DRILL HOLE LOG

BORING NO. 08-OR3-B1

PROJECT: I-15 UTAH COUNTY CORRIDOR - OR3, I-15 OVER 800 NORTH (SR-52)
CLIENT: UTAH DEPARTMENT OF TRANSPORTATION
LOCATION: N:284,453 E:578,009
DRILLING METHOD: CME-75 / N.W. CASING TO 28'
DRILLER: M. WAYMENT
DEPTH TO WATER - INITIAL: N.M. **AFTER 24 HOURS:** 26.8'

PROJECT NUMBER: 200801.200
DATE STARTED: 9/8/08
DATE COMPLETED: 9/10/08
GROUND ELEVATION: 4647.0'
LOGGED BY: M. HANSEN, J. BOONE

Elev. (ft)	Depth (ft)	Lithology	Sample Type	Rec. (in)	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
4645				13	2,3,5,(19)	SM	lt. brown, dry, med. dense									
	5			14	5,8,7,(35)	SM (A-2-4(0))	lt. brown, slightly moist, dense	SILTY SAND		8.2		NP	0	86	14	
4640																
	10			12	4,7,8,(27)	SM	lt. brown, moist, med. dense									
4635																
	15			13	4,6,10,(23)	SP (A-3(0))	lt. brown, wet, med. dense	SAND random silt lenses		22.6		NP	0	95	5	DS
4630																
	20			14	5,8,12,(26)	SP	lt. brown, very moist, med. dense									
4625																
	25			14	5,7,10,(20)	SP-SM (A-2-4(0))	lt. brown, moist, med. dense	SAND W/SILT random silt lenses		14.1		NP	0	89	11	5% -0.005 mm
4620																
	30			18	3,8,11,(21)	ML	lt. brown, wet, med. dense	SANDY SILT sand layers to 3" thick								
						SM	lt. brown, wet, med. dense	SILTY SAND								
4615																
	35			15	Pushed 0.35	CL-ML (A-4(1))	brown, very moist to wet, firm	SILTY CLAY W/SAND silt lenses 0.5" to 1" apart	91.4	30.1	25	4	0	28	72	CT
4610																
	40			18	3,4,8,(12)	ML (A-4(0))	lt. brown, wet, med. dense	SILT W/SAND interbedded w/silty sand layers to 1" thick		26.5	23	1	0	26	74	14% -0.005 mm
4605				17	4,7,15,(22) 0.46	CL	lt. brown, moist, firm	LEAN CLAY sand lenses								
						SM	lt. brown, wet, med. dense	SILTY SAND								
	45			18	5,9,12,(20) 0.41	CL-ML (A-4(2))	lt. brown, very moist, firm	SILTY CLAY W/SAND sand layers to 4" thick		26.7	25	4	0	22	78	
4600				18	2,5,6,(11) 0.36	CL-ML	lt. brown, very moist, firm									

DH_LOGV1 08-OR3.GPJ US EVAL.GDT 2/23/09

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

DRILL HOLE LOG

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DATE COMPLETED: 9/10/08
GROUND ELEVATION: 4647.0'
LOGGED BY: M. HANSEN, 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
				15	Pushed 0.35	CL (A-4(8))	brown, moist, firm	96.4	26.8	29	10	0	10	90	CT UC
4595				18	2,4,7,(10) 0.30	CL	brown to gray, moist, firm								
	55			18	0/17",1/1",(1) 0.35	CL	brown & gray layers, moist, firm								
4590							LEAN CLAY sandy clay layers, numerous silt and/or sand lenses								
	60			16	Pushed 0.45	CL (A-6(11))	brown, moist, firm	91.4	29.2	31	12	0	2	98	CT UU
4585															
	65			18	0.36 0,7,7,(12) 0.40	CL SM CL	gray & brown layers, moist, firm; brown, wet; gray & brown layers, moist, firm								
4580							SILTY SAND; LEAN CLAY silt lenses								
	70			9	Pushed	CL SP-SM	brown, moist; brown, wet								
4575				12	4,9,16,(21)	SP-SM (A-3(0))	brown, wet, med. dense		23.6		NP	0	92	8	
							SAND W/SILT								
	75			17	7,11,17,(23) 0.51	CL-ML (A-4(5)) ML	GRAVELS (driller's observation); brown, very moist, stiff; brown, wet, med. dense		22.6	25	6	0	3	97	
4570							SILTY CLAY silt lenses								
	80			0*	Pushed	-	*lost shelby down the hole, no recovery								
4565							SANDY SILT								
	85			0	63/6"	-	no recovery								
4560				3	17,31,54	CL	brown, moist								
							LEAN CLAY possible sand layers (drilling through shelby tube)								
	90			16	0.33 14,21,32,(41)	CL (A-4(2)) SM	lt. brown, moist, firm; brown, wet, dense		17.8	26	8	0	45	55	
4555							SANDY LEAN CLAY sand lenses								
	95			14	25,34,43,(58)	SM	brown, wet, very dense								
4550							SILTY SAND								
							LEAN CLAY								

DH_LOGV1 08-OR3.GPJ US EVAL.GDT 2/23/09

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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DS = Direct Shear
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HYD = Hydrometer

DRILL HOLE LOG

BORING NO. 08-OR3-B1

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DRILLING METHOD: CME-75 / N.W. CASING TO 28'
DRILLER: M. WAYMENT
DEPTH TO WATER - INITIAL: N.M. **AFTER 24 HOURS:** 26.8'

PROJECT NUMBER: 200801.200
DATE STARTED: 9/8/08
DATE COMPLETED: 9/10/08
GROUND ELEVATION: 4647.0'
LOGGED BY: M. HANSEN, 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
				18	Pushed *0.35*	CL *(A-6(14))*	dk. gray, very moist, firm	LEAN CLAY	89.7	34.9	34	14	0	1	99	CT UC
4545																
	105			18	5,9,22,(22) *0.39*	CL	dk. gray, very moist, firm	LEAN CLAY interbedded w/silt, sand & silty clay lenses & layers								
4540																
	110			15	29,31,43,(53)	SM *(A-2-4(0))*	dk. gray, wet, very dense			19.6		NP	0	77	23	
4535																
	115															
4530																
	120			16	25,26,35,(42)	SM	gray-brown, wet, dense	SILTY SAND few random clay lenses								
4525																
	125															
4520																
	130			18	24,37,34,(47)	SM	gray-brown, wet, dense									
4515																
	135															
4510																
	140															
4505																
	145															
4500																

DH_LOGV1 08-OR3.GPJ US EVAL.GDT 2/23/09

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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CU = Consolidated, Undrained
HYD = Hydrometer

DRILL HOLE LOG

BORING NO. 08-OR3-B2

PROJECT: I-15 UTAH COUNTY CORRIDOR - OR3, I-15 OVER 800 NORTH (SR-52)
CLIENT: UTAH DEPARTMENT OF TRANSPORTATION
LOCATION: N:284,687 E:577,787
DRILLING METHOD: 96-CME-55 / N.W. CASING TO 30'
DRILLER: L. HILER
DEPTH TO WATER - INITIAL: N.M. **AFTER 24 HOURS:** 40.5'

PROJECT NUMBER: 200801.200
DATE STARTED: 9/22/08
DATE COMPLETED: 9/24/08
GROUND ELEVATION: 4659.9'
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
				17	3,10,13,(48)	CL (A-6(17))	brown, dry, stiff	LEAN CLAY		6.9	37	20	0	14	86	
						SM	brown, slightly moist	SILTY SAND (fill)								
4655	5			10	12,12,14,(55)	GM	brown, moist, dense	SILTY GRAVEL W/SAND (fill)								
4650	10			16	19,26,28,(92)	SM (A-2-4(0))	brown & gray, moist, very dense, 3" silty clay layer	SILTY SAND (fill)		12.3		NP	0	69	31	
4645	15			14	15,20,19,(52)	ML	dk. brown, moist, dense	SANDY SILT W/GRAVEL (fill)								
						SP-SM	brown, moist, dense	SAND W/SILT & GRAVEL (fill)								
4640	20			15	5,9,13,(27)	SP-SM (A-3(0))	brown, very moist to wet, med. dense			18.9		NP	1	92	7	
4635	25			8	16,14,13,(30)	SP-SM	brown, wet, med. dense	SAND W/SILT clay lenses								
4630	30			14	5,7,7,(14)	SP-SM (A-3(0))	gray, wet, med. dense			22.2		NP	0	92	8	DS 2% -0.005 mm
4625	35			9	8,15,20,(33)	SP-SM	brown, wet, dense									
								SAND W/SILT								
4620	40			8	8,12,14,(23)	SP-SM (A-3(0))	brown, wet, med. dense			21.8		NP	0	91	9	
4615	45			11	8,12,13,(21)	SP-SM	brown, wet, med. dense	SAND W/SILT silt lenses								

DH_LOGV1 08-OR3.GPJ US EVAL.GDT 2/23/09

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
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HYD = Hydrometer

DRILL HOLE LOG

BORING NO. 08-OR3-B2

PROJECT: I-15 UTAH COUNTY CORRIDOR - OR3, I-15 OVER 800 NORTH (SR-52)
CLIENT: UTAH DEPARTMENT OF TRANSPORTATION
LOCATION: N:284,687 E:577,787
DRILLING METHOD: 96-CME-55 / N.W. CASING TO 30'
DRILLER: L. HILER
DEPTH TO WATER - INITIAL: N.M. **AFTER 24 HOURS:** 40.5'

PROJECT NUMBER: 200801.200
DATE STARTED: 9/22/08
DATE COMPLETED: 9/24/08
GROUND ELEVATION: 4659.9'
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
				12	20,27,38,(54)	SP-SM (A-3(0))	brown, wet, dense	SAND W/SILT silt lenses		22.1		NP	0	92	8	
4605	55			15	5,5,8,(11) 0.59	CL-ML (A-4(1))	brown, very moist, stiff	SILTY CLAY W/SAND sand layers to 1.5" thick		25.0	24	4	0	27	73	
4600	60			18	14,18,14,(25) 0.90	SP-SM	brown, wet/moist, med. dense/stiff	SAND W/SILT clay layers to 2" thick								
4595	65			18	11,13,16,(22)	SM (A-4(0))	brown, wet, med. dense	SILTY SAND clay and/or silt lenses & layers to 0.25" thick		23.5		NP	0	56	44	
4590	70			15	12,14,11,(19) 0.56	SP-SM ML,CL, SP-SM	brown, wet	SAND W/SILT								
							brown, wet/moist, med. dense/stiff	INTERBEDDED SILT, LEAN CLAY & SAND W/SILT LAYERS TO 2" THICK								
4585	75			16	Pushed 0.50	CL (A-6(18))	gray, moist, firm to stiff	LEAN CLAY silt lenses	96.3	28.0	37	18	0	5	95	CT UU
4580	80			0	0/12",1,(1)	-	no recovery									
4575	85			16	Pushed 0.47	CL (A-6(20))	gray, moist, firm	LEAN CLAY	92.1	30.7	39	19	0	0	100	CT UC
4570	90			15	1,11,13,(17) 0.48	CL (A-6(13))	gray, moist, firm	LEAN CLAY angled bedding, silt lenses, thin sand layers less than 0.25" thick		27.5	33	14	0	4	96	
4565	95			12	Pushed	CL ML	gray, moist									
							brown, wet	SANDY SILT silt layers to 6" thick								

DH_LOGV1 08-OR3.GPJ US EVAL.GDT 2/23/09

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0.45 — Torvane (tsf)

OTHER TESTS
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DRILL HOLE LOG

BORING NO. 08-OR3-B2

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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
				16	20,20,17,(25)	ML (A-4(0))	gray, wet, med. dense		17.8		NP	0	41	59	
4555	105			8	18,24,23,(31)	ML (A-4(0))	brown, wet, dense — SANDY SILT, silt layers to 6" thick		19.9		NP	0	46	54	
4550	110			9	25,43,37,(52)	ML	brown, wet, very dense								
4545	115														
4540	120														
4535	125														
4530	130														
4525	135														
4520	140														
4515	145														

DH_LOGV1 08-OR3.GPJ US EVAL.GDT 2/23/09

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LEGEND:

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

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