December 22, 2025
Project No. 20250119H001

Emergence Institute, LLC
PO Box 1164
Inverness, California 94937

Attention: Zach Whelan

Subject: Updated Critical Aquifer Recharge Area (CARA) Assessment Information
Emergence Whidbey
Whidbey Island, Washington

Dear Zach Whelan:

Associated Earth Sciences, Inc. (AESI) is pleased to present this letter-report that provides updated project information and conclusions related specifically to the designated critical aquifer recharge area (CARA) that exists at the parcel owned by Emergence Institute, LLC (Client) (Island County Parcel R32922-205-0620) adjacent to Maxwelton Road to the west, and Campbell Road to the south, on Whidbey Island in Island County, Washington. This letter-report has been prepared for the exclusive use of the Client and their agents. Within the limitations of scope, schedule, and budget, our services have been performed in accordance with generally accepted hydrogeology practices in effect in this area at the time our letter-report was prepared. No other warranty, express or implied, is made.

BACKGROUND INFORMATION

The Client is planning development of a retreat center at the site that is within the Whidbey Island Aquifer Area Sole Source Aquifer (EPA, 2025) and the majority of the site has been designated as a medium to high susceptibility CARA (Island County, 2025). AESI reviewed the existing site plan (Attachment A) and previous PanGEO Inc. (PanGEO) reports and is providing updated information pertaining to the proposed project and the CARA that exists at the site. Specifically, we reviewed the following PanGEO report that discusses CARAs:

- "Geotechnical, Infiltration, and Critical Areas Report, Emergence Whidbey, Campbell Road and Maxwelton Road, Island County, Washington," Project No. 23-356.300, Prepared by PanGEO, Dated April 2025a.

In addition, we reviewed a second PanGEO report for the site:

- "Hydrogeologic Assessment, Emergence Whidbey, Parcels R32922-205-0620, R32922-245-0950, R32922-265-1920, and R32922-297-2250, Island County, Washington," Project No. 23-356.200 REV3," Prepared by PanGEO, Dated April 2025b.

AESI previously assisted the Client with an updated nitrate loading analysis (AESI, 2025a) and more recently assisted the Client with a new water supply well at the site (AESI, 2025b) which included observation of well installation, testing, analysis, and reporting. The pertinent AESI reports are:

- "Updated Nitrate Loading Analysis, Emergence Whidbey, Whidbey Island, Washington," Project No. 20250119H002, Prepared by AESI, Dated September 24, 2025 (2025a).

- "Well Installation and Testing, Emergence Whidbey, Island County, Washington," Project No. 20250119H001, Prepared by AESI, Dated December 2025 (2025b).

PROJECT UPDATES AND CONCLUSIONS

Updates and conclusions based on our review of previous PanGEO reports (2025a and 2025b) and our more recent reports (AESI, 2025a and 2025b) include:

1. The proposed project will obtain potable water from on-site water supply wells instead of from a nearby water system, as previously assumed in the PanGEO report (2025a) (Attachment B).
2. The operation of the on-site wells will not adversely impact groundwater quantity within the aquifer that underlies the site.
    a. The surrounding water systems, which were considered as a water supply for the project, are groundwater sourced water systems similar to the groundwater source that will be utilized for the on-site wells.
    b. The groundwater quantity that is anticipated to be removed from the aquifer (maximum 5,000 gallons per day for domestic use and irrigation water for ½ acre of lawn or garden) will remain the same; the only change will be that the location of the groundwater withdrawal will occur at the on-site wells instead of at an off-site well.
    c. The operation of the on-site wells will have a negligible impact on neighboring wells; the estimated water level drawdown in the aquifer at the nearest project property line and on neighboring properties is less than 0.1 feet.

AESI's report (2025b) describes the installation and testing of the new on-site well, and analysis of the new on-site well and other existing on-site wells and provides more detailed information pertaining to the on-site wells and the aquifer that underlies the site and neighboring properties.

CLOSURE

This letter-report has been prepared for the exclusive use of Emergence Institute, LLC and its agents for specific application to this project. Within the limitations of scope, schedule, and budget, our services have been performed in accordance with generally accepted hydrogeologic practices in effect in this area at the time our letter-report was prepared. No other warranty, express or implied, is made.

We appreciate the opportunity to be of continued service to the Emergence Whidbey project. If you have any questions or require additional information, please contact us at your earliest convenience.

Sincerely,
ASSOCIATED EARTH SCIENCES, INC.
Mount Vernon, Washington

Christopher W. Allen
Digitally signed by Christopher W. Allen
Date: 2025.12.22 12:48:24 -08'00'

State of Washington
Hydrogeologist
2594
Licensed Geologist
Christopher W. Allen

Jay W. Chennault, L.G., L.Hg., CWRE, P.E.
Principal Hydrogeologist

Christopher W. Allen, L.G., L.Hg.
Associate Hydrogeologist

ATTACHMENTS

Attachment A: Site Plan from Architect
Attachment B: Geotechnical, Infiltration, and Critical Areas Report by PanGEO

REFERENCES

Associated Earth Sciences, Inc. (AESI), 2025a, Updated nitrate loading analysis, Emergence Whidbey, Whidbey Island, Washington: AESI Project No. 20250119H002, Dated September 24, 2025.

AESI, 2025b, Well installation and testing, Emergence Whidbey, Island County, Washington: AESI Project No. 20250119H001, Dated December 2025.

Environmental Protection Agency (EPA), 2025, Interactive map of sole source aquifers, website: https://www.epa.gov/dwssa/map-sole-source-aquifer-locations, accessed December 5, 2025.

Island County, 2025, ICGeoMap, website: https://icgeomap.islandcountywa.gov/Html5Viewer/Index.html?viewer=ICGeoMap, accessed December 5, 2025.

PanGEO Inc., 2025a, Geotechnical, infiltration, and critical areas report, Emergence Whidbey, Campbell Road and Maxwelton Road, Island County, Washington: Project No. 23-356.300, Prepared by PanGEO, Dated April 2025.

PanGEO Inc., 2025b, Hydrogeologic assessment, Emergence Whidbey, parcels R32922-205-0620, R32922-245-0950, R32922-265-1920, and R32922-297-2250, Island County, Washington: Project No. 23-356.200 REV3, Prepared by PanGEO, Dated April 2025.

ATTACHMENT A

Site Plan from Architect

GENERAL NOTES:

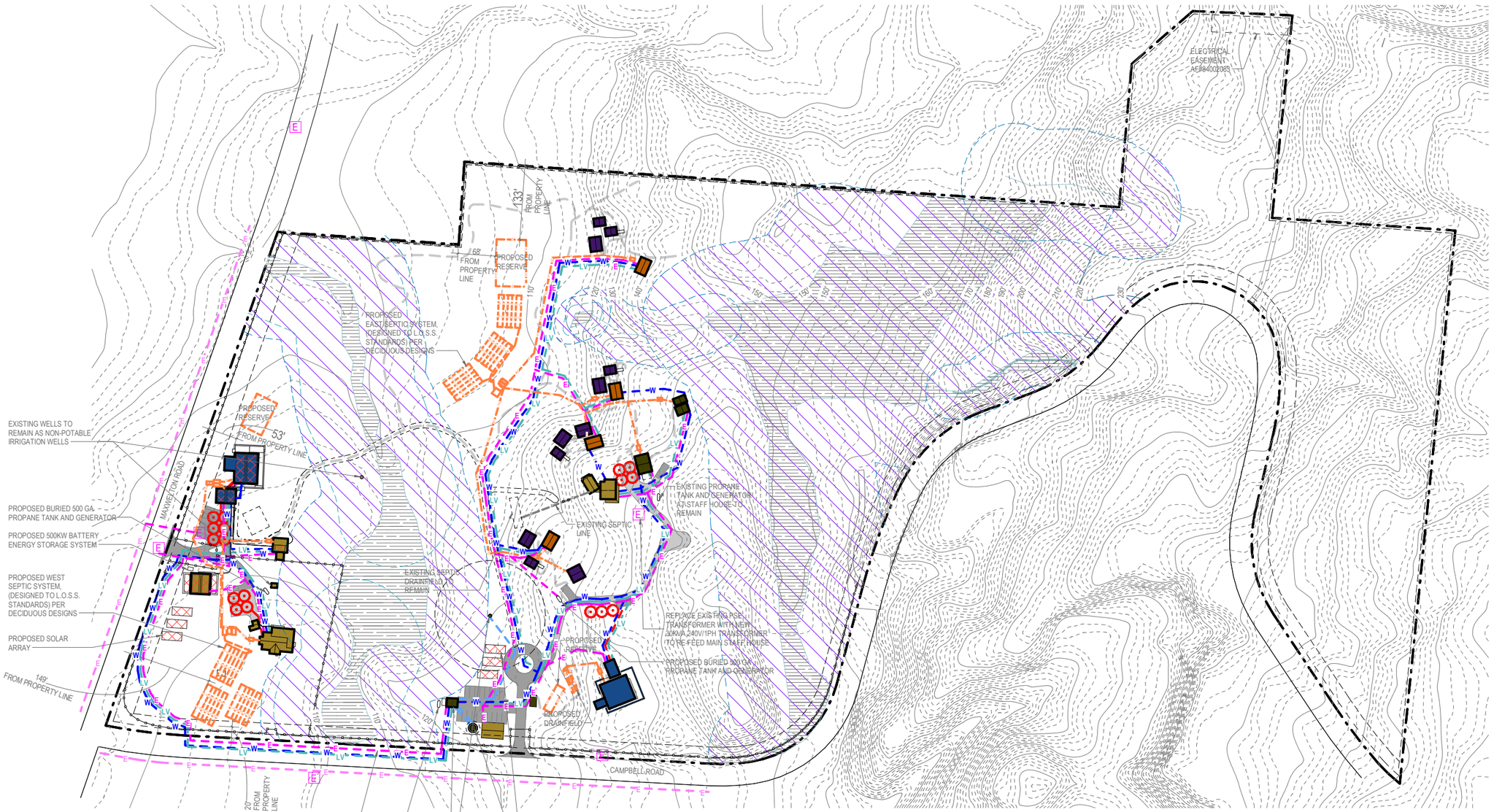
1. ALL UTILITIES ARE TO BE INSTALLED UNDERGROUND.
2. SEE A1.04 SITE PLAN FOR BUILDING KEY.
3. FOR NEW GROUP A TRANSIENT NON-COMMUNITY WATER SYSTEM INFRASTRUCTURE, SEE DOH WATER SYSTEM APPLICATION.
4. SEE SHEETS C3.00-C3.03 SUBMITTED FOR CLEARING AND GRADING REVIEW. SEE SHEETS XXX FOR PRELIMINARY SEPTIC REVIEW. SHEETS XXX ALSO SHOW SEPTIC/POTABLE WATER SEPARATIONS AND CROSSINGS.
5. FOR UTILITIES IN ROW, SEE SECTION DETAIL ON SHEET XXX FOR PRELIMINARY REVIEW. PERMIT TO WORK IN THE RIGHT OF WAY WILL BE SUBMITTED SEPARATELY.

SITE UTILITIES:

- E — POWER TRANSFORMER
- W — BURIED WATER LINE (TREATED)
- BURIED WATER LINE (UNTREATED)
- E — BURIED POWER LINE
- E — EXISTING OVERHEAD POWER LINE
- LV — BURIED LOW VOLTAGE LINE
- S — BURIED SEPTIC
- GEOTHERMAL WELL (APPROX)
- BURIED GEOTHERMAL LINE

LEGEND:

- EXISTING BUILDING
- PROPOSED RETREAT CENTER EDUCATIONAL BUILDINGS
- PROPOSED RETREAT CENTER CABINS
- PROPOSED BATHHOUSES
- PROPOSED STAFF BUILDINGS
- EXISTING PRIVATE DRIVEWAY (GRAVEL)
- PROPOSED PRIVATE DRIVEWAY AND PARKING AREAS (GRAVEL)
- PROPOSED SOLAR ARRAYS
- NEW AND EXISTING TRAILS
- WATER COURSE
- WATER SLOPE DIRECTION
- TERRAIN SLOPE DIRECTION
- EXISTING MEADOW/CLEARED AREA
- FORESTED AREA
- WETLAND, PER FACET NW REPORT



1 SITE UTILITIES PLAN
1" = 200'-0"

REVISION:

NO.	DESCRIPTION	DATE

STAMP:

mw|works llc
architecture+design
159 WESTERN AVE W, SUITE 484
SEATTLE, WASHINGTON 98119
P.206.352.7319
WWW.MWWORKS.COM

PROJECT:

EMERGENCE INSTITUTE

2302

3691 CAMPBELL ROAD &
6253/6263 MAXWELTON ROAD

DRAWING TITLE:

SITE UTILITIES PLAN

NOT FOR CONSTRUCTION

DATE:	12/08/2025
ISSUED FOR:	SITE PLAN REVIEW: REV 1
DRAWN BY:	CE/VB
CHECKED BY:	CK
SCALE:	AS INDICATED
SHEET NO.:	

A1.09

12/8/2025 12:30:24 PM

ATTACHMENT B

Geotechnical, Infiltration, and Critical Areas Report, by PanGEO

GEOTECHNICAL, INFILTRATION, AND CRITICAL AREAS REPORT EMERGENCE WHIDBEY

Campbell Road and Maxwelton Road
Island County, Washington

PROJECT NO. 23-356.300

April 2025

Prepared for:
Emergence Whidbey, LLC

PanGEO INCORPORATED

Geotechnical & Earthquake Engineering Consultants

PanGEO INCORPORATED
Geotechnical & Earthquake 7ngineering Consultants

April 22, 2025
PanGEO Project No. 23-356.300

Zachary Whelan
Emergence Institute, LLC
c/o mw|works architecture+design lld
159 Western Avenue West, Suite 484
Seattle, Washington 98119
Attention: Campie Ellis, AIA

Subject: Geotechnical, Infiltration and Critical Areas Report
Emergence Whidbey
Campbell Road and Maxwelton Road, Island County, Washington

Dear Campie:

PanGEO, Inc. is pleased to present this geotechnical, infiltration and critical areas report for the proposed Emergence Whidbey in Island County, Washington. We previously conducted a hydrogeologic assessment for the two large on-site sewage systems (LOSS) and presented the results in a report dated April 7, 2025.

In preparing this report, we completed a subsurface exploration program, conducted filed infiltration tests, conducted a site reconnaissance, reviewed groundwater data for the site vicinity, and conducted our engineering analyses.

Our field investigation indicates the site is underlain by glacially consolidated soils consisting of Vashon till and advance outwash with localized areas of alluvium. Based on the results of our study:

- Building support can be provided using conventional footings;
- The site is located in an aquifer recharge area, erosion, and steep slope environmentally critical area (ECA);
- The steep slope ECA is located in the east portion of the site and consists of localized areas of steep slopes ranging up to about 16 feet high. The closest structure to the slope is more than 100 feet from the toe of the slope. Based on our reconnaissance, the slope does not present a hazard to the planned improvements.

- Erosion hazards can be controlled using best management practices incorporated into the grading and earthwork plan;
- Based on the planned incorporation of the following elements into the project, the planned improvement site should not adversely impact the underlying aquifer:
    - Most of the site will be left in an undeveloped state, maintaining the current natural dispersion and infiltration of stormwater.
    - With the planned use of infiltration and dispersion of stormwater collected from existing and new impervious surfaces, the proposed development should promote recharge of the underlying aquifer.
    - The proposed development will connect to a public water source and should not result in an increase in groundwater withdrawals.
    - The development is residential in nature use and will not use, manufacture, or dispose of hazardous chemicals.

Additional details of our findings are outlined in the attached report. Should you have any questions, please do not hesitate to contact us.

Sincerely,

Scott D. Dinkelman, LHG
Principal Hydrogeologist

TABLE OF CONTENTS

Section Page

ATTACHMENTS:

Appendix A Boring Logs

1.0 GENERAL

As requested, PanGEO, Inc. is pleased to present this geotechnical report and critical areas assessment to assist the project team with the planning and design of the proposed Emergence Whidbey at the intersection of Campbell Road and Maxwelton Road in Island County, Redmond, Washington. This study was performed in general accordance with our mutually agreed scope of services outlined in our agreement dated March 6, 2025. Our scope of services included reviewing readily available geologic and geotechnical data, drilling eight borings, excavating 11 test pits, conducting a site reconnaissance, and preparing recommendations for developing the site as planned.

2.0 SITE AND PROJECT DESCRIPTION

2.1 SITE DESCRIPTION

The study area is located to the northeast of the intersection of Maxwelton Road and Campbell Road near the neighborhood of Clinton in unincorporated Island County, Washington. The subject site comprises three tax parcels (Island County parcels #R32922-245-0950, #R32922-205-0620, and #R32922-265-1920) comprising an aggregate area of about 40-acres. The approximate location of the site is shown in the attached Figure 1, Vicinity Map.

The site currently contains two single residence structures, a barn, two tool sheds, and two well houses. The site is vegetated with tall grass, Douglas fir trees, big leaf maple, fruit trees vine maple, salal, and sword fern as well as landscaping plants and trees. The approximate layout of the site is shown in Figure 2, Site and Exploration Plan.

The site is located on the west face of a north-south trending ridgeline and the site grade slopes down from east to west, with about 130 feet of elevation change across the width of the site. Slope gradients are in the range of 5 to 30 percent with localized areas of 40 percent and steeper slopes that range up to feet high in the east portion of the site.

Plate 1 on the following page provides an aerial overview of the site while Plate 2 shows a ground level view of the general site conditions.

Plate 1: *Aerial view of the site.*

Plate 2: *Surface Conditions in the central meadow.*

2.2 PROJECT UNDERSTANDING

We understand it is planned to develop the site with an environmentally focused retreat center that will include re-utilizing of existing structures, relocating the barn and using it as a farm storage/laundry building. It is also planned to construct 23 new structures at the site.

The proposed structures will include the following:

- A staff house consisting of a two-story building with a footprint of 750 square feet.
- A total of 15 cabins ranging in size from 300 to 400 square feet. The cabins will range in height from one to two stories.
- A dining hall/kitchen is planned in the west central portion of the site that will have a footprint of 2,200 square feet and be one story in height.
- A gathering building/library planned for the southeast portion of the site will be one story in height.
- A small storage shed and an arrival kiosk.
- Solar arrays are planned at 10 locations around the site.

The approximate layout of the planned improvements is shown in the attached Figure 2, Site and Exploration Plan. We anticipate the proposed buildings will consist of lightly loaded wood frame construction with a combination of slab-on-grade and wood-joist floor systems over a crawl space. The proposed buildings will be constructed at or near existing site grades and that fill generated from excavations will be used elsewhere on-site as structural fill.

Besides the proposed structures, the following utility improvements will also be incorporated into the project:

- As part of the development, it is planned to extend public water to the site. The new water main will connect to the public water main to the northeast of the site and extend along Campbell Road before entering the site north of the intersection of Campbell Road and Maxwelton Road.
- It is planned to infiltrate and disperse surface water from the planned improvements into the site soils. The proposed infiltration systems will consist of infiltration trenches and drywells. Dispersion will be performed using level spreaders.
- Wastewater from the development will be treated and disposed of in two large on-site sewage systems (LOSS) located in then north and southwest portions of the site. A hydrogeologic assessment of the LOSS's was presented in a separate report prepared by PanGEO.

The conclusions and recommendations in this report are based on our understanding of the proposed development, which is in turn based on the project information provided. If the above project description is incorrect, or the project information changes, we should be consulted to review the recommendations contained in this study and make modifications, if needed. In any case PanGEO should be retained to provide a review of the final design to confirm that our geotechnical recommendations have been correctly interpreted and adequately implemented in the construction documents.

3.0 SUBSURFACE EXPLORATION AND LABORATORY TESTING

Subsurface conditions at the site were explored using a combination of test borings and test pits. Representative soil samples collected from our test pits and borings were submitted to a laboratory for grain size distribution, cation exchange capacity and percent organics testing.

3.1 TEST BORINGS

Eight borings identified as PG-1 through PG-8 were drilled at the site on December 19, 2023. The borings were drilled using a limited access track mounted drill rig owned and operated by Geologic Drill Partners under subcontract to PanGEO. The approximate locations of the test borings are indicated in the attached Figure 2.

Soil samples were obtained from the borings at 2½- and 5-foot depth intervals. Standard penetration tests were performed in the borings using a 2-inch outside diameter split-spoon sampler. The sampler was driven into the soil a distance of 18 inches using a 140-pound hammer falling a distance of 30 inches using a rope and cat-head mechanism. The number of blows required for each 6-inch increment of sampler penetration was recorded, and the blowcounts required for the last 12 inches of penetration is termed the SPT N-value. SPT N-value provides an empirical measure of the relative density of cohesionless soil, or the relative consistency of fine-grained soils.

A geologist from PanGEO was present throughout the field exploration program to observe the drilling, assist in sampling, and to document the soil samples obtained from the borings. The soil samples were described using the system outlined on Figure A-1 of Appendix A and the summary boring logs are included as Figures A-2 through A-9.

3.2 TEST PITS

We observed and logged the excavation of 11 test pits at the site on March 11, 2025. Seven of the test pits (PIT-1 through PIT-7) were for infiltration testing and four test pits (TP-1 to TP-4) were to evaluate depth to bearing soil for the proposed cabins. The test pits were excavated using a track-mounted excavator provided by the client. The exploration was overseen by a geologist with our firm who logged and sampled the soils encountered in the test pits. The test pits were excavated to a maximum depth of about eight feet below existing grade. The approximate test pit locations were located in the field relative to the site boundaries and features and are shown in Figure 2.

The soils were logged using the system summarized on Figure A-1, Terms and Symbols for Boring and Test Pit Logs. Summary test pit logs are included in Appendix B and provide detailed descriptions of the materials encountered, depths to soil contacts, and depths of seepage or caving, if present. The relative in-situ density of cohesionless soils, or the relative consistency of fine-grained soils, was estimated from the excavating action of the excavator, and the stability of the test pit sidewalls. Where soil contacts were gradual or undulating, the average depth of the contact was recorded on the log.

3.3 LABORATORY TESTING

3.3.1 Grain Size Analyses

Laboratory tests were conducted on representative soil samples to verify or modify the field soil classification and to evaluate the general physical properties and engineering characteristics of the soil encountered. Visual field classifications were supplemented by grain size analyses on representative soil samples. We submitted a total of 11 samples for particle size distribution testing in accordance with ASTM D-422 *Standard Test Method for Particle-Size Analysis of Soils*. The results of the grain size determinations for the samples were used in classification of the soils and are presented in Appendix C.

It is important to note that these test results may not accurately represent the overall in-situ soil conditions. Our geotechnical recommendations are based on our interpretation of these test results and their use in guiding our engineering judgment.

3.3.2 Percent Organics

Laboratory tests were conducted on seven representative soil samples evaluate the percentage of organics. The percentage of organics was determined in general accordance with ASTM D 2974 *Standard Test Methods for Determining the Water (Moisture) Content, Ash Content, and Organic Material of Peat and Other Organic Soils.* The test results are summarized in Table 1, below.

TABLE 1: Organic Matter of Organic Soils Test Results

Location	Soil Sample Depth [feet below existing grade]	Organic Content [%]
PIT-1	4	0.15
PIT-2	4	0.08
PIT-3	4	0.12
PIT-4	4	0.21
PIT-5	8	0.05
PIT-6	8	0.14
PIT-7	8	0.19

3.3.3 Cation Exchange Capacity

The cation exchange capacity (CEC) of the soil refers to the capability of the soil to adsorb and exchange cations and anions. CEC testing was performed on seven soil samples collected in each of the PIT locations. Table 2 provides a summary of the CEC test results.

TABLE 2: Cation Exchange Capacity Test Results

Location	Soil Sample Depth [feet]	CEC [meq/100g]
PIT-1	4	3.0
PIT-2	4	3.5
PIT-3	4	1.5
PIT-4	4	2.3
PIT-5	8	3.0
PIT-6	8	3.8
PIT-7	8	4.5

4.0 SUBSURFACE CONDITIONS

4.1 SITE GEOLOGY

Based on review of the *Preliminary Geologic Map of the Maxwelton Quadrangle, Island County, Washington* (Dethier, *et al.*, 1981), the geologic units in the area of the site include Vashon till (Geologic Map Unit Qvt) and Vashon advance outwash (Geologic Map Unit Qva). The principal characteristics of these geologic units are summarized below:

- Vashon till generally consists of an unsorted deposit (diamict) of clay, silt, sand and gravel that was been deposited glaciers during the Vashon Stade of the Fraser glaciation. In the area of the site, the till forms a discontinuous mantle and is mapped as thin, less than six feet thick, patchy, and has a relatively high percentage of sand and gravel and relatively low percentage of fines (silt and clay sized particles) and has relatively high hydraulic conductivity.
- Advance outwash stratigraphically underlies till and is described as well-stratified gray pebbly sand with gravel interbeds that was deposited by meltwater streams near the advancing ice sheet. This deposit ranges from 80 to 160 feet thick.
- Early Vashon and pre-Vashon fine grained deposits consisting of silt and fine sand underly the Vashon advance outwash.

4.2 USDA SOIL SURVEY

We reviewed the USDA Natural Resource Conservation Service (NRSC) Soil Survey (NRCS, 2024) for surficial soil information. The west, gently sloping portion of the site is underlain by Indianola loam sand 0 to 5 percent slopes and 3 to 16 percent slopes while the east, more steeply portion of the site is underlain by Utsalady-Uselessbay complex 2 to 12 percent slopes. Indianola soils formed in sandy glacial outwash while Utsaladay-Uselessbay soils formed in less-sandy glacial outwash.

4.3 SOIL CONDITIONS

For a detailed description of the subsurface conditions encountered at each exploration location, please refer to our boring logs provided in Appendix A and test pit logs provided in Appendix B. The stratigraphic contacts indicated on the boring and test pit logs represent the approximate depth to boundaries between soil units. Actual transitions between soil

units may be more gradual or occur at different elevations. The descriptions of groundwater conditions and depths are likewise approximate.

- **Topsoil and Forest Duff:** At most of our test pit and boring locations, we encountered topsoil or forest comprised of loose, silty sand with organics and leaf litter. The topsoil and forest duff layer ranged from 6 to 12 inches thick.
- **Fill:** At the location of Test Pit TP-4, we encountered about two feet of loose silty fine sand containing organics debris that has a disturbed texture. Based on the disturbed texture and the presence of a buried topsoil horizon at the base of the layer, we classified this material as fill.
- **Alluvium:** At the location of Test Pit PIT-1 we encountered medium dense gravelly sand and gravel with silt and sand to about five feet below grade. We classified this material as alluvial deposits consisting of colluvium or slopewash generated from the adjacent slopes and stream channel deposits associated with the unnamed stream that flows through the site.
- **Vashon Till (Qvt):** At the locations of Test Boring PG-2 in the northwest portion of the site, borings PG-5 and PG-8 in the east portion of the site, below the alluvium encountered in Test Pit PIT-1 and in Test Pit TP-1, we encountered medium dense to very silty sand and fine to medium sand gravel and silt that appeared consistent with the mapped Vashon till unit. In general, the grain size distribution of the till was similar to the advance outwash but contained a higher percentage of fines.
- **Advance Outwash (Qva):** At the locations of Borings PG-1, PG-3, PG-4, PG-6, PG-7 and Test Pits PIT-2 through PIT-7 and TP-2 through TP-4, we encountered medium dense to dense poorly graded sand with varying amounts of gravel and silt. The material appeared to be consistent with the mapped Advance Outwash.

The test pits excavated for this project were backfilled with the site soils, but the backfill was not placed and compacted as a structural fill. The test pits should be located during construction and backfilled with structural fill.

Our subsurface descriptions are based on the conditions encountered at the time of our exploration. Soil conditions between our exploration locations may vary from those encountered. The nature and extent of variations between our exploratory locations may not become evident until construction. If variations do appear, PanGEO should be

requested to reevaluate the recommendations in this report and to modify or verify them in writing prior to proceeding with earthwork and construction.

4.4 GROUNDWATER ENCOUNTERED DURING SUBSURFACE EXPLORATION

Test Borings PG-4 and PG-6 encountered perched groundwater of limited thickness at about 5 to 6 feet deep during drilling. We also encountered perched groundwater when overdigging Test Pit PIT-2 at 7 to 8 feet below grade. However, we did not encounter groundwater in the other test borings and test pits during our field exploration.

It should also be noted that groundwater elevations may vary depending on the season, local subsurface conditions, and other factors. Groundwater levels are normally highest during the winter and early spring.

5.0 INFILTRATION AND DISPERSION

5.1 INFILTRATION

5.1.1 Infiltration Testing

Field infiltration tests were conducted to evaluate the infiltration rates of the site soils. The tests were conducted in general accordance with the procedure for the Small Pilot Infiltration Test (PIT) outlined in the *2024 Stormwater Management Manual for Western Washington* (SWDMWW) which has been adopted by Island County. In general, the test consisted of the following procedure:

- A test pit was excavated to the approximate design bottom of the proposed infiltration facility with a minimum bottom area of 12 square feet for each test location. Plate 3 below shows the infiltration test setup.
- The test pits were pre-soaked for six hours by maintaining a water level of at least 12 inches above the bottom of the pits.
- At the end of the pre-soak period, a flow meter was used to monitor the amount of water needed to maintain a constant head of 12 inches for at least one hour and until at least a point at which a constant volume of water per time unit was achieved.
- At the end of the constant head test, we measured the falling head infiltration rate by shutting off the water flow and recording the drop in water level over regular time intervals for one hour or until all the water was infiltrated.

- The test pits were then overexcavated to determine the presence of hydraulically restrictive soils and groundwater mounding.

The field infiltration rate was then calculated based on the final measured volume per time unit and the bottom area of the pits. The results are summarized in Table 4 on the next page.

Plate 3: *Typical infiltration testing setup.*

The digital flow meter is visible in the upper right of the photo.

The energy diffuser is visible in the bottom of the test hole.

5.1.2 Correction Factors for Design Infiltration Rate

Small pilot infiltration tests provide an uncorrected, saturated hydraulic conductivity (K_{sat}) of soil. To provide a long-term design infiltration rate, the K_{sat} value is factored by applying a series of correction factors (CF) outlined in the SWDMWW. The correction factors account for the test method (CF_t), influent control (CF_m) and site variability (CF_v). The value of each of these factors are discussed in the following sections of this report.

5.1.3 Test Method

The correction factor for the test method (CF_t) is used to account for differences between the test method and in-situ infiltration testing. The SWDMWW specifies a CF_t value of 0.5 based on the use of the small PIT method.

5.1.4 Influent Control

The influent control correction factor (CF_m) is intended to account for a reduction in infiltration capacity due to clogging from siltation and the build-up of biological material.

An influent control factor of 0.9 was used in our calculation, assuming that when the infiltration system loses 10 percent of its infiltration capacity due to clogging, the system will be maintained or cleaned.

5.1.5 Site Variability

The correction factor for site variability (CF_v) is intended to correct for the number of locations sampled and the consistency of the underlying soil conditions. The value for CF_v ranges from 0.33 to 1.0. Based on the number of exploration locations, relatively uniform soil conditions encountered at our exploration locations and our experience and engineering judgment, we assigned a correction factor of 0.8 for site variability.

5.1.6 Correction Factor

The total correction factor ($CF = CF_v \times CF_t \times CF_m = 0.36$) is then applied to the infiltration rate to obtain a corrected infiltration rate appropriate for long term design purposes.

5.1.7 Design Infiltration Rate

Table 4, below, summarizes the infiltration data collected and the long-term design rates calculated for each of the test locations.

TABLE 4: Summary Results of Small Pilot Infiltration Testing

Test Location	Test Depth (ft)	Soils	Field Infiltration Rate K_{SAT} [inches/hour]	Correction Factor			Design Infiltration Rate [inches/hour]
				CF_v	CF_t	CF_m	
PIT-1	4	Alluvium over till	3.2	0.8	0.5	0.9	1.2
PIT-2	4	Advance Outwash	1.2	0.8	0.5	0.9	0.4
PIT-3	4	Advance Outwash	13.7	0.8	0.5	0.9	4.9
PIT-4	4	Advance Outwash	12.8	0.8	0.5	0.9	4.6
PIT-5	4	Advance Outwash	14.4	0.8	0.5	0.9	5.2
PIT-6	4	Advance Outwash	12.8	0.8	0.5	0.9	4.6
PIT-7	4	Advance Outwash	12	0.8	0.5	0.9	4.3

At the location of PIT-1, the test was performed about one foot above a relatively hydraulically restrictive layer of Vashon till which resulted in a low design infiltration rate. At the location of PIT-2, we observed residual water from the test was observed mounding on less permeable soil layers, which also resulted in a low design infiltration rate.

5.1.8 Construction Considerations

Infiltration facilities are post-construction facilities which are designed to improve the quality and manage the volume of stormwater runoff by encouraging natural infiltration on-site. In order to protect the infiltration receptor soils from becoming clogged with sediment and/or compacted during construction, we recommend the following measures be implemented during construction:

- The infiltration facilities should be constructed as late in the schedule as feasible and should not be constructed until after the upstream areas are stabilized.
- Heavy equipment traffic on prepared subgrades should be limited, especially during wet weather.
- If fine grained sediment is deposited or tracked onto the infiltration system subgrade, it should be removed using an excavator with a grade plate, small dozer, or vacuum truck.
- The subgrade should be scarified prior to placing fill to prevent sealing of the receptor soils.
- Structural fill and aggregate base materials should be end-dumped at the edge of the fill area and the material pushed out over the subgrade.
- Grading of the infiltration galleries should be accomplished using low-impact earth-moving equipment to prevent compaction of the underlying soils. Wide tracked vehicles such as back hoes, small dozers and bobcats are suggested.

Furthermore, infiltration facilities should be located as far away as possible from any footings and basements in order to avoid water migration into adjacent structures and long term settlement of foundation soils.

It is recommended that PanGEO be retained during construction to observe excavations of infiltration facilities to confirm the infiltration facilities are constructed in the intended soil unit.

5.2 STORMWATER DISPERSION

In our opinion, the dispersion of stormwater should be feasible for areas with slopes that are no steeper than 25 percent. We anticipate that most of the water released by the dispersion trenches will infiltrate into the topsoil and underlying weathered soil layers and flow through the ground as shallow interflow, generally following the ground surface topography.

The dispersion systems should be located in areas that are well vegetated. The surface vegetation will slow the flows, allowing for shallow infiltration and reduce the potential for overland flow and erosion of the surface soils.

A primary consideration with dispersion trenches is uniformly discharging the flow and reducing the potential for the dispersed flows to remerge downstream and become concentrated. In order to uniformly discharge the flow, the dispersion trenches should be aligned parallel to the slope and the transition from the discharge location or dispersion trench should be level. A notched grade board or concrete curb may be used to provide a level transition and prevent the concentration of discharge.

6.0 CRITICAL AREA CONSIDERATIONS

As part of our study, we conducted a review of geotechnically-related critical areas at the subject site as defined in Island County Code (ICC) Chapter 11.02.030 and shown in the Island County GeoMap website (ICGeoMap | Island County, WA). Based on our review, the site is mapped as a critical aquifer recharge area and contains steep slope and erosion hazard areas.

6.1 CRITICAL AQUIFER RECHARGE AREA

The subject site is located within a Critical Aquifer Recharge Area (CARA) environmentally critical area which are defined as having:

> *… a critical recharge effect on aquifers used for potable water, including sole source aquifer recharge areas...*

6.1.1 Groundwater Occurrence and Aquifer Properties

Hydrogeologic units that conduct significant groundwater flow are known as aquifers. Hydrogeologic units that significantly retard or block groundwater flow are known as aquitards or confining layers. Based on review of the nearby well logs hydrogeologic units present at the site from shallowest to deepest are:

- ***Vashon Till*** – Till is typically an aquitard or confining layer, however in the vicinity of the site, the till is patchy, thin and contains relatively lower fines than typical glacial till. However, due to its soil structures, the Vashon Till on site has low permeability as demonstrated by the infiltration tests at PIT-1 and PIT-2.
- ***Vashon Advance Outwash Aquifer*** – Vashon advance outwash is the shallow aquifer that underlies the site. This unit consists of sand with pebbly gravel and small amounts of silt and clay. Static water levels range from elevation 78½ to 65 feet and descend from the southeast to the northwest. We interpret flow in the shallow aquifer is to the northwest.
- ***Early Vashon and Pre-Vashon Deposits*** – This hydrogeologic unit consists of fine-grained deposits and represents a lower aquitard making up the base of the Vashon advance outwash aquifer. The water wells reviewed as part of this study generally did not encounter early Vashon or Pre-Vashon deposits except for well 78K which encountered a clay layer at 106 feet below grade. This unit may have been encountered in the Kyllonen Hill Water Associations well (78K) at about 106 feet below grade.

6.1.2 Interpretation of Well Logs

The site is located in a rural area and groundwater is the primary source of water for nearby properties. We identified nine wells located within one thousand feet of the site, including two wells at the site – a water supply well (Domestic Well) and a well that is used for irrigation (Irrigation Well). The locations of the reviewed wells are approximately shown in Figure 3. Well logs for the reviewed logs are provided in Appendix D. Well records for the onsite wells and wells on the adjacent property to the north (6205 and 6165 Maxwelton Road) could not be located.

We identified nine water supply well logs within a one quarter mile radius of the site. The approximate locations of these wells are shown in Figure 3. Copies of the well logs are included in Appendix D.

6.1.3 Depth to Groundwater and Flow Direction

Groundwater in the shallow aquifer ranges from elevation 60 to 80 feet in the area of the site. Groundwater elevation contours are presented in Figure 3 and show the direction of groundwater flow is from the southeast to the northwest. Figure 4 is a Hydrogeologic Profile that shows the relationship between the subsurface units and groundwater levels.

6.1.4 Surface Water

A north-south trending unnamed stream extends through the west-central portion of the site. The stream enters the site at the south through a culvert below Campbell Road and exists the site at the northwest through a culvert below Maxwelton Road. The unnamed stream eventually discharges into Miller Lake about 1,200 feet northwest of the site.

6.1.5 Background Nitrate Levels

Background nitrate levels were determined by sampling the Domestic Well and Irrigation Well at the site and reviewing records of previous water quality sampling of the Domestic Well provided by the client. We also sampled the unnamed creek where it enters the site and where it exits the site. A summary of the results of our sampling and testing are provided in Table 5, below. Test results from the analytical testing laboratories are included in Appendix E.

TABLE 5: Well Nitrate Levels

Date	Nitrate Levels [mg/L]			
	Domestic Well	**Irrigation Well**	**Creek [upstream]**	**Creek [downstream]**
March 11, 2025	0.499	Not Detected	0.968	0.895
August 19, 2024	0.565	0.408	0.436	Not Sampled
May 7, 2024	0.514	Not Sampled	Not Sampled	Not Sampled
February 16, 2021	0.44	Not Sampled	Not Sampled	Not Sampled

6.1.6 Potential Construction Groundwater Quality Impacts

At the time this report was prepared, details regarding the proposed construction sequencing or methods were not available. When this information is available a more detailed discussion of potential construction-related groundwater impacts can be provided.

6.1.7 Potential Long-Term Groundwater Impacts

The proposed development will primarily consist of residential space and cabins. We understand that hazardous materials will not be stored, handled, used, produced, recycled or disposed of on-site. Potential contaminants from the proposed retreat center could include leaks or discharges from vehicles, the use and storage of household chemicals, and the use of herbicides and pesticides in landscaping areas.

Roadway runoff includes trace amounts of petroleum hydrocarbons and trace metals. Common chemicals used in landscaping include fertilizers, pesticides and herbicides.

Most modern pesticides and herbicides are formulated to strongly attach to soil particles, so they do not travel through the soil profile and/or are readily degraded in the environment. Pesticides and herbicides should be used in accordance with the manufacturer's dosing recommendations in order to minimize impacts to the underlying aquifer.

Fertilizers contain nitrogen that can be present as nitrate and may migrate into the soil column. Provided fertilizers are used properly, the nitrogen should be taken up by plants and microbes in the soil column and either incorporated into the plant material or converted to nitrogen gas.

6.1.8 Stormwater Infiltration Impacts

A portion of the surface water from the non-pollution generating sources such as building roofs, patios and decks will be infiltrated or dispersed and should recharge the aquifer.

Low pH runoff such as precipitation can mobilize contaminants in soil. As the site has a history of rural use and to the best of our knowledge there are no identified environmental contaminants at the site, it is not anticipated that stormwater infiltration will mobilize contaminants.

6.1.9 Critical Aquifer Recharge Area Conclusions

The proposed development will consist of an environmental retreat and education center and will not generate or store hazardous materials.

The proposed development will infiltrate or disperse all stormwater, allowing it to recharge the aquifer and maintaining the existing water balance.

It is planned to connect the site to the public water source with the two existing wells on-site used for irrigation purposes. As such, the proposed development is not anticipated to increase groundwater withdrawals.

Based on the proposed land use and the intention to infiltrate stormwater and reduce groundwater withdrawals, in our opinion impacts to the aquifer should be minimal.

6.2 STEEP SLOPE HAZARDS

Steep slope hazards are defined in the ICC as the following:

> *… those areas in Island County on slopes forty (40) percent or steeper within a vertical elevation change of at least ten (10) feet. A slope is delineated by establishing its toe and top and is measured by averaging the inclination over at least ten (10) feet of vertical relief. For the purpose of this definition:*
>
> 1. *The toe of a slope is a distinct topographic break in slope which separates slopes inclined at less than forty (40) percent from slopes forty (40) percent or steeper. Where no distinct break exists, the toe of a steep slope is the lowermost limit of the area where the ground surface drops ten (10) feet or more vertically within a horizontal distance of twenty-five (25) feet; and*
> 2. *The top of a slope is a distinct, topographic break in slope which separates slopes inclined at less than forty (40) percent from slopes forty (40) percent or steeper. Where no distinct break exists, the top of a steep slope is the upper most limit of the area where the ground surface drops ten (10) feet or more vertically within a horizontal distance of twenty-five (25) feet.*

Based on review of the LiDAR derived topography and the detailed ground survey performed around the buildings, the site contains localized areas of 40 percent and steeper slopes but they are generally less than about 10 feet in height. The approximate extent of 40 percent and steeper slopes that are more than 40 feet in height are shown in Figure 2.

In the southwest portion of the site, more than 100 feet east of the proposed gathering building is a 10- to 16-foot-high slope that ascends to the east with slope gradients in excess of 40 percent. The setback of the gathering building exceeds the minimum 50-foot setback identified in the ICC for slopes of 10 to 30 feet in height.

East of the site, outside of the proposed development area and adjacent to the Campbell Road right of way are slopes that exceed 40 percent in gradient and exceed 10 feet in height. Due to the distance of these slopes from the planned improvements, the impact of the development on the slopes should be negligible.

6.3 EROSION HAZARDS

The site is mapped by Island County as having a Moderate Geologic Hazard due to erosion. The ICC identifies highly erodible soils as the following:

> *… soils that show extensive ongoing erosion as a result of land uses, or that have a "severe" or "very severe" susceptibility to erosion from water according to the Natural Resources Conservation Service. Maps showing the location of these soils are available from the Natural Resources Conservation Service and the County. Location may also be established through a field survey by a qualified soil scientist.*

The site is underlain by Indianola and Utsalady-Uselessbay complex soils. Where these soils are exposed on slopes of 30 percent and steeper they would have a severe to very severe erosion hazard.

The erosion control plan should include measures for reducing concentrated surface runoff and protecting disturbed or exposed surfaces by mulching and revegetation. The temporary erosion and sediment control (TESC) plan should include the following:

- Construction activity should be scheduled or phased as much as possible to reduce the amount of earthwork that is performed during the wet season – October through March.
- The TESC plan should include adequate ground cover measures, access roads, and staging areas. The contractor should be prepared to implement and maintain the TESC measures to maximize the effectiveness of the TESC elements.
- Where practical, a buffer of vegetation should be maintained around cleared areas.
- The TESC measures should be installed in conjunction with the initial ground clearing. The recommended sequence of construction within a given area after

clearing would be to install silt fences and straw waddles around the site perimeter prior to starting mass grading.

- In areas where grading is complete, hydroseed or straw mulch should be placed.
- During the wet season, or when large storm events are predicted during the summer months, work areas should be stabilized so that if showers occur, the work area can receive the rainfall without excessive erosion or sediment transport. Areas that are to be left un-worked for more than two days should be covered with straw mulch or plastic sheeting.
- During the summer months, stabilization should consist of sealing the ground surface by rolling it with a smooth drum roller.
- Temporary site drainage measures such as surface water interceptor swales with rock check dams should also be provided to route runoff to the approved treatment facilities.
- Disturbed areas should be revegetated as soon as possible. If work takes place outside of the growing season, the disturbed areas should be covered with wood or straw mulch.
- Soils that are to be stockpiled for reuse at the site should be stored in such a manner as to reduce erosion from the stockpile. Protective measures may include, but are not limited to, covering stockpiles with plastic sheeting, the use of low stockpiles in flat areas, or the installation of silt fences around stockpile perimeters. If plastic sheeting is used, it should be staked and sandbagged in place.

The erosion control measures should be reviewed, adjusted and maintained on a regular basis to verify they are functioning as intended.

7.0 GEOTECHNICAL RECOMMENDATIONS

7.1 SEISMIC DESIGN

7.1.1 Site Class

The seismic design should be performed using the 2021 edition of the International Building Code (IBC), which specifies a design earthquake having a 2% probability of occurrence in 50 years (return interval of 2,475 years). Based on the site soil conditions, it is our opinion that Site Class D should be used.

7.1.2 Liquefaction Potential

Liquefaction is a process that can occur when soils lose shear strength for short periods of time during a seismic event. Ground shaking of sufficient strength and duration results in the loss of grain-to-grain contact and an increase in pore water pressure, causing the soil to behave as a fluid. Soils with a potential for liquefaction are typically cohesionless, predominately silt and sand sized, must be loose, and be below the groundwater table. The site is underlain by medium dense to very dense silty sand without a defined groundwater table. Based on these conditions, in our opinion the liquefaction potential of the site is negligible and design considerations related to soil liquefaction are not necessary for this project.

7.2 FOUNDATIONS

Based on our understanding of the planned development, it is our opinion the proposed buildings may be supported on conventional footings. Footings should bear on the undisturbed native soil underlying the site, or on structural fill placed on the undisturbed native soil. Fill and topsoil/forest duff, if present, should be completely removed from the footing excavations and the building footprints.

7.2.1 Allowable Soil Bearing Pressure

A maximum allowable soil bearing pressure of 3,000 pounds per square foot (psf) may be used for sizing footings. The recommended allowable soil bearing pressure is for dead plus live loads. For allowable stress design, the recommended bearing pressure may be increased by one-third for transient loading, such as wind or seismic forces

Footings designed and constructed in accordance with the above recommendations should experience total settlement of about one inch and differential settlement of about ½ inch. Most of the anticipated settlement should occur during construction as dead loads are applied.

For frost protection considerations, exterior foundation elements should be placed at a minimum depth of 18 inches below final exterior grade. Interior spread foundations should be placed at a minimum depth of 12 inches below the top of concrete slabs.

7.2.2 Lateral Resistance

Lateral loads on the structures may be resisted by passive earth pressure developed against the embedded portion of the foundation system and by frictional resistance at the bottom of the foundation.

- For footings bearing on undisturbed native soils or compacted structural fill, a frictional coefficient of 0.45 may be used to evaluate sliding resistance.
- Passive soil resistance may be calculated using an equivalent fluid weight of 350 pcf, assuming foundations are backfilled with properly compacted structural fill and level ground surface. Unless covered by pavements or slabs, the passive resistance in the upper 12 inches of soil should be neglected.

The above values include a factor of safety of 1.5.

7.2.3 Foundation Subgrade Preparation

The foundation subgrade should be in a dense and unyielding condition prior to setting forms and placing rebar. Loose soils encountered at the foundation subgrade elevation should be compacted in-place to the requirements of structural fill. Loose or soft soils that cannot be compacted in-place should be overexcavated and replaced with structural fill.

The exposed footing subgrade should be protected against moisture, particularly if the footings will be constructed during wet weather. It is the contractor's responsibility to protect the footing subgrade. This may consist of covering the exposed the footing subgrades with a layer of lean-mix concrete, or compacted crushed rock.

The adequacy of the footing subgrade soils should be verified by a representative of PanGEO prior to placing forms or rebar.

7.2.4 Footing Drains

We recommend that footing drains be installed around the perimeter of the buildings. The drain should consist of a minimum four-inch diameter, schedule 40 PVC or SDR 35, perforated pipe embedded in pea gravel or clean crushed rock and wrapped in filter fabric. The footing drain should be installed at the base of the footings to collect and direct intercepted water to an appropriate outlet.

Under no circumstances should roof downspout drain lines be connected to the footing drain system. Roof downspouts must be separately tightlined to an appropriate discharge.

Cleanouts should be installed to allow for periodic maintenance of the footing drain and downspout tightline systems.

7.3 RETAINING WALL DESIGN PARAMETERS

7.3.1 Lateral Earth Pressures

Retaining walls should be designed to resist the lateral earth pressures exerted by the soils behind the walls. Proper drainage provisions should also be provided behind the walls to intercept and remove groundwater that may be present behind the wall.

Cantilever walls should be designed for an equivalent fluid pressure of 35 pcf for a level backfill condition behind the walls assuming the walls are free to rotate. If the walls are restrained at the top from free movement, an equivalent fluid pressure of 55 pcf should be used for a level backfill condition behind the walls.

Permanent walls should be designed for an additional uniform lateral pressure of 9H psf for seismic loading, where H corresponds to the height of the buried depth of the wall.

The recommended lateral pressures assume that the backfill behind the walls consists of a free draining and properly compacted fill with adequate drainage provisions.

7.3.2 Surcharge

Surcharge loads, where present, should also be included in the design of retaining walls. We recommend that a lateral load coefficient of 0.35 be used to compute the lateral pressure on the wall face resulting from surcharge loads located within a horizontal distance of one-half the wall height.

7.3.3 Wall Foundations

The recommendations outlined in Section 7.2 of this report are also appropriate for designing wall foundations.

7.3.4 Wall Drainage

Provisions for wall drainage should consist of a 4-inch diameter perforated drainpipe placed behind and at the base of the wall footings, embedded in 12 to 18 inches of clean crushed rock or pea gravel wrapped with a layer of filter fabric. A minimum 18-inch-wide

zone of free draining granular soils (i.e., pea gravel or washed rock) is recommended to be placed adjacent to the wall for the full height of the wall. Alternatively, a composite drainage material, such as Miradrain 6000, may be used in lieu of the clean crushed rock or pea gravel. The drainpipe at the base of the wall should be graded to direct water to a suitable outlet.

For site retaining walls, in lieu of using drainpipes as footing drains, weep holes may be placed near the base of the walls. If used, the weep holes should be at least one inch on diameter and spaced no more than 10 feet on center.

7.3.5 Wall Backfill

The site soils should generally be suitable for use as wall backfill. Alternatively, if needed, wall backfill may consist of imported, free draining granular material, such as a soil meeting the requirements of Gravel Borrow as defined in Section 9-03.14(1) of the WSDOT *Standard Specifications for Road, Bridge, and Municipal Construction* (WSDOT, 2022). In areas where space is limited between the wall and the face of excavation, pea gravel may be used as backfill without compaction.

Wall backfill should be moisture conditioned to near optimum moisture content, placed in loose, horizontal lifts less than 12 inches in thickness, and systematically compacted to a dense and relatively unyielding condition. If density tests will be performed, the test results should indicate at least 95 percent of the maximum dry density, as determined using test method ASTM D-1557. Within 5 feet of retaining walls, the backfill should be compacted with hand-operated equipment to at least 90 percent of the maximum dry density.

7.4 FLOORS SLABS

The floor slabs for the proposed buildings may be constructed using conventional concrete slab-on-grade floor construction. The floor slabs should be supported on competent native soil or structural fill. All existing undocumented fill and topsoil/duff should be removed from below the slabs. If areas of the slab subgrade are overexcavated, the overexcavations should be backfilled with structural fill.

Interior concrete slab-on-grade floors should be underlain by a capillary break consisting of at least of 4 inches of pea gravel or compacted ¾-inch, clean crushed rock (less than 3 percent fines). The capillary break should be placed on the subgrade that has been

compacted to a dense and unyielding condition. The capillary break material should meet the gradational requirements provided in Table 6, below.

TABLE 6: Capillary Break Gradation

Sieve Size	Percent Passing
¾-inch	100
No. 4	0 – 10
No. 100	0 – 5
No. 200	0 – 3

Construction joints should be incorporated into the floor slab to control cracking.

Recommendations for waterproofing and damp proofing measures are beyond pur scope of work.

7.5 Permanent Cut and Fill Slopes

Based on the anticipated soil that will be exposed at the site, we recommend permanent cut and fill slopes be constructed no steeper than 2H:1V (Horizontal:Vertical).

Cut slopes should be observed by PanGEO during excavation to verify that conditions are as anticipated. Supplementary recommendations can then be developed, if needed, to improve stability, including flattening of slopes or installation of surface or subsurface drains.

Permanently exposed slopes should be seeded with an appropriate species of vegetation to reduce erosion and improve stability of the surficial layer of soil.

8.0 EARTHWORK CONSIDERATIONS

8.1 Stripping and Proofrolling

Building, pavement and areas to receive structural fill should be stripped and cleared of surface vegetation, organic matter, and other deleterious material. Based on the conditions encountered in our test pits, the forest duff and topsoil ranges from six to 12 inches thick.

Existing utility pipes to be abandoned, if present, should be plugged or removed so they do not provide a conduit for water and cause soil saturation and stability problems.

In no case should the stripped materials be used as structural fill or mixed with material to be used as structural fill. The stripped materials may be "wasted" on site in non-structural landscaping areas or they should be exported.

Following the stripping operation and excavations necessary to achieve construction subgrade elevations, the ground surface where structural fill, foundations, slabs, or pavements are to be placed should be observed by a representative of PanGEO. Proofrolling may be necessary to identify soft or unstable areas. Proofrolling should be performed under the observation of a representative of PanGEO. Soil in loose or soft areas, if re-compacted and still yielding, should be overexcavated and replaced with structural fill to a depth that will provide a stable base beneath the general structural fill. The optional use of a geotextile fabric placed directly on the overexcavated surface may also help to bridge unstable areas.

8.2 TEST PIT BACKFILL

We excavated 11 test pits at the approximate locations shown in Figure 2. The test pits were backfilled with the excavated soils and minimally compacted and graded with the excavator bucket. The test pit backfill is anticipated to experience long term settlement and is not suitable for supporting load-bearing elements, including but not limited to footings, utilities, and pavements. During construction of this project the test pit backfill should be completely removed and replaced with structural fill.

8.3 STRUCTURAL FILL AND COMPACTION

Soil to be used as structural fill should be free of organic and inorganic debris, be near the optimum moisture content, and be capable of being compacted to the recommendations provided below. Structural fill should consist of imported granular soils with a maximum dimension of 4 inches, less than 30 percent passing the U.S. Standard No. 40 sieve, and less than 7 percent passing the U.S. Standard No. 200 sieve. The fine-grained portion of structural fill soils should consist of non-plastic material.

Structural fill should be moisture conditioned to near optimum moisture content, placed in loose, horizontal lifts of 8 to 12 inches in thickness and compacted to the requirement of structural fill. If field density testing will be conducted on the structural fill, the material

should be compacted at tested to at least 95 percent maximum density, determined using ASTM D-1557 (Modified Proctor). The contractor should include costs for moisture conditioning the native soils by adding water as needed to achieve moisture conditions that will facilitate proper compact as a bearing subgrade or utility trench backfill.

The procedure to achieve proper density of a compacted fill depends on the size and type of compaction equipment, the number of passes, thickness of the lifts being compacted, and certain soil properties. If the excavation to be backfilled is constricted and limits the use of heavy equipment, smaller equipment can be used, but the lift thickness will need to be reduced to achieve the required relative compaction.

Generally, loosely compacted soils are a result of poor construction technique or improper moisture content. Soils with high fines contents are particularly susceptible to becoming too wet and coarse-grained materials easily become too dry, for proper compaction. Silty soils with a moisture content too high for adequate compaction should be aerated during dry weather or moisture conditioned by mixing with drier materials to reduce the moisture content.

8.4 MATERIAL REUSE

The native soil underlying can be reused on-site as structural fill, however the soil may become disturbed and soft when exposed to inclement weather conditions and construction traffic. The site soils that are planned to be re-used as structural fill should be stockpiled and protected from precipitation with plastic sheeting.

8.5 TEMPORARY EXCAVATIONS

We anticipate the excavation for this project will be relatively shallow and will likely be limited to footing excavations for the at-grade building and trenching for utilities. Temporary excavations should be constructed in accordance with Part N of the WAC (Washington Administrative Code) 296-155. The contractor is responsible for maintaining safe excavation slopes and/or shoring.

Based on the soil conditions encountered at our test pit locations, in our opinion temporary excavations may be cut at a maximum 1H:1V inclination. Trench boxes may be used to support trench excavations for utilities.

Temporary excavations should be evaluated in the field during construction based on actual observed soil conditions. If seepage is encountered, excavation slope inclinations may need to be reduced. During wet weather, the cut slopes may need to be flattened to reduce potential erosion or should be covered with plastic sheeting.

8.6 WET WEATHER CONSTRUCTION

The soils underlying the site are highly moisture sensitive. These soils will become disturbed and soft when exposed to inclement weather conditions and construction traffic. To avoid disturbance, construction traffic should refrain from travelling on prepared native subgrade soils during wet weather.

General recommendations relative to earthwork performed in wet weather or in wet conditions are presented below. The following procedures are best management practices recommended for use in wet weather construction:

- Earthwork should be performed in small areas to minimize subgrade exposure to wet weather. Excavation or the removal of unsuitable soil should be followed promptly by the placement and compaction of clean structural fill. The size and type of construction equipment used may have to be limited to prevent soil disturbance.
- During wet weather, the allowable fines content of the structural fill should be reduced to no more than 5 percent by weight based on the portion passing the 0.75-inch sieve. The fines should be non-plastic.
- The ground surface within the construction area should be graded to promote run-off of surface water and to prevent the ponding of water.
- Geotextile silt fences should be installed at strategic locations around the site to control erosion and the movement of soil.
- Excavation slopes and soils stockpiled on site should be covered with plastic sheeting.

8.7 EROSION CONSIDERATIONS

Surface runoff can be controlled during construction by careful grading practices. Typically, this includes the construction of shallow, upgrade perimeter ditches or low earthen berms in conjunction with silt fences to collect runoff and prevent water from

entering excavations or to prevent runoff from the construction area leaving the immediate work site. Temporary erosion control may require the use of hay bales on the downhill side of the project to prevent water from leaving the site and potential storm water detention to trap sand and silt before the water is discharged to a suitable outlet. All collected water should be directed under control to a positive and permanent discharge system.

Permanent control of surface water should be incorporated in the final grading design. Adequate surface gradients and drainage systems should be incorporated into the design such that surface runoff is collected and directed away from the structures and to a suitable outlet. Potential issues associated with erosion may also be reduced by establishing vegetation within disturbed areas immediately following grading operations.

9.0 ADDITIONAL SERVICES

To confirm that our recommendations are properly incorporated into the design and construction of the proposed addition, PanGEO should be retained to conduct a review of the final project plans and specifications, and to monitor the construction of geotechnical elements.

10.0 CLOSURE

We have prepared this report for Emergence Whidbey LLC and the project design team. Recommendations contained in this report are based on a site reconnaissance, a subsurface exploration program, review of pertinent subsurface information, and our understanding of the project. The study was performed using a mutually agreed-upon scope of work.

Variations in soil conditions may exist between the locations of the explorations and the actual conditions underlying the site. The nature and extent of soil variations may not be evident until construction occurs. If any soil conditions are encountered at the site that are different from those described in this report, we should be notified immediately to review the applicability of our recommendations. Additionally, we should also be notified to review the applicability of our recommendations if there are any changes in the project scope.

Our scope of services does not include services related to construction safety precautions. Our recommendations are not intended to direct the contractors' methods, techniques, sequences or procedures, except as specifically described in our report for consideration in design. Additionally, the scope of our services specifically excludes the assessment of environmental characteristics, particularly those involving hazardous substances. We are not mold consultants nor are our recommendations to be interpreted as being preventative of mold development. A mold specialist should be consulted for all mold-related issues.

This report has been prepared for planning and design purposes for specific application to the proposed project in accordance with the generally accepted standards of local practice at the time this report was written. No warranty, express or implied, is made.

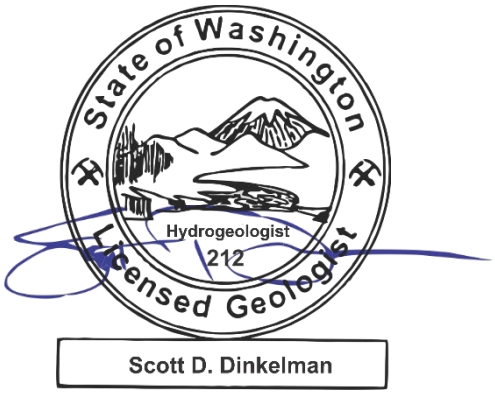
This report may be used only by the client and for the purposes stated, within a reasonable time from its issuance. Land use, site conditions (both off and on-site), or other factors including advances in our understanding of applied science, may change over time and could materially affect our findings. Therefore, this report should not be relied upon after 24 months from its issuance. PanGEO should be notified if the project is delayed by more than 24 months from the date of this report so that we may review the applicability of our conclusions considering the time lapse.

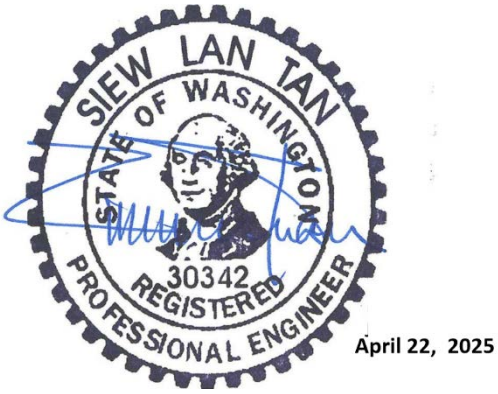
It is the client's responsibility to see that all parties to this project, including the designer, contractor, subcontractors, etc., are made aware of this report in its entirety. The use of information contained in this report for bidding purposes should be done at the contractor's

option and risk. Any party other than the client who wishes to use this report shall notify PanGEO of such intended use and for permission to copy this report. Based on the intended use of the report, PanGEO may require that additional work be performed and that an updated report be reissued. Noncompliance with any of these requirements will release PanGEO from any liability resulting from the use this report.

Sincerely,

PanGEO, Inc.





Scott D. Dinkelman, LEG, LHG
Principal Hydrogeologist

Siew L Tan, P.E.
Principal Geotechnical Engineer

11.0 REFERENCES

Dethier, D. P., Safioles, S.A., and Minard, J.P., 1981, Preliminary Geologic Map of the *Maxwelton Quadrangle, Island County, Washington* – U. S. Geological Survey Open File Report 82-192, scale 1:24,000.

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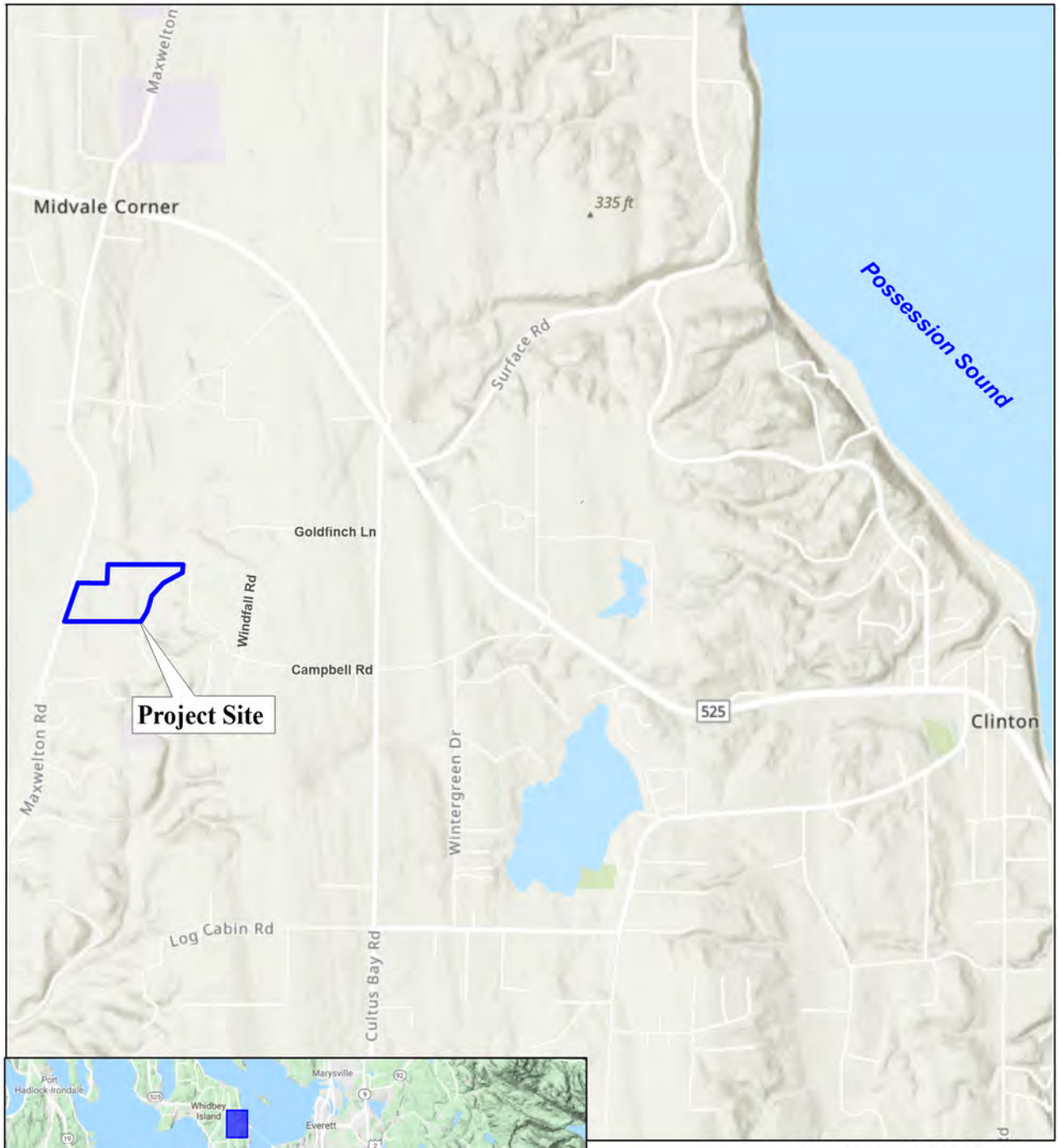
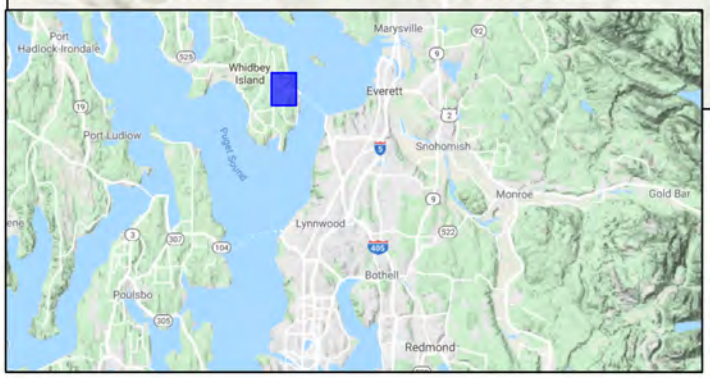


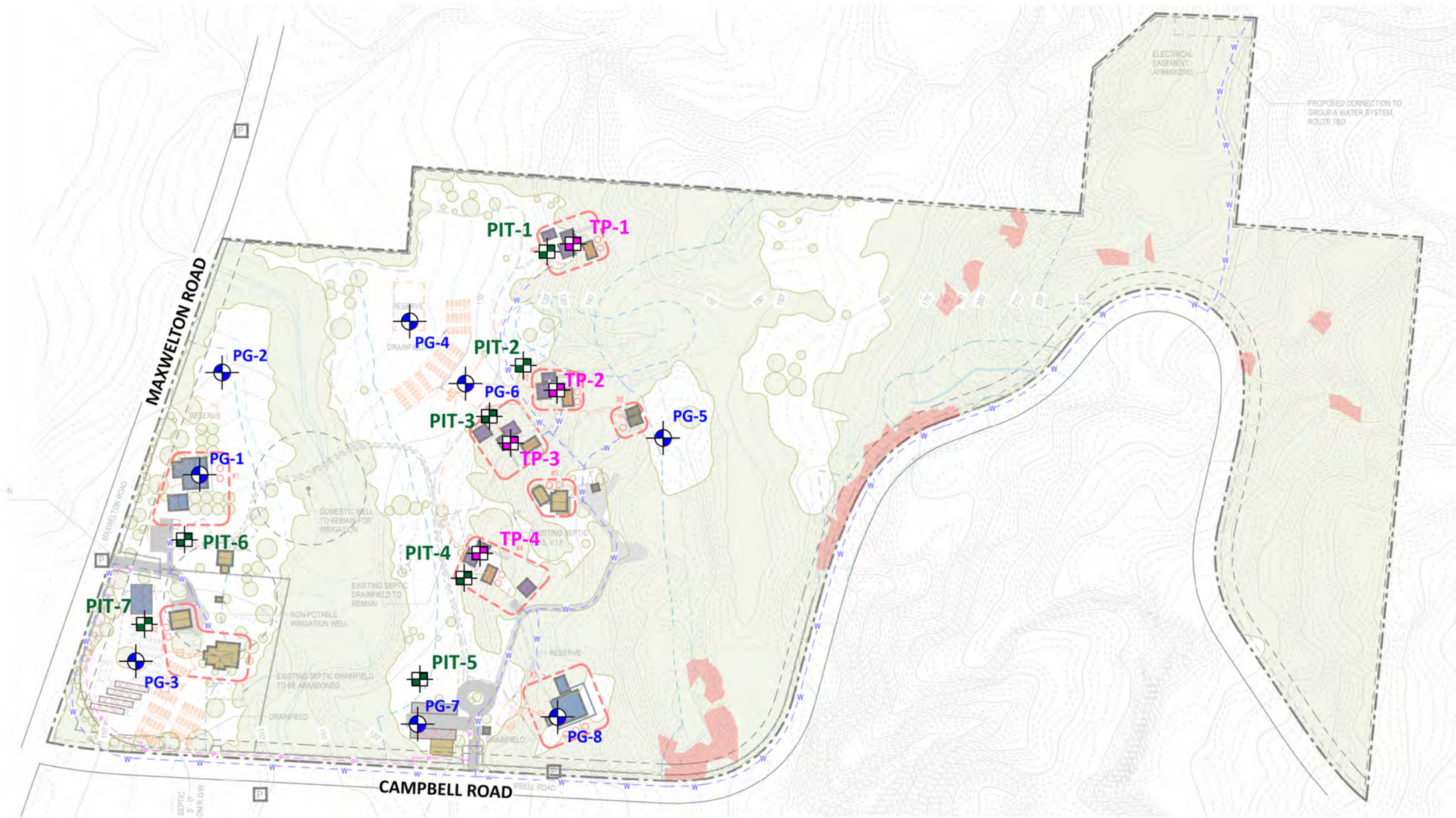


Base Map: ESRI Topographic

NORTH

Not to Scale

PanGEO INCORPORATED	**Emergence Whidbey Campbell Road and Maxwelton Road Island County, WA**	**VICINITY MAP**	
		Project No. **23-356.300**	Figure No. **1**



Approx. Scale (feet)
0 100 200

NORTH

LEGEND:

- Subject Site
- Approximate Extent of 40 Percent Slopes Greater than 10 Feet in Height
- Approximate Boring Location, PanGEO, Inc.
- Approximate Infiltration Test Location, PanGEO, Inc.
- Approximate Test Pit Location, PanGEO, Inc.

Note: Site plan modified from Site Plan Utilities by mw|works, dated January 14, 2025.

PanGEO INCORPORATED

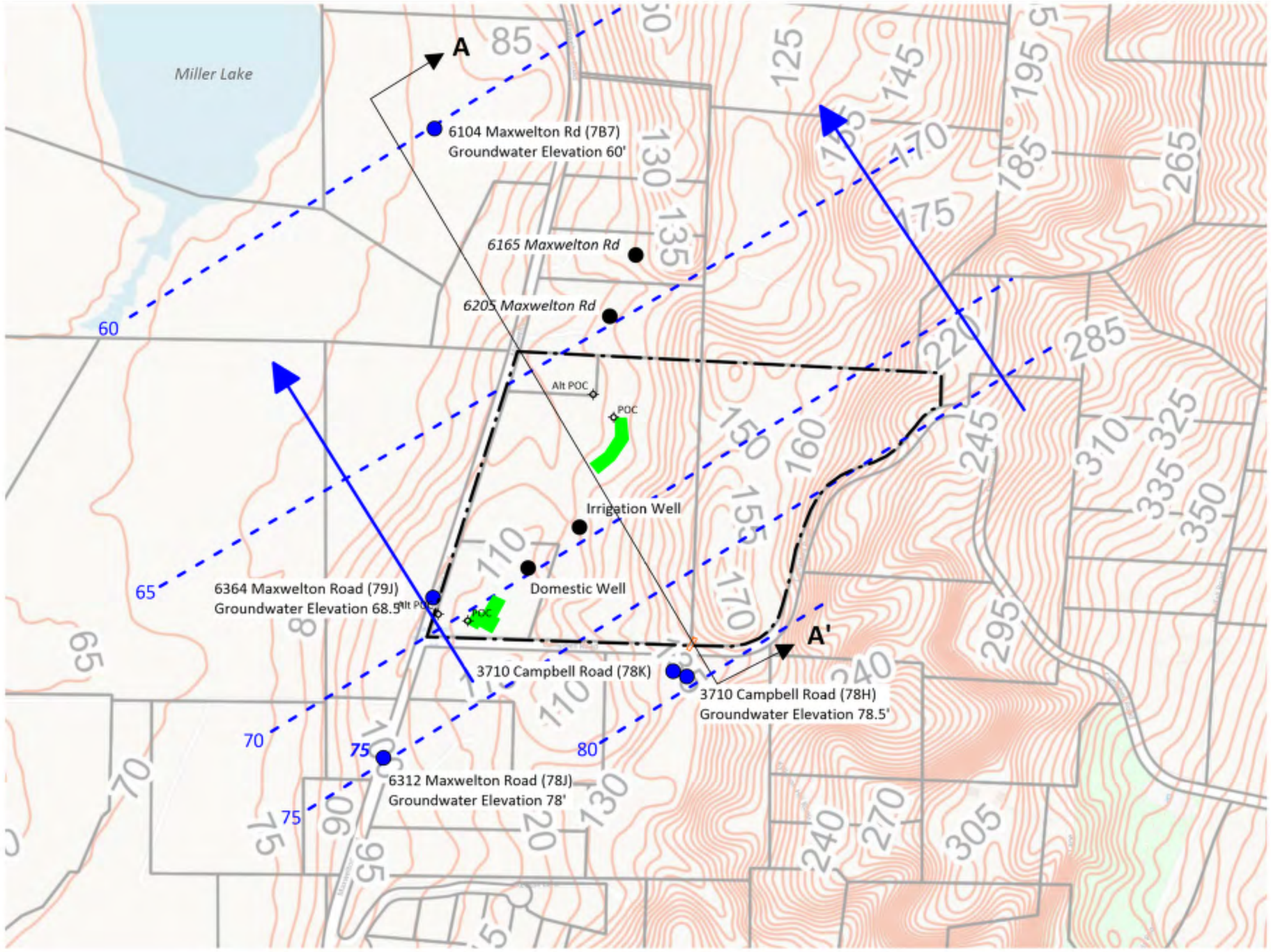
Emergence Whidbey Campbell Road and Maxwelton Road Island County, WA

SITE AND EXPLORATION PLAN

Project No. **23-356.300**

Figure No. **2**

13-011_Fig 2 Site & Exploration Plan.grf 4/7/25 JCR



PanGEO INCORPORATED

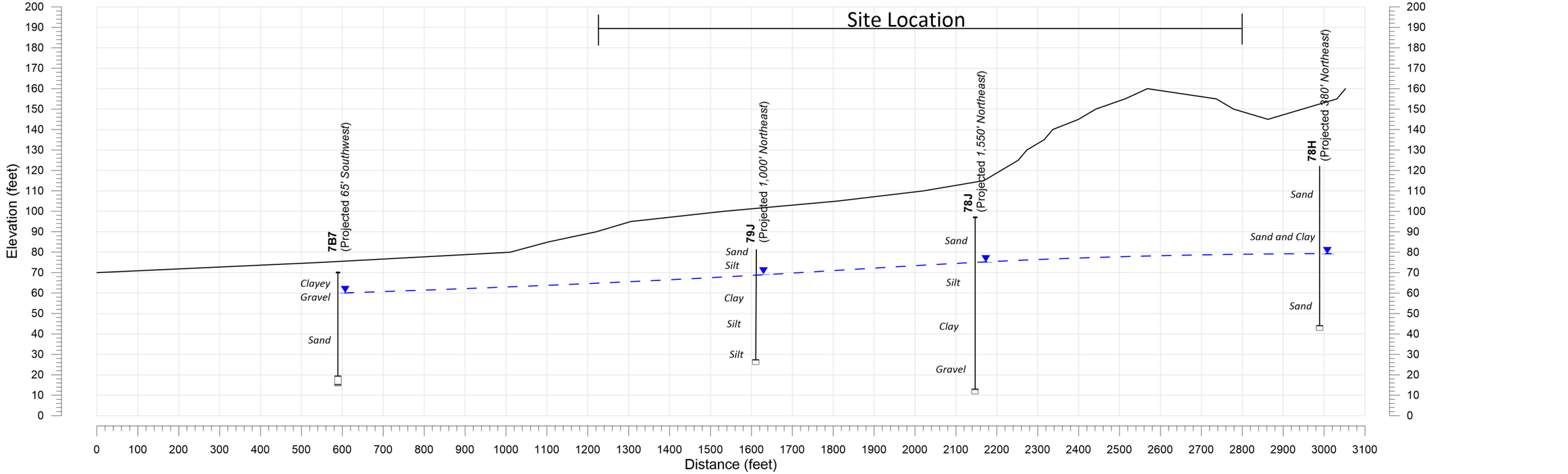
Emergence Whidbey
Campbell Road and Maxwelton Road
Island County, WA

GROUNDWATER ELEVATION AND FLOW DIRECTION

Project No. 23-356.300 | Figure No. 3

A (Northwest)

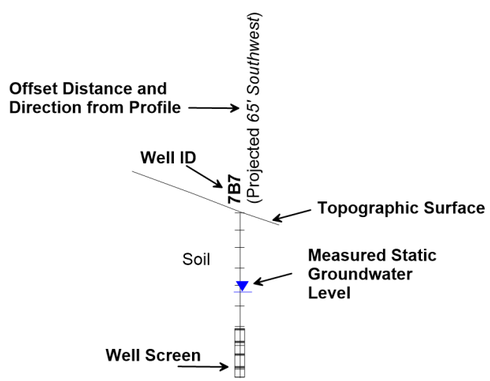
A' (Southeast)



Horizontal Scale 1"=250'
Vertical Scale 1" = 25
10X Vertical:Horizontal Exaggeration

LEGEND:

Graphics Legend:



PanGEO INCORPORATED	**Emergence Whidbey Campbell Road and Maxwelton Road Island County, WA**	**HYDROGEOLOGIC PROFILE A-A'**	
		Project No. 23-356.300	Figure No. 4

RELATIVE DENSITY / CONSISTENCY

SAND / GRAVEL			SILT / CLAY		
Density	SPT N-values	Approx. Relative Density (%)	Consistency	SPT N-values	Approx. Undrained Shear Strength (psf)
Very Loose	<4	<15	Very Soft	<2	<250
Loose	4 to 10	15 - 35	Soft	2 to 4	250 - 500
Med. Dense	10 to 30	35 - 65	Med. Stiff	4 to 8	500 - 1000
Dense	30 to 50	65 - 85	Stiff	8 to 15	1000 - 2000
Very Dense	>50	85 - 100	Very Stiff	15 to 30	2000 - 4000
			Hard	>30	>4000

UNIFIED SOIL CLASSIFICATION SYSTEM

MAJOR DIVISIONS		GROUP DESCRIPTIONS	
Gravel 50% or more of the coarse fraction retained on the #4 sieve. Use dual symbols (eg. GP-GM) for 5% to 12% fines.	GRAVEL (<5% fines)	GW	Well-graded GRAVEL
		GP	Poorly-graded GRAVEL
	GRAVEL (>12% fines)	GM	Silty GRAVEL
		GC	Clayey GRAVEL
Sand 50% or more of the coarse fraction passing the #4 sieve. Use dual symbols (eg. SP-SM) for 5% to 12% fines.	SAND (<5% fines)	SW	Well-graded SAND
		SP	Poorly-graded SAND
	SAND (>12% fines)	SM	Silty SAND
		SC	Clayey SAND
Silt and Clay 50%or more passing #200 sieve	Liquid Limit < 50	ML	SILT
		CL	Lean CLAY
		OL	Organic SILT or CLAY
	Liquid Limit > 50	MH	Elastic SILT
		CH	Fat CLAY
		OH	Organic SILT or CLAY
Highly Organic Soils		PT	PEAT

Notes: 1. Soil exploration logs contain material descriptions based on visual observation and field tests using a system modified from the Uniform Soil Classification System (USCS). Where necessary laboratory tests have been conducted (as noted in the "Other Tests" column), unit descriptions may include a classification. Please refer to the discussions in the report text for a more complete description of the subsurface conditions.

2. The graphic symbols given above are not inclusive of all symbols that may appear on the borehole logs. Other symbols may be used where field observations indicated mixed soil constituents or dual constituent materials.

DESCRIPTIONS OF SOIL STRUCTURES

Layered: Units of material distinguished by color and/or composition from material units above and below

Laminated: Layers of soil typically 0.05 to 1mm thick, max. 1 cm

Lens: Layer of soil that pinches out laterally

Interlayered: Alternating layers of differing soil material

Pocket: Erratic, discontinuous deposit of limited extent

Homogeneous: Soil with uniform color and composition throughout

Fissured: Breaks along defined planes

Slickensided: Fracture planes that are polished or glossy

Blocky: Angular soil lumps that resist breakdown

Disrupted: Soil that is broken and mixed

Scattered: Less than one per foot

Numerous: More than one per foot

BCN: Angle between bedding plane and a plane normal to core axis

COMPONENT DEFINITIONS

COMPONENT	SIZE / SIEVE RANGE	COMPONENT	SIZE / SIEVE RANGE
Boulder:	> 12 inches	Sand	
Cobbles:	3 to 12 inches	Coarse Sand:	#4 to #10 sieve (4.5 to 2.0 mm)
Gravel		Medium Sand:	#10 to #40 sieve (2.0 to 0.42 mm)
Coarse Gravel:	3 to 3/4 inches	Fine Sand:	#40 to #200 sieve (0.42 to 0.074 mm)
Fine Gravel:	3/4 inches to #4 sieve	Silt	0.074 to 0.002 mm
		Clay	<0.002 mm

TEST SYMBOLS

for In Situ and Laboratory Tests listed in "Other Tests" column.

ATT	Atterberg Limit Test
Comp	Compaction Tests
Con	Consolidation
DD	Dry Density
DS	Direct Shear
%F	Fines Content
GS	Grain Size
Perm	Permeability
PP	Pocket Penetrometer
R	R-value
SG	Specific Gravity
TV	Torvane
TXC	Triaxial Compression
UCC	Unconfined Compression

SYMBOLS

Sample/In Situ test types and intervals

- 2-inch OD Split Spoon, SPT (140-lb. hammer, 30" drop)
- 3.25-inch OD Spilt Spoon (300-lb hammer, 30" drop)
- Non-standard penetration test (see boring log for details)
- Thin wall (Shelby) tube
- Grab
- Rock core
- Vane Shear

MONITORING WELL

- Groundwater Level at time of drilling (ATD)
- Static Groundwater Level
- Cement / Concrete Seal
- Bentonite grout / seal
- Silica sand backfill
- Slotted tip
- Slough
- Bottom of Boring

MOISTURE CONTENT

Dry	Dusty, dry to the touch
Moist	Damp but no visible water
Wet	Visible free water

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Phone: 206.262.0370

Terms and Symbols for Boring and Test Pit Logs

Figure A-1

Project:	Emergence Whidbey	Surface Elevation:	~106 ft
Job Number:	23-356	Top of Casing Elev.:	N/A
Location:	Clinton (Island County), WA	Drilling Method:	HSA
Coordinates:	Northing: 1252640, Easting: 362919	Sampling Method:	SPT

Depth, (ft)	Sample No.	Sample Type	Blows / 6 in.	Other Tests	Symbol	MATERIAL DESCRIPTION
0						**TOPSOIL**
1						Approx 12 inches of topsoil.
						VASHON ADVANCE OUTWASH - Qva
						Loose to medium dense, orange-brown to grey-brown, LOAMY SAND to SAND, trace gravel; occasional iron-oxide banding, moist.
3	S-1		2 4 6	CEC OM USDA		***SAMPLE S1 - LOAMY SAND:*** *SAND 88%, SILT 5%, CLAY 7%;. OM 0.164%, CEC 3.61 mg/kg.*
5	S-2		3 5 8	CEC OM USDA		***SAMPLE S2 - SAND:*** *SAND 93%, SILT 1%, CLAY 6%;. OM 0.099%, CEC 3.75 mg/kg.*
8	S-3		8 11 12			*- approximate 6-inch lens of interbedded silts observed at approximately 8 feet.*
10	S-4		6 10 25			*- becomes dense; approximate 6-inch lens of interbedded silts observed at approximately 10.5 feet.*
11.5						Boring terminated at approximately 11.5 feet below grade.
						Groundwater was not observed at time of drilling.

N-Value ▲ PL Moisture LL RQD Recovery 0 50 100

Completion Depth:	11.5ft
Date Borehole Started:	12/19/23
Date Borehole Completed:	12/19/23
Logged By:	S. Scott
Drilling Company:	Geologic Drill Partners

Remarks: Boring drilled using an bobcat tracked drill rig. Standard penetration test (SPT) sampler driven with a 140 lb. safety hammer. Hammer operated with rope and cathead. Surface elevation is approximate and based on their relative location to site features. This information is provided for relative information only and is not a substitution for field survey.
DATUM - WA STATE PLANE NORTH, NAVD88

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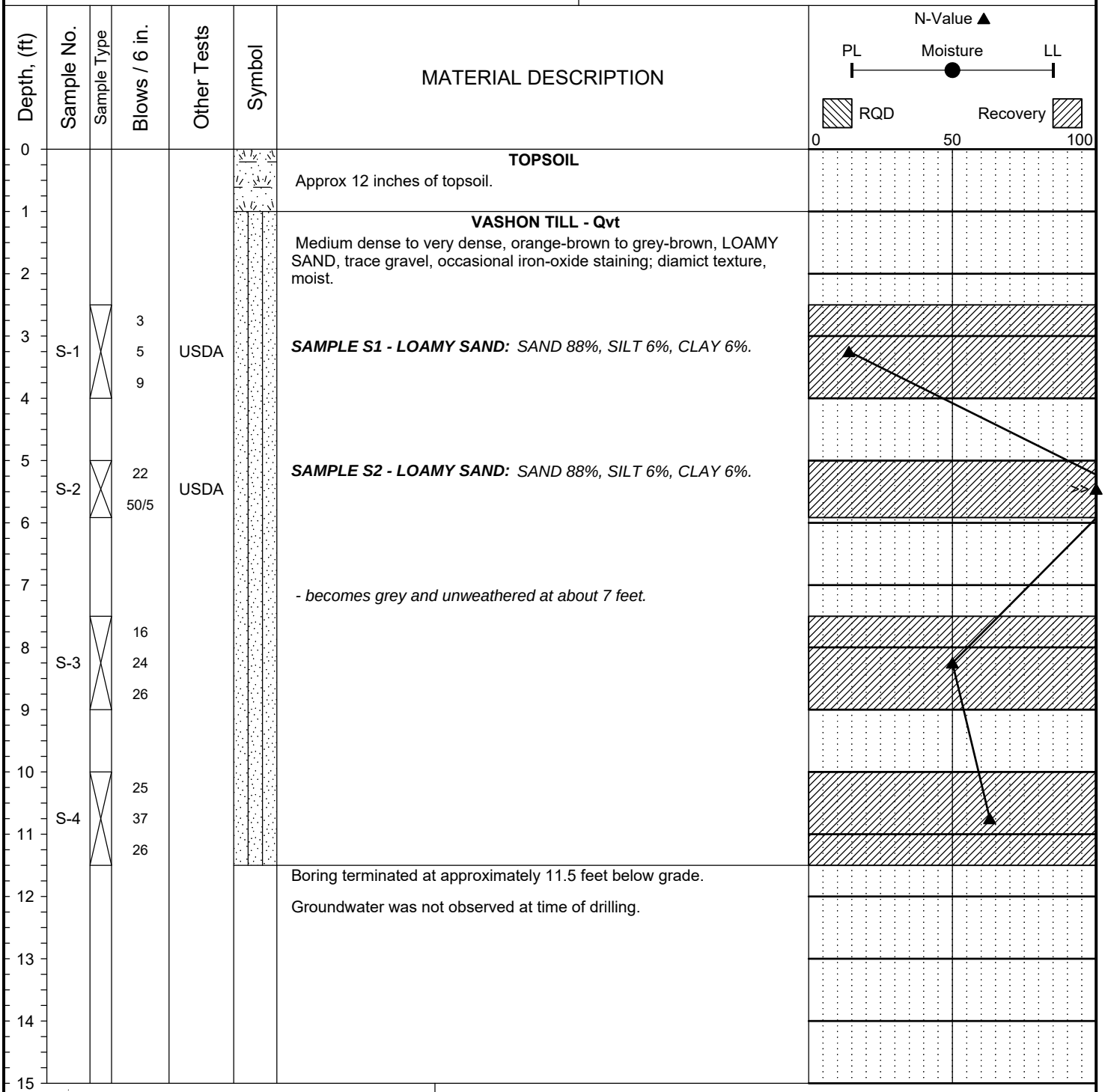
LOG OF TEST BORING 1

Figure A-2

The stratification lines represent approximate boundaries. The transition may be gradual.

Project:	Emergence Whidbey	Surface Elevation:	~100 ft
Job Number:	23-356	Top of Casing Elev.:	N/A
Location:	Clinton (Island County), WA	Drilling Method:	HSA
Coordinates:	Northing: 1252536, Easting: 363111	Sampling Method:	SPT



Completion Depth:	11.5ft
Date Borehole Started:	12/19/23
Date Borehole Completed:	12/19/23
Logged By:	S. Scott
Drilling Company:	Geologic Drill Partners

Remarks: Boring drilled using an bobcat tracked drill rig. Standard penetration test (SPT) sampler driven with a 140 lb. safety hammer. Hammer operated with rope and cathead. Surface elevation is approximate and based on their relative location to site features. This information is provided for relative information only and is not a substitution for field survey.
DATUM - WA STATE PLANE NORTH, NAVD88

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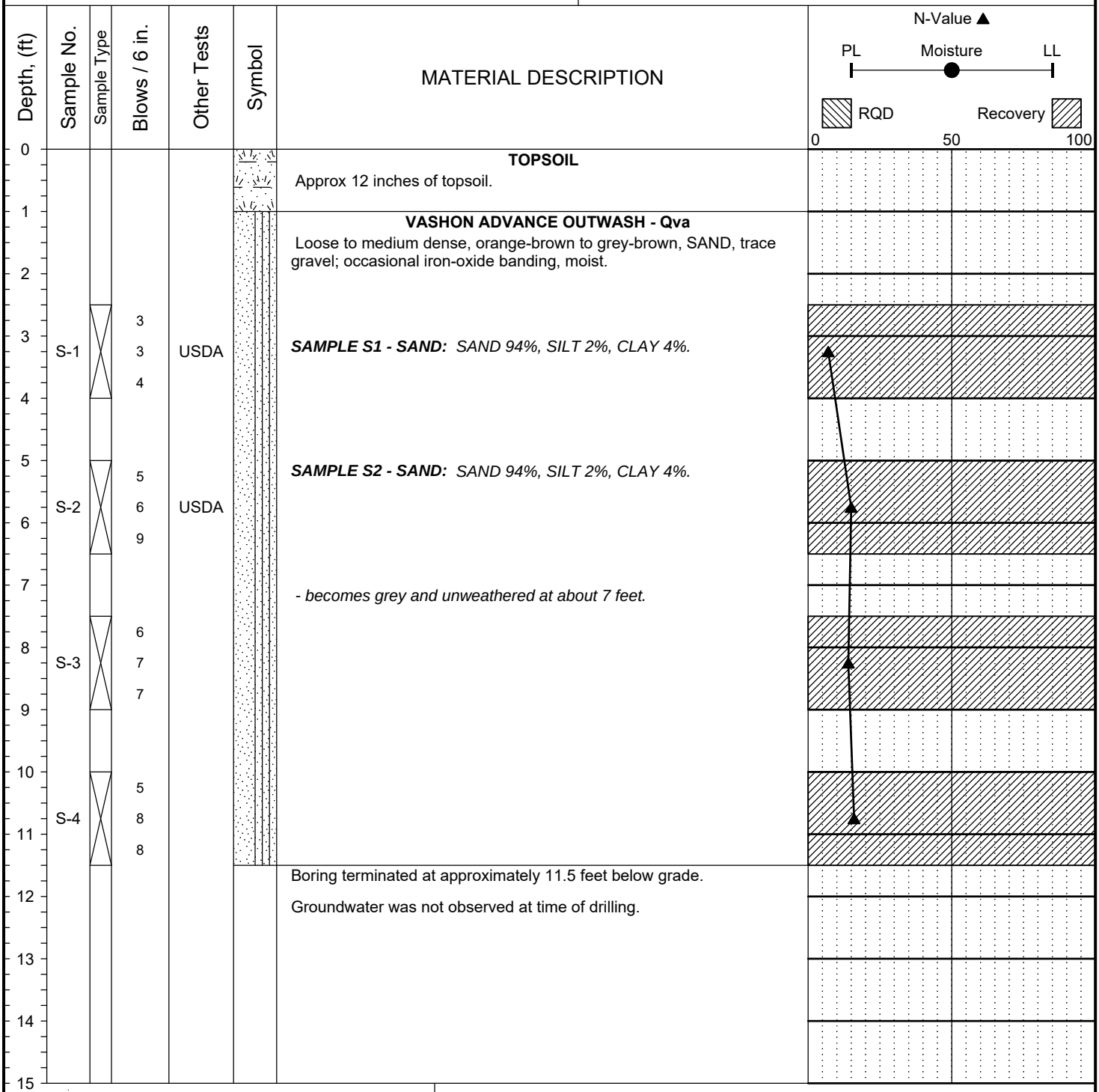
LOG OF TEST BORING 2

Figure A-3

The stratification lines represent approximate boundaries. The transition may be gradual.

Project:	Emergence Whidbey	Surface Elevation:	~110 ft
Job Number:	23-356	Top of Casing Elev.:	N/A
Location:	Clinton (Island County), WA	Drilling Method:	HSA
Coordinates:	Northing: 1252535, Easting: 362578	Sampling Method:	SPT



Completion Depth:	11.5ft
Date Borehole Started:	12/19/23
Date Borehole Completed:	12/19/23
Logged By:	S. Scott
Drilling Company:	Geologic Drill Partners

Remarks: Boring drilled using an bobcat tracked drill rig. Standard penetration test (SPT) sampler driven with a 140 lb. safety hammer. Hammer operated with rope and cathead. Surface elevation is approximate and based on their relative location to site features. This information is provided for relative information only and is not a substitution for field survey.
DATUM - WA STATE PLANE NORTH, NAVD88

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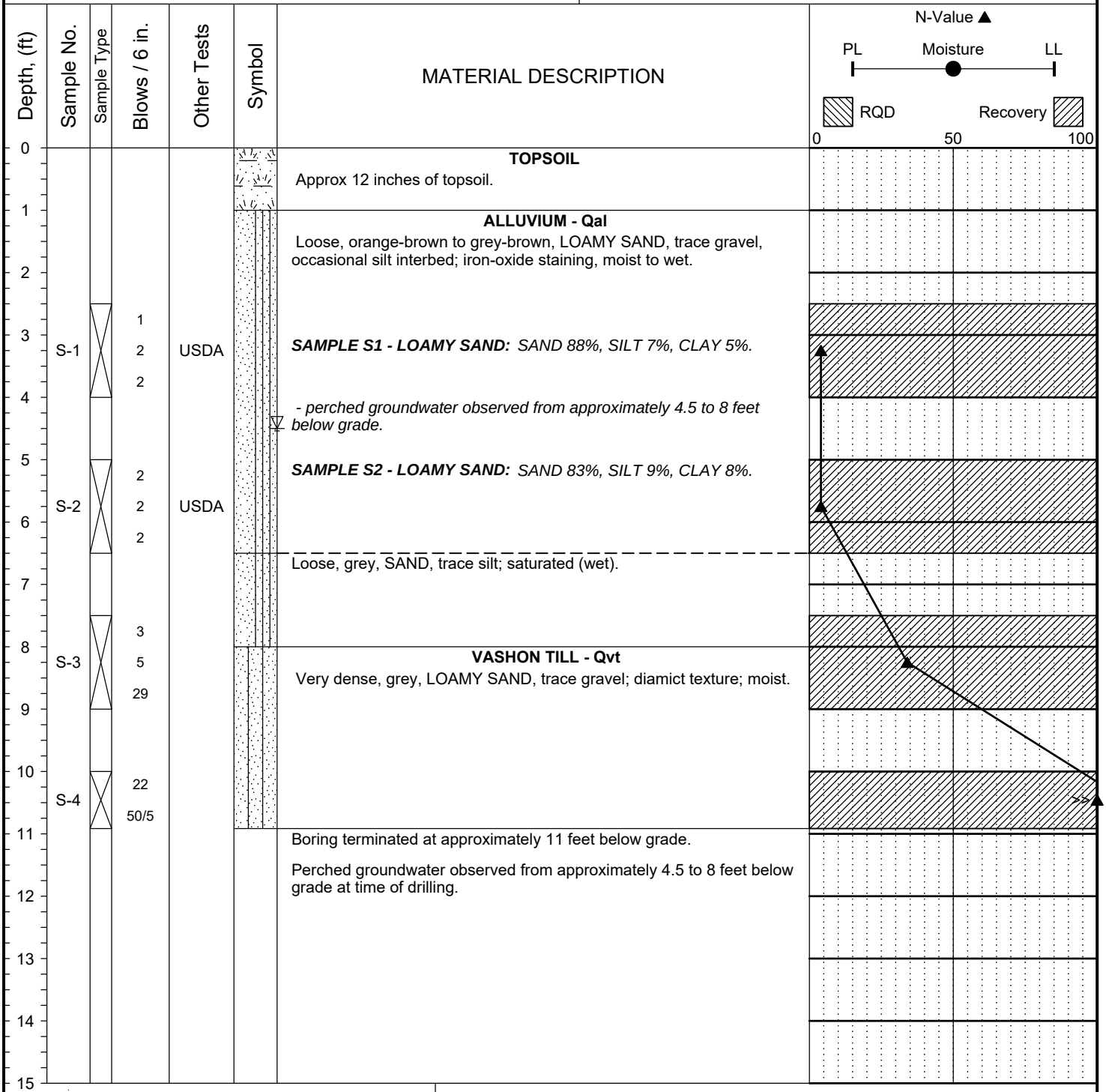
LOG OF TEST BORING 3

Figure A-4

The stratification lines represent approximate boundaries. The transition may be gradual.

Project:	Emergence Whidbey	Surface Elevation:	~105 ft
Job Number:	23-356	Top of Casing Elev.:	N/A
Location:	Clinton (Island County), WA	Drilling Method:	HSA
Coordinates:	Northing: 1253000, Easting: 363189	Sampling Method:	SPT



Completion Depth:	10.9ft
Date Borehole Started:	12/19/23
Date Borehole Completed:	12/19/23
Logged By:	S. Scott
Drilling Company:	Geologic Drill Partners

Remarks: Boring drilled using an bobcat tracked drill rig. Standard penetration test (SPT) sampler driven with a 140 lb. safety hammer. Hammer operated with rope and cathead. Surface elevation is approximate and based on their relative location to site features. This information is provided for relative information only and is not a substitution for field survey.
DATUM - WA STATE PLANE NORTH, NAVD88

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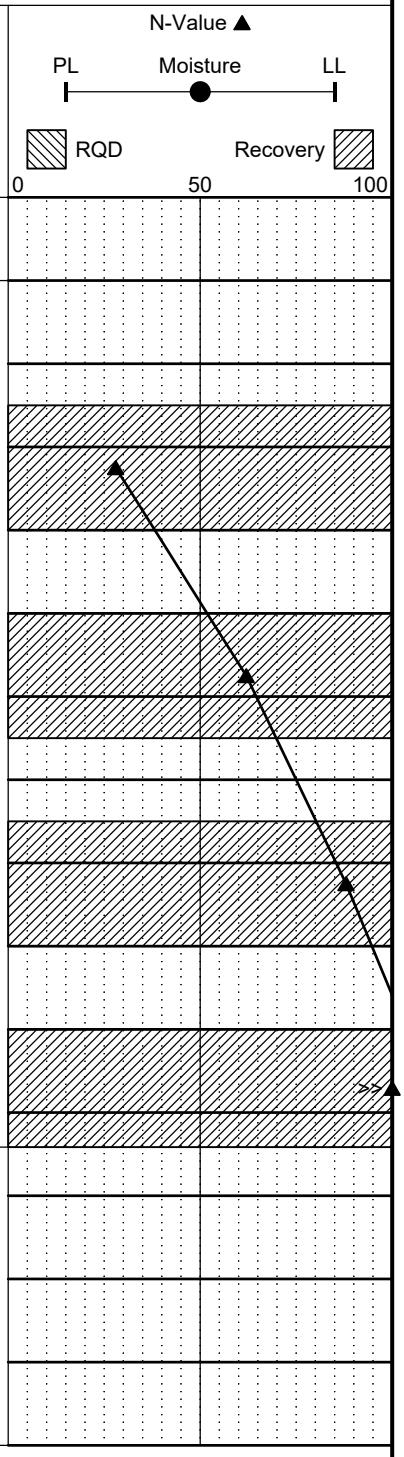
LOG OF TEST BORING 4

Figure A-5

The stratification lines represent approximate boundaries. The transition may be gradual.

Project:	Emergence Whidbey	Surface Elevation:	~162 ft
Job Number:	23-356	Top of Casing Elev.:	N/A
Location:	Clinton (Island County), WA	Drilling Method:	HSA
Coordinates:	Northing: 1253483, Easting: 362971	Sampling Method:	SPT

Depth, (ft)	Sample No.	Sample Type	Blows / 6 in.	Other Tests	Symbol	MATERIAL DESCRIPTION
0						**TOPSOIL**
1						Approx 12 inches of topsoil.
						VASHON TILL - Qvt
						Medium dense to very dense, orange-brown to grey, SANDY LOAM, trace gravel, occasional iron-oxide staining; diamict texture, moist.
3	S-1		6 12 16	USDA		***SAMPLE S1 - SANDY LOAM:*** *SAND 76%, SILT 14%, CLAY 10%.*
5	S-2		14 22 40	USDA		***SAMPLE S2 - SANDY LOAM:*** *SAND 58%, SILT 31%, CLAY 11%.*
7						*- becomes grey and unweathered at about 5.5 feet.*
8	S-3		17 40 48			
10	S-4		18 40 50/5			
11						Boring terminated at approximately 11.4 feet below grade.
						Groundwater was not observed at time of drilling.
15						



Completion Depth:	11.4ft
Date Borehole Started:	12/19/23
Date Borehole Completed:	12/19/23
Logged By:	S. Scott
Drilling Company:	Geologic Drill Partners

Remarks: Boring drilled using an bobcat tracked drill rig. Standard penetration test (SPT) sampler driven with a 140 lb. safety hammer. Hammer operated with rope and cathead. Surface elevation is approximate and based on their relative location to site features. This information is provided for relative information only and is not a substitution for field survey.
DATUM - WA STATE PLANE NORTH, NAVD88

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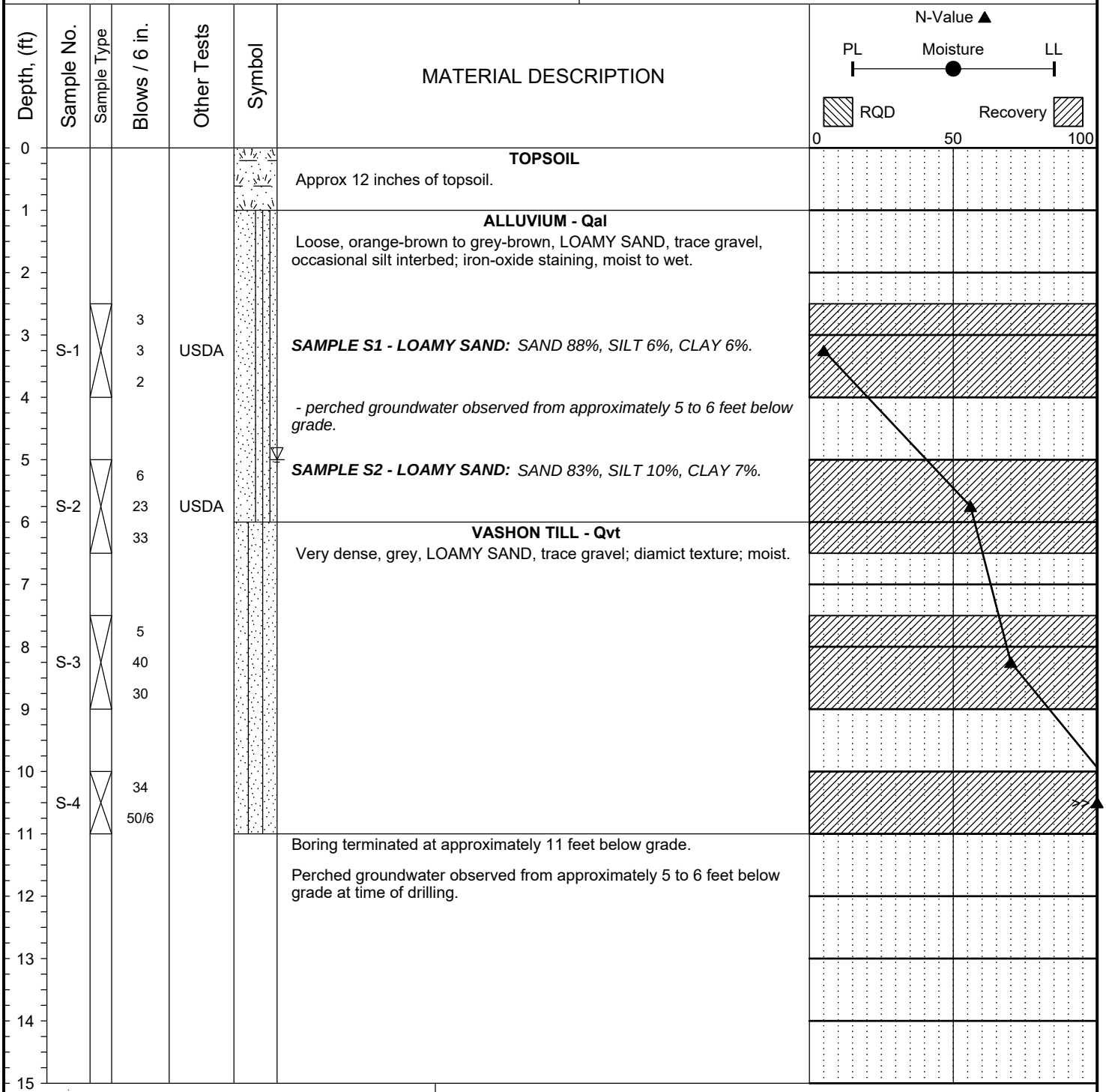
LOG OF TEST BORING 5

Figure A-6

The stratification lines represent approximate boundaries. The transition may be gradual.

Project:	Emergence Whidbey	Surface Elevation:	~109 ft
Job Number:	23-356	Top of Casing Elev.:	N/A
Location:	Clinton (Island County), WA	Drilling Method:	HSA
Coordinates:	Northing: 1253037, Easting: 363033	Sampling Method:	SPT



Completion Depth:	11.0ft
Date Borehole Started:	12/19/23
Date Borehole Completed:	12/19/23
Logged By:	S. Scott
Drilling Company:	Geologic Drill Partners

Remarks: Boring drilled using an bobcat tracked drill rig. Standard penetration test (SPT) sampler driven with a 140 lb. safety hammer. Hammer operated with rope and cathead. Surface elevation is approximate and based on their relative location to site features. This information is provided for relative information only and is not a substitution for field survey.
DATUM - WA STATE PLANE NORTH, NAVD88

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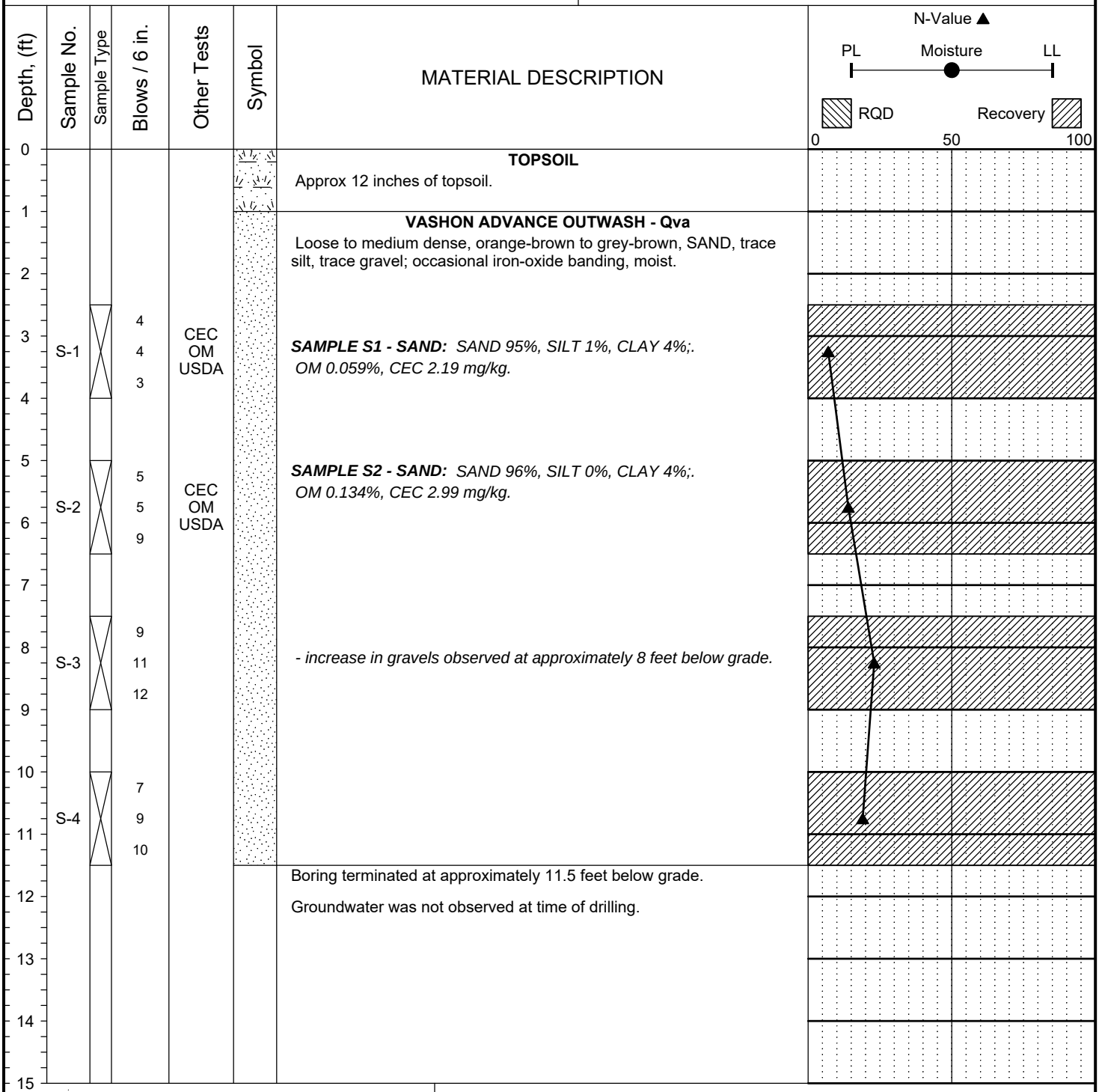
LOG OF TEST BORING 6

Figure A-7

The stratification lines represent approximate boundaries. The transition may be gradual.

Project:	Emergence Whidbey	Surface Elevation:	~123 ft
Job Number:	23-356	Top of Casing Elev.:	N/A
Location:	Clinton (Island County), WA	Drilling Method:	HSA
Coordinates:	Northing: 1253031, Easting: 362465	Sampling Method:	SPT



Completion Depth:	11.5ft
Date Borehole Started:	12/19/23
Date Borehole Completed:	12/19/23
Logged By:	S. Scott
Drilling Company:	Geologic Drill Partners

Remarks: Boring drilled using an bobcat tracked drill rig. Standard penetration test (SPT) sampler driven with a 140 lb. safety hammer. Hammer operated with rope and cathead. Surface elevation is approximate and based on their relative location to site features. This information is provided for relative information only and is not a substitution for field survey.
DATUM - WA STATE PLANE NORTH, NAVD88

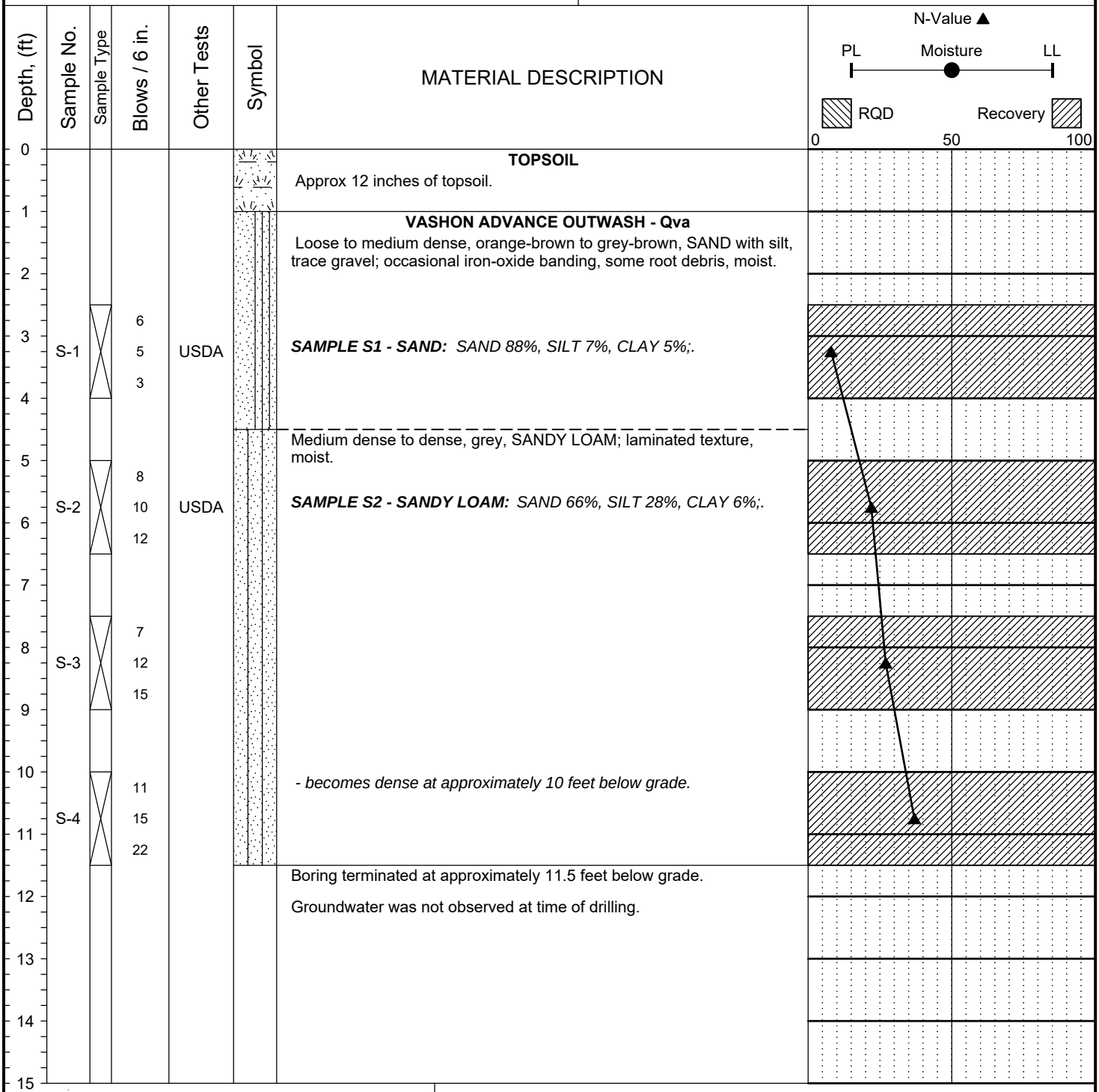
PanGEO INCORPORATED

LOG OF TEST BORING 7

Figure A-8

The stratification lines represent approximate boundaries. The transition may be gradual.

Project:	Emergence Whidbey	Surface Elevation:	~146 ft
Job Number:	23-356	Top of Casing Elev.:	N/A
Location:	Clinton (Island County), WA	Drilling Method:	HSA
Coordinates:	Northing: 1253277, Easting: 362502	Sampling Method:	SPT



Completion Depth:	11.5ft
Date Borehole Started:	12/19/23
Date Borehole Completed:	12/19/23
Logged By:	S. Scott
Drilling Company:	Geologic Drill Partners

Remarks: Boring drilled using an bobcat tracked drill rig. Standard penetration test (SPT) sampler driven with a 140 lb. safety hammer. Hammer operated with rope and cathead. Surface elevation is approximate and based on their relative location to site features. This information is provided for relative information only and is not a substitution for field survey.
DATUM - WA STATE PLANE NORTH, NAVD88

PanGEO INCORPORATED

LOG OF TEST BORING 8

Figure A-9

The stratification lines represent approximate boundaries. The transition may be gradual.

APPENDIX B

TEST PIT LOGS

Test Pit Logs

Project No: 23-356.300
Project Name: Emergence Whidbey Island
Project Location: 3691 Campbell Road & 6263 Maxwelton Road, Whidbey Island, WA
Excavated: 3/11/2025

Test Pit No. PIT-1

Location: 1253263, 363313 (Washington State Plane - North)

Approximate ground surface elevation: 118 feet (NAVD88 – Island 2014 LiDAR Dataset)

Depth (ft)	Material Description
0 - ½	**[Topsoil]** Loose, dark brown, silty sand with organics, moist
½ – 1½	**[Alluvium]** Medium dense, gray-brown, gravelly SAND trace silt; moist; trace roots
1½ – 5	**[Alluvium]** Medium dense, gray-brown, poorly graded GRAVEL with silt and sand; moist; trace roots
5 – 6	**[Vashon Till – Qvt]** Dense to very dense, gray, silty SAND; moist; trace roots • diamict (till-like) texture

Image of PIT-1 at approximately 5 feet below the existing ground surface. Groundwater seepage was not observed at the time of our excavation.

Logged by: J. Meissner

PanGEO INCORPORATED
Geotechnical & Earthquake Engineering Consultants

Figure B-1

Test Pit Logs

Project No: 23-356.300
Project Name: Emergence Whidbey Island
Project Location: 3691 Campbell Road & 6263 Maxwelton Road, Whidbey Island, WA
Excavated: 3/11/2025

Test Pit No. PIT-2

Location: 1253232, 363096 (Washington State Plane - North)

Approximate ground surface elevation: 115 feet (NAVD88 – Island 2014 LiDAR Dataset)

Depth (ft)	Material Description
0 - ½	**[Topsoil]** Loose, dark brown, silty sand with organics, moist
½ – 1½	**[Weathered Advance Outwash – Qva]** Medium dense gray-brown gravelly SAND trace silt; moist; trace roots
1½ – 8	**[Advance Outwash - Qva]** Medium dense, gray, poorly graded SAND with gravel; moist; trace roots

Image of PIT-2 at approximately 4 feet below the existing ground surface. Groundwater seepage was observed at approximately 7-8 feet during over-excavation.

Logged by: J. Meissner

Test Pit Logs

Project No: 23-356.300
Project Name: Emergence Whidbey Island
Project Location: 3691 Campbell Road & 6263 Maxwelton Road, Whidbey Island, WA
Excavated: 3/11/2025

Test Pit No. PIT-3

Location: 1253182, 363027 (Washington State Plane - North)

Approximate ground surface elevation: 113 feet (NAVD88 – Island 2014 LiDAR Dataset)

Depth (ft)	Material Description
0 - ½	**[Topsoil]** Loose, dark brown, silty sand with organics, moist
½ – 2	**[Weathered Advance Outwash – Qva]** Medium dense gray-brown gravelly SAND trace silt; moist; trace roots; trace organics
2 – 7	**[Advance Outwash - Qva]** Medium dense, gray, poorly graded SAND with gravel; moist; trace roots -- At 7 feet becomes with silt -- Diamict (till-like) texture

Image of PIT-3 at approximately 4 feet below the existing ground surface. Groundwater seepage was not encountered at the time of our excavation

Logged by: J. Meissner

PanGEO INCORPORATED
Geotechnical & Earthquake Engineering Consultants

Figure B-3

Test Pit Logs

Project No: 23-356.300
Project Name: Emergence Whidbey Island
Project Location: 3691 Campbell Road & 6263 Maxwelton Road, Whidbey Island, WA
Excavated: 3/11/2025

Test Pit No. PIT-4

Location: 1253118, 362743 (Washington State Plane - North)

Approximate ground surface elevation: 121 feet (NAVD88 – Island 2014 LiDAR Dataset)

Depth (ft)	Material Description
0 - ½	**[Topsoil]** Loose, dark brown, silty sand with organics, moist
½ – 2½	**[Weathered Advance Outwash – Qva]** Medium dense, brown, gravelly SAND; moist; trace roots
2½ – 8	**[Advance Outwash - Qva]** Medium dense, gray-brown, poorly graded SAND with silt and gravel; moist; trace roots -- At 7 feet becomes silty and dense

Image of soils encountered approximately 4 feet below the existing ground surface during infiltration testing. Groundwater seepage was not encountered during excavation

Logged by: J. Meissner

PanGEO INCORPORATED
Geotechnical & Earthquake Engineering Consultants

Figure B-4

Test Pit Logs

Project No: 23-356.300
Project Name: Emergence Whidbey Island
Project Location: 3691 Campbell Road & 6263 Maxwelton Road, Whidbey Island, WA
Excavated: 3/11/2025

Test Pit No. PIT-5

Location: 1253055, 362524 (Washington State Plane - North)

Approximate ground surface elevation: 123 feet (NAVD88 – Island 2014 LiDAR Dataset)

Depth (ft)	Material Description
0 – ¾	**[Topsoil]** Loose, dark brown, gravelly, silty SAND; moist; roots; organics
¾ – 2½	**[Weathered Advance Outwash – Qva]** Medium dense, gray-brown, poorly graded gravelly SAND trace silt; moist; trace roots
2½ – 8	**[Advance Outwash - Qva]** Medium dense to dense, gray-brown, poorly graded SAND; moist; trace roots; -- Becomes gray and gravelly at about 7 feet

Image of PIT-5 at approximately 8 feet below the existing ground surface. Groundwater seepage was not encountered at the time of our excavation

Logged by: J. Meissner

PanGEO INCORPORATED
Geotechnical & Earthquake Engineering Consultants

Figure B-5

Test Pit Logs

Project No: 23-356.300
Project Name: Emergence Whidbey Island
Project Location: 3691 Campbell Road & 6263 Maxwelton Road, Whidbey Island, WA
Excavated: 3/11/2025

Test Pit No. PIT-6

Location: 1252570, 362658 (Washington State Plane - North)

Approximate ground surface elevation: 110 feet (NAVD88 – Island 2014 LiDAR Dataset)

Depth (ft)	Material Description
0 – ½	**[Topsoil]** Loose, dark brown, silty SAND; moist; roots
½ – 2½	**[Weathered Advance Outwash – Qva]** Medium loose to medium dense, gray-brown, poorly graded gravelly SAND trace silt; moist; trace roots
2½ – 8	**[Advance Outwash - Qva]** Medium dense, gray, poorly graded SAND with gravel; moist; trace roots -- Gravel lenses observed at below five feet

Image of PIT-6 at approximately 8 feet below the existing ground surface. Groundwater seepage was not encountered at the time of our excavation

Logged by: J. Meissner

PanGEO INCORPORATED
Geotechnical & Earthquake Engineering Consultants

Figure B-6

Test Pit Logs

Project No: 23-356.300
Project Name: Emergence Whidbey Island
Project Location: 3691 Campbell Road & 6263 Maxwelton Road, Whidbey Island, WA
Excavated: 3/11/2025

Test Pit No. PIT-7

Location: 47.72932, -122.25046 (WGS84)

Approximate ground surface elevation: 397 feet (NAVD88)

Depth (ft)	Material Description
0 – ¾	**[Topsoil]** Loose, brown, gravelly silty SAND; moist; roots; trace debris; organics
¾ – 4	**[Weathered Advance Outwash – Qva]** Medium dense, gray-brown to red-brown, gravelly SAND trace silt; moist; trace roots; weathered; iron oxide staining
4 – 8	**[Advance Outwash – Qva]** Loose to medium dense, gray to gray-brown, poorly graded SAND with silt and gravel; moist; trace roots.

Image of PIT-7 at approximately 8 feet below the existing ground surface. Groundwater seepage was not encountered at the time of our excavation.

Logged by: J. Meissner

Test Pit Logs

Project No: 23-356.300
Project Name: Emergence Whidbey Island
Project Location: 3691 Campbell Road & 6263 Maxwelton Road, Whidbey Island, WA
Excavated: 3/11/2025

Test Pit No. TP-1

Location: 1253311, 363325 (Washington State Plane - North)

Approximate ground surface elevation: 126 feet (NAVD88 – Island 2014 LiDAR Dataset)

Depth (ft)	Material Description
0 - ½	**[Topsoil]** Loose, dark brown, silty sand with organics, moist
½ – 2	**[Weathered Vashon Till - Qvt]** Loose to medium dense, orange-brown, silty fine SAND; trace gravel, scattered roots and organics; disturbed texture, iron-oxide staining; moist
2 – 6	**[Vashon Till - Qvt]** Dense to very dense, orange-brown to gray-brown, silty fine to medium SAND with gravel, trace cobble; trace iron-oxide staining; moist -- Diamict (till-like) texture

Image of Test Pit TP-1 at approximately 6 feet below the existing ground surface at practical digging refusal. Groundwater seepage was not observed at the time of our excavation.

Logged by: S. Scott

PanGEO INCORPORATED
Geotechnical & Earthquake Engineering Consultants

Figure B-8

Test Pit Logs

Project No: 23-356.300
Project Name: Emergence Whidbey Island
Project Location: 3691 Campbell Road & 6263 Maxwelton Road, Whidbey Island, WA
Excavated: 3/11/2025

Test Pit No. TP-2

Location: 1253274, 363067 (Washington State Plane - North)

Approximate ground surface elevation: 124 feet (NAVD88 – Island 2014 LiDAR Dataset)

Depth (ft)	Material Description
0 - ½	**[Topsoil]** Loose, dark brown, forest duff/organics, moist
½ – 6	**[Weathered Advance Outwash - Qva]** Medium dense, orange-brown to gray-brown, poorly-graded SAND with silt; trace gravel, scattered roots and organics; iron-oxide staining; moist
6 – 7	**[Advance Outwash - Qva]** Dense, gray-brown, silty fine to medium SAND with gravel; moist

Image of Test Pit TP-2 at approximately 7 feet below the existing ground surface at practical digging refusal. Groundwater seepage was not observed at the time of our excavation.

Logged by: S.Scott

PanGEO INCORPORATED
Geotechnical & Earthquake Engineering Consultants

Figure B-9

Test Pit Logs

Project No: 23-356.300
Project Name: Emergence Whidbey Island
Project Location: 3691 Campbell Road & 6263 Maxwelton Road, Whidbey Island, WA
Excavated: 3/11/2025

Test Pit No. TP-3

Location: 1253199, 362986 (Washington State Plane - North)

Approximate ground surface elevation: 123 feet (NAVD88 – Island 2014 LiDAR Dataset)

Depth (ft)	Material Description
0 - ½	**[Forest Duff]** Loose, dark brown, silty sand with leaf litter and organics, moist
½ – 2	**[Weathered Advance Outwash - Qva]** Approximately 6 inches of forest duff above: loose to medium dense, orange-brown, silty fine SAND; trace gravel, roots and organics; iron-oxide staining; moist
2 – 4	**[Advance Ourwash - Qva]** Dense to very dense, gray-brown, poorly graded SAND with silt and gravel; moist

Image of Test Pit TP-3 at approximately 4 feet below the existing ground surface at practical digging refusal. Groundwater seepage was not observed at the time of our excavation.

Logged by: S. Scott

PanGEO INCORPORATED
Geotechnical & Earthquake Engineering Consultants

Figure B-10

Test Pit Logs

Project No: 23-356.300
Project Name: Emergence Whidbey Island
Project Location: 3691 Campbell Road & 6263 Maxwelton Road, Whidbey Island, WA
Excavated: 3/11/2025

Test Pit No. TP-4

Location: 1253141, 362776 (Washington State Plane - North)

Approximate ground surface elevation: 129 feet (NAVD88 – Island 2014 LiDAR Dataset)

Depth (ft)	Material Description
0 - ½	**[Topsoil]** Loose, dark brown, silty sand with organics, moist
½ – 3	**[Weathered Advance Outwash – Qva]** Medium dense, orange-brown, silty fine SAND; trace gravel, scattered roots and organics; disturbed texture, iron-oxide staining; moist -- Relic soil horizon approximately 3 feet inches below surface
3 – 6	**[Advance OutwashAlluvium – Qal]** Medium dense, orange-brown to gray-brown, poorly grades SAND with silt, trace gravel, scattered roots and organics; iron-oxide staining; moist -- Becomes dense to very dense at 5 feet

Image of Test Pit TP-4 at approximately 6 feet below the existing ground surface at practical digging refusal. Groundwater seepage was not observed at the time of our excavation.

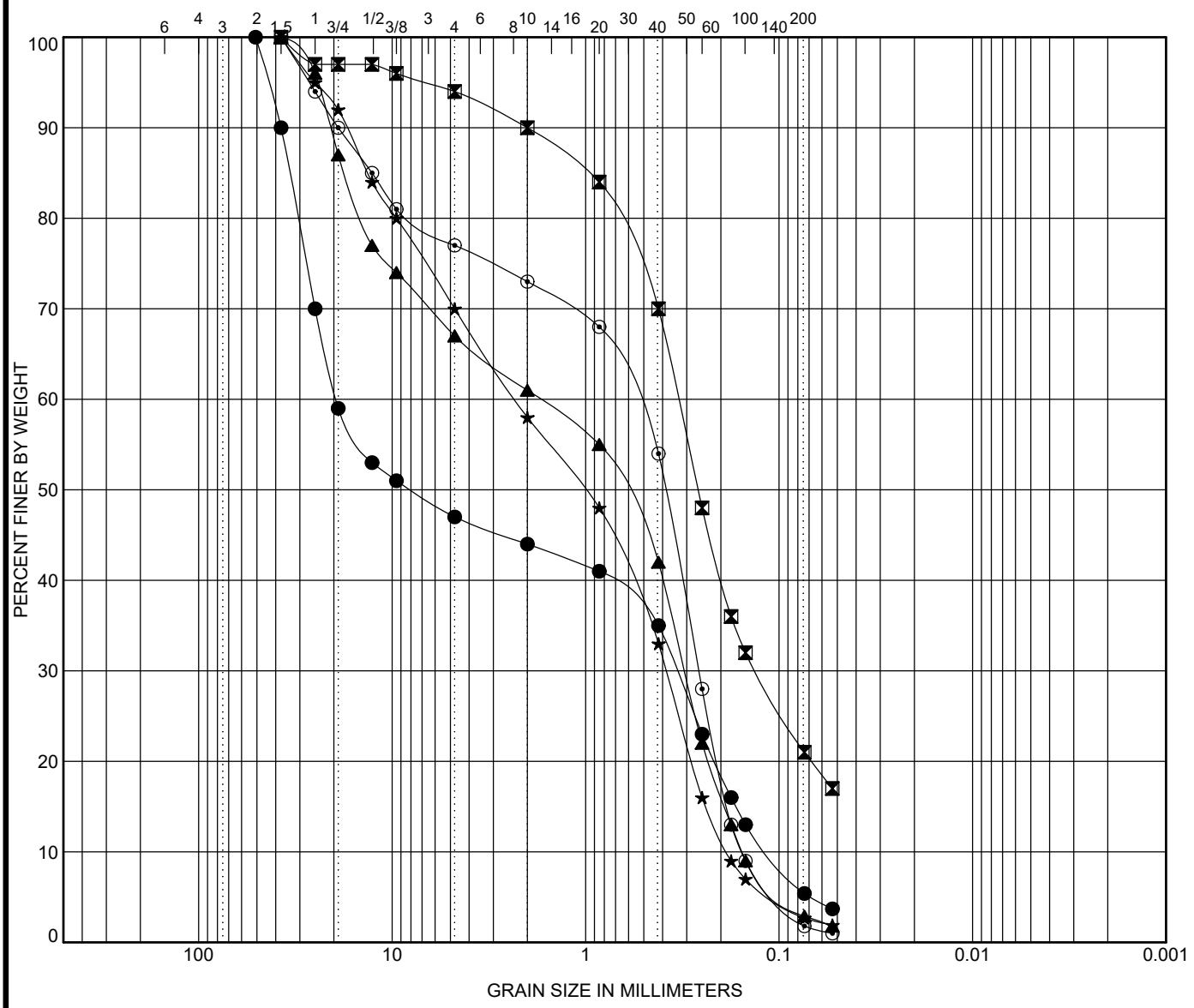
Logged by: S. Scott

PanGEO INCORPORATED
Geotechnical & Earthquake Engineering Consultants

Figure B-11

APPENDIX C

LABORATORY TEST RESULTS



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	Specimen Identification		Classification	LL	PL	PI	Cc	Cu
●	PIT-1	@ 5.0 ft.	POORLY GRADED GRAVEL with SILT and SAND(GP-GM)				0.05	172.34
⊠	PIT-1	@ 5.5 ft.	SILTY SAND(SM)					
▲	PIT-2	@ 4.0 ft.	POORLY GRADED SAND with GRAVEL(SP)				0.35	11.15
★	PIT-2	@ 8.0 ft.	POORLY GRADED SAND with GRAVEL(SP)				0.34	12.42
⊙	PIT-3	@ 4.0 ft.	POORLY GRADED SAND with GRAVEL(SP)				0.77	3.65

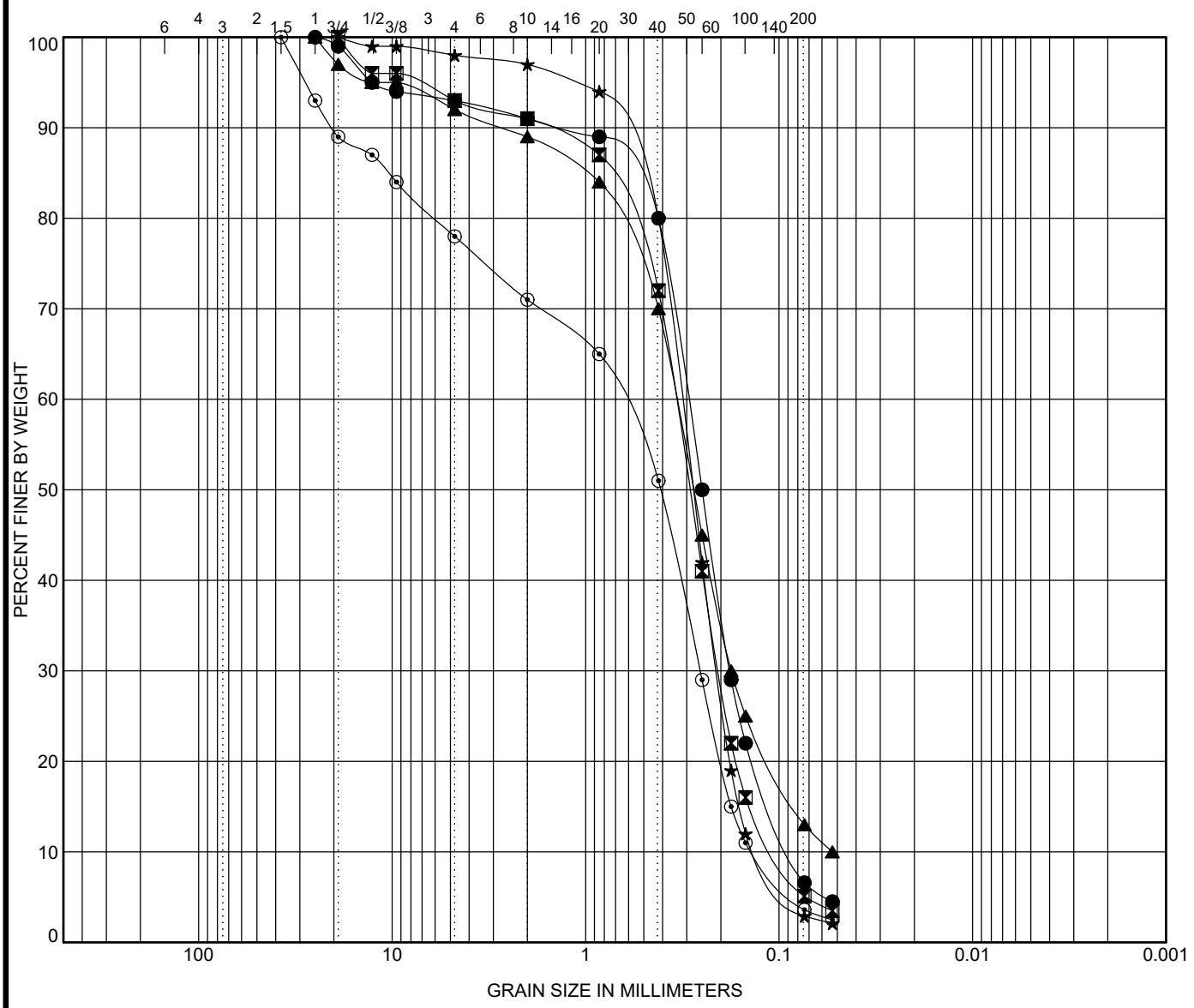
	Specimen Identification		D100	D90	D60	D10	%Gravel	%Sand	%Silt	%Clay
●	PIT-1	5.0	50.8	37.5	19.48	0.113	53.0	41.5	5.5	
⊠	PIT-1	5.5	37.5	2	0.332		6.0	72.8	21.2	
▲	PIT-2	4.0	37.5	20.82	1.734	0.156	33.0	64.0	3.0	
★	PIT-2	8.0	37.5	17.18	2.31	0.186	30.0	67.2	2.8	
⊙	PIT-3	4.0	37.5	19	0.568	0.156	23.0	75.1	1.9	

PanGEO INCORPORATED
Phone: 206.262.0370

GRAIN SIZE DISTRIBUTION

Project: Emergence Whidbey
Job Number: 23-356
Location: Clinton (Island County), WA

Figure C-1



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen Identification		Classification	LL	PL	PI	Cc	Cu
●	PIT-3 @ 8.0 ft.	POORLY GRADED SAND with SILT(SP-SM)				1.26	3.44
⊠	PIT-4 @ 4.0 ft.	POORLY GRADED SAND with SILT(SP-SM)				1.20	3.39
▲	PIT-4 @ 8.0 ft.	SILTY SAND(SM)				1.73	6.44
★	PIT-5 @ 8.0 ft.	POORLY GRADED SAND(SP)				1.07	2.50
⊙	PIT-6 @ 8.0 ft.	POORLY GRADED SAND with GRAVEL(SP)				0.73	4.87

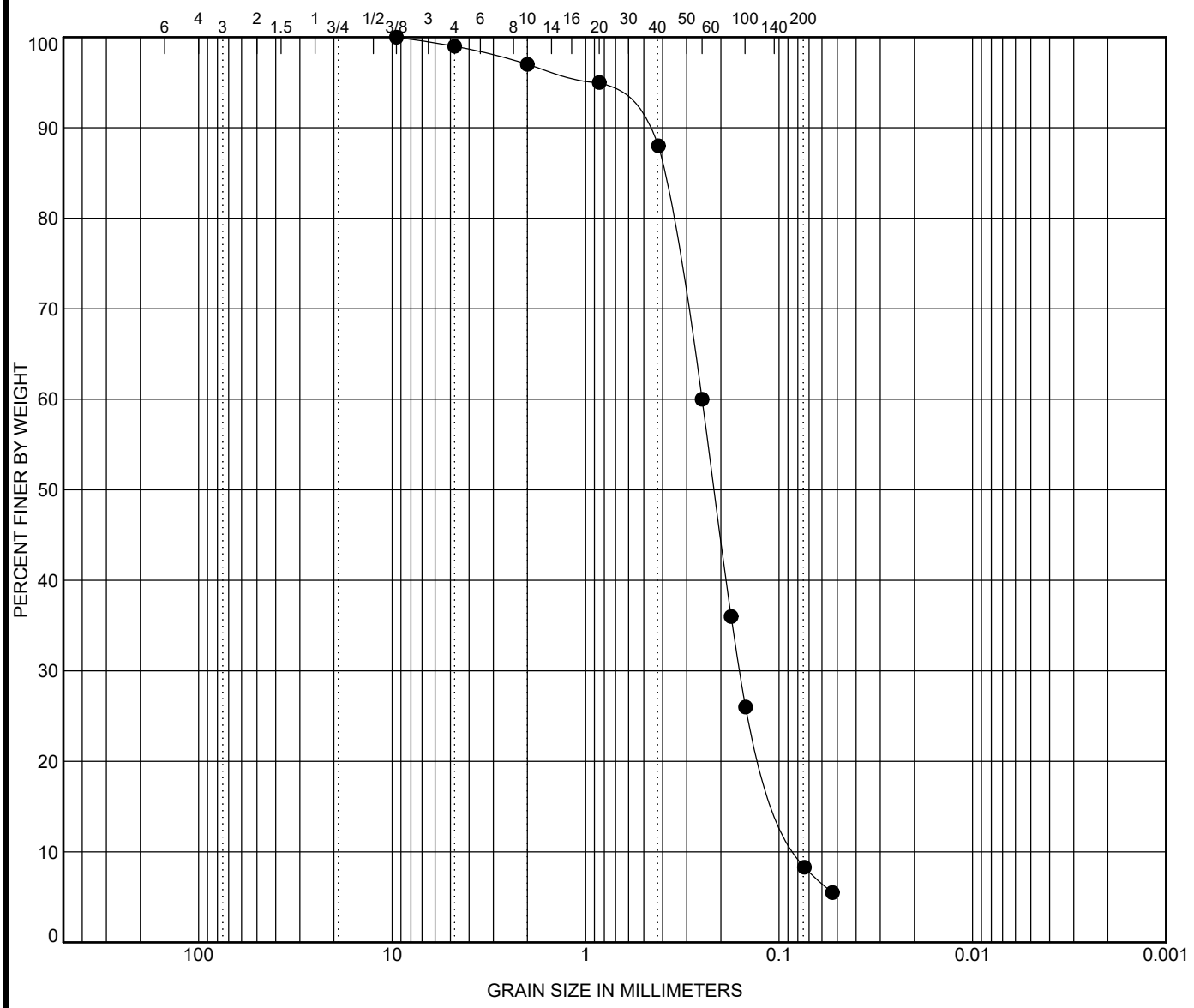
Specimen Identification		D100	D90	D60	D10	%Gravel	%Sand	%Silt	%Clay
●	PIT-3 8.0	25	1.304	0.297	0.086	7.0	86.1	6.9	
⊠	PIT-4 4.0	19	1.615	0.344	0.101	7.0	87.7	5.3	
▲	PIT-4 8.0	25	2.668	0.341	0.053	8.0	78.8	13.2	
★	PIT-5 8.0	19	0.695	0.32	0.128	2.0	94.9	3.1	
⊙	PIT-6 8.0	37.5	20.349	0.661	0.136	22.0	74.3	3.7	

PanGEO INCORPORATED
Phone: 206.262.0370

GRAIN SIZE DISTRIBUTION

Project: Emergence Whidbey
Job Number: 23-356
Location: Clinton (Island County), WA

Figure C-2



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	Specimen Identification		Classification	LL	PL	PI	Cc	Cu
●	**PIT-7**	**@ 8.0 ft.**	**POORLY GRADED SAND with SILT(SP-SM)**				**1.29**	**3.16**

	Specimen Identification		D100	D90	D60	D10	%Gravel	%Sand	%Silt	%Clay
●	**PIT-7**	**8.0**	**9.5**	**0.514**	**0.25**	**0.079**	**1.0**	**90.4**	**8.6**	

PanGEO INCORPORATED
Phone: 206.262.0370

GRAIN SIZE DISTRIBUTION

Project: Emergence Whidbey
Job Number: 23-356
Location: Clinton (Island County), WA

Figure C-3

GRAIN SIZE 23-356 BORING LOGS.GPJ PANGEO.GDT 4/2/25

APPENDIX D
WELL LOGS

WELL LOG 7B7
6104 MAXWELTON ROAD

29-3-22

Start Card No. W063697

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

ENTERED

WATER WELL REPORT

STATE OF WASHINGTON

UNIQUE WELL I.D. # ACS 102

Water Right Permit No. _____

(1) **OWNER:** Name Robert Olin Address 6104 S. Maxwelton Clinton

(2) **LOCATION OF WELL:** County Island 1/4 NW 1/4 Sec 22 T 29N N., R 3 E W.M.

(2a) **STREET ADDRESS OF WELL** (or nearest address) 6104 S. Maxwelton Rd Clinton 98236

(3) **PROPOSED USE:** ☑ Domestic ☐ Industrial ☐ Municipal ☐ ☐ Irrigation ☐ Test Well ☐ Other ☐ ☐ DeWater

(4) **TYPE OF WORK:** Owner's number of well (If more than one) _____

Abandoned ☐ New well ☐ Method: Dug ☐ Bored ☐
Deepened ☑ Cable ☑ Driven ☐
Reconditioned ☐ Rotary ☐ Jetted ☐

(5) **DIMENSIONS:** Diameter of well 6 inches. Drilled 57 feet. Depth of completed well 55 ft.

(6) **CONSTRUCTION DETAILS:**

Casing Installed: 6 " Diam. from 0 ft. to 45 ft.
Welded ☑
Liner installed ☐ _____ " Diam. from _____ ft. to _____ ft.
Threaded ☐ _____ " Diam. from _____ ft. to _____ ft.

Perforations: Yes ☐ No ☑
Type of perforator used _____
SIZE of perforations _____ in. by _____ in.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes ☑ No ☐
Manufacturer's Name Sinclair
Type Plastic Model No. _____
Diam. 4 Slot size 10 from 45 ft. to 55 ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes ☐ No ☑ Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes ☑ No ☐ To what depth? 18 ft.
Material used in seal Bentite
Did any strata contain unusable water? Yes ☐ No ☑
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) **PUMP:** Manufacturer's Name Flint Walling
Type: Submersible H.P. 3/4

(8) **WATER LEVELS:** Land-surface elevation above mean sea level 150 ft.
Static level 10 ft. below top of well Date 5/10/98
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) **WELL TESTS:** Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☑ No ☐ If yes, by whom? Driller
Yield: 20 gal./min. with 30 ft. drawdown after 4 hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level
0	45'	30 min	10'		
1 min	30'				
10 min	15'				

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes ☐ No ☑

(10) **WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION**

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
CLAY & HARDPAN BR	0	20
LAYER WATER GRA.	20	45
SAND & GRAVEL WH GRAY	45	55

RECEIVED
MAY 18 1998
NWRO - WR
DEPT OF ECOLOGY

Work Started 5/5/1998 Completed 5/10/1998

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME Bobs Backhoe Service (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address 6104 S. Maxwelton Rd

(Signed) _____ (WELL DRILLER) License No. 0264

Contractor's Registration No. BOBSSB5101dd Date 5/12/1998

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6600. The TDD number is (206) 407-6006.

ECY 050-1-20 (9/93)

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WELL LOG 78H
3710 CAMPBELL ROAD

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

29/03-22 B
Application No. .....

Permit No. .....

(1) OWNER: Name Jim Melton Address Clinton Wa. 98236

(2) LOCATION OF WELL: County ISLAND — NE ¼ SW ¼ Sec. 22 T. 29 N., R. 3E W.M.

Bearing and distance from section or subdivision corner 1320 South / 1280 West from Center Sec 22

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) .....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☒ Driven ☐
Reconditioned ☐ Rotary ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 80 ft. Depth of completed well 80 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from 0 ft. to 75 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☒ No ☐
Manufacturer's Name COOK
Type 6S Model No.
Diam. 6 Slot size 10 from 75 ft. to 80 ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name STA-RITE
Type: SUB H.P. 1½

(8) WATER LEVELS: Land-surface elevation above mean sea level .... 150 ft.
Static level 42' 6" ft. below top of well Date 4-20-77
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☒ No ☐ If yes, by whom? DRILLER
Yield: 20 gal./min. with 11 ft. drawdown after 24 hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
TOP SOIL	0	3
BROWN SAND MED	3	115
" SAND & CLAY WW	115	60
" SAND MED WW	60	80

Work started 4-14 19 77 Completed 4-20 19 77

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME B & W DRILLING CO
(Person, firm, or corporation) (Type or print)

Address P.O. Box 55 FREELAND WA. 98249

[Signed] (Well Driller)

License No. 265 Date 6-13, 1977

(USE ADDITIONAL SHEETS IF NECESSARY)

S. F. No. 7356—OS—(Rev. 4-71).

3

WELL LOG 78J
6312 MAXWELTON ROAD

ENTERED

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W 053622

UNIQUE WELL I.D. #

Water Right Permit No. 21/35/21-R

(1) **OWNER:** Name Chad Lorring Address Maxwelton Rd

(2) **LOCATION OF WELL:** County Island SE 1/4 SE 1/4 Sec 01 T. 29 N. R 3E W.M.

(2a) **STREET ADDRESS OF WELL** (or nearest address)

(3) **PROPOSED USE:** ☒ Domestic ☐ Industrial ☐ Municipal ☐ ☐ Irrigation ☐ Test Well ☐ Other ☐ ☐ DeWater

(4) **TYPE OF WORK:** Owner's number of well (if more than one)

Abandoned ☐ New well ☒ Method: Dug ☐ Bored ☐ Deepened ☐ Cable ☒ Driven ☐ Reconditioned ☐ Rotary ☐ Jetted ☐

(5) **DIMENSIONS:** Diameter of well 6 inches. Drilled 46 feet. Depth of completed well 45' ft.

(6) **CONSTRUCTION DETAILS:**

Casing installed: 6" Diam. from +1 ft. to 40' ft.
Welded ☒ Liner installed ☐ Threaded ☐ " Diam. from ft. to ft.
" Diam. from ft. to ft.

Perforations: Yes ☐ No ☐
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☒ No ☐
Manufacturer's Name Weyerhaeuser
Type Slotted Model No. 35
Diam. 5" Slot size 10 from 45 ft. to 40' ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 18+ ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) **PUMP:** Manufacturer's Name F & W
Type: Submersible H.P. 3/4

(8) **WATER LEVELS:** Land-surface elevation above mean sea level 110' ft.
Static level 15 ft. below top of well Date 6-9-95
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) **WELL TESTS:** Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☒ No ☐ If yes, by whom? Driller
Yield: 3 gal./min. with 10 ft. drawdown after 1 hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level
0:00	25	0:15	20	0:35	15

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Airtest gal./min. with stem set at ft. for hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☐

(10) **WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION**

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Brown Soil	0	1'
Caucasich Sand	1'	15'
Brown Clay & Sand	15'	31'
Clay	31'	36'
Brown Sand & Gravel w/water	36	46'
Silty Sandy Gravel	45'	

RECEIVED
JUN 15 1995
DEPT. OF ECOLOGY

Work Started June 6, 1995 Completed June 9, 1995

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME Island Well Drilling (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address 5463 Shawnhill Langley WA 98260

(Signed) (WELL DRILLER) License No. 0933

Contractor's Registration No. ISLAND*872MF Date June 9, 1995

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6600. The TDD number is (206) 407-6006.

ECY 050-1-20 (9/93)

WELL LOG 78K
3710 CAMPBELL ROAD

STATE OF WASHINGTON

Appli. #7737 DEPARTMENT OF CONSERVATION AND DEVELOPMENT

Permit #7399

WELL LOG No. 29 / 13 E 22 E

Date June 6, 1967

Record by Whidbey Drillers

Source Driller's record

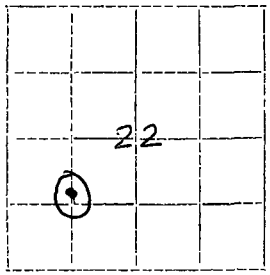


Diagram of Section

Location: State of WASHINGTON

County Island

Area

Map

NW¼ SW¼ sec. 22 T. 29 N., R. 3 E. W.

Drilling Co. Whidbey Drillers

Address P. O. Box 277 Oak Harbor, Washington

Method of Drilling Cable Date ., 19

Owner Leo Lee and George Stockholm

Address Langley, Washington

Land surface datum ft above below

SWL: 47'4" Nov. 15, 1965 Dims: 8" x 106'

29/3E-22E

File number

CORRELATION	MATERIAL	THICKNESS (feet)	DEPTH (feet)
	Industrial		
	Gravel	0	10
	Sand, dirty	10	54
	Water in sand	54	106
	Clay	106	?
	Casing: 8" from 0-84'8"		
	Screened from 80-106'		
	Yield: 150 gpm with 20' DD after 2 hrs.		
	full recovery in ten minutes		
	Bailer Test: 30 gpm with 0' DD after 2 min.		
	Temperature 56°		
	Pump: 5 h.p. Deep well turbine		
	Deming		

(Transcribe driller's terminology literally but paraphrase as necessary, in parentheses. If material water-bearing, so state and record static level if reported. Give depths in feet below land-surface datum unless otherwise indicated. Correlate with stratigraphic column, if feasible. Following log of materials, list all casings, perforations, screens, etc.)

Turn up

Sheet . . . of . . . sheets

WELL LOG 79J
6364 MAXWELTON ROAD

29/3-22M START CARD NO. 530161

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No. .....
Permit No. .....

(1) OWNER: Name Larry Long Address 6364 Maxwelton Rd

(2) LOCATION OF WELL: County Island NW ¼ of ¼ Sec. 12 T. 32 N. R. 1 E. W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☑ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) 1
New well ☑ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 86 ft. Depth of completed well 85 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Diam. from 0 ft. to 81 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☑ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☑
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☑ No ☐ Johnson
Manufacturer's Name
Type Stainless Model No 304
Diam. 6 Slot size 18 from 80 ft. to 85 ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☑ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☑ No ☐ To what depth? 18 ft.
Material used in seal Bentonite Cement
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name Gould
Type: Sub H.P. 1

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 28½ ft. below top of well Date
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom? Driller
Yield: 15 gal./min. with 11½ ft. drawdown after 1 hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Baller test 15 gal./min. with 10 ft. drawdown after 1 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:
Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
SAND	0	6
SANDY CLAY	7	12
Soupy SANDY CLAY	13	15
BROWN Clay CLAY	16	54
Most Blue SANDY CLAY	55	74
BROWN WATER SAND	75	86

DEPARTMENT OF ECOLOGY NORTHWEST REGION
MAY 31 1989
Received
JUN 13 1989
DEPARTMENT OF ECOLOGY NORTHWEST REGION

Work started May 1989 Completed May 1989

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Well Done Drillers (Person, firm, or corporation) (Type or print)
Address 429 N. Valley Dr
[Signed] (Well Driller)
License No. 1304 Date May 1989

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

APPENDIX E

ANALYTICAL TEST RESULTS

ALLIANCE TECHNICAL GROUP

SAMPLE COLLECTED MARCH 11, 2025

3600 Fremont Ave N
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

PanGEO Inc
Scott Dinkelman
3213 Easklake Ave E, Suite B
Seattle, WA 98102

RE: WHIDBEY, 23-356.300
Work Order Number: 2503178

March 18, 2025

Attention Scott Dinkelman:

Alliance Technical Group, LLC - Seattle received 4 sample(s) on 3/11/2025 for the analyses presented in the following report.

Conductivity by SM 2510B
Drinking Water Metals by EPA 200.8
Ion Chromatography by EPA 300.0
Total Coliform & E.coli by SM 9223B
Total Coliform & E.coli by SM 9223B (IDEXX)
Total Metals by EPA 200.8

All analyses were performed according to our accredited Quality Assurance program. Please contact the laboratory if you should have any questions about the results.

Alliance Technical Group is committed to accuracy, speed, and customer service. Thank you for choosing Alliance Technical Group's Seattle laboratory team for your analytical needs. We appreciate this opportunity to serve you!

Sincerely,

Kelley Lovejoy
Project Manager

CC:
Spenser Scott

DoD-ELAP Accreditation #79636 by PJLA, ISO/IEC 17025:2017 and QSM 5.4 for Environmental Testing
ORELAP Certification: WA 100009 (NELAP Recognized) for Environmental Testing
Washington State Department of Ecology Accredited for Environmental Testing, Lab ID C910

Original

Date: *03/18/2025*

CLIENT: PanGEO Inc
Project: WHIDBEY
Work Order: 2503178

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2503178-001	S-1 'irrigation well'	03/11/2025 2:30 PM	03/11/2025 4:16 PM
2503178-002	S-2 'domestic well'	03/11/2025 2:25 PM	03/11/2025 4:16 PM
2503178-003	S-2 'creek up'	03/11/2025 1:45 PM	03/11/2025 4:16 PM
2503178-004	S-2 'creek down'	03/11/2025 2:15 PM	03/11/2025 4:16 PM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

Case Narrative

WO#: **2503178**

Date: **3/18/2025**

CLIENT: PanGEO Inc
Project: WHIDBEY

I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:
Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:
Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Prep Sample Comments:
2503178-001A 703472: Prep Comments for EPA200.8, Sample 2503178-001A: Turbidity = 0.14 NTU
2503178-002A 703476: Prep Comments for EPA200.8, Sample 2503178-002A: Turbidity = 0.07 NTU

Qualifiers:

* - Flagged value is not within established control limits
B - Analyte detected in the associated Method Blank
D - Dilution was required
E - Value above quantitation range
H - Holding times for preparation or analysis exceeded
I - Analyte with an internal standard that does not meet established acceptance criteria
J - Analyte detected below Reporting Limit
N - Tentatively Identified Compound (TIC)
Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria
S - Spike recovery outside accepted recovery limits
ND - Not detected at the Reporting Limit
R - High relative percent difference observed

Acronyms:

%Rec - Percent Recovery
CCB - Continued Calibration Blank
CCV - Continued Calibration Verification
DF - Dilution Factor
DUP - Sample Duplicate
HEM - Hexane Extractable Material
ICV - Initial Calibration Verification
LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
MCL - Maximum Contaminant Level
MB or MBLANK - Method Blank
MDL - Method Detection Limit
MS/MSD - Matrix Spike / Matrix Spike Duplicate
PDS - Post Digestion Spike
Ref Val - Reference Value
REP - Sample Replicate
RL - Reporting Limit
RPD - Relative Percent Difference
SD - Serial Dilution
SGT - Silica Gel Treatment
SPK - Spike
Surr - Surrogate

Analytical Report

Work Order: **2503178**
Date Reported: **3/18/2025**

Client: PanGEO Inc
Collection Date: 3/11/2025 2:30:00 PM
Project: WHIDBEY
Lab ID: 2503178-001
Matrix: Drinking Water
Client Sample ID: **S-1 'irrigation well'**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Total Coliform & E.coli by SM 9223B (IDEXX)				Batch ID: R98211		Analyst: JH
Coliform, Total	13.4	1.0		MPN/100mL	1	3/11/2025 4:00:00 PM
E. coli	ND	1.0		MPN/100mL	1	3/11/2025 4:00:00 PM
Ion Chromatography by EPA 300.0				Batch ID: 47019		Analyst: OP
Chloride	11.1	0.600		mg/L	1	3/12/2025 11:45:00 AM
Nitrite (as N)	ND	0.250		mg/L	1	3/12/2025 11:45:00 AM
Nitrate (as N)	ND	0.150		mg/L	1	3/12/2025 11:45:00 AM
Drinking Water Metals by EPA 200.8				Batch ID: 47026		Analyst: SLL
Arsenic	0.00211	0.00100		mg/L	1	3/18/2025 11:08:00 AM
Conductivity by SM 2510B				Batch ID: R98306		Analyst: BB
Specific Conductance (Conductivity)	284	1.00		µS/cm	1	3/18/2025 8:15:24 AM

Analytical Report

Work Order: **2503178**
Date Reported: **3/18/2025**

Client: PanGEO Inc
Collection Date: 3/11/2025 2:25:00 PM
Project: WHIDBEY
Lab ID: 2503178-002
Matrix: Drinking Water
Client Sample ID: **S-2 'domestic well'**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Total Coliform & E.coli by SM 9223B (IDEXX)				Batch ID: R98211		Analyst: JH
Coliform, Total	ND	1.0		MPN/100mL	1	3/11/2025 4:00:00 PM
E. coli	ND	1.0		MPN/100mL	1	3/11/2025 4:00:00 PM
Ion Chromatography by EPA 300.0				Batch ID: 47019		Analyst: OP
Chloride	6.02	0.600		mg/L	1	3/12/2025 12:35:00 PM
Nitrite (as N)	ND	0.250		mg/L	1	3/12/2025 12:35:00 PM
Nitrate (as N)	0.499	0.150		mg/L	1	3/12/2025 12:35:00 PM
Drinking Water Metals by EPA 200.8				Batch ID: 47026		Analyst: SLL
Arsenic	0.00129	0.00100		mg/L	1	3/18/2025 11:17:00 AM
Conductivity by SM 2510B				Batch ID: R98306		Analyst: BB
Specific Conductance (Conductivity)	194	1.00		µS/cm	1	3/18/2025 8:15:24 AM

Analytical Report

Work Order: **2503178**
Date Reported: **3/18/2025**

Client: PanGEO Inc
Project: WHIDBEY
Lab ID: 2503178-003
Client Sample ID: **S-2 'creek up'**

Collection Date: 3/11/2025 1:45:00 PM
Matrix: Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Total Coliform & E.coli by SM 9223B				Batch ID: R98211		Analyst: JH
Coliform, Total	185.0	1.0		MPN/100mL	1	3/11/2025 4:00:00 PM
E. coli	ND	1.0		MPN/100mL	1	3/11/2025 4:00:00 PM
Ion Chromatography by EPA 300.0				Batch ID: 47019		Analyst: OP
Chloride	8.87	0.600		mg/L	1	3/12/2025 12:48:00 PM
Nitrite (as N)	ND	0.250		mg/L	1	3/12/2025 12:48:00 PM
Nitrate (as N)	0.968	0.150		mg/L	1	3/12/2025 12:48:00 PM
Total Metals by EPA 200.8				Batch ID: 47014		Analyst: ME
Arsenic	0.00271	0.000500		mg/L	1	3/13/2025 2:01:00 PM
Conductivity by SM 2510B				Batch ID: R98306		Analyst: BB
Specific Conductance (Conductivity)	201	1.00		µS/cm	1	3/18/2025 8:15:24 AM

Analytical Report

Work Order: **2503178**
Date Reported: **3/18/2025**

Client: PanGEO Inc
Collection Date: 3/11/2025 2:15:00 PM
Project: WHIDBEY
Lab ID: 2503178-004
Matrix: Groundwater
Client Sample ID: S-2 'creek down'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Total Coliform & E.coli by SM 9223B				Batch ID: R98211		Analyst: JH
Coliform, Total	248.1	1.0		MPN/100mL	1	3/11/2025 4:00:00 PM
E. coli	ND	1.0		MPN/100mL	1	3/11/2025 4:00:00 PM
Ion Chromatography by EPA 300.0				Batch ID: 47019		Analyst: OP
Chloride	8.75	0.600		mg/L	1	3/12/2025 1:00:00 PM
Nitrite (as N)	ND	0.250		mg/L	1	3/12/2025 1:00:00 PM
Nitrate (as N)	0.895	0.150		mg/L	1	3/12/2025 1:00:00 PM
Total Metals by EPA 200.8				Batch ID: 47023		Analyst: ME
Arsenic	0.00272	0.000500		mg/L	1	3/13/2025 2:48:00 PM
Conductivity by SM 2510B				Batch ID: R98306		Analyst: BB
Specific Conductance (Conductivity)	200	1.00		µS/cm	1	3/18/2025 8:15:24 AM

Work Order: 2503178
CLIENT: PanGEO Inc
Project: WHIDBEY

QC SUMMARY REPORT

Conductivity by SM 2510B

Sample ID: **MB-R98306** SampType: **MBLK** Units: **µS/cm** Prep Date: **3/18/2025** RunNo: **98306**
Client ID: **MBLKW** Batch ID: **R98306** Analysis Date: **3/18/2025** SeqNo: **2048429**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance (Conductivity)	ND	1.00									

Sample ID: **LCS-R98306** SampType: **LCS** Units: **µS/cm** Prep Date: **3/18/2025** RunNo: **98306**
Client ID: **LCSW** Batch ID: **R98306** Analysis Date: **3/18/2025** SeqNo: **2048430**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance (Conductivity)	986	1.00	1,000	0	98.6	90	110				

Sample ID: **2503166-001ADUP** SampType: **DUP** Units: **µS/cm** Prep Date: **3/18/2025** RunNo: **98306**
Client ID: **BATCH** Batch ID: **R98306** Analysis Date: **3/18/2025** SeqNo: **2048432**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance (Conductivity)	934	1.00						926.0	0.860	20	

Sample ID: **2503300-003BDUP** SampType: **DUP** Units: **µS/cm** Prep Date: **3/18/2025** RunNo: **98306**
Client ID: **BATCH** Batch ID: **R98306** Analysis Date: **3/18/2025** SeqNo: **2048442**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance (Conductivity)	69.2	1.00						69.60	0.576	20	

Work Order: 2503178
CLIENT: PanGEO Inc
Project: WHIDBEY

QC SUMMARY REPORT

Ion Chromatography by EPA 300.0

Sample ID: **MB-47019** SampType: **MBLK** Units: **mg/L** Prep Date: **3/12/2025** RunNo: **98303**
Client ID: **MBLKW** Batch ID: **47019** Analysis Date: **3/12/2025** SeqNo: **2048402**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	ND	0.600									
Nitrite (as N)	ND	0.250									
Nitrate (as N)	ND	0.150									

Sample ID: **LCS-47019** SampType: **LCS** Units: **mg/L** Prep Date: **3/12/2025** RunNo: **98303**
Client ID: **LCSW** Batch ID: **47019** Analysis Date: **3/12/2025** SeqNo: **2048403**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	10.3	0.600	10.00	0	103	90	110				
Nitrite (as N)	3.17	0.250	3.045	0	104	90	110				
Nitrate (as N)	2.33	0.150	2.259	0	103	90	110				

Sample ID: **2503178-001BDUP** SampType: **DUP** Units: **mg/L** Prep Date: **3/12/2025** RunNo: **98303**
Client ID: **S-1 'irrigation well'** Batch ID: **47019** Analysis Date: **3/12/2025** SeqNo: **2048407**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	11.1	0.600						11.11	0.171	20	
Nitrite (as N)	ND	0.250						0		20	
Nitrate (as N)	ND	0.150						0		20	

Sample ID: **2503178-001BMS** SampType: **MS** Units: **mg/L** Prep Date: **3/12/2025** RunNo: **98303**
Client ID: **S-1 'irrigation well'** Batch ID: **47019** Analysis Date: **3/12/2025** SeqNo: **2048408**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	20.6	0.600	10.00	11.11	94.6	80	120				
Nitrite (as N)	3.09	0.250	3.045	0	101	80	120				
Nitrate (as N)	2.27	0.150	2.259	0.03700	98.9	80	120				

Work Order: 2503178
CLIENT: PanGEO Inc
Project: WHIDBEY

QC SUMMARY REPORT

Ion Chromatography by EPA 300.0

Sample ID: **2503178-001BMSD** SampType: **MSD** Units: **mg/L** Prep Date: **3/12/2025** RunNo: **98303**
Client ID: **S-1 'irrigation well'** Batch ID: **47019** Analysis Date: **3/12/2025** SeqNo: **2048409**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	21.0	0.600	10.00	11.11	99.0	80	120	20.57	2.14	20	
Nitrite (as N)	3.27	0.250	3.045	0	107	80	120	3.087	5.70	20	
Nitrate (as N)	2.40	0.150	2.259	0.03700	105	80	120	2.271	5.48	20	

Work Order: 2503178
CLIENT: PanGEO Inc
Project: WHIDBEY

QC SUMMARY REPORT

Drinking Water Metals by EPA 200.8

Sample ID: **MB-47026** SampType: **MBLK** Units: **mg/L** Prep Date: **3/13/2025** RunNo: **98316**
Client ID: **MBLKW** Batch ID: **47026** Analysis Date: **3/18/2025** SeqNo: **2048567**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.00100									

Sample ID: **LCS-47026** SampType: **LCS** Units: **mg/L** Prep Date: **3/13/2025** RunNo: **98316**
Client ID: **LCSW** Batch ID: **47026** Analysis Date: **3/18/2025** SeqNo: **2048568**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.0986	0.00100	0.100	0	98.6	85	115				

Sample ID: **2503178-001ADUP** SampType: **DUP** Units: **mg/L** Prep Date: **3/13/2025** RunNo: **98316**
Client ID: **S-1 'irrigation well'** Batch ID: **47026** Analysis Date: **3/18/2025** SeqNo: **2048570**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.00205	0.00100						0.00211	2.93	30	

Sample ID: **2503178-001AMS** SampType: **MS** Units: **mg/L** Prep Date: **3/13/2025** RunNo: **98316**
Client ID: **S-1 'irrigation well'** Batch ID: **47026** Analysis Date: **3/18/2025** SeqNo: **2048571**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.104	0.00100	0.100	0.00211	102	70	130				

Sample ID: **2503178-001AMSD** SampType: **MSD** Units: **mg/L** Prep Date: **3/13/2025** RunNo: **98316**
Client ID: **S-1 'irrigation well'** Batch ID: **47026** Analysis Date: **3/18/2025** SeqNo: **2048572**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.102	0.00100	0.100	0.00211	100	70	130	0.104	1.63	30	

Work Order: 2503178
CLIENT: PanGEO Inc
Project: WHIDBEY

QC SUMMARY REPORT

Total Metals by EPA 200.8

Sample ID: **MB-47014** SampType: **MBLK** Units: **mg/L** Prep Date: **3/12/2025** RunNo: **98218**
Client ID: **MBLKW** Batch ID: **47014** Analysis Date: **3/12/2025** SeqNo: **2046671**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.000500									

Sample ID: **LCS-47014** SampType: **LCS** Units: **mg/L** Prep Date: **3/12/2025** RunNo: **98218**
Client ID: **LCSW** Batch ID: **47014** Analysis Date: **3/12/2025** SeqNo: **2046675**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.104	0.000500	0.100	0	104	85	115				

Sample ID: **2503143-001ADUP** SampType: **DUP** Units: **mg/L** Prep Date: **3/12/2025** RunNo: **98218**
Client ID: **BATCH** Batch ID: **47014** Analysis Date: **3/12/2025** SeqNo: **2046677**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.000737	0.000500						0.000770	4.38	30	

Sample ID: **2503143-001AMS** SampType: **MS** Units: **mg/L** Prep Date: **3/12/2025** RunNo: **98218**
Client ID: **BATCH** Batch ID: **47014** Analysis Date: **3/12/2025** SeqNo: **2046678**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.100	0.000500	0.100	0.000770	99.4	70	130				

Sample ID: **2503189-001AMS** SampType: **MS** Units: **mg/L** Prep Date: **3/12/2025** RunNo: **98218**
Client ID: **BATCH** Batch ID: **47014** Analysis Date: **3/12/2025** SeqNo: **2046682**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.105	0.000500	0.100	0.00241	103	70	130				

Work Order: 2503178
CLIENT: PanGEO Inc
Project: WHIDBEY

QC SUMMARY REPORT

Total Metals by EPA 200.8

Sample ID: **MB-47023** SampType: **MBLK** Units: **mg/L** Prep Date: **3/12/2025** RunNo: **98257**
Client ID: **MBLKW** Batch ID: **47023** Analysis Date: **3/13/2025** SeqNo: **2047452**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.000500									

Sample ID: **LCS-47023** SampType: **LCS** Units: **mg/L** Prep Date: **3/12/2025** RunNo: **98257**
Client ID: **LCSW** Batch ID: **47023** Analysis Date: **3/13/2025** SeqNo: **2047453**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.0990	0.000500	0.100	0	99.0	85	115				

Sample ID: **2503177-001BDUP** SampType: **DUP** Units: **mg/L** Prep Date: **3/12/2025** RunNo: **98257**
Client ID: **BATCH** Batch ID: **47023** Analysis Date: **3/13/2025** SeqNo: **2047455**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.00115	0.000500						0.00114	0.873	30	

Sample ID: **2503177-001BMS** SampType: **MS** Units: **mg/L** Prep Date: **3/12/2025** RunNo: **98257**
Client ID: **BATCH** Batch ID: **47023** Analysis Date: **3/13/2025** SeqNo: **2047456**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.0998	0.000500	0.100	0.00114	98.7	70	130				

Sample ID: **2503207-001BMS** SampType: **MS** Units: **mg/L** Prep Date: **3/12/2025** RunNo: **98257**
Client ID: **BATCH** Batch ID: **47023** Analysis Date: **3/13/2025** SeqNo: **2047477**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.0973	0.000500	0.100	0.00141	95.9	70	130				

Sample Log-In Check List

Client Name:	PANGEO	Work Order Number:	2503178
Logged by:	Morgan Wilson	Date Received:	3/11/2025 4:16:00 PM

Chain of Custody

1.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2.	How was the sample delivered?	Client		

Log In

3.	Custody Seals present on shipping container/cooler? (Refer to comments for Custody Seals not intact)	Yes ☐	No ☐	Not Present ☑
4.	Was an attempt made to cool the samples?	Yes ☐	No ☑	NA ☐
		Unkown prior to receipt.		
5.	Were all items received at a temperature of >2°C to 6°C *	Yes ☐	No ☐	NA ☑
6.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
7.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
8.	Are samples properly preserved?	Yes ☑	No ☐	
9.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
10.	Is there headspace in the VOA vials?	Yes ☐	No ☐	NA ☑
11.	Did all samples containers arrive in good condition(unbroken)?	Yes ☑	No ☐	
12.	Does paperwork match bottle labels?	Yes ☑	No ☐	
13.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
14.	Is it clear what analyses were requested?	Yes ☑	No ☐	
15.	Were all hold times (except field parameters, pH e.g.) able to be met?	Yes ☑	No ☐	

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified:		Date:	
By Whom:		Via:	☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:			
Client Instructions:			

17. Additional remarks:

Item Information

Item #	Temp °C
Sample	15.2

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

Alliance TECHNICAL GROUP
3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790

Chain of Custody Record & Laboratory Services Agreement

Date: 3/11/25 Page: 1 of: 1

Laboratory Project No (internal): 2503187 BUR 3/11

Special Remarks:

Project Name: WHIDBEY

Project No: 23-356,300

Client: PANGEO

Address: 3213 EASTLAKE AVE E

City, State, Zip: SEATTLE, WA 98102

Telephone: 206-262-0370

Collected by: S. SCOTT

Location:

Report To (PM): SCOTT DINKELMAN

Disposal: Samples will be disposed in 30 days unless otherwise requested.
☐ Retain volume (specify above) ☐ Return to client

Email(s): SDINKELMAN@PANGEOINC.COM + SSCOTT@PANGEOINC.COM

	Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	# of Cont.	VOCs (EPA 8260 / 624)	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 (200.8)) Total (T) | Dissolved (D)	Anions (IC)	EDB (8011)	Conductivity	Total Coliform			Comments
1	S-1 'irrigation well'	3/11/25	2:30p	DW	3									X	X	X					Conductivity SM2510B
2	S-2 'domestic well'	3/11/25	2:25p	DW	3									X	X	X					"
3	S-3 'Creek up'	3/11/25	1:45p	GW	3									X	X	X					"
4	S-4 'Creek down'	3/11/25	2:15p	GW	3									X	X	X					"
5																					
6																					
7																					
8																					
9																					
10																					

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

**Metals (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL *Individual:* Ag Al (As) B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Ti Tl V Zn

***Anions (Circle): (Nitrate) (Nitrite) (Chloride) Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

Turn-around Time:
☒ Standard ☐ Next Day
☐ 3 Day ☐ Same Day
☐ 2 Day ☐ _____ (specify)

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished (Signature)	Print Name	Date/Time	Received (Signature)	Print Name	Date/Time
x	STENSER P SCOTT	3/11/25 4:15	x	Briana Ballard	3/11 4:16pm
Relinquished (Signature)	Print Name	Date/Time	Received (Signature)	Print Name	Date/Time
x			x		

ALLIANCE TECHNICAL GROUP

SAMPLE COLLECTED AUGUST 19, 2024

3600 Fremont Ave N
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

PanGEO Inc
Scott Dinkelman
3213 Easklake Ave E, Suite B
Seattle, WA 98102

RE: Whidbey, 23-256.200
Work Order Number: 2408282

August 26, 2024

Attention Scott Dinkelman:

Fremont Analytical, Inc, an Alliance Technical Group company, received 9 sample(s) on 8/19/2024 for the analyses presented in the following report.

Conductivity by SM 2510B
Drinking Water Metals by EPA 200.8
Ion Chromatography by EPA 300.0
Total Coliform & E.coli by SM 9223B
Total Coliform & E.coli by SM 9223B (IDEXX)
Total Metals by EPA 200.8

All analyses were performed according to our accredited Quality Assurance program. Please contact the laboratory if you should have any questions about the results.

Please note, while the appearance of our logo and branding will update, our commitment to accuracy, speed, and customer service remain values celebrated and shared by Alliance Technical Group. Thank you for the opportunity to serve you.

Sincerely,

Brianna Barnes
Project Manager

CC:
Spenser Scott

DoD-ELAP Accreditation #79636 by PJLA, ISO/IEC 17025:2017 and QSM 5.4 for Environmental Testing
ORELAP Certification: WA 100009 (NELAP Recognized) for Environmental Testing
Washington State Department of Ecology Accredited for Environmental Testing, Lab ID C910

Original

Date: *08/26/2024*

CLIENT: PanGEO Inc
Project: Whidbey
Work Order: 2408282

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2408282-001	S-1	08/19/2024 8:45 AM	08/19/2024 11:20 AM
2408282-002	S-2	08/19/2024 8:45 AM	08/19/2024 11:20 AM
2408282-003	S-3	08/19/2024 8:45 AM	08/19/2024 11:20 AM
2408282-004	S-4	08/19/2024 9:00 AM	08/19/2024 11:20 AM
2408282-005	S-5	08/19/2024 9:00 AM	08/19/2024 11:20 AM
2408282-006	S-6	08/19/2024 9:00 AM	08/19/2024 11:20 AM
2408282-007	S-7	08/19/2024 8:25 AM	08/19/2024 11:20 AM
2408282-008	S-8	08/19/2024 8:25 AM	08/19/2024 11:20 AM
2408282-009	S-9	08/19/2024 8:25 AM	08/19/2024 11:20 AM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

Case Narrative

WO#: **2408282**

Date: **8/26/2024**

CLIENT: PanGEO Inc
Project: Whidbey

WorkOrder Narrative:
I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:
Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:
Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Prep Sample Comments:
2408282-001A 669989: Prep Comments for EPA200.8, Sample 2408282-001A: Turbidity = 0.22 NTU
2408282-007A 669990: Prep Comments for EPA200.8, Sample 2408282-007A: Turbidity = 0.06 NTU

Qualifiers:

* - Flagged value is not within established control limits
B - Analyte detected in the associated Method Blank
D - Dilution was required
E - Value above quantitation range
H - Holding times for preparation or analysis exceeded
I - Analyte with an internal standard that does not meet established acceptance criteria
J - Analyte detected below Reporting Limit
N - Tentatively Identified Compound (TIC)
Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria
S - Spike recovery outside accepted recovery limits
ND - Not detected at the Reporting Limit
R - High relative percent difference observed

Acronyms:

%Rec - Percent Recovery
CCB - Continued Calibration Blank
CCV - Continued Calibration Verification
DF - Dilution Factor
DUP - Sample Duplicate
HEM - Hexane Extractable Material
ICV - Initial Calibration Verification
LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
MCL - Maximum Contaminant Level
MB or MBLANK - Method Blank
MDL - Method Detection Limit
MS/MSD - Matrix Spike / Matrix Spike Duplicate
PDS - Post Digestion Spike
Ref Val - Reference Value
REP - Sample Replicate
RL - Reporting Limit
RPD - Relative Percent Difference
SD - Serial Dilution
SGT - Silica Gel Treatment
SPK - Spike
Surr - Surrogate

Analytical Report

Work Order: **2408282**
Date Reported: **8/26/2024**

CLIENT: PanGEO Inc
Project: Whidbey

Irrigation Well

Lab ID: 2408282-001 **Collection Date:** 8/19/2024 8:45:00 AM
Client Sample ID: **S-1** **Matrix:** Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Drinking Water Metals by EPA 200.8				Batch ID: 44924		Analyst: ME
Arsenic	1.81	1.00		µg/L	1	8/22/2024 11:11:00 AM

Lab ID: 2408282-002 **Collection Date:** 8/19/2024 8:45:00 AM
Client Sample ID: **S-2** **Matrix:** Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Ion Chromatography by EPA 300.0				Batch ID: 44911		Analyst: OP
Chloride	10.7	0.400	D	mg/L	2	8/20/2024 6:12:00 PM
Nitrite (as N)	ND	0.200		mg/L	1	8/19/2024 7:38:00 PM
Nitrate (as N)	0.408	0.200		mg/L	1	8/19/2024 7:38:00 PM
Conductivity by SM 2510B				Batch ID: R93900		Analyst: OP
Specific Conductance (Conductivity)	287	1.00		µS/cm	1	8/26/2024 4:07:58 PM

Lab ID: 2408282-003 **Collection Date:** 8/19/2024 8:45:00 AM
Client Sample ID: **S-3** **Matrix:** Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Total Coliform & E.coli by SM 9223B (IDEXX)				Batch ID: R93776		Analyst: BB
Coliform, Total	ND	1.0		MPN/100mL	1	8/19/2024 4:23:00 PM
E. coli	ND	1.0		MPN/100mL	1	8/19/2024 4:23:00 PM

CLIENT: PanGEO Inc
Project: Whidbey

Creek - Downstream of Culvert Crossing

Lab ID: 2408282-004 **Collection Date:** 8/19/2024 9:00:00 AM
Client Sample ID: **S-4** **Matrix:** Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Total Metals by EPA 200.8				Batch ID: 44932		Analyst: ME
Arsenic	3.86	0.500		µg/L	1	8/22/2024 1:51:00 PM

Lab ID: 2408282-005 **Collection Date:** 8/19/2024 9:00:00 AM
Client Sample ID: **S-5** **Matrix:** Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Ion Chromatography by EPA 300.0				Batch ID: 44911		Analyst: OP
Chloride	9.70	0.400	D	mg/L	2	8/20/2024 6:35:00 PM
Nitrite (as N)	ND	0.200		mg/L	1	8/19/2024 8:01:00 PM
Nitrate (as N)	0.436	0.200		mg/L	1	8/19/2024 8:01:00 PM
Conductivity by SM 2510B				Batch ID: R93900		Analyst: OP
Specific Conductance (Conductivity)	223	1.00		µS/cm	1	8/26/2024 4:07:58 PM

Lab ID: 2408282-006 **Collection Date:** 8/19/2024 9:00:00 AM
Client Sample ID: **S-6** **Matrix:** Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Total Coliform & E.coli by SM 9223B				Batch ID: R93776		Analyst: BB
Coliform, Total	1,011.2	1.0		MPN/100mL	1	8/19/2024 4:23:00 PM
E. coli	870.4	1.0		MPN/100mL	1	8/19/2024 4:23:00 PM

CLIENT: PanGEO Inc
Project: Whidbey

Domestic Well

Lab ID: 2408282-007 **Collection Date:** 8/19/2024 8:25:00 AM
Client Sample ID: **S-7** **Matrix:** Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Drinking Water Metals by EPA 200.8				Batch ID: 44924		Analyst: ME
Arsenic	ND	1.00		µg/L	1	8/22/2024 11:13:00 AM

Lab ID: 2408282-008 **Collection Date:** 8/19/2024 8:25:00 AM
Client Sample ID: **S-8** **Matrix:** Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Ion Chromatography by EPA 300.0				Batch ID: 44911		Analyst: OP
Chloride	6.23	0.400	D	mg/L	2	8/20/2024 6:58:00 PM
Nitrite (as N)	ND	0.200		mg/L	1	8/19/2024 8:24:00 PM
Nitrate (as N)	0.565	0.200		mg/L	1	8/19/2024 8:24:00 PM
Conductivity by SM 2510B				Batch ID: R93900		Analyst: OP
Specific Conductance (Conductivity)	206	1.00		µS/cm	1	8/26/2024 4:07:58 PM

Lab ID: 2408282-009 **Collection Date:** 8/19/2024 8:25:00 AM
Client Sample ID: **S-9** **Matrix:** Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Total Coliform & E.coli by SM 9223B (IDEXX)				Batch ID: R93776		Analyst: BB
Coliform, Total	ND	1.0		MPN/100mL	1	8/19/2024 4:23:00 PM
E. coli	ND	1.0		MPN/100mL	1	8/19/2024 4:23:00 PM

Work Order: 2408282
CLIENT: PanGEO Inc
Project: Whidbey

QC SUMMARY REPORT

Conductivity by SM 2510B

Sample ID: **MB-R93900**	SampType: **MBLK**	Units: **µS/cm**	Prep Date: **8/26/2024**	RunNo: **93900**
Client ID: **MBLKW**	Batch ID: **R93900**		Analysis Date: **8/26/2024**	SeqNo: **1961265**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance (Conductivity)	ND	1.00									

Sample ID: **LCS-R93900**	SampType: **LCS**	Units: **µS/cm**	Prep Date: **8/26/2024**	RunNo: **93900**
Client ID: **LCSW**	Batch ID: **R93900**		Analysis Date: **8/26/2024**	SeqNo: **1961266**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance (Conductivity)	968	1.00	1,000	0	96.8	90	110				

Sample ID: **LCSD-R93900**	SampType: **LCSD**	Units: **µS/cm**	Prep Date: **8/26/2024**	RunNo: **93900**
Client ID: **LCSW02**	Batch ID: **R93900**		Analysis Date: **8/26/2024**	SeqNo: **1961267**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance (Conductivity)	969	1.00	1,000	0	96.9	90	110	968.0	0.103	20	

Work Order: 2408282
CLIENT: PanGEO Inc
Project: Whidbey

QC SUMMARY REPORT

Ion Chromatography by EPA 300.0

Sample ID: **MB-44911** SampType: **MBLK** Units: **mg/L** Prep Date: **8/19/2024** RunNo: **93731**
Client ID: **MBLKW** Batch ID: **44911** Analysis Date: **8/19/2024** SeqNo: **1957526**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	ND	0.200									
Nitrite (as N)	ND	0.200									
Nitrate (as N)	ND	0.200									

Sample ID: **LCS-44911** SampType: **LCS** Units: **mg/L** Prep Date: **8/19/2024** RunNo: **93731**
Client ID: **LCSW** Batch ID: **44911** Analysis Date: **8/19/2024** SeqNo: **1957530**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	0.723	0.200	0.7500	0	96.4	90	110				
Nitrite (as N)	0.680	0.200	0.7500	0	90.7	90	110				
Nitrate (as N)	0.715	0.200	0.7500	0	95.3	90	110				

Sample ID: **2408281-003ADUP** SampType: **DUP** Units: **mg/L** Prep Date: **8/19/2024** RunNo: **93731**
Client ID: **BATCH** Batch ID: **44911** Analysis Date: **8/19/2024** SeqNo: **1957532**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	4.69	0.200						4.670	0.491	20	Q
Nitrite (as N)	ND	0.200						0		20	
Nitrate (as N)	4.03	0.200						4.020	0.273	20	

NOTES:
Q - Associated calibration verification is above acceptance criteria. Result may be high-biased.

Sample ID: **2408281-003AMS** SampType: **MS** Units: **mg/L** Prep Date: **8/19/2024** RunNo: **93731**
Client ID: **BATCH** Batch ID: **44911** Analysis Date: **8/19/2024** SeqNo: **1957533**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	5.39	0.200	0.7500	4.670	96.3	80	120				
Nitrite (as N)	0.692	0.200	0.7500	0	92.3	80	120				
Nitrate (as N)	4.72	0.200	0.7500	4.020	93.5	80	120				

Work Order: 2408282
CLIENT: PanGEO Inc
Project: Whidbey

QC SUMMARY REPORT

Ion Chromatography by EPA 300.0

Sample ID: **2408281-003AMSD** SampType: **MSD** Units: **mg/L** Prep Date: **8/19/2024** RunNo: **93731**
Client ID: **BATCH** Batch ID: **44911** Analysis Date: **8/19/2024** SeqNo: **1957534**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	5.42	0.200	0.7500	4.670	99.6	80	120	5.392	0.463	20	
Nitrite (as N)	0.710	0.200	0.7500	0	94.7	80	120	0.6920	2.57	20	
Nitrate (as N)	4.74	0.200	0.7500	4.020	96.5	80	120	4.721	0.486	20	

Work Order: 2408282
CLIENT: PanGEO Inc
Project: Whidbey

QC SUMMARY REPORT

Drinking Water Metals by EPA 200.8

Sample ID: **MB-44924** SampType: **MBLK** Units: **µg/L** Prep Date: **8/20/2024** RunNo: **93825**
Client ID: **MBLKW** Batch ID: **44924** Analysis Date: **8/22/2024** SeqNo: **1959387**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	1.00									

Sample ID: **LCS-44924** SampType: **LCS** Units: **µg/L** Prep Date: **8/20/2024** RunNo: **93825**
Client ID: **LCSW** Batch ID: **44924** Analysis Date: **8/22/2024** SeqNo: **1959388**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	96.8	1.00	100.0	0	96.8	85	115				

Sample ID: **2408241-004ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **8/20/2024** RunNo: **93825**
Client ID: **BATCH** Batch ID: **44924** Analysis Date: **8/22/2024** SeqNo: **1959390**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	1.00						0		30	

Sample ID: **2408241-004AMS** SampType: **MS** Units: **µg/L** Prep Date: **8/20/2024** RunNo: **93825**
Client ID: **BATCH** Batch ID: **44924** Analysis Date: **8/22/2024** SeqNo: **1959391**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	110	1.00	100.0	0	110	70	130				

Sample ID: **2408282-007AMS** SampType: **MS** Units: **µg/L** Prep Date: **8/20/2024** RunNo: **93825**
Client ID: **S-7** Batch ID: **44924** Analysis Date: **8/22/2024** SeqNo: **1959417**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	95.9	1.00	100.0	0.7740	95.2	70	130				

Work Order: 2408282
CLIENT: PanGEO Inc
Project: Whidbey

QC SUMMARY REPORT

Drinking Water Metals by EPA 200.8

Sample ID: **MB-44924** SampType: **MBLK** Units: **µg/L** Prep Date: **8/20/2024** RunNo: **93825**
Client ID: **MBLKW** Batch ID: **44924** Analysis Date: **8/22/2024** SeqNo: **1959421**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	1.00									

Work Order: 2408282
CLIENT: PanGEO Inc
Project: Whidbey

QC SUMMARY REPORT

Total Metals by EPA 200.8

Sample ID: **MB-44932** SampType: **MBLK** Units: **µg/L** Prep Date: **8/21/2024** RunNo: **93836**
Client ID: **MBLKW** Batch ID: **44932** Analysis Date: **8/22/2024** SeqNo: **1959633**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.500									

Sample ID: **LCS-44932** SampType: **LCS** Units: **µg/L** Prep Date: **8/21/2024** RunNo: **93836**
Client ID: **LCSW** Batch ID: **44932** Analysis Date: **8/22/2024** SeqNo: **1959634**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	103	0.500	100.0	0	103	85	115				

Sample ID: **2408275-001ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **8/21/2024** RunNo: **93836**
Client ID: **BATCH** Batch ID: **44932** Analysis Date: **8/22/2024** SeqNo: **1959636**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	10.0						0		30	D

Sample ID: **2408275-001AMS** SampType: **MS** Units: **µg/L** Prep Date: **8/21/2024** RunNo: **93836**
Client ID: **BATCH** Batch ID: **44932** Analysis Date: **8/22/2024** SeqNo: **1959637**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	117	10.0	100.0	3.221	114	70	130				D

Sample ID: **2408338-001AMS** SampType: **MS** Units: **µg/L** Prep Date: **8/22/2024** RunNo: **93836**
Client ID: **BATCH** Batch ID: **44932** Analysis Date: **8/22/2024** SeqNo: **1959672**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	106	0.500	100.0	1.155	105	70	130				

Sample Log-In Check List

Client Name:	PANGEO	Work Order Number:	2408282
Logged by:	Morgan Wilson	Date Received:	8/19/2024 11:20:00 AM

Chain of Custody

1.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2.	How was the sample delivered?	Client		

Log In

3.	Custody Seals present on shipping container/cooler? (Refer to comments for Custody Seals not intact)	Yes ☐	No ☐	Not Present ☑
4.	Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
5.	Were all items received at a temperature of >2°C to 6°C *	Yes ☑	No ☐	NA ☐
6.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
7.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
8.	Are samples properly preserved?	Yes ☑	No ☐	
9.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
10.	Is there headspace in the VOA vials?	Yes ☐	No ☐	NA ☑
11.	Did all samples containers arrive in good condition(unbroken)?	Yes ☑	No ☐	
12.	Does paperwork match bottle labels?	Yes ☑	No ☐	
13.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
14.	Is it clear what analyses were requested?	Yes ☑	No ☐	
15.	Were all hold times (except field parameters, pH e.g.) able to be met?	Yes ☑	No ☐	

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☑ No ☐ NA ☐

Person Notified:	Spenser Scott	Date:	8/19/2024
By Whom:	Morgan Wilson	Via:	☑ eMail ☑ Phone ☐ Fax ☐ In Person
Regarding:	Samples 3-6 Matrix, Mislabels on Bacteria Bottles		
Client Instructions:	GW from Creek, Each Set is from same source, assign bottles as needed		

17. Additional remarks:

Item Information

Item #	Temp ºC
Sample	5.6

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

Fremont Analytical
An Alliance Technical Group Company
3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790

Chain of Custody Record & Laboratory Services Agreement

Date: 8/19/24 Page: 1 of: 3

Laboratory Project No (internal): 2408281

Project Name: WHIDBEY

Special Remarks:

Client: PANGEO

Project No: 23-256.200

Address: 3213 EASTLAKE AVE E

Collected by: SPENSER SCOTT

City, State, Zip: SEATTLE, WA 98102

Location: STINKY WELL

Telephone: 206-262-0370

Report To (PM): SCOTT DINKELMAN

Disposal: Samples will be disposed in 30 days unless otherwise requested.
☐ Retain volume (specify above) ☐ Return to client

Email(s): SDINKELMAN@PANGEOINC.COM + SSCOTT@PANGEOINC.COM

	Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	# of Cont.	VOCs (EPA 8260 / 624)	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 (200.8)) Total (T) | Dissolved (D)	Anions (IC)*** 300.0	EDB (8011)	Bacteriological SM 9223B			Comments
1	S-1	8/19/24	8:45	DW	1								X							
2	S-2	8/19/24	8:45	DW	1									X						Conductivity SM2510B
3	S-3	8/19/24	8:45	DW	1											X				
4																				
5																				
6																				
7																				
8																				
9																				
10																				

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

**Metals (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL *Individual:* Ag Al (As) B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Ti Tl V Zn

***Anions (Circle): (Nitrate) (Nitrite) (Chloride) Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

Turn-around Time:
☒ Standard ☐ Next Day
☐ 3 Day ☐ Same Day
☐ 2 Day ☐ _____ (specify)

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished (Signature)	Print Name	Date/Time	Received (Signature)	Print Name	Date/Time
x	SPENSER P SCOTT	8/19/24 11:20	x	Jack Hawthorne	8/19/24 1120
Relinquished (Signature)	Print Name	Date/Time	Received (Signature)	Print Name	Date/Time
x			x		

Chain of Custody Record & Laboratory Services Agreement

Fremont Analytical
An Alliance Technical Group Company
3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790

Date: 8/19/24 Page: 2 of: 3

Laboratory Project No (internal): 2408281

Project Name: WHIDBEY

Special Remarks:

Client: PANGEO

Project No: 23-356.200

Address: 3213 EASTLAKE AVE E

Collected by: SPENSER SCOTT

City, State, Zip: SEATTLE, WA 98102

Location: CREEK

Telephone: 206-262-0370

Report To (PM): SCOTT DINKELMAN

Disposal: Samples will be disposed in 30 days unless otherwise requested.
☐ Retain volume (specify above) ☐ Return to client

Email(s): SDINKELMAN@PANGEOINC.COM + SSCOTT@PANGEOINC.COM

	Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	# of Cont.	VOCs (EPA 8260 / 624)	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 (200.8)) Total (T) | Dissolved (D)	Anions (IC)***	EDB (8011)	300.0	Bacteriological SM 9223B			Comments
1	S-4	8/19/24	9:00	GW	1									X							
2	S-5	8/19/24	9:00	GW	1										X						Conductivity SM2510B
3	S-6	8/19/24	9:00	GW	1												X				
4																					
5																					
6																					
7																					
8																					
9																					
10																					

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

**Metals (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL *Individual:* Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Ti Tl V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

Turn-around Time:
☒ Standard ☐ Next Day
☐ 3 Day ☐ Same Day
☐ 2 Day _____ (specify)

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x	SPENSER SCOTT	11:20 8/19/24	x	Jack Hawthorne	8/19/24 1120
Relinquished (Signature)	Print Name	Date/Time	Received (Signature)	Print Name	Date/Time
x			x		

Chain of Custody Record & Laboratory Services Agreement

Fremont Analytical
An Alliance Technical Group Company

3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790

Date: 8/19/24 Page: 3 of: 3

Laboratory Project No (internal): 2408281

Project Name: WHIDBEY

Special Remarks:

Client: PANGEO

Project No: 23-356.200

Address: 3213 EASTLAKE AVE E

Collected by: SPENSER SCOTT

City, State, Zip: SEATTLE, WA 98102

Location: BARN TAP

Telephone: 206-262-0376

Report To (PM): SCOTT DINKELMAN

Disposal: Samples will be disposed in 30 days unless otherwise requested.
☐ Retain volume (specify above) ☐ Return to client

Email(s): SDINKELMAN@PANGEOINC.COM + SSCOTT@PANGEOINC.COM

	Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	# of Cont.	VOCs (EPA 8260 / 624)	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 (200.8)) Total (T) | Dissolved (D)	Anions (IC)***	EDB (8011)	Bacteriological SM 9222B	300.0	Comments
1	S-7	8/19/24	8:25	DW	1									X					
2	S-8	8/19/24	8:25	DW	1										X				Conductivity SM2510B
3	S-9	8/19/24	8:25	DW	1											X			
4																			
5																			
6																			
7																			
8																			
9																			
10																			

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

**Metals (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al (As) B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Ti Tl V Zn

***Anions (Circle): (Nitrate) (Nitrite) (Chloride) Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

Turn-around Time:
☒ Standard ☐ Next Day
☐ 3 Day ☐ Same Day
☐ 2 Day _____ (specify)

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished (Signature)	Print Name	Date/Time	Received (Signature)	Print Name	Date/Time
x	SPENSER SCOTT	11:20 8/19/24	x Jack Hawthorne	Jack Hawthorne	8/19/24 1120
Relinquished (Signature)	Print Name	Date/Time	Received (Signature)	Print Name	Date/Time
x			x		

ALLIANCE TECHNICAL GROUP

SAMPLE COLLECTED MAY 7, 2024

3600 Fremont Ave N
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

PanGEO Inc.
Scott Dinkelman
3213 Easklake Ave E. Suite B
Seattle, WA 98102

RE: Whidbey, 23-356.200
Work Order Number: 2405124

May 14, 2024

Attention Scott Dinkelman:

Fremont Analytical, Inc, an Alliance Technical Group company, received 3 sample(s) on 5/7/2024 for the analyses presented in the following report.

Conductivity by SM 2510B
Drinking Water Metals by EPA 200.8
Ion Chromatography by EPA 300.0
Total Coliform & E.coli by SM 9223B (IDEXX)

All analyses were performed according to our accredited Quality Assurance program. Please contact the laboratory if you should have any questions about the results.

Please note, while the appearance of our logo and branding will update, our commitment to accuracy, speed, and customer service remain values celebrated and shared by Alliance Technical Group. Thank you for the opportunity to serve you.

Sincerely,

Brianna Barnes
Project Manager

DoD-ELAP Accreditation #79636 by PJLA, ISO/IEC 17025:2017 and QSM 5.4 for Environmental Testing
ORELAP Certification: WA 100009 (NELAP Recognized) for Environmental Testing
Washington State Department of Ecology Accredited for Environmental Testing, Lab ID C910

Original

Date: *05/14/2024*

CLIENT: PanGEO Inc.
Project: Whidbey
Work Order: 2405124

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2405124-001	S-1	05/07/2024 9:48 AM	05/07/2024 12:23 PM
2405124-002	S-2	05/07/2024 9:48 AM	05/07/2024 12:23 PM
2405124-003	S-3	05/07/2024 9:48 AM	05/07/2024 12:23 PM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

Original

Case Narrative

WO#: **2405124**

Date: **5/14/2024**

CLIENT: PanGEO Inc.
Project: Whidbey

I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:
Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:
Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Information about the National Primary Drinking Water Regulations and their Maximum Contaminant Levels (MCLs) can be found at: https://www.epa.gov/ground-water-and-drinking-water/national-primary-drinking-water-regulations

Prep Sample Comments:
2405124-002A 652056: Prep Comments for EPA200.8, Sample 2405124-002A: Turbidity = 0.07 NTU

Qualifiers:

* - Flagged value is not within established control limits
B - Analyte detected in the associated Method Blank
D - Dilution was required
E - Value above quantitation range
H - Holding times for preparation or analysis exceeded
I - Analyte with an internal standard that does not meet established acceptance criteria
J - Analyte detected below Reporting Limit
N - Tentatively Identified Compound (TIC)
Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria
S - Spike recovery outside accepted recovery limits
ND - Not detected at the Reporting Limit
R - High relative percent difference observed

Acronyms:

%Rec - Percent Recovery
CCB - Continued Calibration Blank
CCV - Continued Calibration Verification
DF - Dilution Factor
DUP - Sample Duplicate
HEM - Hexane Extractable Material
ICV - Initial Calibration Verification
LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
MCL - Maximum Contaminant Level
MB or MBLANK - Method Blank
MDL - Method Detection Limit
MS/MSD - Matrix Spike / Matrix Spike Duplicate
PDS - Post Digestion Spike
Ref Val - Reference Value
REP - Sample Replicate
RL - Reporting Limit
RPD - Relative Percent Difference
SD - Serial Dilution
SGT - Silica Gel Treatment
SPK - Spike
Surr - Surrogate

Analytical Report

Work Order: **2405124**
Date Reported: **5/14/2024**

CLIENT: PanGEO Inc.
Project: Whidbey

Lab ID: 2405124-001 **Collection Date:** 5/7/2024 9:48:00 AM
Client Sample ID: **S-1** **Matrix:** Drinking Water

Analyses	Result	RL	MCL	Qual	Units	DF	Date Analyzed
Ion Chromatography by EPA 300.0					Batch ID: 43820		Analyst: FG
Chloride	5.93	0.200	250		mg/L	1	5/8/2024 8:14:00 PM
Nitrite (as N)	ND	0.200	1.00		mg/L	1	5/8/2024 8:14:00 PM
Nitrate (as N)	0.514	0.200	10.0		mg/L	1	5/8/2024 8:14:00 PM
Conductivity by SM 2510B					Batch ID: R91552		Analyst: FG
Specific Conductance (Conductivity)	201	1.00			µS/cm	1	5/8/2024 2:29:14 PM

Lab ID: 2405124-002 **Collection Date:** 5/7/2024 9:48:00 AM
Client Sample ID: **S-2** **Matrix:** Drinking Water

Analyses	Result	RL	MCL	Qual	Units	DF	Date Analyzed
Drinking Water Metals by EPA 200.8					Batch ID: 43844		Analyst: ME
Arsenic	0.00115	0.00100	0.0100		mg/L	1	5/9/2024 9:52:00 AM

Lab ID: 2405124-003 **Collection Date:** 5/7/2024 9:48:00 AM
Client Sample ID: **S-3** **Matrix:** Drinking Water

Analyses	Result	RL	MCL	Qual	Units	DF	Date Analyzed
Total Coliform & E.coli by SM 9223B (IDEXX)					Batch ID: R91619		Analyst: BB
Coliform, Total	ND	1.0			MPN/100mL	1	5/7/2024 3:45:00 PM
E. coli	ND	1.0			MPN/100mL	1	5/7/2024 3:45:00 PM

Work Order: 2405124
CLIENT: PanGEO Inc.
Project: Whidbey

QC SUMMARY REPORT

Conductivity by SM 2510B

Sample ID: **MB-R91552** SampType: **MBLK** Units: **µS/cm** Prep Date: **5/8/2024** RunNo: **91552**
Client ID: **MBLKW** Batch ID: **R91552** Analysis Date: **5/8/2024** SeqNo: **1909236**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance (Conductivity)	ND	1.00									

Sample ID: **LCS-R91552** SampType: **LCS** Units: **µS/cm** Prep Date: **5/8/2024** RunNo: **91552**
Client ID: **LCSW** Batch ID: **R91552** Analysis Date: **5/8/2024** SeqNo: **1909237**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance (Conductivity)	995	1.00	1,000	0	99.5	90	110				

Sample ID: **2405124-001ADUP** SampType: **DUP** Units: **µS/cm** Prep Date: **5/8/2024** RunNo: **91552**
Client ID: **S-1** Batch ID: **R91552** Analysis Date: **5/8/2024** SeqNo: **1909239**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance (Conductivity)	201	1.00						201.0	0	20	

Work Order: 2405124
CLIENT: PanGEO Inc.
Project: Whidbey

QC SUMMARY REPORT

Ion Chromatography by EPA 300.0

Sample ID: **MB-43820** SampType: **MBLK** Units: **mg/L** Prep Date: **5/8/2024** RunNo: **91595**
Client ID: **MBLKW** Batch ID: **43820** Analysis Date: **5/8/2024** SeqNo: **1910504**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	ND	0.200									
Nitrite (as N)	ND	0.200									
Nitrate (as N)	ND	0.200									

Sample ID: **LCS-43820** SampType: **LCS** Units: **mg/L** Prep Date: **5/8/2024** RunNo: **91595**
Client ID: **LCSW** Batch ID: **43820** Analysis Date: **5/8/2024** SeqNo: **1910505**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	0.726	0.200	0.7500	0	96.8	90	110				
Nitrite (as N)	0.707	0.200	0.7500	0	94.3	90	110				
Nitrate (as N)	0.720	0.200	0.7500	0	96.0	90	110				

Sample ID: **2405118-001BDUP** SampType: **DUP** Units: **mg/L** Prep Date: **5/8/2024** RunNo: **91595**
Client ID: **BATCH** Batch ID: **43820** Analysis Date: **5/8/2024** SeqNo: **1910507**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	7.68	0.200						7.620	0.797	20	E
Nitrite (as N)	0.347	0.200						0.3470	0	20	
Nitrate (as N)	ND	0.200						0		20	

Sample ID: **2405118-001BMS** SampType: **MS** Units: **mg/L** Prep Date: **5/8/2024** RunNo: **91595**
Client ID: **BATCH** Batch ID: **43820** Analysis Date: **5/8/2024** SeqNo: **1910508**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	8.32	0.200	0.7500	7.620	92.8	80	120				E
Nitrite (as N)	1.14	0.200	0.7500	0.3470	106	80	120				
Nitrate (as N)	0.736	0.200	0.7500	0	98.1	80	120				

Work Order: 2405124
CLIENT: PanGEO Inc.
Project: Whidbey

QC SUMMARY REPORT

Ion Chromatography by EPA 300.0

Sample ID: **2405118-001BMSD** SampType: **MSD** Units: **mg/L** Prep Date: **5/8/2024** RunNo: **91595**
Client ID: **BATCH** Batch ID: **43820** Analysis Date: **5/8/2024** SeqNo: **1910509**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	8.32	0.200	0.7500	7.620	93.2	80	120	8.316	0.0361	20	E
Nitrite (as N)	1.15	0.200	0.7500	0.3470	107	80	120	1.142	0.698	20	
Nitrate (as N)	0.734	0.200	0.7500	0	97.9	80	120	0.7360	0.272	20	

Work Order: 2405124
CLIENT: PanGEO Inc.
Project: Whidbey

QC SUMMARY REPORT

Drinking Water Metals by EPA 200.8

Sample ID: **MB-43844**	SampType: **MBLK**			Units: **mg/L**		Prep Date: **5/9/2024**		RunNo: **91574**		
Client ID: **MBLKW**	Batch ID: **43844**					Analysis Date: **5/9/2024**		SeqNo: **1909886**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.00100									

Sample ID: **2405124-002ADUP**	SampType: **DUP**			Units: **mg/L**		Prep Date: **5/9/2024**		RunNo: **91574**		
Client ID: **S-2**	Batch ID: **43844**					Analysis Date: **5/9/2024**		SeqNo: **1909889**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.00113	0.00100						0.00115	1.93	30	

Sample ID: **2405124-002AMS**	SampType: **MS**			Units: **mg/L**		Prep Date: **5/9/2024**		RunNo: **91574**		
Client ID: **S-2**	Batch ID: **43844**					Analysis Date: **5/9/2024**		SeqNo: **1909890**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.0974	0.00100	0.100	0.00115	96.2	70	130				

Sample ID: **2405124-002AMSD**	SampType: **MSD**			Units: **mg/L**		Prep Date: **5/9/2024**		RunNo: **91574**		
Client ID: **S-2**	Batch ID: **43844**					Analysis Date: **5/9/2024**		SeqNo: **1909891**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.0988	0.00100	0.100	0.00115	97.7	70	130	0.0974	1.49	30	

Sample ID: **LCS-43844**	SampType: **LCS**			Units: **mg/L**		Prep Date: **5/9/2024**		RunNo: **91574**		
Client ID: **LCSW**	Batch ID: **43844**					Analysis Date: **5/9/2024**		SeqNo: **1909873**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.0907	0.00100	0.100	0	90.7	85	115				

Sample Log-In Check List

Client Name:	PANGEO	Work Order Number:	2405124
Logged by:	Morgan Wilson	Date Received:	5/7/2024 12:23:00 PM

Chain of Custody

1.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2.	How was the sample delivered?	Client		

Log In

3.	Custody Seals present on shipping container/cooler? (Refer to comments for Custody Seals not intact)	Yes ☐	No ☐	Not Present ☑
4.	Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
5.	Were all items received at a temperature of >2°C to 6°C *	Yes ☑	No ☐	NA ☐
6.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
7.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
8.	Are samples properly preserved?	Yes ☑	No ☐	
9.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
10.	Is there headspace in the VOA vials?	Yes ☐	No ☐	NA ☑
11.	Did all samples containers arrive in good condition(unbroken)?	Yes ☑	No ☐	
12.	Does paperwork match bottle labels?	Yes ☑	No ☐	
13.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
14.	Is it clear what analyses were requested?	Yes ☑	No ☐	
15.	Were all hold times (except field parameters, pH e.g.) able to be met?	Yes ☑	No ☐	

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☑ No ☐ NA ☐

Person Notified:	Scott Dinkelman	Date:	5/7/2024
By Whom:	Morgan Wilson	Via:	☑ eMail ☑ Phone ☐ Fax ☐ In Person
Regarding:	Confirm Analyses vs Bottle Order Request		
Client Instructions:	Updated COC to Include Conductivity		

17. Additional remarks:

Item Information

Item #	Temp ºC
Sample	5.1

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

Chain of Custody Record & Laboratory Services Agreement

Fremont Analytical
An Alliance Technical Group Company
3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790

Date: 5/7/24 | Page: 1 of: 1 | Laboratory Project No (internal): 2405174

Project Name: WHIDBEY | Special Remarks:

Client: PANGEO | Project No: 23-356.200

Address: 3213 EASTLAKE AVE E | Collected by: SCOTT DINKELMAN

City, State, Zip: SEATTLE, WA 98102 | Location: WELL AKY-721

Telephone: (206) 262-0370 | Report To (PM): SCOTT DINKELMAN

Email(s): SDINKELMAN@PANGEOINC.COM

Disposal: Samples will be disposed in 30 days unless otherwise requested. ☐ Retain volume (specify above) ☐ Return to client

	Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	# of Cont.	VOCs (EPA 8260 / 624)	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8) Total (T) | Dissolved (D)	Anions (IC)***	EDB (8011)	13 SECTOR ANALYTICAL			Comments
1	S-1	5/7/24	9:48	DW	1									X						
2	S-2	5/7/24	9:48	DW	1								X	X						
3	S-3	5/7/24	9:48	DW	1									X		X				
4																				
5																				
6																				
7																				
8																				
9																				
10																				

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

**Metals (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL *Individual:* Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Ti Tl V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

Turn-around Time:
☒ Standard ☐ Next Day
☐ 3 Day ☐ Same Day
☐ 2 Day _____ (specify)

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished (Signature)	Print Name	Date/Time	Received (Signature)	Print Name	Date/Time
x	SCOTT DINKELMAN	5/7/24 12:22	x	GHein-Gipson	5/7/24 12:23
Relinquished (Signature)	Print Name	Date/Time	Received (Signature)	Print Name	Date/Time
x			x		

Fremont Analytical
An Alliance Technical Group Company
3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790

Chain of Custody Record & Laboratory Services Agreement

Date: 5/7/24 Page: 1 of: 1

Laboratory Project No (internal): 2405174

Special Remarks: Update per SD -mw 5/7/24

Project Name: WHIDBEY

Project No: 23-356.200

Client: PANGEO

Address: 3213 EASTLAKE AVE E

Collected by: SCOTT DINKELMAN

City, State, Zip: SEATTLE, WA 98102

Location: WELL AKY-721

Telephone: (206) 262-0370

Report To (PM): SCOTT DINKELMAN

Email(s): SDINKELMAN@PANGEOINC.COM

Disposal: Samples will be disposed in 30 days unless otherwise requested.
☐ Retain volume (specify above) ☐ Return to client

	Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	# of Cont.	VOCs (EPA 8260 / 624)	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8) Total (T) | Dissolved (D)	Anions (IC)***	EDB (8011)	13 ACTIVE ALKALI (CA)			Comments
1	S-1	5/7/24	9:48	DW	1									X						Conductivity
2	S-2	5/7/24	9:48	DW	1								X	~~X~~						
3	S-3	5/7/24	9:48	DW	1									~~X~~		X				
4																				
5																				
6																				
7																				
8																				
9																				
10																				

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

**Metals (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Ti Tl V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride ~~Nitrate+Nitrite~~

Turn-around Time:
☒ ~~Standard~~ ☐ Next Day
☐ 3 Day ☐ Same Day
☐ 2 Day ____ (specify)

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Relinquished (Signature)	Print Name	Date/Time	Received (Signature)	Print Name	Date/Time
x			x		

EDGE ANALYTICAL

DRINKING WATER QUALITY REPORT

SAMPLE COLLECTED

FEBRUARY 16, 2021

EDGE ANALYTICAL

Burlington, WA *Corporate Laboratory (a)*
1620 S Walnut St - Burlington, WA 98233 - **800.755.9295** • 360.757.1400

Bellingham, WA *Microbiology (b)*
805 Orchard Dr Ste 4 - Bellingham, WA 98225 - 360.715.1212

Portland, OR *Microbiology/Chemistry (c)*
9150 SW Pioneer Ct Ste W - Wilsonville, OR 97070 - 503.682.7802

Corvallis, OR *Microbiology/Chemistry (d)*
1100 NE Circle Blvd, Ste 130 - Corvallis, OR 97330 - 541.753.4946

Bend, OR *Microbiology (e)*
20332 Empire Blvd Ste 4 - Bend, OR 97701 - 541.639.8425

NELAP ACCREDITED TNI LABORATORY

Drinking Water Quality Report

Client Name: Bryant Plumbing
PO Box 622
Clinton, WA 98236

Project: EWS Well Report

Reference Number: **21-05439**
Report Date: 2/26/21
Approved By: bj,bsp,rml

Authorized by:

Lawrence J Henderson, PhD
Director of Laboratories, Vice President

Field ID:
Sample Description: Well Head
Sample Date: 2/16/21 10:00

Lab Number: 046-10612
Date Received: 2/16/21
Sampled By: Josh
Sampler Phone:

CAS Number	Analyte	Result	MCL	Pass^	Lab	QL	Units	Analyzed	Comments
Primary Drinking Water Standards									
7440-38-2	ARSENIC	**0.0011**	0.010	Pass	a	0.001	mg/L	2/22/21	
7439-97-6	MERCURY	**ND**	0.002	Pass	a	0.0001	mg/L	2/19/21	
7439-92-1	LEAD	**0.0123**	0.015	Pass	a	0.001	mg/L	2/22/21	
16984-48-8	FLUORIDE	**ND**	4	Pass	a	0.1	mg/L	2/16/21	
14797-55-8	NITRATE-N	**0.44**	10	Pass	a	0.1	mg/L	2/16/21	
14797-65-0	NITRITE-N	**ND**	1.0	Pass	a	0.1	mg/L	2/16/21	
E-10128	TOTAL NITRATE+NITRITE as N	**0.44**	10	Pass	a	0.1	mg/L	2/16/21	
Secondary Drinking Water Standards									
7439-96-5	MANGANESE	**0.0104**	0.05	Pass	a	0.001	mg/L	2/22/21	
7439-89-6	IRON	**0.27**	0.3	Pass	a	0.05	mg/L	2/18/21	
E-11778	HARDNESS as Calcium Carbonate	**78.7**			a	10	mg/L	2/18/21	
E-10184	ELECTRICAL CONDUCTIVITY	**186**	700	Pass	a	10	uS/cm	2/17/21	
E-10173	TOTAL DISSOLVED SOLIDS (TDS)	**122**	500	Pass	a	10	mg/L	2/19/21	
16887-00-6	CHLORIDE	**6.02**	250	Pass	a	0.1	mg/L	2/16/21	
14808-79-8	SULFATE	**4.87**	250	Pass	a	0.2	mg/L	2/16/21	
Aesthetic Drinking Water Standards									
7631-86-9	*SILICA	**36.3**			a	0.05	mg/L	2/18/21	
E-14506	ALKALINITY	**81.1**			a	1	mg CaCC	2/18/21	
7440-23-5	SODIUM	**7.2**			a	0.5	mg/L	2/18/21	
E-10139	HYDROGEN ION (pH)	**7.15**			a		pH Units	2/16/21	Temp (C) : 25.1
Microbiology									
	*IRON RELATED BACTERIA	**POS**			b	P/A	CFU/mL	2/22/21	Density: 500-2200 cfu/mL; Moderate

Notation:
MCL = Maximum Contaminant Level, maximum permissible level of a contaminant in water established by EPA; Federal Action Levels are 0.015 mg/L for Lead and 1.3 mg/L for Copper. Sodium has a recommended limit of 20 mg/L. A blank MCL value indicates a level is not currently established.
QL = Quantitation Limit is the lower calibration cpncentration.
ND = Not detected above the listed specified reporting limit (QL).
CAS Number = Chemical Abstract Service Number is an unique identifier of the Analyte tested.
^ = 'PASS', indicates that the parameter tested meets EPA, State, or local jurisdiction MCL.
An * in front of the parameter name indicates it is not NELAP accredited but it is accredited through OR DEQ or USEPA Region 10.

These test results meet all the requirements of NELAC, unless otherwise stated in writing, and relate only to these samples.
If you have any questions concerning this report contact Lawrence J Henderson at the above phone number.

FORM: POM.rpt