



LOG OF TEST BORING

Start Card R-68536

Job No. XL-2754

SR 515

Elevation 154.0 ft (46.9 m)

HOLE No. 515- 5-06

Sheet 6 of 6

Project I-405 / SR-515 Interchange Improvements

Driller Henderson, Danny Lic# 2742T

Depth (ft)	Elevation (ft)	Profile	Field SPT (N)				Blows/6" (N) and/or RQD FF	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			20	40	60	80							
											End of test hole boring at 120.5 ft below ground elevation. This is a summary Log of Test Boring. Soil/Rock descriptions are derived from visual field identifications and laboratory test data.		
											Water level before bailing 4.5', bailed bore hole water level to 46.4'. After 18 hrs minutes 52.3'.		
30													
125													
25													
130													
20													
135													
15													
140													
10													
145													

SOILA_XL-2754_SR-405_SR-515_INTERCHANGE_IMPROVEMENTS.GPJ_SOIL.GDT_6/28/06,9:15:01.A6



LOG OF TEST BORING

Start Card S-26394

Job No. XL-2754 SR 515 Elevation 154.0 ft

HOLE No. 515- 6-06

Sheet 1 of 6

Project I-405 / SR-515 Interchange Improvements

Driller Danny Henderson Lic# 2742 T

Site Address Vicinity SR-405 & Benson Rd.S.

Inspector Bill Hanning

Start June 20, 2006 Completion June 20, 2006 Well ID# _____ Equipment CME 850 with Autohammer

Station _____ Offset _____ Hole Dia 6 (inches) Method Wet Rotary

Northing 175219.7 Easting 1301605.9 Latitude _____ Longitude _____

County King Subsection NW/NW Section 20 Range 5 EWM Township 23 N

SOILA_XL-2754_SR-405_SR-515_INTERCHANGE_IMPROVEMENTS.GPJ SOIL_GDT 6/28/06 9:15:08 AM

Depth (ft)	Elevation (ft)	Profile	Field SPT (N)				Blows/6" (N) and/or RQD FF	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			20	40	60	80							
5	153.0												
	152.0												
	151.0												
	150.0	◆											
	149.0					1 0 0 (0)	▲	D-1		Silty SAND Boiler Debris, Coal, Ash Cake, Glass Fragments, very loose, black, moist, homogenous, HCl not tested, 100% Drill Fluid Loss. Drill behavior indicates possible voids. Length Recovered 0.5, Length Retained:0.5			
	148.0												
	147.0	◆											
	146.0					1 1 1 (2)	▲	D-2		Silty SAND Boiler Debris, Coal, Ash Cake, Glass Fragments, very loose, black, moist, homogenous, HCl not tested, 100% Drill Fluid Loss. Drill Behavior Indicates Possible Voids. Length Recovered 0.3 ft. Length Retained 0.3 ft.			
	145.0	◆											
10	144.0					1 1 1 (2)	▲	D-3		Silty SAND Boiler Debris, Coal, Ash Cake, Glass Fragments, very loose, very pale brown, moist, homogenous, HCl not tested, 100% Drill Fluid Loss. Length Recovered 0.4 ft. Length Retained 0.4 ft.			
	143.0												
	142.0	◆											
	141.0					1 2 1 (3)	▲	D-4		Silty SAND Boiler Debris, Coal, Ash Cake, Glass Fragments, very loose, very pale brown, moist, homogenous, HCl not tested, 100% Drill Fluid Loss. Length Recovered 0.2 ft. Length Retained 0.2 ft.			
	140.0	◆											
15	139.0					2 2 1 (3)	▲	D-5		Silty SAND Boiler Debris, Coal, Ash Cake, Glass Fragments, very loose, black, moist, homogenous, HCl not tested, 100% Drill Fluid Loss. . Recovered:0.5 Ret:0.5			
	138.0												
	137.0	◆											
	136.0					1 0 0 (0)	▲	D-6		Silty SAND Boiler Debris, Coal, Ash Cake, Glass Fragments, very loose, black, moist, stratified, HCl not tested, 100% Drill Fluid Loss. Length Recovered 0.7 ft. Length Retained 0.7 ft.			
	135.0	◆											
20	134.0					1 1	▲	D-7		Silty SAND Boiler Debris, Coal, Ash Cake, Glass Fragments, very loose, very pale brown, moist,			



Depth (ft)	Elevation (ft)	Profile	Field SPT (N) Moisture Content RQD	Blows/6" (N) and/or RQD FF	Sample Type Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			20 40 60 80	0 (1)			homogenous, HCl not tested, 100% Drill Fluid Loss. Length Recovered 0.3 ft. Length Retained 0.3 ft.		
				1 1 1 (2)	D-8		Silty SAND Boiler Debris, Coal, Ash Cake, Glass Fragments, very loose, very pale brown, moist, homogenous, HCl not tested, 100% Drill Fluid Loss. Length Recovered 0.2 ft. Length Retained 0.2 ft.		
130				1 3 2 (5)	D-9		Silty SAND with gravel, loose, olive brown, moist, stratified, HCl not tested, Transition to Glacial Till at 25.0 ft. Length Recovered 0.5 ft. Length Retained 0.5 ft.		
25				8 16 16 (32)	D-10		Silty SAND with gravel, dense, olive gray, moist, stratified, HCl not tested, 85% Drill Fluid Return. Length Recovered 1.5 ft. Length Retained 1.5 ft.		
125				14 46 50/2" (50/2")	D-11		Silty GRAVEL, very dense, olive brown, moist, homogenous, HCl not tested, 100% Drill Fluid Return. Length Recovered 0.1 ft. Length Retained 0.1 ft.		
30				50 (50)	D-12		Poorly graded SAND with trace silt (sandstone), very dense, pale brown, moist, stratified, HCl not tested, Contact with Sandstone between 30.2 ft. and 34.0 ft. Length Recovered 0.5 ft. Length Retained 0.5 ft.		
35				RQD 20 FF 1	C-13 C-14		No Recovery SANDSTONE, medium grained, dusky yellow, highly weathered, very weak rock, Discontinuities are very closely spaced and in poor condition. Recovered: 23% RQD: 0 FF: 20, Note Drilling behavior indicates possible voids, 35.5 ft. to 39.0 ft. 100% Drill fluid loss.		
115				RQD 60 FF 1	C-15		SANDSTONE, medium grained, moderately weathered, very weak rock, Discontinuities are very closely spaced and in good condition. Recovered: 100% RQD: 60 FF: 1.0, Iron Staining Throughout.		
40									
110									
45									

SOILA_XL-2754_SR-515_INTERCHANGE_IMPROVEMENTS.GPJ_SOIL_GDT_6/28/06 9:15:08 A6



LOG OF TEST BORING

Start Card S-26394

Job No. XL-2754

SR 515

Elevation 154.0 ft (46.9 m)

HOLE No. 515- 6-06

Sheet 3 of 6

Project I-405 / SR-515 Interchange Improvements

Driller Danny Henderson Lic# 2742 T

Depth (ft)	Elevation (ft)	Profile	Blows/6" (N) and/or RQD FF				Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			Field SPT (N)	Moisture Content	RQD	FF						
			20	40	60	80						
							RQD 92 FF 0.3	C-16		SANDSTONE, medium grained, moderately weathered, very weak rock, Discontinuities are very closely spaced and in poor condition 20mm 50 degree fracture infilled with silty sand. Recovered 100% RQD: 92 FF: 0.3, Iron Staining Throughout.		
105							RQD 100 FF 0.2	C-17		SANDSTONE, medium grained, light gray, fresh, very weak rock, Discontinuities are very closely spaced and in excellent condition. Recovered: 100% RQD: 100 FF: 0.2, Iron staining at fractures.		
50							RQD 93 FF 0.2	C-18		SANDSTONE, medium grained, slightly weathered, very weak rock, Discontinuities are very closely spaced and in good condition. Recovered: 100% RQD: 93 FF: 0.2, Iron staining at fractures.		
100							RQD 100 FF 0.1	C-19		SANDSTONE with some Coal Lamina, medium grained, fresh light gray, slightly weathered, very weak rock, Discontinuities are very closely spaced and in good condition. Recovered: 100% RQD: 100 FF: 0.1, Iron staining at fractures.		
55							RQD 100 FF 0.2	C-20		SANDSTONE, medium grained, yellowish gray, slightly weathered, very weak rock, Discontinuities are closely spaced and in excellent condition. Recovered: 100% RQD: 100 FF: 0.2		
95												
60												
90												
65												
85												
70												

SOILA_XL-2754 SR-405 SR-515 INTERCHANGE IMPROVEMENTS.GPJ SOIL_GDT 6/28/06 9:15:08 A6



LOG OF TEST BORING

Start Card S-26394

Job No. XL-2754

SR 515

Elevation 154.0 ft (46.9 m)

HOLE No. 515- 6-06

Sheet 4 of 6

Project I-405 / SR-515 Interchange Improvements

Driller Danny Henderson Lic# 2742 T

Depth (ft)	Elevation (ft)	Profile	Field SPT (N)				Blows/6" (N) and/or RQD FF	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			20	40	60	80							
							RQD 100 FF:0	C-21		SANDSTONE, medium grained, yellowish gray, fresh, very weak rock, Discontinuities are closely spaced and in excellent condition. Recovered: 100% RQD: 100 FF: 0			
80							RQD 100 FF 0	C-22		SANDSTONE with some Coal Lamina, medium grained, light gray, fresh, very weak rock, Discontinuities are closely spaced and in excellent condition. Recovered: 100% RQD: 100 FF: 0			
75							RQD 90 FF 0.2	C-23		SANDSTONE with Coal lamina throughout, medium grained, light gray, fresh, very weak rock, Discontinuities are closely spaced and in good condition. Recovered: 100% RQD: 90 FF: 0.2			
80							RQD 100 FF 0	C-24		SANDSTONE with Coal lamina throughout, medium grained, light gray, fresh, very weak rock, Discontinuities are closely spaced and in excellent condition. Recovered: 100% RQD: 100 FF: 0			
70							RQD 100 FF 0.2	C-25		SANDSTONE, medium grained, light gray, fresh, very weak rock, Discontinuities are closely spaced and in excellent gray. Recovered: 100% RQD: 100 FF: 0.2			
85													
65													
90													
60													
95													

SOILA_XL-2754_SR-515_INTERCHANGE_IMPROVEMENTS.GPJ_SOIL_GDT_6/28/06 9:15:08 AM



LOG OF TEST BORING

Start Card S-26394

Job No. XL-2754

SR 515

Elevation 154.0 ft (46.9 m)

HOLE No. 515- 6-06

Sheet 5 of 6

Project I-405 / SR-515 Interchange Improvements

Driller Danny Henderson Lic# 2742 T

Depth (ft)	Elevation (ft)	Profile	Field SPT (N)				Blows/6" (N) and/or RQD FF	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			20	40	60	80							
55	100						RQD 100 FF 0	C-26		SANDSTONE, medium grained, light gray, fresh, very weak rock, Discontinuities are closely spaced and in excellent condition. Recovered: 100% RQD: 100 FF: 0			
50	105						RQD 92 FF 0.3	C-27		SANDSTONE, medium grained, light gray, fresh, very weak rock, Discontinuities are closely spaced and in good condition. Recovered: 100% RQD: 92 FF: 0.3			
45	110						RQD 100 FF 0.2	C-28		SANDSTONE with Mudstone bedding , medium grained, light gray, fresh, very weak rock, Discontinuities are closely spaced and in excellent condition 3.6' to 4.2'. Recovered: 100% RQD: 100 FF: 0.2			
40	115						RQD 100 FF 0.2	C-29		SANDSTONE with Mudstone bedding and Coal lamina, medium grained, light gray, fresh, very weak rock, Discontinuities are closely spaced and in good condition. Recovered: 100% RQD: 100 FF: 0.2			
35	120						RQD 100 FF 0.2	C-30		SANDSTONE with silty bedding and Coal lamina, medium grained, light gray, fresh, very weak rock, Discontinuities are closely spaced and in good condition. Recovered: 100% RQD: 100 FF: 0.2			

SOILA XL-2754 SR-405 SR-515 INTERCHANGE IMPROVEMENTS.GPJ SOIL GDT 6/28/06 9:15:08 A6



LOG OF TEST BORING

Start Card S-26394

Job No. XL-2754

SR 515

Elevation 154.0 ft (46.9 m)

HOLE No. 515-6-06

Sheet 6 of 6

Project I-405 / SR-515 Interchange Improvements

Driller Danny Henderson Lic# 2742 T

Depth (ft)	Elevation (ft)	Profile	Field SPT (N)				Blows/6" (N) and/or RQD FF	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			20	40	60	80							
120.5			[Hatched area]								End of test hole boring at 120.5 ft below ground elevation. This is a summary Log of Test Boring. Soil/Rock descriptions are derived from visual field identifications and laboratory test data.		
30													
125													
25													
130													
20													
135													
15													
140													
10													
145													



LOG OF TEST BORING

Start Card S-26211

Job No. XL-2754 SR 515 Elevation 156.3 ft

HOLE No. 515-7-06

Sheet 1 of 3

Project I-405 / SR-515 Interchange Improvements

Driller Henderson, Danny Lic# 2742

Site Address Vic. Cedar Ave. and S. 7th St.

Inspector Hanning/Hilts

Start October 5, 2006 Completion October 9, 2006 Well ID# _____ Equipment CME 850 with Autohammer

Station _____ Offset _____ Hole Dia 4 (inches) Method Wet Rotary

Northing 175263 Easting 1301606 Latitude _____ Longitude _____

County King Subsection NW1/4 of NW1/4 Section 20 Range 5 EWM Township 23N

Depth (ft)	Elevation (ft)	Profile	RQD				Blows/6" (N) and/or RQD FF	Sample Type	Sample No. (Tube No.)	Lab. Tests	Description of Material	Groundwater	Instrument
			20	40	60	80							
155.0										No samples collected between 0.0ft to 20.5ft.			
5													
150.0													
10													
145.0													
15													
140.0													
20													

SOILA XL-2754 SR-405 SR-515 INTERCHANGE IMPROVEMENTS.GPJ SOIL.GDT 10/18/06 1:36:19 P10



Depth (ft)	Elevation (ft)	Profile	Field SPT (N)				Blows/6" (N) and/or RQD FF	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			20	40	60	80							
135								C-1		Silty SAND with gravel, olive grey, wet, stratified, laminated, HCl not tested, 22.7' bottom of debris, from 22.7' to 23.4' reddish brown silty sand with rounded gravel and the remainder was olive grey silty sand with fine sub rounded gravel with vertical sand laminae.. Length Recovered: ft. Length Retained: ft.			
25	130							C-2		Silty SAND with gravel, olive grey, wet, stratified, HCl not tested, 40% water loss and the bottom .4' with Sand stone fragments. The core wasn't kept but photo's were taken. Length Recovered: ft. Length Retained: ft.			
30	125							C-3		SANDSTONE , medium grained, highly weathered, very weak rock, Discontinuities are closely spaced and in poor condition. Recovered:60% RQD:35 FF:0.5			
35	120							C-4		SANDSTONE , medium grained, moderately weathered, very weak rock, Discontinuities are closely spaced and in poor condition. Recovered:100% RQD:63 FF:2			
40	115							C-5		SANDSTONE , Discontinuities are 0 and in 0. Recovered:0% RQD:0 FF:0, We sanded in and had to over-ream to depth, therefore losing the core.			
45													

SOILA_XL-2754_SR-515_INTERCHANGE_IMPROVEMENTS.GPJ_SOIL.GDT 10/18/06, 1:38:19 P10



LOG OF TEST BORING

Start Card S-26211

Job No. XL-2754

SR 515

Elevation 156.3 ft

HOLE No. 515-7-06

Sheet 3 of 3

Project I-405 / SR-515 Interchange Improvements

Driller Henderson, Danny Lic# 2742

Depth (ft)	Elevation (ft)	Profile	Field SPT (N)				Blows/6" (N) and/or RQD FF	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			20	40	60	80							
110								C-6			SANDSTONE , medium grained, slightly weathered, very weak rock, Discontinuities are widely spaced and in fair condition. Recovered:100% RQD:93 FF:0		
50								C-7			SANDSTONE , medium grained, slightly weathered, very weak rock, Discontinuities are widely spaced and in fair condition. Recovered:100% RQD:100 FF:0		
105													
55													
100											End of test hole boring at 55.5 ft below ground elevation. This is a summary Log of Test Boring. Soil/Rock descriptions are derived from visual field identifications and laboratory test data. Note: REF = SPT Refusal		
60													
95													
65													
90													
70													

SOILA_XL-2754_SR-405_SR-515_INTERCHANGE_IMPROVEMENTS.GPJ_SOIL_GDT_10/18/06,1:36:19 P-10



LOG OF TEST BORING

Start Card S-26211

Job No. XL-2754 SR 515 Elevation 156.4 ft

HOLE No. 515-8-06

Sheet 1 of 3

Project I-405 / SR-515 Interchange Improvements

Driller Henderson, Danny Lic# 2742

Site Address Vic. Cedar Ave. and S. 7th St.

Inspector Brian Hilts

Start October 10, 2006 Completion October 10, 2006 Well ID# _____ Equipment CME 850 with Autohammer

Station _____ Offset _____ Hole Dia 4 (inches) Method Wet Rotary

Northing 175165 Easting 1301593 Latitude _____ Longitude _____

County King Subsection NW1/4 of NW1/4 Section 20 Range 5 EWM Township 23N

Depth (ft)	Elevation (ft)	Profile	<ul style="list-style-type: none"> ◆ Field SPT (N) ⊕ Moisture Content ▨ RQD 				Blows/6" (N) and/or RQD FF	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			20	40	60	80							
155.0										No samples collected between 0.0ft to 25.5ft.			
5													
150.0													
10													
145.0													
15													
140.0													
20													

SOILA XL-2754 SR-405 SR-515 INTERCHANGE IMPROVEMENTS.GPJ SOIL.GDT 10/18/06, 1:36:20 P10



Depth (ft)	Elevation (ft)	Profile	Field SPT (N)				Blows/6" (N) and/or RQD FF	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			20	40	60	80							
135													
25													
130								C-1		Well graded GRAVEL, red, wet, homogenous, HCl not tested, Brick debris and fines washed out. Length Recovered:0.3 ft. Length Retained:0.3 ft.			
30								C-2		Well graded GRAVEL, reddish brown, wet, homogenous, HCl not tested, fines washed out. Length Recovered:0.2 ft. Length Retained:0.2 ft.			
125								C-3		SANDSTONE , medium grained, moderately weathered, very weak rock, Discontinuities are closely spaced and in fair condition. Recovered:78% RQD:74 FF:1, the top .2' with gravel. We encountered SANDSTONE at 36.8'.			
35								C-4		SANDSTONE , medium grained, moderately weathered, moderately weak rock, Discontinuities are moderately spaced and in fair condition. Recovered:100% RQD:100 FF:0, with some coal laminae			
120													
40													
115													
45													

SOILA_XL-2754_SR-515_INTERCHANGE_IMPROVEMENTS.GPJ_SOIL.GDT 10/18/06, 1:36:20 P10



LOG OF TEST BORING

Start Card S-26211

Job No. XL-2754

SR 515

Elevation 156.4 ft

HOLE No. 515-8-06

Sheet 3 of 3

Project I-405 / SR-515 Interchange Improvements

Driller Henderson, Danny Lic# 2742

Depth (ft)	Elevation (ft)	Profile	Field SPT (N)				Blows/6" (N) and/or RQD FF	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			20	40	60	80							
110								C-5			SANDSTONE , medium grained, slightly weathered, moderately weak rock, Discontinuities are widely spaced and in fair condition. Recovered:100% RQD:100 FF:0, the top 1.4' was grey in color.		
50													
105											End of test hole boring at 50.5 ft below ground elevation. This is a summary Log of Test Boring. Soil/Rock descriptions are derived from visual field identifications and laboratory test data. Note: REF = SPT Refusal		
55													
100													
60													
95													
65													
90													
70													

SOILA_XL-2754_SR-405_SR-515_INTERCHANGE_IMPROVEMENTS.GPJ_SOIL_GDT_10/18/06,1:36:20 P:10



LOG OF TEST BORING

Start Card S-26211

Job No. XL-2754 SR 515 Elevation 157.3 ft

HOLE No. 515-9-06

Sheet 1 of 3

Project I-405 / SR-515 Interchange Improvements

Driller Henderson, Danny Lic# 2742

Site Address Vic. Cedar Ave. and S. 7th St.

Inspector Brian Hilts

Start October 10, 2006 Completion October 10, 2006 Well ID# _____ Equipment CME 850 with Autohammer

Station _____ Offset _____ Hole Dia 4 (inches) Method Wet Rotary

Northing 175067 Easting 1301568 Latitude _____ Longitude _____

County King Subsection NW1/4 of NW1/4 Section 20 Range 5 EWM Township 23N

Depth (ft)	Elevation (ft)	Profile	Field SPT (N)				Blows/6" (N) and/or RQD FF	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			20	40	60	80							
155.0													
5													
150.0													
10													
145.0													
15													
140.0													
20													



LOG OF TEST BORING

Start Card S-26211

Job No. XL-2754

SR 515

Elevation 157.3 ft

HOLE No. 515-9-06

Sheet 2 of 3

Project I-405 / SR-515 Interchange Improvements

Driller Henderson, Danny Lic# 2742

Depth (ft)	Elevation (ft)	Profile	Field SPT (N)				Blows/6" (N) and/or RQD FF	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			20	40	60	80							
135													
25													
130													
30								C-1		Silty SAND with gravel, yellowish brown, wet, homogenous, HCl not tested. Length Recovered:1.3 ft. Length Retained:1.3 ft.			
125													
35								C-2		Silty SAND with gravel, yellowish brown, wet, homogenous, HCl not tested, The top 1.1' with some FeO stains.. Length Recovered:2.7 ft. Length Retained:2.7 ft.			
120													
40								C-3		Well graded SAND with gravel, SANDSTONE, grayish brown, moist, stratified, HCl not tested, AT 44' to 44.5' SANDSTONE. Length Recovered:5 ft. Length Retained:5 ft.			
115													
45								C-4		SANDSTONE , medium grained, moderately weathered,			

SOILA_XL-2754_SR-405_SR-515_INTERCHANGE_IMPROVEMENTS.GPJ_SOIL_GDT_10/18/06,1:36:21 P10



LOG OF TEST BORING

Start Card S-26211

Job No. XL-2754

SR 515

Elevation 157.3 ft

HOLE No. 515-9-06

Sheet 3 of 3

Project I-405 / SR-515 Interchange Improvements

Driller Henderson, Danny Lic# 2742

Depth (ft)	Elevation (ft)	Profile	Field SPT (N)				Blows/6" (N) and/or RQD FF	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			20	40	60	80							
110													
50								C-5		moderately weak rock, Discontinuities are closely spaced and in fair condition. Recovered:97% RQD:88 FF:1, at 48' lost water return			
105										SANDSTONE , medium grained, slightly weathered, very weak rock, Discontinuities are moderately spaced and in fair condition. Recovered:95% RQD:81 FF:1, At 44' we encountered SANDSTONE			
55										End of test hole boring at 54.5 ft below ground elevation. This is a summary Log of Test Boring. Soil/Rock descriptions are derived from visual field identifications and laboratory test data. Note: REF = SPT Refusal			
100													
60													
95													
65													
90													
70													



LOG OF TEST BORING

Start Card R-65961

Job No. XL-2066 SR 167 Elevation 84.6 ft (25.8 m)

HOLE No. SRP-2-05

Sheet 1 of 2

Project I-405 RENTON NICKEL & IMPLEMENTATION PROJECT

Driller Joe Judd Lic# 2454

Site Address Vic Benson Rd. & SR 405

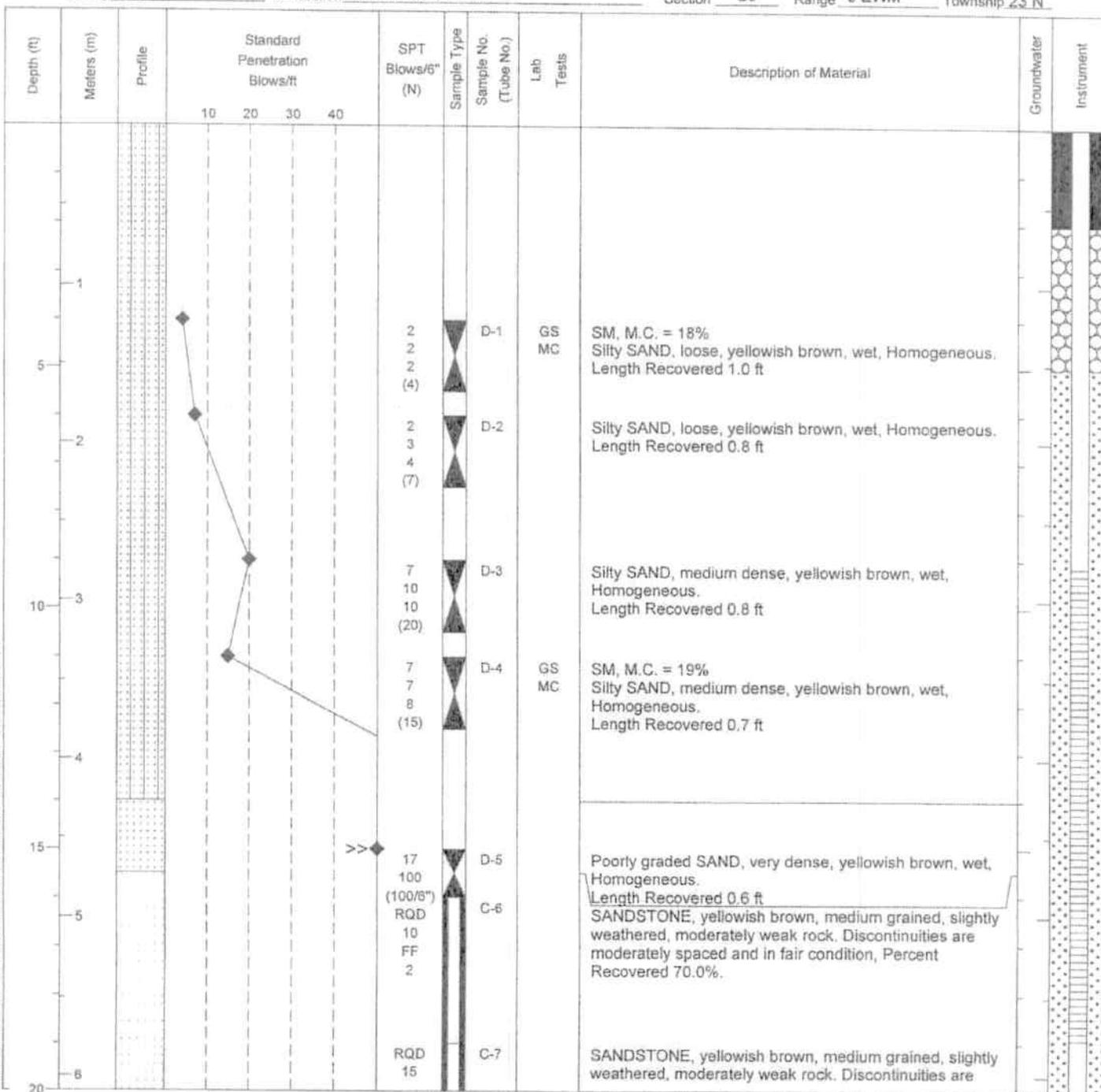
Inspector Dave Nelson

Start March 22, 2005 Completion March 22, 2005 Well ID# AHN-918 Equipment CME 850 w/ auto hammer

Station _____ Offset _____ Casing HWT x 5.0 & HQ x 24.0 Method Wet Rotary

Northing 175171.088 Easting 1301173.516 Latitude _____ Longitude _____

County King Subsection NW 1/4 of NW 1/4 Section 20 Range 5 EWM Township 23 N



SOIL XL-2066 SR 167 I-405 RENTON NICKEL GP J SOIL GDT 6/3/05.1.26.37 P5



LOG OF TEST BORING

Start Card R-65961

Job No. XL-2066 SR 167

Elevation 84.6 ft (25.8 m)

HOLE No. SRP-2-05

Sheet 2 of 2

Project I-405 RENTON NICKEL & IMPLEMENTATION PROJECT

Driller Joe Judd

Lic# 2454

Depth (ft)	Meters (m)	Profile	Standard Penetration Blows/ft				SPT Blows/6" (N)	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			10	20	30	40							
7							FF 3						
25													
8										End of test hole boring at 24 ft below ground elevation. This is a summary Log of Test Boring. Soil/Rock descriptions are derived from visual field identifications and laboratory test data. Bail Start @ 14.5, Bail Stopped @ 23.0, Recharged to 0.5 No Recharge			
9													
30													
10													
35													
11													
40													
12													
45													
13													



LOG OF TEST BORING

Start Card R-65961

Job No. XL2066 SR 167 Elevation 69.0 ft (21.0 m)

HOLE No. SRP-3-05

Sheet 1 of 2

Project I-405 RENTON NICKEL & IMPLEMENTATION PROJECT

Driller Sean Verlo Lic# 2615

Site Address Vic. of Benson Rd. South and SR 405

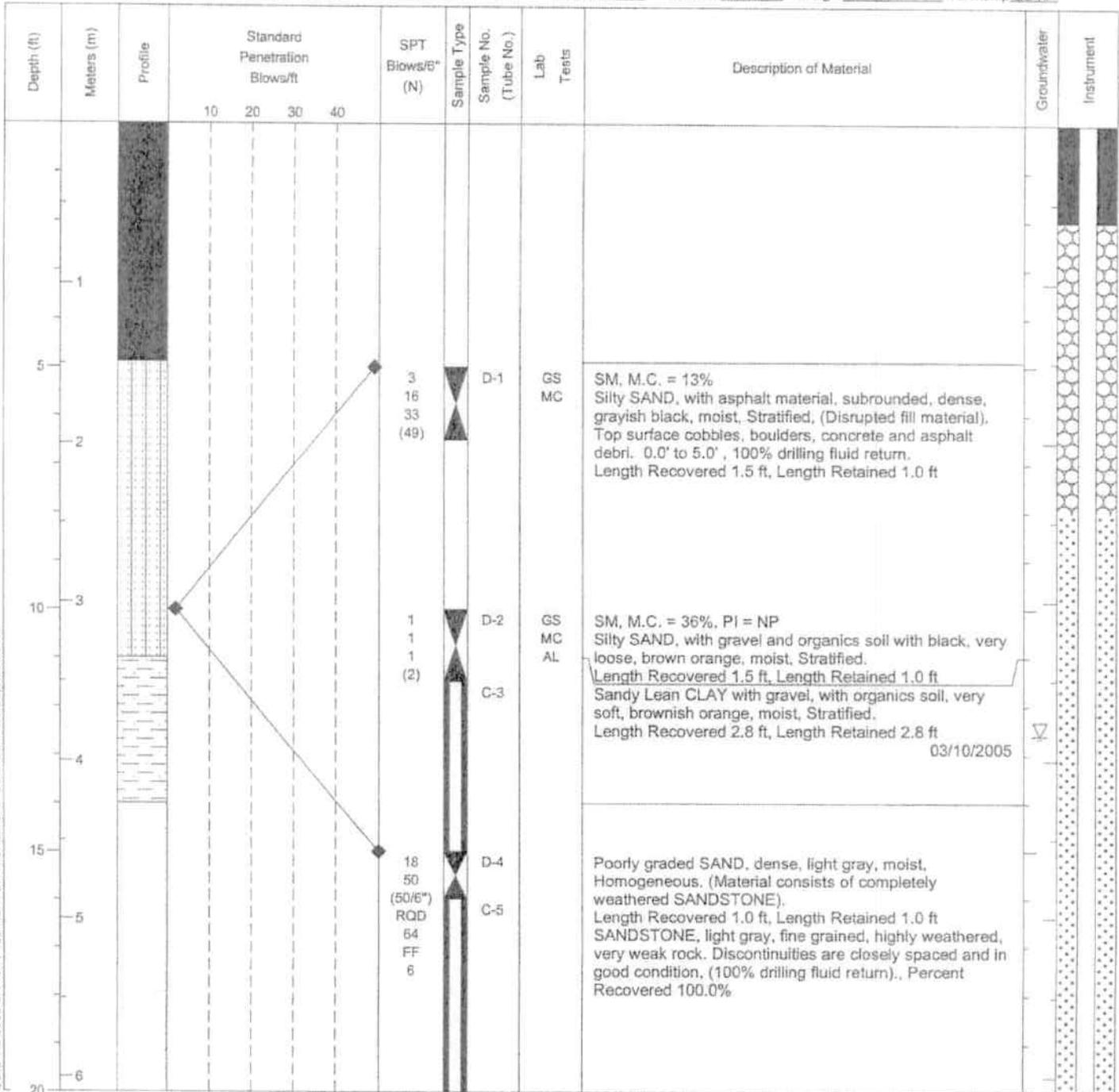
Inspector Cleo Andrews

Start March 9, 2005 Completion March 9, 2005 Well ID# AHN-919 Equipment CME 45 w/ autohammer

Station _____ Offset _____ Casing (HWT 4" ID x 12.0')(HQ 3" ID x 12.0') Wet Rotary

Northing 175492.512 Easting 1301369.542 Latitude _____ Longitude _____

County King Subsection NW 1/4 of the NW 1/4 Section 20 Range 5 EWM Township 25 N



SOIL_XL2066 SR 167 I-405 RENTON NICKEL.GPJ SOIL.GDT 5/3/05 8:33:20 A5



LOG OF TEST BORING

Start Card R-65961

Job No. XL2066 SR 167

Elevation 69.0 ft (21.0 m)

HOLE No. SRP-3-05

Sheet 2 of 2

Project I-405 RENTON NICKEL & IMPLEMENTATION PROJECT

Driller Sean Verlo

Lic# 2615

Depth (ft)	Meters (m)	Profile	Standard Penetration Blows/ft				SPT Blows/ft (N)	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			10	20	30	40							
7							RQD 100 FF 0	C-6		SANDSTONE, light gray, fine grained, highly weathered, very weak rock. Discontinuities are very closely spaced and in excellent condition, Percent Recovered 100.0%			
25	8						RQD 100 FF 0	C-7		SANDSTONE, light gray, fine grained, moderately weathered, moderately weak rock. Discontinuities are very closely spaced and in excellent condition, Percent Recovered 100.0%			
30	9						RQD 100 FF 0	C-8		SANDSTONE, light gray, fine grained, moderately weathered, moderately weak rock. Discontinuities are very closely spaced and in excellent condition, Percent Recovered 100.0%			
35	10						RQD 100 FF 0	C-9		SANDSTONE, light gray, fine grained, moderately weathered, moderately weak rock. Discontinuities are very closely spaced and in excellent condition, Percent Recovered 100.0%			
40	11						RQD 100 FF 0			End of test hole boring at 40 ft below ground elevation. This is a summary Log of Test Boring. Soil/Rock descriptions are derived from visual field identifications and laboratory test data.			
45	13									Water table in casing before bailing hole is 7.0, bailed hole to 25.2', after 15 minutes delay water table recharged to 12.6'. Ended test boring at 40.0' below ground elevation. Installed 1" ID piezo well with 10.0' slotted screen at 35.0'. 3/9/05.,			

SOIL XL-2066 SR 167 I-405 RENTON NICKEL GPJ SOIL GDT 5/3/05, 8:33:20 A5



LOG OF TEST BORING

Start Card R66031

Job No. XL-2066 SR 167 Elevation 56.0 ft

HOLE No. SRP-5-05

Sheet 1 of 2

Project I-405 RENTON NICKEL & IMPLEMENTATION PROJECT

Driller Sean Verlo Lic# 2615

Site Address Smithers Ave. South near 14th St.

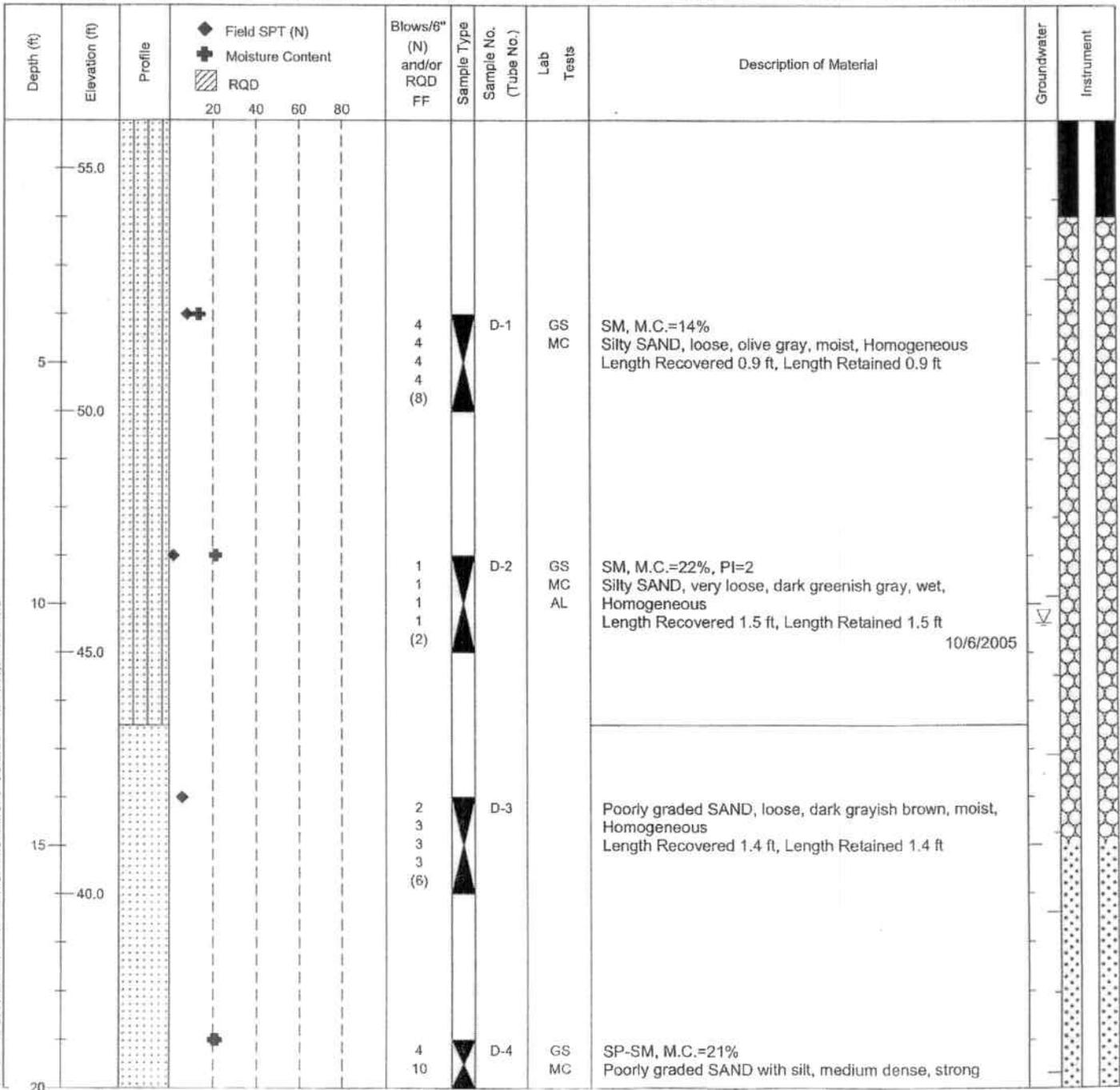
Inspector Joe Judd

Start June 6, 2005 Completion June 6, 2005 Well ID# AKK 306 Equipment CME 45 w/ autohammer

Station _____ Offset _____ Hole Dia 4.0 (inches) Method Wet Rotary

Northing 173691.80 Easting 1300088.00 Latitude _____ Longitude _____

County King Subsection SE 1/4 NE 1/4 Section 19 Range 5 EWM Township 23



SOILA_XL-2066 SR 167_I-405 RENTON NICKEL.GPJ SOIL.GDT 12/18/05 6:48:07 A:12



Depth (ft)	Meters (m)	Profile	Standard Penetration Blows/ft				SPT Blows/6" (N)	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			10	20	30	40							
7													
25													
8													
9													
30													
10													
35													
11													
12													
40													
13													
45													

SOIL XL-2066 SR 167 I-405 RENTON NICKEL_GPJ_SOIL_GDT_9/2/05, 7:46:32 AM

End of test hole boring at 31 ft below ground elevation. This is a summary Log of Test Boring. Soil/Rock descriptions are derived from visual field identifications and laboratory test data.



LOG OF TEST BORING

Start Card S-22852

Job No. XL-2066 SR 167 Elevation 161.0 ft (49.1 m)

HOLE No. SRW-1-05

Sheet 1 of 5

Project I-405 RENTON NICKEL & IMPLEMENTATION PROJECT

Driller Robert Shepherd Lic# 2710T

Site Address Vic. Benson Rd. South & SR 405

Inspector James Fetterly

Start June 21, 2005 Completion June 22, 2005 Well ID# _____ Equipment CME 55 w/ autohammer

Station _____ Offset _____ Casing 4"x 103' Method Wet Rotary

Northing 174382.296 Easting 1301123.771 Latitude _____ Longitude _____

County King Subsection SW/NW Section 20 Range 5 EWM Township 23 N

Depth (ft)	Meters (m)	Profile	Standard Penetration Blows/ft				SPT Blows/5" (N)	SPT Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			10	20	30	40							
1													
5						6 14 23 (37)	D-1			Silty SAND, dense, pale yellow, moist, Homogeneous Length Recovered 1.4 ft, Length Retained 1.4 ft			
10						6 8 10 (18)	D-2		GS MC	SM, M.C. = 17% Silty SAND, medium dense, pale yellow, moist, Homogeneous Length Recovered 1.4 ft, Length Retained 1.4 ft			
15						28 50/3 (50/3")	D-3			Silty SAND, very dense, pale yellow, moist, Homogeneous, weathered sandstone Length Recovered 0.8 ft, Length Retained 0.8 ft			
20						50/3 (50/3")	D-4			Silty SAND, very dense, pale yellow, moist, Homogeneous, weathered sandstone			

SOIL XL-2066 SR 167 I-405 RENTON NICKEL GPJ SOIL.GDT 8/30/05 9:24:23 AM



LOG OF TEST BORING

Start Card S-22852

Job No. XL-2066

SR 167

Elevation 181.0 ft (49.1 m)

HOLE No. SRW-1-05

Sheet 3 of 5

Project I-405 RENTON NICKEL & IMPLEMENTATION PROJECT

Driller Robert Shepherd

Lot# 2710T

Depth (ft)	Meters (m)	Profile	Standard Penetration Blows/ft				SPT Blows/ft (N)	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			10	20	30	40							
14		X					RQD 100 FF 0	C-10		SANDSTONE with coal seams, pale yellow, medium grained, completely weathered, very weak rock. Discontinuities are very widely spaced and in poor condition, Percent Recovered 100.0%			
50		X					RQD 100 FF 0	C-11		SANDSTONE with coal seams, pale yellow to light grey, medium grained, completely weathered, very weak rock. Discontinuities are very widely spaced and in poor condition, Percent Recovered 100.0%			
55		X					RQD 100 FF 0	C-12		SANDSTONE, medium light grey, medium grained, completely weathered, very weak rock. Discontinuities are very widely spaced and in poor condition, Percent Recovered 100.0%			
80		X					RQD 100 FF 0	C-13		SANDSTONE, medium light grey, medium grained, completely weathered, very weak rock. Discontinuities are very widely spaced and in poor condition, Percent Recovered 100.0%			
65		X					RQD 80 FF 1	C-14		SANDSTONE, medium light grey to pale yellow, medium grained, completely weathered, very weak rock. Discontinuities are very widely spaced and in poor condition, Percent Recovered 100.0%			
70		X											

BOIL XL-2066 SR 167 I-405 RENTON NICKEL GPJ SOIL GDT 09/30/05 09:24:23 AG



LOG OF TEST BORING

Start Card S-22852

Job No. XL-2066

SR 167

Elevation 161.0 ft (49.1 m)

HOLE No. SRW-1-05

Sheet 4 of 5

Project I-405 RENTON NICKEL & IMPLEMENTATION PROJECT

Driller Robert Shepherd Lic# 2710T

Depth (ft)	Meters (m)	Profile	Standard Penetration Blows/ft				SPT Blows/5' (N)	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			10	20	30	40							
22		X					RQD 100 FF 0	C-15		SANDSTONE, yellowish grey, medium grained, completely weathered, very weak rock. Discontinuities are very widely spaced and in poor condition, Percent Recovered 70.0%			
75		X					RQD 100 FF 0	C-16		SANDSTONE bedded with organics, light grey to dark grey, medium grained, completely weathered, very weak rock. Discontinuities are very widely spaced and in poor condition, Percent Recovered 100.0%			
24		X									06/22/2005	▽	
80		X					RQD 100 FF 0	C-17		SANDSTONE, pale blue, medium grained, completely weathered, very weak rock. Discontinuities are very widely spaced and in poor condition, Percent Recovered 100.0%			
25		X											
85		X					RQD 100 FF 0	C-18		SANDSTONE, pale blue, medium grained, completely weathered, very weak rock. Discontinuities are very widely spaced and in poor condition, Percent Recovered 100.0%			
27		X											
90		X					RQD 100 FF 0	C-19		SANDSTONE, pale blue, medium grained, completely weathered, very weak rock. Discontinuities are very widely spaced and in poor condition, Percent Recovered 50.0%			
28		X											
85		X											

SOIL_XL-2066 SR 167 I-405 RENTON NICKEL.GPJ SOIL.GDT 6/20/05 9:24:23 AM



LOG OF TEST BORING

Start Card S-22708

Job No. XL2066 SR 167 Elevation 37.7 ft (11.5 m)

HOLE No SRX-16-05

Sheet 1 of 4

Project I-405 RENTON NICKEL & IMPLEMENTATION PROJECT

Driller Joe Judd Lic# 2454

Site Address Vic. SR 405 & SR 167

Inspector Brian Hilts

Start February 24, 2005 Completion February 24, 2005 Well ID# _____ Equipment CME 850 w/ autohammer

Station _____ Offset _____ Casing HQ. 3.5" Method Wet Rotary

Northing 173320.56 Easting 1298265.811 Latitude _____ Longitude _____

County King Subsection SW/NE Section 19 Range 5 EWM Township 23 N

Depth (ft)	Meters (m)	Profile	Standard Penetration Blows/ft				SPT Blows/6" (N)	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			10	20	30	40							
1													
5						13 16 28 (44)	D-1			Poorly graded SAND, dense, light grey, moist, Homogeneous, highly weathered SANDSTONE. Length Recovered 1.5 ft, Length Retained 1.5 ft			
10						>> 90 (90/6")	D-2			Poorly graded SAND, with black organics (coal), very dense, light grey, moist, Stratified, color change to black at 6.0' and back to grey at 7.5', highly weathered SANDSTONE. Length Recovered 0.5 ft, Length Retained 0.5 ft			
15						>> 83 (83/6")	D-3 C-4			Poorly graded SAND, very dense, light grey, moist, Homogeneous, highly weathered SANDSTONE. Length Recovered 0.5 ft, Length Retained 0.5 ft Poorly graded SAND, very dense, light grey, moist, Homogeneous, highly weathered SANDSTONE. Length Recovered 1.5 ft, Length Retained 1.5 ft			
20													

02/25/2005



LOG OF TEST BORING

Start Card S-22708

Job No. XL2066

SR 157

Elevation 37.7 ft (11.5 m)

HOLE No. SRX-16-05

Sheet 2 of 4

Project I-405 RENTON NICKEL & IMPLEMENTATION PROJECT

Driller Joe Judd

Lot# 2454

Depth (ft)	Meters (m)	Profile	Standard Penetration Blows/ft				SPT Blows/ft (N)	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			10	20	30	40							
7							60 50/3" (50/3")	D-5 C-6		Poorly graded SAND, very dense, light grey, moist, Homogeneous, highly weathered SANDSTONE. Length Recovered 0.8 ft, Length Retained 0.8 ft Poorly graded SAND, very dense, light grey, moist, Homogeneous, highly weathered SANDSTONE. Length Recovered 1.6 ft, Length Retained 1.6 ft			
8							18 50/3" (50/3")	D-7 C-8		Poorly graded SAND, very dense, light grey, moist, Homogeneous, highly weathered SANDSTONE. Length Recovered 0.8 ft, Length Retained 0.8 ft Poorly graded SAND, very dense, light grey, moist, Homogeneous, highly weathered SANDSTONE. Length Recovered 0.4 ft, Length Retained 0.4 ft			
9							>>> 60/5" (60/5") RQD 73 FF 6	D-9 C-10		Poorly graded SAND, very dense, light grey, moist, Homogeneous, highly weathered SANDSTONE. Length Recovered 0.4 ft, Length Retained 0.4 ft SANDSTONE, light grey, coarse grained, moderately weathered, very weak rock. Discontinuities are moderately spaced and in fair condition, Percent Recovered 81.0%			
11							50/5" (50/5") RQD 21 FF 1.2	D-11 C-12		Poorly graded SAND, very dense, light grey, moist, Homogeneous, highly weathered SANDSTONE. Length Recovered 0.2 ft, Length Retained 0.2 ft SANDSTONE, light grey, coarse grained, highly weathered, very weak rock. Discontinuities are very closely spaced and in poor condition, Percent Recovered 38.0%			
13							>>> 75/5" (75/5")	D-13 C-14		Poorly graded SAND, very dense, light grey, moist, Homogeneous, highly weathered SANDSTONE. Length Recovered 0.4 ft, Length Retained 0.4 ft Poorly graded SAND, very dense, light grey, moist, Homogeneous, highly weathered SANDSTONE. Length Recovered 0.6 ft, Length Retained 0.6 ft			

SOIL XL-2066 SR 157 I-405 RENTON NICKEL GPJ SOIL.GDT 4/28/05, P-43 51 A4



LOG OF TEST BORING

Start Card S-22708

Job No. XL2066

SR

167

Elevation 37.7 ft (11.5 m)

HOLE No. SRX-16-05

Sheet 3 of 4

Project I-405 RENTON NICKEL & IMPLEMENTATION PROJECT

Driller Joe Judd

Lic# 2454

Depth (ft)	Meters (m)	Profile	Standard Penetration Blows/ft				SPT Blows/ft (N)	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			10	20	30	40							
14							>> 60/3" (60/3")	D-15 C-16		Poorly graded SAND, very dense, light grey, moist, Homogeneous, highly weathered SANDSTONE. Length Recovered 0.3 ft, Length Retained 0.3 ft			
							RQD 82						
							FF 1						
15													
50							>> 60/4" (60/4")	D-17 C-18		Poorly graded SAND, very dense, light grey, moist, Homogeneous, SANDSTONE. Length Recovered 0.2 ft, Length Retained 0.2 ft			
							RQD 55						
							FF 1.2						
16													
55							>> 70/4" (70/4")	D-19 C-20		Poorly graded SAND, very dense, light grey, moist, Homogeneous, SANDSTONE. Length Recovered 0.4 ft, Length Retained 0.4 ft			
							RQD 82						
							FF 2						
17													
60							>> 70/4" (70/4")	D-21 C-22		Poorly graded SAND, very dense, light grey, moist, Homogeneous, SANDSTONE. Length Recovered 0.4 ft, Length Retained 0.4 ft			
							RQD 91						
							FF .6						
18													
65							>> 80/5" (80/5")	D-23 C-24		Poorly graded SAND, very dense, light grey, moist, Homogeneous. Length Recovered 0.4 ft, Length Retained 0.4 ft			
							RQD 100						
							FF 0						
19													
85													
20													
70													
21													

SOIL XL 2066 SR 167 I-405 RENTON NICKEL.GPJ SOIL.GDT 4/29/05 9:43:51 AM



LOG OF TEST BORING

Start Card S-22708

Job No. XL2066

SR 167

Elevation 37.7 ft (11.5 m)

HOLE No. SRX-16-05

Sheet 4 of 4

Project I-405 RENTON NICKEL & IMPLEMENTATION PROJECT

Driller Joe Judd

Lic# 2454

Depth (ft)	Meters (m)	Profile	Standard Penetration Blows/ft				SPT Blows/ft (N)	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			10	20	30	40							
22						>> 60/3* (60/3*)		D-25		Poorly graded SAND, very dense, light grey, moist, Homogeneous, SANDSTONE Length Recovered 0.3 ft, Length Retained 0.3 ft			
75										End of test hole boring at 70.8 ft below ground elevation. This is a summary Log of Test Boring. Soil/Rock descriptions are derived from visual field identifications and laboratory test data.			
23													
24													
80													
25													
85													
26													
27													
90													
28													
95													



LOG OF TEST BORING

Start Card S-22687

Job No. _____ SR 167 Elevation 35.7 ft (10.9 m)

HOLE No. SRX-17-05

Sheet 1 of 3

Project I-405 RENTON NICKEL & IMPLEMENTATION PROJECT

Driller Mike Harvey Lic# 2599

Site Address Vic. SR 405 & Rainier Ave.

Inspector Dan Reed

Start March 10, 2005 Completion March 10, 2005 Well ID# _____ Equipment CME 55 w/ autohammer

Station _____ Offset _____ Casing HW-4.5/HQ-3.5 Method Wet Rotary

Northing 173931.513 Easting 1299125.536 Latitude _____ Longitude _____

County King Subsection SW 1/4 of the NE 1/4 Section 19 Range 5 EWM Township 23 N

Depth (ft)	Meters (m)	Profile	Standard Penetration Blows/ft				SPT Blows/6" (N)	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			10	20	30	40							
1													
5						4	▼	D-1		Well graded SAND, loose, light brown, wet, Homogeneous, with large gravel as indicated by drilling. Length Recovered 1.5 ft, Length Retained 1.5 ft			
10						13 18 21 (39)	▼	D-2		Well graded SAND, dense, light brown, moist, Homogeneous, Contact with highly weathered sandstone at 10.0'. Length Recovered 1.5 ft, Length Retained 1.5 ft			
15						15 15 17 (32)	▼	D-3		Well graded SAND, dense, light brown, moist, Homogeneous. C-4 17.0' to 22.0'. Length Recovered 1.5 ft, Length Retained 1.5 ft			
20						RQD 82 FF 1	■	C-4		SANDSTONE, medium grained, moderately weathered, moderately weak rock. Discontinuities are moderately spaced and in good condition, Fresh strong gray rock 20.7' to 22.0', Percent Recovered 100.0%			

03/10/2005
03/10/2005



LOG OF TEST BORING

Start Card S-22667

Job No. _____ SR 167

Elevation 35.7 ft (10.9 m)

HOLE No. SRX-17-05

Sheet 2 of 3

Project I-405 RENTON NICKEL & IMPLEMENTATION PROJECT

Driller Mike Harvey Lic# 2599

Depth (ft)	Meters (m)	Profile	Standard Penetration Blows/ft				SPT Blows/6" (N)	Sample Type	Sample No (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			10	20	30	40							
7							RQD 75 FF 2	C-5		SANDSTONE, medium grained, highly weathered, moderately weak rock. Discontinuities are closely spaced and in fair condition, Altered zones within rock mass. Grain size and color changes., Percent Recovered 78.0%			
8							RQD 94 FF 1	C-6		SANDSTONE, medium grained, fresh, moderately strong rock. Discontinuities are widely spaced and in excellent condition, Percent Recovered 96.0%			
9							RQD 100 FF 1	C-7		SANDSTONE, medium grained, fresh, moderately strong rock. Discontinuities are widely spaced and in excellent condition, Percent Recovered 100.0%			
10							RQD 94 FF 1	C-8		SANDSTONE, medium grained, fresh, moderately strong rock. Discontinuities are widely spaced and in excellent condition, Percent Recovered 100.0%			
11							RQD 100 FF 0.8	C-9		SANDSTONE, coarse grained, fresh, moderately strong rock. Discontinuities are widely spaced and in excellent condition, Percent Recovered 100.0%			
12													
13													
45													



LOG OF TEST BORING

Start Card S-22687

Job No. _____ SR 167

Elevation 35.7 ft (10.9 m)

HOLE No SRX-17-05

Sheet 3 of 3

Project I-405 RENTON NICKEL & IMPLEMENTATION PROJECT

Driller Mike Harvey

Lic# 2599

Depth (ft)	Meters (m)	Profile	Standard Penetration Blows/ft				SPT Blows/6" (N)	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			10	20	30	40							
14													
							78/2" (78/2")	D-10			Well graded SAND, very dense, gray, moist, Homogeneous, SANDSTONE. Length Recovered 0.3 ft, Length Retained 0.3 ft		
15													
50											End of test hole boring at 47.3 ft below ground elevation. This is a summary Log of Test Boring. Soil/Rock descriptions are derived from visual field identifications and laboratory test data.		
16											Bail and Recharge, bore hole water level before bailing -9.0', bailed bore hole water level to -36.0', after 15 minutes -31.0', after 30 minutes -26.0', after 45 minutes -23.0', after 60 minutes -20.1', water table stabilized at -17.3'.		
55													
17													
18													
60													
19													
65													
20													
21													
70													



Washington State
Department of Transportation

LOG OF TEST BORING

Start Card S-22709

Job No. XL2066 SR 167 Elevation 47.8 ft (14.6 m)

HOLE No. SRX-18-05

Sheet 1 of 3

Project I-405 RENTON NICKEL & IMPLEMENTATION PROJECT

Driller Danny Henderson Lic# 2742T

Site Address Vic. SR 405 & SR-167

Inspector Joe Judd

Start February 22, 2005 Completion February 23, 2005 Well ID# _____ Equipment CME 850 w/ autohammer

Station _____ Offset _____ Casing HQ 3.5" Method Wet Rotary

Northing 173910.469 Easting 1300073.029 Latitude _____ Longitude _____

County King Subsection SE/NE Section 19 Range 5 EWM Township 23 N

Depth (ft)	Meters (m)	Profile	Standard Penetration Blows/ft				SPT Blows/6" (N)	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			10	20	30	40							
1													
5						3 5 6 (11)	D-1			SILT, medium dense, light brown, moist, Homogeneous. Length Recovered 1.3 ft, Length Retained 1.3 ft			
10						2 4 5 (9)	D-2			Poorly graded SAND, loose, light brown, moist, Homogeneous. Length Recovered 1.0 ft, Length Retained 1.0 ft			
15						5 5 6 (11)	D-3			Poorly graded SAND, medium dense, light brown, wet, Homogeneous. Length Recovered 0.9 ft, Length Retained 0.9 ft			
20						4 4	D-4			Poorly graded SAND, loose, brown, wet, Homogeneous. Length Recovered 0.9 ft, Length Retained 0.9 ft			

SOIL XL-2066 SR 167 I-405 RENTON NICKEL GP J SOIL GDT 4/29/05, 9:43:52 AM



LOG OF TEST BORING

Start Card S-22709

Job No. XL2066

SR 167

Elevation 47.8 ft (14.6 m)

HOLE No. SRX-18-05

Sheet 2 of 3

Project I-405 RENTON NICKEL & IMPLEMENTATION PROJECT

Driller Danny Henderson

Lic# 2742T

Depth (ft)	Meters (m)	Profile	Standard Penetration Blows/ft				SPT Blows/6" (N)	Sample Type Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			10	20	30	40						
7							5 (9)					
25							6 6 7 (13)	D-5		Poorly graded SAND, medium dense, BROWN, wet, Homogeneous. Length Recovered 1.0 ft, Length Retained 1.0 ft		
30								S-6		Sandy SILT, very loose, light grey, moist, Homogeneous. Length Recovered 1.9 ft, Length Retained 1.9 ft		
10							1 5 3 (8)	D-7		Sandy SILT, loose, light grey, moist, Stratified. Length Recovered 1.5 ft, Length Retained 1.5 ft		
35							2 9 12 (21)	D-8		Silty SAND, medium dense, light grey, moist, Stratified. Length Recovered 0.9 ft, Length Retained 0.9 ft		
40							>> 70/3" (70/3") ROD 88 FF .6	D-9 C-10		Silty SAND, very dense, light grey, dry, Homogeneous, ENCOUNTERED SANDSTONE at 37.1'. Length Recovered 0.2 ft, Length Retained 0.2 ft SANDSTONE, medium light grey, coarse grained, fresh, very weak rock. Discontinuities are moderately spaced and in fair condition, soil infill from 47.5' to 47.7' note, top 1.5' sand. Percent Recovered 100.0%		
45												