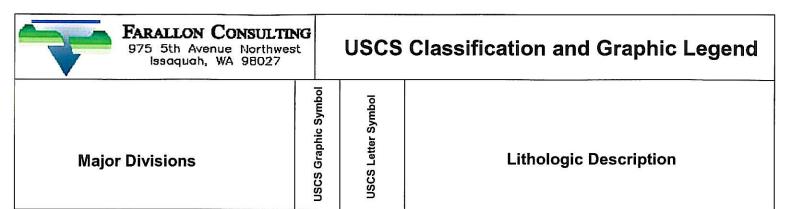
APPENDIX D BORING AND WELL CONSTRUCTION LOGS

REMEDIAL INVESTIGATION WORK PLAN
Capital Industries, Inc.
5801 Third Avenue South
Seattle, Washington

Farallon PN: 457-004



Coarse- Grained Soil (More than 50% of material is larger than No. 200 sieve size)	GRAVEL AND GRAVELLY SOIL (More than 50% of coarse fraction retained on No. 4 sieve)	CLEAN GRAVEL (Little or no fines)	0000	GW	Well graded GRAVEL, well graded GRAVEL with sand
			8 8 .	GP	Poorly graded GRAVEL, GRAVEL with sand
		GRAVEL WITH FINES (Appreciable amount of fines)		GP-GM	Poorly graded GRAVEL - GRAVEL with sand and silt
			 8 8 8	GM	Silty GRAVEL
			(0//0/)	GC	Clayey GRAVEL
	SAND AND SANDY SOIL (More than 50% of coarse fraction passed through No. 4 sieve)	CLEAN SAND (Little or no fines)		sw	Well graded SAND
				SP	Poorly graded SAND
		SAND WITH FINES (Appreciable amount of fines)		SP-SM	Poorly graded SAND - silty SAND
				SM	Silty SAND
				sc	Clayey SAND
				SM-ML	SILT - Silty SAND
Fine- Grained	SILT AND CLAY (Liquid limit less than 50)			ML	SILT
Soil (More than 50%				CL	CLAY
of material			11111	OL	Organic SILT
than No. 200 sieve size)	SILT AND CLAY (Liquid limit greater than 50)			МН	Inorganic SILT
			7	СН	Inorganic CLAY
		P. C.	~~	ОН	Organic CLAY
		Highly Organic Soil	11 11.	PT	Peat
OTHER MATERIALS	PAVEMENT			AC	Asphalt concrete
MATERIALS				со	Concrete
	OTHER		\triangle	RK	Bedrock
			< P	WD	Wood Debris
			77	DB	Debris (Miscellaneous)
				PC	Portland cement

	Sample Interval		Legend			
	ASSAULT CON PRODUCT STATE OF THE STATE OF TH	<u> </u>			Solid line indicates sharp contact between units well defined.	
G	Grab Sample Interval	Og	Cement Grout			
×	Water level at time of drilling Water level at time of sampling		Bentonite	*****	Dashed line indicates gradational contact between units.	
모				feet bgs = feet below ground surface		
	Blank Casing		Sand Pack	NE = Not Encountered NA = Not Applicable		
	Screened Casing		Well Cap	units = PID units calibrated to		
E:\Forms\Boilerplates\L	LogPlot\Lithology\Coverpage	USCS = Unified Soil Classification System				



Page 1 of 1

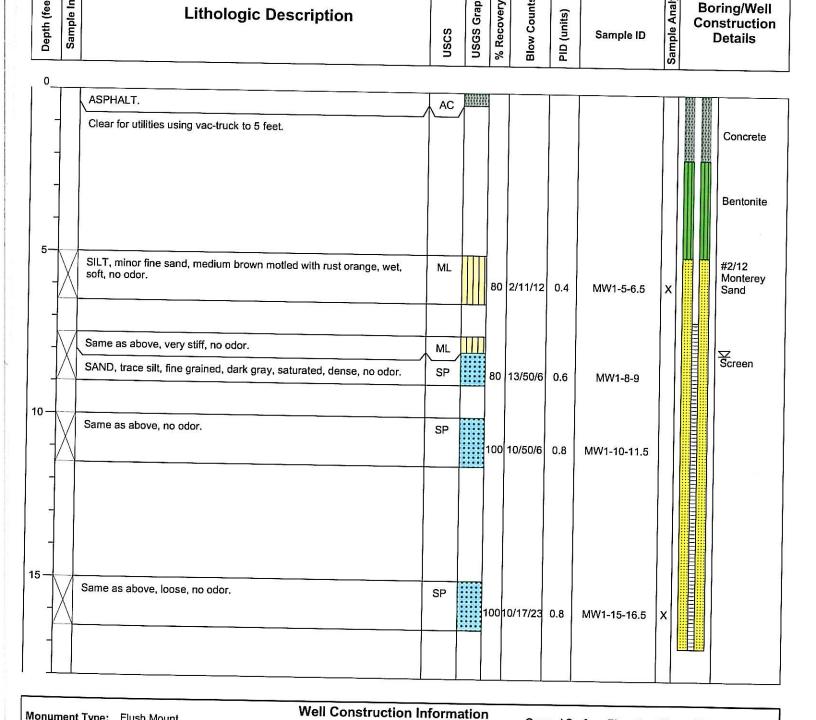
Construction

2/7/06 1100 Sampler Type: Dames & Moore 2/7/06 1230 Drive Hammer (lbs.):

Limited Access Rig Depth of Water ATD (ft bgs): 8

Cascade Drilling Total Boring Depth (ft bgs): 18 Dave Total Well Depth (ft bgs): 17 **Drilling Method: HSA**

Logged By: T. Mulhern Depth (feet bgs.) Blow Counts 8/8/8 Sample Interval Sample Analyzed **USGS Graphic** Boring/Well Lithologic Description



Monument Type: Flush Mount Casing Diameter (inches): 2" Screen Slot Size (inches): 0.010 Screened Interval (ft bgs):

7-17

Filter Pack:

Surface Seal: Cement Annular Seal: Bentonite

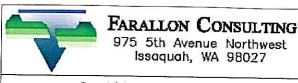
#2/12 Monterey Sand

Ground Surface Elevation (ft): Top of Casing Elevation (ft):

Boring Abandonment:

16.73 16.34 N/A

Surveyed Location: X: N/A



Page 1 of 1

Capital Industries Client: Project: Capital Industries Location: Seattle, Washington

Equipment:

2/7/06 1500 2/7/06 1600

Sampler Type: Dames & Moore

Date/Time Completed:

Drive Hammer (lbs.):

Drilling Company:

Date/Time Started:

Limited Access Rig Cascade Drilling

Depth of Water ATD (ft bgs): 8 Total Boring Depth (ft bgs): 20

Farallon PN: 457-001

Lithologic Description

Drilling Foreman:

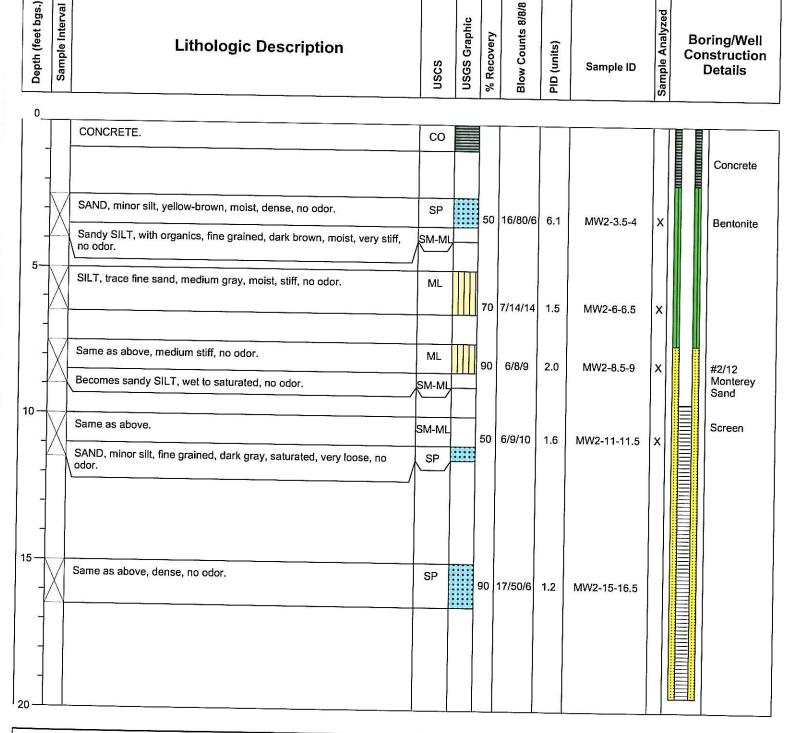
Dave

Total Well Depth (ft bgs): 19.5

Logged By: T. Mulhern

Drilling Method: HSA

> Boring/Well Construction



Monument Type: Flush Mount Casing Diameter (inches):

Screen Slot Size (inches): 0.010 Screened Interval (ft bgs): 9.5-19.5

Well Construction Information Filter Pack:

#2/12 Monterey Sand

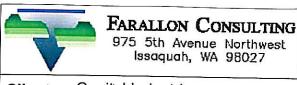
Surface Seal: Cement Annular Seal: Bentonite Ground Surface Elevation (ft):

Top of Casing Elevation (ft): 16.48 **Boring Abandonment:** N/A

Surveyed Location: X: N/A

Y: N/A

16.91



Page 1 of 1

Client: Capital Industries Project: Capital Industries Location: Seattle, Washington

Farallon PN: 457-001

Logged By: T. Mulhern

Date/Time Started: Date/Time Completed:

Drilling Company:

Equipment:

2/6/06 0845 2/6/06 1000

CME

Cascade Drilling

Drilling Foreman: Drilling Method:

Andy

HSA

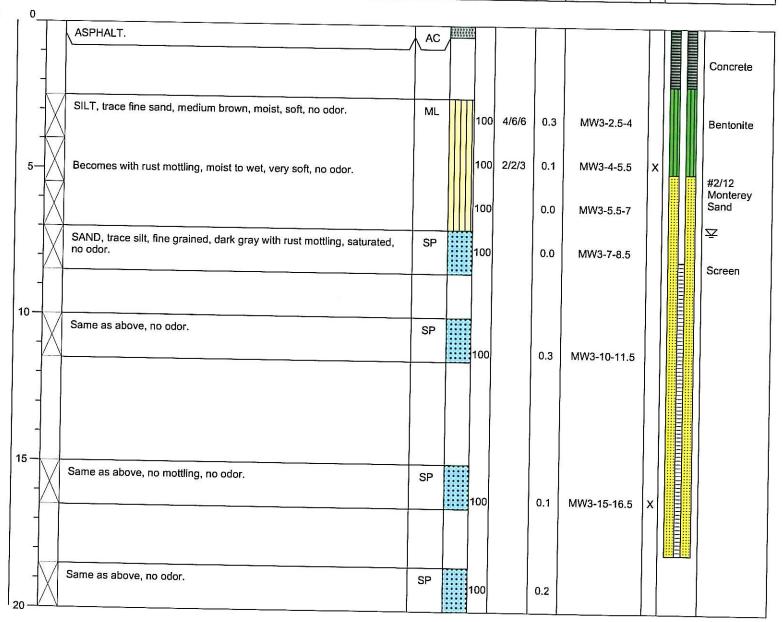
Sampler Type: Dames & Moore

Drive Hammer (lbs.):

Depth of Water ATD (ft bgs): 7

Total Boring Depth (ft bgs): 20 Total Well Depth (ft bgs): 17

Depth (feet bgs.) Blow Counts 8/8/8 Sample Interval Sample Analyzed **USGS Graphic** Recovery Boring/Well Lithologic Description PID (units) Construction uscs Sample ID **Details**



Monument Type: Flush Mount Casing Diameter (inches): 2"

Screen Slot Size (inches): 0.010 Screened Interval (ft bgs): 7-17

Well Construction Information Filter Pack:

Surface Seal: Cement Annular Seal: Bentonite

#2/12 Monterey Sand

Ground Surface Elevation (ft): Top of Casing Elevation (ft):

Boring Abandonment: Surveyed Location: X: N/A

Y: N/A

16.13

15.74

N/A



Date/Time Started: Date/Time Completed:

2/6/06 1015 2/6/06 1130

CME

Sampler Type: Dames & Moore

Drive Hammer (lbs.): Depth of Water ATD (ft bgs): 7

Cascade Drilling **Drilling Foreman:** Andy

Total Boring Depth (ft bgs): 18.5 Total Well Depth (ft bgs): 17

Farallon PN: 457-001

Logged By: T. Mulhern

Drilling Method:

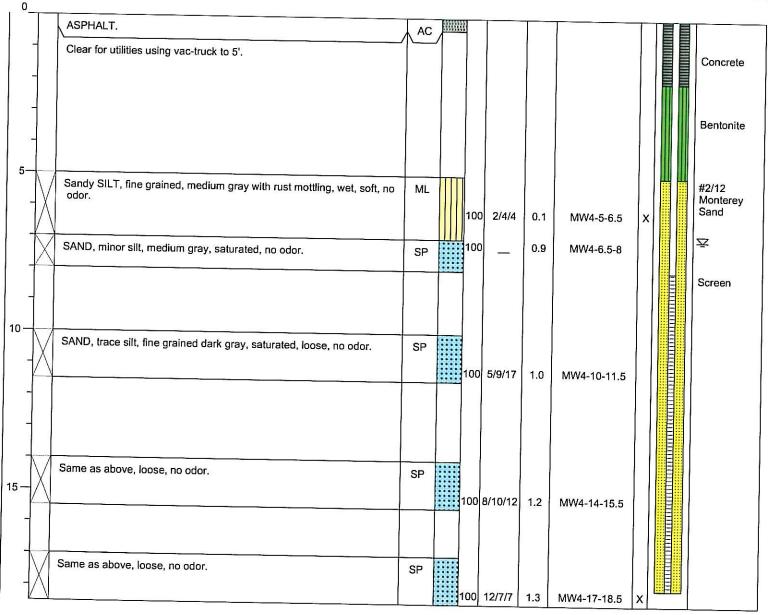
Drilling Company:

Equipment:

HSA

Page 1 of 1

Depth (feet bgs.) Blow Counts 8/8/8 Sample Interval Sample Analyzed **USGS Graphic** Recovery Boring/Well Lithologic Description PID (units) Construction uscs Sample ID Details 0



Monument Type: Flush Mount Casing Diameter (inches):

Screen Slot Size (inches): 0.010 Screened Interval (ft bgs): 7-17

Well Construction Information

Filter Pack: #2/12 Monterey Sand Surface Seal: Cement

Ground Surface Elevation (ft): 16.04 Top of Casing Elevation (ft): 15.62 **Boring Abandonment:** N/A

Annular Seal: Bentonite Surveyed Location: X: N/A



2/7/06 0915

2/7/06 1045

Sampler Type: Dames & Moore

Drive Hammer (lbs.):

10-11

Page 1 of 1

Equipment: **Drilling Company:**

Date/Time Started:

Date/Time Completed:

Limited Access Rig Cascade Drilling

Depth of Water ATD (ft bgs):

Total Boring Depth (ft bgs):

20

Drilling Foreman:

Dave

Total Well Depth (ft bgs):

Sample ID

19

Logged By: T. Mulhern

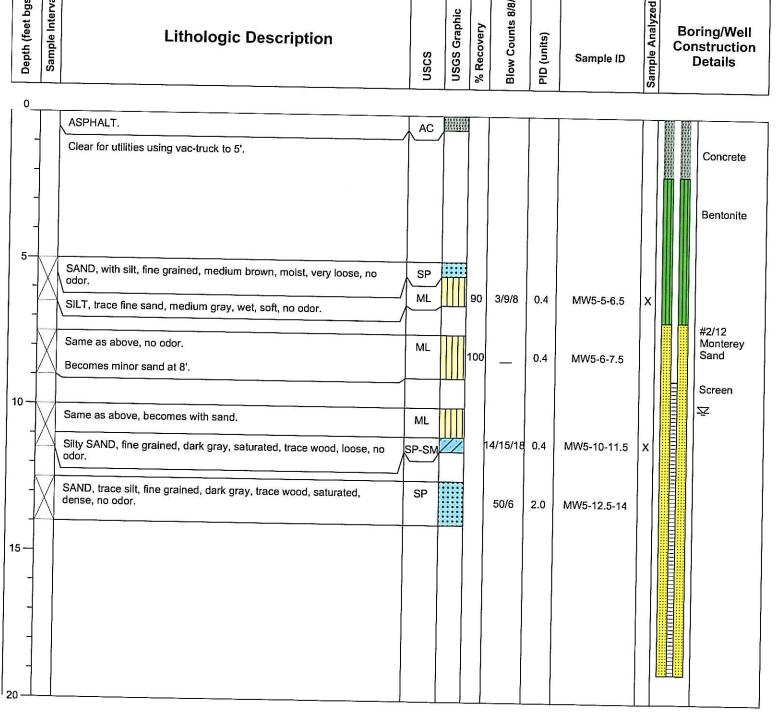
Farallon PN: 457-001

Drilling	Method:
----------	---------

HSA

Blow Counts 8/8/8 Depth (feet bgs.) Sample Interval **USGS Graphic** Recovery Lithologic Description PID (units)

Boring/Well Construction Details



Monument Type: Flush Mount Casing Diameter (inches):

Screen Slot Size (inches): 0.010 Screened Interval (ft bgs):

Filter Pack:

#2/12 Monterey Sand

Surface Seal: Cement Annular Seal: Bentonite

Well Construction Information

Ground Surface Elevation (ft): Top of Casing Elevation (ft):

Boring Abandonment:

15.90 N/A

16.30

Surveyed Location: X: N/A



Page 1 of 1

Capital Industries Client: Project: Capital Industries Location: Seattle, Washington

Farallon PN: 457-001

Logged By: T. Mulhern

Date/Time Started:

2/7/06 1245

Sampler Type: Dames & Moore

Date/Time Completed:

2/7/06 1445

Limited Access Rig

Drive Hammer (lbs.):

Depth of Water ATD (ft bgs):

8.5 Total Boring Depth (ft bgs): 18

Drilling Company: Drilling Foreman: Drilling Method:

Equipment:

Cascade Drilling Dave

HSA

Total Well Depth (ft bgs):

18

140

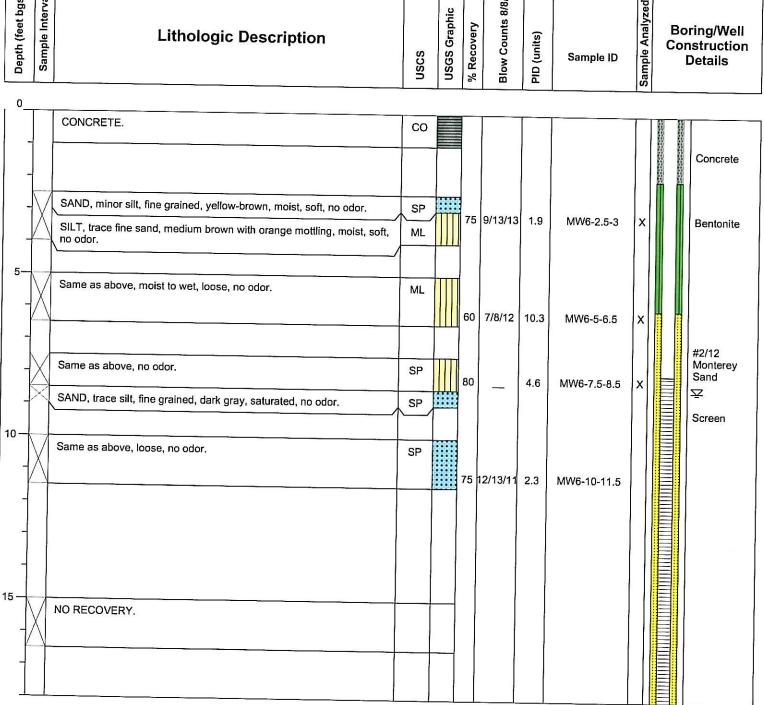
Depth (feet bgs.)

Lithologic Description

Blow Counts 8/8/8 **USGS Graphic** Recovery USCS

PID (units) Sample ID

Boring/Well Construction **Details**



Monument Type: Flush Mount Casing Diameter (inches):

Screen Slot Size (inches):

Well Construction Information Filter Pack:

#2/12 Monterey Sand

Ground Surface Elevation (ft): Top of Casing Elevation (ft):

17.43 N/A

17.79

Screened Interval (ft bgs):

0.010

Annular Seal: Bentonite

Surface Seal: Cement

Surveyed Location: X: N/A

Boring Abandonment:



Logged By: T. Mulhern

Log of Boring: MW-7

2/6/06 1215 Sampler Type: Dames & Moore 2/6/06 1345

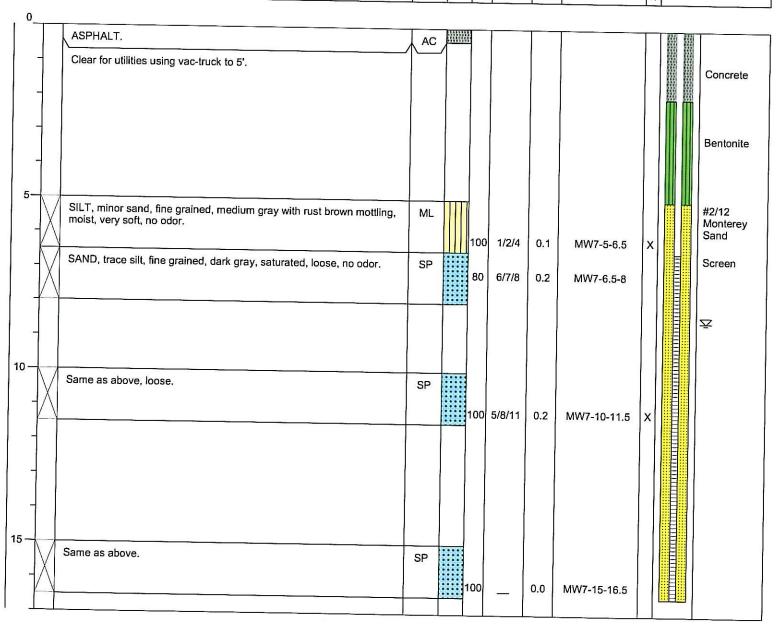
Drive Hammer (lbs.): Depth of Water ATD (ft bgs): 8.5 Total Boring Depth (ft bgs): 16.5

Page 1 of 1

Cascade Drilling **Drilling Foreman:** Andy Total Well Depth (ft bgs): 17 **Drilling Method: HSA**

CME

Depth (feet bgs.) Blow Counts 8/8/8 Sample Interval Sample Analyzed **USGS Graphic** Boring/Well Lithologic Description PID (units) Construction Sample ID **Details**



Monument Type: Flush Mount Casing Diameter (inches): Screen Slot Size (inches):

0.010 Screened Interval (ft bgs): 7-17

Well Construction Information Filter Pack:

Surface Seal: Cement

Annular Seal: Bentonite

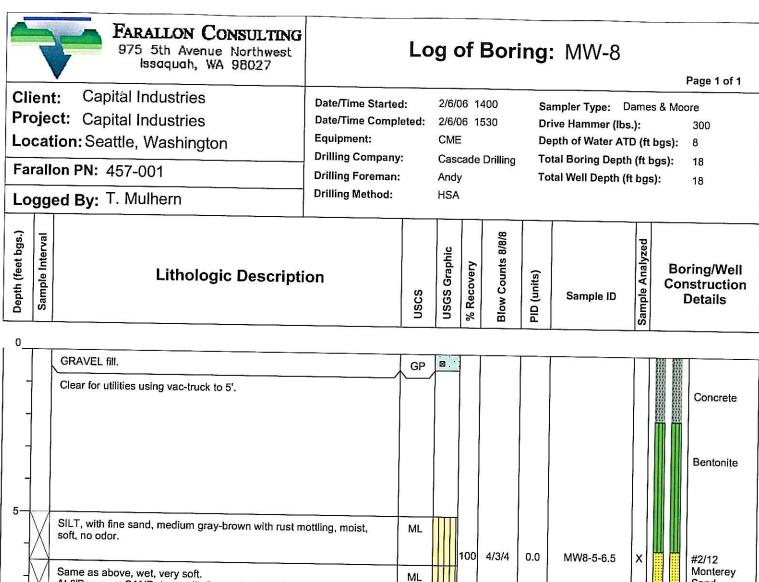
#2/12 Monterey Sand

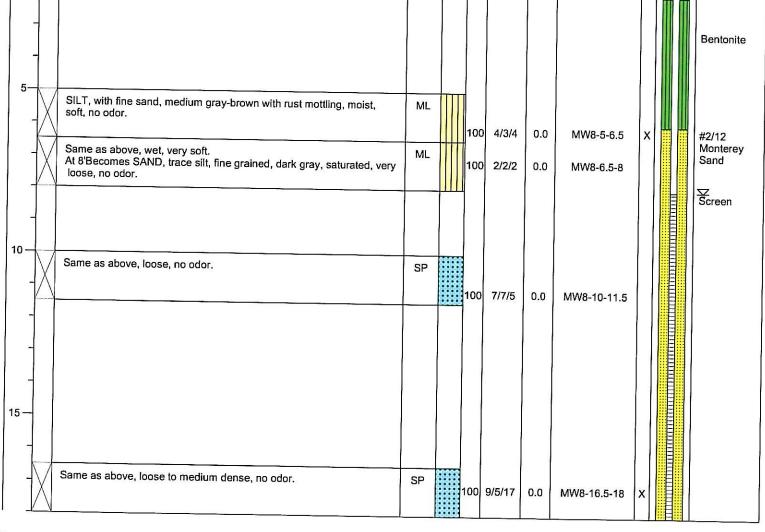
Ground Surface Elevation (ft): Top of Casing Elevation (ft): **Boring Abandonment:**

16.93 N/A

17.30

Surveyed Location: X: N/A





Monument Type: Flush Mount Casing Diameter (inches):

2" Screen Slot Size (inches): 0.010 Screened Interval (ft bgs):

Well Construction Information

Filter Pack:

Surface Seal: Cement

Annular Seal: Bentonite

#2/12 Monterey Sand

Ground Surface Elevation (ft): 17.02 Top of Casing Elevation (ft): 16.68 **Boring Abandonment:**

Surveyed Location: X: N/A

N/A



Page 1 of 2

Date/Time Started: Date/Time Completed:

1/16/06 0900

Sampler Type: Geoprobe

leted: 1/16/06 1115

Drive Hammer (lbs.):

N/A

Location: Seattle, Washington

Equipment: Geoprobe

Drilling Company: Cascade Drilling

Depth of Water ATD (ft bgs): Total Boring Depth (ft bgs):

s): 8

Farallon PN: 457-001

7-001 Drilling Foreman:

Kasey

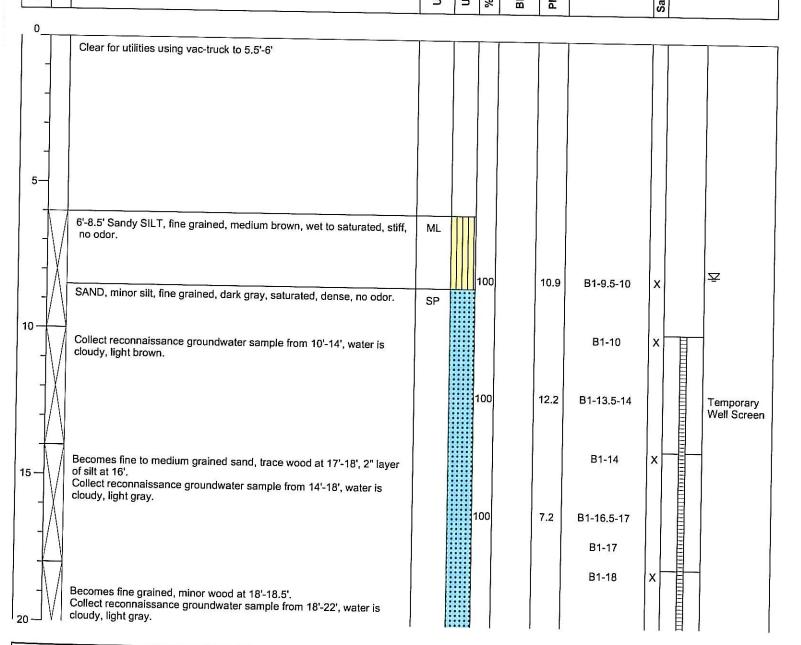
Total Well Depth (ft bgs):

N/A

Logged By: T. Mulhern

Drilling Method: Dir

Direct Push



Monument Type: N/A

Casing Diameter (inches): N/A

N/A

Filter Pack:

ack: N/A

Well Construction Information

Surface Seal: N/A

Ground Surface Elevation (ft): Top of Casing Elevation (ft):

N/A N/A

Boring Abandonment:

Bentonite

Screen Slot Size (inches): Screened Interval (ft bgs):

N/A

Annular Seal: N/A

Surveyed Location: X: N/A

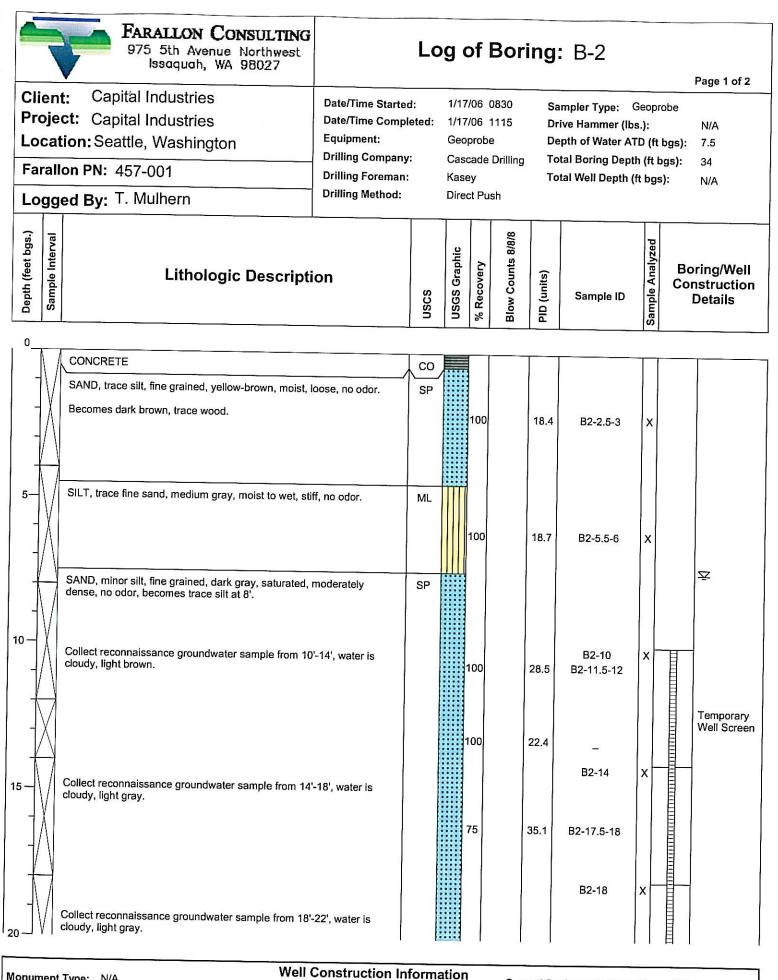
FARALLON CONSULTING 975 5th Avenue Northwest Log of Boring:B-1 Issaquah, WA 98027 Page 2 of 2 Depth (feet bgs.) Sample Interval Blow Counts 8/8/8 Sample Analyzed **USGS** Graphic % Recovery Well **Lithologic Description** PID (ppm) Construction Sample ID uscs **Details** 20 100 10.2 B1-21.5-22 B1-22 X Collect reconnaissance groundwater sample from 22'-26', water is cloudy, light gray. 34.2 B1-25.5-26 25 Becomes very fine grained. B1-26 ML Sandy SILT, fine grained, medium gray, saturated, stiff, no odor, becomes SILT, trace fine sand at 27'. Collect reconnaissance groundwater sample from 26'-30', water is 100 slightly cloudy, light gray. 174 B1-29.5-30 30 Collect reconnaissance groundwater sample from 30'-34', water is B1-30 cloudy, light gray. 100 Silty SAND, fine grained, minor woor, dark gray, saturated, dense, no SP

210

B1-33.5-34

odor.

Well Construction Information Monument Type: N/A Ground Surface Elevation (ft): N/A Filter Pack: N/A Casing Diameter (inches): N/A Top of Casing Elevation (ft): N/A Screen Slot Size (inches): Surface Seal: N/A N/A **Boring Abandonment:** Bentonite Screened Interval (ft bgs): N/A Annular Seal: N/A Surveyed Location: X: N/A Y: N/A



Monument Type: N/A Casing Diameter (inches): N/A Screen Slot Size (inches):

Filter Pack: Surface Seal: N/A

N/A

Top of Casing Elevation (ft): **Boring Abandonment:**

Ground Surface Elevation (ft):

N/A N/A Bentonite

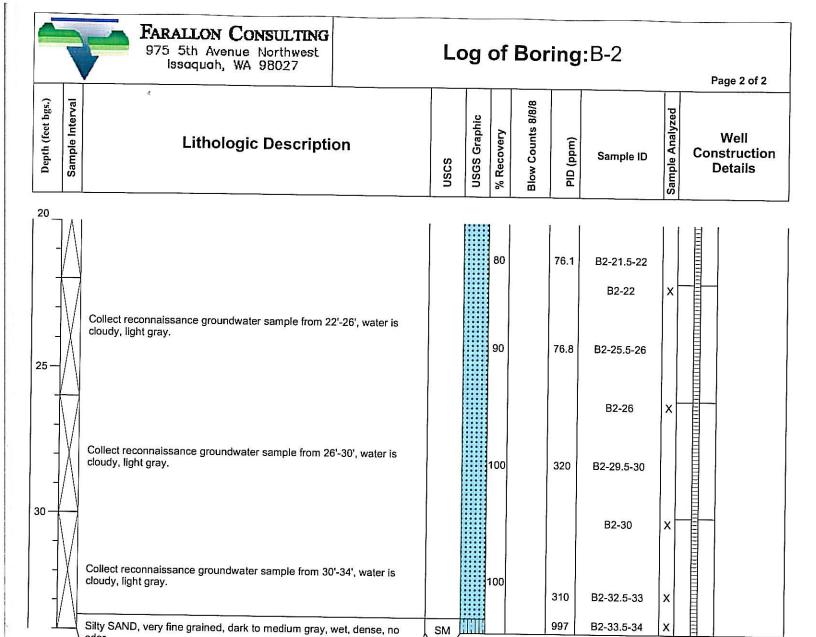
Annular Seal: N/A

Y: N/A

Screened Interval (ft bgs):

N/A

Surveyed Location: X: N/A



Well Construction Information Monument Type: N/A Ground Surface Elevation (ft): N/A Filter Pack: Casing Diameter (inches): N/A Top of Casing Elevation (ft): N/A Screen Slot Size (inches): Surface Seal: N/A N/A **Boring Abandonment:** Bentonite Screened Interval (ft bgs): N/A Annular Seal: N/A Surveyed Location: X: N/A Y: N/A

FARALLON CONSULTING Log of Boring: B-3 975 5th Avenue Northwest Issaquah, WA 98027 Client: Capital Industries Date/Time Started: 1/17/06 1130 Sampler Type: Geoprobe Project: Capital Industries Date/Time Completed: 1/17/06 1350 Drive Hammer (lbs.): Location: Seattle, Washington Equipment: Geoprobe Depth of Water ATD (ft bgs): **Drilling Company:** Total Boring Depth (ft bgs): Cascade Drilling Farallon PN: 457-001 Total Well Depth (ft bgs): **Drilling Foreman:** Kasey Logged By: T. Mulhern **Drilling Method: Direct Push** Depth (feet bgs.) Sample Interval

Lithologic Description

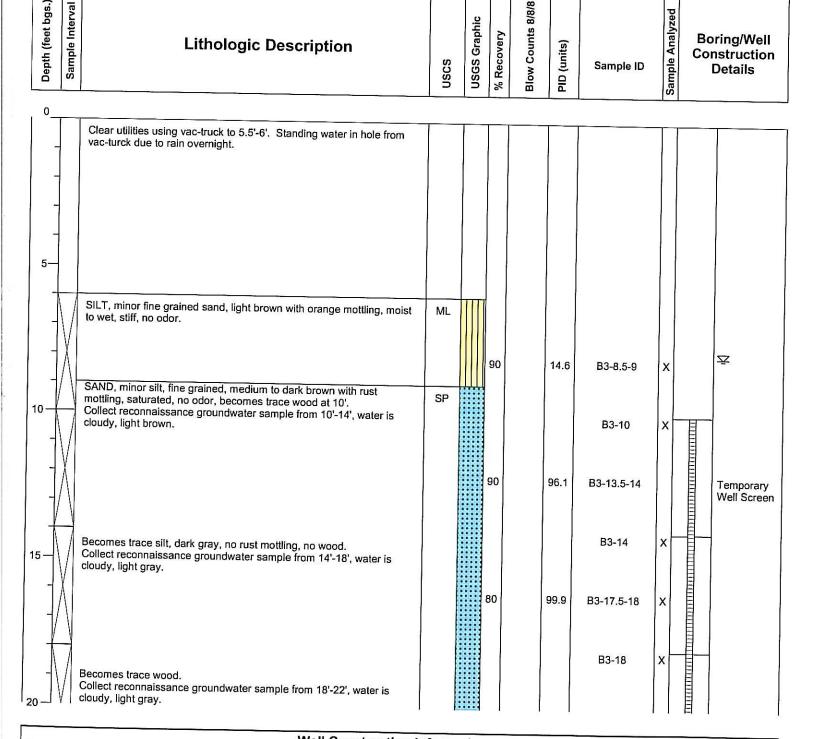
Page 1 of 2

N/A

N/A

Boring/Well

Construction



Well Construction Information Monument Type: N/A Ground Surface Elevation (ft): N/A Filter Pack: N/A Casing Diameter (inches): N/A Top of Casing Elevation (ft): N/A Screen Slot Size (inches): N/A Surface Seal: N/A **Boring Abandonment:** Bentonite Screened Interval (ft bgs): N/A Annular Seal: N/A Surveyed Location: X: N/A Y: N/A

FARALLON CONSULTING 975 5th Avenue Northwest Log of Boring:B-3 Issaquah, WA 98027 Page 2 of 2 Depth (feet bgs.) Sample Interval Blow Counts 8/8/8 Sample Analyzed **USGS** Graphic % Recovery **Lithologic Description** Well PID (ppm) Construction Sample ID uscs **Details** 85 112 B3-21.5-22 B3-22 X Collect reconnaissance groundwater sample from 22'-26', water is cloudy, light gray. 85 468 B3-25.5-26 25 B3-26 Becomes minor silt. Collect reconnaissance groundwater sample from 26'-30', water is 413 B3-29.5-30 cloudy, light gray. 30 B3-30 Becomes with wood. Collect reconnaissance groundwater sample from 30'-34', water is 90 98.0 B3-32-32.5 X clear to slightly cloudy.

Monument Type: N/A Casing Diameter (inches): Screen Slot Size (inches):

Screened Interval (ft bgs):

N/A N/A

N/A

Filter Pack:

N/A

Well Construction Information

Surface Seal: N/A

Ground Surface Elevation (ft): Top of Casing Elevation (ft):

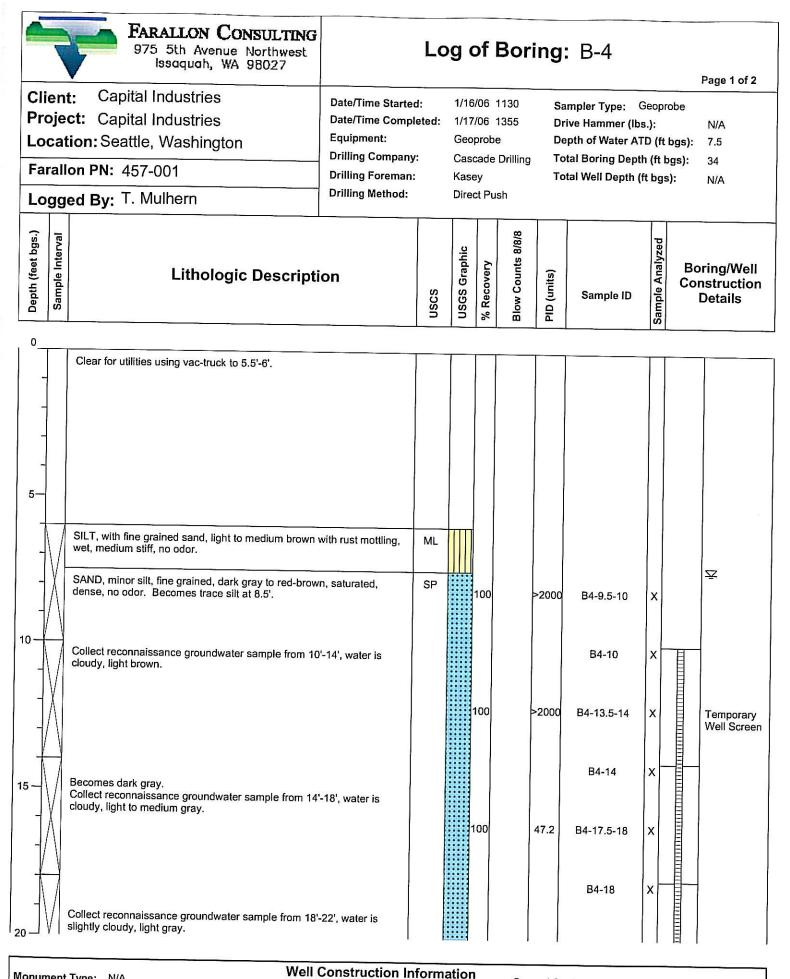
N/A N/A

Boring Abandonment:

Bentonite

Annular Seal: N/A

Surveyed Location: X: N/A



Monument Type: N/A Ground Surface Elevation (ft): N/A Filter Pack: N/A Casing Diameter (inches): N/A Top of Casing Elevation (ft): N/A Screen Slot Size (inches): Surface Seal: N/A N/A Boring Abandonment: Bentonite Screened Interval (ft bgs): Annular Seal: N/A N/A Surveyed Location: X: N/A Y: N/A

FARALLON CONSULTING 975 5th Avenue Northwest Log of Boring:B-4 Issaquah, WA 98027 Page 2 of 2 Depth (feet bgs.) Sample Interval Blow Counts 8/8/8 Sample Analyzed **USGS** Graphic % Recovery Well **Lithologic Description** PID (ppm) Construction Sample ID uscs **Details** 95 34.0 B4-21,5-22 B4-22 Х Collect reconnaissance groundwater sample from 22'-26', water is cloudy, medium gray. 90 11.8 B4-25.5-26 25 B4-26 Becomes with silt. Collect reconnaissance groundwater sample from 26'-30', water is 0.0 B4-29.5-30 cloudy, medium gray. 30 B4-30

Well Construction Information Monument Type: N/A Filter Pack: N/A Casing Diameter (inches): N/A Screen Slot Size (inches): Surface Seal: N/A N/A

N/A

Annular Seal: N/A

Screened Interval (ft bgs):

Collect reconnaissance groundwater sample from 30'-34', water is

cloudy, medium gray.

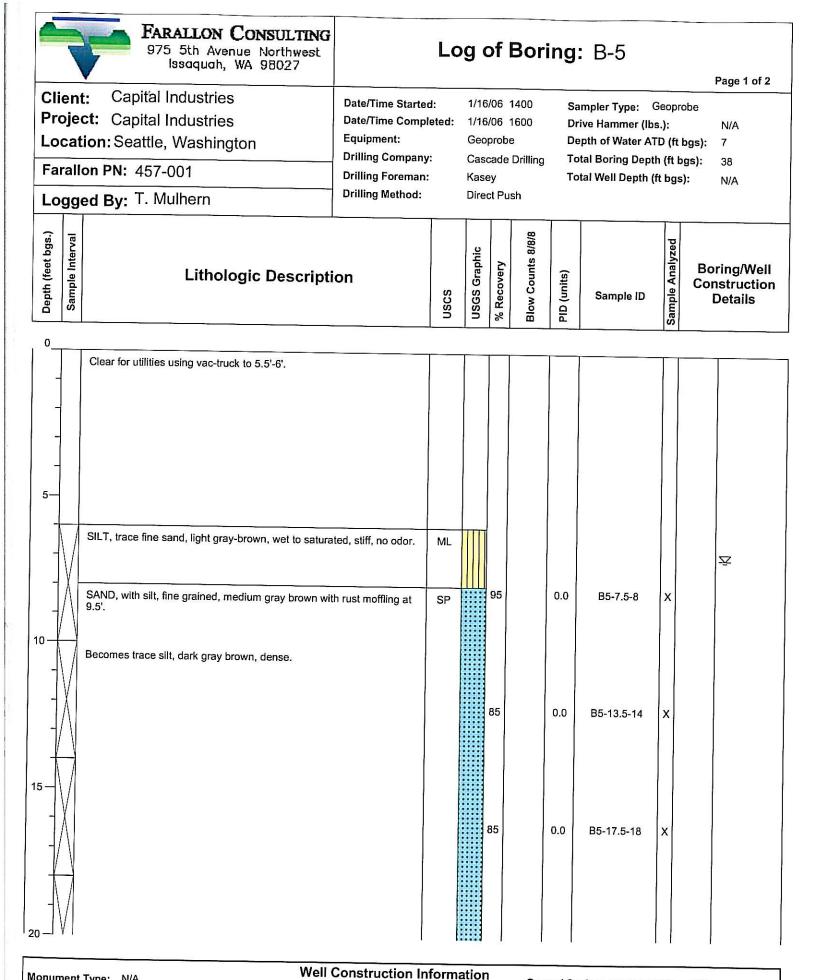
Ground Surface Elevation (ft): N/A Top of Casing Elevation (ft): N/A Boring Abandonment: Bentonite

Surveyed Location: X: N/A

95

0.0

B4-33.5-34



Monument Type: N/A Casing Diameter (inches):

Screened Interval (ft bgs):

Screen Slot Size (inches):

N/A

N/A N/A Filter Pack:

N/A

Surface Seal: N/A Annular Seal: N/A Ground Surface Elevation (ft):

Top of Casing Elevation (ft): **Boring Abandonment:**

N/A N/A Bentonite

Surveyed Location: X: N/A

FARALLON CONSULTING 975 5th Avenue Northwest Log of Boring:B-5 Issaquah, WA 98027 Page 2 of 2 Depth (feet bgs.) Sample Interval Blow Counts 8/8/8 Sample Analyzed **USGS Graphic** Recovery **Lithologic Description** Well PID (ppm) Construction Sample ID uscs **Details** 85 0.0 B5-21.5-22 Trace wood from 21'-22'. 90 0.0 B5-25.5-26 25 B5-26 Collect reconnaissance groundwater sample from 26'-30', water is cloudy, light gay. 90 0.0 B5-29.5-30 Temporary Well Screen 30 B5-30 Collect reconnaissance groundwater sample from 30'-34', water is cloudy, light gray. 80 0.0 B5-33.5-34 B5-34 X 35 50 0.0 B5-37.5-38 Saturated sample caused poor recovery.

Well Construction Information Monument Type: N/A Ground Surface Elevation (ft): N/A Filter Pack: N/A Casing Diameter (inches): N/A Top of Casing Elevation (ft): N/A Screen Slot Size (inches): Surface Seal: N/A N/A **Boring Abandonment:** Bentonite Screened Interval (ft bgs): Annular Seal: N/A N/A Surveyed Location: X: N/A Y: N/A

Collect reconnaissance groundwater sample from 34'-38', water is

cloudy, light gray.