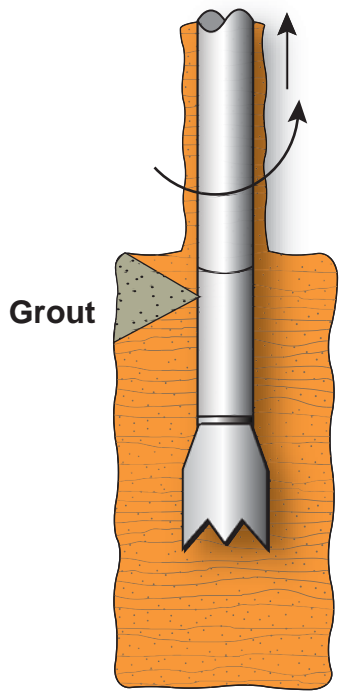


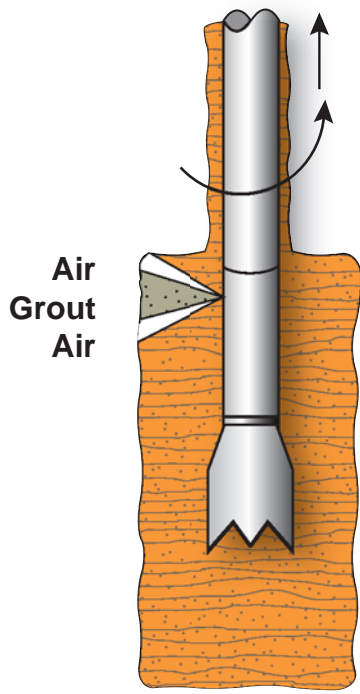
Jet Grouting

FIG_206: Title



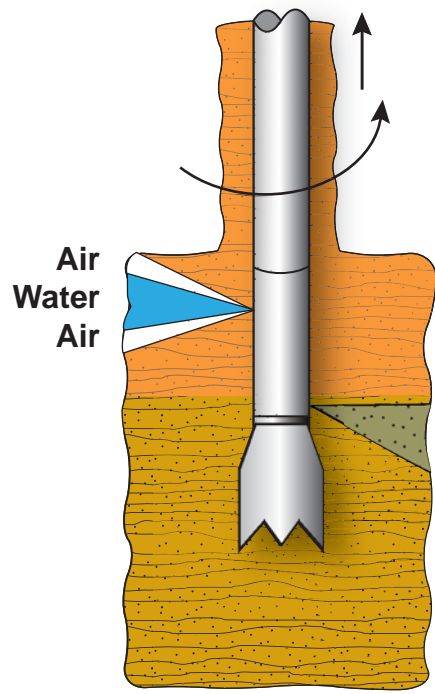
Grout

Single Rod



Air
Grout
Air

Double Rod

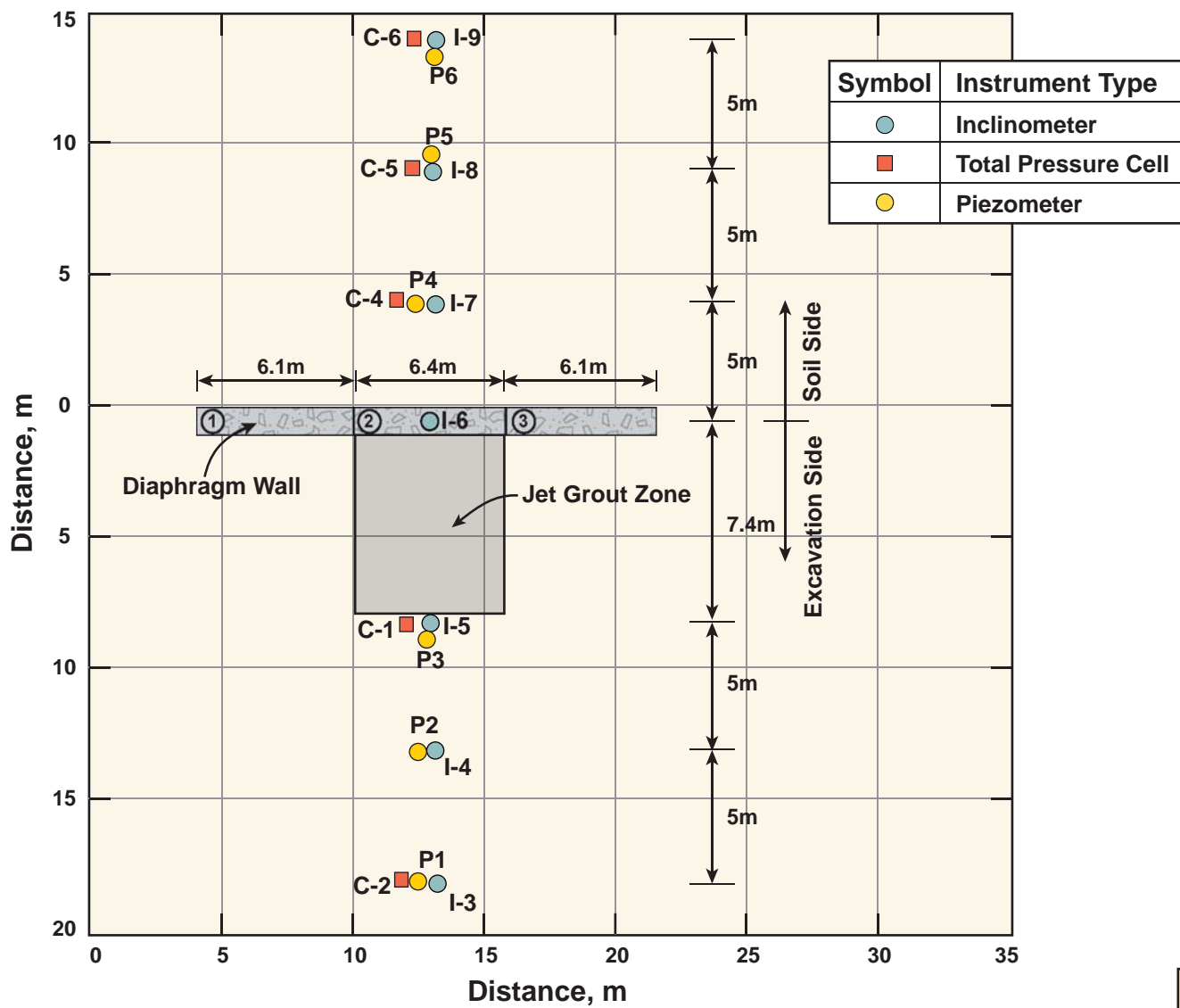


Air
Water
Air

Triple Rod

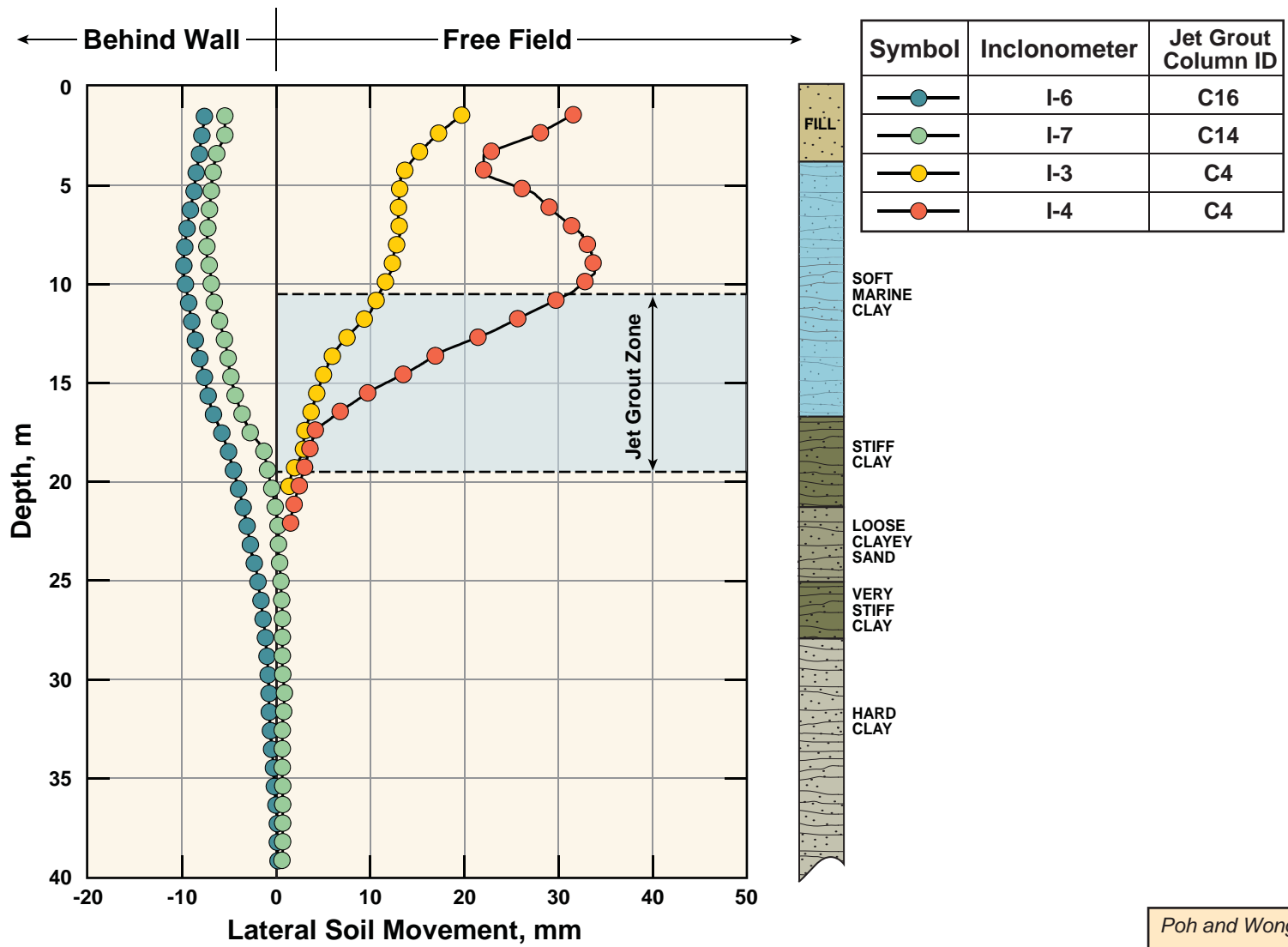
FIG_207: Jet-Grouting Systems

W:\Infrastructure\Geotech\UC Berkeley 2008 Seminar\Final Figures\10 JET GROUTING (206-224)\FIG_207

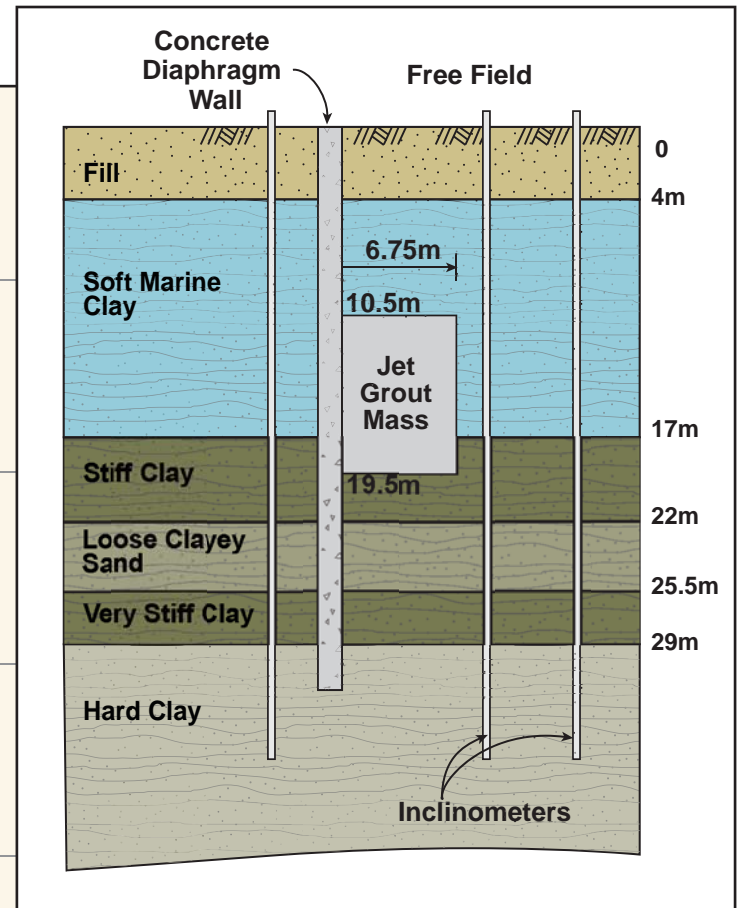
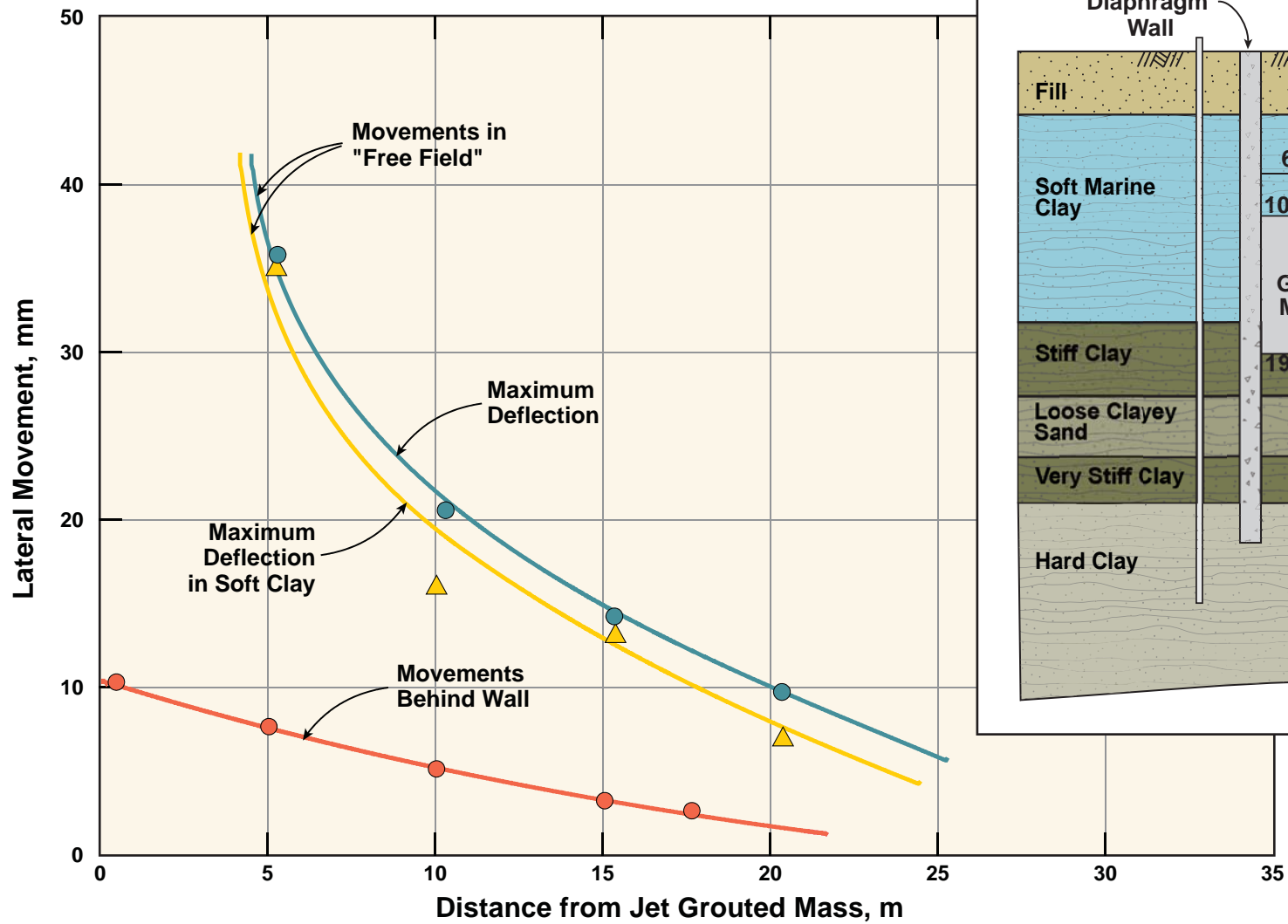


Poh and Wong (2001)

FIG_208: Plan of Singapore Jet-Grout Experiment

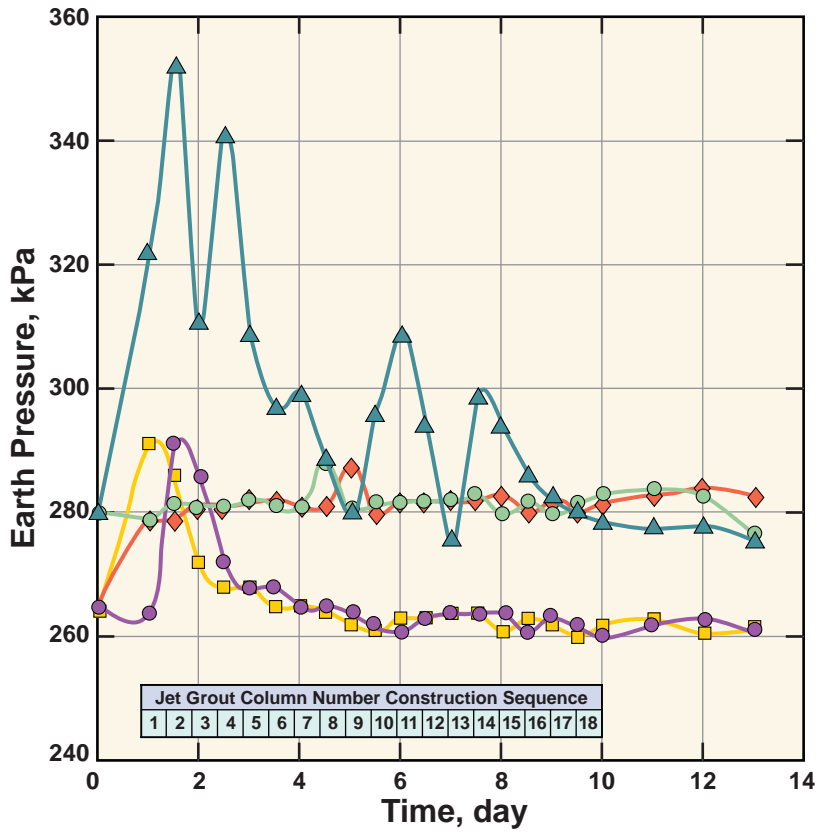


FIG_208A: Lateral Deformation Profiles - Singapore Experiment



Poh and Wong (2001)

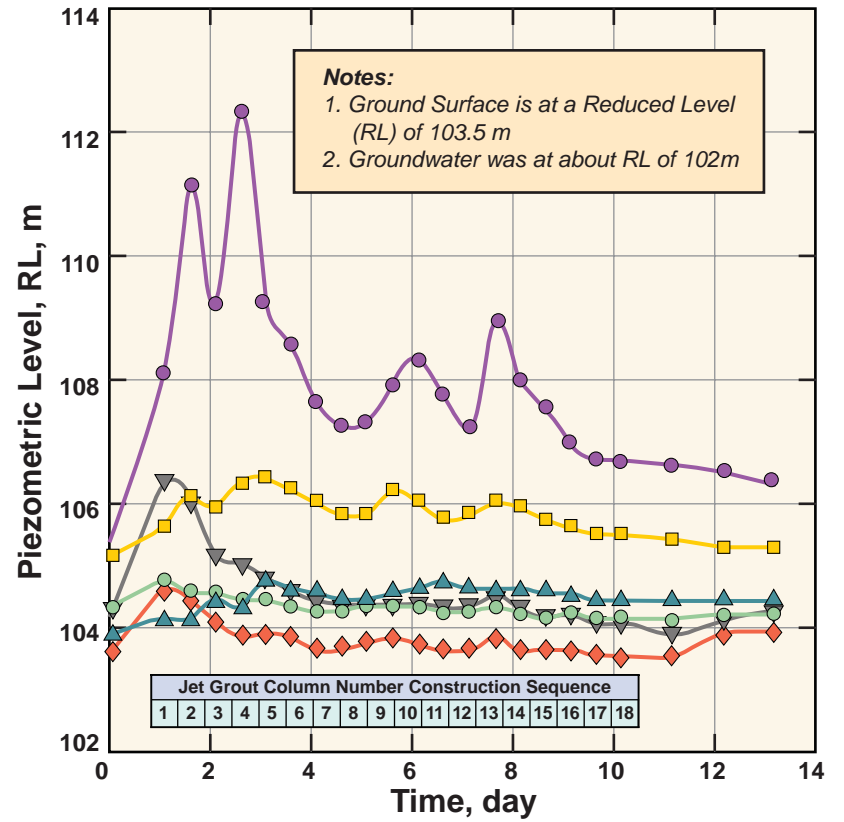
FIG_208B: Lateral Deflections Caused by Jet Grouting - Singapore Experiment



Jet Grout Column Number	Construction Sequence
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18

Symbol	Total Pressure Cell ID	Distance from Jet Grout Area	Location
▲	TPC1	0.25m	Within Excavation
●	TPC2	10.25m	
◆	TPC3	15.25m	
●	TPC4	5.4m	Outside Excavation
■	TPC5	10.4m	

Poh and Wong (2001)

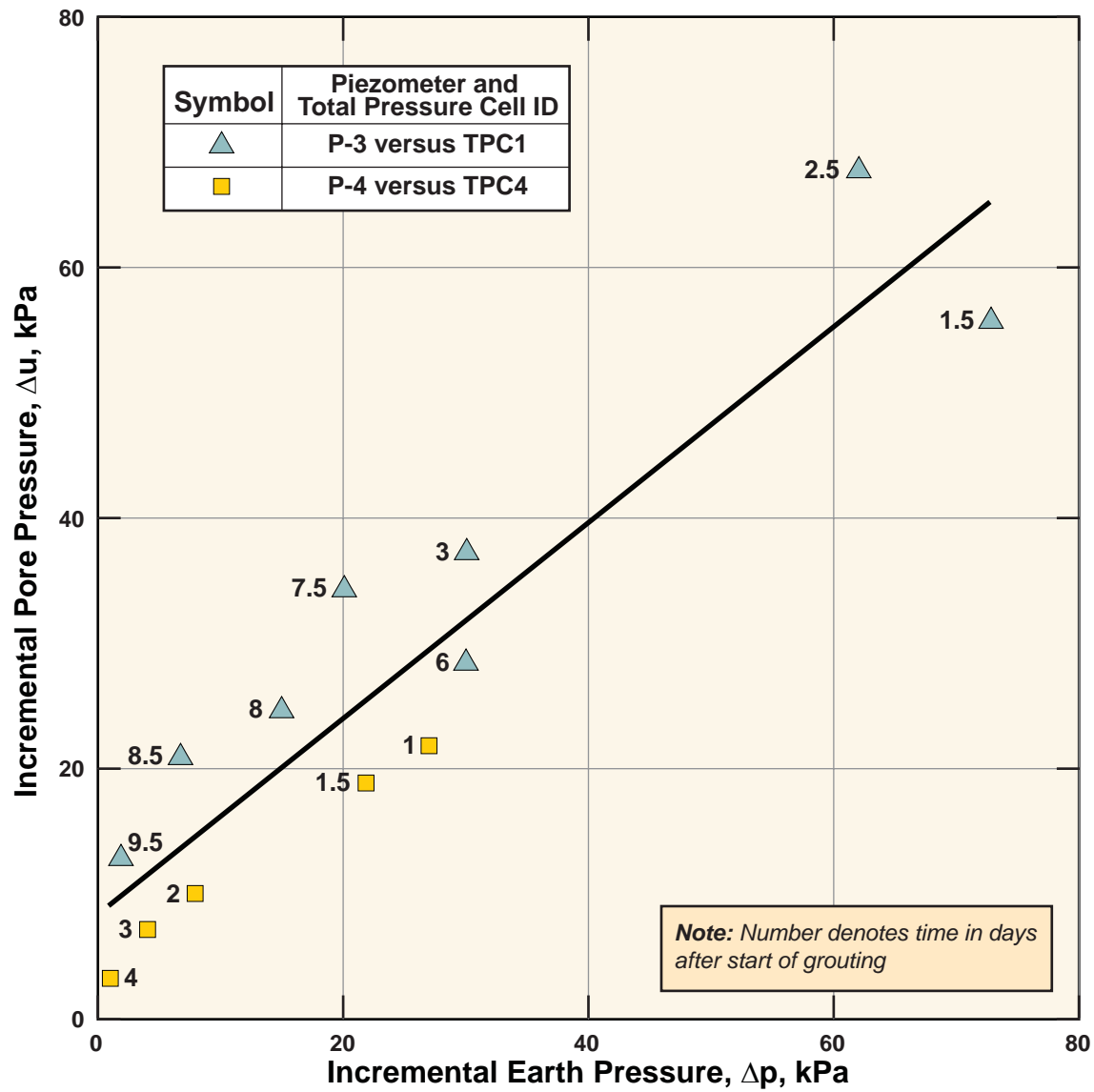


Notes:
 1. Ground Surface is at a Reduced Level (RL) of 103.5 m
 2. Groundwater was at about RL of 102m

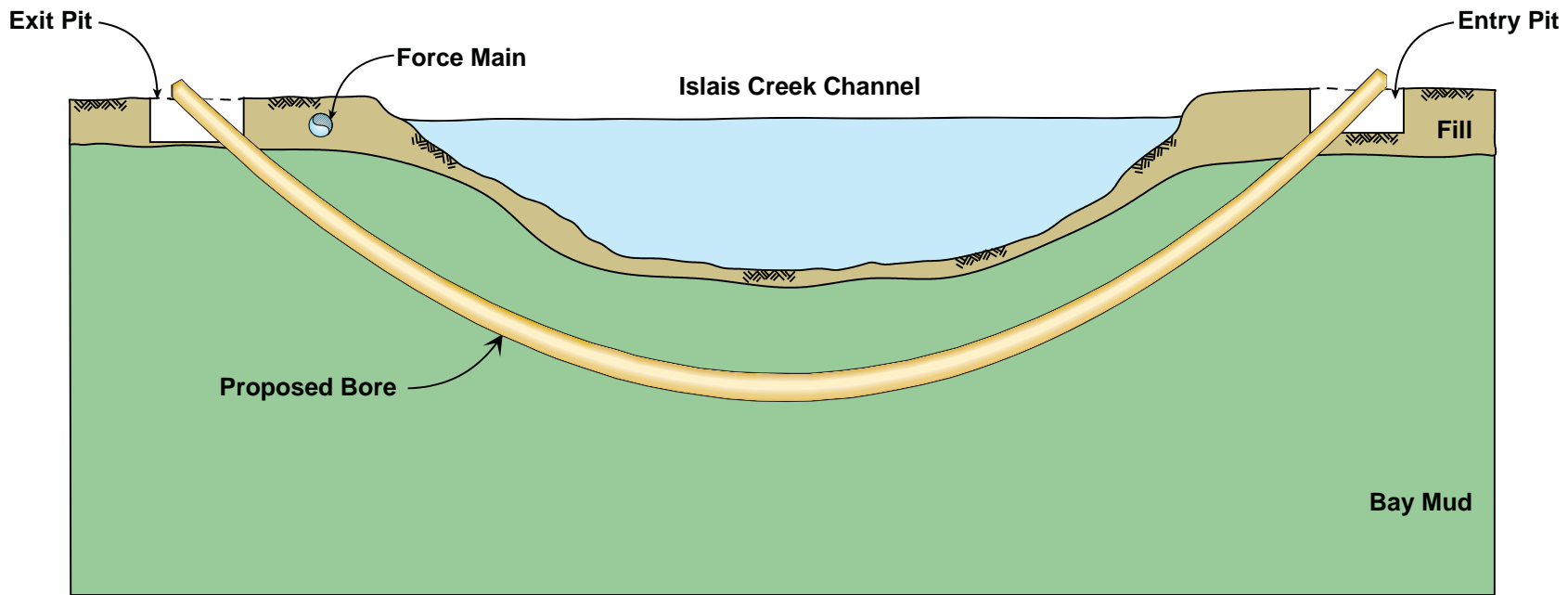
Jet Grout Column Number	Construction Sequence
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18

Symbol	Piezometer ID	Distance from Jet Grout Area	Location
▲	P1	10.25m	Within Excavation
■	P2	5.25m	
●	P3	0.25m	
▼	P4	5.4m	Outside Excavation
◆	P5	10.4m	
●	P6	15.4m	

FIG_209: Changes in Horizontal Pressures and Excess Pore Pressures Caused by Jet-Grouting: Singapore Experiment



FIG_210: Excess Pore Pressures and Lateral Pressures Caused by Jet-Grouting: Singapore Experiment

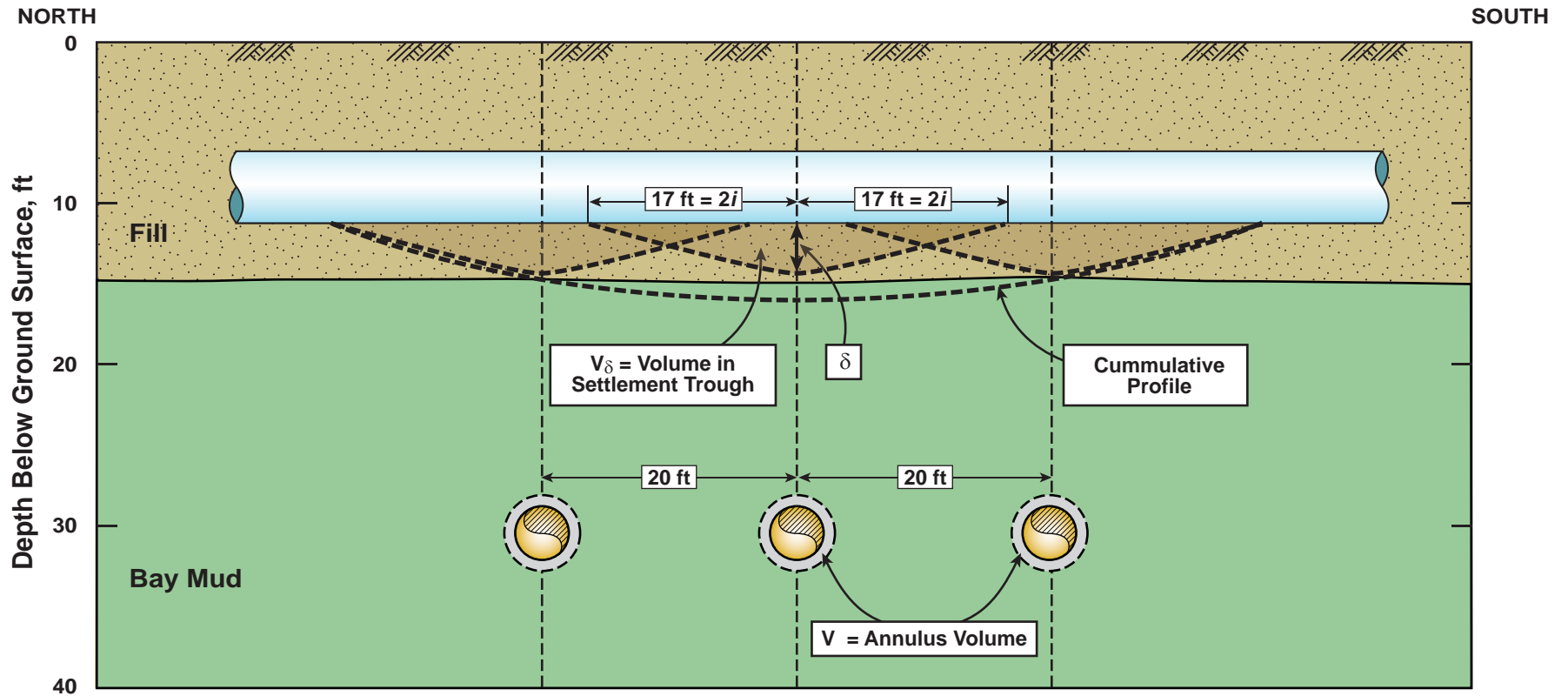


FIG_211: Construction of Duct Banks Under Islais Creek Using Directional Driving

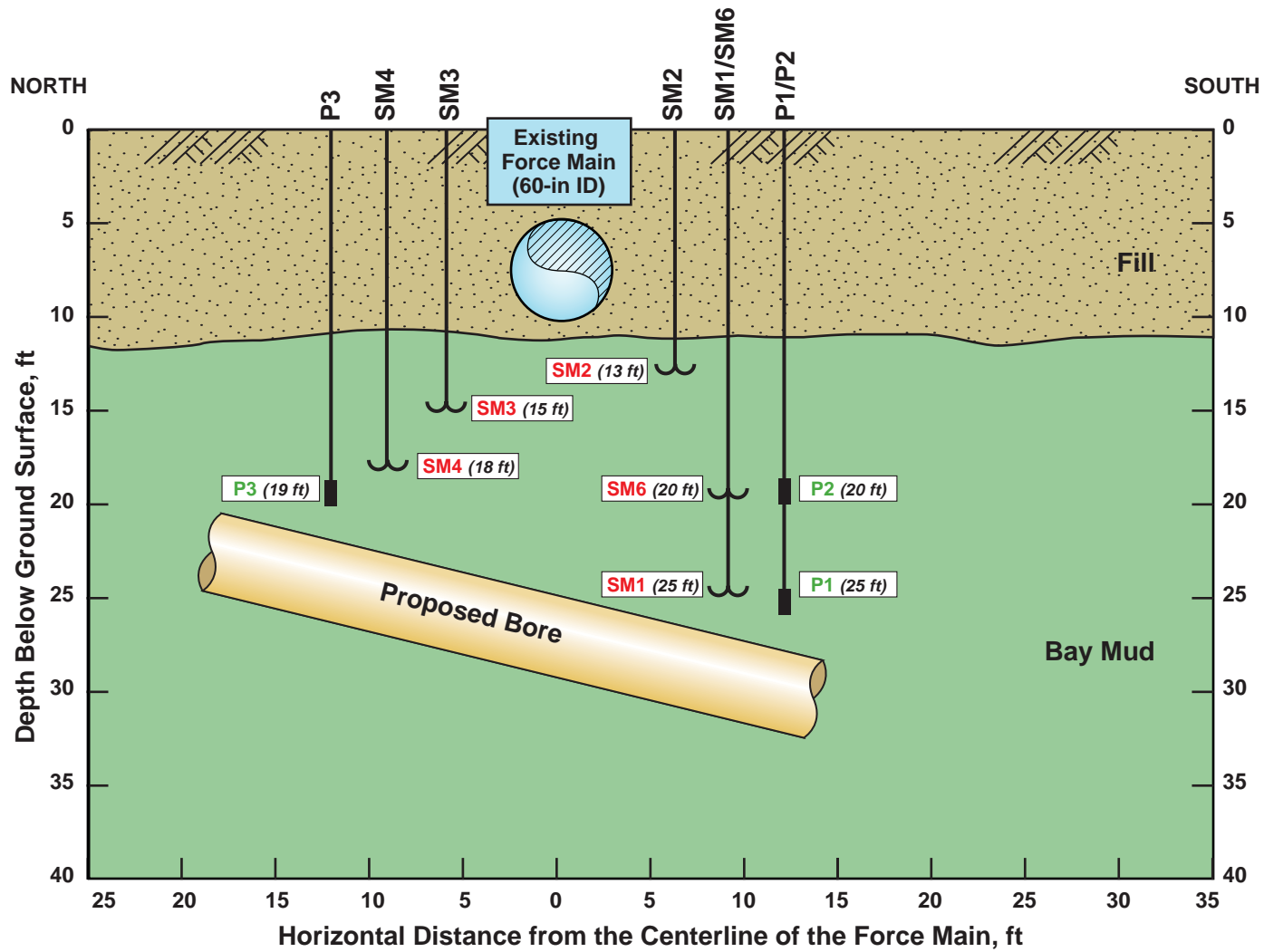


FIG_211A: Construction of Duct Banks Under Islais Creek Using Directional Driving

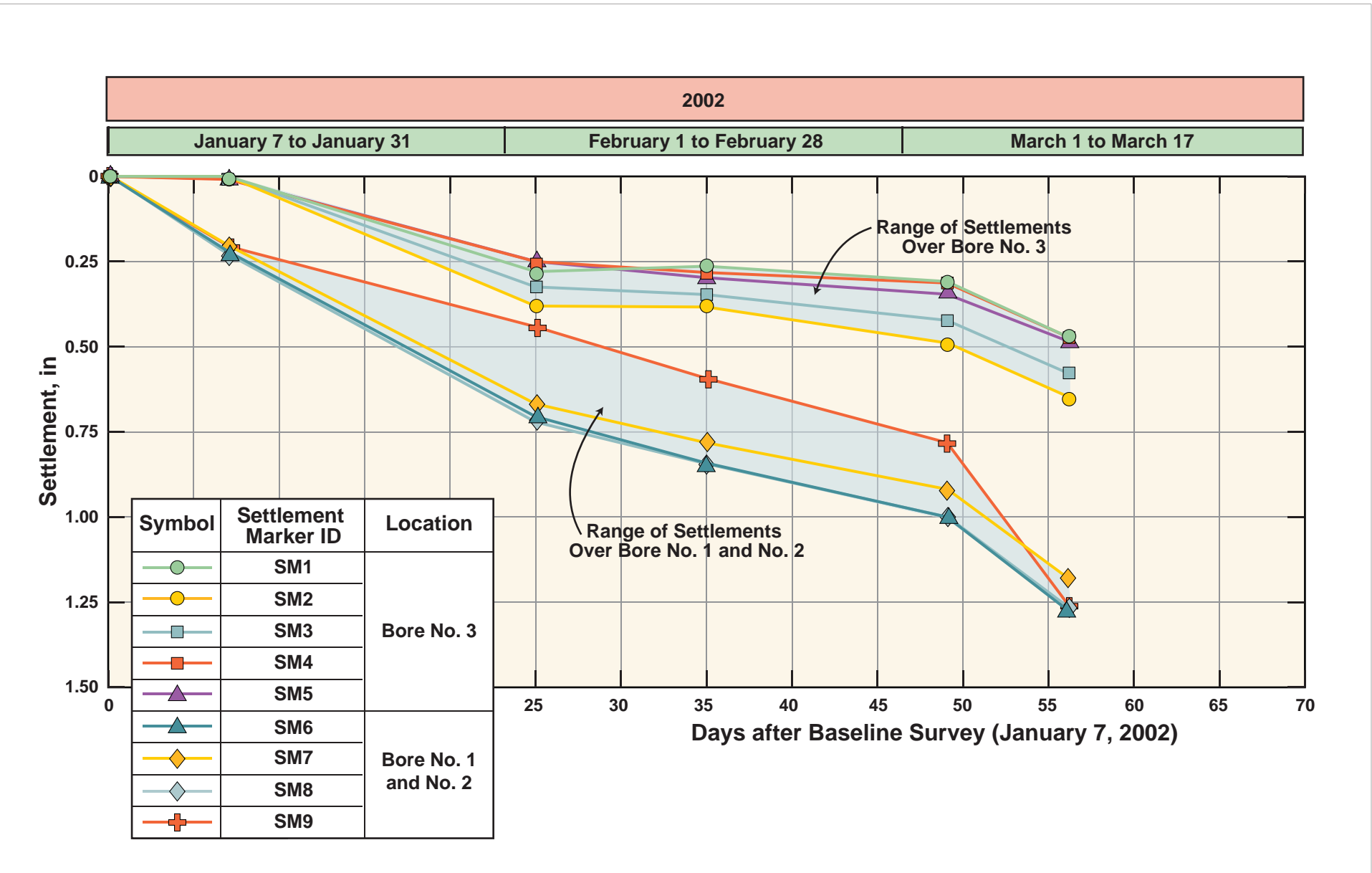
W:\Infrastructure\Geotech\UC Berkeley 2008 Seminar\Final Figures\10 JET GROUTING (206-224)\FIG_211A



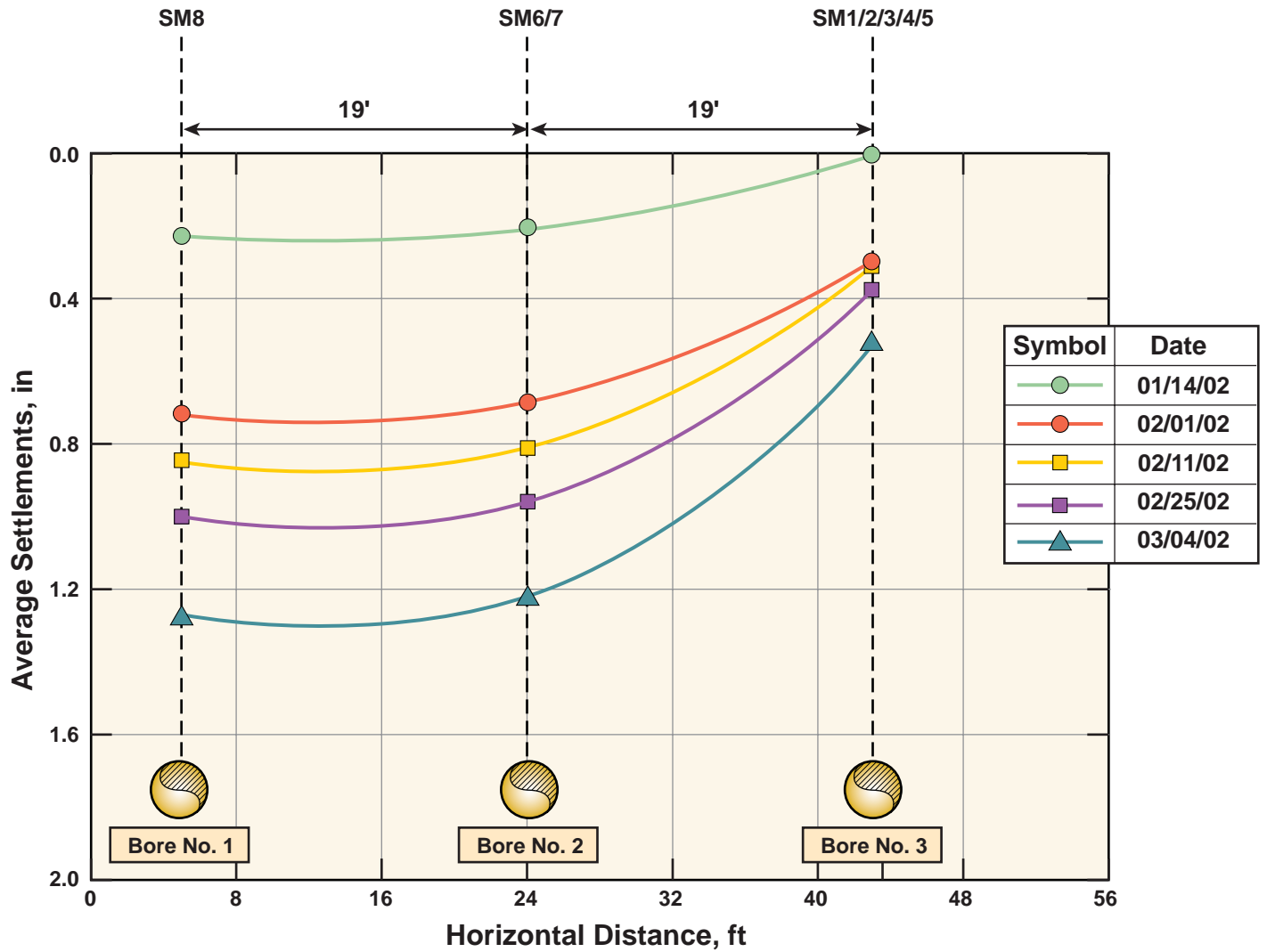
FIG_212: Settlements Caused by Directional Drilling



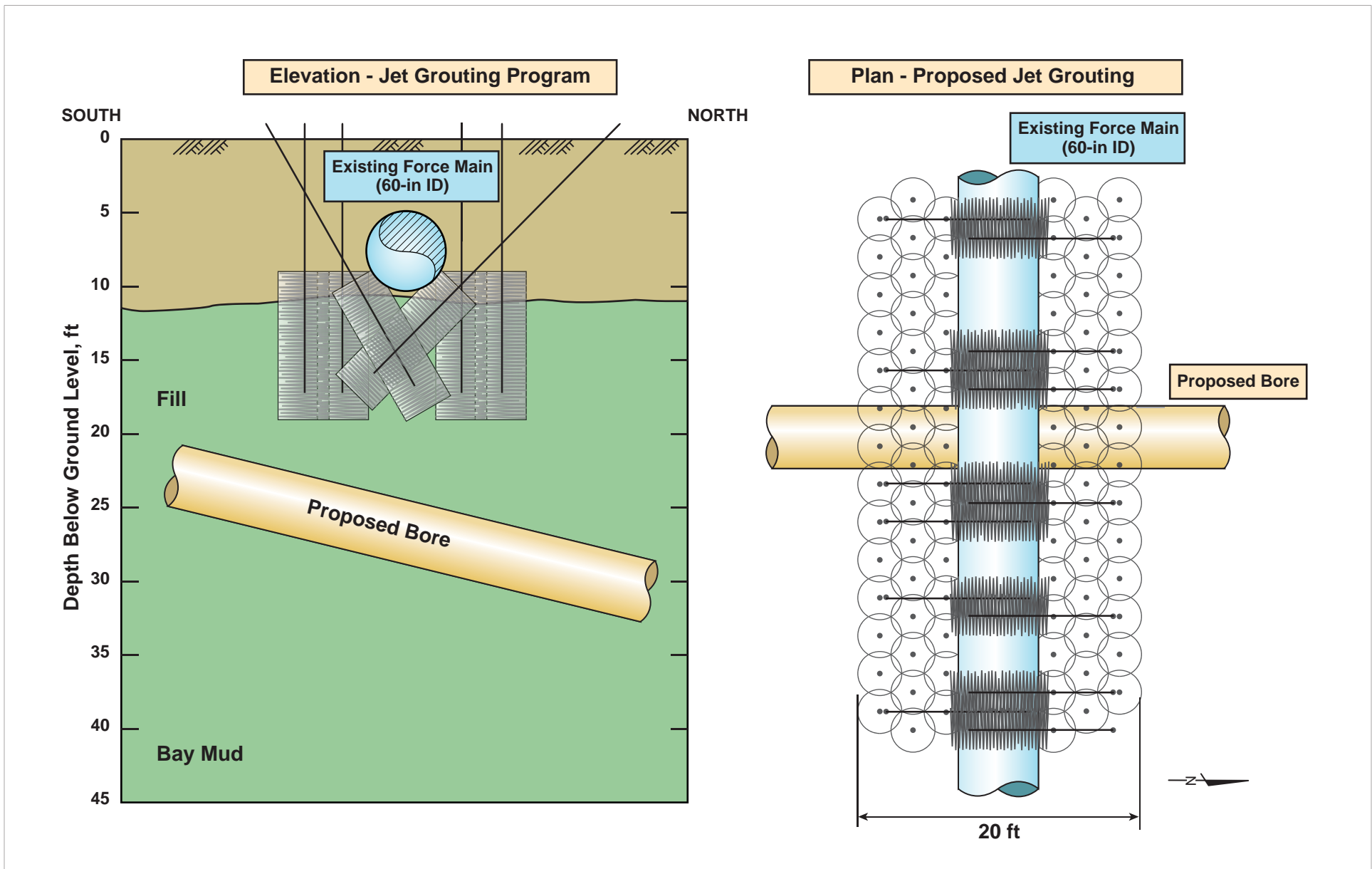
FIG_213: Subsurface Section Showing Instrumentation Installed Over the Proposed Bore No. 3



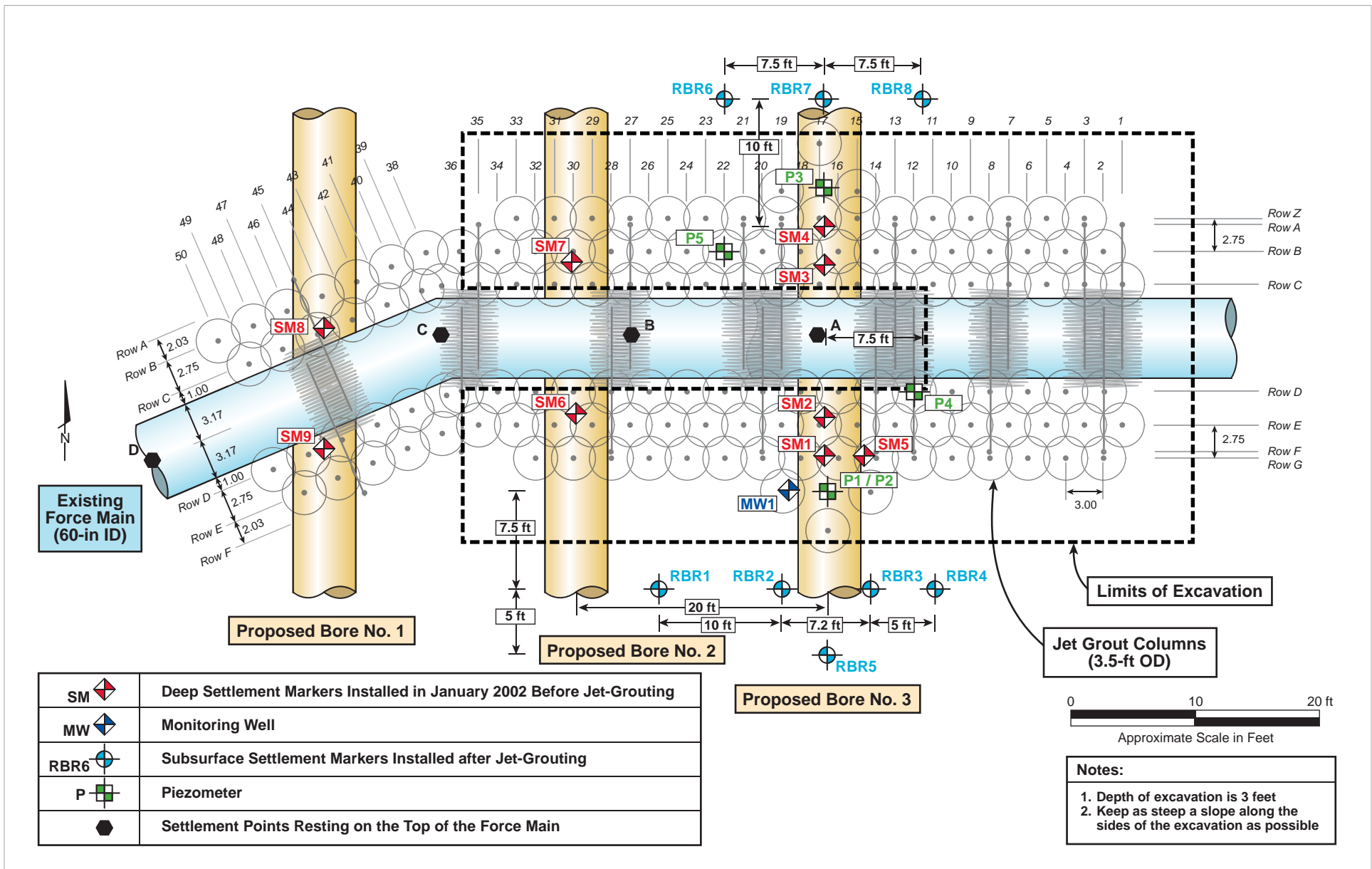
FIG_213A: Settlements of the Force Main Prior to the Installation of the Third Bore



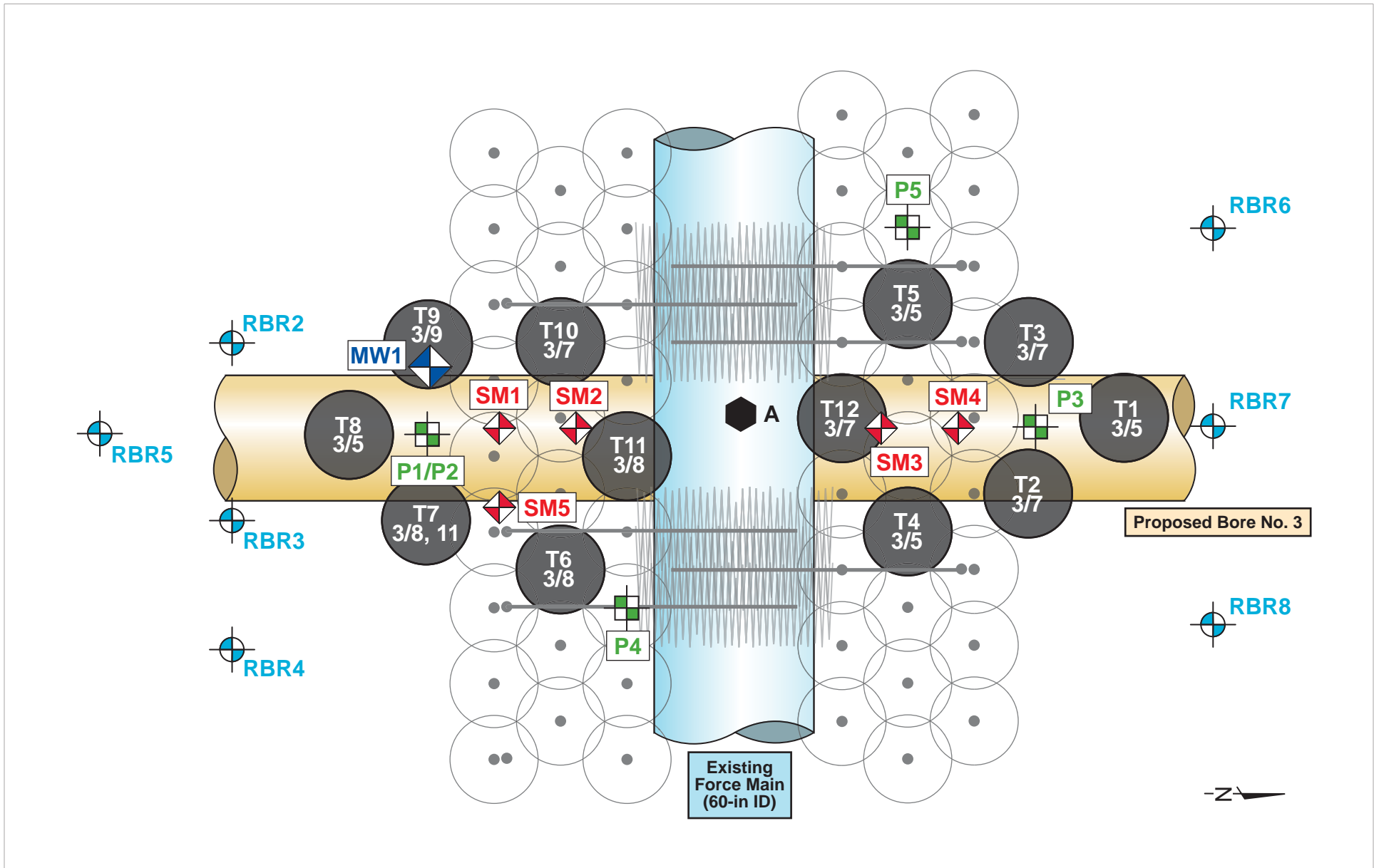
FIG_213B: Settlement Profile Prior to the Installation of Third Bore



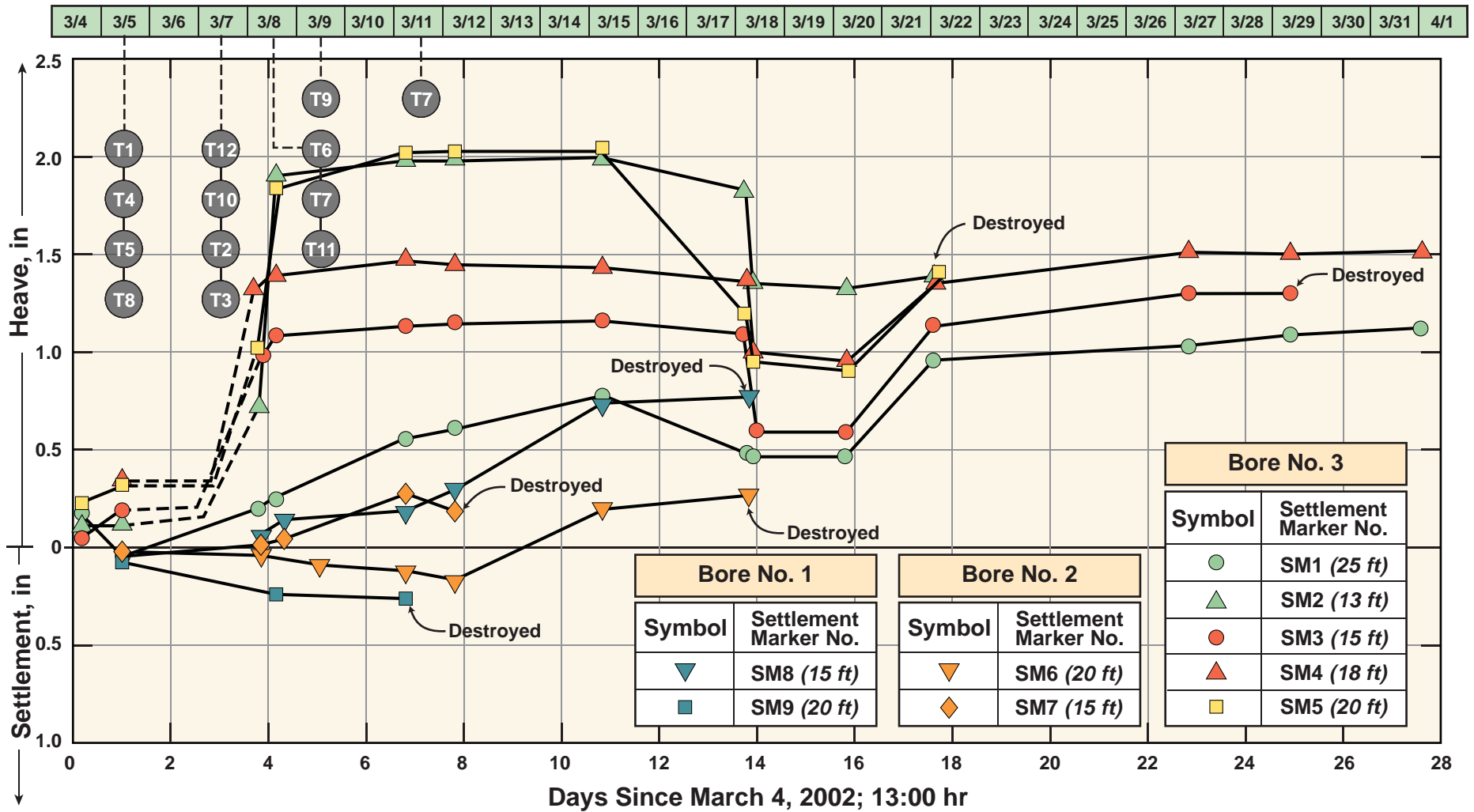
FIG_213C: Settlements of the Force Main Prior to the Installation of the Third Bore



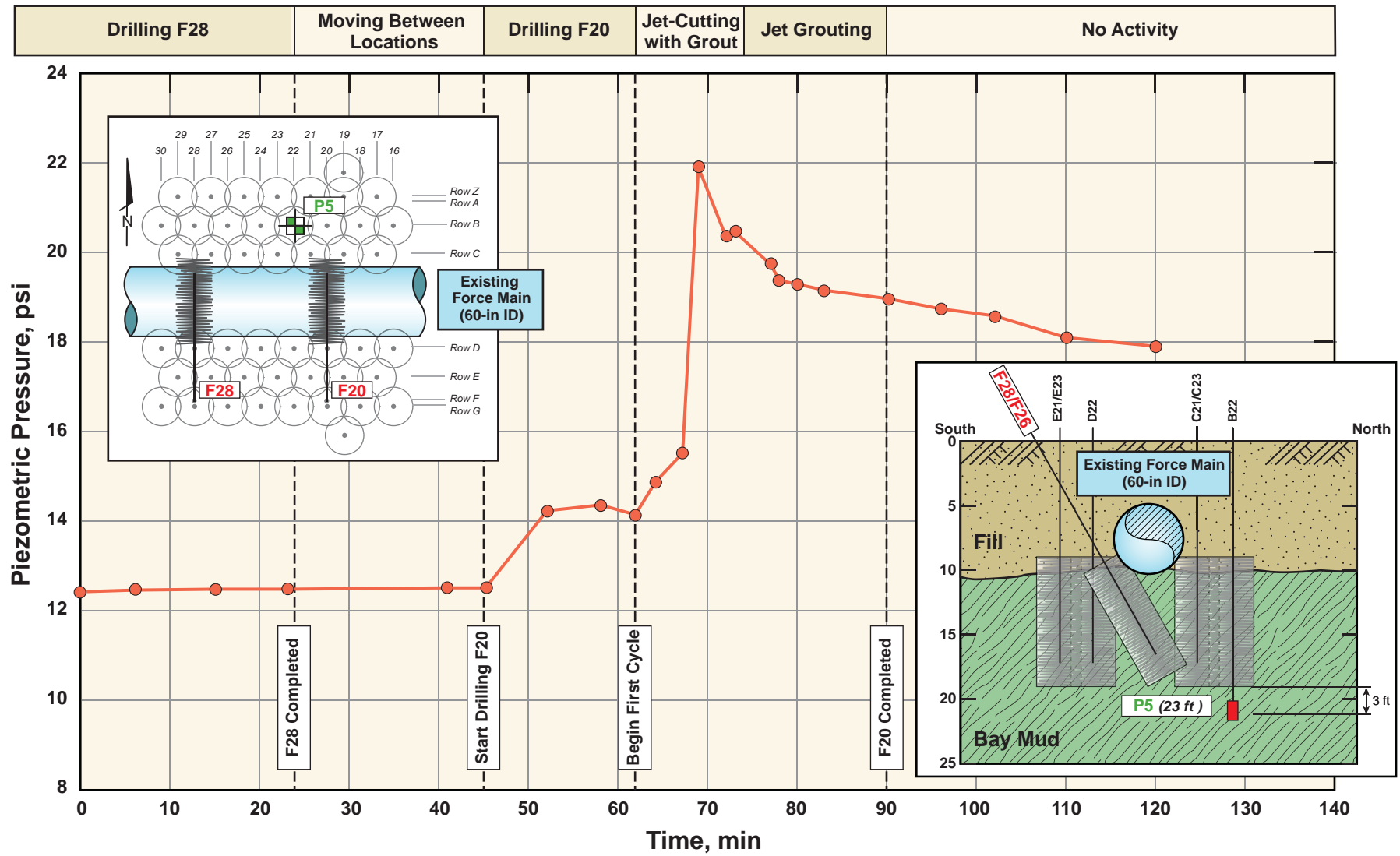
FIG_213D: Excess Pore Pressures Caused by Jet -Grouting: Effect of Single Column



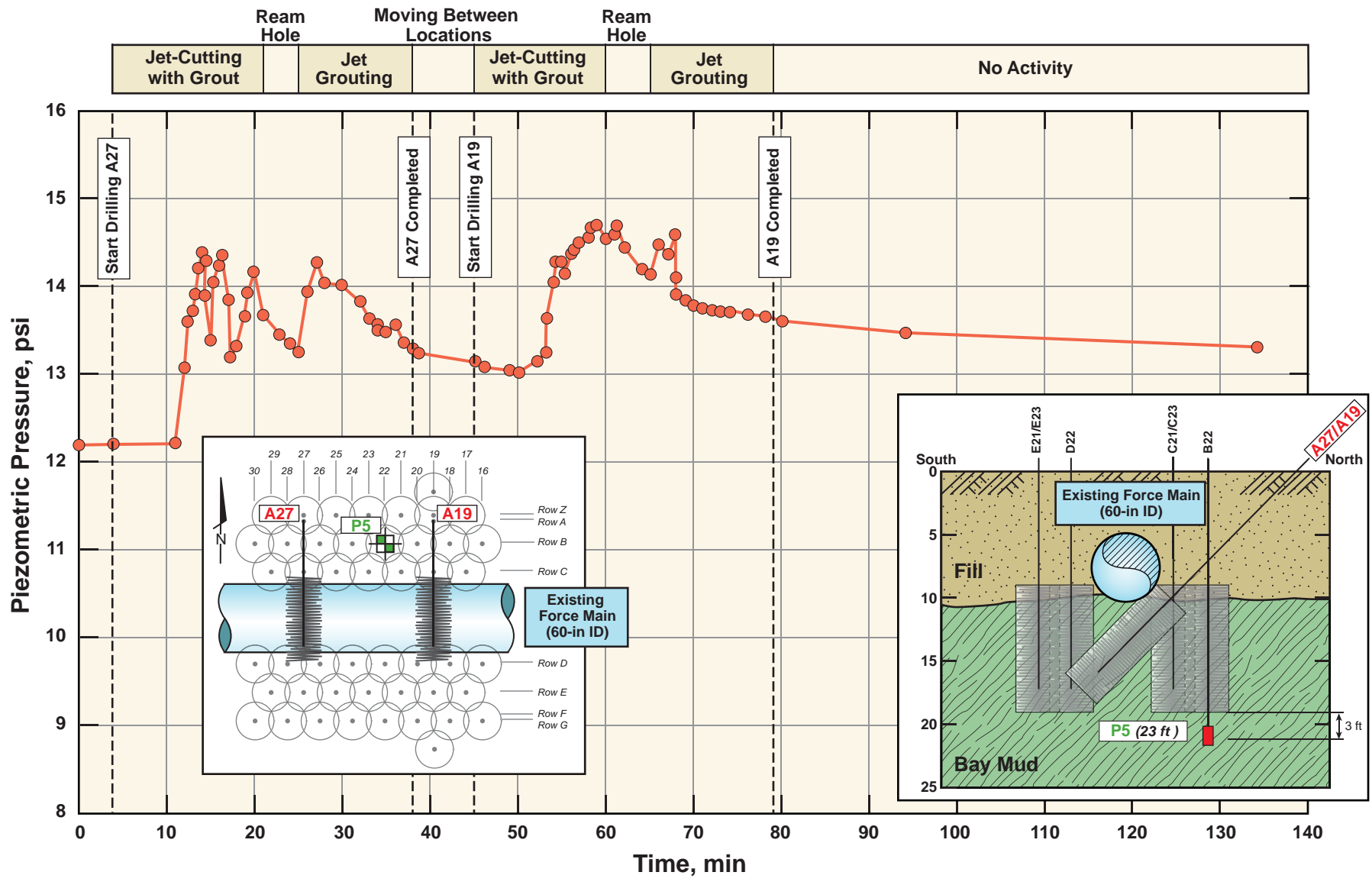
FIG_214: Jet-Grouting Test Section: Sequence of Installation



FIG_215: Subsurface Heave Caused by Jet-Grouting in Test Section: Effects of 12 Columns

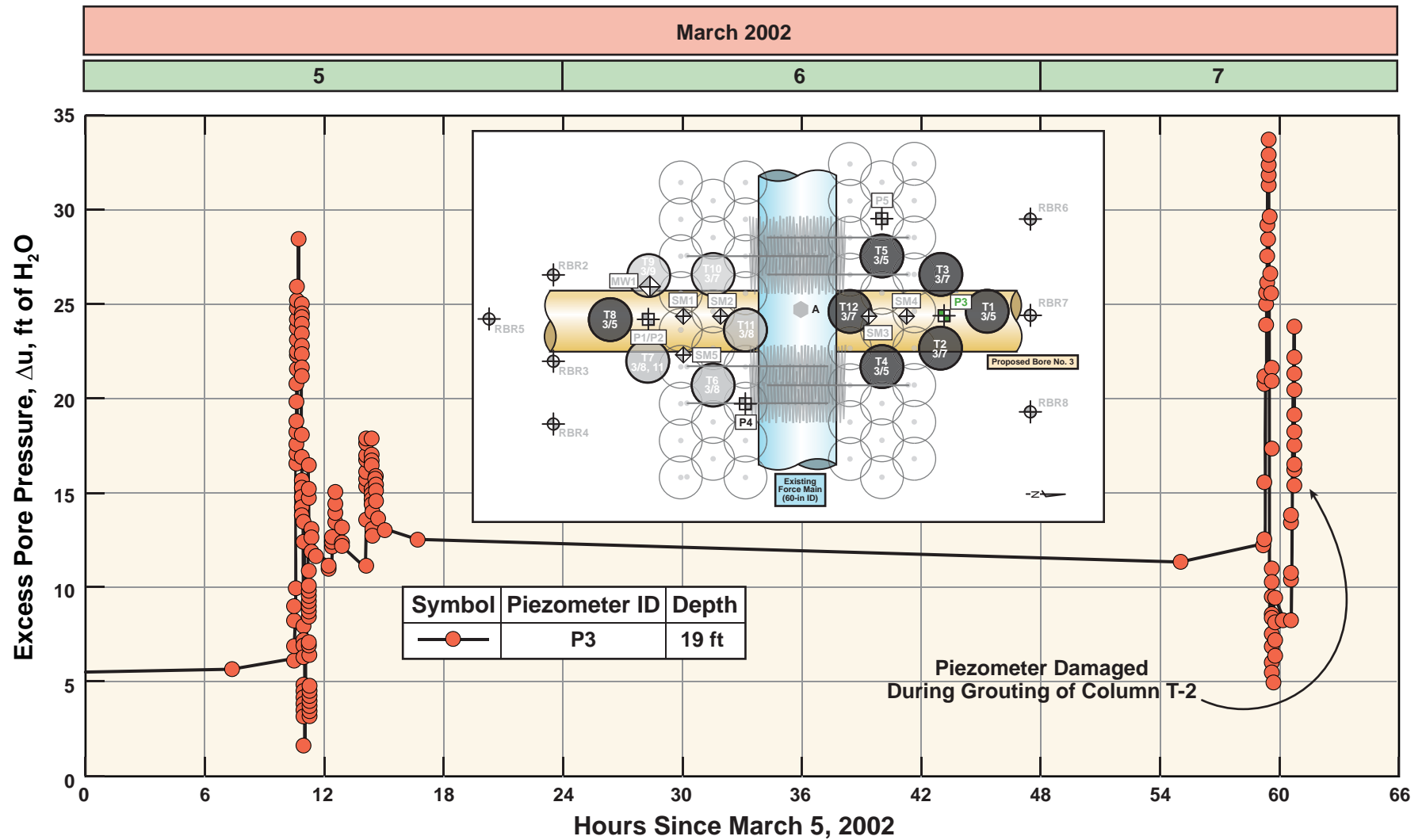


FIG_216: Excess Pore Pressures Caused by Jet -Grouting: Effect of Single Column

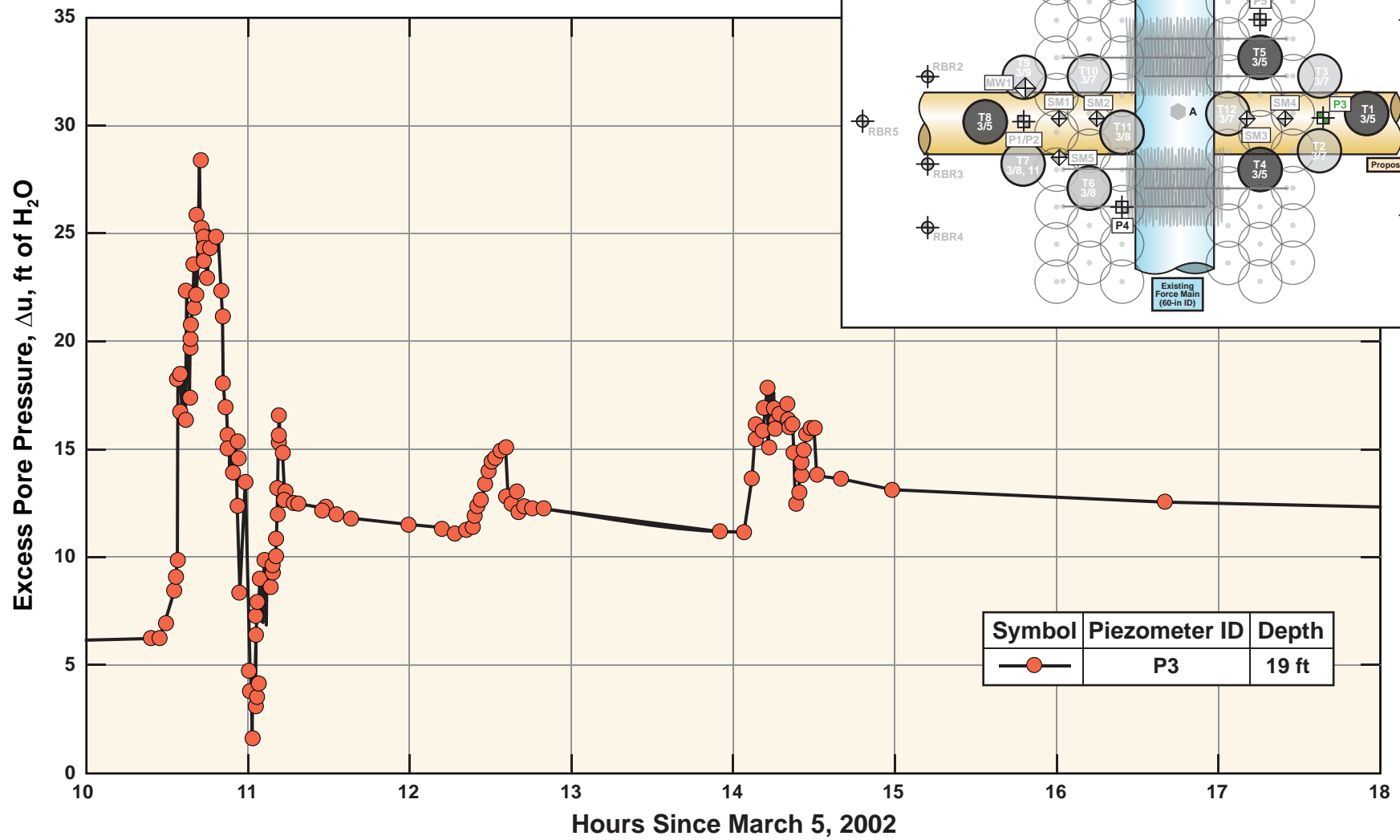


FIG_217: Excess Pore Pressures Caused by Jet-Grouting: Effects of Distant Columns

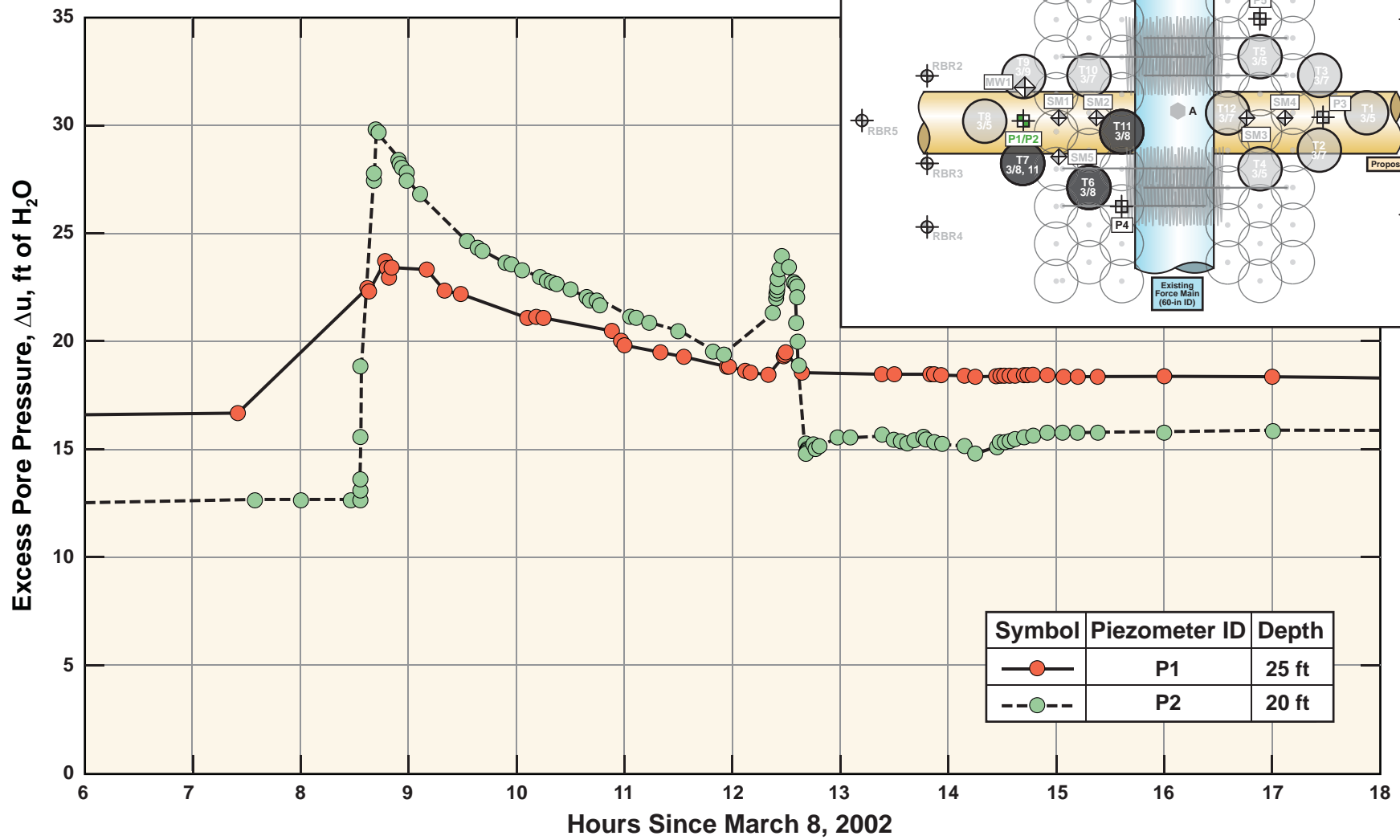
W:\Infrastructure\Geotech\UC Berkeley 2008\W:\Infrastructure\Geotech\UC Berkeley 2008 Seminar\Final Figures\10 JET GROUTING (206-224)\FIG_217



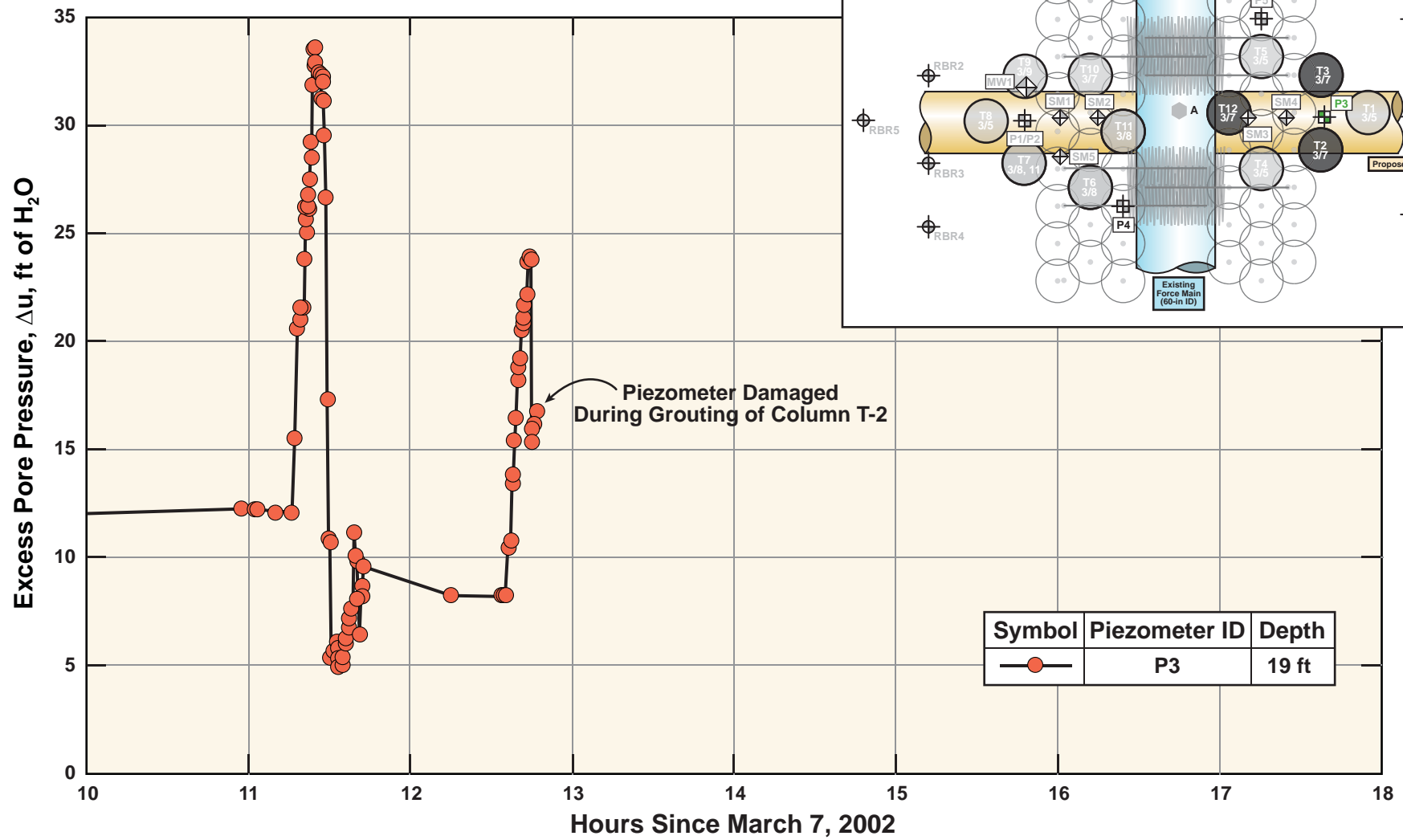
FIG_218: Excess Pore Pressures During Production Jet-Grouting



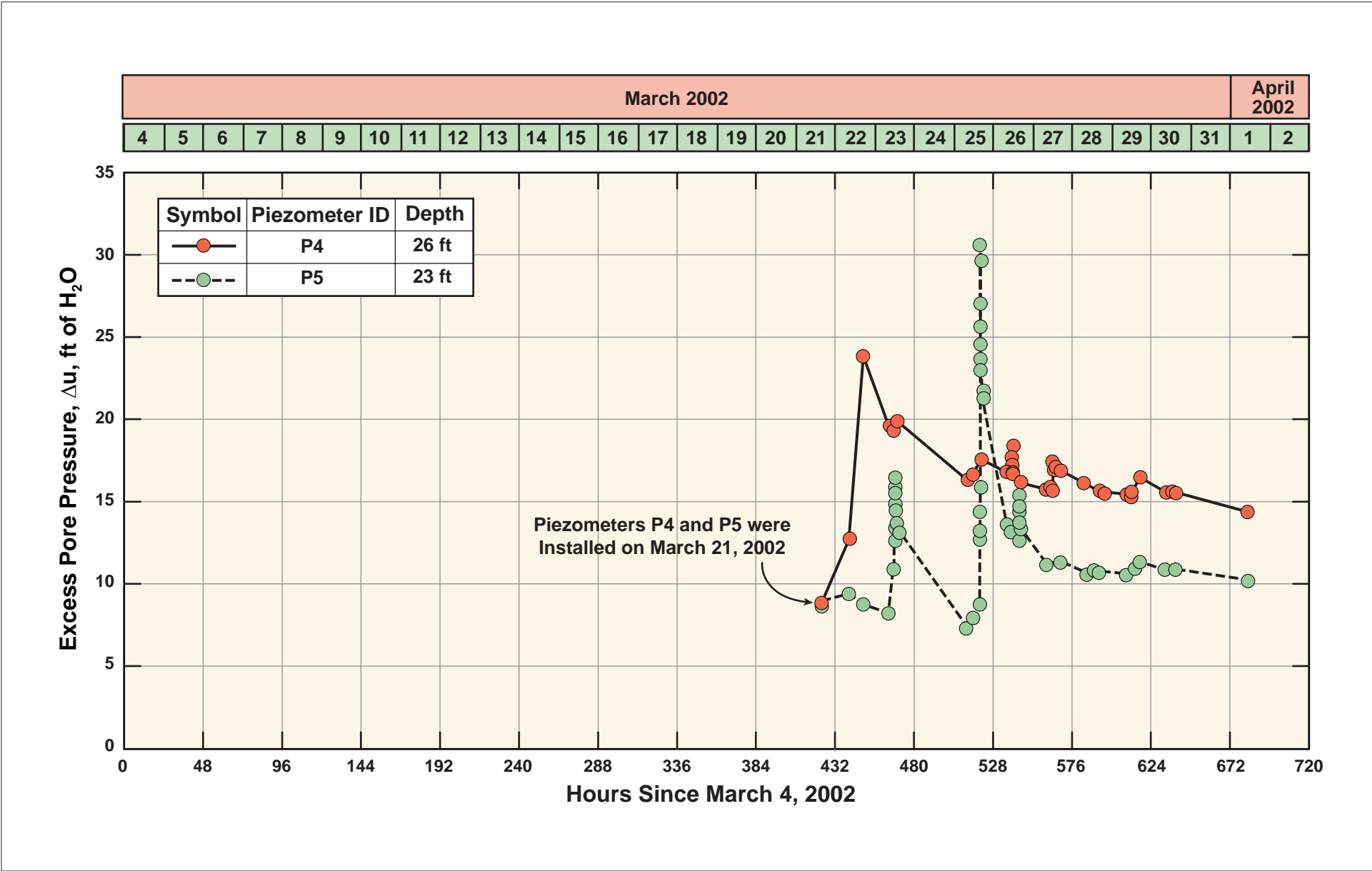
FIG_219: Excess Pore Pressures During Production Jet-Grouting



FIG_220: Excess Pore Pressures During Production Jet-Grouting

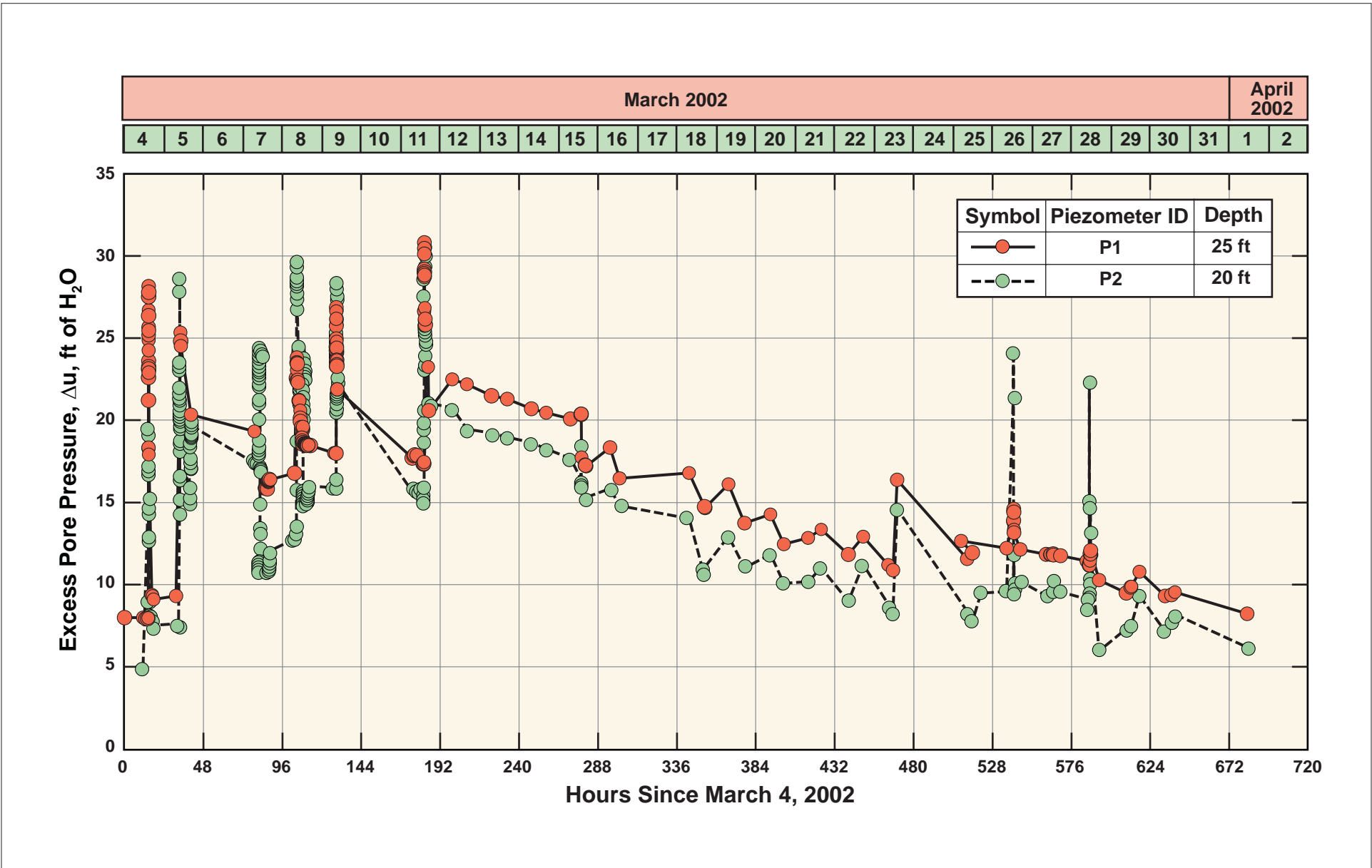


FIG_221: Excess Pore Pressure Head Versus Time



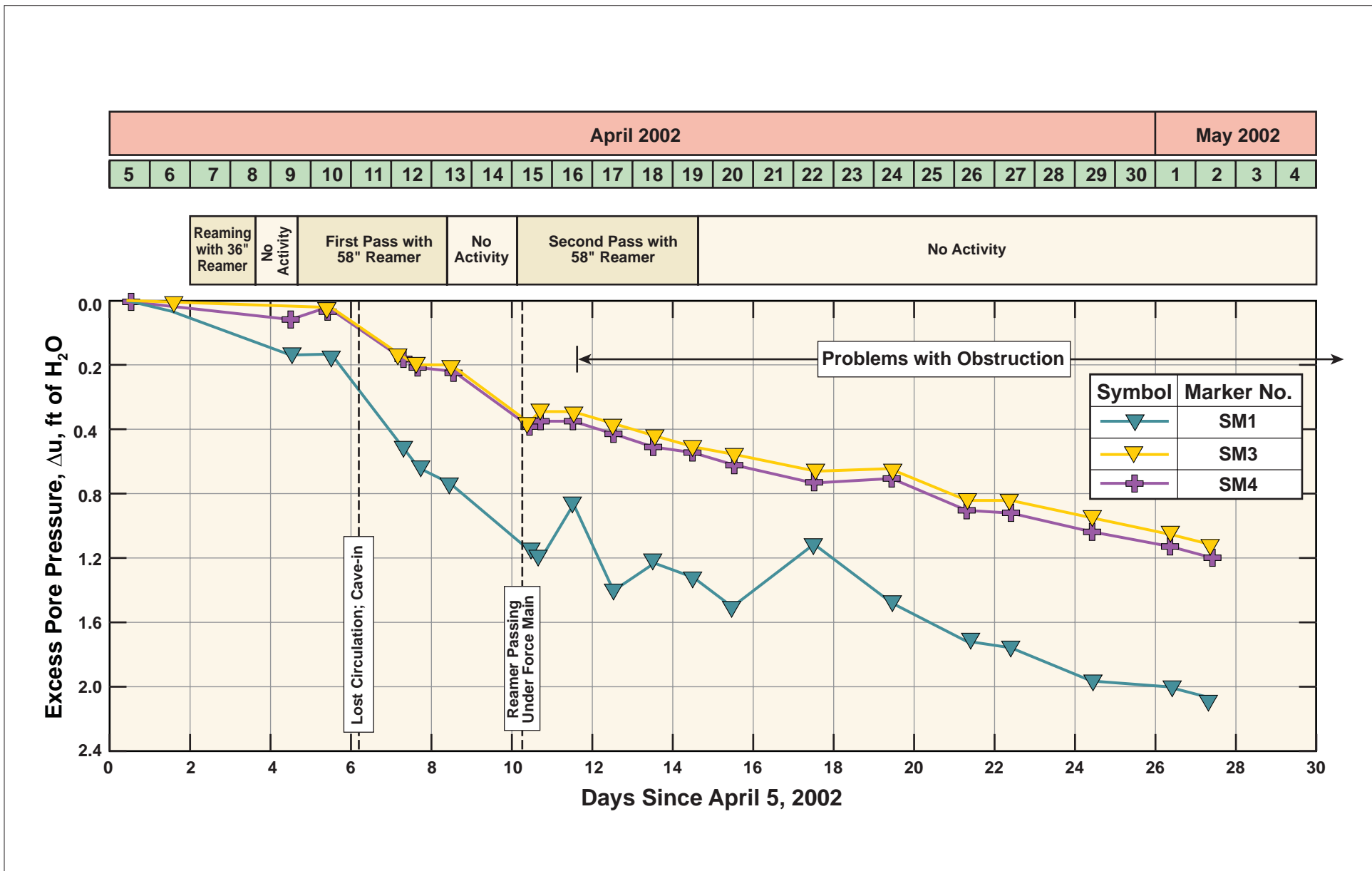
FIG_222: Excess Pore Pressures During Production Jet-Grouting

W:\Infrastructure\Geotech\UC Berkeley 2008 Seminar\Final Figures\10 JET GROUTING (206-224)\FIG_222

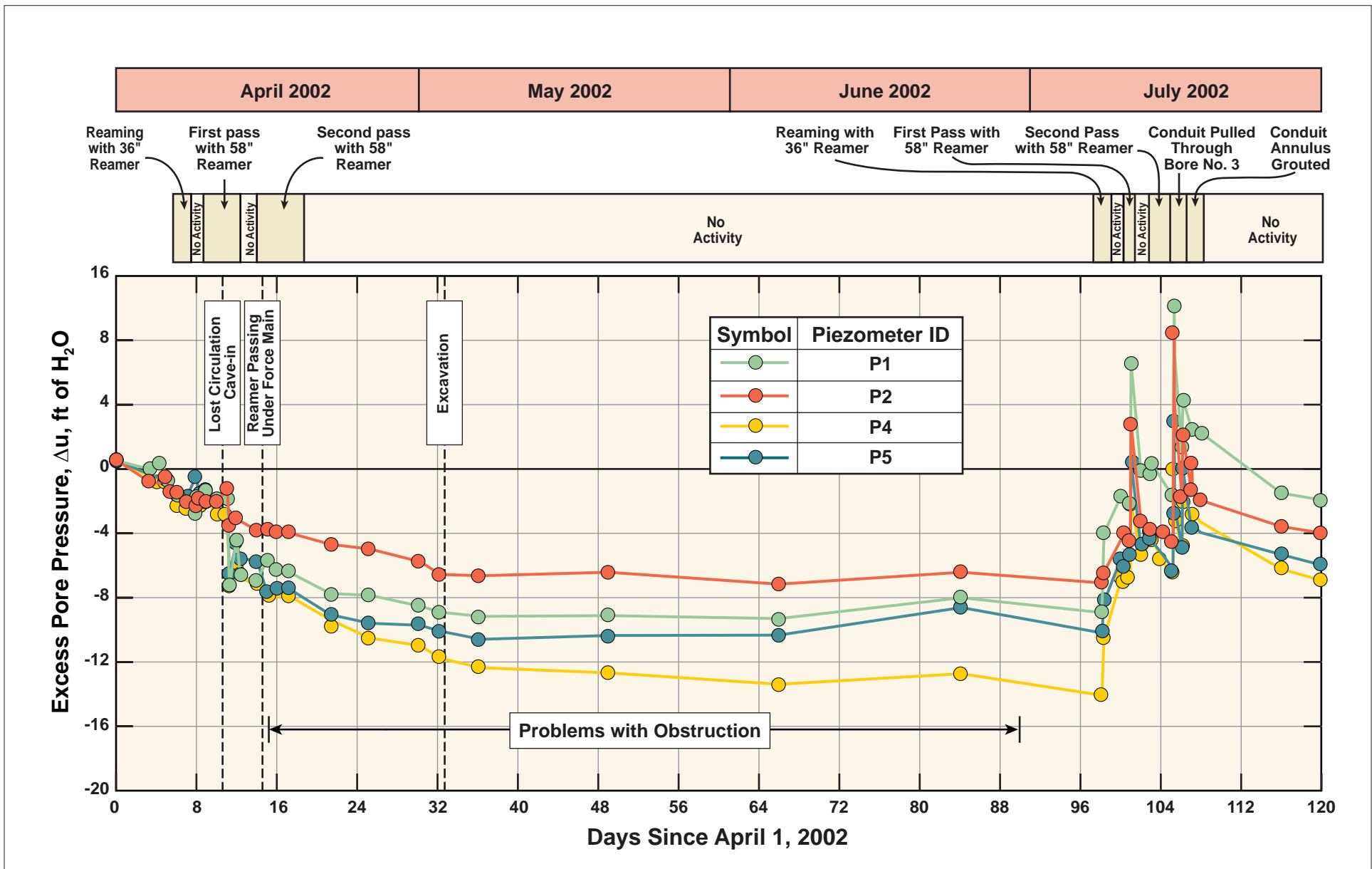


FIG_223: Cumulative Effects with Time: Production Jet-Grouting

W:\Infrastructure\Geotech\UC Berkeley 2008 Seminar\Final Figures\10 JET GROUTING (206-224)\FIG_223



FIG_224: Settlements During Directional Drilling



FIG_224A: TITLE



FIG_225: Directional Drilling Islais Creek Duct Banks/Force Main

W:\Infrastructure\Geotech\UC Berkeley 2008 Seminar\Final Figures\10 JET GROUTING (206-224)\FIG_224A



FIG_226: Jet Grouting: Islais Creek Force Main



FIG_227: Instrumentation Monitors Islais Creek Force Main

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