

Appendix F
Priority 5 (I-405) Site Data

Appendix F - Priority 5 (405 Fwy)

Geotechnical Laboratory Test Methods

General

The results of geotechnical laboratory tests undertaken on selected soil samples obtained from subsurface investigations at the Priority 5 (405 Fwy) sites are summarized in this appendix. The following types of tests were performed:

- water content tests
- liquid limit and plastic limit tests
- particle-size distribution tests
- pH
- organic matter content
- cation exchange capacity

Brief descriptions of the testing methods are presented below. Results of the tests are summarized on tables included in the front of the individual Priority 5 site data sections in this appendix. Plasticity charts showing plots of plasticity index versus liquid limit, and particle-size distribution plots, are also included in the site data sections and results are presented on the corresponding logs at the sample depths.

Water Content

The in situ water content of selected soil samples was tested in accordance with ASTM D 2216-98, "Standard Test Method for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass". This test method defines water content in the manner generally used in geotechnical practice: the ratio of the weight of water in the specimen to the weight of solid material, expressed as a percentage.

Liquid and Plastic Limits

Tests on selected soil samples to obtain the liquid and plastic limits and the plasticity index were performed in accordance with ASTM D 4318-98, "Standard Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils". The test results were used to aid in classification of fine-grained materials such as silt and clay and the fraction of coarse soils that was finer than the No. 40 sieve.

Particle Size Distribution

Tests on selected soil samples to obtain the distribution of particle sizes were performed in accordance with ASTM D 422-63(1998), “Standard Test Method for Particle-Size Analysis of Soils”, and/or D 1140-97, “Standard Test Method for Amount of Material in Soils Finer Than the No. 200 (75- μ m) Sieve”.

On some samples a sieve analysis was performed, which yields the distribution of particle sizes larger than the U.S. No. 200 sieve. Sieving through the No. 200 was performed by washing.

On other samples a partial sieve analysis was performed, called a wash analysis, primarily to obtain the percent of particles passing the No. 200 sieve, i.e., fines content. The wash analysis also yielded the percent of particles passing the No. 40 and No. 100 sieves.

In other cases a hydrometer analysis was performed in addition to a sieve analysis. The hydrometer analysis yields the distribution of particle sizes smaller than the No. 200 sieve opening.

For correlation with the soil profile, the fines content¹ values from sieve analyses (denoted by “SA”) and wash analyses (WA) of samples from the borings and test pits are presented on the corresponding logs.

pH

Soil pH was determined using methods consistent with the US Department of Agriculture, US Regional Salinity Laboratory, Handbook No. 60.

Organic Matter Content

Organic matter content tests were performed using the Muffle Furnace Method.

Cation Exchange Capacity

The test method involved an acid extraction followed by Inductively Coupled Plasma/Mass Spectrometer (ICPMS) analysis.

¹ “Fines” is defined in this report as the soil particles passing a U.S. Standard No. 200 sieve, and “fines content” is defined as the percentage of soil particles, on a dry weight basis, passing a U.S. Standard No. 200 sieve in a sieve analysis by washing.

APPENDIX F

405S-1 (Wilshire Blvd.)

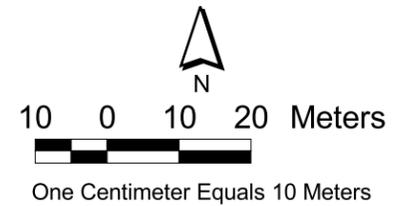
Table 1	Geotechnical Laboratory Test Data
Figure 405S-1-1	Site Plan
Figure 405S-1-2	Geologic Cross Section A-A'
Figure 405S-1-3	Geologic Cross Section B-B'
Figure 405S-1-4	Log of Boring 405S-1-MW-1
Figure 405S-1-5	Groundwater Monitoring Well 405S-1-MW-1 Diagram
Figure 405S-1-6	Groundwater Monitoring Well 405S-1-MW-1 Photographs
Figure 405S-1-7	Log of Boring 405S-1-B-1
Figure 405S-1-8	Log of Boring 405S-1-B-2
Figure 405S-1-9	Log of Boring 405S-1-B-3
Figure 405S-1-10	Log of Boring 405S-1-B-4
Figure 405S-1-11	Log of Boring 405S-1-P-1
Figure 405S-1-12	Infiltration Data for 405S-1-P-1
Figure 405S-1-13	Log of Boring 405S-1-P-2
Figure 405S-1-14	Infiltration Data for 405S-1-P-2
Figure 405S-1-15	Log of Boring 405S-1-P-3
Figure 405S-1-16	Infiltration Data for 405S-1-P-3
Figure 405S-1-17	Log of Boring 405S-1-P-4
Figure 405S-1-18	Infiltration Data for 405S-1-P-4
Figure 405S-1-19	Particle-Size Distribution Curves
Figure 405S-1-20	Particle-Size Distribution Curves
Figure 405S-1-21	Particle-Size Distribution Curves
Figure 405S-1-22	Particle-Size Distribution Curves
Figure 405S-1-23	Particle-Size Distribution Curves
Figure 405S-1-24	Plasticity Chart
Figure 405S-1-25	Hydrographs for Selected Wells
Figure 405S-1-26	Site Photographs

TABLE 1

405S-1 GEOTECHNICAL LABORATORY TEST DATA

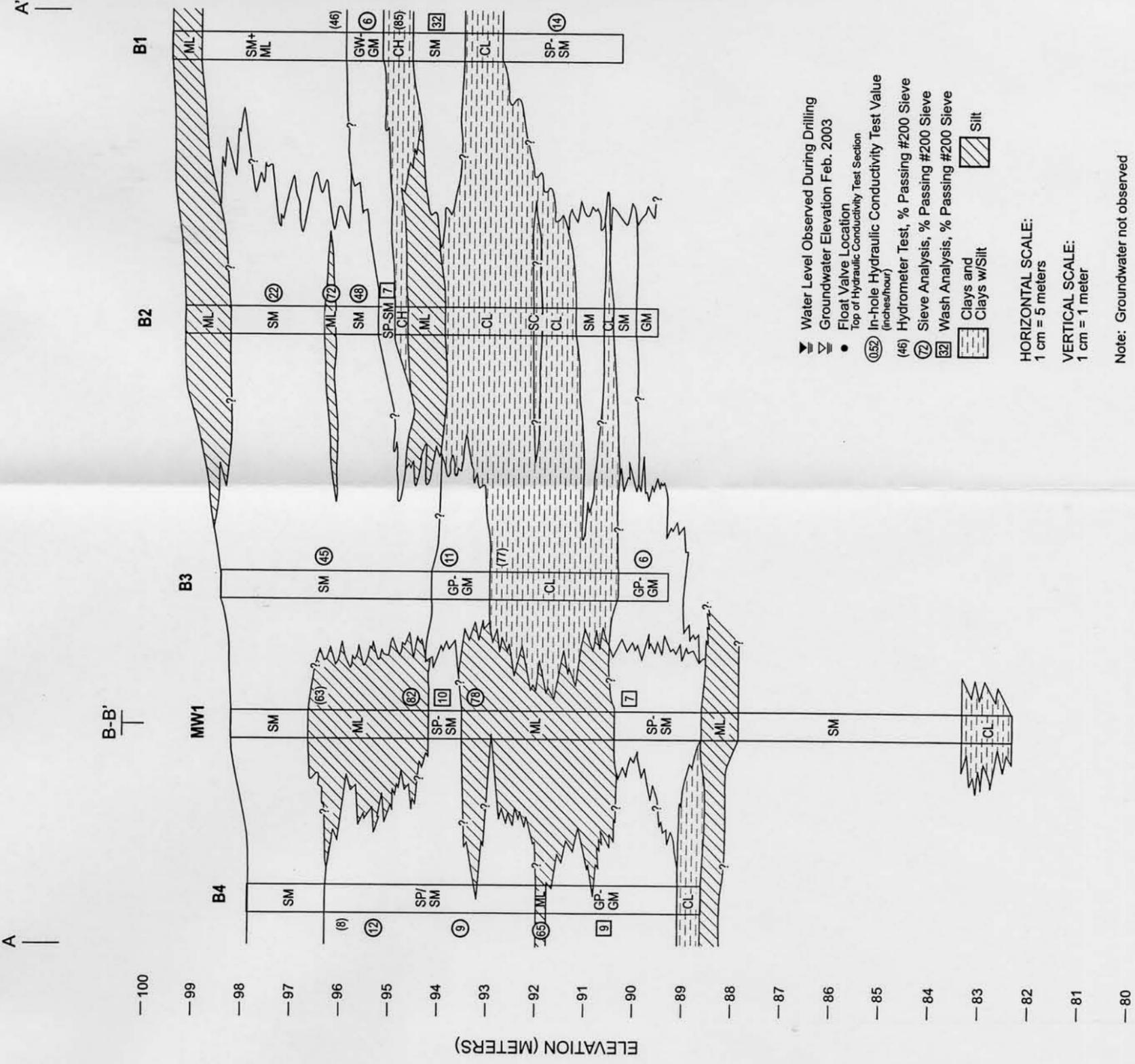
Location		Depth (m)	Cattrans Soil Classification	Water Content (%)	Total Unit Weight (pcf)	Dry Unit Weight (pcf)	Atterberg Limits		Sieve				Chemical Test Data		
Exploration Number	Sample/ Specimen Number						Liquid Limit (%)	Plasticity Index (%)	Gravel (%)	Sand (%)	<#200 Fines (%)	5 microns (%)	pH	O.M.% (% organic matter)	CEC (me/g) ¹
405S-1-MW-1	1	1.52	ML	9	-	-	-	-	0	37	63	10	7	1.8	0.092
405S-1-MW-1	2	2.44	SMML	6	-	-	-	-	-	-	-	-	-	-	-
405S-1-MW-1	3	3.05	ML	22	-	-	-	-	3	14	82	26	-	-	-
405S-1-MW-1	4	4.27	SP-SM	1	-	-	-	-	-	-	10	-	-	-	-
405S-1-MW-1	5	4.57	ML	15	-	-	-	-	0	22	78	-	-	-	-
405S-1-MW-1	6	6.10	ML	17	-	-	-	-	-	-	-	-	-	-	-
405S-1-MW-1	7	7.62	SP-SM	3	-	-	-	-	-	-	7	-	-	-	-
405S-1-B-1	1	3.05	SM	11	-	-	-	-	4	50	46	14	7.6	1.3	0.127
405S-1-B-1	2	3.96	GW-GM	4	-	-	-	-	50	45	6	-	-	-	-
405S-1-B-1	3	4.57	CH	11	-	-	-	-	0	15	85	20	-	-	-
405S-1-B-1	4	5.18	SM	5	-	-	-	-	-	-	33	-	-	-	-
405S-1-B-1	5	6.10	CL	13	-	-	32	14	-	-	-	-	-	-	-
405S-1-B-1	6	7.62	SM	5	-	-	-	-	34	52	14	-	-	-	-
405S-1-B-2	1	1.52	SC	7	-	-	-	-	36	43	22	-	-	-	-
405S-1-B-2	2	2.44	SM	-	-	-	-	-	-	-	-	-	6.9	2.5	0.075
405S-1-B-2	3	2.90	ML	21	-	-	-	-	1	26	72	-	-	-	-
405S-1-B-2	4	3.05	SM	16	-	-	-	-	4	48	48	-	-	-	-
405S-1-B-2	6	4.11	SP-SM	2	-	-	-	-	-	-	7	-	-	-	-
405S-1-B-2	7	4.42	CH	28	-	-	51	23	-	-	-	-	-	-	-
405S-1-B-3	1	2.29	SM	10	-	-	-	-	1	54	45	-	7	1	0.07
405S-1-B-3	2	2.90	SM	11	-	-	-	-	-	-	-	-	-	-	-
405S-1-B-3	3	4.42	GP-GM	5	-	-	-	-	46	43	10	-	-	-	-
405S-1-B-3	4	5.79	CL	17	-	-	33	13	0	23	77	25	-	-	-
405S-1-B-3	5	6.86	ML	16	-	-	-	-	-	-	-	-	-	-	-
405S-1-B-3	6	8.38	GP-GM	2	-	-	-	-	53	41	6	-	-	-	-
405S-1-B-4	1	2.13	SP-SM	1	-	-	-	-	32	60	8	3	7	1.5	0.04
405S-1-B-4	2	2.90	SP-SM	1	-	-	-	-	1	87	12	-	-	-	-
405S-1-B-4	3	4.42	SP-SM	1	-	-	-	-	32	59	9	-	-	-	-
405S-1-B-4	4	5.94	ML	9	-	-	-	-	1	34	65	12	-	-	-
405S-1-B-4	5	7.62	GP-GM	1	-	-	-	-	-	-	9	-	-	-	-
405S-1-B-4	6	9.14	CL	16	-	-	33	13	-	-	-	-	-	-	-
405S-1-P-1	4	1.98	CL	11	-	-	32	10	0	22	78	20	-	-	-
405S-1-P-1	5	2.44	SC	-	-	-	27	8	-	-	38	-	-	-	-
405S-1-P-2	5	3.05	SM	-	-	-	-	-	15	61	24	-	-	-	-
405S-1-P-2	6	3.51	GW	-	-	-	-	-	61	36	3	-	-	-	-
405S-1-P-3	3	1.52	CL	8	-	-	34	14	0	22	78	27	-	-	-
405S-1-P-3	4	1.98	SM/ML	-	-	-	-	-	0	50	50	-	-	-	-
405S-1-P-4	2	0.61	SP-SM	-	-	-	-	-	43	50	8	-	-	-	-

Notes: ¹ Cation exchange capacity, millequivalents per gram



- Boring
 - ⊕ Monitoring Well
 - ⊕ In-Hole Hydraulic Conductivity Test Well
- A ————— A'
Geologic Cross Section

Priority 5-405S-1 (Wilshire Blvd.) Site Plan		
April 2003	Infiltration Basin Site Selection Study	Figure 405S-1-1

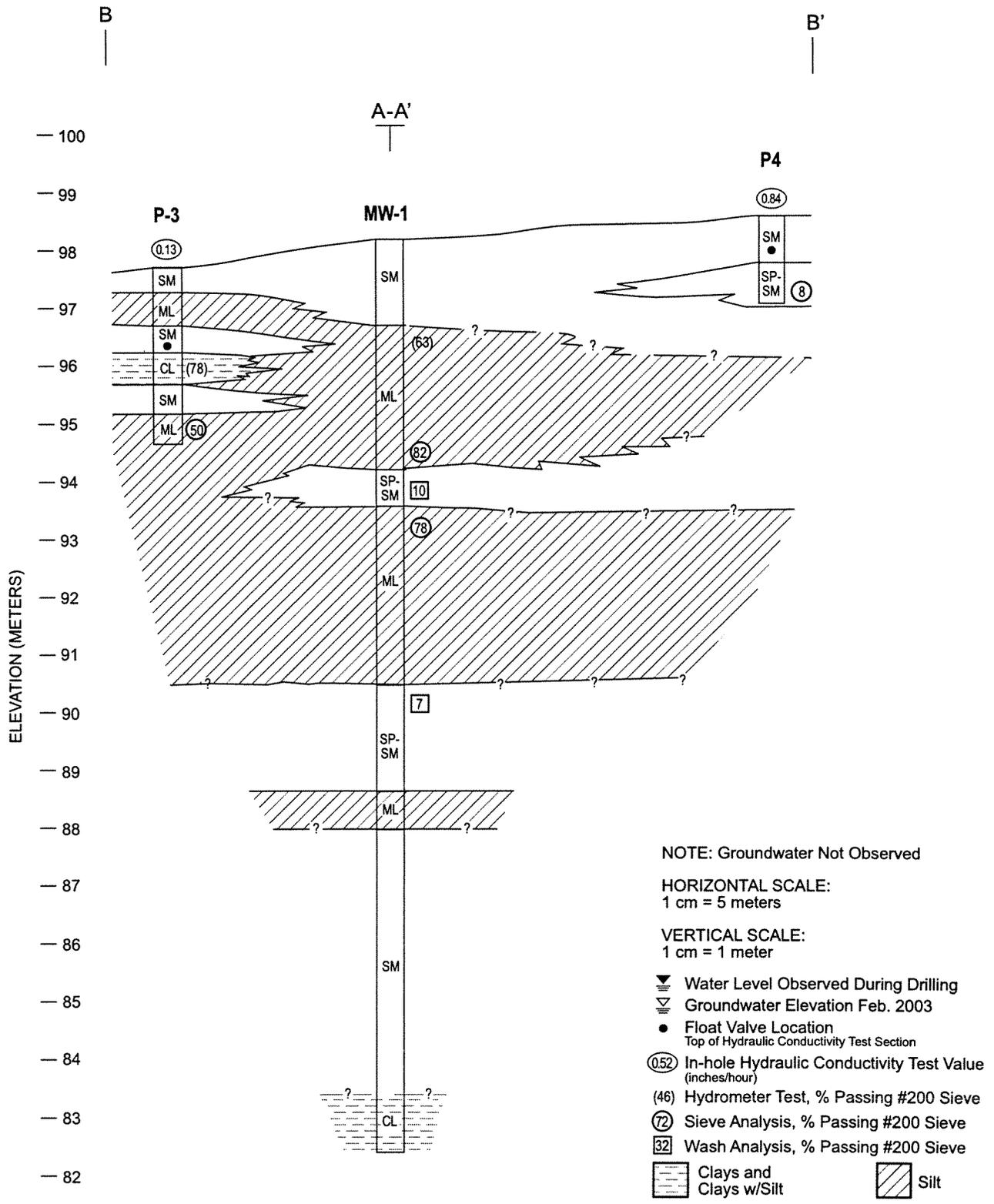


**PRIORITY 5 - SITE 405 S-1
 GEOLOGIC CROSS SECTION A-A'**

Project: INFILTRATION BASIN SITE SELECTION STUDY

Date: APRIL 2003

Figure 405 S-1-2



PRIORITY 5 – SITE 405 S-1 GEOLOGIC CROSS SECTION B-B'

Date: APRIL 2003

Project: INFILTRATION BASIN SITE SELECTION STUDY

Figure 405S-1-3

L:\CALTRANS\C GOETZ\sect 405 S-1-3.FH10

Project: INFILTRATION BASIN SITE SELECTION STUDY
Project Location: I-405, Wilshire Boulevard

Log of Boring 405S-1-MW-1

Sheet 1 of 2

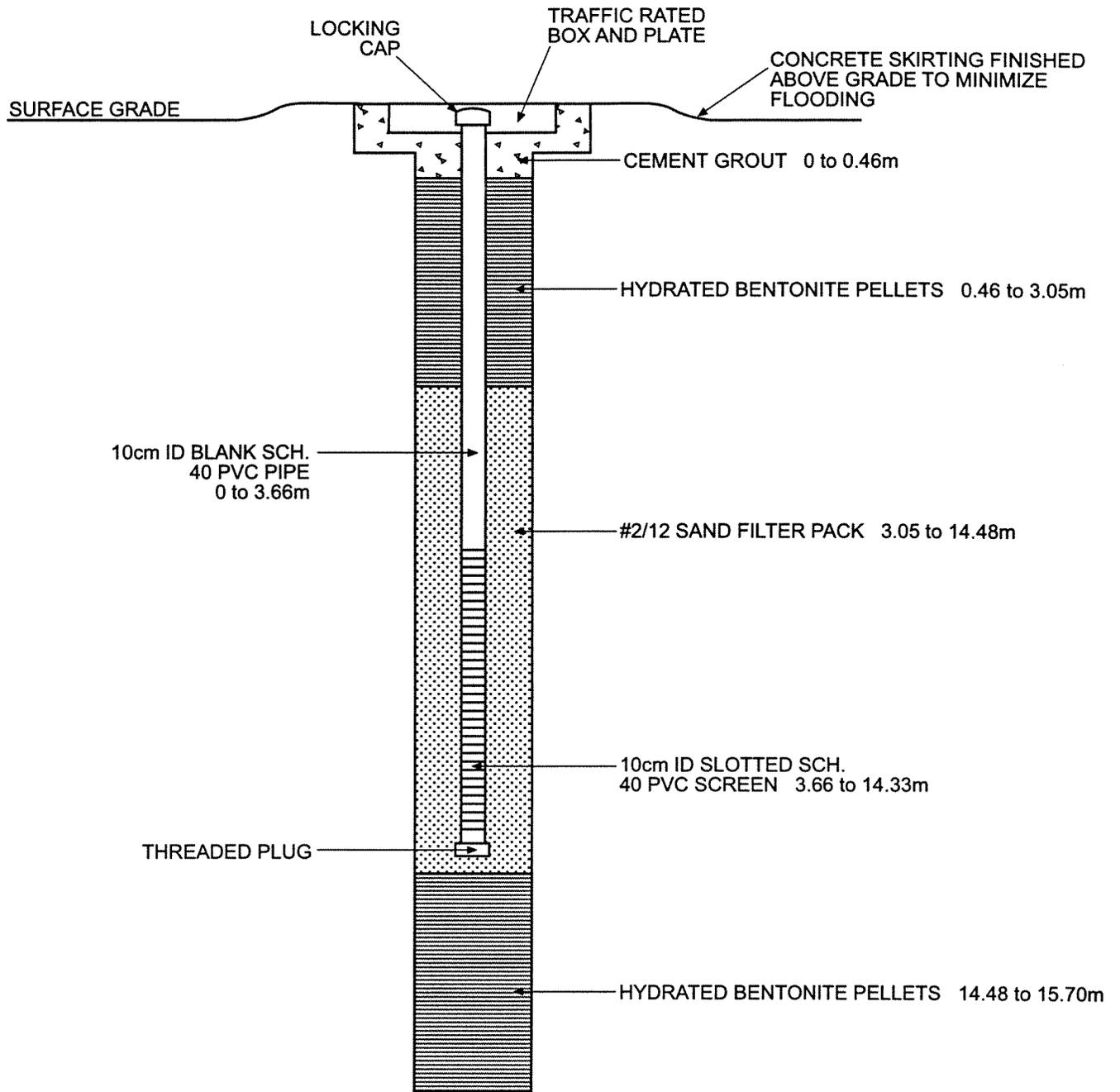
Date(s) Drilled	4/11/02	Logged By	P.Salter	Checked By	M. Siem
Drilling Method	Hollow-Stem Auger	Drill Bit Size/Type	203mm & 254mm auger bits	Total Depth of Borehole	15.7 meters
Drill Rig Type	CME 85	Drilling Contractor	A & R Drilling	Approximate Surface Elevation	98.2 m MSL
Groundwater Level(s)	Not encountered	Sampling Method(s)	ContinousCoring/ModifiedCalifornia	Hammer Data	63.5 kg, 762mm drop
Borehole Backfill	See Well Construction Figure	Location	See Site Plan		

Elevation, meters	Depth, meters	SAMPLES				Graphic Log	MATERIAL DESCRIPTION	Water Content, %	PID, ppm	REMARKS AND OTHER TESTS
		Type	Number	Sampling Resistance, blows/0.30m	Core Recovery, %					
98	0						Silty sand (SM) loose to medium dense, brown, moist, fine to medium grained sand, with occasional fine grained gravel and organics			Start at 0800. Post Hole to 1.5m Note: 76mm Diameter Continous Coring to 4.6m with 203mm diameter Hollow Stem Auger.
	1									
	2	1	5		1-2-5'		Sandy silt (ML) stiff, dark brown, moist, fine to medium grained sand	9		HYD:63%<#200 pH=7.0; O.M.=1.8% CEC=0.092 me/g
96	2	2						6	0.9	
	3									
	3	3	13				Silt with sand (ML) stiff, brown, moist, fine to coarse grained sand, trace fine gravel, with some rootlets	22		SA: 82%<#200
	4									
94	4	4					Poorly graded sand with silt and gravel (SP-SM) medium dense, mottled gray and brown, moist, fine to coarse grained sand, gravel consists of slate clasts	1	1.0	WA: 10%<#200
	5									
	5	5	10				silt with sand (ML) stiff/medium dense, brown, moist, fine to medium grained	15		SA: 78%<#200 Note: Boring overdrilled to 4.6m with 254mm diameter HSA. Below 4.6m 254mm HSA used.
	6									
92	6	6	9					17		
	7									
	7						Sandy silt (ML) stiff, dark brown, moist, fine grained sand, with clay and fine grained gravel			
	8									
90	8	7	38				Poorly graded sand with silt and gravel (SP-SM) dense, mottled gray and brown, moist, fine to coarse grained sand, fine grained gravel consisting of slate clasts	3		WA: 7%<#200
	9									

Figure 405S-1-4

Elevation, meters	Depth, meters	SAMPLES					Graphic Log	MATERIAL DESCRIPTION	Water Content, %	PID, ppm	REMARKS AND OTHER TESTS
		Type	Number	Sampling Resistance, blows/0.30m	Core Recovery, %	Environmental Sample ID					
			8	52			As above with gravel up to 50mm in diameter				
	10						Sandy silt (ML) very stiff, dark brown, moist, fine grained sand, with some coarse grained sand and fine grained gravel				
88			9	27			Silty sand (SM) medium dense, dark brown, moist, fine grained sand, with some fine grained gravel				
	11						← Becomes fine to medium grained sand				
	12		10	14							
86											
	13										
	14		11	32			Silty sand (SM) medium dense, dark grayish brown, moist, fine to medium grained sand, with some grained gravel and trace clay				From 13.7m driller indicates "binding," augers smoking. Driller adds 5 gallons DI water to get cuttings up.
84							Sandy lean clay (CL) hard, mottled dark gray and brown, moist, fine grained sand, with some fine grained gravel				
	15		12	18		12-2-50'					
	16						Bottom of boring at 15.7 meters				Finish at 1112.
82											
	17										
	18										
80											
	19										

Figure 405S-1-4



405S-1-MW-1

Not to Scale

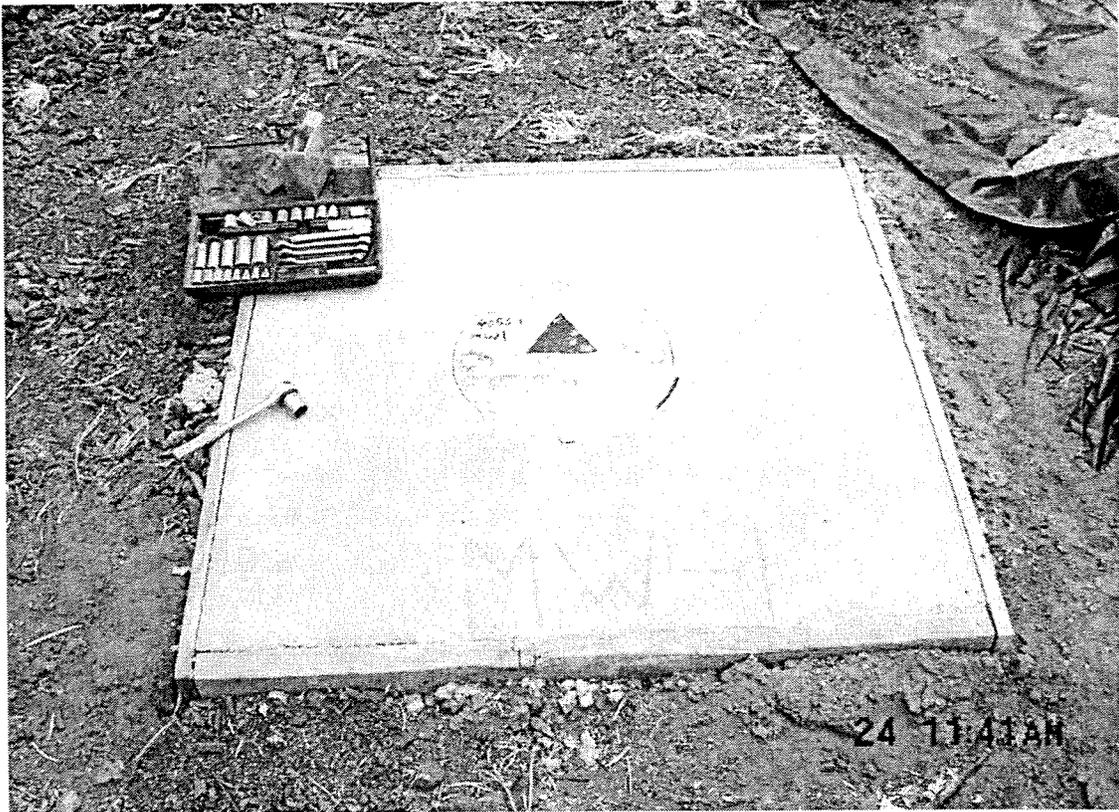
GROUNDWATER MONITORING WELL DIAGRAM

Date: APRIL 2003

Project: INFILTRATION BASIN SITE SELECTION STUDY

Figure 405S-1-5

L:\caltrans\GW monitoring well diag. fh10 5/03



405S-1-MW-1

Project: INFILTRATION BASIN SITE SELECTION STUDY

Project Location: I-405, Wilshire Boulevard

Log of Boring 405S-1-B-1

Sheet 1 of 1

Date(s) Drilled	4/10/02	Logged By	P.Salter	Checked By	M. Siem
Drilling Method	Hollow-Stem Auger	Drill Bit Size/Type	203mm auger bit	Total Depth of Borehole	9.1 meters
Drill Rig Type	CME 85	Drilling Contractor	A & R Drilling	Approximate Surface Elevation	99.5 m MSL
Groundwater Level(s)	Not encountered	Sampling Method(s)	ContinousCoring	Hammer Data	63.5 kg, 762mm drop
Borehole Backfill	Soil Cuttings	Location	See Site Plan		

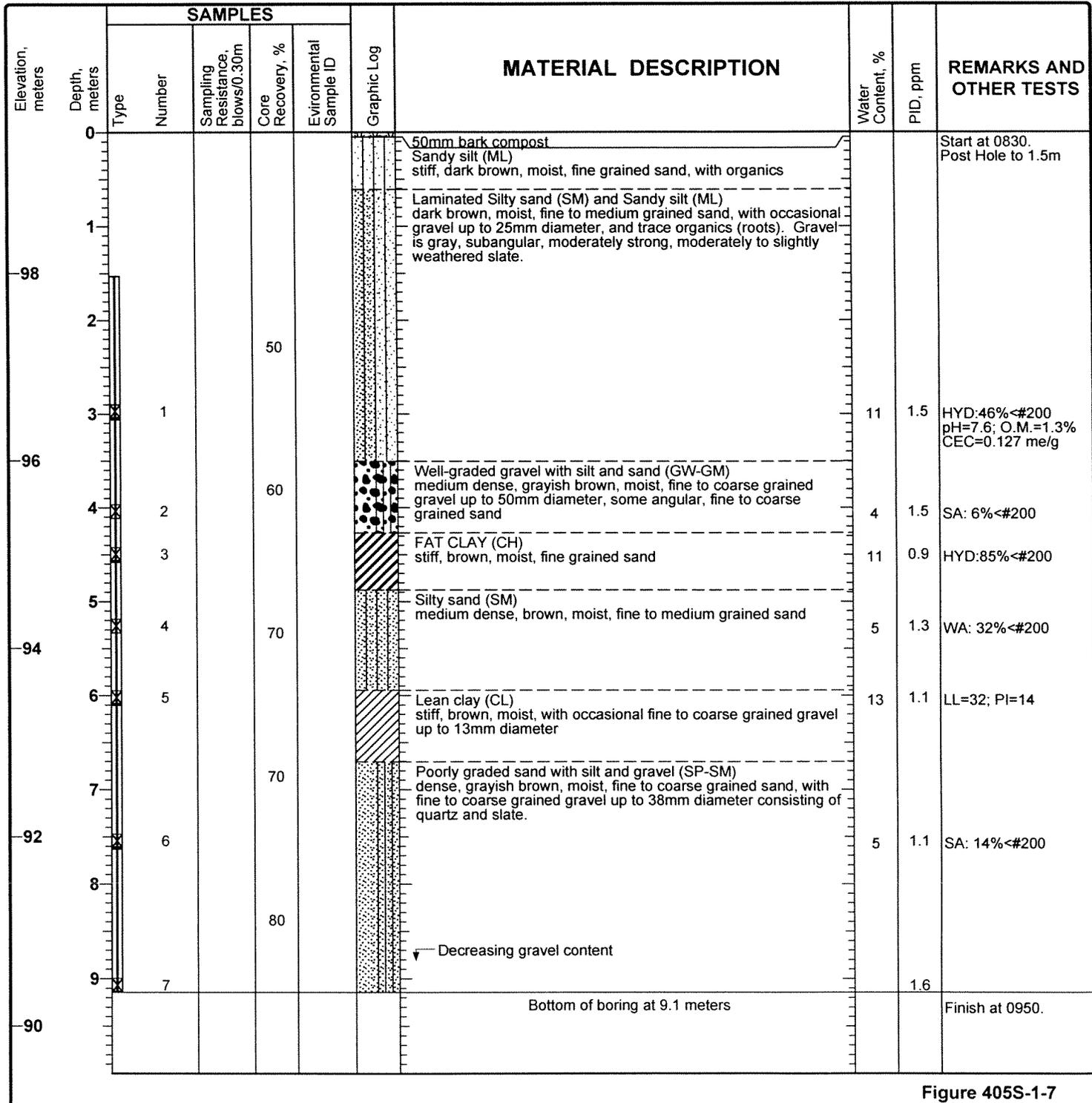


Figure 405S-1-7

Project: INFILTRATION BASIN SITE SELECTION STUDY

Project Location: I-405, Wilshire Boulevard

Log of Boring 405S-1-B-2

Sheet 1 of 1

Date(s) Drilled	4/10/02	Logged By	P.Salter	Checked By	M. Siem
Drilling Method	Hollow-Stem Auger	Drill Bit Size/Type	203mm auger bit	Total Depth of Borehole	9.6 meters
Drill Rig Type	CME 85	Drilling Contractor	A & R Drilling	Approximate Surface Elevation	99.2 m MSL
Groundwater Level(s)	Not encountered	Sampling Method(s)	ContinousCoring/ModifiedCalifornia	Hammer Data	63.5 kg, 762mm drop
Borehole Backfill	Soil Cuttings	Location	See Site Plan		

Elevation, meters	Depth, meters	SAMPLES				Graphic Log	MATERIAL DESCRIPTION	Water Content, %	PI, ppm	REMARKS AND OTHER TESTS
		Type	Number	Sampling Resistance, blows/0.30m	Core Recovery, %					
0						Silt (ML) stiff, dark brown, moist, with some fine to coarse grained sand, clay and fine to coarse grained gravel up to 50mm diameter			Start at 1030. Post Hole to 1.5m	
-98	1				1-2-5'	Silty sand with gravel (SM) medium dense, dark brown, moist, fine to medium grained sand, with fine to coarse grained gravel up to 50mm diameter	7		SA: 22%<#200	
	2	1	10							
	3	2		57					pH=6.9; O.M.=2.5% CEC=0.075 me/g	
	3	3				Silt with sand (ML) stiff, dark brown, moist, fine to medium grained sand	20	0.9	SA: 72%<#200 SA: 48%<#200	
-96	4	4	9			Silty sand (SM) loose, dark brown, moist, fine to medium grained sand, with trace fine grained gravel	16			
	5	5		100				1.2		
	4	6				Poorly graded sand with silt and gravel (SP-SM) medium dense, grayish brown, moist, fine to coarse grained sand, fine to coarse grained gravel consisting of angular slate fragments up to 38mm diameter	2	1.1	WA: 7%<#200	
	5	7				Fat clay (CH)	28	0.9	LL=51; PI=23	
	5	8	11			firm, dark brown, moist, with trace fine grained sand		0.9		
-94	6	9		86		Silt with sand (ML) medium dense, dark brown, moist, fine grained sand, with occasional fine grained gravel				
	6	10	8			Lean clay (CL) stiff, dark brown, moist		38	0.9	
	7	11		71						
-92	8	12				Clayey sand (SC) medium dense, dark brown, moist, fine grained sand			1.2	
	8	13	18			Lean clay (CL) stiff, dark brown, moist			0.9	
	9	14		71		Silty sand with gravel (SM) medium dense, mottled yellow and brown, moist, fine to coarse grained sand			0.9	
-90	9	15				Lean clay (CL) stiff, dark brown, moist			0.9	
	9	16	20		16-2-30'	Silty sand with gravel (SM) dense, dark grayish brown, moist, fine to coarse grained sand, with fine to coarse grained gravel up to 25mm diameter			1.1	
						Silty gravel (GM) dense, dark olive grayish brown, moist, fine to coarse grained gravel, with fine to coarse grained sand and silt stringers				
						Bottom of boring at 9.6 meters				
									Finish at 1202.	

Figure 405S-1-8

Project: INFILTRATION BASIN SITE SELECTION STUDY

Project Location: I-405, Wilshire Boulevard

Log of Boring 405S-1-B-3

Sheet 1 of 1

Date(s) Drilled	4/10/02	Logged By	P.Salter	Checked By	M. Siem
Drilling Method	Hollow-Stem Auger	Drill Bit Size/Type	203mm auger bit	Total Depth of Borehole	9.1 meters
Drill Rig Type	CME 85	Drilling Contractor	A & R Drilling	Approximate Surface Elevation	98.5 m MSL
Groundwater Level(s)	Not encountered	Sampling Method(s)	ContinuousCoring	Hammer Data	63.5 kg, 762mm drop
Borehole Backfill	Soil Cuttings	Location	See Site Plan		

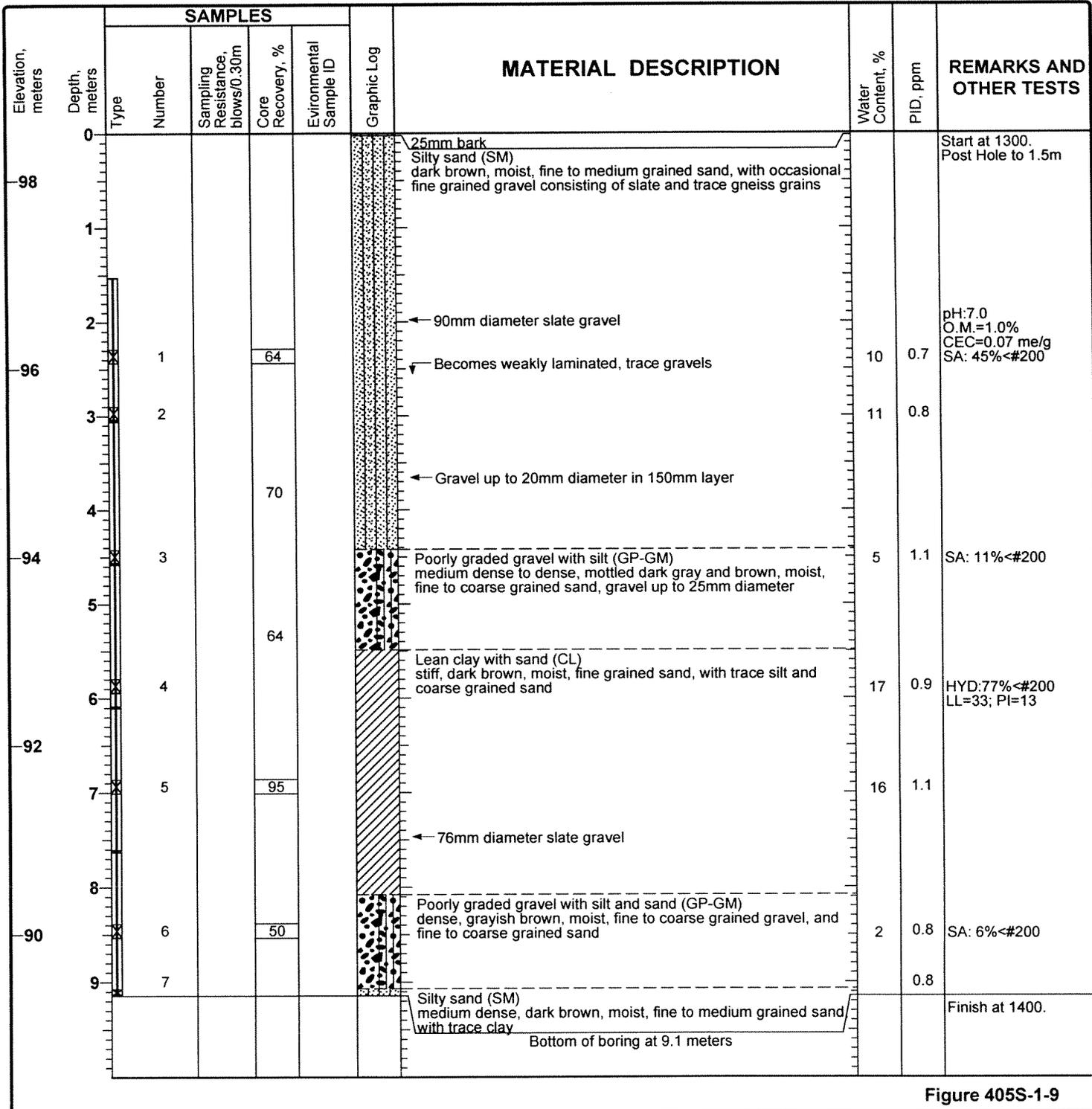


Figure 405S-1-9

Project: INFILTRATION BASIN SITE SELECTION STUDY
Project Location: I-405, Wilshire Boulevard

Log of Boring 405S-1-B-4

Sheet 1 of 1

Date(s) Drilled	4/10/02	Logged By	P. Salter	Checked By	M. Siem
Drilling Method	Hollow-Stem Auger	Drill Bit Size/Type	203mm auger bit	Total Depth of Borehole	9.1 meters
Drill Rig Type	CME 85	Drilling Contractor	A & R Drilling	Approximate Surface Elevation	97.8 m MSL
Groundwater Level(s)	Not encountered	Sampling Method(s)	ContinousCoring	Hammer Data	63.5 kg, 762mm drop
Borehole Backfill	Soil Cuttings	Location	See Site Plan		

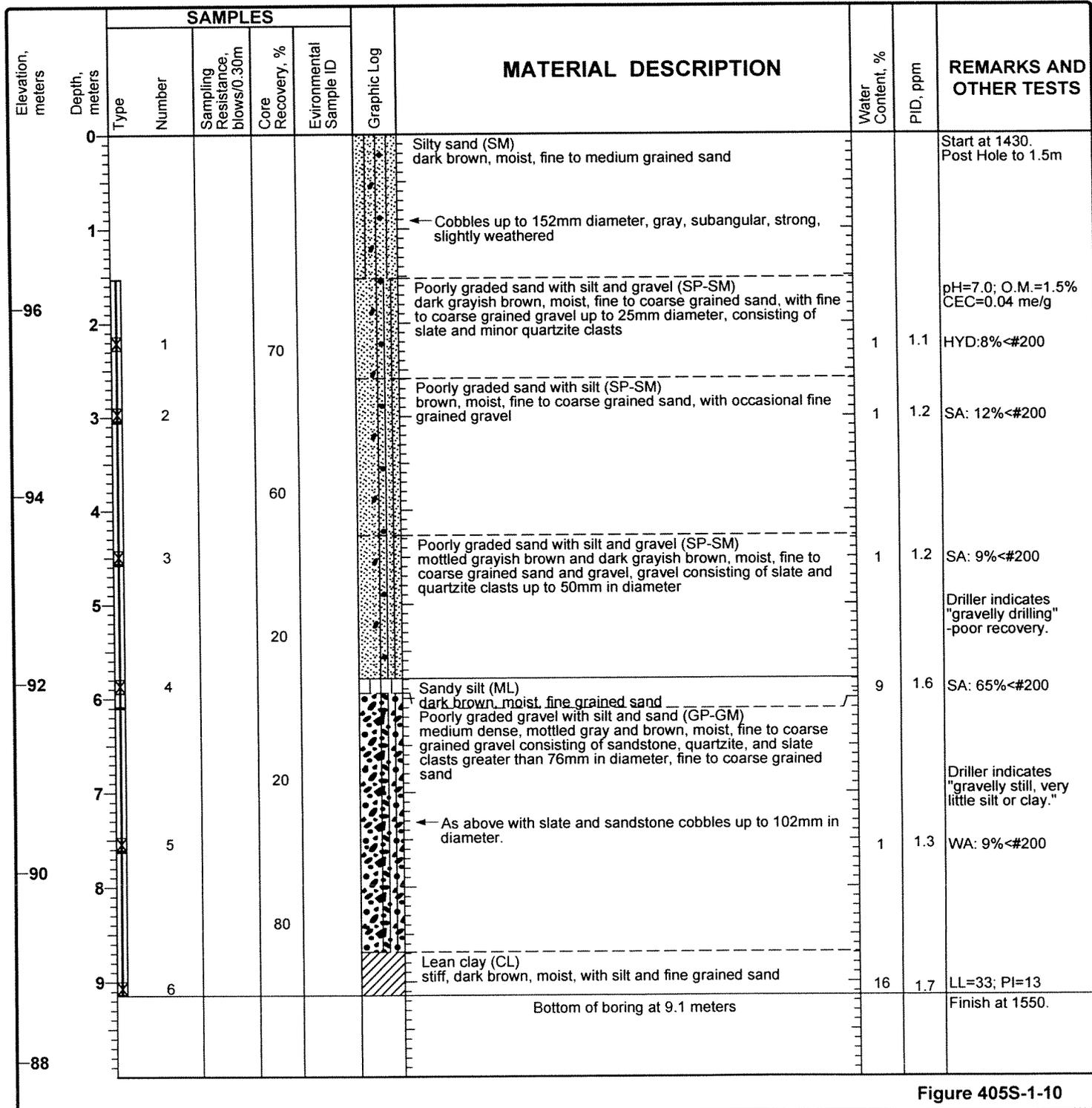


Figure 405S-1-10

Project: INFILTRATION BASIN SITE SELECTION STUDY
Project Location: I-405, Wilshire Boulevard

Log of Boring 405S-1-P-1

Sheet 1 of 1

Date(s) Drilled	7/26/02	Logged By	P. Salter	Checked By	C. Goetz
Drilling Method	Hollow-Stem Auger	Drill Bit Size/Type	152mm auger bit	Total Depth of Borehole	3.5 meters
Drill Rig Type	Limited Access	Drilling Contractor	BC2 Environmental	Approximate Surface Elevation	99.4 m MSL
Groundwater Level(s)	Not encountered	Sampling Method(s)	SPT	Hammer Data	63.5 kg, 762mm drop
Borehole Backfill	See well construction on log	Location	See Site Plan		

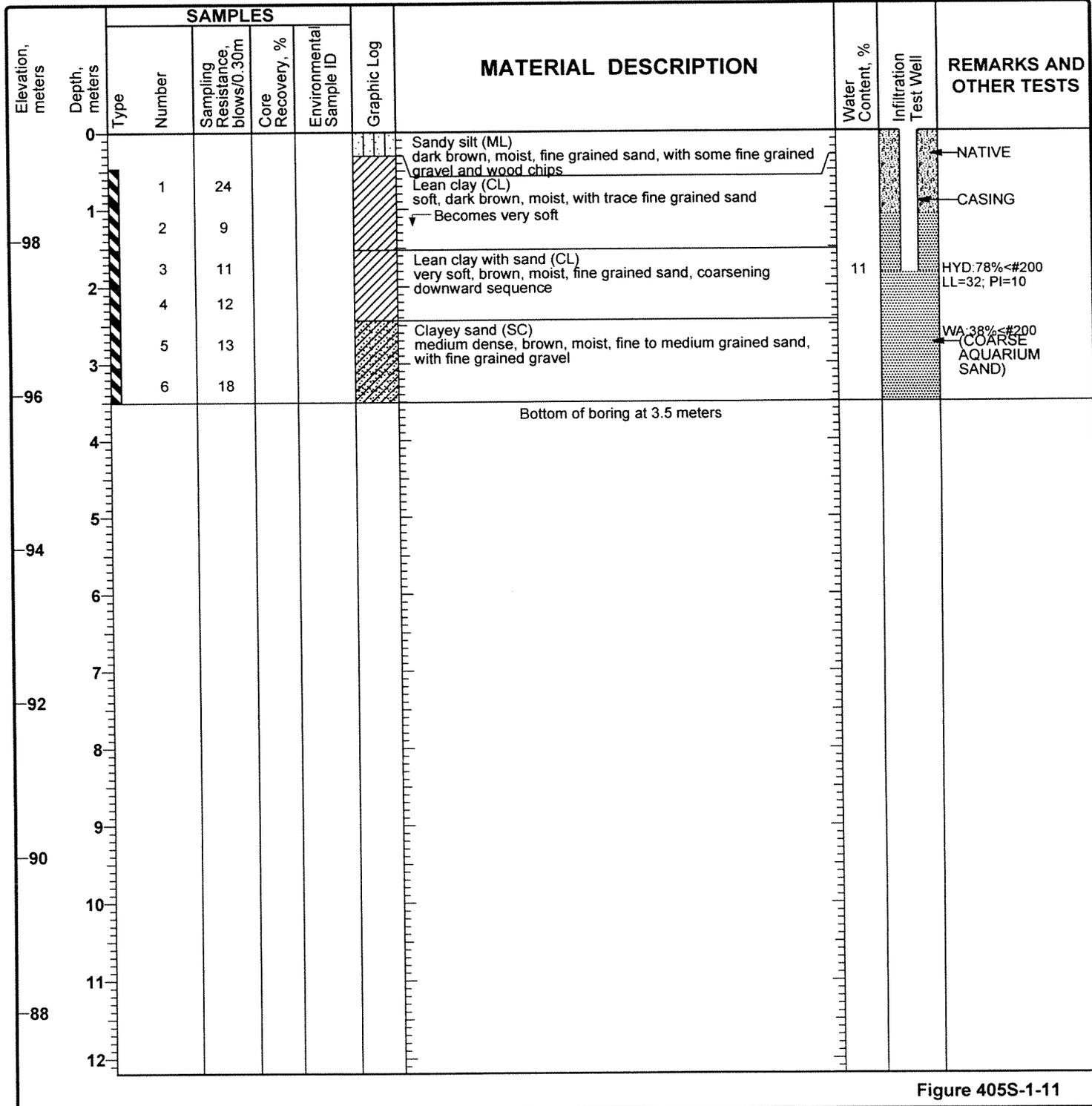


Figure 405S-1-11

405S-1-P-1-1

Clock	Accumulated Time	Tank Reading (gallons)	Difference (gallons)	Accumulated Flow (gallons)	Flow Rate (gpm)	Well Temp (°F)	Reservoir Temp (°F)
8:43:00	0:00:00	57.5	0	0	0.000		
8:44:00	0:01:00	52.8	4.7	4.7	4.700	73.4	
8:45:00	0:02:00	51.2	1.6	6.3	3.150		
8:46:00	0:03:00	50.5	0.7	7	2.333	73.4	
8:47:00	0:04:00	49.5	1	8	2.000		
8:53:00	0:10:00	48	1.5	9.5	0.950	73.4	
9:01:00	0:18:00	47.5	0.5	10	0.556	73.2	
9:09:00	0:26:00	46.9	0.6	10.6	0.408	73	
9:20:00	0:37:00	46.2	0.7	11.3	0.305	73	75.9
9:36:00	0:53:00	45.4	0.8	12.1	0.228	73	76.5
9:48:00	1:05:00	45	0.4	12.5	0.192	73.2	76.8
10:26:00	1:43:00	43	2	14.5	0.141	74.7	
10:59:00	2:16:00	41.9	1.1	15.6	0.115	74.7	78.4
11:37:00	2:54:00	40.2	1.7	17.3	0.099	74.8	78.4
12:10:00	3:27:00	38.8	1.4	18.7	0.090	75.4	78.6
12:47:00	4:04:00	36.8	2	20.7	0.085	76.5	
13:18:00	4:35:00	36	0.8	21.5	0.078	78.3	
14:02:00	5:19:00	34.4	1.6	23.1	0.072	78.3	80.4
14:38:00	5:55:00	33.2	1.2	24.3	0.068	78.8	
15:09:00	6:26:00	32	1.2	25.5	0.066	80.4	
15:36:00	6:53:00	31.2	0.8	26.3	0.064	79.9	81.5
16:00:00	7:17:00	30	1.2	27.5	0.063	79.2	80.4

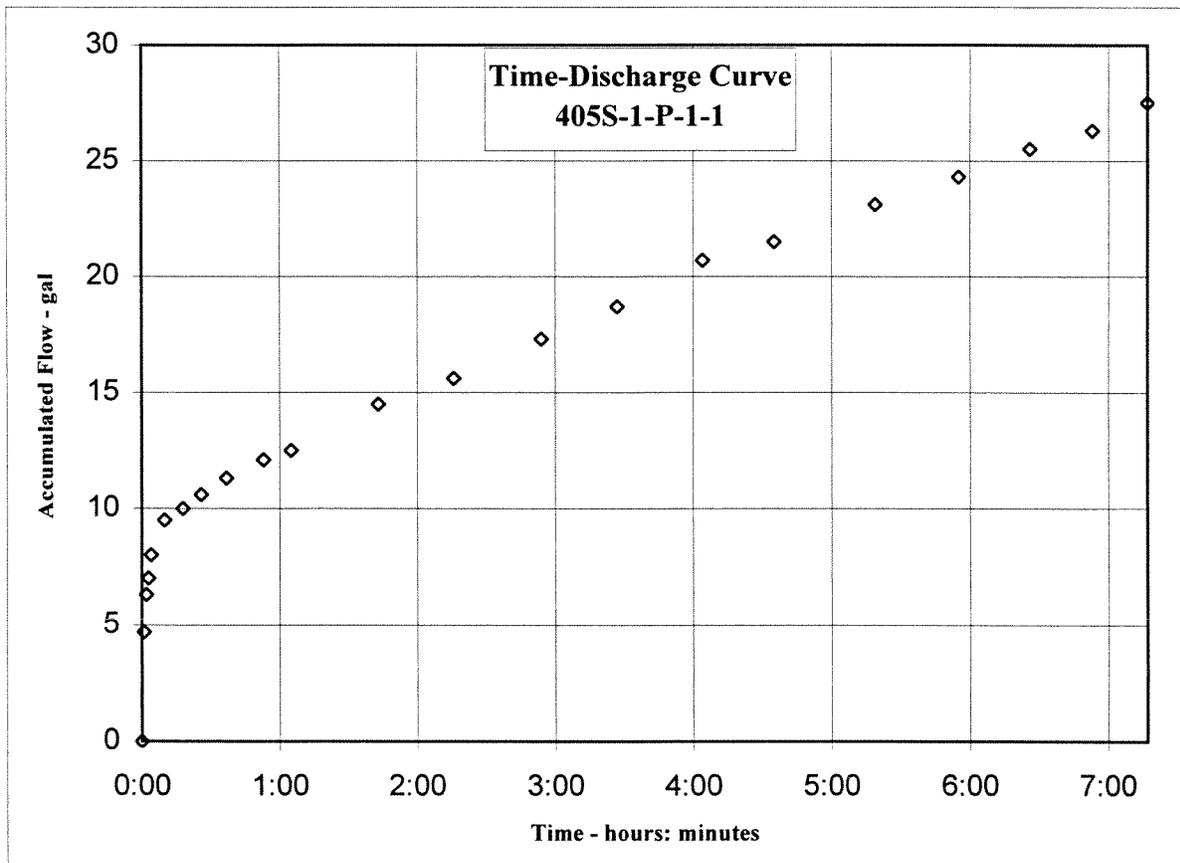


Figure 405S-1-12A

Calculation of Test Condition

Float depth =	5.3 ft	1.62 meters
Borehole depth =	11.5 ft	3.51 meters
Height of water in test well, h =	6.2 ft	1.89 meters
Depth of water table =	1000 ft	304.80 meters
Depth to impervious layer =	19 ft	5.79 meters
Unsaturated distance between water table or impervious layer and surface of well water, Tu=	13.7 ft	4.18 meters

Based on the Test Data, Condition II is the most applicable

Calculation of equivalent radius of the well, r_w

mass of sand in borehole, m_s =	200 lbs	
density of sand in borehole, ρ_s =	104.84 lbs/cu ft	
r_w =	0.313 ft	3.76 inches

Calculations for k_{20}

h =	6.2 ft	74.4 inches
Steady-state discharge rate, q =	0.0362 gpm	8.370 cu.in./min
Average well water temperature, T =	79.15 °F	26.19 °C
Kinematic viscosity ratio, V =	0.8461 no units	
Condition II - k_{20} =	0.000673 in/min	0.0404 in/hr
Condition I - k_{20} =	0.000556 in/min	0.0333 in/hr

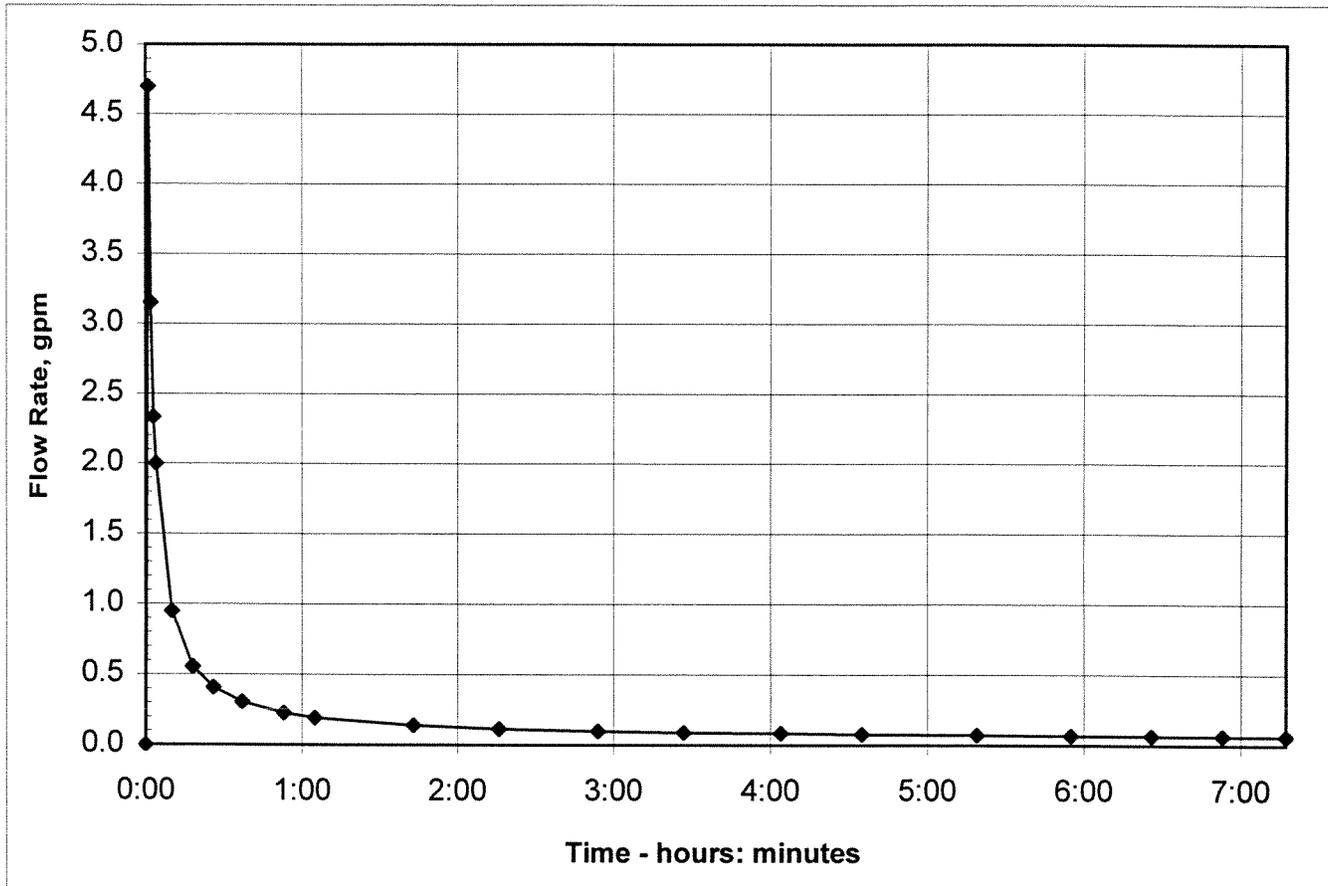


Figure 405S-1-12B

Project: INFILTRATION BASIN SITE SELECTION STUDY Project Location: I-405, Wilshire Boulevard	Log of Boring 405S-1-P-2 Sheet 1 of 1
---	---

Date(s) Drilled: 7/26/02	Logged By: P. Salter	Checked By: C. Goetz
Drilling Method: Hollow-Stem Auger	Drill Bit Size/Type: 152mm auger bit	Total Depth of Borehole: 4.0 meters
Drill Rig Type: Limited Access	Drilling Contractor: BC2 Environmental	Approximate Surface Elevation: 99.0 m MSL
Groundwater Level(s): Not encountered	Sampling Method(s): SPT	Hammer Data: 63.5 kg, 762mm drop
Borehole Backfill: See well construction on log	Location: See Site Plan	

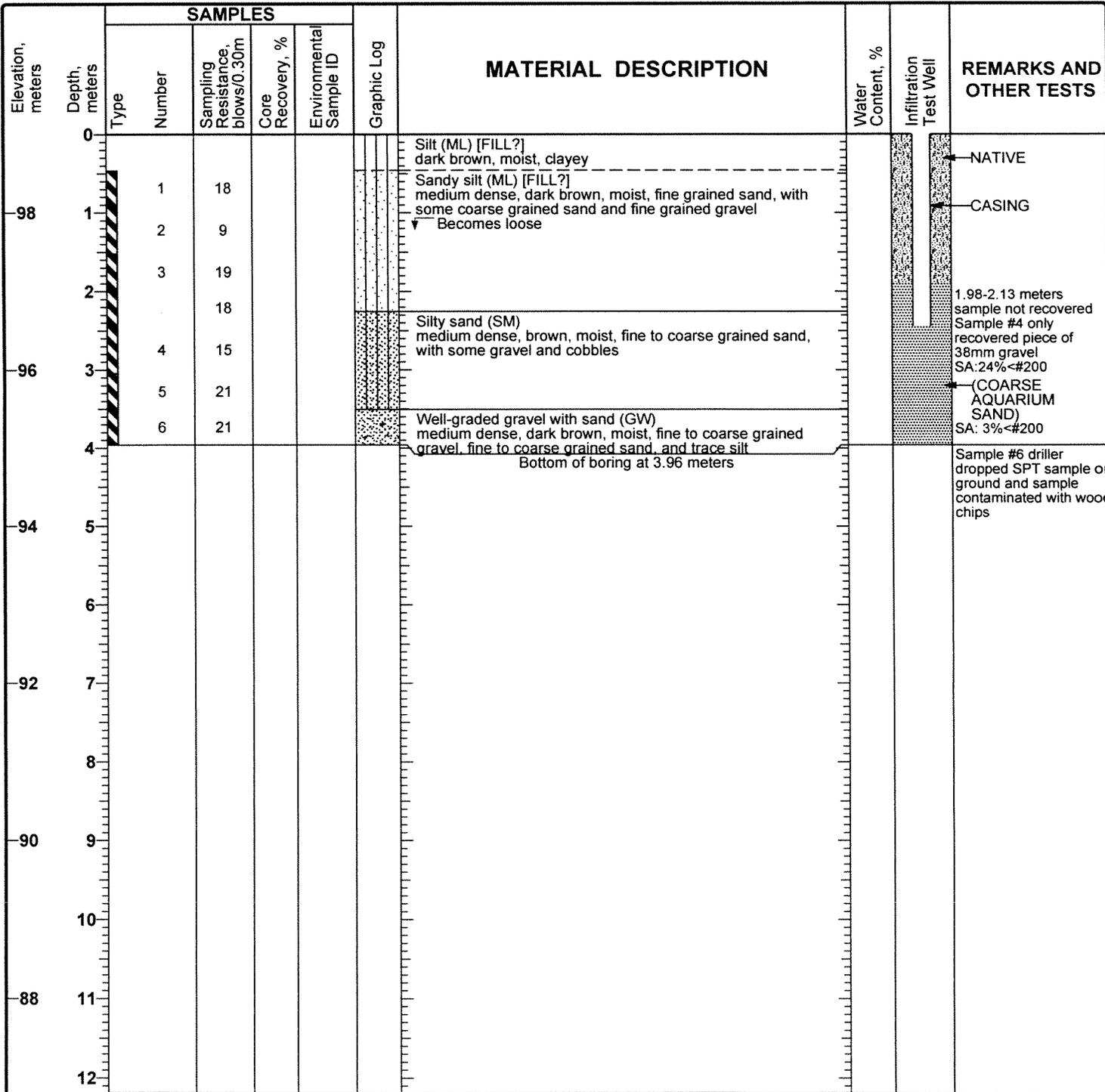


Figure 405S-1-13

405S-1-P-2-1

Clock	Accumulated Time	Tank Reading (gallons)	Difference (gallons)	Accumulated Flow (gallons)	Flow Rate (gpm)	Well Temp (°F)	Reservoir Temp (°F)
8:50:00	0:00:00	59	0	0	0.000		
8:51:00	0:01:00	54	5	5	5.000	74.1	
8:52:00	0:02:00	53.2	0.8	5.8	2.900		
8:55:00	0:05:00	53	0.2	6	1.200	74.1	
8:59:00	0:09:00	52.9	0.1	6.1	0.678		
9:08:00	0:18:00	52.4	0.5	6.6	0.367	74.1	
9:17:00	0:27:00	52.1	0.3	6.9	0.256	74.3	75.9
9:34:00	0:44:00	51.5	0.6	7.5	0.170	74.3	
9:47:00	0:57:00	51.2	0.3	7.8	0.137	74.5	
10:22:00	1:32:00	49.8	1.4	9.2	0.100	75.6	79.7
10:58:00	2:08:00	48.8	1	10.2	0.080	76.1	80.6
11:39:00	2:49:00	47.7	1.1	11.3	0.067	77.7	
12:15:00	3:25:00	47	0.7	12	0.059	78.8	83.1
12:48:00	3:58:00	46	1	13	0.055	79.5	84
13:16:00	4:26:00	45.5	0.5	13.5	0.051	80.2	84.7
13:49:00	4:59:00	44.7	0.8	14.3	0.048	81.5	85.6
14:35:00	5:45:00	43.4	1.3	15.6	0.045	81.9	
15:07:00	6:17:00	42.8	0.6	16.2	0.043	82	87.3
15:34:00	6:44:00	42.2	0.6	16.8	0.042	83.1	88
16:06:00	7:16:00	41.8	0.4	17.2	0.039	83.7	

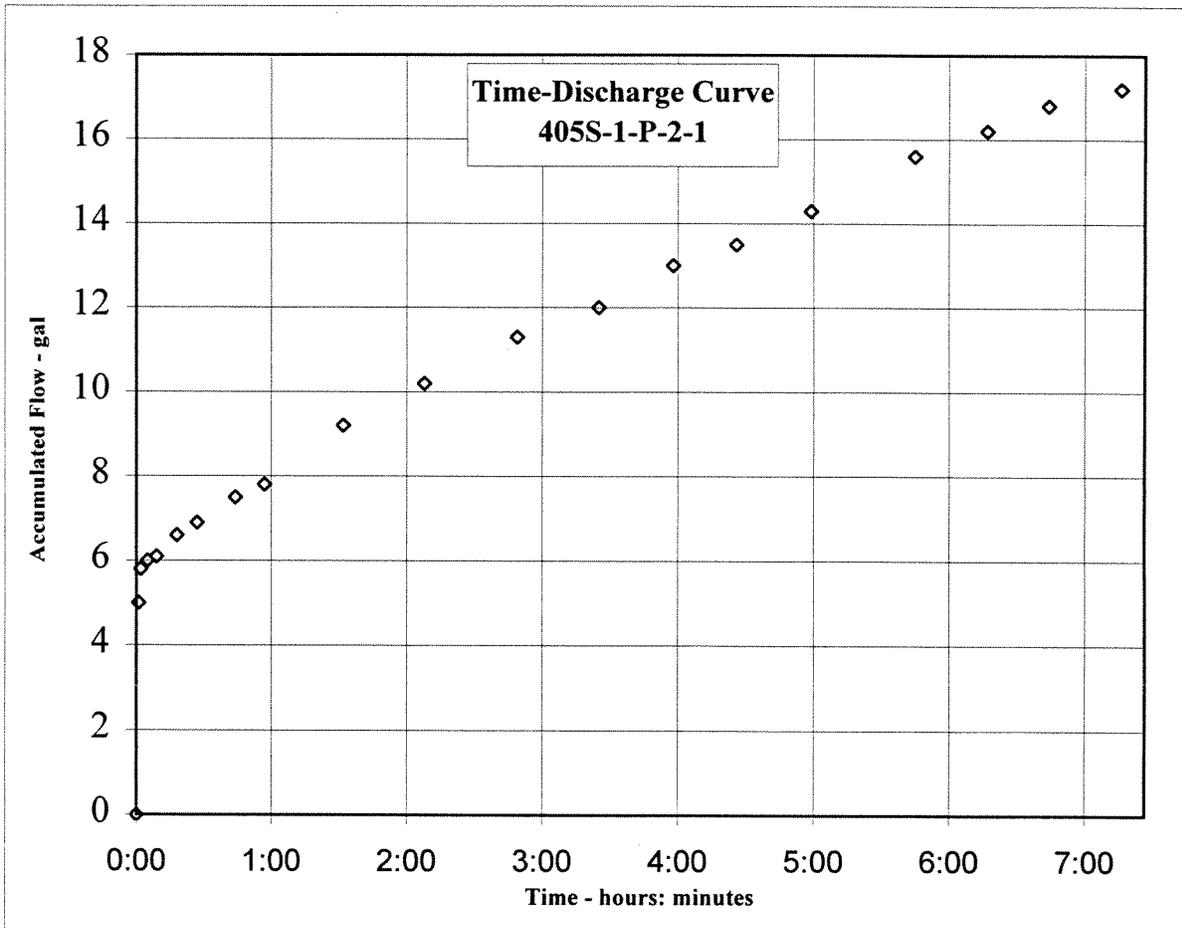


Figure 405S-1-14A

Calculation of Test Condition

Float depth =	7.2 ft	2.19 meters
Borehole depth =	13 ft	3.96 meters
Height of water in test well, h =	5.8 ft	1.77 meters
Depth of water table =	1000 ft	304.80 meters
Depth to impervious layer =	13.7 ft	4.18 meters
Unsaturated distance between water table or impervious layer and surface of well water, Tu=	6.5 ft	1.98 meters

Based on the Test Data, Condition II is the most applicable

Calculation of equivalent radius of the well, r_w

mass of sand in borehole, m_s =	150 lbs	
density of sand in borehole, ρ_s =	105.83 lbs/cu ft	
r_w =	0.28 ft	3.35 inches

Calculations for k_{20}

h =	5.8 ft	69.6 inches
Steady-state discharge rate, q =	0.023 gpm	5.312 cu.in./min
Average well water temperature, T =	81.34 °F	27.41 °C
Kinematic viscosity ratio, V =	0.8210 no units	
Condition II - k_{20} =	8.05E-04 in/min	0.0483 in/hr
Condition I - k_{20} =	3.98E-04 in/min	0.0239 in/hr

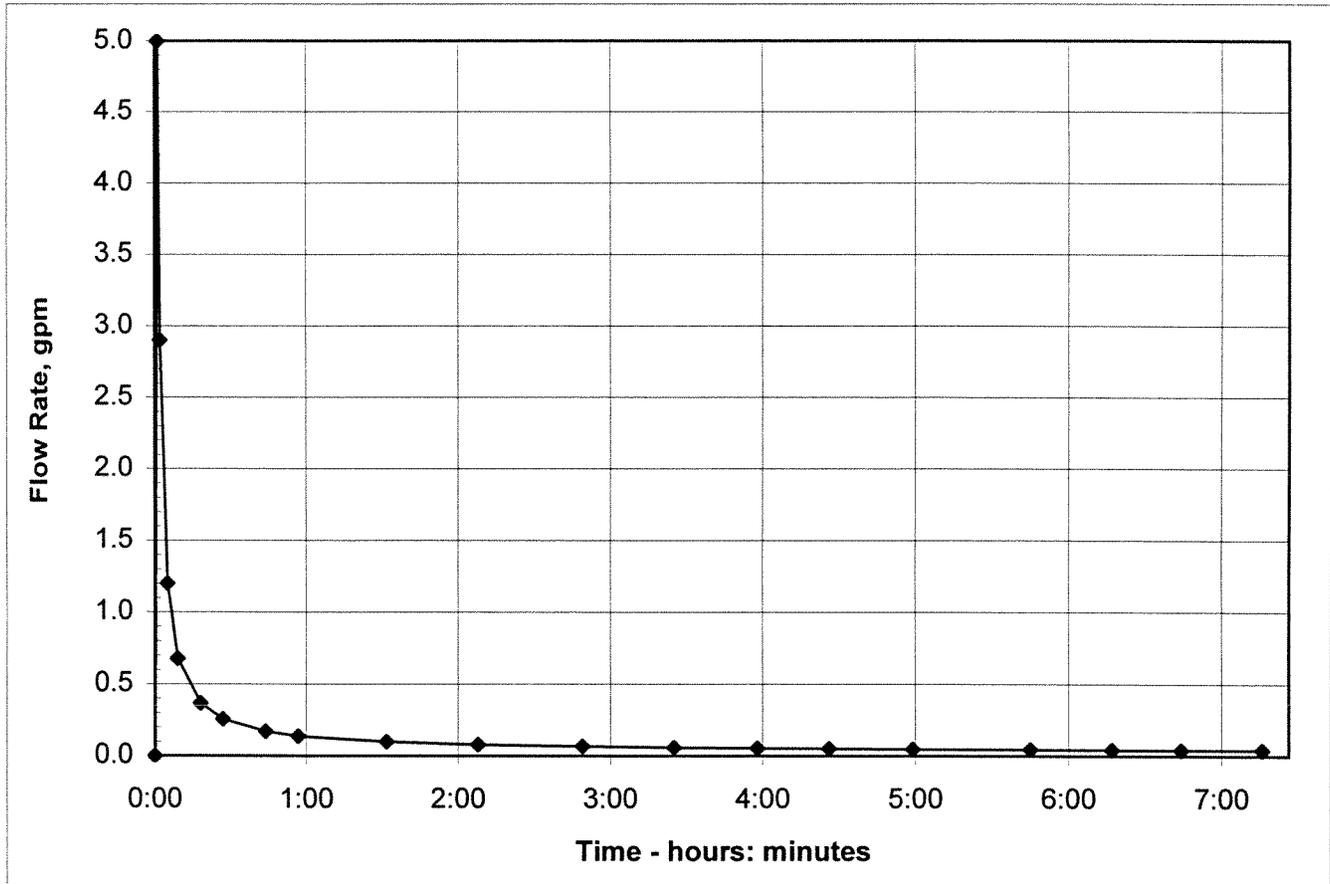


Figure 405S-1-14B

Project: INFILTRATION BASIN SITE SELECTION STUDY

Project Location: I-405, Wilshire Boulevard

Log of Boring 405S-1-P-3

Sheet 1 of 1

Date(s) Drilled	7/26/02	Logged By	P. Salter	Checked By	C. Goetz
Drilling Method	Hollow-Stem Auger	Drill Bit Size/Type	152mm auger bit	Total Depth of Borehole	3.0 meters
Drill Rig Type	Limited Access	Drilling Contractor	BC2 Environmental	Approximate Surface Elevation	97.7 m MSL
Groundwater Level(s)	Not encountered	Sampling Method(s)	SPT	Hammer Data	63.5 kg, 762mm drop
Borehole Backfill	See well construction on log	Location	See Site Plan		

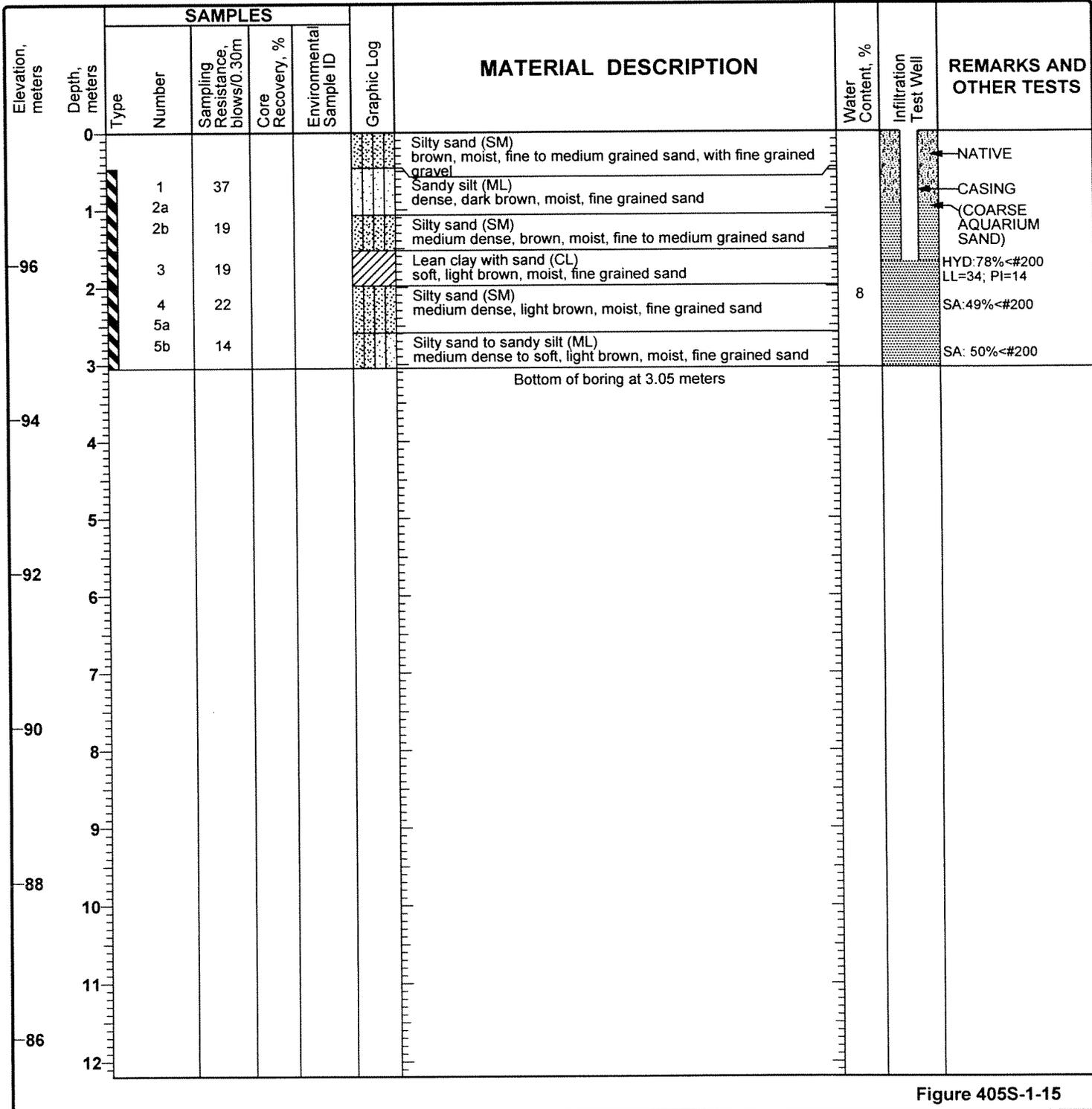


Figure 405S-1-15

405S-1-P-3-1

Clock	Accumulated Time	Tank Reading (gallons)	Difference (gallons)	Accumulated Flow (gallons)	Flow Rate (gpm)	Well Temp (°F)	Reservoir Temp (°F)
9:03:40	0:00:00	57	0	0	0.000		
9:05:00	0:01:20	52.5	4.5	4.5	3.375		
9:06:26	0:02:46	50	2.5	7	2.530		
9:08:05	0:04:25	49.8	0.2	7.2	1.630	72.5	
9:09:56	0:06:16	49.4	0.4	7.6	1.213	72.5	
9:11:25	0:07:45	49	0.4	8	1.032	72.5	
9:13:27	0:09:47	48.8	0.2	8.2	0.838	72.5	
9:15:07	0:11:27	48.6	0.2	8.4	0.734	72.5	
9:17:07	0:13:27	48	0.6	9	0.669	72.5	
9:18:55	0:15:15	47.9	0.1	9.1	0.597	72.5	
9:20:36	0:16:56	47.8	0.1	9.2	0.543	72.5	
9:22:22	0:18:42	47.6	0.2	9.4	0.503	72.3	
9:28:32	0:24:52	46.8	0.8	10.2	0.410	72.3	
9:35:20	0:31:40	46	0.8	11	0.347	72.1	
9:41:50	0:38:10	45.1	0.9	11.9	0.312	72.1	
9:48:05	0:44:25	44.5	0.6	12.5	0.281	72.1	
9:54:45	0:51:05	44	0.5	13	0.254	72	
10:01:20	0:57:40	43.2	0.8	13.8	0.239	72	
10:07:40	1:04:00	42.8	0.4	14.2	0.222	72	
10:39:15	1:35:35	39.5	3.3	17.5	0.183	72	
11:11:10	2:07:30	35.5	4	21.5	0.169	72	
11:43:10	2:39:30	33.7	1.8	23.3	0.146	72.5	
12:14:45	3:11:05	31	2.7	26	0.136	72.7	75.6
12:45	3:41:20	27.8	3.2	29.2	0.132	72.9	75.7
13:17:45	4:14:05	25	2.8	32	0.126	73	76.1
13:50	4:46:20	22.4	2.6	34.6	0.121	73.4	76.5
14:10:15	5:06:35	20	2.4	37	0.121		
14:12:25	5:08:45	47.8	0	37		73.6	77.7
14:41:30	5:37:50	44.8	3	40	0.118	74.7	77.9
15:12:00	6:08:20	42	2.8	42.8	0.116	74.8	77.5
15:43:30	6:39:50	38.8	3.2	46	0.115	75.2	77.7
16:15:50	7:12:10	35.5	3.3	49.3	0.114	75.2	77.9

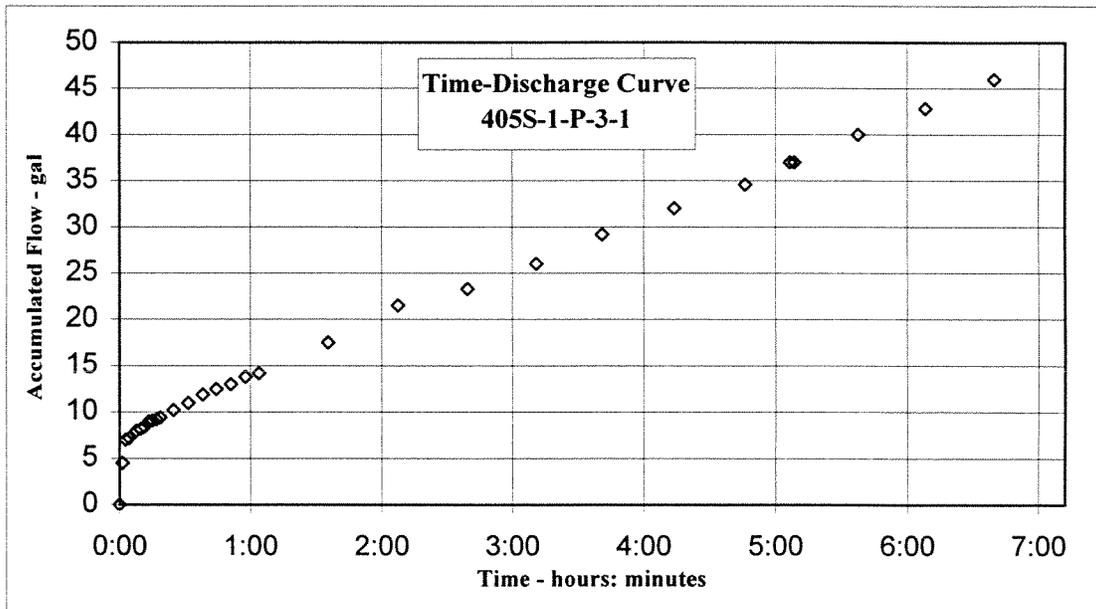


Figure 405S-1-16A

Calculation of Test Condition

Float depth =	4.9 ft	1.49 meters
Borehole depth =	10 ft	3.05 meters
Height of water in test well, h =	5.1 ft	1.55 meters
Depth of water table, ft bgs	1000 ft	304.80 meters
Depth to impervious layer, ft bgs	48.2 ft	14.69 meters
Unsaturated distance between water table or impervious layer and surface of well water, Tu	43.3 ft	13.20 meters

Based on the Test Data, Condition I is the most applicable

Calculation of equivalent radius of the well, r_w

mass of sand in borehole, m_s =	150 lbs	
density of sand in borehole, ρ_s =	104.26 lbs/cu ft	
r_w =	0.30 ft	3.60 inches

Calculations for k_{20}

h =	5.1 ft	61.2 inches
Steady-state discharge rate, q =	0.095 gpm	21.97 cu.in./min
Average well water temperature, T =	73.80 °F	23.22 °C
Kinematic viscosity ratio, V =	0.9118 no units	
Condition I - k_{20} =	2.20E-03 in/min	0.132 in/hr

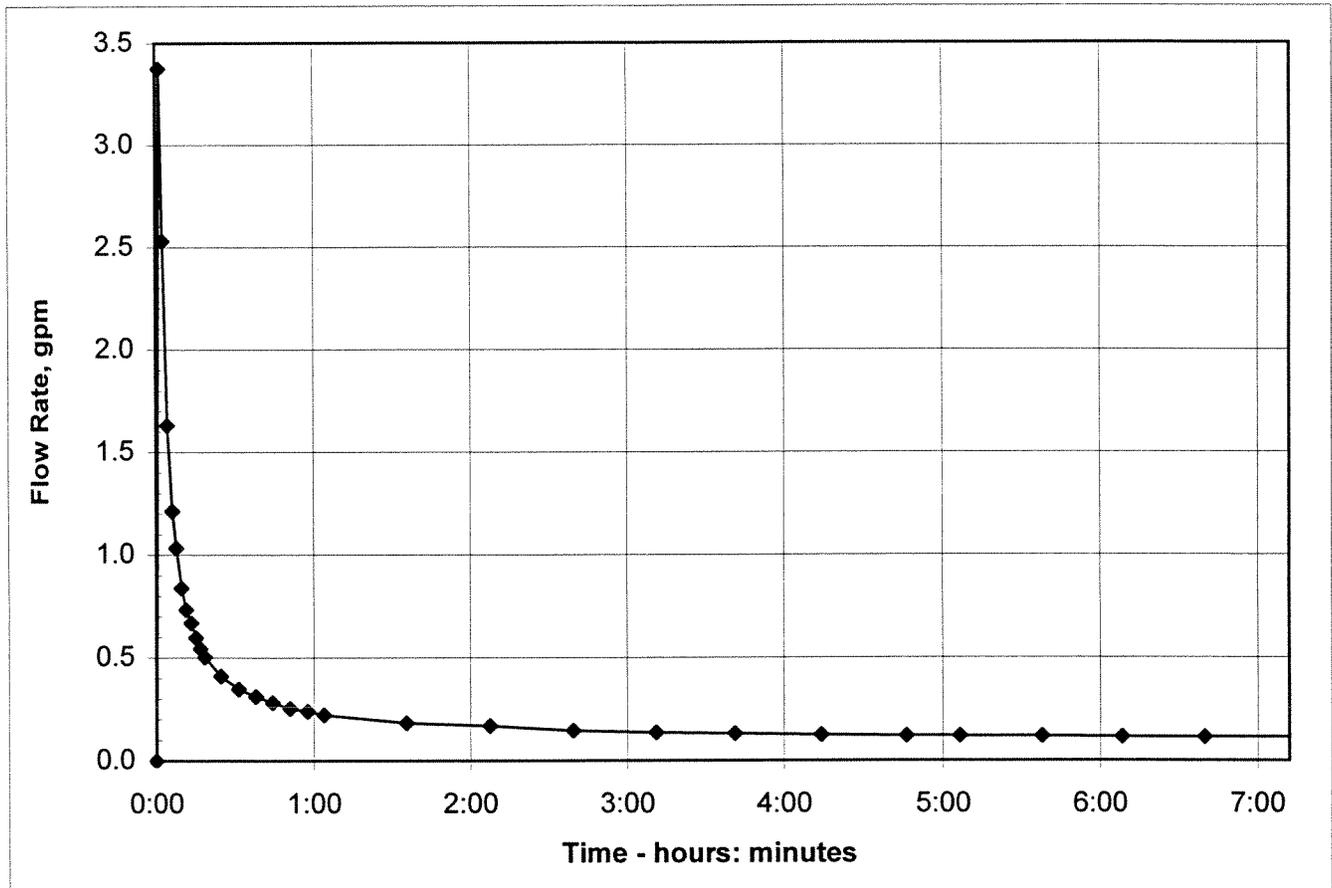


Figure 405S-1-16B

Project: INFILTRATION BASIN SITE SELECTION STUDY
Project Location: I-405, Wilshire Boulevard

Log of Boring 405S-1-P-4

Sheet 1 of 1

Date(s) Drilled	7/26/02	Logged By	P. Salter	Checked By	C. Goetz
Drilling Method	Hollow-Stem Auger	Drill Bit Size/Type	152mm auger bit	Total Depth of Borehole	1.5 meters
Drill Rig Type	Limited Access	Drilling Contractor	BC2 Environmental	Approximate Surface Elevation	98.6 m MSL
Groundwater Level(s)	Not encountered	Sampling Method(s)	SPT	Hammer Data	63.5 kg, 762mm drop
Borehole Backfill	See well construction on log	Location	See Site Plan		

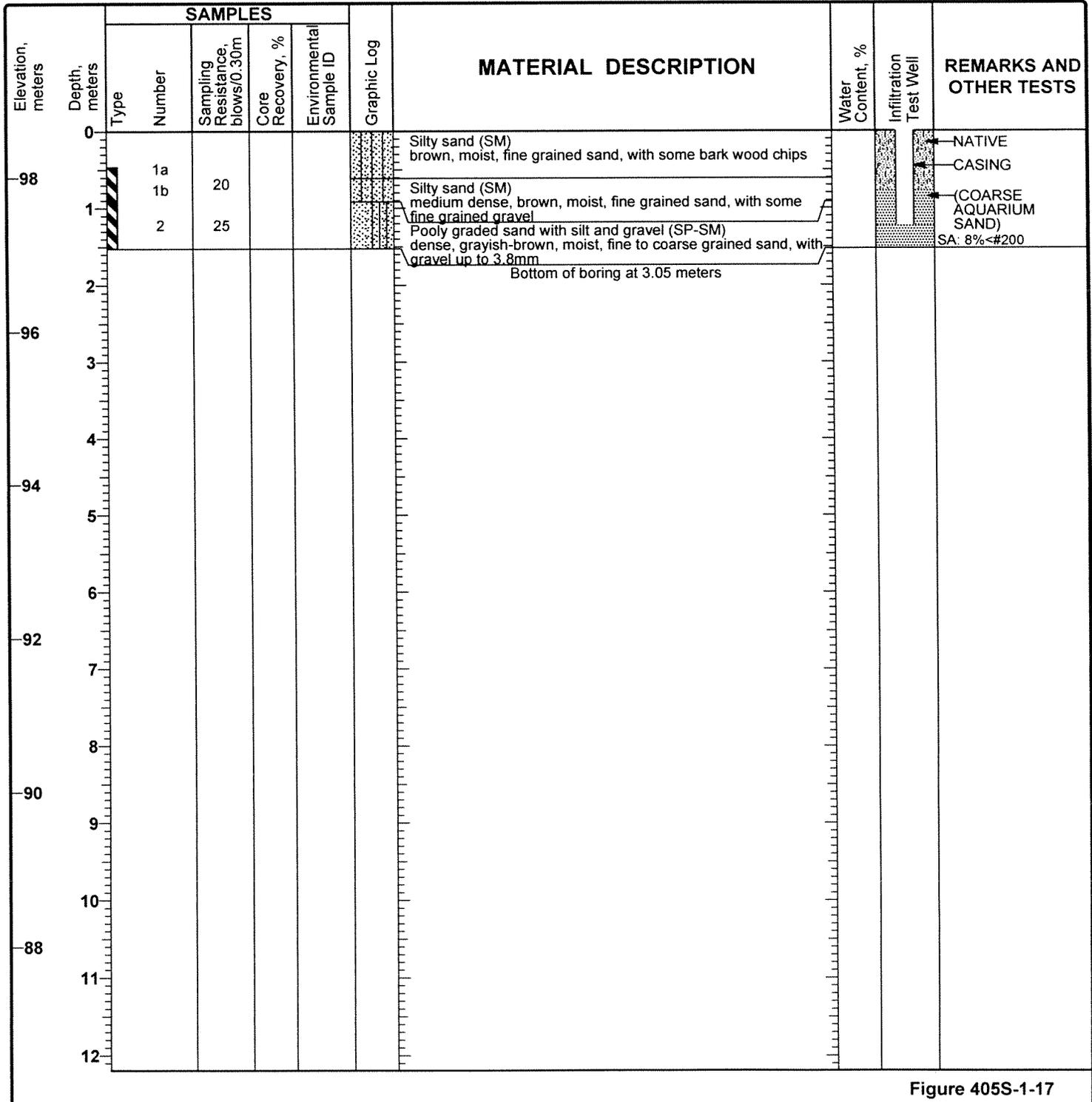


Figure 405S-1-17

405S-1-P-4-1

Clock	Accumulated Time	Tank Reading (gallons)	Difference (gallons)	Accumulated Flow (gallons)	Flow Rate (gpm)	Well Temp (°F)	Reservoir Temp (°F)
9:03:00	0:00:00	60	0	0	0.000		
9:04:24	0:01:24	55.5	4.5	4.5	3.214		
9:05:45	0:02:45	53.5	2	6.5	2.364		
9:07:08	0:04:08	52.5	1	7.5	1.815	73.8	
9:09:08	0:06:08	51.8	0.7	8.2	1.337	73.8	
9:10:40	0:07:40	51	0.8	9	1.174	73.8	
9:12:12	0:09:12	50	1	10	1.087	73.8	75.7
9:14:12	0:11:12	49.2	0.8	10.8	0.964	73.8	75.9
9:16:10	0:13:10	48.5	0.7	11.5	0.873	73.9	76.1
9:18:00	0:15:00	47.8	0.7	12.2	0.813	73.9	76.1
9:19:45	0:16:45	47.3	0.5	12.7	0.758	73.9	76.1
9:21:25	0:18:25	46.8	0.5	13.2	0.717	73.9	76.1
9:27:27	0:24:27	44.5	2.3	15.5	0.634	74.1	76.3
9:34:29	0:31:29	42.1	2.4	17.9	0.569	74.1	76.3
9:40:55	0:37:55	40	2.1	20	0.527	74.1	77.2
9:47:20	0:44:20	37.5	2.5	22.5	0.508	74.9	76.6
9:53:40	0:50:40	35.7	1.8	24.3	0.480	74.9	76.6
10:00:10	0:57:10	33.5	2.2	26.5	0.464	74.7	76.8
10:06:45	1:03:45	31.8	1.7	28.2	0.442	74.7	76.8
10:38:15	1:35:15	21.8	10	38.2	0.401	76.3	78.1
11:09:55	2:06:55	12	9.8	48	0.378	78.1	79.7
11:26:00	2:23:00	9	3	51	0.357		
11:26:10	2:23:10	58.5	0	51			78.8
11:42	2:39:00	52	6.5	57.5	0.362	76.9	78.8
12:13:05	3:10:05	43	9	66.5	0.350	77.4	79.7
12:42	3:39:00	34.2	8.8	75.3	0.344	78.4	
13:16:30	4:13:30	25	9.2	84.5	0.333	79.7	
13:48:50	4:45:50	16.1	8.9	93.4	0.327	81.9	
13:59:00	4:56:00	13.5	2.6	96	0.324		
14:05:30	5:02:30	60	0	96			
14:40:40	5:37:40	48	12	108	0.320	79.9	
15:10:45	6:07:45	39.7	8.3	116.3	0.316	80.2	
15:42:30	6:39:30	31.5	8.2	124.5	0.312	81	
16:14:30	7:11:30	22.5	9	133.5	0.309	81.9	

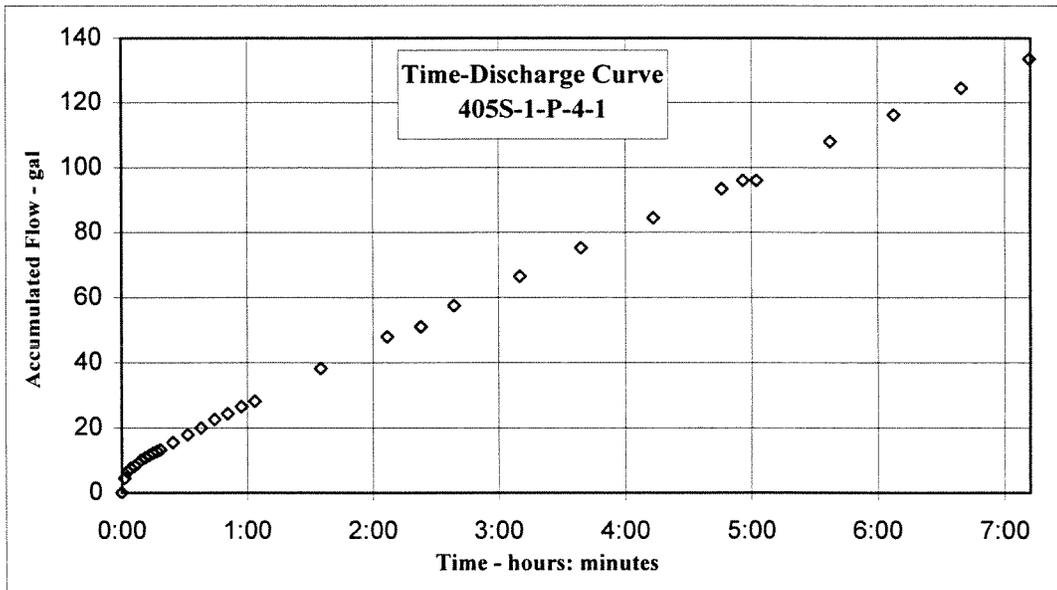


Figure 405S-1-18A

Calculation of Test Condition

Float depth =	2.2 ft	0.67 meters
Borehole depth =	5 ft	1.52 meters
Height of water in test well, h =	2.8 ft	0.85 meters
Depth of water table =	1000 ft	304.80 meters
Depth to impervious layer =	48.2 ft	14.69 meters
Unsaturated distance between water table or impervious layer and surface of well water, Tu=	46 ft	14.02 meters

Based on the Test Data, Condition I is the most applicable

Calculation of equivalent radius of the well, r_w

mass of sand in borehole, m_s =	100 lbs	
density of sand in borehole, ρ_s =	101.49 lbs/cu ft	
r_w =	0.335 ft	4.02 inches

Calculations for k_{20}

h =	2.8 ft	33.6 inches
Steady-state discharge rate, q =	0.270 gpm	62.47 cu.in./min
Average well water temperature, T =	80.75 °F	27.08 °C
Kinematic viscosity ratio, V =	0.8277 no units	
Condition I - k_{20} =	0.0141 in/min	0.845 in/hr

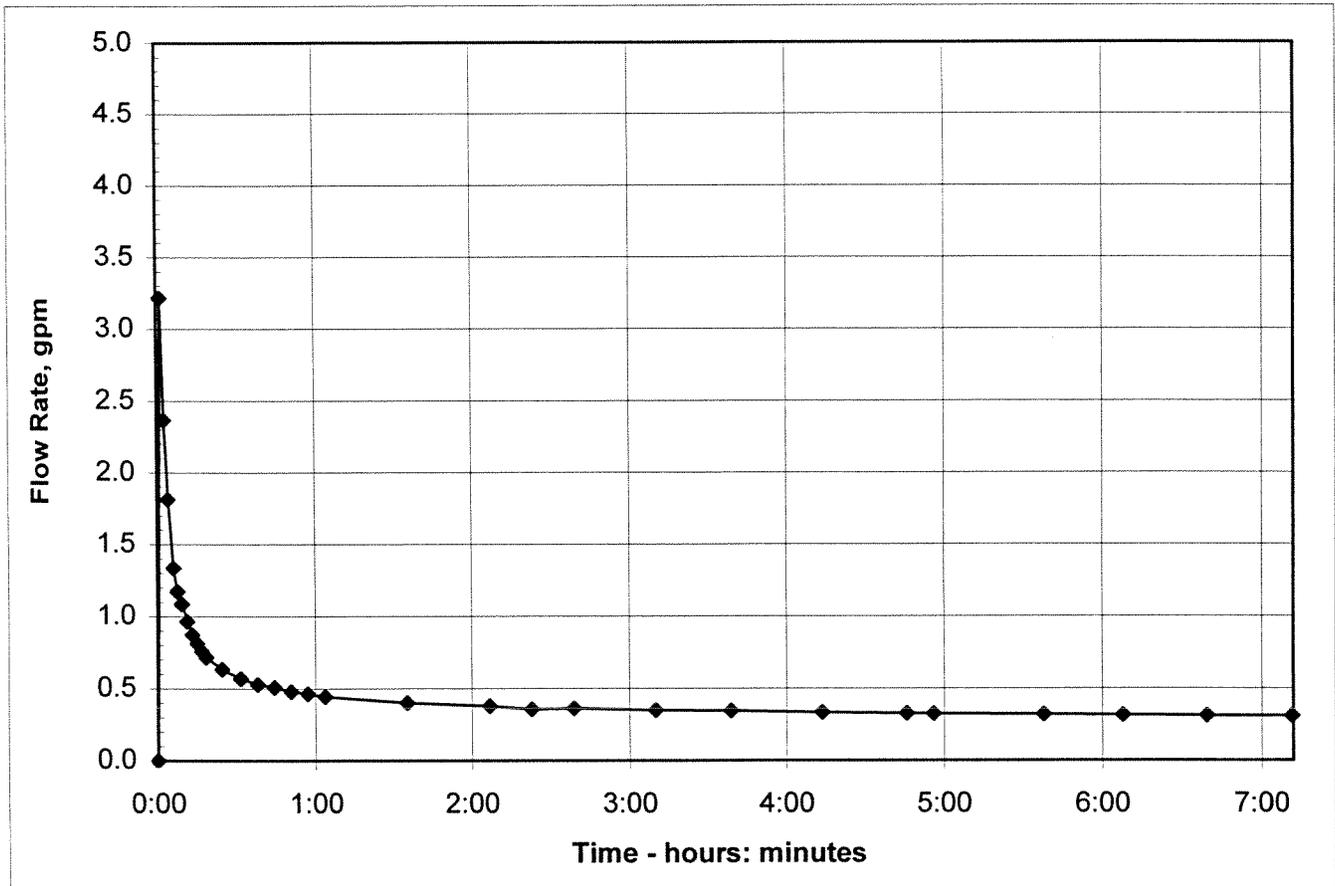
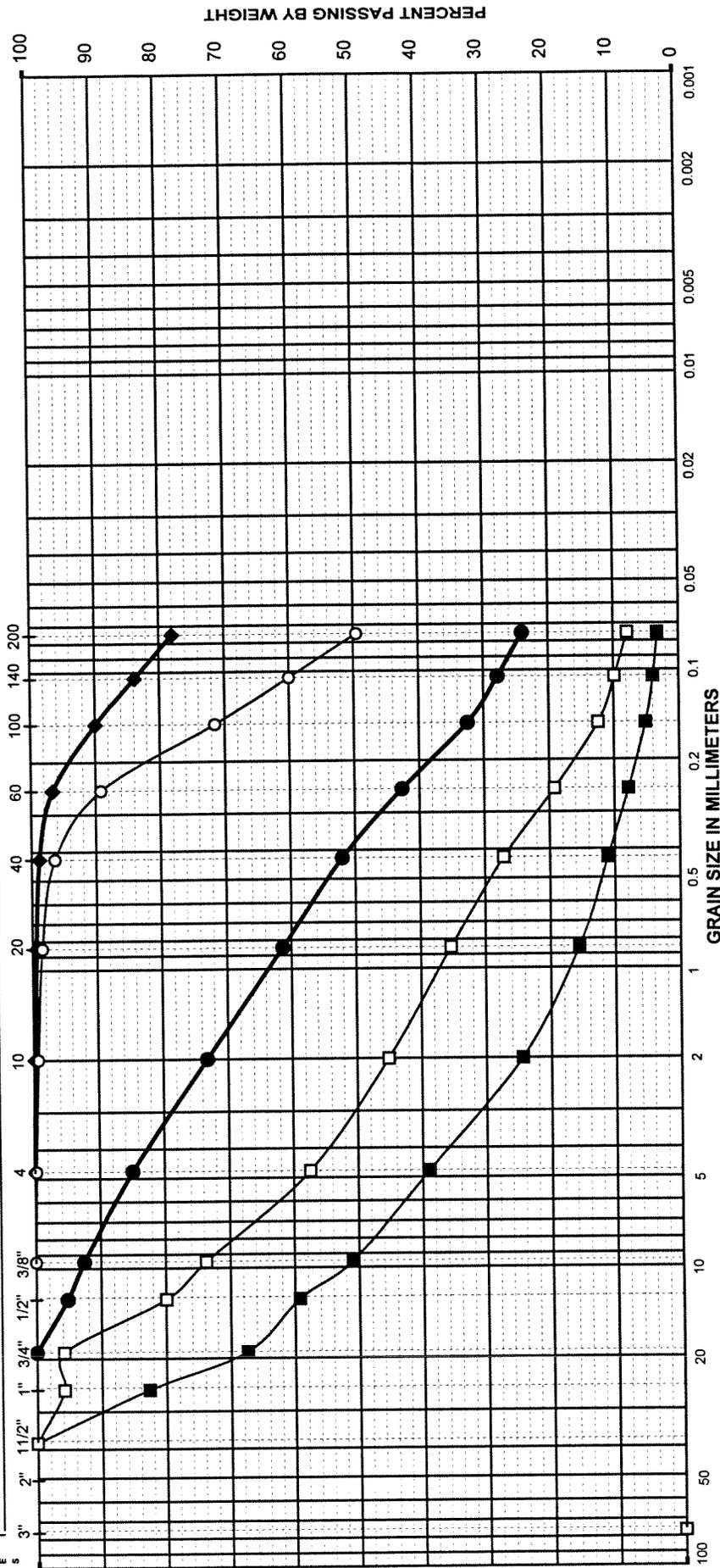


Figure 405S-1-18B

UNIFIED SOIL CLASSIFICATION

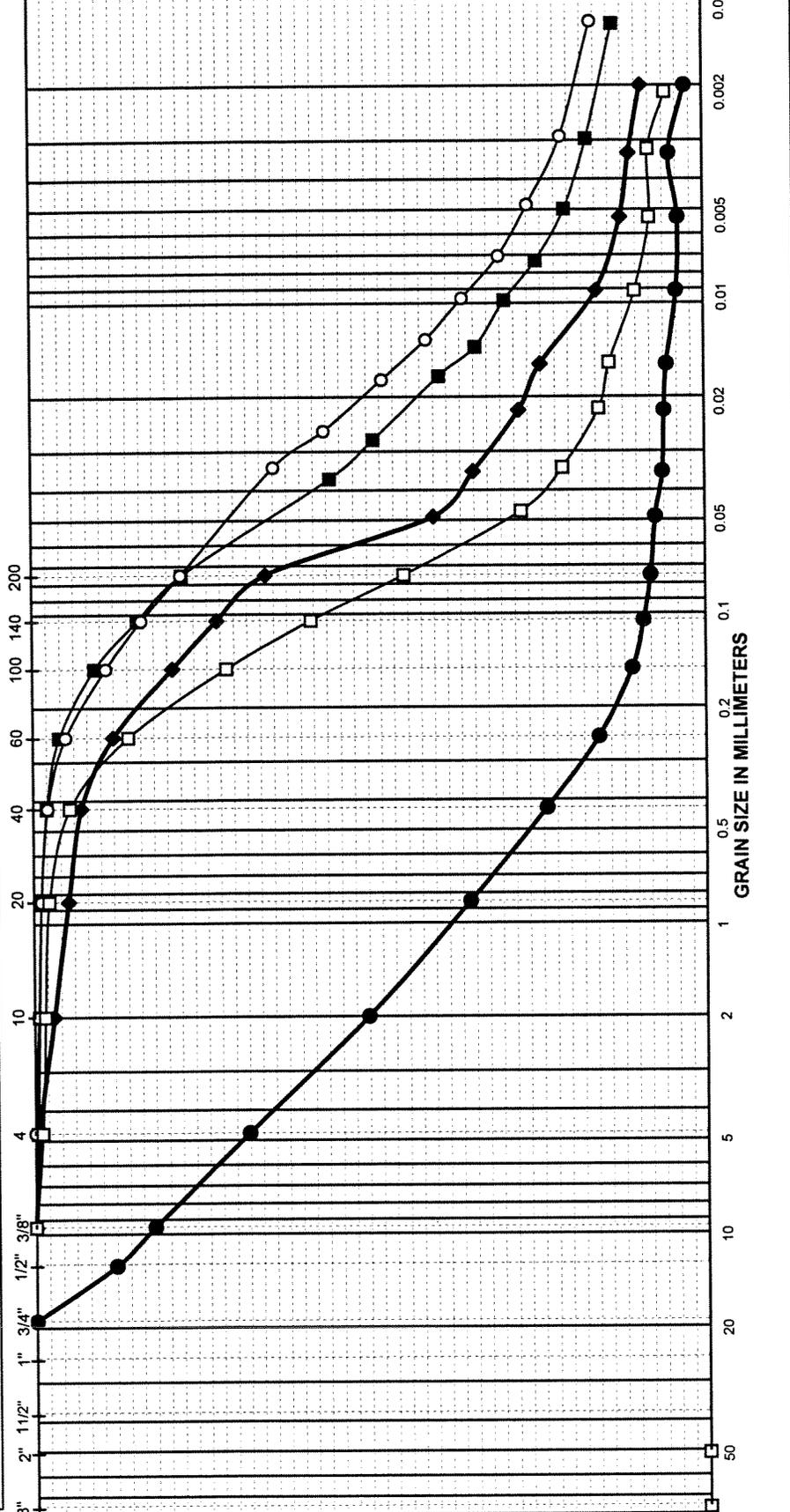
GRAVEL	SAND	SILT AND CLAY
COARSE	MEDIUM	HYDROMETER
FINE	FINE	

U. S. STANDARD SIEVE SIZES



UNIFIED SOIL CLASSIFICATION

GRAVEL	SAND	SILT AND CLAY
COARSE	MEDIUM	HYDROMETER
FINE	FINE	

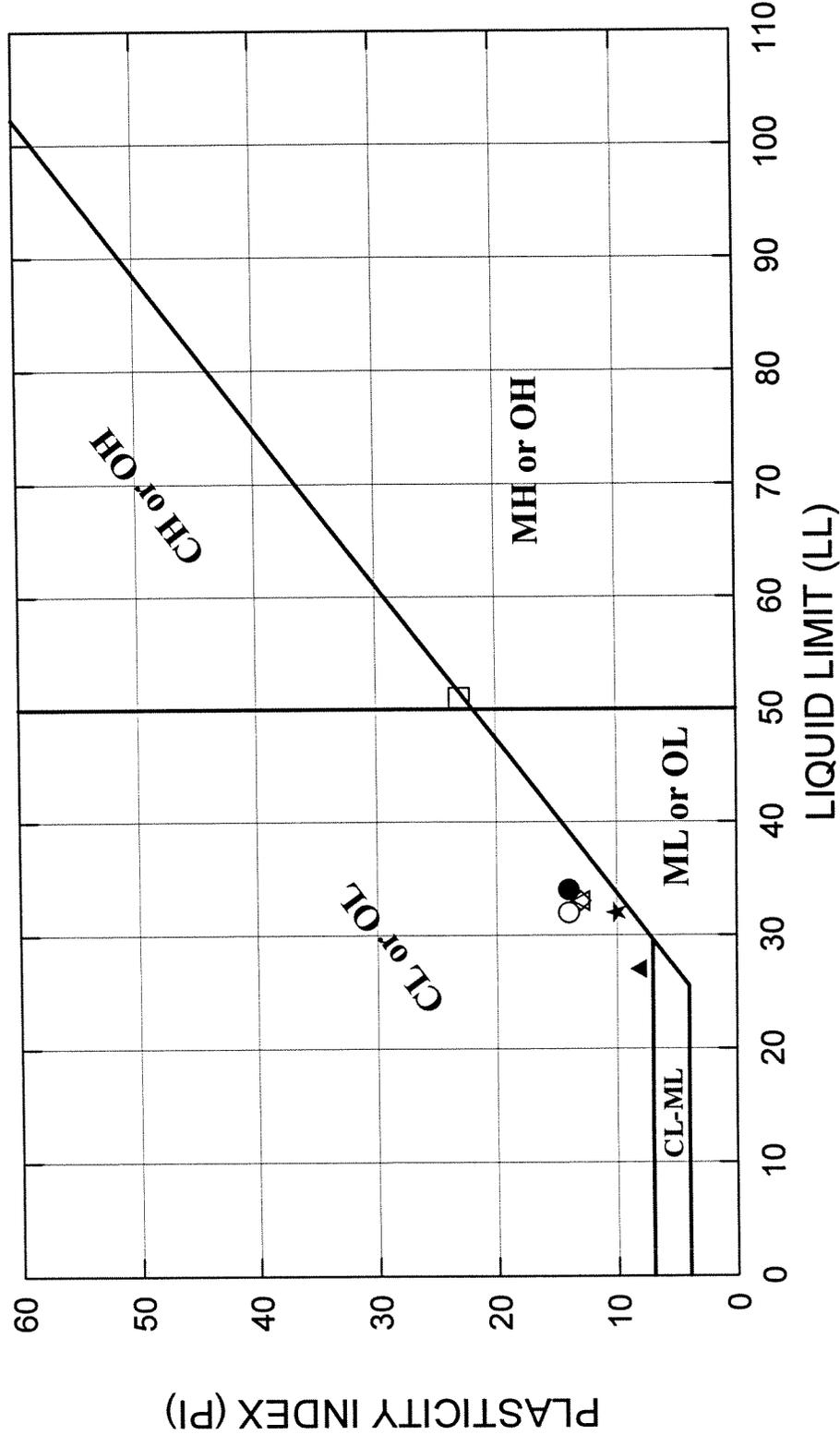


Exploration No.	Sample No.	Depth (m)	SYMBOL	W _n (%)	LL	PI	% Clay	Description and Classification	D ₆₀	D ₃₀	D ₁₀	C _u	C _c
405S-1-B-4	1	2.13	●	1.3			2	Gray, poorly graded Sand with silt and gravel (SP-SM)	3.30	0.65	0.15	22.0	0.9
405S-1-B-4	4	5.94	◆	8.6			9	Gray sandy Silt (ML)	0.07	0.028	0.003	23.3	3.7
405S-1-P-1	4	1.98	■	11.0	32	10	15	Dark brown Clay with sand (CL)	0.043	0.01			
405S-1-P-3	3	1.52	○	8.2	34	14	19	Brown Clay with sand (CL)	0.03	0.007			
405S-1-B-3	1	2.29	□	9.7			5	Dark brown silty Sand (SM)	0.12	0.052	0.01	12.0	2.3

PROJECT NAME: Caltrans IFB Site Selection Study

PARTICLE-SIZE DISTRIBUTION CURVES

Figure: 405S-1-23



LEGEND: ○ 405S-1-B-1@6.1m ◇ 405S-1-B-3@5.79m ★ 405S-1-P-1@1.98m ● 405S-1-P-3@1.52m
 □ 405S-1-B-2@4.42m △ 405S-1-B-4@9.15m ▲ 405S-1-P-1@2.44m × _____

PLASTICITY CHART

Date: April 2003

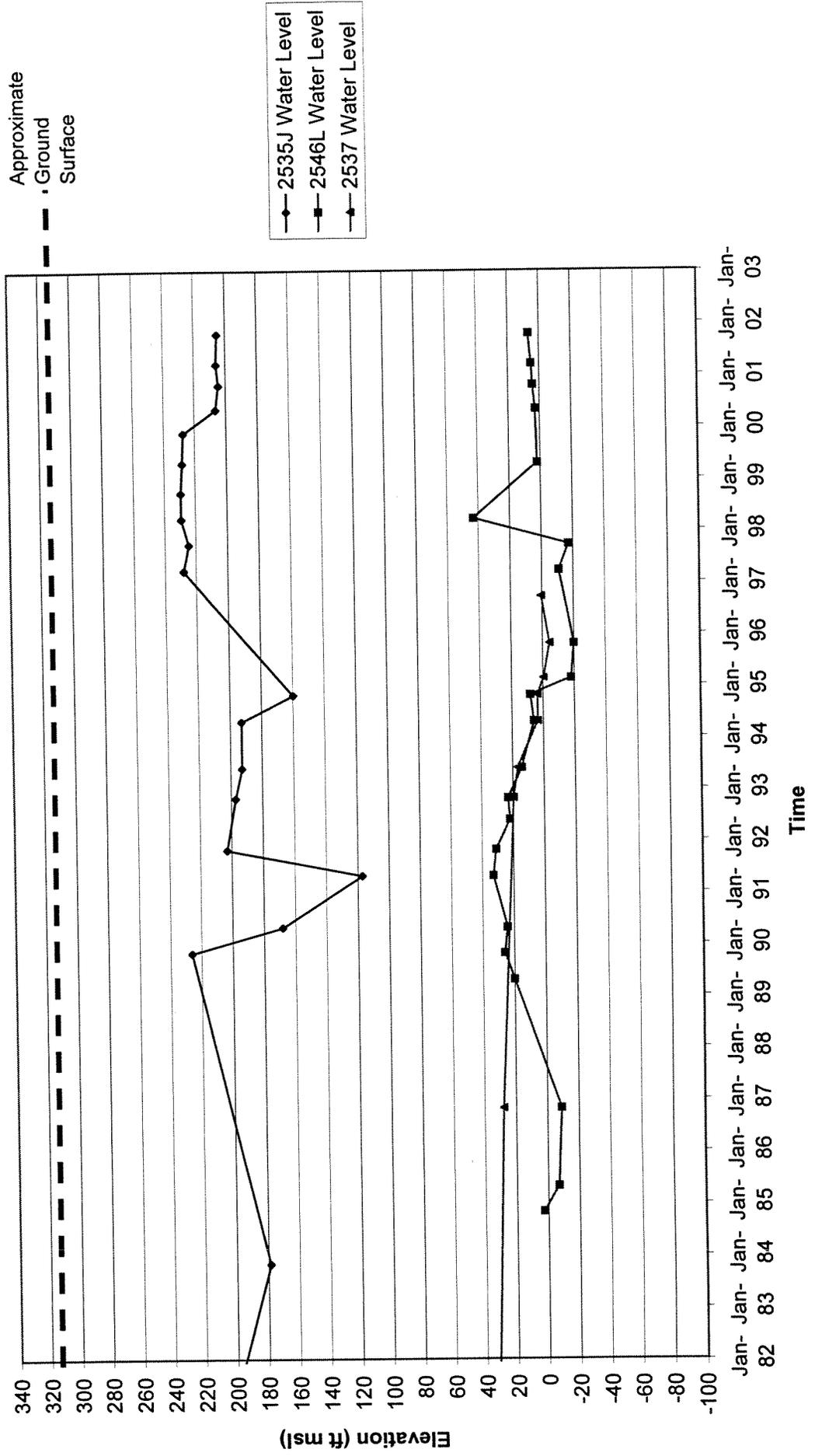
Project: Caltrans Infiltration Basin Project

Figure 405S-1-24

Figure 405S-1-25

Hydrographs of Selected Wells near 405 Freeway; 405S-1, 405S-2

LA Co. Dept. Public Works Well Data - 3 Closest Wells





Priority 5-405S-1(Wilshire Blvd.) Site Photographs

Date: April 2003

Project: Caltrans IFB Site Selection Study

Figure: 405S- 1 -26

APPENDIX F

405S-2 (Wilshire Blvd.)

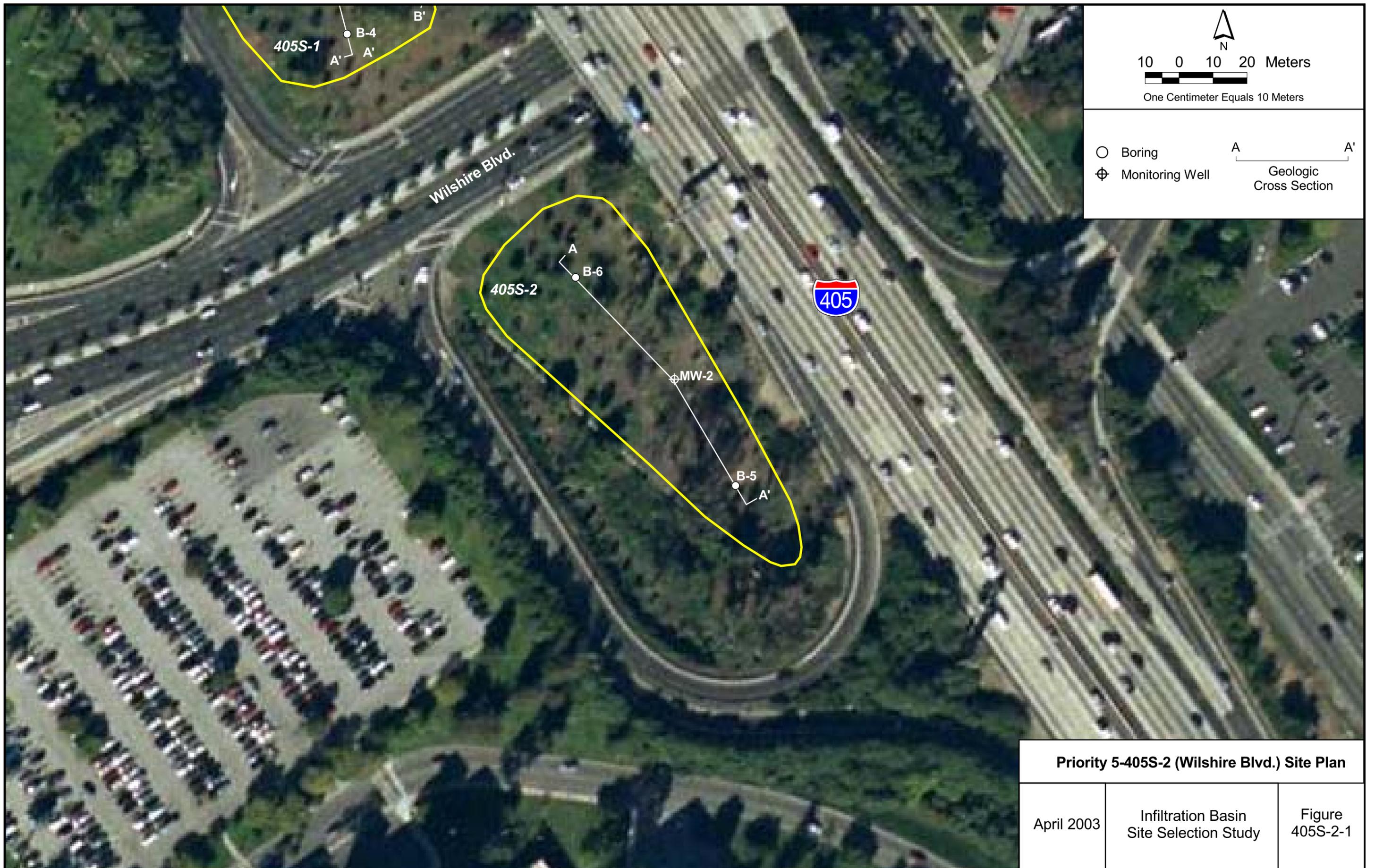
Table 1	Geotechnical Laboratory Test Data
Figure 405S-2-1	Site Plan
Figure 405S-2-2	Geologic Cross Section A-A'
Figure 405S-2-3	Log of Boring 405S-2-MW-2
Figure 405S-2-4	Groundwater Monitoring Well 405S-2-MW-2 Diagram
Figure 405S-2-5	Groundwater Monitoring Well 405S-2-MW-2 Photographs
Figure 405S-2-6	Log of Boring 405S-2-B-5
Figure 405S-2-7	Log of Boring 405S-2-B-6
Figure 405S-2-8	Particle-Size Distribution Curves
Figure 405S-2-9	Particle-Size Distribution Curves
Figure 405S-2-10	Particle-Size Distribution Curves
Figure 405S-2-11	Particle-Size Distribution Curves
Figure 405S-2-12	Hydrographs for Selected Wells
Figure 405S-2-13	Site Photographs

TABLE 1

405S-2 GEOTECHNICAL LABORATORY TEST DATA

Location		Depth (m)	California Soil Classification	Water Content (%)	Total Unit Weight (pcf)	Dry Unit Weight (pcf)	Atterberg Limits		Sieve				Chemical Test Data		
Exploration Number	Sample/ Specimen Number						Liquid Limit (%)	Plasticity Index (%)	Gravel (%)	Sand (%)	<#200 Fines (%)	5 microns (%)	pH	O.M. % (% organic matter)	CEC (me/g) ¹
405S-2-MW-2	1	1.52	CL	14	-	-	35	14	18	29	53	20	6.9	2.5	0.102
405S-2-MW-2	2	2.44	CL	19	-	-	-	-	1	20	79	31	-	-	-
405S-2-MW-2	3	3.05	SP-SM	4	-	-	-	-	35	55	10	-	-	-	-
405S-2-MW-2	4	4.57	CL	20	-	-	-	-	0	20	80	-	-	-	-
405S-2-MW-2	6	7.62	ML	14	-	-	-	-	-	-	63	-	-	-	-
405S-2-B-5	2	1.22	SM	4	-	-	-	-	23	33	44	15	-	-	-
405S-2-B-5	4	1.98	CL	18	-	-	40	18	-	-	-	-	-	-	-
405S-2-B-5	6	3.35	SM	4	-	-	-	-	16	65	19	5	7.3	1	0.072
405S-2-B-5	8	4.27	ML	13	-	-	-	-	0	21	79	-	-	-	-
405S-2-B-5	9	6.10	ML	18	-	-	-	-	-	-	-	-	-	-	-
405S-2-B-5	10	9.14	ML	17	-	-	-	-	-	-	-	-	-	-	-
405S-2-B-6	2	1.52	ML	13	-	-	-	-	0	37	63	16	6.4	3.4	0.128
405S-2-B-6	3	1.98	CL	13	-	-	-	-	-	-	63	-	-	-	-
405S-2-B-6	4	2.44	ML	11	-	-	-	-	3	26	71	30	-	-	-
405S-2-B-6	6	3.35	CL	15	-	-	-	-	4	34	62	-	-	-	-
405S-2-B-6	9	4.88	SM	10	-	-	-	-	-	-	42	-	-	-	-

Notes: ¹ Cation exchange capacity, millequivalents per gram



Priority 5-405S-2 (Wilshire Blvd.) Site Plan

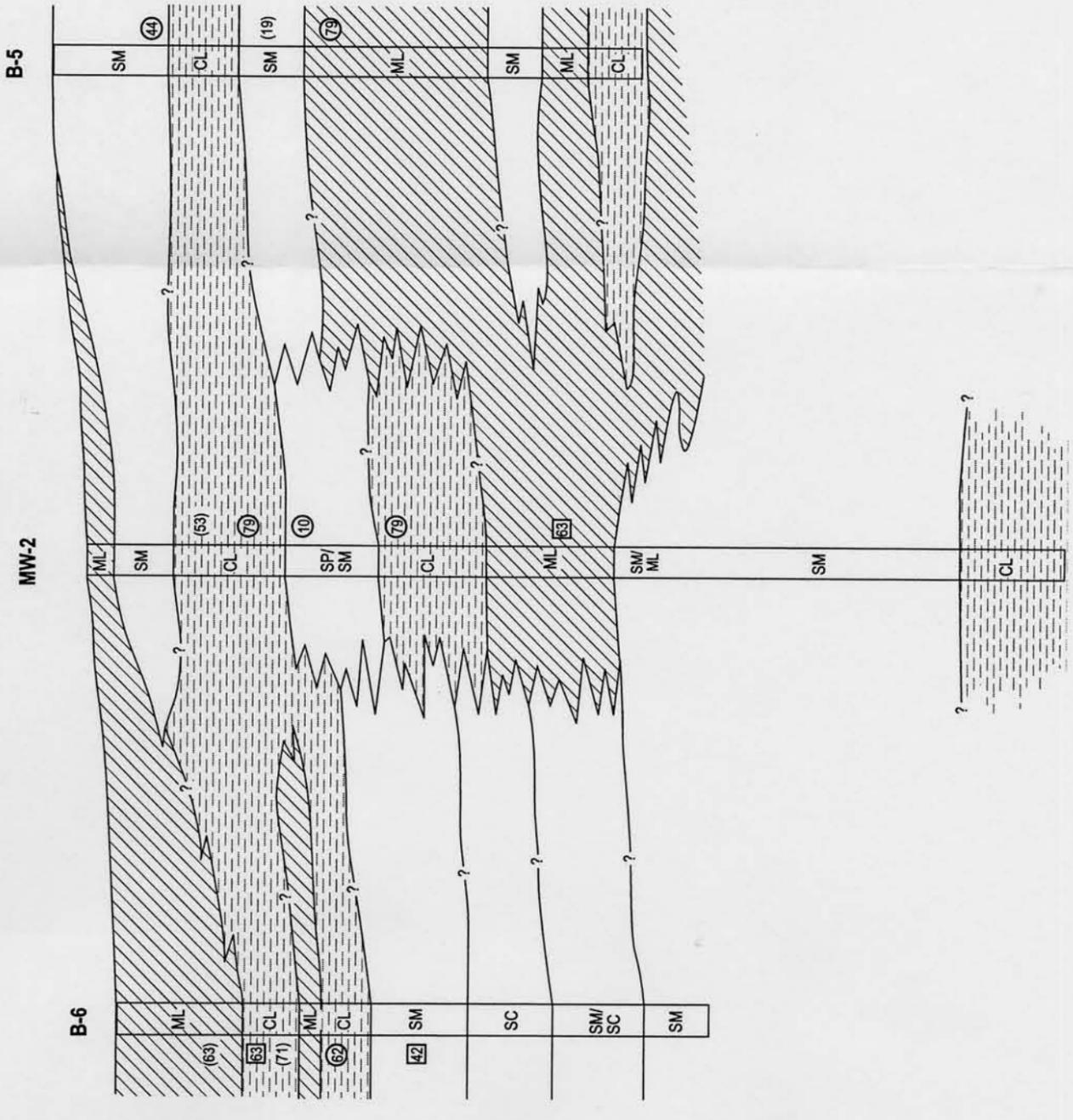
April 2003	Infiltration Basin Site Selection Study	Figure 405S-2-1
------------	--	--------------------

A

A

—99
—98
—97
—96
—95
—94
—93
—92
—91
—90
—89
—88
—87
—86
—85
—84
—83
—82
—81
—80

ELEVATION (METERS)



- ▶ Water Level Observed During Drilling
- ◀ Groundwater Elevation Feb. 2003
- Float Valve Location
- Top of Hydraulic Conductivity Test Section
- (052) In-hole Hydraulic Conductivity Test Value (inches/hour)
- (46) Hydrometer Test, % Passing #200 Sieve
- (72) Sieve Analysis, % Passing #200 Sieve
- (32) Wash Analysis, % Passing #200 Sieve
- ▨ Clays and Clays w/Silt
- ▨ Silt

PRIORITY 5 – SITE 405 S-2 GEOLOGIC CROSS SECTION A-A'	
Project:	INFILTRATION BASIN SITE SELECTION STUDY
Date:	APRIL 2003
Figure 405 S-2-2	

Note: Groundwater Not Observed
 HORIZONTAL SCALE:
 1 cm = 5 meters
 VERTICAL SCALE:
 1 cm = 1 meter

Project: INFILTRATION BASIN SITE SELECTION STUDY
Project Location: I-405, Wilshire Boulevard

Log of Boring 405S-2-MW-2

Sheet 1 of 2

Date(s) Drilled	4/11/02	Logged By	P. Salter	Checked By	M. Siem
Drilling Method	Hollow-Stem Auger	Drill Bit Size/Type	203mm & 254mm auger bits	Total Depth of Borehole	15.7 meters
Drill Rig Type	CME 85	Drilling Contractor	A & R Drilling	Approximate Surface Elevation	95.1 m MSL
Groundwater Level(s)	Not encountered	Sampling Method(s)	Continuous Coring/Modified California	Hammer Data	63.5 kg, 762mm drop
Borehole Backfill	See Well Construction Figure	Location	See Site Plan		

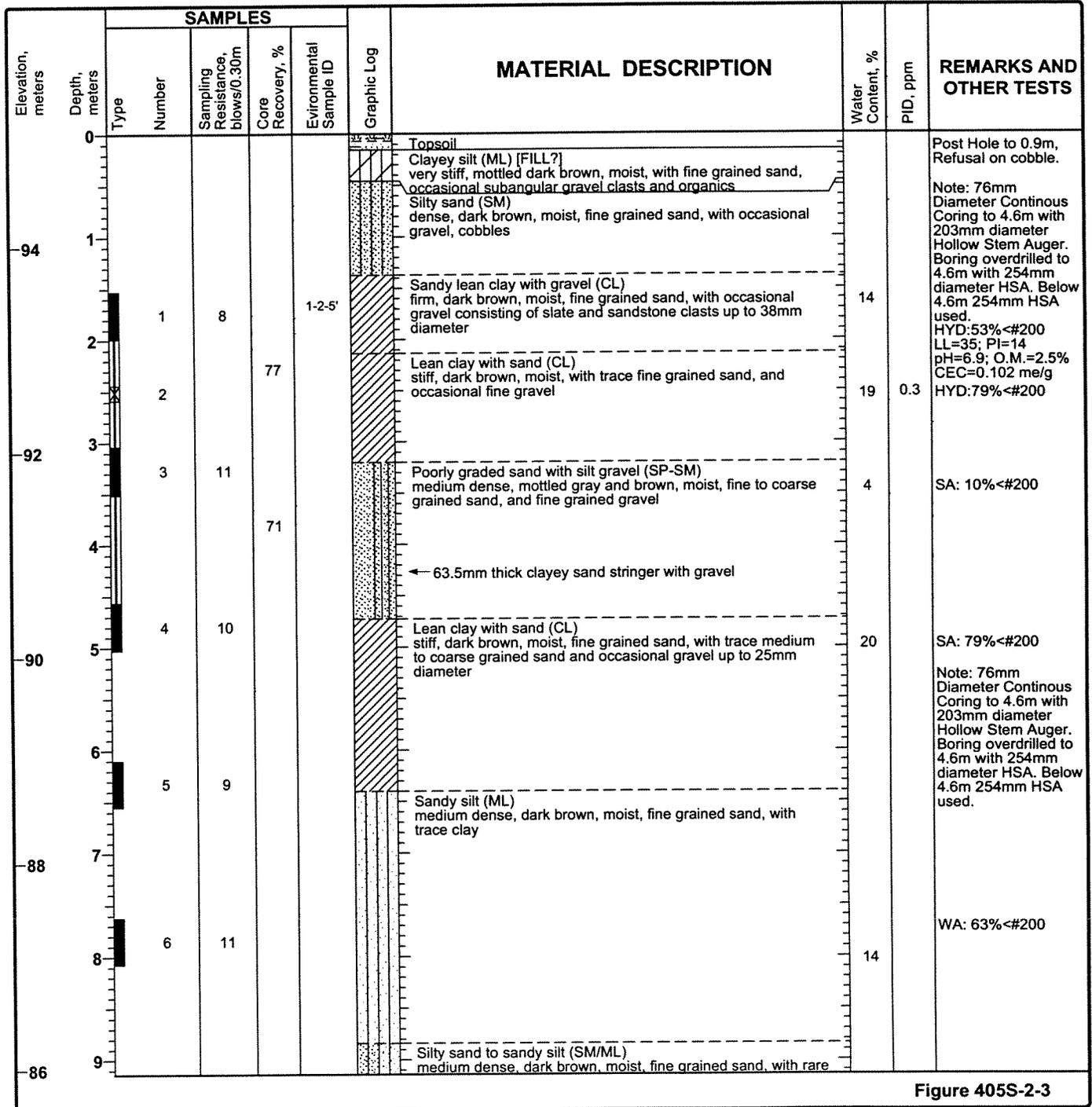
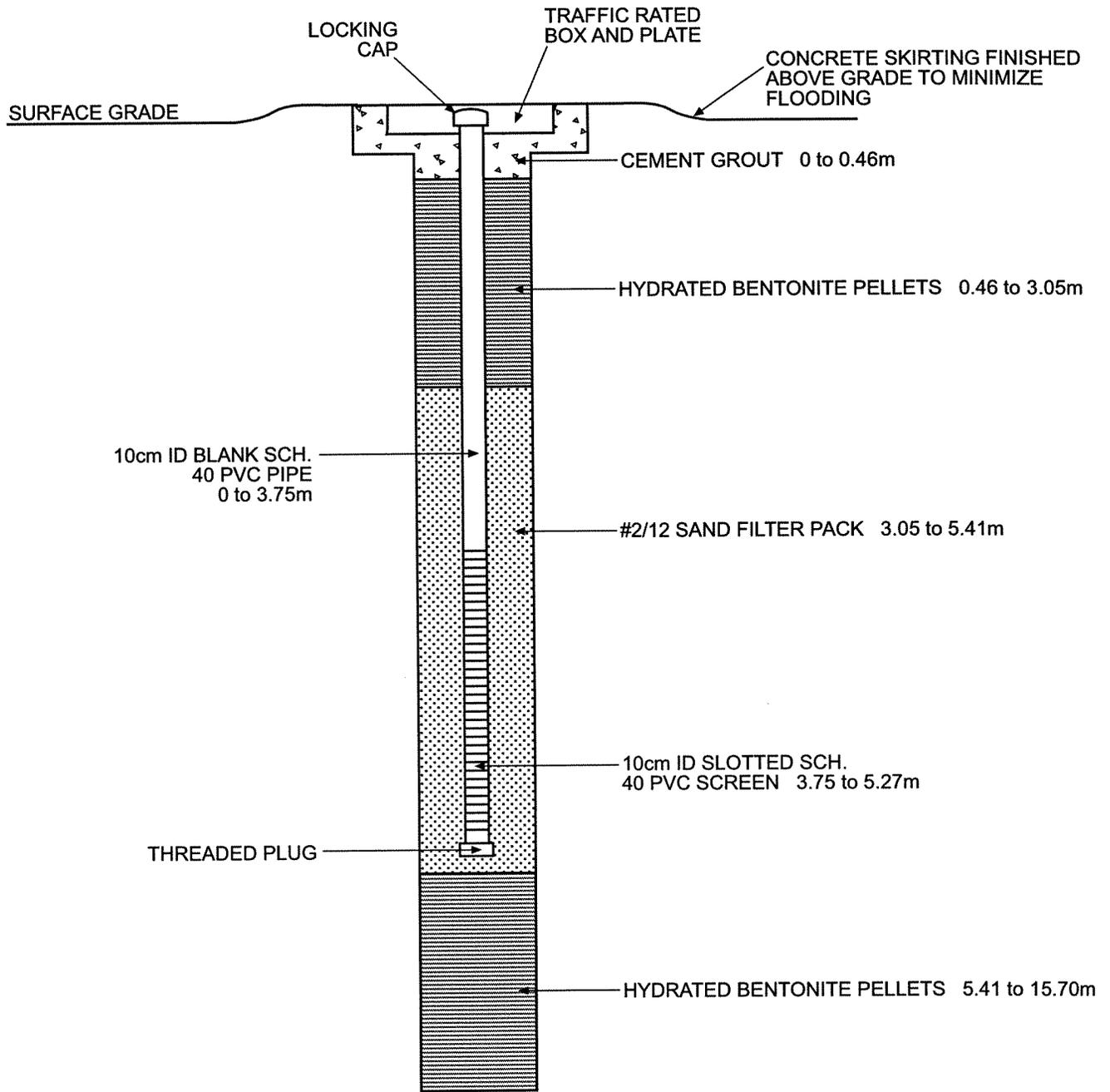


Figure 405S-2-3

Elevation, meters	Depth, meters	SAMPLES					Graphic Log	MATERIAL DESCRIPTION	Water Content, %	PID, ppm	REMARKS AND OTHER TESTS
		Type	Number	Sampling Resistance, blows/0.30m	Core Recovery, %	Environmental Sample ID					
			7	16			gravel				
	10						Silty sand (SM) medium dense, dark brown, moist, fine grained sand, with trace clay				
-84	11		8	16					0.0	PID from cuttings stockpile	
	12										
	13		9	59			Silty sand with gravel (SM) very dense, mottled gray and brown, fine to coarse grained sand, with trace clay				
-82	14		10	11			Sandy lean clay (CL) stiff, dark brown, moist, fine grained sand				
	15		11	19	11-2-50'		Silty CLAY (CL) stiff, dark reddish brown, moist, with trace coarse grained sand and fine grained gravel		0.0	PID from cuttings stockpile	
-80	16						Bottom of boring at 15.7 meters			Finish at 1623.	
	17										
-78	18										
	19										
-76											

Figure 405S-2-3



405S-2-MW-2

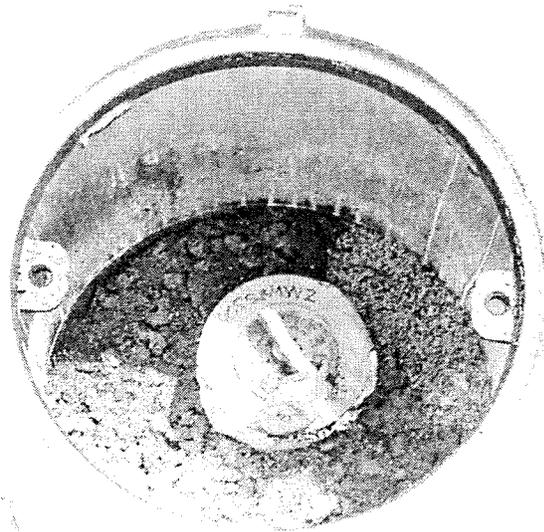
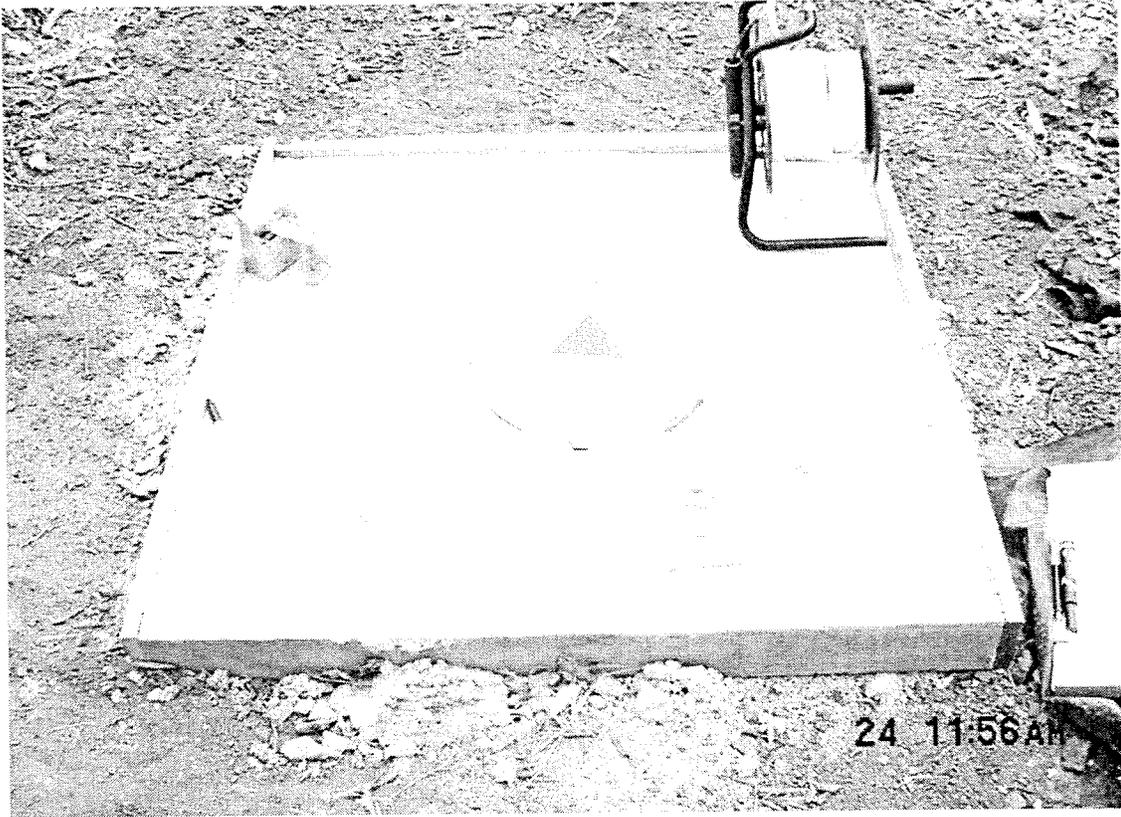
Not to Scale

GROUNDWATER MONITORING WELL DIAGRAM

Date: APRIL 2003

Project: INFILTRATION BASIN SITE SELECTION STUDY

Figure 405S-2-4



405S-2-MW-2

Project: INFILTRATION BASIN SITE SELECTION STUDY
Project Location: I-405, Wilshire Boulevard

Log of Boring 405S-2-B-5

Sheet 1 of 1

Date(s) Drilled	4/12/02	Logged By	P.Salter	Checked By	M. Siem
Drilling Method	Hollow-Stem Auger	Drill Bit Size/Type	203mm auger bit	Total Depth of Borehole	9.6 meters
Drill Rig Type	CME 75	Drilling Contractor	BC2 Environmental Corp	Approximate Surface Elevation	95.8 m MSL
Groundwater Level(s)	Not encountered	Sampling Method(s)	Grab/ModifiedCalifornia/SPT	Hammer Data	63.5 kg, 762mm drop
Borehole Backfill	Soil Cuttings	Location	See Site Plan		

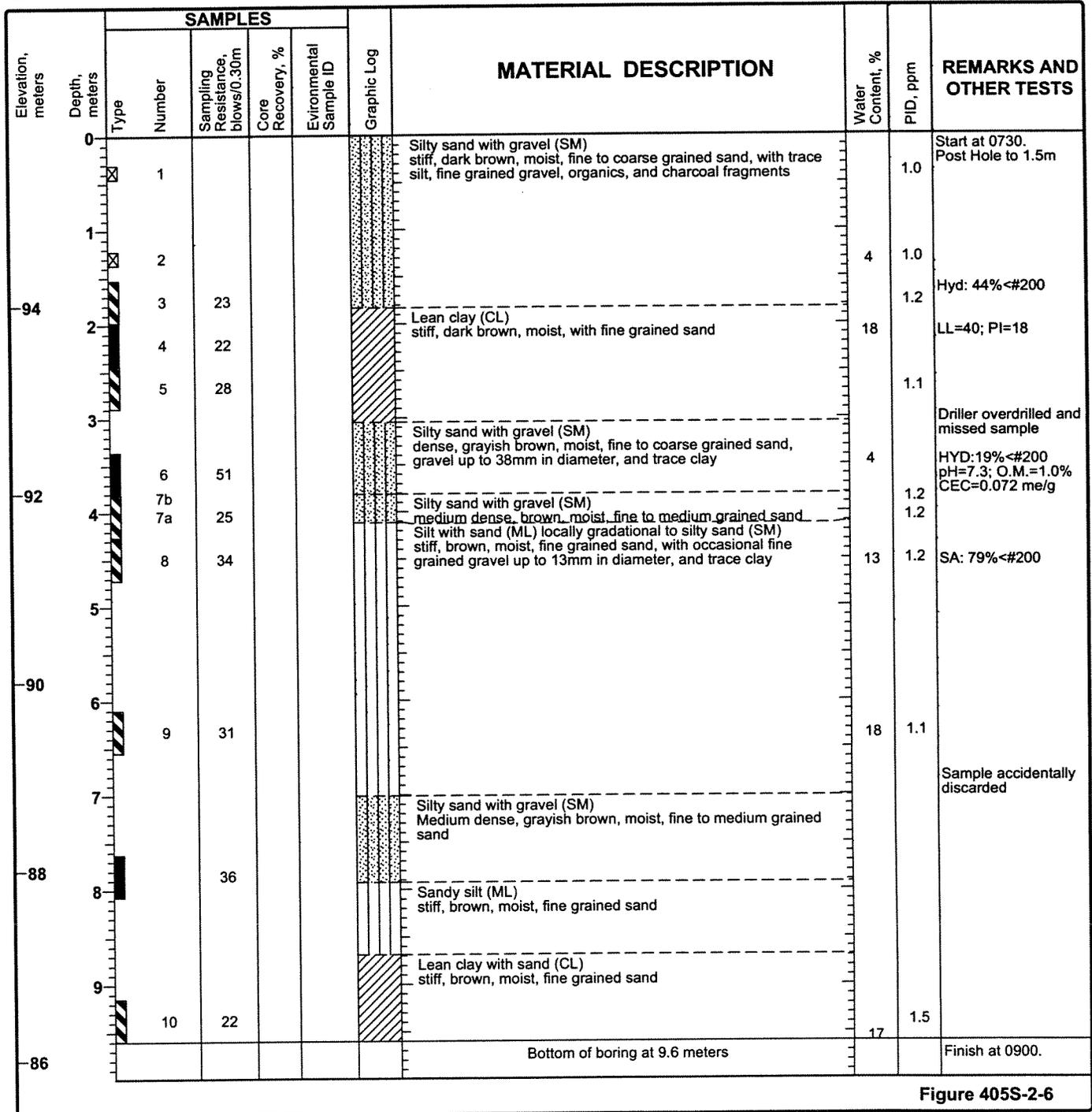


Figure 405S-2-6

Project: INFILTRATION BASIN SITE SELECTION STUDY
Project Location: I-405, Wilshire Boulevard

Log of Boring 405S-2-B-6

Sheet 1 of 1

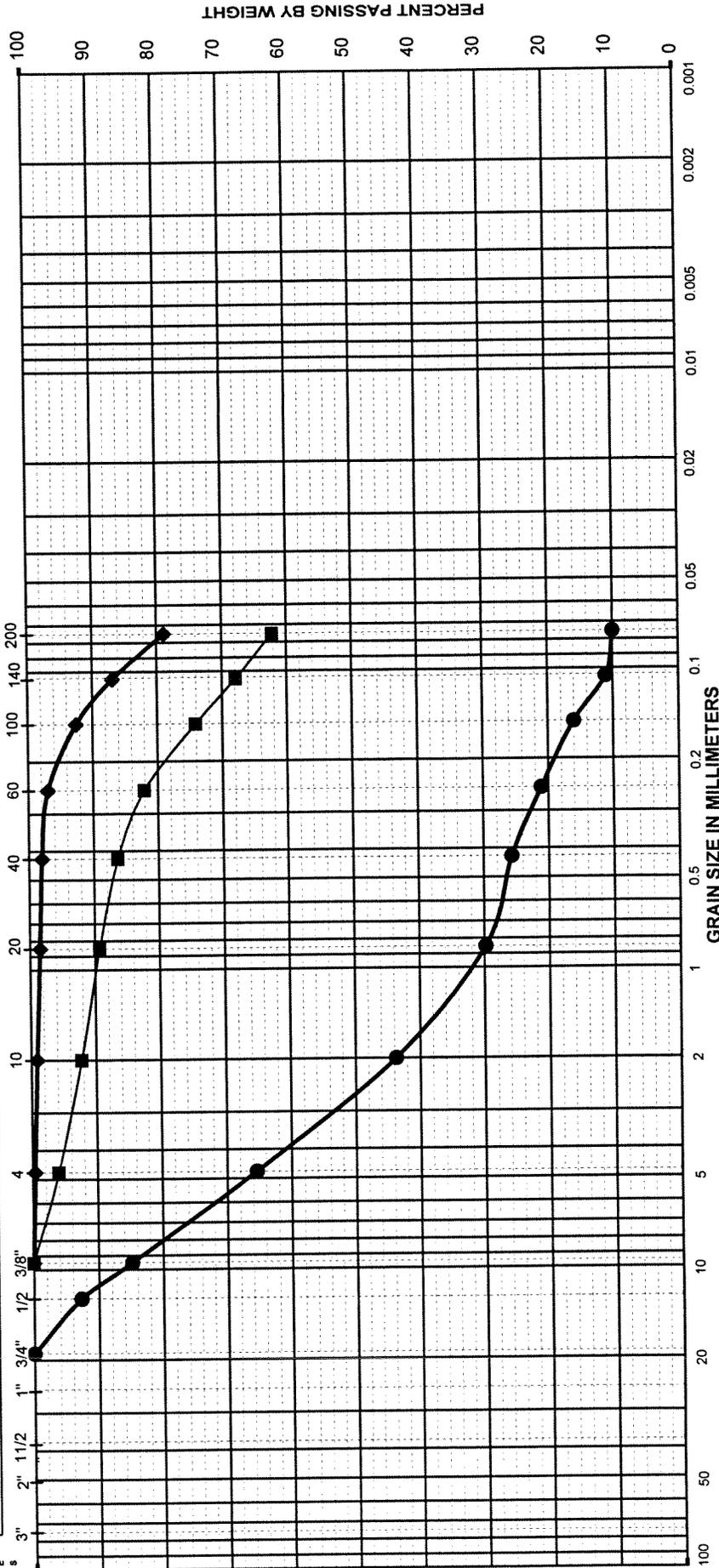
Date(s) Drilled	4/12/02	Logged By	P.Salter	Checked By	M. Siem
Drilling Method	Hollow-Stem Auger	Drill Bit Size/Type	203mm auger bit	Total Depth of Borehole	9.6 meters
Drill Rig Type	CME 75	Drilling Contractor	BC2 Environmental Corp	Approximate Surface Elevation	94.6 m MSL
Groundwater Level(s)	Not encountered	Sampling Method(s)	Grab/Modified California/SPT	Hammer Data	63.5 kg, 762mm drop
Borehole Backfill	Soil Cuttings	Location	See Site Plan		

Elevation, meters	Depth, meters	SAMPLES					Graphic Log	MATERIAL DESCRIPTION	Water Content, %	PID, ppm	REMARKS AND OTHER TESTS
		Type	Number	Sampling Resistance, blows/0.30m	Core Recovery, %	Environmental Sample ID					
0							Sandy silt (ML) stiff, dark brown, moist, fine to medium grained sand		1.0	Start at 0920. Post Hole to 1.5m PID from Background pH=6.4; O.M.=3.4% CEC=0.128 me/g	
-94	0.5	X	1								
	1										
	1.5		2	16					12	HYD:63%<#200	
	2		3	18		3-2-6.5'	Sandy lean clay (CL) stiff, dark brown, moist, fine grained sand Occasional fine gravel		12	WA: 63%<#200	
-92	2.5		4	15			Silt with sand (ML) very stiff, dark brown, moist, fine to coarse grained sand, with trace gravel		11	HYD:71%<#200	
	3		5	41					1.2		
	3.5		6	27			Sandy lean clay with gravel (CL) very stiff, brown, moist, fine to coarse grained sand, trace fine grained gravel Tree root		15	SA: 62%<#200	
	4		7	29					1.4		
-90	4.5		8	28			Silty sand (SM) medium dense, dark brown, moist, fine grained sand with coarse grained sand, and fine grained gravel		1.5		
	5		9	38			increasing sand and clay content grading to clayey sand		10	WA: 42%<#200	
	6		10				Clayey sand (SC) medium dense, reddish brown, moist, reddish brown, fine grained sand, with silt			Blow count not recorded	
-88	7		11	44			Silty to clayey sand with gravel (SM/SC) dense, light grayish brown, moist, fine to coarse grained sand, fine to coarse grained gravel up to 50mm in diameter				
	8		12	36		12-2-30'	Silty sand (SM) dense, light brown, moist, fine grained sand, with trace clay, organic flecks, and occasional fine gravel				
-86	9						Bottom of boring at 9.6 meters			Finish at 1010.	

Figure 405S-2-7

UNIFIED SOIL CLASSIFICATION

GRAVEL	SAND			SILT AND CLAY
COARSE	FINE	COARSE	MEDIUM	FINE
U. S. STANDARD SIEVE SIZES				



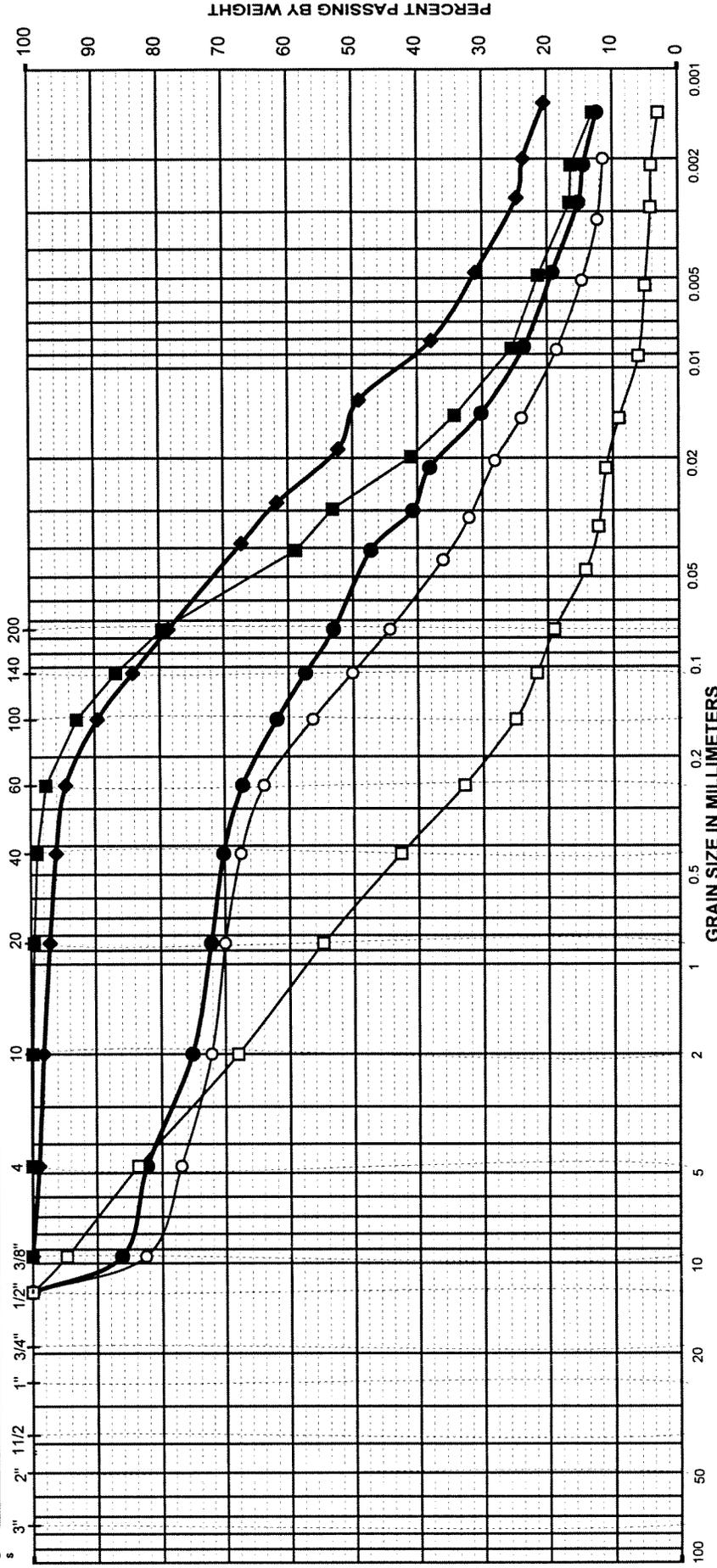
Exploration No.	Sample No.	Depth (m)	SYMBOL	Wn (%)	LL	PI	% Clay	Description and Classification	D ₆₀	D ₃₀	D ₁₀	C _u	C _c
405S-2-MW-2	3	3.05	●	4.0				Brown gray poorly graded Sand w/ silt and gravel (SP-SM)	3.9	0.85	0.075	52.0	2.5
405S-2-B-5	8	4.27	◆	12.6				Brown Silt with sand (ML)					
405S-2-B-6	6	3.35	■	15.0				Dark brown sandy Clay (CL)					

PROJECT NAME: Caltrans IFB Site Selection Study

Figure: 405S-2-8

UNIFIED SOIL CLASSIFICATION

GRAVEL	SAND	SILT AND CLAY
COARSE	MEDIUM	
FINE	FINE	
U. S. STANDARD SIEVE SIZES		

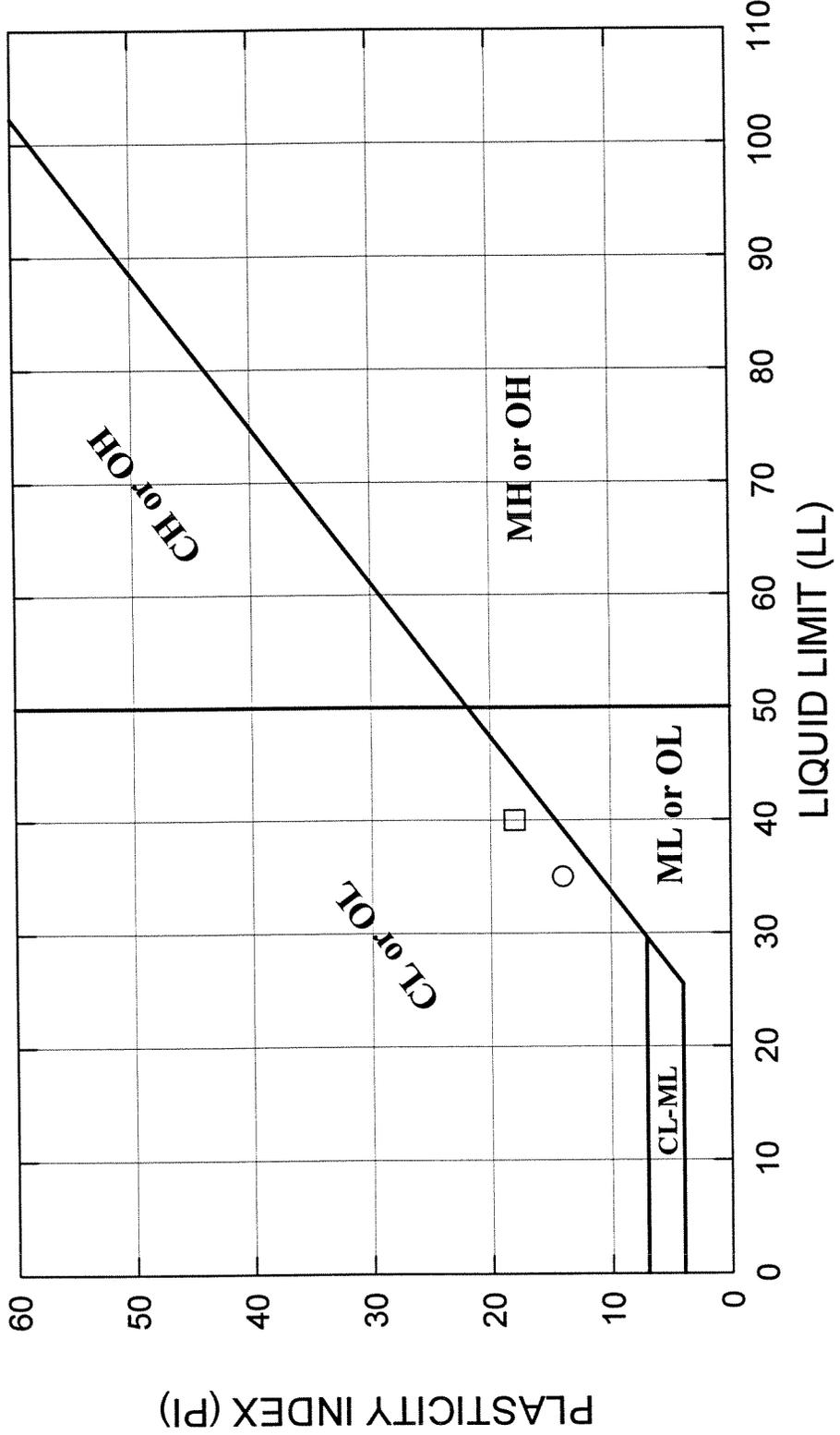


Exploration No.	Sample No.	Depth (m)	SYMBOL	W _n (%)	LL	PI	% Clay	Description and Classification	D ₆₀	D ₃₀	D ₁₀	C _u	C _c
405S-2-MW-2	1	1.52	●	14.4	35	14	14	Dark brown Clay with Sand and Gravel (CL)	0.13	0.015			
405S-2-MW-2	2	2.44	◆	19.2			24	Brown sandy Clay (CL)	0.027	0.004			
405S-2-MW-2	4	4.57	■	20.0			16	Dark brown Clay with sand (CL)	0.043	0.012			
405S-2-B-5	2	1.22	○	4.1			11	Brown silty Sand with gravel (SM)	0.19	0.025			
405S-2-B-5	6	3.35	□	4.4			4	Light brown silty Sand with gravel (SM)	1.30	0.22	0.018	72.2	2.1

PROJECT NAME: Caltrans IFB Site Selection Study

PARTICLE-SIZE DISTRIBUTION CURVES

Figure: 405S-2-9



PLASTICITY CHART

Date: April 2003

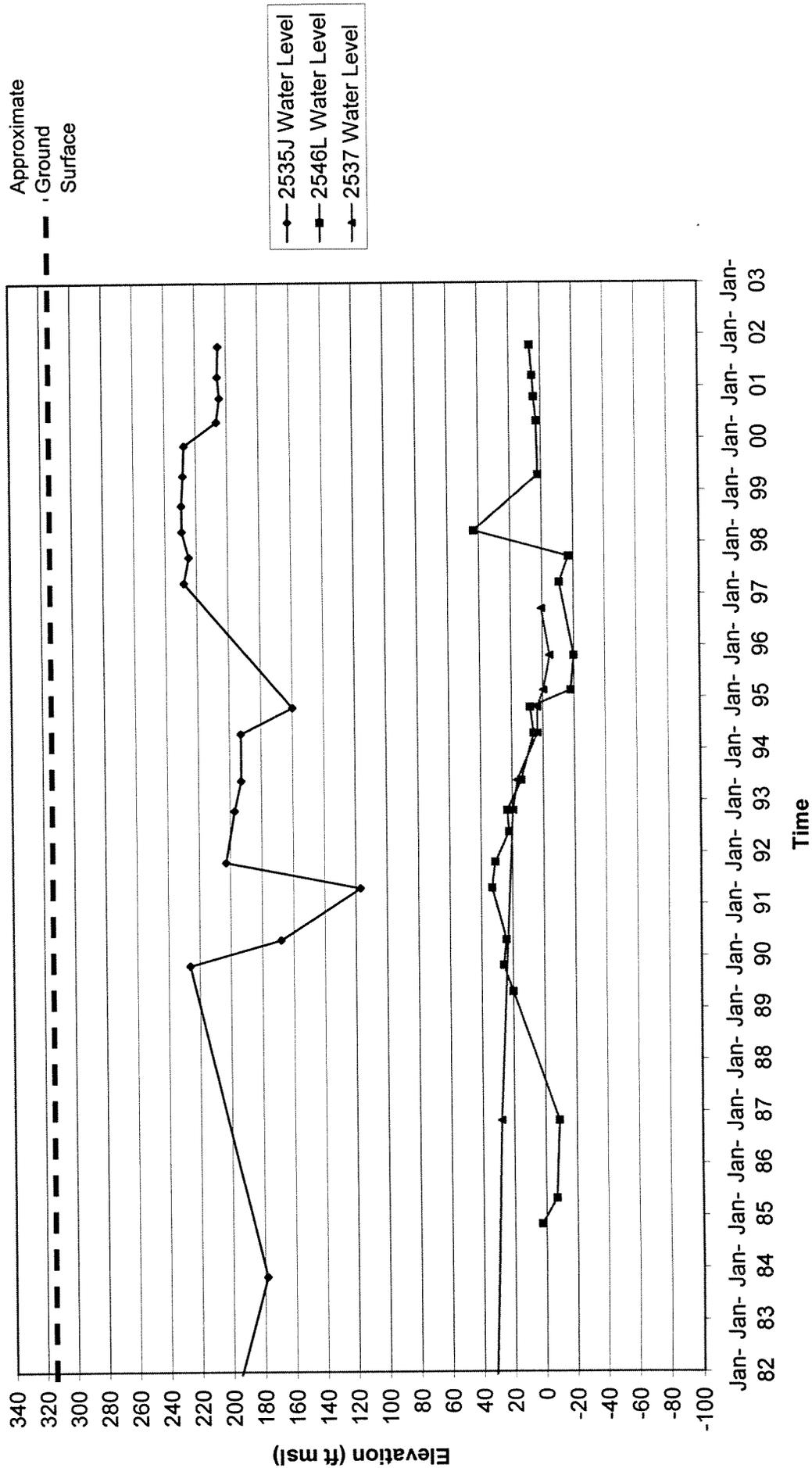
Project: Caltrans Infiltration Basin Project

Figure 405S-2-11

Figure 405S-2-12

Hydrographs of Selected Wells near 405 Freeway; 405S-1, 405S-2

LA Co. Dept. Public Works Well Data - 3 Closest Wells





Priority 5-405S -2 (Wilshire Blvd.) Site Photograph

Date: April 2003

Project: Caltrans IFB Site Selection Study

Figure: 405S-2-13