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November 9, 2006

Ueland Tree Farm
7216 78th Avenue NW
Gig Harbor, WA 98335

Attention: Mr. Mark Mauren

Preliminary Geological Report
Mineral Resource Evaluation
Ueland Tree Farms
Kitsap County, Washington
Job#: UelandTreeFarm.RG(r4)

INTRODUCTION AND SCOPE

This preliminary report summarizes the results of our geological evaluation regarding mineral resources on the Ueland Tree Farm property in Kitsap County, Washington. The site is approximately shown on the attached Site Vicinity Map, Figure 1. The initial phase of work was completed in accordance with our proposal dated April 24, 2006. The supplemental evaluation of the bedrock was completed in accordance with our proposal dated June 22, 2006.

EXPLORATION METHODS

The purpose of our services was to perform geologic mapping and a preliminary site investigation for potential mineral resources available on the Ueland Tree Farm. Our evaluation is to be used as a basis for an initial economic feasibility analysis for mining the mineral resources. Our site evaluation was directed at locating sources of sand and gravel, as well as quarry rock. We explored surface and subsurface conditions on the Ueland Tree Farm property over a period of 5 days in March, 2006. We returned to the site to complete a series of deeper rock corings on May 30, 2006 through June 1, 2006. A third round of explorations consisting of 25 rock cores drilled with a pneumatic air hammer drill was completed on October 2 and 3, 2006. Our exploration and testing program was comprised of the following elements:

- A visual surface reconnaissance of the site;
- Preliminary geologic mapping using the Geologic Map of the Wildcat Lake 7.5 Minute Quadrangle, Kitsap and Mason Counties, Washington by Haeussler and Clark, 2000.
- The excavation of 83 test-pits (TP-1 through TP-83) to depths of up to 20 feet at selected locations across the site;
- Advancing four rock corings to depths of 20 to 35 feet below the adjacent ground surface at selected locations across the site;
- Twenty five air-hammer cores (referred to as HC-1 through HC-25) drilled to depths of 72 to 80 feet at selected locations within portions of the site underlain by bedrock; and

- A review of the Kitsap County zoning designations.

The actual number, locations, and depths of our explorations were selected in the field based on a review of the ortho-photographs, topographic survey, geologic maps, and observed site conditions by GeoResources personnel. Approximate exploration locations were determined by taping and pacing from features shown on the referenced ortho-photos and topographic maps provided by the Ueland Tree Farm, and are shown on the attached Site Plans, Figures 2a through 2c.

The explorations performed as part of this evaluation indicate conditions only at the specific locations and that actual condition in other locations could vary. The nature and extent of any such variations would not become evident until additional explorations are performed or until construction activities have begun.

Test Pits

Our test pits were excavated by using a track-hoe operated by a licensed earthwork contractor working for GeoResources, LLC. A geotechnical specialist visually logged the subsurface stratigraphy in the field and collected representative soil samples that were taken to our office for further evaluation. The encountered soils were visually classified in accordance with the system described in ASTM: D-2488 and as shown on the attached Soil Classification System, Figure 4. After each test pit was completed, it was backfilled with the excavated soils. Test Pit Logs are included at the end of this report.

Rock Corings

Our supplemental rock corings were advanced with triple-tube wire-line coring tools, using a truck-mounted drill rig operated by an independent drilling firm working under subcontract to GeoResources, LLC. A geologist from our firm continuously observed the corings, logged the subsurface conditions, and collected rock core samples. All samples were stored in waxed cardboard core boxes and later transported to our office and laboratory for further visual examination and testing. After each boring was completed, the borehole was backfilled with a mixture of bentonite chips and soil cuttings, and the surface was patched with asphalt or concrete (where appropriate).

All coring was performed using NX size equipment, which creates a 2.93-inch-diameter borehole and produces a 2.155-inch-diameter core sample. This coring technique involves inserting the smaller diameter coring tools through the outer casing and advancing the core barrel into the rock at the bottom of the casing until a 5-foot core run is completed or circulation of drilling fluid is lost. Once the run is stopped, the core barrel is removed from the casing with the wire-line, and the inner core sleeve, or split tube, is removed. The inner tube is then parted along lengthwise separations to allow viewing, logging, and packaging of the recovered rock core.

The enclosed rock core logs describe the vertical sequence of rock and materials encountered in each boring, based primarily on our field classifications and supported by our subsequent laboratory examination and testing. Where a rock contact was observed to be gradational, our logs indicate the average contact depth. Where a rock type changed between sample intervals, we inferred the contact depth. Our logs also graphically indicate the Rock Quality Designation (RQD), run length, run number, recovery percentage, and approximate depth of each core run, as well as any laboratory tests performed on these rock samples. If any groundwater was encountered in a borehole, the approximate groundwater depth is depicted on the boring log. Groundwater depth estimates are typically based on the wetted height on the drilling rods, and the water level measured in the borehole after the drilling tools

have been extracted.

Air Hammer Cores

To augment the rock coring that was previously completed; we mobilized a track air-rotary hammer type core drill that is used in drilling and blasting operations. The contractor that was used, MacCullum Rock Drilling, previously work on the site during drilling and blasting operations of the former rock quarry operations in the northeast corner of the site. The drill rig uses a combination of high pressure air and pneumatic percussion hammer to pulverize and remove the rock from the core. The cuttings consist of fine dust and small rock fragments (on the order of 5/8-inch crushed rock). A total of 26 "hammer cores" were drilled across the site (referred to as HC-1 through HC-25, and including HC-21a and HC-21b). Eleven of the cores (HC-1 through HC-11) were drilled in the upper rock source area "F"; nine cores were drilled in rock source area "D"; and six were drilled in rock source area "E". The "hammer cores" were drilled to depths ranging from 60 to 84 feet below existing ground surface.

SITE CONDITIONS

Surface Conditions

The site consists of the north and east flanks of Green Mountain located in central Kitsap County near Bremerton, Washington. The site occupies portions of Township 24N, Range 1E, Sections 7, 18, 19 and Township 24N, R1W, Sections 12, 13, 24, and 25. The site generally consists of two main north-south trending valleys with moderate ridges and the east slope of Green Mountain. Side slopes for the central ridges are fairly moderate, while the slopes going up the east side of Green Mountain are considerably steeper. Elevations range from about 280 feet in the eastern portion of the property to about 1,080 feet western portion of the site near Green Mountain.

The site has been logged in various stages, with some areas cleared as recently as 2003 and other forested areas not cleared since 1943. Access across the site is from a network of improved dirt and gravel roads. Several streams cross the site; the largest stream is located in the western valley. There are also several wetlands and ponds, typically located in depressions across the site.

There are several small borrow areas where both sand and gravel and hard rock have been mined from the site to aid in construction of the existing on-site access roads.

Site Soils

The Soil Survey for Kitsap County (USDA Soil Conservation Service) has mapped the site soils to consist of multiple soil types. The mapped soil type number, name, erosion potential, and development limitations are listed below in Table 1.

TABLE 1			
SCS Soil Survey Map Summary			
Mapped Soil Type	Soil Name and Slopes	Derived From	Classified Use as Construction Material
1	Alderwood very gravelly sandy loam (0 to 6)	Glacial Till	Fair to Improbable
2	Alderwood very gravelly sandy loam (6 to 15)	Glacial Till	Fair to Improbable
3	Alderwood very gravelly sandy loam (15 to 30)	Glacial Till	Fair to Improbable
10	Dystric Xerothents	Till / Outwash	Not Rated
17	Harstine gravelly sandy loam (30 to 45)	Sandy Glacial Till	Poor to Improbable
20	Indianola loamy sand (15 to 30)	Sandy Outwash	Poor to Probable
25	Kilchis very gravelly sandy loam (15 to 30)	Basalt	Poor to Improbable
26	Kilchis very gravelly sandy loam (30 to 70)	Basalt	Poor to Improbable
32	McKenna gravelly loam (0 to 6)	Glacial Till	Poor to Improbable
34	Neilton gravelly loamy sand (0 to 3)	Outwash	Good to Probable
48	Schneider very gravelly loam (45 to 70)	Basalt	Poor to Improbable

An excerpt of the SCS Map is included as Figure 3. As will be discussed below, our test pits excavated across the site generally confirmed the mapped SCS soil types. Some exceptions were noted, especially in the vicinity of test pits TP-51, TP-52, and TP-53 where we encountered a sandy recessional outwash, more indicative of the Indianola loamy sand, in an area mapped as Alderwood soils derived from glacial till. Additionally, in the east central portion of the property, some of the areas mapped as being underlain by the Alderwood soils (type 2 and 3 soils) near the areas underlain the Kilchis soils (type 25 and 26 soils) may only consists of a thin veneer of glacial till mantling bedrock.

Site Geology

According to *Geologic Map of the Wildcat Lake 7.5 Minute Quadrangle, Kitsap and Mason Counties, Washington* by Haeussler and Clark, 2000, the area around the site is underlain by a combination of glacial soils and bedrock. The reference map, however, does not include the entire parcel, so the mapped stratigraphy is inferred based on the soil and rock conditions encountered in our explorations.

The existing topography, as well as the surficial and shallow subsurface soils in the area, is the result of the most recent Vashon stade of the Fraser glaciation that occurred between about 16,000 and 17,400 years ago, and weathering and erosion that has occurred since. Encountered glacial soil types include recessional outwash and glacial till. The Vashon glacial till consists of a heterogeneous mixture of clay, silt, sand, and gravel that was deposited at the base of the prehistoric continental glacial ice mass and was subsequently over-ridden. As such, the till exhibits high strength and low compressibility characteristics. The recessional outwash deposits consists of graded deposits of sand and gravel that was deposited by meltwater streams and rivers emanating from the retreating continental ice mass. The upper portion of the till has been weathered to a medium dense condition.

The primary types of bedrock mapped in the vicinity of the site include the Crescent Formation massive basalt flows (Tcb) and Submarine basalt and volcanoclastic rocks (Tcbs). These middle Eocene age rocks (46 to 50 million years ago) consist of aerial and submarine. The younger and overlying massive basalt flows (Tcb) are considered to be aerial basalt flows that are more than 180-meters thick while the older submarine complex (Tcbs) consists of basalt interbedded with sandstone, siltstone, tuffs, and breccia. According to Haeussler and others, (2000), aeromagnetic and gravity data over the Green and Gold Mountain, indicate that

highly magnetic and dense rocks are located within a few kilometers of the surface, inferring that a deeper ultramafic rock complex may be present under the mountains.

Groundwater Conditions

Groundwater seepage was encountered in a number of our test pits at the time of digging. Based on the mapped stratigraphy and inferred subsurface conditions it is our opinion that the encountered groundwater was indicative of a perched groundwater condition. Perched groundwater develops when the vertical infiltration of soils through a shallow, more permeable soil is slowed by a deeper, less permeable horizon during periods of heavy or sustained precipitation. Groundwater was also encountered at depth within several of our deeper rock cores. We interpret the deeper groundwater to be associated with fracture or joint patterns within the bedrock. Groundwater conditions may vary with changes in site utilizations, or seasonally with precipitation.

CONCLUSIONS AND RECOMMENDATIONS

General

Based on the results of our site reconnaissance, subsurface exploration program, and review of published information development of both a sand and gravel borrow source and hard rock quarry appears feasible on the site.

Aggregate Material

The northern portion of the property, along the main access road, appears to be underlain by recessional outwash material that grades from clean poorly sorted sand to a clean well sorted sandy gravel. This material was encountered in test pits TP-1, TP-2, TP-3, TP-81, TP-82, and TP-83. We estimate that there is about 600,000 cubic yards of sand and gravel in this area (denoted as area A on the attached site plan). This main sand and gravel source is bounded by a stream to the west, and the property line to the north and east, so it may not be feasible to mine all of the available resource. With minimal preparation, the material would likely be suitable for as all-weather structural fill. Using a screening and sorting operation, this material could also provide select materials that would include clean sand for use as pipe bedding or in masonry applications, as well as a variety of gravel products such as pea gravel to drain rock.

A considerably thinner layer of clean, well sorted gravel was encountered in the topographically lower elevations of the north central portion of the site. Test pits TP-15, TP-16, TP-17, and TP-18 encountered this gravel deposit. Depths were limited to about 13 to 17 feet due to underlying glacial till and rapid perched groundwater seepage atop the till. We anticipate that the gravel extends from the test pits east to the stream that comprises the west boundary of the initially discussed area. We anticipate that the volume of material in this area could be as much as 650,000 cubic yards. This area, denoted as area "B", is also shown on Figure 2a.

Further south of area "A", our explorations indicate a moderate deposit of clean sand with trace gravel. Like the above described area "A", this area could provide a source of bedding material, sand filter material, masonry material, and general borrow, or possibly select fill. This source is bounded by the property line to the east and a stream to the west. This location (bracketed by Test Pits TP-51, TP-52, TP-53, and TP-54) appears to be slightly smaller than the area described above. We anticipate that the volume of material in this area could be as much as 550,000 cubic yards. This area, denoted as area "C", is also shown on Figure 2b.

The remainder of the northern portion of the site is generally underlain by dense to very dense glacial till. The till can be used for general borrow material, but placement of this material is limited to periods of extended dry weather.

Quarry Rock

Bedrock was encountered at shallow depths under the southern portion of the two lower ridges and along the upper portions of Green Mountain. Rock was typically encountered between 2 to 6 feet below ground surface. At most locations, the rock was covered by a layer of topsoil or forest duff and a residual soil derived by in-situ weathering of the original bedrock. At some locations, the rock was overlain by a thin veneer of glacial till or outwash. Underlying the residual soils, our test pits generally encountered highly to moderately weathered, very weak to weak basalt that was easily ripable with our trackhoe and could be broken by hand. At depths of about 4 to 8 feet below ground surface, the rock became significantly less weathered and increased in strength from moderately weak to moderately strong. Our test pits generally encountered refusal in this layer, although the rock still appeared jointed.

It appeared that the some bedrock encountered in the central portion of the site, or at the mid-level elevations along the northeast flank of Green Mountain consists of very weathered, weak siltstone and sandstone (marine sedimentary rocks) that are less dense; more highly weathered, and less economically valuable than the igneous (basalt) rock deposits.

The location where rock was encountered tended to abut the south and west property lines. Typical set-backs for mining operations require a 50-foot buffer or setback. Excavation faces can be made at inclinations near vertical. Assuming the outer weathered layer is a uniform thickness similar to those encountered in our test pits, it does appear that an abundant supply of rock is available for mining from the site. We generally outlined potential rock sources on the attached Site Plans, Figures 2b and 2c.

Contingent upon the depth of weathering and joint pattern within the underlying rock, the moderately weak to moderately strong basalt could be used for aggregates including crushed rock, quarry spalls, rip rap, and possibly landscaping or rockery rock. Evidence of strong, fresh rock was observed at several locations across the site including the stream channel in the south east corner of the site where larger, angular rocks were visible in the channel and several massive (non-jointed or weathered) outcrops that were observed in the southern portion of the site.

The rock that we encountered underlying the site is similar to the rock currently being mined at the existing hard rock quarry atop the ridge on the east side of Kitsap Lake and the former rock quarry along Highway 3 near Gorst. Based on historic performance, some of the basalt in the Puget Sound are prone to rapid degradation and wear when exposed. The old Black River quarry in Renton mined submarine basalts that tended to degrade and resulted in numerous failed rockeries owing to accelerated weathering.

Rock Quality

Two samples of rock collected from coring C-1 (upland rock source) and C-4 (lower, eastern rock source) were tested for durability and compressive strengths. The rock samples from coring C-1 has compressive strengths of up to 1,200 psi (pounds per square inch) and a durability "D" value of 25 and 27 percent. The relatively low compressive strength is the result of the sample breaking along a vein of secondary mineralization with the rock. Samples from C-4 have a compressive strength up to 19,000 psi and a "D" value of 28 to 32 percent. According to the WSDOT Standard Specification for Road, Bridge and Municipal Construction manual, rock to be crushed and used for ballast should have a minimum "D" value of 15

percent; crushed rock base course of 15 percent; and crushed rock top course of 25 percent. Based on these results, it appears that the rock does appear competent and suitable to be quarried for various types of crushed rock aggregates.

Without sampling and testing rock from other quarry sources, it is not feasible to characterize the rock on the site to other quarries in Kitsap County. However, based on visual observations of the rock compared to rock from other quarry sites, the rock at the site appears similar to other sources. The rock encountered in our corings did appear more competent and less weathered than the existing rock quarry on the Tree Farm property.

Based on our observations of the cuttings from the "hammer cores" and a discussion with the drilling operator, it appeared that most of the rock in the 26 cores would require blasting to be completed in order to facilitate excavation. The upper shallow rock did appear to be soft in some areas, but in general, the drill operator stated that the rock was of considerably better quality than the original rock quarry site. Cuttings from the rock were collected and screened, and the larger fragments were used to create the attached core logs.

Rock Quantities

Our coring indicated that the rock sources located near the top of the western portion of the site (corings C-1 and C-3), generally encountered hard, but fractured, basalt. Drilling fluid was often lost in the fractured zones resulting in very short runs. Coring C-1 was drilled to a depth of about 20 feet, with a measured RQD of 0. Coring C-3 was drilled to a depth of 30 feet, with a RQD of about 10 percent. Coring C-2, drilled further up the slope appeared to encounter soft marine sedimentary rocks to the full depth explored of about 25 feet. A fourth coring, C-4, was drilled in the eastern portion of the site, in the area denoted as area "D" on the site plan. Rock coring C-4 also encountered hard but fractured basalt. This coring was drilled to a depth of about 30 feet and had a RQD of about 25 to 30 percent. An area that we did not advance any rock corings in, but that had very hard bedrock was encountered in several test pits, including test pits TP-71 and TP-72 is shown on the site plan as area "E". We understand that the environmental issues pertaining to the stream that flows between areas "D" and "E" may make it so that area "E" could not be used as a quarry site.

The fractured rock in corings C-1, C-2, and C-4 while not appearing massive, did appear hard, sound, and durable. Based on the "hammer cores", the rock appeared more massive and competent than observed in the four rock corings. As previously stated, rock samples submitted for testing did exceed the WSDOT limits for degradation as stated above.

Based on rough estimates of areas where the various corings were drilled, we estimate that the lower area, where the apparently more intact rock was observed, would have an source volume of about of 10 to 15 million tons of rock. We estimate that the area further to the south, area "E", would have about 6 to 8 millions tons of rock, if excavation extended down to a bottom elevation of about 650 feet. The upper rock quarry area (area "F") had more fractures zones, but has a potential for a deeper quarry, would have a source of about half of the amount as estimated in area "E". This area is shown on the attached Site Plan, Figure 2c, as area "F".

Our general assumptions of loss due to fractures and weathered zones generally estimated about 20 to 30 percent waste in each location. The attached core logs generally confirmed that assumption. Some of the rock cores had no discernable fractured zones or areas of chemically weathered rock. However, many of the cores did have isolated 2 to 10 foot zones of weathered rock (based on colorization and drilling resistance) that we infer to be noticeably weaker or less durable rock. However, the areas of fresh, strong to very strong rock were encountered in each of our corings, and should be viable sources of multiple types of crushed aggregate, including crushed base course, ballast, quarry spalls, riprap, and

LIMITATIONS

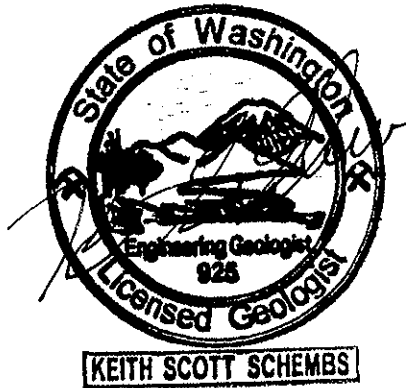
We have prepared this report for use by Ueland Tree Farm and other members of the design team, for use in the design of a portion of this project. The data used in preparing this report and this report should be provided to prospective contractors for their bidding or estimating purposes only. Our report, conclusions and interpretations are based on data from others and limited site reconnaissance, and should not be construed as a warranty of the subsurface conditions.



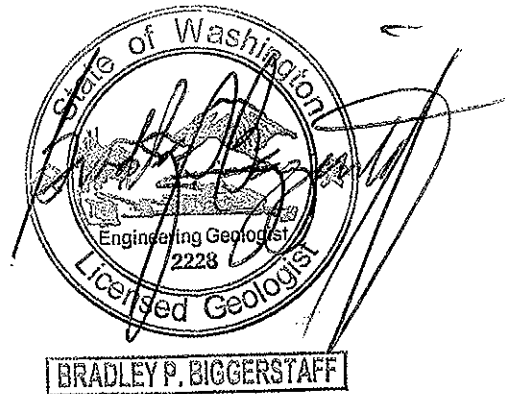
We trust that this letter is sufficient for your current needs. Please do not hesitate to call with any additional comments or questions. We will also be willing to meet with you to discuss the findings of our initial site assessment.

Respectfully submitted,
GeoResources, LLC

Keith S. Schembs, LEG
Associate



Brad P. Biggerstaff, LEG
Principal

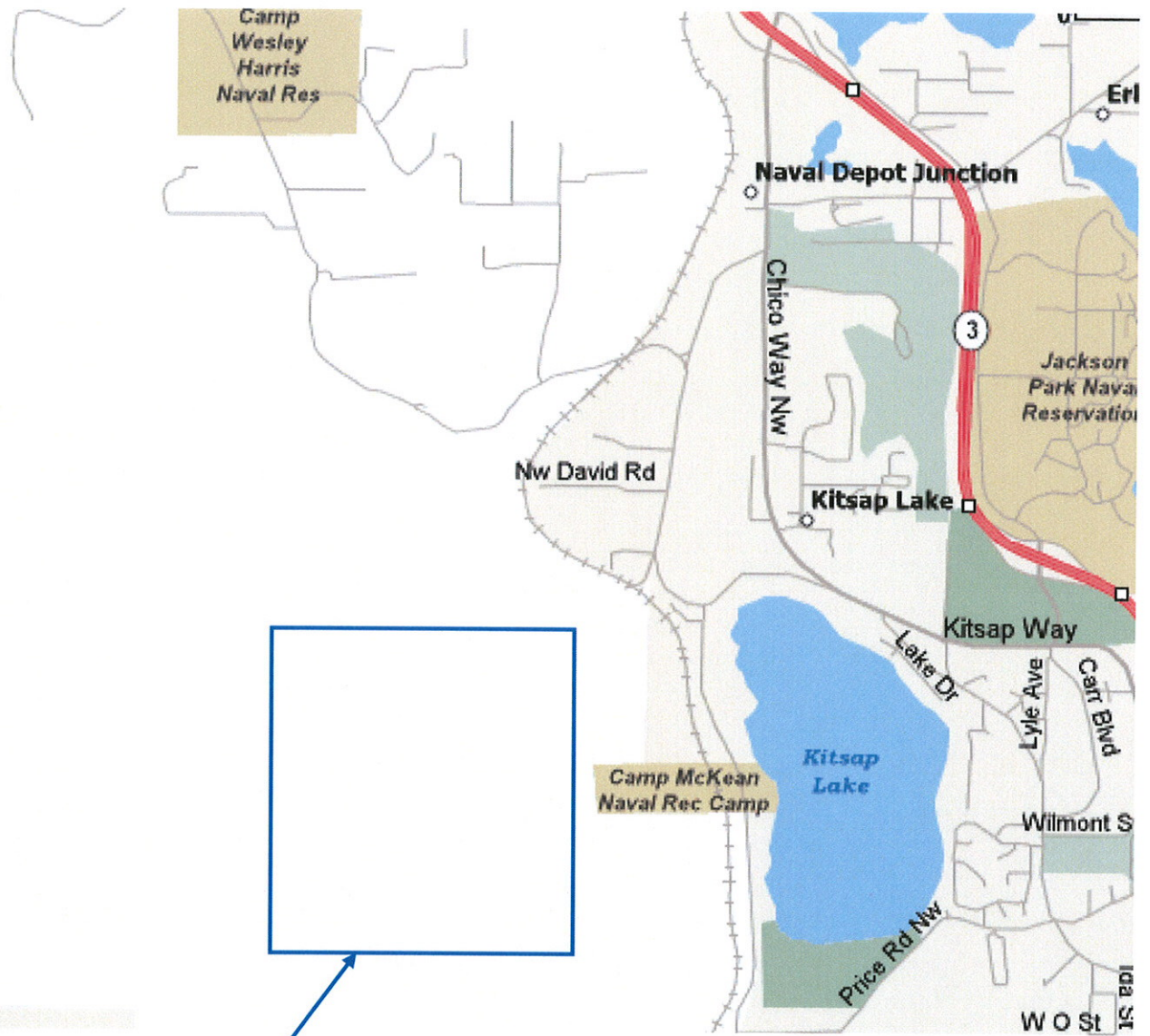


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Attachments:

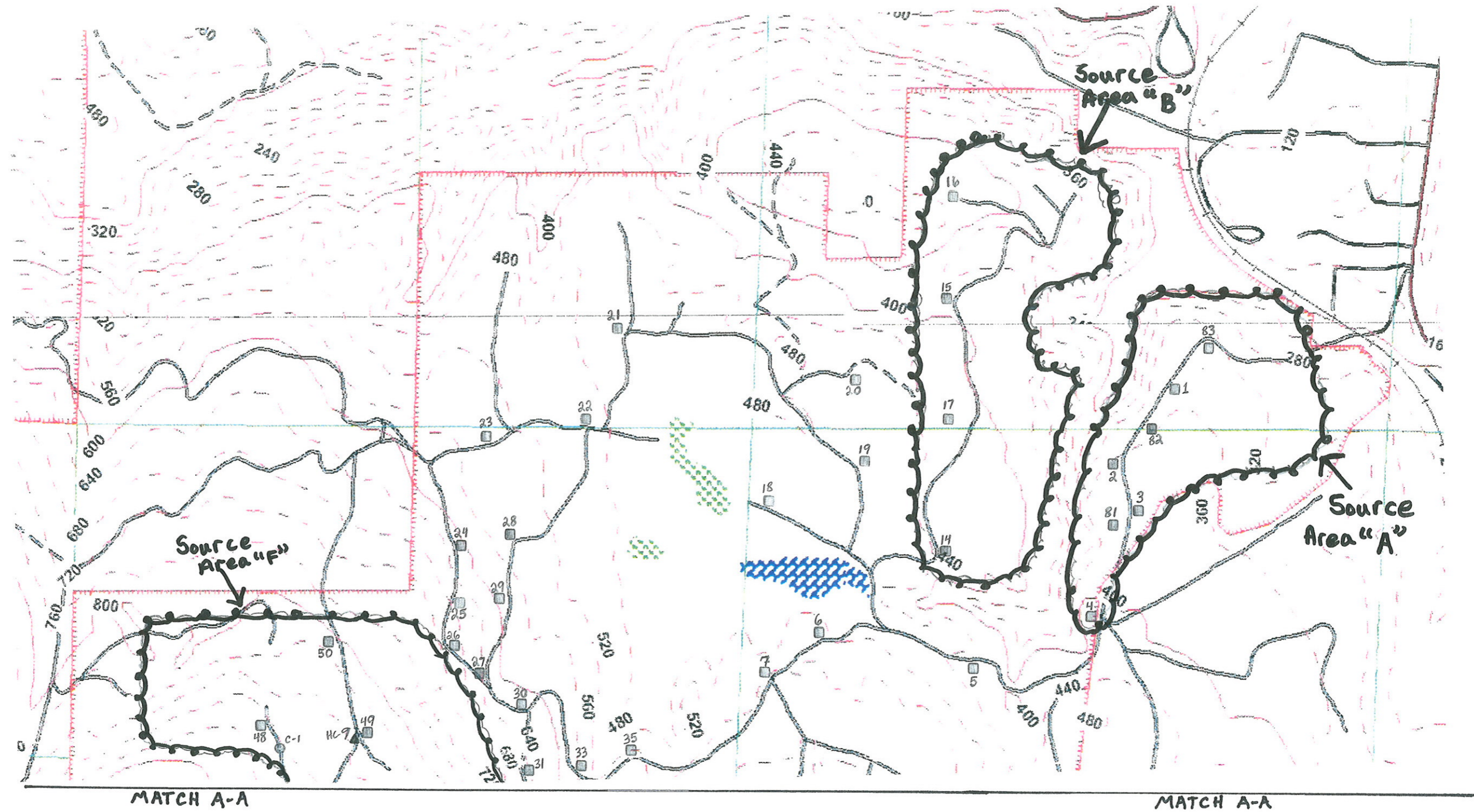
- Figure 1 – Site Vicinity Map
- Figure 2a – Site Plan – North Section
- Figure 2b – Site Plan – Central Section
- Figure 2c – Site Plan – South Section
- Figure 3 – USDA SCS Soils Map
- Figure 4 – Soil Classification System
- Test Pit Logs
- Rock Core Logs
- Air Hammer Logs
- Laboratory Test Results



Approximate Site Area

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Figure 1: Site Location Map



NUMBER AND APPROXIMATE LOCATION OF CORING C-4 ●
 NUMBER AND APPROXIMATE LOCATION OF TEST PIT TP-83 ■
 NUMBER AND APPROXIMATE LOCATION OF HAMMER/CORE HC-25 ■

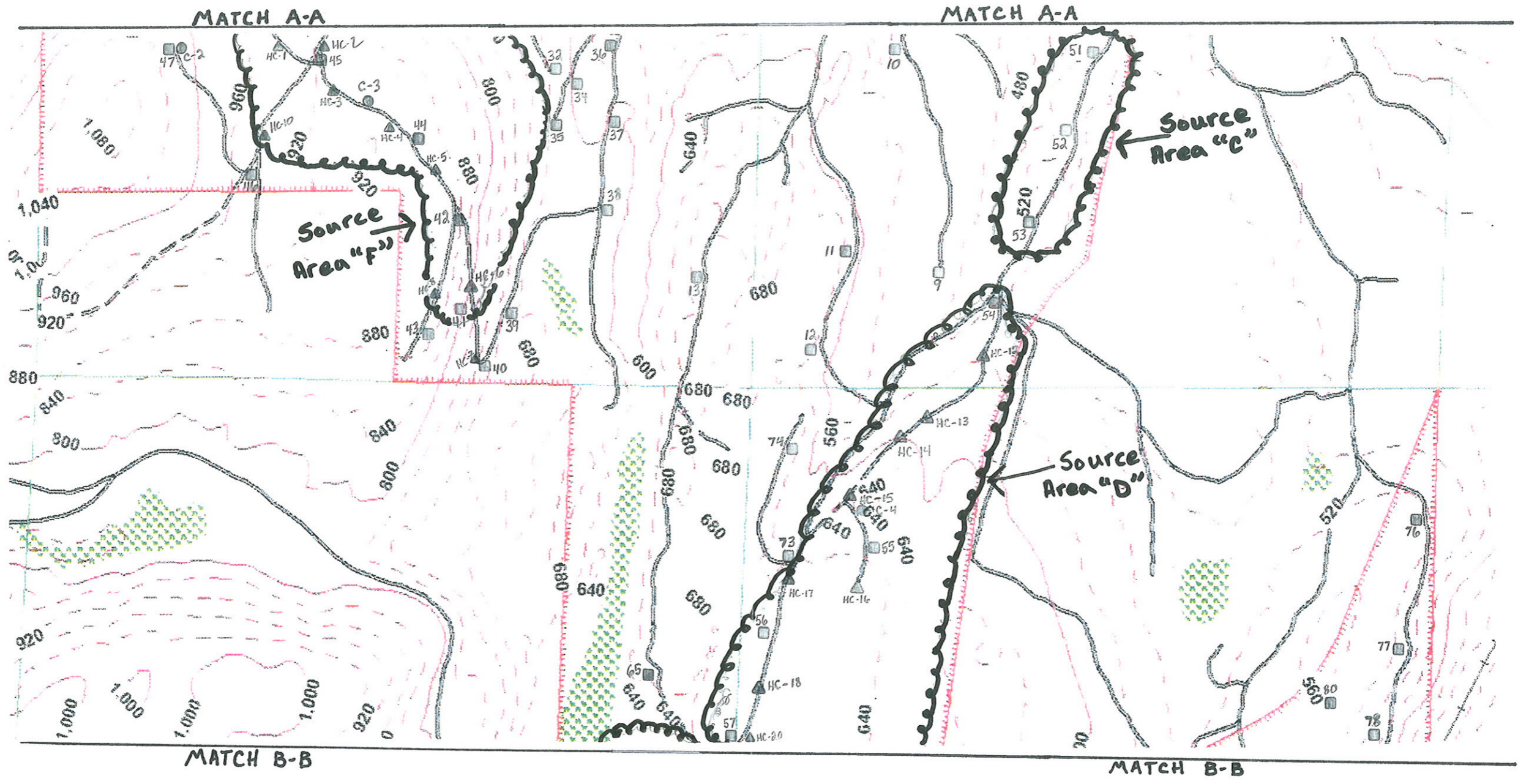
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FIGURE 2a - Site Plan (North Portion)

Project: Ueland Tree Farm – Kitsap Property
 Location: Kitsap County, Washington
 Client: Mr. Mark Mauren
 Date: November 3, 2006 Job #: UelandTreeFarm.SPn



NUMBER AND APPROXIMATE LOCATION OF CORING C-4 ●
 NUMBER AND APPROXIMATE LOCATION OF TEST PIT TP-83 ■
 NUMBER AND APPROXIMATE LOCATION OF HAMMER/CORE HC-25 ■

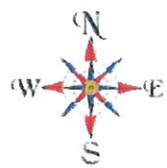
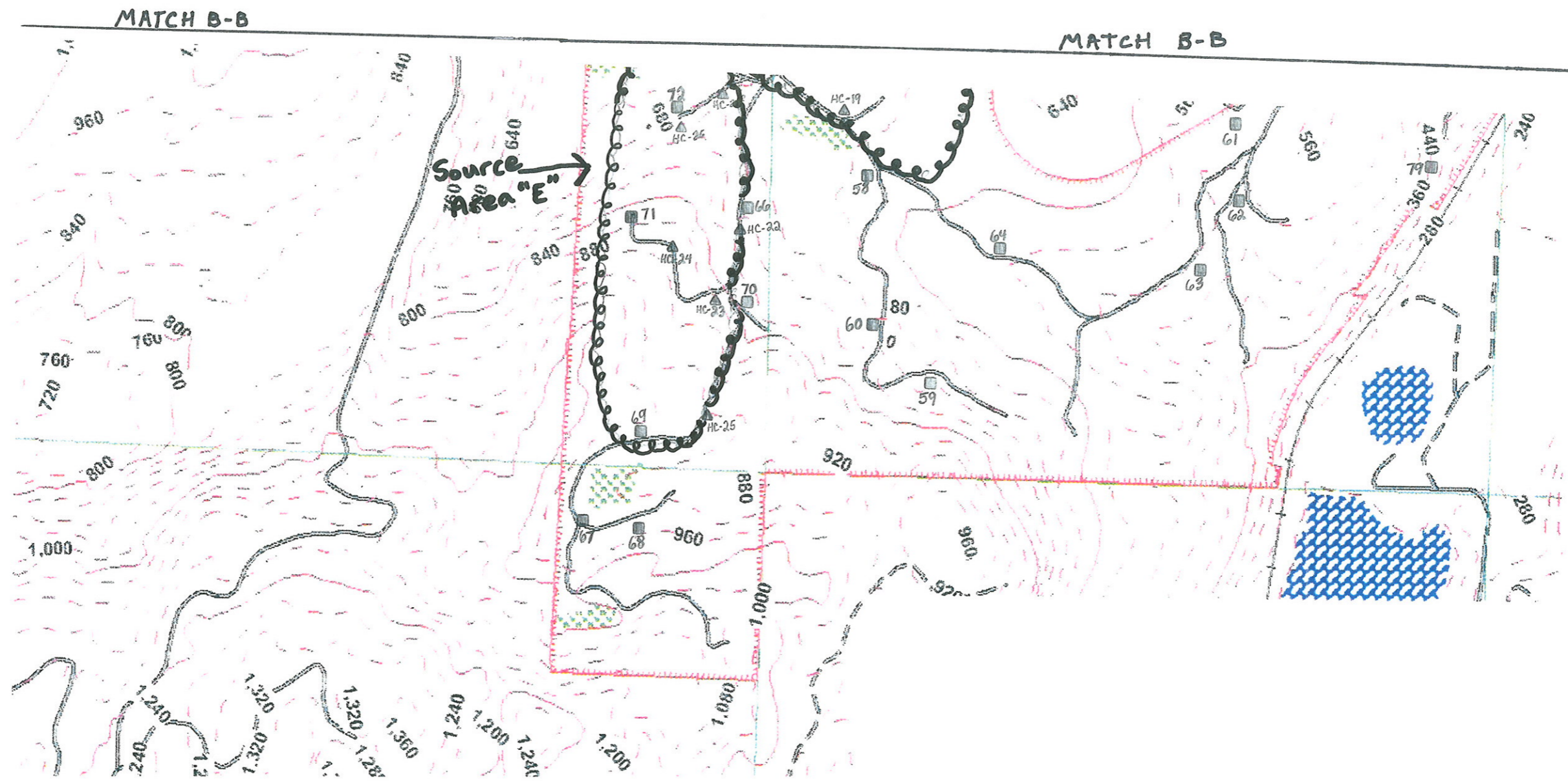
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FIGURE 2b - Site Plan (Central Portion)

Project: Ueland Tree Farm – Kitsap Property
 Location: Kitsap County, Washington
 Client: Mr. Mark Mauren
 Date: November 3, 2006 Job #: UelandTreeFarm.SPc



NUMBER AND APPROXIMATE LOCATION OF CORING C-4 ●
 NUMBER AND APPROXIMATE LOCATION OF TEST PIT TP-83 ■
 NUMBER AND APPROXIMATE LOCATION OF HAMMER/CORE HC-25 ■

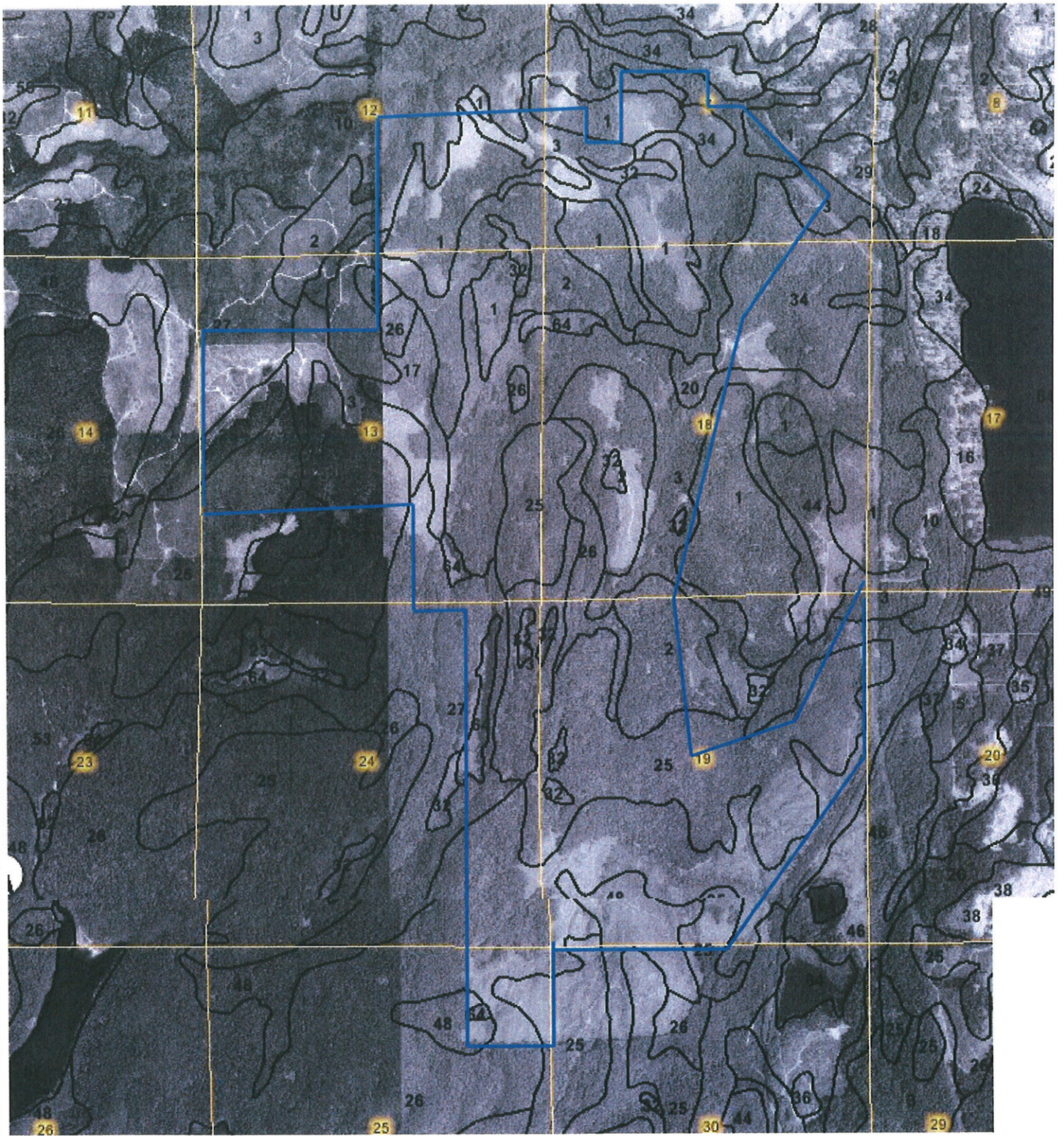
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FIGURE 2c - Site Plan (South Portion)

Project: Ueland Tree Farm – Kitsap Property
 Location: Kitsap County, Washington
 Client: Mr. Mark Mauren
 Date: November 3, 2006 Job #: UelandTreeFarm.SPs



Not to scale

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Figure 3: USDA SCS Map

SOIL CLASSIFICATION SYSTEM

MAJOR DIVISIONS			GROUP SYMBOL	GROUP NAME
COARSE GRAINED SOILS More than 50% Retained on No. 200 Sieve	GRAVEL	CLEAN GRAVEL	GW	WELL-GRADED GRAVEL, FINE TO COARSE GRAVEL
	More than 50% Of Coarse Fraction Retained on No. 4 Sieve	GRAVEL WITH FINES	GP	POORLY-GRADED GRAVEL
			GM	SILTY GRAVEL
			GC	CLAYEY GRAVEL
			SW	WELL-GRADED SAND, FINE TO COARSE SAND
	More than 50% Of Coarse Fraction Passes No. 4 Sieve	SAND WITH FINES	SP	POORLY-GRADED SAND
			SM	SILTY SAND
			SC	CLAYEY SAND
			SILT AND CLAY	INORGANIC
	CL	CLAY		
More than 50% Passes No. 200 Sieve	Liquid Limit Less than 50	ORGANIC	OL	ORGANIC SILT, ORGANIC CLAY
		SILT AND CLAY	INORGANIC	MH
	CH			CLAY OF HIGH PLASTICITY, FAT CLAY
	Liquid Limit 50 or more	ORGANIC	OH	ORGANIC CLAY, ORGANIC SILT
HIGHLY ORGANIC SOILS			PT	PEAT

NOTES:

1. Field classification is based on visual examination of soil in general accordance with ASTM D2488-90.
2. Soil classification using laboratory tests is based on ASTM D2487-90.
3. Description of soil density or consistency are based on interpretation of blow count data, visual appearance of soils, and or test data.

SOIL MOISTURE MODIFIERS:

- Dry- Absence of moisture, dry to the touch
- Moist- Damp, but no visible water
- Wet- Visible free water or saturated, usually soil is obtained from below water table

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Figure 4: Soil Classification System

**TEST PIT LOGS
 UELAND TREE FARM
 KITSAP COUNTY, WASHINGTON**

TEST PIT 1 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 0.5		Topsoil/Forest duff
0.5 - 2.5	SP	Org-brn SAND w/ minor gravel, silt, occ organic (loose to med dense, moist)
2.5 - 8.0	SP	Brn fine to med SAND w/ gravel, occ cobble (med dense, moist) (Outwash)
8.0 - 13.0	SP	Brn med to coarse SAND w/ gravel, occ cobble (med dense, moist) (Outwash)

Severe caving observed at 8 to 13 feet
 No groundwater seepage observed

TEST PIT 2 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 1.0		Topsoil/Forest duff
1.0 - 2.0	SM	Org-brn silty SAND w/ gravel, organics (loose to med, moist)
2.0 - 7.5	SP	Brn med SAND w/ gravel, occ cobble (med dense, moist) (Outwash)
7.5 - 19.0	SP	Brn gry SAND w/ minor gravel, occ gravel lenses (dense, moist) (Outwash)

Minor caving observed
 Groundwater seepage observed at 18 feet

TEST PIT 3 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 0.5		Topsoil/Forest duff
0.5 - 1.5	SM	Org-brn silty SAND w/ gravel, organics (med dense, moist)
1.5 - 6.5	SP	Brn SAND w/ gravel (med, damp)
6.5 - 7.5	SP	Brn silt w/ SAND, occ gravel, cobble (dense, wet)
7.5 - 9.0	SM	Gry silty SAND w/ gravel (very dense, moist) (Glacial Till)

No caving observed
 Minor groundwater seepage observed at 6 to 8 feet

TEST PIT 4 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 0.5		Topsoil/Forest duff
0.5 - 10.5	SP	Brn SAND w/ gravel, occ cobble (Outwash)

No caving observed
 No groundwater seepage observed

TEST PIT 5 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 0.5		Topsoil/Forest duff
0.5 - 1.5	SM	Org-brn silty SAND w/ gravel, organics (loose to med dense, moist)
1.5 - 5.5	SP	Brn SAND w/ gravel, occ cobble (med dense to dense, moist)
5.5 - 8.5	SP	Gry SAND w/ gravel (very dense, moist) (Glacial Till)
8.5 - 10.0		Medium soft, highly weathered BASALT

No caving observed

Minor groundwater seepage observed at 4.5 to 5.5 feet

TEST PIT 6 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 2.5	SM	Org-gry silty SAND w/ gravel (med dense to dense, moist) (Weathered till)
2.5 - 12.0	SM	Gry silty SAND w/ gravel (very dense, moist) (Glacial Till)

No caving observed

No groundwater seepage observed

TEST PIT 7 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 6.5	SM	Org-red silty SAND w/ rock, gravel (med dense to dense, moist)
6.5 - 8.5		Medium soft, highly weathered BASALT
8.5 - 9.0		Hard, slightly weathered, BASALT

No caving observed

No groundwater seepage observed

TEST PIT 8 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 0.5		Topsoil/Forest duff
0.5 - 3.5	SP	Org-red SAND w/ silt, occ gravel, organics (loose to med dense, moist)
3.5 - 12.0	SP	Org-brn fine-med SAND w/ occ gravel (med dense to dense, moist)
12.0 - 13.0	SM	Gry silty SAND w/ gravel (very dense, moist) (Glacial Till)
13.0 - 15.0		Medium soft, highly weathered BASALT

No caving observed

No groundwater seepage observed

TEST PIT 9 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 6.0	GP	Some Bedrock (fill) w/ silt and SAND (dense, moist)
6.0 - 9.0		Medium soft, highly weathered BEDROCK
		No caving observed
		No groundwater seepage observed

TEST PIT 10 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 0.5		Topsoil/Forest duff
0.5 - 2.5	GP	Medium soft, highly weathered BEDROCK w/ silty SAND infilling
2.5 - 6.0		Hard, fractured BEDROCK
		No caving observed
		No groundwater seepage observed

TEST PIT 11 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 4.0	GP	Weathered bedrock silty SAND w/ gravel, cobble (med dense, moist)
4.0 - 6.0	GP	Medium soft, highly weathered BEDROCK w/ silty SAND infilling (very dense, moist)
6.0 - 8.0		Hard, fractured BEDROCK
		No caving observed
		No groundwater seepage observed

TEST PIT 12 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 4.0	SM	Brn silty SAND w/ gravel, cobble (med dense to dense, moist) (Bedrock fill)
4.0 - 7.0	GP	Brn medium soft, highly weathered BEDROCK w/ silty SAND infilling (very dense, moist)
7.0 - 8.0		Hard, fractured BEDROCK w/ silty SAND infilling
		No caving observed
		No groundwater seepage observed

TEST PIT 13 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 2.0	SM	Rd-brn silty SAND (med dense to dense, moist)
2.0 - 4.5	GP	Rd-brn silty SAND, w/ 2 to 4-inch weathered angular rock (med dense to dense, moist)
4.5 - 6.5		Hard, fractured BEDROCK w/ silty SAND infilling
		No caving observed
		No groundwater seepage observed

TEST PIT 14 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 0.3		Sod/Topsoil
0.3 - 6.0	SP	Brn gravelly SAND w/ cobble, occ boulder (med dense, moist). Iron stained at 5.5 to 6 feet
6.0 - 7.0	SM	Gry silty SAND w/ gravel (very dense, moist) (Glacial Till)
		No caving observed
		No groundwater seepage observed

TEST PIT 15 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 0.5		Sod/Topsoil
0.5 - 1.0	SM	Org-brn silty SAND w/ gravel (dense, moist)
1.0 - 2.5	SP	Brn SAND w/ gravel, minor silt, occ cobble, organics (roots)
2.5 - 7.0	GP	Brn sandy GRAVEL w/ cobble, occ boulder (dense, moist) (Outwash)
7.0 - 15.0	SP	Gry-brn fine to med SAND w/ minor gravel, coarse SAND lenses at 12 inches
15.0 - 19.0	SP	Gry-brn med to coarse SAND w/ gravel (Outwash)
		No caving observed
		No groundwater seepage observed

TEST PIT 16 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 0.3		Sod/Topsoil
0.3 - 13.0	SP	Gry-brn gravelly SAND w/ occ cobble (dense, moist)
13.0 - 17.0	SP	Brn gravelly SAND w/ minor silt, occ cobble (very dense, moist to damp) (Glacial Till)

TEST PIT 17 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 0.3		Sod/Forest duff
0.3 - 9.0	SP	Brn-gry gravelly SAND grading to sandy gravel w/cobble (dense, moist)
9.0	SM	Lt gry silty gravelly SAND (very dense, moist) (Glacial Till)
		No caving observed
		No groundwater seepage observed

TEST PIT 18 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 0.5		Forest duff
0.5 - 3.5	SM	Lt yellow-brn dense to med silty SAND w/ gravel, organics (loose to med dense, moist)
3.5 - 10.0	SM	Lt gry silty gravelly SAND w/ cobble (very dense, moist) (Glacial till)
7.5 - 19.0	SP	Brn gry silt SAND w/ minor gravel, occ gravel lenses (dense, moist) (Glacial Till)
		No caving observed
		No groundwater seepage observed

TEST PIT 19 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 0.2		Forest duff
0.2 - 2.0	SM	Lt org-brn silty SAND w/ gravel (med dense, moist) (Weathered till)
2.0 - 5.0	SM	Lt gry silty gravelly SAND w/ minor cobble (very dense, moist) (Glacial till)
		No caving observed
		No groundwater seepage observed

TEST PIT 20 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 1.5	SM	Lt yellow-brn silty gravelly SAND w/ minor cobble (loose to med dense, moist) (Weathered till)
1.5 - 4.0	SM	Lt gry silty gravelly SAND w/ some cobble (very dense, moist) (Glacial till)
		No caving observed
		No groundwater seepage observed

TEST PIT 21 - Approximate location is shown on attached site plan.

<u>Depth (ft.)</u>	<u>Soil Type</u>	<u>Description</u>
0.0 - 0.3		Forest duff
0.3 - 1.5	SM	Lt org-brn silty gravelly SAND (med dense, moist) (Weathered Till)
1.5 - 6.5	SM	Lt gry silty gravelly SAND w/ minor cobble (dense becoming very dense, moist) (Glacial Till)

No caving observed
Groundwater seepage observed at 1.2 to 1.5 feet

TEST PIT 22 - Approximate location is shown on attached site plan.

<u>Depth (ft.)</u>	<u>Soil Type</u>	<u>Description</u>
0.0 - 0.5		Forest duff
0.5 - 3.0	SM	Org-brn silty gravelly SAND (med dense, moist) (Weathered Till)
3.0 - 9.5		Gry sandy gravel/gravelly SAND w/ silt (dense, wet) (Sandy Glacial Till)

No caving observed
Groundwater seepage observed at 2.75 to 3.25 feet

TEST PIT 23 - Approximate location is shown on attached site plan.

<u>Depth (ft.)</u>	<u>Soil Type</u>	<u>Description</u>
0.0 - 0.5		Forest duff
0.5 - 2.5	SM	Org-brn silty gravelly SAND (med dense, moist) (Weathered Till)
2.5 - 9.0	SM	Gry silty gravelly SAND (dense to very dense, moist) (Glacial Till)

No caving observed
Slight groundwater seepage observed at 2.25 to 2.5 feet

TEST PIT 24 - Approximate location is shown on attached site plan.

<u>Depth (ft.)</u>	<u>Soil Type</u>	<u>Description</u>
0.0 - 0.5		Forest duff
0.5 - 2.5	SM	Org-brn silty gravelly SAND (med dense, moist) (Weathered Till)
2.5 - 9.0	SM	Gry silty gravelly SAND (dense to very dense, moist) (Glacial Till)

No caving observed
Slight groundwater seepage observed at 2.25 to 2.5 feet

TEST PIT 25 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 0.5		Forest duff
0.5 - 1.5	ML	Drk gry sandy SILT w/ roots
1.5 - 3.5	GP	Weathered BEDROCK - highly fractured, soft, weathered
3.5	GP	BEDROCK – moderately fractured, moderately hard, black w/ white phenocryst
		No caving observed
		No groundwater seepage observed

TEST PIT 26 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 0.5		Sod/Topsoil
0.5 - 3.0	SM	Lt yellow-brn silty gravelly SAND (med dense, moist) (Weathered Till)
3.0 - 6.5	SM	Gry silty gravelly SAND (med dense, moist) (Glacial Till)
6.5 - 7.0	GP	Weathered BEDROCK – soft, fractured

TEST PIT 27 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 6.5		Road fill
6.5 - 8.0	SM	Org-brn silty gravelly SAND (med dense, moist) (Weathered Till)
8.0 - 10.0	GM	Gry silty sandy GRAVEL (dense to very dense, moist) (Glacial Till)
		Moderate caving observed at 3 to 6 feet
		No groundwater seepage observed

TEST PIT 28 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 0.5		Topsoil
0.5 - 2.0	SM	Lt org-brn silty SAND w/ some gravel (med dense, moist)
2.0 - 9.0	GM	Lt gry silty sandy GRAVEL (very dense, moist) (Glacial Till)
		No caving observed
		No groundwater seepage observed

TEST PIT 29 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 0.5		Forest duff
0.5 - 3.0	SM	Org-brn silty SAND w/ some gravel, roots (med dense, moist) (Weathered Till)
3.0 - 8.5	GM	Gry silty sandy GRAVEL (dense to very dense, moist) (Glacial Till)
		No caving observed
		Groundwater seepage observed at 2.5 feet

TEST PIT 30 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 0.5		Forest duff
0.5 - 3.0	SM	Org-brn silty SAND w/ some gravel, roots (med dense, moist) (Weathered Till)
3.0 - 6.5	GM	Gry silty sandy GRAVEL (dense to very dense, moist) (Glacial till)
6.5 - 9.5	GP	Weathered BEDROCK – highly fractured, moderately soft basalt bedrock

No caving observed
No groundwater seepage observed

TEST PIT 31 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 0.3		Forest duff
0.3 - 3.0	GP	Brn coarse sandy GRAVEL, w/ trace silt (med dense, moist)
3.0 - 12.5	GM	Gry silty sandy GRAVEL (dense to very dense, moist) (Glacial Till)

Caving observed at 4 to 8 feet
Heavy groundwater seepage observed at 8 feet

TEST PIT 32 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 0.3		Forest duff
0.3 - 11.0	GP	Brn coarse sandy GRAVEL, w/ trace silt (med dense, moist)

Caving observed at 10 to 11 feet
Heavy groundwater seepage observed at 10 to 11 feet

TEST PIT 33 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 0.3		Forest duff
0.3 - 11.0	GP	Brn coarse sandy GRAVEL, w/ trace silt (med dense, moist)

No caving observed
No groundwater seepage observed

TEST PIT 34 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 0.7		Forest duff
0.7 - 8.0	GP	Lt yellow-tan sandy GRAVEL w/ silt (med dense, moist)
8.0 - 14.0	GM	Gry silty sandy GRAVEL (dense, moist) (Glacial till)

No caving observed
No groundwater seepage observed

TEST PIT 35 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 2.0	GM	Org-brn silty GRAVEL w/ angular rock
2.0 - 5.0	GP	Weathered BEDROCK - fractured moderately hard basalt
5.0 - 7.0	GP	BEDROCK - Moderately weathered, fractured moderately hard basalt

No caving observed
No groundwater seepage observed

TEST PIT 36 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 2.0	GP	Org-brn sandy GRAVEL w/ some silt
2.0 - 7.0	GM	Gry silty sandy GRAVEL (dense, moist) (Glacial till)
7.0 - 8.0	GP	Weathered BEDROCK - Moderately weathered, fractured, moderately sound basalt

No caving observed
Groundwater seepage observed at 7 to 7.5 feet

TEST PIT 37 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 0.5		Forest duff
0.5 - 3.0	SM	Lt org-brn silty gravelly SAND w/ cobble (med dense, moist)
3.0 - 10.0	SM	Gry silty gravelly SAND w/ cobble (very dense, moist) (Glacial Till)

No caving observed
Groundwater seepage observed at 2.5 to 3 feet

TEST PIT 38 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 0.5		Forest duff
0.5 - 3.0	SM	Lt org-brn silty gravelly SAND w/ cobble (med dense, moist)
3.0 - 10.0	SM	Gry silty gravelly SAND w/ cobble (very dense, moist) (Glacial Till)

No caving observed
Groundwater seepage observed at 2.5 to 3 feet

TEST PIT 39 - Approximate location is shown on attached site plan.

<u>Depth (ft.)</u>	<u>Soil Type</u>	<u>Description</u>
0.0 - 3.0		Road fill
3.0 - 6.0	SM	Gry silty gravelly SAND w/ cobble (very dense, moist) (Glacial till)
6.0 - 7.0	GP	Moderately weathered, fractured, moderately sound basalt
		No caving observed
		No groundwater seepage observed

TEST PIT 40 - Approximate location is shown on attached site plan.

<u>Depth (ft.)</u>	<u>Soil Type</u>	<u>Description</u>
0.0 - 2.0		Road fill
2.0 - 7.0	GM	Lt brn silty sandy GRAVEL w/ cobble, angular rock (med dense, moist) (Colluvium)
7.0 - 9.0	GP	BEDROCK - Weathered, fractured, moderately soft basalt
		No caving observed
		No groundwater seepage observed

TEST PIT 41 - Approximate location is shown on attached site plan.

<u>Depth (ft.)</u>	<u>Soil Type</u>	<u>Description</u>
0.0 - 0.5		Road fill
0.5 - 4.0	GP	BEDROCK - Weathered, fractured, moderately soft basalt
		No caving observed
		No groundwater seepage observed

TEST PIT 42 - Approximate location is shown on attached site plan.

<u>Depth (ft.)</u>	<u>Soil Type</u>	<u>Description</u>
0.0 - 0.5		Forest duff
0.5 - 2.0	SM	Org-brn silty gravelly SAND w/ weathered bedrock (med dense, moist)
2.0 - 7.0	GP	BEDROCK - Weathered, fractured, moderately soft basalt
		No caving observed
		No groundwater seepage observed

TEST PIT 43 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 0.5		Forest duff
0.5 - 2.0		Road fill
2.0 - 6.0	GP	BEDROCK - Weathered, fractured, moderately soft basalt
6.0 - 7.0	GP	BEDROCK - Slightly weathered, fractured, moderately soft basalt
No caving observed		
No groundwater seepage observed		

TEST PIT 44 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 0.5		Forest duff
0.5 - 2.0	SM	Org-brn silty gravelly SAND w/ weathered 2 to 6-inch pieces of angular rock 2 to 6-inch (med dense, moist)
2.0 - 7.0	GP	BEDROCK - Weathered, fractured, moderately soft basalt
No caving observed		
No groundwater seepage observed		

TEST PIT 45 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 0.5		Forest duff
0.5 - 4.0	SM	Org-brn silty gravelly SAND w/ weathered bedrock (med dense, moist)
4.0 - 9.0	GP	BEDROCK - Weathered, fractured, moderately soft basalt
No caving observed		
No groundwater seepage observed		

TEST PIT 46 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 0.5		Forest duff
0.5 - 3.0		Colluvium
3.0 - 5.0	GP	Drk redish-blk slightly weathered soft bedrock
5.0 - 8.0	GP	Weathered BEDROCK – Highly weathered, fractured bedrock
8.0 - 9.5	GP	BEDROCK – Hard, fractured basalt bedrock
No caving observed		
No groundwater seepage observed		

TEST PIT 47 - Approximate location is shown on attached site plan.

<u>Depth (ft.)</u>	<u>Soil Type</u>	<u>Description</u>
0.0 - 0.5		Topsoil
0.5 - 2.0	SM	Lt org-brn silty gravelly SAND
2.0 - 3.0	GP	Rd-blk BEDROCK – moderately weathered, fractured, soft
3.0 - 7.0	GP	BEDROCK - fractured, weathered bedrock, hard
		No caving observed
		No groundwater seepage observed

TEST PIT 48 - Approximate location is shown on attached site plan.

<u>Depth (ft.)</u>	<u>Soil Type</u>	<u>Description</u>
0.0 - 0.5		Forest duff
0.5 - 2.0	GP	Rd-blk BEDROCK – moderately weathered, fractured, soft
2.0 - 2.5	GP	BEDROCK - fractured, weathered bedrock, hard

TEST PIT 49 - Approximate location is shown on attached site plan.

<u>Depth (ft.)</u>	<u>Soil Type</u>	<u>Description</u>
0.0 - 0.5		Forest duff
0.5 - 3.5	SM	Gry silty gravelly SAND w/ cobble (very dense, moist) (Glacial till)
3.5 - 7.0	GP	Rd-blk BEDROCK – moderately weathered, fractured, soft
7.0	GP	BEDROCK - fractured, weathered bedrock, hard
		No caving observed
		No groundwater seepage observed

TEST PIT 50 - Approximate location is shown on attached site plan.

<u>Depth (ft.)</u>	<u>Soil Type</u>	<u>Description</u>
0.0 - 0.5		Forest duff
0.5 - 3.5	SM	Gry silty gravelly SAND w/ cobble (very dense, moist) (Glacial till)
3.5 - 7.0	GP	Rd-blk BEDROCK – moderately weathered, fractured, soft
7.0	GP	BEDROCK - fractured, weathered bedrock, hard
		No caving observed
		No groundwater seepage observed

TEST PIT 51 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 0.5		Topsoil
0.5 - 2.0	SM	Lt org-brn silty fine to med SAND, trace roots
2.0 - 10.0	SM	Lt gry silty fine to med SAND, minor gravel (med dense, moist) (Outwash)
10.0 - 13.0	SP	Gry fine to med SAND w/ some silt, gravel (med dense to dense, moist) (Glacial Till?)
No caving observed		
No groundwater seepage observed		

TEST PIT 52 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 0.5		Forest duff
0.5 - 3.0	SP	Org-brn fine to med SAND w/ some silt (loose, moist)
3.0 - 9.0	SP	Lt yellow brn-gry fine to med SAND w/ minor silt (loose to med dense, moist) (Outwash)
9.0 - 14.0	SP	Drk gry med to coarse SAND w/ scattered pebbles (loose, moist) (Outwash)
Slight caving observed at 9 to 14 feet		
No groundwater seepage observed		

TEST PIT 53 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 0.5		Forest duff
0.5 - 3.0	SP	Lt yellow-brn fine to med SAND w/ some silt (Outwash)
3.0 - 14.0	SP	Drk gry med to coarse SAND, minor gravel (Outwash)
No caving observed		
Slight groundwater seepage observed at 12 feet		

TEST PIT 54 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 0.5		Forest duff
0.5 - 4.0	SP	Lt yellow-brn fine to med SAND w/ some silt (Outwash)
4.0 - 15.0	SP	Drk gry med to coarse SAND, minor gravel (Outwash)
No caving observed		
Slight groundwater seepage observed at 12 feet		

TEST PIT 55 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 0.5		Topsoil/Forest duff
0.5 - 3.5	SM	Red-brn silty SAND w/ gravel, occ cobble, occ organics (med dense- dense, moist) (Weathered bedrock)
3.5 - 6.5	GP	Brn fractured bedrock w/ minor silt/SAND (med dense-dense, moist) (Fill?)
6.5 - 9.0	GP	BEDROCK – highly fractured, weathered bedrock, hard (1 ½-6 in fragments)
No caving observed		
No groundwater seepage observed		

TEST PIT 56 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 0.3		Topsoil/Forest duff
0.3 - 4.0	GP	Red-brn sandy gravel w/ silt, gravel, occ coble (med dense-dense, moist) (Weathered bedrock/Residual Soil)
4.0 - 9.0	GP	Rd-blk Weathered BEDROCK – highly weathered, fractured, soft
9.0 - 10.5		BEDROCK - fractured, weathered bedrock, hard
No caving observed		
No groundwater seepage observed		

TEST PIT 57 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 1.0		Topsoil/Forest duff
1.0 - 2.0		Brn sand & gravel (Fill) (Crushed rock) (dense, moist)
2.0 - 4.5	SM	Red-brn silty SAND w/ minor fractured rock (med dense, wet)
4.5 - 9.5	GP	Brn Weathered BEDROCK – highly weathered, fractured, soft
9.5 - 11.5	GP	Purple-brn BEDROCK - fractured, weathered bedrock, hard
No caving observed		
No groundwater seepage observed		

TEST PIT 58 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 1.0		Topsoil/Forest duff
1.0 - 2.0	GP	Brn sand & gravel (Fill) (Crushed rock) (dense, moist)
2.0 - 4.5	GP	Red-brn silty SAND w/ minor fractured rock (med dense, wet)
4.5 - 9.5		Brn Weathered BEDROCK – highly weathered, fractured, soft
9.5 - 11.5		Purple-brn BEDROCK - fractured, weathered bedrock, hard
No caving observed		
No groundwater seepage observed		

TEST PIT 59 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 1.5	SM	Red-brn silty SAND w/ rock, occ organics (med dense-dense, moist)
1.5 - 2.5	GP	Purple-brn Weathered BEDROCK – highly weathered, fractured, soft
2.5 - 10.5		Purple-brn BEDROCK - fractured, weathered bedrock, hard
		No caving observed
		No groundwater seepage observed

TEST PIT 60 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 0.5		Sod/Forest duff/Slash
0.5 - 6.5	SM	Red-brn silty SAND w/ rock (weathered) (med dense-dense, moist)
6.5 - 8.5		Purple-brn BEDROCK - fractured, slightly weathered bedrock, hard
		No caving observed
		No groundwater seepage observed

TEST PIT 61 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 0.5		Topsoil/Forest duff
0.5 - 4.5	GM	Red-brn Weathered BEDROCK – highly weathered, fractured, soft
4.5 - 6.5		Red-brn BEDROCK - fractured, slightly weathered bedrock, hard
		No caving observed
		No groundwater seepage observed

TEST PIT 62 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 6.0	GM	Red-brn Weathered BEDROCK – highly weathered, fractured, soft
6.0 - 8.5		Red-brn BEDROCK - fractured, slightly weathered bedrock, hard
		No caving observed
		No groundwater seepage observed

TEST PIT 63 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 4.0	GM	Fill-bedrock
4.0 - 7.0	GM	Red-brn Weathered BEDROCK – highly weathered, fractured, soft
7.0 - 10.0		Red-brn BEDROCK - fractured, slightly weathered bedrock, hard
		No caving observed
		No groundwater seepage observed

TEST PIT 64 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 0.3		Topsoil/Forest duff
0.3 - 3.0	SM	Red-brn silty SAND w/ gravel, occ cobble (bedrock) (loose-med dense, moist)
3.0 - 6.0	GP	Brn Weathered BEDROCK – highly weathered, fractured, soft w/ silt infilling
6.0 - 7.0		Red-brn BEDROCK - fractured, slightly weathered bedrock, hard
No caving observed		
Minor groundwater seepage observed at 5 to 6 feet		

TEST PIT 65 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 0.5		Topsoil/Forest duff
0.5 - 5.0	SM	Red-brn silty SAND w/ gravel, cobble, occ bedrock (loose-med dense, moist)
5.0 - 9.0		Red-brn BEDROCK - fractured, slightly weathered bedrock, hard
No caving observed		
No groundwater seepage observed		

TEST PIT 66 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 0.3		Sod/Topsoil
0.3 - 4.0	SM	Red-brn silty SAND w/ gravel, cobble (loose-med dense, moist-wet)
4.0 - 16.5		Purple-brn BEDROCK - fractured, slightly weathered bedrock, hard w/ silt infiling
No caving observed		
Minor groundwater seepage observed at 3 to 4 feet		

TEST PIT 67 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 4.0		Fill
4.0 - 10.0	GM	Weathered BEDROCK – highly weathered, fractured, soft
No caving observed		
No groundwater seepage observed		

TEST PIT 68 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 8.5		BEDROCK - fractured, slightly weathered bedrock, hard
No caving observed		
No groundwater seepage observed		

TEST PIT 69 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 0.4		Sod/Topsoil
0.4 - 3.0	SM	Brn silty SAND w/ gravel, rock (med dense, moist)
3.0 - 5.5	GM	Red-brn Weathered BEDROCK – highly weathered, fractured, soft
5.5 - 8.5	GP	Purple-brn BEDROCK - fractured, slightly weathered bedrock, hard

No caving observed
 No groundwater seepage observed

TEST PIT 70 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 3.0	SM/GM	Red-brn silty weathered bedrock (dense, moist)
3.0 - 7.5	GP	Purple-brn Weathered BEDROCK – highly weathered, fractured, medium hard
7.5 - 11.0	GP	Purple-brn BEDROCK - fractured, slightly weathered bedrock, hard

No caving observed
 No groundwater seepage observed

TEST PIT 71 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 3.0	SM/GM	Red-brn silty weathered bedrock (dense, moist)
3.0 - 7.5	GP	Purple-brn Weathered BEDROCK – highly weathered, fractured, medium hard
7.5 - 11.0	GP	Purple-brn BEDROCK - fractured, slightly weathered bedrock, hard

No caving observed
 No groundwater seepage observed

TEST PIT 72 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 3.0	SM/GM	Red-brn silty weathered bedrock (dense, moist)
3.0 - 7.5	GP	Purple-brn Weathered BEDROCK – highly weathered, fractured, medium hard
7.5 - 11.0	GP	Purple-brn BEDROCK - fractured, slightly weathered bedrock, hard

No caving observed
 No groundwater seepage observed

TEST PIT 73 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 0.5		Forest Duff
0.5 - 2.5		Lght org-brn silty SAND w/ sub-angular rock fragments (highly weathered rock)
2.5 - 5.5		Org-brn Weathered BEDROCK – highly weathered, fractured, medium hard
5.5 - 9.0		Org-brn BEDROCK - fractured, slightly weathered bedrock, hard. Breaks into 2 to 4-inch quarry spall type fragments
		No caving observed
		No groundwater seepage observed

TEST PIT 74 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 0.5		Forest Duff
0.5 - 2.0		Org-brn Weathered BEDROCK – highly weathered, fractured, medium hard
2.0 - 6.5		Org-brn BEDROCK - fractured, slightly weathered bedrock, hard. Refusal.
		No caving observed
		No groundwater seepage observed

TEST PIT 75 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 0.5		Forest Duff
0.5 - 3.0		Org-brn BEDROCK - fractured, slightly weathered bedrock, very hard. Refusal
		No caving observed
		No groundwater seepage observed

TEST PIT 76 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 3.0	SM/GM	Red-brn silty weathered bedrock (dense, moist)
0.2 - 3.0		Org-brn Weathered BEDROCK – highly weathered, fractured, soft with vesicles and infilling
3.0 - 7.5		Org-brn Weathered BEDROCK – highly weathered, fractured, medium hard
		No caving observed
		No groundwater seepage observed

TEST PIT 77 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 0.5		Forest Duff
0.5 - 2.0		Org-brn BEDROCK – highly weathered, fractured, very hard.
		No caving observed
		No groundwater seepage observed

TEST PIT 78 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 3.0	SM/GM	Red-brn silty weathered bedrock (dense, moist)
3.0 - 7.5	GP	Purple-brn Weathered BEDROCK – highly weathered, fractured, medium hard
7.5 - 11.0	GP	Purple-brn BEDROCK - fractured, slightly weathered bedrock, hard
		No caving observed
		No groundwater seepage observed

TEST PIT 79 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 0.5	SM/GM	Red-brn silty weathered bedrock (dense, moist)
0.5 - 11.0		Rd-tan clayey SILT w/ angular gravel (med dense, wet) (Residual Rock)
11.0 - 12.0		Org-brn BEDROCK – highly weathered, fractured, very hard.
		No caving observed
		No groundwater seepage observed

TEST PIT 80 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 3.0	SM/GM	Red-brn silty weathered bedrock (dense, moist)
3.0 - 7.5	GP	Purple-brn Weathered BEDROCK – highly weathered, fractured, medium hard
7.5 - 11.0	GP	Purple-brn BEDROCK - fractured, slightly weathered bedrock, hard
		No caving observed
		No groundwater seepage observed

TEST PIT 81 - Approximate location is shown on attached site plan.

Depth (ft.)	Soil Type	Description
0.0 - 0.5		Topsoil/Forest duff
0.5 - 2.5	SP	Org-brn SAND w/ minor gravel, silt, occ organic (loose to med dense, moist)
2.5 - 8.0	SP	Brn fine to med SAND w/ gravel, occ cobble (med dense, moist) (Outwash)
8.0 - 13.0	SP	Brn med to coarse SAND w/ gravel, occ cobble (med dense, moist) (Outwash)
		No caving observed
		No groundwater seepage observed

TEST PIT 82 - Approximate location is shown on attached site plan.

<u>Depth (ft.)</u>	<u>Soil Type</u>	<u>Description</u>
0.0 - 0.5		Topsoil/Forest duff
0.5 - 2.5	SP	Org-brn SAND w/ minor gravel, silt, occ organic (loose to med dense, moist)
2.5 - 7.0	SP	Brn med to coarse SAND w/ gravel, occ cobble (med dense, moist) (Outwash)
7.0 - 12.0	SP	Brn fine to med SAND occ grave, cobble (med dense, moist) (Outwash)

No caving observed
No groundwater seepage observed

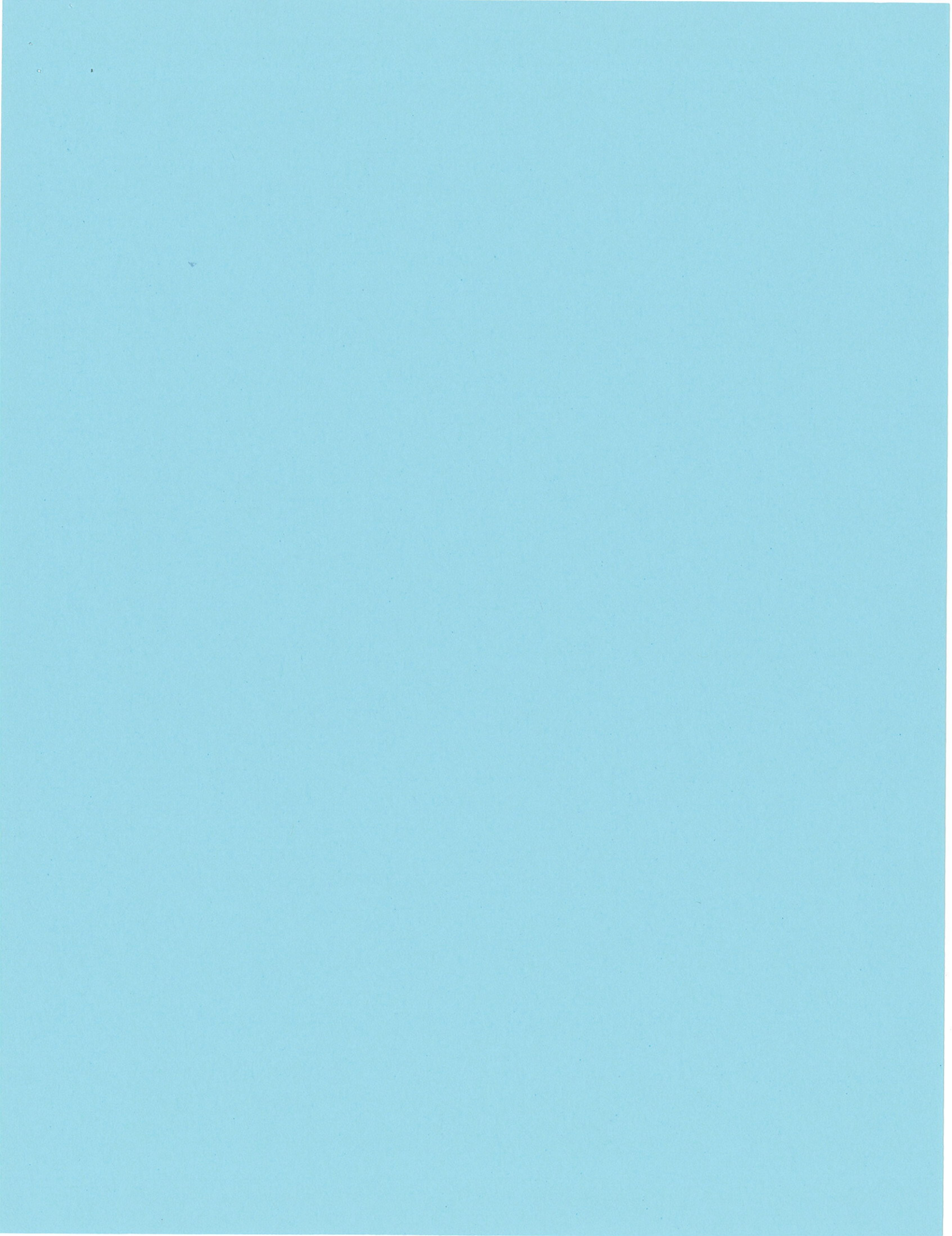
TEST PIT 83 - Approximate location is shown on attached site plan.

<u>Depth (ft.)</u>	<u>Soil Type</u>	<u>Description</u>
0.0 - 0.5		Topsoil/Forest duff
0.5 - 2.5	SP	Org-brn SAND w/ minor gravel, silt, occ organic (loose to med dense, moist)
2.5 - 15.0	SP	Brn fine to med SAND occ grave, cobble (med dense, moist) (Outwash)

No caving observed
No groundwater seepage observed

Excavated on: March 1, 2, 3, 29, & 30

Logged by: BPB/KSS



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Boring Logs

OWNER Mark Mauren	JOB NUMBER MaurenM.UelandTreeFarm	BORING NUMBER C-1
PROJECT Ueland Tree Farm	LOCATION Kitsap County	DATE 5-30-06

Depth (feet)	Sample Description	Run #	RQD / Recovery	Notes	Testing	
0	Topsoil over loose, brown silty sand with gravel			Set surface casing to 7 ft		
5	Moderately weathered, very weak to weak, brown/gray basalt with excessive fractures and highly jointed. Fractures infilled with clay and mineralization					
10		R-1	0 / 40%			
15		R-2	25 / 38%			
		R-3	0 / 100%			
	Becomes medium strong to strong, less fractures and jointing, more massive	R-4	0 / 100%			
20		R-5	18 / 100%			
					Switched back to casing, advanced casing to 25 feet	
25	Moderately weathered, strong, gray basalt with fractures and jointing	R-6	0 / 100%			
	Coring terminated at 27 feet due to fracturing and lose of circulation					
30						

Type of Drill Rig:	Holocene Drilling, Core Drill	Approximate Elevation:	
Type of Sampler:		Logged By:	Keith Schembs

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Boring Logs

OWNER Mark Mauren	JOB NUMBER MaurenM.UelandTreeFarm	BORING NUMBER C-2
PROJECT Ueland Tree Farm	LOCATION Kitsap County	DATE 5-30-06

Depth (feet)	Sample Description	Run #	RQD / Recovery	Notes	Testing	
0	Topsoil over loose, brown clayey silty sand			Set surface casing to 10 ft		
5						
10	Highly weathered, extremely weak to very weak, brown siltstone/claystone (marine sedimentary rock) (logged by cuttings in drilling fluid only, no recovery)	R-1	0 / 0%			
		R-2	0 / 0%			
15		R-3	0 / 0%			
20						
25					Switched back to casing, advanced casing to 30 feet	
30						

Type of Drill Rig:	Holocene Drilling, Core Drill	Approximate Elevation:	
Type of Sampler:		Logged By:	Keith Schembs

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Boring Logs

OWNER Mark Mauren	JOB NUMBER MaurenM.UelandTreeFarm	BORING NUMBER C-2
PROJECT Ueland Tree Farm	LOCATION Kitsap County	DATE 5-30-06

Depth (feet)	Sample Description	Run #	RQD / Recovery	Notes	Testing
30	No recovery, lost circulation	R-4	0 / 0%		
	Coring terminated at 32 feet due to fracturing and lose of circulation				
35					
40					
45					
50					
55					
60					

Type of Drill Rig:	Holocene Drilling, Core Drill	Approximate Elevation:	
Type of Sampler:		Logged By:	Keith Schembs

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Boring Logs

OWNER Mark Mauren	JOB NUMBER MaurenM.UelandTreeFarm	BORING NUMBER C-3
PROJECT Ueland Tree Farm	LOCATION Kitsap County	DATE 5-31-06

Depth (feet)	Sample Description	Run #	RQD / Recovery	Notes	Testing
0	Topsoil over loose, brown clayey silty sand				
5	Moderately weathered, weak to strong, light gray to purple gray basalt (logged by cuttings in drilling fluid only)			Set surface casing to 40 ft due to highly fractured nature of rock, driller continually lost circulation in fractures and wanted good seal prior to coring.	
10					
15					
20					
25					
30					

Type of Drill Rig:	Holocene Drilling, Core Drill	Approximate Elevation:	
Type of Sampler:		Logged By:	Keith Schembs

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Boring Logs

OWNER Mark Mauren	JOB NUMBER MaurenM.UelandTreeFarm	BORING NUMBER C-3
PROJECT Ueland Tree Farm	LOCATION Kitsap County	DATE 5-31-06

Depth (feet)	Sample Description	Run #	RQD / Recovery	Notes	Testing
30					
35					
40	Coring terminated at 40 feet due to fracturing and lose of circulation			Kept loosing circulation, abandoned coring location, moved to lower area.	
45					
50					
55					
60					

Type of Drill Rig:	Holocene Drilling, Core Drill	Approximate Elevation:	
Type of Sampler:		Logged By:	Keith Schembs

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Boring Logs

OWNER Mark Mauren	JOB NUMBER MaurenM.UelandTreeFarm	BORING NUMBER C-4
PROJECT Ueland Tree Farm	LOCATION Kitsap County	DATE 6-1-06

Depth (feet)	Sample Description	Run #	RQD / Recovery	Notes	Testing
0	Topsoil over loose, brown sandy gravel				
5	Moderately weathered, strong, gray highly fractured and jointed basalt Becomes more massive, with crystallization infilling in joints More highly fractured	R-1	0 / 40%		
10					
15		R-2	35 / 90%		
20		R-3	40 / 100%		
25		R-4	10 / 70%		
		R-5	0 / 80%		
30		R-6	0 / 60%		

Type of Drill Rig:	Holocene Drilling, Core Drill	Approximate Elevation:	
Type of Sampler:		Logged By:	Brad Biggerstaff

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Boring Logs

OWNER Mark Mauren	JOB NUMBER MaurenM.UelandTreeFarm	BORING NUMBER C-4
PROJECT Ueland Tree Farm	LOCATION Kitsap County	DATE 6-1-06

Depth (feet)	Sample Description	Run #	RQD / Recovery	Notes	Testing	
30	Moderately weathered, strong, gray highly fractured and jointed basalt (as above)	R-7	0 / 50%			
		R-8	0 / 50%			
		R-9	0 / 0%			
		R-10	0 / 0%			
35	Terminated at 35 feet due to lose of circulation					
40						
45						
50						
55						
60						

Type of Drill Rig:	Holocene Drilling, Core Drill	Approximate Elevation:	
Type of Sampler:		Logged By:	Brad Biggerstaff

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Boring Logs

OWNER Mark Mauren	JOB NUMBER MaurenM.UelandTreeFarm	BORING NUMBER HC-1
PROJECT Ueland Tree Farm	LOCATION Kitsap County	DATE 10-2-06

Depth (feet)	Sample Description	Run #	Notes	Testing
0	Topsoil	R-1		
	Overburden – Tan gravelly silt			
	Olive green medium strong to strong basalt			
10		R-2		
	Highly weathered, v. weak to weak olive/brown basalt, with infilling			
20	Fresh, light gray strong to very strong basalt			
	Highly weathered, v. weak to weak, reddish brown basalt, with infilling	R-3		
30				
		R-4		
40				
	Fresh, light gray strong to very strong basalt	R-5	Encountered water at 50 ft	
50				

Type of Drill Rig:	MacCullum Rock Drilling Air Hammer	Approximate Elevation:	NA
Type of Sampler:		Logged By:	Keith Schembs

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Boring Logs

OWNER Mark Mauren	JOB NUMBER MaurenM.UelandTreeFarm	BORING NUMBER HC-1
PROJECT Ueland Tree Farm	LOCATION Kitsap County	DATE 10-2-06

Depth (feet)	Sample Description	Run #	Notes	Testing	
60	Fresh, light gray strong to very strong basalt	R-6			
70					
80				R-7	
	Terminated at 84 feet below existing ground surface				
90					
100					
110					
120					

Type of Drill Rig:	MacCullum Rock Drilling Air Hammer	Approximate Elevation:	NA
Type of Sampler:		Logged By:	Keith Schembs

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Boring Logs

OWNER Mark Mauren	JOB NUMBER MaurenM.UelandTreeFarm	BORING NUMBER HC-2
PROJECT Ueland Tree Farm	LOCATION Kitsap County	DATE 10-2-06

Depth (feet)	Sample Description	Run #	Notes	Testing
0	Overburden – Brown gravelly silt	R-1	Water at 36 feet	
	Highly weathered, weak to medium strong, reddish brown basalt			
10	Moderately weathered, strong, black, basalt	R-2		
	Fresh, light gray strong to very strong basalt			
20		R-3		
30		R-4		
	Fractured zone			
	Fresh, light gray strong to very strong basalt			
40		R-5		
	Moderately weathered, strong to medium strong, purple-gray basalt			
50				
	Fresh, light gray strong to very strong basalt			

Type of Drill Rig:	MacCullum Rock Drilling Air Hammer	Approximate Elevation:	NA
Type of Sampler:		Logged By:	Keith Schembs

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Boring Logs

OWNER Mark Mauren	JOB NUMBER MaurenM.UelandTreeFarm	BORING NUMBER HC-2
PROJECT Ueland Tree Farm	LOCATION Kitsap County	DATE 10-2-06

Depth (feet)	Sample Description	Run #	Notes	Testing
60	Fresh, light gray strong to very strong basalt	R-6		
	Moderately weathered, strong to medium strong, purple-gray basalt			
70	Fresh, light gray strong to very strong basalt	R-7		
80				
	Terminated at 84 feet below existing ground surface			
90				
100				
110				
120				

Type of Drill Rig:	MacCullum Rock Drilling Air Hammer	Approximate Elevation:	NA
Type of Sampler:		Logged By:	Keith Schembs / Cal Olmstead

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Boring Logs

OWNER Mark Mauren	JOB NUMBER MaurenM.UelandTreeFarm	BORING NUMBER HC-3
PROJECT Ueland Tree Farm	LOCATION Kitsap County	DATE 10-2-06

Depth (feet)	Sample Description	Run #	Notes	Testing
0	Overburden – Brown gravelly silt	R-1		
	Highly weathered, v. weak brown rock with infilling			
	Moderately weathered, weak to medium strong, olive green basalt			
10	Fresh, light gray strong to very strong basalt	R-2		
20	Mod weathered, med strong, purple-gray fractured	R-3		
	Fresh, light gray strong to very strong basalt			
30				
40	Mod weathered, med strong, purple-gray fractured	R-4		
50	Fresh, light gray strong to very strong basalt	R-5		

Type of Drill Rig:	MacCullum Rock Drilling Air Hammer	Approximate Elevation:	NA
Type of Sampler:		Logged By:	Keith Schembs

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Boring Logs

OWNER Mark Mauren	JOB NUMBER MaurenM.UelandTreeFarm	BORING NUMBER HC-3
PROJECT Ueland Tree Farm	LOCATION Kitsap County	DATE 10-2-06

Depth (feet)	Sample Description	Run #	Notes	Testing
60	Fresh, light gray strong to very strong basalt	R-6		
70				
80		R-7		
	Terminated at 84 feet below existing ground surface			
90				
100				
110				
120				

Type of Drill Rig:	MacCullum Rock Drilling Air Hammer	Approximate Elevation:	NA
Type of Sampler:		Logged By:	Keith Schembs / Cal Olmstead

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Boring Logs

OWNER Mark Mauren	JOB NUMBER MaurenM.UelandTreeFarm	BORING NUMBER HC-4
PROJECT Ueland Tree Farm	LOCATION Kitsap County	DATE 10-2-06

Depth (feet)	Sample Description	Run #	Notes	Testing
0	Overburden – Brown gravelly silt			
	Moderately weathered, weak to medium strong purple gray rock	R-1		
10				
	Fresh, light gray strong to very strong basalt	R-2		
20				
		R-3		
30				
		R-4		
40	Highly weathered, weak, brown rock with clay infilling			
	Fresh, light gray strong to very strong basalt	R-5		
50				
	Highly weathered, weak, brown rock with clay infilling			

Type of Drill Rig:	MacCullum Rock Drilling Air Hammer	Approximate Elevation:	NA
Type of Sampler:		Logged By:	Keith Schembs

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Boring Logs

OWNER Mark Mauren	JOB NUMBER MaurenM.UelandTreeFarm	BORING NUMBER HC-4
PROJECT Ueland Tree Farm	LOCATION Kitsap County	DATE 10-2-06

Depth (feet)	Sample Description	Run #	Notes	Testing
60	Highly weathered, weak, brown rock with clay infilling Fresh, light gray strong to very strong basalt	R-6		
70	Highly weathered, weak, brown rock with clay infilling Fresh, light gray strong to very strong basalt	R-7		
80				
	Terminated at 84 feet below existing ground surface			
90				
100				
110				
120				

Type of Drill Rig:	MacCullum Rock Drilling Air Hammer	Approximate Elevation:	NA
Type of Sampler:		Logged By:	Keith Schembs / Cal Olmstead

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Boring Logs

OWNER Mark Mauren	JOB NUMBER MaurenM.UelandTreeFarm	BORING NUMBER HC-5
PROJECT Ueland Tree Farm	LOCATION Kitsap County	DATE 10-2-06

Depth (feet)	Sample Description	Run #	Notes	Testing
0	Overburden – Brown gravelly silt	R-1		
	Moderately weathered, weak to medium strong purple gray rock			
	Fresh, light gray strong to very strong basalt			
10		R-2		
20		R-3		
	Very strong, dark gray			
30	Fresh, light gray strong to very strong basalt	R-4		
40		R-5		
50	Mod weathered, strong, fractured, gray basalt			

Type of Drill Rig:	MacCullum Rock Drilling Air Hammer	Approximate Elevation:	NA
Type of Sampler:		Logged By:	Keith Schembs

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Boring Logs

OWNER Mark Mauren	JOB NUMBER MaurenM.UelandTreeFarm	BORING NUMBER HC-5
PROJECT Ueland Tree Farm	LOCATION Kitsap County	DATE 10-2-06

Depth (feet)	Sample Description	Run #	Notes	Testing
60	Mod weathered, weak to mod strong, brown, fractured rock	R-6		
70	Fresh, light gray strong to very strong basalt	R-7		
80	Highly weathered, weak to v. weak, brown Fresh, light gray strong to very strong basalt			
	Terminated at 84 feet below existing ground surface			
90				
100				
110				
120				

Type of Drill Rig:	MacCullum Rock Drilling Air Hammer	Approximate Elevation:	NA
Type of Sampler:		Logged By:	Keith Schembs / Cal Olmstead

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Boring Logs

OWNER Mark Mauren	JOB NUMBER MaurenM.UelandTreeFarm	BORING NUMBER HC-6
PROJECT Ueland Tree Farm	LOCATION Kitsap County	DATE 10-2-06

Depth (feet)	Sample Description	Run #	Notes	Testing
0	Overburden – Brown gravelly silt	R-1		
	Moderately weathered, weak to medium strong purple gray rock			
	Fresh, light gray strong to very strong basalt			
10		R-2		
	Mod weathered, weak to mod strong, brown, fractured rock			
20		R-3		
	Fresh, light gray strong to very strong basalt			
30			R-4	
40		R-5		
50				

Type of Drill Rig:	MacCullum Rock Drilling Air Hammer	Approximate Elevation:	NA
Type of Sampler:		Logged By:	Keith Schembs / Cal Olmstead

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Boring Logs

OWNER Mark Mauren	JOB NUMBER MaurenM.UelandTreeFarm	BORING NUMBER HC-6
PROJECT Ueland Tree Farm	LOCATION Kitsap County	DATE 10-2-06

Depth (feet)	Sample Description	Run #	Notes	Testing
60	Fresh, light gray strong to very strong basalt	R-6		
70	Mod weathered, weak to mod strong, brown, fractured rock			
	Terminated at 72 feet below existing ground surface			
80				
90				
100				
110				
120				

Type of Drill Rig:	MacCullum Rock Drilling Air Hammer	Approximate Elevation:	NA
Type of Sampler:		Logged By:	Keith Schembs / Cal Olmstead

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Boring Logs

OWNER Mark Mauren	JOB NUMBER MaurenM.UelandTreeFarm	BORING NUMBER HC-7
PROJECT Ueland Tree Farm	LOCATION Kitsap County	DATE 10-2-06

Depth (feet)	Sample Description	Run #	Notes	Testing
0	Overburden – Brown gravelly silt	R-1		
	Moderately weathered, weak to medium strong reddish brown rock			
	Fresh, light gray strong to very strong basalt			
10		R-2		
20	Moderately weathered, medium strong olive green basalt	R-3		
	Moderately weathered, medium strong purple gray basalt			
	Fresh, dark gray strong to very strong basalt			
30		R-4		
40		R-5		
50				

Type of Drill Rig:	MacCullum Rock Drilling Air Hammer	Approximate Elevation:	NA
Type of Sampler:		Logged By:	Keith Schembs / Cal Olmstead

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Boring Logs

OWNER Mark Mauren	JOB NUMBER MaurenM.UelandTreeFarm	BORING NUMBER HC-7
PROJECT Ueland Tree Farm	LOCATION Kitsap County	DATE 10-2-06

Depth (feet)	Sample Description	Run #	Notes	Testing
60	Fresh, strong to very strong dark gray basalt, with thin fractured zones	R-6		
70				
	Highly weathered, weak to v. weak, brown Fresh, strong to very strong dark gray basalt	R-7		
80				
	Terminated at 84 feet below existing ground surface			
90				
100				
110				
120				

Type of Drill Rig:	MacCullum Rock Drilling Air Hammer	Approximate Elevation:	NA
Type of Sampler:		Logged By:	Keith Schembs / Cal Olmstead

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Boring Logs

<small>OWNER</small> Mark Mauren	<small>JOB NUMBER</small> MaurenM.UelandTreeFarm	<small>BORING NUMBER</small> HC-8
<small>PROJECT</small> Ueland Tree Farm	<small>LOCATION</small> Kitsap County	<small>DATE</small> 10-2-06

Depth (feet)	Sample Description	Run #	Notes	Testing
0	Overburden – Brown gravelly silt	R-1		
	Moderately weathered, weak to medium strong reddish brown rock			
	Fresh, light gray strong to very strong basalt with thin fractured zones			
10		R-2		
	Mod weathered, very weak to weak brown rock with clay infilling			
20	Fresh, strong to very strong light gray basalt			
		R-3		
30				
		R-4		
40				
		R-5		
50				

Type of Drill Rig: MacCullum Rock Drilling Air Hammer	Approximate Elevation: NA
Type of Sampler:	Logged By: Keith Schembs / Cal Olmstead

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Boring Logs

OWNER Mark Mauren	JOB NUMBER MaurenM.UelandTreeFarm	BORING NUMBER HC-8
PROJECT Ueland Tree Farm	LOCATION Kitsap County	DATE 10-2-06

Depth (feet)	Sample Description	Run #	Notes	Testing
60	Fresh, strong to very strong light gray basalt	R-6		
70				
80	Terminated at 84 feet below existing ground surface	R-7		
90	Terminated at 84 feet below existing ground surface			
100	Terminated at 84 feet below existing ground surface			
110	Terminated at 84 feet below existing ground surface			
120	Terminated at 84 feet below existing ground surface			

Type of Drill Rig:	MacCullum Rock Drilling Air Hammer	Approximate Elevation:	NA
Type of Sampler:		Logged By:	Keith Schembs / Cal Olmstead

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Boring Logs

OWNER Mark Mauren	JOB NUMBER MaurenM.UelandTreeFarm	BORING NUMBER HC-9
PROJECT Ueland Tree Farm	LOCATION Kitsap County	DATE 10-2-06

Depth (feet)	Sample Description	Run #	Notes	Testing
0	Overburden – Dark brown gravelly and silt	R-1		
	Highly weathered, weak brown rock with clay infilling			
10		R-2		
	Mod weathered to fresh, strong, light gray basalt with thin fractured zones			
20		R-3		
30		R-4		
	Fresh, strong light green/gray basalt			
40		R-5		
	Fresh, strong to very strong dark gray basalt			
50				
	Fresh, strong to very strong dark green/gray basalt			

Type of Drill Rig:	MacCullum Rock Drilling Air Hammer	Approximate Elevation:	NA
Type of Sampler:		Logged By:	Cal Olmstead

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Boring Logs

OWNER Mark Mauren	JOB NUMBER MaurenM.UelandTreeFarm	BORING NUMBER HC-9
PROJECT Ueland Tree Farm	LOCATION Kitsap County	DATE 10-2-06

Depth (feet)	Sample Description	Run #	Notes	Testing
60	Fresh, strong to very strong dark green/gray basalt	R-6		
70				
80		R-7		
	Terminated at 84 feet below existing ground surface			
90				
100				
110				
120				

Type of Drill Rig:	MacCullum Rock Drilling Air Hammer	Approximate Elevation:	NA
Type of Sampler:		Logged By:	Cal Olmstead

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Boring Logs

OWNER Mark Mauren	JOB NUMBER MaurenM.UelandTreeFarm	BORING NUMBER HC-10
PROJECT Ueland Tree Farm	LOCATION Kitsap County	DATE 10-2-06

Depth (feet)	Sample Description	Run #	Notes	Testing
0	Overburden – Loose, dark brown gravelly and silt	R-1		
10				
	Overburden– loose, light gray sandy gravel	R-2		
20				
	Mod weathered to fresh, med strong to strong, light brown / gray basalt	R-3		
30				
40	Fresh, strong light brown rock with thin fractured zones	R-4		
	Mod weathered, weak to med strong, light brown / gray basalt with thin fractured zones	R-5	Water encountered at 48 feet	
50				
	Fresh, strong to very strong light gray basalt			

Type of Drill Rig:	MacCullum Rock Drilling Air Hammer	Approximate Elevation:	NA
Type of Sampler:		Logged By:	Cal Olmstead

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Boring Logs

OWNER Mark Mauren	JOB NUMBER MaurenM.UelandTreeFarm	BORING NUMBER HC-10
PROJECT Ueland Tree Farm	LOCATION Kitsap County	DATE 10-2-06

Depth (feet)	Sample Description	Run #	Notes	Testing
60	Fresh, strong to very strong light gray basalt	R-6		
70				
80		R-7		
	Terminated at 84 feet below existing ground surface			
90				
100				
110				
120				

Type of Drill Rig:	MacCullum Rock Drilling Air Hammer	Approximate Elevation:	NA
Type of Sampler:		Logged By:	Cal Olmstead

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Boring Logs

OWNER Mark Mauren	JOB NUMBER MaurenM.UelandTreeFarm	BORING NUMBER HC-11
PROJECT Ueland Tree Farm	LOCATION Kitsap County	DATE 10-2-06

Depth (feet)	Sample Description	Run #	Notes	Testing
0	Overburden – Loose, dark brown silty sand	R-1	Water encountered at 44 feet	
10	Mod weathered, med strong dark purple gray basalt			
20	Fresh, strong light gray basalt	R-2		
30	Mod weathered to fresh, med strong dark purple gray basalt	R-3		
40	Fresh, strong light gray basalt			
50	Fresh, strong dark gray basalt	R-4		
	Mod weathered, weak to med strong, light brown / gray basalt with thin fractured zones			
	Fresh, strong to very strong light gray basalt	R-5		

Type of Drill Rig:	MacCullum Rock Drilling Air Hammer	Approximate Elevation:	NA
Type of Sampler:		Logged By:	Cal Olmstead

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Boring Logs

OWNER Mark Mauren	JOB NUMBER MaurenM.UelandTreeFarm	BORING NUMBER HC-11
PROJECT Ueland Tree Farm	LOCATION Kitsap County	DATE 10-2-06

Depth (feet)	Sample Description	Run #	Notes	Testing
60	Fresh, strong to very strong light gray basalt	R-6		
70				
		R-7		
80				
	Terminated at 84 feet below existing ground surface			
90				
100				
110				
120				

Type of Drill Rig:	MacCullum Rock Drilling Air Hammer	Approximate Elevation:	NA
Type of Sampler:		Logged By:	Cal Olmstead

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Boring Logs

OWNER Mark Mauren	JOB NUMBER MaurenM.UelandTreeFarm	BORING NUMBER HC-12
PROJECT Ueland Tree Farm	LOCATION Kitsap County	DATE 10-3-06

Depth (feet)	Sample Description	Run #	Notes	Testing
0	Overburden – Loose, dark brown silty sand	R-1		
	Fresh, strong light gray basalt	R-2		
10				
	Mod weathered, med strong dark purple gray basalt	R-3		
20				
	Fresh, strong dark gray basalt	R-4		
30				
		R-5		
40				
50				
	Mod weathered, weak to med strong dark purple gray basalt with thin fracture zones			

Type of Drill Rig:	MacCullum Rock Drilling Air Hammer	Approximate Elevation:	NA
Type of Sampler:		Logged By:	Keith Schembs / Cal Olmstead

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Boring Logs

OWNER Mark Mauren	JOB NUMBER MaurenM.UelandTreeFarm	BORING NUMBER HC-12
PROJECT Ueland Tree Farm	LOCATION Kitsap County	DATE 10-3-06

Depth (feet)	Sample Description	Run #	Notes	Testing
60	Mod weathered, weak to med strong dark purple gray basalt with thin fracture zones	R-6	Water encountered at 60 feet	
	Fresh, strong to very strong light gray basalt			
70		R-7		
80				
	Terminated at 84 feet below existing ground surface			
90				
100				
110				
120				

Type of Drill Rig:	MacCullum Rock Drilling Air Hammer	Approximate Elevation:	NA
Type of Sampler:		Logged By:	Keith Schembs / Cal Olmstead

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Boring Logs

OWNER Mark Mauren	JOB NUMBER MaurenM.UelandTreeFarm	BORING NUMBER HC-13
PROJECT Ueland Tree Farm	LOCATION Kitsap County	DATE 10-3-06

Depth (feet)	Sample Description	Run #	Notes	Testing
0	Overburden – Loose, dark brown silty sand	R-1		
	Mod weathered, weak to med strong gray basalt			
10		R-2		
20	Mod weathered to fresh, med strong to strong, reddish gray basalt	R-3		
30	Mod weathered to fresh, medium strong light brown / gray basalt			
40		R-4		
50		R-5		

Type of Drill Rig:	MacCullum Rock Drilling Air Hammer	Approximate Elevation:	NA
Type of Sampler:		Logged By:	Keith Schembs / Cal Olmstead

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Boring Logs

OWNER Mark Mauren	JOB NUMBER MaurenM.UelandTreeFarm	BORING NUMBER HC-13
PROJECT Ueland Tree Farm	LOCATION Kitsap County	DATE 10-3-06

Depth (feet)	Sample Description	Run #	Notes	Testing
60	Mod weathered to fresh, med strong to strong, reddish brown basalt with thin fracture zones	R-6		
70				
	Terminated at 84 feet below existing ground surface			
80				
90				
100				
110				
120				

Type of Drill Rig:	MacCullum Rock Drilling Air Hammer	Approximate Elevation:	NA
Type of Sampler:		Logged By:	Keith Schembs / Cal Olmstead

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Boring Logs

OWNER Mark Mauren	JOB NUMBER MaurenM.UelandTreeFarm	BORING NUMBER HC-14
PROJECT Ueland Tree Farm	LOCATION Kitsap County	DATE 10-3-06

Depth (feet)	Sample Description	Run #	Notes	Testing
0	Overburden – Loose, dark brown silty sand	R-1		
	Mod weathered, weak to med strong, fractured gray basalt			
10		R-2		
	Mod weathered to fresh, med strong to strong, light gray basalt			
20		R-3		
	Mod weathered to fresh, med strong to strong, light brown basalt with thin fracture zones			
30		R-4		
	Highly weathered, very weak to weak, brown rock with clay infilling			
40	Fresh, strong to very strong, light gray basalt	R-5		
50				

Type of Drill Rig:	MacCullum Rock Drilling Air Hammer	Approximate Elevation:	NA
Type of Sampler:		Logged By:	Keith Schembs / Cal Olmstead

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Boring Logs

OWNER Mark Mauren	JOB NUMBER MaurenM.UelandTreeFarm	BORING NUMBER HC-14
PROJECT Ueland Tree Farm	LOCATION Kitsap County	DATE 10-3-06

Depth (feet)	Sample Description	Run #	Notes	Testing
60	Mod weathered to fresh, med strong to strong, reddish brown basalt with thin fracture zones	R-6		
70				
	Terminated at 72 feet below existing ground surface			
80				
90				
100				
110				
120				

Type of Drill Rig:	MacCullum Rock Drilling Air Hammer	Approximate Elevation:	NA
Type of Sampler:		Logged By:	Keith Schembs / Cal Olmstead

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Boring Logs

OWNER Mark Mauren	JOB NUMBER MaurenM.UelandTreeFarm	BORING NUMBER HC-15
PROJECT Ueland Tree Farm	LOCATION Kitsap County	DATE 10-3-06

Depth (feet)	Sample Description	Run #	Notes	Testing
0	Overburden – Loose, dark brown silty sand	R-1		
	Highly weathered, very weak to weak, brown fractured rock			
10	Mod weathered to fresh, med strong to strong, light brown basalt with fractures and infilling	R-2		
20		R-3		
	Fresh, strong to very strong, light gray basalt with fracture zones			
30				
		R-4		
40				
		R-5		
50				

Type of Drill Rig:	MacCullum Rock Drilling Air Hammer	Approximate Elevation:	NA
Type of Sampler:		Logged By:	Keith Schembs / Cal Olmstead

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Boring Logs

OWNER Mark Mauren	JOB NUMBER MaurenM.UelandTreeFarm	BORING NUMBER HC-15
PROJECT Ueland Tree Farm	LOCATION Kitsap County	DATE 10-3-06

Depth (feet)	Sample Description	Run #	Notes	Testing
60	Mod weathered to fresh, med strong to strong, reddish brown basalt with thin fracture zones	R-6		
70				
	Terminated at 72 feet below existing ground surface			
80				
90				
100				
110				
120				

Type of Drill Rig:	MacCullum Rock Drilling Air Hammer	Approximate Elevation:	NA
Type of Sampler:		Logged By:	Keith Schembs / Cal Olmstead

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Boring Logs

OWNER Mark Mauren	JOB NUMBER MaurenM.UelandTreeFarm	BORING NUMBER HC-16
PROJECT Ueland Tree Farm	LOCATION Kitsap County	DATE 10-3-06

Depth (feet)	Sample Description	Run #	Notes	Testing
0	Overburden – Loose, dark brown silty sand			
	Highly weathered, very weak to weak, gray / brown fractured basalt	R-1		
10	Fresh, strong to very strong, light gray basalt	R-2		
20				
30		R-3		
40		R-4		
50		R-5		

Type of Drill Rig:	MacCullum Rock Drilling Air Hammer	Approximate Elevation:	NA
Type of Sampler:		Logged By:	Keith Schembs / Cal Olmstead

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Boring Logs

OWNER Mark Mauren	JOB NUMBER MaurenM.UelandTreeFarm	BORING NUMBER HC-16
PROJECT Ueland Tree Farm	LOCATION Kitsap County	DATE 10-3-06

Depth (feet)	Sample Description	Run #	Notes	Testing	
60	Fresh, strong to very strong, light gray basalt	R-6			
70	Terminated at 72 feet below existing ground surface				
80	Terminated at 72 feet below existing ground surface				
90	Terminated at 72 feet below existing ground surface				
100	Terminated at 72 feet below existing ground surface				
110	Terminated at 72 feet below existing ground surface				
120	Terminated at 72 feet below existing ground surface				

Type of Drill Rig:	MacCullum Rock Drilling Air Hammer	Approximate Elevation:	NA
Type of Sampler:		Logged By:	Keith Schembs / Cal Olmstead

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Boring Logs

OWNER Mark Mauren	JOB NUMBER MaurenM.UelandTreeFarm	BORING NUMBER HC-17
PROJECT Ueland Tree Farm	LOCATION Kitsap County	DATE 10-3-06

Depth (feet)	Sample Description	Run #	Notes	Testing
0	Overburden – Loose, brown silty gravelly sand			
	Highly weathered, very weak to weak, gray / brown fractured basalt	R-1		
10				
	Fresh, med strong to strong, light green/gray basalt	R-2		
20				
30		R-3		
	Fresh, strong to very strong, light gray basalt			
40		R-4		
50		R-5		

Type of Drill Rig:	MacCullum Rock Drilling Air Hammer	Approximate Elevation:	NA
Type of Sampler:		Logged By:	Cal Olmstead

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Boring Logs

OWNER Mark Mauren	JOB NUMBER MaurenM.UelandTreeFarm	BORING NUMBER HC-17
PROJECT Ueland Tree Farm	LOCATION Kitsap County	DATE 10-3-06

Depth (feet)	Sample Description	Run #	Notes	Testing
60	Fresh, strong to very strong, light gray basalt	R-6		
70				
	Terminated at 72 feet below existing ground surface			
80				
90				
100				
110				
120				

Type of Drill Rig:	MacCullum Rock Drilling Air Hammer	Approximate Elevation:	NA
Type of Sampler:		Logged By:	Cal Olmstead

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Boring Logs

OWNER Mark Mauren	JOB NUMBER MaurenM.UelandTreeFarm	BORING NUMBER HC-18
PROJECT Ueland Tree Farm	LOCATION Kitsap County	DATE 10-3-06

Depth (feet)	Sample Description	Run #	Notes	Testing
0	Overburden – Loose, brown silty gravelly sand	R-1		
	Highly weathered, very weak to weak, brown fractured basalt			
	Mod weathered, weak to med strong, green basalt			
10		R-2		
	Fresh, strong to very strong, green rock			
20		R-3		
	Fresh, med strong to strong, light green/gray basalt			
30		R-4		
40		R-5		
	Mod weathered, weak to med strong, reddish purple basalt			
50	Fresh, strong to very strong, light gray basalt			

Type of Drill Rig:	MacCullum Rock Drilling Air Hammer	Approximate Elevation:	NA
Type of Sampler:		Logged By:	Cal Olmstead

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Boring Logs

OWNER Mark Mauren	JOB NUMBER MaurenM.UelandTreeFarm	BORING NUMBER HC-18
PROJECT Ueland Tree Farm	LOCATION Kitsap County	DATE 10-3-06

Depth (feet)	Sample Description	Run #	Notes	Testing
60	Fresh, strong to very strong, light gray basalt	R-6		
70				
	Terminated at 72 feet below existing ground surface			
80				
90				
100				
110				
120				

Type of Drill Rig:	MacCullum Rock Drilling Air Hammer	Approximate Elevation:	NA
Type of Sampler:		Logged By:	Cal Olmstead

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Boring Logs

OWNER Mark Mauren	JOB NUMBER MaurenM.UelandTreeFarm	BORING NUMBER HC-19
PROJECT Ueland Tree Farm	LOCATION Kitsap County	DATE 10-3-06

Depth (feet)	Sample Description	Run #	Notes	Testing
0	Overburden – loose, brown silty sand	R-1		
10	Mod weathered to fresh, strong, light gray basalt			
20		R-2		
30		R-3		
40	Moderately weathered, med strong, dark reddish black	R-4		
50	Moderately weathered to fresh, strong to very strong, dark gray basalt	R-5		

Type of Drill Rig:	MacCullum Rock Drilling Air Hammer	Approximate Elevation:	NA
Type of Sampler:		Logged By:	Cal Olmstead

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Boring Logs

OWNER Mark Mauren	JOB NUMBER MaurenM.UelandTreeFarm	BORING NUMBER HC-19
PROJECT Ueland Tree Farm	LOCATION Kitsap County	DATE 10-3-06

Depth (feet)	Sample Description	Run #	Notes	Testing
60	Moderately weathered to fresh, strong to very strong, dark gray basalt	R-6		
70	Terminated at 72 feet below existing ground surface			
80				
90				
100				
110				
120				

Type of Drill Rig:	MacCullum Rock Drilling Air Hammer	Approximate Elevation:	NA
Type of Sampler:		Logged By:	Cal Olmstead

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Boring Logs

OWNER Mark Mauren	JOB NUMBER MaurenM.UelandTreeFarm	BORING NUMBER HC-20
PROJECT Ueland Tree Farm	LOCATION Kitsap County	DATE 10-3-06

Depth (feet)	Sample Description	Run #	Notes	Testing
0	Overburden – loose, brown silty sand	R-1		
10	Mod weathered to fresh, medium strong, light gray basalt	R-2		
20				
30		R-3		
40	Moderately weathered, strong, dark greenish gray basalt	R-4		
	Moderately weathered to fresh, strong to very strong, purple / gray basalt			
50	Moderately weathered to fresh, strong, dark greenish gray basalt	R-5		

Type of Drill Rig:	MacCullum Rock Drilling Air Hammer	Approximate Elevation:	NA
Type of Sampler:		Logged By:	Cal Olmstead

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Boring Logs

OWNER Mark Mauren	JOB NUMBER MaurenM.UelandTreeFarm	BORING NUMBER HC-20
PROJECT Ueland Tree Farm	LOCATION Kitsap County	DATE 10-3-06

Depth (feet)	Sample Description	Run #	Notes	Testing
60	Moderately weathered to fresh, strong, dark greenish gray basalt	R-6		
70				
	Terminated at 72 feet below existing ground surface			
80				
90				
100				
110				
120				

Type of Drill Rig:	MacCullum Rock Drilling Air Hammer	Approximate Elevation:	NA
Type of Sampler:		Logged By:	Cal Olmstead

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Boring Logs

OWNER Mark Mauren	JOB NUMBER MaurenM.UelandTreeFarm	BORING NUMBER HC-21a
PROJECT Ueland Tree Farm	LOCATION Kitsap County	DATE 10-3-06

Depth (feet)	Sample Description	Run #	Notes	Testing
0	Overburden – loose, brown silty sand	R-1		
10	Highly weathered, extremely to very weak, dark brown fractured rock	R-2		
20	Fresh, strong to very strong, light gray basalt	R-3		
30		R-4		
40		R-5		
50				

Type of Drill Rig:	MacCullum Rock Drilling Air Hammer	Approximate Elevation:	NA
Type of Sampler:		Logged By:	Cal Olmstead

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Boring Logs

OWNER Mark Mauren	JOB NUMBER MaurenM.UelandTreeFarm	BORING NUMBER HC-21a
PROJECT Ueland Tree Farm	LOCATION Kitsap County	DATE 10-3-06

Depth (feet)	Sample Description	Run #	Notes	Testing
60	Fresh, strong to very strong, light gray basalt	R-6		
70				
	Terminated at 72 feet below existing ground surface			
80				
90				
100				
110				
120				

Type of Drill Rig:	MacCullum Rock Drilling Air Hammer	Approximate Elevation:	NA
Type of Sampler:		Logged By:	Cal Olmstead

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Boring Logs

OWNER Mark Mauren	JOB NUMBER MaurenM.UelandTreeFarm	BORING NUMBER HC-21b
PROJECT Ueland Tree Farm	LOCATION Kitsap County	DATE 10-3-06

Depth (feet)	Sample Description	Run #	Notes	Testing	
0	Overburden – loose, brown silty sand	R-1			
10	Fresh, strong to very strong, light gray basalt	R-2			
20		R-3			
30		R-4			
40		R-5			
50					

Type of Drill Rig:	MacCullum Rock Drilling Air Hammer	Approximate Elevation:	NA
Type of Sampler:		Logged By:	Cal Oimstead

5007 Pacific Highway East, #20
 Fife, Washington 98424
 (253) 896-1011
 (253) 896-2633

GeoResources, LLC

Boring Logs

OWNER Mark Mauren	JOB NUMBER MaurenM.UelandTreeFarm	BORING NUMBER HC-21b
PROJECT Ueland Tree Farm	LOCATION Kitsap County	DATE 10-3-06

Depth (feet)	Sample Description	Run #	Notes	Testing
60	Terminated at 60 feet below existing ground surface due to density			
70				
80				
90				
100				
110				
120				

Type of Drill Rig:	MacCullum Rock Drilling Air Hammer	Approximate Elevation:	NA
Type of Sampler:		Logged By:	Cal Olmstead

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 (253) 896-2633

GeoResources, LLC

Boring Logs

OWNER Mark Mauren	JOB NUMBER MaurenM.UelandTreeFarm	BORING NUMBER HC-22
PROJECT Ueland Tree Farm	LOCATION Kitsap County	DATE 10-3-06

Depth (feet)	Sample Description	Run #	Notes	Testing
0	Overburden – loose, brown silty sand			
		R-1		
	Mod weathered, med strong to strong, light brown - gray basalt			
10		R-2		
20	Fresh, strong to very strong, light purple gray basalt			
		R-3		
30				
		R-4		
40				
		R-5		
50				

Type of Drill Rig:	MacCullum Rock Drilling Air Hammer	Approximate Elevation:	NA
Type of Sampler:		Logged By:	Cal Olmstead

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GeoResources, LLC

Boring Logs

OWNER Mark Mauren	JOB NUMBER MaurenM.UelandTreeFarm	BORING NUMBER HC-22
PROJECT Ueland Tree Farm	LOCATION Kitsap County	DATE 10-3-06

Depth (feet)	Sample Description	Run #	Notes	Testing
60	Fresh, strong to very strong, light purple gray basalt	R-6		
70				
	Terminated at 72 feet below existing ground surface			
80				
90				
100				
110				
120				

Type of Drill Rig:	MacCullum Rock Drilling Air Hammer	Approximate Elevation:	NA
Type of Sampler:		Logged By:	Cal Olmstead

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Boring Logs

OWNER Mark Mauren	JOB NUMBER MaurenM.UelandTreeFarm	BORING NUMBER HC-23
PROJECT Ueland Tree Farm	LOCATION Kitsap County	DATE 10-3-06

Depth (feet)	Sample Description	Run #	Notes	Testing
0	Overburden – loose, dark brown silty sand	R-1		
	Mod weathered to fresh, strong, light gray basalt			
10		R-2		
	Mod weathered, strong, purple gray basalt			
20		R-3		
	Fresh, strong to very strong, light gray basalt			
	Mod weathered, strong, purple gray basalt Fresh, strong to very strong, light gray basalt			
30		R-4		
40		R-5		
	Mod weathered to fresh, med strong to strong, light gray fractured basalt			
50				
	Fresh, strong to very strong, light brown / gray basalt			

Type of Drill Rig:	MacCullum Rock Drilling Air Hammer	Approximate Elevation:	NA
Type of Sampler:		Logged By:	Cal Olmstead

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Boring Logs

OWNER Mark Mauren	JOB NUMBER MaurenM.UelandTreeFarm	BORING NUMBER HC-23
PROJECT Ueland Tree Farm	LOCATION Kitsap County	DATE 10-3-06

Depth (feet)	Sample Description	Run #	Notes	Testing
60	Fresh, strong to very strong, light brown / gray basalt	R-6		
70				
	Terminated at 72 feet below existing ground surface			
80				
90				
100				
110				
120				

Type of Drill Rig:	MacCullum Rock Drilling Air Hammer	Approximate Elevation:	NA
Type of Sampler:		Logged By:	Cal Olmstead

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Boring Logs

OWNER Mark Mauren	JOB NUMBER MaurenM.UelandTreeFarm	BORING NUMBER HC-24
PROJECT Ueland Tree Farm	LOCATION Kitsap County	DATE 10-3-06

Depth (feet)	Sample Description	Run #	Notes	Testing
0	Overburden – loose, dark brown silty sand	R-1		
10	Moderate weathered, med strong, light brown fractured basalt	R-2		
20	Fresh, strong to very strong, light gray basalt			
30	Moderately weathered to fresh, strong, purple basalt	R-3		
40	Fresh, strong to very strong, light brown / gray basalt with occasional less than 1-foot purple zones	R-4		
50		R-5		

Type of Drill Rig:	MacCullum Rock Drilling Air Hammer	Approximate Elevation:	NA
Type of Sampler:		Logged By:	Cal Olmstead

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Boring Logs

OWNER Mark Mauren	JOB NUMBER MaurenM.UelandTreeFarm	BORING NUMBER HC-24
PROJECT Ueland Tree Farm	LOCATION Kitsap County	DATE 10-3-06

Depth (feet)	Sample Description	Run #	Notes	Testing
60	Fresh, strong to very strong, light brown / gray basalt with occasional less than 1-foot purple zones	R-6		
70				
80		R-7		
	Terminated at 84 feet below existing ground surface			
90				
100				
110				
120				

Type of Drill Rig:	MacCullum Rock Drilling Air Hammer	Approximate Elevation:	NA
Type of Sampler:		Logged By:	Cal Olmstead

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GeoResources, LLC

Boring Logs

OWNER Mark Mauren	JOB NUMBER MaurenM.UelandTreeFarm	BORING NUMBER HC-25
PROJECT Ueland Tree Farm	LOCATION Kitsap County	DATE 10-3-06

Depth (feet)	Sample Description	Run #	Notes	Testing
0	Overburden – loose, dark brown silty sand			
	Moderately weathered, weak, fractured gray basalt	R-1		
	Fresh, strong to very strong, light gray basalt			
10				
		R-2		
20				
30		R-3		
40		R-4		
50				
	Fresh, strong to very strong, light brown / gray basalt	R-5		

Type of Drill Rig:	MacCullum Rock Drilling Air Hammer	Approximate Elevation:	NA
Type of Sampler:		Logged By:	Cal Olmstead

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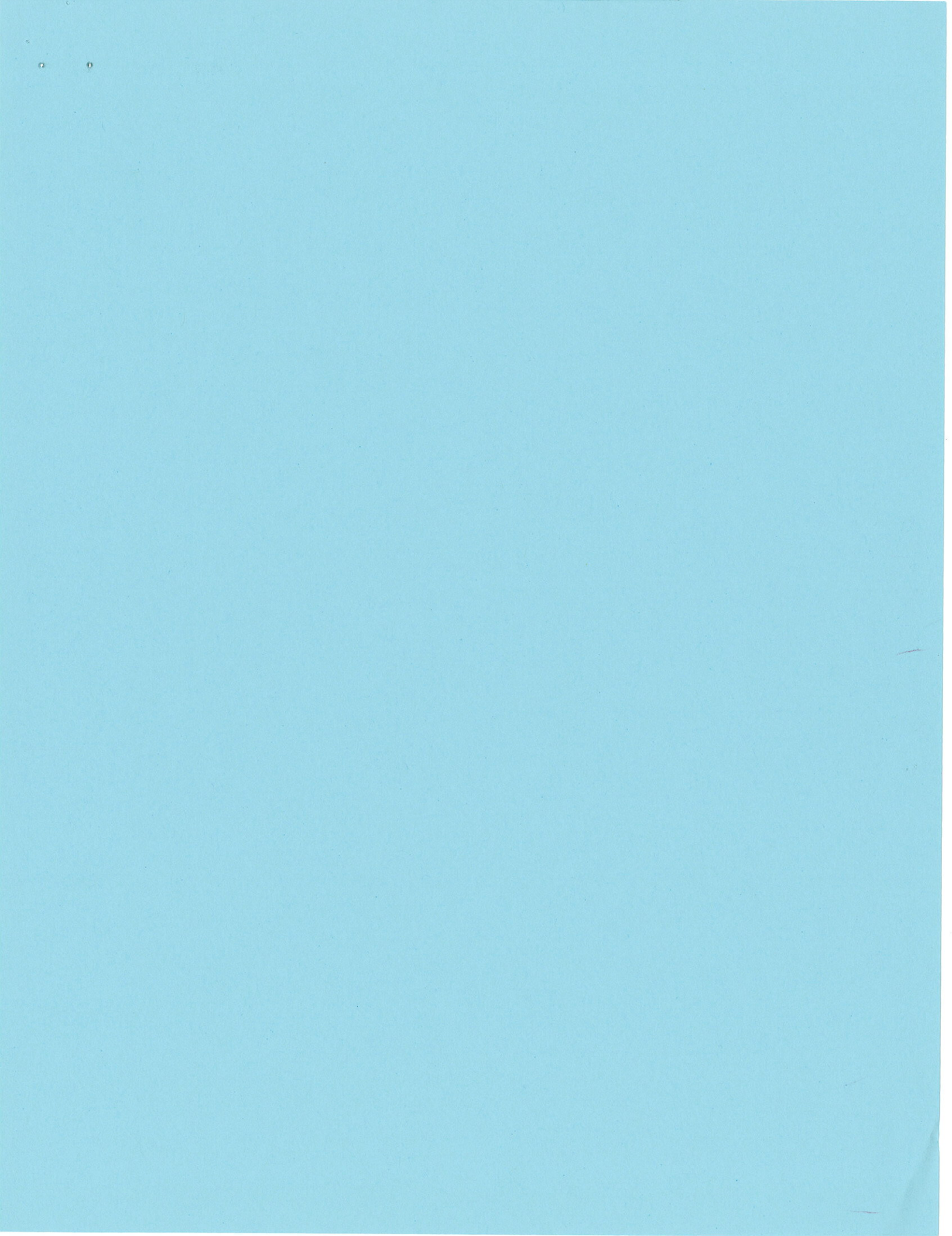


Boring Logs

OWNER Mark Mauren	JOB NUMBER MaurenM.UelandTreeFarm	BORING NUMBER HC-25
PROJECT Ueland Tree Farm	LOCATION Kitsap County	DATE 10-3-06

Depth (feet)	Sample Description	Run #	Notes	Testing	
60	Fresh, strong to very strong, light brown / gray basalt	R-6			
70				R-7	
80					
	Terminated at 84 feet below existing ground surface				
90					
100					
110					
120					

Type of Drill Rig:	MacCullum Rock Drilling Air Hammer	Approximate Elevation:	NA
Type of Sampler:		Logged By:	Cal Olmstead



Project No. 066-06004 Cyl. Code 061627 Pour Date 7/5/2006 Report No. 18506
 Weather In Lab Jurisdiction Permit No.
 Project Geo Resources In Lab Testing Engineer
 Location Kitsap Tree Farm Architect
 Client Geo Resources Contractor

CYLINDER REPORT							
Concrete		Other					
Supplier	Plant No.			Site Mix			
				Mix	Air	Unit	
				Slump	Temp.	Temp.	Wt.
Time	Truck#	Ticket #	% Air	(in.)	(F)	(F)	(pcf)

Reported Batch Data		
	Design Weights	Actual Weights
Mix No.		
Cem. lbs.		
F. Ash lbs.		
C. agg. lbs. 1		
C. agg. lbs. 2		
C. agg. lbs. 3		
Sand lbs.		
Water lbs.		
Air Ent. (oz)		
Other (oz)		
Other (oz)		
Other (oz)		
Other (oz)		
Water Added on Job (gals.)		

Placement Area
 Location Stone cores from location C-1.

Remarks Correction factor must be applied to break.
 No 1-2 ratio possible.

Please refer to Field Report No. 64831.

Field Test Methods	
ASTM C143	ASTM C138
ASTM C1064	ASTM C173
ASTM C31	X ASTM C172
OTHER	ASTM C231

Inspector T. Bergstrom

Laboratory Data			Design Strength			@ 28 days		Date Specimens Rec'd. 7/3/2006				
Cyl. Code	Test Date	Field Cure	Age	Dim.	Area	C.F.	Max. Load	Comp. Str. (psi)	Tested Set #	Break By	Break Type	Laboratory Test Methods
061627	7/6/2006		1	2x2	2.735	applied	36940	1,180	SW	N/A		X ASTM C39 ASTM C109 ASTM C617 X ASTM C1231 ASTM C780 Other

Remarks

Results Reviewed By _____ Date Reviewed _____

Codes for Break Types: 1: Cone 2: Cone & Split 3: Cone & Shear 4: Shear 5: Columnar (Split)

Measurement Uncertainties: ASTM C-39 +/- 8%

Test Results
Conforming
Non-Conforming

Project No. 066-06004 Cyl. Code 061627 Pour Date 7/5/2006 Report No. 18506
 Weather In Lab Jurisdiction Permit No.
 Project Geo Resources In Lab Testing Engineer
 Location Kitsap Tree Farm Architect
 Client Geo Resources Contractor

CYLINDER REPORT							
Concrete				Other			
Supplier		Plant No.		Site Mix			
Time	Truck#	Ticket #	% Air	Slump (in.)	Mix Temp. (F)	Air Temp. (F)	Unit Wt. (pcf)

Reported Batch Data		
Mix No.	Design Weights	Actual Weights
Cem. lbs.		
F. Ash lbs.		
C. agg. lbs. 1		
C. agg. lbs. 2		
C. agg. lbs. 3		
Sand lbs.		
Water lbs.		
Air Ent. (oz)		
Other (oz)		
Other (oz)		
Other (oz)		
Other (oz)		
Water Added on Job (gals.)		

Placement Area
 Location Stone cores from location C-4.

Remarks 1-2 ratio good.
 No correction factor necessary.

Please refer to Field Report No. 64831.

Field Test Methods	
ASTM C143	ASTM C138
ASTM C1064	ASTM C173
ASTM C31	X ASTM C172
OTHER	ASTM C231

Inspector T. Bergstrom

Laboratory Data			Design Strength				@ 28 days		Date Specimens Rec'd.			Laboratory Test Methods
Cyl. Code	Test Date	Field Cure Age	Dim.	Area	C.F.	Max. Load	Comp. Str. (psi)	Set #	Tested By	Break Type		
061627	7/7/2006	2	2x4	2.812	0.0	55465	19,720		SW	N/A	X	ASTM C39
061627	7/7/2006	2	2x4	2.817	0.0	34348	12,190		SW	N/A		ASTM C109
												ASTM C617
											X	ASTM C1231
												ASTM C780
												Other

Remarks

Results Reviewed By _____ Date Reviewed _____

Codes for Break Types: 1: Cone 2: Cone & Split 3: Cone & Shear 4: Shear 5: Columnar (Split)

Measurement Uncertainties: ASTM C-39 +/- 8%

DEGRADATION WORKSHEET

KA Project No: 066-06004 Sample ID No: 61627

Client Name: GeoResources LLC. Date Sampled: 7/5/2006

Project Name: Ueland Tree Farm Date Received: 7/5/2006

Location of Samples: Kitsap County, Washington, C-1 Dated Tested: 7/7/2006

Time Tested: _____

Sample Description: Aggregate Cores Tested By: Timothy I. Bergstrom

SAMPLING PROCEDURE

AASHTO T2

TEST METHOD USED

WSDOT No. 113 X

AASHTO T210 _____

Grading Requirements (Dry Weights)

12.5mm (1/2 in.) - 6.3mm (1/4 in.) 500 g 500 g

6.3mm (1/4 in.) - 2.00mm (No. 10) 500 g 500 g

Test	Start Time	Agitate	Time Cylinder Filled	Time Cylinder Read	Sediment Level (H)	"D" Value <small>See WSDOT Chart</small>
1		<input type="checkbox"/> 10 min			10.3	25
		<input checked="" type="checkbox"/> 20 min				
2		<input type="checkbox"/> 10 min			9.7	27
		<input checked="" type="checkbox"/> 20 min				
3		<input type="checkbox"/> 10 min				
		<input checked="" type="checkbox"/> 20 min				
Average:						26

Specifications shown are for Class E asphalt. Please correct if you use another type of Asphalt.

DEGRADATION WORKSHEET

KA Project No: 066-06004

Sample ID No: 61627

Client Name: GeoResources LLC.

Date Sampled: 7/5/2006

Project Name: Ueland Tree Farm

Date Received: 7/5/2006

Location of Samples: Kitsap County, Washington, C-24

Dated Tested: 7/7/2006

Time Tested: _____

Sample Description: Aggregate Cores

Tested By: Timothy I. Bergstrom

SAMPLING PROCEDURE

AASHTO T2

TEST METHOD USED

WSDOT No. 113 X

AASHTO T210 _____

Grading Requirements (Dry Weights)

12.5mm (1/2 in.) - 6.3mm (1/4 in.) 500 g 500 g

6.3mm (1/4 in.) - 2.00mm (No. 10) 500 g 500 g

Test	Start Time	Agitate	Time Cylinder Filled	Time Cylinder Read	Sediment Level (H)	"D" Value <small>See WSDOT Chart</small>
1		<input type="checkbox"/> 10 min			8.1	32
		<input checked="" type="checkbox"/> 20 min				
2		<input type="checkbox"/> 10 min			9.3	28
		<input checked="" type="checkbox"/> 20 min				
3		<input type="checkbox"/> 10 min				
		<input type="checkbox"/> 20 min				
Average:						30

Specifications shown are for Class E asphalt. Please correct if you use another type of Asphalt.