PROJECT: Autumnwood Development Wildomar, California	**Log of Boring No. 1**
BORING LOCATION: #1 Southern end of South Pasadena Street	ELEVATION AND DATUM:
DRILLING CONTRACTOR: Interphase	DATE STARTED: 11/7/13 / DATE FINISHED: 11/7/13
DRILLING METHOD: Direct Push	TOTAL DEPTH (ft.): 24.0 / MEASURING POINT: ground surface
DRILLING EQUIPMENT: 6600 GeoProbe	DEPTH TO WATER: FIRST 20 / COMPL. 20.77 / 24 HRS.
SAMPLING METHOD: Dual Tube	LOGGED BY: V. Robino
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: J. Bahde / REG. NO. 7058

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ 6 inches	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	PID READING (ppm)	REMARKS
				Surface Elevation:		
				0.42 ft asphalt		
1				CLAYEY SAND (SC): dark olive gray (5Y 3/2), moist, ~70% fine to medium sand, predominantly fine sand, ~30% low to medium plasticity fines		PID: MiniRAE 3000 calibrated to 100 ppm Isobutylene standard.
2						Hand Auger to a depth of 5 feet below grade.
3				olive brown (2.5Y 4/3), moist, ~70% fine to medium sand, ~30% medium plasticity fines		PID readings are Headspace in resealable plastic bags.
4						
5					0.0	
				SILTY SAND (SM): dark yellowish brown (10YR 4/6), moist, ~80% fine sand, ~20% low plasticity fines		
6						
7						Replacement push probe constructed at 10 ft bgs. #3 sand 9.5 - 10.5 ft bgs bentonite granular (dry) 8.5 - 9.5 ft bgs bentonite granular (hydrated) 0 - 8.5 ft bgs
8				~70% sand, ~30% fines		
9						
10					0.0	
11						
12						
13						
				CLAYEY SAND (SC): see next page		
14						

RMRK3-ROTATE SAMPLE NO

PROJECT: Autumnwood Development
Wildomar, California

Log of Boring No. 1 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ 6 inches	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	PID READING (ppm)	REMARKS
15				CLAYEY SAND (SC): dark yellowish brown (10YR 4/6), moist, ~70% fine to medium sand, ~30% medium plasticity fines	0.0	
16				~85% fine to medium sand, ~15% medium plasticity fines		
17						
18				SILTY SAND (SM): dark yellowish brown (10YR 4/4), moist, ~65% fine sand, ~35% low plasticity fines		
19				~65% fine sand, ~35% low to medium plasticity fines		
20				POORLY GRADED SAND with SILT (SP-SM): dark yellowish brown (10YR 4/4), wet, ~90% fine sand, ~10% low plasticity fines	0.2	
21				SILTY SAND (SM): dark yellowish brown (10YR 4/6), moist, ~80% fine sand, ~20% low plasticity fines		
22						
23				POORLY GRADED SAND (SP): dark yellowish brown (10YR 4/4), wet, ~85% fine to coarse sand, ~10% fine gravel, ~5% fines		Temporary 3/4-inch diameter PVC well set from 19 - 24 ft bgs.
24				Bottom of boring at 24 ft bgs.		DTW = 20.7' bgs
25				**Temp Soil Gas Probes:** 5 ft probe 1.5 - 3.5 = bentonite grout 3.5 - 4.5 = dry granular bentonite 4.5 - 5.5 = #3 sand 5.5 - 6 = dry granular bentonite 6 - 13.5 = bentonite grout 15 ft probe 13.5 - 14.5 = dry granular bentonite 14.5 - 15.5 = #3 sand 15.5 - 16.5 = dry granular bentonite 16.5 - 24 = bentonite grout		Collect groundwater sample 1-GW-19-24 from 19-24 ft bgs using disposable bailer
26						
27						
28						
29						
30						
31						

RMRK3-ROTATE SAMPLE NO

PROJECT: Autumnwood Development Wildomar, California	**Log of Boring No. 6**
BORING LOCATION: #6 North side of Protea Court	ELEVATION AND DATUM:
DRILLING CONTRACTOR: Interphase	DATE STARTED: 11/8/13 / DATE FINISHED: 11/8/13
DRILLING METHOD: Direct Push	TOTAL DEPTH (ft.): 16.0 / MEASURING POINT: ground surface
DRILLING EQUIPMENT: 6600 GeoProbe	DEPTH TO WATER / FIRST: NA / COMPL.: NA / 24 HRS.
SAMPLING METHOD: Dual Tube	LOGGED BY: V. Robino
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: J. Bahde / REG. NO. 7058

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ 6 inches	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	PID READING (ppm)	REMARKS
				Surface Elevation:		
				0.33 ft asphalt		
1				CLAYEY SAND (SC): mottled dark greenish gray (10Y 4/1) and dark yellowish brown (10YR 4/6), moist, ~70% fine sand, trace medium sand, ~30% medium plasticity fines [POSSIBLE FILL]		PID: MiniRAE 3000 calibrated to 100 ppm Isobutylene standard.
2						Hand Auger to a depth of 5 feet below grade.
3						PID readings are Headspace in resealable plastic bags.
4						
5	6-SS-5-6			mottled brown (10YR 4/3) and dark yellowish brown (10YR 4/6), ~60% fine sand, trace medium sand, ~40% medium plasticity fines [POSSIBLE FILL]		
6					0.8	Replacement push probe constructed at 3 ft bgs. #3 sand 2.5 - 3.5 ft bgs bentonite granular (dry) 2.0 - 2.5 ft bgs bentonite granular (hydrated) 0 -2.0 ft bgs
7						
8				SILTY SAND (SM): dark yellowish brown (10YR 4/4), moist, ~70% fine sand, ~30% low plasticity fines		
9						
10	6-SS-9-11					
11					1.6	
12				CLAYEY SAND (SC): dark grayish brown (10YR 4/2), moist, ~70% fine to medium sand, ~30% medium plasticity fines		
13	6-SS-13.75 - 14.75					
14				~80% fine to medium sand, ~20% medium plasticity fines	1.2	

RMRK3-ROTATE SAMPLE NO

PROJECT: Autumnwood Development
Wildomar, California

Log of Boring No. 6 (cont'd)

DEPTH (feet)	SAMPLES Sample No.	SAMPLES Sample	SAMPLES Blows/ 6 inches	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	PID READING (ppm)	REMARKS
15				CLAYEY SAND (SC): continued		
16				Bottom of boring at 16 ft bgs. Groundwater not encountered at time of drilling. **Temp Soil Gas Probes:** Probe at 5 1.5 - 3.5 = bentonite grout 3.5 - 4.5 = dry granular bentonite 4.5 - 5.5 = #3 sand 5.5 - 6 = dry granular bentonite 6 - 13.5 = bentonite grout Probe at 15 13.5 - 14.5 = dry granular bentonite 14.5 - 15.5 = #3 sand 15.5 - 16 = dry granular bentonite		
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RMRK3-ROTATE SAMPLE NO

PROJECT: Autumnwood Development Wildomar, California	**Log of Boring No. 7**
BORING LOCATION: #7 E. side of S. Pasadena St., S. of Pink Ginger Court	ELEVATION AND DATUM:
DRILLING CONTRACTOR: Interphase	DATE STARTED: 11/8/13 / DATE FINISHED: 11/8/13
DRILLING METHOD: Direct Push	TOTAL DEPTH (ft.): 28.0 / MEASURING POINT: ground surface
DRILLING EQUIPMENT: 6600 GeoProbe	DEPTH TO WATER: FIRST ~27 / COMPL. 26.55 / 24 HRS.
SAMPLING METHOD: Dual Tube	LOGGED BY: V. Robino
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: J. Bahde / REG. NO. 7058

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ 6 inches	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	PID READING (ppm)	REMARKS
0				0.42 ft asphalt and 0.58 ft base material		PID: MiniRAE 3000 calibrated to 100 ppm Isobutylene standard.
1				SILTY SAND (SM): dark yellowish brown (10YR 4/6), moist, ~70% fine sand, ~30% low plasticity fines, ~trace medium sand		
2						Hand Auger to a depth of 5 feet below grade.
3						PID readings are Headspace in resealable plastic bags.
4						
5				~80% sand, ~20% fines	0.2	
6						
7						
8				~75% sand, ~25% fines		
9						
10				~70% sand, ~30% fines	0.2	
11						
12				CLAYEY SAND (SC): dark yellowish brown (10YR 4/6), moist, ~70% fine sand, ~30% medium plasticity fines		
13						
14						

RMRK3-ROTATE SAMPLE NO

PROJECT: Autumnwood Development
Wildomar, California

Log of Boring No. 7 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ 6 inches	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	PID READING (ppm)	REMARKS
15				CLAYEY SAND (SC): continued	0.2	
16				~65% fine to medium sand, ~35% medium plasticity fines		
17						
18						
19						
20				~70% sand, ~30% fines, coarsens	0.2	
21				~80% sand, ~20% fines		
22						
23				coarsens, ~70% sand, predominantly medium sand, ~30% fines		
24				~80% sand, ~20% fines		
25					0.2	
26						
27				wet		Temporary 3/4-inch diameter PVC well set from 23 - 28 ft bgs. Collect groundwater sample 7-GW-23-28 and split sample using disposable bailer
28				~70% fine to medium sand, ~30% medium plasticity fines Bottom of boring at 28 ft bgs. **Temp Soil Gas Probes:** 5 ft probe 1.5 - 3.5 = bentonite grout 3.5 - 4.5 = dry granular bentonite 4.5 - 5.5 = #3 sand 5.5 - 6.0 = dry granular bentonite 6.0 - 13.5 = bentonite grout		
29						
30						
31						

RMRK3-ROTATE SAMPLE NO

PROJECT: Autumnwood Development
Wildomar, California

Log of Boring No. 7 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ 6 inches	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	PID READING (ppm)	REMARKS
32				15 ft probe 13.5 - 14.5 = dry granular bentonite 14.5 - 15.5 = #3 sand 15.5 - 16.4 = dry granular bentonite 16.4 - 28 = bentonite grout		
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RMRK3-ROTATE SAMPLE NO

PROJECT: Autumnwood Development Wildomar, California	**Log of Boring No. 8**
BORING LOCATION: #8 North side of Pink Ginger Court	ELEVATION AND DATUM:
DRILLING CONTRACTOR: Interphase	DATE STARTED: 11/8/13 / DATE FINISHED: 11/8/13
DRILLING METHOD: Direct Push	TOTAL DEPTH (ft.): 16.0 / MEASURING POINT: ground surface
DRILLING EQUIPMENT: 6600 GeoProbe	DEPTH TO WATER / FIRST: NA / COMPL.: NA / 24 HRS.
SAMPLING METHOD: Dual Tube	LOGGED BY: V. Robino
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: J. Bahde / REG. NO. 7058

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ 6 inches	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	PID READING (ppm)	REMARKS
0				0.35 ft asphalt and 0.17 ft base material		PID: MiniRAE 3000 calibrated to 100 ppm Isobutylene standard.
1				CLAYEY SAND (SC): dark yellowish brown (10YR 4/4), moist, ~60% fine to medium sand, trace coarse sand, ~30% medium plasticity fines, ~10% fine gravel [FILL]		
2				CLAYEY GRAVEL with SAND (GC): dark yellowish brown (10YR 4/4), ~60% fine and coarse gravel, ~25% fine to coarse sand, ~15% medium plasticity fines [FILL]		Hand Auger to a depth of 5 feet below grade. PID readings are Headspace in resealable plastic bags.
3						
4						
5	8-SS-5-6			CLAYEY SAND (SC): mottled dark yellowish brown (10YR 4/4) and olive gray (5Y 4/2), moist, ~75% fine to medium sand, ~25% medium plasticity fines [FILL]		
6					0.8	
7				@7 ft, 1/2" diameter concrete fragment [FILL]		Replacement push probe constructed at 3 ft bgs. #3 sand 2.5 - 3.5 ft bgs bentonite granular (dry) 2.0 - 2.5 ft bgs bentonite granular (hydrated) 0 - 2 ft bgs
8				POORLY GRADED SAND (SP): yellowish brown (10YR 5/4), moist, ~95% fine to medium sand, ~5% fines		
9				SILTY SAND (SM): dark yellowish brown (10YR 3/6), moist, ~65% fine sand, ~35% low plasticity fines		
10	8-SS-9.5-10.5					
11						
12					0.6	
13						
14						

RMRK3-ROTATE SAMPLE NO

PROJECT: Autumnwood Development
Wildomar, California

Log of Boring No. 8 (cont'd)

DEPTH (feet)	SAMPLES Sample No.	SAMPLES Sample	SAMPLES Blows/ 6 inches	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	PID READING (ppm)	REMARKS
15	8-SS-14.25-15.25			SILTY SAND (SM): continued	0.9	
16				Bottom of boring at 16 ft bgs. Groundwater not encountered at time of drilling. **Temp Soil Gas Probes:** 5 ft probe 1.5 - 3.5 = bentonite grout 3.5 - 4.5 = dry granular bentonite 4.5 - 5.5 = #3 sand 5.5 - 6 = dry granular bentonite 6 - 13.5 = bentonite grout 15 ft probe 13.5 - 14.5 = dry granular bentonite 14.5 - 15.5 = #3 sand 15.5 - 16 = dry granular bentonite		
17						
18						
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RMRK3-ROTATE SAMPLE NO

PROJECT: Autumnwood Development Wildomar, California	**Log of Boring No. 11**
BORING LOCATION: #11 North end of Penrose Street	ELEVATION AND DATUM:
DRILLING CONTRACTOR: Interphase	DATE STARTED: 11/7/13 / DATE FINISHED: 11/7/13
DRILLING METHOD: Direct Push	TOTAL DEPTH (ft.): 36.0 / MEASURING POINT: ground surface
DRILLING EQUIPMENT: 6600 GeoProbe	DEPTH TO WATER: FIRST 27 / COMPL. 28.05 / 24 HRS.
SAMPLING METHOD: Dual Tube/Temp Well	LOGGED BY: V. Robino
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: J. Bahde / REG. NO. 7058

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ 6 inches	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	PID READING (ppm)	REMARKS
0				0.3 ft asphalt and base material		PID: MiniRAE 3000 calibrated to 100ppm Isobutylene standard.
1				SILTY SAND (SM): dark yellowish brown (10YR 4/6), moist, ~75% fine to medium sand, ~25% low plasticity fines		
2						Hand Auger to a depth of 5 feet below grade.
3						
4						
5				~75% fine to coarse sand, predominantly fine to medium sand, ~25% low plasticity fines, trace fine gravel	0.9	
6						
7						
8						
9				POORLY GRADED SAND (SP): dark yellowish brown (10YR 4/6), moist, ~95% fine to medium sand, ~5% fines		
10				CLAYEY SAND (SC): dark yellowish brown (10YR 4/4), moist, ~70% fine to medium sand, ~30% low to medium plasticity fines	0.8	
11				SILTY SAND (SM): dark yellowish brown (10YR 4/6), moist, ~70% fine to trace medium sand, ~30% low plasticity fines		
12						
13						
14						

RMRK3-ROTATE SAMPLE NO

PROJECT: Autumnwood Development
Wildomar, California

Log of Boring No. 11 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ 6 inches	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	PID READING (ppm)	REMARKS
15				SILTY SAND (SM): continued low to medium plasticity fines	0.7	
16				CLAYEY SAND (SC): dark yellowish brown (10YR 4/4), moist, ~70% fine to medium sand, ~30% medium plasticity fines		
17						
18						
19						
20				~85% fine to trace medium sand, ~15% low to medium plasticity fines	0.9	
21				~70% sand, ~30% fines		
22						
23						
24				SILTY SAND (SM): dark yellowish brown (10YR 4/4), moist, ~70% fine to medium sand, ~30% low plasticity fines		
25				increased moisture	0.8	
26						
27				wet, ~85% fine to coarse sand, ~15% low to medium plasticity fines, trace fine gravel		
28				~70% fine to trace medium sand, ~30% low to medium plasticity fines		
29				CLAYEY SAND (SC): dark yellowish brown (10YR 4/4), moist, ~70% fine to trace medium sand, ~30% medium plasticity fines		
30					0.4	
31				SILTY SAND (SM): see next page		

RMRK3-ROTATE SAMPLE NO

PROJECT: Autumnwood Development
Wildomar, California

Log of Boring No. 11 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ 6 inches	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	PID READING (ppm)	REMARKS
32				SILTY SAND (SM): ~70% fine to trace medium sand, ~30% low to medium plasticity fines		
33				CLAYEY SAND (SC): dark yellowish brown (10YR 4/4), wet, ~65% fine sand, trace medium sand, ~35% low to medium plasticity fines		Set temporary 3/4-inch diameter PVC well from 27 - 32 ft bgs; dry
34				POORLY GRADED SAND (SP): mottled olive brown (2.5Y 4/4) and dark yellowish brown (10YR 4/4), wet, ~85% fine to coarse sand, ~10% fine gravel, ~5% fines		
35						
36				Bottom of boring at 36 ft bgs.		Set new temporary 3/4-inch diameter PVC well from 31 - 36 ft bgs
37				**Temp Soil Gas Probes:** 5 ft probe 1.5 - 3.5 = bentonite grout 3.5 - 4.5 = dry granular bentonite 4.5 - 5.5 = #3 sand 5.5 - 6.0 = dry granular bentonite 6.0 - 13.5 = bentonite grout 15 ft probe 13.5 - 14.5 = dry granular bentonite 14.5 - 15.5 = #3 sand 15.5 - 16 = dry granular bentonite 16 - 36 = bentonite grout		DTW = 28.05 ft bgs Collect groundwater sample 11-GW-31-36 using disposable bailer
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RMRK3-ROTATE SAMPLE NO

PROJECT: Autumnwood Development Wildomar, California	**Log of Boring No. 12**
BORING LOCATION: End of Amaryllis Court	ELEVATION AND DATUM:
DRILLING CONTRACTOR: Interphase	DATE STARTED: 11/8/13 / DATE FINISHED:
DRILLING METHOD: Direct Push	TOTAL DEPTH (ft.): 16.0 / MEASURING POINT: ground surface
DRILLING EQUIPMENT: 6600 GeoProbe	DEPTH TO WATER / FIRST: NA / COMPL.: NA / 24 HRS.
SAMPLING METHOD: Dual Tube	LOGGED BY: V. Robino
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: J. Bahde / REG. NO. 7058

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ 6 inches	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	PID READING (ppm)	REMARKS
0				0.3 ft asphalt		PID: MiniRAE 3000 calibrated to 100 ppm Isobutylene standard.
1				SILTY SAND (SM): dark yellowish brown (10YR 4/4), moist, ~80% fine to medium sand, ~20% low plasticity fines		
2						Hand Auger to a depth of 5 feet below grade.
3						PID readings are Headspace in resealable plastic bags.
4						
5	12-SS-5-6			~80% fine to coarse sand, ~20% fines	5.3	
6				trace fine gravel, mottled dark yellowish brown (10YR 4/4) and dark grayish brown (2.5Y 4/2)		
7				CLAYEY SAND (SC): dark grayish brown (2.5Y 4/2), moist, ~60% fine sand, ~40% medium plasticity fines		
8				CLAYEY SAND (SC): dark grayish brown (2.5Y 4/2), moist, ~60% fine sand, ~40% medium plasticity fines		
9				CLAYEY SAND (SC): dark greenish gray (10Y 4/1), moist, ~70% fine to medium sand, ~30% medium plasticity fines, trace coarse gravel embedded in sandy lean clay, micaceous		
10	12-SS-9.5-10.5			SILTY SAND (SM): dark yellowish brown (10YR 4/6), moist, ~75% fine sand, trace medium sand, ~25% low plasticity fines POORLY GRADED SAND (SP): dark yellowish brown (10YR 4/6), moist, ~95% fine sand, ~5% fines	2.1 398	Initial response of 398 reported when probe tip plugged. After recalibrating and ~10 minute wait, response was 2.1.
11						
12						
13				SILTY SAND (SM): dark yellowish brown (10YR 4/6), moist, ~75% fine sand, trace medium sand, ~25% low plasticity fines	1.5	
14						

RMRK3-ROTATE SAMPLE NO

PROJECT: Autumnwood Development
Wildomar, California

Log of Boring No. 12 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ 6 inches	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	PID READING (ppm)	REMARKS
15	12-SS-13.25-15.25			SILTY SAND (SM): continued		
16				Bottom of boring at 16 ft bgs. **Temp Soil Gas Probes:** 5 ft probe 1.5 - 3.5 = bentonite grout 3.5 - 4.5 = dry granular bentonite 4.5 - 5.5 = #3 sand 5.5 - 6 = dry granular bentonite 6 - 13.5 = bentonite grout 15 ft probe 13.5 - 14.5 = dry granular bentonite 14.5 - 15.5 = #3 sand 15.5 - 16 = dry granular bentonite		
17						
18						
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29						
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RMRK3-ROTATE SAMPLE NO

PROJECT: Autumnwood Development Wildomar, California	**Log of Boring No. 13**
BORING LOCATION: #13 South Pasadena Street, near Amaryllis Court	ELEVATION AND DATUM:
DRILLING CONTRACTOR: Interphase	DATE STARTED: 11/7/13 / DATE FINISHED: 11/7/13
DRILLING METHOD: Direct Push	TOTAL DEPTH (ft.): 32.0 / MEASURING POINT: ground surface
DRILLING EQUIPMENT: 6600 GeoProbe	DEPTH TO WATER / FIRST: 27.21 / COMPL.: NA / 24 HRS.
SAMPLING METHOD: Dual Tube/Temp Well	LOGGED BY: V. Robino
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: J. Bahde / REG. NO. 7058

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ 6 inches	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	PID READING (ppm)	REMARKS
0				0.3 ft asphalt and 0.9 ft concrete base		PID: MiniRAE 3000 calibrated to 100 ppm Isobutylene standard.
1				CLAYEY SAND (SC): dark grayish brown (2.5Y 4/2), moist, ~65% fine to medium sand, ~35% medium plasticity fines		
2						Hand Auger to a depth of 5 feet below grade.
3						PID readings are Headspace in resealable plastic bags.
4				yellowish brown (10YR 5/6), ~85% fine to medium sand, ~15% low to medium plasticity fines		
5				~75% sand, ~25% medium plasticity fines	3.1	
6						
7						
8				dark olive gray (5Y 3/2), ~65% fine to medium sand, trace medium sand, ~35% medium plasticity fines		
9						
10				dark yellowish brown (10YR 4/6), ~70% fine to trace medium sand, ~30% low to medium plasticity fines	2.2	
11						
12				POORLY GRADED SAND (SP): dark yellowish brown (10YR 4/6), moist, ~95% fine to medium sand, trace coarse sand, ~5% fines		
13				SILTY SAND (SM): dark yellowish brown (10YR 4/4), moist, ~65% fine to trace medium sand, ~35% low to medium plasticity fines		
14						

RMRK3-ROTATE SAMPLE NO

PROJECT: Autumnwood Development
Wildomar, California

Log of Boring No. 13 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ 6 inches	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	PID READING (ppm)	REMARKS
15				SILTY SAND (SM): continued	2.8	
16				CLAYEY SAND (SC): dark yellowish brown (10YR 4/4), moist, ~80% fine to coarse sand, trace fine gravel, ~20% medium plasticity fines		
17						
18				~75% fine to medium sand, ~25% medium plasticity fines		
19						
20				SILTY SAND (SM): dark yellowish brown (10YR 4/4), moist, ~75% fine to medium sand, ~25% low plasticity fines	2.1	
21						
22				~70% fine sand, ~30% fines		
23						
24				CLAYEY SAND (SC): dark yellowish brown (10YR 4/6), moist, ~65% fine to coarse sand, ~35% medium plasticity fines, trace fine gravel		
25						
26				mottled yellowish brown (10YR 5/6) and olive gray (5Y 4/2), ~70% fine to medium sand, ~30% low to medium plasticity fines		
27						
28				olive (5Y 4/3), ~65% fine to coarse sand, ~25% medium plasticity fines, ~10% fine gravel		
29						
30				POORLY GRADED SAND (SP): olive (5Y 4/3), wet, ~85% fine to coarse sand, ~10% fine gravel, ~5% fines		
31				CLAYEY SAND (SC): see next page		

RMRK3-ROTATE SAMPLE NO

PROJECT: Autumnwood Development
Wildomar, California

Log of Boring No. 13 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ 6 inches	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	PID READING (ppm)	REMARKS
32				CLAYEY SAND (SC): olive (5Y 4/3), ~65% fine to coarse sand, ~25% medium plasticity fines, ~10% fine gravel		
				Bottom of boring at 32 ft bgs. **Temp Soil Gas Probes:** 5 ft probe 1.5 - 3.5 = bentonite grout 3.5 - 4.5 = dry granular bentonite 4.5 - 5.5 = #3 sand 5.5 - 6.0 = dry granular bentonite 15 ft probe 13.5 - 14.5 = dry granular bentonite 14.5 - 15.5 = #3 sand 15.5 - 17.2 = dry granular bentonite 17.2 - 32 = bentonite grout		
33						
34						
35						
36						Temporary 3/4-inch diameter PVC well set from 27 - 32 ft bgs.
37						Collect groundwater sample 13-GW-27-32 from 27-32 ft bgs using disposable bailer
38						
39						
40						
41						
42						
43						
44						
45						
46						
47						
48						

RMRK3-ROTATE SAMPLE NO