DRILL HOLE LOG

BORING NO. 08-S3-B1

PROJECT: I-15 UTAH CO. CORRIDOR - S3, 1600 SOUTH OVER I-15
CLIENT: UTAH DEPARTMENT OF TRANSPORTATION
LOCATION: N:223,487 E:599,939
DRILLING METHOD: 96-CME-55 / N.W. CASING TO 10'
DRILLER: L. HILER
DEPTH TO WATER - INITIAL: N.M. **AFTER 24 HOURS:** 7.0'

PROJECT NUMBER: 200801.200
DATE STARTED: 8/6/08
DATE COMPLETED: 8/8/08
GROUND ELEVATION: 4522.1'
LOGGED BY: G. PEASLEE, J. BOONE

Elev. (ft)	Depth (ft)	Lithology	Sample Type	Sample Rec. (in)	Sample See Legend	Sample USCS (AASHTO)	Material Description	Dry Density (pcf)	Moisture Content (%)	Atter. Liquid Limit	Atter. Plast. Index	Gradation Gravel (%)	Gradation Sand (%)	Gradation Silt/Clay (%)	Other Tests
4520				14	6,14,14,(59)	GM	brown, slightly moist, dense — SILTY GRAVEL W/SAND								
4515	5			13	2,5,7,(27) *0.30*	CL-ML (*A-4(4)*)	lt. brown to brown, very moist, firm — SILTY CLAY		28.6	26	5	0	3	97	
4510	10			12	Pushed *0.68*	SM (*A-4(0)*)	brown, wet — SILTY SAND		23.3		NP	1	57	42	
						ML (*A-4(6)*)	lt. brown, moist, stiff — SILT plastic	90.3	27.5	31	7	4	10	86	DS
4505	15			22	0/22",(0) *0.05*	CL (*A-4(2)*)	lt. brown, wet, very soft		29.3	22	8	0	39	61	29% -0.005 mm
4500	20			18	Pushed *0.36*	CL (*A-6(12)*)	lt. brown, moist, firm	89.8	27.1	30	14	0	4	96	CT UU
4495	25			18	5,9,14,(32) *1.50*	CL	red-brown, moist, very stiff								
4490	30			11	Pushed *1.10*	CL (*A-7-6(24)*)	brown & gray, moist, very stiff — LEAN CLAY silt lenses	100.3	22.8	42	23	0	1	99	UC
4485	35			12	4,7,9,(20) *1.40*	CL	brown & gray, moist, very stiff								
4480	40			16	Pushed *0.61*	CL (*A-6(22)*)	gray, moist, stiff	92.4	33.2	40	21	0	0	100	CT UU
4475	45			16	0/20",(0) *0.25*	CL	gray & brown, moist, soft to firm								
							SILT								

DH_LOGV1 08-S3.GPJ US EVAL.GDT 4/14/09

RB&G ENGINEERING, INC.

LEGEND:

DISTURBED SAMPLE: 2,3,2,(6) — Blow Count per 6"; $(N_1)_{60}$ Value; *0.45* — Torvane (tsf)

UNDISTURBED SAMPLE: PUSHED *0.45* — Torvane (tsf)

OTHER TESTS
UC = Unconfined Compression
CT = Consolidation
DS = Direct Shear
UU = Unconsolidated, Undrained
CU = Consolidated, Undrained
HYD = Hydrometer
SS = Soluble Salt
DC = Dispersive Clay

DRILL HOLE LOG

BORING NO. 08-S3-B1

PROJECT: I-15 UTAH CO. CORRIDOR - S3, 1600 SOUTH OVER I-15
CLIENT: UTAH DEPARTMENT OF TRANSPORTATION
LOCATION: N:223,487 E:599,939
DRILLING METHOD: 96-CME-55 / N.W. CASING TO 10'
DRILLER: L. HILER
DEPTH TO WATER - INITIAL: N.M. **AFTER 24 HOURS:** 7.0'

PROJECT NUMBER: 200801.200
DATE STARTED: 8/6/08
DATE COMPLETED: 8/8/08
GROUND ELEVATION: 4522.1'
LOGGED BY: G. PEASLEE, J. BOONE

Elev. (ft)	Depth (ft)	Lithology	Sample Type	Sample Rec. (in)	Sample See Legend	Sample USCS (AASHTO)	Material Description	Dry Density (pcf)	Moisture Content (%)	Atter. Liquid Limit	Atter. Plast. Index	Gradation Gravel (%)	Gradation Sand (%)	Gradation Silt/Clay (%)	Other Tests
				14	Pushed 0.06	ML (A-4(6))	brown, moist, very soft SILT		26.3	30	6	0	3	97	
4470															
	55			22	0/22",(0) 0.26	CL	gray, moist, firm								
4465															
	60			15	Pushed 0.59	CL (A-7-6(21))	gray, moist, stiff LEAN CLAY	86.9	34.3	41	21	0	0	100	CT UU
4460															
	65			24	0/24",(0) 0.27	CL	gray to dk. gray, moist, firm								
4455															
	70			15	Pushed 0.44	CL (A-7-6(29))	gray, moist, firm	87.6	30.5	47	26	0	1	99	UC
4450															
	75			17	0/20",(0) 0.42	CH	dk. gray, moist, firm FAT CLAY								
4445															
	80			17	Pushed 0.63	CH (A-7-6(35))	dk. gray, moist, stiff	75.3	44.4	53	31	0	1	99	CT UU
4440															
	85			15	12,15,18,(28) 0.57	SM (A-2-4(0)) CL-ML	dk. gray, wet, med. dense SILTY SAND; brown, moist, stiff SILTY CLAY W/SAND		28.8		NP	0	71	29	
4435															
	90			18	11,12,15,(22) 0.53	SM (A-2-4(0)) CL-ML	dk. gray, wet, med. dense SILTY SAND; brown, moist, stiff SILTY CLAY W/SAND		28.2		NP	0	82	18	
4430							FLOWING SANDS (driller's observation)								
	95			19	0/19",(0) 0.40	CL	dk. gray, moist, firm LEAN CLAY silt lenses								
4425							SILTY SAND								

LEGEND:

DISTURBED SAMPLE — 2,3,2,(6) — Blow Count per 6"; $(N_1)_{60}$ Value; 0.45 — Torvane (tsf)

UNDISTURBED SAMPLE — PUSHED 0.45 — Torvane (tsf)

OTHER TESTS
UC = Unconfined Compression
CT = Consolidation
DS = Direct Shear
UU = Unconsolidated, Undrained
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RB&G ENGINEERING, INC.

DRILL HOLE LOG

BORING NO. 08-S3-B1

PROJECT: I-15 UTAH CO. CORRIDOR - S3, 1600 SOUTH OVER I-15
CLIENT: UTAH DEPARTMENT OF TRANSPORTATION
LOCATION: N:223,487 E:599,939
DRILLING METHOD: 96-CME-55 / N.W. CASING TO 10'
DRILLER: L. HILER
DEPTH TO WATER - INITIAL: N.M. **AFTER 24 HOURS:** 7.0'

PROJECT NUMBER: 200801.200
DATE STARTED: 8/6/08
DATE COMPLETED: 8/8/08
GROUND ELEVATION: 4522.1'
LOGGED BY: G. PEASLEE, J. BOONE

Elev. (ft)	Depth (ft)	Lithology	Sample Type	Sample Rec. (in)	Sample See Legend	USCS (AASHTO)	Material Description	Dry Density (pcf)	Moisture Content (%)	Atter. Liquid Limit	Atter. Plast. Index	Gradation Gravel (%)	Gradation Sand (%)	Gradation Silt/Clay (%)	Other Tests
				13	Pushed	SM	brown, wet — SILTY SAND								
4420															
	105			18	0.39 0/10",5,5,(8) 0.38	MH (A-7-5(18)) CL CL-ML	green-brown to dk. gray, moist, firm — ELASTIC SILT W/SAND brown, moist, firm — LEAN CLAY brown, moist, firm — SILTY CLAY W/SAND		43.6	53	23	0	27	73	
4415															
	110			0	Pushed	-	no recovery								
4410				13	23,33,30,(47)	SM (A-2-4(0))	brown, wet, dense — SILTY SAND		24.4		NP	0	86	14	
	115			16	13,16,28,(32)	SM CL-ML/CL SP-SM	gray-brown, wet brown — SILTY CLAY W/SAND brown, wet, dense — SAND W/SILT								
4405															
	120			13	Pushed 0.29	ML (A-4(8))	dk. gray, very moist, firm — SILT plastic	86.8	34.9	31	8	0	1	99	CT UU
4400															
	125														
4395															
	130			12	22,60,60/4", (REF)	GP-GM	brown, wet, very dense — GRAVEL W/SILT & SAND possible cobbles								
4390															
	135														
4385															
	140														
4380															
	145														
4375															

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RB&G ENGINEERING, INC.

LEGEND:

DISTURBED SAMPLE — 2,3,2,(6) — Blow Count per 6"; $(N_1)_{60}$ Value; 0.45 — Torvane (tsf)

UNDISTURBED SAMPLE — PUSHED; 0.45 — Torvane (tsf)

OTHER TESTS
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DC = Dispersive Clay

DRILL HOLE LOG

BORING NO. 08-S3-B2

PROJECT: I-15 UTAH CO. CORRIDOR - S3, 1600 SOUTH OVER I-15
CLIENT: UTAH DEPARTMENT OF TRANSPORTATION
LOCATION: N:223,605 E:599,767
DRILLING METHOD: 08-CME-55 / N.W. CASING TO 35'
DRILLER: D. SAMPSON
DEPTH TO WATER - INITIAL: ▽ 5.5' **AFTER 24 HOURS:** ▼ 5.5'

PROJECT NUMBER: 200801.200
DATE STARTED: 8/4/08
DATE COMPLETED: 8/6/08
GROUND ELEVATION: 4520.7'
LOGGED BY: J. PRICE, J. BOONE

Elev. (ft)	Depth (ft)	Lithology	Sample Type	Sample Rec. (in)	Sample See Legend	Sample USCS (AASHTO)	Material Description	Dry Density (pcf)	Moisture Content (%)	Atter. Liquid Limit	Atter. Plast. Index	Gradation Gravel (%)	Gradation Sand (%)	Gradation Silt/Clay (%)	Other Tests
4520			■	8	10,14,13,(57)	GM	gray-brown, dry, dense SILTY GRAVEL W/SAND								
4515	5		⊠	18	Pushed *0.45*	ML (*A-4(2)*)	brown, moist, firm SILT plastic	97.8	23.6	26	3	0	2	98	CU
4510	10		■	14	*0.72* 4,5,7,(24)	CL SC-SM (*A-4(0)*)	LEAN CLAY dk. brown, stiff dk. brown, med. dense SILTY CLAYEY SAND		13.9	21	6	0	51	49	
4505	15		⊠	18	*0.20* Pushed 2,4,4,(14)	CL (*A-6(7)*) SM (*A-4(0)*)	SANDY LEAN CLAY brown, moist, soft brown SILTY SAND	98.1	25.4 21.1	33	19 NP	0 2	43 60	57 38	CT
			■	16	*0.20*	CL	dk. brown, soft								
4500	20		■	18	3,4,5,(14) *0.80*	CL (*A-6(20)*)	brown, moist, stiff LEAN CLAY occasional silt lenses		27.0	40	19	0	1	99	
4495	25		⊠	15	Pushed *1.50*	CL (*A-7-6(28)*)	brown, moist, very stiff	98.7	25.1	44	26	0	1	99	CT UC
4490	30		■	8	0/18",(0) *0.16*	CL	brown, wet, soft								
			■	18	2,5,10,(20) *0.99+*	CL	gray & brown, moist, very stiff LEAN CLAY								
4485	35		⊠	17	Pushed *1.63*	CL (*A-6(23)*)	brown, moist, very stiff	95.7	24.8	40	22	0	0	100	UU
4480	40		■	18	3,5,7,(14) *1.38*	CL	brown, moist, very stiff LEAN CLAY few silt lenses								
4475	45		⊠	18	Pushed *0.65*	CL (*A-6(20)*)	gray, moist, stiff	90.6	29.3	38	19	0	0	100	CT UC

DH_LOGV1 08-S3.GPJ US EVAL.GDT 4/14/09

RB&G ENGINEERING, INC.

LEGEND:

DISTURBED SAMPLE ■ 2,3,2,(6) ← Blow Count per 6"; ← $(N_1)_{60}$ Value; *0.45* ← Torvane (tsf)

UNDISTURBED SAMPLE ⊠ PUSHED *0.45* ← Torvane (tsf)

OTHER TESTS
UC = Unconfined Compression
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SS = Soluble Salt
DC = Dispersive Clay

DRILL HOLE LOG

BORING NO. 08-S3-B2

PROJECT: I-15 UTAH CO. CORRIDOR - S3, 1600 SOUTH OVER I-15
CLIENT: UTAH DEPARTMENT OF TRANSPORTATION
LOCATION: N:223,605 E:599,767
DRILLING METHOD: 08-CME-55 / N.W. CASING TO 35'
DRILLER: D. SAMPSON
DEPTH TO WATER - INITIAL: ▽ 5.5' **AFTER 24 HOURS:** ▼ 5.5'

PROJECT NUMBER: 200801.200
DATE STARTED: 8/4/08
DATE COMPLETED: 8/6/08
GROUND ELEVATION: 4520.7'
LOGGED BY: J. PRICE, J. BOONE

Elev. (ft)	Depth (ft)	Lithology	Sample Type	Sample Rec. (in)	Sample See Legend	USCS (AASHTO)	Material Description	Dry Density (pcf)	Moisture Content (%)	Atter. Liquid Limit	Atter. Plast. Index	Gradation Gravel (%)	Gradation Sand (%)	Gradation Silt/Clay (%)	Other Tests
4470			■	18	0,3,3,(7) *0.50*	CL	gray, moist, firm to stiff — LEAN CLAY, few silt lenses								
4465	55		⊠	9	Pushed *0.40*	CL-ML (*A-4(4)*)	gray, moist, firm — SILTY CLAY		25.7	25	6	0	3	97	
4460	60		■	18	0/18",(0) *0.30*	CL	gray, moist, firm								
4455	65		⊠	18	Pushed *0.55*	CL (*A-7-6(26)*)	gray, moist, stiff	83.6	37.8	44	24	0	1	99	CT UC UU
4450	70		■	18	0,0,3,(3) *0.55*	CL	gray, moist, stiff — LEAN CLAY, occasional silt lenses								
4445	75		⊠	18	Pushed *0.55*	CL (*A-7-6(24)*)	gray, moist, stiff	86.3	32.7	43	22	0	1	99	UC
4440	80		■	18	0,0,7,(6) *0.88*	CL	gray, moist, stiff								
4435	85		⊠	18	*0.53* Pushed	CL (*A-7-6(25)*)	gray, moist, stiff	90.0	34.3	45	26	0	9	91	
						SM (*A-2-4(0)*)	gray, wet		23.2		NP	0	67	33	
4430	90		■	12	9,8,13,(18)	SM (*A-4(0)*)	gray, wet, med. dense — SILTY SAND, some silty clay layers to 1" thick		27.1		NP	0	61	39	
4425	95		■	18	1,2,5,(6)	SM (*A-2-4(0)*)	gray-brown, wet, loose		27.6		NP	0	84	16	
						CL	gray-brown, moist, firm to stiff — LEAN CLAY								
							SILTY SAND								

DH_LOGV1 08-S3.GPJ US EVAL.GDT 4/14/09

RB&G ENGINEERING, INC.

LEGEND:

DISTURBED SAMPLE ■ 2,3,2,(6) — Blow Count per 6"; $(N_1)_{60}$ Value
0.45 — Torvane (tsf)

UNDISTURBED SAMPLE ⊠ PUSHED
0.45 — Torvane (tsf)

OTHER TESTS
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HYD = Hydrometer
SS = Soluble Salt
DC = Dispersive Clay

DRILL HOLE LOG

BORING NO. 08-S3-B2

PROJECT: I-15 UTAH CO. CORRIDOR - S3, 1600 SOUTH OVER I-15

CLIENT: UTAH DEPARTMENT OF TRANSPORTATION

LOCATION: N:223,605 E:599,767

DRILLING METHOD: 08-CME-55 / N.W. CASING TO 35'

DRILLER: D. SAMPSON

DEPTH TO WATER - INITIAL: ▽ 5.5' **AFTER 24 HOURS:** ▼ 5.5'

PROJECT NUMBER: 200801.200

DATE STARTED: 8/4/08

DATE COMPLETED: 8/6/08

GROUND ELEVATION: 4520.7'

LOGGED BY: J. PRICE, J. BOONE

Elev. (ft)	Depth (ft)	Lithology	Sample Type	Sample Rec. (in)	Sample See Legend	Sample USCS (AASHTO)	Material Description	Dry Density (pcf)	Moisture Content (%)	Atter. Liquid Limit	Atter. Plast. Index	Gradation Gravel (%)	Gradation Sand (%)	Gradation Silt/Clay (%)	Other Tests
4420				18	9,17,30,(37)	SM ML	gray-brown, wet, dense: SILTY SAND gray-brown, wet, dense: interbedded w/lean clay layers to 3" thick SANDY SILT lean clay layers to 3" thick								
4415	105														
4410	110														
4405	115														
4400	120														
4395	125														
4390	130														
4385	135														
4380	140														
4375	145														

DH_LOGV1 08-S3.GPJ US EVAL.GDT 4/14/09

RB&G ENGINEERING, INC.

LEGEND:

DISTURBED SAMPLE — 2,3,2,(6) — Blow Count per 6"; $(N_1)_{60}$ Value; 0.45 — Torvane (tsf)

UNDISTURBED SAMPLE — PUSHED; 0.45 — Torvane (tsf)

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