DRILL HOLE LOG

BORING NO. 08-OR2-B1

PROJECT: I-15 UTAH COUNTY CORRIDOR - OR2, I-15 OVER 1200 NORTH
CLIENT: UTAH DEPARTMENT OF TRANSPORTATION
LOCATION: N:287,234 E:577,930
DRILLING METHOD: 96-CME-55 / H.S. AUGER TO 35' THEN N.W. CASING TO 65'
DRILLER: L. HILER, D. PAYNE
DEPTH TO WATER - INITIAL: ▽ 26.0' **AFTER 24 HOURS:** ▼ 29.0'

PROJECT NUMBER: 200801.200
DATE STARTED: 6/30/08
DATE COMPLETED: 7/15/08
GROUND ELEVATION: 4649.9'
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
			■	17	7,9,10,(43)	SM	brown, dry, dense	SILTY SAND W/GRAVEL (fill)								
4645	5		■	13	14,23,28,(99+)	SP (A-3(0))	brown, dry, very dense			2.8		NP	0	95	5	
4640	10		■	15	5,8,10,(31)	SP	brown, slightly moist, dense	SAND possible thin clay layers								
4635	15		■	15	12,19,18,(52)	SP (A-3(0))	brown, moist, very dense			9.4		NP	0	96	4	DS
4630	20		■	15	10,20,20,(49)	SP	brown, moist, dense									
4625	25 ▽		■	18	7,13,14,(30)	SP-SM (A-3(0))	brown, very moist, med. dense	SAND W/SILT		15.8		NP	0	94	6	
4620	30 ▼		■	18	3,6,7,(13)	SP (A-3(0))	brown, wet, med. dense	SAND		22.9		NP	0	95	5	1% -0.005 mm
			■	6	19,22,22,(44)	SP	brown, wet, dense									
4615	35		■	7	3,12,35,(46)	SP-SM	brown, wet, dense	SAND W/SILT								
			■	18	7,10,11,(20)	SM (A-4(0))	brown, wet, med. dense			22.9		NP	1	50	49	12% -0.005 mm
4610	40		☒	15	Pushed	SM	brown, wet	SILTY SAND INTERBEDDED W/SILTY CLAY LENSES & LAYERS TO 2" THICK								
			■	16	8,8,10,(17)	SM	brown, wet, med. dense									
4605	45							SILTY CLAY sand layers to 2" thick								

DH_LOGV1 08-OR2.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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GROUND ELEVATION: 4649.9'
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 0.60	CL-ML (A-4(5))	brown, moist, stiff	SILTY CLAY sand layers to 2" thick	102.6	23.9	27	7	0	9	91	CT
4595	55		■	3	50/4",(REF)	SP	brown, wet, very dense	SAND								
						GP-GM	brown, wet	GRAVEL W/SILT & SAND								
			■	14	9,13,14,(23)	SM	brown, wet, med. dense	SILTY SAND clay lenses & layers								
4590	60															
			■	7	24,34,44,(65)	SP (A-3(0))	brown, wet, very dense	SAND W/GRAVEL clay layers (driller's observation)		21.7		NP	17	80	3	
4585	65		■	15	23,40,40.(66)	SP	brown, wet, very dense									
4580	70		■	18	11,14,20,(27)	SM (A-4(0))	dk. red-brown to brown, wet, med. dense			23.9		NP	0	60	40	
4575	75		■	16	18,29,31,(47)	SM	brown, wet, dense	SILTY SAND silty clay lenses & layers								
4570	80		☒	6	Pushed 0.20	ML (A-4(0))	red-brown, wet	SANDY SILT silty clay lenses & layers		21.1		NP	0	48	52	
4565	85		■	18	4,6,11,(13) 0.30	CL	gray, moist, firm									
4560	90		☒	15	Pushed 0.99+	CL (A-4(10))	gray, moist, very stiff	LEAN CLAY sand lenses & layers to 1.5" thick	101.5	21.5	31	10	0	1	99	CT UU
4555	95		■	18	4,7,20,(19) 0.40	CL	gray, moist, firm									
								SILTY SAND								

DH_LOGV1 08-OR2.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

BORING NO. 08-OR2-B1

PROJECT: I-15 UTAH COUNTY CORRIDOR - OR2, I-15 OVER 1200 NORTH
CLIENT: UTAH DEPARTMENT OF TRANSPORTATION
LOCATION: N:287,234 E:577,930
DRILLING METHOD: 96-CME-55 / H.S. AUGER TO 35' THEN N.W. CASING TO 65'
DRILLER: L. HILER, D. PAYNE
DEPTH TO WATER - INITIAL: ▽ 26.0' **AFTER 24 HOURS:** ▼ 29.0'

PROJECT NUMBER: 200801.200
DATE STARTED: 6/30/08
DATE COMPLETED: 7/15/08
GROUND ELEVATION: 4649.9'
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
			■	12	8,11,16,(19)	SM	dk. brown, wet, med. dense	SILTY SAND								
4545	105		⊠	14	Pushed *0.77*	CL *(A-6(13))*	gray, moist, stiff	LEAN CLAY sand lenses	100.5	22.8	33	13	0	3	97	CT UC
4540	110		■	17	14,11,18,(20) *0.15*	CL	dk. gray, very moist, soft	LEAN CLAY INTERBEDDED W/SAND LAYERS								
4535	115		■	16	26,30,26,(37)	SM *(A-2-4(0))*	dk. gray, wet, dense	SILTY SAND		21.1		NP	0	72	28	
4530	120		■	16	38,40,49,(59)	SM	dk. gray, wet, very dense									
4525	125															
4520	130															
4515	135															
4510	140															
4505	145															

DH_LOGV1 08-OR2.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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HYD = Hydrometer

DRILL HOLE LOG

BORING NO. 08-OR2-B2

PROJECT: I-15 UTAH COUNTY CORRIDOR - OR2, I-15 OVER 1200 NORTH
CLIENT: UTAH DEPARTMENT OF TRANSPORTATION
LOCATION: N:287,148 E:577,736
DRILLING METHOD: 08-CME-55 / H.S. AUGER TO 40' THEN N.W. CASING TO 44'
DRILLER: L. HILER, D. PAYNE
DEPTH TO WATER - INITIAL: ▽ 25.0' **AFTER 24 HOURS:** ▼ 26.0'

PROJECT NUMBER: 200801.200
DATE STARTED: 7/7/08
DATE COMPLETED: 7/9/08
GROUND ELEVATION: 4645.2'
LOGGED BY: G.P., M.H., J.B.

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	7,8,8,(34)	SM	brown, dry, dense	SILTY SAND gravel & organics in top 4"								
4640	5		■	16	5,5,7,(27)	SP (A-3(0))	brown, slightly moist, med. dense			3.2		NP	0	96	4	DS
								SAND occasional thin clay layers <1" thick								
4635	10		■	16	5,8,10,(31)	SP	brown, slightly moist, dense									
4630	15		■	18	0.33 3,6,11,(24)	CL-ML SM (A-2-4(0))	brown, moist, firm	SILTY CLAY								
							brown, moist, med. dense	SILTY SAND occasional clay layers		12.0		NP	0	76	24	
4625	20		■	16	6,9,11,(26)	SP	brown, moist, med. dense									
								SAND occasional clay lenses & layers to 1" thick								
4620	25		■	16	7,8,10,(20)	SP (A-3(0))	brown, moist to wet, med. dense			22.3		NP	0	95	5	1% -0.005 mm
4615	30		■	18	5,5,7,(13)	SM (A-2-4(0))	brown, wet, med. dense			23.1		NP	0	73	27	5% -0.005 mm
			■	18	9,7,9,(17)	SM	brown, wet, med. dense	SILTY SAND occasional clay lenses & layers to 1.5" thick								
4610	35		■	18	7,7,14,(22)	SM	brown, wet, med. dense									
			■	17	4,4,8,(12)	SM (A-4(0))	brown, wet, med. dense			23.2		NP	0	53	47	9% -0.005 mm
4605	40		■	15	7,12,22,(34)	SP-SM	brown, wet, dense	SAND W/SILT								
4600	45		■	17	15,15,12,(26)	SM (A-2-4(0))	lt. brown, wet, med. dense			23.8		NP	0	85	15	
								SILTY SAND occasional clay layers								
			■	15	5,10,13,(24)	SM	lt. brown, wet, med. dense									

DH_LOGV1 08-OR2.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)

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DRILL HOLE LOG

BORING NO. 08-OR2-B2

PROJECT: I-15 UTAH COUNTY CORRIDOR - OR2, I-15 OVER 1200 NORTH
CLIENT: UTAH DEPARTMENT OF TRANSPORTATION
LOCATION: N:287,148 E:577,736
DRILLING METHOD: 08-CME-55 / H.S. AUGER TO 40' THEN N.W. CASING TO 44'
DRILLER: L. HILER, D. PAYNE
DEPTH TO WATER - INITIAL: ▽ 25.0' **AFTER 24 HOURS:** ▼ 26.0'

PROJECT NUMBER: 200801.200
DATE STARTED: 7/7/08
DATE COMPLETED: 7/9/08
GROUND ELEVATION: 4645.2'
LOGGED BY: G.P., M.H., J.B.

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
								SILTY SAND occasional clay layers								
4590	55		■	16	8,9,9,(16)	ML (A-4(0))	lt. brown, wet, med. dense	SANDY SILT lean clay & silty sand lenses & layers to 1.5" thick		25.4		NP	0	42	58	11% -0.005 mm
4585	60		■	17	9,14,12,(23) *0.71*	SM CL	lt. brown, wet, med. dense lt. brown, moist, stiff	SILTY SAND clay & silt lenses & layers LEAN CLAY								
4580	65		⊠ ■	14 18	Pushed *0.66* 7,9,9,(15) *0.44*	SM (A-4(0)) CL (A-6(10)) CL	lt. brown, wet brown, moist, stiff brown, moist, firm	SILTY SAND LEAN CLAY silty sand layers to 4" thick	101.9	19.5 23.6	29	NP 11	0 0	59 1	41 99	CT
						GP	gray, wet	GRAVEL W/SAND								
4575	70		■	4	15,36,32,(56)	SP-SM	gray, wet, very dense									
4570	75		■	16	7,21,25,(37)	SP-SM (A-3(0))	brown, wet, dense	SAND W/SILT		23.7		NP	0	94	6	
4565	80		■	15	19,30,34,(51)	SM	gray-brown, wet, very dense	SILTY SAND								
4560	85		■	18	23,27,22,(38)	SP-SM (A-2-4(0))	gray-brown to brown, wet, dense	SAND W/SILT silt & clay layers to 0.5" thick		21.4		NP	1	88	11	
								GRAVELS (driller's observation)								
4555	90		■	18	8,10,9,(14) *0.28*	CL	gray, moist, firm									
4550	95		⊠	18	Pushed *0.82*	CL (A-6(18))	lt. gray, moist, stiff	LEAN CLAY silt & sand lenses & layers to 0.25" thick	92.5	23.9	38	17	0	1	99	CT UC
			■	18	0/8",4,7,(8) *0.59*	CL	lt. gray, moist, stiff									

DH_LOGV1 08-OR2.GPJ US EVAL.GDT 2/23/09

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DRILL HOLE LOG

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4540	105			15	Pushed 0.79	CL (A-7-6(22))	gray, moist, stiff — LEAN CLAY W/SAND	102.3	22.7	45	26	0	16	84	UU
4535	110			14	26,36,38,(52)	SM	dk. gray, wet, very dense — SILTY SAND								
4530	115			16	27,34,39,(50)	SM (A-2-4(0))	gray, wet, dense		21.2		NP	0	82	18	
4525	120			18	9,12,21,(22)	SM	gray-brown, wet, med. dense — SILTY SAND clay & silt lenses & layers to 6" thick								
4520	125														
4515	130														
4510	135														
4505	140														
4500	145														

DH_LOGV1 08-OR2.GPJ US EVAL.GDT 2/23/09

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LEGEND:

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