34-0157NB-B4L

Caltrans | EXPLORATION BORING FIELD LOG | Date 5/6/08 | Boring No.

Location Doyle Drive Replacement | Lab No. | EA No. 163701 | Page 1 of 5

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

Ft. Rt. Lt. Line. Sta. Northings. 2120710.162 Eastings. 5993235.827 Elev. 42.042

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

Logged By : E. Ortega | Drill Crew : Bob

Drill rig : Mobil B-47 | Hammer Type and Weight :

Drilling Method : Rotatory Wash | Casing :

Hole Completion : 5/09/08

Depth	Sample Interval Tool	Blows / RQD	Sample I.D.	% Rec.	Strength	Graphic Log	Description			Remarks
1							Drilled thru unpaved soil			
2										
3										
4										
5		12					Colma Sand, Poorly graded sand (SP), dense, drk brwn, med. sand, moist, n. pls; weak cementation			
6		16								
		20								
7										
8										
9										
10		16					Same			
11		20								
		25								
12										
13										
14										
15		20					Same but v. dense and some oxidation spots			
16		25								
		32								
17										
18										
19										
20							Same			
21		8								
		27								
		40								
22										
23										
24										
25							Same			
26		22								
		38								
		46								
27										
28										
29										
30										

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Caltrans | EXPLORATION BORING FIELD LOG | Date 5/6/08 | Boring No.

Location Doyle Drive Replacement | Lab No. | EA No. 163701 | Page 2 of 5

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

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

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

Logged By: E. Ortega | Drill Crew:

Drill rig: | Hammer Type and Weight:

Drilling Method: Rotatory Wash | Casing:

Hole Completion:

Depth	Sample Interval Tool	Blows RQD	Sample I.D.	% Rec.	Strength	Graphic Log	Description			Remarks
30							Same but drk gray Tip has some roots and smells			
31		14 24 35								
32										
33										
34							Colma Sand			
35							Poorly graded sand (SP), v. dense, drk brown, med sand, n. pls, weak cementation			
36		10 44 >50								
37										
38										
39										
40							Same			
41		33 >50								
42										
43										
44										
45							Fat Clay (CH), v. stiff, drk greenish blck, high pls q_u = .75-1.25 Ton/ft²			
46		3 8 14								
47										
48										
49										
50							Same but hard w/some woodchips q_u = 2.5-3.0 Ton/ft²			
51		12 17 19								
52										
53										
54										
55							Same w fragments of shale serpentinized q_u = 1.5-2.5 Ton/ft²			
56		13 15 29								
57										

34-0157NB-BAL

EXPLORATION BORING FIELD LOG

Caltrans

Date 5/6/08 | Boring No.

Location: Doyle Drive Replacement | Log No. | EA No. 163701 | Page 3 of 5

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

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

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

Logged By: E. Ortega | Drill Crew:

Drill rig: | Hammer Type and Weight:

Drilling Method: Rotatory Wash | Casing:

Hole Completion:

Depth	Sample Interval / Tool	Blows / RQD	Sample I.D.	% Rec.	Strength	Graphic Log	Description			Remarks
58										
59										
60							Same w fragments of shale cerpentinized. q_u = 3.25-3.50 Ton/ft²			
		2								
61		17								
		20								
62										
63										
64										
65							Poorly graded sand (SP) v. dense, lt. gray, med sand, n. plb, weak calcite stains			
		35								
66		40								
		34								
67										
68										
69										
70							Fat Clay (CH), hard, greenish black, h. plb, w fragments of shale q_u = 4.75 > 4.5 Ton/ft²			
		11								
71		24								
		35								
72										
73										
74										
75							6" Same q_u = 3.75 Ton/ft² 12" Shale, v. int. fract, decomposed, dk brown			
		17								
76		48								
		50/3"								
77							Shale, mod. fract, mod. weath dk. greenish gray, lt oxidation spots			Dip: 10° Glex: 3/4-1/DY
78										
79										
80							RQD = 8+5+8.5+4+4.3/60 = 89.2%			
81										
82							Same RQD = 5+23/54 = 51.9%			
83										
84										
							Same RQD = 15+14/30 = 96.6%			
85										
86										
87							Same RQD = 9+6+4/36 = 52.7%			
88										

34-0157NB-B4L

Caltrans | EXPLORATION BORING FIELD LOG | Date 5/7/08 5/8/08 | Boring No.

Location Doyle Drive Replacement | Lab No. | EA No. 163701 | Page 4 of 5

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

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

Ground Water Data

Date / Time	Water Level	Bot. of Boring

Logged By: E. Ortega | Drill Crew:

Drill rig: | Hammer Type and Weight:

Drilling Method: Rotatory Wash | Casing:

Hole Completion:

Depth	Sample Interval Tool	Blows RQD	Sample I.D.	% Rec.	Strength	Graphic Log	Description			Remarks
89							Same but slightly fract			
90							RQD = 13+27/48 = 83.3%			
91										
92										
93							Same RQD = 12/12 = 100%			
94										
95							Same but v. int fract			
96							RQD = 7+8/48 = 31.25%			
97										
98										
99							Same but mod. fract			
100							RQD = 7+7+6+9.5/36 = 81.9%			
101										
102							Same			
103							RQD = 5/16 = 31.2%			
104							Same RQD = 9/20 = 45%			
105							Same RQD = 5+14.5/30 = 65%			
106										
107							Same RQD = 4+8.5+7/30 = 65%			
108										
109										
110							Sandstone, mod fract,			5/08/08
111							mod. weath, dk greenish gray,			
112							healed w/clay			
113							RQD = 8.5+6+14.5+10.5+6.5/60 = 76.6%			
114										
115							Same			
116							RQD = 13+5+6+6+4/36 = 94.4%			
117										Loosing circulation
118							Same			
119							RQD = 6+6.5+4.5/24			
120							Same but mod to int fract			
121							RQD = 9+9.5+6+9.5+4.5+4/60 = 70.8%			
122										
123										
124							Same but int to v. int fract			
125							RQD = 5.5+4+4+8/48 = 44.8%			
126										

34-0157NB-B4L

Caltrans | EXPLORATION BORING FIELD LOG | Date 5/08/08 | Boring No.

Location Doyle Drive Replacement | Lab No. | EA No. 163701 | Page 5 of 5

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

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

Ground Water Data

Date / Time	Water Level	Bot. of Boring

Logged By : E. Ortega | Drill Crew :

Drill rig : | Hammer Type and Weight :

Drilling Method : Rotatory Wash | Casing :

Hole Completion : 5/08/08

Depth	Sample Interval	Blows / RQD	Sample I.D.	% Rec.	Strength	Graphic Log	Description			Remarks
127										
128							Same RQD = 6+10+6/36 = 61.1%			
129										
130										
131							Same but slightly fract RQD = 10/12 = 83.3%			
132										
133							Same but int to v. int fract RQD = 7.5+4/24 = 47.9%			
134										
135							Same but mod fract RQD = 6+9+5.5+9+7.5/42 = 88.1%			
136										
137										
138							Same but no fract RQD = 16/16 = 100%			
139										
140							Same but mod fract RQD = 12.5+7.5+4+4.5+6.5/54 = 64.8%			
141										
142										
143										
144							Same but v. int fract RQD = 5.5/36 = 15.3%			
145										
146										
147							Same RQD = 6+4.5+8/30 = 61.6%			
148										
149							Same RQD = 4.5+5+5/24 = 60.4%			
150										
151							Same RQD = 4.5+5/36 = 26.4%			
152										
153										
154							Same RQD = 8+6/60 = 23.3%			
155										
156										
157										
158										
159										
160							Bottom of boring @ 160' on 5/9/08			