C#101301-01-01			
	UNITS	T14-4B Lab-Dup	T14-4B QAQC	T14-5A	RDL	T14-5B	RDL	MDL	QC Batch
Metals									
Acid Extractable Aluminum (Al)	mg/kg	10000	9200	9700	10	9600	10	N/A	9690472
Acid Extractable Antimony (Sb)	mg/kg	<2.0	<2.0	<2.0	2.0	<2.0	2.0	N/A	9690472
Acid Extractable Arsenic (As)	mg/kg	2.2	2.5	2.1	2.0	2.6	2.0	N/A	9690472
Acid Extractable Barium (Ba)	mg/kg	1400	1500	1200	5.0	2600	50	N/A	9690472
Acid Extractable Beryllium (Be)	mg/kg	<0.50	<0.50	<0.50	0.50	<0.50	0.50	N/A	9690472
Acid Extractable Bismuth (Bi)	mg/kg	<2.0	<2.0	<2.0	2.0	<2.0	2.0	N/A	9690472
Acid Extractable Boron (B)	mg/kg	<50	<50	<50	50	<50	50	N/A	9690472
Acid Extractable Cadmium (Cd)	mg/kg	<0.30	<0.30	<0.30	0.30	<0.30	0.30	N/A	9690472
Acid Extractable Chromium (Cr)	mg/kg	31	29	31	2.0	31	2.0	N/A	9690472
Acid Extractable Cobalt (Co)	mg/kg	5.5	5.3	5.6	1.0	5.4	1.0	N/A	9690472
Acid Extractable Copper (Cu)	mg/kg	14	14	14	2.0	17	2.0	N/A	9690472
Acid Extractable Iron (Fe)	mg/kg	18000	17000	18000	50	18000	50	N/A	9690472
Acid Extractable Lead (Pb)	mg/kg	10	14	7.0	0.50	19	0.50	N/A	9690472
Acid Extractable Lithium (Li)	mg/kg	16	16	16	2.0	16	2.0	N/A	9690472
Acid Extractable Manganese (Mn)	mg/kg	200	190	200	2.0	220	2.0	N/A	9690472
Acid Extractable Mercury (Hg)	mg/kg	<0.10	<0.10	<0.10	0.10	<0.10	0.10	N/A	9690472
Acid Extractable Molybdenum (Mo)	mg/kg	<2.0	<2.0	<2.0	2.0	<2.0	2.0	N/A	9690472
Acid Extractable Nickel (Ni)	mg/kg	19	18	20	2.0	20	2.0	N/A	9690472
Acid Extractable Rubidium (Rb)	mg/kg	22	21	23	2.0	22	2.0	N/A	9690472
Acid Extractable Selenium (Se)	mg/kg	0.62	0.53	0.59	0.50	0.55	0.50	N/A	9690472
Acid Extractable Silver (Ag)	mg/kg	<0.50	<0.50	<0.50	0.50	<0.50	0.50	N/A	9690472
Acid Extractable Strontium (Sr)	mg/kg	70	70	71	5.0	110	5.0	N/A	9690472
Acid Extractable Thallium (Tl)	mg/kg	0.13	0.12	0.12	0.10	0.12	0.10	N/A	9690472
Acid Extractable Tin (Sn)	mg/kg	<1.0	<1.0	<1.0	1.0	<1.0	1.0	N/A	9690472
Acid Extractable Uranium (U)	mg/kg	0.92	0.80	0.83	0.10	0.82	0.10	N/A	9690472
Acid Extractable Vanadium (V)	mg/kg	34	32	34	2.0	34	2.0	N/A	9690472
Acid Extractable Zinc (Zn)	mg/kg	47	51	45	5.0	55	5.0	N/A	9690472

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

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ELEMENTS BY ATOMIC SPECTROSCOPY (SEDIMENT)

Bureau Veritas ID		AEPF12	AEPF13	AEPF14	AEPF16			
Sampling Date		2024/09/29	2024/09/29	2024/09/29	2024/09/29			
COC Number		C#101301-01-01	C#101301-01-01	C#101301-01-01	C#101301-01-01			
	UNITS	T14-6A	T14-6B	T14-7A	T14-7B	RDL	MDL	QC Batch
Metals								
Acid Extractable Aluminum (Al)	mg/kg	8700	9600	10000	9400	10	N/A	9690472
Acid Extractable Antimony (Sb)	mg/kg	<2.0	<2.0	<2.0	<2.0	2.0	N/A	9690472
Acid Extractable Arsenic (As)	mg/kg	<2.0	2.3	2.2	2.1	2.0	N/A	9690472
Acid Extractable Barium (Ba)	mg/kg	1500	830	420	530	5.0	N/A	9690472
Acid Extractable Beryllium (Be)	mg/kg	<0.50	<0.50	<0.50	<0.50	0.50	N/A	9690472
Acid Extractable Bismuth (Bi)	mg/kg	<2.0	<2.0	<2.0	<2.0	2.0	N/A	9690472
Acid Extractable Boron (B)	mg/kg	<50	<50	<50	<50	50	N/A	9690472
Acid Extractable Cadmium (Cd)	mg/kg	<0.30	<0.30	<0.30	<0.30	0.30	N/A	9690472
Acid Extractable Chromium (Cr)	mg/kg	28	31	33	30	2.0	N/A	9690472
Acid Extractable Cobalt (Co)	mg/kg	4.9	5.8	6.0	5.4	1.0	N/A	9690472
Acid Extractable Copper (Cu)	mg/kg	12	13	14	13	2.0	N/A	9690472
Acid Extractable Iron (Fe)	mg/kg	16000	18000	19000	17000	50	N/A	9690472
Acid Extractable Lead (Pb)	mg/kg	7.1	5.5	4.8	5.1	0.50	N/A	9690472
Acid Extractable Lithium (Li)	mg/kg	14	16	17	15	2.0	N/A	9690472
Acid Extractable Manganese (Mn)	mg/kg	190	200	210	190	2.0	N/A	9690472
Acid Extractable Mercury (Hg)	mg/kg	<0.10	<0.10	<0.10	<0.10	0.10	N/A	9690472
Acid Extractable Molybdenum (Mo)	mg/kg	<2.0	<2.0	<2.0	<2.0	2.0	N/A	9690472
Acid Extractable Nickel (Ni)	mg/kg	18	20	21	19	2.0	N/A	9690472
Acid Extractable Rubidium (Rb)	mg/kg	19	23	25	22	2.0	N/A	9690472
Acid Extractable Selenium (Se)	mg/kg	0.50	0.60	0.53	0.53	0.50	N/A	9690472
Acid Extractable Silver (Ag)	mg/kg	<0.50	<0.50	<0.50	<0.50	0.50	N/A	9690472
Acid Extractable Strontium (Sr)	mg/kg	76	64	58	58	5.0	N/A	9690472
Acid Extractable Thallium (Tl)	mg/kg	0.11	0.14	0.12	0.10	0.10	N/A	9690472
Acid Extractable Tin (Sn)	mg/kg	<1.0	<1.0	<1.0	<1.0	1.0	N/A	9690472
Acid Extractable Uranium (U)	mg/kg	0.73	0.91	0.93	0.69	0.10	N/A	9690472
Acid Extractable Vanadium (V)	mg/kg	31	34	36	32	2.0	N/A	9690472
Acid Extractable Zinc (Zn)	mg/kg	39	43	45	41	5.0	N/A	9690472

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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ELEMENTS BY ATOMIC SPECTROSCOPY (SEDIMENT)

Bureau Veritas ID		AEPF17	AEPF19	AEPF21		AEPF22			
Sampling Date		2024/09/29	2024/09/29	2024/09/29		2024/09/29			
COC Number		C#101301-01-01	C#101301-01-01	C#101301-01-01		C#101301-01-01			
	UNITS	T16-1A	T16-1B	T17-1A	RDL	T17-1A-QAQC	RDL	MDL	QC Batch
Metals									
Acid Extractable Aluminum (Al)	mg/kg	9200	9100	9600	10	9400	10	N/A	9690472
Acid Extractable Antimony (Sb)	mg/kg	<2.0	<2.0	<2.0	2.0	<2.0	2.0	N/A	9690472
Acid Extractable Arsenic (As)	mg/kg	2.2	2.3	2.1	2.0	2.6	2.0	N/A	9690472
Acid Extractable Barium (Ba)	mg/kg	720	440	1700	5.0	2400	50	N/A	9690472
Acid Extractable Beryllium (Be)	mg/kg	<0.50	<0.50	<0.50	0.50	<0.50	0.50	N/A	9690472
Acid Extractable Bismuth (Bi)	mg/kg	<2.0	<2.0	<2.0	2.0	<2.0	2.0	N/A	9690472
Acid Extractable Boron (B)	mg/kg	<50	<50	<50	50	<50	50	N/A	9690472
Acid Extractable Cadmium (Cd)	mg/kg	<0.30	<0.30	<0.30	0.30	<0.30	0.30	N/A	9690472
Acid Extractable Chromium (Cr)	mg/kg	29	29	31	2.0	30	2.0	N/A	9690472
Acid Extractable Cobalt (Co)	mg/kg	5.1	5.2	5.4	1.0	5.4	1.0	N/A	9690472
Acid Extractable Copper (Cu)	mg/kg	13	12	14	2.0	16	2.0	N/A	9690472
Acid Extractable Iron (Fe)	mg/kg	17000	17000	18000	50	18000	50	N/A	9690472
Acid Extractable Lead (Pb)	mg/kg	6.4	5.6	9.3	0.50	18	0.50	N/A	9690472
Acid Extractable Lithium (Li)	mg/kg	15	15	15	2.0	15	2.0	N/A	9690472
Acid Extractable Manganese (Mn)	mg/kg	190	190	210	2.0	220	2.0	N/A	9690472
Acid Extractable Mercury (Hg)	mg/kg	<0.10	<0.10	<0.10	0.10	<0.10	0.10	N/A	9690472
Acid Extractable Molybdenum (Mo)	mg/kg	<2.0	<2.0	<2.0	2.0	<2.0	2.0	N/A	9690472
Acid Extractable Nickel (Ni)	mg/kg	18	18	19	2.0	19	2.0	N/A	9690472
Acid Extractable Rubidium (Rb)	mg/kg	21	20	22	2.0	22	2.0	N/A	9690472
Acid Extractable Selenium (Se)	mg/kg	0.54	0.50	0.52	0.50	0.58	0.50	N/A	9690472
Acid Extractable Silver (Ag)	mg/kg	<0.50	<0.50	<0.50	0.50	<0.50	0.50	N/A	9690472
Acid Extractable Strontium (Sr)	mg/kg	57	52	85	5.0	110	5.0	N/A	9690472
Acid Extractable Thallium (Tl)	mg/kg	0.11	0.10	0.12	0.10	0.12	0.10	N/A	9690472
Acid Extractable Tin (Sn)	mg/kg	<1.0	<1.0	<1.0	1.0	<1.0	1.0	N/A	9690472
Acid Extractable Uranium (U)	mg/kg	0.87	0.77	0.84	0.10	0.94	0.10	N/A	9690472
Acid Extractable Vanadium (V)	mg/kg	31	32	34	2.0	33	2.0	N/A	9690472
Acid Extractable Zinc (Zn)	mg/kg	43	39	46	5.0	51	5.0	N/A	9690472

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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ELEMENTS BY ATOMIC SPECTROSCOPY (SEDIMENT)

Bureau Veritas ID		AEPF23		AEPF24	AEPF25	AEPF26			
Sampling Date		2024/09/29		2024/09/29	2024/09/29	2024/09/30			
COC Number		C#101301-01-01		C#101301-01-01	C#101301-01-01	C#101301-01-01			
	UNITS	T17-1B	RDL	T20-1A	T20-1B	T27-1A	RDL	MDL	QC Batch
Metals									
Acid Extractable Aluminum (Al)	mg/kg	9600	10	8500	8600	10000	10	N/A	9690472
Acid Extractable Antimony (Sb)	mg/kg	<2.0	2.0	<2.0	<2.0	<2.0	2.0	N/A	9690472
Acid Extractable Arsenic (As)	mg/kg	2.9	2.0	2.1	<2.0	2.1	2.0	N/A	9690472
Acid Extractable Barium (Ba)	mg/kg	2400	50	1400	380	660	5.0	N/A	9690472
Acid Extractable Beryllium (Be)	mg/kg	<0.50	0.50	<0.50	<0.50	<0.50	0.50	N/A	9690472
Acid Extractable Bismuth (Bi)	mg/kg	<2.0	2.0	<2.0	<2.0	<2.0	2.0	N/A	9690472
Acid Extractable Boron (B)	mg/kg	<50	50	<50	<50	<50	50	N/A	9690472
Acid Extractable Cadmium (Cd)	mg/kg	<0.30	0.30	<0.30	<0.30	<0.30	0.30	N/A	9690472
Acid Extractable Chromium (Cr)	mg/kg	30	2.0	28	27	32	2.0	N/A	9690472
Acid Extractable Cobalt (Co)	mg/kg	5.5	1.0	4.8	4.9	5.9	1.0	N/A	9690472
Acid Extractable Copper (Cu)	mg/kg	18	2.0	12	11	14	2.0	N/A	9690472
Acid Extractable Iron (Fe)	mg/kg	18000	50	16000	16000	18000	50	N/A	9690472
Acid Extractable Lead (Pb)	mg/kg	25	0.50	8.6	4.7	4.9	0.50	N/A	9690472
Acid Extractable Lithium (Li)	mg/kg	16	2.0	14	13	16	2.0	N/A	9690472
Acid Extractable Manganese (Mn)	mg/kg	220	2.0	190	180	210	2.0	N/A	9690472
Acid Extractable Mercury (Hg)	mg/kg	<0.10	0.10	<0.10	<0.10	<0.10	0.10	N/A	9690472
Acid Extractable Molybdenum (Mo)	mg/kg	<2.0	2.0	<2.0	<2.0	<2.0	2.0	N/A	9690472
Acid Extractable Nickel (Ni)	mg/kg	19	2.0	18	17	20	2.0	N/A	9690472
Acid Extractable Rubidium (Rb)	mg/kg	22	2.0	20	19	24	2.0	N/A	9690472
Acid Extractable Selenium (Se)	mg/kg	0.60	0.50	<0.50	<0.50	0.53	0.50	N/A	9690472
Acid Extractable Silver (Ag)	mg/kg	<0.50	0.50	<0.50	<0.50	<0.50	0.50	N/A	9690472
Acid Extractable Strontium (Sr)	mg/kg	110	5.0	75	51	63	5.0	N/A	9690472
Acid Extractable Thallium (Tl)	mg/kg	0.13	0.10	0.10	<0.10	0.13	0.10	N/A	9690472
Acid Extractable Tin (Sn)	mg/kg	<1.0	1.0	<1.0	<1.0	<1.0	1.0	N/A	9690472
Acid Extractable Uranium (U)	mg/kg	0.95	0.10	0.74	0.64	1.1	0.10	N/A	9690472
Acid Extractable Vanadium (V)	mg/kg	33	2.0	30	30	35	2.0	N/A	9690472
Acid Extractable Zinc (Zn)	mg/kg	61	5.0	41	37	44	5.0	N/A	9690472

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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ELEMENTS BY ATOMIC SPECTROSCOPY (SEDIMENT)

Bureau Veritas ID		AEPF27			
Sampling Date		2024/09/30			
COC Number		C#101301-01-01			
	UNITS	T27-1B	RDL	MDL	QC Batch
Metals					
Acid Extractable Aluminum (Al)	mg/kg	9700	10	N/A	9690472
Acid Extractable Antimony (Sb)	mg/kg	<2.0	2.0	N/A	9690472
Acid Extractable Arsenic (As)	mg/kg	2.0	2.0	N/A	9690472
Acid Extractable Barium (Ba)	mg/kg	200	5.0	N/A	9690472
Acid Extractable Beryllium (Be)	mg/kg	<0.50	0.50	N/A	9690472
Acid Extractable Bismuth (Bi)	mg/kg	<2.0	2.0	N/A	9690472
Acid Extractable Boron (B)	mg/kg	<50	50	N/A	9690472
Acid Extractable Cadmium (Cd)	mg/kg	<0.30	0.30	N/A	9690472
Acid Extractable Chromium (Cr)	mg/kg	31	2.0	N/A	9690472
Acid Extractable Cobalt (Co)	mg/kg	5.6	1.0	N/A	9690472
Acid Extractable Copper (Cu)	mg/kg	13	2.0	N/A	9690472
Acid Extractable Iron (Fe)	mg/kg	18000	50	N/A	9690472
Acid Extractable Lead (Pb)	mg/kg	4.9	0.50	N/A	9690472
Acid Extractable Lithium (Li)	mg/kg	16	2.0	N/A	9690472
Acid Extractable Manganese (Mn)	mg/kg	200	2.0	N/A	9690472
Acid Extractable Mercury (Hg)	mg/kg	<0.10	0.10	N/A	9690472
Acid Extractable Molybdenum (Mo)	mg/kg	<2.0	2.0	N/A	9690472
Acid Extractable Nickel (Ni)	mg/kg	19	2.0	N/A	9690472
Acid Extractable Rubidium (Rb)	mg/kg	23	2.0	N/A	9690472
Acid Extractable Selenium (Se)	mg/kg	0.59	0.50	N/A	9690472
Acid Extractable Silver (Ag)	mg/kg	<0.50	0.50	N/A	9690472
Acid Extractable Strontium (Sr)	mg/kg	52	5.0	N/A	9690472
Acid Extractable Thallium (Tl)	mg/kg	0.13	0.10	N/A	9690472
Acid Extractable Tin (Sn)	mg/kg	<1.0	1.0	N/A	9690472
Acid Extractable Uranium (U)	mg/kg	0.97	0.10	N/A	9690472
Acid Extractable Vanadium (V)	mg/kg	34	2.0	N/A	9690472
Acid Extractable Zinc (Zn)	mg/kg	43	5.0	N/A	9690472

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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ATLANTIC RBCA HYDROCARBONS (SEDIMENT)

Bureau Veritas ID		AEPE90	AEPE91			AEPE92			
Sampling Date		2024/09/28	2024/09/28			2024/09/28			
COC Number		C#101301-01-01	C#101301-01-01			C#101301-01-01			
	UNITS	T1-1A	T1-1B	RDL	MDL	T6-1A	RDL	MDL	QC Batch
Petroleum Hydrocarbons									
Benzene	mg/kg	<0.0050	<0.0050	0.0050	N/A	<0.010	0.010	N/A	9682032
Toluene	mg/kg	<0.050	<0.050	0.050	N/A	<0.10	0.10	N/A	9682032
Ethylbenzene	mg/kg	<0.010	<0.010	0.010	0.025	<0.020	0.020	0.050	9682032
Total Xylenes	mg/kg	<0.050	<0.050	0.050	N/A	<0.10	0.10	N/A	9682032
C6 - C10 (less BTEX)	mg/kg	<2.5	<2.5	2.5	N/A	<5.0	5.0	N/A	9682032
>C10-C16 Hydrocarbons	mg/kg	0.45	0.47	0.25	N/A	1.8	0.25	N/A	9697109
>C16-C21 Hydrocarbons	mg/kg	0.62	0.60	0.25	N/A	1.1	0.25	N/A	9697109
>C21-<C32 Hydrocarbons	mg/kg	2.7	2.3	0.25	N/A	1.9	0.25	N/A	9697109
Reached Baseline at C32	mg/kg	Yes	Yes	N/A	N/A	Yes	N/A	N/A	9697109
Hydrocarbon Resemblance	mg/kg	COMMENT (1)	COMMENT (1)	N/A	N/A	COMMENT (2)	N/A	N/A	9697109
Surrogate Recovery (%)									
n-Dotriacontane - Extractable	%	89	94	N/A	N/A	88	N/A	N/A	9697109
Isobutylbenzene - Volatile	%	113	110	N/A	N/A	107 (3)	N/A	N/A	9682032

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) Unidentified compound(s) in fuel / lube range. Possible lube oil fraction.
(2) One product in fuel oil range. Unidentified compound(s) in lube oil range. Possible lube oil fraction.
(3) Elevated VPH RDL(s) due to limited sample.

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ATLANTIC RBCA HYDROCARBONS (SEDIMENT)

Bureau Veritas ID		AEPE93		AEPE94		AEPE95			
Sampling Date		2024/09/28		2024/09/29		2024/09/28			
COC Number		C#101301-01-01		C#101301-01-01		C#101301-01-01			
	UNITS	**T6-1B**	**RDL**	**T9-1A**	**RDL**	**T9-1B**	**RDL**	**MDL**	**QC Batch**
Petroleum Hydrocarbons									
Benzene	mg/kg	<0.010	0.010	<0.010	0.010	<0.010	0.010	N/A	9682032
Toluene	mg/kg	<0.10	0.10	<0.10	0.10	<0.10	0.10	N/A	9682032
Ethylbenzene	mg/kg	<0.020	0.020	<0.020	0.020	<0.020	0.020	0.050	9682032
Total Xylenes	mg/kg	<0.10	0.10	<0.10	0.10	<0.10	0.10	N/A	9682032
C6 - C10 (less BTEX)	mg/kg	<5.0	5.0	<5.0	5.0	<5.0	5.0	N/A	9682032
>C10-C16 Hydrocarbons	mg/kg	12	0.27	14	0.29	12	0.32	N/A	9697109
>C16-C21 Hydrocarbons	mg/kg	6.4	0.27	7.4	0.29	6.9	0.32	N/A	9697109
>C21-<C32 Hydrocarbons	mg/kg	2.8	0.27	2.8	0.29	3.1	0.32	N/A	9697109
Reached Baseline at C32	mg/kg	Yes	N/A	Yes	N/A	Yes	N/A	N/A	9697109
Hydrocarbon Resemblance	mg/kg	COMMENT (1)	N/A	COMMENT (1)	N/A	COMMENT (1)	N/A	N/A	9697109
Surrogate Recovery (%)									
n-Dotriacontane - Extractable	%	104 (2)	N/A	78 (2)	N/A	89 (2)	N/A	N/A	9697109
Isobutylbenzene - Volatile	%	110 (3)	N/A	109 (3)	N/A	117 (3)	N/A	N/A	9682032

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) One product in fuel oil range. Unidentified compound(s) in lube oil range. Possible lube oil fraction.
(2) Elevated TEH RDL(s) due to matrix interference.
(3) Elevated VPH RDL(s) due to limited sample.

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ATLANTIC RBCA HYDROCARBONS (SEDIMENT)

Bureau Veritas ID		AEPE96			AEPE97			AEPE98			
Sampling Date		2024/09/28			2024/09/29			2024/09/29			
COC Number		C#101301-01-01			C#101301-01-01			C#101301-01-01			
	UNITS	T9-1B QAQC	RDL	MDL	T11-1A	RDL	MDL	T11-1B	RDL	MDL	QC Batch
Petroleum Hydrocarbons											
Benzene	mg/kg	<0.0050	0.0050	N/A	<0.010	0.010	N/A	<0.0050	0.0050	N/A	9682032
Toluene	mg/kg	<0.050	0.050	N/A	<0.10	0.10	N/A	<0.050	0.050	N/A	9682032
Ethylbenzene	mg/kg	<0.010	0.010	0.025	<0.020	0.020	0.050	<0.010	0.010	0.025	9682032
Total Xylenes	mg/kg	<0.050	0.050	N/A	<0.10	0.10	N/A	<0.050	0.050	N/A	9682032
C6 - C10 (less BTEX)	mg/kg	<2.5	2.5	N/A	<5.0	5.0	N/A	<2.5	2.5	N/A	9682032
>C10-C16 Hydrocarbons	mg/kg	8.1	0.35	N/A	1.4	0.25	N/A	15	0.30	N/A	9697109
>C16-C21 Hydrocarbons	mg/kg	4.0	0.35	N/A	1.2	0.25	N/A	8.4	0.30	N/A	9697109
>C21-<C32 Hydrocarbons	mg/kg	3.1	0.35	N/A	3.0	0.25	N/A	5.1	0.30	N/A	9697109
Reached Baseline at C32	mg/kg	Yes	N/A	N/A	Yes	N/A	N/A	Yes	N/A	N/A	9697109
Hydrocarbon Resemblance	mg/kg	COMMENT (1)	N/A	N/A	COMMENT (1)	N/A	N/A	COMMENT (2)	N/A	N/A	9697109
Surrogate Recovery (%)											
n-Dotriacontane - Extractable	%	101 (3)	N/A	N/A	98	N/A	N/A	92 (3)	N/A	N/A	9697109
Isobutylbenzene - Volatile	%	110	N/A	N/A	113 (4)	N/A	N/A	111	N/A	N/A	9682032

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) One product in fuel oil range. Unidentified compound(s) in lube oil range. Possible lube oil fraction.
(2) One product in fuel oil range. Unidentified compound(s) in fuel / lube range. Possible lube oil fraction.
(3) Elevated TEH RDL(s) due to matrix interference.
(4) Elevated VPH RDL(s) due to limited sample.

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ATLANTIC RBCA HYDROCARBONS (SEDIMENT)

Bureau Veritas ID		AEPE99				AEPF00		AEPF00			
Sampling Date		2024/09/28				2024/09/28		2024/09/28			
COC Number		C#101301-01-01				C#101301-01-01		C#101301-01-01			
	UNITS	T12-1A	RDL	MDL	QC Batch	T12-1B	RDL	T12-1B Lab-Dup	RDL	MDL	QC Batch
Petroleum Hydrocarbons											
Benzene	mg/kg	<0.0050	0.0050	N/A	9682032	<0.010	0.010	N/A	0.010	N/A	9682032
Toluene	mg/kg	<0.050	0.050	N/A	9682032	<0.10	0.10	N/A	0.10	N/A	9682032
Ethylbenzene	mg/kg	<0.010	0.010	0.025	9682032	<0.020	0.020	N/A	0.020	0.050	9682032
Total Xylenes	mg/kg	<0.050	0.050	N/A	9682032	<0.10	0.10	N/A	0.10	N/A	9682032
C6 - C10 (less BTEX)	mg/kg	<2.5	2.5	N/A	9682032	<5.0	5.0	N/A	5.0	N/A	9682032
>C10-C16 Hydrocarbons	mg/kg	2.3	0.36	N/A	9697109	6.3	0.32	4.7	0.28	N/A	9710295
>C16-C21 Hydrocarbons	mg/kg	2.0	0.36	N/A	9697109	3.0	0.32	2.6	0.28	N/A	9710295
>C21-<C32 Hydrocarbons	mg/kg	2.8	0.36	N/A	9697109	2.8	0.32	2.6	0.28	N/A	9710295
Reached Baseline at C32	mg/kg	Yes	N/A	N/A	9697109	Yes	N/A	N/A	N/A	N/A	9710295
Hydrocarbon Resemblance	mg/kg	COMMENT (1)	N/A	N/A	9697109	COMMENT (1)	N/A	N/A	N/A	N/A	9710295
Surrogate Recovery (%)											
n-Dotriacontane - Extractable	%	83 (2)	N/A	N/A	9697109	81 (2)	N/A	78 (2)	N/A	N/A	9710295
Isobutylbenzene - Volatile	%	109	N/A	N/A	9682032	101 (3)	N/A	N/A	N/A	N/A	9682032

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) One product in fuel oil range. Unidentified compound(s) in lube oil range. Possible lube oil fraction.
(2) Elevated TEH RDL(s) due to matrix interference.
(3) Elevated VPH RDL(s) due to limited sample.

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ATLANTIC RBCA HYDROCARBONS (SEDIMENT)

Bureau Veritas ID		AEPF01		AEPF02		AEPF03			
Sampling Date		2024/09/29		2024/09/29		2024/09/29			
COC Number		C#101301-01-01		C#101301-01-01		C#101301-01-01			
	UNITS	T14-1A	RDL	T14-1B	RDL	T14-2A	RDL	MDL	QC Batch
Petroleum Hydrocarbons									
Benzene	mg/kg	<0.0050	0.0050	<0.0050	0.0050	<0.0050	0.0050	N/A	9682032
Toluene	mg/kg	<0.050	0.050	<0.050	0.050	<0.050	0.050	N/A	9682032
Ethylbenzene	mg/kg	<0.010	0.010	<0.010	0.010	<0.010	0.010	0.025	9682032
Total Xylenes	mg/kg	<0.050	0.050	<0.050	0.050	<0.050	0.050	N/A	9682032
C6 - C10 (less BTEX)	mg/kg	<2.5	2.5	<2.5	2.5	<2.5	2.5	N/A	9682032
>C10-C16 Hydrocarbons	mg/kg	29	0.28	4.1	0.29	3.1	0.25	N/A	9710295
>C16-C21 Hydrocarbons	mg/kg	13	0.28	3.2	0.29	2.0	0.25	N/A	9710295
>C21-<C32 Hydrocarbons	mg/kg	3.2	0.28	3.0	0.29	2.7	0.25	N/A	9710295
Reached Baseline at C32	mg/kg	Yes	N/A	Yes	N/A	Yes	N/A	N/A	9710295
Hydrocarbon Resemblance	mg/kg	COMMENT (1)	N/A	COMMENT (1)	N/A	COMMENT (1)	N/A	N/A	9710295
Surrogate Recovery (%)									
n-Dotriacontane - Extractable	%	84 (2)	N/A	91 (2)	N/A	90	N/A	N/A	9710295
Isobutylbenzene - Volatile	%	105	N/A	107	N/A	108	N/A	N/A	9682032

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) One product in fuel oil range. Unidentified compound(s) in lube oil range. Possible lube oil fraction.
(2) Elevated TEH RDL(s) due to matrix interference.

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ATLANTIC RBCA HYDROCARBONS (SEDIMENT)

Bureau Veritas ID		AEPF04			AEPF05			AEPF06			
Sampling Date		2024/09/29			2024/09/29			2024/09/29			
COC Number		C#101301-01-01			C#101301-01-01			C#101301-01-01			
	UNITS	T14-2B	RDL	QC Batch	T14-3A	RDL	MDL	T14-3B	RDL	MDL	QC Batch
Petroleum Hydrocarbons											
Benzene	mg/kg	<0.010	0.010	9682032	<0.010	0.010	N/A	<0.0050	0.0050	N/A	9690468
Toluene	mg/kg	<0.10	0.10	9682032	<0.10	0.10	N/A	<0.050	0.050	N/A	9690468
Ethylbenzene	mg/kg	<0.020	0.020	9682032	<0.020	0.020	0.050	<0.010	0.010	0.025	9690468
Total Xylenes	mg/kg	<0.10	0.10	9682032	<0.10	0.10	N/A	<0.050	0.050	N/A	9690468
C6 - C10 (less BTEX)	mg/kg	<5.0	5.0	9682032	<5.0	5.0	N/A	<2.5	2.5	N/A	9690468
>C10-C16 Hydrocarbons	mg/kg	5.8	0.32	9710295	4.1	0.28	N/A	1.3	0.27	N/A	9710295
>C16-C21 Hydrocarbons	mg/kg	3.9	0.32	9710295	2.4	0.28	N/A	1.4	0.27	N/A	9710295
>C21-<C32 Hydrocarbons	mg/kg	2.8	0.32	9710295	2.8	0.28	N/A	2.6	0.27	N/A	9710295
Reached Baseline at C32	mg/kg	Yes	N/A	9710295	Yes	N/A	N/A	Yes	N/A	N/A	9710295
Hydrocarbon Resemblance	mg/kg	COMMENT (1)	N/A	9710295	COMMENT (1)	N/A	N/A	COMMENT (1)	N/A	N/A	9710295
Surrogate Recovery (%)											
n-Dotriacontane - Extractable	%	85 (2)	N/A	9710295	93 (2)	N/A	N/A	88 (2)	N/A	N/A	9710295
Isobutylbenzene - Volatile	%	107 (3)	N/A	9682032	104 (3)	N/A	N/A	109	N/A	N/A	9690468

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) One product in fuel oil range. Unidentified compound(s) in lube oil range. Possible lube oil fraction.
(2) Elevated TEH RDL(s) due to matrix interference.
(3) Elevated VPH RDL(s) due to limited sample.

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ATLANTIC RBCA HYDROCARBONS (SEDIMENT)

Bureau Veritas ID		AEPF07		AEPF08	AEPF08			
Sampling Date		2024/09/30		2024/09/30	2024/09/30			
COC Number		C#101301-01-01		C#101301-01-01	C#101301-01-01			
	UNITS	T14-4A	RDL	T14-4B	T14-4B Lab-Dup	RDL	MDL	QC Batch
Petroleum Hydrocarbons								
Benzene	mg/kg	<0.0050	0.0050	<0.0050	<0.0050	0.0050	N/A	9690468
Toluene	mg/kg	<0.050	0.050	<0.050	<0.050	0.050	N/A	9690468
Ethylbenzene	mg/kg	<0.010	0.010	<0.010	<0.010	0.010	0.025	9690468
Total Xylenes	mg/kg	<0.050	0.050	<0.050	<0.050	0.050	N/A	9690468
C6 - C10 (less BTEX)	mg/kg	<2.5	2.5	<2.5	<2.5	2.5	N/A	9690468
>C10-C16 Hydrocarbons	mg/kg	55	0.33	21	N/A	0.30	N/A	9710295
>C16-C21 Hydrocarbons	mg/kg	14	0.33	9.6	N/A	0.30	N/A	9710295
>C21-<C32 Hydrocarbons	mg/kg	5.7	0.33	3.7	N/A	0.30	N/A	9710295
Reached Baseline at C32	mg/kg	Yes	N/A	Yes	N/A	N/A	N/A	9710295
Hydrocarbon Resemblance	mg/kg	COMMENT (1)	N/A	COMMENT (1)	N/A	N/A	N/A	9710295
Surrogate Recovery (%)								
n-Dotriacontane - Extractable	%	86 (2)	N/A	84 (2)	N/A	N/A	N/A	9710295
Isobutylbenzene - Volatile	%	101	N/A	102	104	N/A	N/A	9690468

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) One product in fuel oil range. Unidentified compound(s) in lube oil range. Possible lube oil fraction.
(2) Elevated TEH RDL(s) due to matrix interference.

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ATLANTIC RBCA HYDROCARBONS (SEDIMENT)

Bureau Veritas ID		AEPF09			AEPF10	AEPF11			
Sampling Date		2024/09/28			2024/09/29	2024/09/29			
COC Number		C#101301-01-01			C#101301-01-01	C#101301-01-01			
	UNITS	T14-4B QAQC	RDL	MDL	T14-5A	T14-5B	RDL	MDL	QC Batch
Petroleum Hydrocarbons									
Benzene	mg/kg	<0.010	0.010	N/A	<0.0050	<0.0050	0.0050	N/A	9690468
Toluene	mg/kg	<0.10	0.10	N/A	<0.050	<0.050	0.050	N/A	9690468
Ethylbenzene	mg/kg	<0.020	0.020	0.050	<0.010	<0.010	0.010	0.025	9690468
Total Xylenes	mg/kg	<0.10	0.10	N/A	<0.050	<0.050	0.050	N/A	9690468
C6 - C10 (less BTEX)	mg/kg	<5.0	5.0	N/A	<2.5	<2.5	2.5	N/A	9690468
>C10-C16 Hydrocarbons	mg/kg	23	0.32	N/A	230	110	0.25	N/A	9710295
>C16-C21 Hydrocarbons	mg/kg	9.1	0.32	N/A	90	41	0.25	N/A	9710295
>C21-<C32 Hydrocarbons	mg/kg	4.1	0.32	N/A	4.0	3.2	0.25	N/A	9710295
Reached Baseline at C32	mg/kg	Yes	N/A	N/A	Yes	Yes	N/A	N/A	9710295
Hydrocarbon Resemblance	mg/kg	COMMENT (1)	N/A	N/A	COMMENT (1)	COMMENT (1)	N/A	N/A	9710295
Surrogate Recovery (%)									
n-Dotriacontane - Extractable	%	88 (2)	N/A	N/A	97	90	N/A	N/A	9710295
Isobutylbenzene - Volatile	%	101 (3)	N/A	N/A	95	108	N/A	N/A	9690468

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) One product in fuel oil range. Unidentified compound(s) in lube oil range. Possible lube oil fraction.
(2) Elevated TEH RDL(s) due to matrix interference.
(3) Elevated VPH RDL(s) due to limited sample.

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ATLANTIC RBCA HYDROCARBONS (SEDIMENT)

Bureau Veritas ID		AEPF12			AEPF13		AEPF14			
Sampling Date		2024/09/29			2024/09/29		2024/09/29			
COC Number		C#101301-01-01			C#101301-01-01		C#101301-01-01			
	UNITS	T14-6A	RDL	MDL	T14-6B	RDL	T14-7A	RDL	MDL	QC Batch
Petroleum Hydrocarbons										
Benzene	mg/kg	<0.010	0.010	N/A	<0.0050	0.0050	<0.0050	0.0050	N/A	9690468
Toluene	mg/kg	<0.10	0.10	N/A	<0.050	0.050	<0.050	0.050	N/A	9690468
Ethylbenzene	mg/kg	<0.020	0.020	0.050	<0.010	0.010	<0.010	0.010	0.025	9690468
Total Xylenes	mg/kg	<0.10	0.10	N/A	<0.050	0.050	<0.050	0.050	N/A	9690468
C6 - C10 (less BTEX)	mg/kg	<5.0	5.0	N/A	<2.5	2.5	<2.5	2.5	N/A	9690468
>C10-C16 Hydrocarbons	mg/kg	270	0.25	N/A	35	0.28	26	0.29	N/A	9710295
>C16-C21 Hydrocarbons	mg/kg	110	0.25	N/A	15	0.28	11	0.29	N/A	9710295
>C21-<C32 Hydrocarbons	mg/kg	4.4	0.25	N/A	2.8	0.28	2.7	0.29	N/A	9710295
Reached Baseline at C32	mg/kg	Yes	N/A	N/A	Yes	N/A	Yes	N/A	N/A	9710295
Hydrocarbon Resemblance	mg/kg	COMMENT (1)	N/A	N/A	COMMENT (1)	N/A	COMMENT (1)	N/A	N/A	9710295
Surrogate Recovery (%)										
n-Dotriacontane - Extractable	%	76	N/A	N/A	80 (2)	N/A	81 (2)	N/A	N/A	9710295
Isobutylbenzene - Volatile	%	100 (3)	N/A	N/A	108	N/A	106	N/A	N/A	9690468

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) One product in fuel oil range. Unidentified compound(s) in lube oil range. Possible lube oil fraction.
(2) Elevated TEH RDL(s) due to matrix interference.
(3) Elevated VPH RDL(s) due to limited sample.

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ATLANTIC RBCA HYDROCARBONS (SEDIMENT)

Bureau Veritas ID		AEPF16		AEPF17		AEPF19			
Sampling Date		2024/09/29		2024/09/29		2024/09/29			
COC Number		C#101301-01-01		C#101301-01-01		C#101301-01-01			
	UNITS	T14-7B	RDL	T16-1A	RDL	T16-1B	RDL	MDL	QC Batch
Petroleum Hydrocarbons									
Benzene	mg/kg	<0.0050	0.0050	<0.0050	0.0050	<0.0050	0.0050	N/A	9690468
Toluene	mg/kg	<0.050	0.050	<0.050	0.050	<0.050	0.050	N/A	9690468
Ethylbenzene	mg/kg	<0.010	0.010	<0.010	0.010	<0.010	0.010	0.025	9690468
Total Xylenes	mg/kg	<0.050	0.050	<0.050	0.050	<0.050	0.050	N/A	9690468
C6 - C10 (less BTEX)	mg/kg	<2.5	2.5	<2.5	2.5	<2.5	2.5	N/A	9690468
>C10-C16 Hydrocarbons	mg/kg	42	0.30	270	0.33	120	0.29	N/A	9710295
>C16-C21 Hydrocarbons	mg/kg	17	0.30	99	0.33	56	0.29	N/A	9710295
>C21-<C32 Hydrocarbons	mg/kg	2.8	0.30	5.9	0.33	4.7	0.29	N/A	9710295
Reached Baseline at C32	mg/kg	Yes	N/A	Yes	N/A	Yes	N/A	N/A	9710295
Hydrocarbon Resemblance	mg/kg	COMMENT (1)	N/A	COMMENT (1)	N/A	COMMENT (1)	N/A	N/A	9710295
Surrogate Recovery (%)									
n-Dotriacontane - Extractable	%	69 (2)	N/A	94 (2)	N/A	83 (2)	N/A	N/A	9710295
Isobutylbenzene - Volatile	%	105	N/A	94	N/A	101	N/A	N/A	9690468

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) One product in fuel oil range. Unidentified compound(s) in lube oil range. Possible lube oil fraction.
(2) Elevated TEH RDL(s) due to matrix interference.

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ATLANTIC RBCA HYDROCARBONS (SEDIMENT)

Bureau Veritas ID		AEPF21				AEPF22		AEPF23			
Sampling Date		2024/09/29				2024/09/29		2024/09/29			
COC Number		C#101301-01-01				C#101301-01-01		C#101301-01-01			
	UNITS	T17-1A	RDL	MDL	QC Batch	T17-1A-QAQC	RDL	T17-1B	RDL	MDL	QC Batch
Petroleum Hydrocarbons											
Benzene	mg/kg	<0.010	0.010	N/A	9690468	<0.0050	0.0050	<0.0050	0.0050	N/A	9690468
Toluene	mg/kg	<0.10	0.10	N/A	9690468	<0.050	0.050	<0.050	0.050	N/A	9690468
Ethylbenzene	mg/kg	<0.020	0.020	0.050	9690468	<0.010	0.010	<0.010	0.010	0.025	9690468
Total Xylenes	mg/kg	<0.10	0.10	N/A	9690468	<0.050	0.050	<0.050	0.050	N/A	9690468
C6 - C10 (less BTEX)	mg/kg	<5.0	5.0	N/A	9690468	<2.5	2.5	<2.5	2.5	N/A	9690468
>C10-C16 Hydrocarbons	mg/kg	2700	15	N/A	9710295	2200	2.5	230	0.26	N/A	9710266
>C16-C21 Hydrocarbons	mg/kg	910	15	N/A	9710295	730	2.5	86	0.26	N/A	9710266
>C21-<C32 Hydrocarbons	mg/kg	32	15	N/A	9710295	16	2.5	4.3	0.26	N/A	9710266
Reached Baseline at C32	mg/kg	Yes	N/A	N/A	9710295	Yes	N/A	Yes	N/A	N/A	9710266
Hydrocarbon Resemblance	mg/kg	COMMENT (1)	N/A	N/A	9710295	COMMENT (1)	N/A	COMMENT (2)	N/A	N/A	9710266
Surrogate Recovery (%)											
n-Dotriacontane - Extractable	%	108 (3)	N/A	N/A	9710295	76 (3)	N/A	90 (4)	N/A	N/A	9710266
Isobutylbenzene - Volatile	%	83 (5)	N/A	N/A	9690468	92	N/A	83	N/A	N/A	9690468

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) One product in fuel oil range.
(2) One product in fuel oil range. Unidentified compound(s) in lube oil range. Possible lube oil fraction.
(3) Elevated TEH RDL(s) due to sample dilution.
(4) Elevated TEH RDL(s) due to matrix interference.
(5) Elevated VPH RDL(s) due to limited sample.

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ATLANTIC RBCA HYDROCARBONS (SEDIMENT)

Bureau Veritas ID		AEPF24		AEPF25	AEPF26		AEPF27			
Sampling Date		2024/09/29		2024/09/29	2024/09/30		2024/09/30			
COC Number		C#101301-01-01		C#101301-01-01	C#101301-01-01		C#101301-01-01			
	UNITS	T20-1A	RDL	T20-1B	T27-1A	RDL	T27-1B	RDL	MDL	QC Batch
Petroleum Hydrocarbons										
Benzene	mg/kg	<0.0050	0.0050	<0.0050	<0.0050	0.0050	<0.0050	0.0050	N/A	9690468
Toluene	mg/kg	<0.050	0.050	<0.050	<0.050	0.050	<0.050	0.050	N/A	9690468
Ethylbenzene	mg/kg	<0.010	0.010	<0.010	<0.010	0.010	<0.010	0.010	0.025	9690468
Total Xylenes	mg/kg	<0.050	0.050	<0.050	<0.050	0.050	<0.050	0.050	N/A	9690468
C6 - C10 (less BTEX)	mg/kg	<2.5	2.5	<2.5	<2.5	2.5	<2.5	2.5	N/A	9690468
>C10-C16 Hydrocarbons	mg/kg	320 (1)	0.25	83	14	0.26	4.6	0.28	N/A	9710266
>C16-C21 Hydrocarbons	mg/kg	120	0.25	31	5.8	0.26	2.0	0.28	N/A	9710266
>C21-<C32 Hydrocarbons	mg/kg	4.4	0.25	2.9	2.9	0.26	3.3	0.28	N/A	9710266
Reached Baseline at C32	mg/kg	Yes	N/A	Yes	Yes	N/A	Yes	N/A	N/A	9710266
Hydrocarbon Resemblance	mg/kg	COMMENT (2)	N/A	COMMENT (2)	COMMENT (2)	N/A	COMMENT (3)	N/A	N/A	9710266
Surrogate Recovery (%)										
n-Dotriacontane - Extractable	%	72	N/A	84 (4)	82 (4)	N/A	86 (4)	N/A	N/A	9710266
Isobutylbenzene - Volatile	%	103	N/A	91	107	N/A	102	N/A	N/A	9690468

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

N/A = Not Applicable

(1) TEH Analysis: We are unable to confirm the presence of Pure Drill in the sample in question. The sample has chromatographic peaks present that are consistent with peaks observed in Pure Drill reference materials. The source of the peaks cannot be determined based on the chromatographic information.

(2) One product in fuel oil range. Unidentified compound(s) in lube oil range. Possible lube oil fraction.

(3) One product in fuel oil range. Unidentified compound(s) in fuel / lube range. Possible lube oil fraction.

(4) Elevated TEH RDL(s) due to matrix interference.

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ATLANTIC RBCA HYDROCARBONS (SEDIMENT)

Bureau Veritas ID		AEPF27			
Sampling Date		2024/09/30			
COC Number		C#101301-01-01			
	UNITS	**T27-1B Lab-Dup**	**RDL**	**MDL**	**QC Batch**
Petroleum Hydrocarbons					
>C10-C16 Hydrocarbons	mg/kg	1.5 (1)	0.26	N/A	9710266
>C16-C21 Hydrocarbons	mg/kg	1.0 (1)	0.26	N/A	9710266
>C21-<C32 Hydrocarbons	mg/kg	3.3	0.26	N/A	9710266
Surrogate Recovery (%)					
n-Dotriacontane - Extractable	%	86 (2)	N/A	N/A	9710266

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) Duplicate: results are outside acceptance limit. Sample was past recommended hold time for repeat analysis.
(2) Elevated TEH RDL(s) due to matrix interference.

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TEST SUMMARY

Bureau Veritas ID: AEPE90 **Collected:** 2024/09/28
Sample ID: T1-1A **Shipped:**
Matrix: Sediment **Received:** 2024/10/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9697109	2024/10/11	2024/10/23	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9685719	2024/10/07	2024/10/07	Morgan Schnare
Moisture	BAL	9686109	N/A	2024/10/08	Pawandeep Dhaliwal
Particle size in solids (pipette&sieve)	PSIV	9686206	N/A	2024/10/15	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9682032	N/A	2024/10/07	Shawn Helmkay

Bureau Veritas ID: AEPE90 Dup **Collected:** 2024/09/28
Sample ID: T1-1A **Shipped:**
Matrix: Sediment **Received:** 2024/10/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Particle size in solids (pipette&sieve)	PSIV	9686206	N/A	2024/10/15	Anh Nguyen

Bureau Veritas ID: AEPE91 **Collected:** 2024/09/28
Sample ID: T1-1B **Shipped:**
Matrix: Sediment **Received:** 2024/10/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9697109	2024/10/11	2024/10/23	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9685719	2024/10/07	2024/10/07	Morgan Schnare
Moisture	BAL	9686109	N/A	2024/10/08	Pawandeep Dhaliwal
Particle size in solids (pipette&sieve)	PSIV	9686206	N/A	2024/10/15	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9682032	N/A	2024/10/07	Shawn Helmkay

Bureau Veritas ID: AEPE92 **Collected:** 2024/09/28
Sample ID: T6-1A **Shipped:**
Matrix: Sediment **Received:** 2024/10/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9697109	2024/10/11	2024/10/23	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9685719	2024/10/07	2024/10/07	Morgan Schnare
Moisture	BAL	9686109	N/A	2024/10/08	Pawandeep Dhaliwal
Particle size in solids (pipette&sieve)	PSIV	9686206	N/A	2024/10/15	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9682032	N/A	2024/10/07	Shawn Helmkay

Bureau Veritas ID: AEPE93 **Collected:** 2024/09/28
Sample ID: T6-1B **Shipped:**
Matrix: Sediment **Received:** 2024/10/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9697109	2024/10/11	2024/10/23	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9685719	2024/10/07	2024/10/07	Morgan Schnare
Moisture	BAL	9686109	N/A	2024/10/08	Pawandeep Dhaliwal
Particle size in solids (pipette&sieve)	PSIV	9686206	N/A	2024/10/15	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9682032	N/A	2024/10/07	Shawn Helmkay

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TEST SUMMARY

Bureau Veritas ID: AEPE94 **Collected:** 2024/09/29
Sample ID: T9-1A **Shipped:**
Matrix: Sediment **Received:** 2024/10/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9697109	2024/10/11	2024/10/23	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9685719	2024/10/07	2024/10/07	Morgan Schnare
Moisture	BAL	9686109	N/A	2024/10/08	Pawandeep Dhaliwal
Particle size in solids (pipette&sieve)	PSIV	9686206	N/A	2024/10/15	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9682032	N/A	2024/10/07	Shawn Helmkay

Bureau Veritas ID: AEPE95 **Collected:** 2024/09/28
Sample ID: T9-1B **Shipped:**
Matrix: Sediment **Received:** 2024/10/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9697109	2024/10/11	2024/10/23	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9685719	2024/10/07	2024/10/07	Morgan Schnare
Moisture	BAL	9686544	N/A	2024/10/08	Pawandeep Dhaliwal
Particle size in solids (pipette&sieve)	PSIV	9686206	N/A	2024/10/15	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9682032	N/A	2024/10/07	Shawn Helmkay

Bureau Veritas ID: AEPE95 Dup **Collected:** 2024/09/28
Sample ID: T9-1B **Shipped:**
Matrix: Sediment **Received:** 2024/10/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	9686544	N/A	2024/10/08	Pawandeep Dhaliwal

Bureau Veritas ID: AEPE96 **Collected:** 2024/09/28
Sample ID: T9-1B QAQC **Shipped:**
Matrix: Sediment **Received:** 2024/10/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9697109	2024/10/11	2024/10/23	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9687745	2024/10/08	2024/10/08	Morgan Schnare
Moisture	BAL	9686544	N/A	2024/10/08	Pawandeep Dhaliwal
Particle size in solids (pipette&sieve)	PSIV	9686206	N/A	2024/10/15	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9682032	N/A	2024/10/07	Shawn Helmkay

Bureau Veritas ID: AEPE97 **Collected:** 2024/09/29
Sample ID: T11-1A **Shipped:**
Matrix: Sediment **Received:** 2024/10/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9697109	2024/10/11	2024/10/23	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9687745	2024/10/08	2024/10/08	Morgan Schnare
Moisture	BAL	9686544	N/A	2024/10/08	Pawandeep Dhaliwal
Particle size in solids (pipette&sieve)	PSIV	9686206	N/A	2024/10/15	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9682032	N/A	2024/10/07	Shawn Helmkay

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TEST SUMMARY

Bureau Veritas ID: AEPE98 **Collected:** 2024/09/29
Sample ID: T11-1B **Shipped:**
Matrix: Sediment **Received:** 2024/10/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9697109	2024/10/11	2024/10/23	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9687745	2024/10/08	2024/10/08	Morgan Schnare
Moisture	BAL	9686544	N/A	2024/10/08	Pawandeep Dhaliwal
Particle size in solids (pipette&sieve)	PSIV	9686206	N/A	2024/10/15	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9682032	N/A	2024/10/07	Shawn Helmkay

Bureau Veritas ID: AEPE99 **Collected:** 2024/09/28
Sample ID: T12-1A **Shipped:**
Matrix: Sediment **Received:** 2024/10/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9697109	2024/10/11	2024/10/23	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9687745	2024/10/08	2024/10/08	Morgan Schnare
Moisture	BAL	9686544	N/A	2024/10/08	Pawandeep Dhaliwal
Particle size in solids (pipette&sieve)	PSIV	9686206	N/A	2024/10/15	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9682032	N/A	2024/10/07	Shawn Helmkay

Bureau Veritas ID: AEPF00 **Collected:** 2024/09/28
Sample ID: T12-1B **Shipped:**
Matrix: Sediment **Received:** 2024/10/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9710295	2024/10/18	2024/10/23	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9685719	2024/10/07	2024/10/07	Morgan Schnare
Moisture	BAL	9686544	N/A	2024/10/08	Pawandeep Dhaliwal
Particle size in solids (pipette&sieve)	PSIV	9686206	N/A	2024/10/15	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9682032	N/A	2024/10/07	Shawn Helmkay

Bureau Veritas ID: AEPF00 Dup **Collected:** 2024/09/28
Sample ID: T12-1B **Shipped:**
Matrix: Sediment **Received:** 2024/10/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9710295	2024/10/18	2024/10/23	Marley Gidney

Bureau Veritas ID: AEPF01 **Collected:** 2024/09/29
Sample ID: T14-1A **Shipped:**
Matrix: Sediment **Received:** 2024/10/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9710295	2024/10/18	2024/10/23	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9685719	2024/10/07	2024/10/07	Morgan Schnare
Moisture	BAL	9686544	N/A	2024/10/08	Pawandeep Dhaliwal
Particle size in solids (pipette&sieve)	PSIV	9686206	N/A	2024/10/15	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9682032	N/A	2024/10/07	Shawn Helmkay

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TEST SUMMARY

Bureau Veritas ID: AEPF02 **Collected:** 2024/09/29
Sample ID: T14-1B **Shipped:**
Matrix: Sediment **Received:** 2024/10/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9710295	2024/10/18	2024/10/23	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9685719	2024/10/07	2024/10/07	Morgan Schnare
Moisture	BAL	9686544	N/A	2024/10/08	Pawandeep Dhaliwal
Particle size in solids (pipette&sieve)	PSIV	9688294	N/A	2024/10/16	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9682032	N/A	2024/10/07	Shawn Helmkay

Bureau Veritas ID: AEPF03 **Collected:** 2024/09/29
Sample ID: T14-2A **Shipped:**
Matrix: Sediment **Received:** 2024/10/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9710295	2024/10/18	2024/10/23	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9685719	2024/10/07	2024/10/07	Morgan Schnare
Moisture	BAL	9686544	N/A	2024/10/08	Pawandeep Dhaliwal
Particle size in solids (pipette&sieve)	PSIV	9688294	N/A	2024/10/16	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9682032	N/A	2024/10/07	Shawn Helmkay

Bureau Veritas ID: AEPF04 **Collected:** 2024/09/29
Sample ID: T14-2B **Shipped:**
Matrix: Sediment **Received:** 2024/10/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9710295	2024/10/18	2024/10/23	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9687745	2024/10/08	2024/10/08	Morgan Schnare
Moisture	BAL	9686544	N/A	2024/10/08	Pawandeep Dhaliwal
Particle size in solids (pipette&sieve)	PSIV	9688294	N/A	2024/10/16	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9682032	N/A	2024/10/07	Shawn Helmkay

Bureau Veritas ID: AEPF05 **Collected:** 2024/09/29
Sample ID: T14-3A **Shipped:**
Matrix: Sediment **Received:** 2024/10/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9710295	2024/10/18	2024/10/23	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9687745	2024/10/08	2024/10/08	Morgan Schnare
Moisture	BAL	9686544	N/A	2024/10/08	Pawandeep Dhaliwal
Particle size in solids (pipette&sieve)	PSIV	9688294	N/A	2024/10/16	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9690468	N/A	2024/10/09	Shawn Helmkay

Bureau Veritas ID: AEPF06 **Collected:** 2024/09/29
Sample ID: T14-3B **Shipped:**
Matrix: Sediment **Received:** 2024/10/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9710295	2024/10/18	2024/10/23	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9687745	2024/10/08	2024/10/08	Morgan Schnare
Moisture	BAL	9686544	N/A	2024/10/08	Pawandeep Dhaliwal

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TEST SUMMARY

Bureau Veritas ID: AEPF06 **Collected:** 2024/09/29
Sample ID: T14-3B **Shipped:**
Matrix: Sediment **Received:** 2024/10/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Particle size in solids (pipette&sieve)	PSIV	9688294	N/A	2024/10/16	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9690468	N/A	2024/10/09	Shawn Helmkay

Bureau Veritas ID: AEPF07 **Collected:** 2024/09/30
Sample ID: T14-4A **Shipped:**
Matrix: Sediment **Received:** 2024/10/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9710295	2024/10/18	2024/10/23	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9687745	2024/10/08	2024/10/08	Morgan Schnare
Moisture	BAL	9686544	N/A	2024/10/08	Pawandeep Dhaliwal
Particle size in solids (pipette&sieve)	PSIV	9688294	N/A	2024/10/16	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9690468	N/A	2024/10/09	Shawn Helmkay

Bureau Veritas ID: AEPF08 **Collected:** 2024/09/30
Sample ID: T14-4B **Shipped:**
Matrix: Sediment **Received:** 2024/10/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9710295	2024/10/18	2024/10/23	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9690472	2024/10/09	2024/10/09	Muskan Thakur
Moisture	BAL	9686544	N/A	2024/10/08	Pawandeep Dhaliwal
Particle size in solids (pipette&sieve)	PSIV	9688294	N/A	2024/10/16	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9690468	N/A	2024/10/09	Shawn Helmkay

Bureau Veritas ID: AEPF08 Dup **Collected:** 2024/09/30
Sample ID: T14-4B **Shipped:**
Matrix: Sediment **Received:** 2024/10/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Metals Solids Acid Extr. ICPMS	ICP/MS	9690472	2024/10/09	2024/10/09	Muskan Thakur
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9690468	N/A	2024/10/09	Shawn Helmkay

Bureau Veritas ID: AEPF09 **Collected:** 2024/09/28
Sample ID: T14-4B QAQC **Shipped:**
Matrix: Sediment **Received:** 2024/10/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9710295	2024/10/18	2024/10/23	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9690472	2024/10/09	2024/10/09	Muskan Thakur
Moisture	BAL	9686544	N/A	2024/10/08	Pawandeep Dhaliwal
Particle size in solids (pipette&sieve)	PSIV	9688294	N/A	2024/10/16	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9690468	N/A	2024/10/09	Shawn Helmkay

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TEST SUMMARY

Bureau Veritas ID: AEPF10 **Collected:** 2024/09/29
Sample ID: T14-5A **Shipped:**
Matrix: Sediment **Received:** 2024/10/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9710295	2024/10/07	2024/10/23	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9690472	2024/10/09	2024/10/09	Muskan Thakur
Moisture	BAL	9686493	N/A	2024/10/08	Pawandeep Dhaliwal
Particle size in solids (pipette&sieve)	PSIV	9688294	N/A	2024/10/16	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9690468	N/A	2024/10/09	Shawn Helmkay

Bureau Veritas ID: AEPF10 Dup **Collected:** 2024/09/29
Sample ID: T14-5A **Shipped:**
Matrix: Sediment **Received:** 2024/10/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	9686493	N/A	2024/10/08	Pawandeep Dhaliwal
Particle size in solids (pipette&sieve)	PSIV	9688294	N/A	2024/10/16	Anh Nguyen

Bureau Veritas ID: AEPF11 **Collected:** 2024/09/29
Sample ID: T14-5B **Shipped:**
Matrix: Sediment **Received:** 2024/10/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9710295	2024/10/07	2024/10/23	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9690472	2024/10/09	2024/10/09	Muskan Thakur
Moisture	BAL	9686493	N/A	2024/10/08	Pawandeep Dhaliwal
Particle size in solids (pipette&sieve)	PSIV	9688294	N/A	2024/10/16	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9690468	N/A	2024/10/09	Shawn Helmkay

Bureau Veritas ID: AEPF12 **Collected:** 2024/09/29
Sample ID: T14-6A **Shipped:**
Matrix: Sediment **Received:** 2024/10/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9710295	2024/10/18	2024/10/23	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9690472	2024/10/09	2024/10/09	Muskan Thakur
Moisture	BAL	9686493	N/A	2024/10/08	Pawandeep Dhaliwal
Particle size in solids (pipette&sieve)	PSIV	9688294	N/A	2024/10/16	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9690468	N/A	2024/10/09	Shawn Helmkay

Bureau Veritas ID: AEPF13 **Collected:** 2024/09/29
Sample ID: T14-6B **Shipped:**
Matrix: Sediment **Received:** 2024/10/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9710295	2024/10/18	2024/10/23	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9690472	2024/10/09	2024/10/09	Muskan Thakur
Moisture	BAL	9686493	N/A	2024/10/08	Pawandeep Dhaliwal
Particle size in solids (pipette&sieve)	PSIV	9688294	N/A	2024/10/16	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9690468	N/A	2024/10/09	Shawn Helmkay

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TEST SUMMARY

Bureau Veritas ID: AEPF14 **Collected:** 2024/09/29
Sample ID: T14-7A **Shipped:**
Matrix: Sediment **Received:** 2024/10/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9710295	2024/10/18	2024/10/23	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9690472	2024/10/09	2024/10/09	Muskan Thakur
Moisture	BAL	9686493	N/A	2024/10/08	Pawandeep Dhaliwal
Particle size in solids (pipette&sieve)	PSIV	9688294	N/A	2024/10/16	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9690468	N/A	2024/10/09	Shawn Helmkay

Bureau Veritas ID: AEPF16 **Collected:** 2024/09/29
Sample ID: T14-7B **Shipped:**
Matrix: Sediment **Received:** 2024/10/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9710295	2024/10/18	2024/10/23	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9690472	2024/10/09	2024/10/09	Muskan Thakur
Moisture	BAL	9686544	N/A	2024/10/08	Pawandeep Dhaliwal
Particle size in solids (pipette&sieve)	PSIV	9691195	N/A	2024/10/17	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9690468	N/A	2024/10/09	Shawn Helmkay

Bureau Veritas ID: AEPF17 **Collected:** 2024/09/29
Sample ID: T16-1A **Shipped:**
Matrix: Sediment **Received:** 2024/10/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9710295	2024/10/18	2024/10/24	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9690472	2024/10/09	2024/10/09	Muskan Thakur
Moisture	BAL	9686544	N/A	2024/10/08	Pawandeep Dhaliwal
Particle size in solids (pipette&sieve)	PSIV	9691195	N/A	2024/10/17	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9690468	N/A	2024/10/09	Shawn Helmkay

Bureau Veritas ID: AEPF19 **Collected:** 2024/09/29
Sample ID: T16-1B **Shipped:**
Matrix: Sediment **Received:** 2024/10/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9710295	2024/10/18	2024/10/24	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9690472	2024/10/09	2024/10/09	Muskan Thakur
Moisture	BAL	9686544	N/A	2024/10/08	Pawandeep Dhaliwal
Particle size in solids (pipette&sieve)	PSIV	9691195	N/A	2024/10/17	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9690468	N/A	2024/10/09	Shawn Helmkay

Bureau Veritas ID: AEPF21 **Collected:** 2024/09/29
Sample ID: T17-1A **Shipped:**
Matrix: Sediment **Received:** 2024/10/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9710295	2024/10/18	2024/10/24	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9690472	2024/10/09	2024/10/09	Muskan Thakur
Moisture	BAL	9686544	N/A	2024/10/08	Pawandeep Dhaliwal

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TEST SUMMARY

Bureau Veritas ID: AEPF21 **Collected:** 2024/09/29
Sample ID: T17-1A **Shipped:**
Matrix: Sediment **Received:** 2024/10/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Particle size in solids (pipette&sieve)	PSIV	9691195	N/A	2024/10/17	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9690468	N/A	2024/10/09	Shawn Helmkay

Bureau Veritas ID: AEPF22 **Collected:** 2024/09/29
Sample ID: T17-1A-QAQC **Shipped:**
Matrix: Sediment **Received:** 2024/10/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9710266	2024/10/18	2024/10/28	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9690472	2024/10/09	2024/10/09	Muskan Thakur
Moisture	BAL	9686544	N/A	2024/10/08	Pawandeep Dhaliwal
Particle size in solids (pipette&sieve)	PSIV	9691195	N/A	2024/10/17	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9690468	N/A	2024/10/09	Shawn Helmkay

Bureau Veritas ID: AEPF23 **Collected:** 2024/09/29
Sample ID: T17-1B **Shipped:**
Matrix: Sediment **Received:** 2024/10/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9710266	2024/10/18	2024/10/25	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9690472	2024/10/09	2024/10/09	Muskan Thakur
Moisture	BAL	9686493	N/A	2024/10/08	Pawandeep Dhaliwal
Particle size in solids (pipette&sieve)	PSIV	9691195	N/A	2024/10/17	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9690468	N/A	2024/10/09	Shawn Helmkay

Bureau Veritas ID: AEPF24 **Collected:** 2024/09/29
Sample ID: T20-1A **Shipped:**
Matrix: Sediment **Received:** 2024/10/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9710266	2024/10/18	2024/10/25	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9690472	2024/10/09	2024/10/09	Muskan Thakur
Moisture	BAL	9686493	N/A	2024/10/08	Pawandeep Dhaliwal
Particle size in solids (pipette&sieve)	PSIV	9691195	N/A	2024/10/17	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9690468	N/A	2024/10/09	Shawn Helmkay

Bureau Veritas ID: AEPF25 **Collected:** 2024/09/29
Sample ID: T20-1B **Shipped:**
Matrix: Sediment **Received:** 2024/10/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9710266	2024/10/18	2024/10/25	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9690472	2024/10/09	2024/10/09	Muskan Thakur
Moisture	BAL	9686493	N/A	2024/10/08	Pawandeep Dhaliwal
Particle size in solids (pipette&sieve)	PSIV	9691195	N/A	2024/10/17	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9690468	N/A	2024/10/09	Shawn Helmkay

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TEST SUMMARY

Bureau Veritas ID: AEPF26 **Collected:** 2024/09/30
Sample ID: T27-1A **Shipped:**
Matrix: Sediment **Received:** 2024/10/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9710266	2024/10/18	2024/10/25	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9690472	2024/10/09	2024/10/09	Muskan Thakur
Moisture	BAL	9686493	N/A	2024/10/08	Pawandeep Dhaliwal
Particle size in solids (pipette&sieve)	PSIV	9691195	N/A	2024/10/17	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9690468	N/A	2024/10/09	Shawn Helmkay

Bureau Veritas ID: AEPF27 **Collected:** 2024/09/30
Sample ID: T27-1B **Shipped:**
Matrix: Sediment **Received:** 2024/10/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9710266	2024/10/18	2024/10/25	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9690472	2024/10/09	2024/10/09	Muskan Thakur
Moisture	BAL	9686493	N/A	2024/10/08	Pawandeep Dhaliwal
Particle size in solids (pipette&sieve)	PSIV	9691195	N/A	2024/10/17	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9690468	N/A	2024/10/09	Shawn Helmkay

Bureau Veritas ID: AEPF27 Dup **Collected:** 2024/09/30
Sample ID: T27-1B **Shipped:**
Matrix: Sediment **Received:** 2024/10/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9710266	2024/10/18	2024/10/25	Marley Gidney
Particle size in solids (pipette&sieve)	PSIV	9691195	N/A	2024/10/17	Anh Nguyen

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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	6.8°C

Revised Report: Further chromatographic ressemblance comments added to samples as per client request. 2025/01/17 MMC

Sample AEPE90 [T1-1A] : TEH Analysis: Sample does not resemble Pure Drill.

Sample AEPE91 [T1-1B] : TEH Analysis: Sample does not resemble Pure Drill.

Sample AEPE93 [T6-1B] : TEH Analysis: We are unable to confirm the presence of Pure Drill in the sample in question. The sample has chromatographic peaks present that are consistent with peaks observed in Pure Drill reference materials. The source of the peaks cannot be determined based on the chromatographic information.

Sample AEPE94 [T9-1A] : TEH Analysis: We are unable to confirm the presence of Pure Drill in the sample in question. The sample has chromatographic peaks present that are consistent with peaks observed in Pure Drill reference materials. The source of the peaks cannot be determined based on the chromatographic information.

Sample AEPE95 [T9-1B] : TEH Analysis: We are unable to confirm the presence of Pure Drill in the sample in question. The sample has chromatographic peaks present that are consistent with peaks observed in Pure Drill reference materials. The source of the peaks cannot be determined based on the chromatographic information.

Sample AEPE96 [T9-1B QAQC] : TEH Analysis: We are unable to confirm the presence of Pure Drill in the sample in question. The sample has chromatographic peaks present that are consistent with peaks observed in Pure Drill reference materials. The source of the peaks cannot be determined based on the chromatographic information.

Sample AEPE97 [T11-1A] : TEH Analysis: We are unable to confirm the presence of Pure Drill in the sample in question. The sample has chromatographic peaks present that are consistent with peaks observed in Pure Drill reference materials. The source of the peaks cannot be determined based on the chromatographic information.

Sample AEPE98 [T11-1B] : TEH Analysis: We are unable to confirm the presence of Pure Drill in the sample in question. The sample has chromatographic peaks present that are consistent with peaks observed in Pure Drill reference materials. The source of the peaks cannot be determined based on the chromatographic information.

Sample AEPE99 [T12-1A] : TEH Analysis: We are unable to confirm the presence of Pure Drill in the sample in question. The sample has chromatographic peaks present that are consistent with peaks observed in Pure Drill reference materials. The source of the peaks cannot be determined based on the chromatographic information.

Sample AEPF00 [T12-1B] : TEH Analysis: We are unable to confirm the presence of Pure Drill in the sample in question. The sample has chromatographic peaks present that are consistent with peaks observed in Pure Drill reference materials. The source of the peaks cannot be determined based on the chromatographic information.

Sample AEPF01 [T14-1A] : TEH Analysis: We are unable to confirm the presence of Pure Drill in the sample in question. The sample has chromatographic peaks present that are consistent with peaks observed in Pure Drill reference materials. The source of the peaks cannot be determined based on the chromatographic information.

Sample AEPF02 [T14-1B] : TEH Analysis: We are unable to confirm the presence of Pure Drill in the sample in question. The sample has chromatographic peaks present that are consistent with peaks observed in Pure Drill reference materials. The source of the peaks cannot be determined based on the chromatographic information.

Sample AEPF03 [T14-2A] : TEH Analysis: We are unable to confirm the presence of Pure Drill in the sample in question. The sample has chromatographic peaks present that are consistent with peaks observed in Pure Drill reference materials. The source of the peaks cannot be determined based on the chromatographic information.

Sample AEPF04 [T14-2B] : TEH Analysis: We are unable to confirm the presence of Pure Drill in the sample in question. The sample has

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chromatographic peaks present that are consistent with peaks observed in Pure Drill reference materials. The source of the peaks cannot be determined based on the chromatographic information.

Sample AEPF05 [T14-3A] : TEH Analysis: We are unable to confirm the presence of Pure Drill in the sample in question. The sample has chromatographic peaks present that are consistent with peaks observed in Pure Drill reference materials. The source of the peaks cannot be determined based on the chromatographic information.

Sample AEPF06 [T14-3B] : TEH Analysis: We are unable to confirm the presence of Pure Drill in the sample in question. The sample has chromatographic peaks present that are consistent with peaks observed in Pure Drill reference materials. The source of the peaks cannot be determined based on the chromatographic information.

Sample AEPF07 [T14-4A] : TEH Analysis: We are unable to confirm the presence of Pure Drill in the sample in question. The sample has chromatographic peaks present that are consistent with peaks observed in Pure Drill reference materials. The source of the peaks cannot be determined based on the chromatographic information.

Sample AEPF08 [T14-4B] : TEH Analysis: We are unable to confirm the presence of Pure Drill in the sample in question. The sample has chromatographic peaks present that are consistent with peaks observed in Pure Drill reference materials. The source of the peaks cannot be determined based on the chromatographic information.

Sample AEPF09 [T14-4B QAQC] : TEH Analysis: We are unable to confirm the presence of Pure Drill in the sample in question. The sample has chromatographic peaks present that are consistent with peaks observed in Pure Drill reference materials. The source of the peaks cannot be determined based on the chromatographic information.

Sample AEPF10 [T14-5A] : TEH Analysis: We are unable to confirm the presence of Pure Drill in the sample in question. The sample has chromatographic peaks present that are consistent with peaks observed in Pure Drill reference materials. The source of the peaks cannot be determined based on the chromatographic information.

Sample AEPF11 [T14-5B] : TEH Analysis: We are unable to confirm the presence of Pure Drill in the sample in question. The sample has chromatographic peaks present that are consistent with peaks observed in Pure Drill reference materials. The source of the peaks cannot be determined based on the chromatographic information.

Sample AEPF12 [T14-6A] : TEH Analysis: We are unable to confirm the presence of Pure Drill in the sample in question. The sample has chromatographic peaks present that are consistent with peaks observed in Pure Drill reference materials. The source of the peaks cannot be determined based on the chromatographic information.

Sample AEPF13 [T14-6B] : TEH Analysis: We are unable to confirm the presence of Pure Drill in the sample in question. The sample has chromatographic peaks present that are consistent with peaks observed in Pure Drill reference materials. The source of the peaks cannot be determined based on the chromatographic information.

Sample AEPF14 [T14-7A] : TEH Analysis: We are unable to confirm the presence of Pure Drill in the sample in question. The sample has chromatographic peaks present that are consistent with peaks observed in Pure Drill reference materials. The source of the peaks cannot be determined based on the chromatographic information.

Sample AEPF16 [T14-7B] : TEH Analysis: We are unable to confirm the presence of Pure Drill in the sample in question. The sample has chromatographic peaks present that are consistent with peaks observed in Pure Drill reference materials. The source of the peaks cannot be determined based on the chromatographic information.

Sample AEPF17 [T16-1A] : TEH Analysis: We are unable to confirm the presence of Pure Drill in the sample in question. The sample has chromatographic peaks present that are consistent with peaks observed in Pure Drill reference materials. The source of the peaks cannot be determined based on the chromatographic information.

Sample AEPF19 [T16-1B] : TEH Analysis: We are unable to confirm the presence of Pure Drill in the sample in question. The sample has chromatographic peaks present that are consistent with peaks observed in Pure Drill reference materials. The source of the peaks cannot be determined based on the chromatographic information.

Sample AEPF21 [T17-1A] : TEH Analysis: We are unable to confirm the presence of Pure Drill in the sample in question. The sample has chromatographic peaks present that are consistent with peaks observed in Pure Drill reference materials. The source of the peaks cannot be

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determined based on the chromatographic information.

Sample AEPF22 [T17-1A-QAQC] : TEH Analysis: We are unable to confirm the presence of Pure Drill in the sample in question. The sample has chromatographic peaks present that are consistent with peaks observed in Pure Drill reference materials. The source of the peaks cannot be determined based on the chromatographic information.

Sample AEPF23 [T17-1B] : TEH Analysis: We are unable to confirm the presence of Pure Drill in the sample in question. The sample has chromatographic peaks present that are consistent with peaks observed in Pure Drill reference materials. The source of the peaks cannot be determined based on the chromatographic information.

Sample AEPF24 [T20-1A] : TEH Analysis: We are unable to confirm the presence of Pure Drill in the sample in question. The sample has chromatographic peaks present that are consistent with peaks observed in Pure Drill reference materials. The source of the peaks cannot be determined based on the chromatographic information.

Sample AEPF25 [T20-1B] : TEH Analysis: We are unable to confirm the presence of Pure Drill in the sample in question. The sample has chromatographic peaks present that are consistent with peaks observed in Pure Drill reference materials. The source of the peaks cannot be determined based on the chromatographic information.

Sample AEPF26 [T27-1A] : TEH Analysis: We are unable to confirm the presence of Pure Drill in the sample in question. The sample has chromatographic peaks present that are consistent with peaks observed in Pure Drill reference materials. The source of the peaks cannot be determined based on the chromatographic information.

Sample AEPF27 [T27-1B] : TEH Analysis: We are unable to confirm the presence of Pure Drill in the sample in question. The sample has chromatographic peaks present that are consistent with peaks observed in Pure Drill reference materials. The source of the peaks cannot be determined based on the chromatographic information.

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
9682032	Isobutylbenzene - Volatile	2024/10/07	116	60 - 130	97	60 - 130	99	%				
9690468	Isobutylbenzene - Volatile	2024/10/09	104	60 - 130	99	60 - 130	101	%				
9697109	n-Dotriacontane - Extractable	2024/10/23	99	60 - 130	107	60 - 130	99	%			97	60 - 130
9710266	n-Dotriacontane - Extractable	2024/10/25	95	60 - 130	77	60 - 130	71	%			78	60 - 130
9710295	n-Dotriacontane - Extractable	2024/10/23	126	60 - 130	78	60 - 130	65	%			77	60 - 130
9682032	Benzene	2024/10/07	93	60 - 130	87	60 - 140	<0.0050	mg/kg	NC	50		
9682032	C6 - C10 (less BTEX)	2024/10/07					<2.5	mg/kg	NC	50		
9682032	Ethylbenzene	2024/10/07	101	60 - 130	95	60 - 140	<0.010	mg/kg	NC	50		
9682032	Toluene	2024/10/07	94	60 - 130	92	60 - 140	<0.050	mg/kg	NC	50		
9682032	Total Xylenes	2024/10/07	101	60 - 130	97	60 - 140	<0.050	mg/kg	NC	50		
9685719	Acid Extractable Aluminum (Al)	2024/10/07					<10	mg/kg	0.55	35		
9685719	Acid Extractable Antimony (Sb)	2024/10/07	76	75 - 125	102	75 - 125	<2.0	mg/kg	NC	35		
9685719	Acid Extractable Arsenic (As)	2024/10/07	95	75 - 125	100	75 - 125	<2.0	mg/kg	2.8	35		
9685719	Acid Extractable Barium (Ba)	2024/10/07	NC	75 - 125	96	75 - 125	<5.0	mg/kg	1.5	35		
9685719	Acid Extractable Beryllium (Be)	2024/10/07	97	75 - 125	97	75 - 125	<1.0	mg/kg	NC	35		
9685719	Acid Extractable Bismuth (Bi)	2024/10/07	94	75 - 125	97	75 - 125	<2.0	mg/kg	NC	35		
9685719	Acid Extractable Boron (B)	2024/10/07	NC	75 - 125	97	75 - 125	<50	mg/kg	2.2	35		
9685719	Acid Extractable Cadmium (Cd)	2024/10/07	97	75 - 125	96	75 - 125	<0.30	mg/kg	7.0	35		
9685719	Acid Extractable Chromium (Cr)	2024/10/07	NC	75 - 125	98	75 - 125	<2.0	mg/kg	0.44	35		
9685719	Acid Extractable Cobalt (Co)	2024/10/07	90	75 - 125	97	75 - 125	<1.0	mg/kg	7.0	35		
9685719	Acid Extractable Copper (Cu)	2024/10/07	NC	75 - 125	97	75 - 125	<2.0	mg/kg	0.18	35		
9685719	Acid Extractable Iron (Fe)	2024/10/07					<50	mg/kg	1.7	35		
9685719	Acid Extractable Lead (Pb)	2024/10/07	89	75 - 125	93	75 - 125	<0.50	mg/kg	4.3	35		
9685719	Acid Extractable Lithium (Li)	2024/10/07	96	75 - 125	98	75 - 125	<2.0	mg/kg	5.2	35		
9685719	Acid Extractable Manganese (Mn)	2024/10/07	NC	75 - 125	99	75 - 125	<2.0	mg/kg	0.97	35		
9685719	Acid Extractable Mercury (Hg)	2024/10/07	91	75 - 125	96	75 - 125	<0.10	mg/kg	NC	35		
9685719	Acid Extractable Molybdenum (Mo)	2024/10/07	NC	75 - 125	101	75 - 125	<2.0	mg/kg	2.0	35		
9685719	Acid Extractable Nickel (Ni)	2024/10/07	NC	75 - 125	99	75 - 125	<2.0	mg/kg	1.8	35		
9685719	Acid Extractable Rubidium (Rb)	2024/10/07	100	75 - 125	99	75 - 125	<2.0	mg/kg	3.1	35		
9685719	Acid Extractable Selenium (Se)	2024/10/07	96	75 - 125	102	75 - 125	<0.50	mg/kg	NC	35		
9685719	Acid Extractable Silver (Ag)	2024/10/07	98	75 - 125	100	75 - 125	<0.50	mg/kg	8.6	35		
9685719	Acid Extractable Strontium (Sr)	2024/10/07	NC	75 - 125	99	75 - 125	<5.0	mg/kg	1.7	35		

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
9685719	Acid Extractable Thallium (Tl)	2024/10/07	89	75 - 125	97	75 - 125	<0.10	mg/kg	NC	35		
9685719	Acid Extractable Tin (Sn)	2024/10/07	95	75 - 125	100	75 - 125	<1.0	mg/kg	10	35		
9685719	Acid Extractable Uranium (U)	2024/10/07	93	75 - 125	94	75 - 125	<0.10	mg/kg	3.2	35		
9685719	Acid Extractable Vanadium (V)	2024/10/07	NC	75 - 125	99	75 - 125	<2.0	mg/kg	2.8	35		
9685719	Acid Extractable Zinc (Zn)	2024/10/07	NC	75 - 125	100	75 - 125	<5.0	mg/kg	0.51	35		
9686109	Moisture	2024/10/08							2.0	25		
9686206	Clay	2024/10/15							0.46	35		
9686206	Gravel	2024/10/15							110 (1)	35		
9686206	Sand	2024/10/15							2.8	35		
9686206	Silt	2024/10/15							0.33	35		
9686493	Moisture	2024/10/08							0.86	25		
9686544	Moisture	2024/10/08							0.27	25		
9687745	Acid Extractable Aluminum (Al)	2024/10/08					<10	mg/kg	9.4	35		
9687745	Acid Extractable Antimony (Sb)	2024/10/08	108	75 - 125	109	75 - 125	<2.0	mg/kg	NC	35		
9687745	Acid Extractable Arsenic (As)	2024/10/08	104	75 - 125	103	75 - 125	<2.0	mg/kg	0.17	35		
9687745	Acid Extractable Barium (Ba)	2024/10/08	99	75 - 125	102	75 - 125	<5.0	mg/kg	0.71	35		
9687745	Acid Extractable Beryllium (Be)	2024/10/08	107	75 - 125	102	75 - 125	<1.0	mg/kg	NC	35		
9687745	Acid Extractable Bismuth (Bi)	2024/10/08	106	75 - 125	101	75 - 125	<2.0	mg/kg				
9687745	Acid Extractable Boron (B)	2024/10/08	102	75 - 125	103	75 - 125	<50	mg/kg	NC	35		
9687745	Acid Extractable Cadmium (Cd)	2024/10/08	101	75 - 125	102	75 - 125	<0.30	mg/kg	NC	35		
9687745	Acid Extractable Chromium (Cr)	2024/10/08	96	75 - 125	100	75 - 125	<2.0	mg/kg	7.5	35		
9687745	Acid Extractable Cobalt (Co)	2024/10/08	101	75 - 125	100	75 - 125	<1.0	mg/kg	4.9	35		
9687745	Acid Extractable Copper (Cu)	2024/10/08	101	75 - 125	99	75 - 125	<2.0	mg/kg	0.11	35		
9687745	Acid Extractable Iron (Fe)	2024/10/08					<50	mg/kg	5.1	35		
9687745	Acid Extractable Lead (Pb)	2024/10/08	102	75 - 125	100	75 - 125	<0.50	mg/kg	1.2	35		
9687745	Acid Extractable Lithium (Li)	2024/10/08	102	75 - 125	102	75 - 125	<2.0	mg/kg				
9687745	Acid Extractable Manganese (Mn)	2024/10/08	NC	75 - 125	101	75 - 125	<2.0	mg/kg	4.5	35		
9687745	Acid Extractable Mercury (Hg)	2024/10/08	93	75 - 125	101	75 - 125	<0.10	mg/kg	NC	35		
9687745	Acid Extractable Molybdenum (Mo)	2024/10/08	106	75 - 125	105	75 - 125	<2.0	mg/kg	NC	35		
9687745	Acid Extractable Nickel (Ni)	2024/10/08	99	75 - 125	103	75 - 125	<2.0	mg/kg	4.7	35		
9687745	Acid Extractable Rubidium (Rb)	2024/10/08	101	75 - 125	102	75 - 125	<2.0	mg/kg				
9687745	Acid Extractable Selenium (Se)	2024/10/08	105	75 - 125	106	75 - 125	<0.50	mg/kg	NC	35		

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			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
9687745	Acid Extractable Silver (Ag)	2024/10/08	103	75 - 125	104	75 - 125	<0.50	mg/kg	NC	35		
9687745	Acid Extractable Strontium (Sr)	2024/10/08	101	75 - 125	99	75 - 125	<5.0	mg/kg	NC	35		
9687745	Acid Extractable Thallium (Tl)	2024/10/08	102	75 - 125	103	75 - 125	<0.10	mg/kg	NC	35		
9687745	Acid Extractable Tin (Sn)	2024/10/08	105	75 - 125	103	75 - 125	<1.0	mg/kg	NC	35		
9687745	Acid Extractable Uranium (U)	2024/10/08	99	75 - 125	99	75 - 125	<0.10	mg/kg	3.4	35		
9687745	Acid Extractable Vanadium (V)	2024/10/08	97	75 - 125	103	75 - 125	<2.0	mg/kg	9.2	35		
9687745	Acid Extractable Zinc (Zn)	2024/10/08	96	75 - 125	101	75 - 125	<5.0	mg/kg	6.6	35		
9688294	Clay	2024/10/16							0.97	35		
9688294	Gravel	2024/10/16							NC	35		
9688294	Sand	2024/10/16							1.1	35		
9688294	Silt	2024/10/16							0.25	35		
9690468	Benzene	2024/10/09	84	60 - 130	77	60 - 140	<0.0050	mg/kg	NC	50		
9690468	C6 - C10 (less BTEX)	2024/10/09					<2.5	mg/kg	NC	50		
9690468	Ethylbenzene	2024/10/09	92	60 - 130	87	60 - 140	<0.010	mg/kg	NC	50		
9690468	Toluene	2024/10/09	86	60 - 130	83	60 - 140	<0.050	mg/kg	NC	50		
9690468	Total Xylenes	2024/10/09	92	60 - 130	89	60 - 140	<0.050	mg/kg	NC	50		
9690472	Acid Extractable Aluminum (Al)	2024/10/09					<10	mg/kg	4.1	35		
9690472	Acid Extractable Antimony (Sb)	2024/10/09	94	75 - 125	103	75 - 125	<2.0	mg/kg	NC	35		
9690472	Acid Extractable Arsenic (As)	2024/10/09	99	75 - 125	100	75 - 125	<2.0	mg/kg	3.4	35		
9690472	Acid Extractable Barium (Ba)	2024/10/09	NC	75 - 125	99	75 - 125	<5.0	mg/kg	10	35		
9690472	Acid Extractable Beryllium (Be)	2024/10/09	102	75 - 125	100	75 - 125	<1.0	mg/kg	NC	35		
9690472	Acid Extractable Bismuth (Bi)	2024/10/09	101	75 - 125	100	75 - 125	<2.0	mg/kg	NC	35		
9690472	Acid Extractable Boron (B)	2024/10/09	105	75 - 125	104	75 - 125	<50	mg/kg	NC	35		
9690472	Acid Extractable Cadmium (Cd)	2024/10/09	102	75 - 125	99	75 - 125	<0.30	mg/kg	NC	35		
9690472	Acid Extractable Chromium (Cr)	2024/10/09	101	75 - 125	102	75 - 125	<2.0	mg/kg	2.1	35		
9690472	Acid Extractable Cobalt (Co)	2024/10/09	99	75 - 125	99	75 - 125	<1.0	mg/kg	2.1	35		
9690472	Acid Extractable Copper (Cu)	2024/10/09	96	75 - 125	98	75 - 125	<2.0	mg/kg	1.4	35		
9690472	Acid Extractable Iron (Fe)	2024/10/09					<50	mg/kg	0.41	35		
9690472	Acid Extractable Lead (Pb)	2024/10/09	98	75 - 125	97	75 - 125	<0.50	mg/kg	5.7	35		
9690472	Acid Extractable Lithium (Li)	2024/10/09	104	75 - 125	101	75 - 125	<2.0	mg/kg	4.9	35		
9690472	Acid Extractable Manganese (Mn)	2024/10/09	NC	75 - 125	101	75 - 125	<2.0	mg/kg	0.83	35		
9690472	Acid Extractable Mercury (Hg)	2024/10/09	95	75 - 125	98	75 - 125	<0.10	mg/kg	1.2	35		

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
9690472	Acid Extractable Molybdenum (Mo)	2024/10/09	105	75 - 125	102	75 - 125	<2.0	mg/kg	NC	35		
9690472	Acid Extractable Nickel (Ni)	2024/10/09	99	75 - 125	100	75 - 125	<2.0	mg/kg	1.8	35		
9690472	Acid Extractable Rubidium (Rb)	2024/10/09	101	75 - 125	101	75 - 125	<2.0	mg/kg	2.1	35		
9690472	Acid Extractable Selenium (Se)	2024/10/09	102	75 - 125	103	75 - 125	<0.50	mg/kg	8.7	35		
9690472	Acid Extractable Silver (Ag)	2024/10/09	102	75 - 125	102	75 - 125	<0.50	mg/kg	NC	35		
9690472	Acid Extractable Strontium (Sr)	2024/10/09	NC	75 - 125	100	75 - 125	<5.0	mg/kg	5.0	35		
9690472	Acid Extractable Thallium (Tl)	2024/10/09	101	75 - 125	100	75 - 125	<0.10	mg/kg	4.6	35		
9690472	Acid Extractable Tin (Sn)	2024/10/09	101	75 - 125	100	75 - 125	<1.0	mg/kg	NC	35		
9690472	Acid Extractable Uranium (U)	2024/10/09	100	75 - 125	98	75 - 125	<0.10	mg/kg	5.1	35		
9690472	Acid Extractable Vanadium (V)	2024/10/09	103	75 - 125	101	75 - 125	<2.0	mg/kg	1.2	35		
9690472	Acid Extractable Zinc (Zn)	2024/10/09	98	75 - 125	100	75 - 125	<5.0	mg/kg	0.56	35		
9691195	Clay	2024/10/17							1.1	35		
9691195	Gravel	2024/10/17							NC	35		
9691195	Sand	2024/10/17							8.8	35		
9691195	Silt	2024/10/17							1.7	35		
9697109	>C10-C16 Hydrocarbons	2024/10/23	101	30 - 130	86	60 - 130	<0.25	mg/kg	39	50		
9697109	>C16-C21 Hydrocarbons	2024/10/23	81	30 - 130	89	60 - 130	<0.25	mg/kg	32	50		
9697109	>C21-<C32 Hydrocarbons	2024/10/23	130	30 - 130	100	60 - 130	<0.25	mg/kg	40	50	134	N/A
9710266	>C10-C16 Hydrocarbons	2024/10/25	79	30 - 130	72	60 - 130	<0.25	mg/kg	103 (2)	50		
9710266	>C16-C21 Hydrocarbons	2024/10/25	72	30 - 130	75	60 - 130	<0.25	mg/kg	65 (2)	50		
9710266	>C21-<C32 Hydrocarbons	2024/10/25	99	30 - 130	76	60 - 130	<0.25	mg/kg	0.45	50	116	N/A
9710295	>C10-C16 Hydrocarbons	2024/10/23	128	30 - 130	73	60 - 130	<0.25	mg/kg	28	50		
9710295	>C16-C21 Hydrocarbons	2024/10/23	82	30 - 130	77	60 - 130	<0.25	mg/kg	12	50		

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
9710295	>C21-<C32 Hydrocarbons	2024/10/23	110	30 - 130	79	60 - 130	<0.25	mg/kg	8.6	50	136	N/A

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) %RPD acceptable. Duplicate values agree within 10% absolute.

(2) Duplicate: results are outside acceptance limit. Sample was past recommended hold time for repeat analysis.

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VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Colleen Acker, B.Sc, Scientific Service Specialist

Janah Rhyno, Scientific Specialist

Phil Deveau, Scientific Specialist (Organics)

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Suzanne Rogers, General Manager responsible for Nova Scotia Environmental laboratory operations.

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Chain Of Custody Record

INVOICE TO:		Report Information		Project Information		Laboratory Use Only	
Company Name	#25828 WSP Canada Inc.	Company Name	WSP Canada Inc.	Quotation #	C41643	Bureau Veritas Job #	Bottle Order #: 1013401
Contact Name	Accounts Payable	Contact Name	Kyle Millar	P.O. #			
Address	36 Pippy Place PO Box 13216 St John's NL A1B 3X2	Address	36 Pippy Place St. John's, NL.	Project #	CA0024395.4785	Chain Of Custody Record	Project Manager
Phone	(709) 722-7023 Fax: (709) 722-7353	Phone	709-771-4671 Fax:	Project Name		C#1013401-01-01	Maryann Comeau
Email	CAPayablesInvoice@wsp.com	Email	kyle.millar@wsp.com	Site #			
				Sampled By			

Regulatory Criteria

Special Instructions

Note: For regulated drinking water samples - please use the Drinking Water Chain of Custody Form

Samples must be kept cool (< 10°C) from time of sampling until delivery to Bureau Veritas

Turnaround Time (TAT) Required

Please provide advance notice for rush projects

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(will be applied if Rush TAT is not specified)
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Job Specific Rush TAT (if applies to entire submission)
Date Required: _____ Time Required: _____
Rush Confirmation Number: _____ (call lab for #)

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Regulated Drinking Water? (Y/N)	Metals Field Filtered? (Y/N)	TEH in Soil (Low Level PIRI)	VPH in Soil (PIRI) - Field Preserved	Particle size in solids (pipette&sieve)	Metals Soil - Includes Barium	# of Bottles	Comments
1		T1-1a	28-Sep			N	N	X	X	X	X	3	
2		T1-1b	28-Sep					X	X	X	X	3	
3		T6-1a	28-Sep					X	X	X	X	3	
4		T6-1b	28-Sep					X	X	X	X	3	
5		T9-1a	29-Sep					X	X	X	X	3	
6		T9-1b	28-Sep					X	X	X	X	3	
7		T9-1b QAQC	28-Sep					X	X	X	X	3	
8		T11-1a	29-Sep					X	X	X	X	3	
9		T11-1b	29-Sep					X	X	X	X	3	
10		T12-1a	28-Sep					X	X	X	X	3	

BEDF-2024-10-120

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Lab Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
				24/10/10	9:10			5.9, 6.8 7.8	Yes / No

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/ENVIRONMENTAL-LABORATORIES/RESOURCES/COC-TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

White: Bureau Veritas Yellow: Client

Bureau Veritas Canada (2019) Inc.

OCT 01 2024

C4U8544
2024/10/02 09:24

Bureau Veritas
49-55 Elizabeth Ave, St. John's, NEWFOUNDLAND Canada A1A 1W9 Tel (709) 754 0203 Toll-free 800-563-6266 Fax (709) 754 8612 www.bvna.com

Chain Of Custody Record

INVOICE TO:		Report Information		Project Information		Laboratory Use Only	
Company Name	#25828 WSP Canada Inc.	Company Name		Quotation #	C41643	Bureau Veritas Job #	Bottle Order #:
Contact Name	Accounts Payable	Contact Name	Kyle Millar	P.O. #			1013401
Address	36 Pippy Place PO Box 13216	Address		Project #	CA0024395.4785	Chain Of Custody Record	Project Manager
	St John's NL A1B 3X2			Project Name		C#1013401-02-01	Maryann Comeau
Phone	(709) 722-7023 Fax: (709) 722-7353	Phone	Fax:	Site #			
Email	CAPayablesInvoice@wsp.com	Email	kyle.millar@wsp.com	Sampled By			

Regulatory Criteria

Special Instructions

Note: For regulated drinking water samples - please use the Drinking Water Chain of Custody Form

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Date Required: _____ Time Required: _____
Rush Confirmation Number: _____ *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Regulated Drinking Water? (Y/N)	Metals Field Filtered? (Y/N)	TEH in Soil (Low Level PIRI)	VPH in Soil (PIRI) - Field Preserved	Particle size in solids (pipette&sieve)	Metals Soil - Includes Barium	# of Bottles	Comments
1		T12-1b	28-Sep		Soil	N	N	X	X	X	X	3	
2		T14-1a	29-Sep		Soil			X	X	X	X	3	
3		T14-1b	29-Sep		Soil			X	X	X	X	3	
4		T14-2a	29-Sep		Soil			X	X	X	X	3	
5		T14-2b	29-Sep		Soil			X	X	X	X	3	
6		T14-3a	29-Sep		Soil			X	X	X	X	3	
7		T14-3b	29-Sep		Soil			X	X	X	X	3	
8		T14-4a	30-Sep		Soil			X	X	X	X	3	
9		T14-4b	30-Sep					X	X	X	X	3	
10		T14-4b QAQC	28-Sep					X	X	X	X	3	

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Lab Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
				24/10/01	9:10		☐	5.9 6.8 7.5	☐ Yes ☐ No

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Bureau Veritas
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Chain Of Custody Record

INVOICE TO:		Report Information		Project Information		Laboratory Use Only	
Company Name	#25828 WSP Canada Inc.	Company Name		Quotation #	C41643	Bureau Veritas Job #	Bottle Order #:
Contact Name	Accounts Payable	Contact Name	Kyle Millar	P.O. #			1013401
Address	36 Pippy Place PO Box 13216	Address		Project #	CA0024395.4785	Chain Of Custody Record	Project Manager
	St John's NL A1B 3X2			Project Name		C#1013401-03-01	Maryann Comeau
Phone	(709) 722-7023 Fax: (709) 722-7353	Phone	Fax:	Site #			
Email	CAPayablesInvoice@wsp.com	Email	kyle.millar@wsp.com	Sampled By			

Regulatory Criteria

Special Instructions

Note: For regulated drinking water samples - please use the Drinking Water Chain of Custody Form

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Analysis Requested

Turnaround Time (TAT) Required

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Date Required: _____ Time Required: _____
Rush Confirmation Number _____ *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Regulated Drinking Water ? (Y / N)	Metals Field Filtered ? (Y / N)	TEH in Soil (Low Level PIRI)	VPH in Soil (PIRI) - Field Preserved	Particle size in solids (pipette&sieve)	Metals Soil - Includes Barium	# of Bottles	Comments
1		T14-5a	29-Sep		Marine Sediment	N	N	X	X	X	X	3	
2		T14-5b	29-Sep					X	X	X	X	3	
3		T14-6a	29-Sep					X	X	X	X	3	
4		T14-6b	29-Sep					X	X	X	X	3	
5		T14-7a	29-Sep					X	X	X	X	3	
6		T14-7b	29-Sep					X	X	X	X	3	
7		T16-1a	29-Sep					X	X	X	X	3	
8		T16-1b	29-Sep					X	X	X	X	3	
9		T17-1a	29-Sep					X	X	X	X	3	
10		T17-1a QAQC	29-Sep					X	X	X	X	3	

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				24/10/01	9:10		☐	5.9 6.8 7.9	☐ Yes ☐ No

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Bureau Veritas Canada (2019) Inc.

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Chain Of Custody Record

INVOICE TO:		Report Information		Project Information		Laboratory Use Only	
Company Name	#25828 WSP Canada Inc.	Company Name		Quotation #	C41643	Bureau Veritas Job #	Bottle Order #:
Contact Name	Accounts Payable	Contact Name	Kyle Millar	P.O. #			1013401
Address	36 Pippy Place PO Box 13216 St John's NL A1B 3X2	Address		Project #	CA0024395.4785	Chain Of Custody Record	Project Manager
Phone	(709) 722-7023 Fax: (709) 722-7353	Phone	Fax:	Project Name		C#1013401-04-01	Maryann Comeau
Email	CAPayablesInvoice@wsp.com	Email	kyle.millar@wsp.com	Site #			
				Sampled By			

Regulatory Criteria

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Date Required: _____ Time Required: _____
Rush Confirmation Number _____ *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Regulated Drinking Water? (Y/N)	Metals Field Filtered? (Y/N)	TEH in Soil (Low Level PIRI)	VPH in Soil (PIRI) - Field Preserved	Particle size in solids (pipette&sieve)	Metals Soil - Includes Barium	# of Bottles	Comments
1		T17-1b	29-Sep		Marine Sediment	N	N	X	X	X	X	3	
2		T20-1a	29-Sep					X	X	X	X	3	
3		T20-1b	29-Sep					X	X	X	X	3	
4		T27-1a	30-Sep					X	X	X	X	3	
5		T27-1b	30-Sep					X	X	X	X	3	
6		.						X	X	X	X	3	
7		.						X	X	X	X	3	
8		.						X	X	X	X	3	
9		.						X	X	X	X	3	
10		.						X	X	X	X	3	

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				24/10/01	9:10		☐	5.9 6.8 7.8	☐ Yes ☐ No

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White: Bureau Veritas Yellow: Client

OCT 0 1 2024

Bureau Veritas Canada (2019) Inc.

Your P.O. #: CA0024395.4785
Your Project #: CA0024395.4785
Site#: CAPPAHAYDEN
Your C.O.C. #: C#1018307-01-01

Attention: Kyle Millar

WSP Canada Inc.
36 Pippy Place
PO Box 13216
St John's , NL
CANADA A1B 3X2

Report Date: 2025/01/15
Report #: R8470868
Version: 3 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C4Y5609
Received: 2024/11/01, 09:37

Sample Matrix: Soil
Samples Received: 35

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
TEH in Soil (Low Level PIRI) (1)	14	2024/11/20	2024/11/22	ATL SOP 00111	Atl. RBCA v3.1 m
TEH in Soil (Low Level PIRI) (1)	10	2024/11/20	2024/11/25	ATL SOP 00111	Atl. RBCA v3.1 m
TEH in Soil (Low Level PIRI) (1)	7	2024/11/20	2024/11/26	ATL SOP 00111	Atl. RBCA v3.1 m
TEH in Soil (Low Level PIRI) (1)	1	2024/11/20	2024/11/28	ATL SOP 00111	Atl. RBCA v3.1 m
TEH in Soil (Low Level PIRI) (1)	3	2024/11/05	2024/11/22	ATL SOP 00111	Atl. RBCA v3.1 m
Metals Solids Acid Extr. ICPMS	34	2024/11/07	2024/11/07	ATL SOP 00058	EPA 6020B R2 m
Metals Solids Acid Extr. ICPMS	1	2024/11/07	2024/11/08	ATL SOP 00058	EPA 6020B R2 m
Moisture	7	N/A	2024/11/06	ATL SOP 00001	OMOE Handbook 1983 m
Moisture	28	N/A	2024/11/07	ATL SOP 00001	OMOE Handbook 1983 m
Particle size in solids (pipette&sieve) (2)	18	N/A	2024/11/27	ATL SOP 00012	MSAMS'78/WREP-125R3m
Particle size in solids (pipette&sieve) (2)	17	N/A	2024/11/28	ATL SOP 00012	MSAMS'78/WREP-125R3m
VPH in Soil (PIRI) - Field Preserved (3)	34	N/A	2024/11/05	ATL SOP 00119	Atl. RBCA v3.1 m
VPH in Soil (PIRI) - Field Preserved (3)	1	N/A	2024/11/08	ATL SOP 00119	Atl. RBCA v3.1 m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope

Your P.O. #: CA0024395.4785
Your Project #: CA0024395.4785
Site#: CAPPAHAYDEN
Your C.O.C. #: C#1018307-01-01

Attention: Kyle Millar

WSP Canada Inc.
36 Pippy Place
PO Box 13216
St John's , NL
CANADA A1B 3X2

Report Date: 2025/01/15
Report #: R8470868
Version: 3 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C4Y5609
Received: 2024/11/01, 09:37

dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) Soils are reported on a dry weight basis unless otherwise specified.
(2) Note: Graphical representation of larger fractions (PHI-4, PHI -3 and PHI -2) not applicable unless these optional parameters are specifically requested.
(3) No lab extraction date is given for C6-C10/BTEX and VOC samples that are field preserved with methanol. Extraction date is date sampled unless otherwise stated.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:
Maryann Comeau, Customer Experience Supervisor/PM
Email:
Phone# (902)420-0203 Ext:298

==========

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Suzanne Rogers, General Manager responsible for Nova Scotia Environmental laboratory operations.

Bureau Veritas Job #: C4Y5609
Report Date: 2025/01/15

WSP Canada Inc.
Client Project #: CA0024395.4785
Your P.O. #: CA0024395.4785

RESULTS OF ANALYSES OF SOIL

Bureau Veritas ID		AHTD99	AHTD99	AHTE00	AHTE01			
Sampling Date		2024/10/28	2024/10/28	2024/10/28	2024/10/28			
COC Number		C#1018307-01-01	C#1018307-01-01	C#1018307-01-01	C#1018307-01-01			
	UNITS	T2-1A	T2-1A Lab-Dup	T2-1B	T10-1A	RDL	MDL	QC Batch
Inorganics								
Moisture	%	41	N/A	40	38	1.0	0.20	9745424
< -1 Phi (2 mm)	%	100	100	100	100 (1)	0.10	N/A	9777285
< 0 Phi (1 mm)	%	100	100	100	100	0.10	N/A	9777285
< +1 Phi (0.5 mm)	%	100	100	100	100	0.10	N/A	9777285
< +2 Phi (0.25 mm)	%	100	100	100	100	0.10	N/A	9777285
< +3 Phi (0.12 mm)	%	100	100	100	100	0.10	N/A	9777285
< +4 Phi (0.062 mm)	%	96	96	96	97	0.10	N/A	9777285
< +5 Phi (0.031 mm)	%	77	77	77	78	0.10	N/A	9777285
< +6 Phi (0.016 mm)	%	47	49	48	53	0.10	N/A	9777285
< +7 Phi (0.0078 mm)	%	28	28	29	33	0.10	N/A	9777285
< +8 Phi (0.0039 mm)	%	25	25	26	30	0.10	N/A	9777285
< +9 Phi (0.0020 mm)	%	21	21	21	6.1	0.10	N/A	9777285
Gravel	%	<0.10	<0.10	<0.10	<0.10	0.10	N/A	9777285
Sand	%	3.7	3.5	3.8	3.1	0.10	N/A	9777285
Silt	%	71	71	70	67	0.10	N/A	9777285
Clay	%	25	25	26	30	0.10	N/A	9777285

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) PSA sample observation comment: Fraction contained a rock.

Bureau Veritas 200 Bluewater Rd, Suite 105, Bedford, Nova Scotia Canada B4B 1G9 Tel: 902-420-0203 Toll-free: 800-565-7227 Fax: 902-420-8612 www.bvna.com

RESULTS OF ANALYSES OF SOIL

Bureau Veritas ID		AHTE02	AHTE03	AHTE04		AHTE05			
Sampling Date		2024/10/28	2024/10/28	2024/10/28		2024/10/28			
COC Number		C#1018307-01-01	C#1018307-01-01	C#1018307-01-01		C#1018307-01-01			
	UNITS	T10-1B	T10-2A	T10-2B	QC Batch	T11-1A	RDL	MDL	QC Batch
Inorganics									
Moisture	%	42	40	40	9745424	37	1.0	0.20	9748315
< -1 Phi (2 mm)	%	100	100	100	9777285	100	0.10	N/A	9777285
< 0 Phi (1 mm)	%	100	100	100	9777285	100	0.10	N/A	9777285
< +1 Phi (0.5 mm)	%	100	100	100	9777285	100	0.10	N/A	9777285
< +2 Phi (0.25 mm)	%	100	100	100	9777285	100	0.10	N/A	9777285
< +3 Phi (0.12 mm)	%	100	100	100	9777285	100	0.10	N/A	9777285
< +4 Phi (0.062 mm)	%	97	98	97	9777285	96	0.10	N/A	9777285
< +5 Phi (0.031 mm)	%	81	83	85	9777285	79	0.10	N/A	9777285
< +6 Phi (0.016 mm)	%	55	60	62	9777285	55	0.10	N/A	9777285
< +7 Phi (0.0078 mm)	%	34	38	39	9777285	35	0.10	N/A	9777285
< +8 Phi (0.0039 mm)	%	30	34	35	9777285	31	0.10	N/A	9777285
< +9 Phi (0.0020 mm)	%	25	27	28	9777285	26	0.10	N/A	9777285
Gravel	%	<0.10	<0.10	<0.10	9777285	<0.10	0.10	N/A	9777285
Sand	%	3.1	2.4	2.7	9777285	3.5	0.10	N/A	9777285
Silt	%	66	63	62	9777285	65	0.10	N/A	9777285
Clay	%	30	34	35	9777285	31	0.10	N/A	9777285

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

Bureau Veritas 200 Bluewater Rd, Suite 105, Bedford, Nova Scotia Canada B4B 1G9 Tel: 902-420-0203 Toll-free: 800-565-7227 Fax: 902-420-8612 www.bvna.com

RESULTS OF ANALYSES OF SOIL

Bureau Veritas ID		AHTE05	AHTE06	AHTE07	AHTE08			
Sampling Date		2024/10/28	2024/10/28	2024/10/29	2024/10/29			
COC Number		C#1018307-01-01	C#1018307-01-01	C#1018307-01-01	C#1018307-01-01			
	UNITS	T11-1A Lab-Dup	T11-1B	T11-2A	T11-2B	RDL	MDL	QC Batch
Inorganics								
Moisture	%	39	40	35	36	1.0	0.20	9748315
< -1 Phi (2 mm)	%	N/A	100	100 (1)	100	0.10	N/A	9777285
< 0 Phi (1 mm)	%	N/A	100	100 (1)	100	0.10	N/A	9777285
< +1 Phi (0.5 mm)	%	N/A	100	100	100	0.10	N/A	9777285
< +2 Phi (0.25 mm)	%	N/A	100	100	100	0.10	N/A	9777285
< +3 Phi (0.12 mm)	%	N/A	100	99	100	0.10	N/A	9777285
< +4 Phi (0.062 mm)	%	N/A	96	96	96	0.10	N/A	9777285
< +5 Phi (0.031 mm)	%	N/A	78	75	78	0.10	N/A	9777285
< +6 Phi (0.016 mm)	%	N/A	54	49	52	0.10	N/A	9777285
< +7 Phi (0.0078 mm)	%	N/A	34	30	32	0.10	N/A	9777285
< +8 Phi (0.0039 mm)	%	N/A	30	27	29	0.10	N/A	9777285
< +9 Phi (0.0020 mm)	%	N/A	25	22	24	0.10	N/A	9777285
Gravel	%	N/A	<0.10	<0.10	<0.10	0.10	N/A	9777285
Sand	%	N/A	4.2	4.0	3.7	0.10	N/A	9777285
Silt	%	N/A	65	69	68	0.10	N/A	9777285
Clay	%	N/A	30	27	29	0.10	N/A	9777285

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) PSA sample observation comment: Fraction contained shells.

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RESULTS OF ANALYSES OF SOIL

Bureau Veritas ID		AHTE09	AHTE10	AHTE11	AHTE12			
Sampling Date		2024/10/29	2024/10/28	2024/10/28	2024/10/28			
COC Number		C#1018307-01-01	C#1018307-01-01	C#1018307-01-01	C#1018307-01-01			
	UNITS	T11-2QAQC	T13-1A	T13-1B	T14-1A	RDL	MDL	QC Batch
Inorganics								
Moisture	%	37	42	42	42	1.0	0.20	9748315
< -1 Phi (2 mm)	%	100	100	100	100 (1)	0.10	N/A	9777285
< 0 Phi (1 mm)	%	100	100	100	100 (1)	0.10	N/A	9777285
< +1 Phi (0.5 mm)	%	100	100	100	100 (1)	0.10	N/A	9777285
< +2 Phi (0.25 mm)	%	100	100	100	100	0.10	N/A	9777285
< +3 Phi (0.12 mm)	%	100	100	100	99	0.10	N/A	9777285
< +4 Phi (0.062 mm)	%	96	96	96	96	0.10	N/A	9777285
< +5 Phi (0.031 mm)	%	77	79	77	79	0.10	N/A	9777285
< +6 Phi (0.016 mm)	%	52	53	53	54	0.10	N/A	9777285
< +7 Phi (0.0078 mm)	%	32	33	33	34	0.10	N/A	9777285
< +8 Phi (0.0039 mm)	%	29	29	30	30	0.10	N/A	9777285
< +9 Phi (0.0020 mm)	%	24	24	24	25	0.10	N/A	9777285
Gravel	%	<0.10	<0.10	<0.10	0.21	0.10	N/A	9777285
Sand	%	3.6	3.5	3.9	3.9	0.10	N/A	9777285
Silt	%	68	67	67	66	0.10	N/A	9777285
Clay	%	29	29	30	30	0.10	N/A	9777285

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) PSA sample observation comment: Fraction contained shells.

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RESULTS OF ANALYSES OF SOIL

Bureau Veritas ID		AHTE13	AHTE14	AHTE15	AHTE16			
Sampling Date		2024/10/28	2024/10/28	2024/10/28	2024/10/29			
COC Number		C#1018307-01-01	C#1018307-01-01	C#1018307-01-01	C#1018307-01-01			
	UNITS	T14-1B	T15-1A	T15-1B	T16-1A	RDL	MDL	QC Batch
Inorganics								
Moisture	%	40	41	41	40	1.0	0.20	9748315
< -1 Phi (2 mm)	%	100	100	100	100	0.10	N/A	9777285
< 0 Phi (1 mm)	%	100	100	100	100	0.10	N/A	9777285
< +1 Phi (0.5 mm)	%	100	100	100	100	0.10	N/A	9777285
< +2 Phi (0.25 mm)	%	100	100	100	100	0.10	N/A	9777285
< +3 Phi (0.12 mm)	%	100	100	100	100	0.10	N/A	9777285
< +4 Phi (0.062 mm)	%	96	97	97	97	0.10	N/A	9777285
< +5 Phi (0.031 mm)	%	76	84	80	80	0.10	N/A	9777285
< +6 Phi (0.016 mm)	%	54	60	55	53	0.10	N/A	9777285
< +7 Phi (0.0078 mm)	%	34	39	35	33	0.10	N/A	9777285
< +8 Phi (0.0039 mm)	%	31	35	32	29	0.10	N/A	9777285
< +9 Phi (0.0020 mm)	%	19	24	26	24	0.10	N/A	9777285
Gravel	%	<0.10	<0.10	<0.10	<0.10	0.10	N/A	9777285
Sand	%	3.6	2.5	2.9	3.5	0.10	N/A	9777285
Silt	%	66	63	65	67	0.10	N/A	9777285
Clay	%	31	35	32	29	0.10	N/A	9777285

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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Bureau Veritas Job #: C4Y5609
Report Date: 2025/01/15

WSP Canada Inc.
Client Project #: CA0024395.4785
Your P.O. #: CA0024395.4785

RESULTS OF ANALYSES OF SOIL

Bureau Veritas ID		AHTE17	AHTE18	AHTE19	AHTE19			
Sampling Date		2024/10/29	2024/10/29	2024/10/29	2024/10/29			
COC Number		C#1018307-01-01	C#1018307-01-01	C#1018307-01-01	C#1018307-01-01			
	UNITS	T16-1B	T16-1QAQC	T17-1A	T17-1A Lab-Dup	RDL	MDL	QC Batch
Inorganics								
Moisture	%	39	40	41	N/A	1.0	0.20	9748315
< -1 Phi (2 mm)	%	100	100	100	100	0.10	N/A	9777772
< 0 Phi (1 mm)	%	100	100	100	100	0.10	N/A	9777772
< +1 Phi (0.5 mm)	%	100	100	100	100	0.10	N/A	9777772
< +2 Phi (0.25 mm)	%	100	100	100	100	0.10	N/A	9777772
< +3 Phi (0.12 mm)	%	100	100	99	99	0.10	N/A	9777772
< +4 Phi (0.062 mm)	%	97	97	95	94	0.10	N/A	9777772
< +5 Phi (0.031 mm)	%	80	79	74	75	0.10	N/A	9777772
< +6 Phi (0.016 mm)	%	56	56	51	50	0.10	N/A	9777772
< +7 Phi (0.0078 mm)	%	35	34	32	32	0.10	N/A	9777772
< +8 Phi (0.0039 mm)	%	32	31	28	29	0.10	N/A	9777772
< +9 Phi (0.0020 mm)	%	26	26	24	24	0.10	N/A	9777772
Gravel	%	<0.10	<0.10	<0.10	<0.10	0.10	N/A	9777772
Sand	%	3.4	2.7	4.9	5.6	0.10	N/A	9777772
Silt	%	65	66	67	66	0.10	N/A	9777772
Clay	%	32	31	28	29	0.10	N/A	9777772

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

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RESULTS OF ANALYSES OF SOIL

Bureau Veritas ID		AHTE20	AHTE21		AHTE22	AHTE22			
Sampling Date		2024/10/29	2024/10/28		2024/10/28	2024/10/28			
COC Number		C#1018307-01-01	C#1018307-01-01		C#1018307-01-01	C#1018307-01-01			
	UNITS	T17-1B	T18-1A	QC Batch	T18-1B	T18-1B Lab-Dup	RDL	MDL	QC Batch
Inorganics									
Moisture	%	36	40	9748315	40	40	1.0	0.20	9748359
< -1 Phi (2 mm)	%	100	100	9777772	100	N/A	0.10	N/A	9777772
< 0 Phi (1 mm)	%	100	100	9777772	100	N/A	0.10	N/A	9777772
< +1 Phi (0.5 mm)	%	100	100	9777772	100	N/A	0.10	N/A	9777772
< +2 Phi (0.25 mm)	%	100	100	9777772	100	N/A	0.10	N/A	9777772
< +3 Phi (0.12 mm)	%	100	100	9777772	100	N/A	0.10	N/A	9777772
< +4 Phi (0.062 mm)	%	97	96	9777772	96	N/A	0.10	N/A	9777772
< +5 Phi (0.031 mm)	%	80	77	9777772	79	N/A	0.10	N/A	9777772
< +6 Phi (0.016 mm)	%	50	51	9777772	54	N/A	0.10	N/A	9777772
< +7 Phi (0.0078 mm)	%	31	34	9777772	34	N/A	0.10	N/A	9777772
< +8 Phi (0.0039 mm)	%	27	31	9777772	31	N/A	0.10	N/A	9777772
< +9 Phi (0.0020 mm)	%	23	25	9777772	25	N/A	0.10	N/A	9777772
Gravel	%	<0.10	<0.10	9777772	<0.10	N/A	0.10	N/A	9777772
Sand	%	3.5	3.8	9777772	3.6	N/A	0.10	N/A	9777772
Silt	%	69	66	9777772	66	N/A	0.10	N/A	9777772
Clay	%	27	31	9777772	31	N/A	0.10	N/A	9777772

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

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RESULTS OF ANALYSES OF SOIL

Bureau Veritas ID		AHTE23	AHTE24	AHTE25		AHTE26			
Sampling Date		2024/10/29	2024/10/29	2024/10/29		2024/10/28			
COC Number		C#1018307-01-01	C#1018307-01-01	C#1018307-01-01		C#1018307-01-01			
	UNITS	T18-2A	T18-2B	T18-2QAQC	QC Batch	T18-3A	RDL	MDL	QC Batch
Inorganics									
Moisture	%	37	37	39	9748315	40	1.0	0.20	9748824
< -1 Phi (2 mm)	%	100 (1)	100	100	9777772	100	0.10	N/A	9777772
< 0 Phi (1 mm)	%	100 (1)	100	100	9777772	100	0.10	N/A	9777772
< +1 Phi (0.5 mm)	%	100	100	100	9777772	100	0.10	N/A	9777772
< +2 Phi (0.25 mm)	%	100	100	100	9777772	100	0.10	N/A	9777772
< +3 Phi (0.12 mm)	%	100	100	100	9777772	100	0.10	N/A	9777772
< +4 Phi (0.062 mm)	%	96	96	96	9777772	96	0.10	N/A	9777772
< +5 Phi (0.031 mm)	%	73	76	75	9777772	77	0.10	N/A	9777772
< +6 Phi (0.016 mm)	%	46	50	49	9777772	50	0.10	N/A	9777772
< +7 Phi (0.0078 mm)	%	27	29	30	9777772	31	0.10	N/A	9777772
< +8 Phi (0.0039 mm)	%	24	26	27	9777772	28	0.10	N/A	9777772
< +9 Phi (0.0020 mm)	%	21	22	23	9777772	23	0.10	N/A	9777772
Gravel	%	<0.10	<0.10	<0.10	9777772	<0.10	0.10	N/A	9777772
Sand	%	3.8	4.1	3.8	9777772	3.9	0.10	N/A	9777772
Silt	%	72	70	69	9777772	68	0.10	N/A	9777772
Clay	%	24	26	27	9777772	28	0.10	N/A	9777772

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) PSA sample observation comment: Fraction contained shells.

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RESULTS OF ANALYSES OF SOIL

Bureau Veritas ID		AHTE27	AHTE28	AHTE29	AHTE30			
Sampling Date		2024/10/28	2024/10/28	2024/10/28	2024/10/29			
COC Number		C#1018307-01-01	C#1018307-01-01	C#1018307-01-01	C#1018307-01-01			
	UNITS	T18-3B	T20-1A	T20-1B	T23-1A	RDL	MDL	QC Batch
Inorganics								
Moisture	%	37	41	38	39	1.0	0.20	9748824
< -1 Phi (2 mm)	%	100	100	100	100	0.10	N/A	9777772
< 0 Phi (1 mm)	%	100	100	100	100	0.10	N/A	9777772
< +1 Phi (0.5 mm)	%	100	100	100	100	0.10	N/A	9777772
< +2 Phi (0.25 mm)	%	100	100	100	100	0.10	N/A	9777772
< +3 Phi (0.12 mm)	%	100	100	100	100	0.10	N/A	9777772
< +4 Phi (0.062 mm)	%	97	96	96	97	0.10	N/A	9777772
< +5 Phi (0.031 mm)	%	79	79	75	82	0.10	N/A	9777772
< +6 Phi (0.016 mm)	%	52	53	49	57	0.10	N/A	9777772
< +7 Phi (0.0078 mm)	%	32	33	29	36	0.10	N/A	9777772
< +8 Phi (0.0039 mm)	%	29	29	26	32	0.10	N/A	9777772
< +9 Phi (0.0020 mm)	%	24	25	22	26	0.10	N/A	9777772
Gravel	%	<0.10	<0.10	<0.10	<0.10	0.10	N/A	9777772
Sand	%	3.2	4.0	3.6	3.1	0.10	N/A	9777772
Silt	%	68	67	71	64	0.10	N/A	9777772
Clay	%	29	29	26	32	0.10	N/A	9777772

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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RESULTS OF ANALYSES OF SOIL

Bureau Veritas ID		AHTE31	AHTE32	AHTE33			
Sampling Date		2024/10/29	2024/10/28	2024/10/28			
COC Number		C#1018307-01-01	C#1018307-01-01	C#1018307-01-01			
	UNITS	T23-1B	T30-1A	T30-1B	RDL	MDL	QC Batch
Inorganics							
Moisture	%	42	41	42	1.0	0.20	9748824
< -1 Phi (2 mm)	%	100	100	100	0.10	N/A	9777772
< 0 Phi (1 mm)	%	100	100	100	0.10	N/A	9777772
< +1 Phi (0.5 mm)	%	100	100	100	0.10	N/A	9777772
< +2 Phi (0.25 mm)	%	100	100	100	0.10	N/A	9777772
< +3 Phi (0.12 mm)	%	100	100	100	0.10	N/A	9777772
< +4 Phi (0.062 mm)	%	97	97	97	0.10	N/A	9777772
< +5 Phi (0.031 mm)	%	80	82	74	0.10	N/A	9777772
< +6 Phi (0.016 mm)	%	56	60	49	0.10	N/A	9777772
< +7 Phi (0.0078 mm)	%	36	38	30	0.10	N/A	9777772
< +8 Phi (0.0039 mm)	%	32	34	27	0.10	N/A	9777772
< +9 Phi (0.0020 mm)	%	24	26	22	0.10	N/A	9777772
Gravel	%	<0.10	<0.10	<0.10	0.10	N/A	9777772
Sand	%	3.1	2.9	3.4	0.10	N/A	9777772
Silt	%	64	63	69	0.10	N/A	9777772
Clay	%	32	34	27	0.10	N/A	9777772

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Bureau Veritas ID		AHTD99	AHTE00	AHTE01	AHTE02			
Sampling Date		2024/10/28	2024/10/28	2024/10/28	2024/10/28			
COC Number		C#1018307-01-01	C#1018307-01-01	C#1018307-01-01	C#1018307-01-01			
	UNITS	T2-1A	T2-1B	T10-1A	T10-1B	RDL	MDL	QC Batch
Metals								
Acid Extractable Aluminum (Al)	mg/kg	9700	9700	10000	11000	10	N/A	9751177
Acid Extractable Antimony (Sb)	mg/kg	<2.0	<2.0	<2.0	<2.0	2.0	N/A	9751177
Acid Extractable Arsenic (As)	mg/kg	<2.0	2.0	<2.0	<2.0	2.0	N/A	9751177
Acid Extractable Barium (Ba)	mg/kg	140	140	460	330	5.0	N/A	9751177
Acid Extractable Beryllium (Be)	mg/kg	<0.50	<0.50	<0.50	<0.50	0.50	N/A	9751177
Acid Extractable Bismuth (Bi)	mg/kg	<2.0	<2.0	<2.0	<2.0	2.0	N/A	9751177
Acid Extractable Boron (B)	mg/kg	<50	<50	<50	<50	50	N/A	9751177
Acid Extractable Cadmium (Cd)	mg/kg	<0.30	<0.30	<0.30	<0.30	0.30	N/A	9751177
Acid Extractable Chromium (Cr)	mg/kg	31	31	33	34	2.0	N/A	9751177
Acid Extractable Cobalt (Co)	mg/kg	5.4	5.5	6.1	5.9	1.0	N/A	9751177
Acid Extractable Copper (Cu)	mg/kg	13	13	14	14	2.0	N/A	9751177
Acid Extractable Iron (Fe)	mg/kg	17000	18000	18000	19000	50	N/A	9751177
Acid Extractable Lead (Pb)	mg/kg	4.8	4.8	4.6	4.8	0.50	N/A	9751177
Acid Extractable Lithium (Li)	mg/kg	16	16	17	18	2.0	N/A	9751177
Acid Extractable Manganese (Mn)	mg/kg	200	200	210	210	2.0	N/A	9751177
Acid Extractable Mercury (Hg)	mg/kg	<0.10	<0.10	<0.10	<0.10	0.10	N/A	9751177
Acid Extractable Molybdenum (Mo)	mg/kg	<2.0	<2.0	<2.0	<2.0	2.0	N/A	9751177
Acid Extractable Nickel (Ni)	mg/kg	19	20	20	21	2.0	N/A	9751177
Acid Extractable Rubidium (Rb)	mg/kg	22	23	25	25	2.0	N/A	9751177
Acid Extractable Selenium (Se)	mg/kg	0.59	0.55	0.55	0.55	0.50	N/A	9751177
Acid Extractable Silver (Ag)	mg/kg	<0.50	<0.50	<0.50	<0.50	0.50	N/A	9751177
Acid Extractable Strontium (Sr)	mg/kg	56	56	61	61	5.0	N/A	9751177
Acid Extractable Thallium (Tl)	mg/kg	0.10	0.11	0.13	0.13	0.10	N/A	9751177
Acid Extractable Tin (Sn)	mg/kg	<1.0	<1.0	<1.0	<1.0	1.0	N/A	9751177
Acid Extractable Uranium (U)	mg/kg	0.70	0.68	0.91	0.94	0.10	N/A	9751177
Acid Extractable Vanadium (V)	mg/kg	33	34	35	36	2.0	N/A	9751177
Acid Extractable Zinc (Zn)	mg/kg	41	42	45	46	5.0	N/A	9751177

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Bureau Veritas ID		AHTE03	AHTE04		AHTE05			
Sampling Date		2024/10/28	2024/10/28		2024/10/28			
COC Number		C#1018307-01-01	C#1018307-01-01		C#1018307-01-01			
	UNITS	T10-2A	T10-2B	QC Batch	T11-1A	RDL	MDL	QC Batch
Metals								
Acid Extractable Aluminum (Al)	mg/kg	11000	12000	9751177	11000	10	N/A	9751420
Acid Extractable Antimony (Sb)	mg/kg	<2.0	<2.0	9751177	<2.0	2.0	N/A	9751420
Acid Extractable Arsenic (As)	mg/kg	2.0	2.2	9751177	2.0	2.0	N/A	9751420
Acid Extractable Barium (Ba)	mg/kg	420	690	9751177	510	5.0	N/A	9751420
Acid Extractable Beryllium (Be)	mg/kg	<0.50	<0.50	9751177	<0.50	0.50	N/A	9751420
Acid Extractable Bismuth (Bi)	mg/kg	<2.0	<2.0	9751177	<2.0	2.0	N/A	9751420
Acid Extractable Boron (B)	mg/kg	<50	<50	9751177	<50	50	N/A	9751420
Acid Extractable Cadmium (Cd)	mg/kg	<0.30	<0.30	9751177	<0.30	0.30	N/A	9751420
Acid Extractable Chromium (Cr)	mg/kg	36	39	9751177	33	2.0	N/A	9751420
Acid Extractable Cobalt (Co)	mg/kg	6.3	7.0	9751177	5.9	1.0	N/A	9751420
Acid Extractable Copper (Cu)	mg/kg	15	16	9751177	14	2.0	N/A	9751420
Acid Extractable Iron (Fe)	mg/kg	20000	22000	9751177	19000	50	N/A	9751420
Acid Extractable Lead (Pb)	mg/kg	4.8	4.6	9751177	4.9	0.50	N/A	9751420
Acid Extractable Lithium (Li)	mg/kg	18	20	9751177	17	2.0	N/A	9751420
Acid Extractable Manganese (Mn)	mg/kg	220	240	9751177	210	2.0	N/A	9751420
Acid Extractable Mercury (Hg)	mg/kg	<0.10	<0.10	9751177	<0.10	0.10	N/A	9751420
Acid Extractable Molybdenum (Mo)	mg/kg	<2.0	<2.0	9751177	<2.0	2.0	N/A	9751420
Acid Extractable Nickel (Ni)	mg/kg	23	24	9751177	21	2.0	N/A	9751420
Acid Extractable Rubidium (Rb)	mg/kg	27	30	9751177	25	2.0	N/A	9751420
Acid Extractable Selenium (Se)	mg/kg	0.61	0.64	9751177	0.58	0.50	N/A	9751420
Acid Extractable Silver (Ag)	mg/kg	<0.50	<0.50	9751177	<0.50	0.50	N/A	9751420
Acid Extractable Strontium (Sr)	mg/kg	64	73	9751177	62	5.0	N/A	9751420
Acid Extractable Thallium (Tl)	mg/kg	0.13	0.14	9751177	0.12	0.10	N/A	9751420
Acid Extractable Tin (Sn)	mg/kg	<1.0	<1.0	9751177	<1.0	1.0	N/A	9751420
Acid Extractable Uranium (U)	mg/kg	0.92	1.1	9751177	0.83	0.10	N/A	9751420
Acid Extractable Vanadium (V)	mg/kg	38	42	9751177	36	2.0	N/A	9751420
Acid Extractable Zinc (Zn)	mg/kg	49	54	9751177	46	5.0	N/A	9751420

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Bureau Veritas ID		AHTE06		AHTE07	AHTE08			
Sampling Date		2024/10/28		2024/10/29	2024/10/29			
COC Number		C#1018307-01-01		C#1018307-01-01	C#1018307-01-01			
	UNITS	T11-1B	QC Batch	T11-2A	T11-2B	RDL	MDL	QC Batch
Metals								
Acid Extractable Aluminum (Al)	mg/kg	11000	9751177	9100	11000	10	N/A	9751723
Acid Extractable Antimony (Sb)	mg/kg	<2.0	9751177	<2.0	<2.0	2.0	N/A	9751723
Acid Extractable Arsenic (As)	mg/kg	<2.0	9751177	<2.0	<2.0	2.0	N/A	9751723
Acid Extractable Barium (Ba)	mg/kg	240	9751177	130	340	5.0	N/A	9751723
Acid Extractable Beryllium (Be)	mg/kg	<0.50	9751177	<0.50	<0.50	0.50	N/A	9751723
Acid Extractable Bismuth (Bi)	mg/kg	<2.0	9751177	<2.0	<2.0	2.0	N/A	9751723
Acid Extractable Boron (B)	mg/kg	<50	9751177	<50	<50	50	N/A	9751723
Acid Extractable Cadmium (Cd)	mg/kg	<0.30	9751177	<0.30	<0.30	0.30	N/A	9751723
Acid Extractable Chromium (Cr)	mg/kg	34	9751177	30	34	2.0	N/A	9751723
Acid Extractable Cobalt (Co)	mg/kg	6.0	9751177	5.2	6.0	1.0	N/A	9751723
Acid Extractable Copper (Cu)	mg/kg	14	9751177	12	14	2.0	N/A	9751723
Acid Extractable Iron (Fe)	mg/kg	19000	9751177	17000	19000	50	N/A	9751723
Acid Extractable Lead (Pb)	mg/kg	4.9	9751177	4.5	5.0	0.50	N/A	9751723
Acid Extractable Lithium (Li)	mg/kg	17	9751177	15	18	2.0	N/A	9751723
Acid Extractable Manganese (Mn)	mg/kg	210	9751177	180	210	2.0	N/A	9751723
Acid Extractable Mercury (Hg)	mg/kg	<0.10	9751177	<0.10	<0.10	0.10	N/A	9751723
Acid Extractable Molybdenum (Mo)	mg/kg	<2.0	9751177	<2.0	<2.0	2.0	N/A	9751723
Acid Extractable Nickel (Ni)	mg/kg	21	9751177	18	21	2.0	N/A	9751723
Acid Extractable Rubidium (Rb)	mg/kg	26	9751177	22	25	2.0	N/A	9751723
Acid Extractable Selenium (Se)	mg/kg	0.55	9751177	<0.50	0.61	0.50	N/A	9751723
Acid Extractable Silver (Ag)	mg/kg	<0.50	9751177	<0.50	<0.50	0.50	N/A	9751723
Acid Extractable Strontium (Sr)	mg/kg	55	9751177	50	62	5.0	N/A	9751723
Acid Extractable Thallium (Tl)	mg/kg	0.12	9751177	0.10	0.12	0.10	N/A	9751723
Acid Extractable Tin (Sn)	mg/kg	<1.0	9751177	<1.0	<1.0	1.0	N/A	9751723
Acid Extractable Uranium (U)	mg/kg	0.90	9751177	0.74	0.92	0.10	N/A	9751723
Acid Extractable Vanadium (V)	mg/kg	36	9751177	31	36	2.0	N/A	9751723
Acid Extractable Zinc (Zn)	mg/kg	46	9751177	41	47	5.0	N/A	9751723

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Bureau Veritas ID		AHTE09	AHTE10		AHTE11	AHTE11			
Sampling Date		2024/10/29	2024/10/28		2024/10/28	2024/10/28			
COC Number		C#1018307-01-01	C#1018307-01-01		C#1018307-01-01	C#1018307-01-01			
	UNITS	T11-2QAQC	T13-1A	RDL	T13-1B	T13-1B Lab-Dup	RDL	MDL	QC Batch
Metals									
Acid Extractable Aluminum (Al)	mg/kg	9600	9600	10	10000	10000	10	N/A	9751420
Acid Extractable Antimony (Sb)	mg/kg	<2.0	<2.0	2.0	<2.0	<2.0	2.0	N/A	9751420
Acid Extractable Arsenic (As)	mg/kg	<2.0	2.1	2.0	2.2	2.3	2.0	N/A	9751420
Acid Extractable Barium (Ba)	mg/kg	400	1700	5.0	1600	1700	50	N/A	9751420
Acid Extractable Beryllium (Be)	mg/kg	<0.50	<0.50	0.50	<0.50	<0.50	0.50	N/A	9751420
Acid Extractable Bismuth (Bi)	mg/kg	<2.0	<2.0	2.0	<2.0	<2.0	2.0	N/A	9751420
Acid Extractable Boron (B)	mg/kg	<50	<50	50	<50	<50	50	N/A	9751420
Acid Extractable Cadmium (Cd)	mg/kg	<0.30	<0.30	0.30	<0.30	<0.30	0.30	N/A	9751420
Acid Extractable Chromium (Cr)	mg/kg	31	31	2.0	31	32	2.0	N/A	9751420
Acid Extractable Cobalt (Co)	mg/kg	5.6	5.3	1.0	5.7	5.6	1.0	N/A	9751420
Acid Extractable Copper (Cu)	mg/kg	13	15	2.0	15	15	2.0	N/A	9751420
Acid Extractable Iron (Fe)	mg/kg	17000	17000	50	18000	18000	50	N/A	9751420
Acid Extractable Lead (Pb)	mg/kg	4.7	13	0.50	13	14	0.50	N/A	9751420
Acid Extractable Lithium (Li)	mg/kg	16	16	2.0	16	16	2.0	N/A	9751420
Acid Extractable Manganese (Mn)	mg/kg	190	200	2.0	210	210	2.0	N/A	9751420
Acid Extractable Mercury (Hg)	mg/kg	<0.10	<0.10	0.10	<0.10	<0.10	0.10	N/A	9751420
Acid Extractable Molybdenum (Mo)	mg/kg	<2.0	<2.0	2.0	<2.0	<2.0	2.0	N/A	9751420
Acid Extractable Nickel (Ni)	mg/kg	19	19	2.0	20	20	2.0	N/A	9751420
Acid Extractable Rubidium (Rb)	mg/kg	23	23	2.0	23	24	2.0	N/A	9751420
Acid Extractable Selenium (Se)	mg/kg	0.51	0.52	0.50	<0.50	<0.50	0.50	N/A	9751420
Acid Extractable Silver (Ag)	mg/kg	<0.50	<0.50	0.50	<0.50	<0.50	0.50	N/A	9751420
Acid Extractable Strontium (Sr)	mg/kg	59	89	5.0	89	90	5.0	N/A	9751420
Acid Extractable Thallium (Tl)	mg/kg	0.11	0.11	0.10	0.12	0.12	0.10	N/A	9751420
Acid Extractable Tin (Sn)	mg/kg	<1.0	<1.0	1.0	<1.0	<1.0	1.0	N/A	9751420
Acid Extractable Uranium (U)	mg/kg	0.80	0.72	0.10	0.74	0.80	0.10	N/A	9751420
Acid Extractable Vanadium (V)	mg/kg	33	33	2.0	33	34	2.0	N/A	9751420
Acid Extractable Zinc (Zn)	mg/kg	42	50	5.0	49	50	5.0	N/A	9751420

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

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ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Bureau Veritas ID		AHTE12	AHTE13	AHTE14	AHTE15			
Sampling Date		2024/10/28	2024/10/28	2024/10/28	2024/10/28			
COC Number		C#1018307-01-01	C#1018307-01-01	C#1018307-01-01	C#1018307-01-01			
	UNITS	T14-1A	T14-1B	T15-1A	T15-1B	RDL	MDL	QC Batch
Metals								
Acid Extractable Aluminum (Al)	mg/kg	9900	11000	11000	10000	10	N/A	9751420
Acid Extractable Antimony (Sb)	mg/kg	<2.0	<2.0	<2.0	<2.0	2.0	N/A	9751420
Acid Extractable Arsenic (As)	mg/kg	<2.0	<2.0	2.2	2.2	2.0	N/A	9751420
Acid Extractable Barium (Ba)	mg/kg	610	480	1400	1400	5.0	N/A	9751420
Acid Extractable Beryllium (Be)	mg/kg	<0.50	<0.50	<0.50	<0.50	0.50	N/A	9751420
Acid Extractable Bismuth (Bi)	mg/kg	<2.0	<2.0	<2.0	<2.0	2.0	N/A	9751420
Acid Extractable Boron (B)	mg/kg	<50	<50	<50	<50	50	N/A	9751420
Acid Extractable Cadmium (Cd)	mg/kg	<0.30	<0.30	<0.30	<0.30	0.30	N/A	9751420
Acid Extractable Chromium (Cr)	mg/kg	31	34	34	32	2.0	N/A	9751420
Acid Extractable Cobalt (Co)	mg/kg	5.6	6.1	6.1	5.9	1.0	N/A	9751420
Acid Extractable Copper (Cu)	mg/kg	13	14	16	15	2.0	N/A	9751420
Acid Extractable Iron (Fe)	mg/kg	18000	19000	19000	18000	50	N/A	9751420
Acid Extractable Lead (Pb)	mg/kg	5.0	5.1	11	13	0.50	N/A	9751420
Acid Extractable Lithium (Li)	mg/kg	16	17	18	17	2.0	N/A	9751420
Acid Extractable Manganese (Mn)	mg/kg	200	210	210	210	2.0	N/A	9751420
Acid Extractable Mercury (Hg)	mg/kg	<0.10	<0.10	<0.10	<0.10	0.10	N/A	9751420
Acid Extractable Molybdenum (Mo)	mg/kg	<2.0	<2.0	<2.0	<2.0	2.0	N/A	9751420
Acid Extractable Nickel (Ni)	mg/kg	19	21	22	20	2.0	N/A	9751420
Acid Extractable Rubidium (Rb)	mg/kg	24	25	27	24	2.0	N/A	9751420
Acid Extractable Selenium (Se)	mg/kg	0.53	0.56	0.64	0.52	0.50	N/A	9751420
Acid Extractable Silver (Ag)	mg/kg	<0.50	<0.50	<0.50	<0.50	0.50	N/A	9751420
Acid Extractable Strontium (Sr)	mg/kg	66	61	86	85	5.0	N/A	9751420
Acid Extractable Thallium (Tl)	mg/kg	0.12	0.12	0.13	0.11	0.10	N/A	9751420
Acid Extractable Tin (Sn)	mg/kg	<1.0	<1.0	<1.0	<1.0	1.0	N/A	9751420
Acid Extractable Uranium (U)	mg/kg	0.68	0.89	0.95	0.75	0.10	N/A	9751420
Acid Extractable Vanadium (V)	mg/kg	33	36	36	34	2.0	N/A	9751420
Acid Extractable Zinc (Zn)	mg/kg	43	46	53	51	5.0	N/A	9751420

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Bureau Veritas ID		AHTE16	AHTE17	AHTE18	AHTE19			
Sampling Date		2024/10/29	2024/10/29	2024/10/29	2024/10/29			
COC Number		C#1018307-01-01	C#1018307-01-01	C#1018307-01-01	C#1018307-01-01			
	UNITS	T16-1A	T16-1B	T16-1QAQC	T17-1A	RDL	MDL	QC Batch
Metals								
Acid Extractable Aluminum (Al)	mg/kg	9700	11000	10000	9700	10	N/A	9751420
Acid Extractable Antimony (Sb)	mg/kg	<2.0	<2.0	<2.0	<2.0	2.0	N/A	9751420
Acid Extractable Arsenic (As)	mg/kg	<2.0	<2.0	<2.0	<2.0	2.0	N/A	9751420
Acid Extractable Barium (Ba)	mg/kg	230	320	230	390	5.0	N/A	9751420
Acid Extractable Beryllium (Be)	mg/kg	<0.50	<0.50	<0.50	<0.50	0.50	N/A	9751420
Acid Extractable Bismuth (Bi)	mg/kg	<2.0	<2.0	<2.0	<2.0	2.0	N/A	9751420
Acid Extractable Boron (B)	mg/kg	<50	<50	<50	<50	50	N/A	9751420
Acid Extractable Cadmium (Cd)	mg/kg	<0.30	<0.30	<0.30	<0.30	0.30	N/A	9751420
Acid Extractable Chromium (Cr)	mg/kg	32	33	32	31	2.0	N/A	9751420
Acid Extractable Cobalt (Co)	mg/kg	5.6	6.1	6.0	5.4	1.0	N/A	9751420
Acid Extractable Copper (Cu)	mg/kg	14	14	14	13	2.0	N/A	9751420
Acid Extractable Iron (Fe)	mg/kg	18000	19000	18000	17000	50	N/A	9751420
Acid Extractable Lead (Pb)	mg/kg	5.0	5.2	4.9	4.7	0.50	N/A	9751420
Acid Extractable Lithium (Li)	mg/kg	16	17	17	16	2.0	N/A	9751420
Acid Extractable Manganese (Mn)	mg/kg	200	210	200	190	2.0	N/A	9751420
Acid Extractable Mercury (Hg)	mg/kg	<0.10	<0.10	<0.10	<0.10	0.10	N/A	9751420
Acid Extractable Molybdenum (Mo)	mg/kg	<2.0	<2.0	<2.0	<2.0	2.0	N/A	9751420
Acid Extractable Nickel (Ni)	mg/kg	20	21	20	19	2.0	N/A	9751420
Acid Extractable Rubidium (Rb)	mg/kg	23	25	25	24	2.0	N/A	9751420
Acid Extractable Selenium (Se)	mg/kg	0.61	0.60	0.51	<0.50	0.50	N/A	9751420
Acid Extractable Silver (Ag)	mg/kg	<0.50	<0.50	<0.50	<0.50	0.50	N/A	9751420
Acid Extractable Strontium (Sr)	mg/kg	58	59	56	55	5.0	N/A	9751420
Acid Extractable Thallium (Tl)	mg/kg	0.10	0.13	0.12	0.12	0.10	N/A	9751420
Acid Extractable Tin (Sn)	mg/kg	<1.0	<1.0	<1.0	<1.0	1.0	N/A	9751420
Acid Extractable Uranium (U)	mg/kg	0.70	1.0	0.84	0.74	0.10	N/A	9751420
Acid Extractable Vanadium (V)	mg/kg	33	36	34	33	2.0	N/A	9751420
Acid Extractable Zinc (Zn)	mg/kg	43	44	44	42	5.0	N/A	9751420

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Bureau Veritas ID		AHTE20	AHTE21	AHTE22	AHTE23			
Sampling Date		2024/10/29	2024/10/28	2024/10/28	2024/10/29			
COC Number		C#1018307-01-01	C#1018307-01-01	C#1018307-01-01	C#1018307-01-01			
	UNITS	T17-1B	T18-1A	T18-1B	T18-2A	RDL	MDL	QC Batch
Metals								
Acid Extractable Aluminum (Al)	mg/kg	9500	9700	10000	8700	10	N/A	9751420
Acid Extractable Antimony (Sb)	mg/kg	<2.0	<2.0	<2.0	<2.0	2.0	N/A	9751420
Acid Extractable Arsenic (As)	mg/kg	<2.0	<2.0	<2.0	<2.0	2.0	N/A	9751420
Acid Extractable Barium (Ba)	mg/kg	140	220	190	600	5.0	N/A	9751420
Acid Extractable Beryllium (Be)	mg/kg	<0.50	<0.50	<0.50	<0.50	0.50	N/A	9751420
Acid Extractable Bismuth (Bi)	mg/kg	<2.0	<2.0	<2.0	<2.0	2.0	N/A	9751420
Acid Extractable Boron (B)	mg/kg	<50	<50	<50	<50	50	N/A	9751420
Acid Extractable Cadmium (Cd)	mg/kg	<0.30	<0.30	<0.30	<0.30	0.30	N/A	9751420
Acid Extractable Chromium (Cr)	mg/kg	30	31	34	28	2.0	N/A	9751420
Acid Extractable Cobalt (Co)	mg/kg	5.4	5.9	5.8	5.2	1.0	N/A	9751420
Acid Extractable Copper (Cu)	mg/kg	13	14	14	12	2.0	N/A	9751420
Acid Extractable Iron (Fe)	mg/kg	17000	18000	19000	16000	50	N/A	9751420
Acid Extractable Lead (Pb)	mg/kg	4.6	5.2	4.7	5.3	0.50	N/A	9751420
Acid Extractable Lithium (Li)	mg/kg	15	16	17	15	2.0	N/A	9751420
Acid Extractable Manganese (Mn)	mg/kg	190	200	210	190	2.0	N/A	9751420
Acid Extractable Mercury (Hg)	mg/kg	<0.10	<0.10	<0.10	<0.10	0.10	N/A	9751420
Acid Extractable Molybdenum (Mo)	mg/kg	<2.0	<2.0	<2.0	<2.0	2.0	N/A	9751420
Acid Extractable Nickel (Ni)	mg/kg	19	20	21	18	2.0	N/A	9751420
Acid Extractable Rubidium (Rb)	mg/kg	22	24	25	20	2.0	N/A	9751420
Acid Extractable Selenium (Se)	mg/kg	<0.50	0.58	0.53	<0.50	0.50	N/A	9751420
Acid Extractable Silver (Ag)	mg/kg	<0.50	<0.50	<0.50	<0.50	0.50	N/A	9751420
Acid Extractable Strontium (Sr)	mg/kg	53	55	56	62	5.0	N/A	9751420
Acid Extractable Thallium (Tl)	mg/kg	0.11	0.11	0.13	<0.10	0.10	N/A	9751420
Acid Extractable Tin (Sn)	mg/kg	<1.0	<1.0	<1.0	<1.0	1.0	N/A	9751420
Acid Extractable Uranium (U)	mg/kg	0.82	0.74	0.82	0.77	0.10	N/A	9751420
Acid Extractable Vanadium (V)	mg/kg	33	33	36	31	2.0	N/A	9751420
Acid Extractable Zinc (Zn)	mg/kg	40	42	45	39	5.0	N/A	9751420

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Bureau Veritas ID		AHTE24	AHTE25		AHTE26			
Sampling Date		2024/10/29	2024/10/29		2024/10/28			
COC Number		C#1018307-01-01	C#1018307-01-01		C#1018307-01-01			
	UNITS	T18-2B	T18-2QAQC	QC Batch	T18-3A	RDL	MDL	QC Batch
Metals								
Acid Extractable Aluminum (Al)	mg/kg	9100	9200	9751420	10000	10	N/A	9751723
Acid Extractable Antimony (Sb)	mg/kg	<2.0	<2.0	9751420	<2.0	2.0	N/A	9751723
Acid Extractable Arsenic (As)	mg/kg	<2.0	<2.0	9751420	<2.0	2.0	N/A	9751723
Acid Extractable Barium (Ba)	mg/kg	770	560	9751420	130	5.0	N/A	9751723
Acid Extractable Beryllium (Be)	mg/kg	<0.50	<0.50	9751420	<0.50	0.50	N/A	9751723
Acid Extractable Bismuth (Bi)	mg/kg	<2.0	<2.0	9751420	<2.0	2.0	N/A	9751723
Acid Extractable Boron (B)	mg/kg	<50	<50	9751420	<50	50	N/A	9751723
Acid Extractable Cadmium (Cd)	mg/kg	<0.30	<0.30	9751420	<0.30	0.30	N/A	9751723
Acid Extractable Chromium (Cr)	mg/kg	30	29	9751420	33	2.0	N/A	9751723
Acid Extractable Cobalt (Co)	mg/kg	5.1	5.3	9751420	5.8	1.0	N/A	9751723
Acid Extractable Copper (Cu)	mg/kg	12	12	9751420	14	2.0	N/A	9751723
Acid Extractable Iron (Fe)	mg/kg	17000	17000	9751420	19000	50	N/A	9751723
Acid Extractable Lead (Pb)	mg/kg	5.4	5.2	9751420	5.0	0.50	N/A	9751723
Acid Extractable Lithium (Li)	mg/kg	15	15	9751420	17	2.0	N/A	9751723
Acid Extractable Manganese (Mn)	mg/kg	190	190	9751420	210	2.0	N/A	9751723
Acid Extractable Mercury (Hg)	mg/kg	<0.10	<0.10	9751420	<0.10	0.10	N/A	9751723
Acid Extractable Molybdenum (Mo)	mg/kg	<2.0	<2.0	9751420	<2.0	2.0	N/A	9751723
Acid Extractable Nickel (Ni)	mg/kg	19	19	9751420	20	2.0	N/A	9751723
Acid Extractable Rubidium (Rb)	mg/kg	21	22	9751420	24	2.0	N/A	9751723
Acid Extractable Selenium (Se)	mg/kg	<0.50	<0.50	9751420	0.51	0.50	N/A	9751723
Acid Extractable Silver (Ag)	mg/kg	<0.50	<0.50	9751420	<0.50	0.50	N/A	9751723
Acid Extractable Strontium (Sr)	mg/kg	64	60	9751420	55	5.0	N/A	9751723
Acid Extractable Thallium (Tl)	mg/kg	0.11	0.11	9751420	0.11	0.10	N/A	9751723
Acid Extractable Tin (Sn)	mg/kg	<1.0	<1.0	9751420	<1.0	1.0	N/A	9751723
Acid Extractable Uranium (U)	mg/kg	0.83	0.83	9751420	0.86	0.10	N/A	9751723
Acid Extractable Vanadium (V)	mg/kg	31	32	9751420	35	2.0	N/A	9751723
Acid Extractable Zinc (Zn)	mg/kg	40	41	9751420	44	5.0	N/A	9751723

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Bureau Veritas ID		AHTE27	AHTE28	AHTE28			
Sampling Date		2024/10/28	2024/10/28	2024/10/28			
COC Number		C#1018307-01-01	C#1018307-01-01	C#1018307-01-01			
	UNITS	T18-3B	T20-1A	T20-1A Lab-Dup	RDL	MDL	QC Batch
Metals							
Acid Extractable Aluminum (Al)	mg/kg	10000	9800	10000	10	N/A	9751723
Acid Extractable Antimony (Sb)	mg/kg	<2.0	<2.0	<2.0	2.0	N/A	9751723
Acid Extractable Arsenic (As)	mg/kg	<2.0	<2.0	<2.0	2.0	N/A	9751723
Acid Extractable Barium (Ba)	mg/kg	130	130	130	5.0	N/A	9751723
Acid Extractable Beryllium (Be)	mg/kg	<0.50	<0.50	<0.50	0.50	N/A	9751723
Acid Extractable Bismuth (Bi)	mg/kg	<2.0	<2.0	<2.0	2.0	N/A	9751723
Acid Extractable Boron (B)	mg/kg	<50	<50	<50	50	N/A	9751723
Acid Extractable Cadmium (Cd)	mg/kg	<0.30	<0.30	<0.30	0.30	N/A	9751723
Acid Extractable Chromium (Cr)	mg/kg	33	31	32	2.0	N/A	9751723
Acid Extractable Cobalt (Co)	mg/kg	5.8	5.5	5.7	1.0	N/A	9751723
Acid Extractable Copper (Cu)	mg/kg	14	13	14	2.0	N/A	9751723
Acid Extractable Iron (Fe)	mg/kg	18000	18000	18000	50	N/A	9751723
Acid Extractable Lead (Pb)	mg/kg	5.2	4.4	4.5	0.50	N/A	9751723
Acid Extractable Lithium (Li)	mg/kg	16	16	17	2.0	N/A	9751723
Acid Extractable Manganese (Mn)	mg/kg	200	200	200	2.0	N/A	9751723
Acid Extractable Mercury (Hg)	mg/kg	<0.10	<0.10	<0.10	0.10	N/A	9751723
Acid Extractable Molybdenum (Mo)	mg/kg	<2.0	<2.0	<2.0	2.0	N/A	9751723
Acid Extractable Nickel (Ni)	mg/kg	20	20	20	2.0	N/A	9751723
Acid Extractable Rubidium (Rb)	mg/kg	24	24	24	2.0	N/A	9751723
Acid Extractable Selenium (Se)	mg/kg	0.54	<0.50	0.52	0.50	N/A	9751723
Acid Extractable Silver (Ag)	mg/kg	<0.50	<0.50	<0.50	0.50	N/A	9751723
Acid Extractable Strontium (Sr)	mg/kg	55	54	54	5.0	N/A	9751723
Acid Extractable Thallium (Tl)	mg/kg	0.11	0.11	0.11	0.10	N/A	9751723
Acid Extractable Tin (Sn)	mg/kg	<1.0	<1.0	<1.0	1.0	N/A	9751723
Acid Extractable Uranium (U)	mg/kg	0.89	0.67	0.67	0.10	N/A	9751723
Acid Extractable Vanadium (V)	mg/kg	35	33	34	2.0	N/A	9751723
Acid Extractable Zinc (Zn)	mg/kg	45	43	45	5.0	N/A	9751723

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

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ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Bureau Veritas ID		AHTE29	AHTE30		AHTE31			
Sampling Date		2024/10/28	2024/10/29		2024/10/29			
COC Number		C#1018307-01-01	C#1018307-01-01		C#1018307-01-01			
	UNITS	T20-1B	T23-1A	QC Batch	T23-1B	RDL	MDL	QC Batch
Metals								
Acid Extractable Aluminum (Al)	mg/kg	9300	11000	9751420	12000	10	N/A	9751723
Acid Extractable Antimony (Sb)	mg/kg	<2.0	<2.0	9751420	<2.0	2.0	N/A	9751723
Acid Extractable Arsenic (As)	mg/kg	<2.0	<2.0	9751420	<2.0	2.0	N/A	9751723
Acid Extractable Barium (Ba)	mg/kg	120	140	9751420	150	5.0	N/A	9751723
Acid Extractable Beryllium (Be)	mg/kg	<0.50	<0.50	9751420	<0.50	0.50	N/A	9751723
Acid Extractable Bismuth (Bi)	mg/kg	<2.0	<2.0	9751420	<2.0	2.0	N/A	9751723
Acid Extractable Boron (B)	mg/kg	<50	<50	9751420	<50	50	N/A	9751723
Acid Extractable Cadmium (Cd)	mg/kg	<0.30	<0.30	9751420	<0.30	0.30	N/A	9751723
Acid Extractable Chromium (Cr)	mg/kg	30	34	9751420	37	2.0	N/A	9751723
Acid Extractable Cobalt (Co)	mg/kg	5.2	6.1	9751420	6.5	1.0	N/A	9751723
Acid Extractable Copper (Cu)	mg/kg	12	15	9751420	16	2.0	N/A	9751723
Acid Extractable Iron (Fe)	mg/kg	17000	19000	9751420	20000	50	N/A	9751723
Acid Extractable Lead (Pb)	mg/kg	4.3	5.4	9751420	5.3	0.50	N/A	9751723
Acid Extractable Lithium (Li)	mg/kg	15	18	9751420	19	2.0	N/A	9751723
Acid Extractable Manganese (Mn)	mg/kg	190	210	9751420	220	2.0	N/A	9751723
Acid Extractable Mercury (Hg)	mg/kg	<0.10	<0.10	9751420	<0.10	0.10	N/A	9751723
Acid Extractable Molybdenum (Mo)	mg/kg	<2.0	<2.0	9751420	<2.0	2.0	N/A	9751723
Acid Extractable Nickel (Ni)	mg/kg	19	21	9751420	23	2.0	N/A	9751723
Acid Extractable Rubidium (Rb)	mg/kg	22	26	9751420	28	2.0	N/A	9751723
Acid Extractable Selenium (Se)	mg/kg	<0.50	0.55	9751420	0.67	0.50	N/A	9751723
Acid Extractable Silver (Ag)	mg/kg	<0.50	<0.50	9751420	<0.50	0.50	N/A	9751723
Acid Extractable Strontium (Sr)	mg/kg	54	57	9751420	60	5.0	N/A	9751723
Acid Extractable Thallium (Tl)	mg/kg	0.11	0.12	9751420	0.13	0.10	N/A	9751723
Acid Extractable Tin (Sn)	mg/kg	<1.0	<1.0	9751420	<1.0	1.0	N/A	9751723
Acid Extractable Uranium (U)	mg/kg	0.73	0.98	9751420	1.0	0.10	N/A	9751723
Acid Extractable Vanadium (V)	mg/kg	32	37	9751420	39	2.0	N/A	9751723
Acid Extractable Zinc (Zn)	mg/kg	40	47	9751420	50	5.0	N/A	9751723

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Bureau Veritas ID		AHTE32	AHTE33			
Sampling Date		2024/10/28	2024/10/28			
COC Number		C#1018307-01-01	C#1018307-01-01			
	UNITS	T30-1A	T30-1B	RDL	MDL	QC Batch
Metals						
Acid Extractable Aluminum (Al)	mg/kg	12000	10000	10	N/A	9751723
Acid Extractable Antimony (Sb)	mg/kg	<2.0	<2.0	2.0	N/A	9751723
Acid Extractable Arsenic (As)	mg/kg	<2.0	2.0	2.0	N/A	9751723
Acid Extractable Barium (Ba)	mg/kg	150	130	5.0	N/A	9751723
Acid Extractable Beryllium (Be)	mg/kg	<0.50	<0.50	0.50	N/A	9751723
Acid Extractable Bismuth (Bi)	mg/kg	<2.0	<2.0	2.0	N/A	9751723
Acid Extractable Boron (B)	mg/kg	<50	<50	50	N/A	9751723
Acid Extractable Cadmium (Cd)	mg/kg	<0.30	<0.30	0.30	N/A	9751723
Acid Extractable Chromium (Cr)	mg/kg	37	33	2.0	N/A	9751723
Acid Extractable Cobalt (Co)	mg/kg	6.5	5.8	1.0	N/A	9751723
Acid Extractable Copper (Cu)	mg/kg	15	14	2.0	N/A	9751723
Acid Extractable Iron (Fe)	mg/kg	21000	19000	50	N/A	9751723
Acid Extractable Lead (Pb)	mg/kg	4.3	5.3	0.50	N/A	9751723
Acid Extractable Lithium (Li)	mg/kg	19	17	2.0	N/A	9751723
Acid Extractable Manganese (Mn)	mg/kg	220	210	2.0	N/A	9751723
Acid Extractable Mercury (Hg)	mg/kg	<0.10	<0.10	0.10	N/A	9751723
Acid Extractable Molybdenum (Mo)	mg/kg	<2.0	2.0	2.0	N/A	9751723
Acid Extractable Nickel (Ni)	mg/kg	23	21	2.0	N/A	9751723
Acid Extractable Rubidium (Rb)	mg/kg	29	25	2.0	N/A	9751723
Acid Extractable Selenium (Se)	mg/kg	0.57	0.51	0.50	N/A	9751723
Acid Extractable Silver (Ag)	mg/kg	<0.50	<0.50	0.50	N/A	9751723
Acid Extractable Strontium (Sr)	mg/kg	61	54	5.0	N/A	9751723
Acid Extractable Thallium (Tl)	mg/kg	0.14	0.11	0.10	N/A	9751723
Acid Extractable Tin (Sn)	mg/kg	<1.0	<1.0	1.0	N/A	9751723
Acid Extractable Uranium (U)	mg/kg	0.87	0.85	0.10	N/A	9751723
Acid Extractable Vanadium (V)	mg/kg	39	35	2.0	N/A	9751723
Acid Extractable Zinc (Zn)	mg/kg	51	45	5.0	N/A	9751723

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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ATLANTIC RBCA HYDROCARBONS (SOIL)

Bureau Veritas ID		AHTD99		AHTE00	AHTE00			
Sampling Date		2024/10/28		2024/10/28	2024/10/28			
COC Number		C#1018307-01-01		C#1018307-01-01	C#1018307-01-01			
	UNITS	T2-1A	RDL	T2-1B	T2-1B Lab-Dup	RDL	MDL	QC Batch
Petroleum Hydrocarbons								
Benzene	mg/kg	<0.0050	0.0050	<0.0050	<0.0050	0.0050	N/A	9745653
Toluene	mg/kg	<0.050	0.050	<0.050	<0.050	0.050	N/A	9745653
Ethylbenzene	mg/kg	<0.010	0.010	<0.010	<0.010	0.010	0.025	9745653
Total Xylenes	mg/kg	<0.050	0.050	<0.050	<0.050	0.050	N/A	9745653
C6 - C10 (less BTEX)	mg/kg	<2.5	2.5	<2.5	<2.5	2.5	N/A	9745653
>C10-C16 Hydrocarbons	mg/kg	<0.71	0.71	<0.59	N/A	0.59	N/A	9777500
>C16-C21 Hydrocarbons	mg/kg	<0.71	0.71	<0.59	N/A	0.59	N/A	9777500
>C21-<C32 Hydrocarbons	mg/kg	2.9	0.71	2.4	N/A	0.59	N/A	9777500
Reached Baseline at C32	mg/kg	Yes	N/A	Yes	N/A	N/A	N/A	9777500
Hydrocarbon Resemblance	mg/kg	COMMENT (1)	N/A	COMMENT (1)	N/A	N/A	N/A	9777500
Surrogate Recovery (%)								
n-Dotriacontane - Extractable	%	84 (2)	N/A	73 (2)	N/A	N/A	N/A	9777500
Isobutylbenzene - Volatile	%	107	N/A	100	99	N/A	N/A	9745653

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) Unidentified compound(s) in lube oil range. Possible lube oil fraction.
(2) Elevated TEH RDL(s) due to matrix interference.

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ATLANTIC RBCA HYDROCARBONS (SOIL)

Bureau Veritas ID		AHTE01		AHTE02		AHTE03			
Sampling Date		2024/10/28		2024/10/28		2024/10/28			
COC Number		C#1018307-01-01		C#1018307-01-01		C#1018307-01-01			
	UNITS	T10-1A	RDL	T10-1B	RDL	T10-2A	RDL	MDL	QC Batch
Petroleum Hydrocarbons									
Benzene	mg/kg	<0.0050	0.0050	<0.0050	0.0050	<0.0050	0.0050	N/A	9745653
Toluene	mg/kg	<0.050	0.050	<0.050	0.050	<0.050	0.050	N/A	9745653
Ethylbenzene	mg/kg	<0.010	0.010	<0.010	0.010	<0.010	0.010	0.025	9745653
Total Xylenes	mg/kg	<0.050	0.050	<0.050	0.050	<0.050	0.050	N/A	9745653
C6 - C10 (less BTEX)	mg/kg	<2.5	2.5	<2.5	2.5	<2.5	2.5	N/A	9745653
>C10-C16 Hydrocarbons	mg/kg	<0.28	0.28	<0.48	0.48	<0.25	0.25	N/A	9777500
>C16-C21 Hydrocarbons	mg/kg	0.54	0.28	<0.48	0.48	0.53	0.25	N/A	9777500
>C21-<C32 Hydrocarbons	mg/kg	1.9	0.28	1.8	0.48	2.2	0.25	N/A	9777500
Reached Baseline at C32	mg/kg	Yes	N/A	Yes	N/A	Yes	N/A	N/A	9777500
Hydrocarbon Resemblance	mg/kg	COMMENT (1)	N/A	COMMENT (2)	N/A	COMMENT (3)	N/A	N/A	9777500
Surrogate Recovery (%)									
n-Dotriacontane - Extractable	%	72 (4)	N/A	66 (4)	N/A	75	N/A	N/A	9777500
Isobutylbenzene - Volatile	%	96	N/A	107	N/A	103	N/A	N/A	9745653

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) One product in fuel oil range. Unidentified compound(s) in lube oil range. Possible lube oil fraction.
(2) Unidentified compound(s) in lube oil range. Possible lube oil fraction.
(3) Unidentified compound(s) in fuel / lube range. Possible lube oil fraction.
(4) Elevated TEH RDL(s) due to matrix interference.

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ATLANTIC RBCA HYDROCARBONS (SOIL)

Bureau Veritas ID		AHTE04		AHTE05			AHTE06			
Sampling Date		2024/10/28		2024/10/28			2024/10/28			
COC Number		C#1018307-01-01		C#1018307-01-01			C#1018307-01-01			
	UNITS	T10-2B	RDL	T11-1A	RDL	QC Batch	T11-1B	RDL	MDL	QC Batch
Petroleum Hydrocarbons										
Benzene	mg/kg	<0.0050	0.0050	<0.0050	0.0050	9745653	<0.0050	0.0050	N/A	9745653
Toluene	mg/kg	<0.050	0.050	<0.050	0.050	9745653	<0.050	0.050	N/A	9745653
Ethylbenzene	mg/kg	<0.010	0.010	<0.010	0.010	9745653	<0.010	0.010	0.025	9745653
Total Xylenes	mg/kg	<0.050	0.050	<0.050	0.050	9745653	<0.050	0.050	N/A	9745653
C6 - C10 (less BTEX)	mg/kg	<2.5	2.5	<2.5	2.5	9745653	<2.5	2.5	N/A	9745653
>C10-C16 Hydrocarbons	mg/kg	<0.29	0.29	41	0.27	9777500	4.2	0.52	N/A	9788522
>C16-C21 Hydrocarbons	mg/kg	0.66	0.29	16	0.27	9777500	2.4	0.52	N/A	9788522
>C21-<C32 Hydrocarbons	mg/kg	2.5	0.29	3.3	0.27	9777500	2.5	0.52	N/A	9788522
Reached Baseline at C32	mg/kg	Yes	N/A	Yes	N/A	9777500	Yes	N/A	N/A	9788522
Hydrocarbon Resemblance	mg/kg	COMMENT (1)	N/A	COMMENT (2)	N/A	9777500	COMMENT (2)	N/A	N/A	9788522
Surrogate Recovery (%)										
n-Dotriacontane - Extractable	%	86 (3)	N/A	80 (3)	N/A	9777500	75 (4)	N/A	N/A	9788522
Isobutylbenzene - Volatile	%	107	N/A	104	N/A	9745653	107	N/A	N/A	9745653

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) Unidentified compound(s) in fuel / lube range. Possible lube oil fraction.
(2) One product in fuel oil range. Unidentified compound(s) in lube oil range. Possible lube oil fraction.
(3) Elevated TEH RDL(s) due to matrix interference.
(4) Elevated TEH RDL(s) due to matrix interference. TEH sample analysed past recommended hold time.

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ATLANTIC RBCA HYDROCARBONS (SOIL)

Bureau Veritas ID		AHTE07			AHTE08			AHTE09			
Sampling Date		2024/10/29			2024/10/29			2024/10/29			
COC Number		C#1018307-01-01			C#1018307-01-01			C#1018307-01-01			
	UNITS	T11-2A	RDL	MDL	T11-2B	RDL	MDL	T11-2QAQC	RDL	MDL	QC Batch
Petroleum Hydrocarbons											
Benzene	mg/kg	<0.010	0.010	N/A	<0.0050	0.0050	N/A	<0.010	0.010	N/A	9745653
Toluene	mg/kg	<0.10	0.10	N/A	<0.050	0.050	N/A	<0.10	0.10	N/A	9745653
Ethylbenzene	mg/kg	<0.020	0.020	0.050	<0.010	0.010	0.025	<0.020	0.020	0.050	9745653
Total Xylenes	mg/kg	<0.10	0.10	N/A	<0.050	0.050	N/A	<0.10	0.10	N/A	9745653
C6 - C10 (less BTEX)	mg/kg	<5.0	5.0	N/A	<2.5	2.5	N/A	<5.0	5.0	N/A	9745653
>C10-C16 Hydrocarbons	mg/kg	<0.28	0.28	N/A	0.49	0.27	N/A	0.61	0.33	N/A	9777500
>C16-C21 Hydrocarbons	mg/kg	0.52	0.28	N/A	0.62	0.27	N/A	0.67	0.33	N/A	9777500
>C21-<C32 Hydrocarbons	mg/kg	2.3	0.28	N/A	2.3	0.27	N/A	2.3	0.33	N/A	9777500
Reached Baseline at C32	mg/kg	Yes	N/A	N/A	Yes	N/A	N/A	Yes	N/A	N/A	9777500
Hydrocarbon Resemblance	mg/kg	COMMENT (1)	N/A	N/A	COMMENT (2)	N/A	N/A	COMMENT (2)	N/A	N/A	9777500
Surrogate Recovery (%)											
n-Dotriacontane - Extractable	%	80 (3)	N/A	N/A	80 (3)	N/A	N/A	77 (3)	N/A	N/A	9777500
Isobutylbenzene - Volatile	%	101 (4)	N/A	N/A	108	N/A	N/A	100 (4)	N/A	N/A	9745653

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) Unidentified compound(s) in fuel / lube range. Possible lube oil fraction.
(2) One product in fuel oil range. Unidentified compound(s) in fuel / lube range. Possible lube oil fraction.
(3) Elevated TEH RDL(s) due to matrix interference.
(4) Elevated VPH RDL(s) due to limited sample.

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ATLANTIC RBCA HYDROCARBONS (SOIL)

Bureau Veritas ID		AHTE09		AHTE10			AHTE11			
Sampling Date		2024/10/29		2024/10/28			2024/10/28			
COC Number		C#1018307-01-01		C#1018307-01-01			C#1018307-01-01			
	UNITS	T11-2QAQC Lab-Dup	RDL	T13-1A	RDL	MDL	T13-1B	RDL	MDL	QC Batch
Petroleum Hydrocarbons										
Benzene	mg/kg	N/A	0.010	<0.010	0.010	N/A	<0.0050	0.0050	N/A	9745653
Toluene	mg/kg	N/A	0.10	<0.10	0.10	N/A	<0.050	0.050	N/A	9745653
Ethylbenzene	mg/kg	N/A	0.020	<0.020	0.020	0.050	<0.010	0.010	0.025	9745653
Total Xylenes	mg/kg	N/A	0.10	<0.10	0.10	N/A	<0.050	0.050	N/A	9745653
C6 - C10 (less BTEX)	mg/kg	N/A	5.0	<5.0	5.0	N/A	<2.5	2.5	N/A	9745653
>C10-C16 Hydrocarbons	mg/kg	0.53	0.31	19	0.33	N/A	34	0.27	N/A	9777500
>C16-C21 Hydrocarbons	mg/kg	0.59	0.31	6.3	0.33	N/A	11	0.27	N/A	9777500
>C21-<C32 Hydrocarbons	mg/kg	2.1	0.31	2.6	0.33	N/A	3.0	0.27	N/A	9777500
Reached Baseline at C32	mg/kg	N/A	N/A	Yes	N/A	N/A	Yes	N/A	N/A	9777500
Hydrocarbon Resemblance	mg/kg	N/A	N/A	COMMENT (1)	N/A	N/A	COMMENT (1)	N/A	N/A	9777500
Surrogate Recovery (%)										
n-Dotriacontane - Extractable	%	69 (2)	N/A	77 (2)	N/A	N/A	82 (2)	N/A	N/A	9777500
Isobutylbenzene - Volatile	%	N/A	N/A	89 (3)	N/A	N/A	95	N/A	N/A	9745653

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) One product in fuel oil range. Unidentified compound(s) in lube oil range. Possible lube oil fraction.
(2) Elevated TEH RDL(s) due to matrix interference.
(3) Elevated VPH RDL(s) due to limited sample.

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ATLANTIC RBCA HYDROCARBONS (SOIL)

Bureau Veritas ID		AHTE12		AHTE13			AHTE14			
Sampling Date		2024/10/28		2024/10/28			2024/10/28			
COC Number		C#1018307-01-01		C#1018307-01-01			C#1018307-01-01			
	UNITS	T14-1A	RDL	T14-1B	RDL	MDL	T15-1A	RDL	MDL	QC Batch
Petroleum Hydrocarbons										
Benzene	mg/kg	<0.0050	0.0050	<0.0050	0.0050	N/A	<0.010	0.010	N/A	9745653
Toluene	mg/kg	<0.050	0.050	<0.050	0.050	N/A	<0.10	0.10	N/A	9745653
Ethylbenzene	mg/kg	<0.010	0.010	<0.010	0.010	0.025	<0.020	0.020	0.050	9745653
Total Xylenes	mg/kg	<0.050	0.050	<0.050	0.050	N/A	<0.10	0.10	N/A	9745653
C6 - C10 (less BTEX)	mg/kg	<2.5	2.5	<2.5	2.5	N/A	<5.0	5.0	N/A	9745653
>C10-C16 Hydrocarbons	mg/kg	16	0.37	8.2	0.32	N/A	14	0.25	N/A	9777500
>C16-C21 Hydrocarbons	mg/kg	5.9	0.37	3.5	0.32	N/A	5.0	0.25	N/A	9777500
>C21-<C32 Hydrocarbons	mg/kg	2.7	0.37	2.4	0.32	N/A	2.4	0.25	N/A	9777500
Reached Baseline at C32	mg/kg	Yes	N/A	Yes	N/A	N/A	Yes	N/A	N/A	9777500
Hydrocarbon Resemblance	mg/kg	COMMENT (1)	N/A	COMMENT (1)	N/A	N/A	COMMENT (1)	N/A	N/A	9777500
Surrogate Recovery (%)										
n-Dotriacontane - Extractable	%	77 (2)	N/A	75 (2)	N/A	N/A	68	N/A	N/A	9777500
Isobutylbenzene - Volatile	%	105	N/A	105	N/A	N/A	95 (3)	N/A	N/A	9745653

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) One product in fuel oil range. Unidentified compound(s) in lube oil range. Possible lube oil fraction.
(2) Elevated TEH RDL(s) due to matrix interference.
(3) Elevated VPH RDL(s) due to limited sample.

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ATLANTIC RBCA HYDROCARBONS (SOIL)

Bureau Veritas ID		AHTE15		AHTE16			AHTE17			
Sampling Date		2024/10/28		2024/10/29			2024/10/29			
COC Number		C#1018307-01-01		C#1018307-01-01			C#1018307-01-01			
	UNITS	T15-1B	RDL	T16-1A	RDL	QC Batch	T16-1B	RDL	MDL	QC Batch
Petroleum Hydrocarbons										
Benzene	mg/kg	<0.010	0.010	<0.010	0.010	9745653	<0.010	0.010	N/A	9745653
Toluene	mg/kg	<0.10	0.10	<0.10	0.10	9745653	<0.10	0.10	N/A	9745653
Ethylbenzene	mg/kg	<0.020	0.020	<0.020	0.020	9745653	<0.020	0.020	0.050	9745653
Total Xylenes	mg/kg	<0.10	0.10	<0.10	0.10	9745653	<0.10	0.10	N/A	9745653
C6 - C10 (less BTEX)	mg/kg	<5.0	5.0	<5.0	5.0	9745653	<5.0	5.0	N/A	9745653
>C10-C16 Hydrocarbons	mg/kg	30	0.30	<0.33	0.33	9777500	<0.31	0.31	N/A	9777528
>C16-C21 Hydrocarbons	mg/kg	10	0.30	0.60	0.33	9777500	0.52	0.31	N/A	9777528
>C21-<C32 Hydrocarbons	mg/kg	2.4	0.30	2.1	0.33	9777500	2.4	0.31	N/A	9777528
Reached Baseline at C32	mg/kg	Yes	N/A	Yes	N/A	9777500	Yes	N/A	N/A	9777528
Hydrocarbon Resemblance	mg/kg	COMMENT (1)	N/A	COMMENT (2)	N/A	9777500	COMMENT (2)	N/A	N/A	9777528
Surrogate Recovery (%)										
n-Dotriacontane - Extractable	%	74 (3)	N/A	76 (3)	N/A	9777500	109 (3)	N/A	N/A	9777528
Isobutylbenzene - Volatile	%	107 (4)	N/A	100 (4)	N/A	9745653	100 (4)	N/A	N/A	9745653

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) One product in fuel oil range. Unidentified compound(s) in lube oil range. Possible lube oil fraction.
(2) Unidentified compound(s) in fuel / lube range. Possible lube oil fraction.
(3) Elevated TEH RDL(s) due to matrix interference.
(4) Elevated VPH RDL(s) due to limited sample.

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ATLANTIC RBCA HYDROCARBONS (SOIL)

Bureau Veritas ID		AHTE18			AHTE19			
Sampling Date		2024/10/29			2024/10/29			
COC Number		C#1018307-01-01			C#1018307-01-01			
	UNITS	T16-1QAQC	RDL	QC Batch	T17-1A	RDL	MDL	QC Batch
Petroleum Hydrocarbons								
Benzene	mg/kg	<0.010	0.010	9745653	<0.010	0.010	N/A	9745667
Toluene	mg/kg	<0.10	0.10	9745653	<0.10	0.10	N/A	9745667
Ethylbenzene	mg/kg	<0.020	0.020	9745653	<0.020	0.020	0.050	9745667
Total Xylenes	mg/kg	<0.10	0.10	9745653	<0.10	0.10	N/A	9745667
C6 - C10 (less BTEX)	mg/kg	<5.0	5.0	9745653	<5.0	5.0	N/A	9745667
>C10-C16 Hydrocarbons	mg/kg	0.75	0.34	9777528	18	0.43	N/A	9777528
>C16-C21 Hydrocarbons	mg/kg	0.88	0.34	9777528	6.9	0.43	N/A	9777528
>C21-<C32 Hydrocarbons	mg/kg	2.7	0.34	9777528	3.5	0.43	N/A	9777528
Reached Baseline at C32	mg/kg	Yes	N/A	9777528	Yes	N/A	N/A	9777528
Hydrocarbon Resemblance	mg/kg	COMMENT (1)	N/A	9777528	COMMENT (1)	N/A	N/A	9777528
Surrogate Recovery (%)								
n-Dotriacontane - Extractable	%	123 (2)	N/A	9777528	129 (2)	N/A	N/A	9777528
Isobutylbenzene - Volatile	%	102 (3)	N/A	9745653	106 (3)	N/A	N/A	9745667

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) One product in fuel oil range. Unidentified compound(s) in fuel / lube range. Possible lube oil fraction.
(2) Elevated TEH RDL(s) due to matrix interference.
(3) Elevated VPH RDL(s) due to limited sample.

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ATLANTIC RBCA HYDROCARBONS (SOIL)

Bureau Veritas ID		AHTE20		AHTE21		AHTE22			
Sampling Date		2024/10/29		2024/10/28		2024/10/28			
COC Number		C#1018307-01-01		C#1018307-01-01		C#1018307-01-01			
	UNITS	T17-1B	RDL	T18-1A	RDL	T18-1B	RDL	MDL	QC Batch
Petroleum Hydrocarbons									
Benzene	mg/kg	<0.0050	0.0050	<0.0050	0.0050	<0.0050	0.0050	N/A	9745667
Toluene	mg/kg	<0.050	0.050	<0.050	0.050	<0.050	0.050	N/A	9745667
Ethylbenzene	mg/kg	<0.010	0.010	<0.010	0.010	<0.010	0.010	0.025	9745667
Total Xylenes	mg/kg	<0.050	0.050	<0.050	0.050	<0.050	0.050	N/A	9745667
C6 - C10 (less BTEX)	mg/kg	<2.5	2.5	<2.5	2.5	<2.5	2.5	N/A	9745667
>C10-C16 Hydrocarbons	mg/kg	1.0	0.28	1.8	0.30	2.1	0.32	N/A	9777528
>C16-C21 Hydrocarbons	mg/kg	0.74	0.28	1.3	0.30	1.4	0.32	N/A	9777528
>C21-<C32 Hydrocarbons	mg/kg	2.4	0.28	2.6	0.30	3.1	0.32	N/A	9777528
Reached Baseline at C32	mg/kg	Yes	N/A	Yes	N/A	Yes	N/A	N/A	9777528
Hydrocarbon Resemblance	mg/kg	COMMENT (1)	N/A	COMMENT (1)	N/A	COMMENT (1)	N/A	N/A	9777528
Surrogate Recovery (%)									
n-Dotriacontane - Extractable	%	116 (2)	N/A	109 (2)	N/A	117 (2)	N/A	N/A	9777528
Isobutylbenzene - Volatile	%	110	N/A	107	N/A	108	N/A	N/A	9745667

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) One product in fuel oil range. Unidentified compound(s) in fuel / lube range. Possible lube oil fraction.
(2) Elevated TEH RDL(s) due to matrix interference.

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ATLANTIC RBCA HYDROCARBONS (SOIL)

Bureau Veritas ID		AHTE22			AHTE23	AHTE24			
Sampling Date		2024/10/28			2024/10/29	2024/10/29			
COC Number		C#1018307-01-01			C#1018307-01-01	C#1018307-01-01			
	UNITS	T18-1B Lab-Dup	RDL	MDL	T18-2A	T18-2B	RDL	MDL	QC Batch
Petroleum Hydrocarbons									
Benzene	mg/kg	<0.0050	0.0050	N/A	<0.010	<0.010	0.010	N/A	9745667
Toluene	mg/kg	<0.050	0.050	N/A	<0.10	<0.10	0.10	N/A	9745667
Ethylbenzene	mg/kg	<0.010	0.010	0.025	<0.020	<0.020	0.020	0.050	9745667
Total Xylenes	mg/kg	<0.050	0.050	N/A	<0.10	<0.10	0.10	N/A	9745667
C6 - C10 (less BTEX)	mg/kg	<2.5	2.5	N/A	<5.0	<5.0	5.0	N/A	9745667
>C10-C16 Hydrocarbons	mg/kg	N/A	0.32	N/A	8.7	8.0	0.35	N/A	9777528
>C16-C21 Hydrocarbons	mg/kg	N/A	0.32	N/A	3.1	3.1	0.35	N/A	9777528
>C21-<C32 Hydrocarbons	mg/kg	N/A	0.32	N/A	2.6	3.2	0.35	N/A	9777528
Reached Baseline at C32	mg/kg	N/A	N/A	N/A	Yes	Yes	N/A	N/A	9777528
Hydrocarbon Resemblance	mg/kg	N/A	N/A	N/A	COMMENT (1)	COMMENT (1)	N/A	N/A	9777528
Surrogate Recovery (%)									
n-Dotriacontane - Extractable	%	N/A	N/A	N/A	117 (2)	129 (2)	N/A	N/A	9777528
Isobutylbenzene - Volatile	%	106	N/A	N/A	104 (3)	111 (3)	N/A	N/A	9745667

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) One product in fuel oil range. Unidentified compound(s) in fuel / lube range. Possible lube oil fraction.
(2) Elevated TEH RDL(s) due to matrix interference.
(3) Elevated VPH RDL(s) due to limited sample.

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ATLANTIC RBCA HYDROCARBONS (SOIL)

Bureau Veritas ID		AHTE25		AHTE26			AHTE27			
Sampling Date		2024/10/29		2024/10/28			2024/10/28			
COC Number		C#1018307-01-01		C#1018307-01-01			C#1018307-01-01			
	UNITS	T18-2QAQC	RDL	T18-3A	RDL	MDL	T18-3B	RDL	MDL	QC Batch
Petroleum Hydrocarbons										
Benzene	mg/kg	<0.0050	0.0050	<0.0050	0.0050	N/A	<0.010	0.010	N/A	9745667
Toluene	mg/kg	<0.050	0.050	<0.050	0.050	N/A	<0.10	0.10	N/A	9745667
Ethylbenzene	mg/kg	<0.010	0.010	<0.010	0.010	0.025	<0.020	0.020	0.050	9745667
Total Xylenes	mg/kg	<0.050	0.050	<0.050	0.050	N/A	<0.10	0.10	N/A	9745667
C6 - C10 (less BTEX)	mg/kg	<2.5	2.5	<2.5	2.5	N/A	<5.0	5.0	N/A	9745667
>C10-C16 Hydrocarbons	mg/kg	11	0.32	<0.36	0.36	N/A	0.47	0.25	N/A	9777528
>C16-C21 Hydrocarbons	mg/kg	3.7	0.32	0.69	0.36	N/A	0.76	0.25	N/A	9777528
>C21-<C32 Hydrocarbons	mg/kg	2.8	0.32	2.9	0.36	N/A	3.1	0.25	N/A	9777528
Reached Baseline at C32	mg/kg	Yes	N/A	Yes	N/A	N/A	Yes	N/A	N/A	9777528
Hydrocarbon Resemblance	mg/kg	COMMENT (1)	N/A	COMMENT (2)	N/A	N/A	COMMENT (2)	N/A	N/A	9777528
Surrogate Recovery (%)										
n-Dotriacontane - Extractable	%	126 (3)	N/A	126 (3)	N/A	N/A	128	N/A	N/A	9777528
Isobutylbenzene - Volatile	%	103	N/A	111	N/A	N/A	104 (4)	N/A	N/A	9745667

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) One product in fuel oil range. Unidentified compound(s) in fuel / lube range. Possible lube oil fraction.
(2) Unidentified compound(s) in fuel / lube range. Possible lube oil fraction.
(3) Elevated TEH RDL(s) due to matrix interference.
(4) Elevated VPH RDL(s) due to limited sample.

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ATLANTIC RBCA HYDROCARBONS (SOIL)

Bureau Veritas ID		AHTE28			AHTE29		AHTE29			
Sampling Date		2024/10/28			2024/10/28		2024/10/28			
COC Number		C#1018307-01-01			C#1018307-01-01		C#1018307-01-01			
	UNITS	T20-1A	RDL	MDL	T20-1B	RDL	T20-1B Lab-Dup	RDL	MDL	QC Batch
Petroleum Hydrocarbons										
Benzene	mg/kg	<0.010	0.010	N/A	<0.0050	0.0050	N/A	0.0050	N/A	9745667
Toluene	mg/kg	<0.10	0.10	N/A	<0.050	0.050	N/A	0.050	N/A	9745667
Ethylbenzene	mg/kg	<0.020	0.020	0.050	<0.010	0.010	N/A	0.010	0.025	9745667
Total Xylenes	mg/kg	<0.10	0.10	N/A	<0.050	0.050	N/A	0.050	N/A	9745667
C6 - C10 (less BTEX)	mg/kg	<5.0	5.0	N/A	<2.5	2.5	N/A	2.5	N/A	9745667
>C10-C16 Hydrocarbons	mg/kg	0.57	0.34	N/A	1.7	0.36	0.59 (1)	0.30	N/A	9777528
>C16-C21 Hydrocarbons	mg/kg	0.54	0.34	N/A	1.2	0.36	0.90	0.30	N/A	9777528
>C21-<C32 Hydrocarbons	mg/kg	1.9	0.34	N/A	3.1	0.36	3.2	0.30	N/A	9777528
Reached Baseline at C32	mg/kg	Yes	N/A	N/A	Yes	N/A	N/A	N/A	N/A	9777528
Hydrocarbon Resemblance	mg/kg	COMMENT (2)	N/A	N/A	COMMENT (2)	N/A	N/A	N/A	N/A	9777528
Surrogate Recovery (%)										
n-Dotriacontane - Extractable	%	103 (3)	N/A	N/A	124 (3)	N/A	128 (3)	N/A	N/A	9777528
Isobutylbenzene - Volatile	%	106 (4)	N/A	N/A	104	N/A	N/A	N/A	N/A	9745667

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) Duplicate: results are outside acceptance limit. Sample was past recommended hold time for repeat analysis.
(2) One product in fuel oil range. Unidentified compound(s) in fuel / lube range. Possible lube oil fraction.
(3) Elevated TEH RDL(s) due to matrix interference.
(4) Elevated VPH RDL(s) due to limited sample.

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ATLANTIC RBCA HYDROCARBONS (SOIL)

Bureau Veritas ID		AHTE30		AHTE31		AHTE32			
Sampling Date		2024/10/29		2024/10/29		2024/10/28			
COC Number		C#1018307-01-01		C#1018307-01-01		C#1018307-01-01			
	UNITS	T23-1A	RDL	T23-1B	RDL	T30-1A	RDL	MDL	QC Batch
Petroleum Hydrocarbons									
Benzene	mg/kg	<0.0050	0.0050	<0.0050	0.0050	<0.0050	0.0050	N/A	9745667
Toluene	mg/kg	<0.050	0.050	<0.050	0.050	<0.050	0.050	N/A	9745667
Ethylbenzene	mg/kg	<0.010	0.010	<0.010	0.010	<0.010	0.010	0.025	9745667
Total Xylenes	mg/kg	<0.050	0.050	<0.050	0.050	<0.050	0.050	N/A	9745667
C6 - C10 (less BTEX)	mg/kg	<2.5	2.5	<2.5	2.5	<2.5	2.5	N/A	9745667
>C10-C16 Hydrocarbons	mg/kg	<0.27	0.27	<0.38	0.38	<0.31	0.31	N/A	9777528
>C16-C21 Hydrocarbons	mg/kg	0.57	0.27	<0.38	0.38	<0.31	0.31	N/A	9777528
>C21-<C32 Hydrocarbons	mg/kg	2.5	0.27	2.3	0.38	2.3	0.31	N/A	9777528
Reached Baseline at C32	mg/kg	Yes	N/A	Yes	N/A	Yes	N/A	N/A	9777528
Hydrocarbon Resemblance	mg/kg	COMMENT (1)	N/A	COMMENT (2)	N/A	COMMENT (2)	N/A	N/A	9777528
Surrogate Recovery (%)									
n-Dotriacontane - Extractable	%	128 (3)	N/A	107 (3)	N/A	113 (3)	N/A	N/A	9777528
Isobutylbenzene - Volatile	%	104	N/A	106	N/A	109	N/A	N/A	9745667

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) Unidentified compound(s) in fuel / lube range. Possible lube oil fraction.
(2) Unidentified compound(s) in lube oil range. Possible lube oil fraction.
(3) Elevated TEH RDL(s) due to matrix interference.

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ATLANTIC RBCA HYDROCARBONS (SOIL)

Bureau Veritas ID		AHTE33			
Sampling Date		2024/10/28			
COC Number		C#1018307-01-01			
	UNITS	T30-1B	RDL	MDL	QC Batch
Petroleum Hydrocarbons					
Benzene	mg/kg	<0.0050	0.0050	N/A	9745667
Toluene	mg/kg	<0.050	0.050	N/A	9745667
Ethylbenzene	mg/kg	<0.010	0.010	0.025	9745667
Total Xylenes	mg/kg	<0.050	0.050	N/A	9745667
C6 - C10 (less BTEX)	mg/kg	<2.5	2.5	N/A	9745667
>C10-C16 Hydrocarbons	mg/kg	<1.2	1.2	N/A	9777528
>C16-C21 Hydrocarbons	mg/kg	<1.2	1.2	N/A	9777528
>C21-<C32 Hydrocarbons	mg/kg	3.0	1.2	N/A	9777528
Reached Baseline at C32	mg/kg	Yes	N/A	N/A	9777528
Hydrocarbon Resemblance	mg/kg	COMMENT (1)	N/A	N/A	9777528
Surrogate Recovery (%)					
n-Dotriacontane - Extractable	%	114 (2)	N/A	N/A	9777528
Isobutylbenzene - Volatile	%	110	N/A	N/A	9745667

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) Unidentified compound(s) in lube oil range. Possible lube oil fraction.
(2) Elevated TEH RDL(s) due to matrix interference.

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TEST SUMMARY

Bureau Veritas ID: AHTD99 **Collected:** 2024/10/28
Sample ID: T2-1A **Shipped:**
Matrix: Soil **Received:** 2024/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9777500	2024/11/05	2024/11/22	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9751177	2024/11/07	2024/11/07	Morgan Schnare
Moisture	BAL	9745424	N/A	2024/11/06	Rosemarie MacDonald
Particle size in solids (pipette&sieve)	PSIV	9777285	N/A	2024/11/27	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9745653	N/A	2024/11/05	Keith Cross

Bureau Veritas ID: AHTD99 Dup **Collected:** 2024/10/28
Sample ID: T2-1A **Shipped:**
Matrix: Soil **Received:** 2024/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Particle size in solids (pipette&sieve)	PSIV	9777285	N/A	2024/11/27	Anh Nguyen

Bureau Veritas ID: AHTE00 **Collected:** 2024/10/28
Sample ID: T2-1B **Shipped:**
Matrix: Soil **Received:** 2024/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9777500	2024/11/05	2024/11/22	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9751177	2024/11/07	2024/11/07	Morgan Schnare
Moisture	BAL	9745424	N/A	2024/11/06	Rosemarie MacDonald
Particle size in solids (pipette&sieve)	PSIV	9777285	N/A	2024/11/27	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9745653	N/A	2024/11/05	Keith Cross

Bureau Veritas ID: AHTE00 Dup **Collected:** 2024/10/28
Sample ID: T2-1B **Shipped:**
Matrix: Soil **Received:** 2024/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9745653	N/A	2024/11/05	Keith Cross

Bureau Veritas ID: AHTE01 **Collected:** 2024/10/28
Sample ID: T10-1A **Shipped:**
Matrix: Soil **Received:** 2024/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9777500	2024/11/05	2024/11/22	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9751177	2024/11/07	2024/11/07	Morgan Schnare
Moisture	BAL	9745424	N/A	2024/11/06	Rosemarie MacDonald
Particle size in solids (pipette&sieve)	PSIV	9777285	N/A	2024/11/27	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9745653	N/A	2024/11/05	Keith Cross

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TEST SUMMARY

Bureau Veritas ID: AHTE02 **Collected:** 2024/10/28
Sample ID: T10-1B **Shipped:**
Matrix: Soil **Received:** 2024/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9777500	2024/11/20	2024/11/22	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9751177	2024/11/07	2024/11/07	Morgan Schnare
Moisture	BAL	9745424	N/A	2024/11/06	Rosemarie MacDonald
Particle size in solids (pipette&sieve)	PSIV	9777285	N/A	2024/11/27	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9745653	N/A	2024/11/05	Keith Cross

Bureau Veritas ID: AHTE03 **Collected:** 2024/10/28
Sample ID: T10-2A **Shipped:**
Matrix: Soil **Received:** 2024/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9777500	2024/11/20	2024/11/22	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9751177	2024/11/07	2024/11/07	Morgan Schnare
Moisture	BAL	9745424	N/A	2024/11/06	Rosemarie MacDonald
Particle size in solids (pipette&sieve)	PSIV	9777285	N/A	2024/11/27	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9745653	N/A	2024/11/05	Keith Cross

Bureau Veritas ID: AHTE04 **Collected:** 2024/10/28
Sample ID: T10-2B **Shipped:**
Matrix: Soil **Received:** 2024/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9777500	2024/11/20	2024/11/22	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9751177	2024/11/07	2024/11/07	Morgan Schnare
Moisture	BAL	9745424	N/A	2024/11/06	Rosemarie MacDonald
Particle size in solids (pipette&sieve)	PSIV	9777285	N/A	2024/11/27	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9745653	N/A	2024/11/05	Keith Cross

Bureau Veritas ID: AHTE05 **Collected:** 2024/10/28
Sample ID: T11-1A **Shipped:**
Matrix: Soil **Received:** 2024/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9777500	2024/11/20	2024/11/22	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9751420	2024/11/07	2024/11/07	Muskan Thakur
Moisture	BAL	9748315	N/A	2024/11/07	Pawandeep Dhaliwal
Particle size in solids (pipette&sieve)	PSIV	9777285	N/A	2024/11/27	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9745653	N/A	2024/11/05	Keith Cross

Bureau Veritas ID: AHTE05 Dup **Collected:** 2024/10/28
Sample ID: T11-1A **Shipped:**
Matrix: Soil **Received:** 2024/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	9748315	N/A	2024/11/07	Pawandeep Dhaliwal

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TEST SUMMARY

Bureau Veritas ID: AHTE06 **Collected:** 2024/10/28
Sample ID: T11-1B **Shipped:**
Matrix: Soil **Received:** 2024/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9788522	2024/11/20	2024/11/28	Marsha (Skinner) Harnum
Metals Solids Acid Extr. ICPMS	ICP/MS	9751177	2024/11/07	2024/11/07	Morgan Schnare
Moisture	BAL	9748315	N/A	2024/11/07	Pawandeep Dhaliwal
Particle size in solids (pipette&sieve)	PSIV	9777285	N/A	2024/11/27	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9745653	N/A	2024/11/05	Keith Cross

Bureau Veritas ID: AHTE07 **Collected:** 2024/10/29
Sample ID: T11-2A **Shipped:**
Matrix: Soil **Received:** 2024/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9777500	2024/11/20	2024/11/22	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9751723	2024/11/07	2024/11/07	Muskan Thakur
Moisture	BAL	9748315	N/A	2024/11/07	Pawandeep Dhaliwal
Particle size in solids (pipette&sieve)	PSIV	9777285	N/A	2024/11/27	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9745653	N/A	2024/11/05	Keith Cross

Bureau Veritas ID: AHTE08 **Collected:** 2024/10/29
Sample ID: T11-2B **Shipped:**
Matrix: Soil **Received:** 2024/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9777500	2024/11/20	2024/11/22	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9751723	2024/11/07	2024/11/07	Muskan Thakur
Moisture	BAL	9748315	N/A	2024/11/07	Pawandeep Dhaliwal
Particle size in solids (pipette&sieve)	PSIV	9777285	N/A	2024/11/27	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9745653	N/A	2024/11/05	Keith Cross

Bureau Veritas ID: AHTE09 **Collected:** 2024/10/29
Sample ID: T11-2QAQC **Shipped:**
Matrix: Soil **Received:** 2024/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9777500	2024/11/20	2024/11/22	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9751420	2024/11/07	2024/11/07	Muskan Thakur
Moisture	BAL	9748315	N/A	2024/11/07	Pawandeep Dhaliwal
Particle size in solids (pipette&sieve)	PSIV	9777285	N/A	2024/11/27	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9745653	N/A	2024/11/05	Keith Cross

Bureau Veritas ID: AHTE09 Dup **Collected:** 2024/10/29
Sample ID: T11-2QAQC **Shipped:**
Matrix: Soil **Received:** 2024/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9777500	2024/11/20	2024/11/22	Marley Gidney

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TEST SUMMARY

Bureau Veritas ID: AHTE10 **Collected:** 2024/10/28
Sample ID: T13-1A **Shipped:**
Matrix: Soil **Received:** 2024/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9777500	2024/11/20	2024/11/22	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9751420	2024/11/07	2024/11/07	Muskan Thakur
Moisture	BAL	9748315	N/A	2024/11/07	Pawandeep Dhaliwal
Particle size in solids (pipette&sieve)	PSIV	9777285	N/A	2024/11/27	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9745653	N/A	2024/11/05	Keith Cross

Bureau Veritas ID: AHTE11 **Collected:** 2024/10/28
Sample ID: T13-1B **Shipped:**
Matrix: Soil **Received:** 2024/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9777500	2024/11/20	2024/11/22	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9751420	2024/11/07	2024/11/08	Muskan Thakur
Moisture	BAL	9748315	N/A	2024/11/07	Pawandeep Dhaliwal
Particle size in solids (pipette&sieve)	PSIV	9777285	N/A	2024/11/27	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9745653	N/A	2024/11/05	Keith Cross

Bureau Veritas ID: AHTE11 Dup **Collected:** 2024/10/28
Sample ID: T13-1B **Shipped:**
Matrix: Soil **Received:** 2024/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Metals Solids Acid Extr. ICPMS	ICP/MS	9751420	2024/11/07	2024/11/08	Muskan Thakur

Bureau Veritas ID: AHTE12 **Collected:** 2024/10/28
Sample ID: T14-1A **Shipped:**
Matrix: Soil **Received:** 2024/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9777500	2024/11/20	2024/11/22	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9751420	2024/11/07	2024/11/07	Muskan Thakur
Moisture	BAL	9748315	N/A	2024/11/07	Pawandeep Dhaliwal
Particle size in solids (pipette&sieve)	PSIV	9777285	N/A	2024/11/27	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9745653	N/A	2024/11/05	Keith Cross

Bureau Veritas ID: AHTE13 **Collected:** 2024/10/28
Sample ID: T14-1B **Shipped:**
Matrix: Soil **Received:** 2024/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9777500	2024/11/20	2024/11/22	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9751420	2024/11/07	2024/11/07	Muskan Thakur
Moisture	BAL	9748315	N/A	2024/11/07	Pawandeep Dhaliwal
Particle size in solids (pipette&sieve)	PSIV	9777285	N/A	2024/11/27	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9745653	N/A	2024/11/05	Keith Cross

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TEST SUMMARY

Bureau Veritas ID: AHTE14 **Collected:** 2024/10/28
Sample ID: T15-1A **Shipped:**
Matrix: Soil **Received:** 2024/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9777500	2024/11/20	2024/11/22	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9751420	2024/11/07	2024/11/07	Muskan Thakur
Moisture	BAL	9748315	N/A	2024/11/07	Pawandeep Dhaliwal
Particle size in solids (pipette&sieve)	PSIV	9777285	N/A	2024/11/27	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9745653	N/A	2024/11/08	Keith Cross

Bureau Veritas ID: AHTE15 **Collected:** 2024/10/28
Sample ID: T15-1B **Shipped:**
Matrix: Soil **Received:** 2024/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9777500	2024/11/20	2024/11/22	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9751420	2024/11/07	2024/11/07	Muskan Thakur
Moisture	BAL	9748315	N/A	2024/11/07	Pawandeep Dhaliwal
Particle size in solids (pipette&sieve)	PSIV	9777285	N/A	2024/11/27	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9745653	N/A	2024/11/05	Keith Cross

Bureau Veritas ID: AHTE16 **Collected:** 2024/10/29
Sample ID: T16-1A **Shipped:**
Matrix: Soil **Received:** 2024/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9777500	2024/11/20	2024/11/22	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9751420	2024/11/07	2024/11/07	Muskan Thakur
Moisture	BAL	9748315	N/A	2024/11/07	Pawandeep Dhaliwal
Particle size in solids (pipette&sieve)	PSIV	9777285	N/A	2024/11/27	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9745653	N/A	2024/11/05	Keith Cross

Bureau Veritas ID: AHTE17 **Collected:** 2024/10/29
Sample ID: T16-1B **Shipped:**
Matrix: Soil **Received:** 2024/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9777528	2024/11/20	2024/11/25	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9751420	2024/11/07	2024/11/07	Muskan Thakur
Moisture	BAL	9748315	N/A	2024/11/07	Pawandeep Dhaliwal
Particle size in solids (pipette&sieve)	PSIV	9777772	N/A	2024/11/28	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9745653	N/A	2024/11/05	Keith Cross

Bureau Veritas ID: AHTE18 **Collected:** 2024/10/29
Sample ID: T16-1QAQC **Shipped:**
Matrix: Soil **Received:** 2024/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9777528	2024/11/20	2024/11/25	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9751420	2024/11/07	2024/11/07	Muskan Thakur
Moisture	BAL	9748315	N/A	2024/11/07	Pawandeep Dhaliwal

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TEST SUMMARY

Bureau Veritas ID: AHTE18 **Collected:** 2024/10/29
Sample ID: T16-1QAQC **Shipped:**
Matrix: Soil **Received:** 2024/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Particle size in solids (pipette&sieve)	PSIV	9777772	N/A	2024/11/28	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9745653	N/A	2024/11/05	Keith Cross

Bureau Veritas ID: AHTE19 **Collected:** 2024/10/29
Sample ID: T17-1A **Shipped:**
Matrix: Soil **Received:** 2024/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9777528	2024/11/20	2024/11/25	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9751420	2024/11/07	2024/11/07	Muskan Thakur
Moisture	BAL	9748315	N/A	2024/11/07	Pawandeep Dhaliwal
Particle size in solids (pipette&sieve)	PSIV	9777772	N/A	2024/11/28	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9745667	N/A	2024/11/05	Keith Cross

Bureau Veritas ID: AHTE19 Dup **Collected:** 2024/10/29
Sample ID: T17-1A **Shipped:**
Matrix: Soil **Received:** 2024/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Particle size in solids (pipette&sieve)	PSIV	9777772	N/A	2024/11/28	Anh Nguyen

Bureau Veritas ID: AHTE20 **Collected:** 2024/10/29
Sample ID: T17-1B **Shipped:**
Matrix: Soil **Received:** 2024/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9777528	2024/11/20	2024/11/25	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9751420	2024/11/07	2024/11/07	Muskan Thakur
Moisture	BAL	9748315	N/A	2024/11/07	Pawandeep Dhaliwal
Particle size in solids (pipette&sieve)	PSIV	9777772	N/A	2024/11/28	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9745667	N/A	2024/11/05	Keith Cross

Bureau Veritas ID: AHTE21 **Collected:** 2024/10/28
Sample ID: T18-1A **Shipped:**
Matrix: Soil **Received:** 2024/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9777528	2024/11/20	2024/11/25	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9751420	2024/11/07	2024/11/07	Muskan Thakur
Moisture	BAL	9748315	N/A	2024/11/07	Pawandeep Dhaliwal
Particle size in solids (pipette&sieve)	PSIV	9777772	N/A	2024/11/28	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9745667	N/A	2024/11/05	Keith Cross

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TEST SUMMARY

Bureau Veritas ID: AHTE22 **Collected:** 2024/10/28
Sample ID: T18-1B **Shipped:**
Matrix: Soil **Received:** 2024/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9777528	2024/11/20	2024/11/25	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9751420	2024/11/07	2024/11/07	Muskan Thakur
Moisture	BAL	9748359	N/A	2024/11/06	Keith Cross
Particle size in solids (pipette&sieve)	PSIV	9777772	N/A	2024/11/28	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9745667	N/A	2024/11/05	Keith Cross

Bureau Veritas ID: AHTE22 Dup **Collected:** 2024/10/28
Sample ID: T18-1B **Shipped:**
Matrix: Soil **Received:** 2024/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	9748359	N/A	2024/11/06	Keith Cross
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9745667	N/A	2024/11/05	Keith Cross

Bureau Veritas ID: AHTE23 **Collected:** 2024/10/29
Sample ID: T18-2A **Shipped:**
Matrix: Soil **Received:** 2024/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9777528	2024/11/20	2024/11/25	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9751420	2024/11/07	2024/11/07	Muskan Thakur
Moisture	BAL	9748315	N/A	2024/11/07	Pawandeep Dhaliwal
Particle size in solids (pipette&sieve)	PSIV	9777772	N/A	2024/11/28	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9745667	N/A	2024/11/05	Keith Cross

Bureau Veritas ID: AHTE24 **Collected:** 2024/10/29
Sample ID: T18-2B **Shipped:**
Matrix: Soil **Received:** 2024/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9777528	2024/11/20	2024/11/26	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9751420	2024/11/07	2024/11/07	Muskan Thakur
Moisture	BAL	9748315	N/A	2024/11/07	Pawandeep Dhaliwal
Particle size in solids (pipette&sieve)	PSIV	9777772	N/A	2024/11/28	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9745667	N/A	2024/11/05	Keith Cross

Bureau Veritas ID: AHTE25 **Collected:** 2024/10/29
Sample ID: T18-2QAQC **Shipped:**
Matrix: Soil **Received:** 2024/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9777528	2024/11/20	2024/11/26	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9751420	2024/11/07	2024/11/07	Muskan Thakur
Moisture	BAL	9748315	N/A	2024/11/07	Pawandeep Dhaliwal
Particle size in solids (pipette&sieve)	PSIV	9777772	N/A	2024/11/28	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9745667	N/A	2024/11/05	Keith Cross

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TEST SUMMARY

Bureau Veritas ID: AHTE26 **Collected:** 2024/10/28
Sample ID: T18-3A **Shipped:**
Matrix: Soil **Received:** 2024/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9777528	2024/11/20	2024/11/25	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9751723	2024/11/07	2024/11/07	Muskan Thakur
Moisture	BAL	9748824	N/A	2024/11/07	Pawandeep Dhaliwal
Particle size in solids (pipette&sieve)	PSIV	9777772	N/A	2024/11/28	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9745667	N/A	2024/11/05	Keith Cross

Bureau Veritas ID: AHTE27 **Collected:** 2024/10/28
Sample ID: T18-3B **Shipped:**
Matrix: Soil **Received:** 2024/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9777528	2024/11/20	2024/11/25	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9751723	2024/11/07	2024/11/07	Muskan Thakur
Moisture	BAL	9748824	N/A	2024/11/07	Pawandeep Dhaliwal
Particle size in solids (pipette&sieve)	PSIV	9777772	N/A	2024/11/28	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9745667	N/A	2024/11/05	Keith Cross

Bureau Veritas ID: AHTE28 **Collected:** 2024/10/28
Sample ID: T20-1A **Shipped:**
Matrix: Soil **Received:** 2024/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9777528	2024/11/20	2024/11/26	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9751723	2024/11/07	2024/11/07	Muskan Thakur
Moisture	BAL	9748824	N/A	2024/11/07	Pawandeep Dhaliwal
Particle size in solids (pipette&sieve)	PSIV	9777772	N/A	2024/11/28	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9745667	N/A	2024/11/05	Keith Cross

Bureau Veritas ID: AHTE28 Dup **Collected:** 2024/10/28
Sample ID: T20-1A **Shipped:**
Matrix: Soil **Received:** 2024/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Metals Solids Acid Extr. ICPMS	ICP/MS	9751723	2024/11/07	2024/11/07	Muskan Thakur

Bureau Veritas ID: AHTE29 **Collected:** 2024/10/28
Sample ID: T20-1B **Shipped:**
Matrix: Soil **Received:** 2024/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9777528	2024/11/20	2024/11/25	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9751420	2024/11/07	2024/11/07	Muskan Thakur
Moisture	BAL	9748824	N/A	2024/11/07	Pawandeep Dhaliwal
Particle size in solids (pipette&sieve)	PSIV	9777772	N/A	2024/11/28	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9745667	N/A	2024/11/05	Keith Cross

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TEST SUMMARY

Bureau Veritas ID: AHTE29 Dup
Sample ID: T20-1B
Matrix: Soil

Collected: 2024/10/28
Shipped:
Received: 2024/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9777528	2024/11/20	2024/11/25	Marley Gidney

Bureau Veritas ID: AHTE30
Sample ID: T23-1A
Matrix: Soil

Collected: 2024/10/29
Shipped:
Received: 2024/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9777528	2024/11/20	2024/11/26	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9751420	2024/11/07	2024/11/07	Muskan Thakur
Moisture	BAL	9748824	N/A	2024/11/07	Pawandeep Dhaliwal
Particle size in solids (pipette&sieve)	PSIV	9777772	N/A	2024/11/28	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9745667	N/A	2024/11/05	Keith Cross

Bureau Veritas ID: AHTE31
Sample ID: T23-1B
Matrix: Soil

Collected: 2024/10/29
Shipped:
Received: 2024/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9777528	2024/11/20	2024/11/26	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9751723	2024/11/07	2024/11/07	Muskan Thakur
Moisture	BAL	9748824	N/A	2024/11/07	Pawandeep Dhaliwal
Particle size in solids (pipette&sieve)	PSIV	9777772	N/A	2024/11/28	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9745667	N/A	2024/11/05	Keith Cross

Bureau Veritas ID: AHTE32
Sample ID: T30-1A
Matrix: Soil

Collected: 2024/10/28
Shipped:
Received: 2024/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9777528	2024/11/20	2024/11/26	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9751723	2024/11/07	2024/11/07	Muskan Thakur
Moisture	BAL	9748824	N/A	2024/11/07	Pawandeep Dhaliwal
Particle size in solids (pipette&sieve)	PSIV	9777772	N/A	2024/11/28	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9745667	N/A	2024/11/05	Keith Cross

Bureau Veritas ID: AHTE33
Sample ID: T30-1B
Matrix: Soil

Collected: 2024/10/28
Shipped:
Received: 2024/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (Low Level PIRI)	GC/FID	9777528	2024/11/20	2024/11/26	Marley Gidney
Metals Solids Acid Extr. ICPMS	ICP/MS	9751723	2024/11/07	2024/11/07	Muskan Thakur
Moisture	BAL	9748824	N/A	2024/11/07	Pawandeep Dhaliwal
Particle size in solids (pipette&sieve)	PSIV	9777772	N/A	2024/11/28	Anh Nguyen
VPH in Soil (PIRI) - Field Preserved	PTGC/MS	9745667	N/A	2024/11/05	Keith Cross

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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	6.3°C

Revised Report: Further chromatographic ressemblance comments added to samples as per client request. 2025/01/15 MMC

Sample AHTD99 [T2-1A] : TEH Analysis: Sample does not resemble Pure Drill.

Sample AHTE00 [T2-1B] : TEH Analysis: Sample does not resemble Pure Drill.

Sample AHTE01 [T10-1A] : TEH Analysis: We are unable to confirm the presence of Pure Drill in the sample in question. The sample has chromatographic peaks present that are consistent with peaks observed in Pure Drill reference materials. The source of the peaks cannot be determined based on the chromatographic information.

Sample AHTE02 [T10-1B] : TEH Analysis: Sample does not resemble Pure Drill.

Sample AHTE03 [T10-2A] : TEH Analysis: Sample does not resemble Pure Drill.

Sample AHTE04 [T10-2B] : TEH Analysis: Sample does not resemble Pure Drill.

Sample AHTE05 [T11-1A] : TEH Analysis: We are unable to confirm the presence of Pure Drill in the sample in question. The sample has chromatographic peaks present that are consistent with peaks observed in Pure Drill reference materials. The source of the peaks cannot be determined based on the chromatographic information.

Sample AHTE06 [T11-1B] : TEH Analysis: We are unable to confirm the presence of Pure Drill in the sample in question. The sample has chromatographic peaks present that are consistent with peaks observed in Pure Drill reference materials. The source of the peaks cannot be determined based on the chromatographic information.

Sample AHTE07 [T11-2A] : TEH Analysis: Sample does not resemble Pure Drill.

Sample AHTE08 [T11-2B] : TEH Analysis: Sample does not resemble Pure Drill.

Sample AHTE09 [T11-2QAQC] : TEH Analysis: Sample does not resemble Pure Drill.

Sample AHTE10 [T13-1A] : TEH Analysis: We are unable to confirm the presence of Pure Drill in the sample in question. The sample has chromatographic peaks present that are consistent with peaks observed in Pure Drill reference materials. The source of the peaks cannot be determined based on the chromatographic information.

Sample AHTE11 [T13-1B] : TEH Analysis: We are unable to confirm the presence of Pure Drill in the sample in question. The sample has chromatographic peaks present that are consistent with peaks observed in Pure Drill reference materials. The source of the peaks cannot be determined based on the chromatographic information.

Sample AHTE12 [T14-1A] : TEH Analysis: We are unable to confirm the presence of Pure Drill in the sample in question. The sample has chromatographic peaks present that are consistent with peaks observed in Pure Drill reference materials. The source of the peaks cannot be determined based on the chromatographic information.

Sample AHTE13 [T14-1B] : TEH Analysis: We are unable to confirm the presence of Pure Drill in the sample in question. The sample has chromatographic peaks present that are consistent with peaks observed in Pure Drill reference materials. The source of the peaks cannot be determined based on the chromatographic information.

Sample AHTE14 [T15-1A] : TEH Analysis: We are unable to confirm the presence of Pure Drill in the sample in question. The sample has chromatographic peaks present that are consistent with peaks observed in Pure Drill reference materials. The source of the peaks cannot be determined based on the chromatographic information.

Sample AHTE15 [T15-1B] : TEH Analysis: We are unable to confirm the presence of Pure Drill in the sample in question. The sample has

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chromatographic peaks present that are consistent with peaks observed in Pure Drill reference materials. The source of the peaks cannot be determined based on the chromatographic information.

Sample AHTE16 [T16-1A] : TEH Analysis: Sample does not resemble Pure Drill.

Sample AHTE17 [T16-1B] : TEH Analysis: Sample does not resemble Pure Drill.

Sample AHTE18 [T16-1QAQC] : TEH Analysis: We are unable to confirm the presence of Pure Drill in the sample in question. The sample has chromatographic peaks present that are consistent with peaks observed in Pure Drill reference materials. The source of the peaks cannot be determined based on the chromatographic information.

Sample AHTE19 [T17-1A] : TEH Analysis: We are unable to confirm the presence of Pure Drill in the sample in question. The sample has chromatographic peaks present that are consistent with peaks observed in Pure Drill reference materials. The source of the peaks cannot be determined based on the chromatographic information.

Sample AHTE20 [T17-1B] : TEH Analysis: We are unable to confirm the presence of Pure Drill in the sample in question. The sample has chromatographic peaks present that are consistent with peaks observed in Pure Drill reference materials. The source of the peaks cannot be determined based on the chromatographic information.

Sample AHTE21 [T18-1A] : TEH Analysis: We are unable to confirm the presence of Pure Drill in the sample in question. The sample has chromatographic peaks present that are consistent with peaks observed in Pure Drill reference materials. The source of the peaks cannot be determined based on the chromatographic information.

Sample AHTE22 [T18-1B] : TEH Analysis: We are unable to confirm the presence of Pure Drill in the sample in question. The sample has chromatographic peaks present that are consistent with peaks observed in Pure Drill reference materials. The source of the peaks cannot be determined based on the chromatographic information.

Sample AHTE23 [T18-2A] : TEH Analysis: We are unable to confirm the presence of Pure Drill in the sample in question. The sample has chromatographic peaks present that are consistent with peaks observed in Pure Drill reference materials. The source of the peaks cannot be determined based on the chromatographic information.

Sample AHTE24 [T18-2B] : TEH Analysis: We are unable to confirm the presence of Pure Drill in the sample in question. The sample has chromatographic peaks present that are consistent with peaks observed in Pure Drill reference materials. The source of the peaks cannot be determined based on the chromatographic information.

Sample AHTE25 [T18-2QAQC] : TEH Analysis: We are unable to confirm the presence of Pure Drill in the sample in question. The sample has chromatographic peaks present that are consistent with peaks observed in Pure Drill reference materials. The source of the peaks cannot be determined based on the chromatographic information.

Sample AHTE26 [T18-3A] : TEH Analysis: Sample does not resemble Pure Drill.

Sample AHTE27 [T18-3B] : TEH Analysis: Sample does not resemble Pure Drill.

Sample AHTE28 [T20-1A] : TEH Analysis: Sample does not resemble Pure Drill.

Sample AHTE29 [T20-1B] : TEH Analysis: We are unable to confirm the presence of Pure Drill in the sample in question. The sample has chromatographic peaks present that are consistent with peaks observed in Pure Drill reference materials. The source of the peaks cannot be determined based on the chromatographic information.

Sample AHTE30 [T23-1A] : TEH Analysis: Sample does not resemble Pure Drill.

Sample AHTE31 [T23-1B] : TEH Analysis: Sample does not resemble Pure Drill.

Sample AHTE32 [T30-1A] : TEH Analysis: Sample does not resemble Pure Drill.

Sample AHTE33 [T30-1B] : TEH Analysis: Sample does not resemble Pure Drill.

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Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
9745653	Isobutylbenzene - Volatile	2024/11/05	89	60 - 130	95	60 - 130	98	%				
9745667	Isobutylbenzene - Volatile	2024/11/05	107	60 - 130	90	60 - 130	100	%				
9777500	n-Dotriacontane - Extractable	2024/11/22	90	60 - 130	79	60 - 130	73	%			73	60 - 130
9777528	n-Dotriacontane - Extractable	2024/11/25	117	60 - 130	118	60 - 130	101	%			94	60 - 130
9788522	n-Dotriacontane - Extractable	2024/11/28	71	60 - 130	103	60 - 130	96	%				
9745424	Moisture	2024/11/06							0.24	25		
9745653	Benzene	2024/11/05	95	60 - 130	94	60 - 140	<0.0050	mg/kg	NC	50		
9745653	C6 - C10 (less BTEX)	2024/11/05					<2.5	mg/kg	NC	50		
9745653	Ethylbenzene	2024/11/05	114	60 - 130	98	60 - 140	<0.010	mg/kg	NC	50		
9745653	Toluene	2024/11/05	106	60 - 130	97	60 - 140	<0.050	mg/kg	NC	50		
9745653	Total Xylenes	2024/11/05	107	60 - 130	98	60 - 140	<0.050	mg/kg	NC	50		
9745667	Benzene	2024/11/05	85	60 - 130	72	60 - 140	<0.0050	mg/kg	NC	50		
9745667	C6 - C10 (less BTEX)	2024/11/05					<2.5	mg/kg	NC	50		
9745667	Ethylbenzene	2024/11/05	93	60 - 130	75	60 - 140	<0.010	mg/kg	NC	50		
9745667	Toluene	2024/11/05	86	60 - 130	75	60 - 140	<0.050	mg/kg	NC	50		
9745667	Total Xylenes	2024/11/05	94	60 - 130	76	60 - 140	<0.050	mg/kg	NC	50		
9748315	Moisture	2024/11/07							5.0	25		
9748359	Moisture	2024/11/06							0.25	25		
9748824	Moisture	2024/11/07							2.8	25		
9751177	Acid Extractable Aluminum (Al)	2024/11/07					<10	mg/kg	0.32	35		
9751177	Acid Extractable Antimony (Sb)	2024/11/07	96	75 - 125	106	75 - 125	<2.0	mg/kg	NC	35		
9751177	Acid Extractable Arsenic (As)	2024/11/07	101	75 - 125	104	75 - 125	<2.0	mg/kg	1.7	35		
9751177	Acid Extractable Barium (Ba)	2024/11/07	103	75 - 125	103	75 - 125	<5.0	mg/kg	0.41	35		
9751177	Acid Extractable Beryllium (Be)	2024/11/07	95	75 - 125	97	75 - 125	<0.50	mg/kg	NC	35		
9751177	Acid Extractable Bismuth (Bi)	2024/11/07	99	75 - 125	99	75 - 125	<2.0	mg/kg	NC	35		
9751177	Acid Extractable Boron (B)	2024/11/07	88	75 - 125	97	75 - 125	<50	mg/kg	NC	35		
9751177	Acid Extractable Cadmium (Cd)	2024/11/07	102	75 - 125	103	75 - 125	<0.30	mg/kg	NC	35		
9751177	Acid Extractable Chromium (Cr)	2024/11/07	94	75 - 125	104	75 - 125	<2.0	mg/kg	13	35		
9751177	Acid Extractable Cobalt (Co)	2024/11/07	102	75 - 125	102	75 - 125	<1.0	mg/kg	2.7	35		
9751177	Acid Extractable Copper (Cu)	2024/11/07	107	75 - 125	102	75 - 125	<2.0	mg/kg	0.86	35		
9751177	Acid Extractable Iron (Fe)	2024/11/07					<50	mg/kg	4.5	35		
9751177	Acid Extractable Lead (Pb)	2024/11/07	102	75 - 125	100	75 - 125	<0.50	mg/kg	1.8	35		

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
9751177	Acid Extractable Lithium (Li)	2024/11/07	102	75 - 125	102	75 - 125	<2.0	mg/kg	3.1	35		
9751177	Acid Extractable Manganese (Mn)	2024/11/07	NC	75 - 125	104	75 - 125	<2.0	mg/kg	2.8	35		
9751177	Acid Extractable Mercury (Hg)	2024/11/07	92	75 - 125	100	75 - 125	<0.10	mg/kg	NC	35		
9751177	Acid Extractable Molybdenum (Mo)	2024/11/07	85	75 - 125	105	75 - 125	<2.0	mg/kg	19	35		
9751177	Acid Extractable Nickel (Ni)	2024/11/07	101	75 - 125	104	75 - 125	<2.0	mg/kg	3.6	35		
9751177	Acid Extractable Rubidium (Rb)	2024/11/07	98	75 - 125	102	75 - 125	<2.0	mg/kg	0.96	35		
9751177	Acid Extractable Selenium (Se)	2024/11/07	102	75 - 125	104	75 - 125	<0.50	mg/kg	NC	35		
9751177	Acid Extractable Silver (Ag)	2024/11/07	101	75 - 125	101	75 - 125	<0.50	mg/kg	NC	35		
9751177	Acid Extractable Strontium (Sr)	2024/11/07	106	75 - 125	103	75 - 125	<5.0	mg/kg	11	35		
9751177	Acid Extractable Thallium (Tl)	2024/11/07	98	75 - 125	102	75 - 125	<0.10	mg/kg	7.0	35		
9751177	Acid Extractable Tin (Sn)	2024/11/07	88	75 - 125	106	75 - 125	<1.0	mg/kg	NC	35		
9751177	Acid Extractable Uranium (U)	2024/11/07	97	75 - 125	100	75 - 125	<0.10	mg/kg	0.15	35		
9751177	Acid Extractable Vanadium (V)	2024/11/07	97	75 - 125	104	75 - 125	<2.0	mg/kg	4.0	35		
9751177	Acid Extractable Zinc (Zn)	2024/11/07	NC	75 - 125	102	75 - 125	<5.0	mg/kg	3.3	35		
9751420	Acid Extractable Aluminum (Al)	2024/11/08					<10	mg/kg	0.23	35		
9751420	Acid Extractable Antimony (Sb)	2024/11/08	90	75 - 125	100	75 - 125	<2.0	mg/kg	NC	35		
9751420	Acid Extractable Arsenic (As)	2024/11/08	97	75 - 125	97	75 - 125	<2.0	mg/kg	1.5	35		
9751420	Acid Extractable Barium (Ba)	2024/11/08	NC	75 - 125	97	75 - 125	<5.0	mg/kg	1.4	35		
9751420	Acid Extractable Beryllium (Be)	2024/11/08	93	75 - 125	92	75 - 125	<0.50	mg/kg	NC	35		
9751420	Acid Extractable Bismuth (Bi)	2024/11/08	95	75 - 125	98	75 - 125	<2.0	mg/kg	NC	35		
9751420	Acid Extractable Boron (B)	2024/11/08	90	75 - 125	92	75 - 125	<50	mg/kg	NC	35		
9751420	Acid Extractable Cadmium (Cd)	2024/11/08	100	75 - 125	100	75 - 125	<0.30	mg/kg	NC	35		
9751420	Acid Extractable Chromium (Cr)	2024/11/08	101	75 - 125	98	75 - 125	<2.0	mg/kg	2.3	35		
9751420	Acid Extractable Cobalt (Co)	2024/11/08	96	75 - 125	98	75 - 125	<1.0	mg/kg	1.3	35		
9751420	Acid Extractable Copper (Cu)	2024/11/08	95	75 - 125	97	75 - 125	<2.0	mg/kg	0.47	35		
9751420	Acid Extractable Iron (Fe)	2024/11/08					<50	mg/kg	2.0	35		
9751420	Acid Extractable Lead (Pb)	2024/11/08	94	75 - 125	96	75 - 125	<0.50	mg/kg	2.1	35		
9751420	Acid Extractable Lithium (Li)	2024/11/08	100	75 - 125	95	75 - 125	<2.0	mg/kg	0.65	35		
9751420	Acid Extractable Manganese (Mn)	2024/11/08	NC	75 - 125	97	75 - 125	<2.0	mg/kg	2.2	35		
9751420	Acid Extractable Mercury (Hg)	2024/11/08	95	75 - 125	106	75 - 125	<0.10	mg/kg	NC	35		
9751420	Acid Extractable Molybdenum (Mo)	2024/11/08	102	75 - 125	100	75 - 125	<2.0	mg/kg	NC	35		
9751420	Acid Extractable Nickel (Ni)	2024/11/08	96	75 - 125	103	75 - 125	<2.0	mg/kg	1.2	35		

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
9751420	Acid Extractable Rubidium (Rb)	2024/11/08	97	75 - 125	97	75 - 125	<2.0	mg/kg	4.5	35		
9751420	Acid Extractable Selenium (Se)	2024/11/08	99	75 - 125	100	75 - 125	<0.50	mg/kg	NC	35		
9751420	Acid Extractable Silver (Ag)	2024/11/08	99	75 - 125	99	75 - 125	<0.50	mg/kg	NC	35		
9751420	Acid Extractable Strontium (Sr)	2024/11/08	NC	75 - 125	101	75 - 125	<5.0	mg/kg	0.91	35		
9751420	Acid Extractable Thallium (Tl)	2024/11/08	96	75 - 125	97	75 - 125	<0.10	mg/kg	2.2	35		
9751420	Acid Extractable Tin (Sn)	2024/11/08	102	75 - 125	92	75 - 125	<1.0	mg/kg	NC	35		
9751420	Acid Extractable Uranium (U)	2024/11/08	96	75 - 125	96	75 - 125	<0.10	mg/kg	6.8	35		
9751420	Acid Extractable Vanadium (V)	2024/11/08	100	75 - 125	97	75 - 125	<2.0	mg/kg	3.0	35		
9751420	Acid Extractable Zinc (Zn)	2024/11/08	97	75 - 125	102	75 - 125	<5.0	mg/kg	2.2	35		
9751723	Acid Extractable Aluminum (Al)	2024/11/07					<10	mg/kg	2.0	35		
9751723	Acid Extractable Antimony (Sb)	2024/11/07	94	75 - 125	99	75 - 125	<2.0	mg/kg	NC	35		
9751723	Acid Extractable Arsenic (As)	2024/11/07	102	75 - 125	97	75 - 125	<2.0	mg/kg	NC	35		
9751723	Acid Extractable Barium (Ba)	2024/11/07	NC	75 - 125	96	75 - 125	<5.0	mg/kg	0.20	35		
9751723	Acid Extractable Beryllium (Be)	2024/11/07	100	75 - 125	94	75 - 125	<0.50	mg/kg	NC	35		
9751723	Acid Extractable Bismuth (Bi)	2024/11/07	102	75 - 125	94	75 - 125	<2.0	mg/kg	NC	35		
9751723	Acid Extractable Boron (B)	2024/11/07	98	75 - 125	93	75 - 125	<50	mg/kg	NC	35		
9751723	Acid Extractable Cadmium (Cd)	2024/11/07	106	75 - 125	98	75 - 125	<0.30	mg/kg	NC	35		
9751723	Acid Extractable Chromium (Cr)	2024/11/07	108	75 - 125	96	75 - 125	<2.0	mg/kg	2.4	35		
9751723	Acid Extractable Cobalt (Co)	2024/11/07	102	75 - 125	97	75 - 125	<1.0	mg/kg	3.7	35		
9751723	Acid Extractable Copper (Cu)	2024/11/07	101	75 - 125	94	75 - 125	<2.0	mg/kg	2.7	35		
9751723	Acid Extractable Iron (Fe)	2024/11/07					<50	mg/kg	1.8	35		
9751723	Acid Extractable Lead (Pb)	2024/11/07	99	75 - 125	94	75 - 125	<0.50	mg/kg	2.3	35		
9751723	Acid Extractable Lithium (Li)	2024/11/07	108	75 - 125	96	75 - 125	<2.0	mg/kg	0.52	35		
9751723	Acid Extractable Manganese (Mn)	2024/11/07	NC	75 - 125	95	75 - 125	<2.0	mg/kg	1.6	35		
9751723	Acid Extractable Mercury (Hg)	2024/11/07	100	75 - 125	96	75 - 125	<0.10	mg/kg	NC	35		
9751723	Acid Extractable Molybdenum (Mo)	2024/11/07	106	75 - 125	100	75 - 125	<2.0	mg/kg	NC	35		
9751723	Acid Extractable Nickel (Ni)	2024/11/07	102	75 - 125	95	75 - 125	<2.0	mg/kg	1.7	35		
9751723	Acid Extractable Rubidium (Rb)	2024/11/07	102	75 - 125	98	75 - 125	<2.0	mg/kg	1.8	35		
9751723	Acid Extractable Selenium (Se)	2024/11/07	105	75 - 125	100	75 - 125	<0.50	mg/kg	4.4	35		
9751723	Acid Extractable Silver (Ag)	2024/11/07	105	75 - 125	98	75 - 125	<0.50	mg/kg	NC	35		
9751723	Acid Extractable Strontium (Sr)	2024/11/07	NC	75 - 125	98	75 - 125	<5.0	mg/kg	0.30	35		
9751723	Acid Extractable Thallium (Tl)	2024/11/07	102	75 - 125	95	75 - 125	<0.10	mg/kg	0.56	35		

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
9751723	Acid Extractable Tin (Sn)	2024/11/07	106	75 - 125	96	75 - 125	<1.0	mg/kg	NC	35		
9751723	Acid Extractable Uranium (U)	2024/11/07	101	75 - 125	94	75 - 125	<0.10	mg/kg	0.083	35		
9751723	Acid Extractable Vanadium (V)	2024/11/07	105	75 - 125	96	75 - 125	<2.0	mg/kg	1.3	35		
9751723	Acid Extractable Zinc (Zn)	2024/11/07	104	75 - 125	96	75 - 125	<5.0	mg/kg	2.6	35		
9777285	Clay	2024/11/27							0.73	35		
9777285	Gravel	2024/11/27							NC	35		
9777285	Sand	2024/11/27							4.8	35		
9777285	Silt	2024/11/27							0.014	35		
9777500	>C10-C16 Hydrocarbons	2024/11/22	64	30 - 130	66	60 - 130	<0.25	mg/kg	13	50		
9777500	>C16-C21 Hydrocarbons	2024/11/22	69	30 - 130	71	60 - 130	<0.25	mg/kg	12	50		
9777500	>C21-<C32 Hydrocarbons	2024/11/22	81	30 - 130	84	60 - 130	<0.25	mg/kg	10	50	72	N/A
9777528	>C10-C16 Hydrocarbons	2024/11/25	76	30 - 130	72	60 - 130	<0.25	mg/kg	94 (1)	50		
9777528	>C16-C21 Hydrocarbons	2024/11/25	67	30 - 130	76	60 - 130	<0.25	mg/kg	28	50		
9777528	>C21-<C32 Hydrocarbons	2024/11/25	110	30 - 130	92	60 - 130	<0.25	mg/kg	2.1	50	61	N/A
9777772	Clay	2024/11/28							0.36	35		
9777772	Gravel	2024/11/28							NC	35		
9777772	Sand	2024/11/28							12	35		
9777772	Silt	2024/11/28							1.1	35		
9788522	>C10-C16 Hydrocarbons	2024/11/28					<0.25	mg/kg				
9788522	>C16-C21 Hydrocarbons	2024/11/28					<0.25	mg/kg				
9788522	>C21-<C32 Hydrocarbons	2024/11/28	76	30 - 130	97	60 - 130	<0.25	mg/kg	1.4	50	85	N/A

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) Duplicate: results are outside acceptance limit. Sample was past recommended hold time for repeat analysis.

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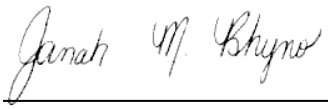
VALIDATION SIGNATURE PAGE

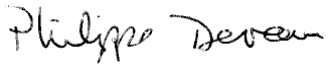
The analytical data and all QC contained in this report were reviewed and validated by:

Bryon Angevine, Senior Analyst

Ernlie Publicover, Scientific Specialist



Janah Rhyno, Scientific Specialist



Phil Deveau, Scientific Specialist (Organics)

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Chain Of Custody Record

INVOICE TO:		Report Information		Project Information		Laboratory Use Only	
Company Name	#25828 WSP Canada Inc.	Company Name		Quotation #	C41643	Bureau Veritas Job #	Bottle Order #:
Contact Name	Accounts Payable	Contact Name	Kyle Millar	P.O. #			1018307
Address	36 Pippy Place PO Box 13216	Address		Project #	CA0024395.4785	Chain Of Custody Record	Project Manager
	St John's NL A1B 3X2			Project Name		C#1018307-01-01	Maryann Comeau
Phone	(709) 722-7023 Fax: (709) 722-7353	Phone	Fax:	Site #	Cappahayden		
Email	CAPayablesInvoice@wsp.com	Email	kyle.millar@wsp.com	Sampled By			

Regulatory Criteria

Special Instructions

Note: For regulated drinking water samples - please use the Drinking Water Chain of Custody Form

Samples must be kept cool (< 10°C) from time of sampling until delivery to Bureau Veritas

Turnaround Time (TAT) Required

Please provide advance notice for rush projects

Regular (Standard) TAT
(will be applied if Rush TAT is not specified)
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)
Date Required: Time Required:
Rush Confirmation Number *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification		Date Sampled	Time Sampled	Matrix	Regulated Drinking Water ? (Y/N)	Metals Field Filtered ? (Y/N)	TEH in Soil (Low Level PIRI)	VPH in Soil (PIRI) - Field Preserved	Particle size in solids (pipette&sieve)	Metals Soil - Includes Barium	# of Bottles	Comments
1	SID#678671	T2-1A	1	28 Oct	Am	*			X	X	X	X		
2	SID#678672	T2-1B	1	28 Oct	Am				X	X	X	X		
3	SID#678673	T10-1A	1	28 Oct	Am				X	X	X	X		
4	SID#678674	T10-1B	1	28 Oct	Am				X	X	X	X		
5	SID#678675	T10-2A	1	28 Oct	Am				X	X	X	X		
6	SID#678676	T10-2B	1	28 Oct	Am				X	X	X	X		
7	SID#678677	T11-1A	1	28 Oct	Am				X	X	X	X		
8	SID#678678	T11-1B	1	28 Oct	Am				X	X	X	X		
9	SID#678679	T11-2A	3	29 Oct	Am				X	X	X	X		
10	SID#678680	T11-2B	3	29 Oct	Am				X	X	X	X		

BEDF-2024-11-032

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Lab Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
				24/10/31	1:30			6.0 6.1 6.7	Yes / No

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/ENVIRONMENTAL-LABORATORIES/RESOURCES/COC-TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

White: Bureau Veritas Yellow: Client

* Marine sediment

Bureau Veritas Canada (2019) Inc.

OCT 31 2024

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Chain Of Custody Record

INVOICE TO:		Report Information		Project Information		Laboratory Use Only	
Company Name	#25828 WSP Canada Inc.	Company Name		Quotation #	C41643	Bureau Veritas Job #	Bottle Order #:
Contact Name	Accounts Payable	Contact Name	Kyle Millar	P.O. #			1018307
Address	36 Pippy Place PO Box 13216	Address		Project #	CA0024395.4785	Chain Of Custody Record	Project Manager
	St John's NL A1B 3X2			Project Name		C#1018307-02-01	Maryann Comeau
Phone	(709) 722-7023 Fax: (709) 722-7353	Phone	Fax:	Site #	Cappahayden		
Email	CAPayablesInvoice@wsp.com	Email	kyle.millar@wsp.com	Sampled By			

Regulatory Criteria

Special Instructions

Note: For regulated drinking water samples - please use the Drinking Water Chain of Custody Form

Samples must be kept cool (< 10°C) from time of sampling until delivery to Bureau Veritas

Turnaround Time (TAT) Required

Please provide advance notice for rush projects

Regular (Standard) TAT
(will be applied if Rush TAT is not specified)
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (If applies to entire submission)
Date Required: _____ Time Required: _____
Rush Confirmation Number: _____ *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Regulated Drinking Water ? (Y / N)	Metals Field Filtered ? (Y / N)	TEH in Soil (Low Level PIRI)	VPH in Soil (PIRI) - Field Preserved	Particle size in solids (pipette&sieve)	Metals Soil - Includes Barium	# of Bottles	Comments
1	SID#678681	T11-2QAQC 3	29 Oct	AM	*			X	X	X	X		
2	SID#678682	T13-1A 1	28 Oct	AM				X	X	X	X		
3	SID#678683	T13-1B 1	28 Oct	AM				X	X	X	X		
4	SID#678684	T14-1A 1	28 Oct	AM				X	X	X	X		
5	SID#678685	T14-1B 1	28 Oct	AM				X	X	X	X		
6	SID#678686	T15-1A 2	28 Oct	PM				X	X	X	X		
7	SID#678687	T15-1B 2	28 Oct	PM				X	X	X	X		
8	SID#678688	T16-1A 3	29 Oct	AM				X	X	X	X		
9	SID#678689	T16-1B 3	29 Oct	AM				X	X	X	X		
10	SID#678690	T16-1QAQC 3	29 Oct	AM				X	X	X	X		

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Lab Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
				24/10/31	1:30			6.0 6.1 6.7	Yes / No

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/ENVIRONMENTAL-LABORATORIES/RESOURCES/COC-TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

White: Bureau Veritas Yellow: Client

* Sediment Marine

Bureau Veritas Canada (2019) Inc.

OCT 31 2024

2/4

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Chain Of Custody Record

INVOICE TO:		Report Information		Project Information		Laboratory Use Only	
Company Name	#25828 WSP Canada Inc.	Company Name		Quotation #	C41643	Bureau Veritas Job #	Bottle Order #:
Contact Name	Accounts Payable	Contact Name	Kyle Millar	P.O. #			1018307
Address	36 Pippy Place PO Box 13216	Address		Project #	CA0024395.4785	Chain Of Custody Record	Project Manager
	St John's NL A1B 3X2			Project Name		C#1018307-03-01	Maryann Comeau
Phone	(709) 722-7023 Fax: (709) 722-7353	Phone	Fax:	Site #	Cappahayden		
Email	CAPayablesInvoice@wsp.com	Email	kyle.millar@wsp.com	Sampled By			

Regulatory Criteria

Special Instructions

Note: For regulated drinking water samples - please use the Drinking Water Chain of Custody Form

Samples must be kept cool (< 10°C) from time of sampling until delivery to Bureau Veritas

Analysis Requested

Turnaround Time (TAT) Required

Please provide advance notice for rush projects

Regular (Standard) TAT
(will be applied if Rush TAT is not specified)
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)
Date Required: _____ Time Required: _____
Rush Confirmation Number: _____ *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Regulated Drinking Water ? (Y / N)	Metals Field Filtered ? (Y / N)	TEH in Soil (Low Level PIRI)	VPH in Soil (PIRI) - Field Preserved	Particle size in solids (pipette&sieve)	Metals Soil - Includes Barium	# of Bottles	Comments
1	SID#678691	T17-1A 3	29 Oct	Am	*			X	X	X	X		
2	SID#678692	T17-1B 3	29 Oct	Am				X	X	X	X		
3	SID#678693	T18-1A 2	28 Oct	pm				X	X	X	X		
4	SID#678694	T18-1B 2	28 Oct	pm				X	X	X	X		
5	SID#678695	T18-2A 3	29 Oct	Am				X	X	X	X		
6	SID#678696	T18-2B 3	29 Oct	Am				X	X	X	X		
7	SID#678697	T18-2QAQC 3	29 Oct	Am				X	X	X	X		
8	SID#678698	T18-3A 2	28 Oct	pm				X	X	X	X		
9	SID#678699	T18-3B 2	28 Oct	pm				X	X	X	X		
10	SID#678700	T20-1A 2	28 Oct	pm				X	X	X	X		

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Lab Use Only
				24/10/31	1:30		Time Sensitive ☐ Temperature (°C) on Receipt 6.0 6.1 6.7 Custody Seal Intact on Cooler? ☐ Yes ☐ No

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/ENVIRONMENTAL-LABORATORIES/RESOURCES/COC-TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

White: Bureau Veritas Yellow: Client

* marine sediment

Bureau Veritas Canada (2019) Inc.

OCT 31 2024

3/4

C4Y5609
2024/11/01 09:37

Bureau Veritas
49-55 Elizabeth Ave, St. John's, NEWFOUNDLAND Canada A1A 1W9 Tel (709) 754 0203 Toll-free 800-563-6266 Fax (709) 754 8612 www.bvna.com

Chain Of Custody Record

INVOICE TO:		Report Information		Project Information		Laboratory Use Only	
Company Name	#25828 WSP Canada Inc.	Company Name		Quotation #	C41643	Bureau Veritas Job #	Bottle Order #:
Contact Name	Accounts Payable	Contact Name	Kyle Millar	P.O. #			1018307
Address	36 Pippy Place PO Box 13216	Address		Project #	CA0024395.4785	Chain Of Custody Record	Project Manager
	St John's NL A1B 3X2			Project Name		C#1018307-04-01	Maryann Comeau
Phone	(709) 722-7023 Fax: (709) 722-7353	Phone	Fax:	Site #	Cappahayden		
Email	CAPayablesInvoice@wsp.com	Email	kyle.millar@wsp.com	Sampled By			

Regulatory Criteria

Special Instructions

Note: For regulated drinking water samples - please use the Drinking Water Chain of Custody Form

Samples must be kept cool (< 10ºC) from time of sampling until delivery to Bureau Veritas

Turnaround Time (TAT) Required

Please provide advance notice for rush projects

Regular (Standard) TAT
(will be applied if Rush TAT is not specified)
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)
Date Required: _____ Time Required: _____
Rush Confirmation Number _____ *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Regulated Drinking Water ? (Y / N)	Metals Field Filtered ? (Y / N)	TEH in Soil (Low Level PIRI)	VPH in Soil (PIRI) - Field Preserved	Particle size in solids (pipette&sieve)	Metals Soil - Includes Barium	# of Bottles	Comments
1	SID#678701	T20-1B 2	29 Oct	PM	*			X	X	X	X		
2	SID#678702	T23-1A 3	24 Oct	AM				X	X	X	X		
3	SID#678703	T23-1B 3	29 Oct	AM				X	X	X	X		
4	SID#678704	T30-1A 2	28 Oct	PM				X	X	X	X		
5	SID#678705	T30-1B 2	28 Oct	PM				X	X	X	X		
6	SID#678706							X	X	X	X		
7	SID#678707							X	X	X	X		
8	SID#678708							X	X	X	X		
9	SID#678709							X	X	X	X		
10	SID#678710							X	X	X	X		

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Lab Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
				24/10/31	1:30			6.1 6.0 6.7	Yes / No

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/ENVIRONMENTAL-LABORATORIES/RESOURCES/COC-TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

White: Bureau Veritas Yellow: Client

* marine sediment

Bureau Veritas Canada (2019) Inc.

OCT 31 2024

4/4

NL Coolers

BUREAU VERITAS

ADDITIONAL COOLER TEMPERATURE RECORD

CHAIN-OF-CUSTODY RECORD

CHAIN OF CUSTODY #	
Page ___ of ___	
Page ___ of ___	
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Page ___ of ___	
Page ___ of ___	
Page ___ of ___	

COOLER OBSERVATIONS:

BV JOB#:

CUSTODY SEAL	YES	NO	COOLER ID	1	2	3
PRESENT			TEMP	5	2	6
INTACT						
ICE PRESENT						
CUSTODY SEAL	YES	NO	COOLER ID			
PRESENT			TEMP	2	3	3
INTACT						
ICE PRESENT						
CUSTODY SEAL	YES	NO	COOLER ID			
PRESENT			TEMP	4	5	5
INTACT						
ICE PRESENT						
CUSTODY SEAL	YES	NO	COOLER ID			
PRESENT			TEMP	2	2	3
INTACT						
ICE PRESENT						
CUSTODY SEAL	YES	NO	COOLER ID			
PRESENT			TEMP	4	4	6
INTACT						
ICE PRESENT						
CUSTODY SEAL	YES	NO	COOLER ID			
PRESENT			TEMP	0	1	1
INTACT						
ICE PRESENT						
CUSTODY SEAL	YES	NO	COOLER ID			
PRESENT			TEMP	3	3	1
INTACT						
ICE PRESENT						
CUSTODY SEAL	YES	NO	COOLER ID			
PRESENT			TEMP	5	7	8
INTACT						
ICE PRESENT						
CUSTODY SEAL	YES	NO	COOLER ID			
PRESENT			TEMP	0	3	2
INTACT						
ICE PRESENT						
CUSTODY SEAL	YES	NO	COOLER ID			
PRESENT			TEMP	5	4	2
INTACT						
ICE PRESENT						

CUSTODY SEAL	YES	NO	COOLER ID	1	2	3
PRESENT			TEMP			
INTACT						
ICE PRESENT						
CUSTODY SEAL	YES	NO	COOLER ID			
PRESENT			TEMP			
INTACT						
ICE PRESENT						
CUSTODY SEAL	YES	NO	COOLER ID			
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ICE PRESENT						
CUSTODY SEAL	YES	NO	COOLER ID			
PRESENT			TEMP			
INTACT						
ICE PRESENT						
CUSTODY SEAL	YES	NO	COOLER ID			
PRESENT			TEMP			
INTACT						
ICE PRESENT						

RECEIVED BY (SIGN & PRINT)		DATE (YYYY/MM/DD)	TIME (HH:MM)
Raghu Rappai			

APPENDIX

F CORAL AND SPONGE CONDITION MAPS

APPENDIX

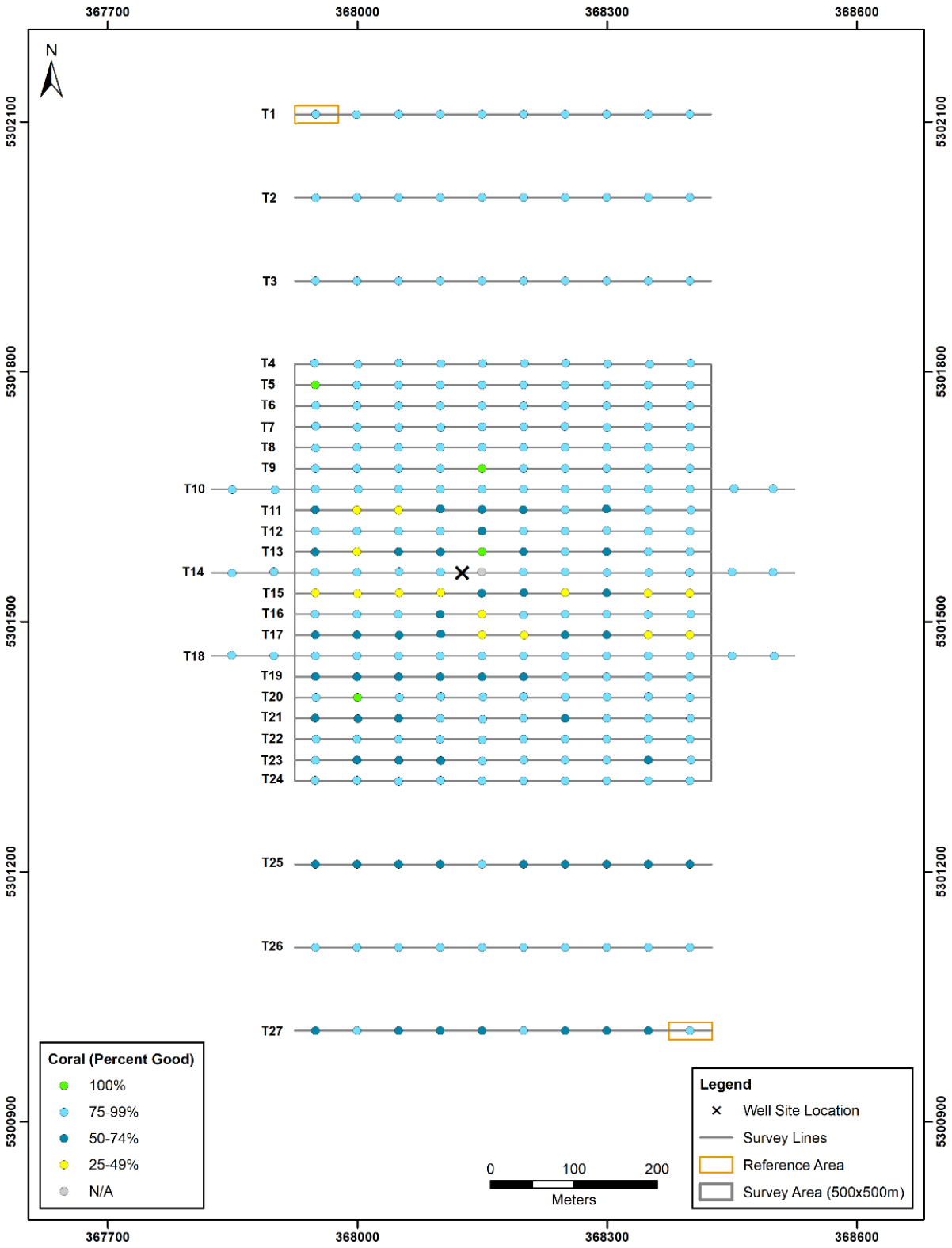

Figure F-1 All coral condition (percent good) observed in the Sitka post-drilling surveys.

APPENDIX

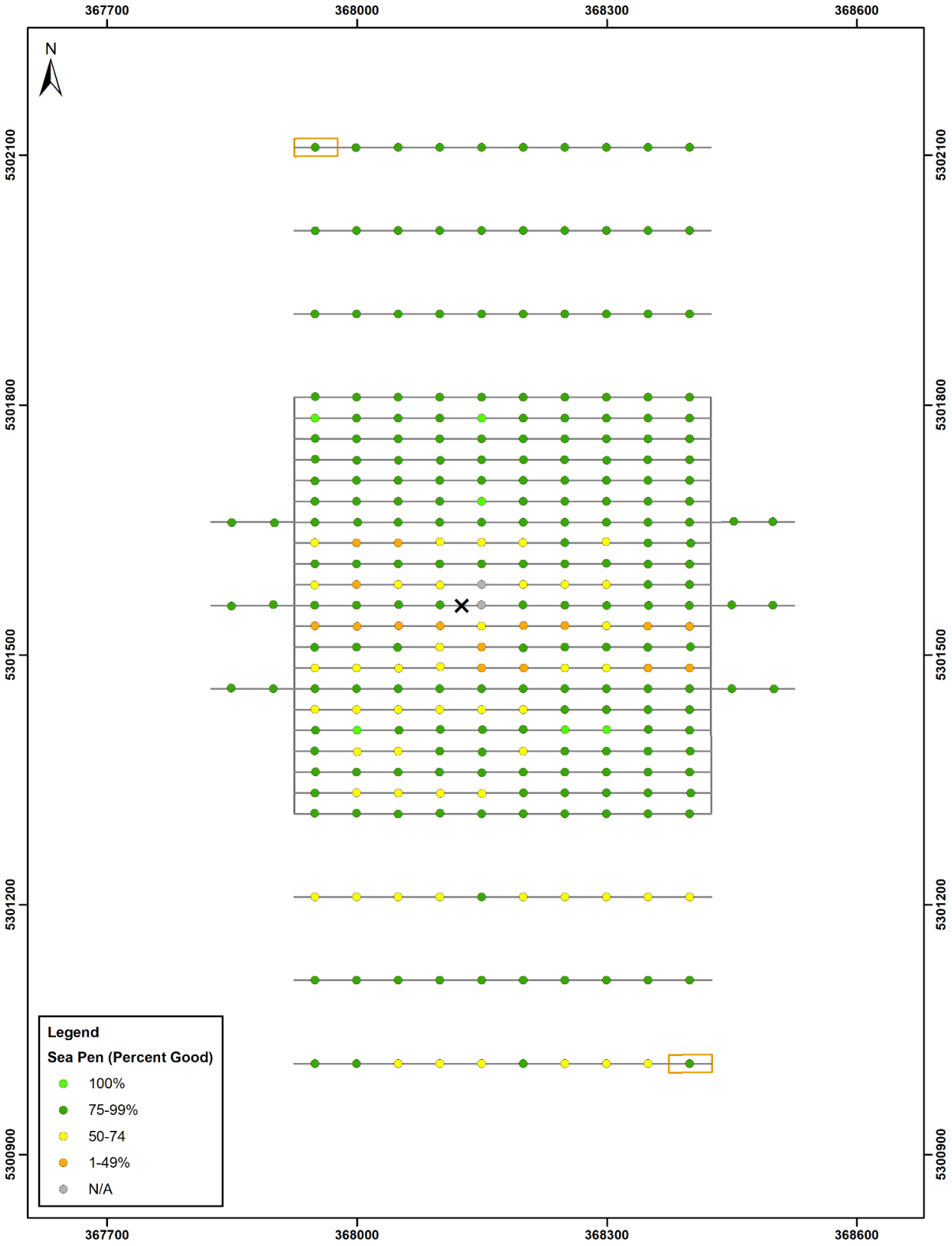

Figure F-2 All sea pen condition (percent good) observed in the Sitka post-drilling surveys.

APPENDIX

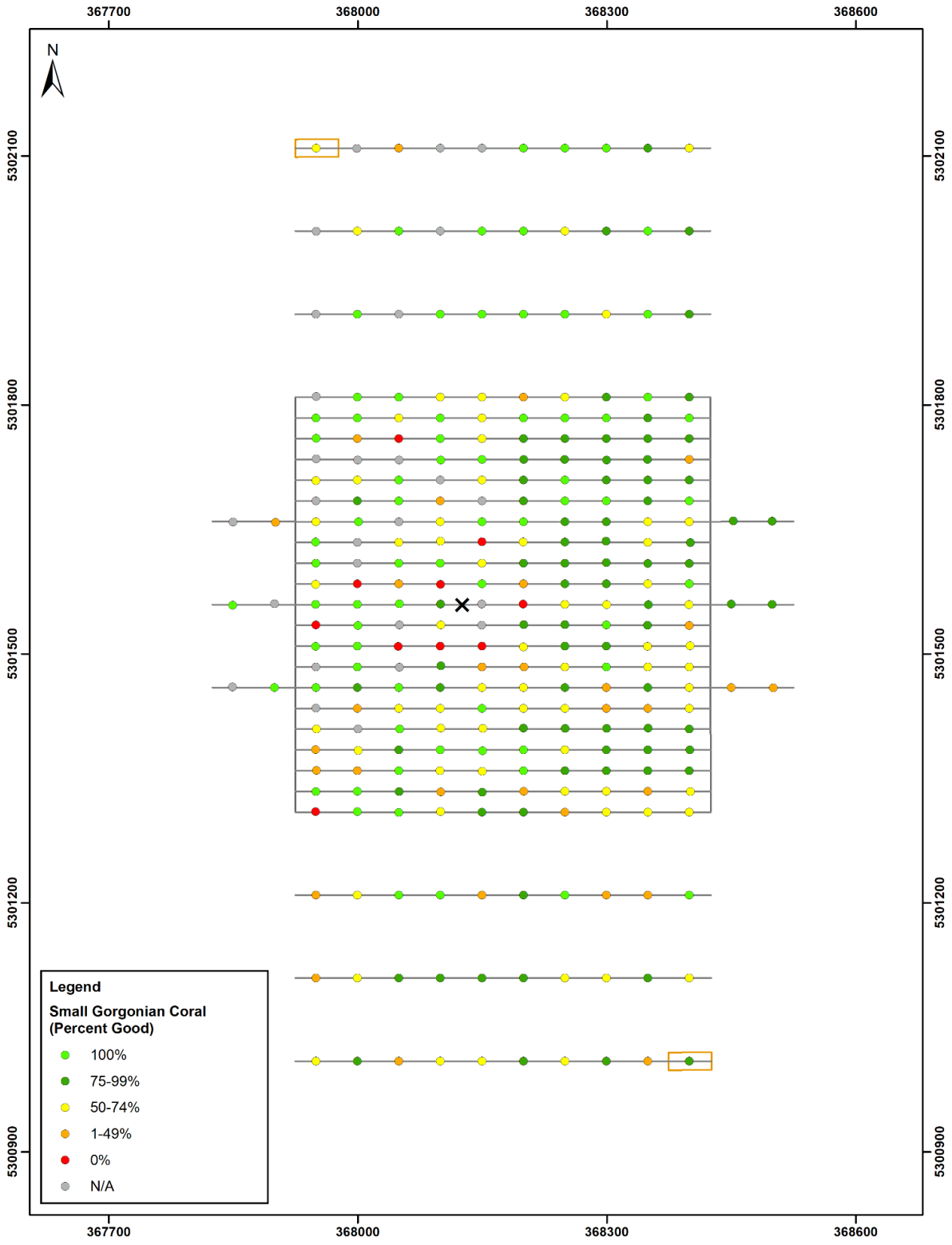

Figure F-3 All small gorgonian coral condition (percent good) observed in the Sitka post-drilling surveys.

APPENDIX

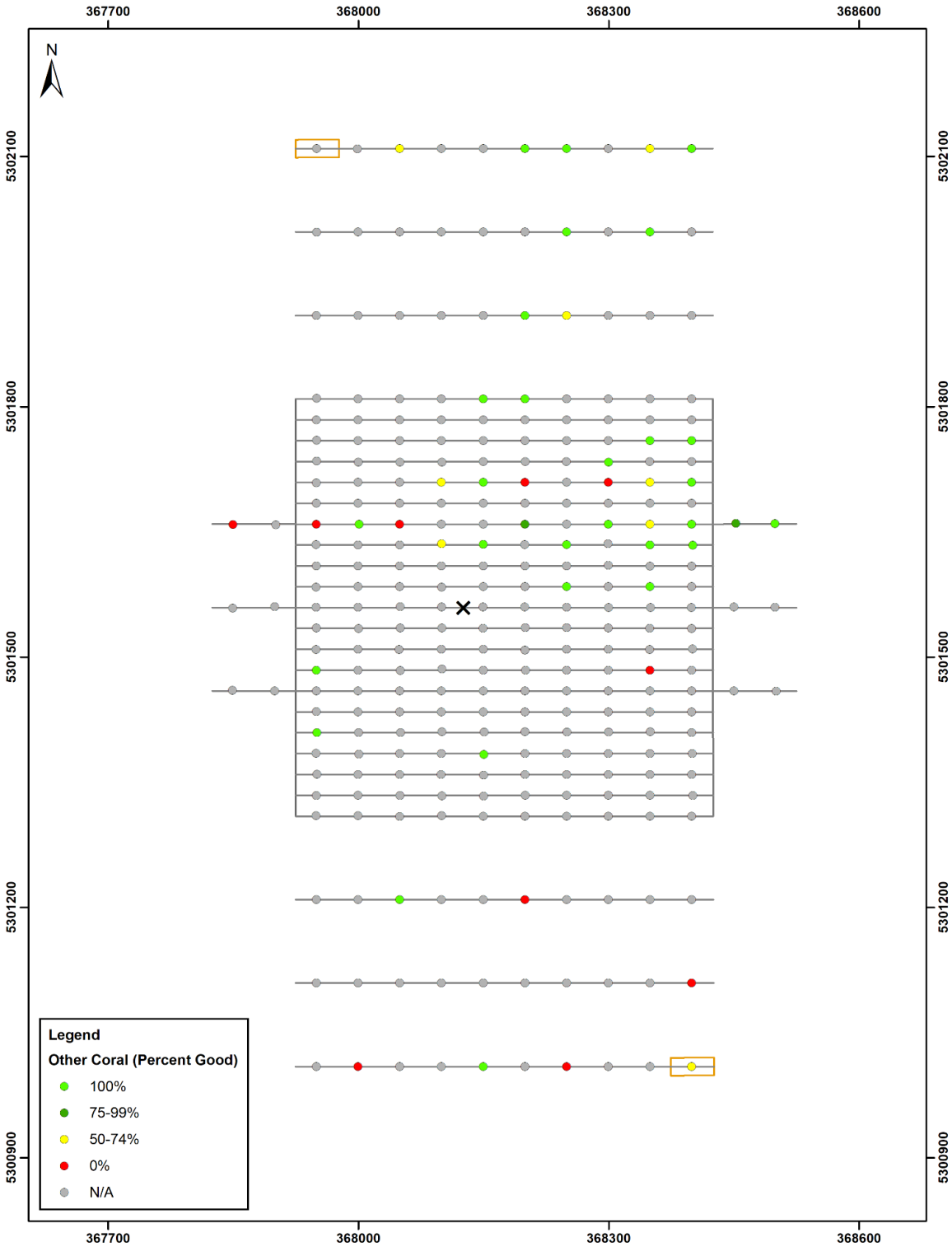

Figure F-4 All other coral condition (percent good) observed in the Sitka post-drilling surveys.

APPENDIX

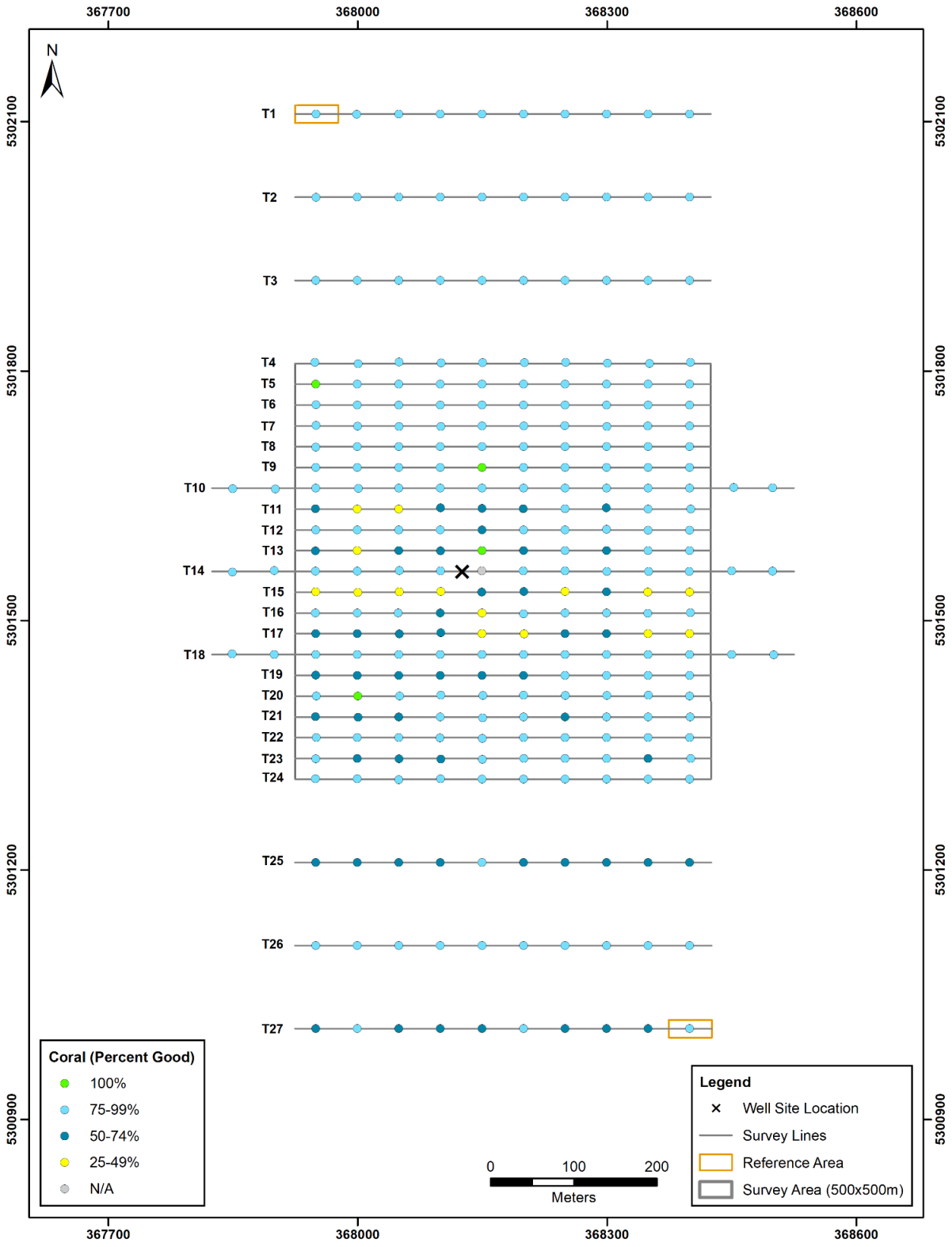

Figure F-5 All sponge condition (percent good) observed in the Sitka post-drilling surveys.

APPENDIX

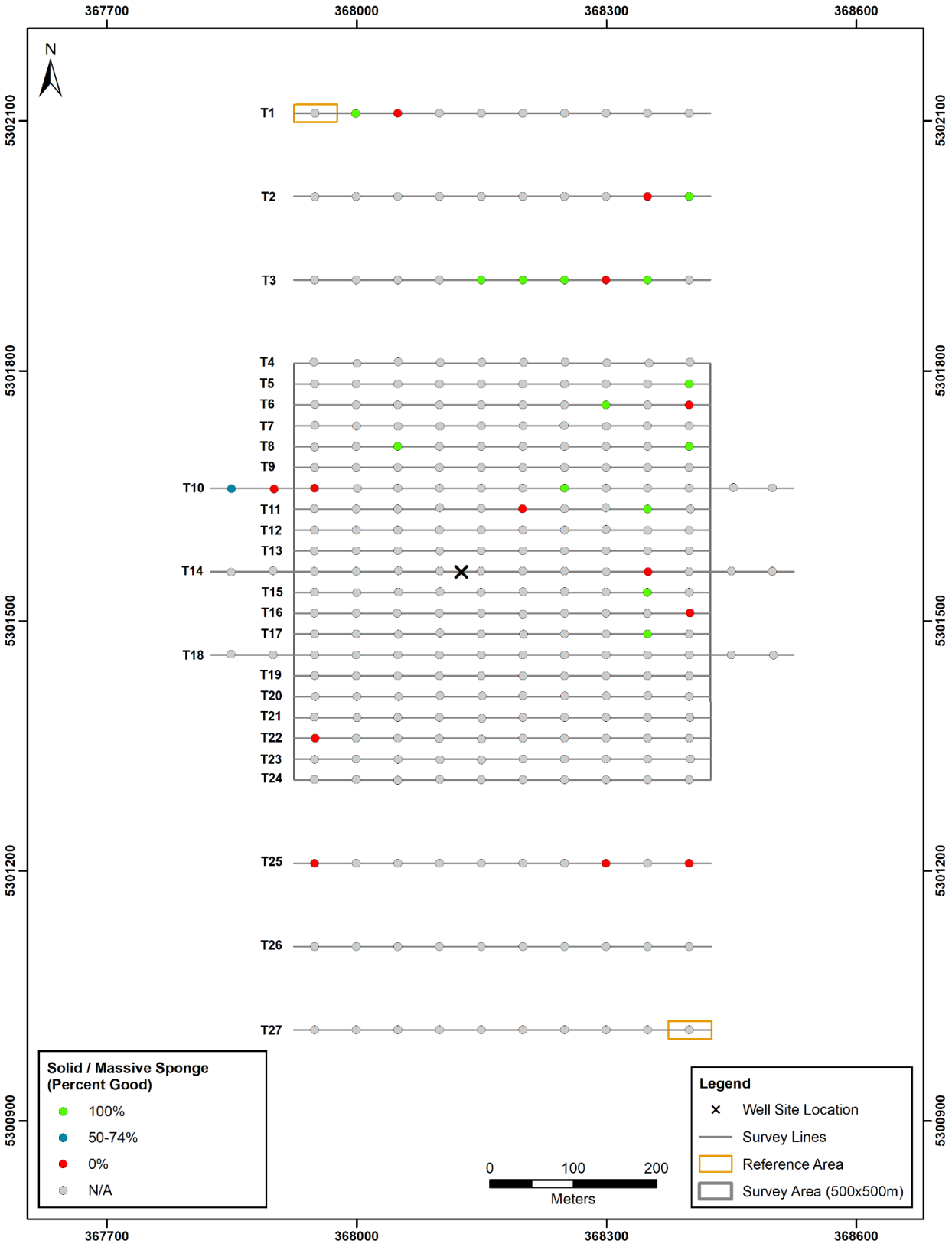

Figure F-6 Solid Massive condition (percent good) observed in the Sitka post-drilling surveys.

APPENDIX

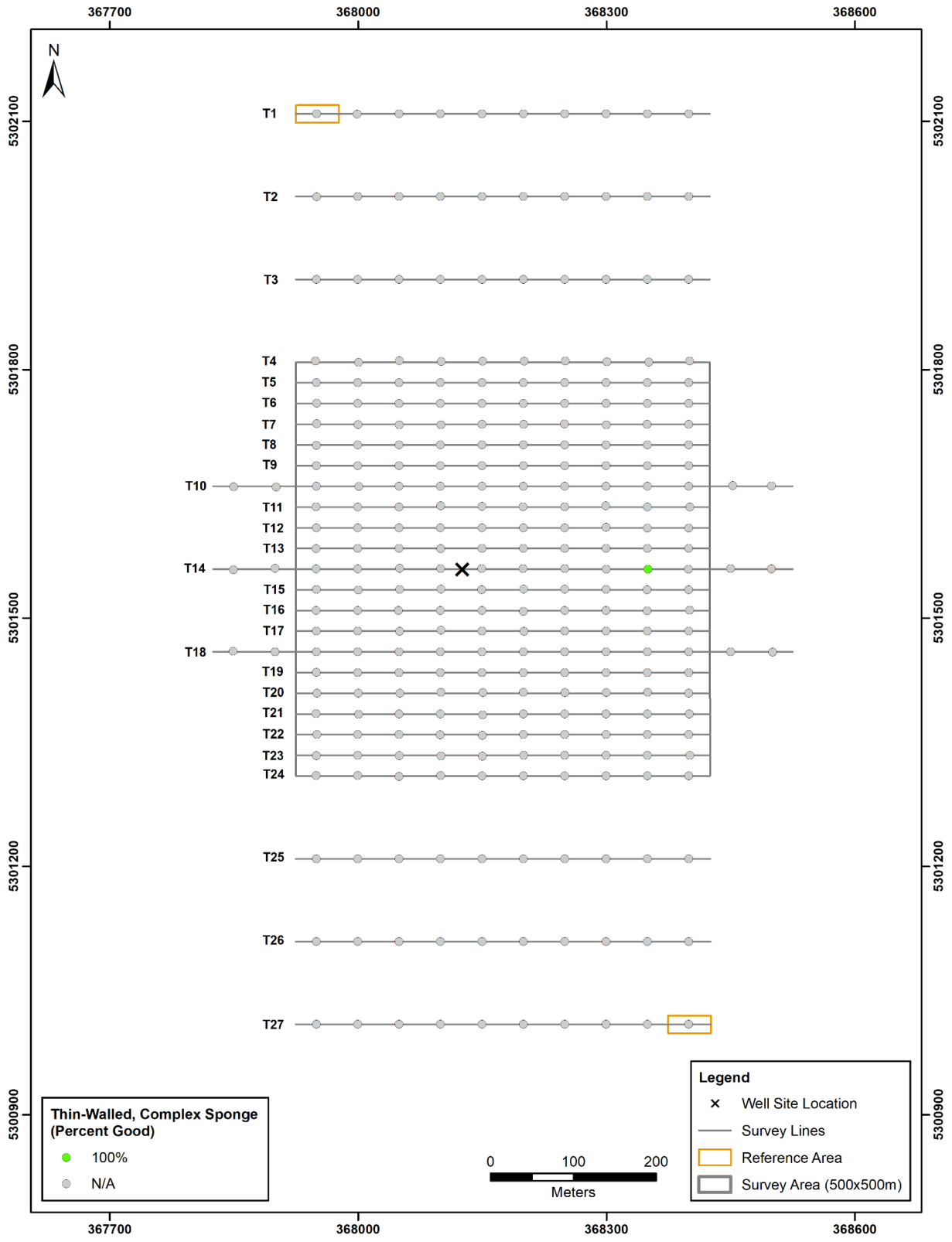

Figure F-7 **Thin-Walled, Complex condition (percent good) observed in the Sitka post-drilling surveys.**

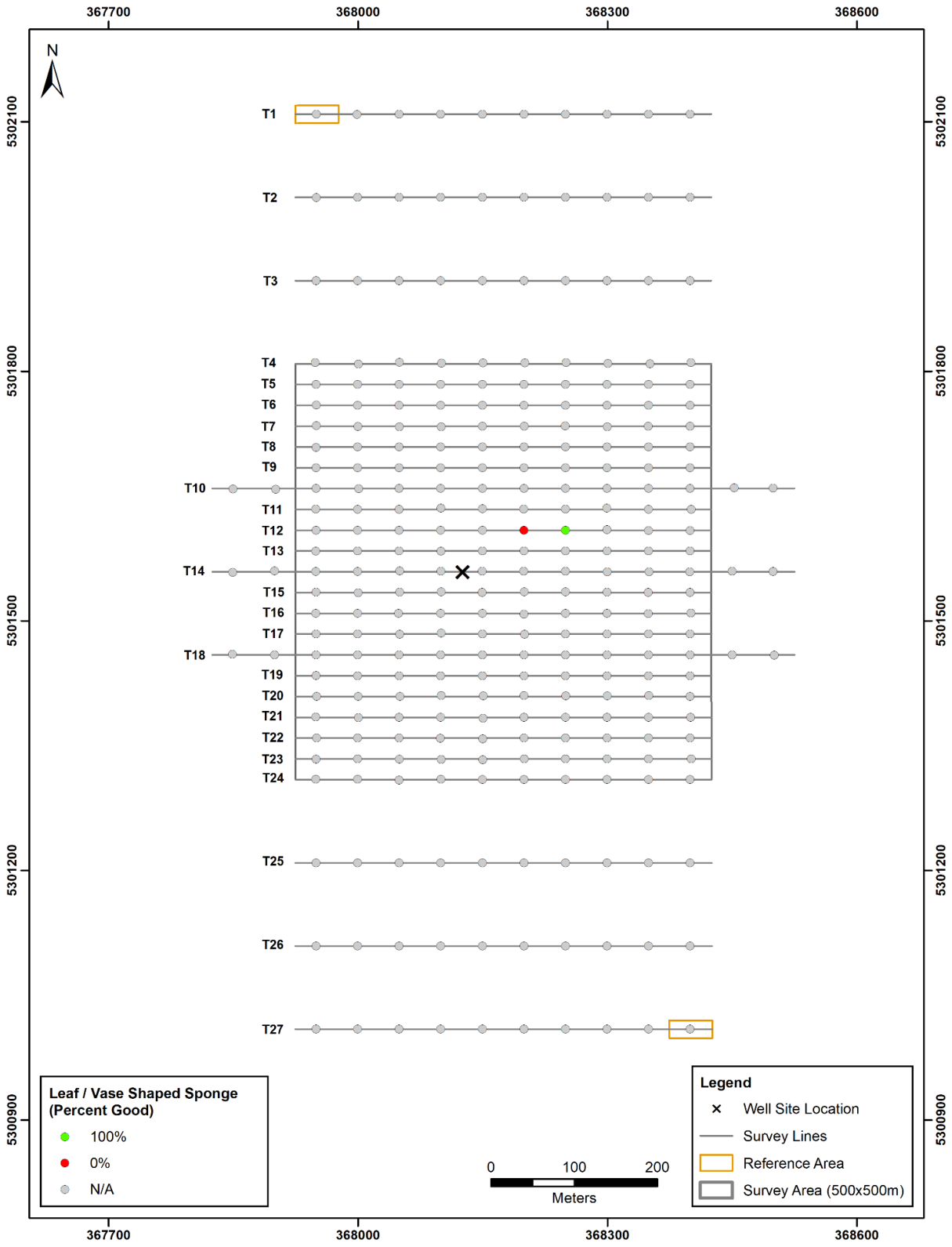

Figure F-8 Leaf/Vase Shaped Sponge condition (percent good) observed in the Sitka post-drilling surveys.

APPENDIX

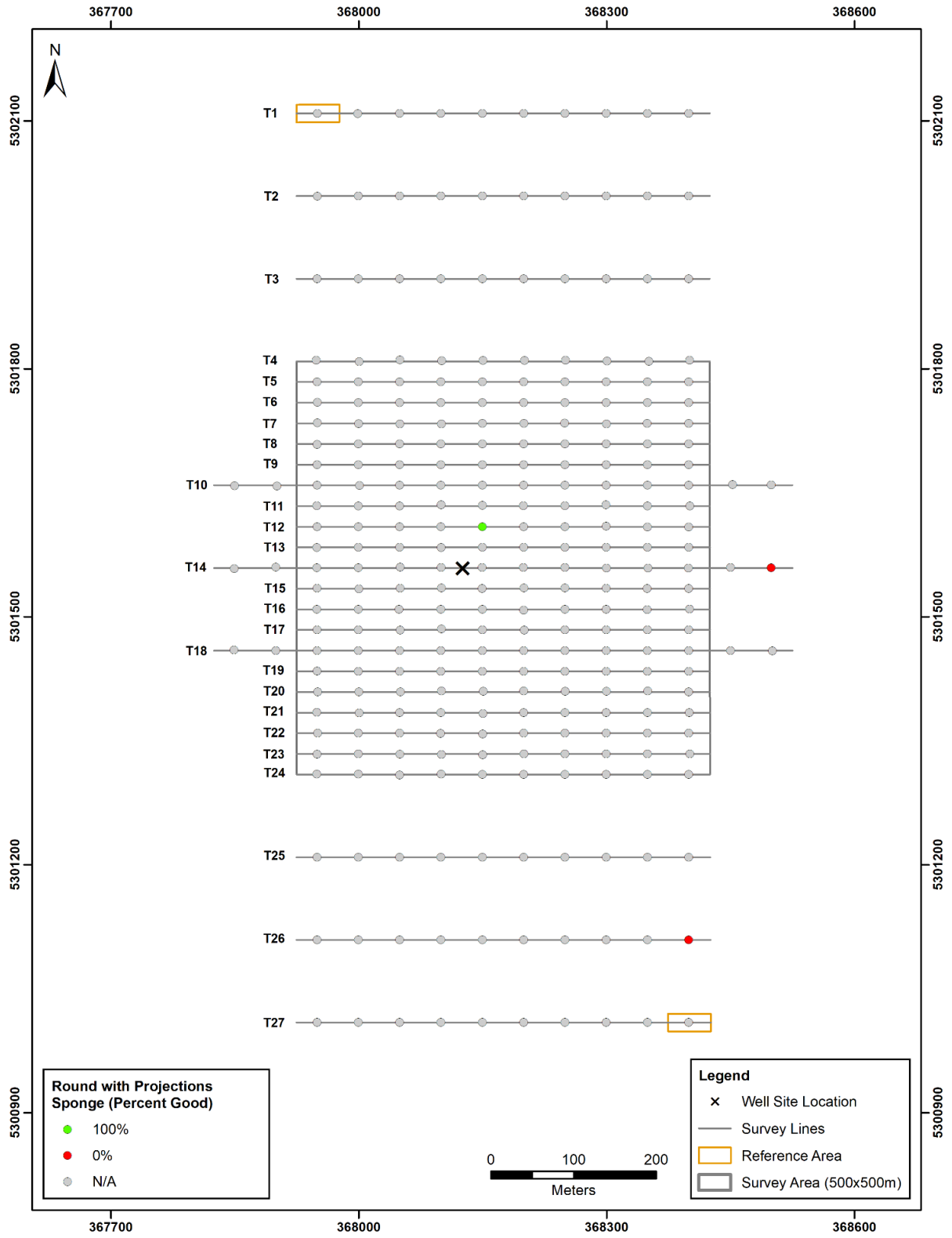

Figure F-9 Round with Projections sponge condition (percent good) observed in the Sitka post-drilling surveys.

APPENDIX

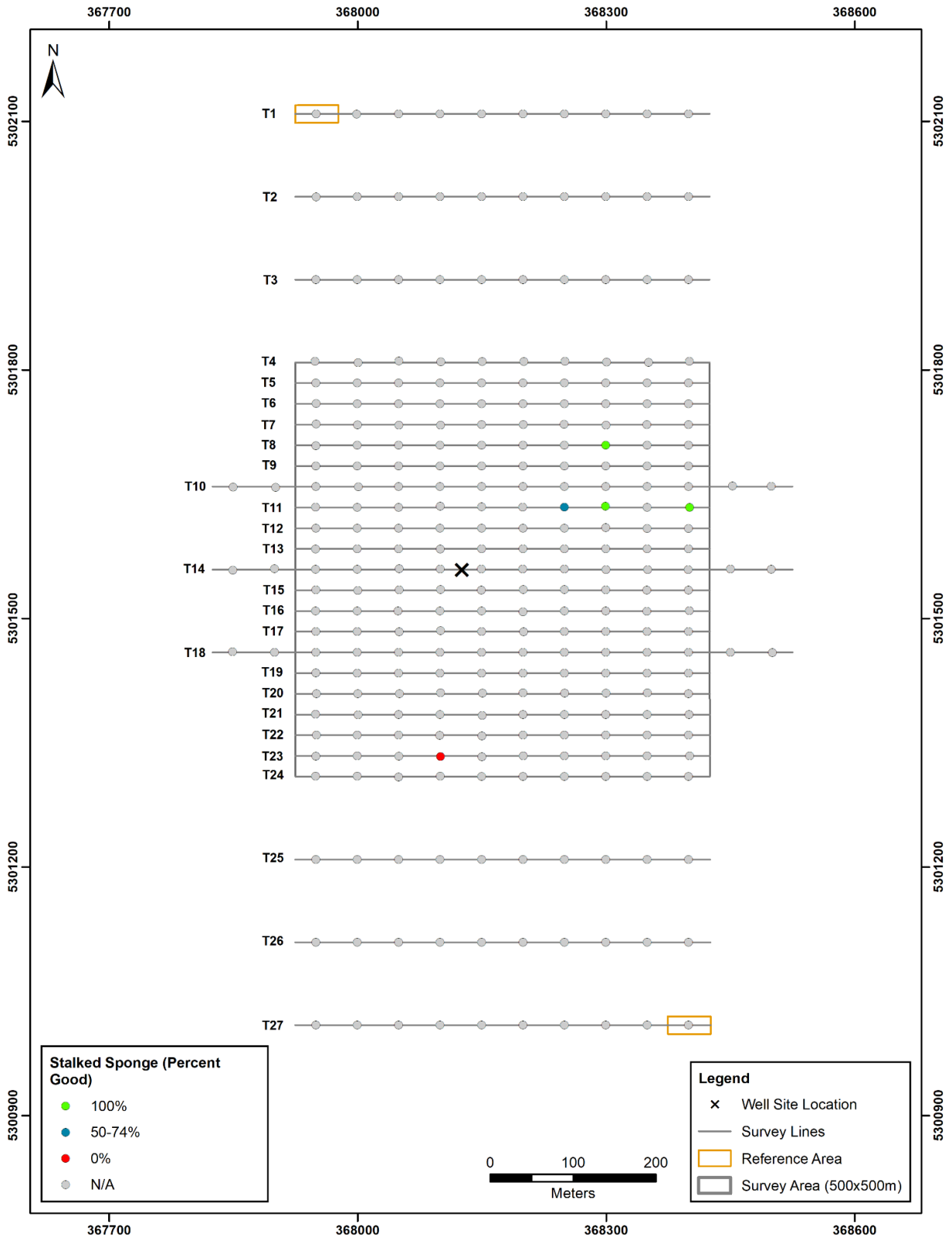

Figure F-10 Stalked Sponge condition (percent good) observed in the Sitka post-drilling surveys.

APPENDIX

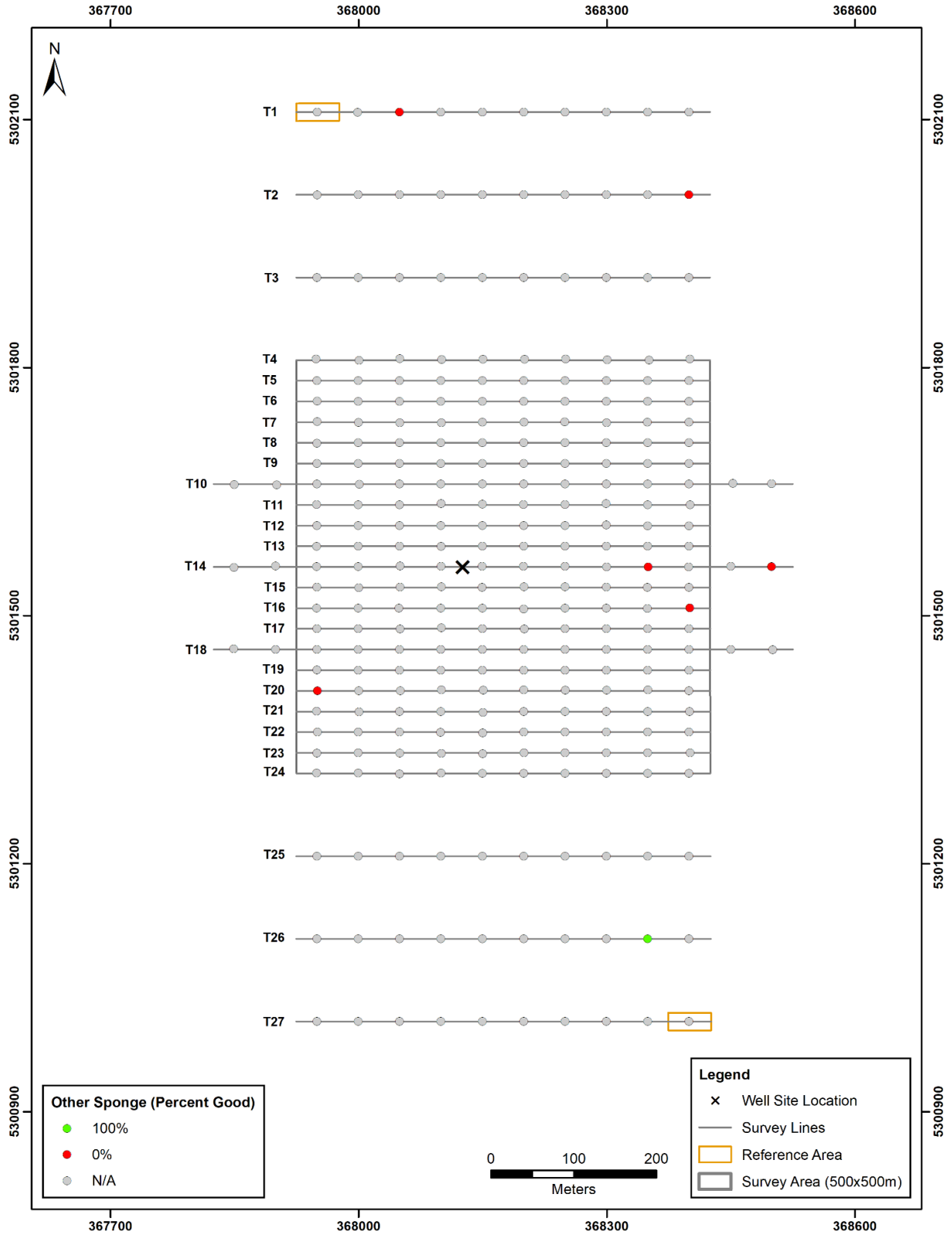

Figure F-11 **Other Sponge condition (percent good) observed in the Sitka post-drilling surveys.**

APPENDIX

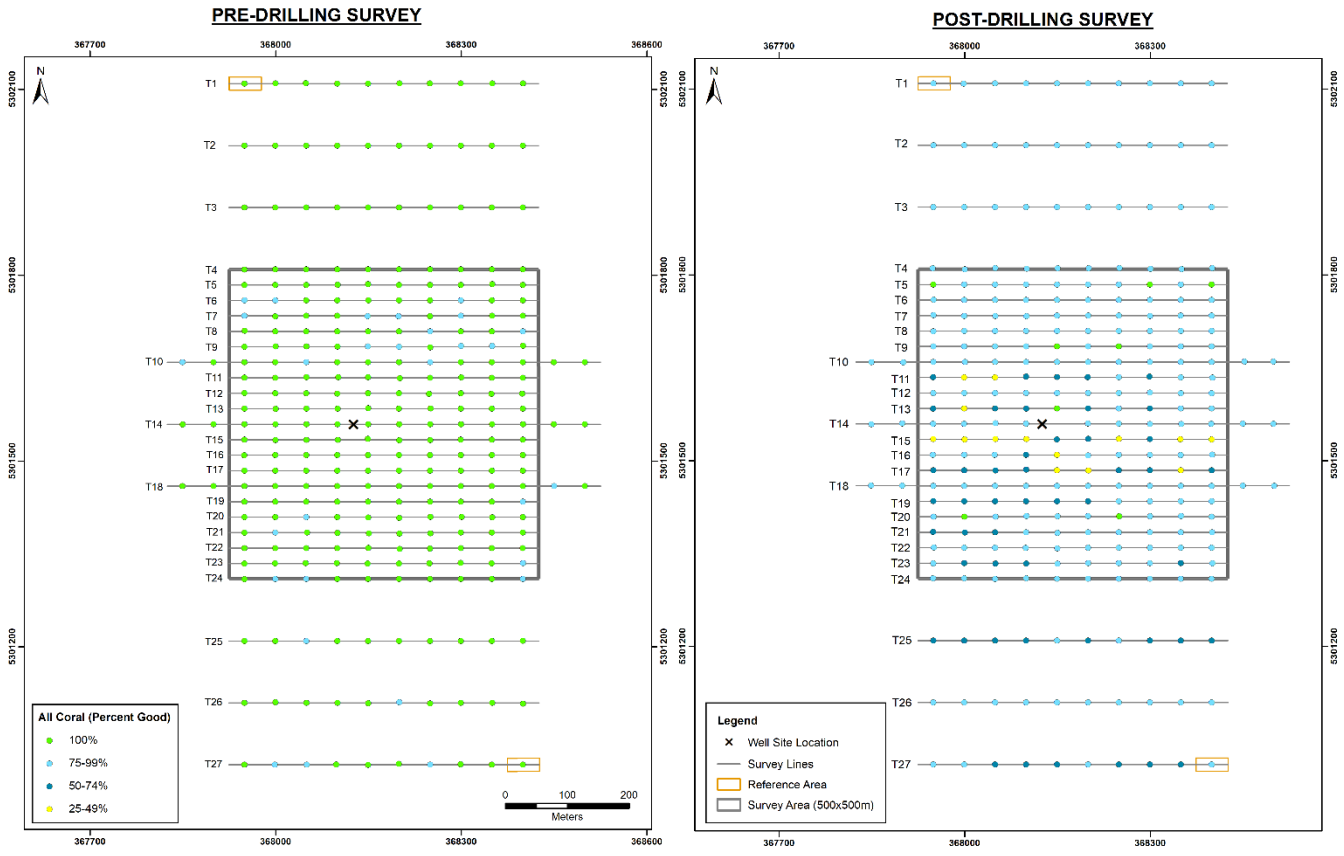

Figure F-12 **All Coral condition (percent good) observed in the Sitka pre- and post-drilling surveys.**

APPENDIX

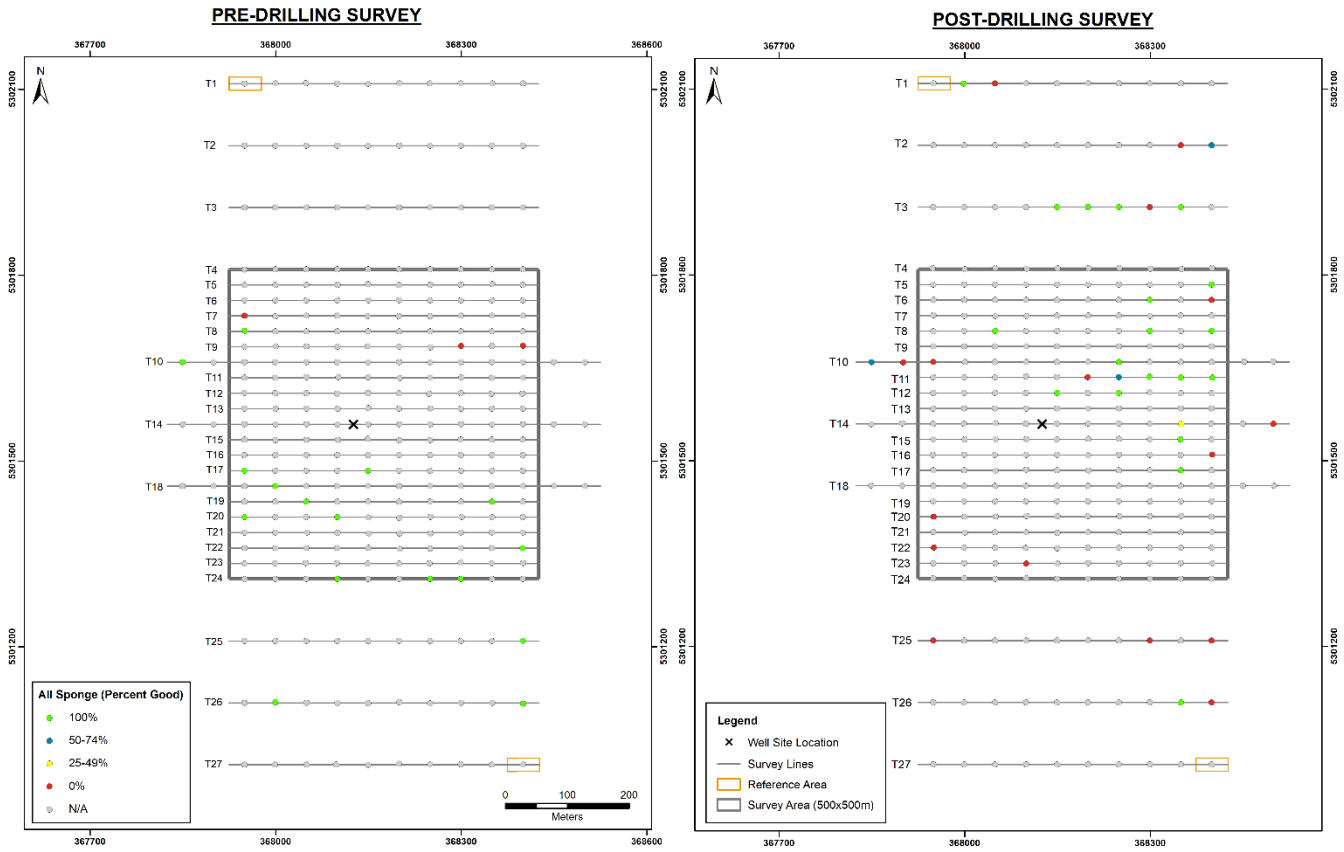

Figure F-13 **All Sponge condition (percent good) observed in the Sitka pre- and post-drilling surveys.**

APPENDIX

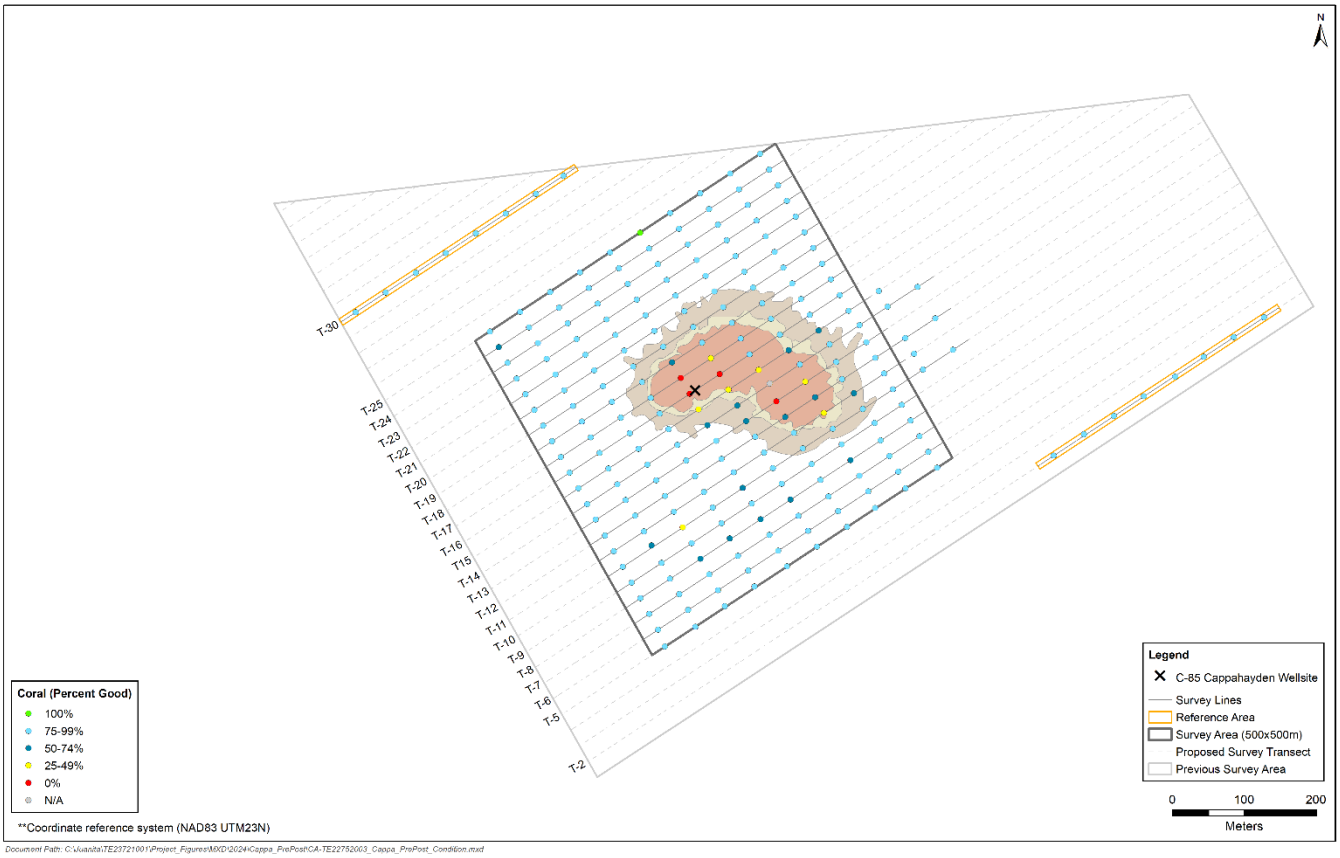

Figure F-14 All Coral condition (percent good) observed in the Cappahayden post-drilling.

APPENDIX

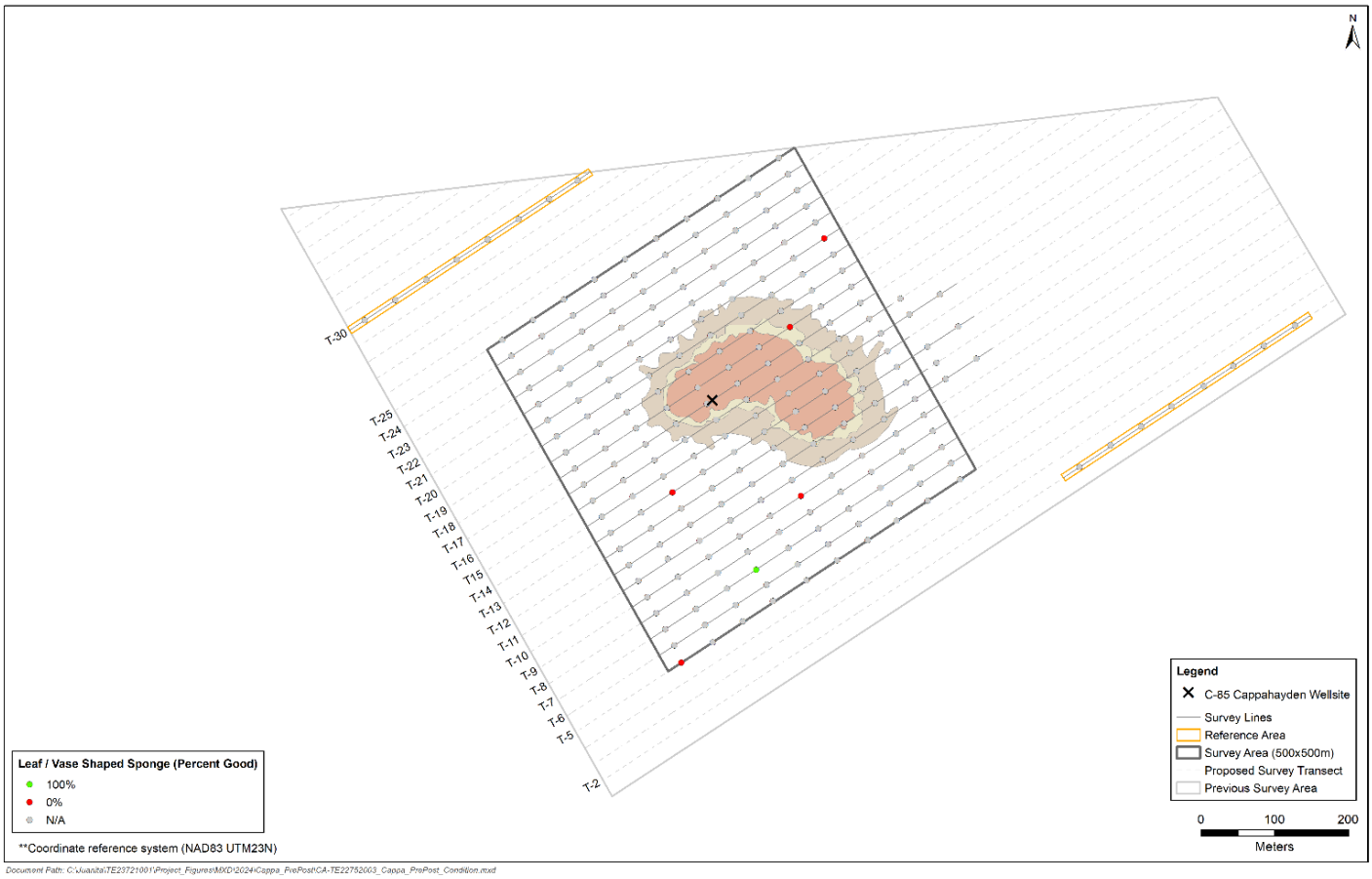

Figure F-15 Leaf/Vase shaped sponge condition (percent good) observed in the Cappahayden post-drilling.

APPENDIX

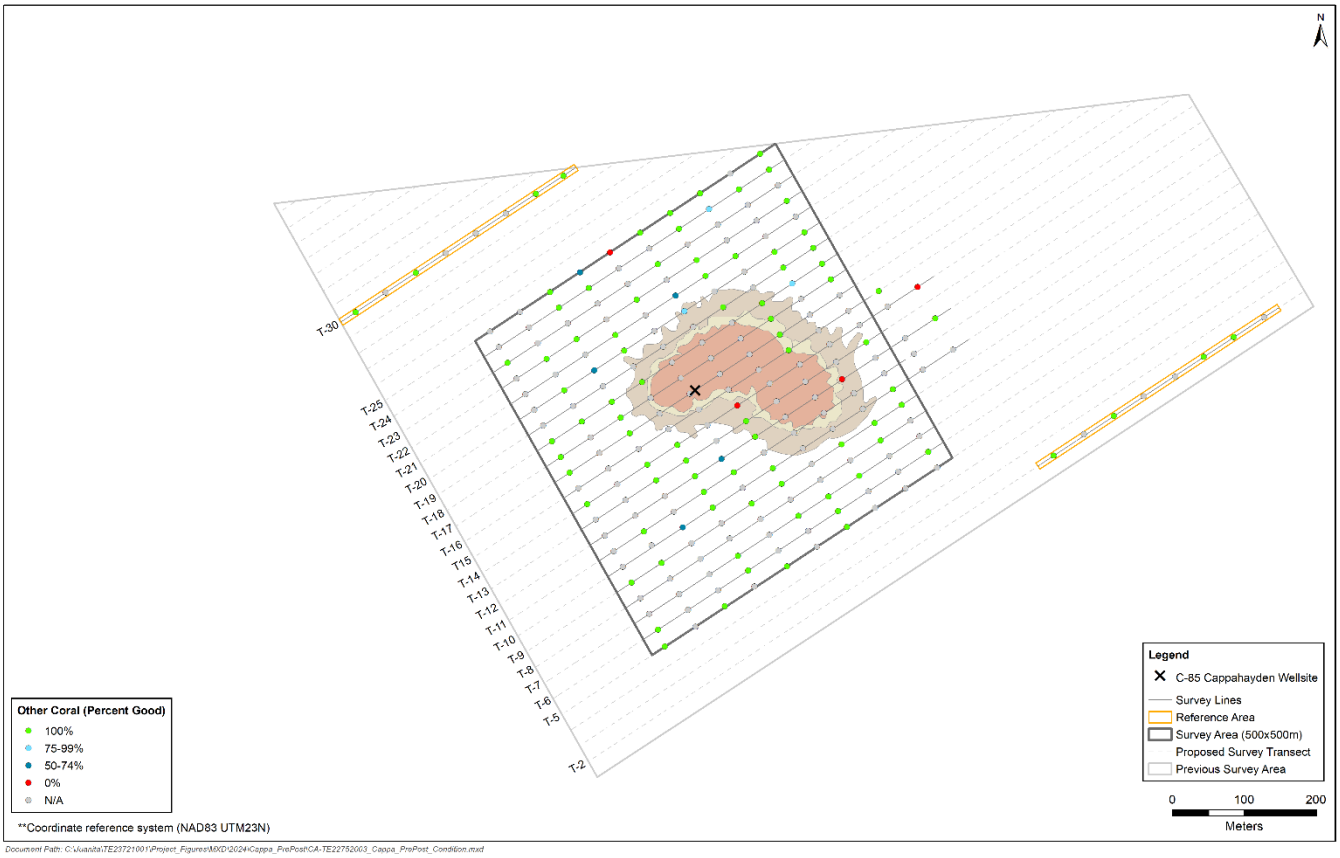

Figure F-16 Other Coral condition (percent good) observed in the Cappahayden post-drilling surveys.

APPENDIX

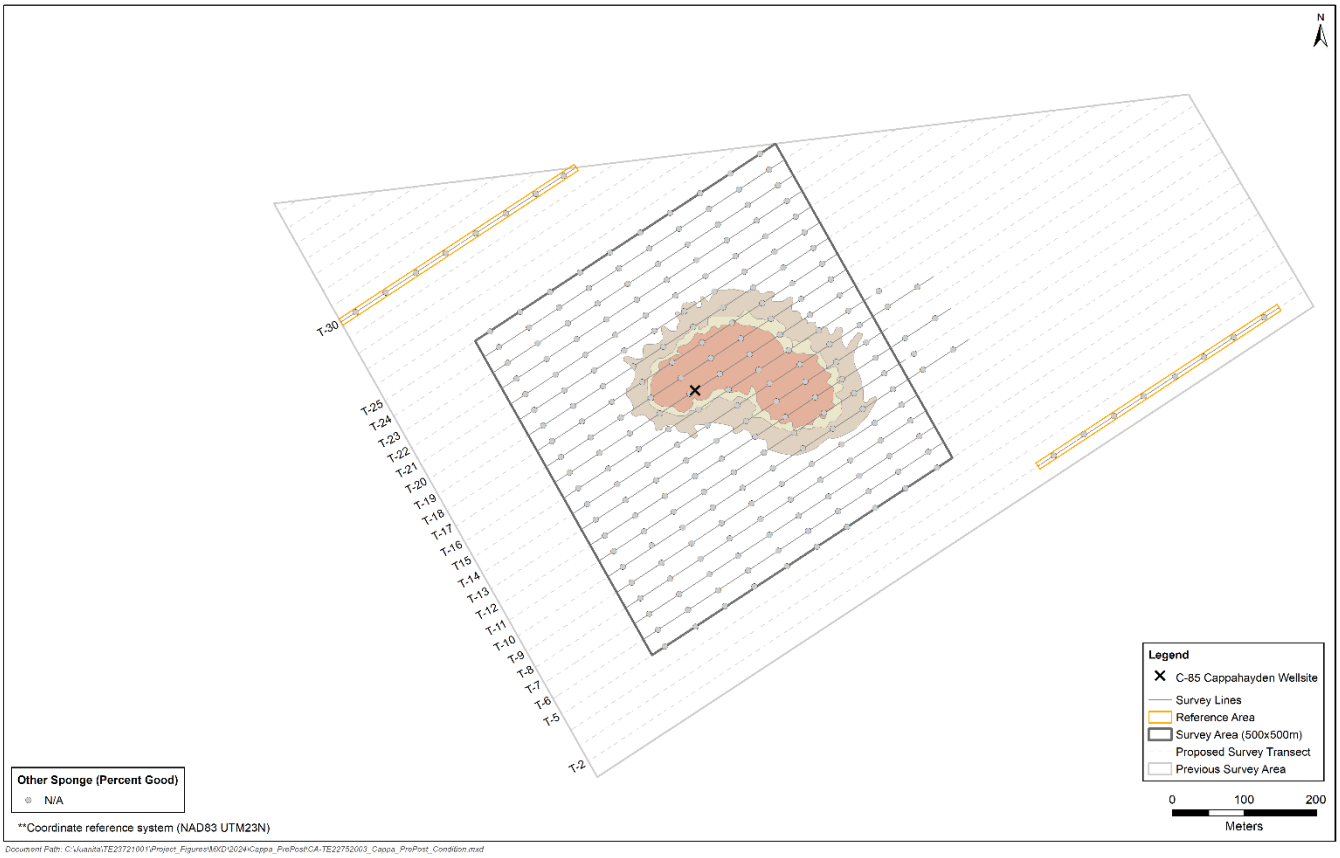

Figure F-17 Other sponge condition (percent good) observed in the Cappahayden post-drilling surveys.

APPENDIX

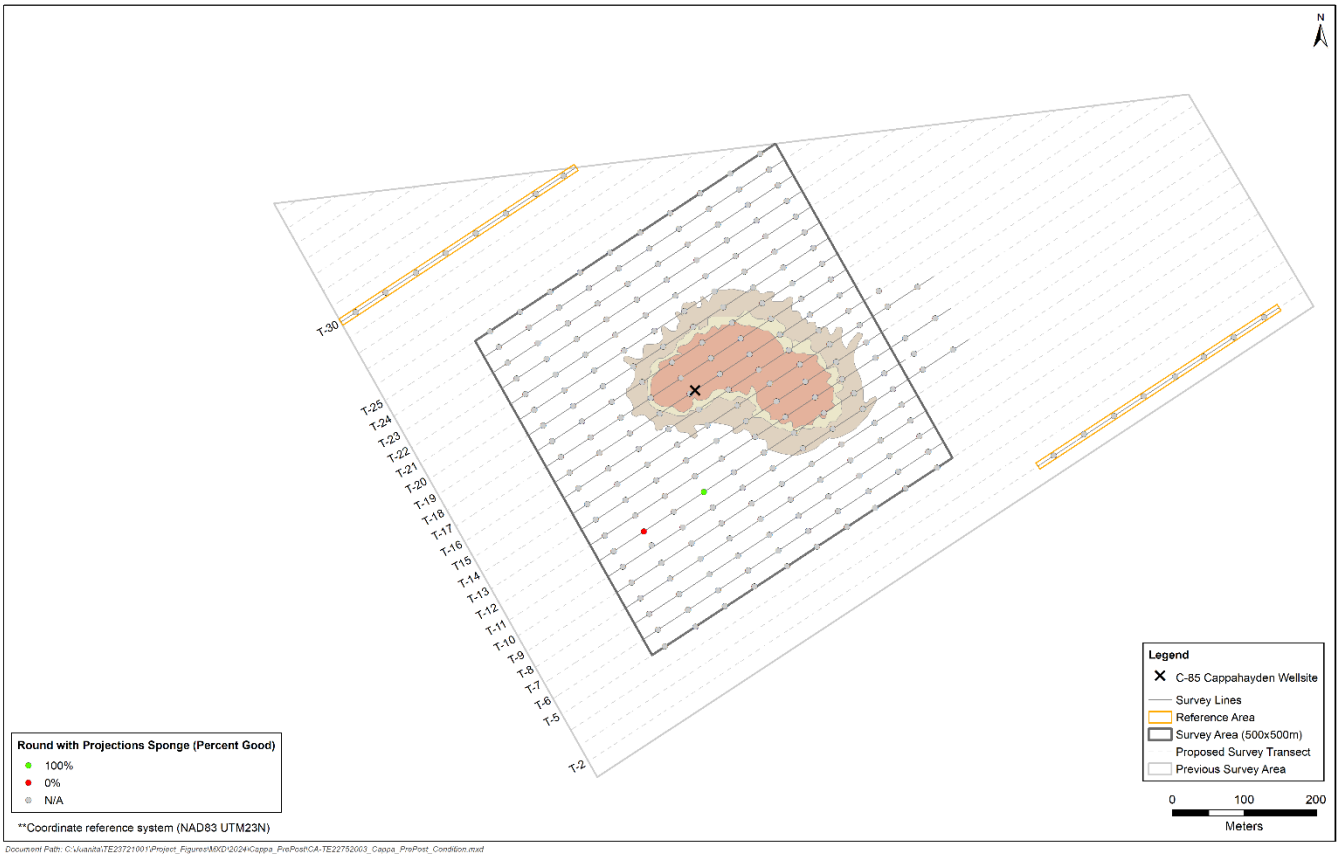

Figure F-18 Round with Projections Sponge condition (percent good) observed in the Cappahayden post-drilling surveys.

APPENDIX

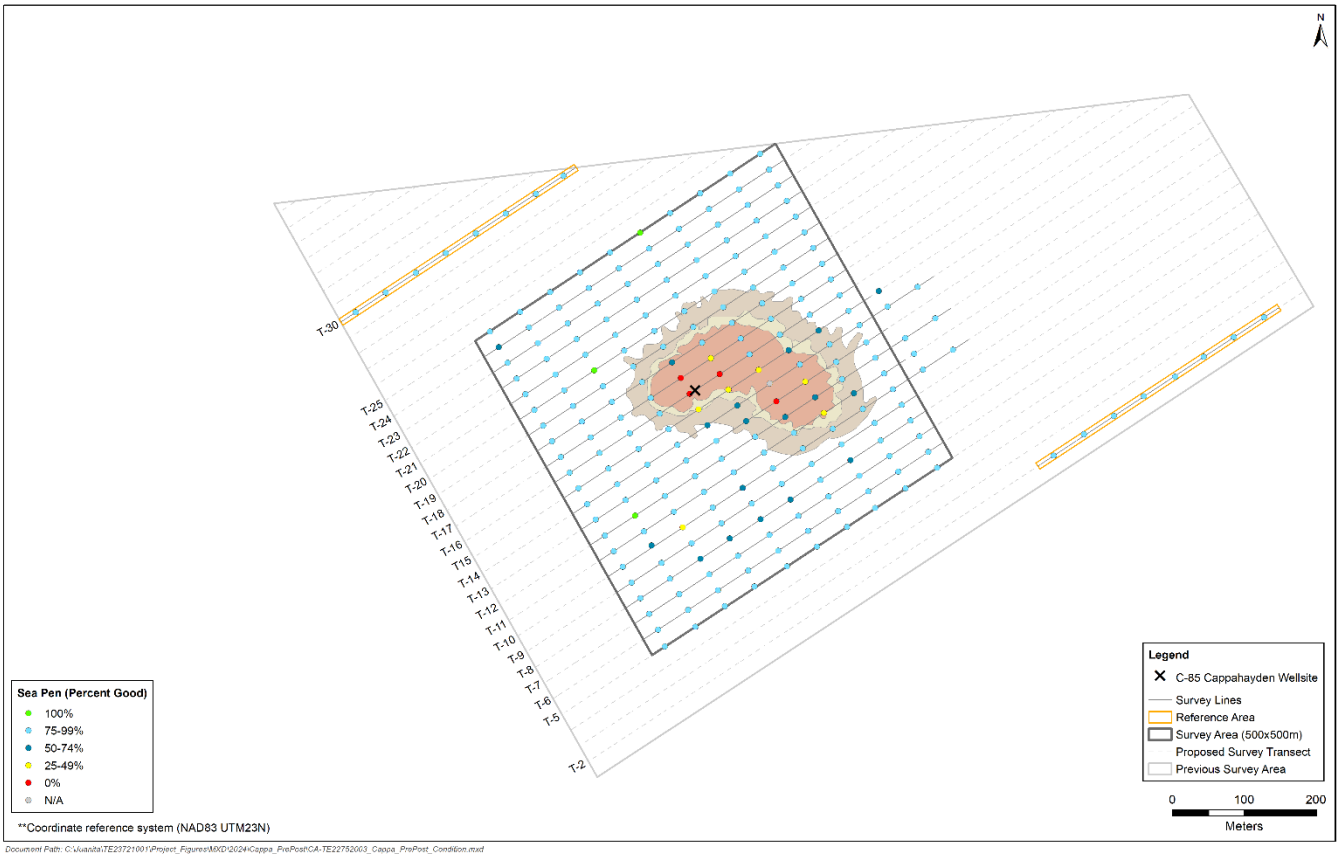

Figure F-19 Sea Pen condition (percent good) observed in the Cappahayden post-drilling surveys.

APPENDIX

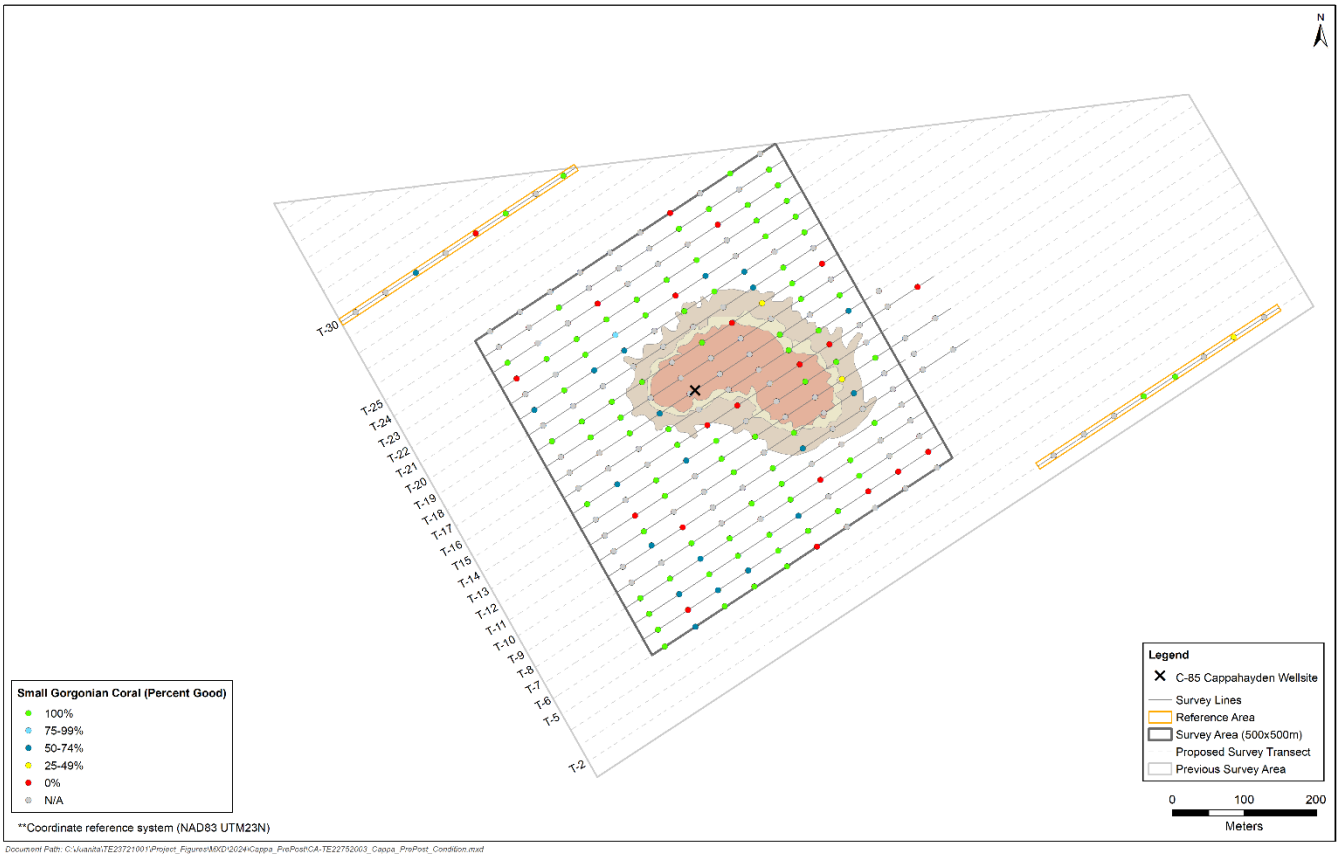

Figure F-20 Small Gorgonian Coral condition (percent good) observed in the Cappahayden post-drilling surveys.

APPENDIX

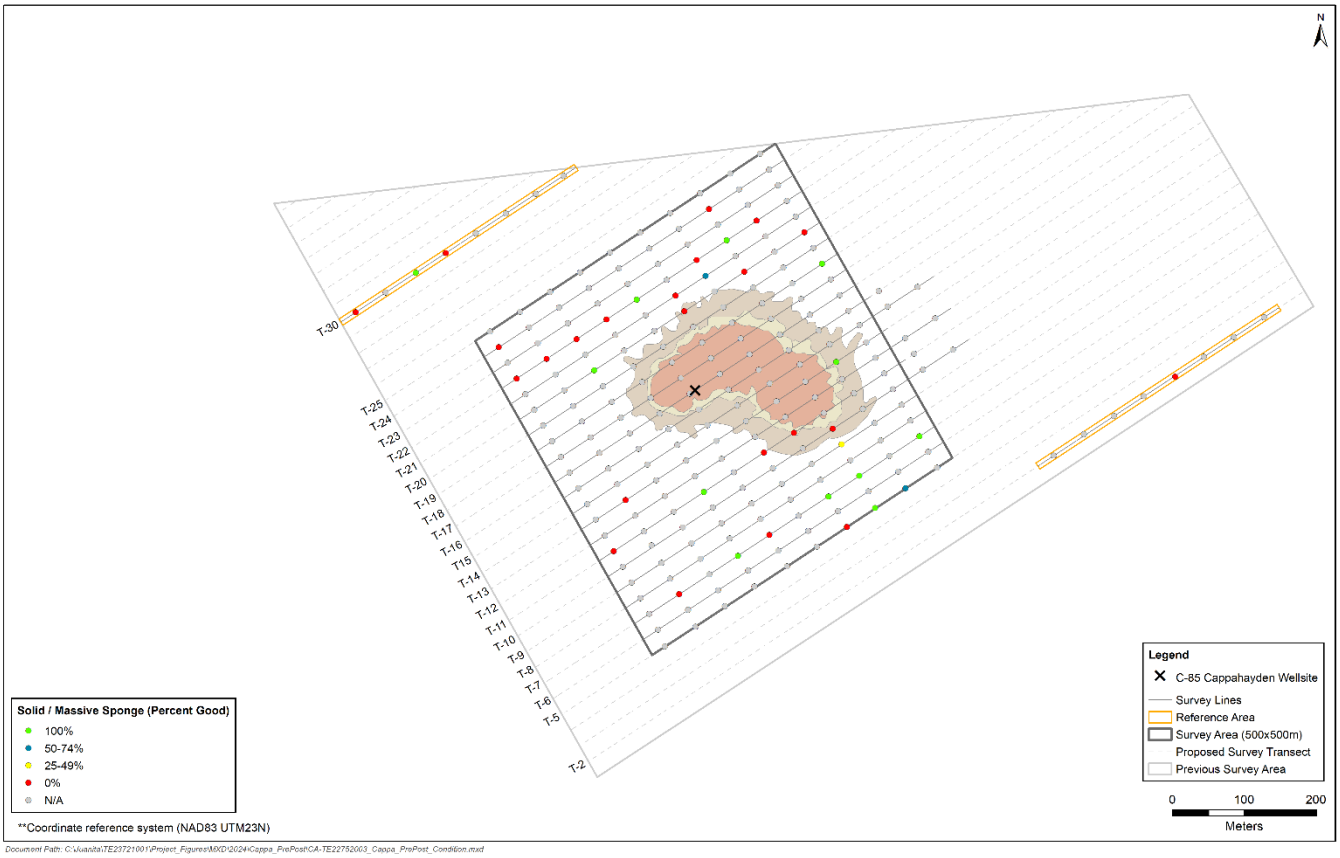

Figure F-21 Solid/Massive Sponge condition (percent good) observed in the Cappahayden post-drilling surveys.

APPENDIX

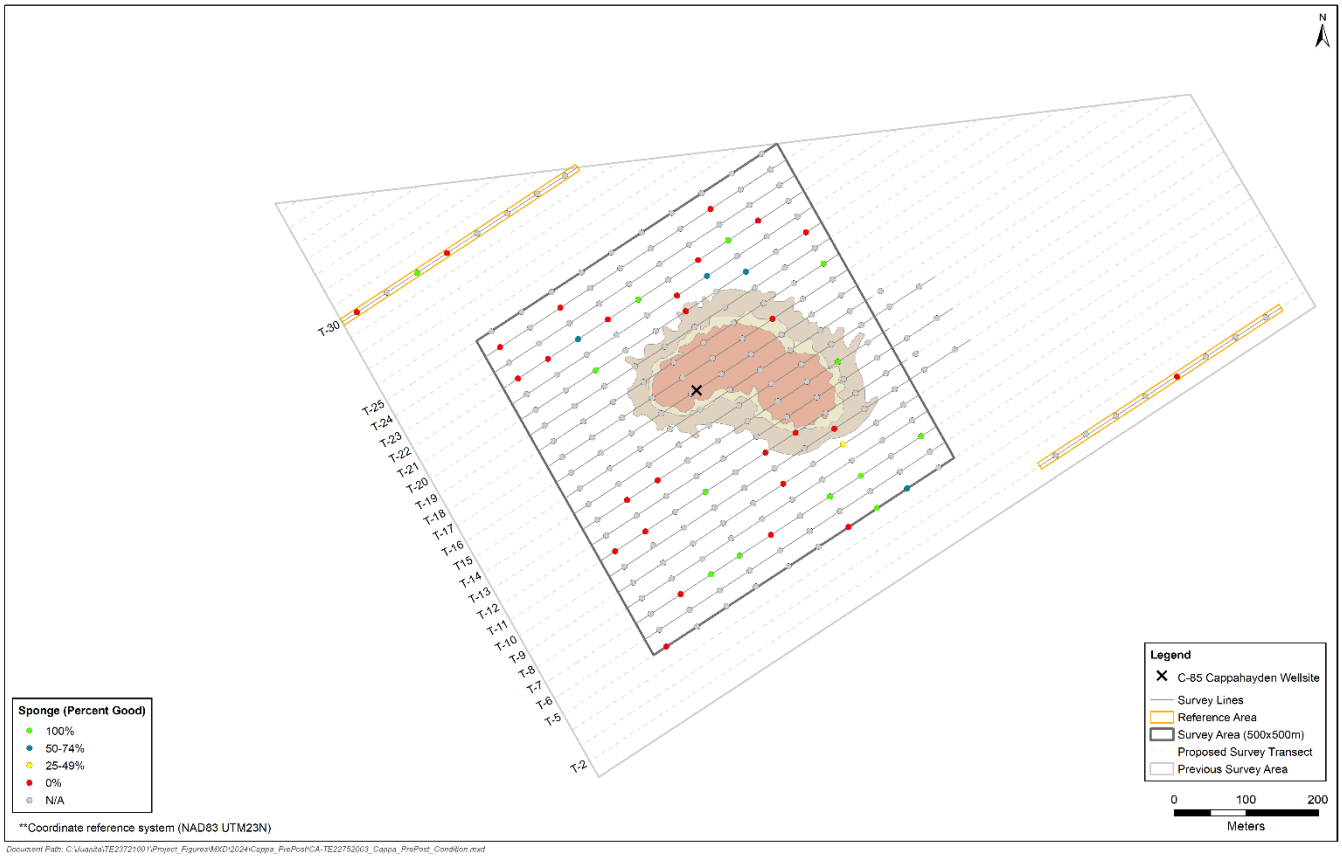

Figure F-22 All Sponge condition (percent good) observed in the Cappahayden post-drilling surveys.

APPENDIX

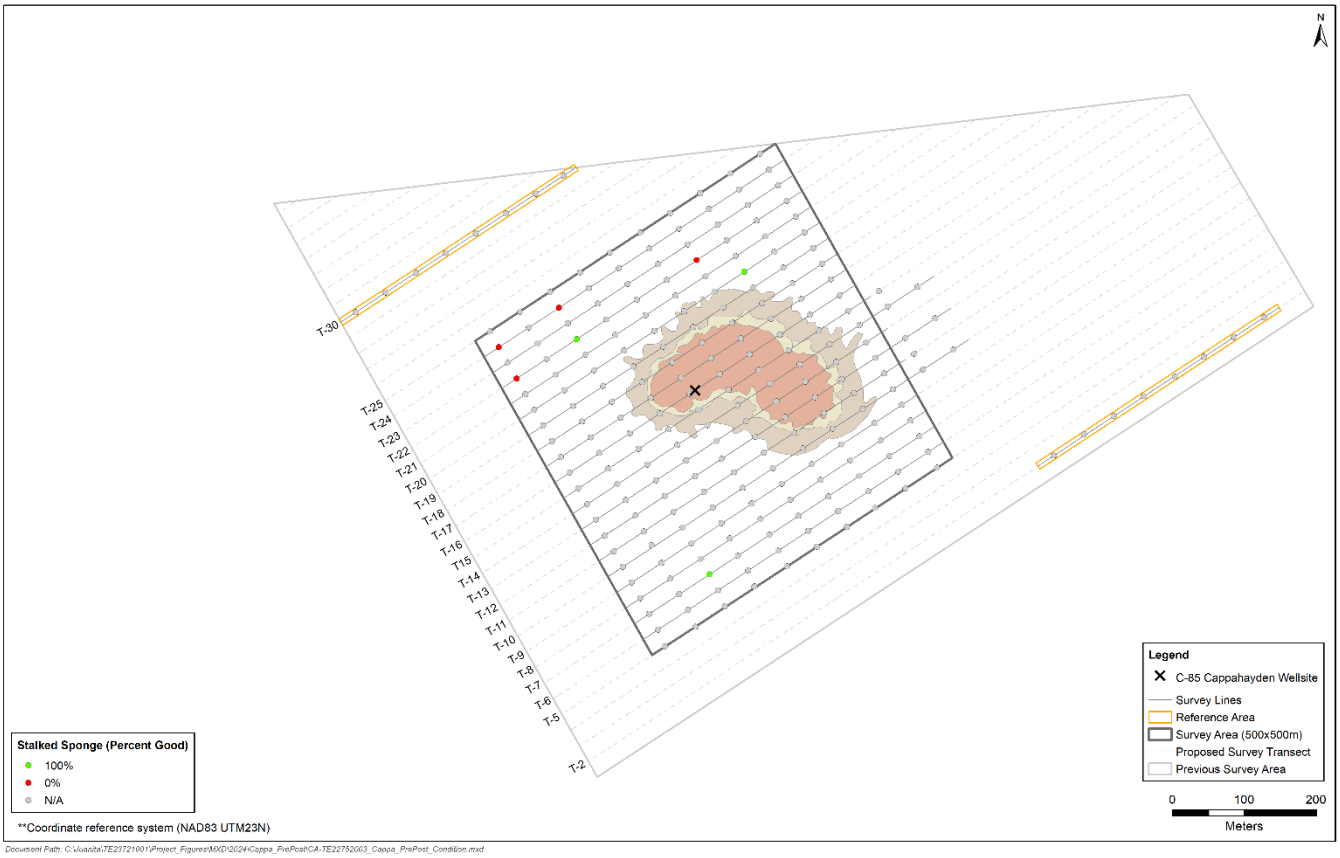

Figure F-23 Stalked Sponge condition (percent good) observed in the Cappahayden post-drilling surveys.

APPENDIX

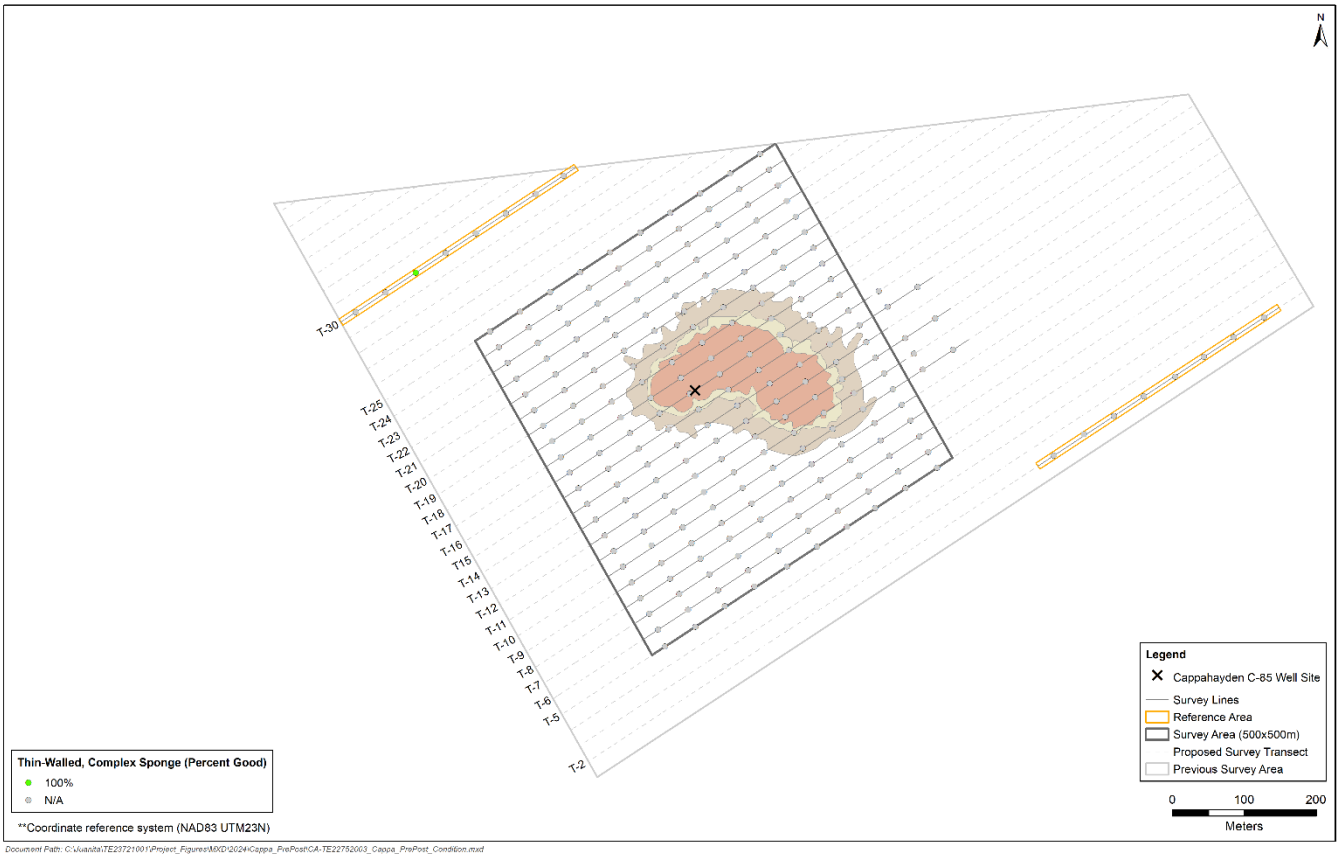

Figure F-24 Thin-walled, Complex Sponge condition (percent good) observed in the Cappahayden post-drilling surveys.

APPENDIX

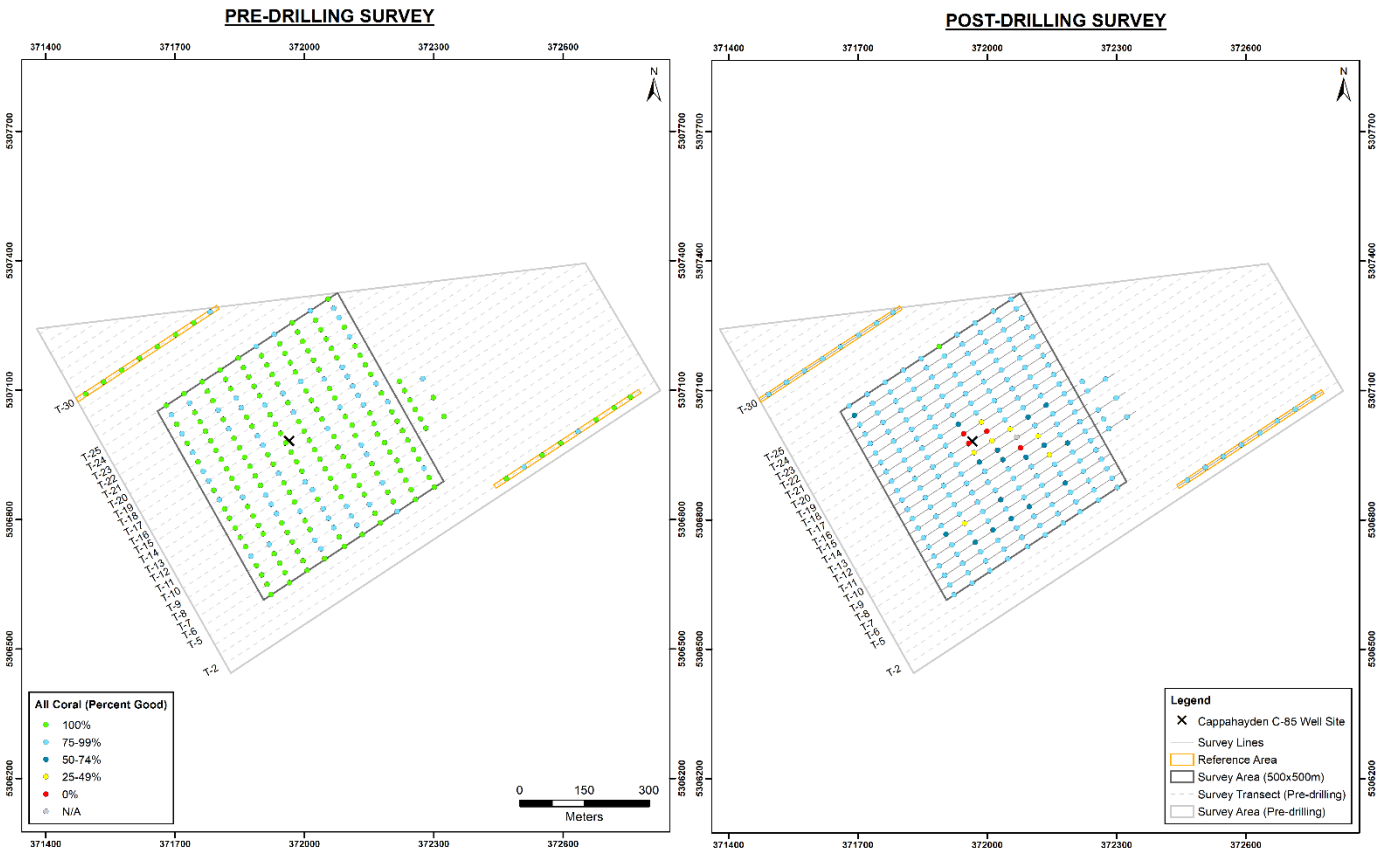

Figure F-25 All Coral condition (percent good) observed in the Cappahayden pre- and post-drilling surveys.

APPENDIX

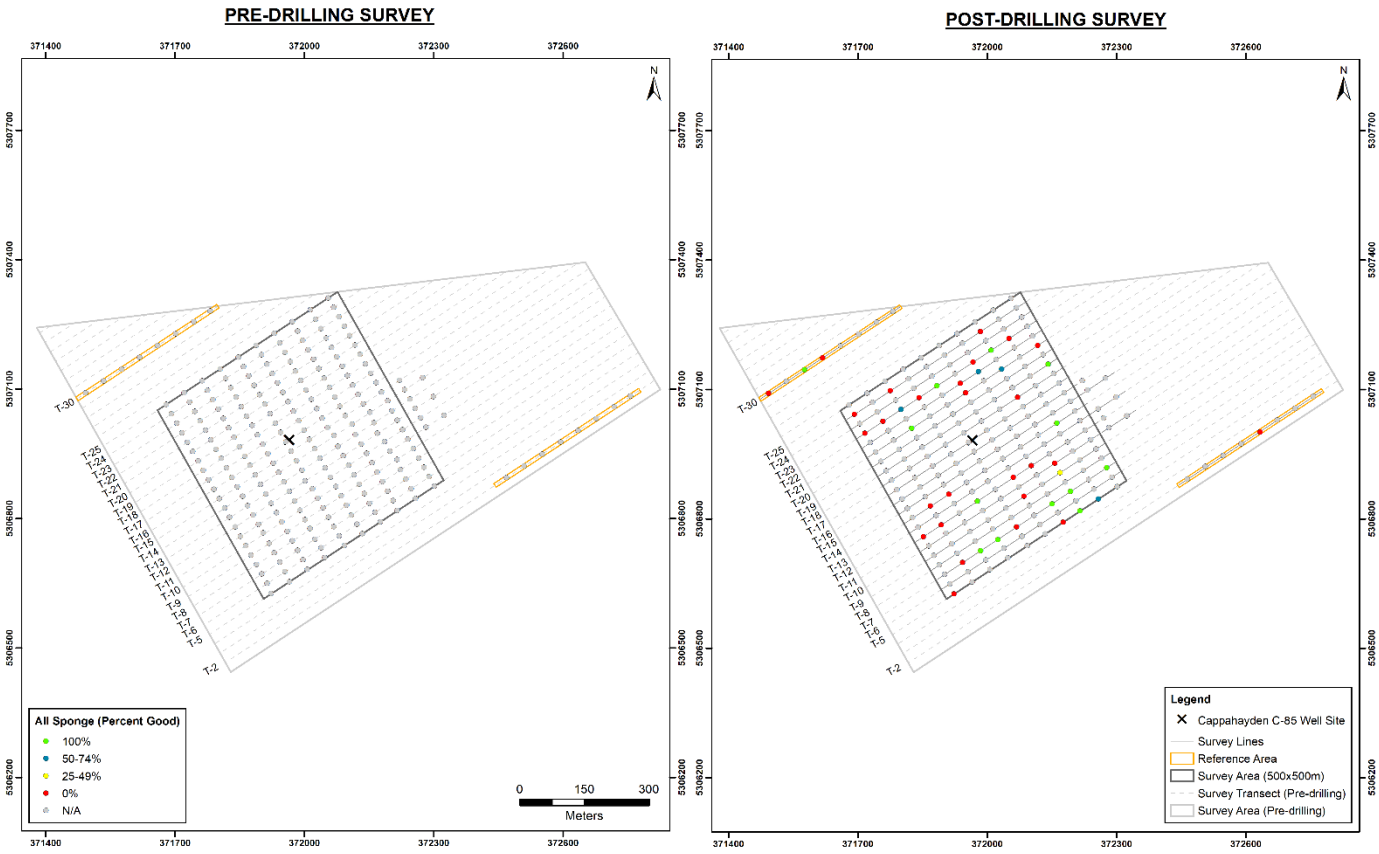

Figure F-26 All Sponge condition (percent good) observed in the Cappahayden post-drilling surveys.

APPENDIX

G FISH AND INVERTEBRATE ABUNDANCE AND DENSITY MAPS

APPENDIX

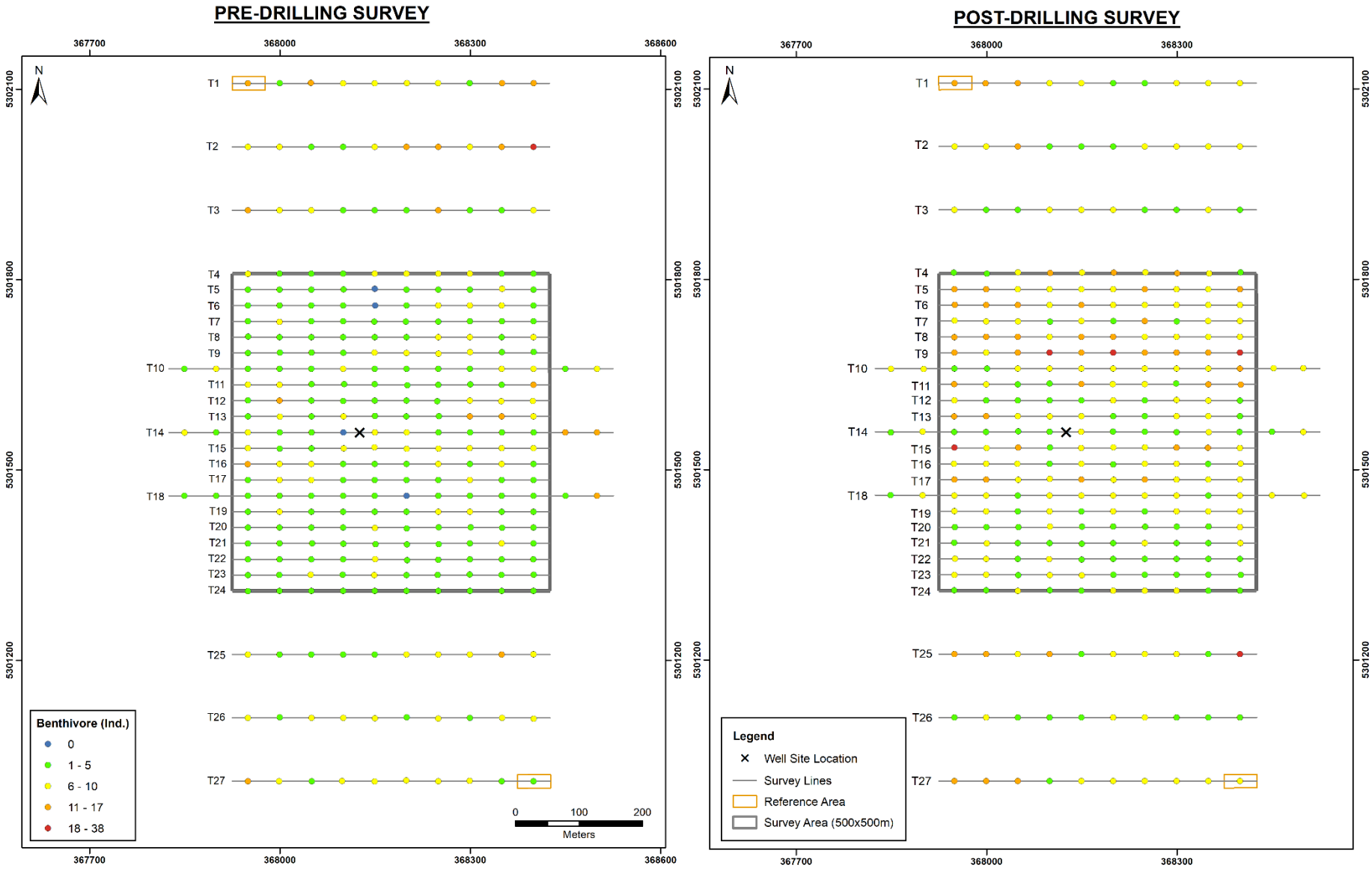

Figure G-1 Benthivore abundance (Individuals) observed in the Sitka pre- and post-drilling survey.

APPENDIX

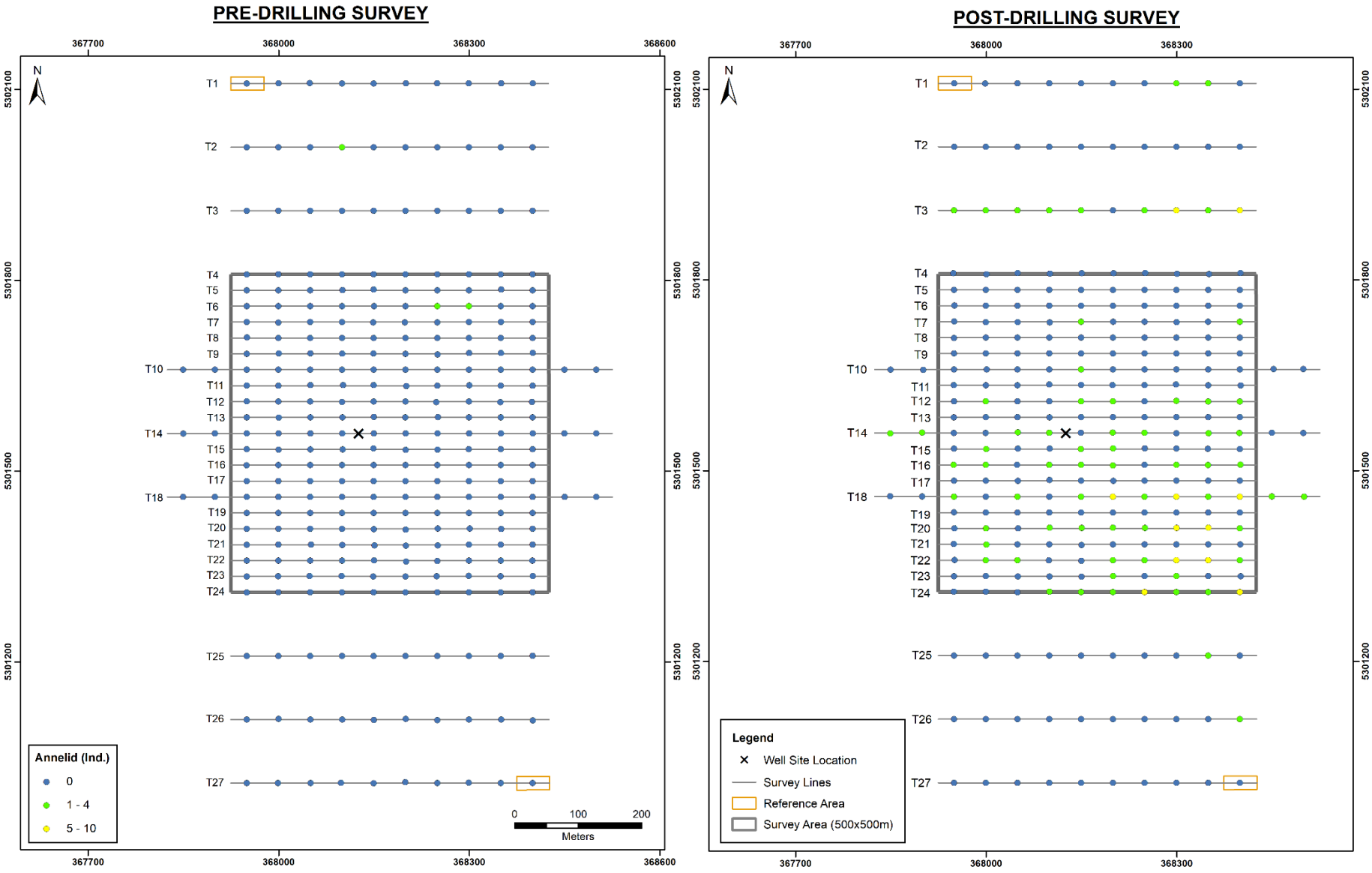

Figure G-2 Annelid abundance (individuals) observed in the Sitka, pre- and post-drilling surveys.

APPENDIX

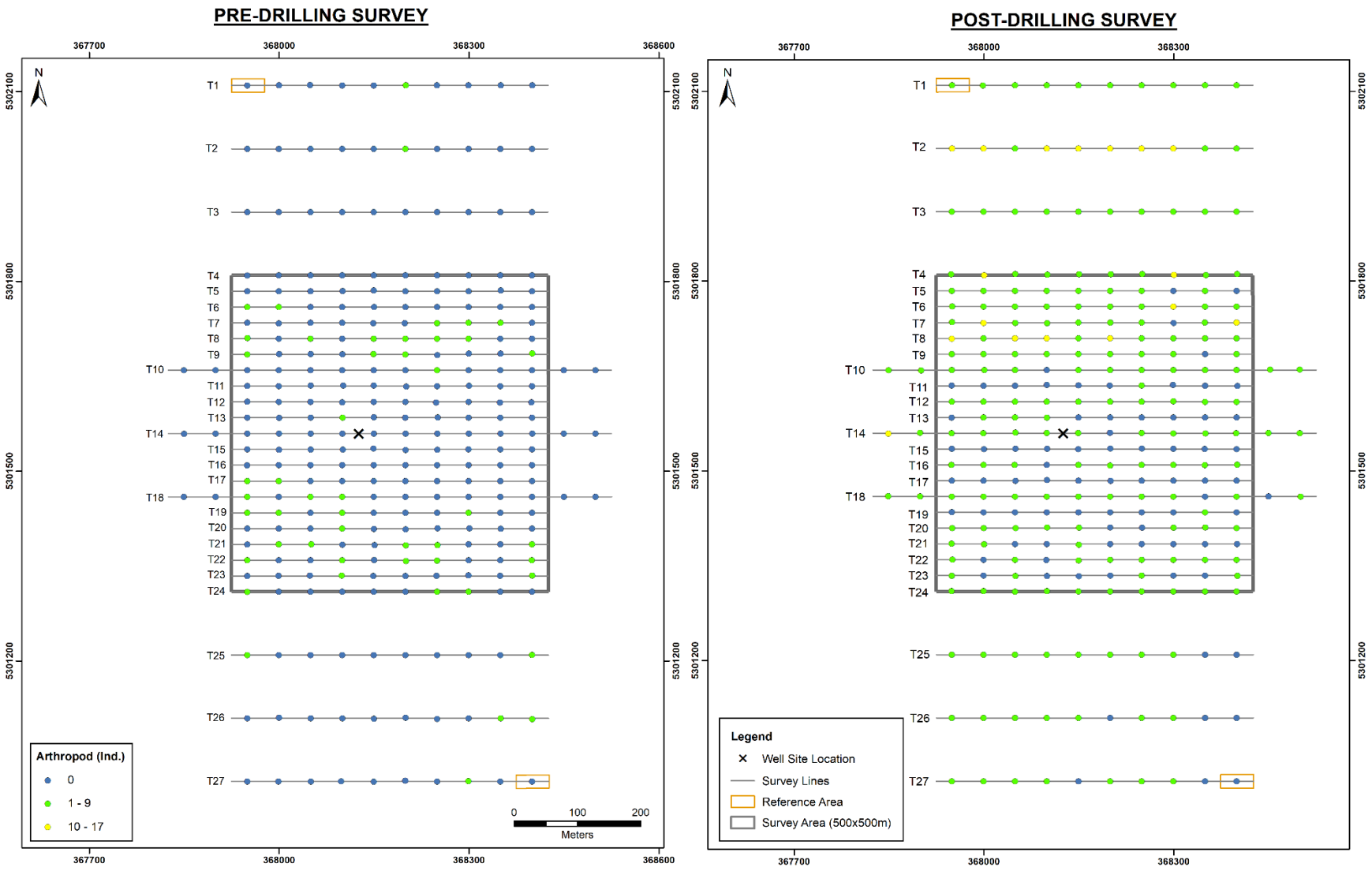

Figure G-3 **Arthropod abundance (individuals) observed in the Sitka, pre- and post-drilling surveys.**

APPENDIX

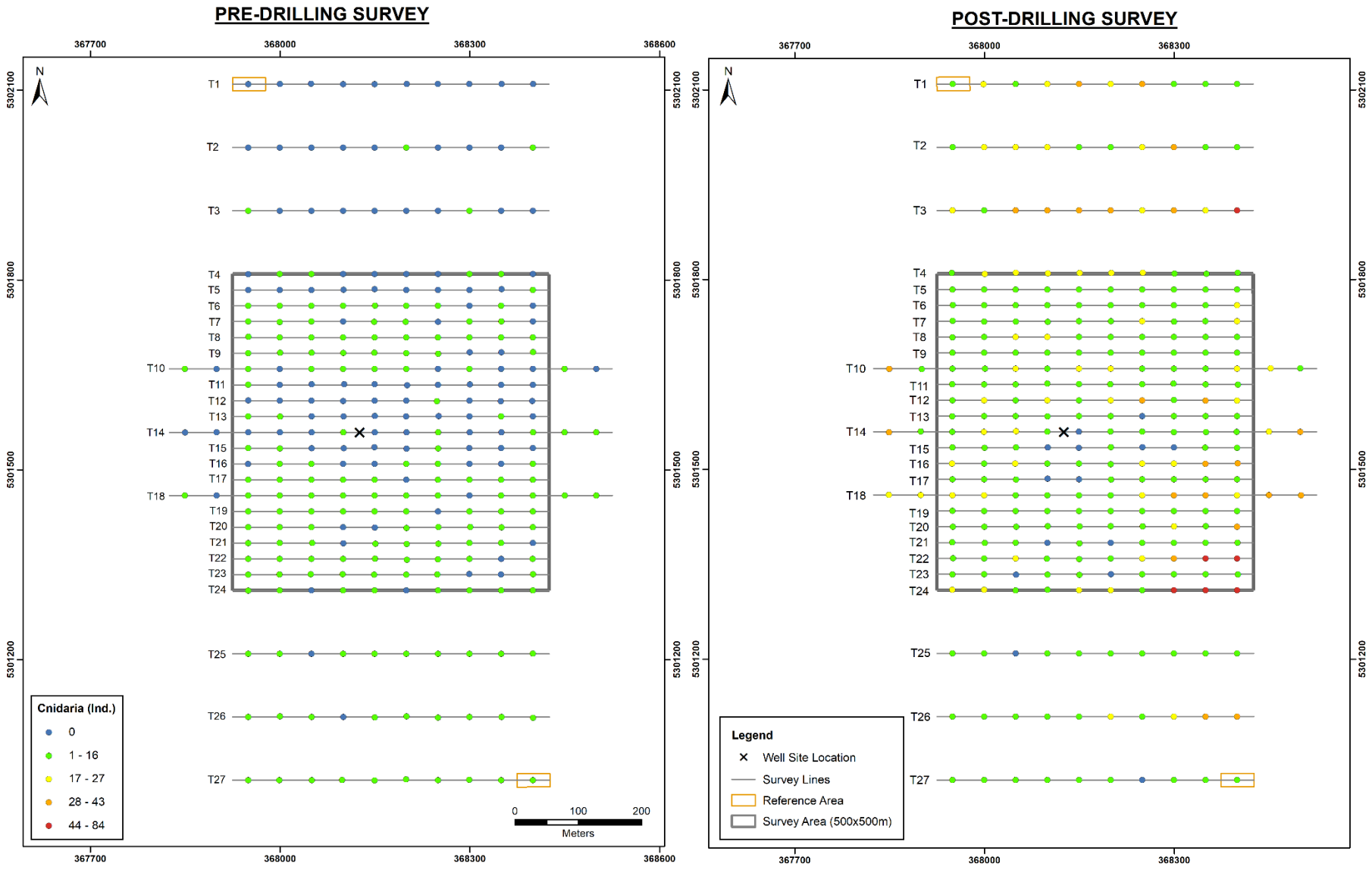

Figure G-4 Cnidaria abundance (individuals) observed in the Sitka, pre- and post-drilling surveys.

APPENDIX

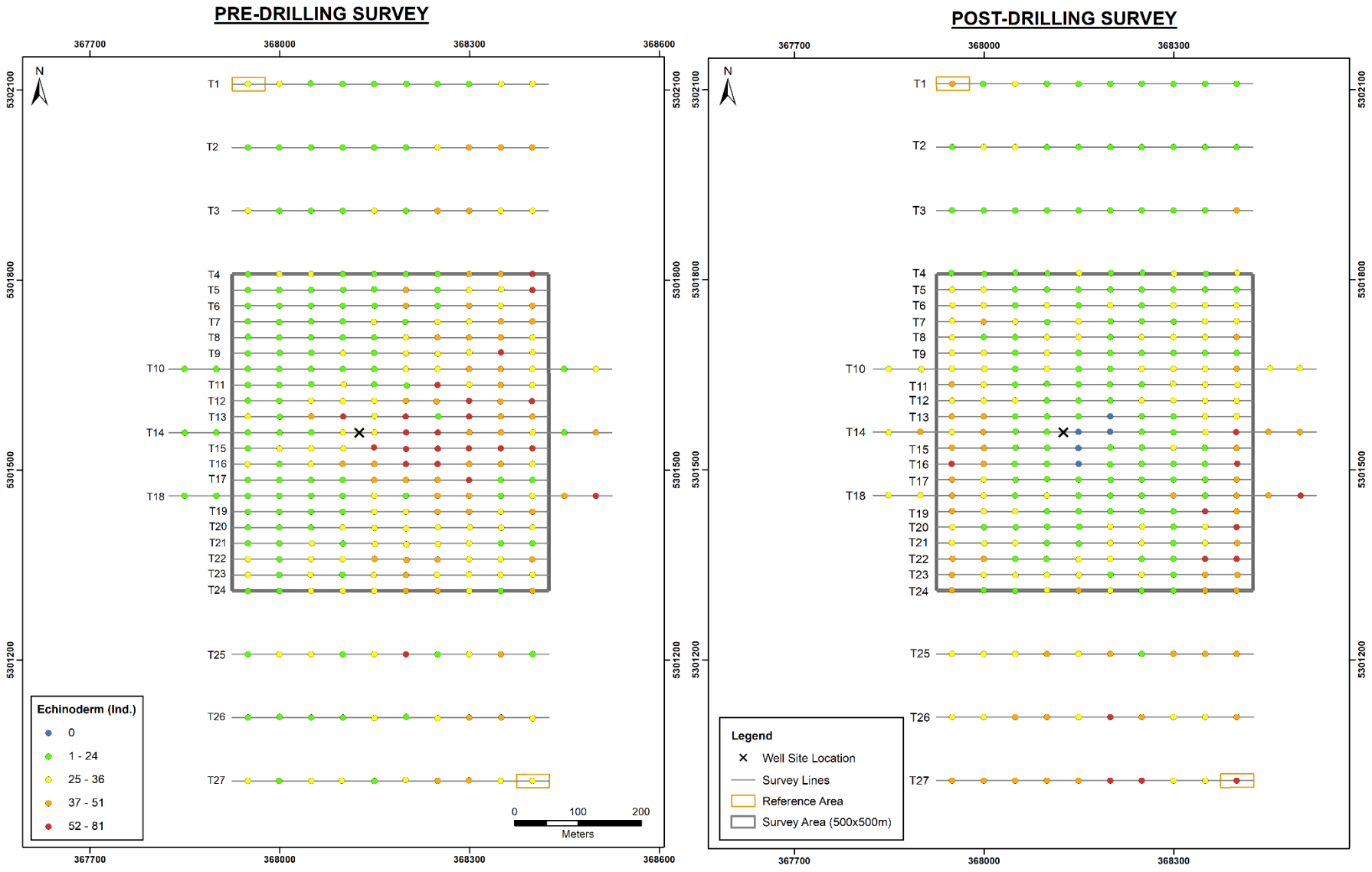

Figure G-5 Echinoderm abundance (individuals) observed in the Sitka, pre- and post-drilling surveys.

APPENDIX

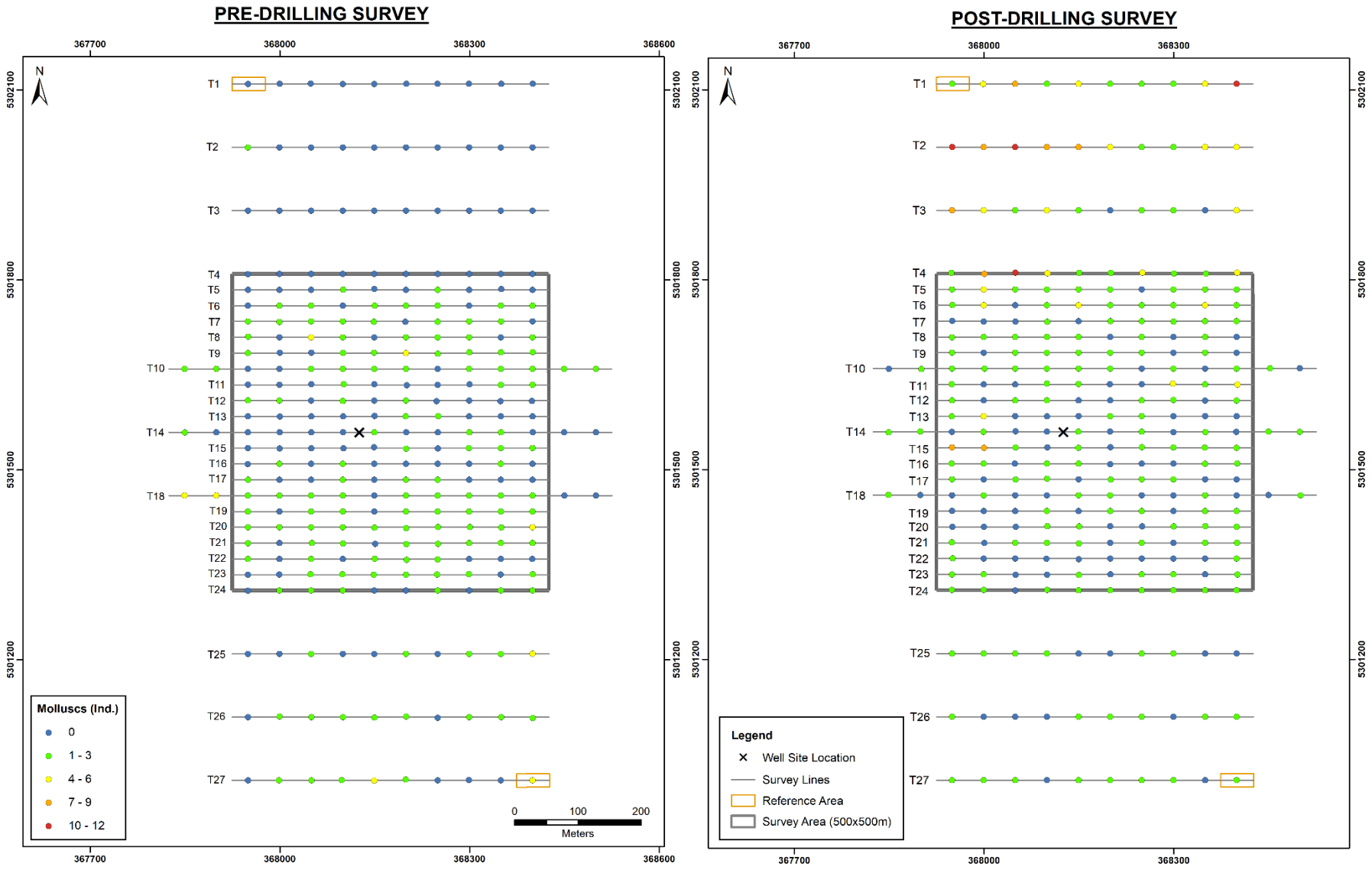

Figure G-6 Molluscs abundance (individuals) observed in the Sitka, pre- and post-drilling surveys.

APPENDIX

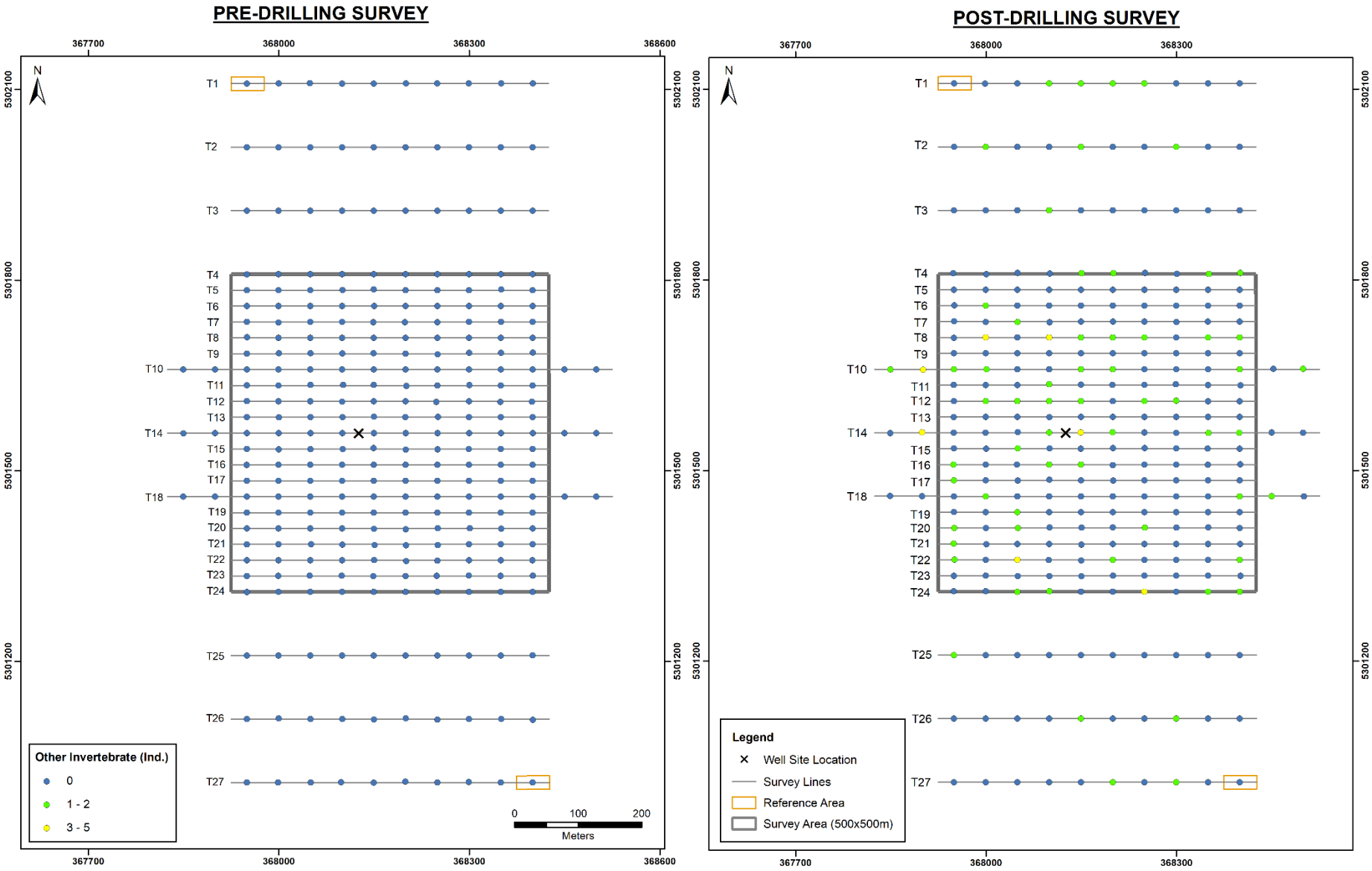

Figure G-7 Other Invertebrate abundance (individuals) observed in the Sitka, pre- and post-drilling surveys.

APPENDIX

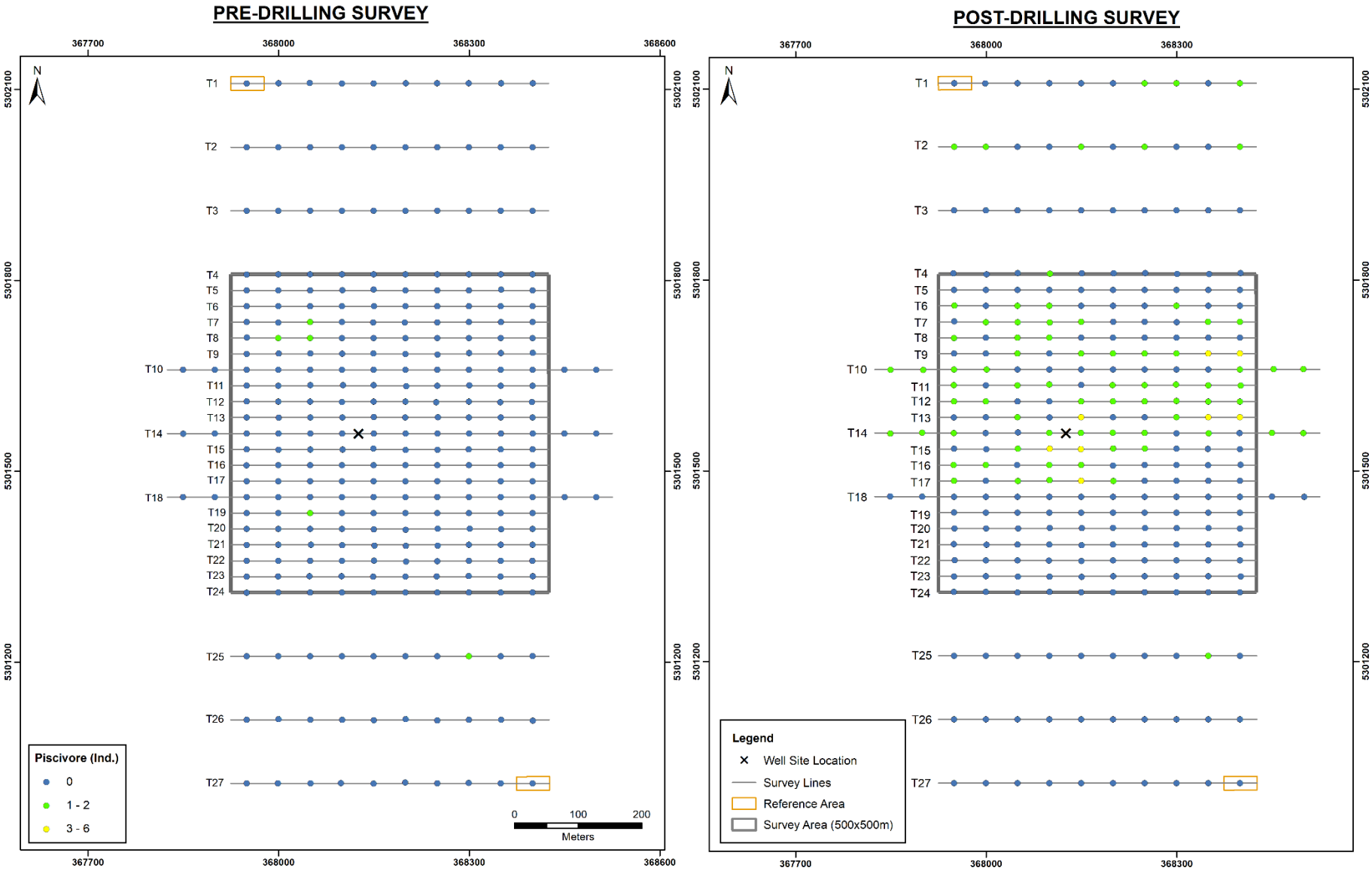

Figure G-8 Piscivores abundance (individuals) observed in the Sitka, pre- and post-drilling surveys.

APPENDIX

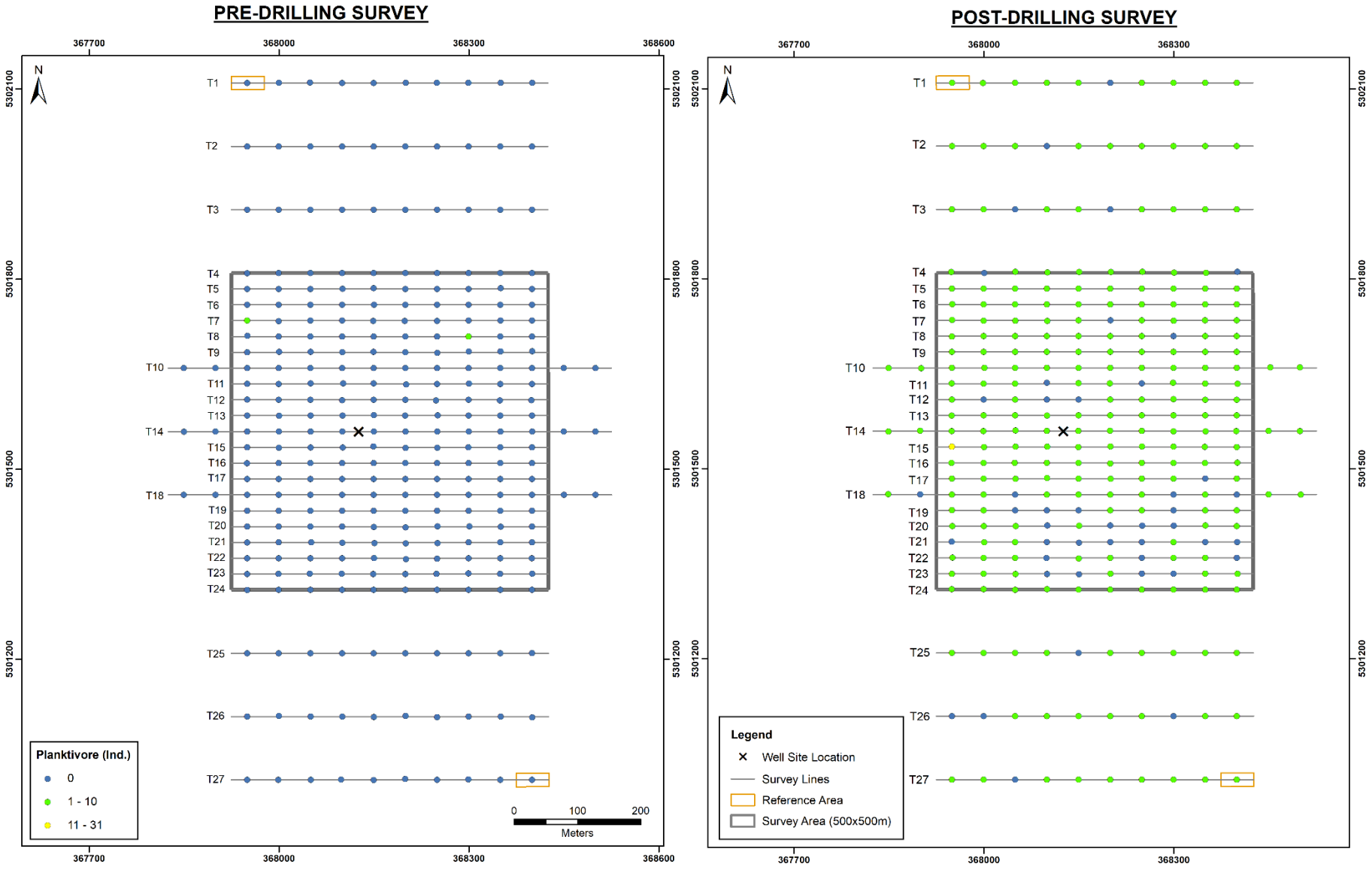

Figure G-9 Planktivore abundance (individuals) observed in the Sitka, pre- and post-drilling surveys.

APPENDIX

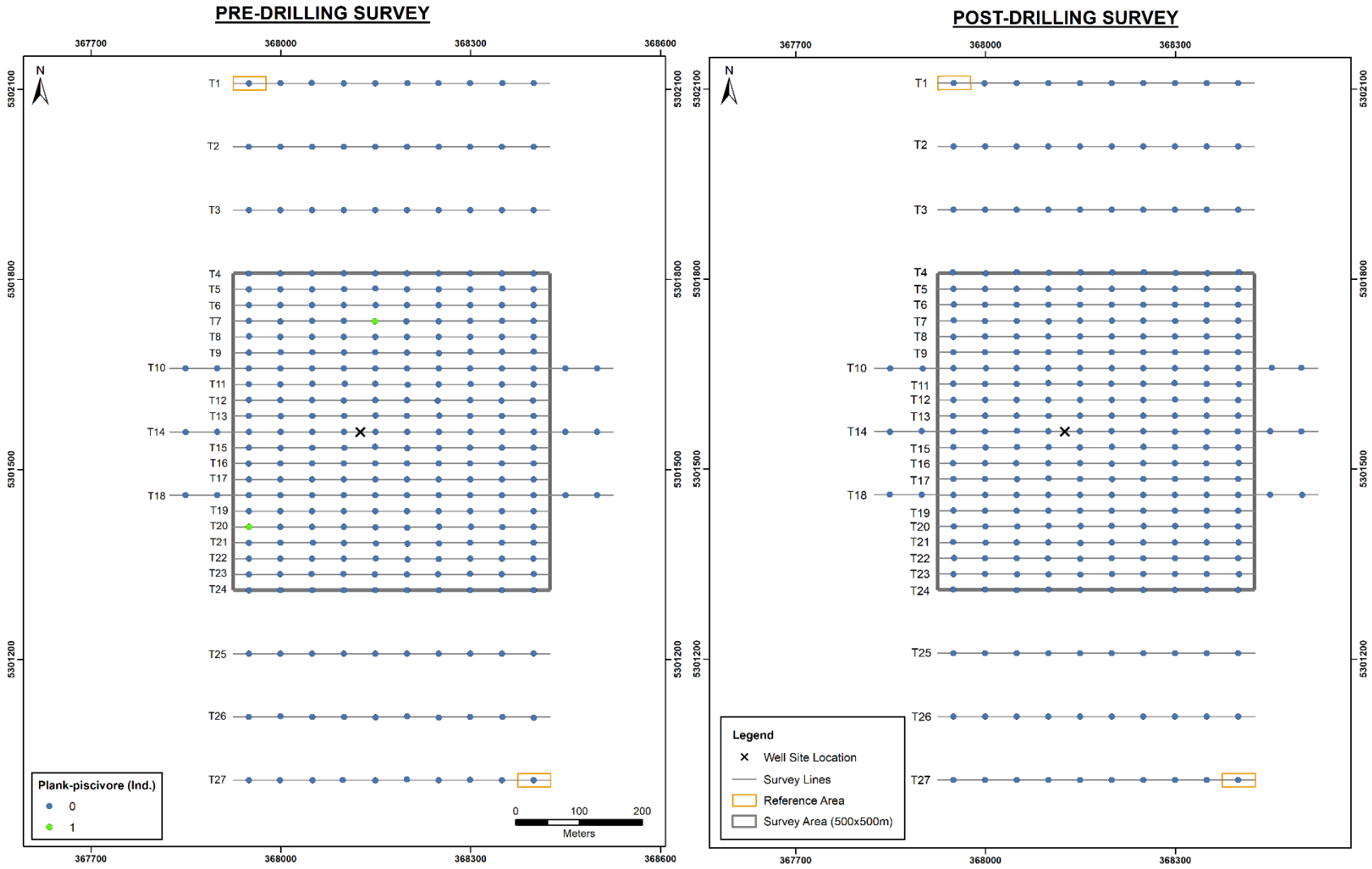

Figure G-10 Plank-piscivore abundance (individuals) observed in the Sitka, pre- and post-drilling surveys.

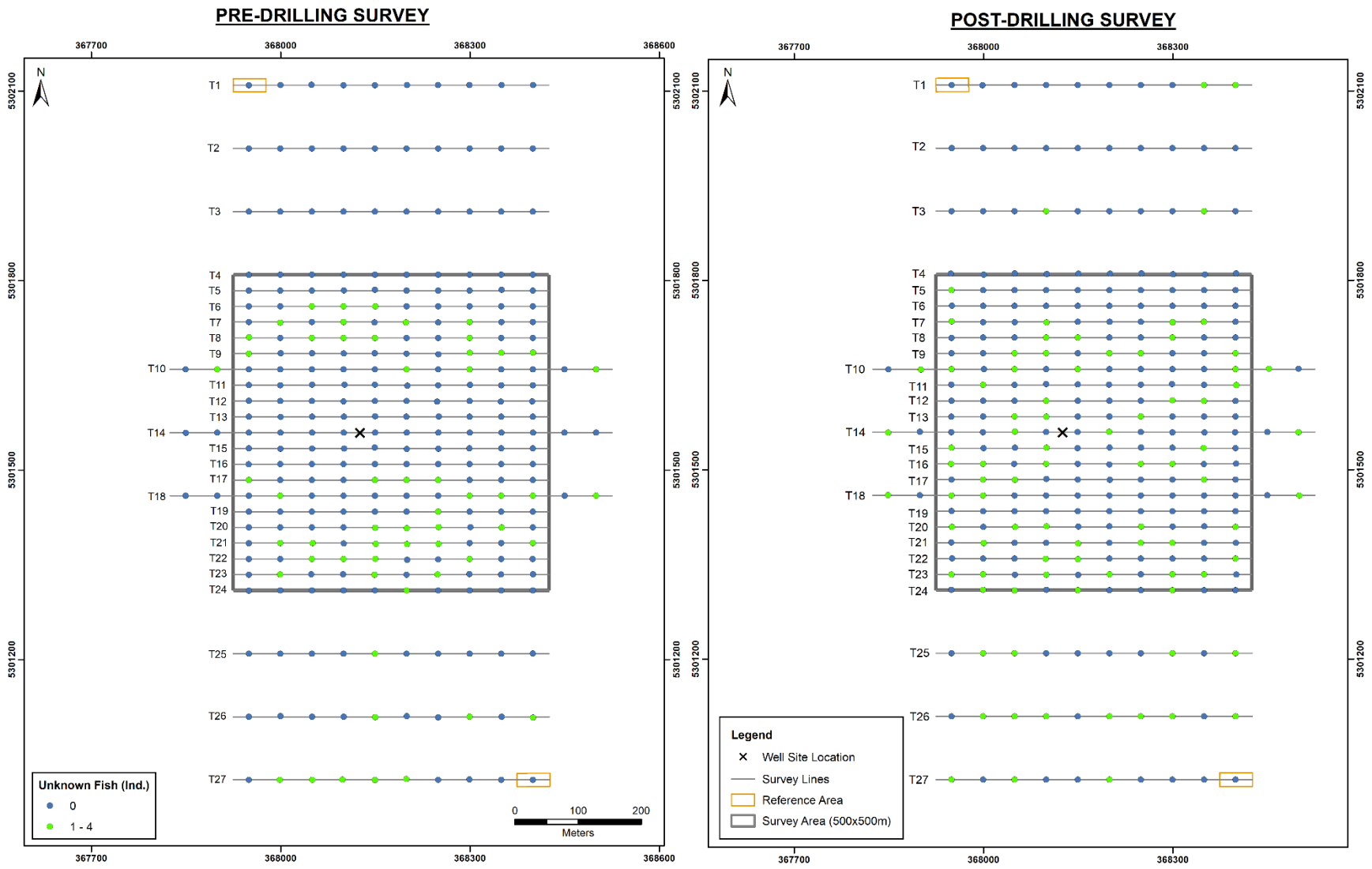

Figure G-11 **Unknown Fish abundance (individuals) observed in the Sitka, pre- and post-drilling surveys.**

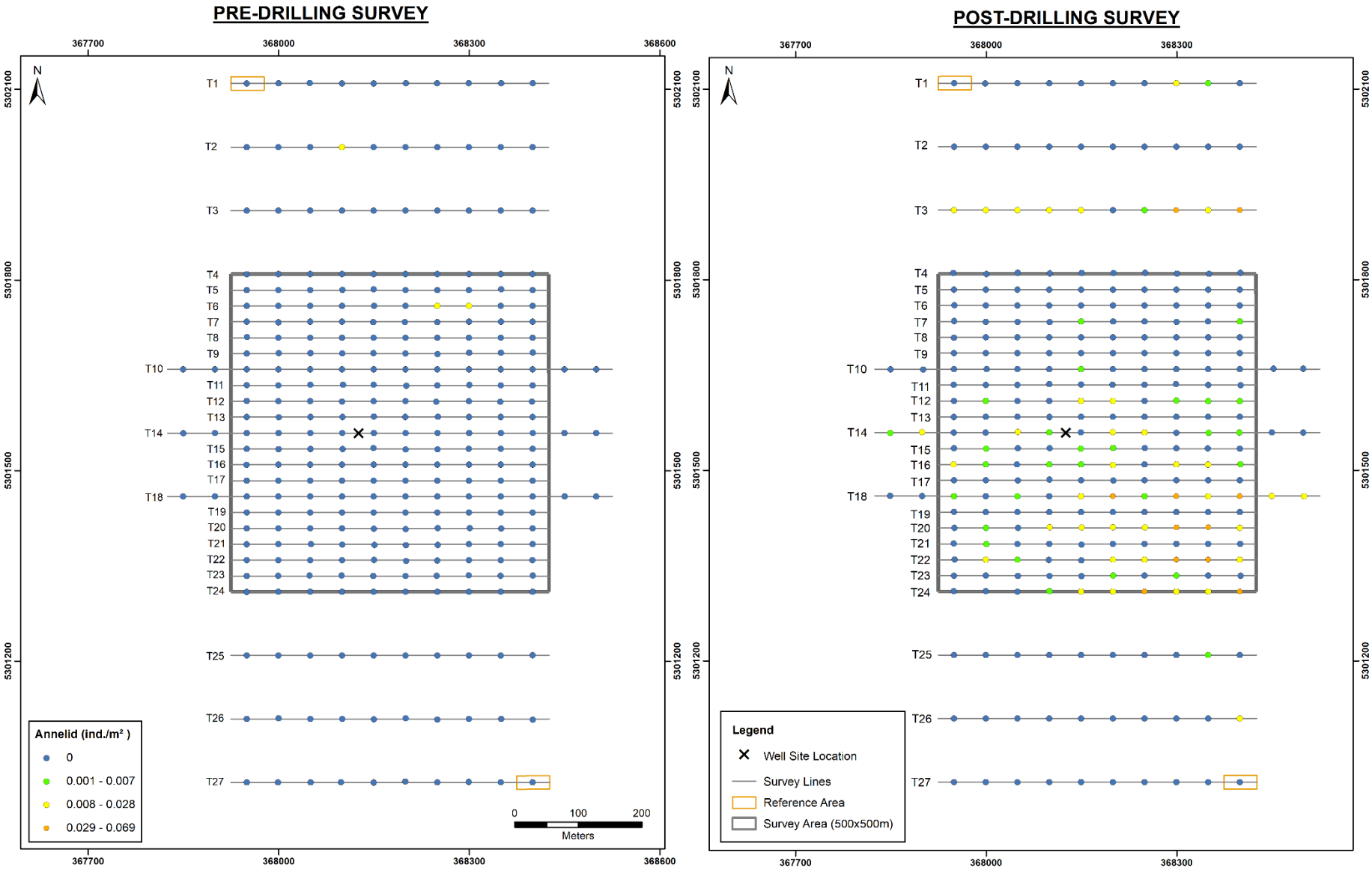

Figure G-12 Annelid density (individuals/m²) observed in the Sitka, pre- and post-drilling surveys.

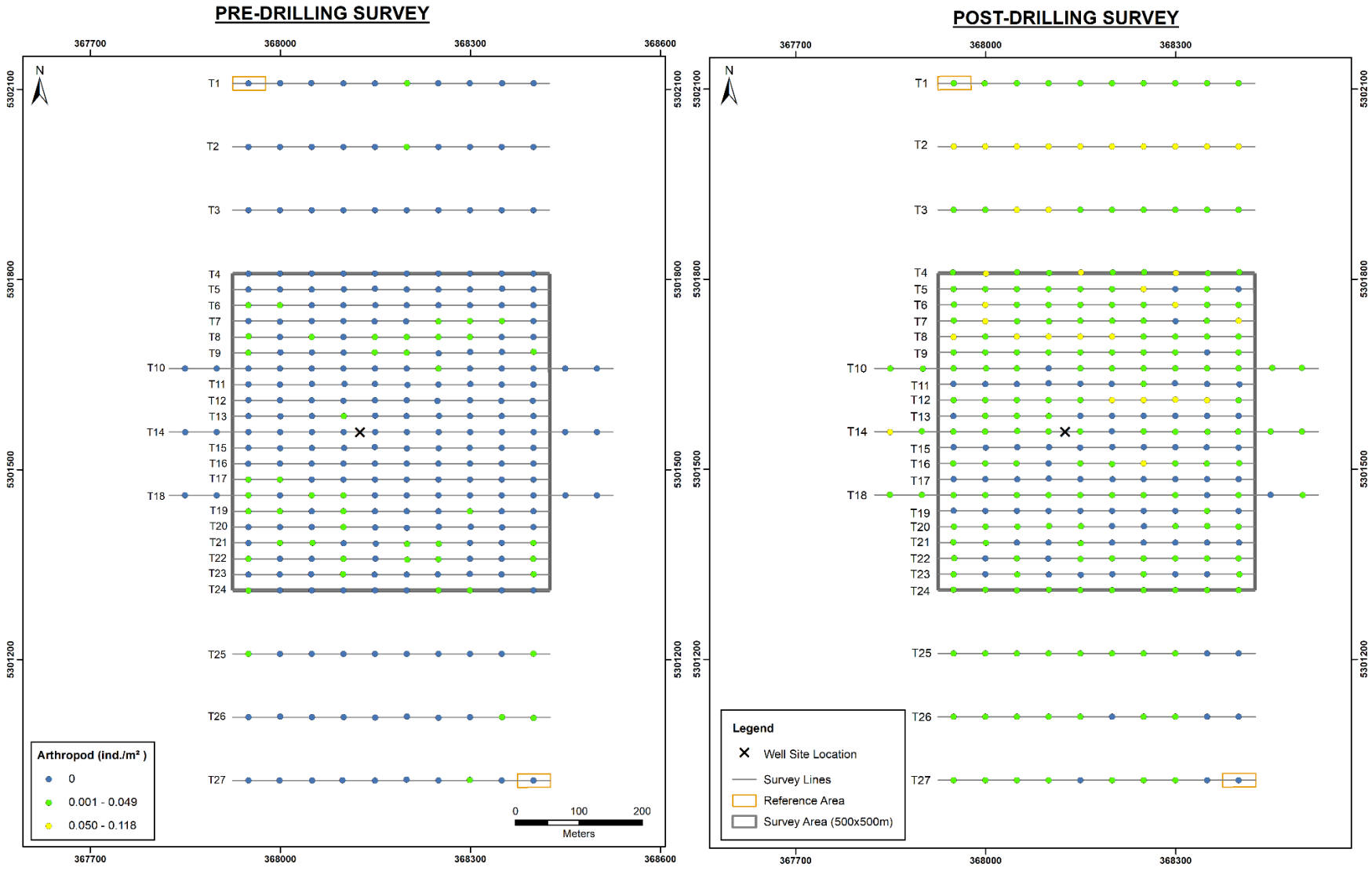

Figure G-13 Arthropod density (individuals/m²) observed in the Sitka, pre- and post-drilling surveys.

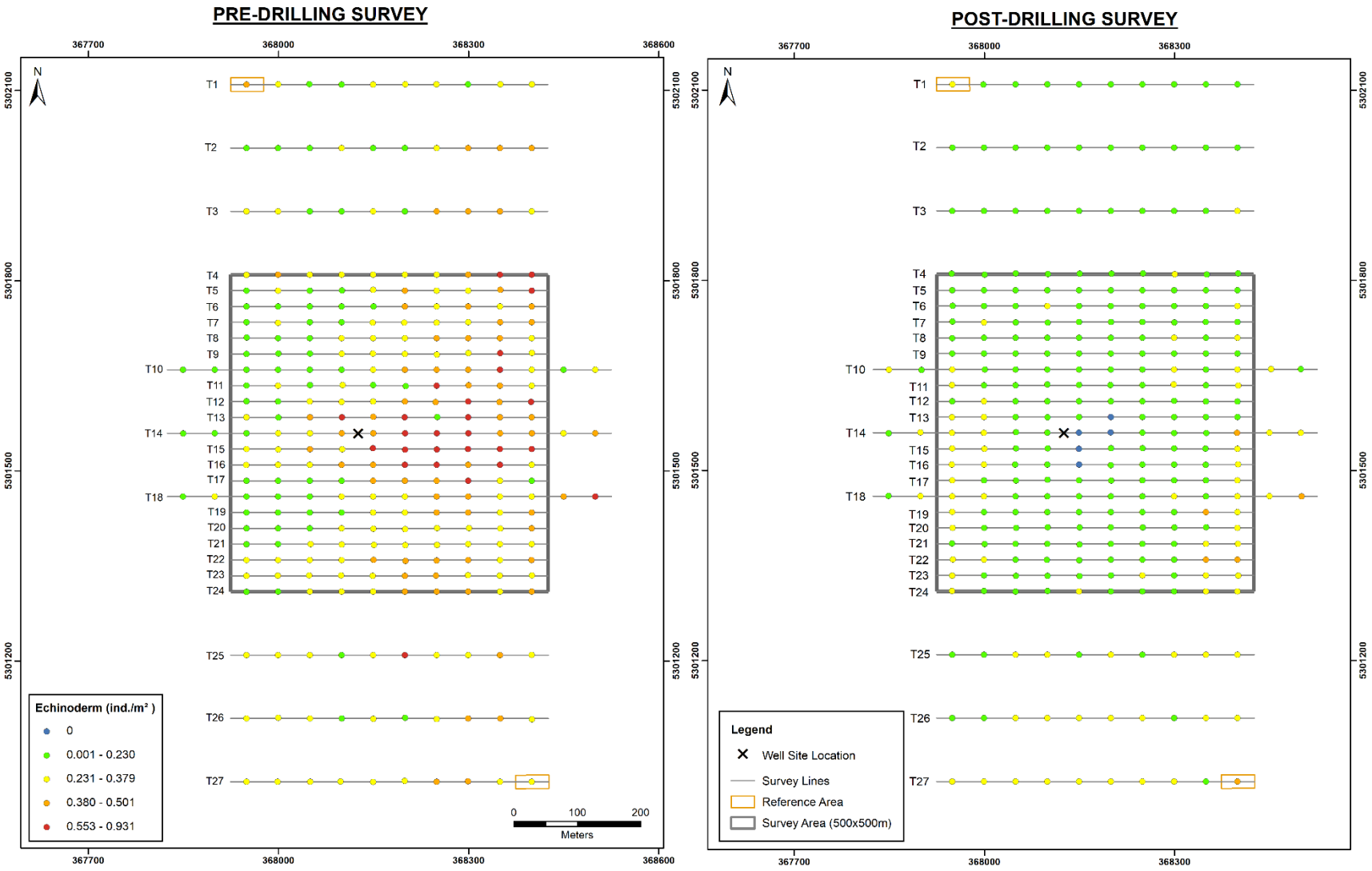

Figure G-14 **Echinoderm density (individuals/m²) observed in the Sitka, pre- and post-drilling surveys.**

APPENDIX

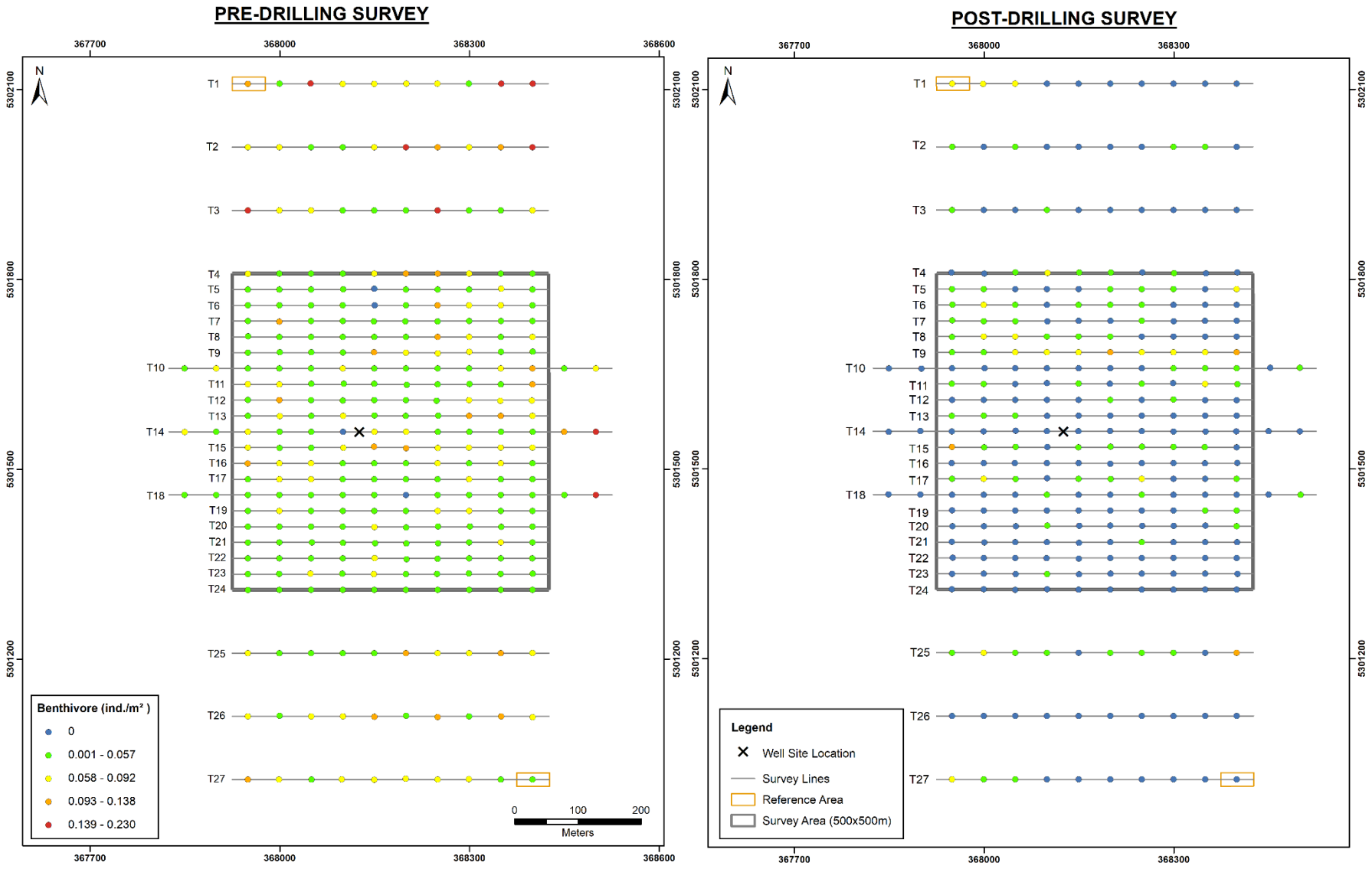

Figure G-15 **Benthivore density (individuals/m²) observed in the Sitka, pre- and post-drilling surveys.**

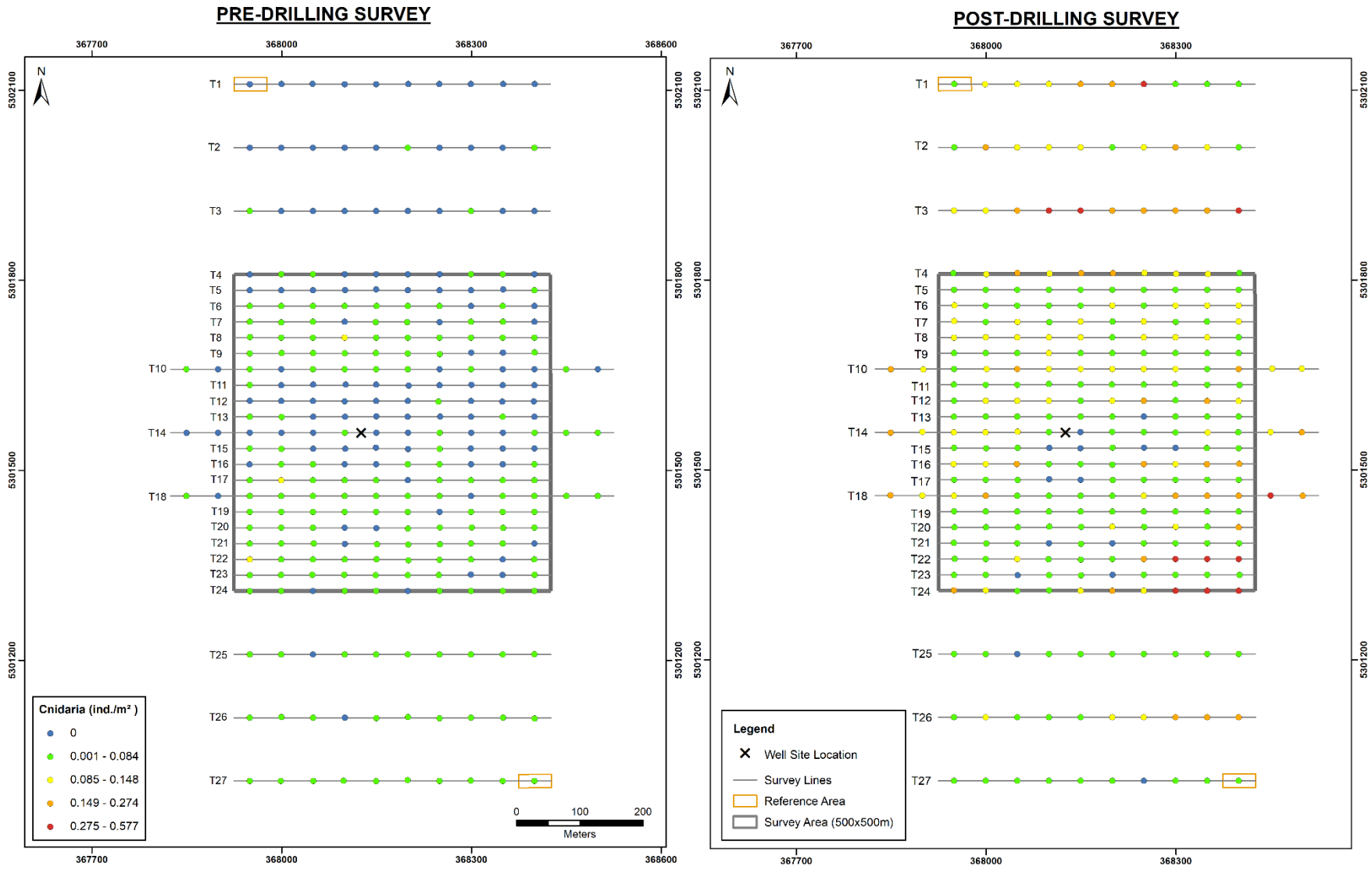

Figure G-16 **Cnidaria density (individuals/m²) observed in the Sitka, pre- and post-drilling surveys.**

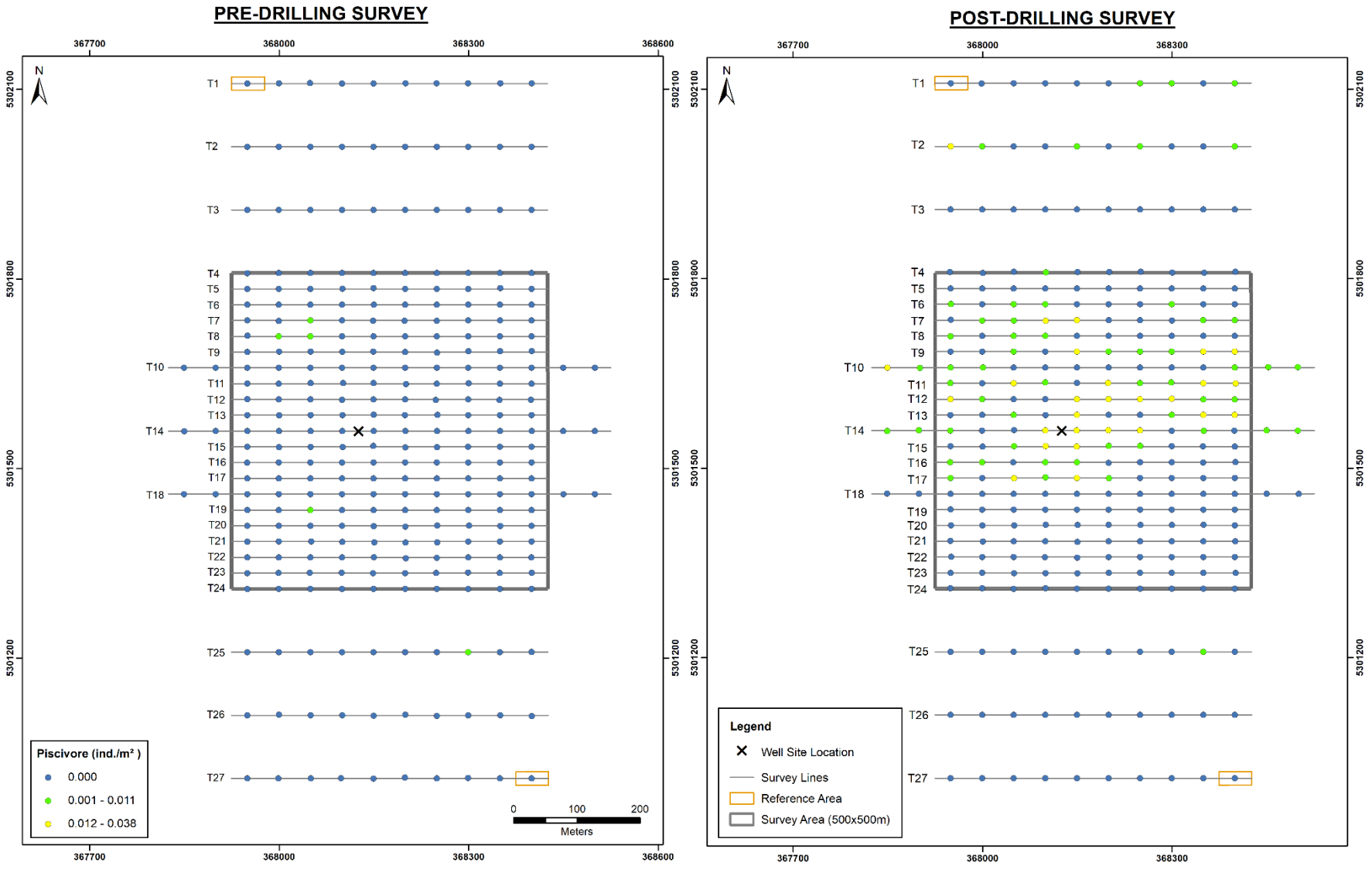

Figure G-17 Piscivore density (individuals/m²) observed in the Sitka, pre- and post-drilling surveys.

APPENDIX

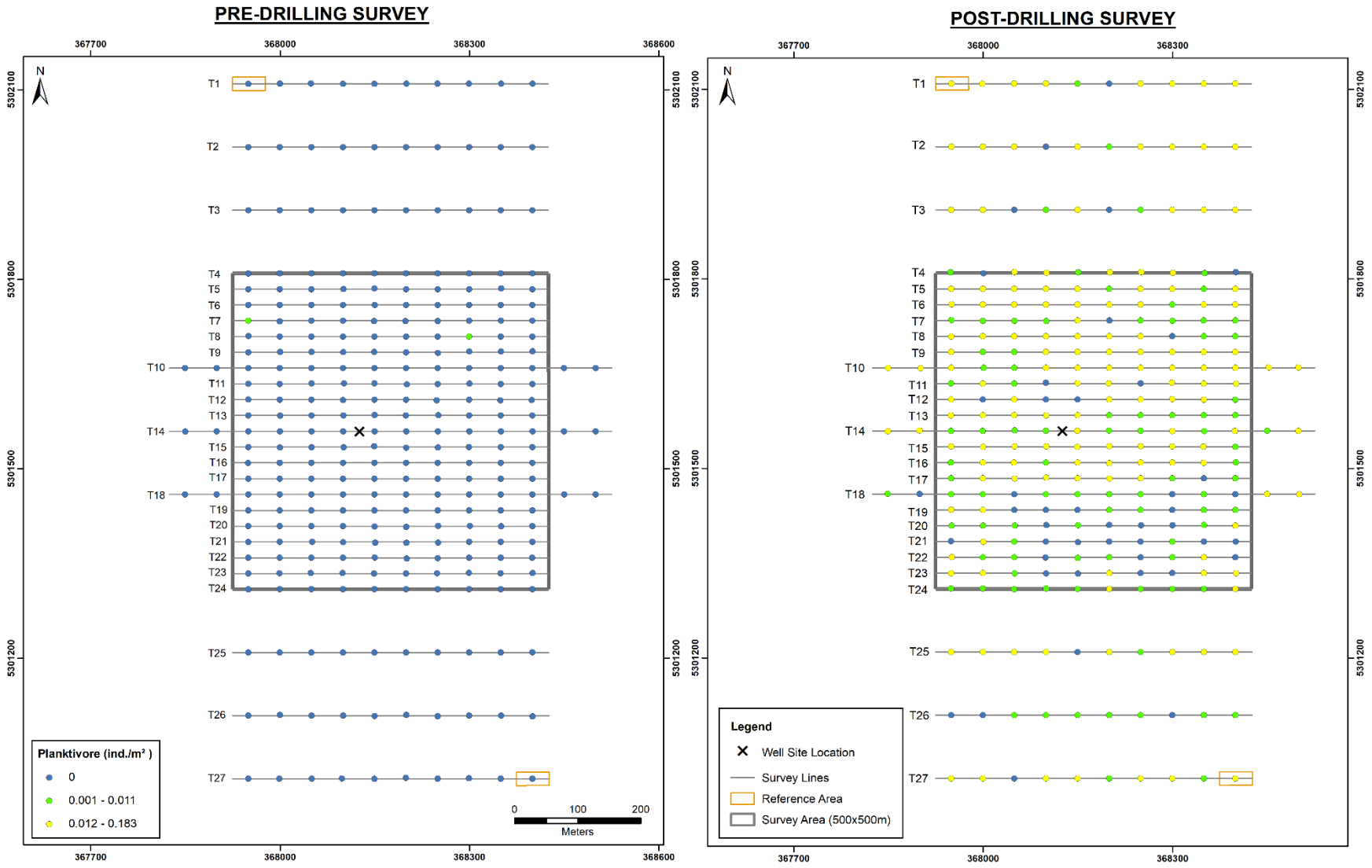

Figure G-18 **Planktivore density (individuals/m²) observed in the Sitka, pre- and post-drilling surveys.**

APPENDIX

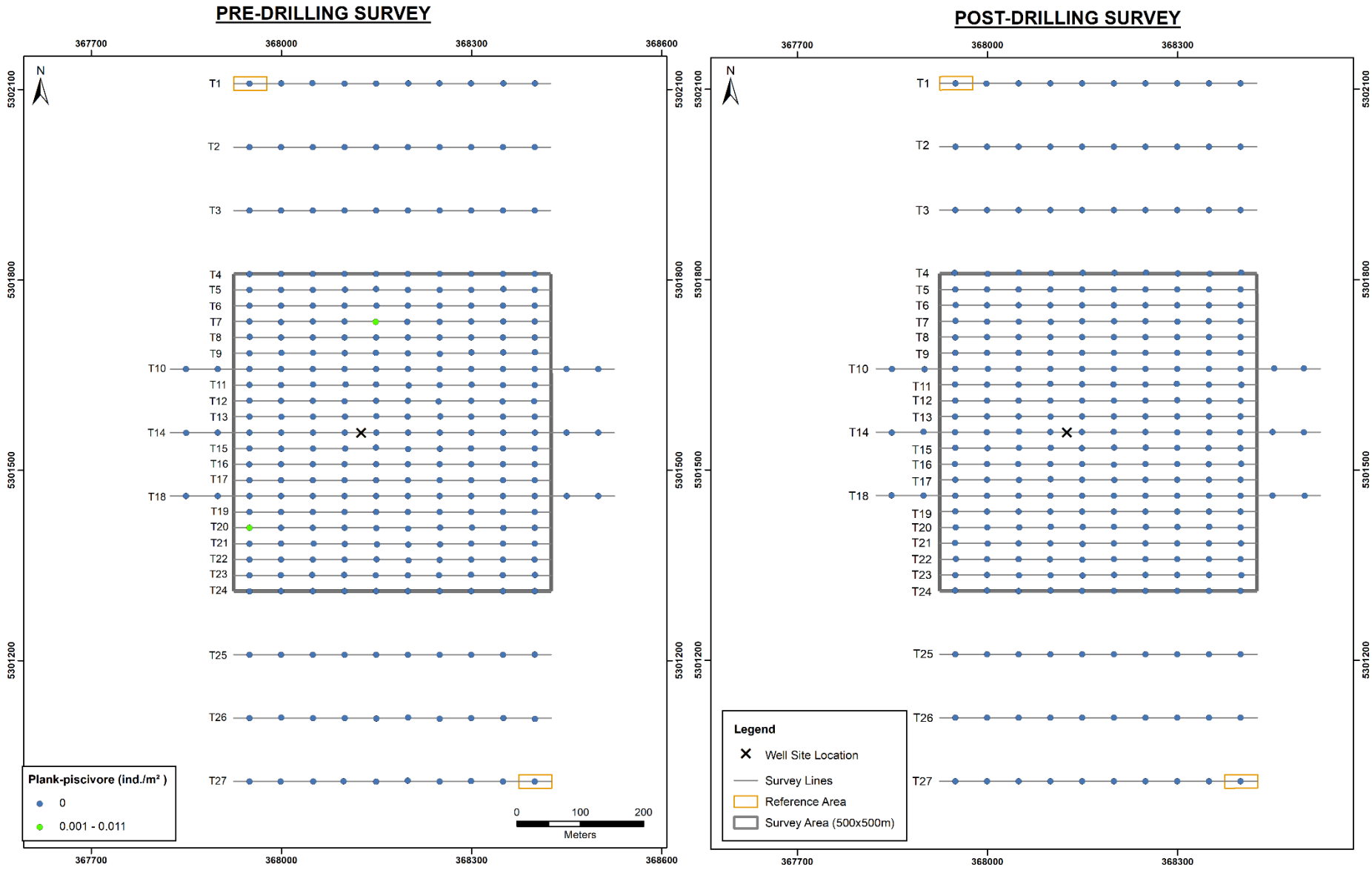

Figure G-19 **Plank-piscivore density (individuals/m²) observed in the Sitka, pre- and post-drilling surveys.**

APPENDIX

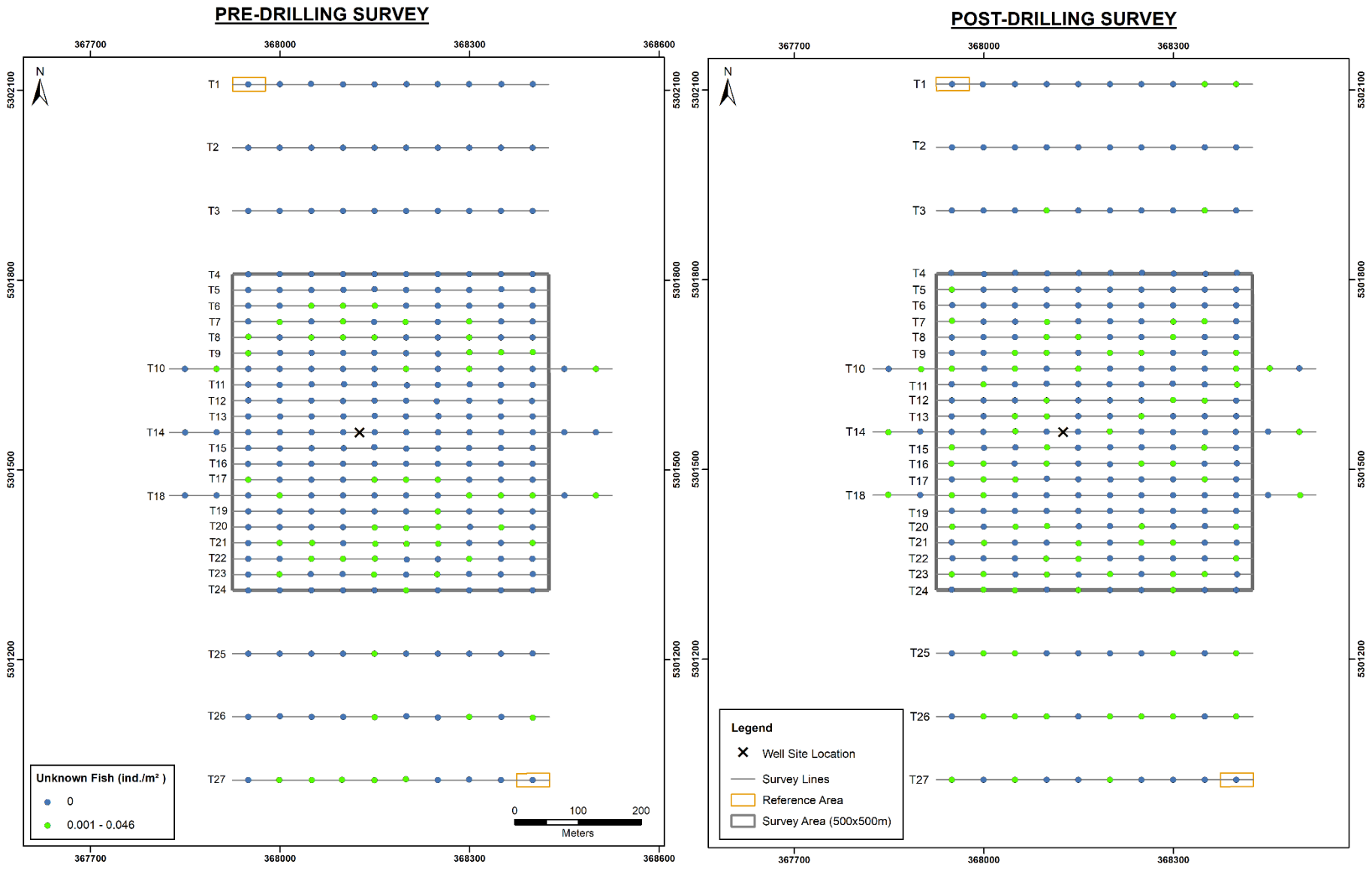

Figure G-20 **Unknown Fish density (individuals/m²) observed in the Sitka, pre- and post-drilling surveys.**

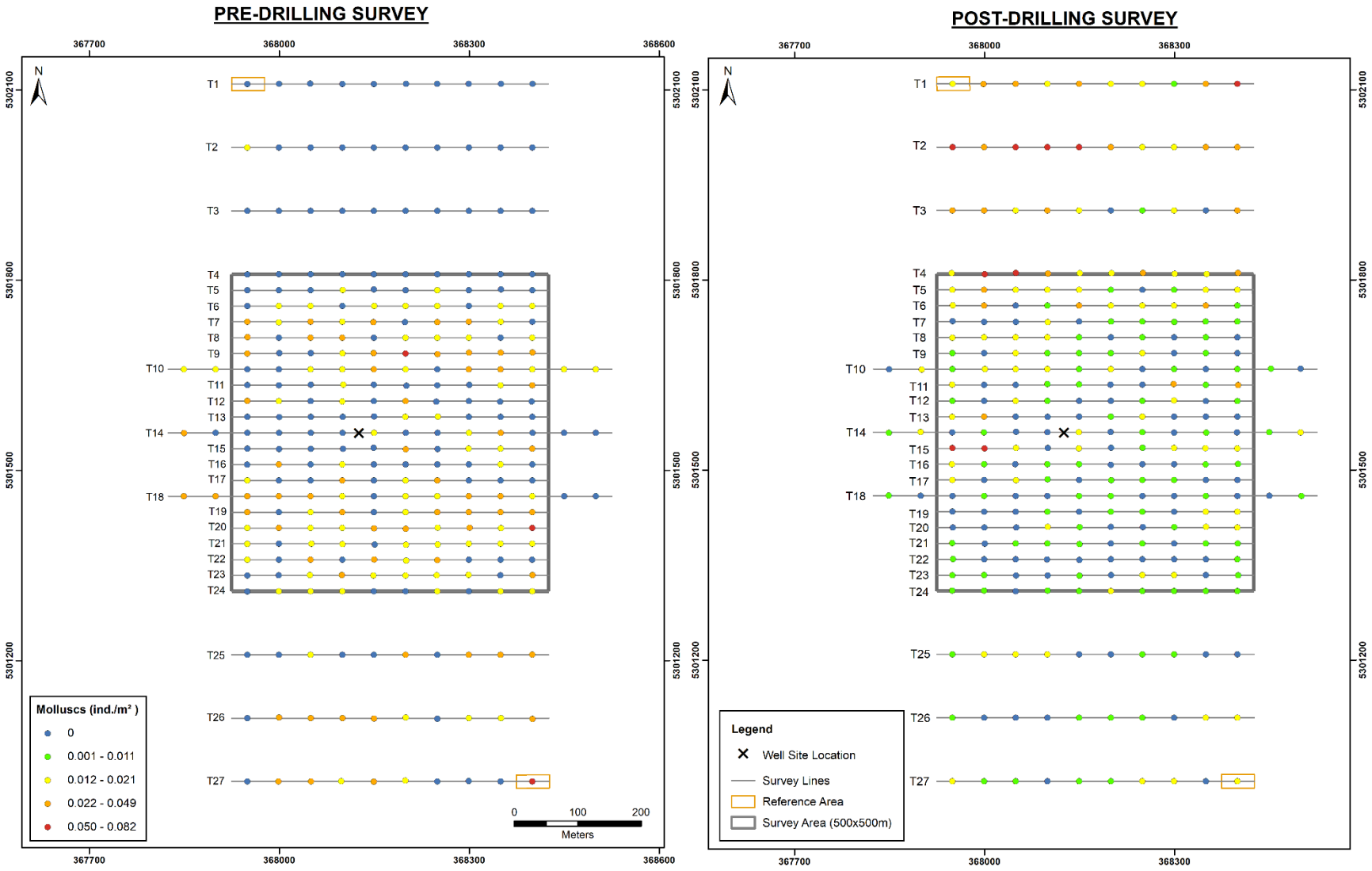

Figure G-21 **Mollusc density (individuals/m²) observed in the Sitka, pre- and post-drilling surveys.**

APPENDIX

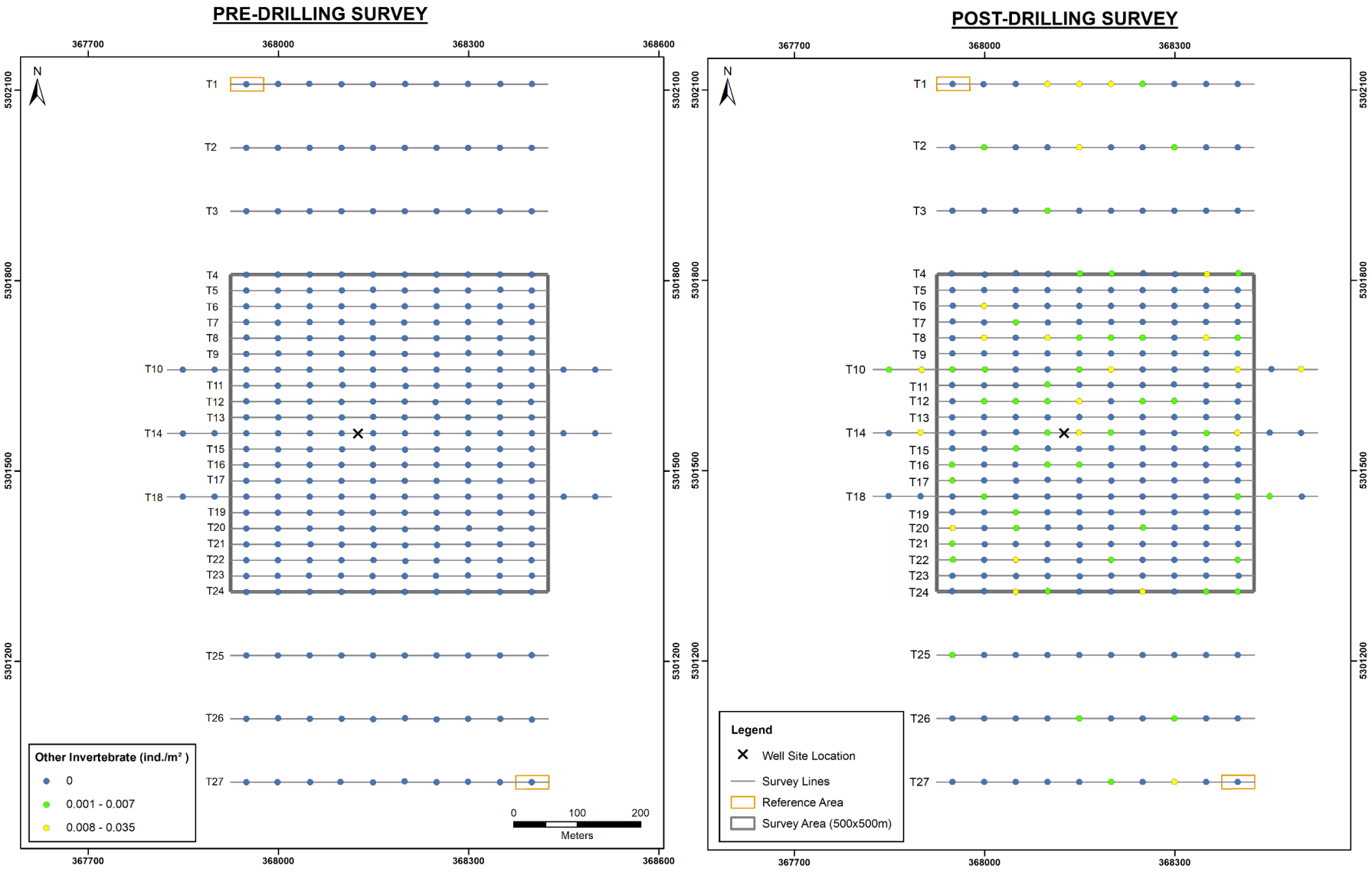

Figure G-22 Other Invertebrate density (individuals/m²) observed in the Sitka, pre- and post-drilling surveys.

APPENDIX

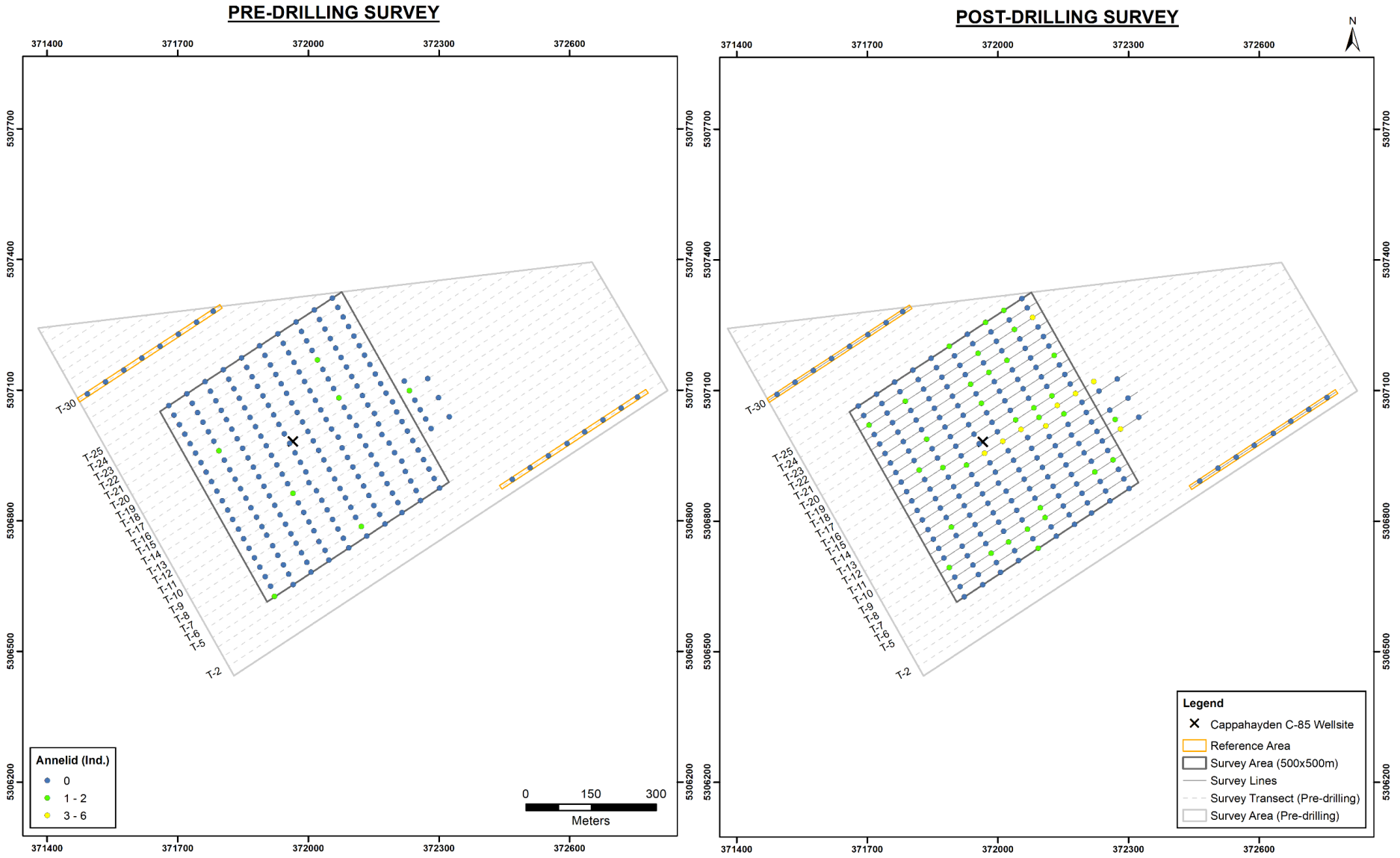

Figure G-23 Annelid abundance (individuals) observed in the Cappahayden, pre- and post-drilling surveys.

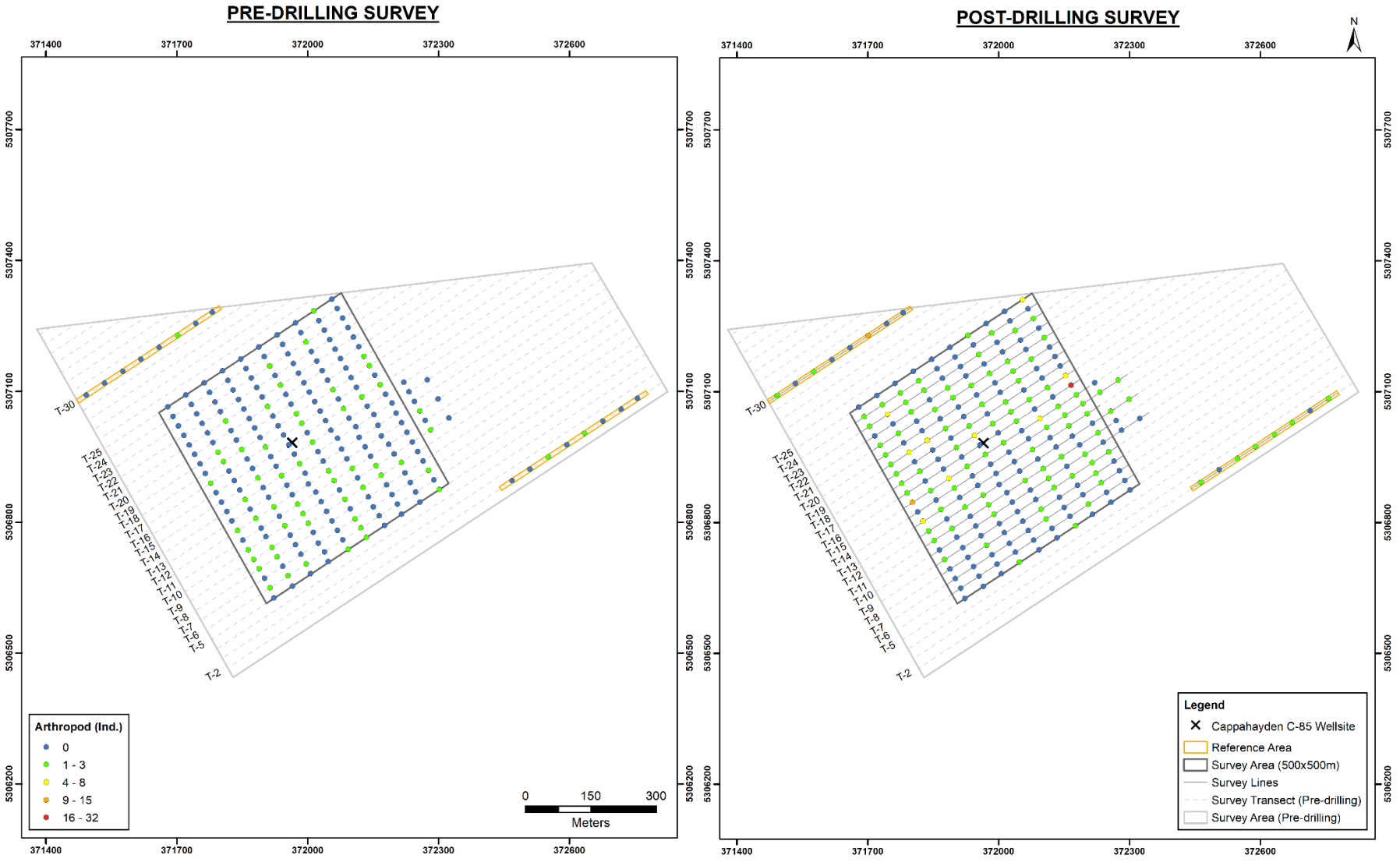

Figure G-24 Arthropod abundance (individuals) observed in the Cappahayden, pre- and post-drilling surveys.

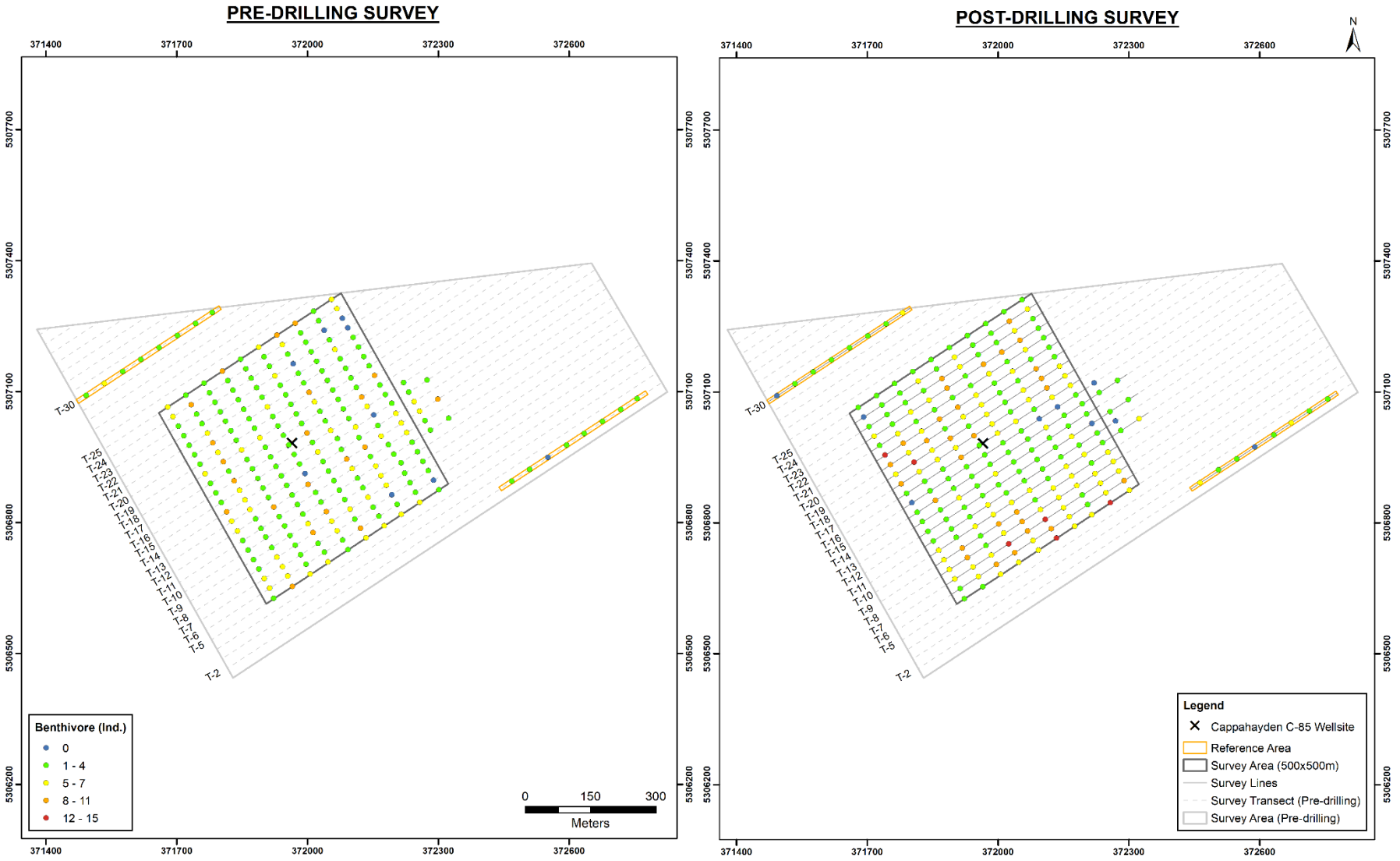

Figure G-25 Benthivore abundance (individuals) observed in the Cappahayden, pre- and post-drilling surveys.

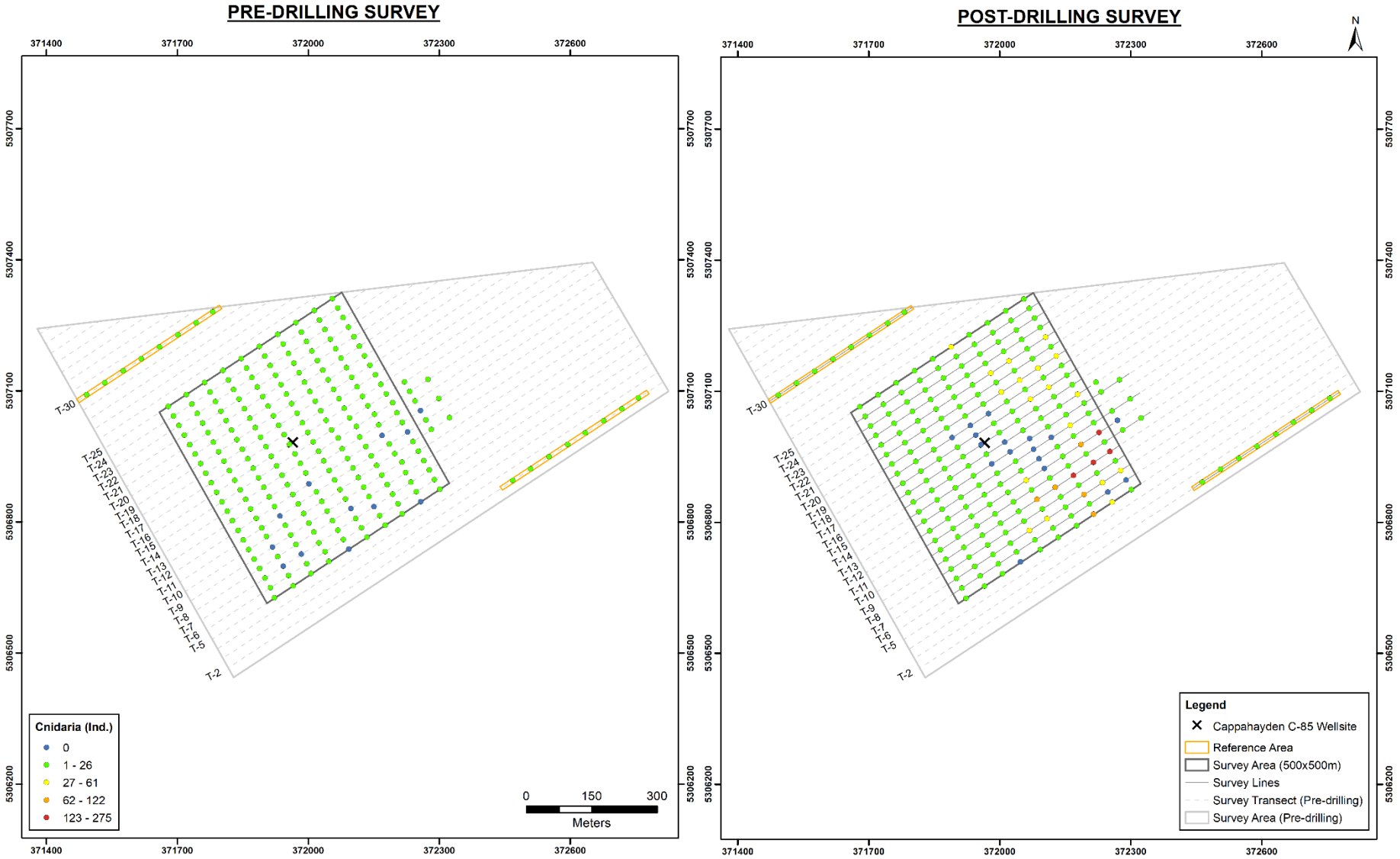

Figure G-26 Cnidaria abundance (individuals) observed in the Cappahayden, pre- and post-drilling surveys.

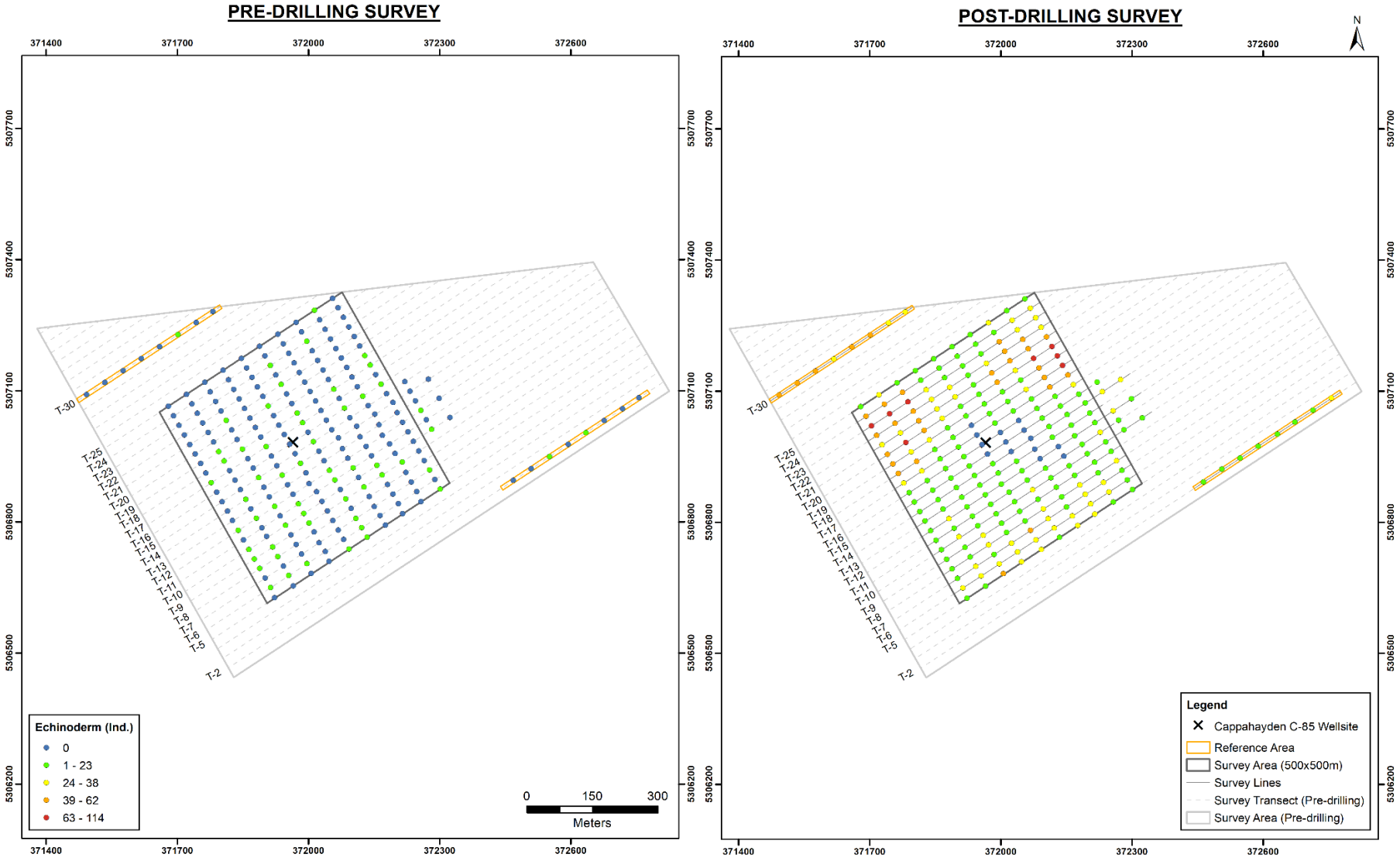

Figure G-27 Echinoderm abundance (individuals) observed in the Cappahayden, pre- and post-drilling surveys.

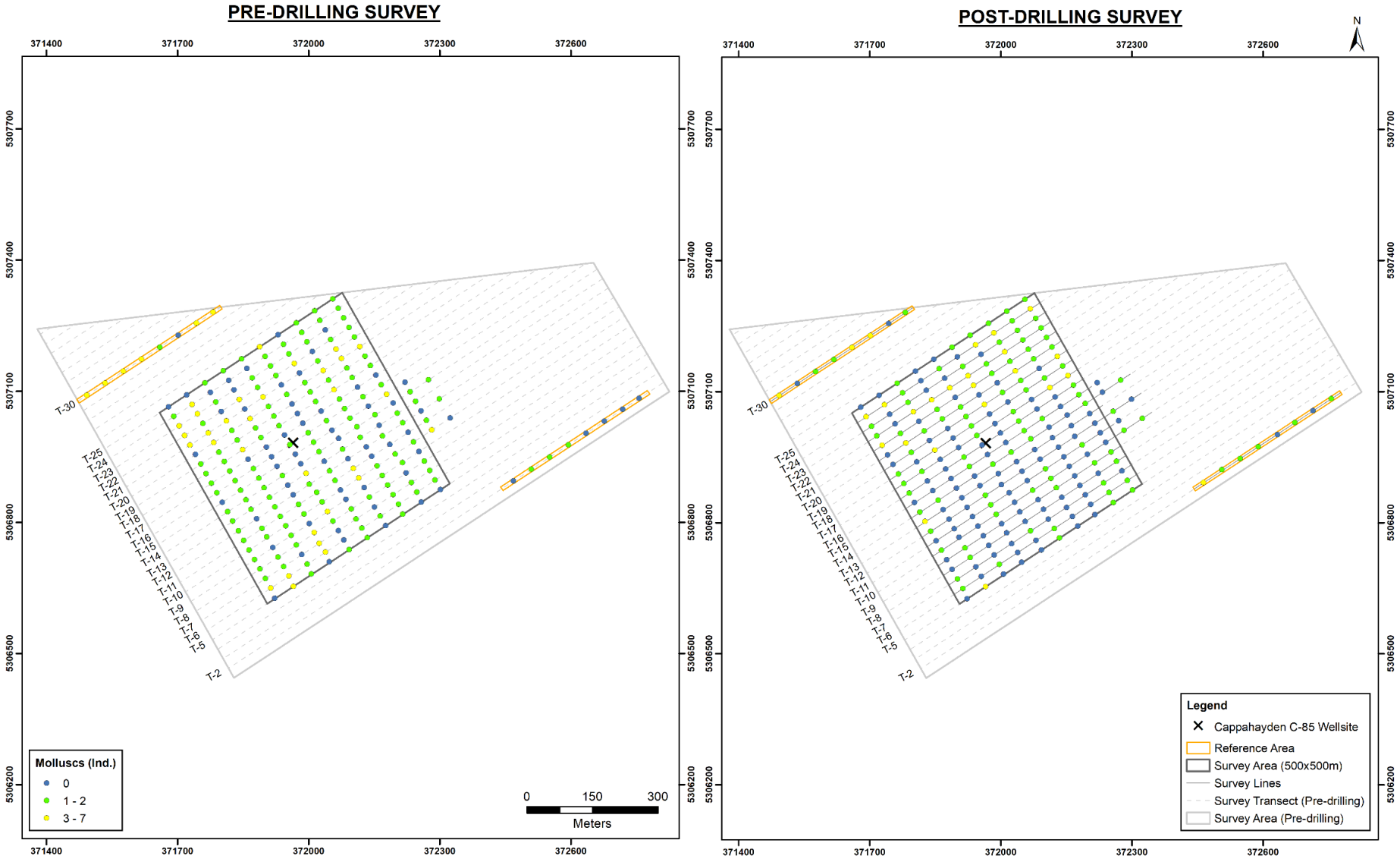

Figure G-28 Mollusc abundance (individuals) observed in the Cappahayden, pre- and post-drilling surveys.

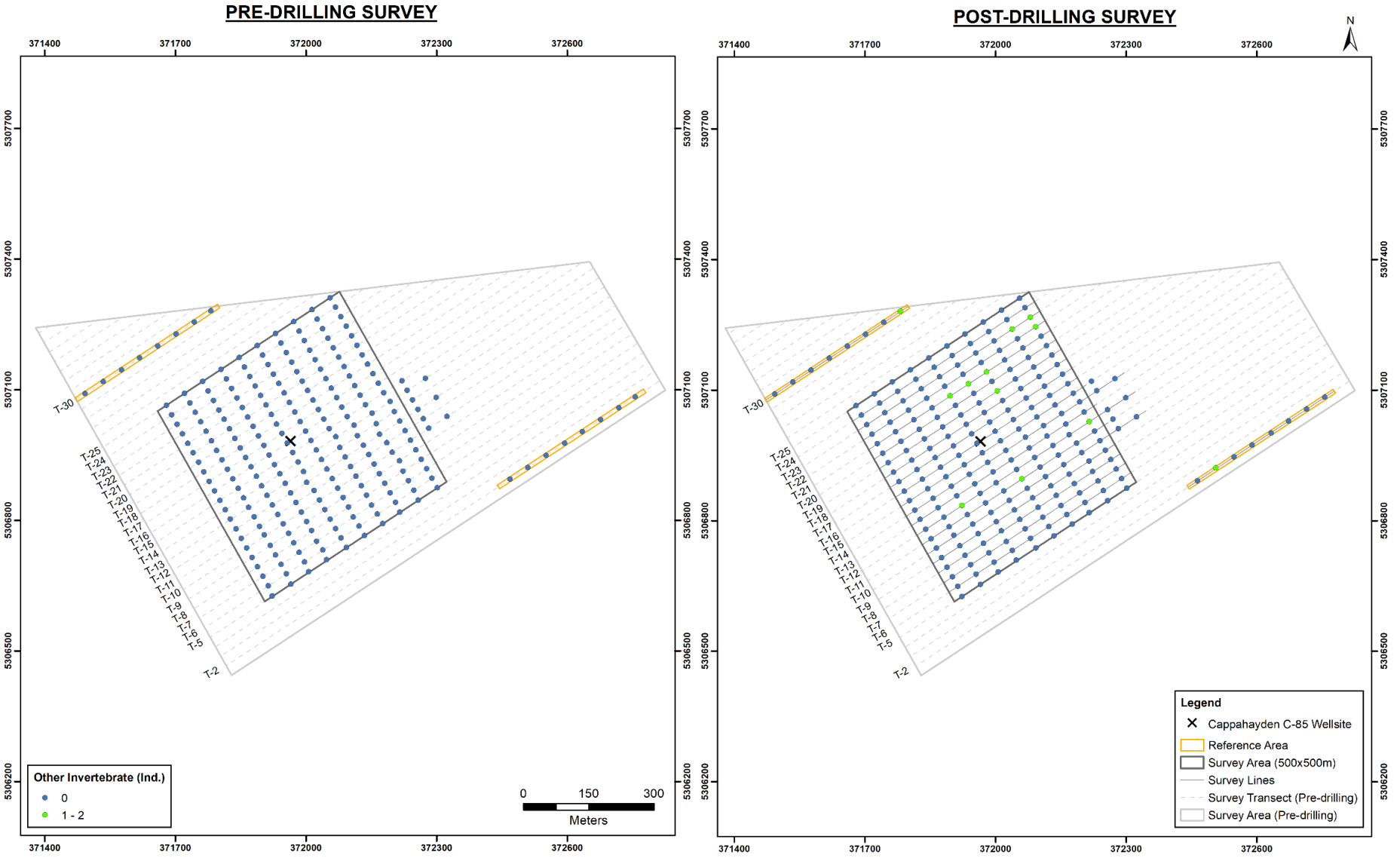

Figure G-29 Other Invertebrates (individuals) observed in the Cappahayden, pre- and post-drilling surveys.

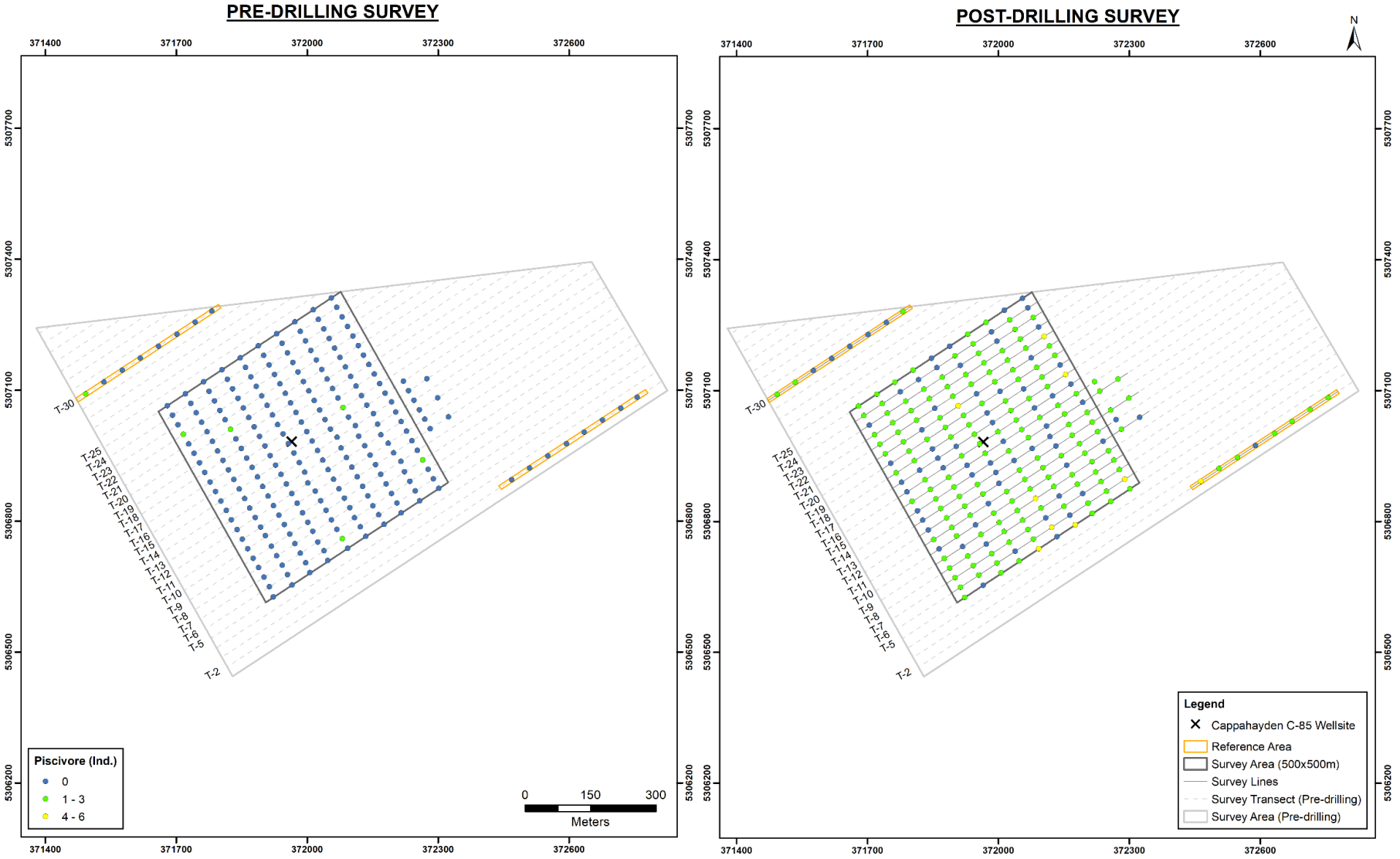

Figure G-30 Piscivore abundance (individuals) observed in the Cappahayden, pre- and post-drilling survey.

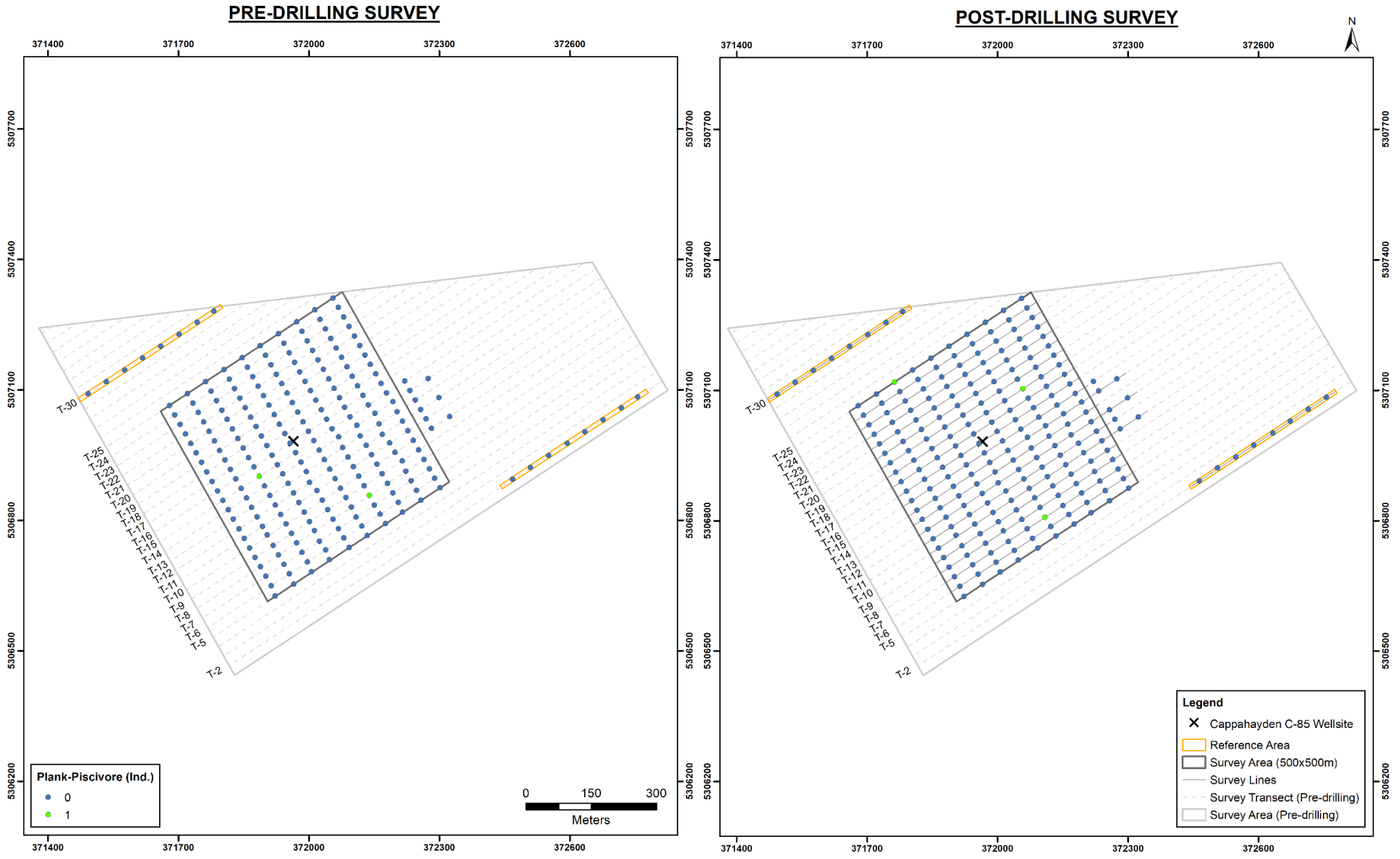

Figure G-31 Plank-Piscivores abundance (individuals) observed in the Cappahayden, pre- and post-drilling surveys.

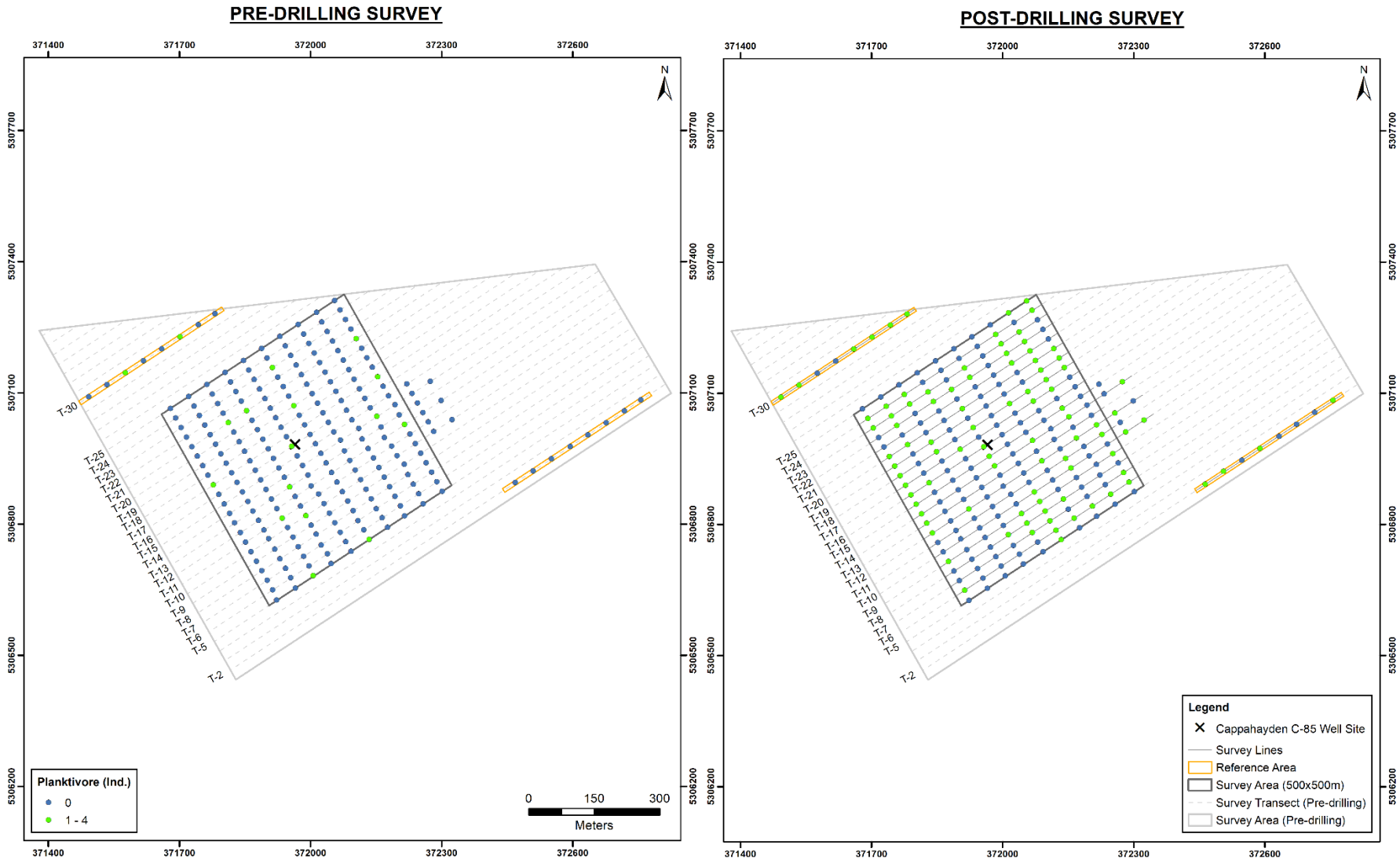

Figure G-32 **Planktivore abundance (individuals) observed in the Sitka, pre- and post-drilling surveys.**

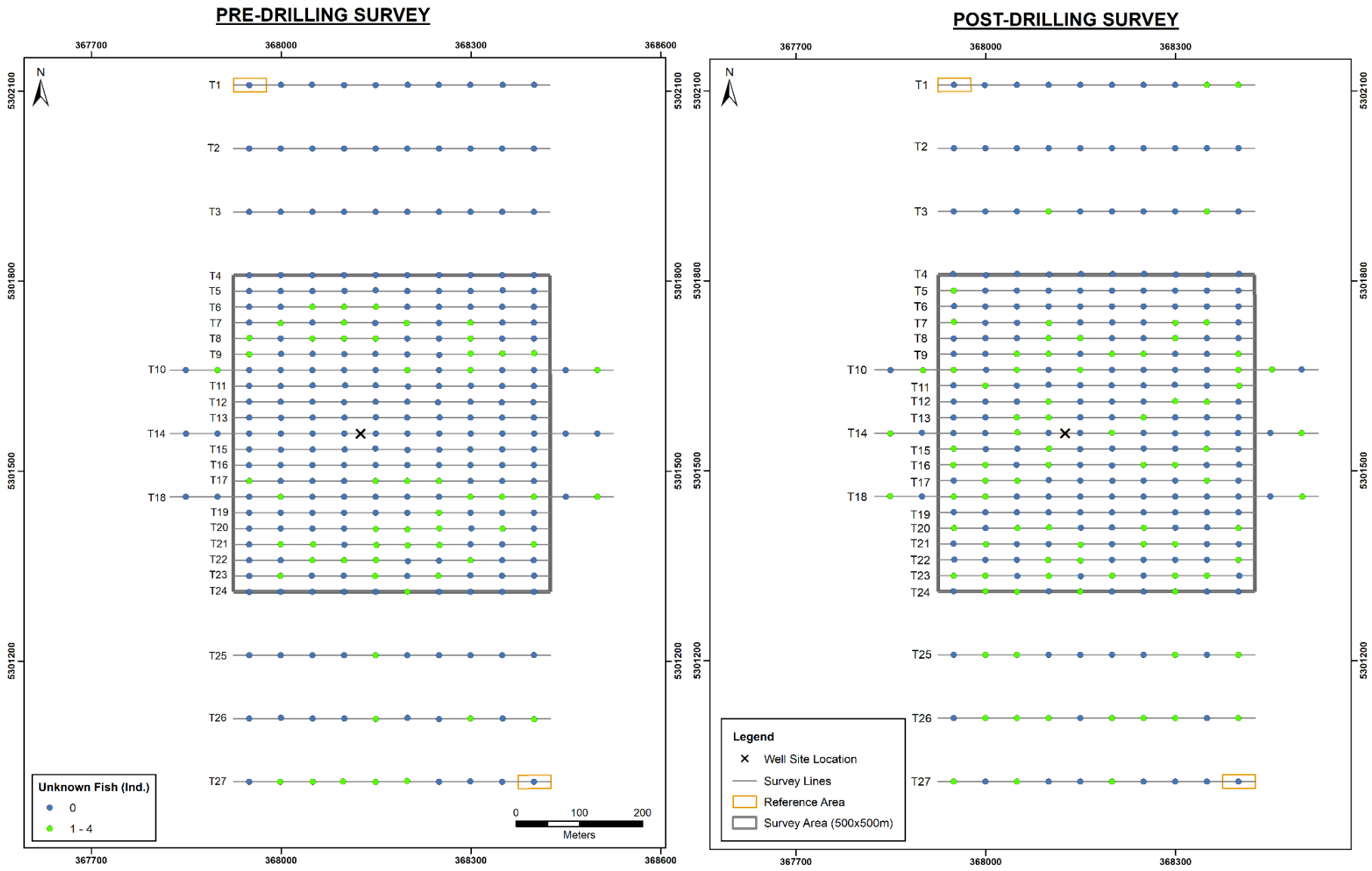

Figure G-33 Unknown Fish abundance (individuals) observed in the Cappahayden, pre- and post-drilling surveys.

APPENDIX

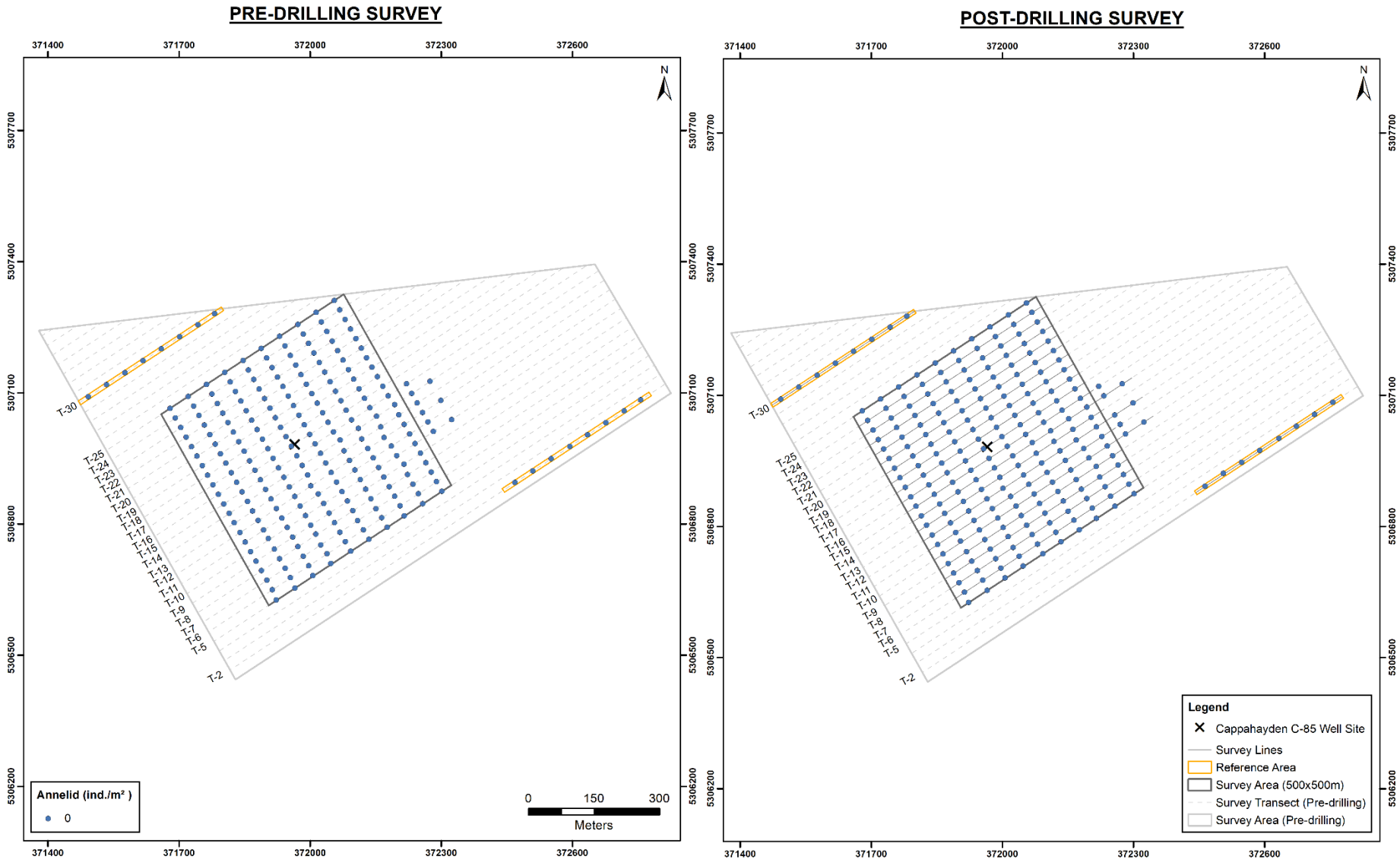
PRE-DRILLING SURVEY
POST-DRILLING SURVEY
371400
371700
372000
372300
372600
5307700
5307400
5307100
5306800
5306500
5306200
N
T-30
T-25
T-24
T-23
T-22
T-21
T-20
T-19
T-18
T-17
T-16
T-15
T-14
T-13
T-12
T-11
T-10
T-9
T-8
T-7
T-6
T-5
T-2
Annelid (ind./m²)
0
0
150
300
Meters
Legend
Cappahayden C-85 Well Site
Survey Lines
Reference Area
Survey Area (500x500m)
Survey Transect (Pre-drilling)
Survey Area (Pre-drilling)

Figure G-34 Annelid density (individuals/m²) observed in the Cappahayden, pre- and post-drilling surveys.

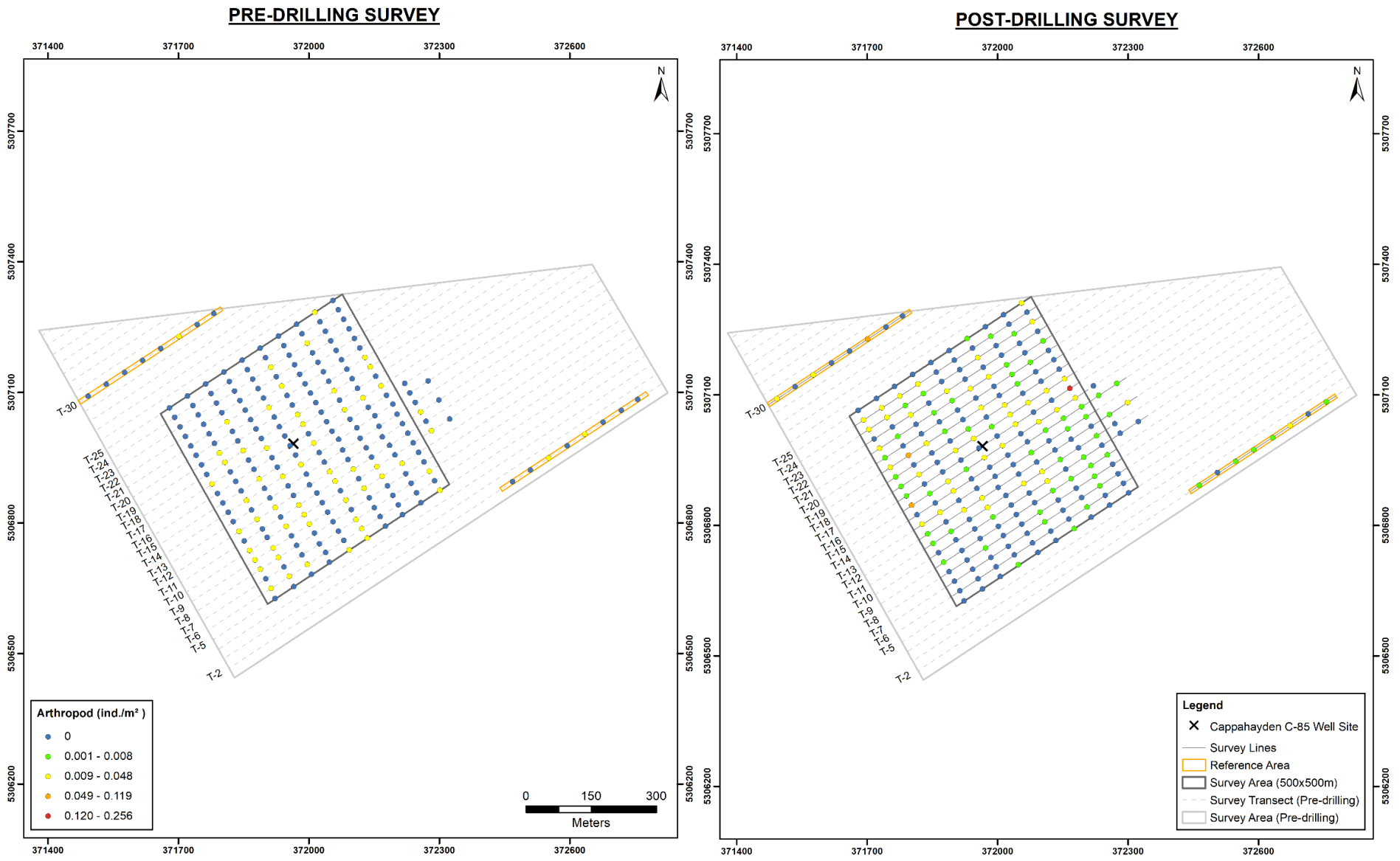

Figure G-35 Arthropod density (individuals/m²) observed in the Cappahayden, pre- and post-drilling surveys.

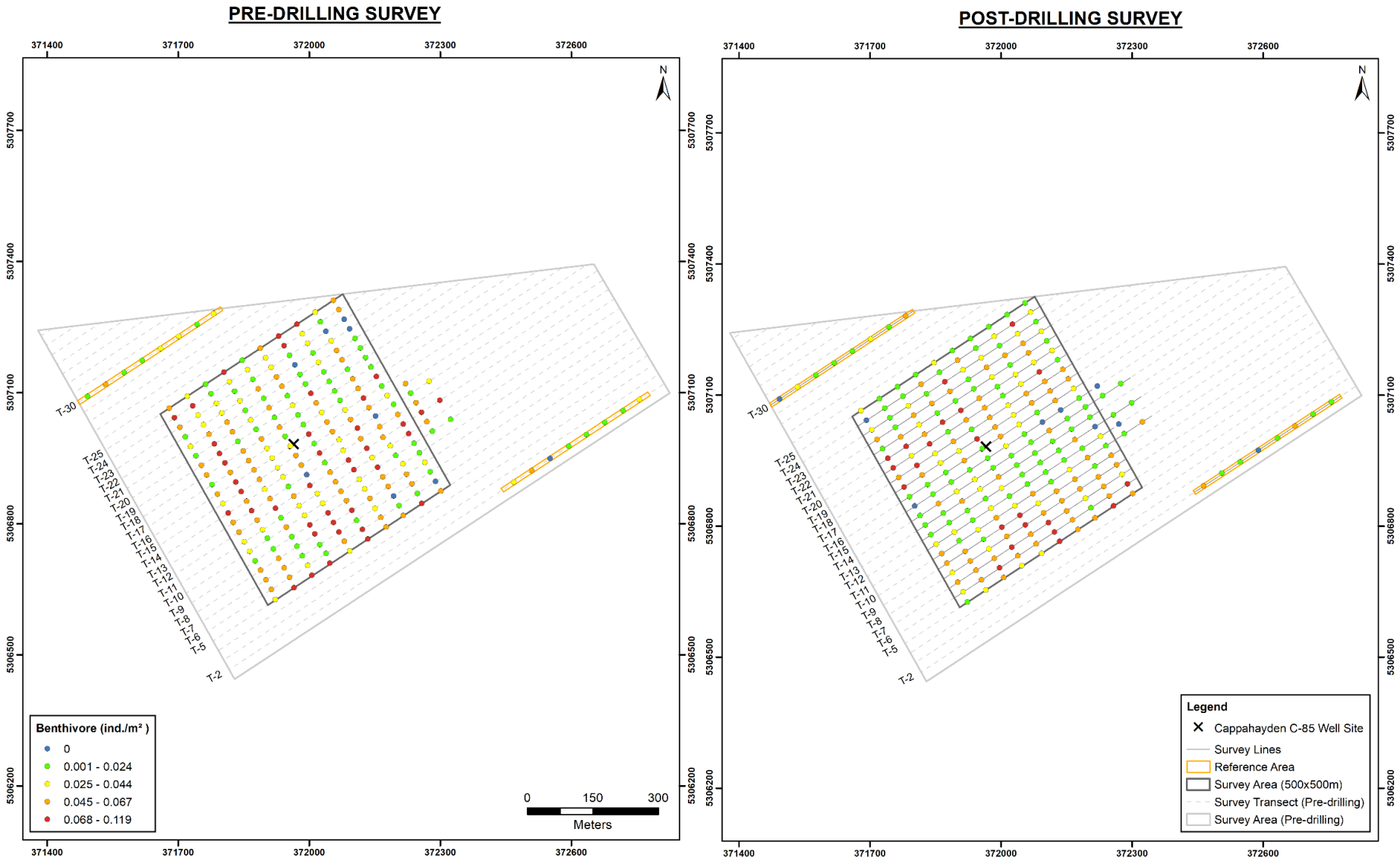

Figure G-36 Benthivore density (individuals/m²) observed in the Cappahayden, pre- and post-drilling surveys.

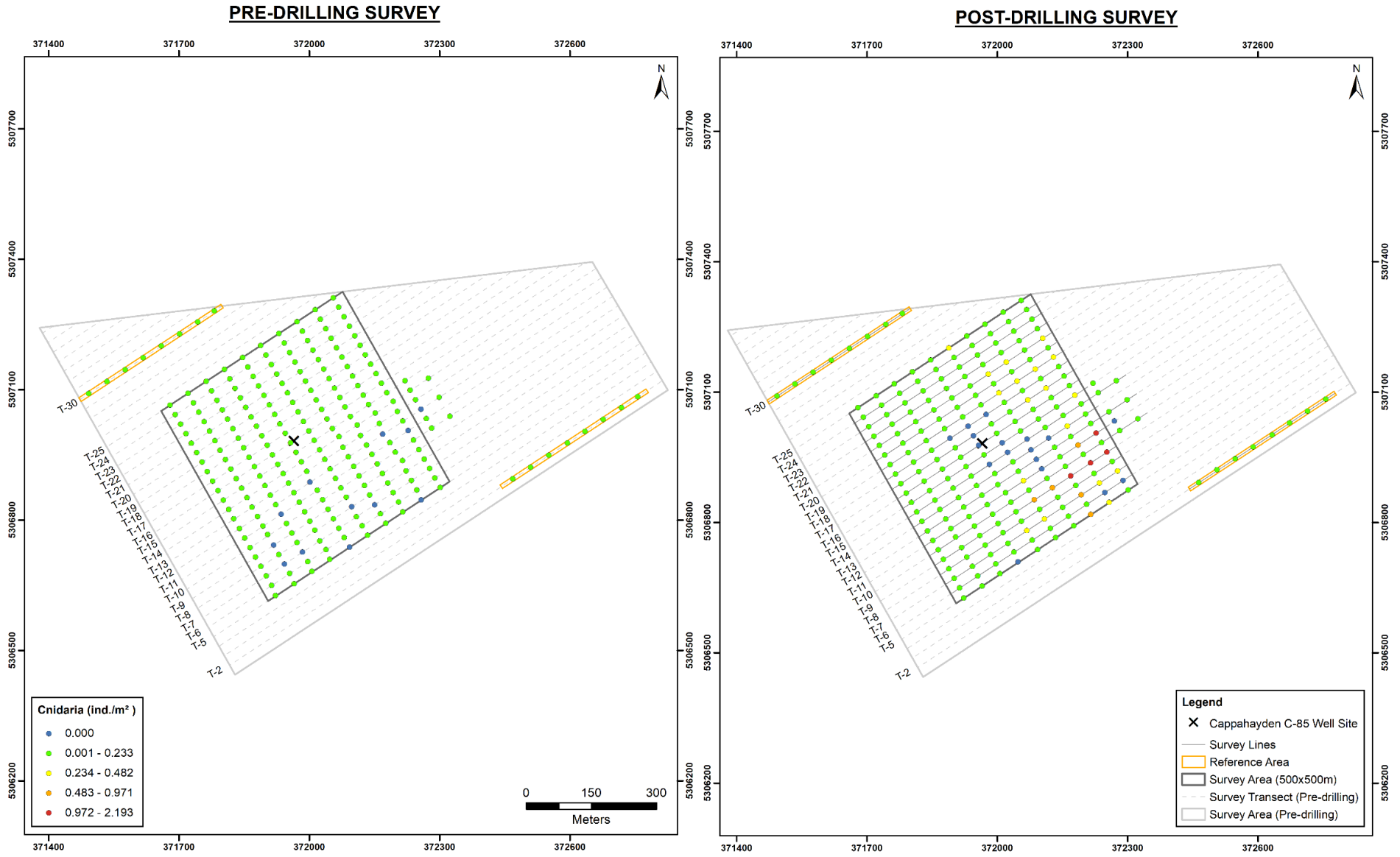

Figure G-37 Cnidaria density (individuals/m²) observed in the Cappahayden, pre- and post-drilling surveys.

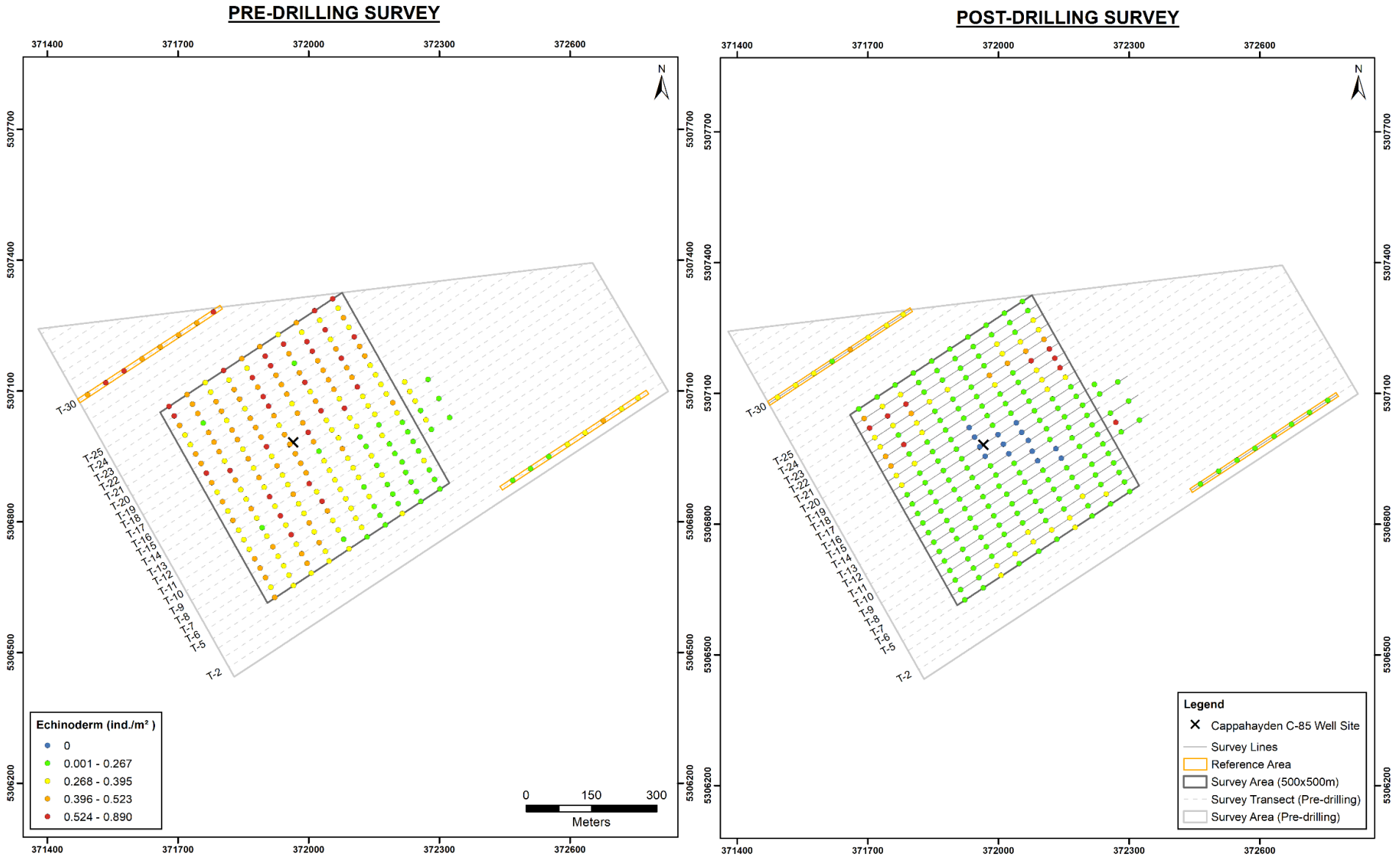

Figure G-38 Echinoderm density (individuals/m²) observed in the Cappahayden, pre- and post-drilling surveys.

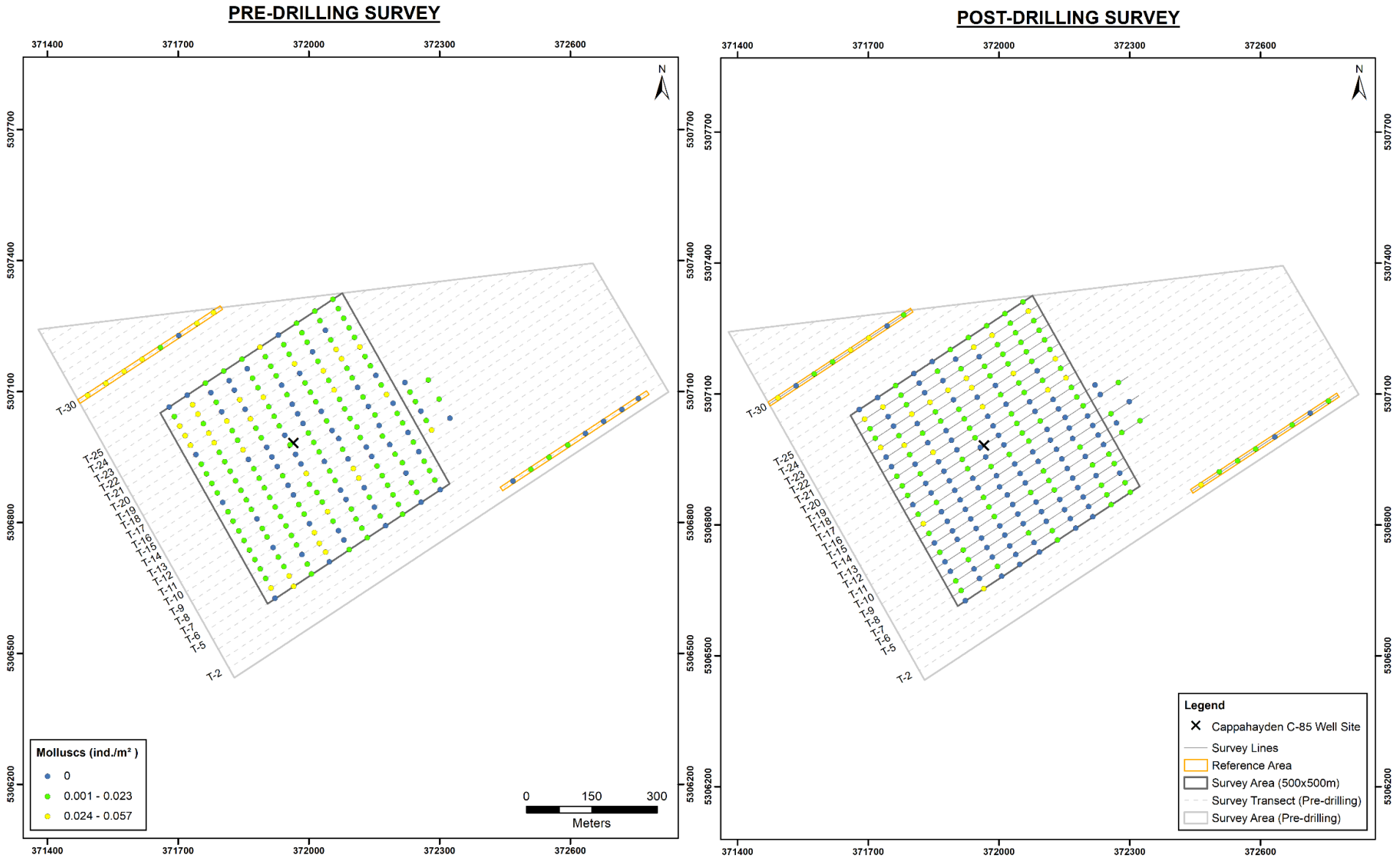

Figure G-39 Mollusc density (individuals/m²) observed in the Cappahayden, pre- and post-drilling surveys.

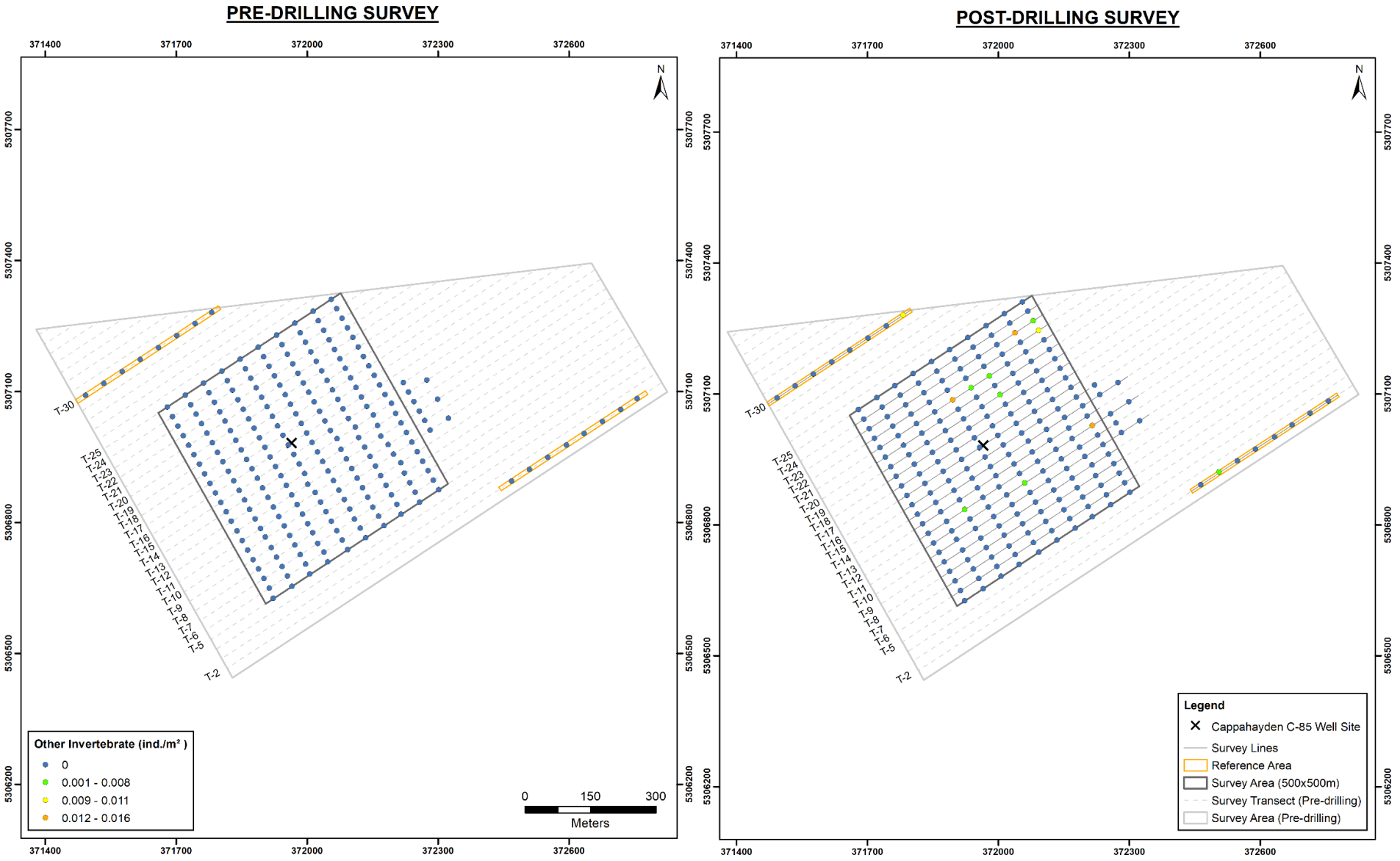

Figure G-40 Other Invertebrate density (individuals/m²) observed in the Cappahayden, pre- and post-drilling surveys.

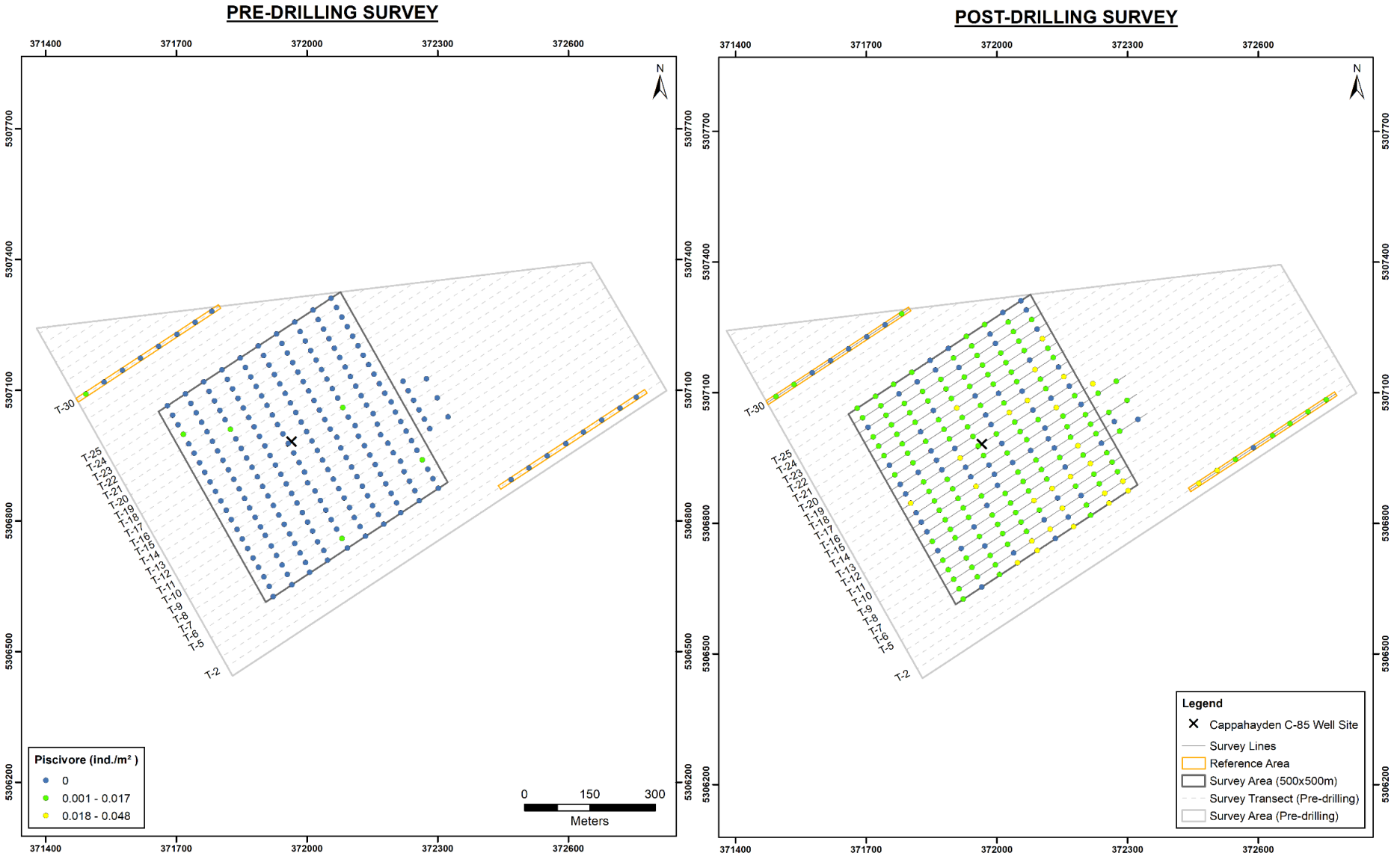

Figure G-41 Piscivore density (individuals/m²) observed in the Cappahayden, pre- and post-drilling surveys.

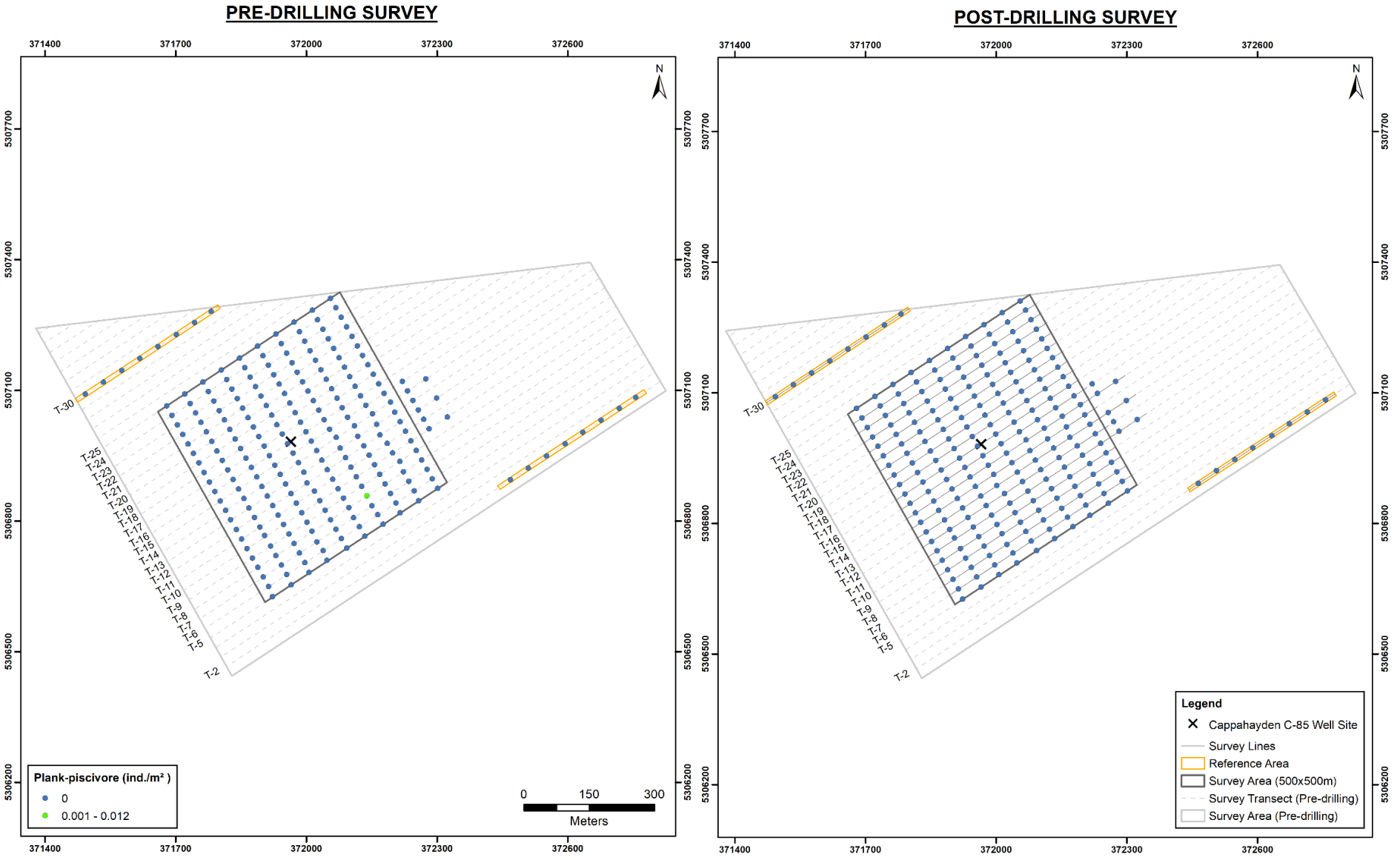

Figure G-42 Plank-Piscivore density (individuals/m²) observed in the Cappahayden, pre- and post-drilling surveys.

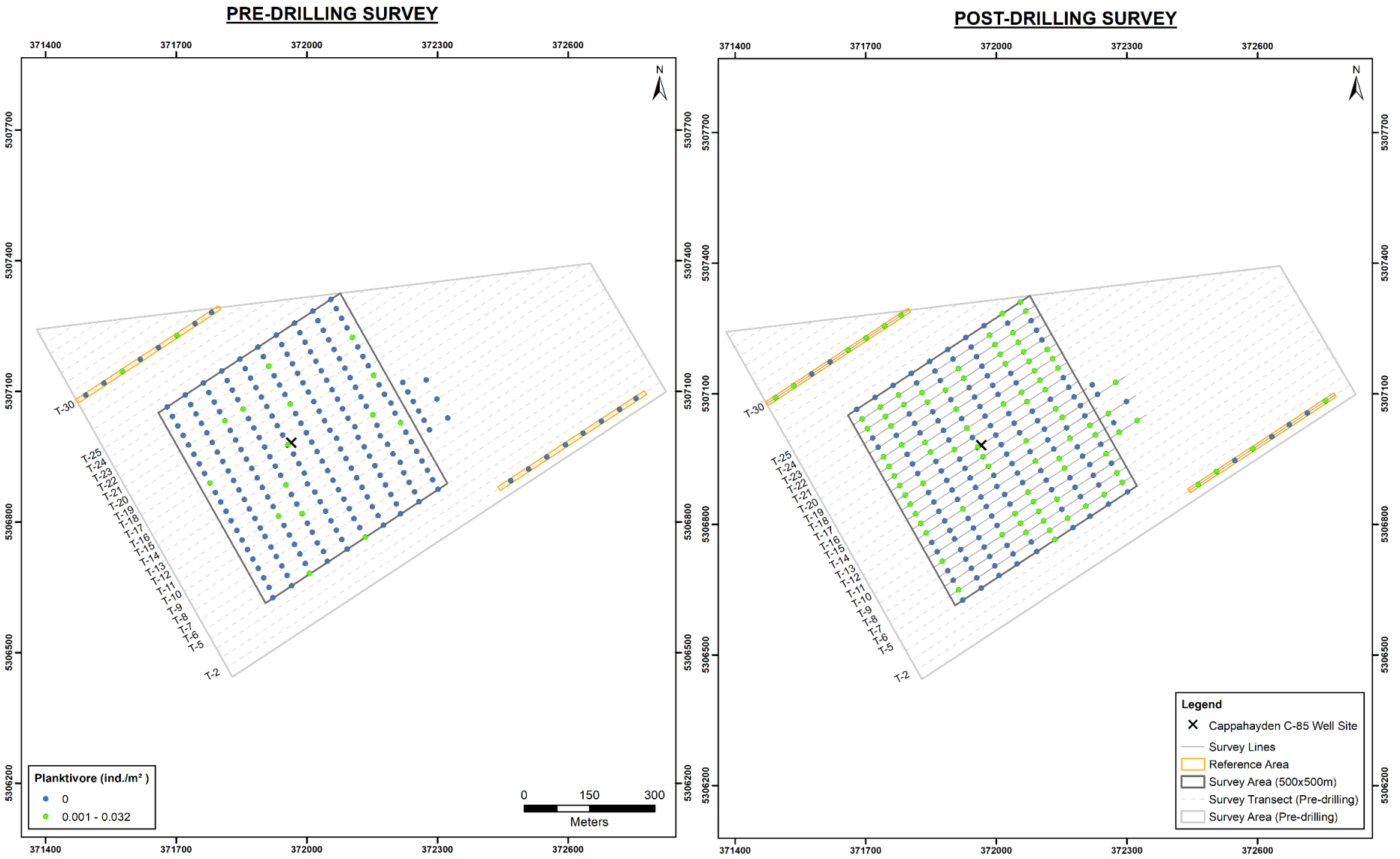

Figure G-43 Planktivore density (individuals/m²) observed in the Cappahayden, pre- and post-drilling surveys.

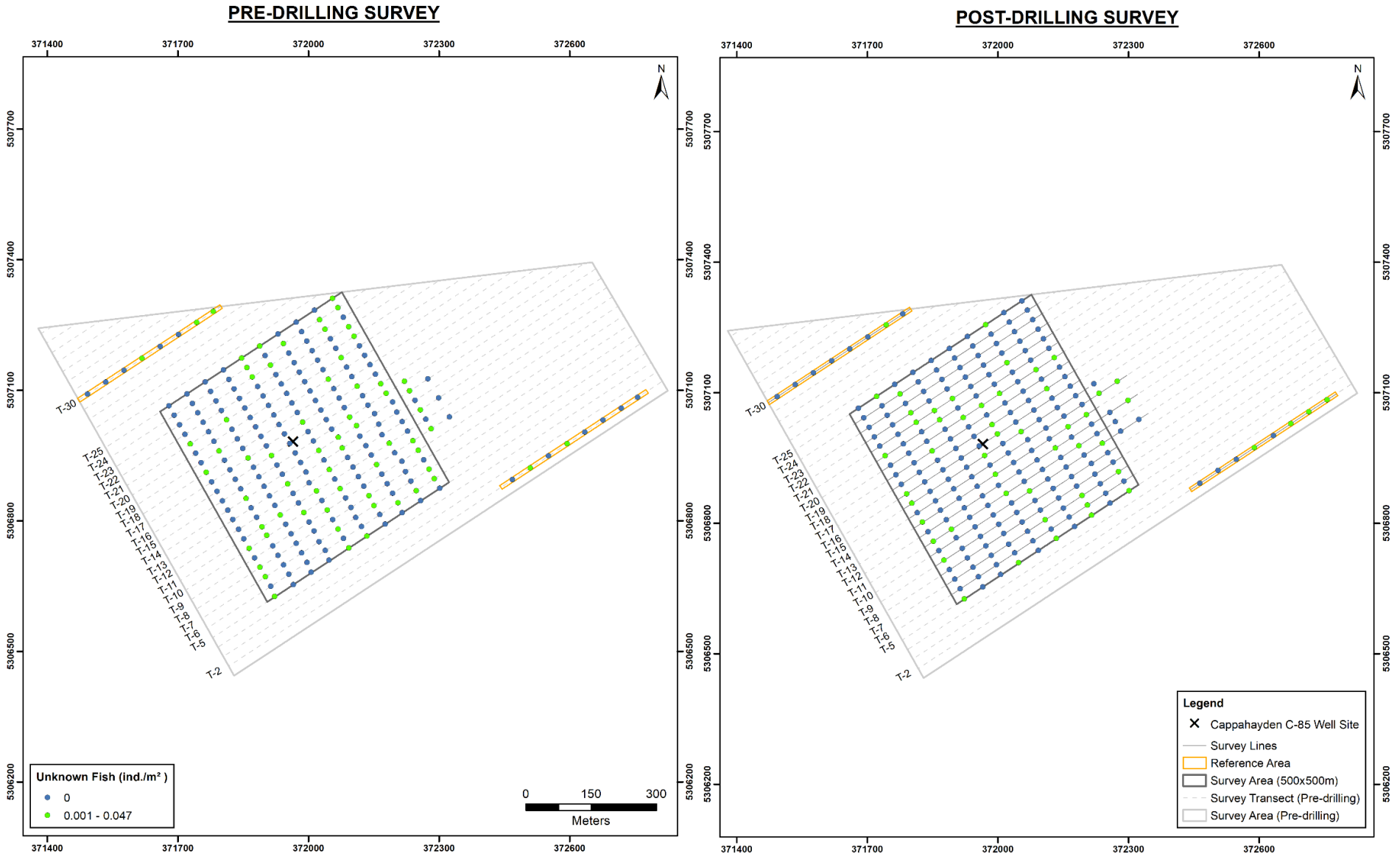

Figure G-44 Unknown Fish density (individuals/m²) observed in the Cappahayden, pre- and post-drilling surveys.

APPENDIX

H STATISTICAL COMPARISON TABLES

APPENDIX

Table H-1 **Statistical comparisons of coral functional group density values between surveys (pre- and post-drilling) and between areas (grid lines and reference areas) for Sitka.**

Factor	Degrees of Freedom	Sum of Squares	Mean Square	F Value	p value
All Coral Density					
Survey	1	656.12	656.12	257.68	**<0.001**
Area	1	4.05	4.05	1.59	0.21
Survey*Area	1	1.75	1.75	0.69	0.41
Residuals	560	1425.92	2.55		
Small Gorgonian Density					
Survey	1	0.01	0.01	2.89	0.09
Area	1	0	0	0.43	0.51
Survey*Area	1	0	0	0.17	0.68
Residuals	560	1.77	0		
Sea Pen Density					
Survey	1	650.74	650.74	262.38	**<0.001**
Area	1	3.93	3.93	1.59	0.21
Survey*Area	1	1.63	1.63	0.66	0.42
Residuals	560	1388.86	2.48		
Other Coral Density					
Survey	1	0	0	0.19	0.66
Area	1	0	0	0.1	0.75
Survey*Area	1	0	0	1.03	0.31
Residuals	560	0.28	0		
Notes: Bolded p-value denotes a significant result (α=0.05)					

Table H-2 **Statistical comparisons of sponge density values between surveys (pre- and post-drilling) and between areas (grid lines and reference areas) for Sitka.**

Factor	Degrees of Freedom	Sum of Squares	Mean Square	F Value	p value
All Sponge Density					
Survey	1	656.12	656.12	257.68	**<0.01**
Area	1	4.05	4.05	1.59	0.21
Survey*Area	1	1.75	1.75	0.69	0.41
Residuals	560	1425.92	2.55		
Notes: Bolded p-value denotes a significant result (α=0.05)					

APPENDIX

Table H-3 **Statistical comparisons of coral functional group density values between surveys (pre- and post-drilling) and between areas (grid lines and reference areas) for Cappahayden.**

Factor	Degrees of Freedom	Sum of Squares	Mean Square	F Value	p value
All Coral Density					
Survey	1	109.48	109.48	427.07	**<0.0001**
Area	1	0.078	0.078	0.31	0.58
Survey*Area	1	0.89	0.89	3.49	0.062
Residuals	465	119.20	0.26		
Small Gorgonian Density					
Survey	1	0	0	8.75	**0.003**
Area	1	0	0	0.98	0.32
Survey*Area	1	0	0	0.30	0.59
Residuals	465	0.033	0		
Sea Pen Density					
Survey	1	110.64	110.64	432.99	**<0.0001**
Area	1	0.083	0.083	0.32	0.57
Survey*Area	1	0.91	0.91	3.56	0.060
Residuals	465	118.82	0.26		
Other Coral Density					
Survey	1	0	0	16.69	**<0.0001**
Area	1	0	0	0	0.98
Survey*Area	1	0	0	0.21	0.65
Residuals	465	0.025	0		
Notes: Bolded p-value denotes a significant result (α=0.05)					

Table H-4 **Statistical comparisons of sponge density values between surveys (pre- and post-drilling) and between areas (grid lines and reference areas) for Cappahayden.**

Factor	Degrees of Freedom	Sum of Squares	Mean Square	F Value	p value
All Sponge Density					
Survey	1	0	0	42.85	**<0.001**
Area	1	0	0	0.040	0.84
Survey*Area	1	0	0	0.040	0.84
Residuals	465	0	0		
Notes: Bolded p-value denotes a significant result (α=0.05)					