34-0157-SB-A7

Caltrans

EXPLORATION BORING FIELD LOG

Date 7/15-16 | Boring No.

Location Doyle Dr. 101 NB offramp | Lab No. | EA No. EA16307 | Page 1 of 2

Dist. 04 Co. SF Rt. 101 P.M. | Br. No. | Purpose of Work Bent

Ft. Rt. Lt. | Line. Sta. | Northings. | Eastings. | Elev.

Ground Water Data	Date / Time	Water Level	Bot. of Boring

Logged By : M Gaffney | Drill Crew : Gregg (Wayne Oscar Trey

Drill rig : Fraste D51 | Hammer Type and Weight : Automatic

Drilling Method : Auger 14' Rock Core | Casing :

Hole Completion :

Depth	Sample Interval Tool	Blows RQD	Sample I.D.	% Rec.	Strength	Graphic Log	Description	Core Time min	Drilling Remarks Start 1:39
0		19		100%			8" of first sample organic matter		4" Layer of organic matter Dryer leaves and Branches
1		18 19					silty SAND SP-SM - med. Dense 60% Fine		CA mod
2		10 10		100%			sand 40% Fines med to low Plasticity		sample 1.0-2.5
3		15					Roots in CA mod sample No Yellowish orange		
4							roots in SPT		
5							@ 4.5' Sandy Clay (SC) : med Dense		
6		7 15		100%			High Plasticity 70% Clays 30% Fine		
7		26 9		75%			sand - Roots and Organic (Black		sample 6.5-8
8		10 18							
9							coarsen downwards to sand		Corrosion Sample
10			Corr sample						
1		10 15		100%			@ 10.5 Sand (SP) med. Dense		sample 11.0-11.5
2		19 12		100%			No Plasticity 100% Fine Sand		sample 11.5-13.0
3		23 17					@ 13' Serpentine approx 3" in diameter		
4		50/2.5		33%			High Fractured		Rock Core
15				0%			@ 14' RQD Top Foot ~~Argillite~~		14'→17' 3:44→3:55
6		11/26	C1	26/36			Dark Gray Very Hard	11	17'→22' 4:16→4:34
7							@ 15' Sand w/ Silt (SM) med dense 80% med	No Plast	
8							Grain sand 20% silt Fining Down Ward		
9		22/35		52/60			To Sandy Clay (CL) ~~[illegible]~~ Stiff	18	Baseline Took 9"
20			C2				80% Clay 20% Fine Sand med Plasticity		section @ 18.5"
1							@ 18.0 Clay Top 1.5"		
2							Serpentine Very hard		22' on 7/15/08
3		0/32		32/60			60° Angles		22'→27' 12:32→12:49
4							Serpentine Same Highly Fractured Top	0"	27'→31' 12:53→1:14
25			C3				Clay (CL) Very dense 100% clay		31'→35' 1:17→1:43
6							high Plasticity Whitish green	17	35'→38' 1:47→2:00
7							of		38'→ 2:15→2:32
8		0/48		45/48			Argillite Mod bed Dark Gray No Weathering		
9			C4				Very Hard Moderately Fractured		
30							Serpentine as above	17	
1									
2		29/48		42/48			Argillite 12" (Shalely)		
3			C5				Serpentine	26	
4							Clay (CL)		
35									
6		10/36		26/36			Same		
7			C6					17	
8									
9									

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Caltrans

EXPLORATION BORING FIELD LOG

Date 7/15-16/08 | Boring No.

Location OH-SF-101 Doyle Dr | Lab No. | EA No. 163701 | Page 2 of 2

Dist. 04 Co. SF Rt. 101 P.M. | Br. No. | Purpose of Work

Ft., Rt. Lt. | Line. Sta. | Northings. | Eastings. | Elev.

Ground Water Data	Date / Time	Water Level	Bot. of Boring

Logged By : | Drill Crew :

Drill rig : | Hammer Type and Weight :

Drilling Method : | Casing :

Hole Completion :

Depth	Sample Interval Tool	Blows RQD	Sample I.D.	% Rec.	Strength	Graphic Log	Description	Core Time min		Remarks
40		10/36	C7	10/36			Serpetine Highly Fractured			41'→44' 2:35-2:56
1							Clay			44'→47' 3:02-3:19
2				27/36			Same			47'→50' 3:27-3:36
3			C8					21		
4							serp. clay serpentine cobble at 44.5			
45		36/36		36/36			[illegible]			
6			C9				shale. Thinly bedded. Gray. Fresh weathering			
7							mod. Hard. mod. fracture	17		
8				41/41			Serpentine (shaley)			
9			C10				Same	9		
50										Total Depth of
1										Boring 50'
2										Grout to surface
3										
4										3 core boxes
55										
6										
7										
8										
9										
60										

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Caltrans EXPLORATION BORING FIELD LOG

Date 7/17-18/00 | Boring No.

Location Doyle Dr | Lab No. | EA No. 163701 | Page 1 of 2

Dist. 04 Co. SF Rt. 101 P.M. | Br. No. | Purpose of Work

Ft. Rt. Lt. Line. Sta. Northings. Eastings. Elev.

Ground Water Data: Date/Time | Water Level | Bot. of Boring

Logged By: ML | Drill Crew: Wayne Oscar Troy

Drill rig: | Hammer Type and Weight: Auto

Drilling Method: Rotary Mud | Casing: No

Hole Completion:

Depth	Sample Interval / Tool	Blows / RQD	Sample I.D.	% Rec.	Strength	Graphic Log	Description	Remarks
1							½ Organic	
2		29 28		100%			Gravelly Sand (SW-SM) medium dens	Sample Enviro (Baseline)
3		12 7					Yellow orange Dry 5% Fines	
4		7 10	2.5-4.0	100%			85% Fine sand 10% med Gravel	Sample Depth 2.5-4.0
5							Angular Serpentine Gravel No	
6		30 50/5					Plasticity. Roots & organic matter	Sample Base line
7		27					at 3.5' Light Brown	
8		46 43					at 4.0' increasing Fine	@ 7.5' Drill core
9		0/51		51/51			at 4.5'	Core 101 method
10			C1	88%			Serpentine Rock crush by Auger	Clean out hole w/
1							Serpentine Fine → Coarse Clay &	Tri cone Bit to 7.5'
2							Serpentine Gravel Laminated	Drill time / Depth
3		0/36		24/36			Moderately Weathered →	1:45 → 1:47 7.5' → 12'
4			C2	81%			decomposed Soft	1:52 → 1:55 12' → 15'
15							@ 12.3 Argillite Dark Gray	1:58 → 2:01 15' - 19'
6				45/48			Very hard ~~tightly Fr~~	101 method
7			C3	94%				Fracture Argillite
8							Argillite	2:05 → 2:07 19' → 24'
9							Soft	2:10 → 2:12 24' → 27'
20				60/60				2:16 → 2:20 27' → 32'
1								2:25 → 2:30 32' → 35'
2			C4	100%			Soft	2:32 → 2:34 35' → 38'
3								2:39 → 2:42 38' → 40'
4								
25		0/36		19/24				
6			C5	57%			Argillite	
7								
8		0/60		52/60			3" White Gray Layer	
9							Slickenside	
30			C6	87%			1" Argillite Layer	
1								
2							Increasing Sands Toward bottom	
3				36/24			Serpentine Fine to Coarse Black Sand	
4			C7	100%			Light Gray Green Very Weathered	
35							Clay (CL) Hard 80% clay 20% Coarse	
6				32/36			Sand med cementation Argillite	
7			C8	89%			Cobbles	
8							Argillite	
9			C9	21/24			Increasing Sands & Serpentine	No Rad
40				88%			Clayey Serpentine ↓	

34-0157NB A7

Caltrans EXPLORATION BORING FIELD LOG

Date 7/17 | Boring No.

Location | Log No. | EA No. 163701 | Page 2 of 2

Dist. | Co. | Rt. | P.M. | Br. No. | Purpose of Work

Ft. Rt. Lt. | Line. Sta. | Northings. | Eastings. | Elev.

Ground Water Data: Date/Time | Water Level | Bot. of Boring

Logged By: | Drill Crew:

Drill rig: | Hammer Type and Weight:

Drilling Method: | Casing:

Hole Completion:

Depth	Sample Interval	Log	Blows	RQD	Sample I.D.	% Rec.	Strength	Graphic Log	Description	Remarks
41						7/24			Clay Serpentine	2:54 → 2:58 40 → 42
42						8%				3:01 → 3:05 42 - 44
43			0/24			24/24			Top 1' Argillite Clay	3:14 → 44 - 47
44					C10	100%			Serp. - Argillite Shatered Serp bottom 3" Argillite	3:26 → 3:31 47 - 47.5
45						32/24			Argillite. White → Black. Coarse sand stone	3:35 → 3:39 47.5 - 50
46					C11				Highly weathered Serpentinite Dark Green.	~~50~~
47									Black on sides Highly Fractured	
48					C12	6/6 100%			Graywacke white 100% Fine sand Gray	
49					C13	3/30			Hard. Sample Shattered From IDI method	7/17/08 Depth 50'
50						89%				7/17/08 Start @
51			NO		C14	20/24			Serp Clay	1:30 - 1:33 50 - 52
52										1:41 - 1:44 52 - 54.5
53					C15	33/32	100%		Argillite	1:52 - 1:55 54.5 - 56
54						83%			Serp	2:00 - 2:03 56 - 58.5
55									Sandy Clay 20% Coarse Sand 80% Clay	2:08 - 2:11 58.5 - 59
56			N/A		C16	16/18			Hard Serp Rock	2:19 - 2:21 59 - 60
57			N/A			7/32			Serp / Clay	
58					C17	100%			Serp / clay more cemented (more rock than clay	
59					C18	35/36	50%		Trace Gravel. Very weathered Very fractured	
60					C19	12/12	100%		Argillite Dark Gray White Veins. Very hard	Total Depth 60'
									Fresh Weathered	
									Serp / Clay Start Loose then more consolidated downward	
									Grouted To Surface 8 bags mix	

34-015758-B6L

Caltrans

EXPLORATION BORING FIELD LOG

Date 6/25/08 6/26/08 | Boring No.

Location Doyle Dr. SB | Lab No. | EA No. 163701 | Page 1 of 2

Dist. 04 Co. SF Rt. 101 P.M. | Br. No. | Purpose of Work

Ft., Rt. Lt. | Line. Sta. | Northings. | Eastings. | Elev.

Ground Water Data: Date / Time | Water Level | Bot. of Boring

Logged By: M. Gaffney | Drill Crew: Gregg (Roland et al)

Drill rig: Fraste Multi Drill XL | Hammer Type and Weight: Automatic

Drilling Method: Rotary | Casing: NA

Hole Completion:

Depth	Sample Interval (Ton)	Blows RQD	Sample I.D.	% Rec.	Strength	Graphic Log	Description	Core Min Time		Remarks
1										
2							Gravelly Sand (SW) · Loose · yellow orange			
3							Dry · 30% 2" subround Gravel 70%			
4	X	31 50/4	3.0-4.5	50%			medium Grain Sand · No Plasticity			
5		0/24	C1	100%			Serpentine Clay Laminated Green	3.		· Clay (Cl) · Rqd 4.5 · Very
6							with black mottled · very weathered			dense Trace coarse
7		0/24	C2				soft · Intensely Fractured			sand No Plasticity Moderate cemente
8				67%			@5.5' Argillite · Fine bedding · black	4		· broken by 101 core
9							Low weather very hard highly			method
10		24/24	C3				Fractured			
11				67%			serpentine · as above	16		
12										
13		27/36	C4							
14				100%				20		
15										
16		4/18	C5							
17				50%				14		
18										
19		4/10	C6							
20				15%				12		
21										
22										
23		0/36	C7				Argillite			
24				100%			Serpentine	6		
25							Argillite			Stop @ 25' on 6/25
26		10/28	C8							
27				100%				8		
28										
29			C9	0%				6		
30										
31			C10	0%			Argillite	5		
32		0/10	C11				serpentine	10		
33			C12				Argillite			
34		14/33		85%				15		
35										
36			C13				Serpentine			
37								19		
38				88%			Argillite			
39										
40			C14				Serpentine	11		

34-015758-B6L

Caltrans EXPLORATION BORING FIELD LOG

Date 6/26 | Boring No.

Location Doyle Dr. | Lab No. | EA No. 163701 | Page 2 of 2

Dist. 04 Co. SF Rt. 100 P.M. | Br. No. | Purpose of Work

Ft. Rt. Lt. | Line. Sta. | Northings. | Eastings. | Elev.

Ground Water Data: Date/Time | Water Level | Bot. of Boring

Logged By: M Gafney | Drill Crew: Greg

Drill rig: | Hammer Type and Weight:

Drilling Method: Rotary | Casing:

Hole Completion: 51' grouted to surface

Depth	Sample Interval	Tool Blows	RQD	Sample I.D.	% Rec.	Strength	Graphic Log	Description	Core Min.		Remarks
41		10/35	C15	100%					17		
42											
43											
44		11/28	C16	75%					18		
45								Serpentine as above			
46											
47		13/30	C17	75%					20		
48											
49											
50		21/45	C18	75%							
51											

Bottom of Boring 51'
Grouted to surface

34.015 SB · B6R

Caltrans EXPLORATION BORING FIELD LOG

Date 6/27/08 6/28/08 | Boring No.

Location Doyle Dr. | Job No. | EA No. 163701 | Page 1 of 2

Dist. 04 Co. SF Rt. 101 P.M. | Br. No. | Purpose of Work

Ft. Rt. Lt. | Line. Sta. | Northings. | Eastings. | Elev.

Ground Water Data: Date / Time | Water Level | Bot. of Boring

Logged By: M. Gaffney | Drill Crew: Gregg (Roland, et al)

Drill rig: Fraste Mult. Drill XL | Hammer Type and Weight: Automatic

Drilling Method: Rotary | Casing: N/A

Hole Completion: 50.5' Grouted to surface

Depth	Sample Interval Tool	Blows RQD	Sample I.D.	% Rec.	Strength	Graphic Log	Description	Drill Time Min	Remarks
1							5" Asphalt 5" concrete		
2							Gravelly Sand (SW) Very Loose.		
3							Light Brown Dry 70% medium Grain		
4		9 12 15	3.0-4.5	33%			Sand 30% Sub round 1" Gravel No		Sample Depth 3.0-4.5
5							Plasticity No Cement (Fill)		
6			C1	100%			Sandy Silt (ML) Very Stiff Yellowish Orange		
7		1.5 4.5					15% fine Sand 85% Silt Low Plasticity	2	
8							Low cementation		
9		32 39 43	8.0-9.5	100%			Colma Sand (SW) Dense Brown		Sample Depth 3.0-4.5
10							100% Sand No Plasticity No Cement.		
11		0/3	C2	100%				7	
12							Argillite black low caturing very hard		
13							highly Fractured		
14			C4	33%			Serpentine green yellowish orange	6	Clay w/ Trace Gravel (CH)
15							highly weathered Highly Fractured		Stiff Green - Yellow Orange
16									100% clay Trace 2"
17		0/6	C5	16%			Basalt (Gabro) Green. Massive Very	12	Gravel Med-High
18							Hard - No weathering No Fractures		Plasticity Medium
19		0/13							Cementation
20			C6	50%			Serpentine As above	8	
21		Drill w/ Tri Tip Bit							Drill ahead w/ Tri Tip bit
22		0/6							
23			C7	15%				9	
24							Serpentine w Argillite Gravel		
25		0/12	C8	50%			Angular Fine to Coarse	9	
26									
27		15/15	C9	50%				10	
28		8/8							
29			C10	25%					
30								22	
31									
32		4/12	C11	80%				15	
33									
34		8/24	C12	75%				13	
35		0/12	C13					9	
36		0/12	C14	100%				9	
37									
38		16/16	C15	100%			Basalt No bedding Dark Green Black	12	Largest Piece encount-
39		11/23	C16	100%			No Weathering Very hard No Fractures		ered in all borings
40							Serpentine as above		Drill (According To Dave)

34-0155B.B6R

Caltrans EXPLORATION BORING FIELD LOG

Date 6/28/05 Boring No.

Location Doyle Dr. Lab No. EA No. 163701 Page 2 of 2

Dist. 04 Co. SF Rt. 101 P.M. Br. No. Purpose of Work

Ft. Rt. Lt. Line. Sta. Northings. Eastings. Elev.

Ground Water Data: Date/Time | Water Level | Bot. of Boring

Logged By: M Gaffney Drill Crew: Greggg

Drill rig: Hammer Type and Weight:

Drilling Method: Casing:

Hole Completion: 50.5' Grouted To Surface

Depth	Sample Interval (ft)	Blows RQD	Sample I.D.	% Rec.	Strength	Graphic Log	Description	Core Time min		Remarks
41		6/9						13		
42				67%			Serpentine as above			
43		8/12		100%				17		
44										
45		10/17		90%						
46								14		
47		0/24		100%						
48										
49										
50		6/30		100%				17		
51							Argillite highly Fractured Slate Laminated Black Moderate Weathered Hard.			
							Bottom of boring 50.5' Grouted To Surface			