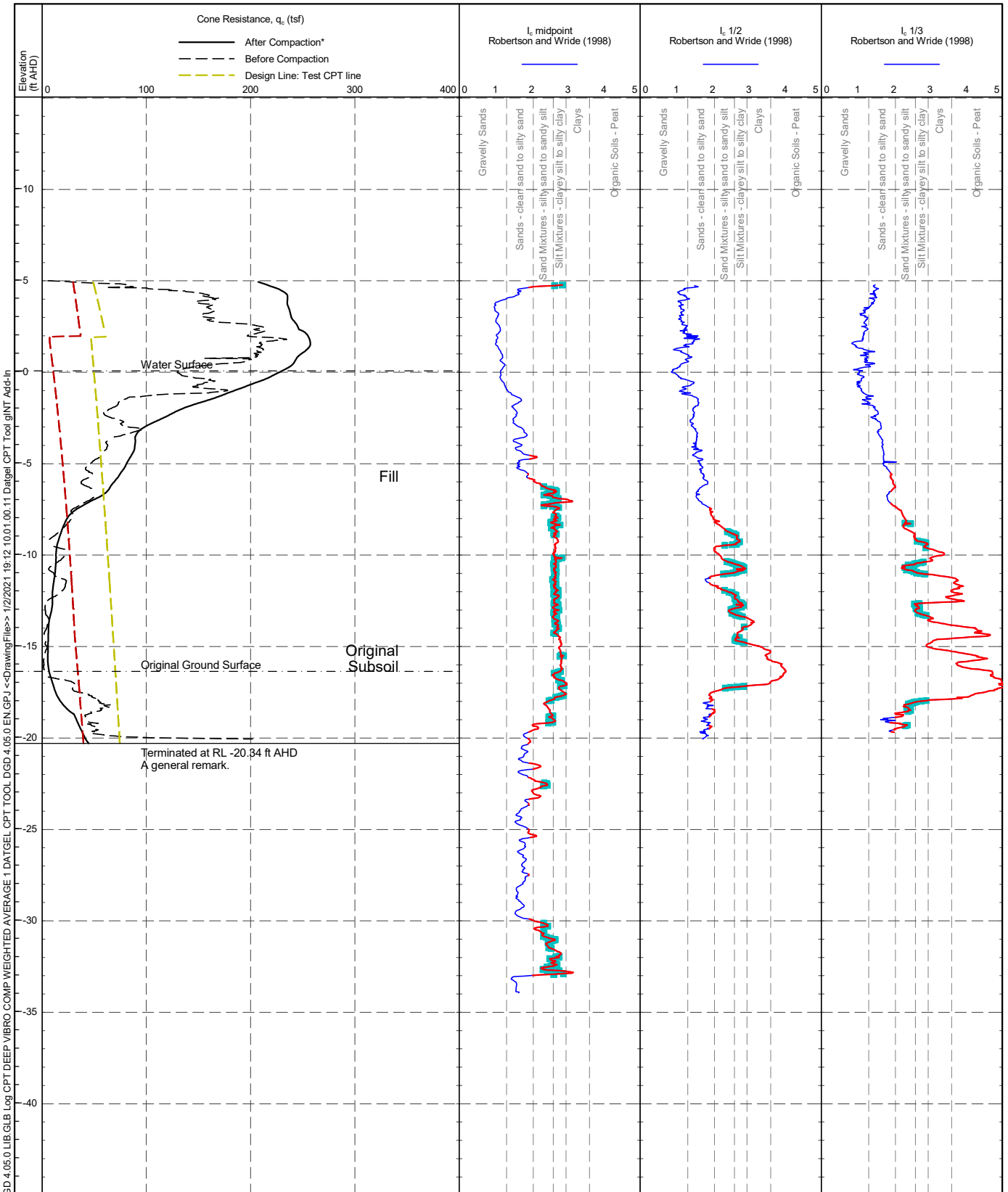


PointID  
**V-VibroCompaction**

CLIENT : Client 1	AREA : Place	SHEET : 1 OF 1
ENGINEER : Engineer 1	EASTING : 862689.0 ft	STATUS : 2
PROJECT : CPT Tool Project	NORTHING : 20558043.4 ft	DATE : 23/12/2009
LOCATION : Somewhere	COORD. SYS. : MGA2020 Zone 56	
PROJECT No. : 4.05.0	ELEVATION : 4.95 ft AHD	

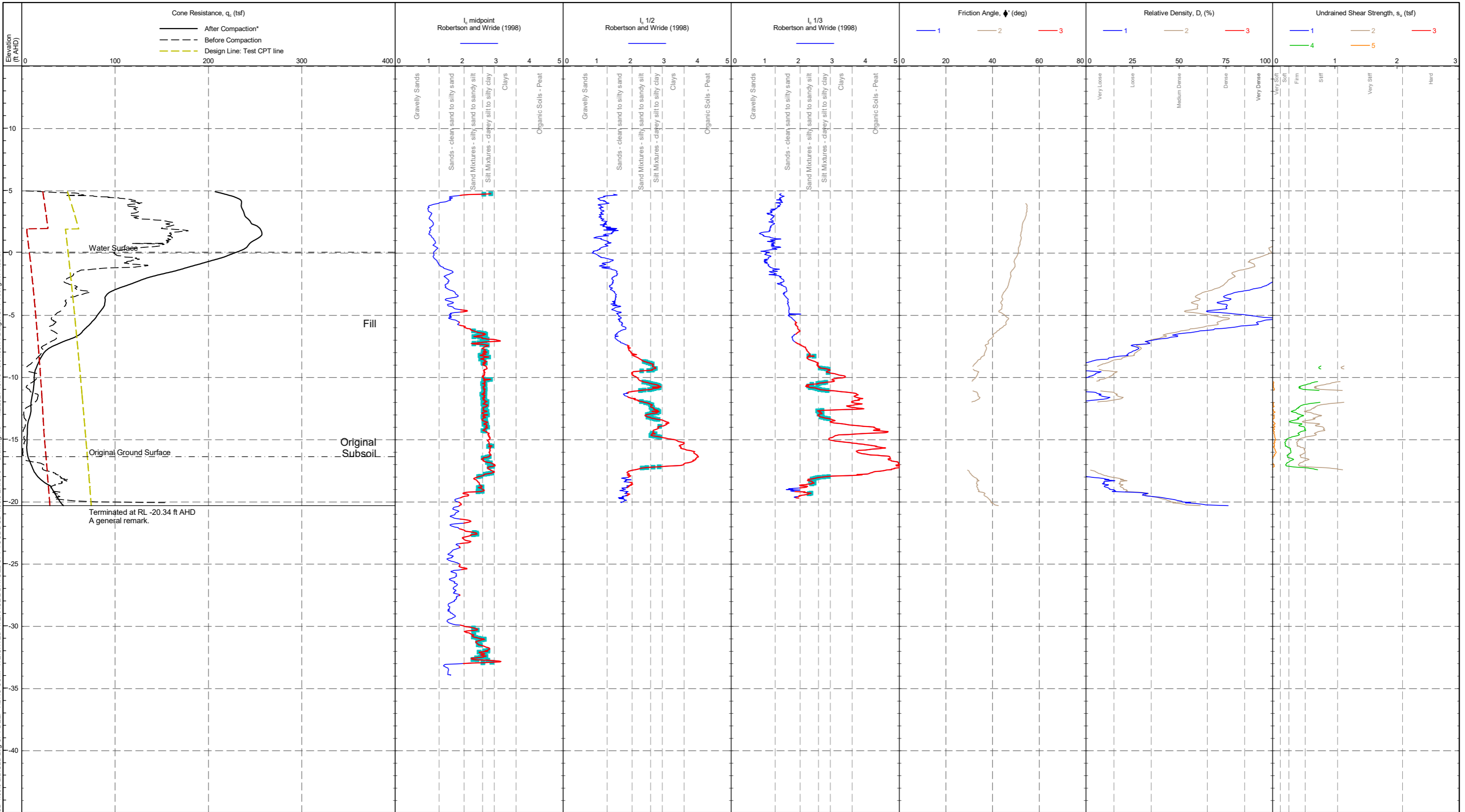


Locations	CPT Name	Ground Level (ft)	Northing (ft)	Easting (ft)	
CPT-Midpoint	CPT 05	4.95	20558043.44	862688.98	— $I_c > 1.9$
CPT-1/2	CPT 02	4.95	20557820.64	862403.48	■ Transition
CPT-1/3	CPT 04	3.94	20557961.75	862592.39	

\*Moving average of weighted average of 3 post compaction CPT's (Midpoint, 1/2 & 1/3)

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Log CPT DEEP VIBRO COMP WEIGHTED AVERAGE 1 DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <<DrawingFile>> 1/2/2021 19:12:10.01.00.11 Datgel CPT Tool gINT Add-In

CLIENT : Client 1	AREA : Place	RIG : Plant B	CHECKED BY : B. Smith	REMARK : A general remark.	SHEET : 1 OF 1
ENGINEER : Engineer 1	EASTING : 862689.0 ft	CONE TYPE :	CHECKED DATE : 6/2/2009		STATUS : 2
PROJECT : CPT Tool Project	NORTHING : 20558043.4 ft	CONE ID :	APPROVED BY : C. Doe		DATE : 23/12/2009
LOCATION : Somewhere	COORD. SYS. : MGA2020 Zone 56	OPERATOR : Operator A	APPROVED DATE : 6/2/2009		
PROJECT No. : 4.05.0	ELEVATION : 4.95 ft AHD				



DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <-DrawingFiles> 1/2/2021 19:13:10.01.00.11.Datgel CPT Tool gINT Add-In

Locations	CPT Name	Ground Level (ft)	Northing (ft)	Easting (ft)	
CPT-Midpoint	CPT 05	4.95	20558043.44	862688.98	<p><span style="color: red;">—</span> <math>I_c &gt; 1.9</math></p> <p><span style="color: blue;">■</span> Transition</p> <p>*Moving average of weighted average of 3 post compaction CPT's (Midpoint, 1/2 &amp; 1/3)</p>
CPT-1/2	CPT 02	4.95	20557820.64	862403.48	
CPT-1/3	CPT 04	3.94	20557961.75	862592.39	

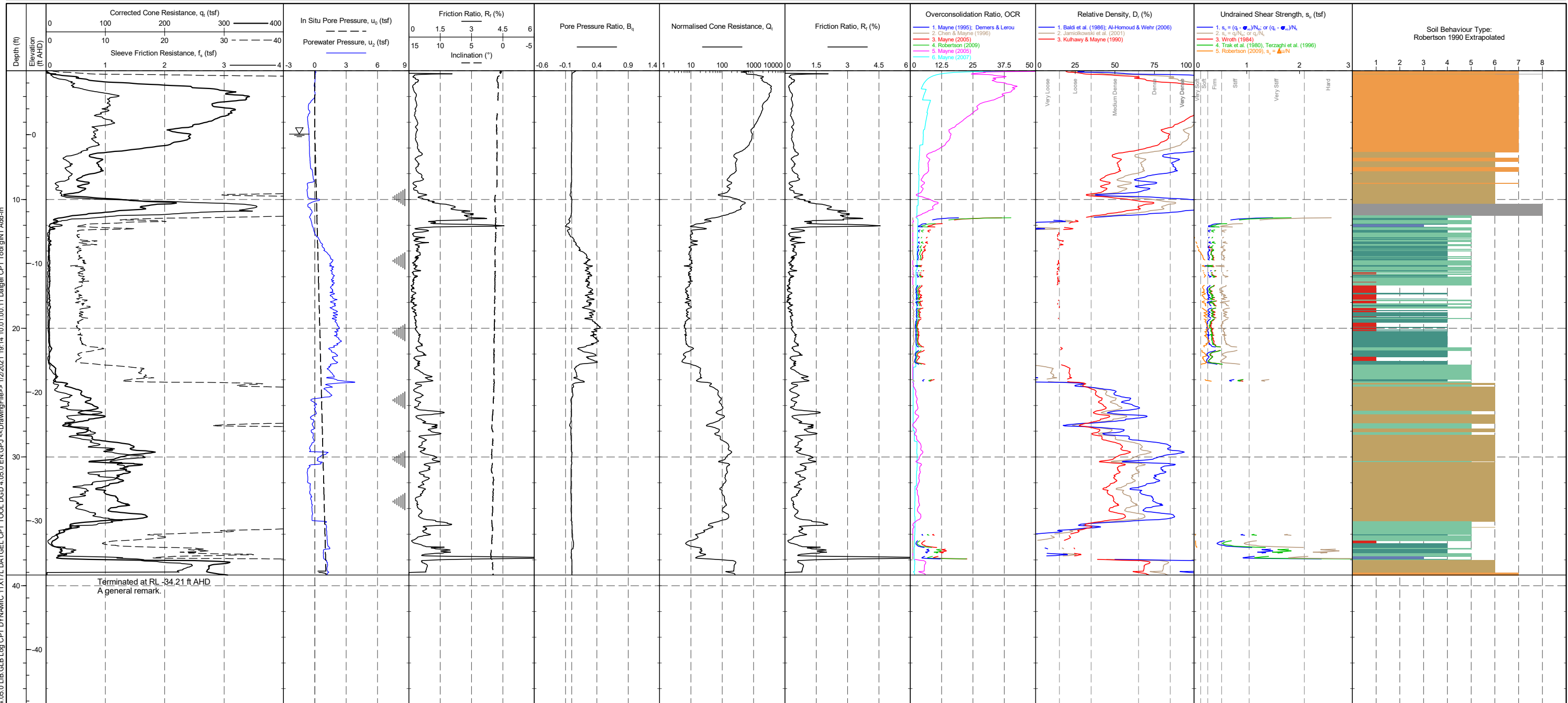
**Friction Angle Method:**  
 1. Senneker et al. (1988 & 1989); Mayne & Campanella (2005)  
 2. Robertson & Campanella (1983)  
 3. Kulhawy & Mayne (1990)

**Relative Density Method:**  
 1. Baldi et al. (1988), Al-Homoud & Wehr (2006)  
 2. Jamiolkowski et al. (2001)  
 3. Kulhawy & Mayne (1990)

**Undrained Shear Strength Method:**  
 1.  $s_u = (q_c - \sigma_{vm})/N_c$ , or  $(q_c - \sigma_{vm})/N_c$   
 2.  $s_u = q_c/N_c$ , or  $q_c/N_c$   
 3. Wroth (1984)  
 4. Trak et al. (1980), Terzaghi et al. (1996)  
 5. Robertson (2009),  $s_u = \Delta u/N$

PointID  
**CPT 05**

CLIENT : Client 1	AREA : Place	RIG : no anchoring	CHECKED BY : B. Smith	REMARK : A general remark.	SHEET : 1 OF 1
ENGINEER : Engineer 1	EASTING : 862689.0 ft	CONE TYPE : C+F+W2	CHECKED DATE : 6/2/2009		STATUS : 2
PROJECT : CPT Tool Project	NORTHING : 20558043.4 ft	CONE ID : S15CFIIP.D76	APPROVED BY : C. Doe		DATE : 23/12/2009
LOCATION : Somewhere	COORD. SYS. : MGA2020 Zone 56	OPERATOR : Operator A	APPROVED DATE : 6/2/2009		
PROJECT No. : 4.05.0	ELEVATION : 4.95 ft AHD				

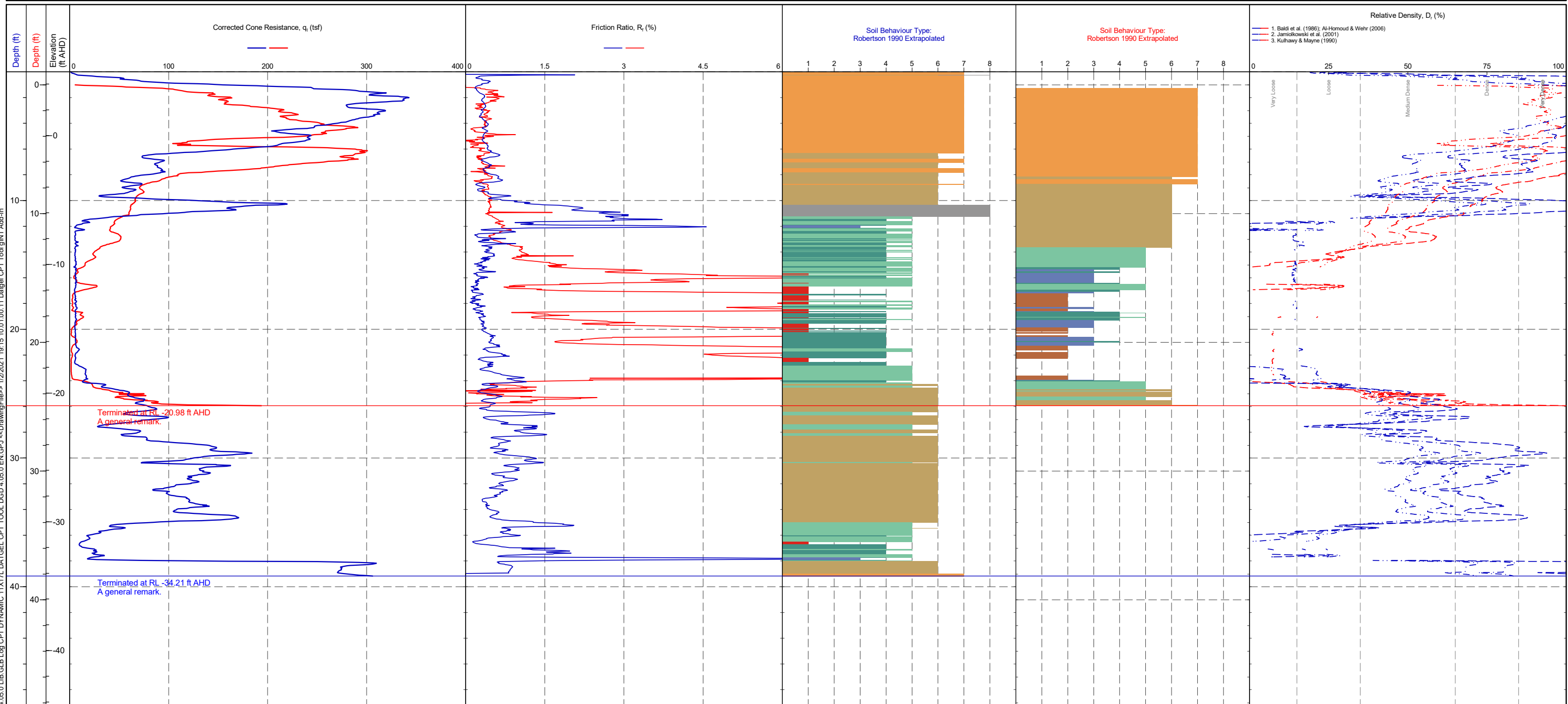


**METHOD: Robertson 1990**

<p>Overconsolidation Ratio Method:</p> <ul style="list-style-type: none"> <li>1. Mayne (1995); Demers &amp; Lerouil (2002)</li> <li>2. Chen &amp; Mayne (1996)</li> <li>3. Mayne (2005)</li> <li>4. Robertson (2009)</li> <li>5. Mayne (2005)</li> <li>6. Mayne (2007)</li> </ul>	<p>Undrained Shear Strength Method:</p> <ul style="list-style-type: none"> <li>1. <math>s_u = (q_c - \sigma_{vc})/N_c</math>; or <math>(q_c - \sigma_{vc})/N_c</math></li> <li>2. <math>s_u = q_c/N_c</math>; or <math>q_c/N_c</math></li> <li>3. Wroth (1984)</li> <li>4. Trak et al. (1980), Terzaghi et al. (1996)</li> <li>5. Robertson (2009), <math>s_u = \Delta u/N</math></li> <li>6. Mayne (2007)</li> </ul>	<p>Relative Density Method:</p> <ul style="list-style-type: none"> <li>1. Baldi et al. (1986); Al-Homoud &amp; Wehr (2006)</li> <li>2. Jamiolkowski et al. (2001)</li> <li>3. Kulhawy &amp; Mayne (1990)</li> </ul>	<ul style="list-style-type: none"> <li>1 - Sensitive, fine grained</li> <li>2 - Organic soil - peats</li> <li>3 - Clays - CLAY to silty CLAY</li> <li>4 - SILT mixtures - clayey SILT to silty CLAY</li> <li>5 - SAND mixtures - silty SAND to sandy SILT</li> <li>6 - Sands - clean SAND to silty SAND</li> <li>7 - Gravelly SAND to SAND</li> <li>8 - Very stiff SAND to clayey SAND</li> <li>9 - Very stiff fine grained</li> </ul>
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Dissipation Test

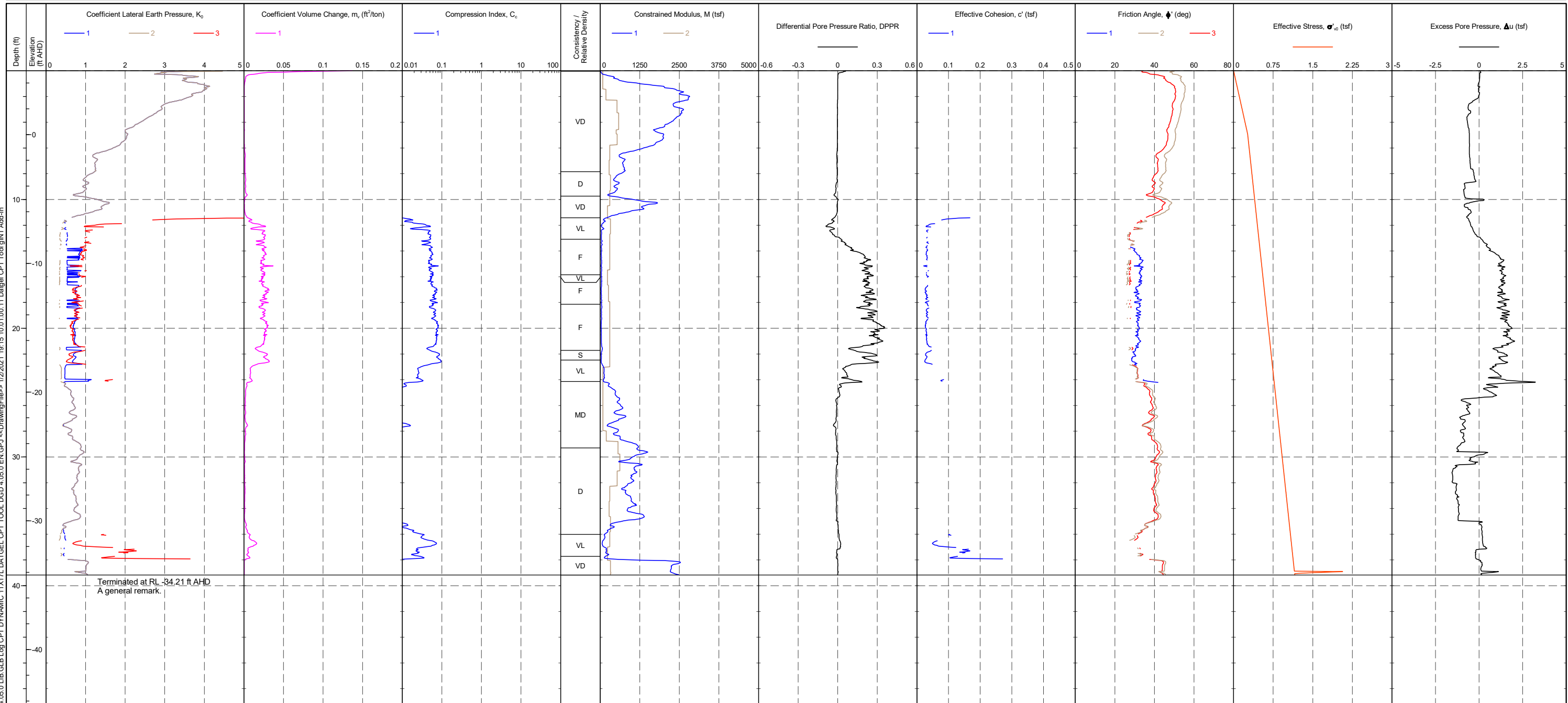
CLIENT : Client 1 ENGINEER : Engineer 1 PROJECT : CPT Tool Project LOCATION : Somewhere PROJECT No. : 4.05.0	RIG : no anchoring CONE TYPE : C+F+W2 CONE ID : S15CFIIP.D76 OPERATOR : Operator A CHECKED BY : B. Smith CHECKED DATE : 6/2/2009 APPROVED BY : C. Doe APPROVED DATE : 6/2/2009	RIG : Crawler 1 no anchoring CONE TYPE : C+F+W2 CONE ID : S15CFIIP.D76 OPERATOR : Operator A CHECKED BY : B. Smith CHECKED DATE : 6/2/2009 APPROVED BY : C. Doe APPROVED DATE : 6/2/2009	REMARK A general remark.  A general remark.	PointID 1 <b>CPT 05</b> STATUS : 2 DATE : 23/12/2009 AREA : Place LAYER : EASTING : 862689.0 ft NORTHING : 20558043.4 ft ELEVATION : 4.95 ft AHD	PointID 2 <b>CPT 04</b> STATUS : DATE : 12/11/2008 AREA : Place LAYER : EASTING : 862592.4 ft NORTHING : 20557961.7 ft ELEVATION : 3.94 ft AHD
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DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Log CPT DYNAMIC 11X17L DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <-DrawingFile> 1/2/2021 19:15:10.01.00.11 Datgel CPT Tool.gINT Add-in

PointID  
**CPT 05**

CLIENT : Client 1	AREA : Place	RIG : no anchoring	CHECKED BY : B. Smith	REMARK : A general remark.	SHEET : 1 OF 1
ENGINEER : Engineer 1	EASTING : 862689.0 ft	CONE TYPE : C+F+W2	CHECKED DATE : 6/2/2009		STATUS : 2
PROJECT : CPT Tool Project	NORTHING : 20558043.4 ft	CONE ID : S15CFIIP.D76	APPROVED BY : C. Doe		DATE : 23/12/2009
LOCATION : Somewhere	COORD. SYS. : MGA2020 Zone 56	OPERATOR : Operator A	APPROVED DATE : 6/2/2009		
PROJECT No. : 4.05.0	ELEVATION : 4.95 ft AHD				



DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Log CPT DYNAMIC 11X17L DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <-DrawingFile> 1/2/2021 19:15:10.01.00.11 Datgel CPT Tool.gINT Add-in

**Coefficient Lateral Earth Pressure Method:**  
 1. Mayne (2007)  
 2. Mayne (2007)  
 3. Kulhawy & Mayne (1990)

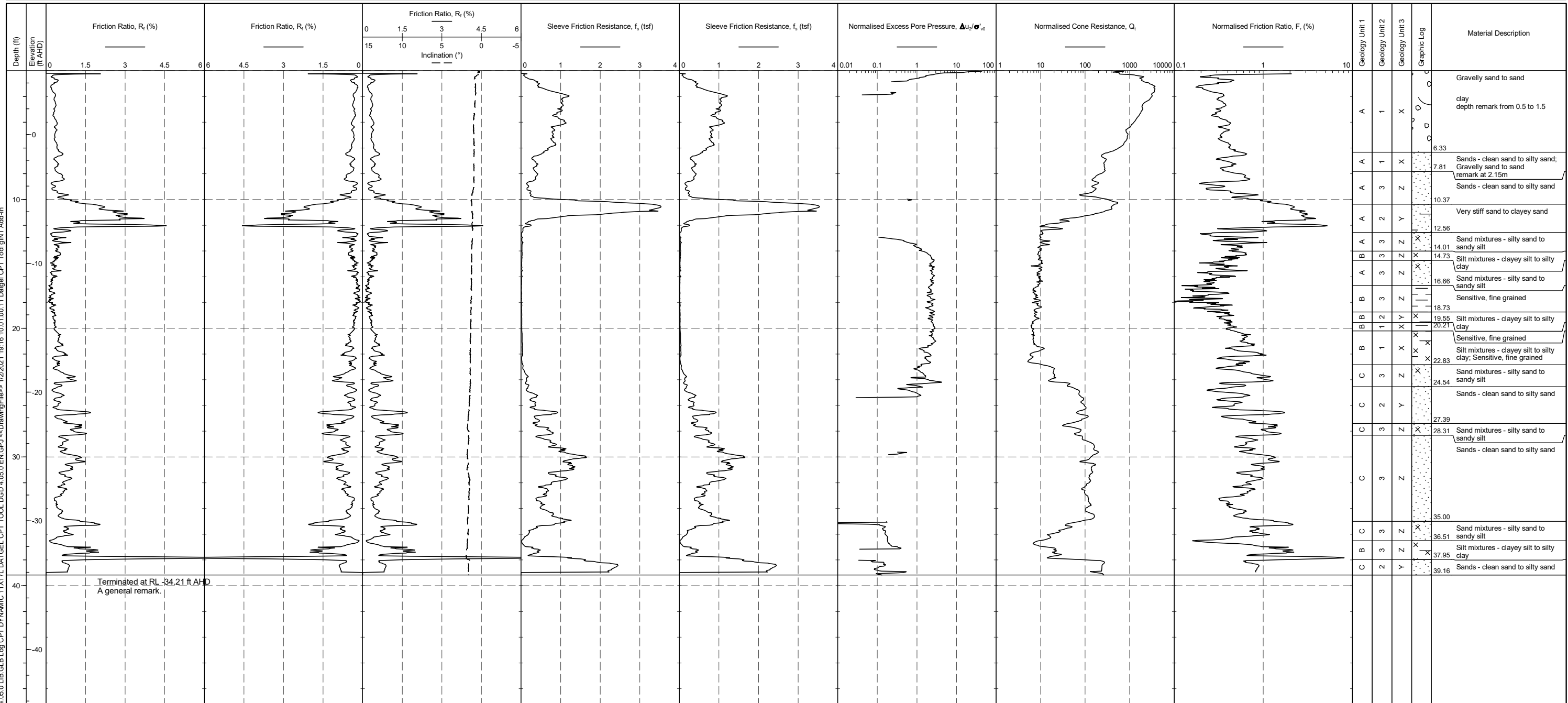
**Constrained Modulus Method:**  
 1. Kulhawy & Mayne (1990)  
 2. Burns & Mayne (2002)

Specification Requirement: Mean Rel density in depth range 0 to 4 m, and if the value is  $\geq 70\%$  / Mean Rel density in depth range 0 to min of HoleDepth and DepthToNaturalGround, and if the value is  $\geq 77\%$   
 Overall: Fail  
 Details: 1: P; 2: F; 3: F; 4: F

Dissipation Test

PointID  
**CPT 05**

CLIENT : Client 1	AREA : Place	RIG : no anchoring	CHECKED BY : B. Smith	REMARK : A general remark.	SHEET : 1 OF 1
ENGINEER : Engineer 1	EASTING : 862689.0 ft	CONE TYPE : C+F+W2	CHECKED DATE : 6/2/2009		STATUS : 2
PROJECT : CPT Tool Project	NORTHING : 20558043.4 ft	CONE ID : S15CFIIP.D76	APPROVED BY : C. Doe		DATE : 23/12/2009
LOCATION : Somewhere	COORD. SYS. : MGA2020 Zone 56	OPERATOR : Operator A	APPROVED DATE : 6/2/2009		
PROJECT No. : 4.05.0	ELEVATION : 4.95 ft AHD				



Terminated at RL -34.21 ft AHD  
A general remark.

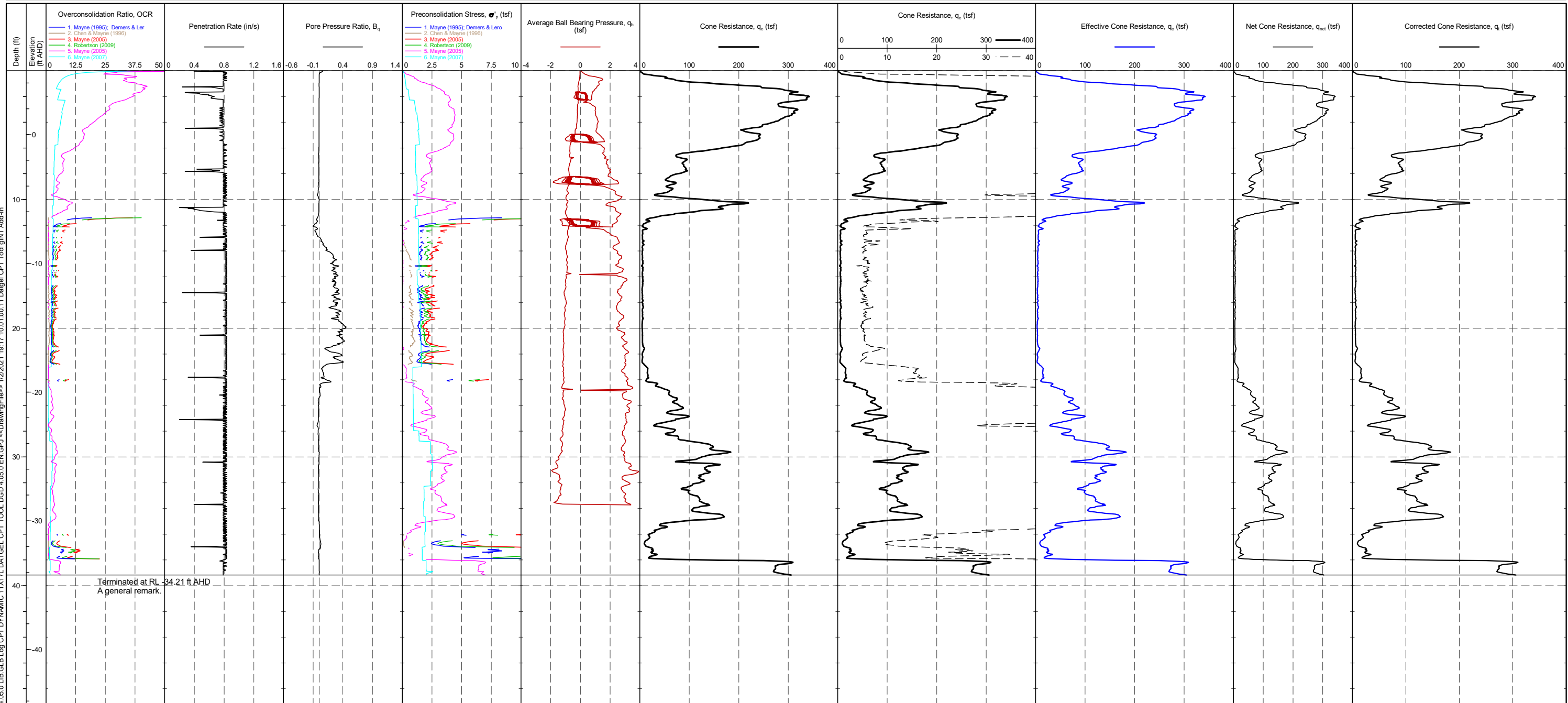


Specification Requirement: Mean Rel density in depth range 0 to 4 m, and if the value is  $\geq 70\%$  / Mean Rel density in depth range 0 to min of HoleDepth and DepthToNaturalGround, and if the value is  $\geq 77\%$   
Overall: Fail  
Details: 1: P; 2: F; 3: F; 4: F

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Log CPT DYNAMIC 11X17L DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <-DrawingFile> 1/2/2021 19:16:10 01.00.11 Datgel CPT Tool.gINT Add-in

PointID  
**CPT 05**

CLIENT : Client 1	AREA : Place	RIG : no anchoring	CHECKED BY : B. Smith	REMARK : A general remark.	SHEET : 1 OF 1
ENGINEER : Engineer 1	EASTING : 862689.0 ft	CONE TYPE : C-F+W2	CHECKED DATE : 6/2/2009		STATUS : 2
PROJECT : CPT Tool Project	NORTHING : 20558043.4 ft	CONE ID : S15CFIIP.D76	APPROVED BY : C. Doe		DATE : 23/12/2009
LOCATION : Somewhere	COORD. SYS. : MGA2020 Zone 56	OPERATOR : Operator A	APPROVED DATE : 6/2/2009		
PROJECT No. : 4.05.0	ELEVATION : 4.95 ft AHD				



DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Log CPT DYNAMIC 11X17L DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <-DrawingFile> 1/2/2021 19:17:10.01.00.11 Datgel CPT Tool.gINT Add.in

Overconsolidation Ratio Method:  
 1. Mayne (1995); Demers & Leroueil (2002)  
 2. Chen & Mayne (1996)  
 3. Mayne (2005)  
 4. Robertson (2009)  
 5. Mayne (2005)  
 6. Mayne (2007)

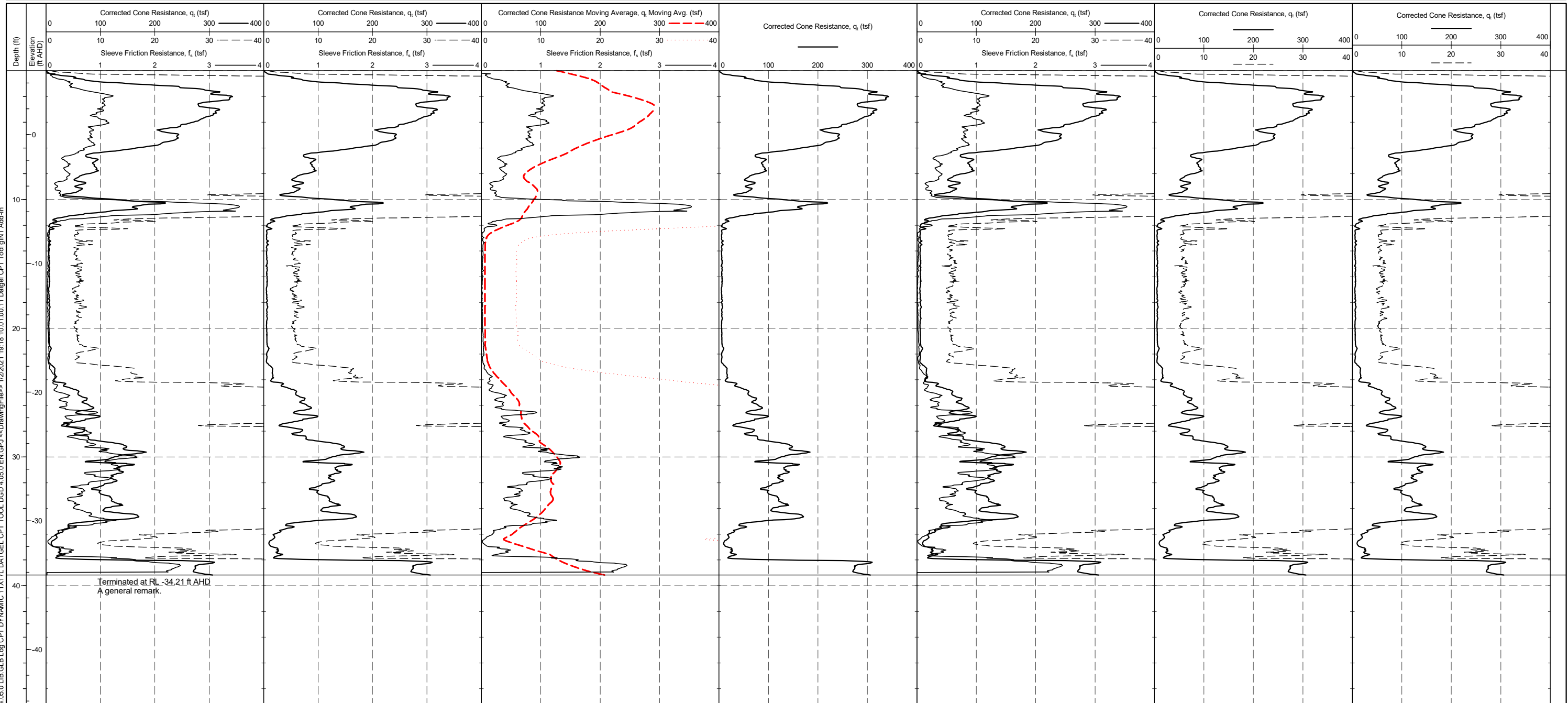
Preconsolidation Stress Method:  
 1. Mayne (1995); Demers & Leroueil (2002)  
 2. Chen & Mayne (1996)  
 3. Mayne (2005)  
 4. Robertson (2009)  
 5. Mayne (2005)  
 6. Mayne (2007)

Specification Requirement: Mean Rel density in depth range 0 to 4 m, and if the value is  $\geq 70\%$  / Mean Rel density in depth range 0 to min of HoleDepth and DepthToNaturalGround, and if the value is  $\geq 77\%$   
 Overall: Fail  
 Details: 1: P; 2: F; 3: F; 4: F

Dissipation Test

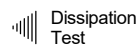
PointID  
**CPT 05**

CLIENT : Client 1	AREA : Place	RIG : no anchoring	CHECKED BY : B. Smith	REMARK : A general remark.	SHEET : 1 OF 1
ENGINEER : Engineer 1	EASTING : 862689.0 ft	CONE TYPE : C+F+W2	CHECKED DATE : 6/2/2009		STATUS : 2
PROJECT : CPT Tool Project	NORTHING : 20558043.4 ft	CONE ID : S15CFIIP.D76	APPROVED BY : C. Doe		DATE : 23/12/2009
LOCATION : Somewhere	COORD. SYS. : MGA2020 Zone 56	OPERATOR : Operator A	APPROVED DATE : 6/2/2009		
PROJECT No. : 4.05.0	ELEVATION : 4.95 ft AHD				



Specification Requirement: Mean Rel density in depth range 0 to 4 m, and if the value is  $\geq 70\%$  / Mean Rel density in depth range 0 to min of HoleDepth and DepthToNaturalGround, and if the value is  $\geq 77\%$   
 Overall: Fail  
 Details: 1: P; 2: F; 3: F; 4: F

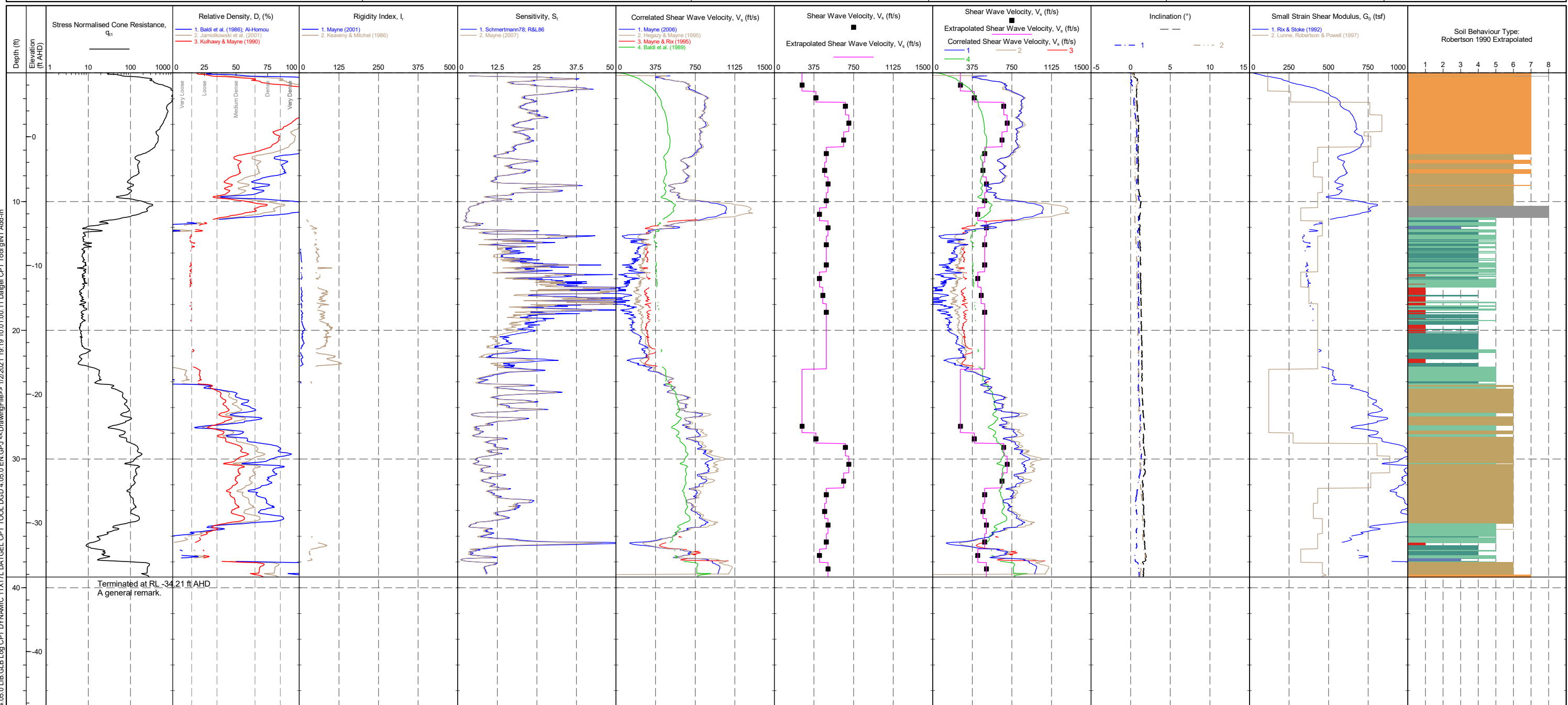
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PointID  
**CPT 05**

CLIENT : Client 1	AREA : Place	RIG : no anchoring	CHECKED BY : B. Smith	REMARK : A general remark.	SHEET : 1 OF 1
ENGINEER : Engineer 1	EASTING : 862689.0 ft	CONE TYPE : C-F+W2	CHECKED DATE : 6/2/2009		STATUS : 2
PROJECT : CPT Tool Project	NORTHING : 20558043.4 ft	CONE ID : S15CFIIP.D76	APPROVED BY : C. Doe		DATE : 23/12/2009
LOCATION : Somewhere	COORD. SYS. : MGA2020 Zone 56	OPERATOR : Operator A	APPROVED DATE : 6/2/2009		
PROJECT No. : 4.05.0	ELEVATION : 4.95 ft AHD				



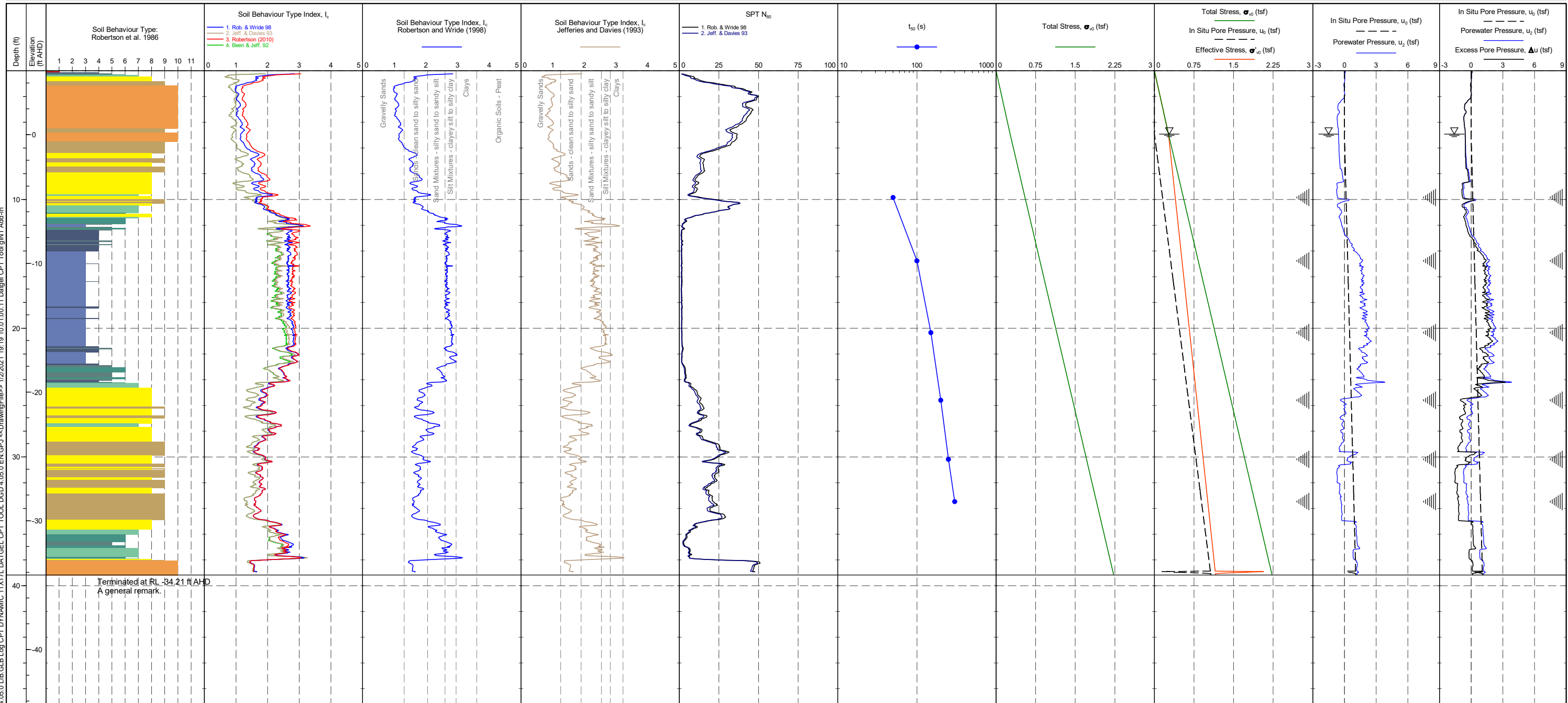
<p>Relative Density Method:</p> <ul style="list-style-type: none"> <li>1. Baldi et al. (1986); Al-Homou &amp; Wehr (2006)</li> <li>2. Jamiolkowski et al. (2001)</li> <li>3. Kulhawy &amp; Mayne (1990)</li> </ul>	<p>Rigidity Index Method:</p> <ul style="list-style-type: none"> <li>1. Mayne (2001)</li> <li>2. Keaveny &amp; Mitchel (1986)</li> </ul>	<p>Sensitivity Method:</p> <ul style="list-style-type: none"> <li>1. Schmertmann78; R&amp;L86</li> <li>2. Mayne (2007)</li> </ul>	<p>METHOD: Robertson 1990</p> <ul style="list-style-type: none"> <li>1 - Sensitive, fine grained</li> <li>2 - Organic soil - peats</li> <li>3 - Clays - CLAY to silty CLAY</li> <li>4 - SILT mixtures - clayey SILT to silty CLAY</li> <li>5 - SAND mixtures - silty SAND to sandy SILT</li> <li>6 - Sands - clean SAND to silty SAND</li> <li>7 - Gravelly SAND to SAND</li> <li>8 - Very stiff SAND to clayey SAND</li> <li>9 - Very stiff fine grained</li> </ul>
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Dissipation Test

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Log CPT DYNAMIC 11X17L DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <-DrawingFile> 1/2/2021 19:19:10.01.00.11 Datgel CPT Tool.gINT Add-in

PointID  
**CPT 05**

CLIENT : Client 1	AREA : Place	RIG : no anchoring	CHECKED BY : B. Smith	REMARK : A general remark.	SHEET : 1 OF 1
ENGINEER : Engineer 1	EASTING : 862689.0 ft	CONE TYPE : C+F+W2	CHECKED DATE : 6/2/2009		STATUS : 2
PROJECT : CPT Tool Project	NORTHING : 20558043.4 ft	CONE ID : S15CFIIP.D76	APPROVED BY : C. Doe		DATE : 23/12/2009
LOCATION : Somewhere	COORD. SYS. : MGA2020 Zone 56	OPERATOR : Operator A	APPROVED DATE : 6/2/2009		
PROJECT No. : 4.05.0	ELEVATION : 4.95 ft AHD				



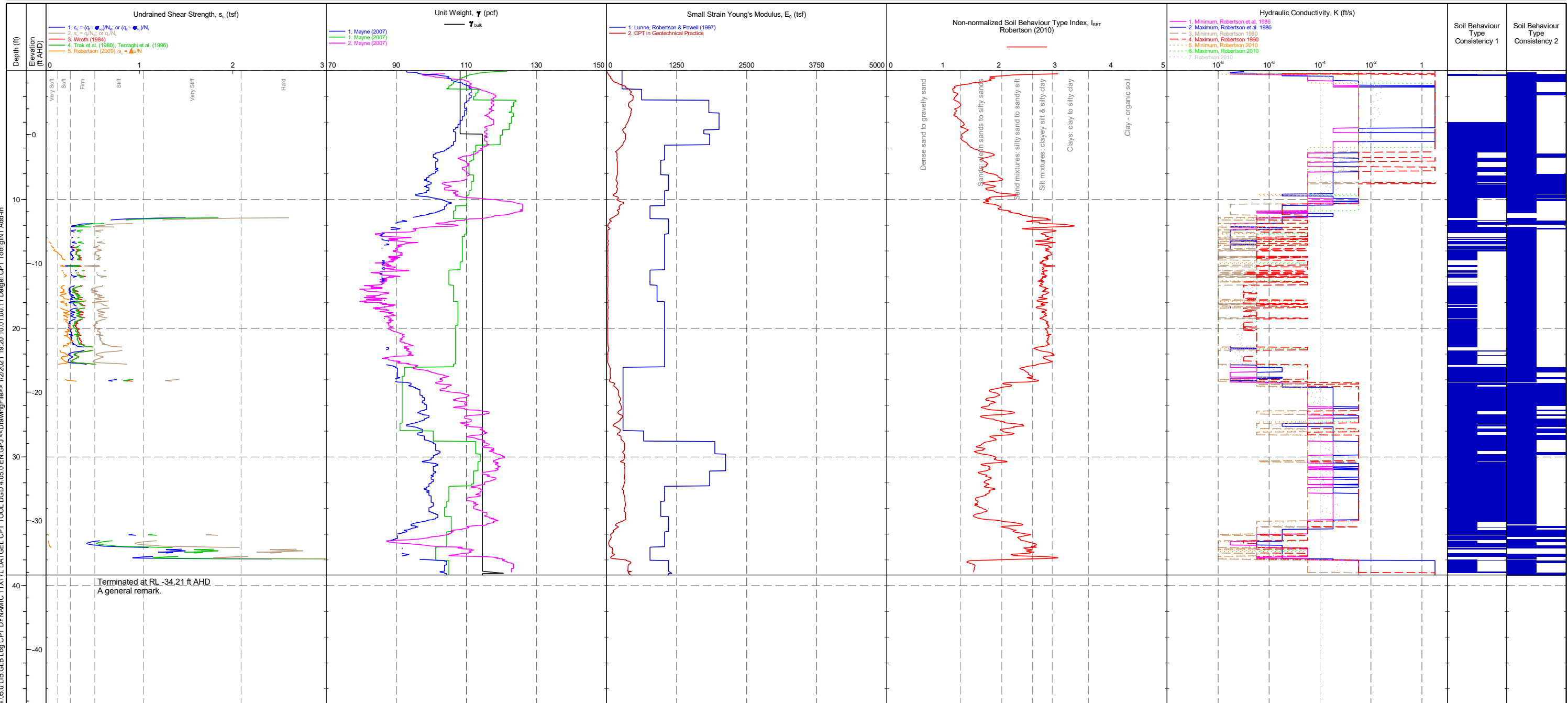
Terminated at RL -34.21 ft AHD  
A general remark.

<b>METHOD: Robertson et al. 1986</b>	1 - Sensitive fine grained material	5 - Clayey SILT to silty CLAY	9 - SAND
2 - Organic material	6 - Sandy SILT to clayey SILT	10 - Gravelly SAND to SAND	
3 - CLAY	7 - Silty SAND to sandy SILT	11 - Very stiff fine grained	
4 - Silty CLAY to CLAY	8 - SAND to silty SAND	12 - SAND to clayey SAND	

Dissipation Test

PointID  
**CPT 05**

CLIENT : Client 1	AREA : Place	RIG : no anchoring	CHECKED BY : B. Smith	REMARK : A general remark.	SHEET : 1 OF 1
ENGINEER : Engineer 1	EASTING : 862689.0 ft	CONE TYPE : C-F+W2	CHECKED DATE : 6/2/2009		STATUS : 2
PROJECT : CPT Tool Project	NORTHING : 20558043.4 ft	CONE ID : S15CFIIP.D76	APPROVED BY : C. Doe		DATE : 23/12/2009
LOCATION : Somewhere	COORD. SYS. : MGA2020 Zone 56	OPERATOR : Operator A	APPROVED DATE : 6/2/2009		
PROJECT No. : 4.05.0	ELEVATION : 4.95 ft AHD				



**Undrained Shear Strength Method:**  
 1.  $s_u = (q_c - \sigma_{vc})/N_{60}$  or  $(q_c - \sigma_{vc})/N_k$   
 2.  $s_u = q_c/N_{60}$  or  $q_c/N_k$   
 3. Wroth (1984)  
 4. Trak et al. (1980), Terzaghi et al. (1996)  
 5. Robertson (2009),  $s_u = \Delta u/N$

**Unit Weight Method:**  
 1.  $\gamma_b$  Applied in Calculation  
 1.  $\gamma_{sat}$  Mayne (2007)  
 2.  $\gamma_{sat}$  Mayne (2007)  
 1.  $\gamma_{dry}$  Mayne (2007)

**Youngs Modulus Method:**  
 1. Lunne, Robertson & Powell (1997)  
 2. CPT in Geotechnical Practice

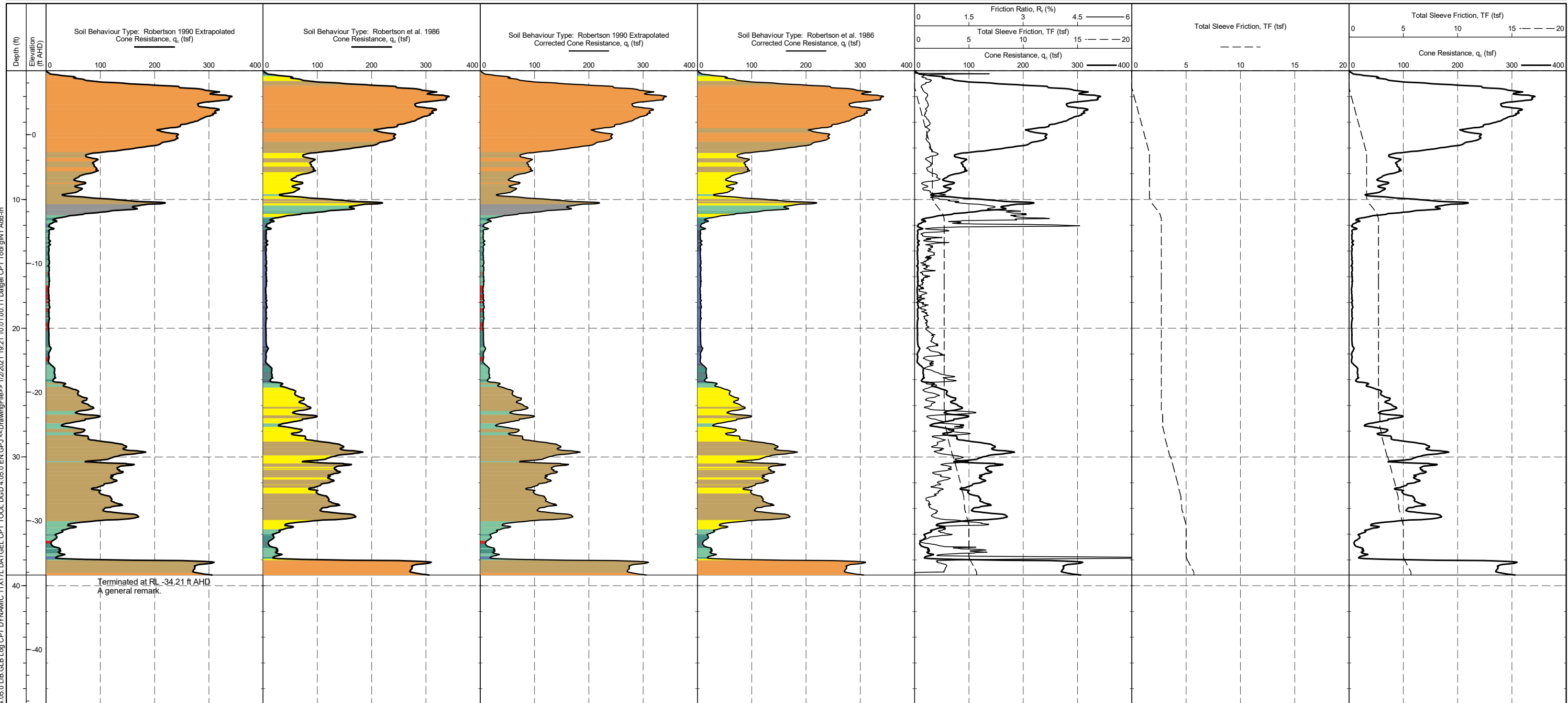
**Hydraulic Conductivity Method:**  
 1. Minimum, Robertson et al. 1986  
 2. Maximum, Robertson et al. 1986  
 3. Minimum, Robertson 1990  
 4. Maximum, Robertson 1990  
 5. Minimum, Robertson 2010  
 6. Maximum, Robertson 2010

**Dissipation Test**

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Log CPT DYNAMIC 11X17L DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <<DrawingFile>> 1/2/2021 19:20 10.01.00.11 Datgel CPT Tool.gINT Add-in

PointID  
**CPT 05**

CLIENT : Client 1	AREA : Place	RIG : no anchoring	CHECKED BY : B. Smith	REMARK : A general remark.	SHEET : 1 OF 1
ENGINEER : Engineer 1	EASTING : 862689.0 ft	CONE TYPE : C+F+W2	CHECKED DATE : 6/2/2009		STATUS : 2
PROJECT : CPT Tool Project	NORTHING : 20558043.4 ft	CONE ID : S15CFIIP.D76	APPROVED BY : C. Doe		DATE : 23/12/2009
LOCATION : Somewhere	COORD. SYS. : MGA2020 Zone 56	OPERATOR : Operator A	APPROVED DATE : 6/2/2009		
PROJECT No. : 4.05.0	ELEVATION : 4.95 ft AHD				



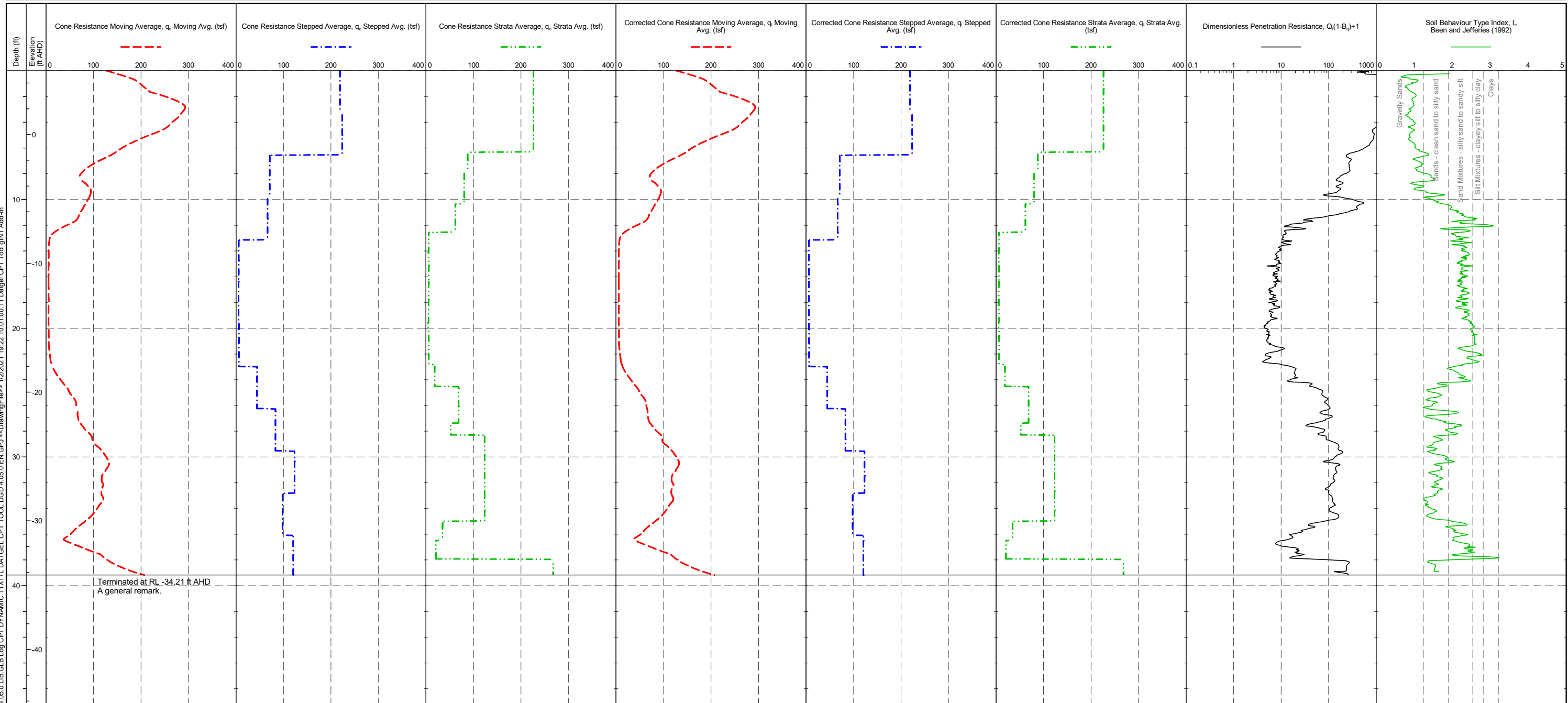
METHOD: Robertson 1990				METHOD: Robertson et al. 1986			
1 - Sensitive, fine grained	5 - SAND mixtures - silty SAND to sandy SILT	9 - Very stiff fine grained		1 - Sensitive fine grained material	5 - Clayey SILT to silty CLAY	9 - SAND	
2 - Organic soil - peats	6 - Sands - clean SAND to silty SAND			2 - Organic material	6 - Sandy SILT to clayey SILT	10 - Gravelly SAND to SAND	
3 - Clays - CLAY to silty CLAY	7 - Gravelly SAND to SAND			3 - CLAY	7 - Silty SAND to sandy SILT	11 - Very stiff fine grained	
4 - SILT mixtures - clayey SILT to silty CLAY	8 - Very stiff SAND to clayey SAND			4 - Silty CLAY to CLAY	8 - SAND to silty SAND	12 - SAND to clayey SAND	

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Log CPT DYNAMIC 11X17L DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <-DrawingFile> 1/2/2021 19:21:10 01.00.11 Datgel CPT Tool.gINT Add-in



PointID  
**CPT 05**

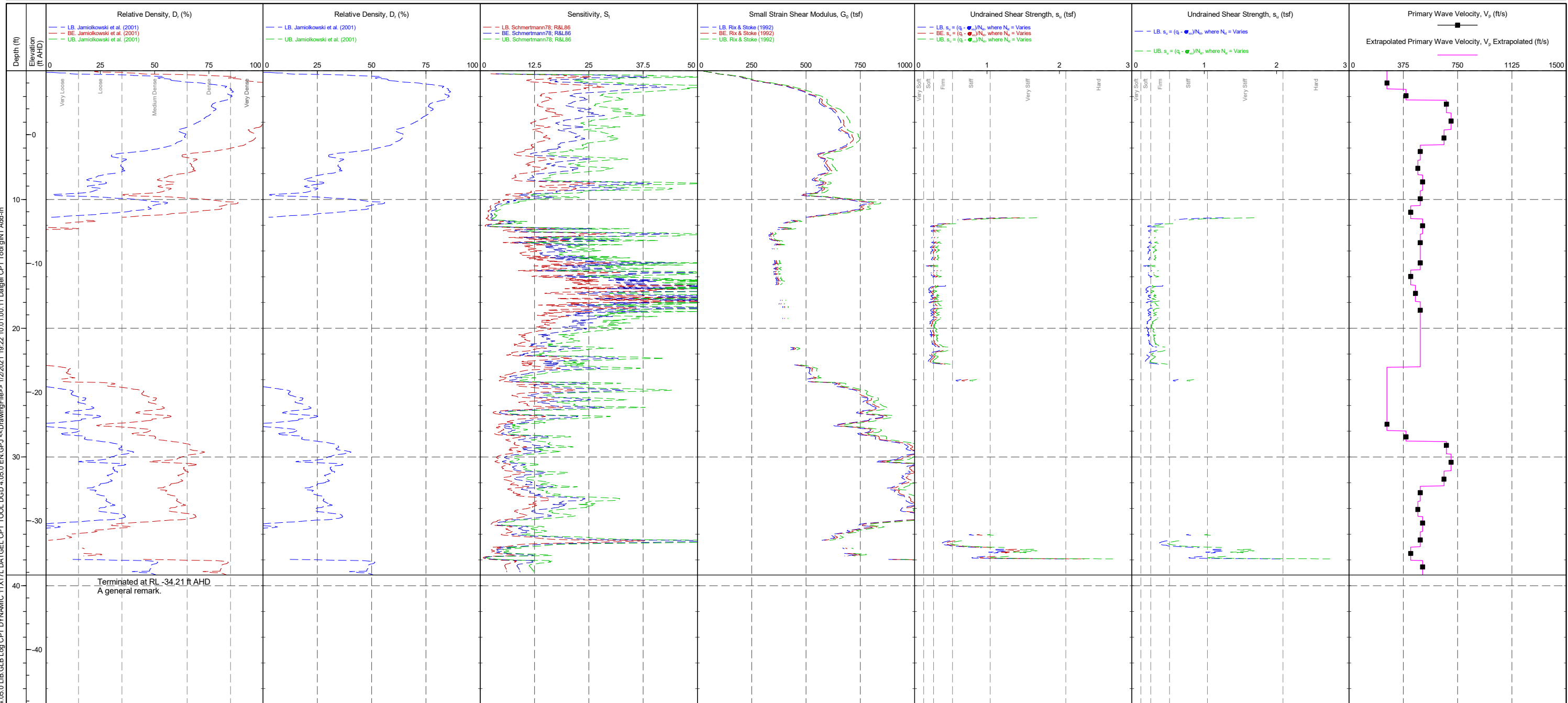
CLIENT : Client 1	AREA : Place	RIG : no anchoring	CHECKED BY : B. Smith	REMARK : A general remark.	SHEET : 1 OF 1
ENGINEER : Engineer 1	EASTING : 862689.0 ft	CONE TYPE : C+F+W2	CHECKED DATE : 6/2/2009		STATUS : 2
PROJECT : CPT Tool Project	NORTHING : 20558043.4 ft	CONE ID : S15CFIIP.D76	APPROVED BY : C. Doe		DATE : 23/12/2009
LOCATION : Somewhere	COORD. SYS. : MGA2020 Zone 56	OPERATOR : Operator A	APPROVED DATE : 6/2/2009		
PROJECT No. : 4.05.0	ELEVATION : 4.95 ft AHD				



DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Log CPT DYNAMIC 11X17L DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <-DrawingFile> 1/2/2021 19:22:10.01.00.11 Datgel CPT Tool.gINT Add-in

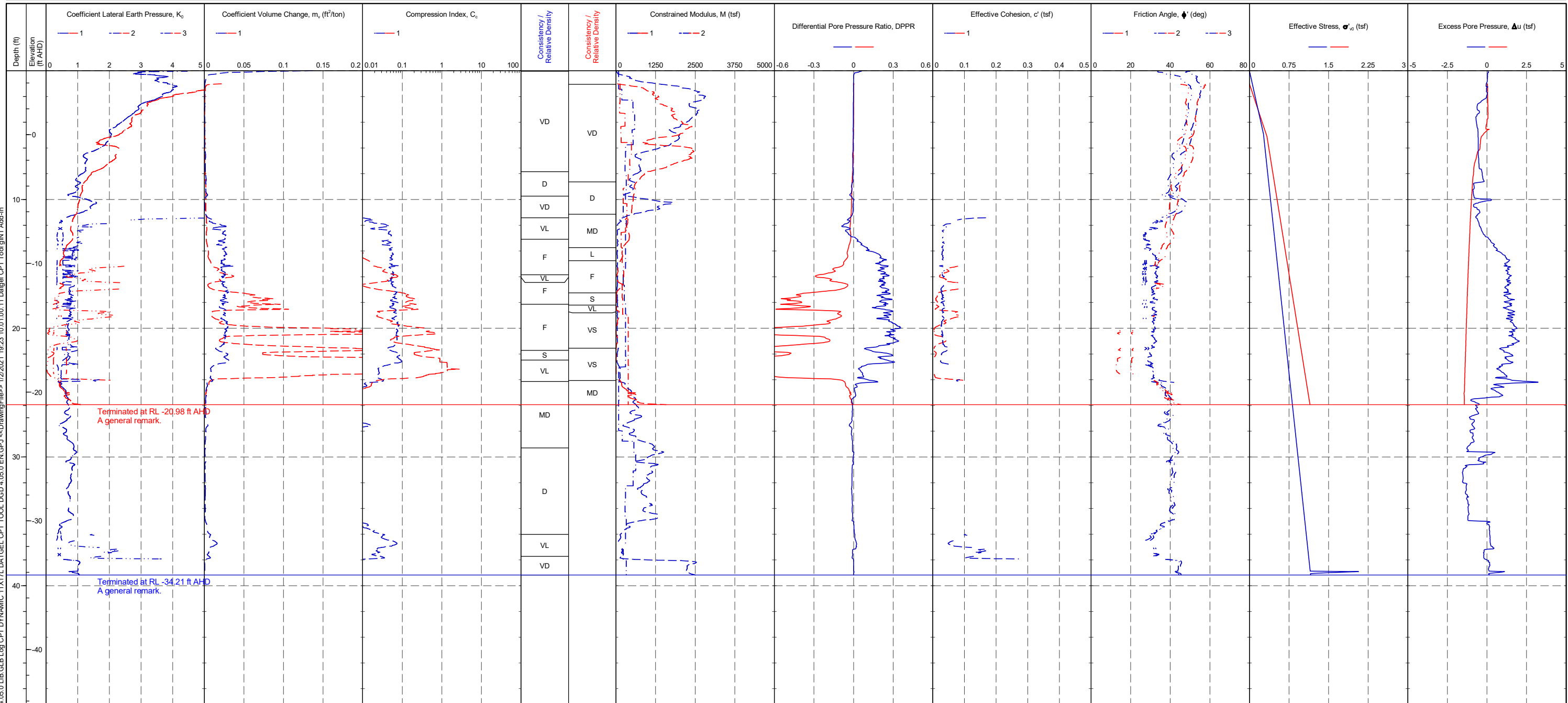
PointID  
**CPT 05**

CLIENT : Client 1	AREA : Place	RIG : no anchoring	CHECKED BY : B. Smith	REMARK : A general remark.	SHEET : 1 OF 1
ENGINEER : Engineer 1	EASTING : 862689.0 ft	CONE TYPE : C-F+W2	CHECKED DATE : 6/2/2009		STATUS : 2
PROJECT : CPT Tool Project	NORTHING : 20558043.4 ft	CONE ID : S15CFIIP.D76	APPROVED BY : C. Doe		DATE : 23/12/2009
LOCATION : Somewhere	COORD. SYS. : MGA2020 Zone 56	OPERATOR : Operator A	APPROVED DATE : 6/2/2009		
PROJECT No. : 4.05.0	ELEVATION : 4.95 ft AHD				



DATGEL\_CPT TOOL DGD 4.05.0 LIB.GLB Log CPT DYNAMIC 11X17L DATGEL\_CPT TOOL DGD 4.05.0 EN.GPJ <-DrawingFile> 1/2/2021 19:22:10 01.00.11 Datgel CPT Tool.gINT Add-in

CLIENT : Client 1 ENGINEER : Engineer 1 PROJECT : CPT Tool Project LOCATION : Somewhere PROJECT No. : 4.05.0	RIG : no anchoring CONE TYPE : C+F+W2 CONE ID : S15CFIIP.D76 OPERATOR : Operator A CHECKED BY : B. Smith CHECKED DATE : 6/2/2009 APPROVED BY : C. Doe APPROVED DATE : 6/2/2009	RIG : Crawler 1no anchoring CONE TYPE : C+F+W2 CONE ID : S15CFIIP.D76 OPERATOR : Operator A CHECKED BY : B. Smith CHECKED DATE : 6/2/2009 APPROVED BY : C. Doe APPROVED DATE : 6/2/2009	REMARK : A general remark.  A general remark.	PointID 1 <b>CPT 05</b> STATUS : 2 DATE : 23/12/2009 AREA : Place LAYER : EASTING : 862689.0 ft NORTHING : 20558043.4 ft ELEVATION : 4.95 ft AHD	PointID 2 <b>CPT 04</b> STATUS : DATE : 12/11/2008 AREA : Place LAYER : EASTING : 862592.4 ft NORTHING : 20557961.7 ft ELEVATION : 3.94 ft AHD
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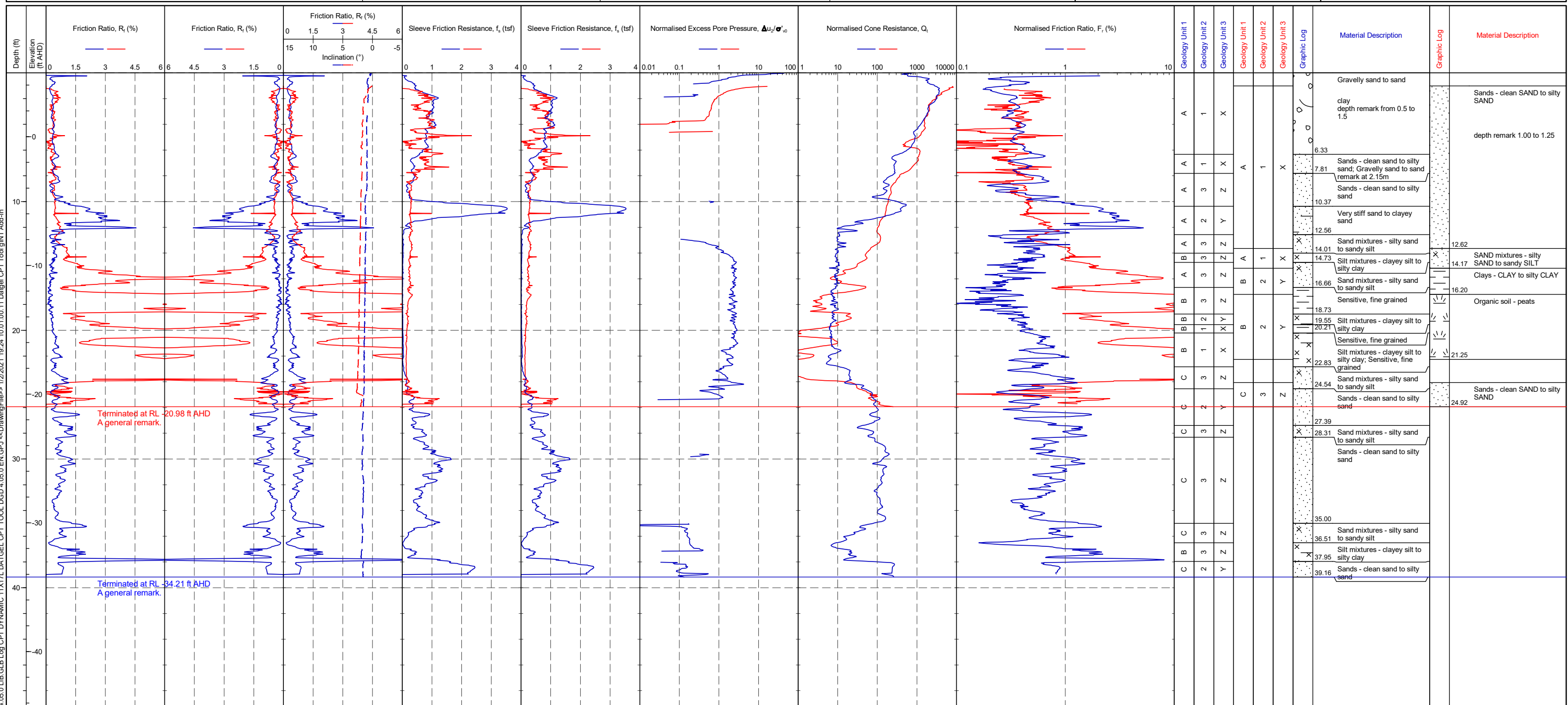
Effective Cohesion Method:  
1. Mayne & Stewart (1988); Mesri & Abdel-Ghaffar (1993)

Friction Angle Method:  
1. Senneset et al. (1988 & 1989); Mayne & Campanella (2005)  
2. Robertson & Campanella (1983)  
3. Kulhawy & Mayne (1990)

▲ Dissipation Test  
▲ Test

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Log CPT DYNAMIC 11X17L DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <-DrawingFiles> 1/2/2021 19:23:10 01.00.11 Datgel CPT Tool.gINT Add-in

CLIENT : Client 1	RIG : no anchoring	RIG : Crawler 1 no anchoring	REMARK : A general remark.	STATUS : 2	STATUS : 2
ENGINEER : Engineer 1	CONE TYPE : C+F+W2	CONE TYPE : C+F+W2	REMARK : A general remark.	DATE : 23/12/2009	DATE : 12/11/2008
PROJECT : CPT Tool Project	CONE ID : S15CFIIP.D76	CONE ID : S15CFIIP.D76		AREA : Place	AREA : Place
LOCATION : Somewhere	OPERATOR : Operator A	OPERATOR : Operator A		LAYER :	LAYER :
PROJECT No. : 4.05.0	CHECKED BY : B. Smith	CHECKED BY : B. Smith		EASTING : 862689.0 ft	EASTING : 862592.4 ft
	CHECKED DATE : 6/2/2009	CHECKED DATE : 6/2/2009		NORTHING : 20558043.4 ft	NORTHING : 20557961.7 ft
	APPROVED BY : C. Doe	APPROVED BY : C. Doe		ELEVATION : 4.95 ft AHD	ELEVATION : 3.94 ft AHD
	APPROVED DATE : 6/2/2009	APPROVED DATE : 6/2/2009			

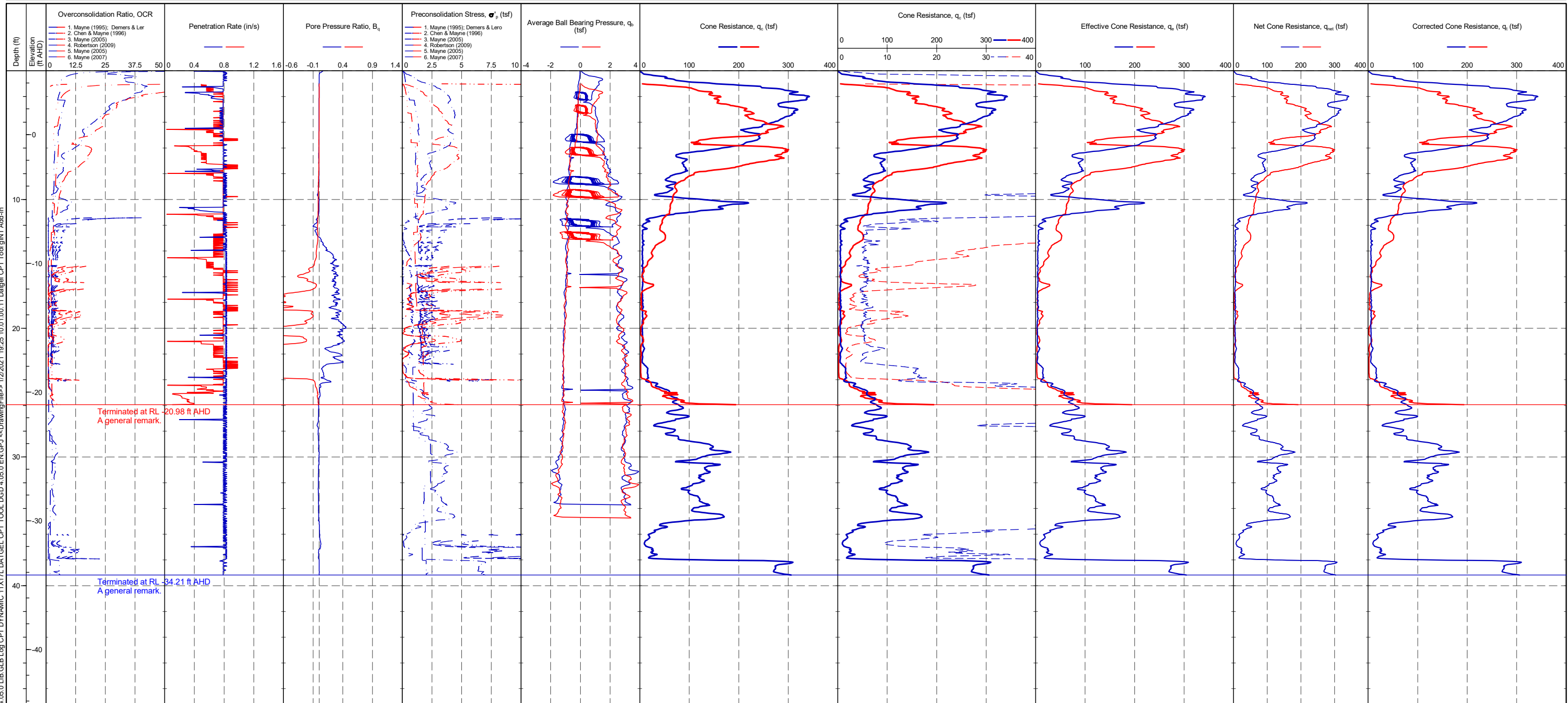


▲ Dissipation  
▲ Test

Specification Requirement: Mean Rel density in depth range 0 to 4 m, and if the value is >=70% / Mean Rel density in depth range 0 to min of HoleDepth and DepthToNaturalGround, and if the value is >=77%  
 Overall: Fail  
 Details: 1: P; 2: F; 3: F; 4: F



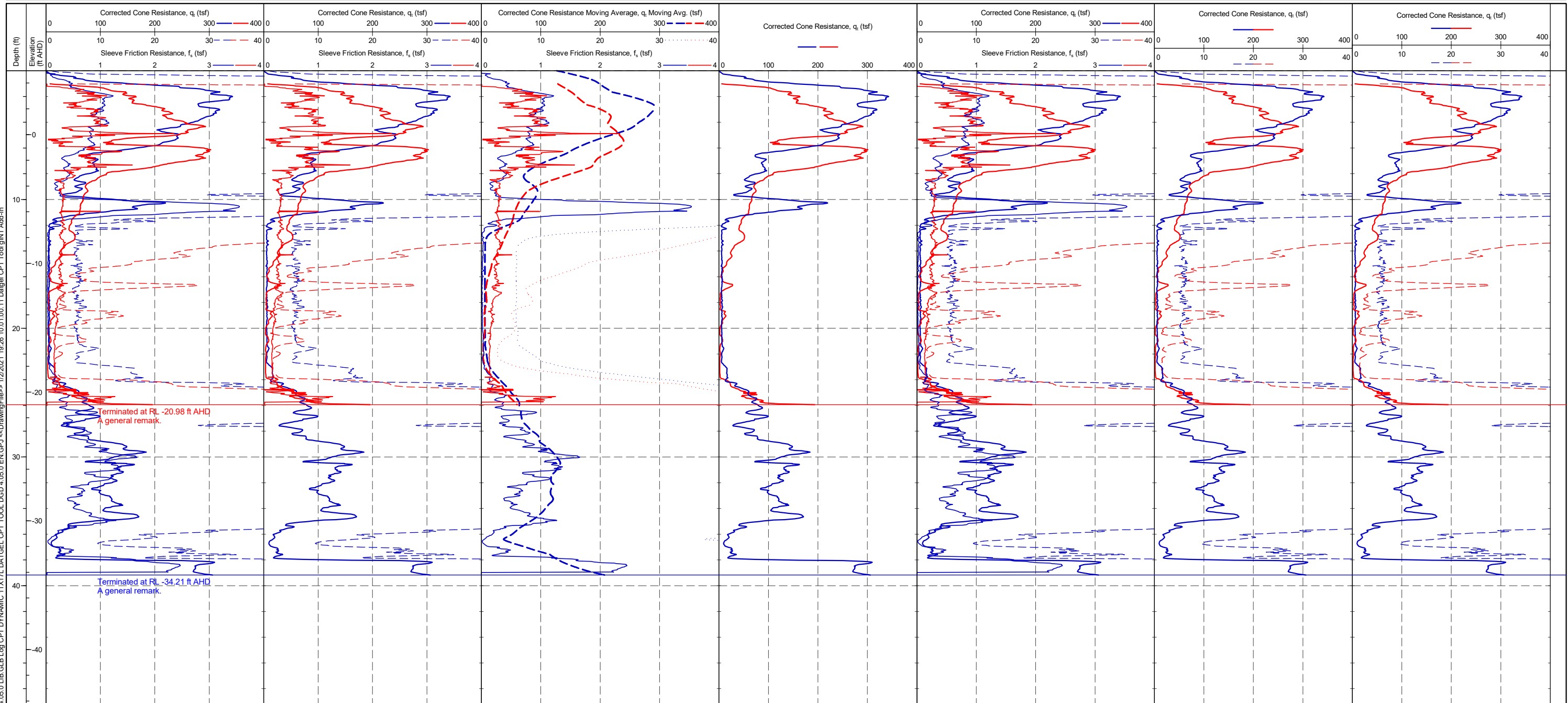
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ENGINEER : Engineer 1	CONE TYPE : C+F+W2	CONE TYPE : C+F+W2	REMARK : A general remark.	STATUS : 2	STATUS : 2
PROJECT : CPT Tool Project	CONE ID : S15CFIIP.D76	CONE ID : S15CFIIP.D76		DATE : 23/12/2009	DATE : 12/11/2008
LOCATION : Somewhere	OPERATOR : Operator A	OPERATOR : Operator A		AREA : Place	AREA : Place
PROJECT No. : 4.05.0	CHECKED BY : B. Smith	CHECKED BY : B. Smith		LAYER :	LAYER :
	CHECKED DATE : 6/2/2009	CHECKED DATE : 6/2/2009		EASTING : 862689.0 ft	EASTING : 862592.4 ft
	APPROVED BY : C. Doe	APPROVED BY : C. Doe		NORTHING : 20558043.4 ft	NORTHING : 20557961.7 ft
	APPROVED DATE : 6/2/2009	APPROVED DATE : 6/2/2009		ELEVATION : 4.95 ft AHD	ELEVATION : 3.94 ft AHD



Specification Requirement: Mean Rel density in depth range 0 to 4 m, and if the value is >=70% / Mean Rel density in depth range 0 to min of HoleDepth and DepthToNaturalGround, and if the value is >=77%  
Overall: Fail  
Details: 1: P; 2: F; 3: F; 4: F

▲ Dissipation Test

CLIENT : Client 1 ENGINEER : Engineer 1 PROJECT : CPT Tool Project LOCATION : Somewhere PROJECT No. : 4.05.0		RIG : no anchoring CONE TYPE : C+F+W2 CONE ID : S15CFIIP.D76 OPERATOR : Operator A CHECKED BY : B. Smith CHECKED DATE : 6/2/2009 APPROVED BY : C. Doe APPROVED DATE : 6/2/2009		RIG : Crawler 1 no anchoring CONE TYPE : C+F+W2 CONE ID : S15CFIIP.D76 OPERATOR : Operator A CHECKED BY : B. Smith CHECKED DATE : 6/2/2009 APPROVED BY : C. Doe APPROVED DATE : 6/2/2009		REMARK : A general remark.  A general remark.		PointID 1 <b>CPT 05</b> STATUS : 2 DATE : 23/12/2009 AREA : Place LAYER : EASTING : 862689.0 ft NORTHING : 20558043.4 ft ELEVATION : 4.95 ft AHD		PointID 2 <b>CPT 04</b> STATUS : DATE : 12/11/2008 AREA : Place LAYER : EASTING : 862592.4 ft NORTHING : 20557961.7 ft ELEVATION : 3.94 ft AHD	
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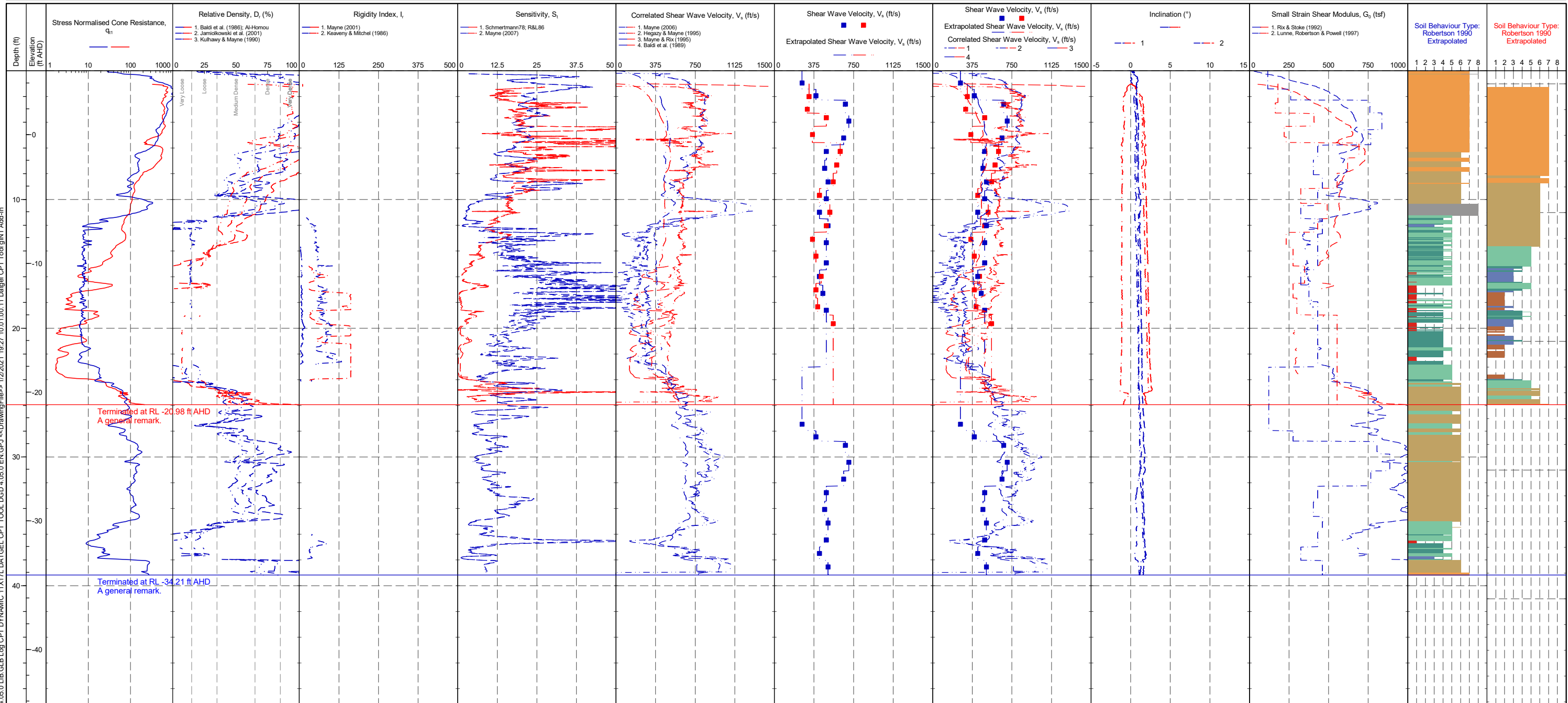


▲ Dissipation  
▲ Test

Specification Requirement: Mean Rel density in depth range 0 to 4 m, and if the value is  $\geq 70\%$  / Mean Rel density in depth range 0 to min of HoleDepth and DepthToNaturalGround, and if the value is  $\geq 77\%$   
 Overall: Fail  
 Details: 1: P; 2: F; 3: F; 4: F

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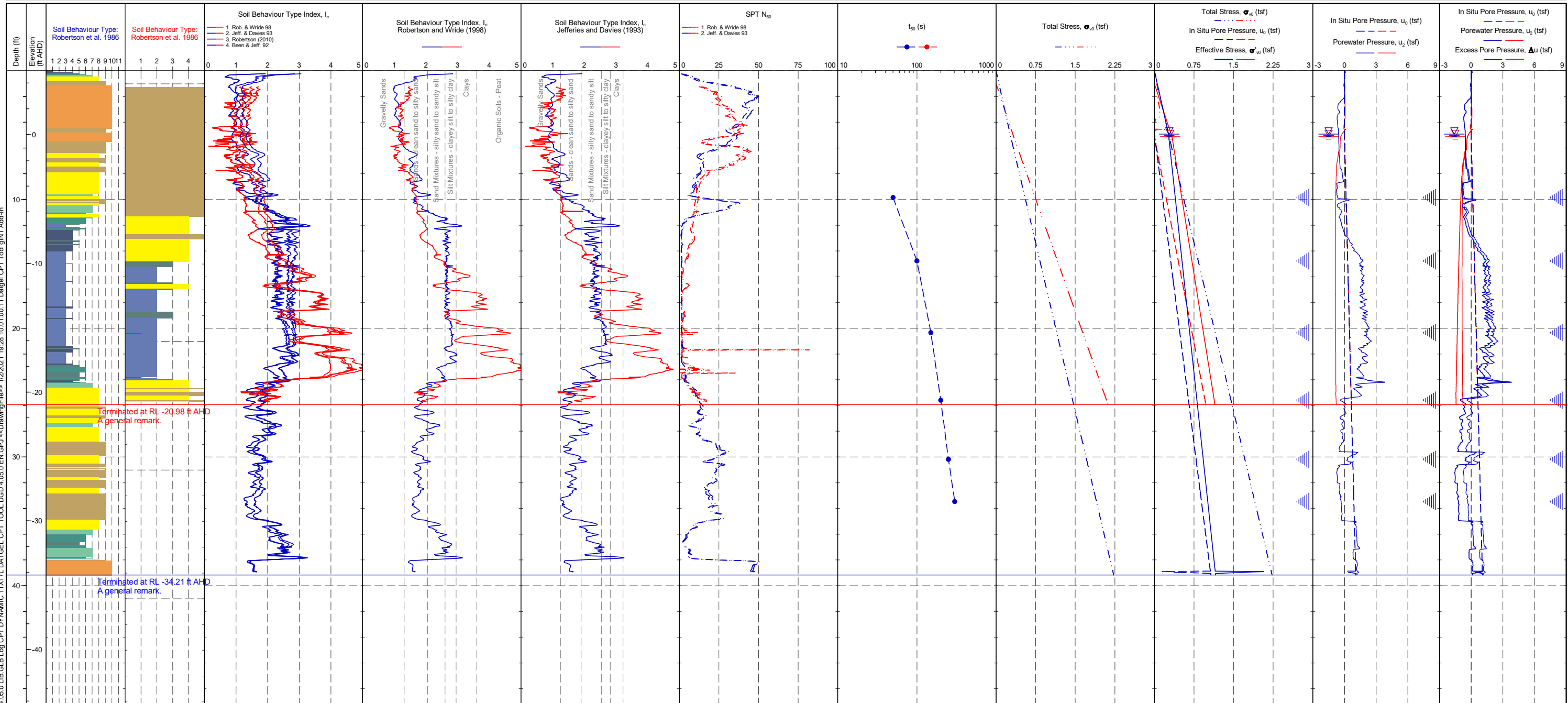
CLIENT : Client 1 ENGINEER : Engineer 1 PROJECT : CPT Tool Project LOCATION : Somewhere PROJECT No. : 4.05.0		RIG : no anchoring CONE TYPE : C+F+W2 CONE ID : S15CFIIP.D76 OPERATOR : Operator A CHECKED BY : B. Smith CHECKED DATE : 6/2/2009 APPROVED BY : C. Doe APPROVED DATE : 6/2/2009		RIG : Crawler 1 no anchoring CONE TYPE : C+F+W2 CONE ID : S15CFIIP.D76 OPERATOR : Operator A CHECKED BY : B. Smith CHECKED DATE : 6/2/2009 APPROVED BY : C. Doe APPROVED DATE : 6/2/2009		REMARK : A general remark.  REMARK : A general remark.		PointID 1 <b>CPT 05</b> STATUS : 2 DATE : 23/12/2009 AREA : Place LAYER : EASTING : 862689.0 ft NORTHING : 20558043.4 ft ELEVATION : 4.95 ft AHD		PointID 2 <b>CPT 04</b> STATUS : DATE : 12/11/2008 AREA : Place LAYER : EASTING : 862592.4 ft NORTHING : 20557961.7 ft ELEVATION : 3.94 ft AHD	
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Shear Wave Velocity Method: 1. Mayne (2006) 2. Hegazy & Mayne (1995) 3. Mayne & Rix (1995) 4. Baldi et al. (1989)	Small Strain Shear Modulus Method: 1. Rix & Stoke (1992) 2. Lunne, Robertson & Powell (1997)	METHOD: Robertson 1990 1 - Sensitive, fine grained 2 - Organic soil - peats 3 - Clays - CLAY to silty CLAY 4 - SILT mixtures - clayey SILT to silty CLAY 5 - SAND mixtures - silty SAND to sandy SILT 6 - Sands - clean SAND to silty SAND 7 - Gravelly SAND to SAND 8 - Very stiff SAND to clayey SAND 9 - Very stiff fine grained
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DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Log CPT DYNAMIC 11X17L DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <-DrawingFile> 1/2/2021 19:27 10.01.00.11 Datgel CPT Tool.gINT Add-in

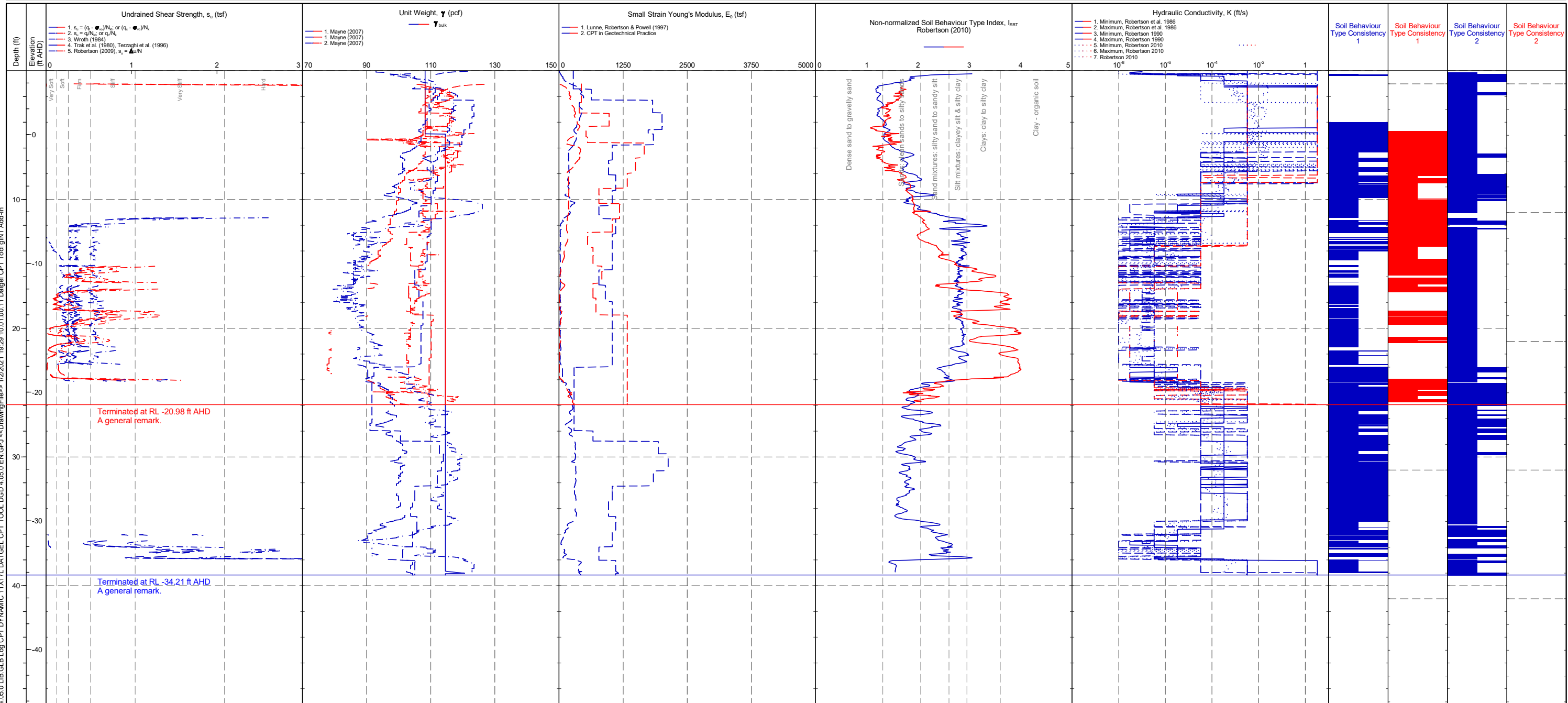
CLIENT : Client 1 ENGINEER : Engineer 1 PROJECT : CPT Tool Project LOCATION : Somewhere PROJECT No. : 4.05.0	RIG : no anchoring CONE TYPE : C+F+W2 CONE ID : S15CFIIP.D76 OPERATOR : Operator A CHECKED BY : B. Smith CHECKED DATE : 6/2/2009 APPROVED BY : C. Doe APPROVED DATE : 6/2/2009	RIG : Crawler 1 no anchoring CONE TYPE : C+F+W2 CONE ID : S15CFIIP.D76 OPERATOR : Operator A CHECKED BY : B. Smith CHECKED DATE : 6/2/2009 APPROVED BY : C. Doe APPROVED DATE : 6/2/2009	REMARK : A general remark.  A general remark.	PointID 1 <b>CPT 05</b> STATUS : 2 DATE : 23/12/2009 AREA : Place LAYER : EASTING : 862689.0 ft NORTHING : 20558043.4 ft ELEVATION : 4.95 ft AHD	PointID 2 <b>CPT 04</b> STATUS : DATE : 12/11/2008 AREA : Place LAYER : EASTING : 862592.4 ft NORTHING : 20557961.7 ft ELEVATION : 3.94 ft AHD
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Specification Requirement: Mean Rel density in depth range 0 to 4 m, and if the value is  $\geq 70\%$  / Mean Rel density in depth range 0 to min of HoleDepth and DepthToNaturalGround, and if the value is  $\geq 77\%$   
 Overall: Fail  
 Details: 1: P; 2: F; 3: F; 4: F

▲ Dissipation  
 ▲ Test

CLIENT : Client 1 ENGINEER : Engineer 1 PROJECT : CPT Tool Project LOCATION : Somewhere PROJECT No. : 4.05.0	RIG : no anchoring CONE TYPE : C+F+W2 CONE ID : S15CFIIP.D76 OPERATOR : Operator A CHECKED BY : B. Smith CHECKED DATE : 6/2/2009 APPROVED BY : C. Doe APPROVED DATE : 6/2/2009	RIG : Crawler 1 no anchoring CONE TYPE : C+F+W2 CONE ID : S15CFIIP.D76 OPERATOR : Operator A CHECKED BY : B. Smith CHECKED DATE : 6/2/2009 APPROVED BY : C. Doe APPROVED DATE : 6/2/2009	REMARK A general remark.  A general remark.	PointID 1 <b>CPT 05</b> STATUS : 2 DATE : 23/12/2009 AREA : Place LAYER : EASTING : 862689.0 ft NORTHING : 20558043.4 ft ELEVATION : 4.95 ft AHD	PointID 2 <b>CPT 04</b> STATUS : DATE : 12/11/2008 AREA : Place LAYER : EASTING : 862592.4 ft NORTHING : 20557961.7 ft ELEVATION : 3.94 ft AHD
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DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Log CPT DYNAMIC 11X17L DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <-DrawingFile> 1/2/2021 19:29 10.01.00.11 Datgel CPT Tool.gINT Add-in

Terminated at RL -20.98 ft AHD  
A general remark.

Terminated at RL -34.21 ft AHD  
A general remark.

Undrained Shear Strength Method:  
 1.  $s_u = (q_c - \sigma_{vc})/N_{sk}$  or  $(q_c - \sigma_{vc})/N_k$   
 2.  $s_u = q_c/N_{sk}$  or  $q_c/N_k$   
 3. Wroth (1984)  
 4. Trak et al. (1980), Terzaghi et al. (1996)  
 5. Robertson (2009),  $s_u = \Delta u/N$

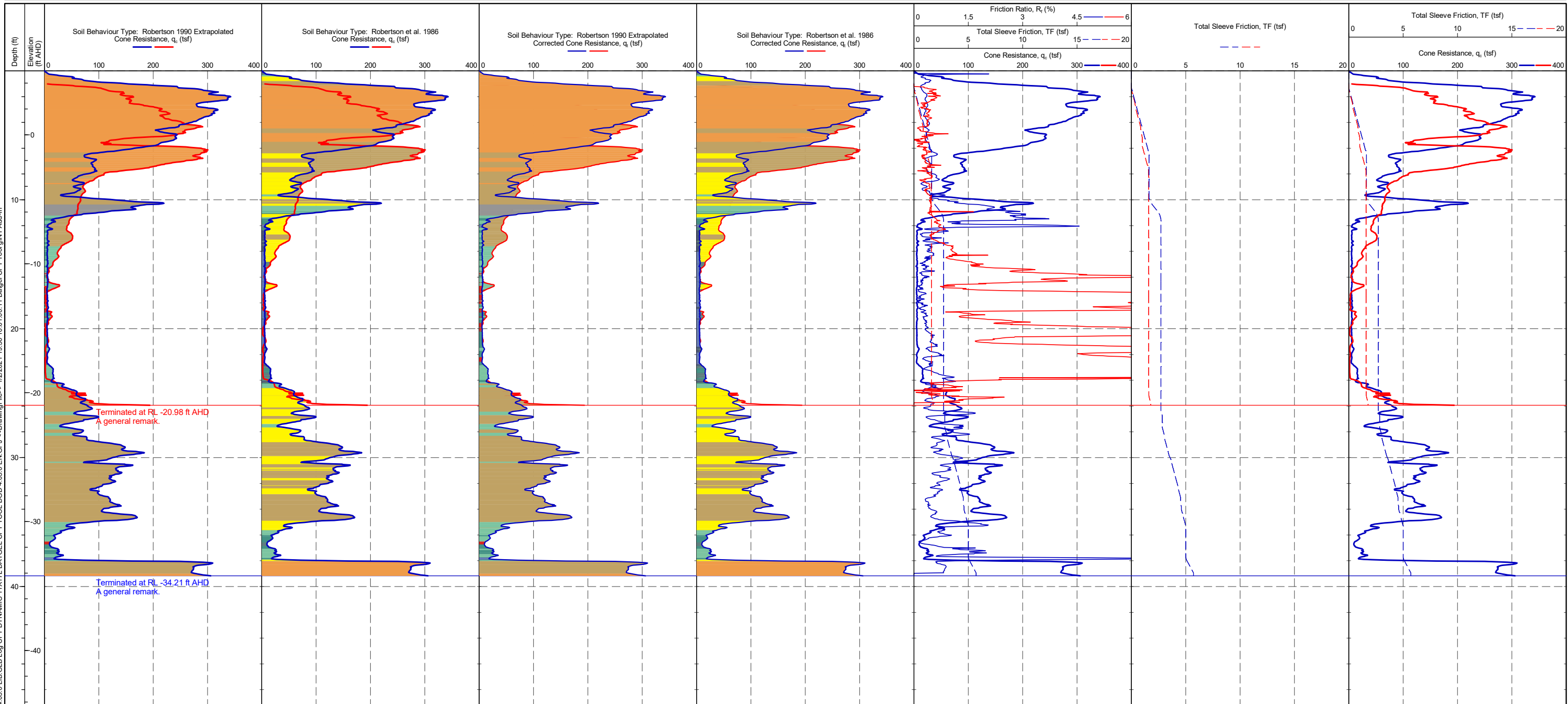
Unit Weight Method:  
 1.  $\gamma_b$  Applied in Calculation  
 1.  $\gamma_{sat}$  Mayne (2007)  
 2.  $\gamma_{sat}$  Mayne (2007)  
 1.  $\gamma_{dry}$  Mayne (2007)

Youngs Modulus Method:  
 1. Lunne, Robertson & Powell (1997)  
 2. CPT in Geotechnical Practice

Hydraulic Conductivity Method:  
 1. Minimum, Robertson et al. 1986  
 2. Maximum, Robertson et al. 1986  
 3. Minimum, Robertson 1990  
 4. Maximum, Robertson 1990  
 5. Minimum, Robertson 2010  
 6. Maximum, Robertson 2010

▲ Dissipation Test

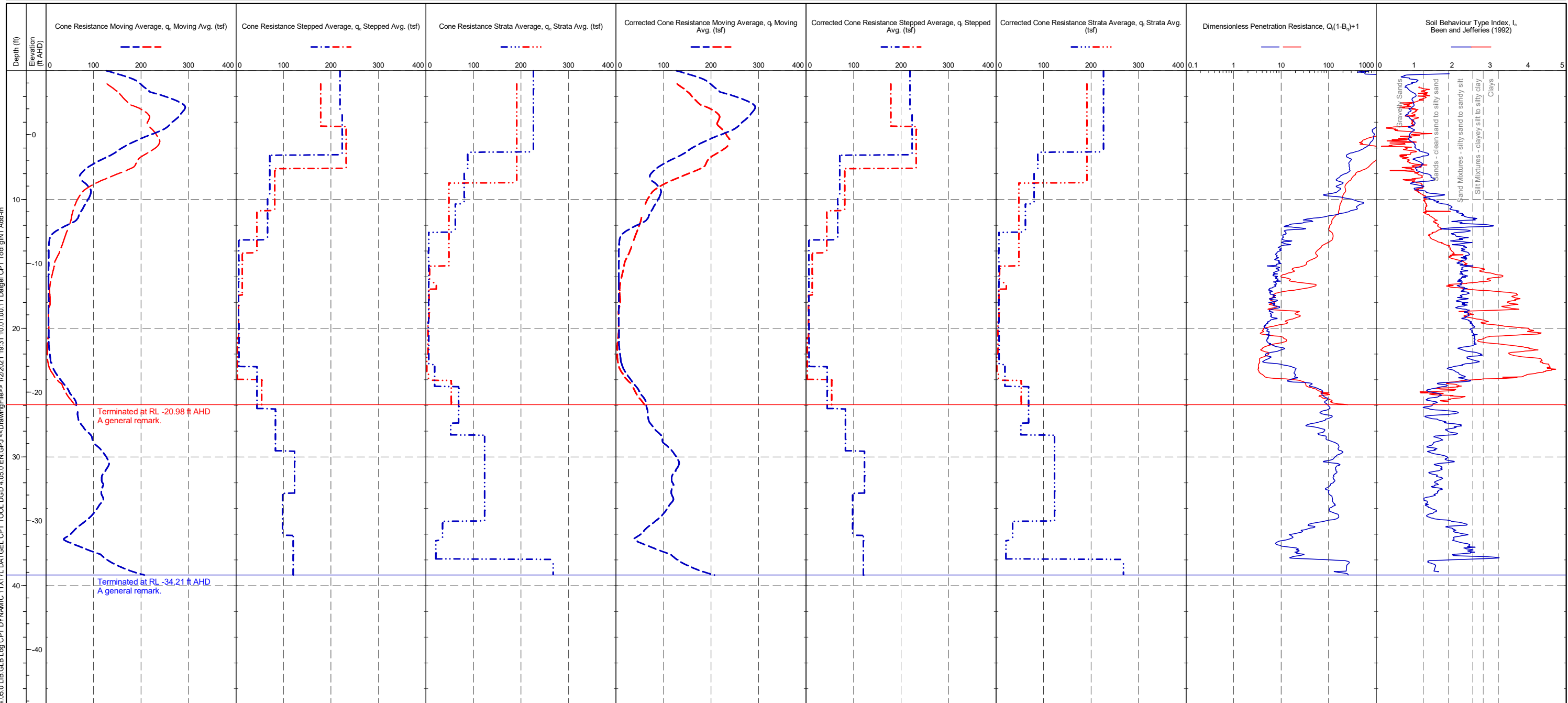
CLIENT : Client 1 ENGINEER : Engineer 1 PROJECT : CPT Tool Project LOCATION : Somewhere PROJECT No. : 4.05.0		RIG : no anchoring CONE TYPE : C+F+W2 CONE ID : S15CFIIP,D76 OPERATOR : Operator A CHECKED BY : B. Smith CHECKED DATE : 6/2/2009 APPROVED BY : C. Doe APPROVED DATE : 6/2/2009		RIG : Crawler 1 no anchoring CONE TYPE : C+F+W2 CONE ID : S15CFIIP,D76 OPERATOR : Operator A CHECKED BY : B. Smith CHECKED DATE : 6/2/2009 APPROVED BY : C. Doe APPROVED DATE : 6/2/2009		REMARK : A general remark.  A general remark.		PointID 1 <b>CPT 05</b> STATUS : 2 DATE : 23/12/2009 AREA : Place LAYER : EASTING : 862689.0 ft NORTHING : 20558043.4 ft ELEVATION : 4.95 ft AHD		PointID 2 <b>CPT 04</b> STATUS : DATE : 12/11/2008 AREA : Place LAYER : EASTING : 862592.4 ft NORTHING : 20557961.7 ft ELEVATION : 3.94 ft AHD	
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METHOD: Robertson 1990 1 - Sensitive, fine grained 2 - Organic soil - peats 3 - Clays - CLAY to silty CLAY 4 - SILT mixtures - clayey SILT to silty CLAY 5 - SAND mixtures - silty SAND to sandy SILT 6 - Sands - clean SAND to silty SAND 7 - Gravelly SAND to SAND 8 - Very stiff SAND to clayey SAND 9 - Very stiff fine grained				METHOD: Robertson et al. 1986 1 - Sensitive fine grained material 2 - Organic material 3 - CLAY 4 - Silty CLAY to CLAY 5 - Clayey SILT to silty CLAY 6 - Sandy SILT to clayey SILT 7 - Silty SAND to sandy SILT 8 - SAND to silty SAND 9 - SAND 10 - Gravelly SAND to SAND 11 - Very stiff fine grained 12 - SAND to clayey SAND			
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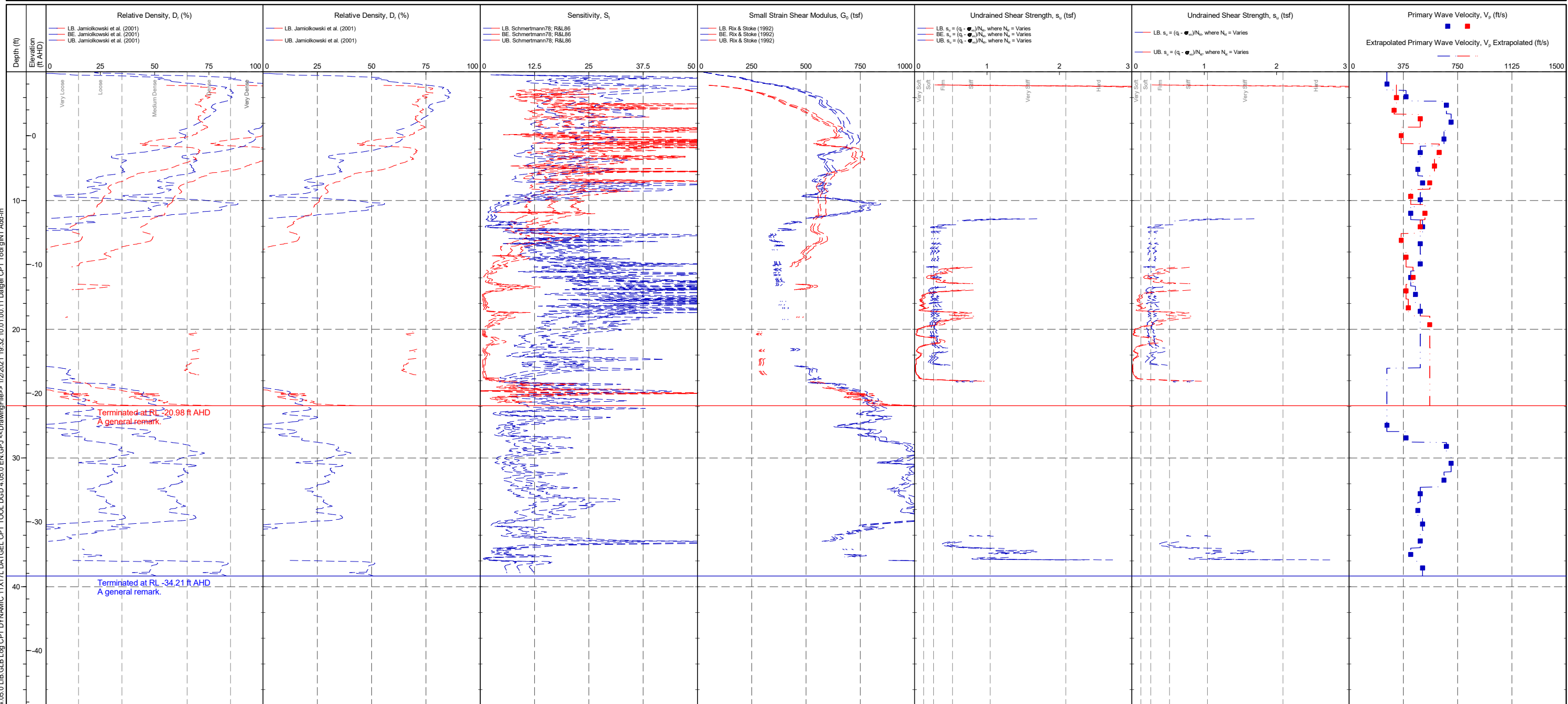
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CLIENT : Client 1 ENGINEER : Engineer 1 PROJECT : CPT Tool Project LOCATION : Somewhere PROJECT No. : 4.05.0		RIG : no anchoring CONE TYPE : C+F+W2 CONE ID : S15CFIIP.D76 OPERATOR : Operator A CHECKED BY : B. Smith CHECKED DATE : 6/2/2009 APPROVED BY : C. Doe APPROVED DATE : 6/2/2009		RIG : Crawler 1 no anchoring CONE TYPE : C+F+W2 CONE ID : S15CFIIP.D76 OPERATOR : Operator A CHECKED BY : B. Smith CHECKED DATE : 6/2/2009 APPROVED BY : C. Doe APPROVED DATE : 6/2/2009		REMARK A general remark.  A general remark.		PointID 1 <b>CPT 05</b> STATUS : 2 DATE : 23/12/2009 AREA : Place LAYER : EASTING : 862689.0 ft NORTHING : 20558043.4 ft ELEVATION : 4.95 ft AHD		PointID 2 <b>Cpt 04</b> STATUS : DATE : 12/11/2008 AREA : Place LAYER : EASTING : 862592.4 ft NORTHING : 20557961.7 ft ELEVATION : 3.94 ft AHD	
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DATGEL\_CPT TOOL DGD 4.05.0 LIB.GLB Log CPT DYNAMIC 11X17L DATGEL\_CPT TOOL DGD 4.05.0 EN.GPJ <-DrawingFiles> 1/2/2021 19:31:10.01.00.11 Datgel CPT Tool.gINT Add-in

CLIENT : Client 1 ENGINEER : Engineer 1 PROJECT : CPT Tool Project LOCATION : Somewhere PROJECT No. : 4.05.0		RIG : no anchoring CONE TYPE : C+F+W2 CONE ID : S15CFIIP.D76 OPERATOR : Operator A CHECKED BY : B. Smith CHECKED DATE : 6/2/2009 APPROVED BY : C. Doe APPROVED DATE : 6/2/2009		RIG : Crawler 1no anchoring CONE TYPE : C+F+W2 CONE ID : S15CFIIP.D76 OPERATOR : Operator A CHECKED BY : B. Smith CHECKED DATE : 6/2/2009 APPROVED BY : C. Doe APPROVED DATE : 6/2/2009		REMARK : A general remark.  A general remark.		PointID 1 <b>CPT 05</b> STATUS : 2 DATE : 23/12/2009 AREA : Place LAYER : EASTING : 862689.0 ft NORTHING : 20558043.4 ft ELEVATION : 4.95 ft AHD		PointID 2 <b>Cpt 04</b> STATUS : DATE : 12/11/2008 AREA : Place LAYER : EASTING : 862592.4 ft NORTHING : 20557961.7 ft ELEVATION : 3.94 ft AHD	
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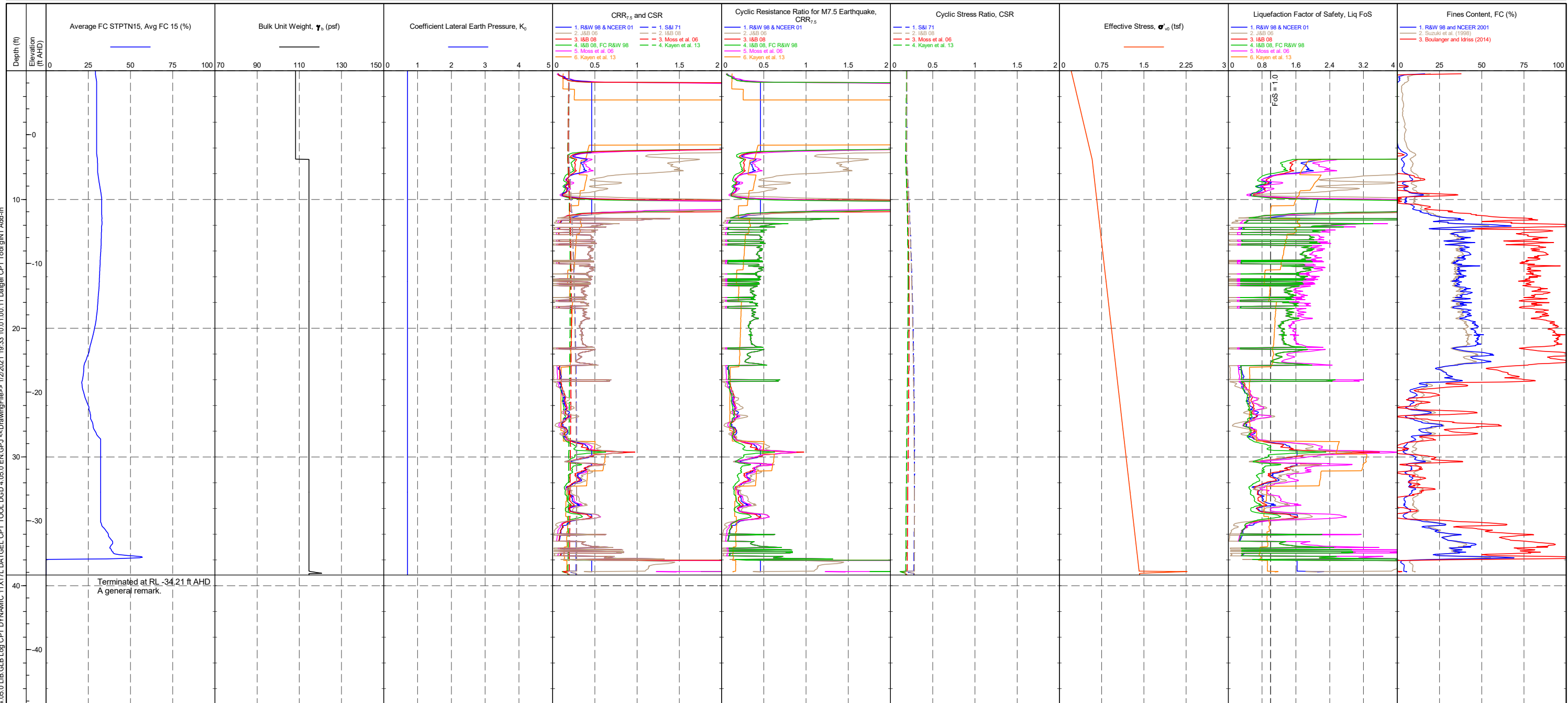


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PointID  
**CPT 05**

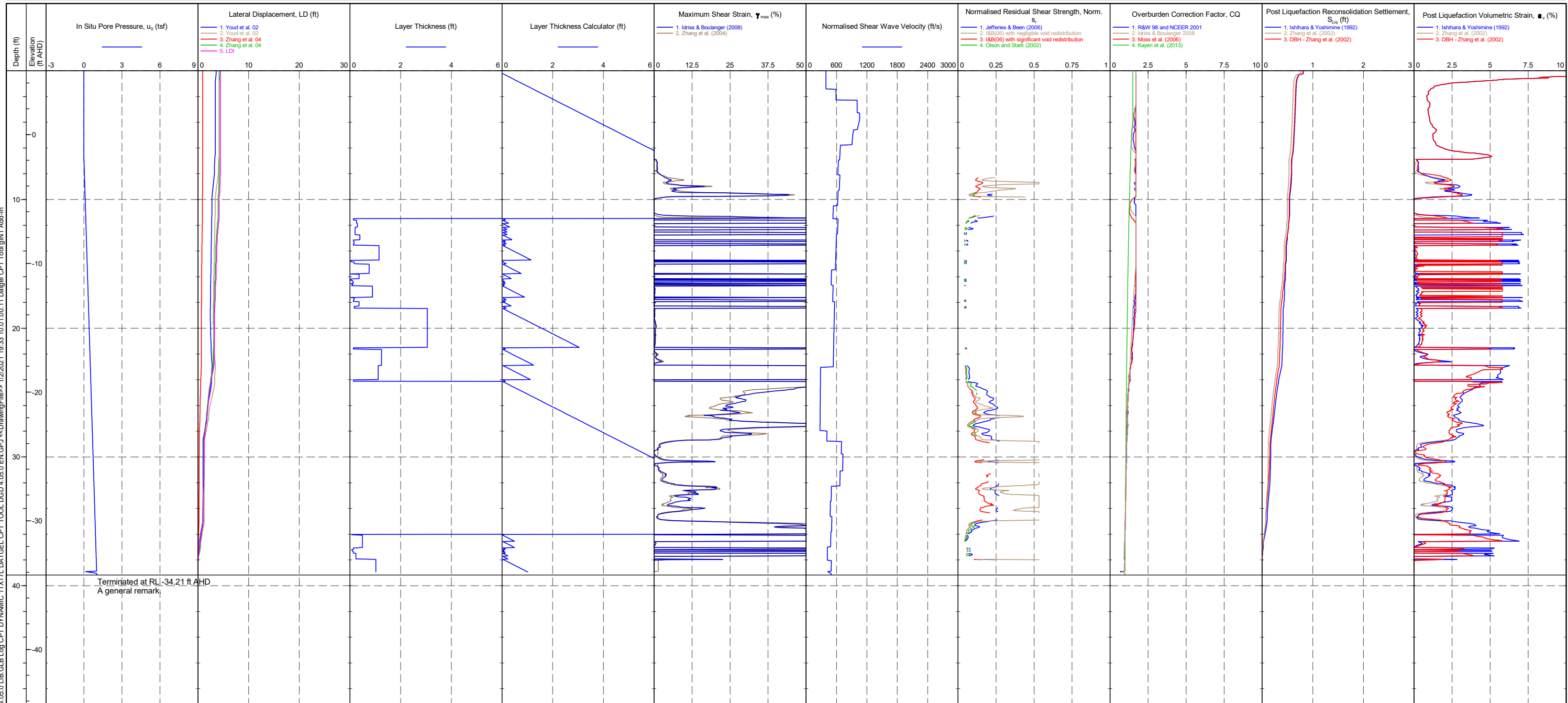
CLIENT : Client 1	AREA : Place	RIG : no anchoring	CHECKED BY : B. Smith	REMARK : A general remark.	SHEET : 1 OF 1
ENGINEER : Engineer 1	EASTING : 862689.0 ft	CONE TYPE : C+F+W2	CHECKED DATE : 6/2/2009		STATUS : 2
PROJECT : CPT Tool Project	NORTHING : 20558043.4 ft	CONE ID : S15CFIIP.D76	APPROVED BY : C. Doe		DATE : 23/12/2009
LOCATION : Somewhere	COORD. SYS. : MGA2020 Zone 56	OPERATOR : Operator A	APPROVED DATE : 6/2/2009		
PROJECT No. : 4.05.0	ELEVATION : 4.95 ft AHD				



DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Log CPT DYNAMIC 11X17L DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <-DrawingFile> 1/2/2021 19:33:10.01.00.11 Datgel CPT Tool.gINT Add-in

PointID  
**CPT 05**

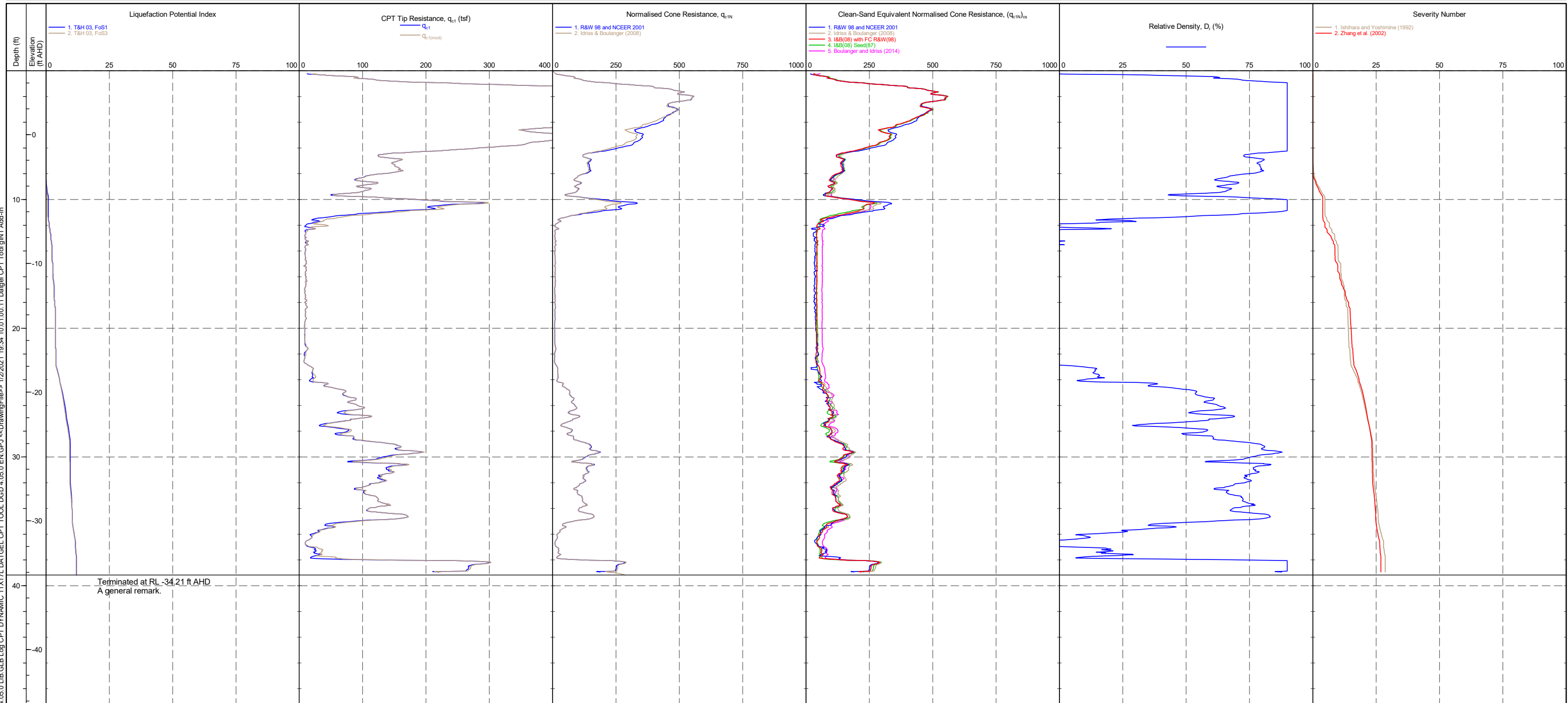
CLIENT : Client 1	AREA : Place	RIG : no anchoring	CHECKED BY : B. Smith	REMARK : A general remark.	SHEET : 1 OF 1
ENGINEER : Engineer 1	EASTING : 862689.0 ft	CONE TYPE : C+F+W2	CHECKED DATE : 6/2/2009		STATUS : 2
PROJECT : CPT Tool Project	NORTHING : 20558043.4 ft	CONE ID : S15CFIIP.D76	APPROVED BY : C. Doe		DATE : 23/12/2009
LOCATION : Somewhere	COORD. SYS. : MGA2020 Zone 56	OPERATOR : Operator A	APPROVED DATE : 6/2/2009		
PROJECT No. : 4.05.0	ELEVATION : 4.95 ft AHD				



DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Log CPT DYNAMIC 11X17L DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <<DrawingFile>> 1/2/2021 19:33:10.01.00.11 Datgel CPT Tool.gINT Add-in

PointID  
**CPT 05**

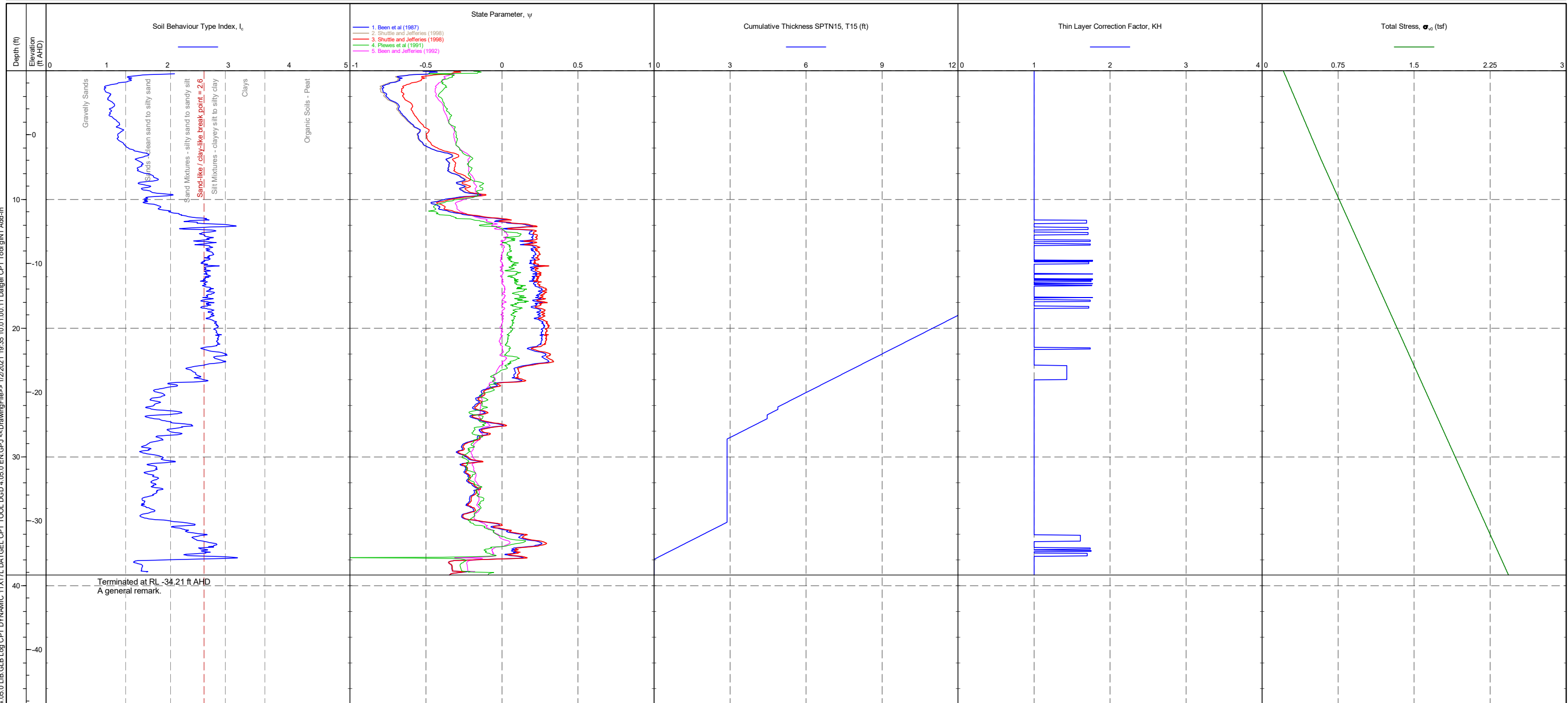
CLIENT : Client 1	AREA : Place	RIG : no anchoring	CHECKED BY : B. Smith	REMARK : A general remark.	SHEET : 1 OF 1
ENGINEER : Engineer 1	EASTING : 862689.0 ft	CONE TYPE : C+F+W2	CHECKED DATE : 6/2/2009		STATUS : 2
PROJECT : CPT Tool Project	NORTHING : 20558043.4 ft	CONE ID : S15CFIIP.D76	APPROVED BY : C. Doe		DATE : 23/12/2009
LOCATION : Somewhere	COORD. SYS. : MGA2020 Zone 56	OPERATOR : Operator A	APPROVED DATE : 6/2/2009		
PROJECT No. : 4.05.0	ELEVATION : 4.95 ft AHD				



DATGEL\_CPT TOOL DGD 4.05.0 LIB.GLB Log CPT DYNAMIC 11X17L DATGEL\_CPT TOOL DGD 4.05.0 EN.GPJ <-DrawingFile> 1/2/2021 19:34:10.01.00.11 Datgel CPT Tool.gINT Add-in

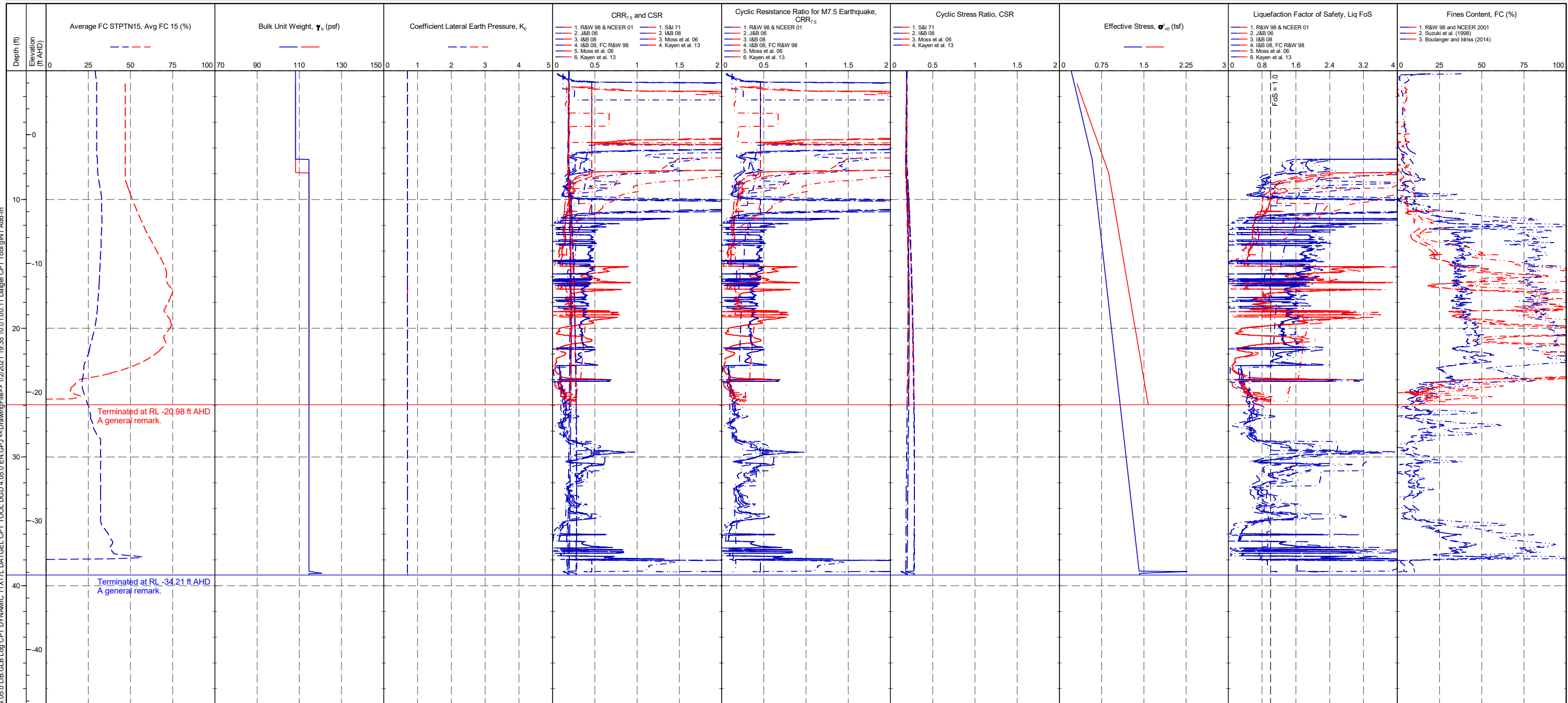
PointID  
**CPT 05**

CLIENT : Client 1	AREA : Place	RIG : no anchoring	CHECKED BY : B. Smith	REMARK : A general remark.	SHEET : 1 OF 1
ENGINEER : Engineer 1	EASTING : 862689.0 ft	CONE TYPE : C+F+W2	CHECKED DATE : 6/2/2009		STATUS : 2
PROJECT : CPT Tool Project	NORTHING : 20558043.4 ft	CONE ID : S15CFIIP.D76	APPROVED BY : C. Doe		DATE : 23/12/2009
LOCATION : Somewhere	COORD. SYS. : MGA2020 Zone 56	OPERATOR : Operator A	APPROVED DATE : 6/2/2009		
PROJECT No. : 4.05.0	ELEVATION : 4.95 ft AHD				



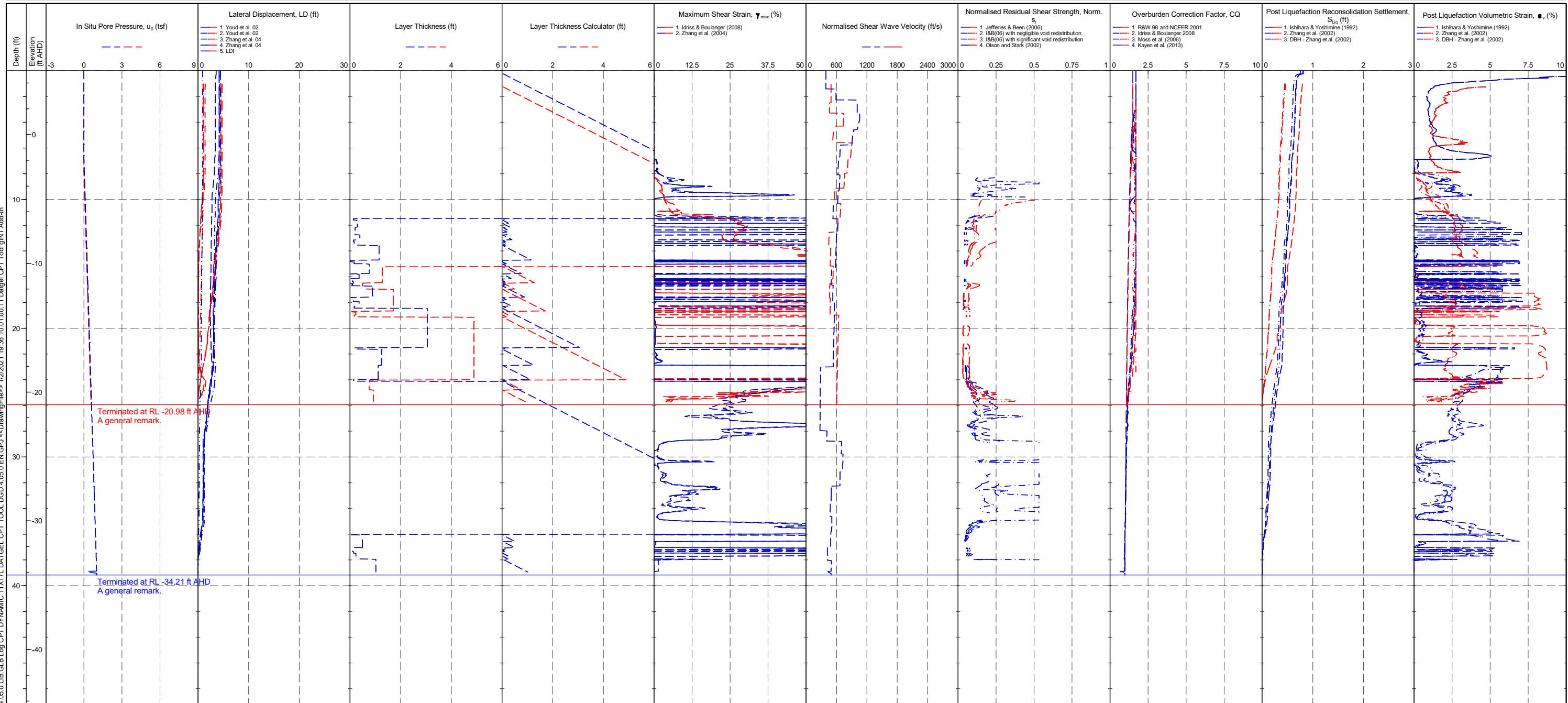
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CLIENT : Client 1 ENGINEER : Engineer 1 PROJECT : CPT Tool Project LOCATION : Somewhere PROJECT No. : 4.05.0		RIG : no anchoring CONE TYPE : C+F+W2 CONE ID : S15CFIIP.D76 OPERATOR : Operator A CHECKED BY : B. Smith CHECKED DATE : 6/2/2009 APPROVED BY : C. Doe APPROVED DATE : 6/2/2009		RIG : Crawler 1no anchoring CONE TYPE : C+F+W2 CONE ID : S15CFIIP.D76 OPERATOR : Operator A CHECKED BY : B. Smith CHECKED DATE : 6/2/2009 APPROVED BY : C. Doe APPROVED DATE : 6/2/2009		REMARK A general remark.  A general remark.		PointID 1 <b>CPT 05</b> STATUS : 2 DATE : 23/12/2009 AREA : Place LAYER : EASTING : 862689.0 ft NORTHING : 20558043.4 ft ELEVATION : 4.95 ft AHD		PointID 2 <b>CPT 04</b> STATUS : DATE : 12/11/2008 AREA : Place LAYER : EASTING : 862592.4 ft NORTHING : 20557961.7 ft ELEVATION : 3.94 ft AHD	
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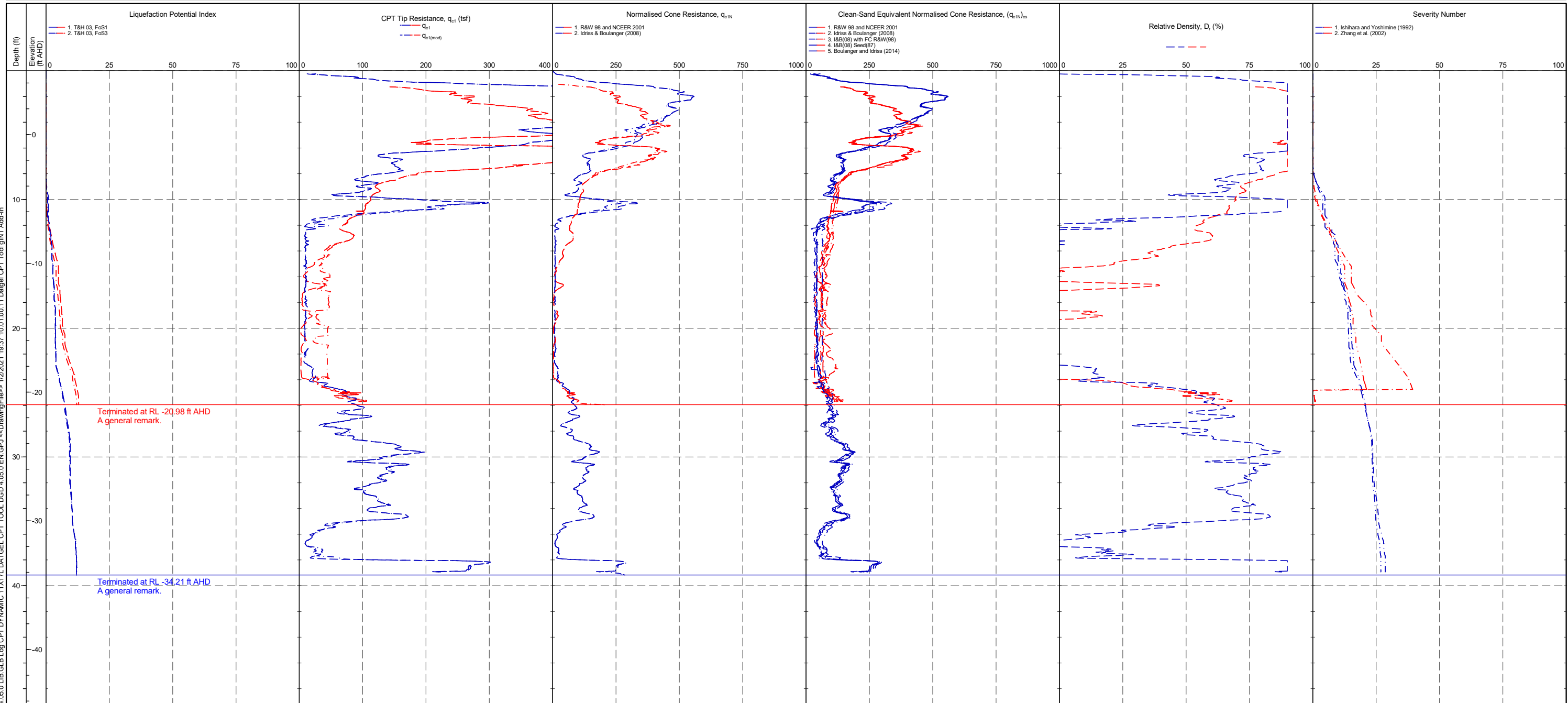


DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Log CPT DYNAMIC 11X17L DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <-DrawingFile> 1/2/2021 19:35:10.01.00.11 Datgel CPT Tool.gINT Add-in

CLIENT : Client 1 ENGINEER : Engineer 1 PROJECT : CPT Tool Project LOCATION : Somewhere PROJECT No. : 4.05.0		RIG : no anchoring CONE TYPE : C+F+W2 CONE ID : S15CFIIP.D76 OPERATOR : Operator A CHECKED BY : B. Smith CHECKED DATE : 6/2/2009 APPROVED BY : C. Doe APPROVED DATE : 6/2/2009		RIG : Crawler 1 no anchoring CONE TYPE : C+F+W2 CONE ID : S15CFIIP.D76 OPERATOR : Operator A CHECKED BY : B. Smith CHECKED DATE : 6/2/2009 APPROVED BY : C. Doe APPROVED DATE : 6/2/2009		REMARK A general remark.  A general remark.		PointID 1 <b>CPT 05</b> STATUS : 2 DATE : 23/12/2009 AREA : Place LAYER : EASTING : 862689.0 ft NORTHING : 20558043.4 ft ELEVATION : 4.95 ft AHD		PointID 2 <b>CPT 04</b> STATUS : DATE : 12/11/2008 AREA : Place LAYER : EASTING : 862592.4 ft NORTHING : 20557961.7 ft ELEVATION : 3.94 ft AHD	
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CLIENT : Client 1	RIG : no anchoring	RIG : Crawler 1 no anchoring	REMARK : A general remark.	PointID 1 : <b>CPT 05</b>	PointID 2 : <b>CPT 04</b>
ENGINEER : Engineer 1	CONE TYPE : C+F+W2	CONE TYPE : C+F+W2	REMARK : A general remark.	STATUS : 2	STATUS :
PROJECT : CPT Tool Project	CONE ID : S15CFIIP.D76	CONE ID : S15CFIIP.D76		DATE : 23/12/2009	DATE : 12/11/2008
LOCATION : Somewhere	OPERATOR : Operator A	OPERATOR : Operator A		AREA : Place	AREA : Place
PROJECT No. : 4.05.0	CHECKED BY : B. Smith	CHECKED BY : B. Smith		LAYER :	LAYER :
	CHECKED DATE : 6/2/2009	CHECKED DATE : 6/2/2009		EASTING : 862689.0 ft	EASTING : 862592.4 ft
	APPROVED BY : C. Doe	APPROVED BY : C. Doe		NORTHING : 20558043.4 ft	NORTHING : 20557961.7 ft
	APPROVED DATE : 6/2/2009	APPROVED DATE : 6/2/2009		ELEVATION : 4.95 ft AHD	ELEVATION : 3.94 ft AHD

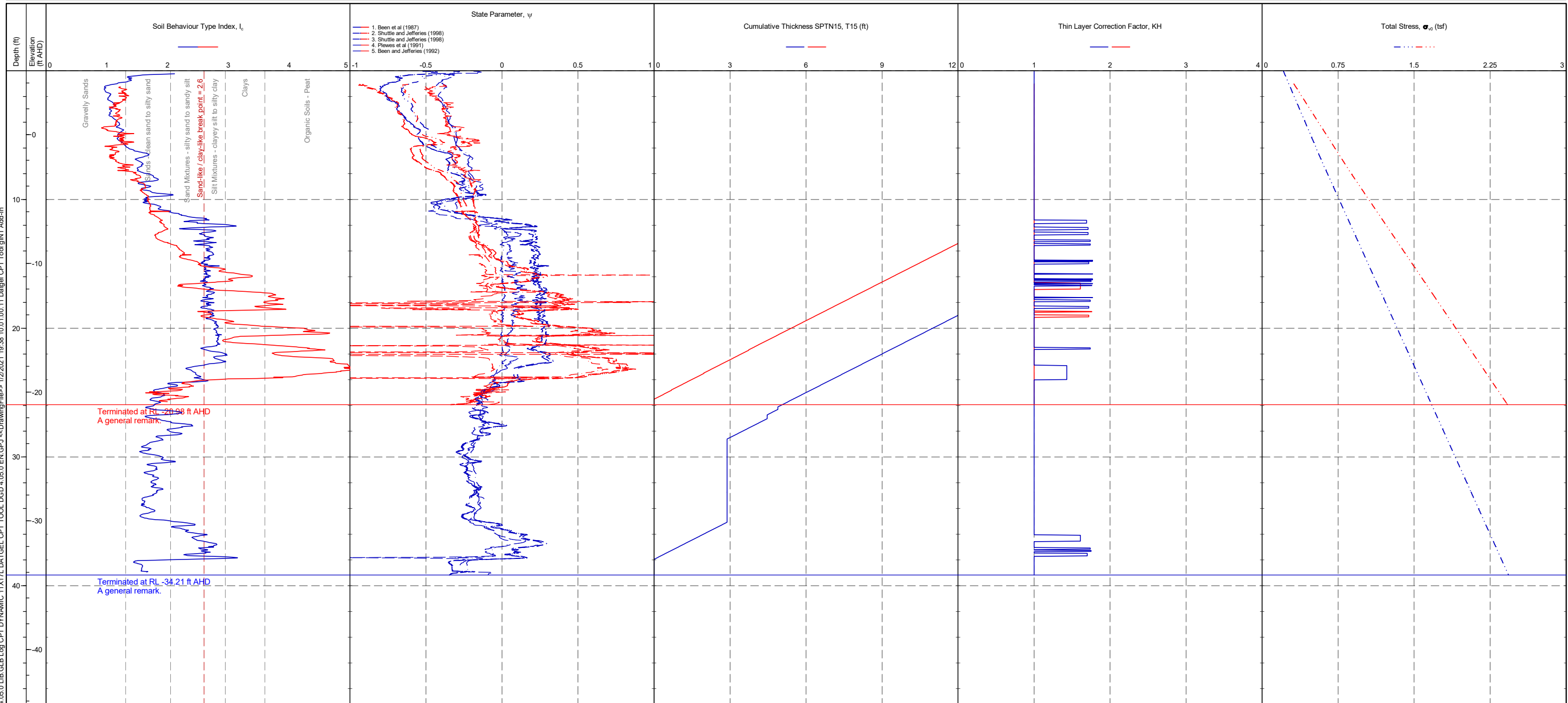


DATGEL\_CPT TOOL DGD 4.05.0 LIB.GLB Log CPT DYNAMIC 11X17L DATGEL\_CPT TOOL DGD 4.05.0 EN.GPJ <-DrawingFile> 1/2/2021 19:37:10.01.00.11 Datgel CPT Tool.gINT Add-in

Terminated at RL -20.98 ft AHD  
A general remark.

Terminated at RL -34.21 ft AHD  
A general remark.

CLIENT : Client 1 ENGINEER : Engineer 1 PROJECT : CPT Tool Project LOCATION : Somewhere PROJECT No. : 4.05.0	RIG : no anchoring CONE TYPE : C+F+W2 CONE ID : S15CFIIP.D76 OPERATOR : Operator A CHECKED BY : B. Smith CHECKED DATE : 6/2/2009 APPROVED BY : C. Doe APPROVED DATE : 6/2/2009	RIG : Crawler 1 no anchoring CONE TYPE : C+F+W2 CONE ID : S15CFIIP.D76 OPERATOR : Operator A CHECKED BY : B. Smith CHECKED DATE : 6/2/2009 APPROVED BY : C. Doe APPROVED DATE : 6/2/2009	REMARK : A general remark.  A general remark.	PointID 1 <b>CPT 05</b> STATUS : 2 DATE : 23/12/2009 AREA : Place LAYER : EASTING : 862689.0 ft NORTHING : 20558043.4 ft ELEVATION : 4.95 ft AHD	PointID 2 <b>CPT 04</b> STATUS : DATE : 12/11/2008 AREA : Place LAYER : EASTING : 862592.4 ft NORTHING : 20557961.7 ft ELEVATION : 3.94 ft AHD
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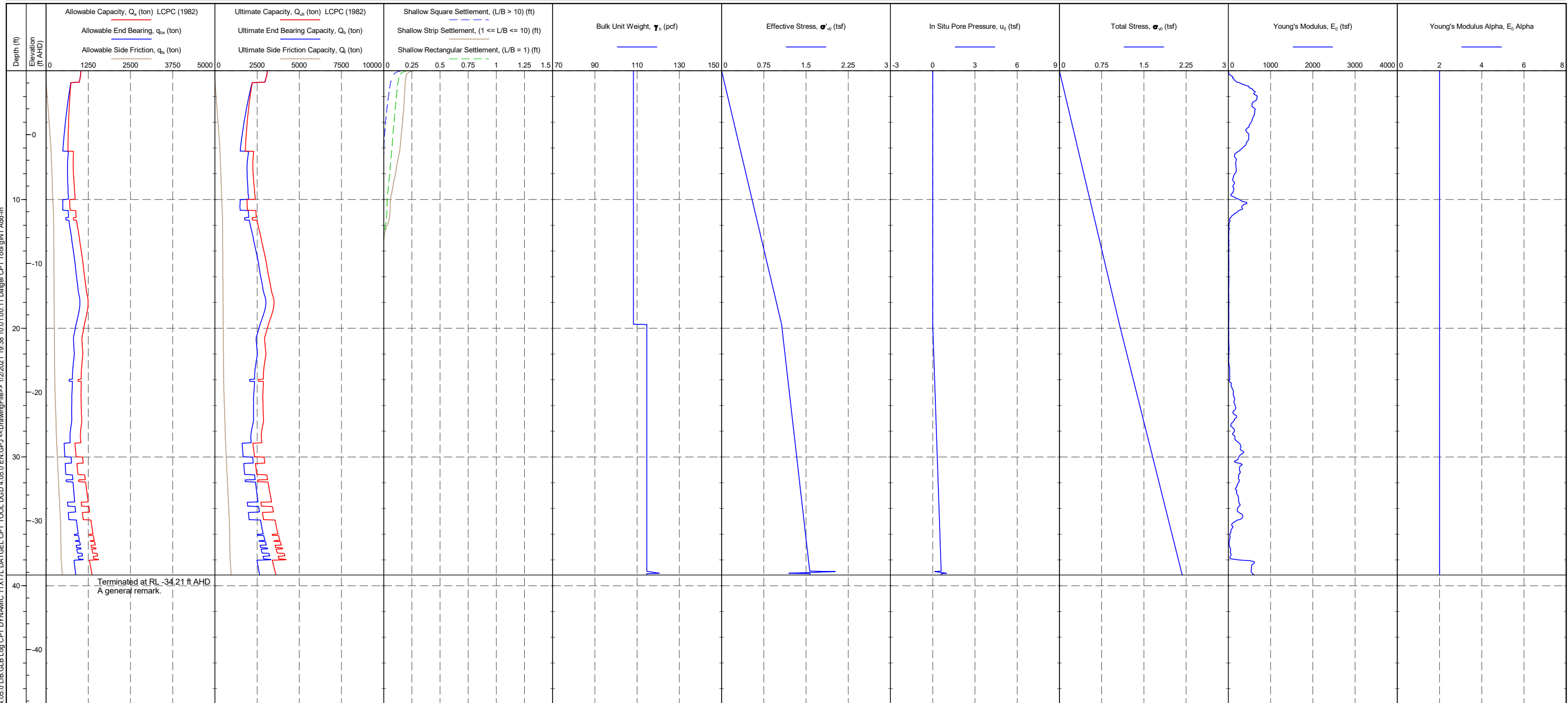


DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Log CPT DYNAMIC 11X17L DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <<DrawingFiles>> 1/2/2021 19:38:10.01.00.11 Datgel CPT Tool.gINT Add-in



PointID  
**CPT 05**

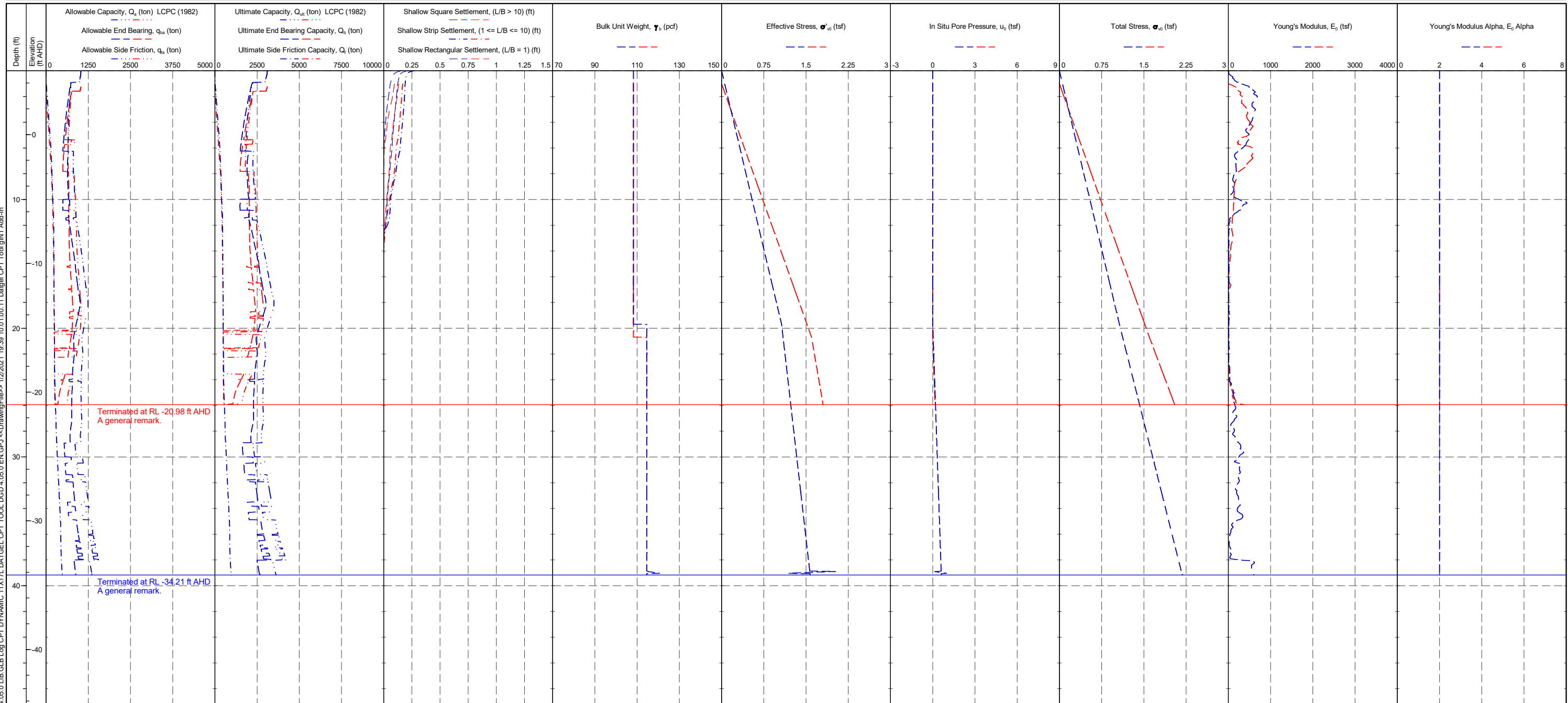
CLIENT : Client 1	AREA : Place	RIG : no anchoring	CHECKED BY : B. Smith	REMARK : A general remark.	SHEET : 1 OF 1
ENGINEER : Engineer 1	EASTING : 862689.0 ft	CONE TYPE : C+F+W2	CHECKED DATE : 6/2/2009		STATUS : 2
PROJECT : CPT Tool Project	NORTHING : 20558043.4 ft	CONE ID : S15CFIIP.D76	APPROVED BY : C. Doe		DATE : 23/12/2009
LOCATION : Somewhere	COORD. SYS. : MGA2020 Zone 56	OPERATOR : Operator A	APPROVED DATE : 6/2/2009		
PROJECT No. : 4.05.0	ELEVATION : 4.95 ft AHD				



DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Log CPT DYNAMIC 11X17L DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <-DrawingFile> 1/2/2021 19:38 10.01.00.11 Datgel CPT Tool.gINT Add-in

Terminated at RL -34.21 ft AHD  
A general remark.

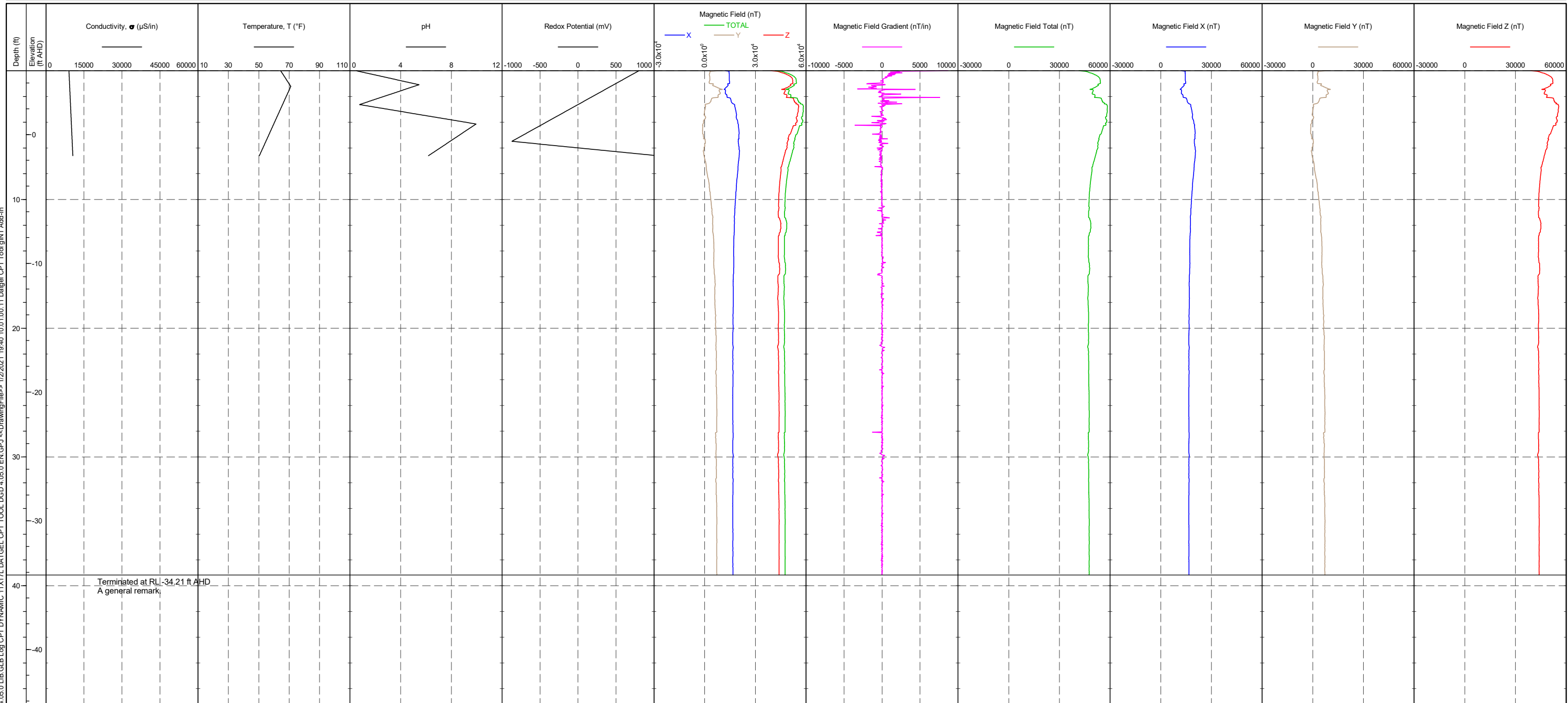
CLIENT : Client 1 ENGINEER : Engineer 1 PROJECT : CPT Tool Project LOCATION : Somewhere PROJECT No. : 4.05.0	RIG : no anchoring CONE TYPE : C+F+W2 CONE ID : S15CFIIP.D76 OPERATOR : Operator A CHECKED BY : B. Smith CHECKED DATE : 6/2/2009 APPROVED BY : C. Doe APPROVED DATE : 6/2/2009	RIG : Crawler 1 no anchoring CONE TYPE : C+F+W2 CONE ID : S15CFIIP.D76 OPERATOR : Operator A CHECKED BY : B. Smith CHECKED DATE : 6/2/2009 APPROVED BY : C. Doe APPROVED DATE : 6/2/2009	REMARK : A general remark.  A general remark.	PointID 1 <b>CPT 05</b> STATUS : 2 DATE : 23/12/2009 AREA : Place LAYER : EASTING : 862689.0 ft NORTHING : 20558043.4 ft ELEVATION : 4.95 ft AHD	PointID 2 <b>CPT 04</b> STATUS : DATE : 12/11/2008 AREA : Place LAYER : EASTING : 862592.4 ft NORTHING : 20557961.7 ft ELEVATION : 3.94 ft AHD
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DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <-DrawingFile> 1/2/2021 19:39 10.01.00.11 Datgel CPT Tool.gINT Add-in

PointID  
**CPT 05**

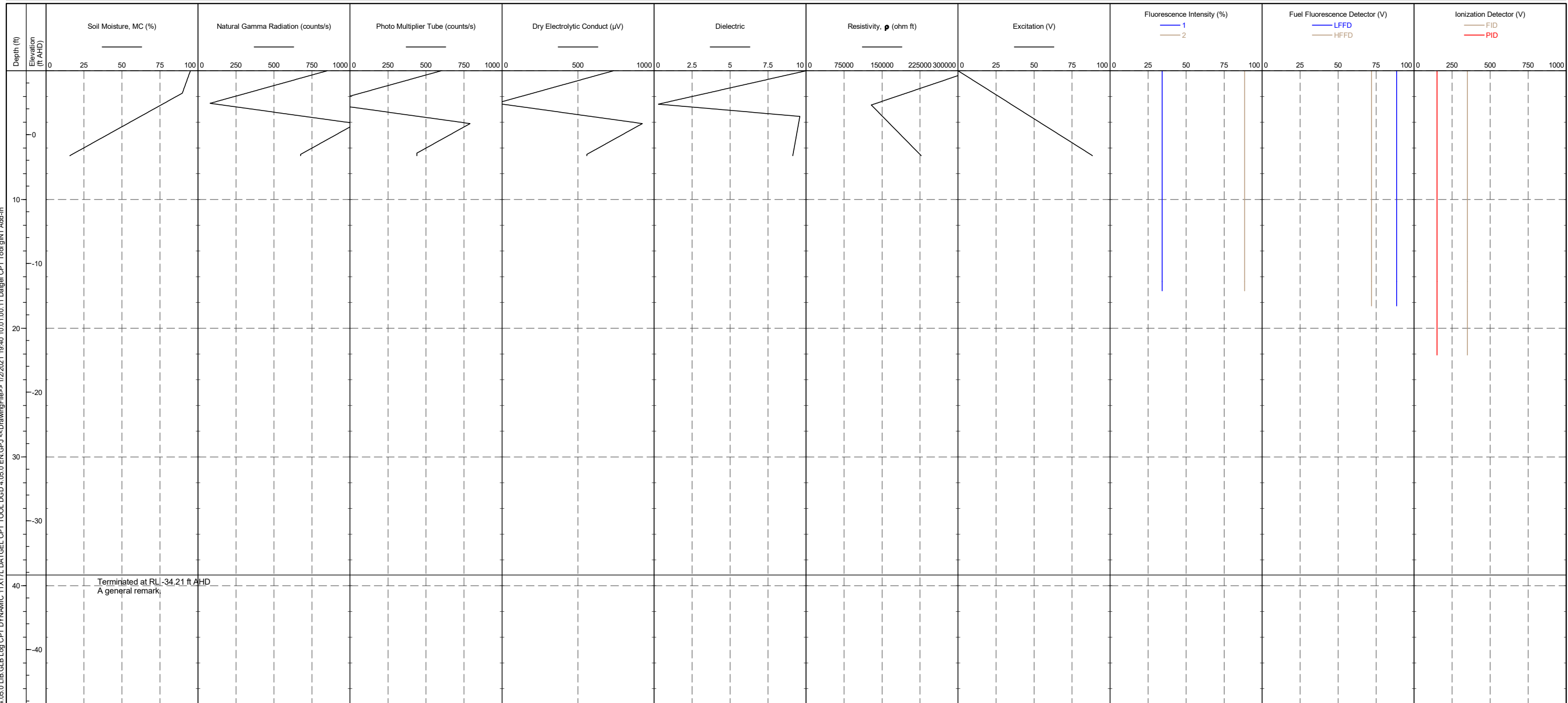
CLIENT : Client 1	AREA : Place	RIG : no anchoring	CHECKED BY : B. Smith	REMARK : A general remark.	SHEET : 1 OF 1
ENGINEER : Engineer 1	EASTING : 862689.0 ft	CONE TYPE : C+F+W2	CHECKED DATE : 6/2/2009		STATUS : 2
PROJECT : CPT Tool Project	NORTHING : 20558043.4 ft	CONE ID : S15CFIIP.D76	APPROVED BY : C. Doe		DATE : 23/12/2009
LOCATION : Somewhere	COORD. SYS. : MGA2020 Zone 56	OPERATOR : Operator A	APPROVED DATE : 6/2/2009		
PROJECT No. : 4.05.0	ELEVATION : 4.95 ft AHD				



DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Log CPT DYNAMIC 11X17L DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <-DrawingFile> 1/2/2021 19:40:10.01.00.11 Datgel CPT Tool.gINT Add.in

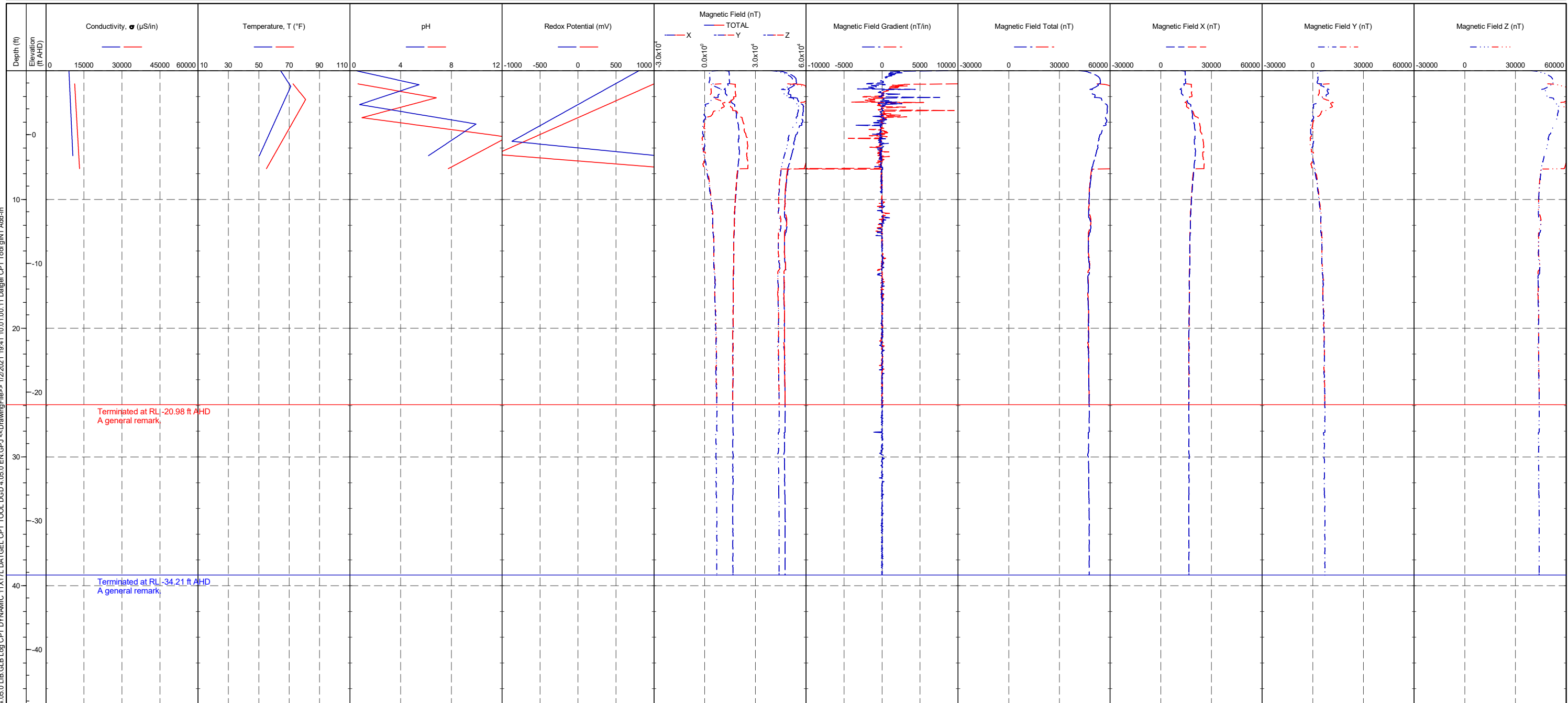
PointID  
**CPT 05**

CLIENT : Client 1	AREA : Place	RIG : no anchoring	CHECKED BY : B. Smith	REMARK : A general remark.	SHEET : 1 OF 1
ENGINEER : Engineer 1	EASTING : 862689.0 ft	CONE TYPE : C+F+W2	CHECKED DATE : 6/2/2009		STATUS : 2
PROJECT : CPT Tool Project	NORTHING : 20558043.4 ft	CONE ID : S15CFIIP.D76	APPROVED BY : C. Doe		DATE : 23/12/2009
LOCATION : Somewhere	COORD. SYS. : MGA2020 Zone 56	OPERATOR : Operator A	APPROVED DATE : 6/2/2009		
PROJECT No. : 4.05.0	ELEVATION : 4.95 ft AHD				



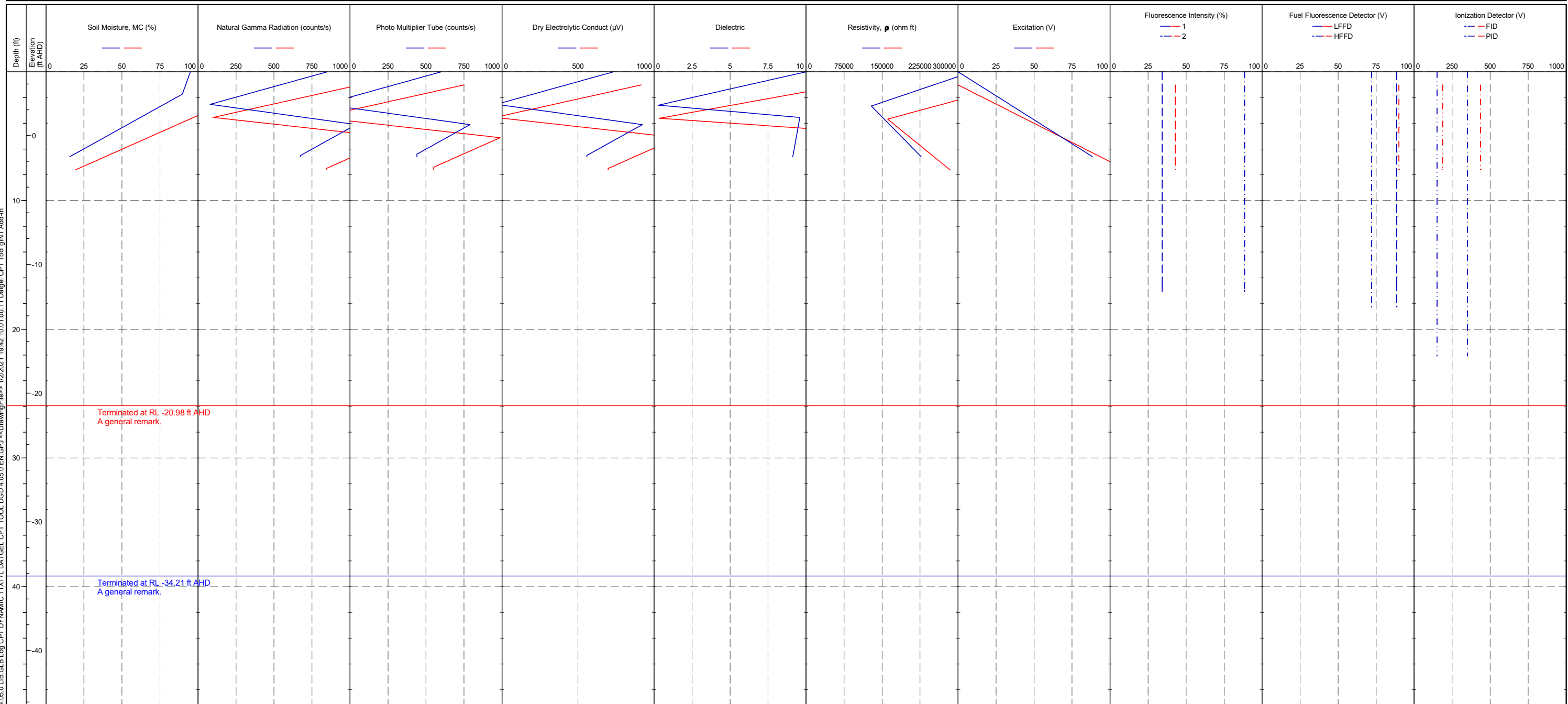
DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Log CPT DYNAMIC 11X17L DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <-DrawingFile> 1/2/2021 19:40:10.01.00.11 Datgel CPT Tool.gINT Add-in

CLIENT : Client 1	RIG : no anchoring	RIG : Crawler 1 no anchoring	REMARK : A general remark.	PointID 1 : <b>CPT 05</b>	PointID 2 : <b>CPT 04</b>
ENGINEER : Engineer 1	CONE TYPE : C+F+W2	CONE TYPE : C+F+W2	REMARK : A general remark.	STATUS : 2	STATUS : 2
PROJECT : CPT Tool Project	CONE ID : S15CFIIP.D76	CONE ID : S15CFIIP.D76		DATE : 23/12/2009	DATE : 12/11/2008
LOCATION : Somewhere	OPERATOR : Operator A	OPERATOR : Operator A		AREA : Place	AREA : Place
PROJECT No. : 4.05.0	CHECKED BY : B. Smith	CHECKED BY : B. Smith		LAYER :	LAYER :
	CHECKED DATE : 6/2/2009	CHECKED DATE : 6/2/2009		EASTING : 862689.0 ft	EASTING : 862592.4 ft
	APPROVED BY : C. Doe	APPROVED BY : C. Doe		NORTHING : 20558043.4 ft	NORTHING : 20557961.7 ft
	APPROVED DATE : 6/2/2009	APPROVED DATE : 6/2/2009		ELEVATION : 4.95 ft AHD	ELEVATION : 3.94 ft AHD



DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Log CPT DYNAMIC 11X17L DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <-DrawingFile> 1/2/2021 19:41:10.01.00.11 Datgel CPT Tool.gINT Add.in

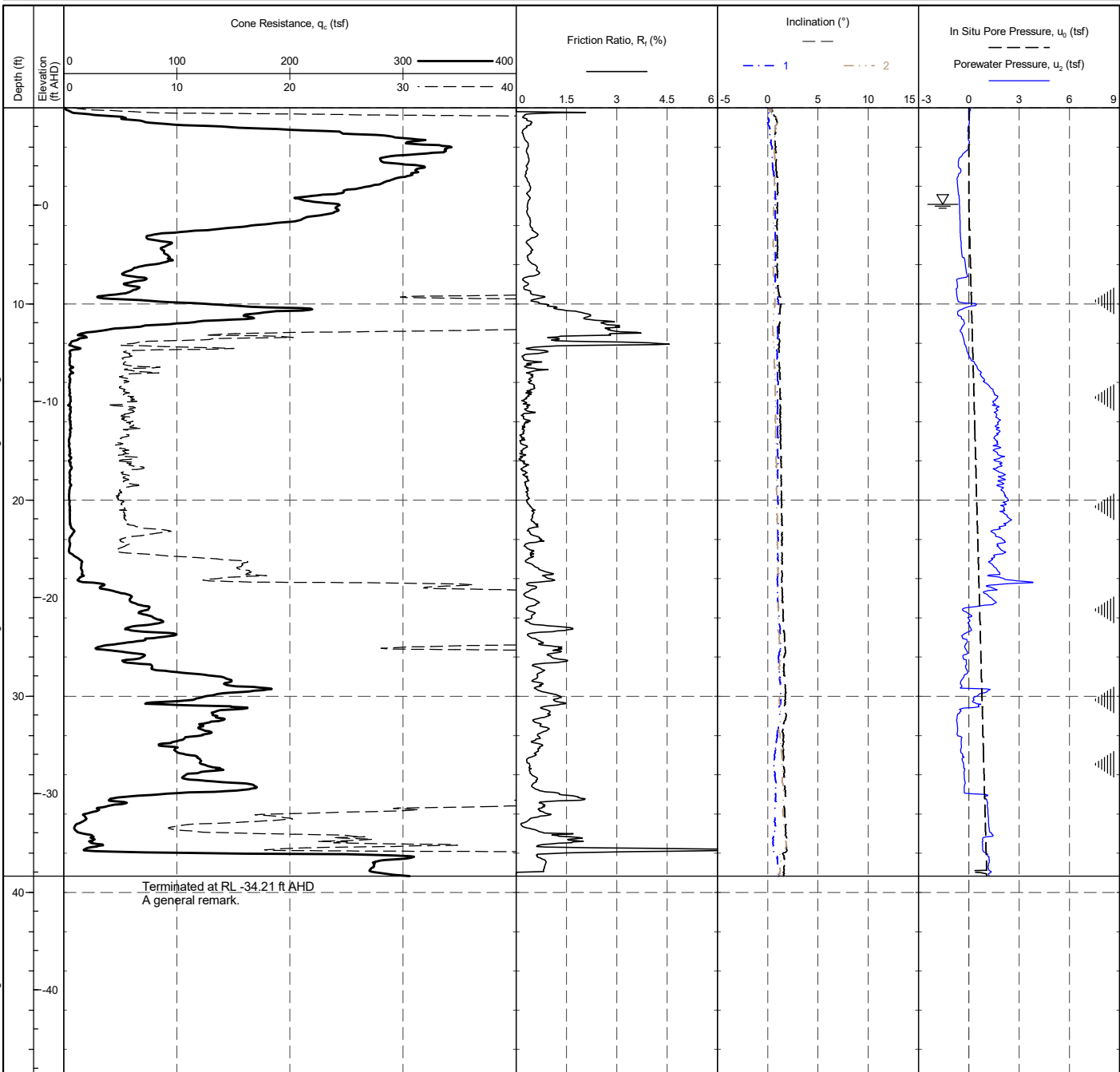
CLIENT : Client 1 ENGINEER : Engineer 1 PROJECT : CPT Tool Project LOCATION : Somewhere PROJECT No. : 4.05.0	RIG : no anchoring CONE TYPE : C+F+W2 CONE ID : S15CFIIP.D76 OPERATOR : Operator A CHECKED BY : B. Smith CHECKED DATE : 6/2/2009 APPROVED BY : C. Doe APPROVED DATE : 6/2/2009	RIG : Crawler 1 no anchoring CONE TYPE : C+F+W2 CONE ID : S15CFIIP.D76 OPERATOR : Operator A CHECKED BY : B. Smith CHECKED DATE : 6/2/2009 APPROVED BY : C. Doe APPROVED DATE : 6/2/2009	REMARK A general remark.  A general remark.	PointID 1 <b>CPT 05</b> STATUS : 2 DATE : 23/12/2009 AREA : Place LAYER : EASTING : 862689.0 ft NORTHING : 20558043.4 ft ELEVATION : 4.95 ft AHD	PointID 2 <b>CPT 04</b> STATUS : DATE : 12/11/2008 AREA : Place LAYER : EASTING : 862592.4 ft NORTHING : 20557961.7 ft ELEVATION : 3.94 ft AHD
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DATGEL\_CPT TOOL DGD 4.05.0.LIB.GLB Log CPT DYNAMIC 11X17L DATGEL\_CPT TOOL DGD 4.05.0.EN.GPJ <-DrawingFile> 1/2/2021 19:42:10.01.00.11 Datgel CPT Tool.gINT Add-in

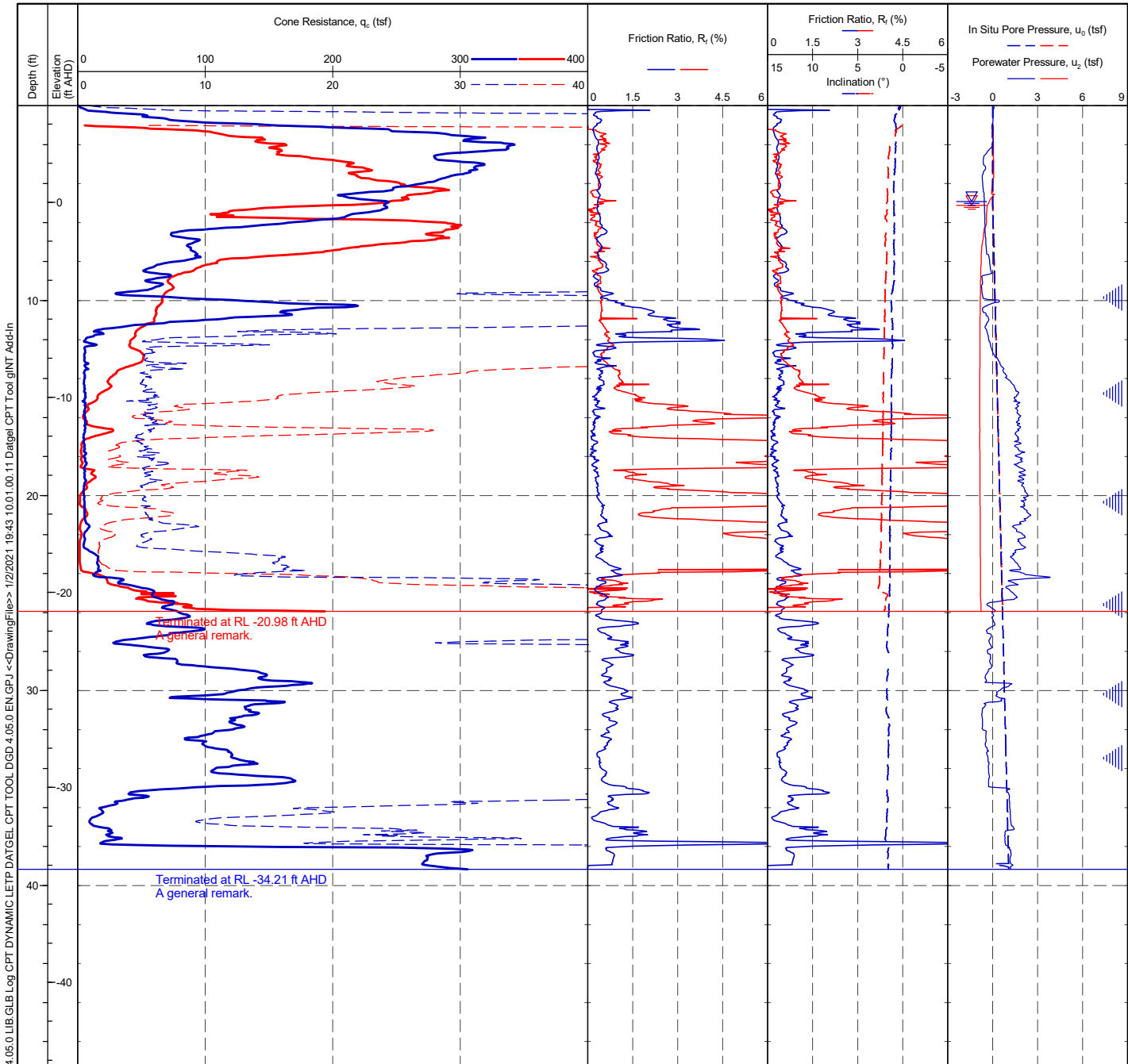
PointID  
**CPT 05**

CLIENT : Client 1	AREA : Place	SHEET : 1 OF 1
ENGINEER : Engineer 1	EASTING : 862689.0 ft	STATUS : 2
PROJECT : CPT Tool Project	NORTHING : 20558043.4 ft	DATE : 23/12/2009
LOCATION : Somewhere	COORD. SYS. : MGA2020 Zone 56	
PROJECT No. : 4.05.0	ELEVATION : 4.95 ft AHD	



DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Lib Log CPT DYNAMIC LETP DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <<DrawingFile>> 1/2/2021 19:43:10.01.00.11 Datgel.CPT.Tool.gINT.AddIn

PointID 1 <b>CPT 05</b>	PointID 2 <b>CPT 04</b>
CLIENT : Client 1 ENGINEER : Engineer 1 PROJECT : CPT Tool Project LOCATION : Somewhere PROJECT No. : 4.05.0	STATUS : 2 DATE : 23/12/2009 AREA : Place LAYER : EASTING : 862689.0 ft NORTHING : 862689.0 ft ELEVATION : 4.95 ft AHD
	STATUS : DATE : 12/11/2008 AREA : Place LAYER : EASTING : 862592.4 ft NORTHING : 20557961.7 ft ELEVATION : 3.94 ft AHD

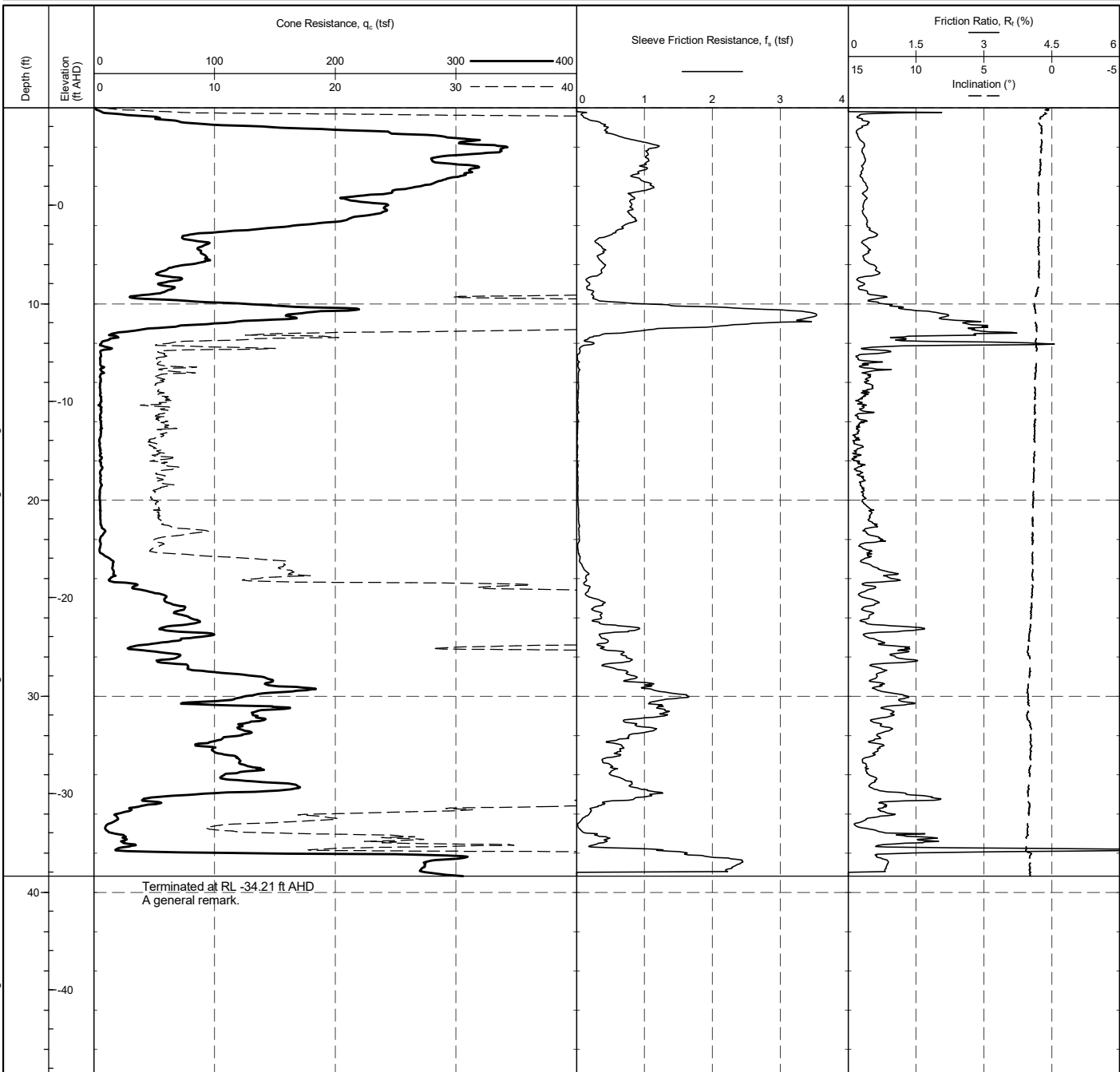


DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Log CPT DYNAMIC LETP DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <<DrawingFile>> 1/2/2021 19:43:10.01.00.11 Datgel CPT Tool gINT Add-in



PointID  
**CPT 05**

CLIENT : Client 1	AREA : Place	SHEET : 1 OF 1
ENGINEER : Engineer 1	EASTING : 862689.0 ft	STATUS : 2
PROJECT : CPT Tool Project	NORTHING : 20558043.4 ft	DATE : 23/12/2009
LOCATION : Somewhere	COORD. SYS. : MGA2020 Zone 56	
PROJECT No. : 4.05.0	ELEVATION : 4.95 ft AHD	

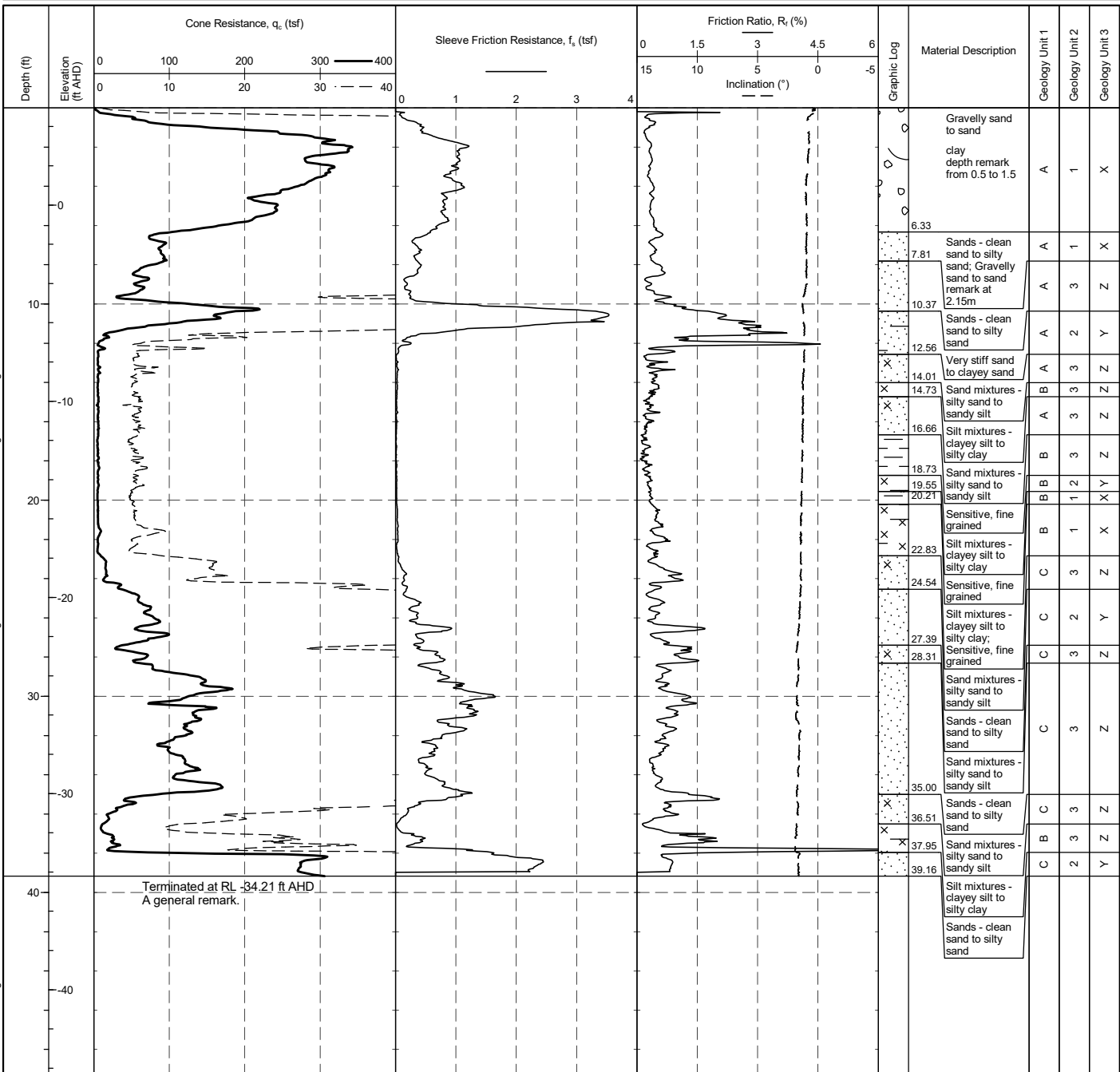


DATGEL.CPT.TOOL.DGD.4.05.0.LIB.G.I.B.L.og.CPT.LETFP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ.<<DrawingFile>> 1/2/2021 19:43:10.01.00.11 Datgel.CPT.Tool.gINT.Add-In

RIG : no anchoring	CHECKED BY : B. Smith	REMARK A general remark.
CONE TYPE : C+F+W2	CHECKED DATE : 6/2/2009	
CONE ID : S15CFIIP.D76	APPROVED BY : C. Doe	
OPERATOR : Operator A	APPROVED DATE : 6/2/2009	

PointID  
**CPT 05**

CLIENT : Client 1	AREA : Place	SHEET : 1 OF 1
ENGINEER : Engineer 1	EASTING : 862689.0 ft	STATUS : 2
PROJECT : CPT Tool Project	NORTHING : 20558043.4 ft	DATE : 23/12/2009
LOCATION : Somewhere	COORD. SYS. : MGA2020 Zone 56	
PROJECT No. : 4.05.0	ELEVATION : 4.95 ft AHD	

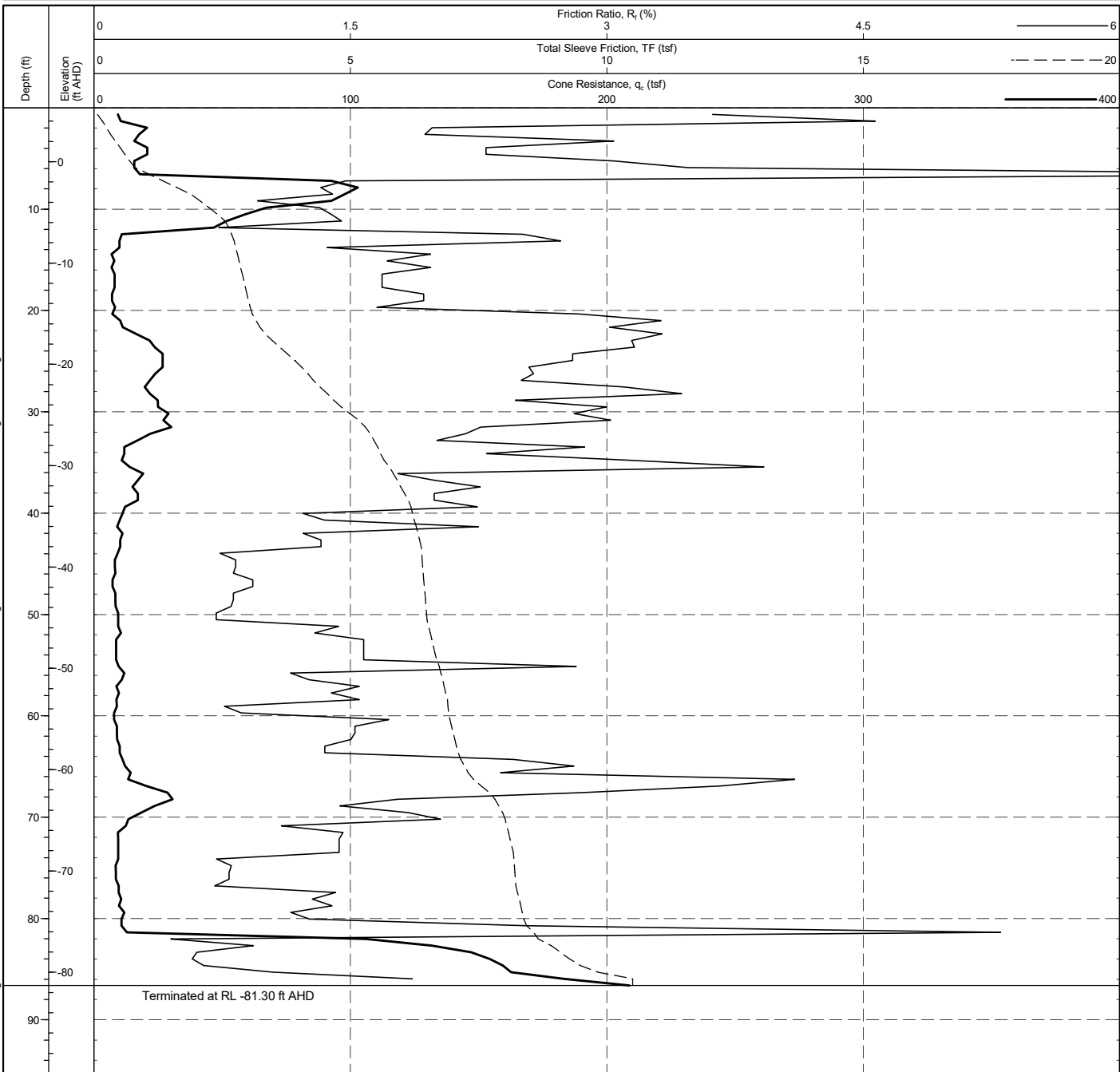


RIG : no anchoring	CHECKED BY : B. Smith	REMARK A general remark.
CONE TYPE : C+F+W2	CHECKED DATE : 6/2/2009	
CONE ID : S15CFIIP.D76	APPROVED BY : C. Doe	
OPERATOR : Operator A	APPROVED DATE : 6/2/2009	

DATGEL.CPT TOOL DGD 4.05.0 EN.GPJ <<DrawingFiles>> 1/2/2021 19:43 10.01.00.11 Datgel CPT Tool.gINT Add-in

PointID  
**V-Beg 01**

CLIENT : Client 1	AREA :	SHEET : 1 OF 1
ENGINEER : Engineer 1	EASTING : 862262.1 ft	STATUS :
PROJECT : CPT Tool Project	NORTHING : 20557678.5 ft	DATE :
LOCATION : Somewhere	COORD. SYS. : MGA2020 Zone 56	
PROJECT No. : 4.05.0	ELEVATION : 5.31 ft AHD	

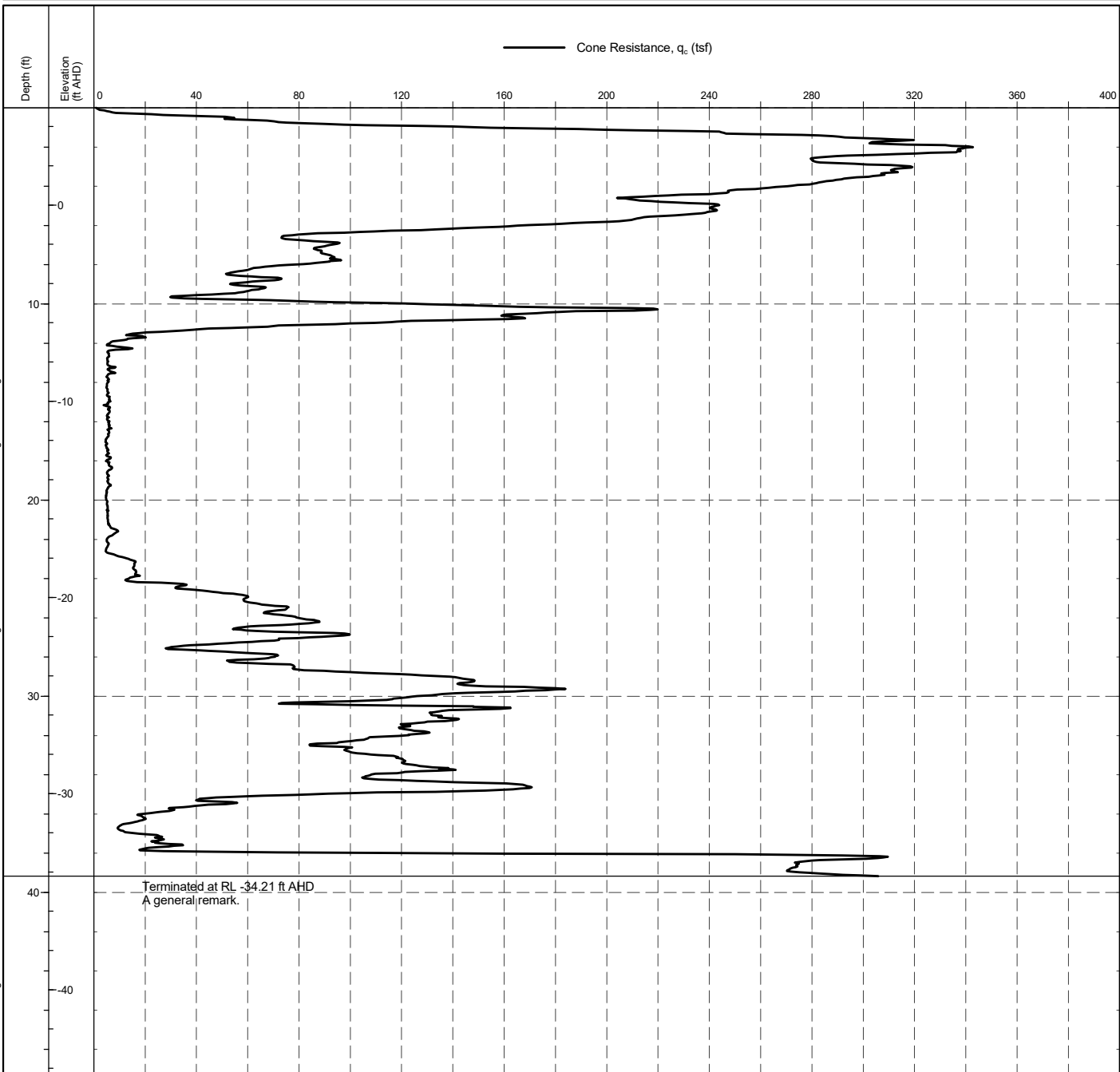


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RIG :	CHECKED BY :	REMARK
CONE TYPE :	CHECKED DATE :	
CONE ID : Beg 01	APPROVED BY :	
OPERATOR :	APPROVED DATE :	

PointID  
**CPT 05**

CLIENT : Client 1	AREA : Place	SHEET : 1 OF 1
ENGINEER : Engineer 1	EASTING : 862689.0 ft	STATUS : 2
PROJECT : CPT Tool Project	NORTHING : 20558043.4 ft	DATE : 23/12/2009
LOCATION : Somewhere	COORD. SYS. : MGA2020 Zone 56	
PROJECT No. : 4.05.0	ELEVATION : 4.95 ft AHD	

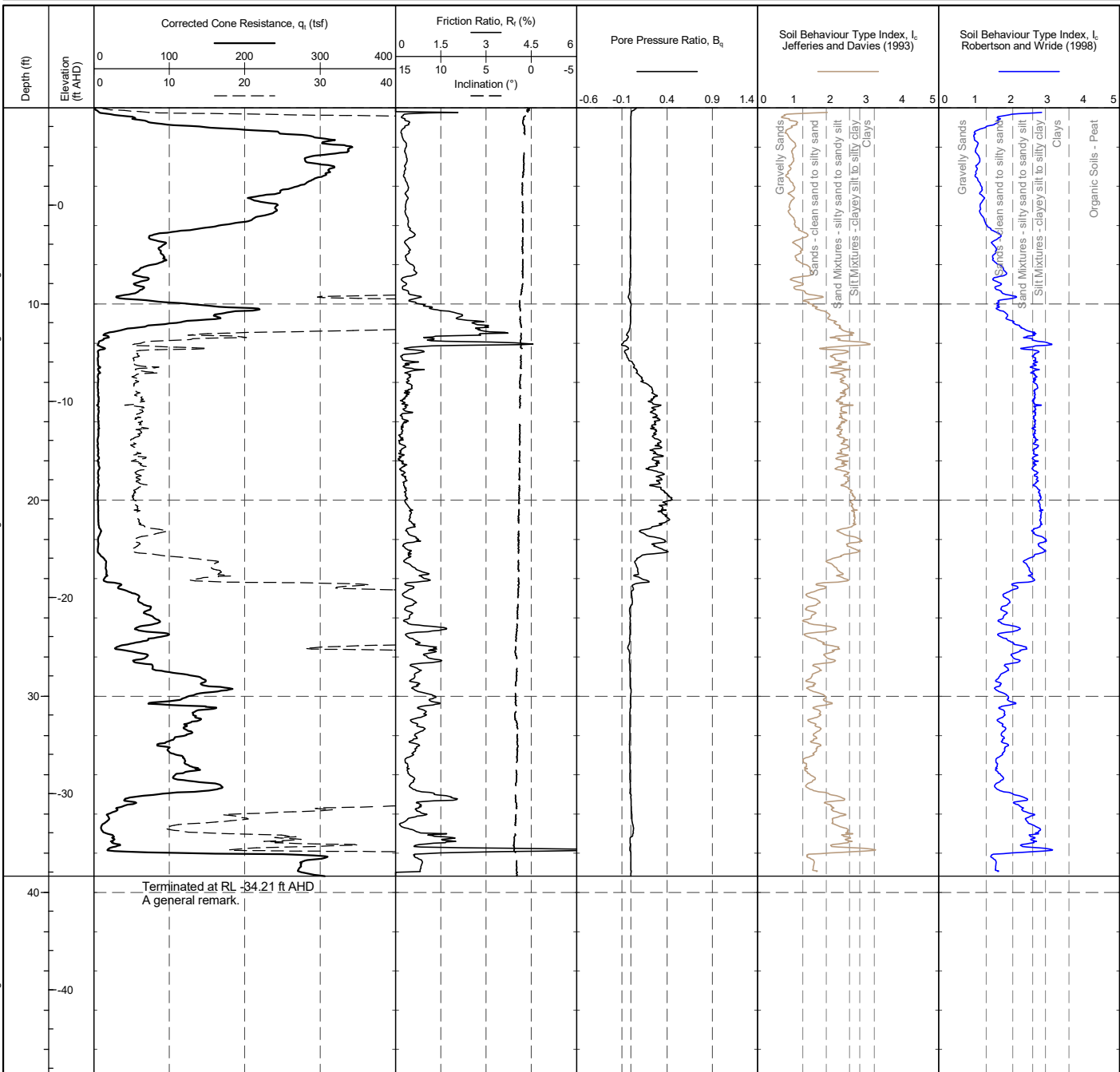


DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLIB.Log.CPT.QC ONLY LETIP DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <<DrawingFile>> 1/22/2021 19:43:10.01.00.11 Datgel.CPT.Tool.gINT.Add-In

RIG : no anchoring	CHECKED BY : B. Smith	REMARK A general remark.
CONE TYPE : C+F+W2	CHECKED DATE : 6/2/2009	
CONE ID : S15CFIIP.D76	APPROVED BY : C. Doe	
OPERATOR : Operator A	APPROVED DATE : 6/2/2009	

PointID  
**CPT 05**

CLIENT : Client 1	AREA : Place	SHEET : 1 OF 1
ENGINEER : Engineer 1	EASTING : 862689.0 ft	STATUS : 2
PROJECT : CPT Tool Project	NORTHING : 20558043.4 ft	DATE : 23/12/2009
LOCATION : Somewhere	COORD. SYS. : MGA2020 Zone 56	
PROJECT No. : 4.05.0	ELEVATION : 4.95 ft AHD	

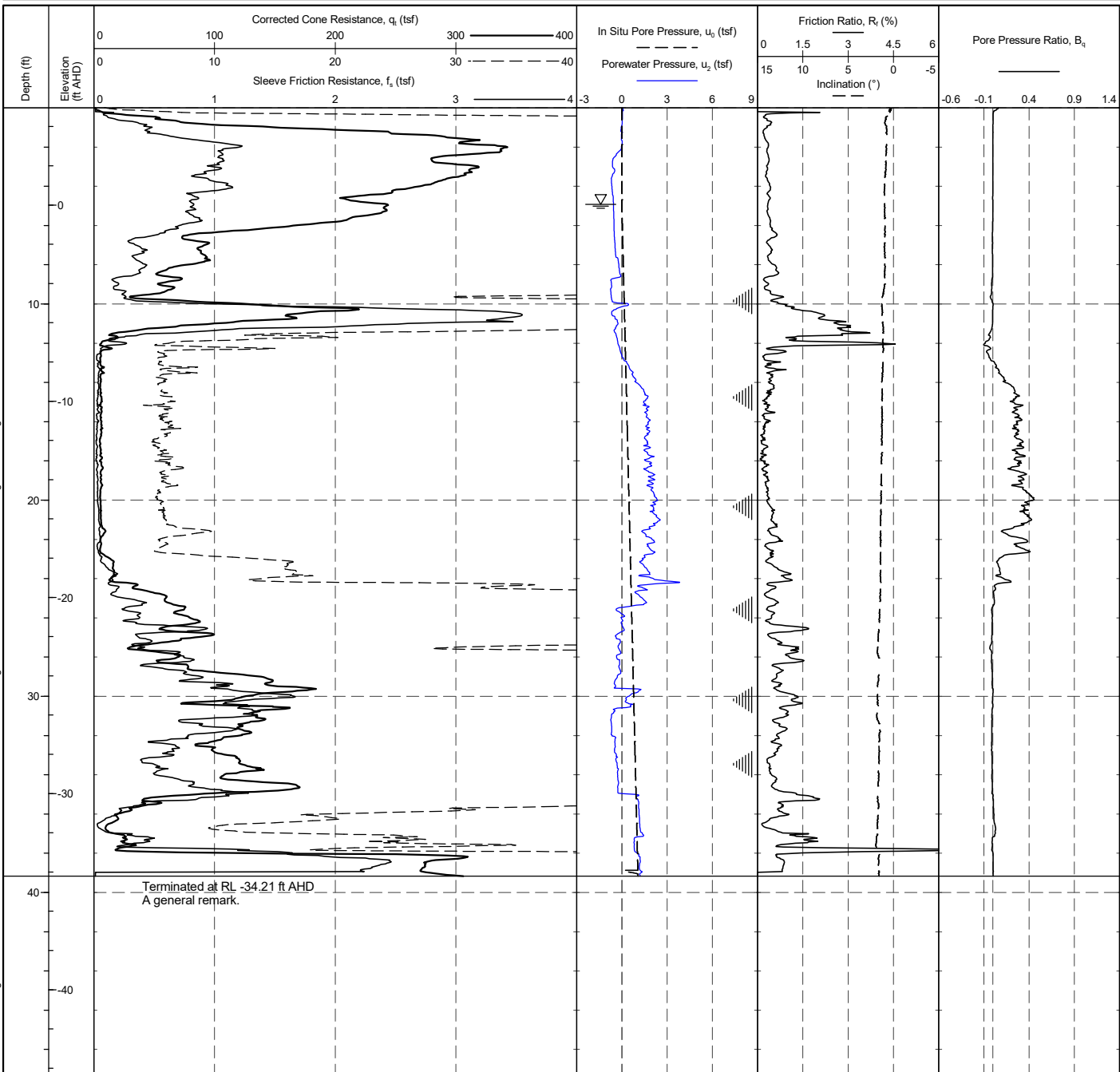


DATGEL\_CPT\_TOOL\_DGD 4.05.0 LIB.GLB Log CPT SOIL BEHAVIOUR TYPE INDEX LEIP.DATGEL\_CPT\_TOOL\_DGD 4.05.0 EN.GPJ <-DrawingFile> 1/2/2021 19:44 10.01.00.11 Datgel CPT Tool.gINT\_Add.in

RIG : no anchoring	CHECKED BY : B. Smith	REMARK A general remark.
CONE TYPE : C+F+W2	CHECKED DATE : 6/2/2009	
CONE ID : S15CFIIP.D76	APPROVED BY : C. Doe	
OPERATOR : Operator A	APPROVED DATE : 6/2/2009	

PointID  
**CPT 05**

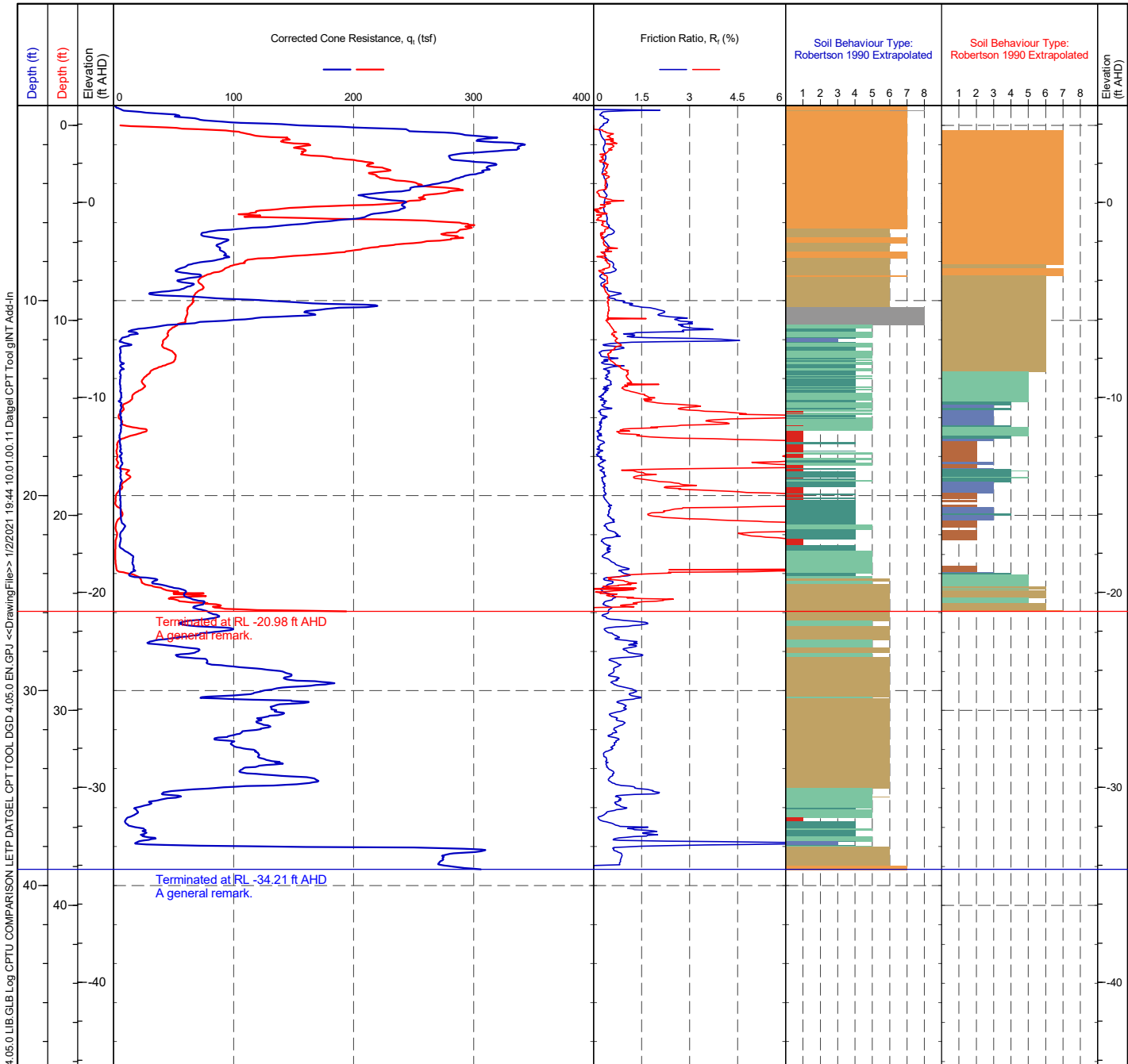
CLIENT : Client 1	AREA : Place	SHEET : 1 OF 1
ENGINEER : Engineer 1	EASTING : 862689.0 ft	STATUS : 2
PROJECT : CPT Tool Project	NORTHING : 20558043.4 ft	DATE : 23/12/2009
LOCATION : Somewhere	COORD. SYS. : MGA2020 Zone 56	
PROJECT No. : 4.05.0	ELEVATION : 4.95 ft AHD	



DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.LOG.CPTIU.LETTP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <<DrawingFile>> 1/22/2021 19:44 10.01.00.11.Datgel.CPT.Tool.gINT.Add-In

RIG : no anchoring	CHECKED BY : B. Smith	REMARK A general remark.
CONE TYPE : C+F+W2	CHECKED DATE : 6/2/2009	
CONE ID : S15CFIIP.D76	APPROVED BY : C. Doe	
OPERATOR : Operator A	APPROVED DATE : 6/2/2009	

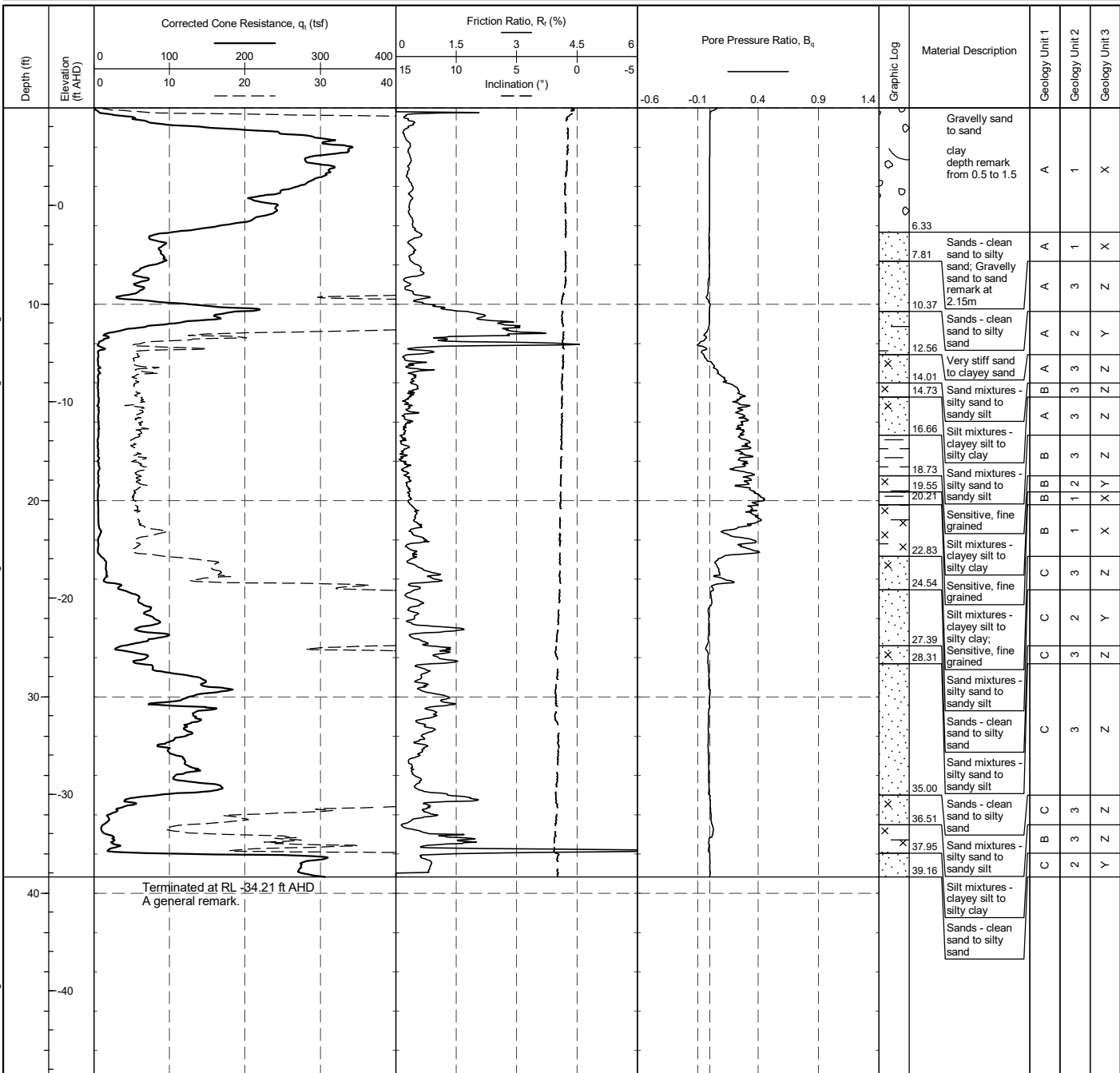
PointID 1 <b>CPT 05</b>	PointID 2 <b>CPT 04</b>
CLIENT : Client 1 ENGINEER : Engineer 1 PROJECT : CPT Tool Project LOCATION : Somewhere PROJECT No. : 4.05.0	STATUS : 2 DATE : 23/12/2009 AREA : Place LAYER : EASTING : 862689.0 ft NORTHING : 862689.0 ft ELEVATION : 4.95 ft AHD
	STATUS : DATE : 12/11/2008 AREA : Place LAYER : EASTING : 862592.4 ft NORTHING : 20557961.7 ft ELEVATION : 3.94 ft AHD



DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLIB.Log.CPTU.COMPARISON.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <<DrawingFile>> 1/2/2021 19:44 10.01.00.11 Datgel.CPT.Tool.gINT.Add-in

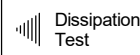
PointID  
**CPT 05**

CLIENT : Client 1	AREA : Place	SHEET : 1 OF 1
ENGINEER : Engineer 1	EASTING : 862689.0 ft	STATUS : 2
PROJECT : CPT Tool Project	NORTHING : 20558043.4 ft	DATE : 23/12/2009
LOCATION : Somewhere	COORD. SYS. : MGA2020 Zone 56	
PROJECT No. : 4.05.0	ELEVATION : 4.95 ft AHD	



DATGEL.CPT TOOL DGD 4.05.0 LIB.GLB Log CPTU DERIVED MATERIAL LEITP.DATGEL.CPT TOOL DGD 4.05.0 EN.GPJ <<DrawingFile>> 1/2/2021 19:44:10.01.00.11 Datgel.CPT Tool.gINT Add-In

RIG : no anchoring	CHECKED BY : B. Smith	REMARK A general remark.
CONE TYPE : C+F+W2	CHECKED DATE : 6/2/2009	
CONE ID : S15CFIIP.D76	APPROVED BY : C. Doe	
OPERATOR : Operator A	APPROVED DATE : 6/2/2009	



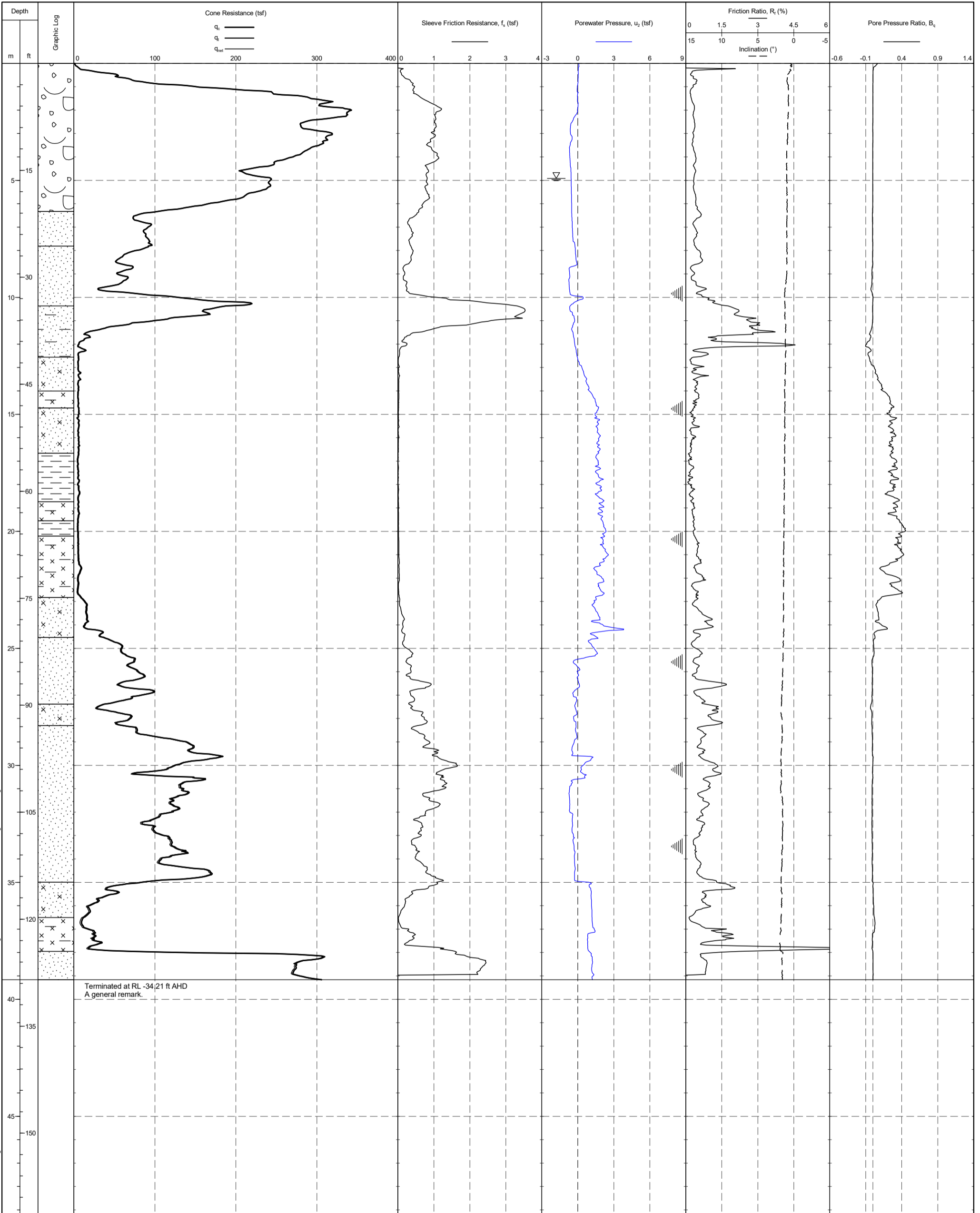


PointID  
**CPT 05**

CLIENT : Client 1  
ENGINEER : Engineer 1  
PROJECT : CPT Tool Project  
LOCATION : Somewhere  
PROJECT No. : 4.05.0

AREA : Place  
EASTING : 862689.0 ft  
NORTHING : 20558043.4 ft  
COORD. SYS. : MGA2020 Zone 56  
ELEVATION : 4.95 ft AHD

SHEET : 1 OF 1  
STATUS : 2  
DATE : 23/12/2009



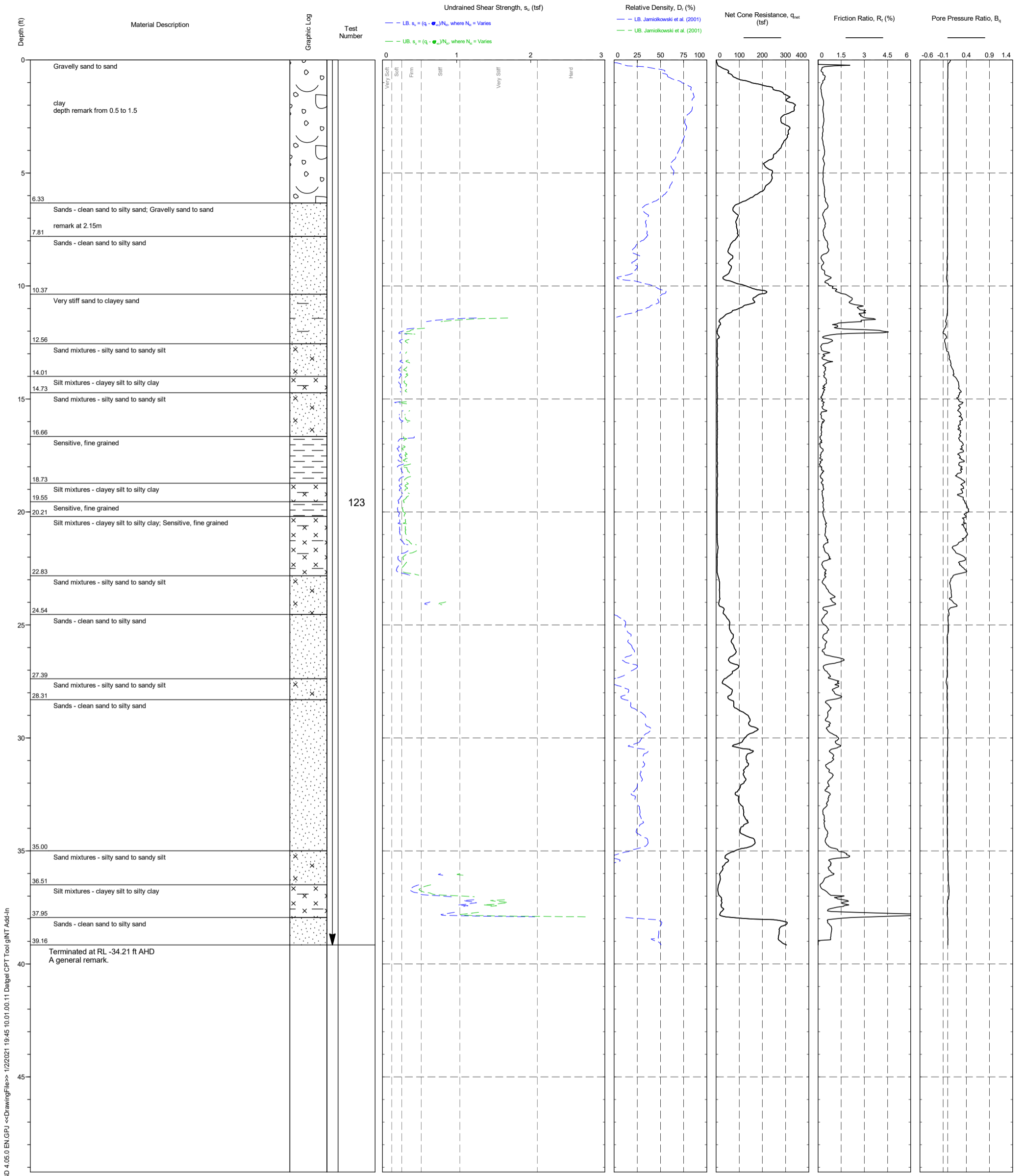
RIG : no anchoring  
CONE TYPE : C+F+W2  
CONE ID : S15CFIIP.D76  
OPERATOR : Operator A

CHECKED BY : B. Smith  
CHECKED DATE : 6/2/2009  
APPROVED BY : C. Doe  
APPROVED DATE : 6/2/2009



REMARK  
A general remark.

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Log CPTU DERIVED Asp DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <<DrawingFile>> 1/2/2021 19:44:10.01.00.11 Datgel CPT Tool gINT Add-in



**NOTES:**  
A general remark.

**KEY**

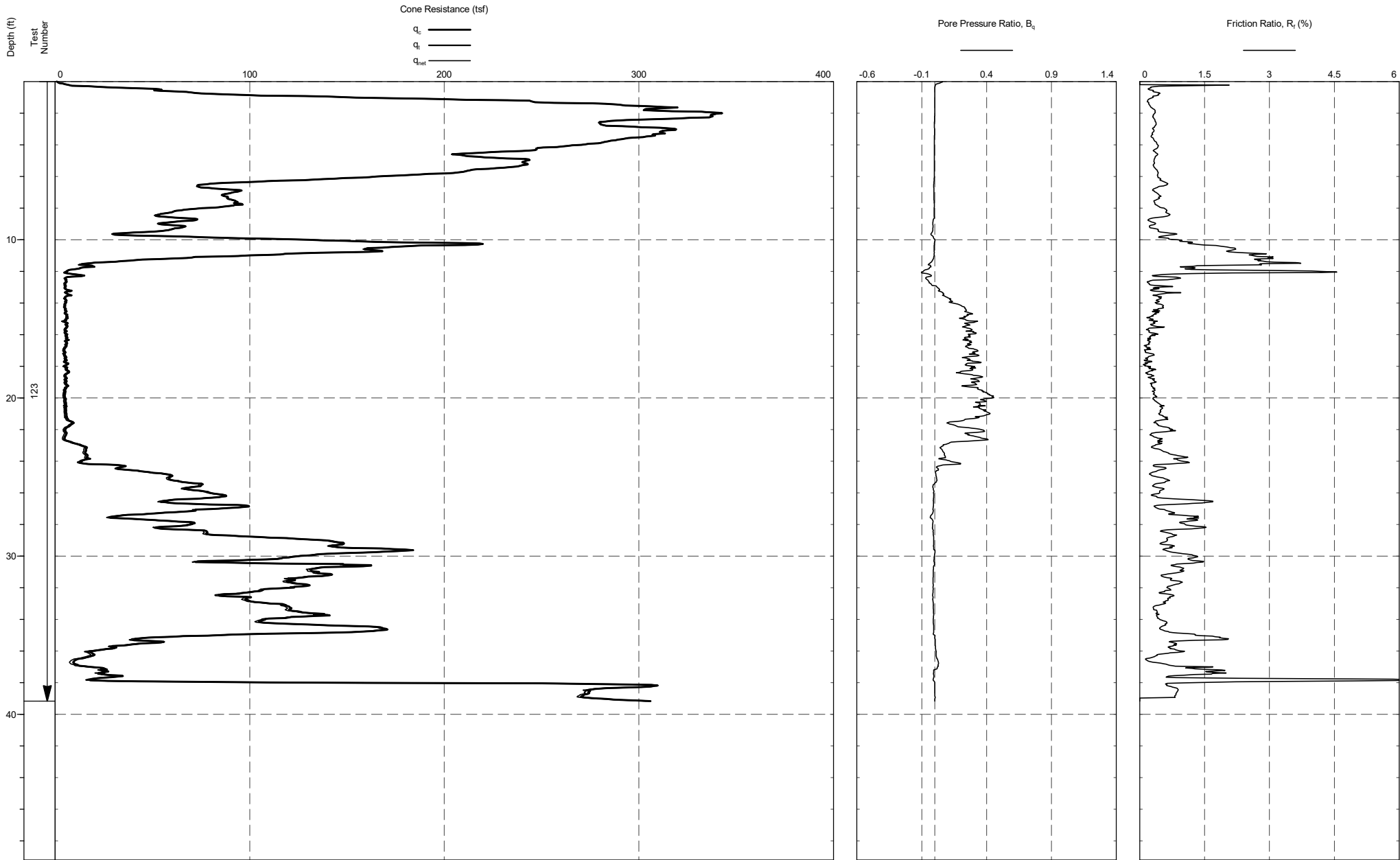
LOCATION : Somewhere  
 COORDINATES 862689.0 ftE 20558043.4 ftN MGA2020 Zone 56

MADE BY : Operator A  
 DATE : 23/12/2009  
 WATER DEPTH -4.95 ft AHD

DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <<DrawingFile>> 1/22/2021 19:45 10:01:00.11 Datgel CPT Tool gINT Add-In



DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Log CPTU DERIVED A4L.DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <<DrawingFile>> 1/22/2021 19:45:10.01.00.11 Datgel CPT Tool gINT Add-in



LOCATION : Somewhere  
 COORDINATES : 862689.0 ftE 20558043.4 ftN MGA2020 Zone 56

MADE BY : Operator A  
 DATE : 23/12/2009  
 WATER DEPTH : -4.95 ft AHD

**SEABED CPT CPT 05 (SHEET 1 OF 1)**

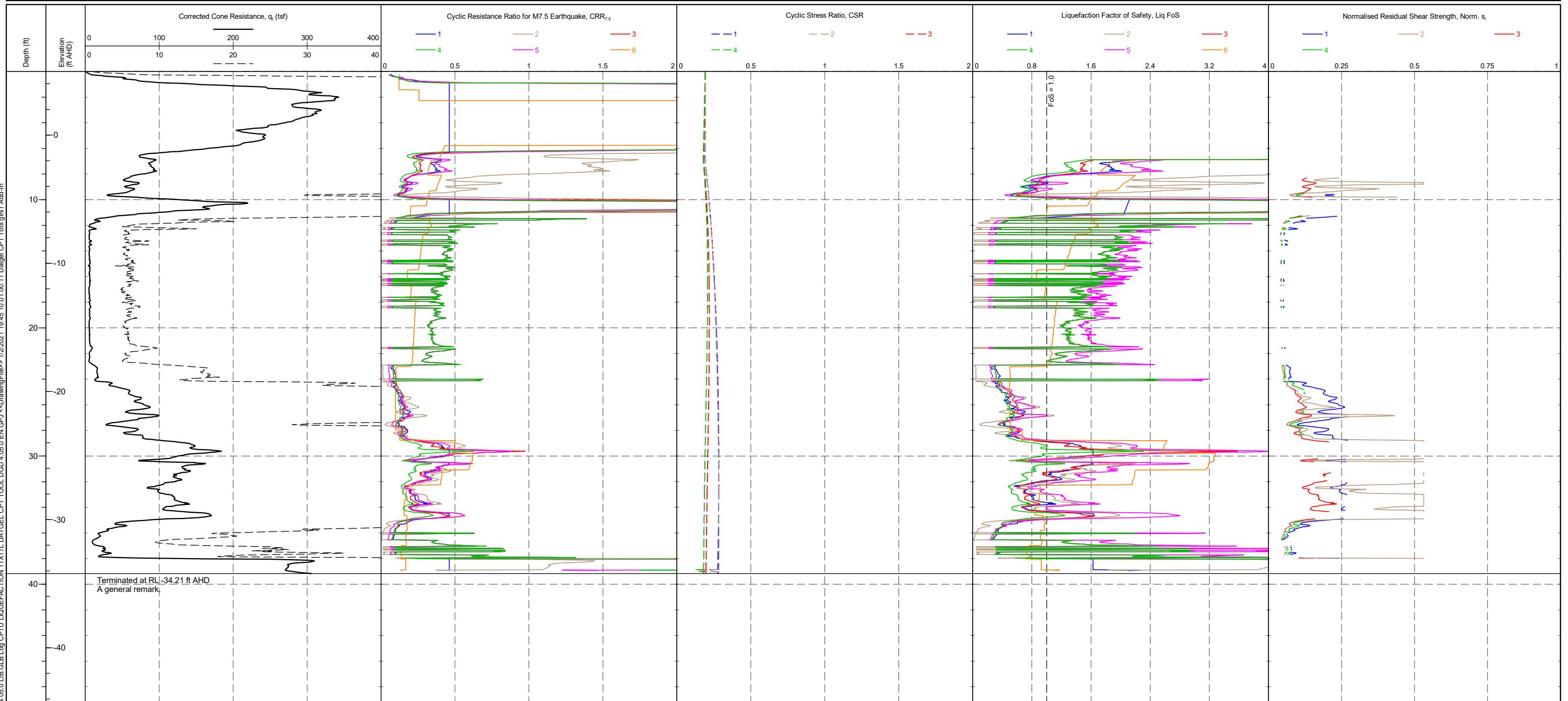
PointID

**CPT 05**

CLIENT : Client 1  
ENGINEER : Engineer 1  
PROJECT : CPT Tool Project  
LOCATION : Somewhere  
PROJECT No. : 4.05.0

AREA : Place  
EASTING : 862689.0 ft  
NORTHING : 20558043.4 ft  
COORD. SYS. : MGA2020 Zone 56  
ELEVATION : 4.95 ft AHD

SHEET : 1 OF 1  
STATUS : 2  
DATE : 23/12/2009



RIG : no anchoring  
CONE TYPE : C+F+W2  
CONE ID : S15CFIIP.D76  
OPERATOR : Operator A

CHECKED BY : B. Smith  
CHECKED DATE : 6/2/2009  
APPROVED BY : C. Doe  
APPROVED DATE : 6/2/2009

Liq Cyclic Resistance Ratio Method:  
1. R&W 98 & NCEER 01  
2. J&B 06  
3. I&B 08  
4. I&B 08, FC R&W 98  
5. Moss et al. 06  
6. Kayen et al. 13

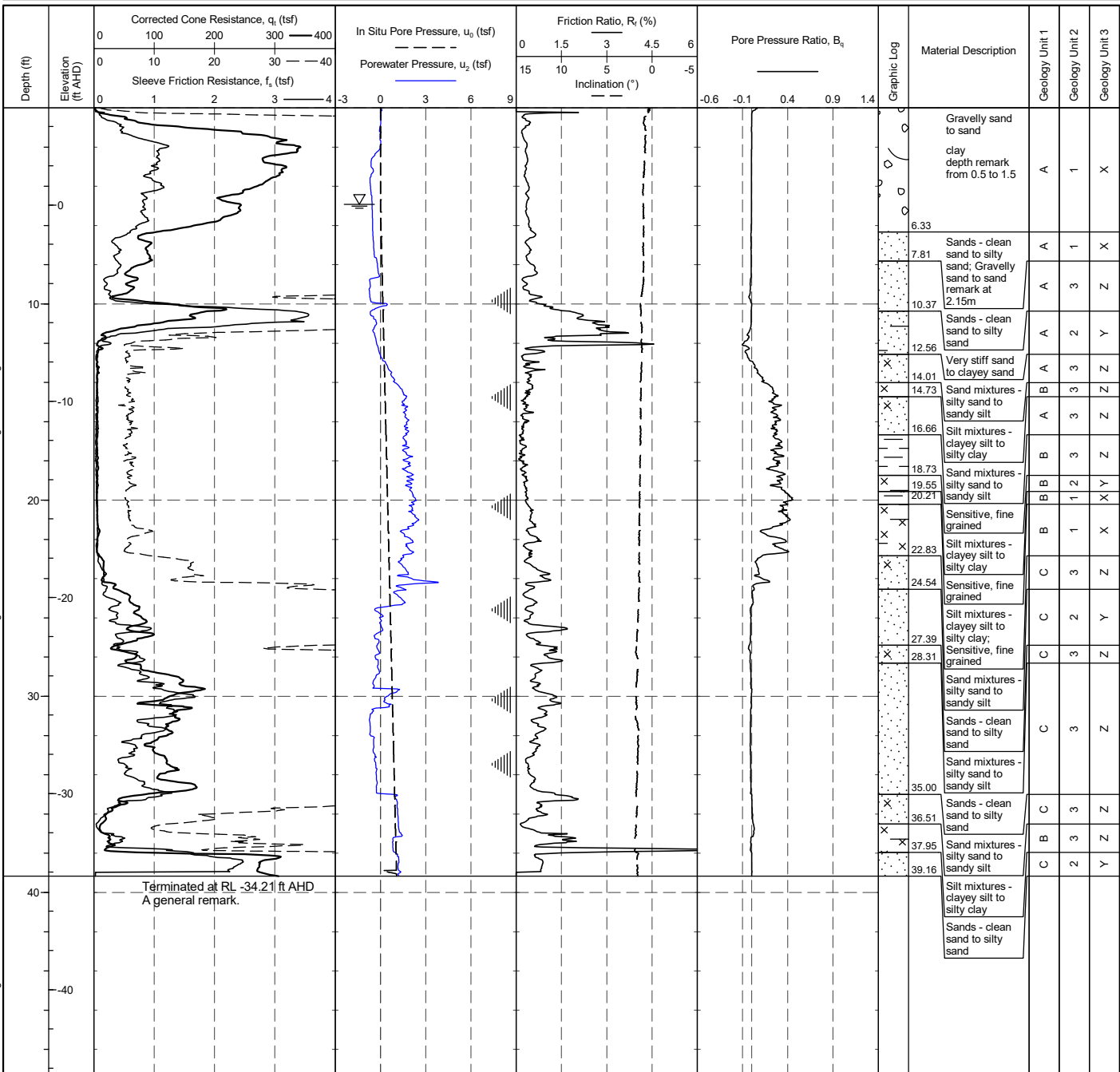
Liq Normalised Residual Shear Strength Method:  
1. Jefferies & Been (2006)  
2. I&B(06) with negligible void redistribution  
3. I&B(06) with significant void redistribution  
4. Olson and Stark (2002)

REMARK  
A general remark.

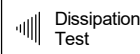
DATGEL CPT TOOL DGD 4.05.0.LIB.GLB Log CPTU LIQUEFACTION 11X17L.DATGEL CPT TOOL DGD 4.05.0.EN.GPJ <-DrawingFile-> 1/2/2021 19:45:10.01.00.11 Datgel CPT Tool gINT Add-in

PointID  
**CPT 05**

CLIENT : Client 1	AREA : Place	SHEET : 1 OF 1
ENGINEER : Engineer 1	EASTING : 862689.0 ft	STATUS : 2
PROJECT : CPT Tool Project	NORTHING : 20558043.4 ft	DATE : 23/12/2009
LOCATION : Somewhere	COORD. SYS. : MGA2020 Zone 56	
PROJECT No. : 4.05.0	ELEVATION : 4.95 ft AHD	

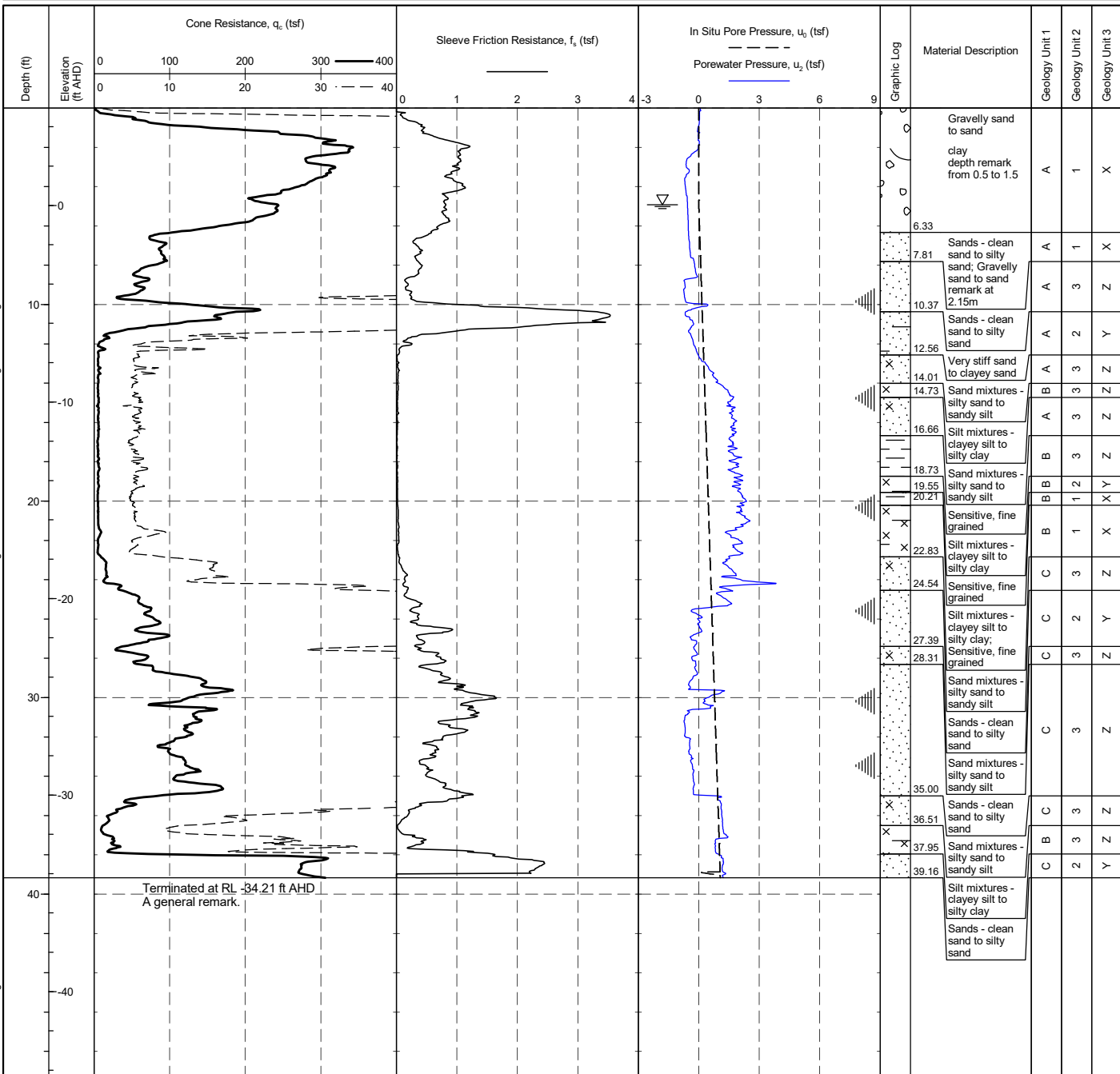


DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Log CPTU MATERIAL LETP DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <<DrawingFile>> 12/2021 19:45:10.01.00.11 Datgel CPT Tool.gINT Add-In

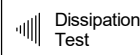
RIG : no anchoring	CHECKED BY : B. Smith	 Dissipation Test	REMARK A general remark.
CONE TYPE : C+F+W2	CHECKED DATE : 6/2/2009		
CONE ID : S15CFIIP.D76	APPROVED BY : C. Doe		
OPERATOR : Operator A	APPROVED DATE : 6/2/2009		

PointID  
**CPT 05**

CLIENT : Client 1	AREA : Place	SHEET : 1 OF 1
ENGINEER : Engineer 1	EASTING : 862689.0 ft	STATUS : 2
PROJECT : CPT Tool Project	NORTHING : 20558043.4 ft	DATE : 23/12/2009
LOCATION : Somewhere	COORD. SYS. : MGA2020 Zone 56	
PROJECT No. : 4.05.0	ELEVATION : 4.95 ft AHD	



RIG : no anchoring	CHECKED BY : B. Smith	REMARK A general remark.
CONE TYPE : C+F+W2	CHECKED DATE : 6/2/2009	
CONE ID : S15CFIIP.D76	APPROVED BY : C. Doe	
OPERATOR : Operator A	APPROVED DATE : 6/2/2009	

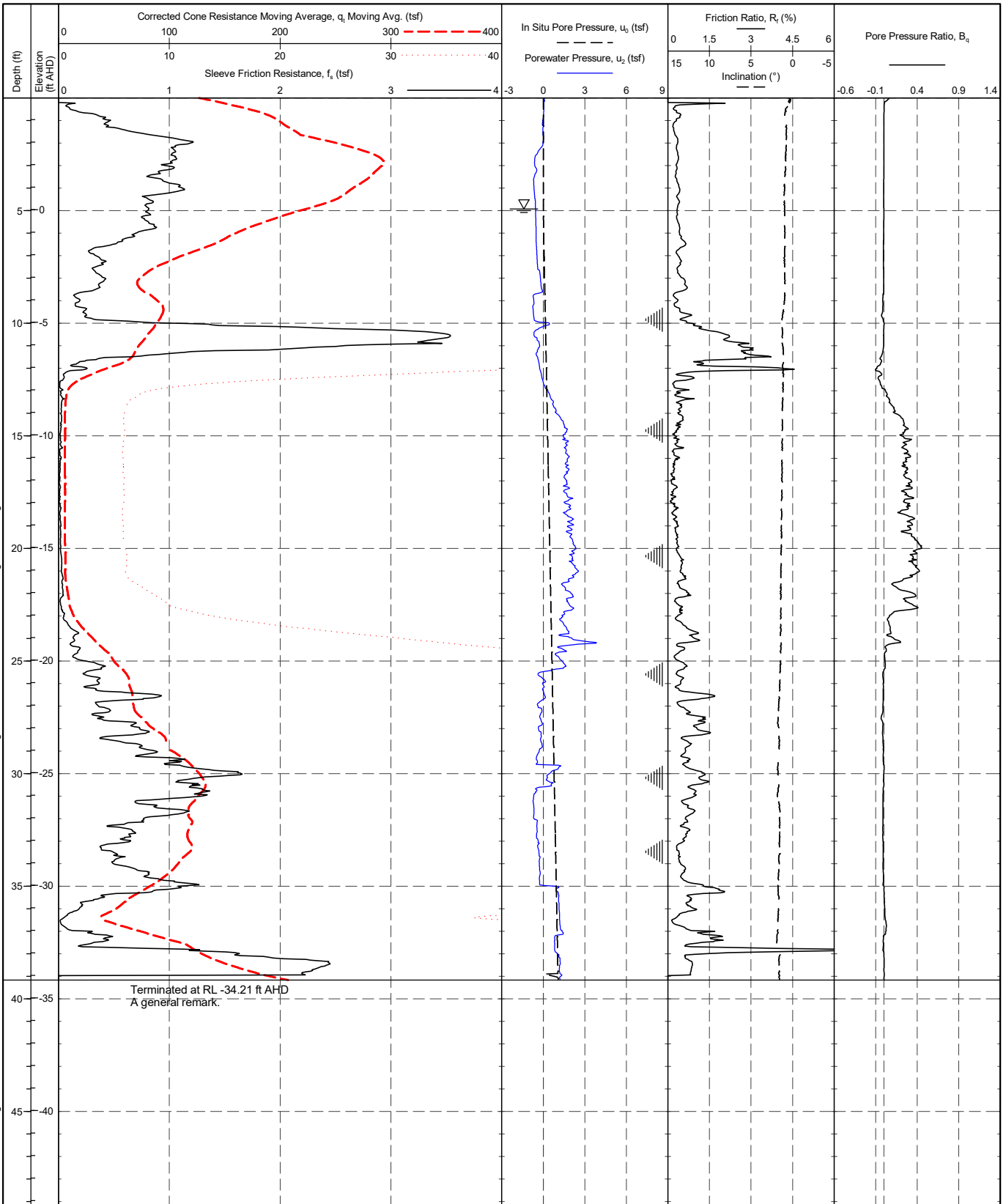


DATGEL.CPT TOOL DGD 4.05.0 LIB.GLB Log CPTU MEASURED MATERIAL LEITP.DATGEL.CPT TOOL DGD 4.05.0 EN.GPJ <<DrawingFile>> 1/2/2021 19:46:10.01.00.11 Datgel.CPT Tool.gINT Add-In

PointID

**CPT 05**

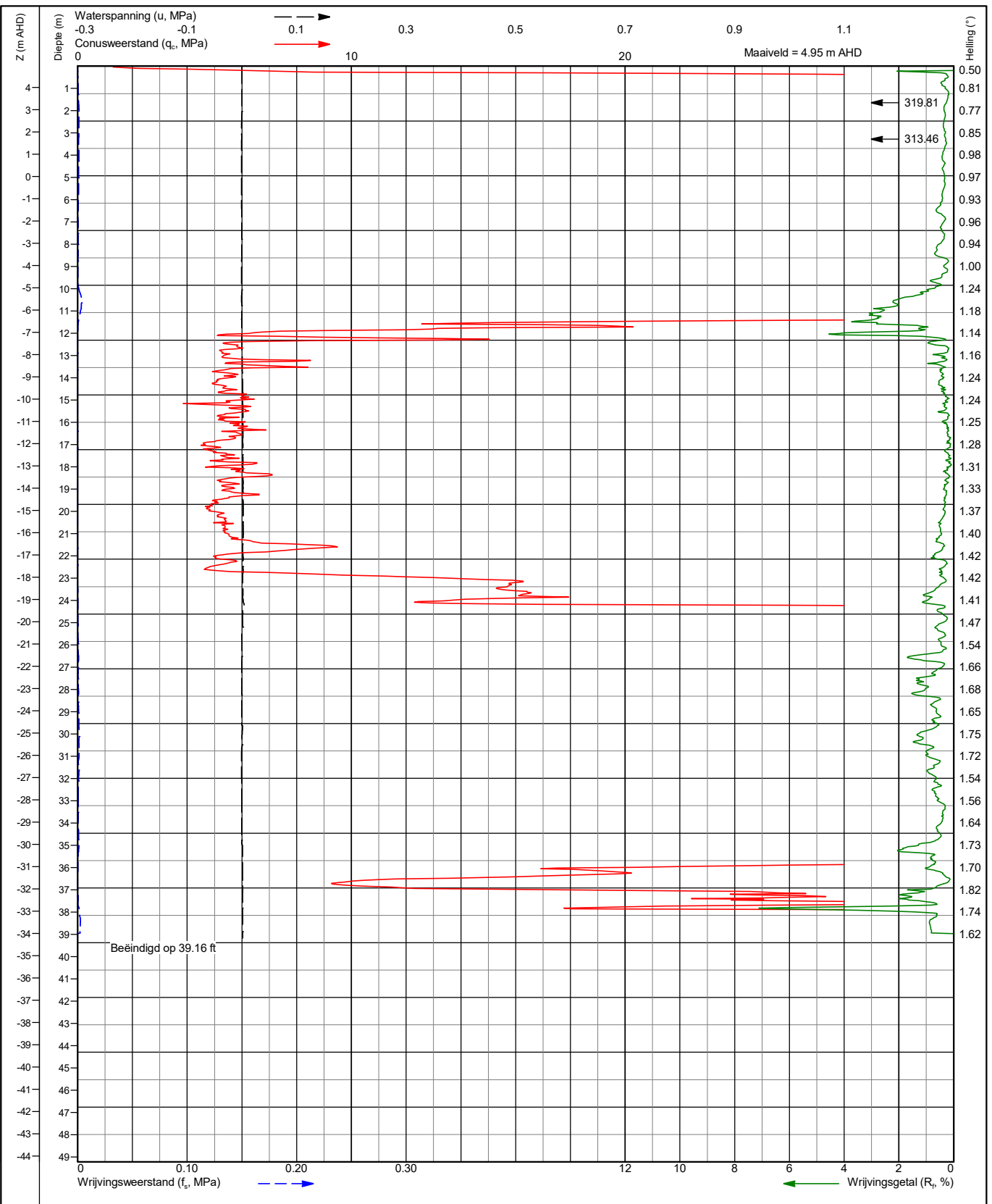
CLIENT : Client 1	AREA : Place	SHEET : 1 OF 1
ENGINEER : Engineer 1	EASTING : 862689.0 ft	STATUS : 2
PROJECT : CPT Tool Project	NORTHING : 20558043.4 ft	DATE : 23/12/2009
LOCATION : Somewhere	COORD. SYS. : MGA2020 Zone 56	
PROJECT No. : 4.05.0	ELEVATION : 4.95 ft AHD	



DATGEL CPT TOOL DGD 4.05.0 LIB.GLB.Log CPTU MOVING AVERAGE AMP DATGEL CPT TOOL DGD 4.05.0 EN.GPJ --<DrawingFile>> 1/2/2021 19:46 10.01.00.11 Datgel CPT Tool gINT Add-In

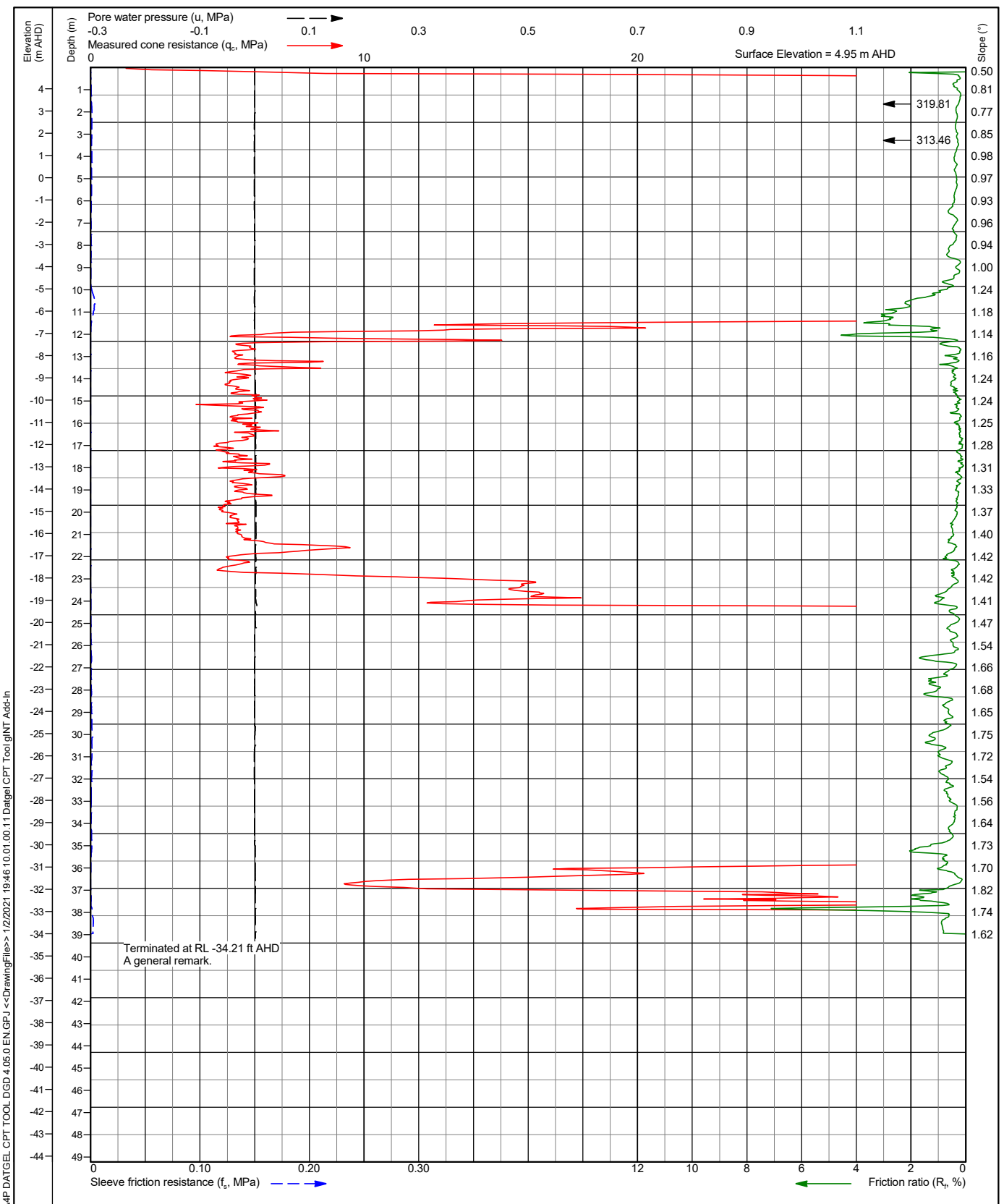
RIG : no anchoring	CHECKED BY : B. Smith	Dissipation Test	REMARK
CONE TYPE : C+F+W2	CHECKED DATE : 6/2/2009		A general remark.
CONE ID : S15CFIIP.D76	APPROVED BY : C. Doe		
OPERATOR : Operator A	APPROVED DATE : 6/2/2009		

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Log CPTU.NL.A4P DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <<DrawingFile>> 1/2/2021 19:46 10.01.00.11 Datigel CPT Tool gINT Add-In



Projectnummer : 4.05.0		Opdrachtgever: Client 1		Sondering : CPT 05	
Projectomschrijving : CPT Tool Project				Conusnr : S15CFIIP.D76	
Projectplaats : Somewhere		Status : 2		Conustype : ABC	
		Datum : 1/2/2021		Conusserie : ABC	
		Coord. : E 862689.0 m N 20558043.4 m MGA2020 Zone 56			
		Norm : NEN5140		Blad : 1 van 1	





Project Number : 4.05.0		Client : Client 1		PointID : CPT 05	
Project Name : CPT Tool Project				ConeID : S15CFIIP.D76	
Project Location : Somewhere			Status : 2		Cone Type : ABC
			Date : 1/2/2021		Cone Series : ABC
			Coords. : E 862689.0 m N 20558043.4 m MGA2020 Zone 56		
			Method : NEN5140		Sheet : 1 of 1

DATGEL\_CPT\_TOOL\_DGD.4.05.0.LIB.GLB.Log.CPTU.NL.EN.A4P.DATGEL\_CPT\_TOOL\_DGD.4.05.0.EN.GPJ <<DrawingFile>> 1/2/2021 19:46 10.01.00.11 Datgel CPT Tool gINT Add-in

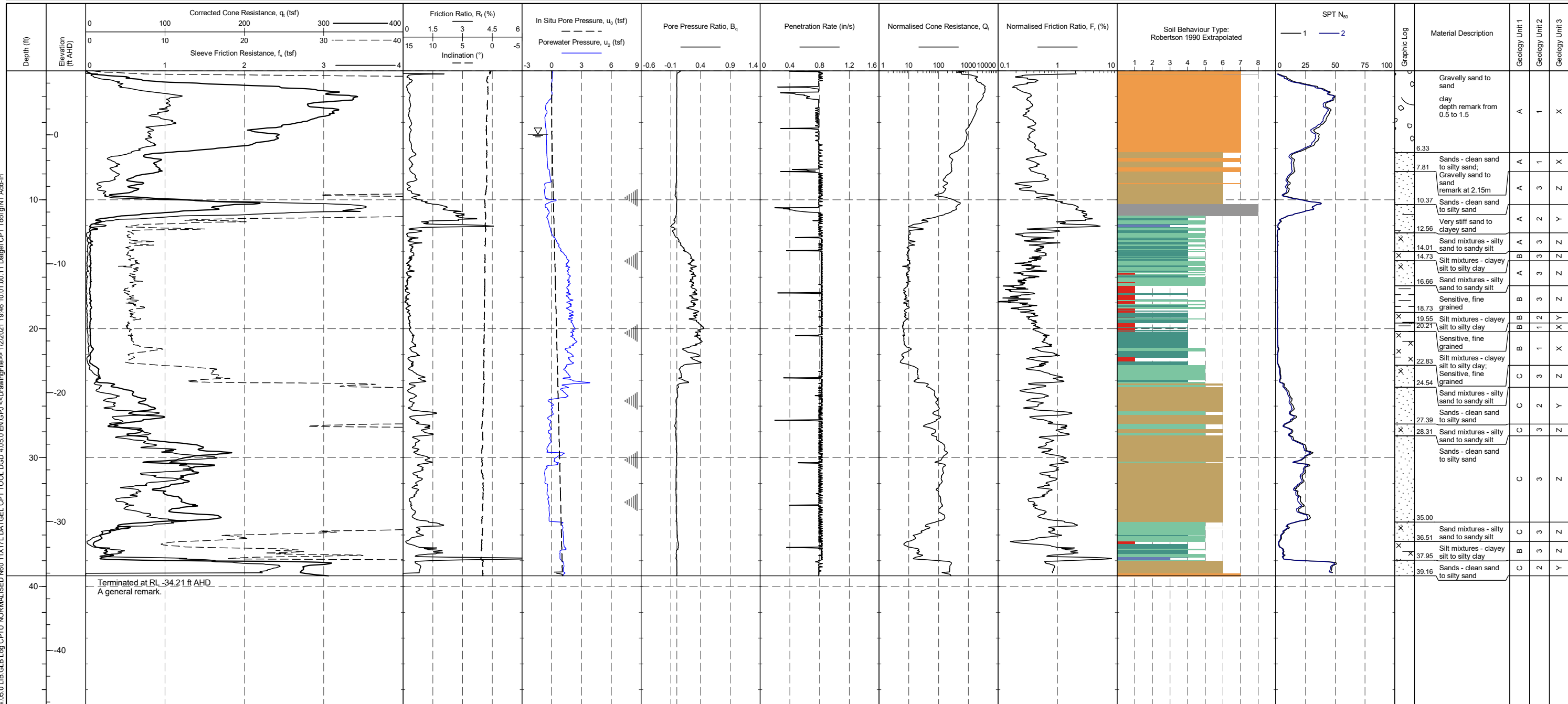
PointID  
**CPT 05**

CLIENT : Client 1  
ENGINEER : Engineer 1  
PROJECT : CPT Tool Project  
LOCATION : Somewhere  
PROJECT No. : 4.05.0

AREA : Place  
EASTING : 862689.0 ft  
NORTHING : 20558043.4 ft  
COORD. SYS. : MGA2020 Zone 56  
ELEVATION : 4.95 ft AHD

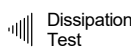
METHOD: Robertson 1990  
 1 - Sensitive, fine grained  
 2 - Organic soil - peats  
 3 - Clays - CLAY to silty CLAY  
 4 - SILT mixtures - clayey SILT to silty CLAY  
 5 - SAND mixtures - silty SAND to sandy SILT  
 6 - Sands - clean SAND to silty SAND  
 7 - Gravelly SAND to SAND  
 8 - Very stiff SAND to clayey SAND  
 9 - Very stiff fine grained

SHEET : 1 OF 1  
STATUS : 2  
DATE : 23/12/2009



RIG : no anchoring  
CONE TYPE : C+F+W2  
CONE ID : S15CFIIP.D76  
OPERATOR : Operator A

CHECKED BY : B. Smith  
CHECKED DATE : 6/2/2009  
APPROVED BY : C. Doe  
APPROVED DATE : 6/2/2009



REMARK  
A general remark.

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Log CPTU NORMALISED N60 11X17L.DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <<DrawingFile>> 1/2/2021 19:46 10:01:00.11 Datgel CPT Tool.gINT Add-In

PointID  
**CPT 05**

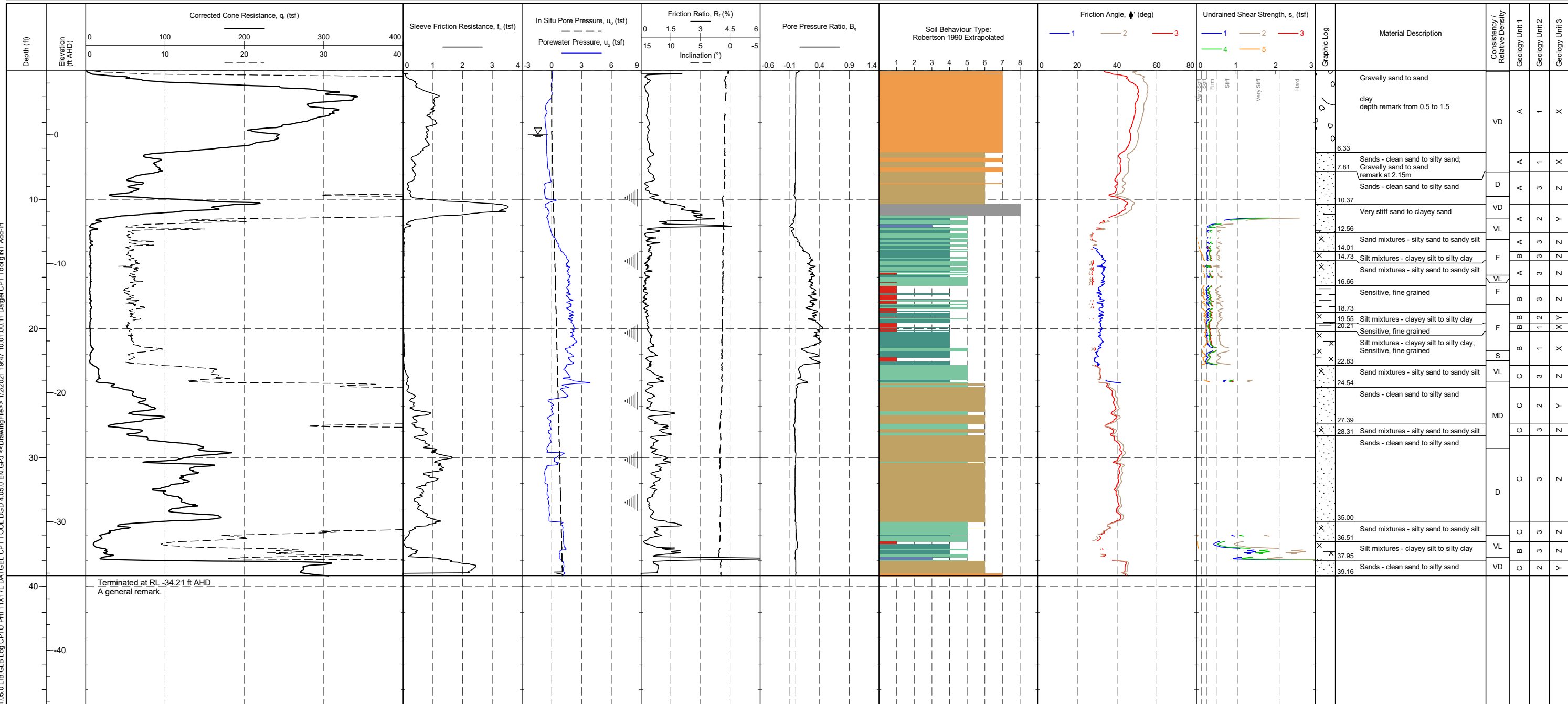
CLIENT : Client 1  
ENGINEER : Engineer 1  
PROJECT : CPT Tool Project  
LOCATION : Somewhere  
PROJECT No. : 4.05.0

AREA : Place  
EASTING : 862689.0 ft  
NORTHING : 20558043.4 ft  
COORD. SYS. : MGA2020 Zone 56  
ELEVATION : 4.95 ft AHD

METHOD: Robertson 1990

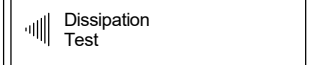
1 - Sensitive, fine grained	5 - SAND mixtures - silty SAND to sandy SILT	9 - Very stiff fine grained
2 - Organic soil - peats	6 - Sands - clean SAND to silty SAND	
3 - Clays - CLAY to silty CLAY	7 - Gravelly SAND to SAND	
4 - SILT mixtures - clayey SILT to silty CLAY	8 - Very stiff SAND to clayey SAND	

SHEET : 1 OF 1  
STATUS : 2  
DATE : 23/12/2009



RIG : no anchoring  
CONE TYPE : C+F+W2  
CONE ID : S15CFIIP.D76  
OPERATOR : Operator A

CHECKED BY : B. Smith  
CHECKED DATE : 6/2/2009  
APPROVED BY : C. Doe  
APPROVED DATE : 6/2/2009



Friction Angle Method:  
1. Senneset et al. (1988 & 1989); Mayne & Campanella (2005)  
2. Robertson & Campanella (1983)  
3. Kulhawy & Mayne (1990)

Undrained Shear Strength Method:  
1.  $s_u = (q_c - \sigma_{vc})/N_k$ ; or  $(q_c - \sigma_{vc})/N_k$   
2.  $s_u = q_u/N_k$ ; or  $q_u/N_k$   
3. Wroth (1984)  
4. Trak et al. (1980), Terzaghi et al. (1996)  
5. Robertson (2009),  $s_u = \Delta u/N$

REMARK  
A general remark.

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Log CPTU PHI 11X17L DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <<DrawingFile>> 1/22/2021 19:47 10.01.00.11 Datgel CPT Tool gINT Add-In

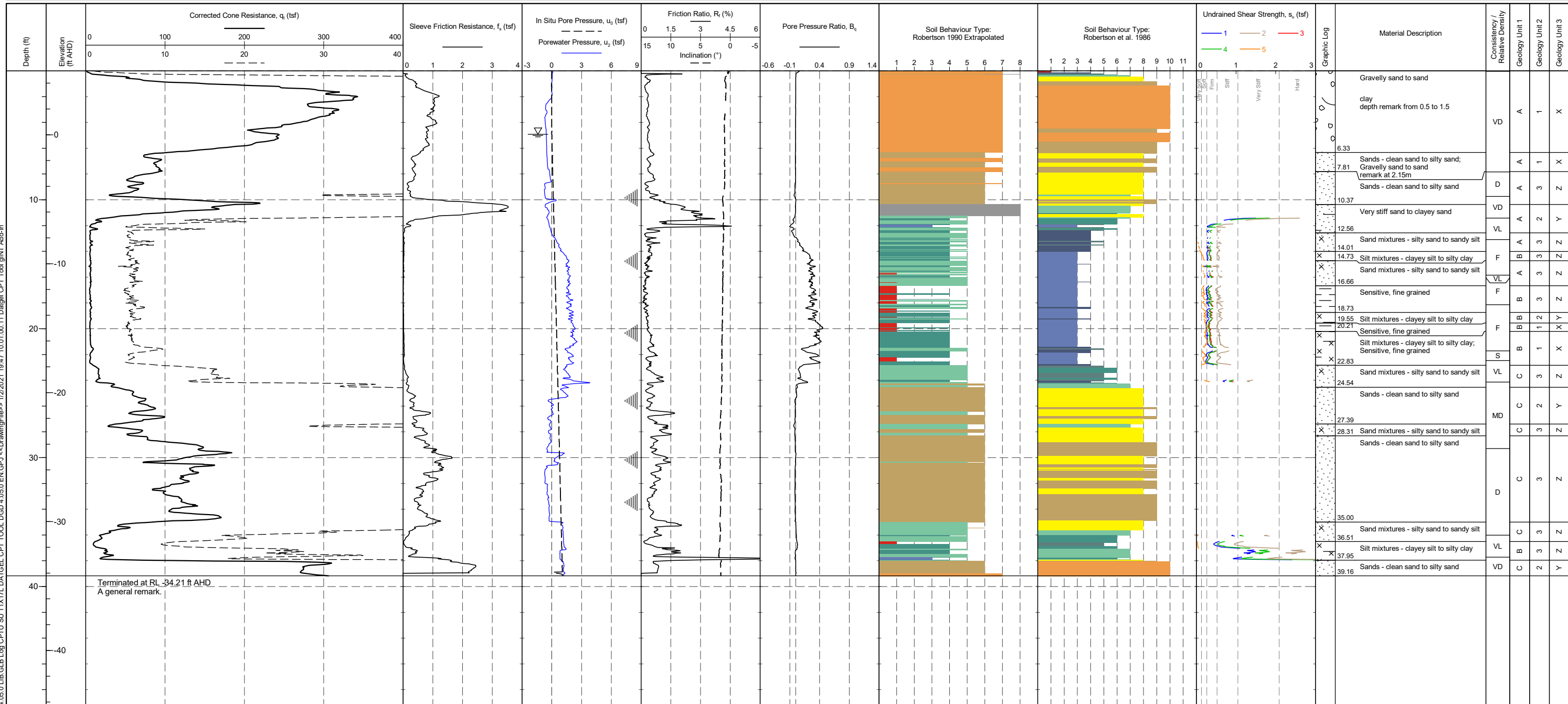
PointID  
**CPT 05**

CLIENT : Client 1  
ENGINEER : Engineer 1  
PROJECT : CPT Tool Project  
LOCATION : Somewhere  
PROJECT No. : 4.05.0

AREA : Place  
EASTING : 862689.0 ft  
NORTHING : 20558043.4 ft  
COORD. SYS. : MGA2020 Zone 56  
ELEVATION : 4.95 ft AHD

METHOD: Robertson 1990  
 1 - Sensitive, fine grained  
 2 - Organic soil - peats  
 3 - Clays - CLAY to silty CLAY  
 4 - SILT mixtures - clayey SILT to silty CLAY  
 5 - SAND mixtures - silty SAND to sandy SILT  
 6 - Sands - clean SAND to silty SAND  
 7 - Gravelly SAND to SAND  
 8 - Very stiff SAND to clayey SAND  
 9 - Very stiff fine grained

SHEET : 1 OF 1  
STATUS : 2  
DATE : 23/12/2009



RIG : no anchoring  
CONE TYPE : C+F+W2  
CONE ID : S15CFIIP.D76  
OPERATOR : Operator A

CHECKED BY : B. Smith  
CHECKED DATE : 6/2/2009  
APPROVED BY : C. Doe  
APPROVED DATE : 6/2/2009



METHOD: Robertson et al. 1986  
 1 - Sensitive fine grained material  
 2 - Organic material  
 3 - CLAY  
 4 - Silty CLAY to CLAY  
 5 - Clayey SILT to silty CLAY  
 6 - Sandy SILT to clayey SILT  
 7 - Silty SAND to sandy SILT  
 8 - SAND to silty SAND  
 9 - SAND  
 10 - Gravelly SAND to SAND  
 11 - Very stiff fine grained  
 12 - SAND to clayey SAND

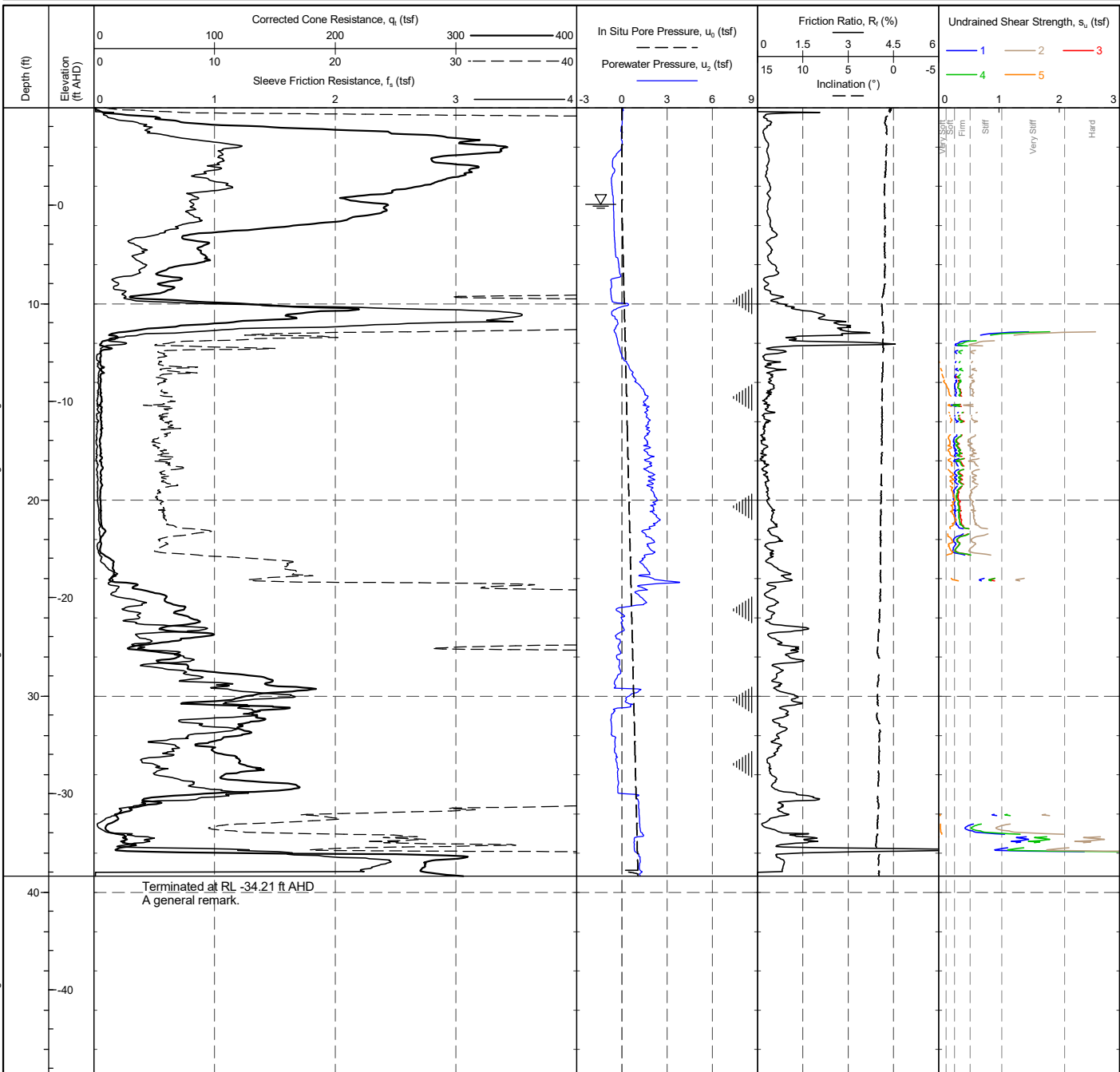
Undrained Shear Strength Method:  
 1.  $s_u = (q_c - \sigma_{vm})/N_c$ ; or  $(q_c - \sigma_{vm})/N_c$   
 2.  $s_u = q_c/N_c$  or  $q_c/N_c$   
 3. Wroth (1984)  
 4. Trak et al. (1980), Terzaghi et al. (1996)  
 5. Robertson (2009),  $s_u = \Delta u/N$

REMARK  
A general remark.

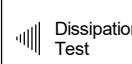
DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Log CPTU SU 11X17L DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <-DrawingFile> 12/2021 19:47:10.01.00.11 Datgel CPT Tool gINT Add-in

PointID  
**CPT 05**

CLIENT : Client 1	AREA : Place	SHEET : 1 OF 1
ENGINEER : Engineer 1	EASTING : 862689.0 ft	STATUS : 2
PROJECT : CPT Tool Project	NORTHING : 20558043.4 ft	DATE : 23/12/2009
LOCATION : Somewhere	COORD. SYS. : MGA2020 Zone 56	
PROJECT No. : 4.05.0	ELEVATION : 4.95 ft AHD	



DATGEL.CPT.TOOL.DGD.4.05.0.LIB.G.I.B.L.og.CPTU.SU.LEIFP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.G.P.I.<<DrawingFile>>.1/2/2021.19:48.10.01.00.1.1.Datgel.CPT.Tool.gINT.Add-In

RIG : no anchoring	CHECKED BY : B. Smith	 Dissipation Test	REMARK A general remark.
CONE TYPE : C+F+W2	CHECKED DATE : 6/2/2009		
CONE ID : S15CFIIP.D76	APPROVED BY : C. Doe		
OPERATOR : Operator A	APPROVED DATE : 6/2/2009		

PointID  
**CPT 05**

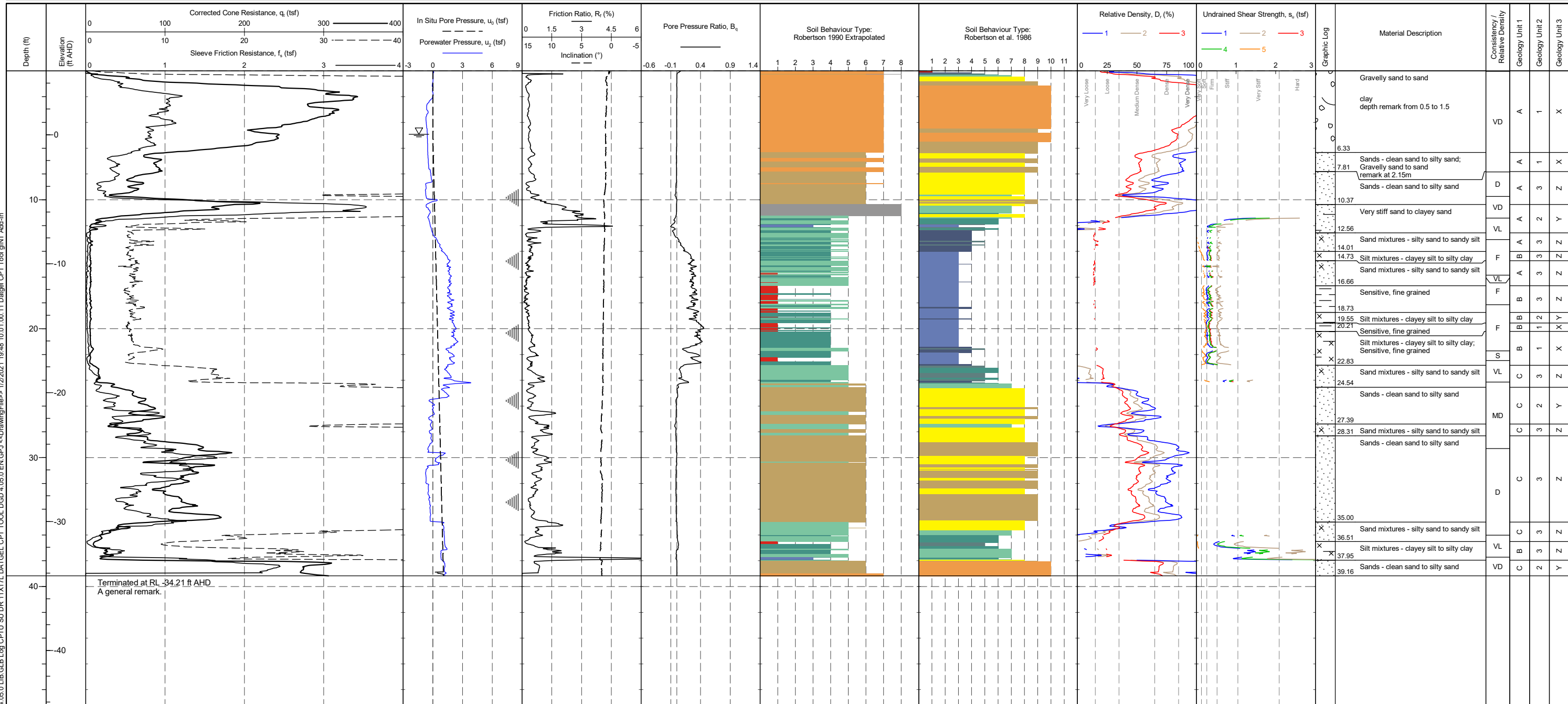
CLIENT : Client 1  
ENGINEER : Engineer 1  
PROJECT : CPT Tool Project  
LOCATION : Somewhere  
PROJECT No. : 4.05.0

AREA : Place  
EASTING : 862689.0 ft  
NORTHING : 20558043.4 ft  
COORD. SYS. : MGA2020 Zone 56  
ELEVATION : 4.95 ft AHD

METHOD: Robertson 1990  
 1 - Sensitive, fine grained  
 2 - Organic soil - peats  
 3 - Clays - CLAY to silty CLAY  
 4 - SILT mixtures - clayey SILT to silty CLAY  
 5 - SAND mixtures - silty SAND to sandy SILT  
 6 - Sands - clean SAND to silty SAND  
 7 - Gravelly SAND to SAND  
 8 - Very stiff SAND to clayey SAND  
 9 - Very stiff fine grained

Relative Density Method:  
 1. Baldi et al. (1986); Al-Homoud & Wehr (2006)  
 2. Jamiolkowski et al. (2001)  
 3. Kulhawy & Mayne (1990)

SHEET : 1 OF 1  
STATUS : 2  
DATE : 23/12/2009



RIG : no anchoring  
CONE TYPE : C+F+W2  
CONE ID : S15CFIIP.D76  
OPERATOR : Operator A

CHECKED BY : B. Smith  
CHECKED DATE : 6/2/2009  
APPROVED BY : C. Doe  
APPROVED DATE : 6/2/2009

Dissipation Test

METHOD: Robertson et al. 1986  
 1 - Sensitive fine grained material  
 2 - Organic material  
 3 - CLAY  
 4 - Silty CLAY to CLAY  
 5 - Clayey SILT to silty CLAY  
 6 - Sandy SILT to clayey SILT  
 7 - Silty SAND to sandy SILT  
 8 - SAND to silty SAND  
 9 - SAND  
 10 - Gravelly SAND to SAND  
 11 - Very stiff fine grained  
 12 - SAND to clayey SAND

Undrained Shear Strength Method:  
 1.  $s_u = (q_c - \sigma_{vm})/N_c$ ; or  $(q_c - \sigma_{vm})/N_c$   
 2.  $s_u = q_c/N_c$  or  $q_c/N_c$   
 3. Wroth (1984)  
 4. Trak et al. (1980); Terzaghi et al. (1996)  
 5. Robertson (2009),  $s_u = \Delta u/N$

REMARK  
A general remark.

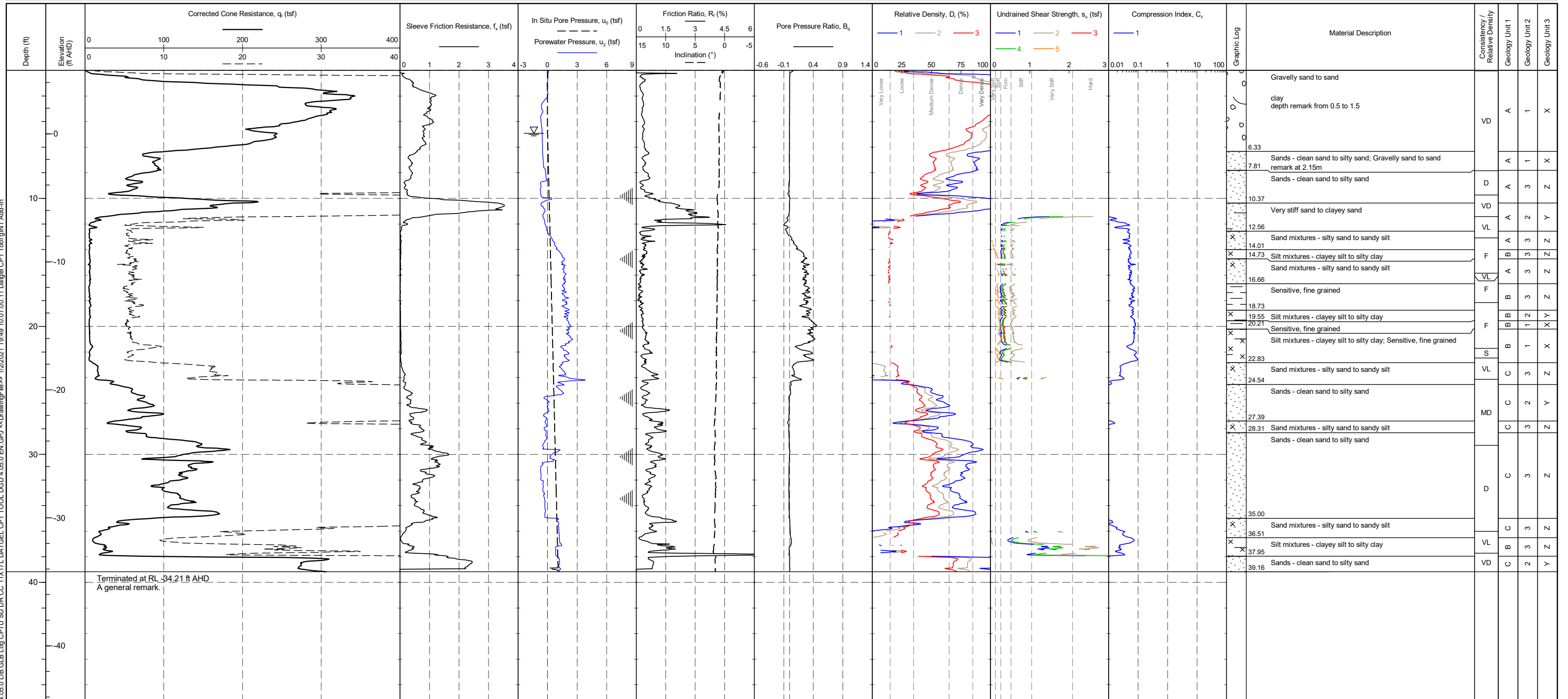
DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Log CPTU SU DR 11X17L DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <<DrawingFile>> 1/2/2021 19:48 10.01.00.11 Datgel.CPT.Tool.gINT Add-In

PointID  
**CPT 05**

CLIENT : Client 1  
ENGINEER : Engineer 1  
PROJECT : CPT Tool Project  
LOCATION : Somewhere  
PROJECT No. : 4.05.0

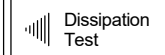
AREA : Place  
EASTING : 862689.0 ft  
NORTHING : 20558043.4 ft  
COORD. SYS. : MGA2020 Zone 56  
ELEVATION : 4.95 ft AHD

SHEET : 1 OF 1  
STATUS : 2  
DATE : 23/12/2009



RIG : no anchoring  
CONE TYPE : C+F+W2  
CONE ID : S15CFIIP.D76  
OPERATOR : Operator A

CHECKED BY : B. Smith  
CHECKED DATE : 6/2/2009  
APPROVED BY : C. Doe  
APPROVED DATE : 6/2/2009



Relative Density Method:  
1. Baldi et al. (1986); Al-Homoud & Wehr (2006)  
2. Jamiolkowski et al. (2001)  
3. Kulhawy & Mayne (1990)

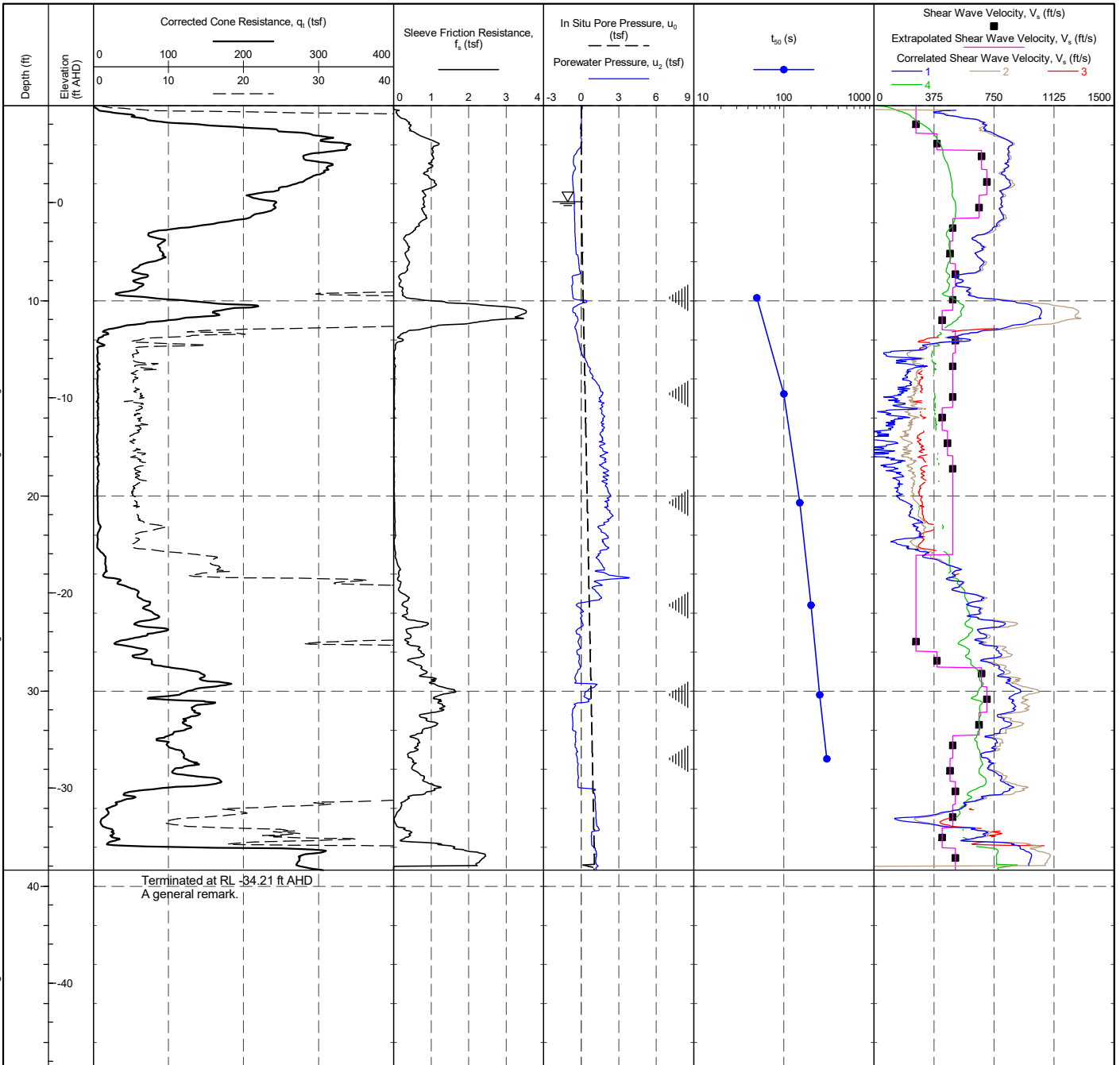
Undrained Shear Strength Method:  
1.  $s_u = (q_c - \sigma'_{vc})/N_c$  or  $(q_c - \sigma'_{vc})/N_c$   
2.  $s_u = q/N_{cu}$  or  $q/N_{cu}$   
3. Wroth (1984)  
4. Trak et al. (1980), Terzaghi et al. (1996)  
5. Robertson (2009),  $s_u = \Delta u/N$

REMARK  
A general remark.

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Log CPTU SU DR CC: 11X17L.DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <<DrawingFile>> 1/2/2021 19:49:10:01:00:11 Datgel CPT Tool gINT Add-in

PointID  
**CPT 05**

CLIENT : Client 1	AREA : Place	SHEET : 1 OF 1
ENGINEER : Engineer 1	EASTING : 862689.0 ft	STATUS : 2
PROJECT : CPT Tool Project	NORTHING : 20558043.4 ft	DATE : 23/12/2009
LOCATION : Somewhere	COORD. SYS. : MGA2020 Zone 56	
PROJECT No. : 4.05.0	ELEVATION : 4.95 ft AHD	



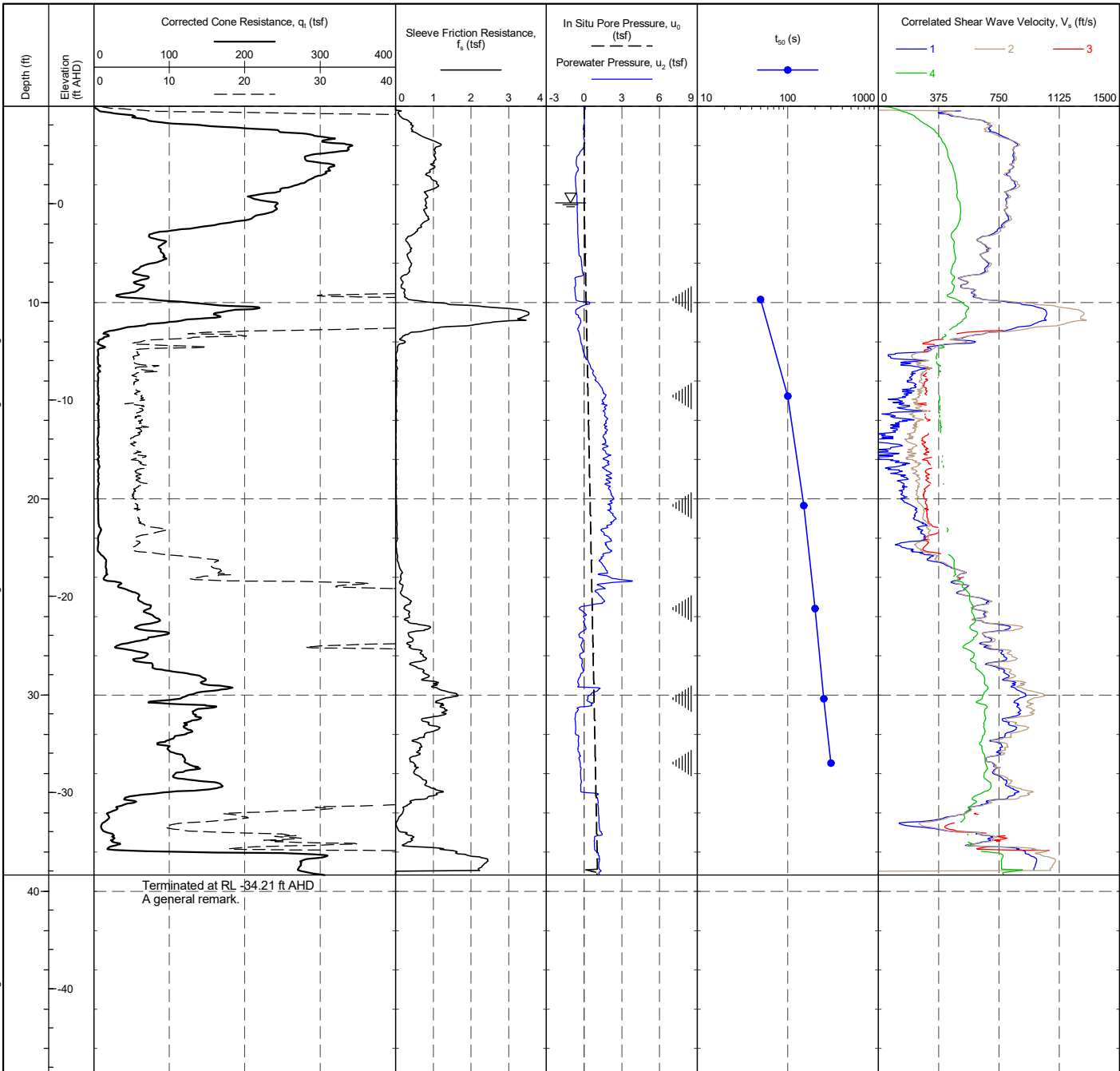
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RIG : no anchoring	CHECKED BY : B. Smith	Dissipation Test	REMARK A general remark.
CONE TYPE : C+F+W2	CHECKED DATE : 6/2/2009		
CONE ID : S15CFIIP.D76	APPROVED BY : C. Doe		
OPERATOR : Operator A	APPROVED DATE : 6/2/2009		



PointID  
**CPT 05**

CLIENT : Client 1	AREA : Place	SHEET : 1 OF 1
ENGINEER : Engineer 1	EASTING : 862689.0 ft	STATUS : 2
PROJECT : CPT Tool Project	NORTHING : 20558043.4 ft	DATE : 23/12/2009
LOCATION : Somewhere	COORD. SYS. : MGA2020 Zone 56	
PROJECT No. : 4.05.0	ELEVATION : 4.95 ft AHD	

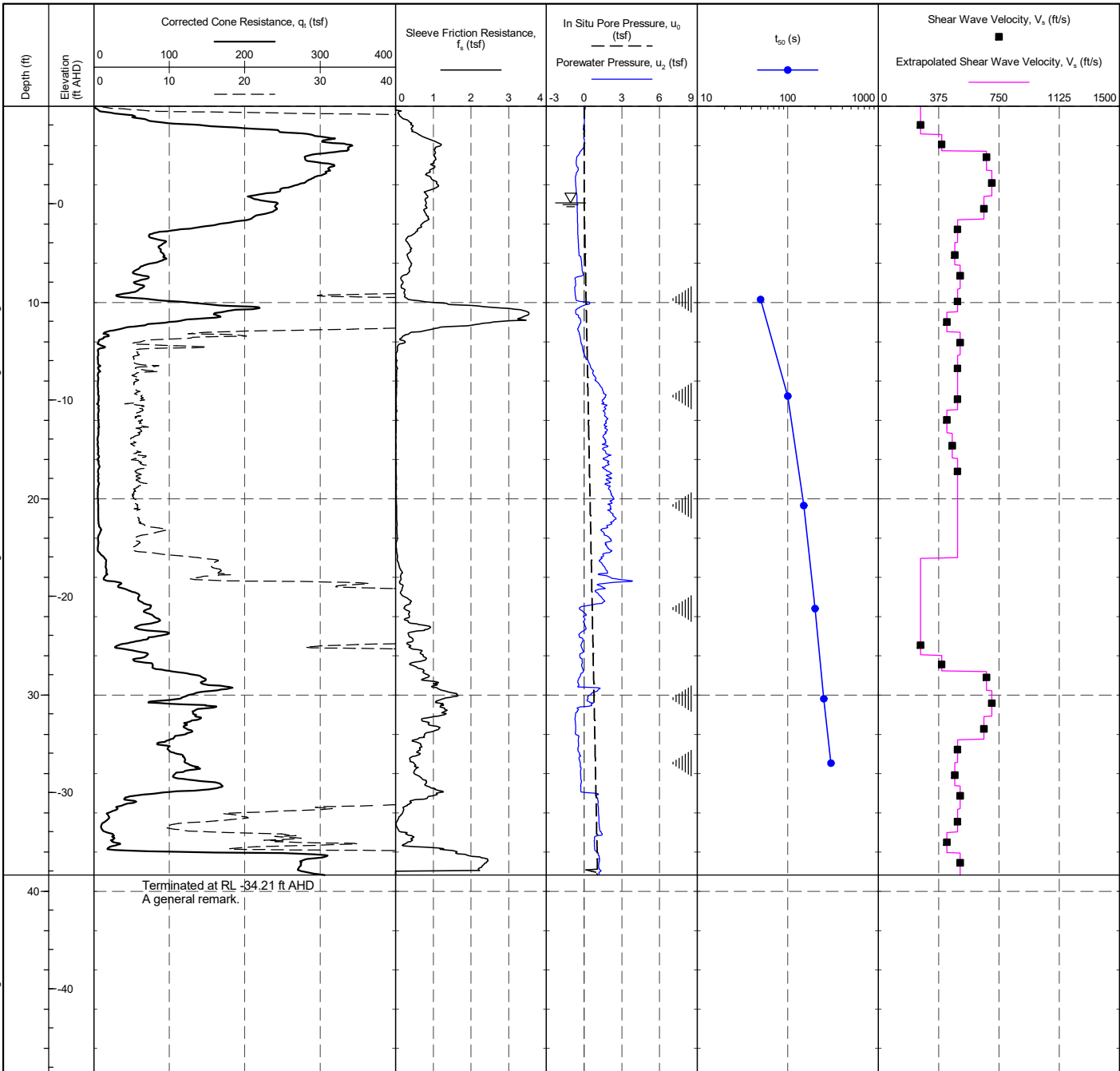


DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Log.SCPTU.CORRELATED.LETF.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ.<<DrawingFile>>.1/2/2021.19:49.10.01.00.11.Datgel.CPT.Tool.gINT.Add.in

RIG : no anchoring	CHECKED BY : B. Smith	Dissipation Test	REMARK A general remark.
CONE TYPE : C+F+W2	CHECKED DATE : 6/2/2009		
CONE ID : S15CFIIP.D76	APPROVED BY : C. Doe		
OPERATOR : Operator A	APPROVED DATE : 6/2/2009		


PointID  
**CPT 05**

CLIENT : Client 1	AREA : Place	SHEET : 1 OF 1
ENGINEER : Engineer 1	EASTING : 862689.0 ft	STATUS : 2
PROJECT : CPT Tool Project	NORTHING : 20558043.4 ft	DATE : 23/12/2009
LOCATION : Somewhere	COORD. SYS. : MGA2020 Zone 56	
PROJECT No. : 4.05.0	ELEVATION : 4.95 ft AHD	



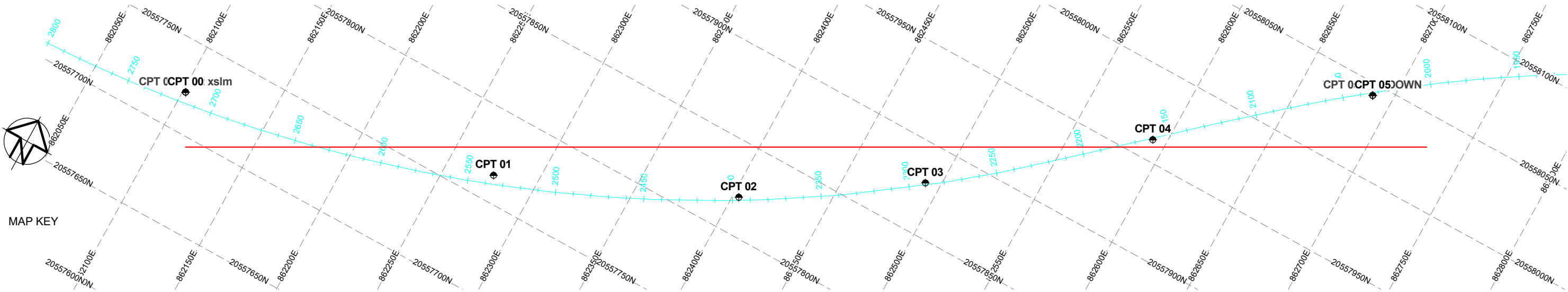
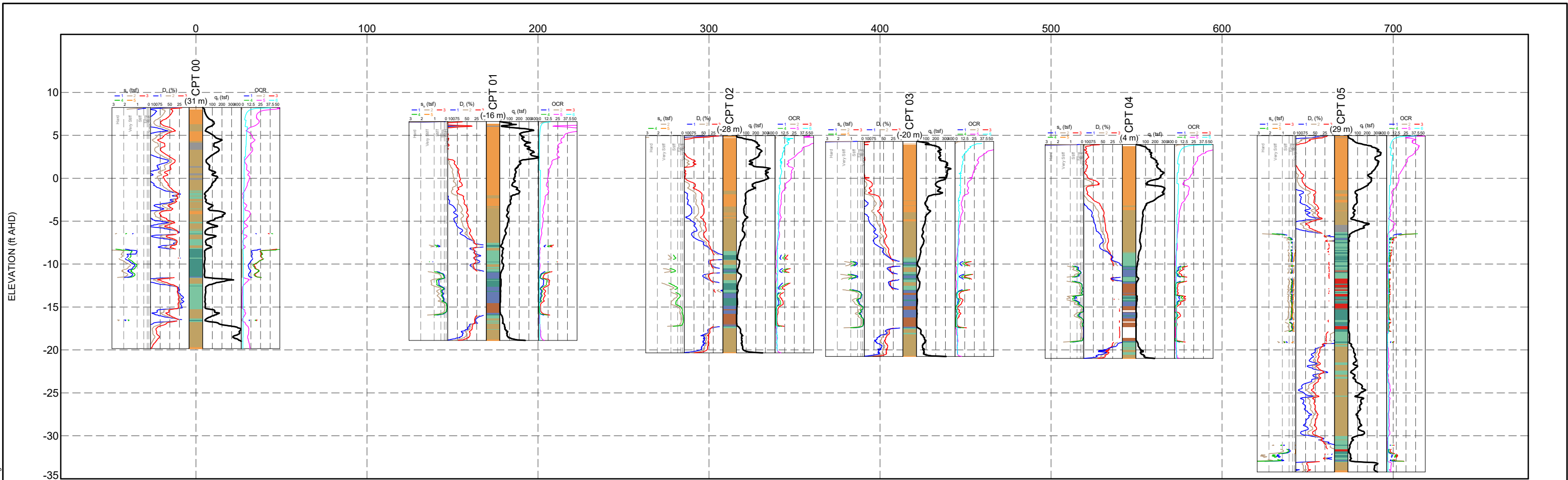
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RIG : no anchoring	CHECKED BY : B. Smith
CONE TYPE : C+F+W2	CHECKED DATE : 6/2/2009
CONE ID : S15CFIIP.D76	APPROVED BY : C. Doe
OPERATOR : Operator A	APPROVED DATE : 6/2/2009

 Dissipation Test

REMARK  
A general remark.

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Fence CPT FENCE 11x17L.DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <DrawingFiles> 1/2/2021 19:52:10.01.00.11.Datgel CPT Tool.gINT Add-In



- SBT METHOD: Robertson 1990**
- 1 - Sensitive, fine grained
  - 4 - SILT mixtures - clayey SILT to silty CLAY
  - 7 - Gravelly SAND to SAND
  - 2 - Organic soil - peats
  - 5 - SAND mixtures - silty SAND to sandy SILT
  - 8 - Very stiff SAND to clayey SAND
  - 3 - Clays - CLAY to silty CLAY
  - 6 - Sands - clean SAND to silty SAND
  - 9 - Very stiff fine grained

- Overconsolidation Ratio Method:**
1. Mayne (1995); Demers & Leroueil (2002)
  2. Chen & Mayne (1996)
  3. Mayne (2005)
  4. Robertson (2009)
  5. Mayne (2005)
  6. Mayne (2007)

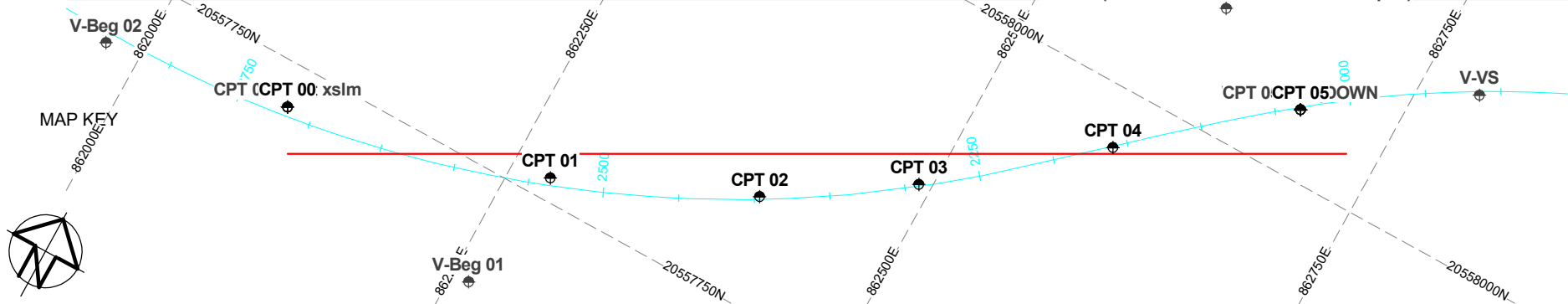
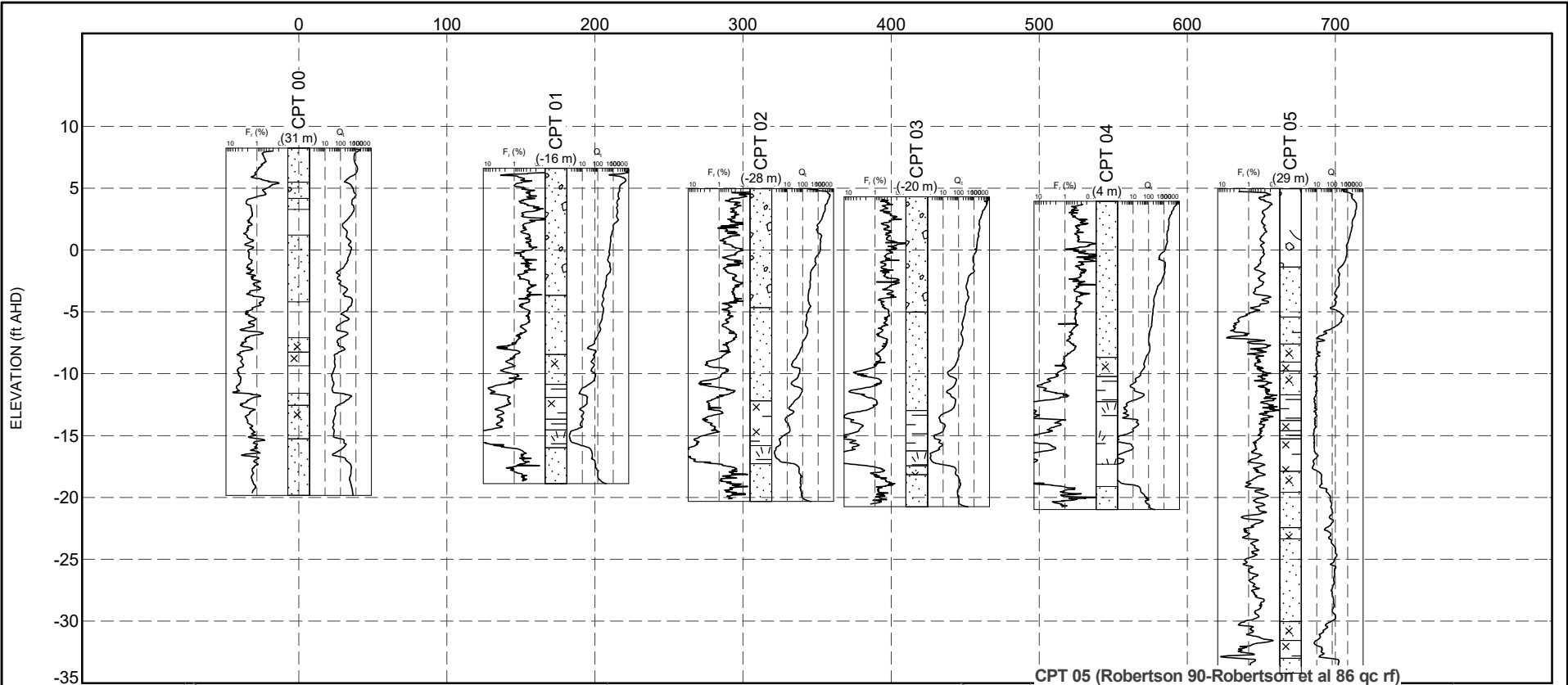
- Relative Density Method:**
1. Baldi et al. (1986); Al-Homoud & Wehr (2006)
  2. Jamiolkowski et al. (2001)
  3. Kulhawy & Mayne (1990)

- Undrained Shear Strength Method:**
1.  $s_u = (q - \sigma_w)/N_k$ ; or  $(q_c - \sigma_w)/N_k$
  2.  $s_u = q/N_{su}$ ; or  $q_c/N_{sc}$
  3. Wroth (1984)
  4. Trak et al. (1980); Terzaghi et al. (1996)
  5. Robertson (2009),  $s_u = \Delta u/N$



TITLE  
 Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Inferred Subsurface Section

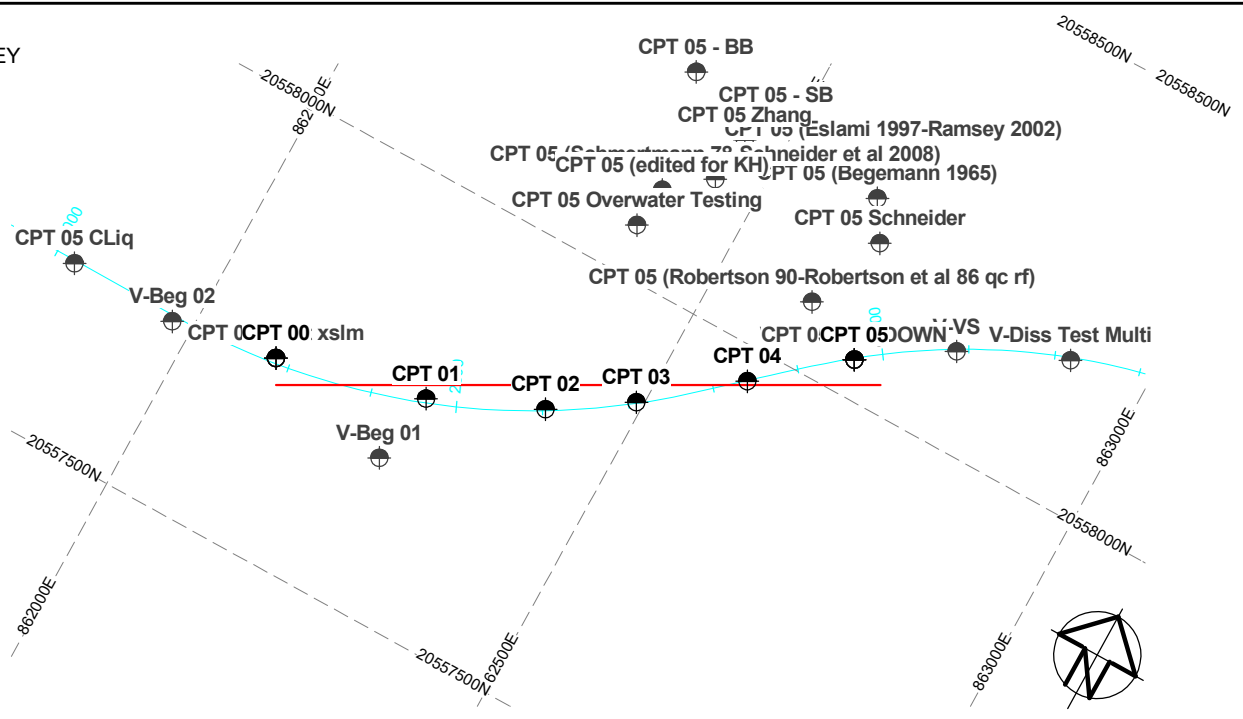
DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	H 1:2258 V 1:450		11x17
PROJECT No	4.05.0	FIGURE No	67



TITLE  
 Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Inferred Subsurface Section

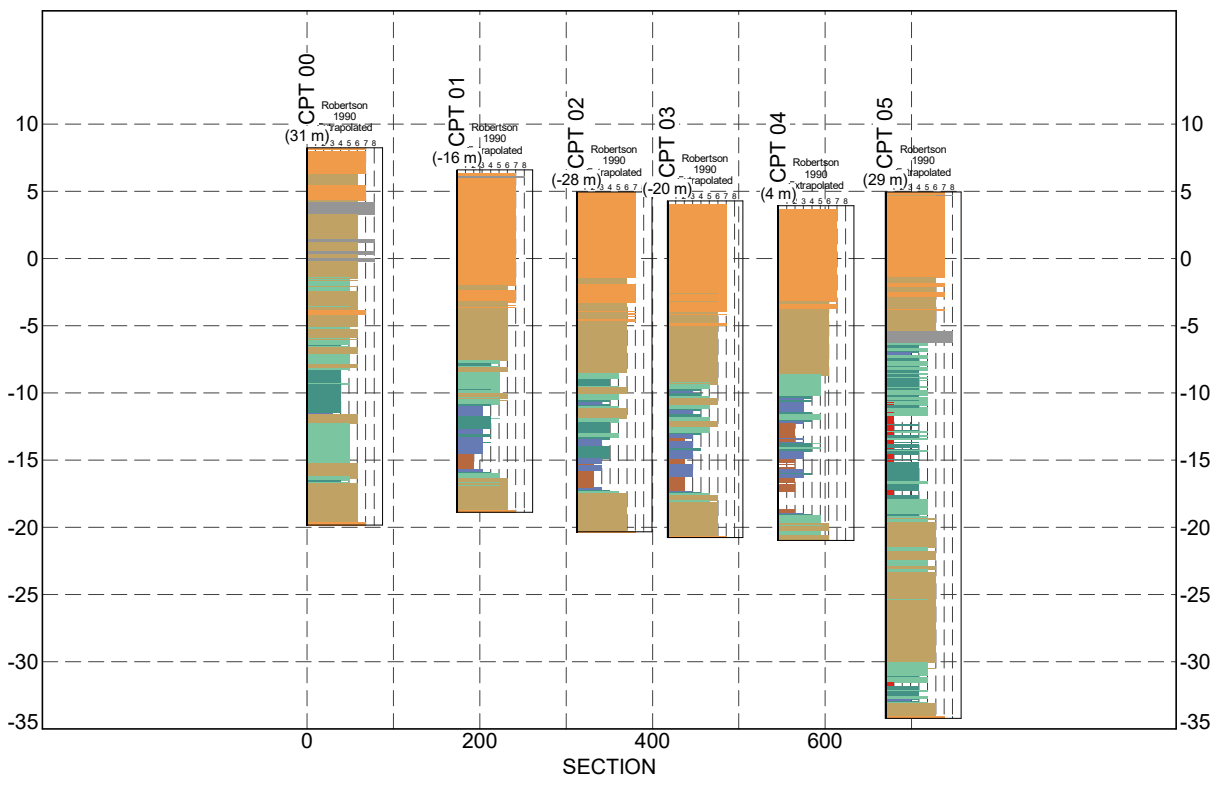
DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	H 1:4179 V 1:500		Let
PROJECT No	4.05.0	FIGURE No	68

MAP KEY




PLAN

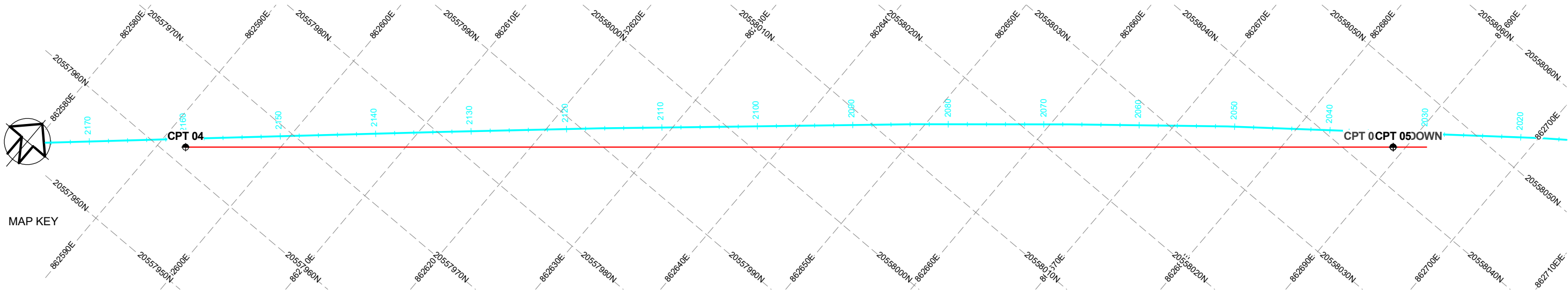
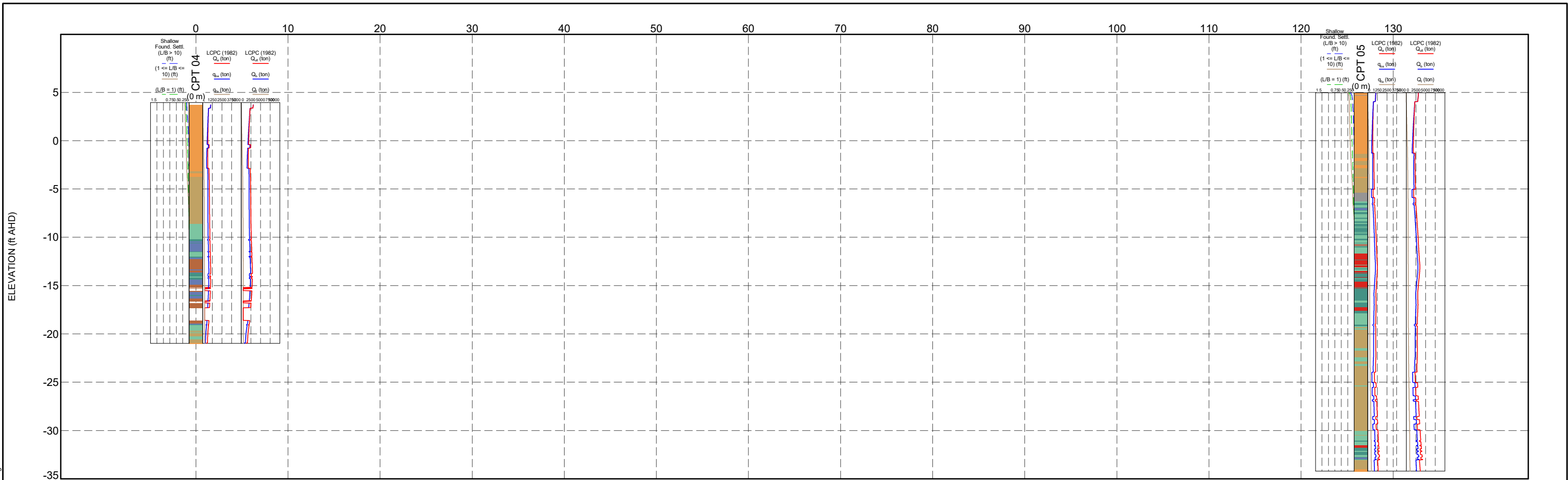
ELEVATION (ft. AHD)



DATGEL CPT TOOL\_DGD\_4.05.0.LIB.GLB Fence CPT FENCE LEIP DATGEL CPT TOOL\_DGD\_4.05.0.EN.GPJ <<DrawingFile>> 1/2/2021 19:54 10.01.00.11.Datgel CPT Tool.GINT.Add-In

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	TITLE	Client 1 Engineer 1 Somewhere CPT Tool Project Inferred Subsurface Section	DRAWN Datgel	DATE 1/2/2021
			CHECKED Datgel	DATE 1/2/2021
			SCALE H 1:8750 V 1:563	Let
			PROJECT No 4.05.0	FIGURE No 69

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Fence CPT FENCE 11x17L.DATGEL CPT TOOL DGD 4.05.0 EN.CPJ <DrawingFiles> 1/2/2021 19:54:10.01.00.11.Datgel CPT Tool.gINT Add-In



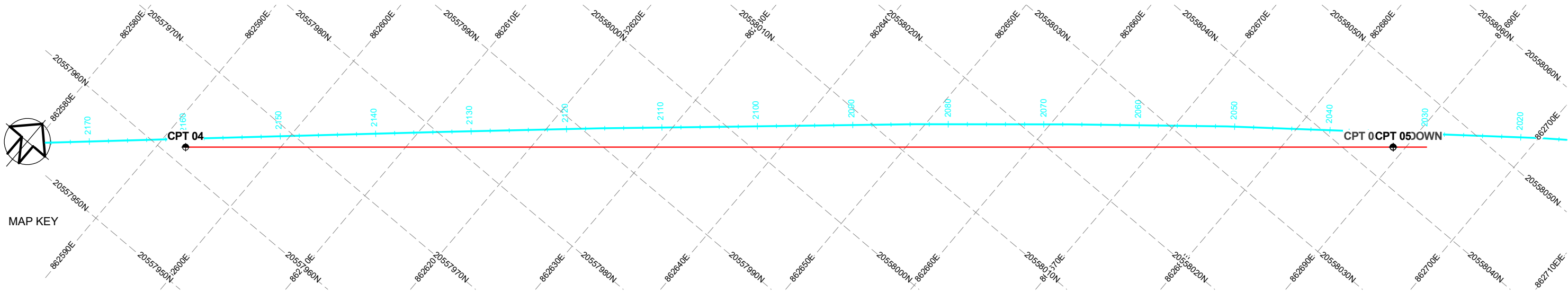
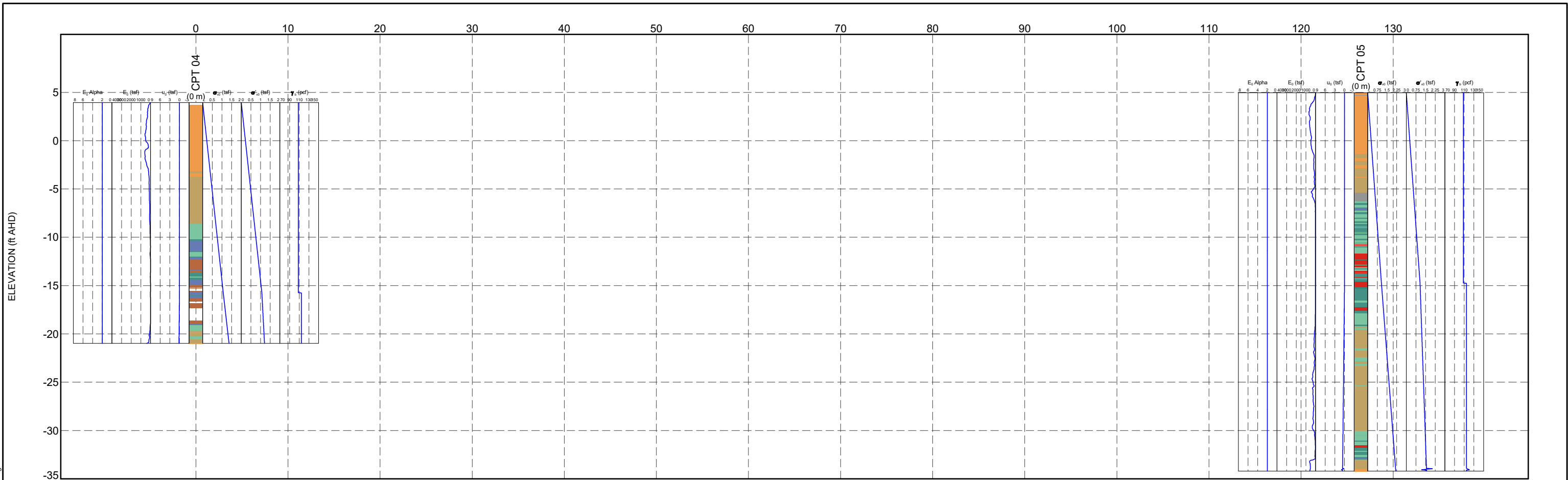
- SBT METHOD: Robertson 1990**
- |                                |   |                                    |
|--------------------------------|---|------------------------------------|
| 1 - Sensitive, fine grained    | 4 - SILT mixtures - clayey SILT to silty CLAY | 7 - Gravelly SAND to SAND          |
| 2 - Organic soil - peats       | 5 - SAND mixtures - silty SAND to sandy SILT  | 8 - Very stiff SAND to clayey SAND |
| 3 - Clays - CLAY to silty CLAY | 6 - Sands - clean SAND to silty SAND          | 9 - Very stiff fine grained        |



TITLE  
 Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Inferred Subsurface Section

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	H 1:419 V 1:400		11x17
PROJECT No	4.05.0	FIGURE No	70

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Fence CPT FENCE 11x17L.DATGEL CPT TOOL DGD 4.05.0 EN.CPJ <DrawingFiles> 1/2/2021 19:55 10.01.00.11.Datgel CPT Tool.gINT Add.in



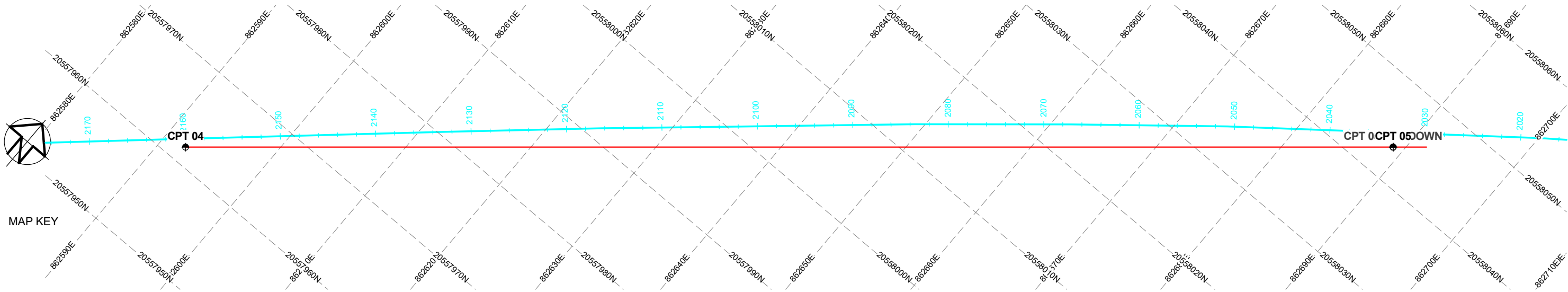
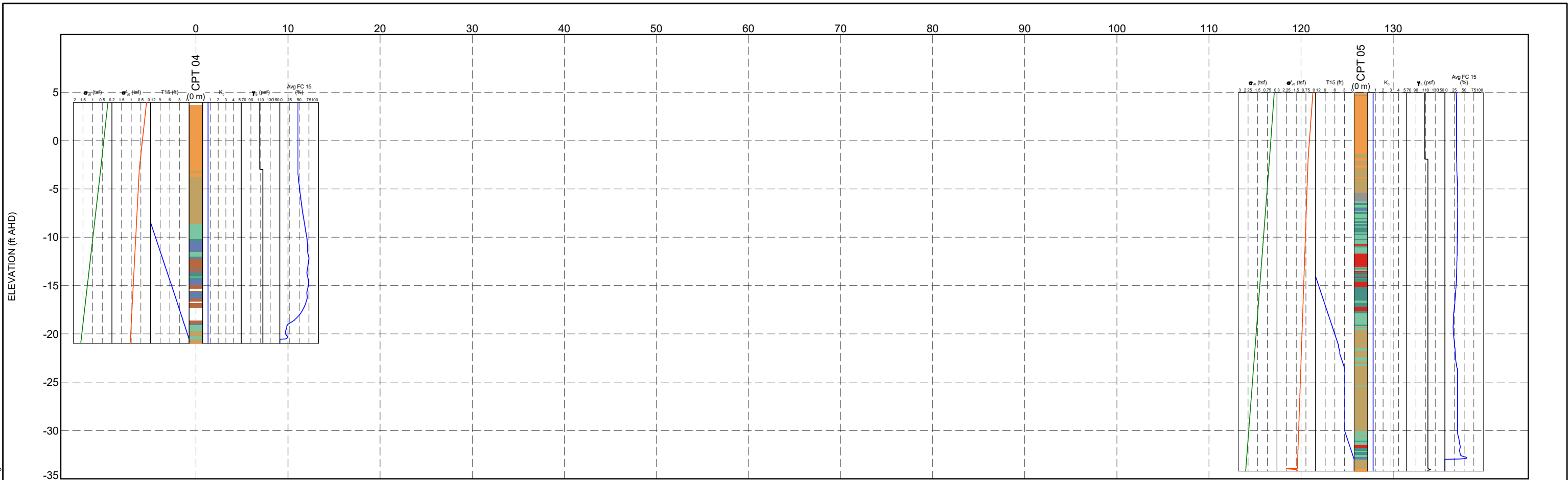
- SBT METHOD: Robertson 1990**
- |                                |   |                                    |
|--------------------------------|---|------------------------------------|
| 1 - Sensitive, fine grained    | 4 - SILT mixtures - clayey SILT to silty CLAY | 7 - Gravelly SAND to SAND          |
| 2 - Organic soil - peats       | 5 - SAND mixtures - silty SAND to sandy SILT  | 8 - Very stiff SAND to clayey SAND |
| 3 - Clays - CLAY to silty CLAY | 6 - Sands - clean SAND to silty SAND          | 9 - Very stiff fine grained        |



TITLE  
 Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Inferred Subsurface Section

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	H 1:419 V 1:400		11x17
PROJECT No	4.05.0	FIGURE No	71

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Fence CPT FENCE 11x17L.DATGEL CPT TOOL DGD 4.05.0 EN.CPJ <DrawingFiles> 1/2/2021 19:55 10.01.00.11.Datgel CPT Tool.gINT Add.in



- SBT METHOD: Robertson 1990**
- 1 - Sensitive, fine grained
  - 4 - SILT mixtures - clayey SILT to silty CLAY
  - 7 - Gravelly SAND to SAND
  - 2 - Organic soil - peats
  - 5 - SAND mixtures - silty SAND to sandy SILT
  - 8 - Very stiff SAND to clayey SAND
  - 3 - Clays - CLAY to silty CLAY
  - 6 - Sands - clean SAND to silty SAND
  - 9 - Very stiff fine grained

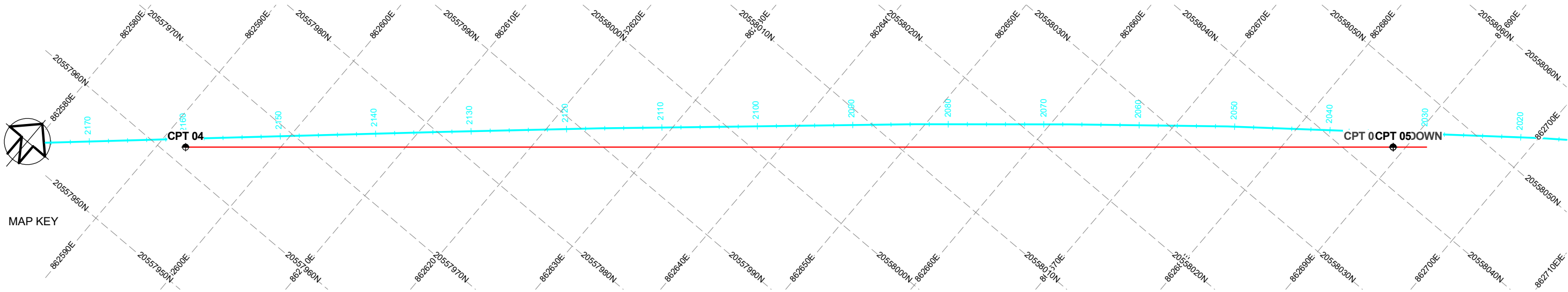
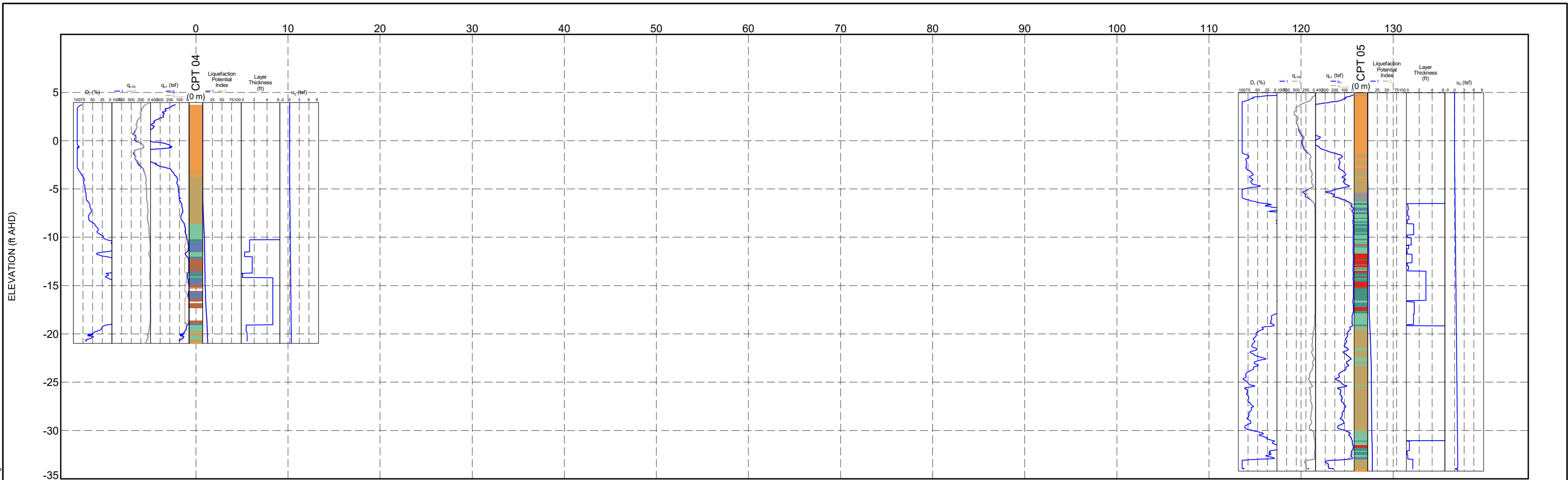


TITLE  
 Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Inferred Subsurface Section

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	H 1:419 V 1:400		11x17
PROJECT No	4.05.0	FIGURE No	72



DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Fence CPT FENCE 11x17L.DATGEL CPT TOOL DGD 4.05.0 EN.CPJ <DrawingFiles> 1/2/2021 19:56 10.01.00.11.Datgel CPT Tool.gINT Add-In

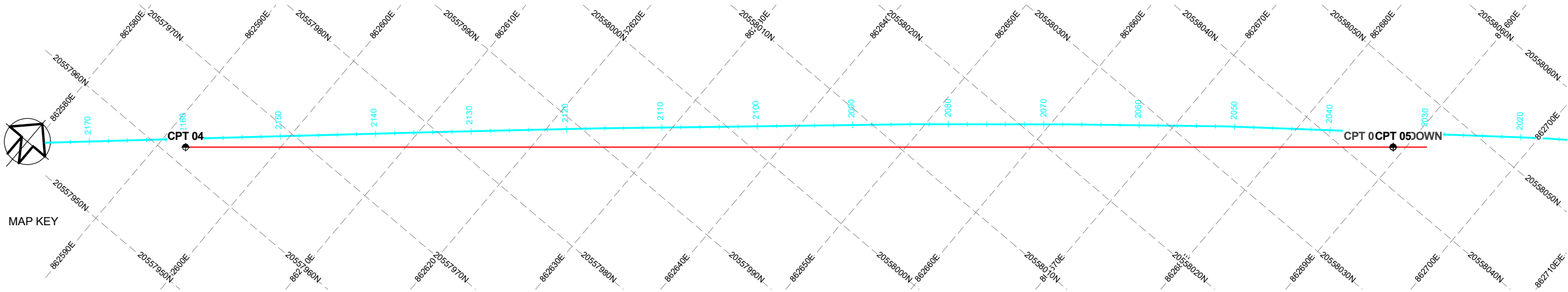
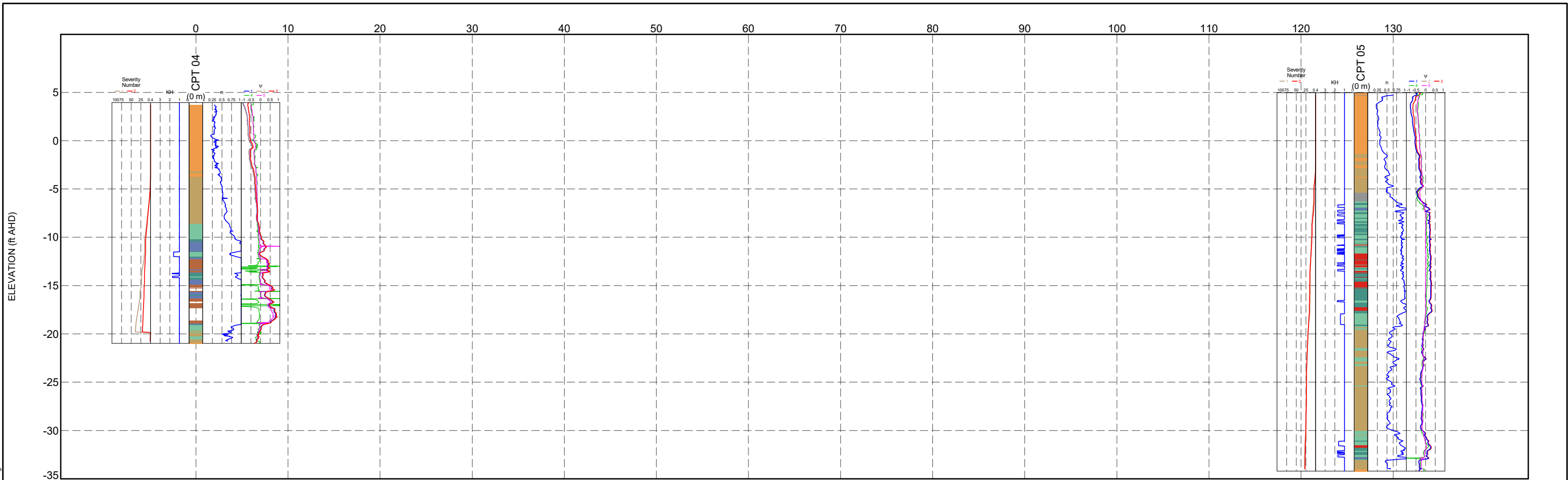


- SBT METHOD: Robertson 1990**
- 1 - Sensitive, fine grained
  - 4 - SILT mixtures - clayey SILT to silty CLAY
  - 7 - Gravelly SAND to SAND
  - 2 - Organic soil - peats
  - 5 - SAND mixtures - silty SAND to sandy SILT
  - 8 - Very stiff SAND to clayey SAND
  - 3 - Clays - CLAY to silty CLAY
  - 6 - Sands - clean SAND to silty SAND
  - 9 - Very stiff fine grained


Relative Density Method:  
 1. Baldi et al. (1986); Al-Homoud & Wehr (2006)  
 2. Jamiolkowski et al. (2001)  
 3. Kulhawy & Mayne (1990)

<p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	TITLE Client 1 Engineer 1 Somewhere CPT Tool Project Inferred Subsurface Section	DRAWN Datgel	DATE 1/2/2021
		CHECKED Datgel	DATE 1/2/2021
		SCALE H 1:419 V 1:400	FIGURE No 73
		PROJECT No 4.05.0	11x17

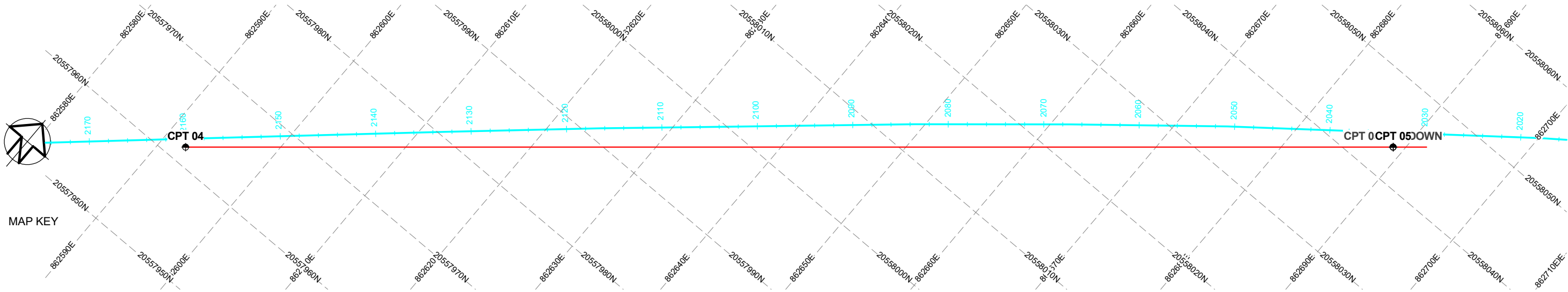
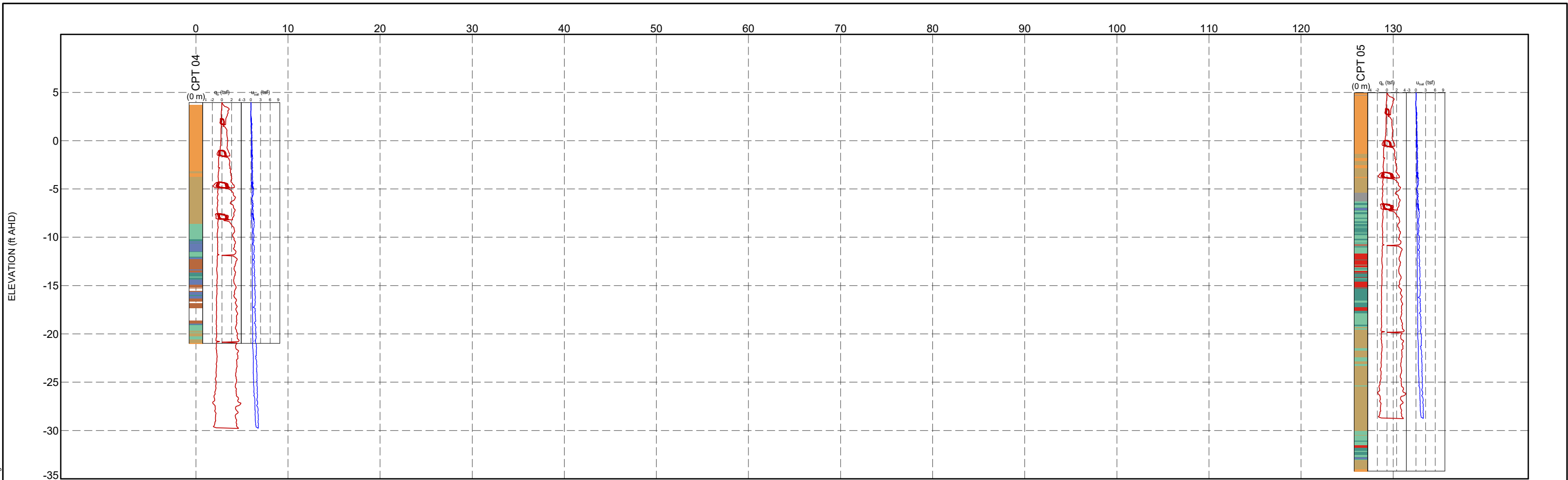
DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Fence CPT FENCE 11x17L.DATGEL CPT TOOL DGD 4.05.0 EN.CPJ <DrawingFiles> 1/2/2021 19:56 10.01.00.11.Datgel CPT Tool.gINT Add.in




- SBT METHOD: Robertson 1990**
- |  |  |  |
|--|--|--|
| <span style="color: red;">■</span> 1 - Sensitive, fine grained     | <span style="color: teal;">■</span> 4 - SILT mixtures - clayey SILT to silty CLAY      | <span style="color: orange;">■</span> 7 - Gravelly SAND to SAND        |
| <span style="color: brown;">■</span> 2 - Organic soil - peats      | <span style="color: lightgreen;">■</span> 5 - SAND mixtures - silty SAND to sandy SILT | <span style="color: grey;">■</span> 8 - Very stiff SAND to clayey SAND |
| <span style="color: blue;">■</span> 3 - Clays - CLAY to silty CLAY | <span style="color: tan;">■</span> 6 - Sands - clean SAND to silty SAND                | <span style="color: lightgrey;">■</span> 9 - Very stiff fine grained   |

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	TITLE	Client 1 Engineer 1 Somewhere CPT Tool Project Inferred Subsurface Section	DRAWN Datgel	DATE 1/2/2021
	CHECKED Datgel	DATE 1/2/2021	SCALE H 1:419 V 1:400	11x17
	PROJECT No 4.05.0	FIGURE No 74		

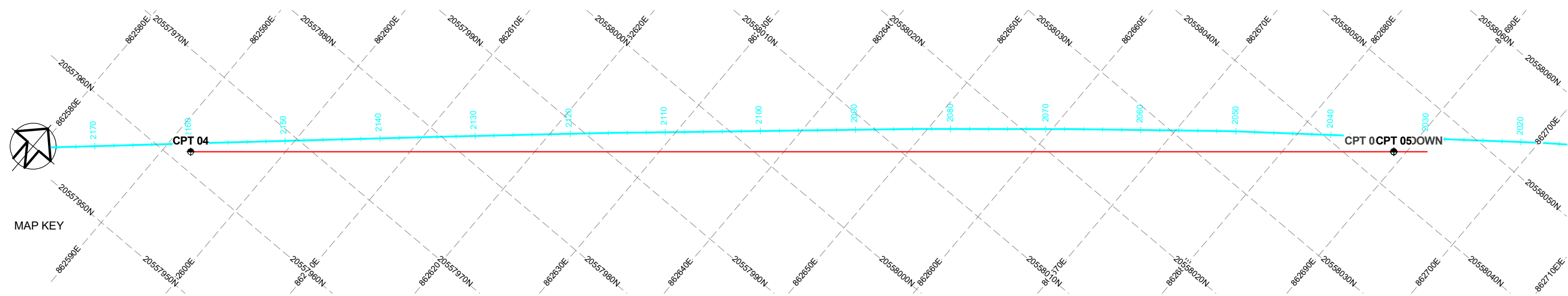
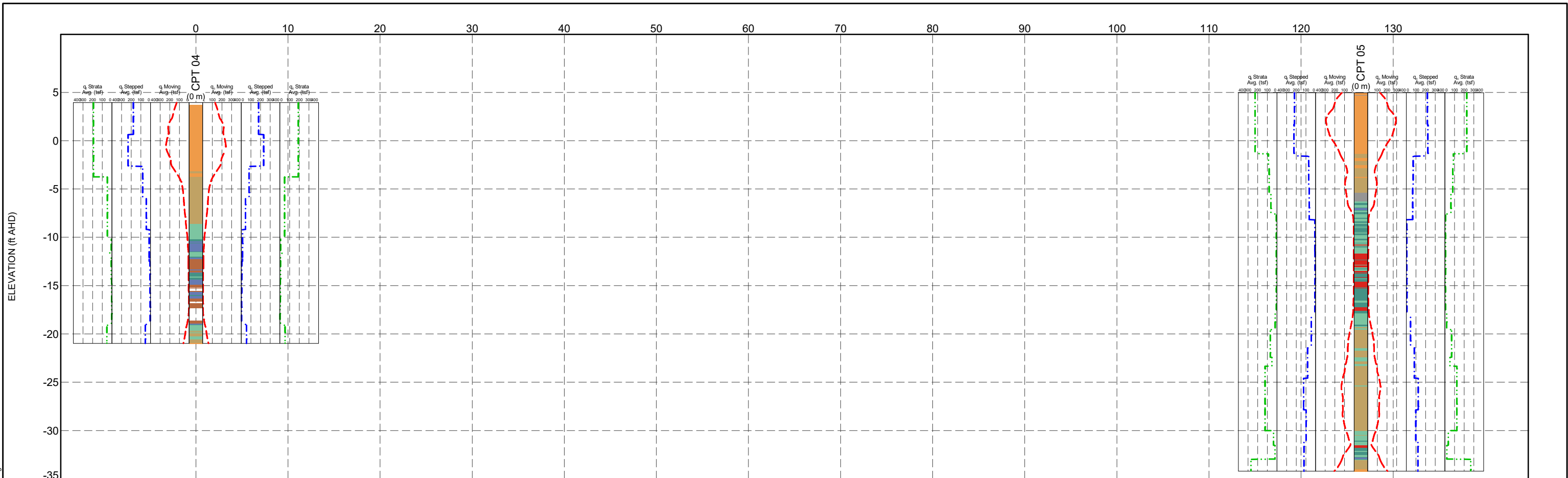
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- SBT METHOD: Robertson 1990**
- |                                |   |                                    |
|--------------------------------|---|------------------------------------|
| 1 - Sensitive, fine grained    | 4 - SILT mixtures - clayey SILT to silty CLAY | 7 - Gravelly SAND to SAND          |
| 2 - Organic soil - peats       | 5 - SAND mixtures - silty SAND to sandy SILT  | 8 - Very stiff SAND to clayey SAND |
| 3 - Clays - CLAY to silty CLAY | 6 - Sands - clean SAND to silty SAND          | 9 - Very stiff fine grained        |

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	TITLE Client 1 Engineer 1 Somewhere CPT Tool Project Inferred Subsurface Section		DRAWN Datgel	DATE 1/2/2021	
			CHECKED Datgel	DATE 1/2/2021	
			SCALE H 1:419 V 1:400		11x17
			PROJECT No 4.05.0	FIGURE No 75	

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Fence CPT FENCE 11x17L.DATGEL CPT TOOL DGD 4.05.0 EN.CPJ <DrawingFiles> 1/2/2021 19:57:10.01.00.11.Datgel CPT Tool.gINT Add.in



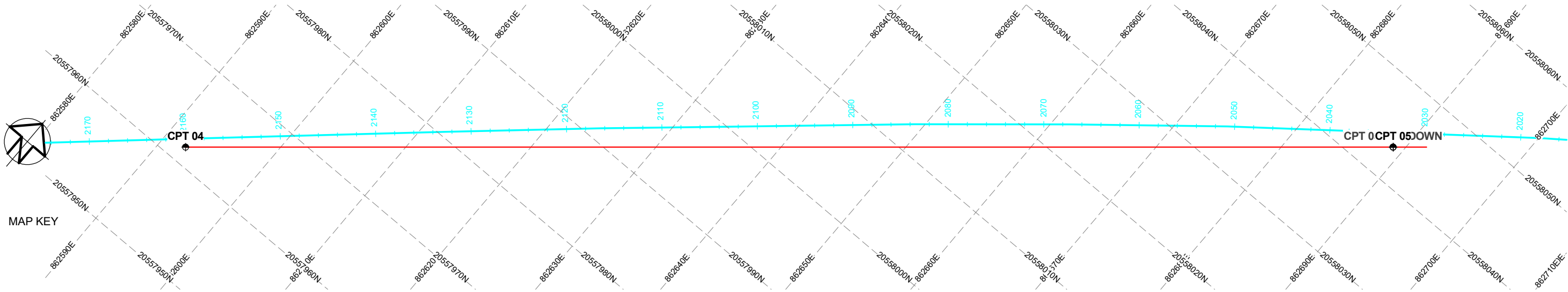
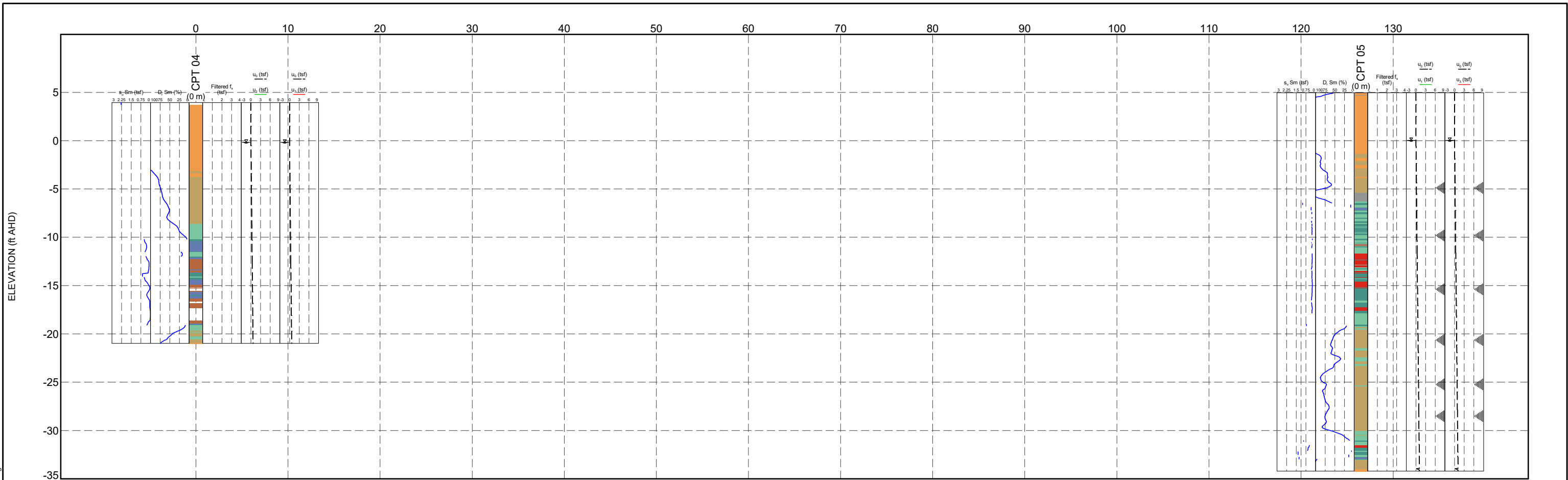
- SBT METHOD: Robertson 1990**
- |  |  |  |
|--|--|--|
| <span style="color: red;">■</span> 1 - Sensitive, fine grained     | <span style="color: teal;">■</span> 4 - SILT mixtures - clayey SILT to silty CLAY      | <span style="color: orange;">■</span> 7 - Gravelly SAND to SAND        |
| <span style="color: brown;">■</span> 2 - Organic soil - peats      | <span style="color: lightgreen;">■</span> 5 - SAND mixtures - silty SAND to sandy SILT | <span style="color: grey;">■</span> 8 - Very stiff SAND to clayey SAND |
| <span style="color: blue;">■</span> 3 - Clays - CLAY to silty CLAY | <span style="color: tan;">■</span> 6 - Sands - clean SAND to silty SAND                | <span style="color: lightgrey;">■</span> 9 - Very stiff fine grained   |



TITLE  
 Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Inferred Subsurface Section

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	H 1:419 V 1:400		11x17
PROJECT No	4.05.0	FIGURE No	76

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Fence CPT FENCE 11x17L.DATGEL CPT TOOL DGD 4.05.0 EN.CPJ <DrawingFiles> 1/2/2021 19:58 10.01.00.11.Datgel CPT Tool.gINT Add-In



- SBT METHOD: Robertson 1990**
- 1 - Sensitive, fine grained
  - 4 - SILT mixtures - clayey SILT to silty CLAY
  - 7 - Gravelly SAND to SAND
  - 2 - Organic soil - peats
  - 5 - SAND mixtures - silty SAND to sandy SILT
  - 8 - Very stiff SAND to clayey SAND
  - 3 - Clays - CLAY to silty CLAY
  - 6 - Sands - clean SAND to silty SAND
  - 9 - Very stiff fine grained

**Relative Density Method:**  
 1. Baldi et al. (1986); Al-Homoud & Wehr (2006)  
 2. Jamiolkowski et al. (2001)  
 3. Kulhawy & Mayne (1990)

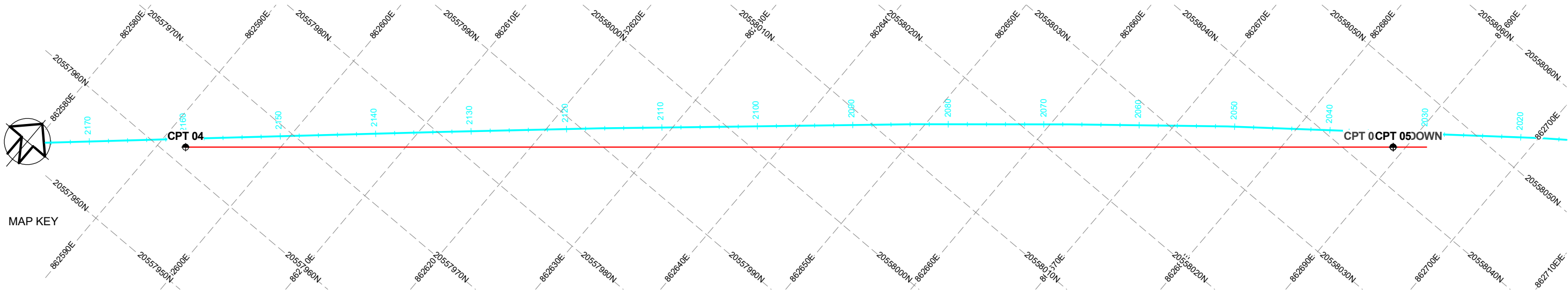
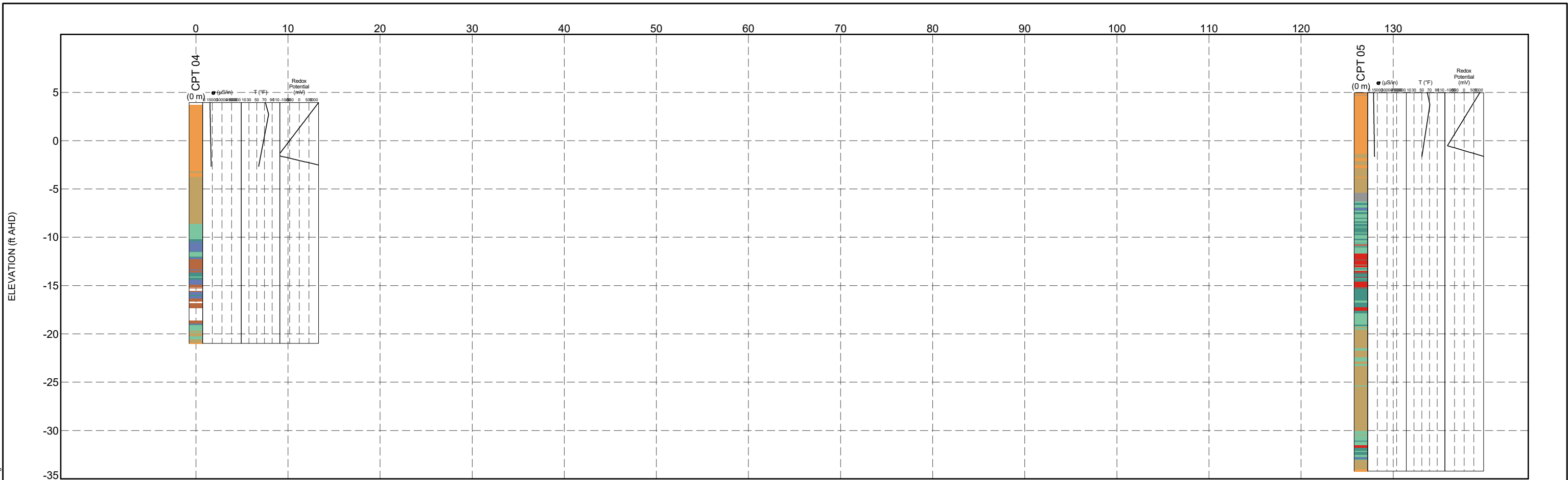
**Undrained Shear Strength Method:**  
 1.  $s_u = (q_c - \sigma_{vc})/N_k$ ; or  $(q_c - \sigma_{vc})/N_k$   
 2.  $s_u = q/N_{kv}$ ; or  $q/N_{kv}$   
 3. Wroth (1984)  
 4. Trak et al. (1980), Terzaghi et al. (1996)  
 5. Robertson (2009),  $s_u = \Delta u/N$



TITLE  
 Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Inferred Subsurface Section

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	H 1:419 V 1:400		11x17
PROJECT No	4.05.0	FIGURE No	77

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Fence CPT FENCE 11x17L.DATGEL CPT TOOL DGD 4.05.0 EN.CPJ <DrawingFiles> 1/2/2021 19:58 10.01.00.11.Datgel CPT Tool.gINT Add-In



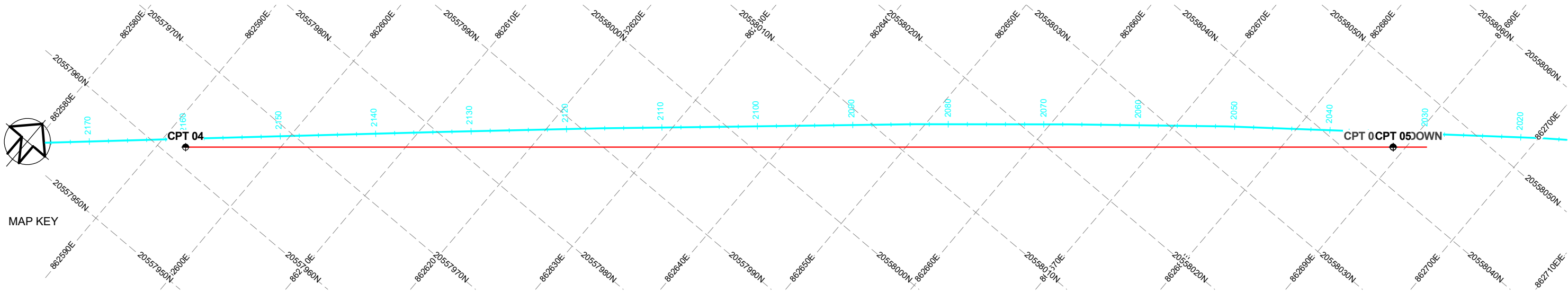
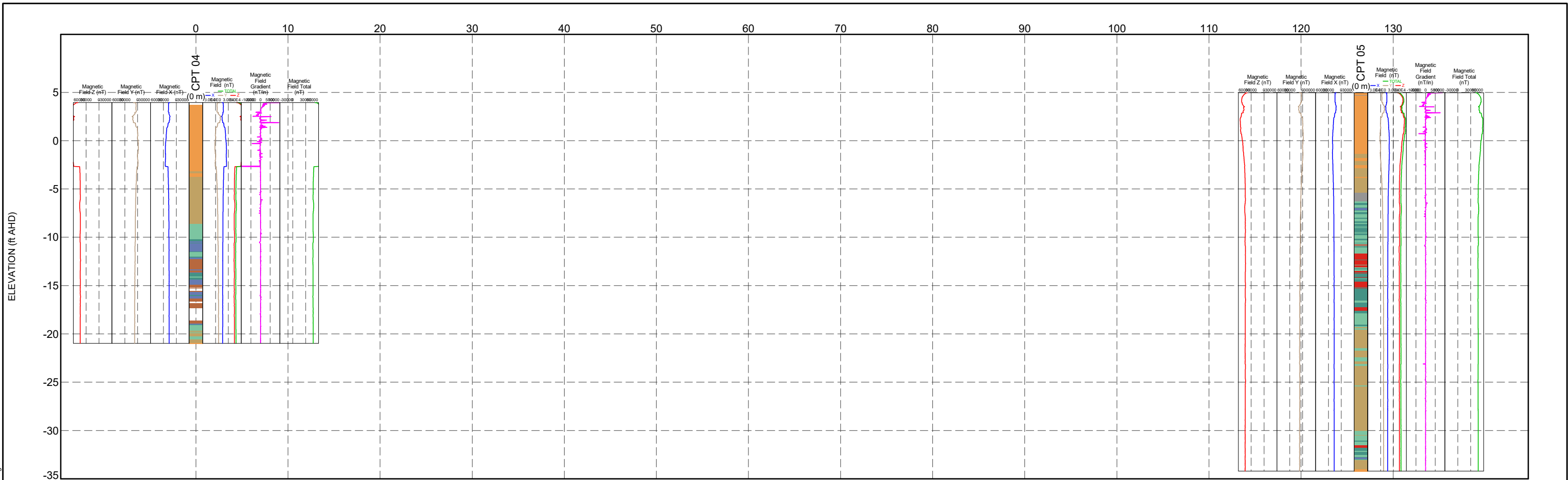
- SBT METHOD: Robertson 1990**
- |  |  |  |
|--|--|--|
| <span style="color: red;">■</span> 1 - Sensitive, fine grained     | <span style="color: teal;">■</span> 4 - SILT mixtures - clayey SILT to silty CLAY      | <span style="color: orange;">■</span> 7 - Gravelly SAND to SAND        |
| <span style="color: brown;">■</span> 2 - Organic soil - peats      | <span style="color: lightgreen;">■</span> 5 - SAND mixtures - silty SAND to sandy SILT | <span style="color: grey;">■</span> 8 - Very stiff SAND to clayey SAND |
| <span style="color: blue;">■</span> 3 - Clays - CLAY to silty CLAY | <span style="color: tan;">■</span> 6 - Sands - clean SAND to silty SAND                | <span style="color: lightgrey;">■</span> 9 - Very stiff fine grained   |



TITLE  
 Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Inferred Subsurface Section

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	H 1:419 V 1:400		11x17
PROJECT No	4.05.0	FIGURE No	78

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Fence CPT FENCE 11x17L.DATGEL CPT TOOL DGD 4.05.0 EN.CPJ <DrawingFiles> 1/2/2021 19:59 10.01.00.11 Datgel CPT Tool.gINT Add-In



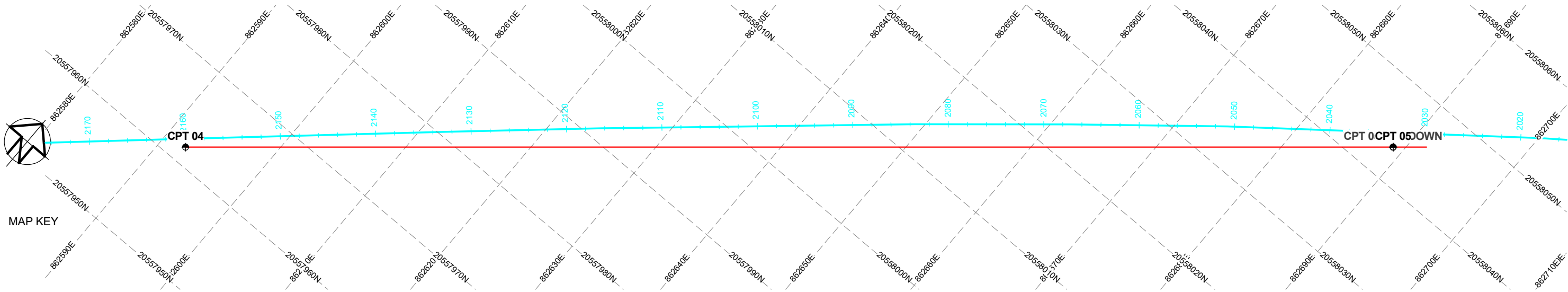
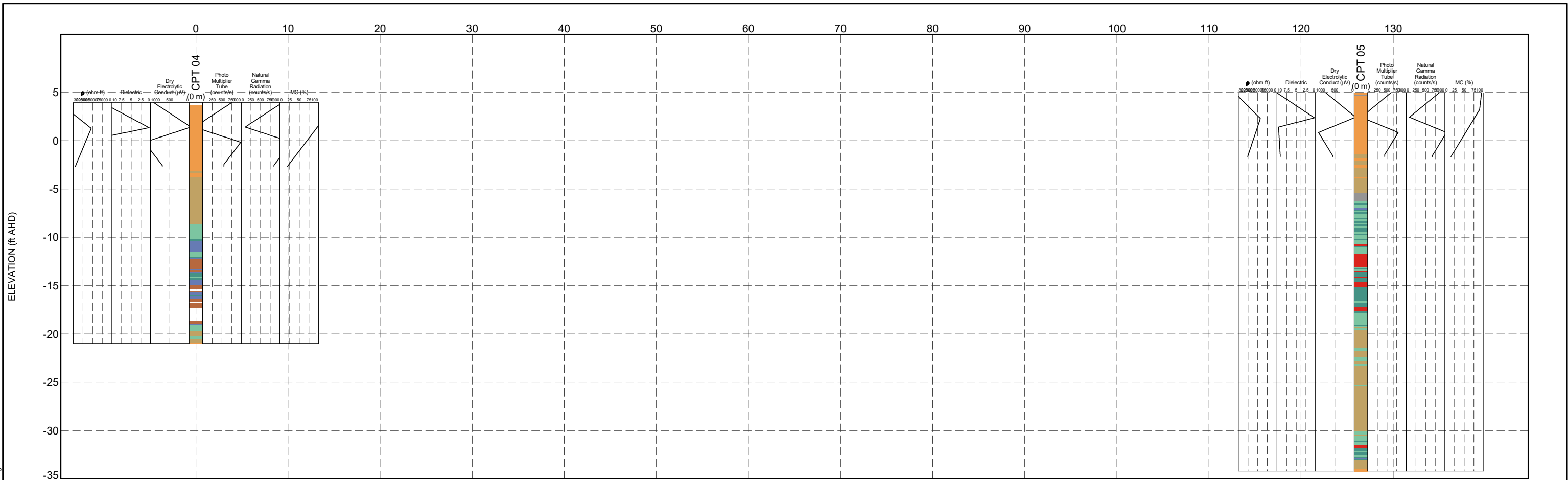
- SBT METHOD: Robertson 1990**
- |  |  |  |
|--|--|--|
| <span style="color: red;">■</span> 1 - Sensitive, fine grained     | <span style="color: teal;">■</span> 4 - SILT mixtures - clayey SILT to silty CLAY      | <span style="color: orange;">■</span> 7 - Gravelly SAND to SAND        |
| <span style="color: brown;">■</span> 2 - Organic soil - peats      | <span style="color: lightgreen;">■</span> 5 - SAND mixtures - silty SAND to sandy SILT | <span style="color: grey;">■</span> 8 - Very stiff SAND to clayey SAND |
| <span style="color: blue;">■</span> 3 - Clays - CLAY to silty CLAY | <span style="color: tan;">■</span> 6 - Sands - clean SAND to silty SAND                | <span style="color: lightgrey;">■</span> 9 - Very stiff fine grained   |



TITLE  
 Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Inferred Subsurface Section

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	H 1:419 V 1:400		11x17
PROJECT No	4.05.0	FIGURE No	79

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Fence CPT FENCE 11x17L.DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <DrawingFiles> 1/2/2021 20:00 10.01.00.11 Datgel CPT Tool.gINT Add.in



- SBT METHOD: Robertson 1990**
- |  |  |  |
|--|--|--|
| <span style="color: red;">■</span> 1 - Sensitive, fine grained     | <span style="color: teal;">■</span> 4 - SILT mixtures - clayey SILT to silty CLAY      | <span style="color: orange;">■</span> 7 - Gravelly SAND to SAND        |
| <span style="color: brown;">■</span> 2 - Organic soil - peats      | <span style="color: lightgreen;">■</span> 5 - SAND mixtures - silty SAND to sandy SILT | <span style="color: grey;">■</span> 8 - Very stiff SAND to clayey SAND |
| <span style="color: blue;">■</span> 3 - Clays - CLAY to silty CLAY | <span style="color: tan;">■</span> 6 - Sands - clean SAND to silty SAND                | <span style="color: lightgrey;">■</span> 9 - Very stiff fine grained   |

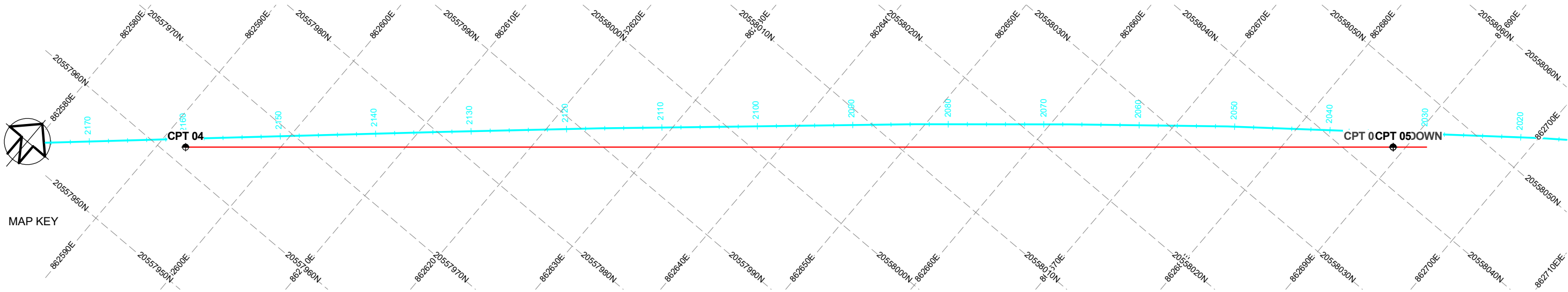
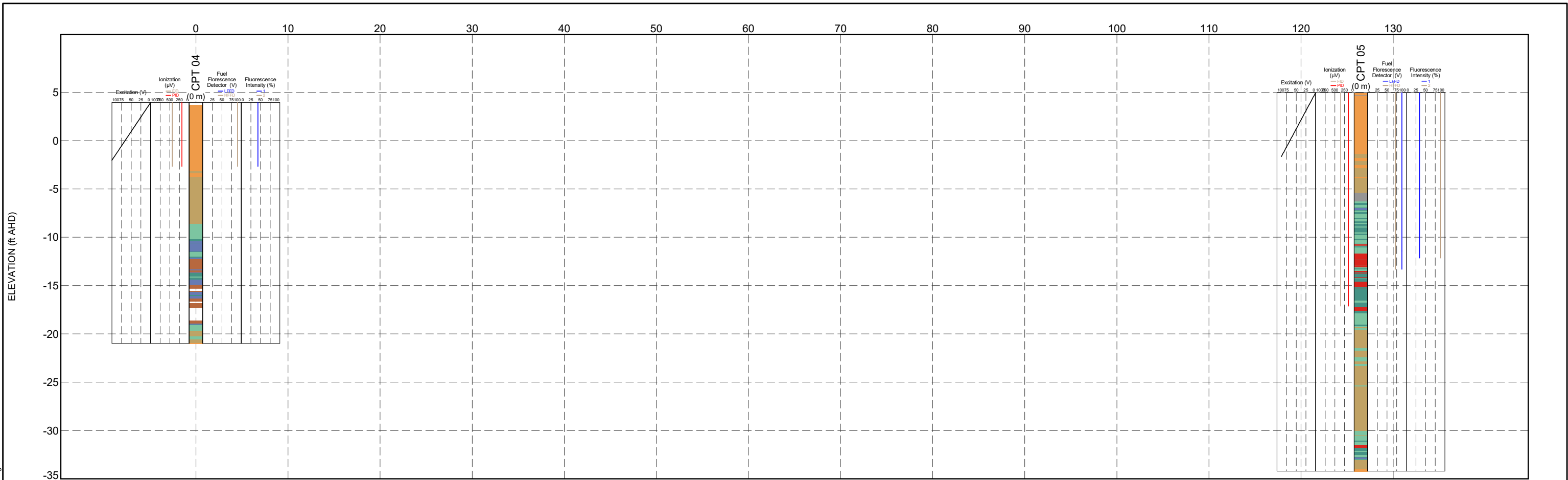


TITLE  
 Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Inferred Subsurface Section


DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	H 1:419 V 1:400		11x17
PROJECT No	4.05.0	FIGURE No	80



DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Fence CPT FENCE 11x17L.DATGEL CPT TOOL DGD 4.05.0 EN.CPJ <DrawingFiles> 1/2/2021 20:00 10.01.00.11 Datgel CPT Tool.gINT Add-In



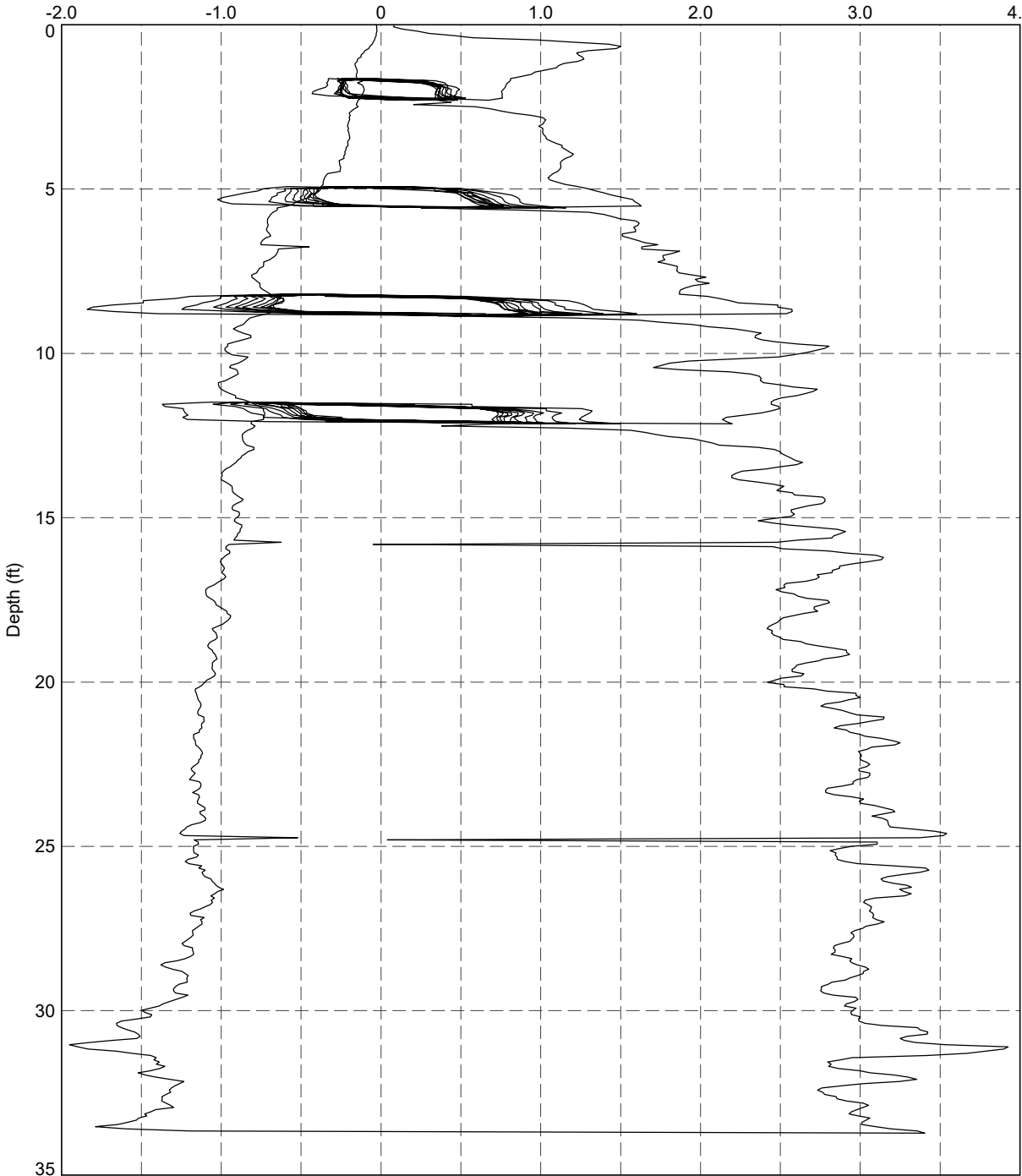
- SBT METHOD: Robertson 1990**
- |                                |   |                                    |
|--------------------------------|---|------------------------------------|
| 1 - Sensitive, fine grained    | 4 - SILT mixtures - clayey SILT to silty CLAY | 7 - Gravelly SAND to SAND          |
| 2 - Organic soil - peats       | 5 - SAND mixtures - silty SAND to sandy SILT  | 8 - Very stiff SAND to clayey SAND |
| 3 - Clays - CLAY to silty CLAY | 6 - Sands - clean SAND to silty SAND          | 9 - Very stiff fine grained        |

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	TITLE	Client 1 Engineer 1 Somewhere CPT Tool Project Inferred Subsurface Section	DRAWN Datgel	DATE 1/2/2021
	CHECKED Datgel	DATE 1/2/2021	SCALE H 1:419 V 1:400	11x17
	PROJECT No 4.05.0	FIGURE No 81		


Average Ball Bearing Pressure,  $q_b$  (tsf)

PointID

V-BPT1



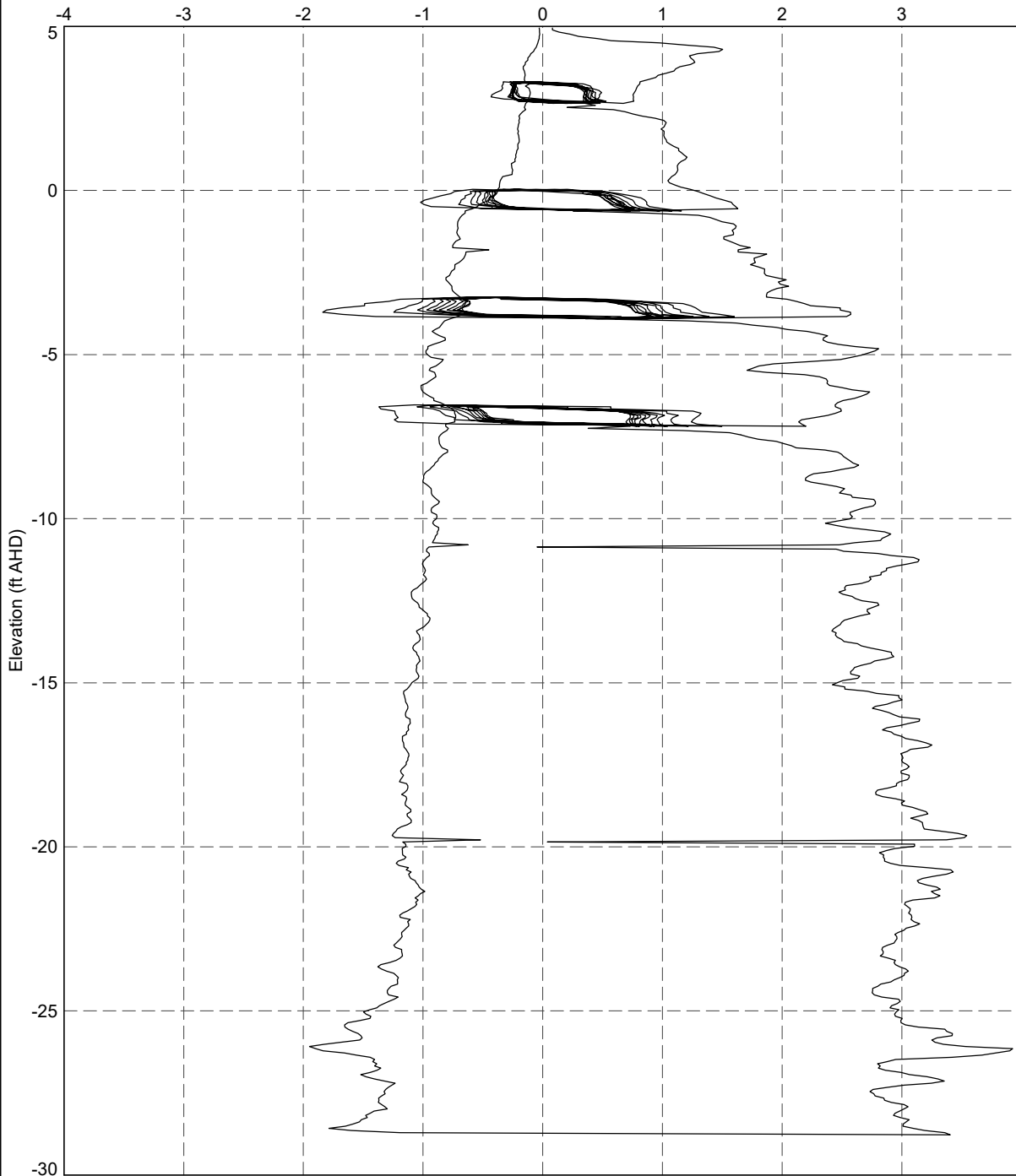
DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph BPT QB DEPTH LETP.DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <-DrawingFiles> 1/2/2021 20:00 10:01:00.11.Datgel.CPT.Tool.gINT.Add-In

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Ball Bearing Pressure versus Depth</p>	<p>DRAWN</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>	
		<p>CHECKED</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>	
		<p>SCALE</p> <p>Not To Scale</p>		<p>Let</p>
		<p>PROJECT No</p> <p>4.05.0</p>	<p>FIGURE No</p> <p>82</p>	

Average Ball Bearing Pressure,  $q_b$  (tsf)

PointID

CPT 05



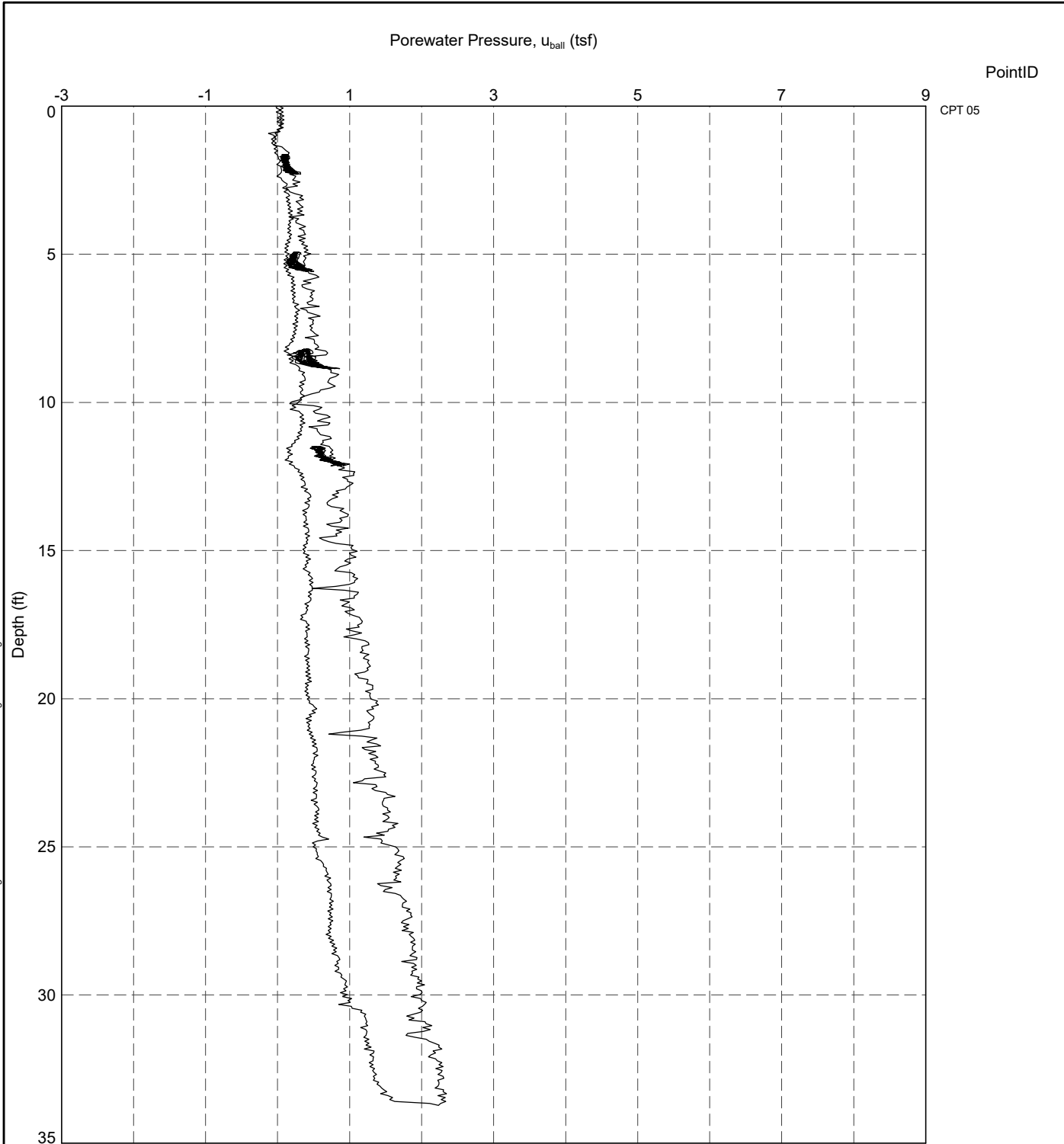
DATGEL\CPT TOOL\_DGD\_4.05.0\LIB\GLB\Graph\BPT\OB RL\LETP DATGEL\CPT TOOL\_DGD\_4.05.0 EN.GPJ <<DrawingFile>> 1/2/2021 20:00 10.01.00.11 Datgel\CPT Tool\gINT\_Add-In




TITLE  
 Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Ball Bearing Pressure versus Elevation

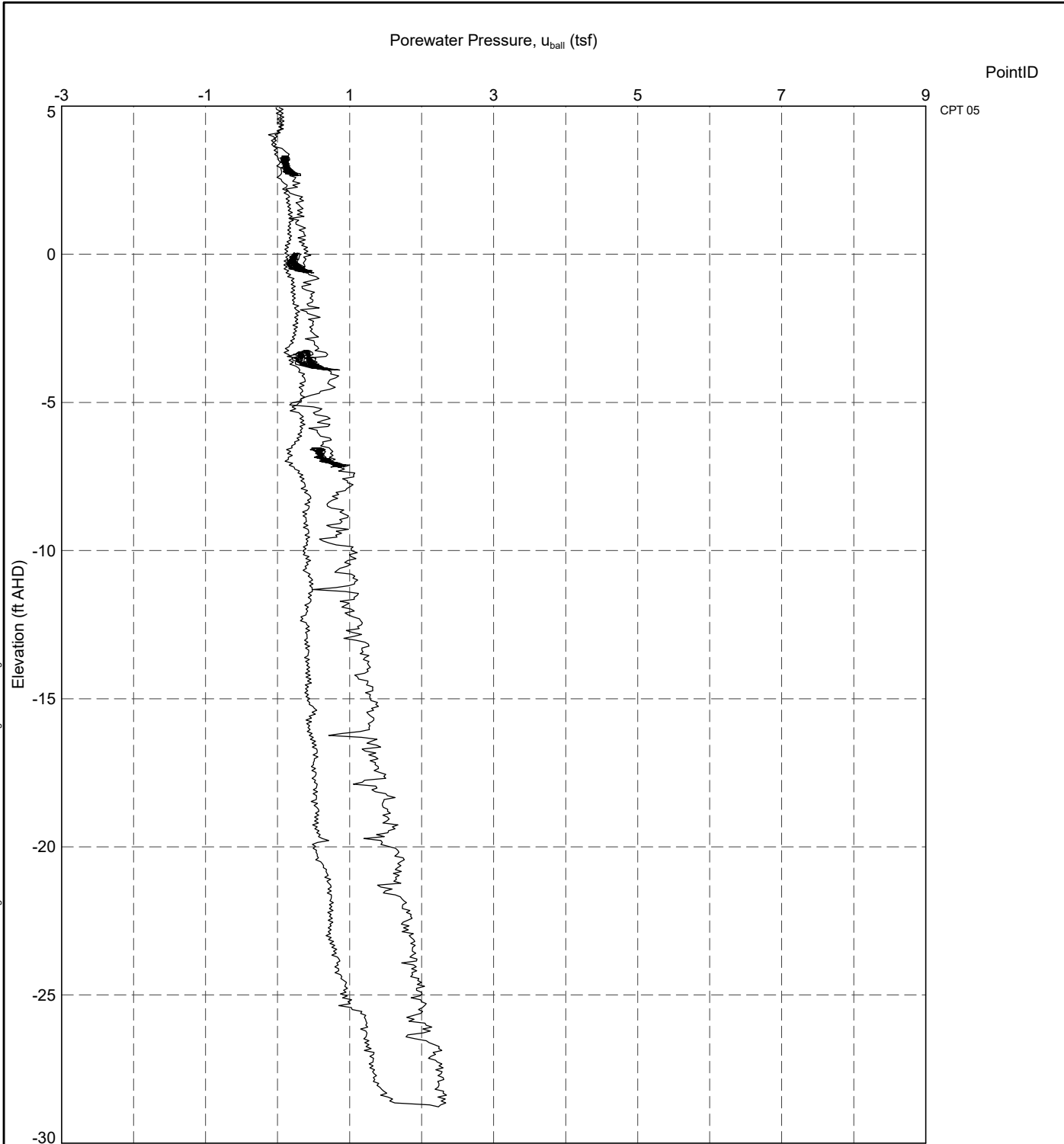
DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	83


DATGEL CPT TOOL\_DGD\_4.05.0.LIB.GLB Graph BPT UBALL\_DEPTH LETP DATGEL\_CPT\_TOOL\_DGD\_4.05.0.EN.GPJ <<DrawingFile>> 1/2/2021 20:00:10.0100.11 Datgel CPT Tool.gINT Add-In



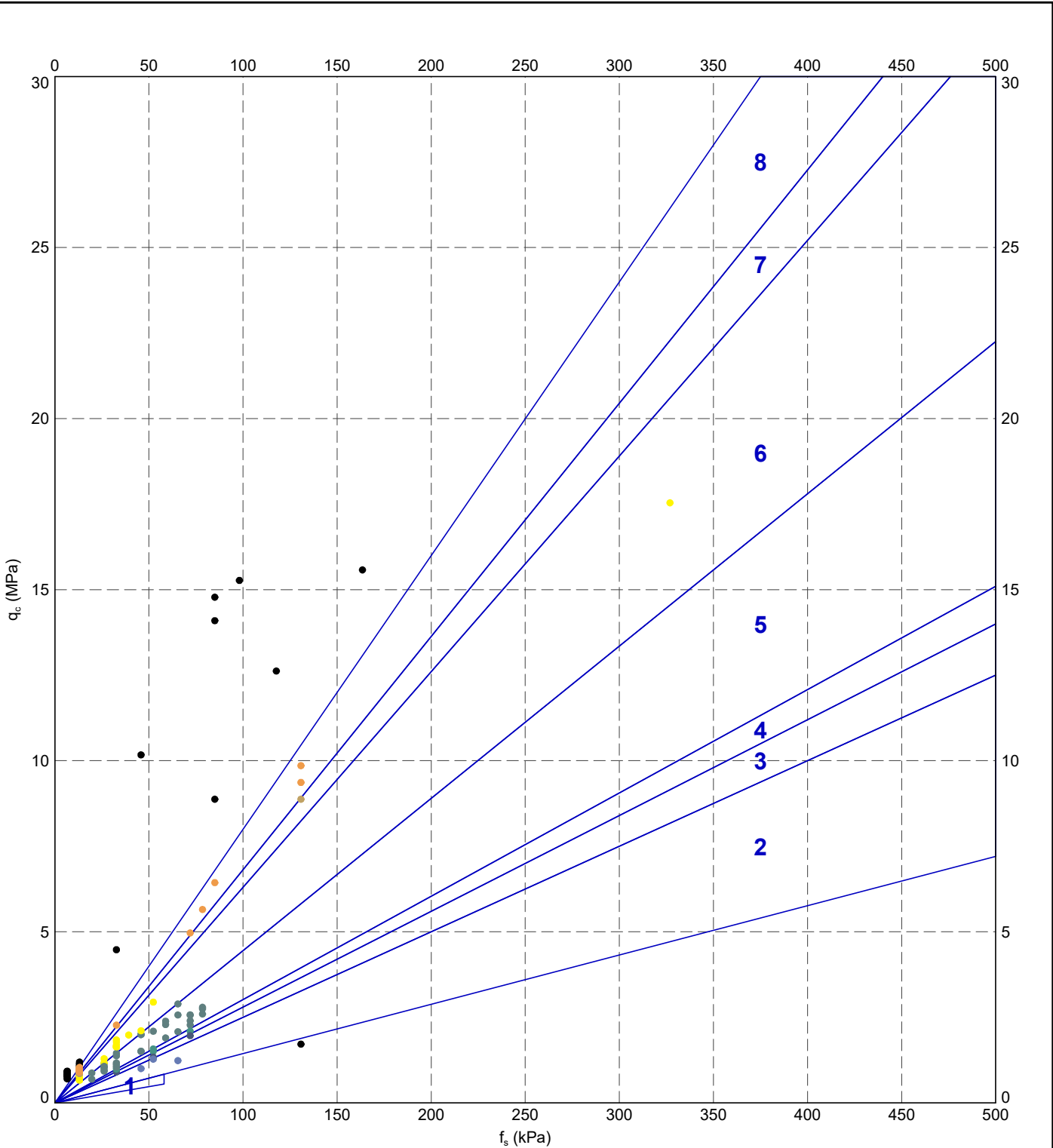
 <b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	TITLE Client 1 Engineer 1 Somewhere CPT Tool Project	DRAWN	Datgel	DATE	1/2/2021	
		Ball Bearing Porewater Pressure versus Depth	CHECKED	Datgel	DATE	1/2/2021
			SCALE	Not To Scale		Let
			PROJECT No	4.05.0	FIGURE No	84

DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.BPT.UBALL.RL.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ.<<DrawingFiles>> 1/2/2021 20:00 10.01.00.11.Datgel.CPT.Tool.gINT.Add-In




 <b>Datgel</b> <small>DATA SOLUTIONS</small> <small>Geotechnics • Geoenvironment • Laboratory</small>	<small>TITLE</small> <p style="text-align: center;">Client 1 Engineer 1 Somewhere CPT Tool Project</p> <p style="text-align: center;">Ball Bearing Porewater Pressure vs Elevation</p>	<small>DRAWN</small> <p style="text-align: center;">Datgel</p>	<small>DATE</small> <p style="text-align: center;">1/2/2021</p>	
	<small>CHECKED</small> <p style="text-align: center;">Datgel</p>	<small>DATE</small> <p style="text-align: center;">1/2/2021</p>	<small>SCALE</small> <p style="text-align: center;">Not To Scale</p>	
	<small>PROJECT No</small> <p style="text-align: center;">4.05.0</p>		<small>FIGURE No</small> <p style="text-align: center;">85</p>	
	<small>Let</small>			

DATGEL CPT TOOL\_DGD\_4.05.0.LIB.GLB Graph CPT BEGEMANN 1965 LETP.DATGEL\_CPT\_TOOL\_DGD\_4.05.0.EN.GPJ <-DrawingFile> 1/2/2021 20:00 10.01.00.11 Datgel CPT Tool.gINT\_Add.in

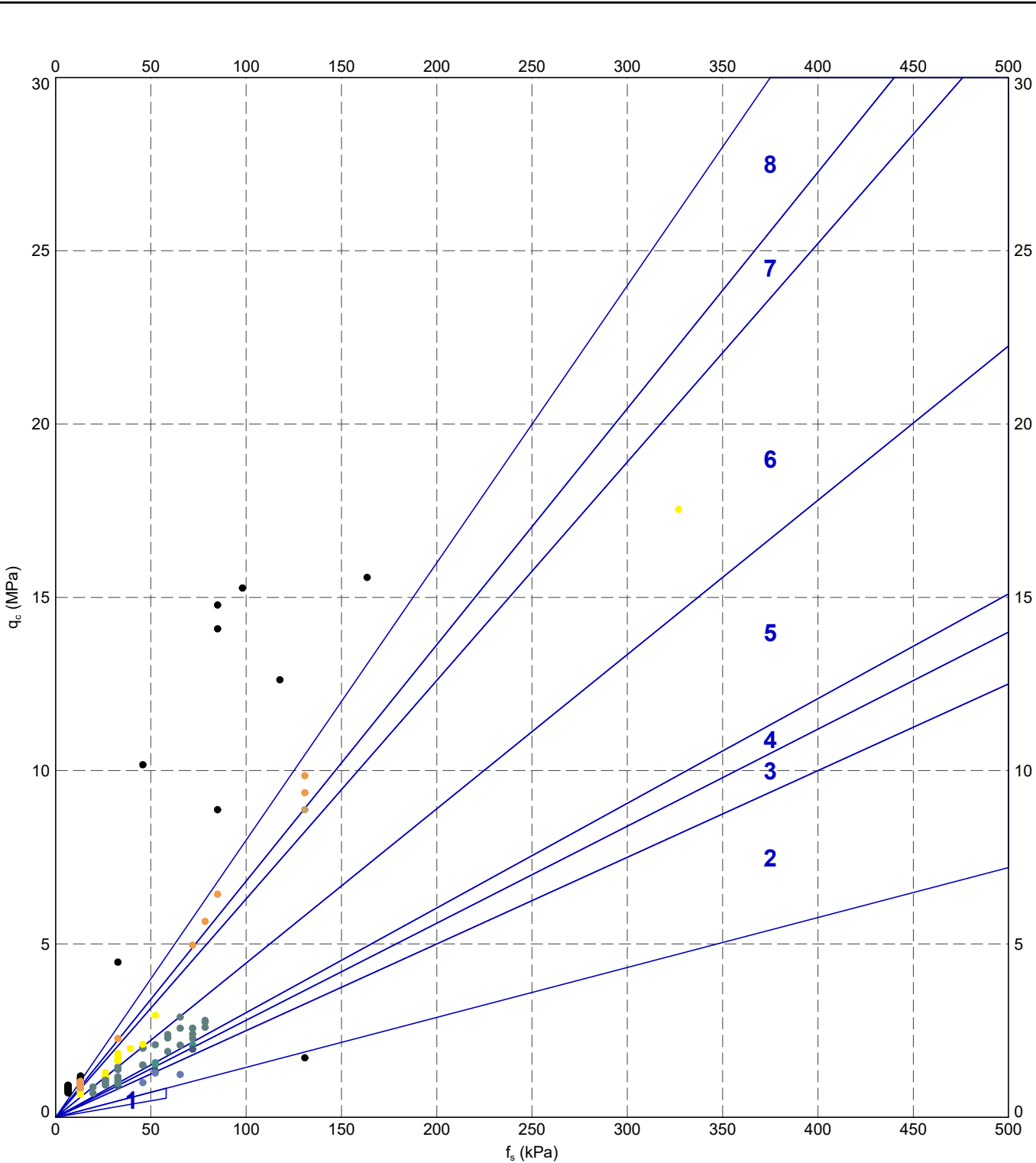


**METHOD: Begemann 1965**

- 1 - PEAT
- 2 - CLAY
- 3 - CLAY - LOAM
- 4 - LOAM
- 5 - SILT - CLAY - SAND
- 6 - Silty SAND
- 7 - Fine SAND
- 8 - Coarse SAND (with GRAVEL)

 <b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	TITLE Client 1 Engineer 1 Somewhere CPT Tool Project Begemann 1965 $q_c$ vs. $f_s$ - V-Beg 01	DRAWN	Datgel	DATE	1/2/2021
	CHECKED	Datgel	DATE	1/2/2021	
	SCALE	Not To Scale			Let
	PROJECT No	4.05.0	FIGURE No	86	

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph CPT BEGEMANN 1965.MLETP DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <<DrawingFile>> 1/2/2021 20:00 10.01.00.11 Datgel CPT.Tool.gINT Add-In



**METHOD: Begemann 1965**

- 1 - PEAT
- 2 - CLAY
- 3 - CLAY - LOAM
- 4 - LOAM
- 5 - SILT - CLAY - SAND
- 6 - Silty SAND
- 7 - Fine SAND
- 8 - Coarse SAND (with GRAVEL)

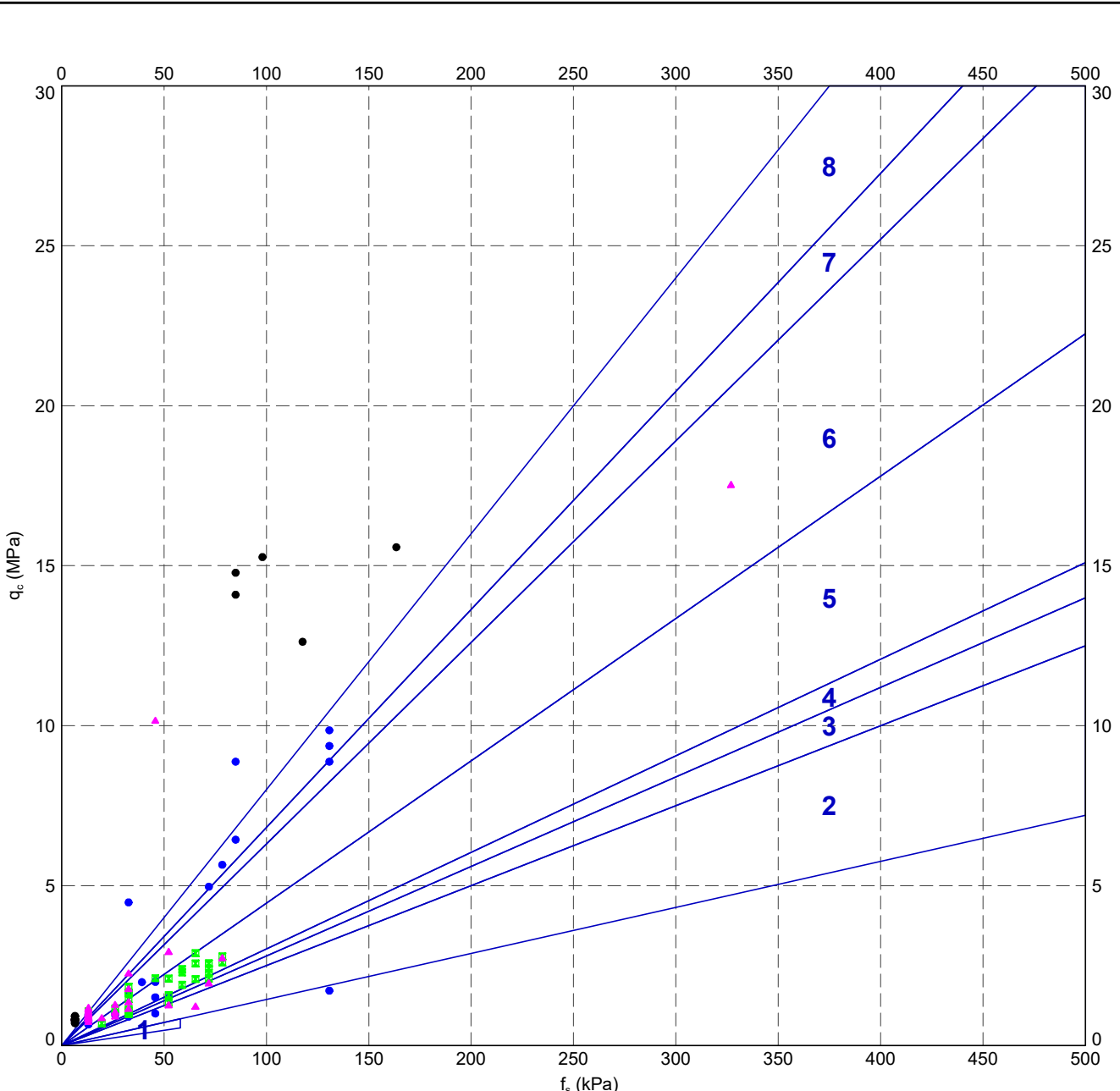
PointIDs: ● V-Beg 01

TITLE

Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Begemann 1965  $q_c$  vs.  $f_s$

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	87

DATGEL CPT TOOL\_DGD\_4.05.0.LIB.GLB Graph CPT BEGEMANN 1965 U LEITP DATGEL CPT TOOL\_DGD\_4.05.0.EN.GPJ <-DrawingFile> 1/2/2021 20:01:10.01.00.11 Datgel CPT\_Tool.gINT\_Add-In




**METHOD: Begemann 1965**

- 1 - PEAT
- 2 - CLAY
- 3 - CLAY - LOAM
- 4 - LOAM
- 5 - SILT - CLAY - SAND
- 6 - Silty SAND
- 7 - Fine SAND
- 8 - Coarse SAND (with GRAVEL)

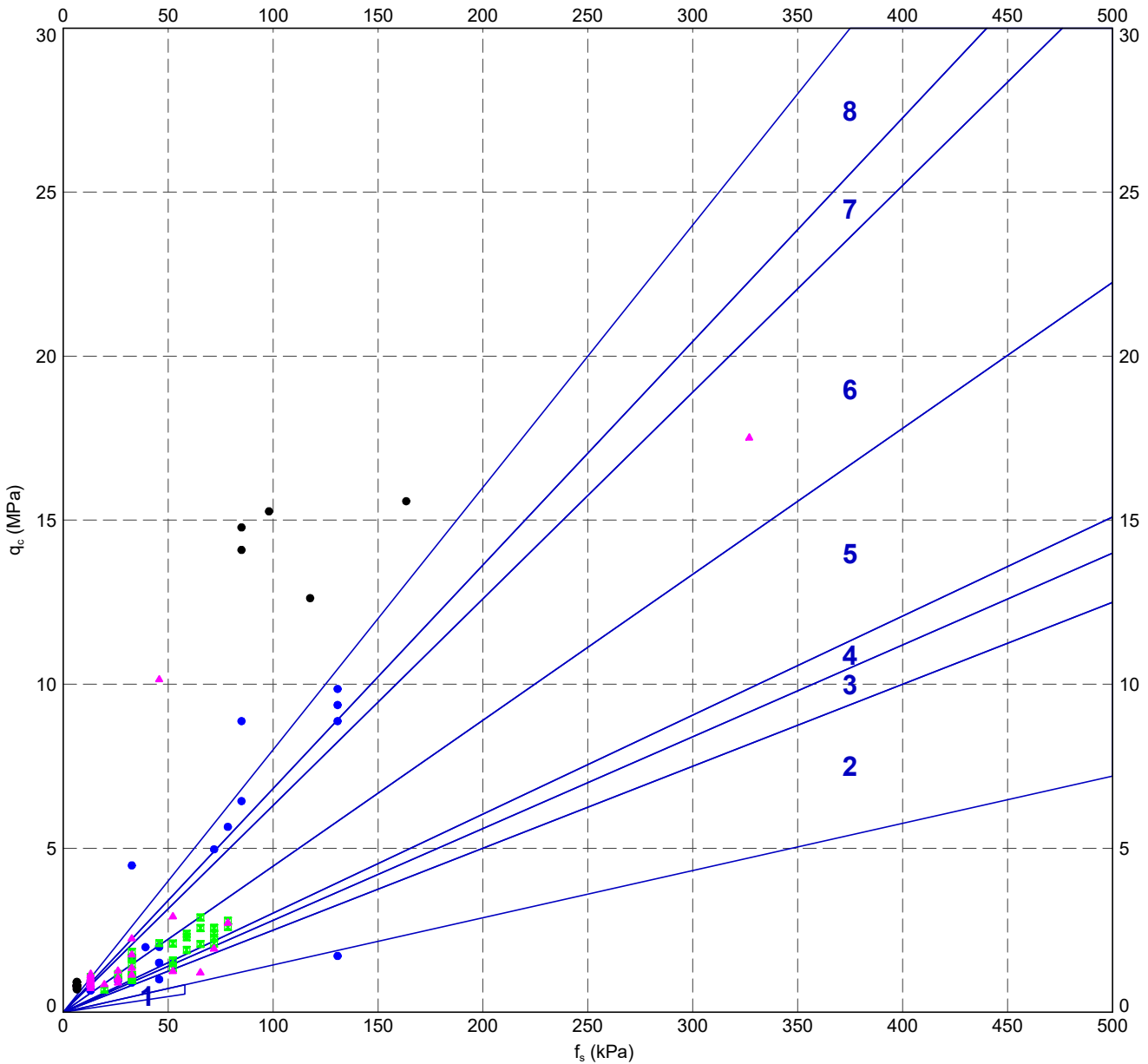
**Geology Unit Legend**

- ★ D - Unit D
- A - Unit A
- B - Unit B
- ▲ C - Unit C
- ◆ F - Unit F
- G - Unit G
- △ H - Unit H
- ⊗ I - Unit I
- ⊕ J - Unit J
- ⊠ K - Unit K
- ◇ R - Rock

 <b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	TITLE Client 1 Engineer 1 Somewhere CPT Tool Project Begemann 1965 $q_c$ vs. $f_s$ - V-Beg 01	DRAWN	Datgel	DATE	1/2/2021
	CHECKED	Datgel	DATE	1/2/2021	
	SCALE	Not To Scale			Let
	PROJECT No	4.05.0	FIGURE No	88	



DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph CPT BEGEMANN 1965 UM LETP DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <-DrawingFiles> 1/2/2021 20:01 10.01.00.11 Datgel CPT Tool gINT Add-In



**METHOD: Begemann 1965**

- 1 - PEAT
- 2 - CLAY
- 3 - CLAY - LOAM
- 4 - LOAM
- 5 - SILT - CLAY - SAND
- 6 - Silty SAND
- 7 - Fine SAND
- 8 - Coarse SAND (with GRAVEL)

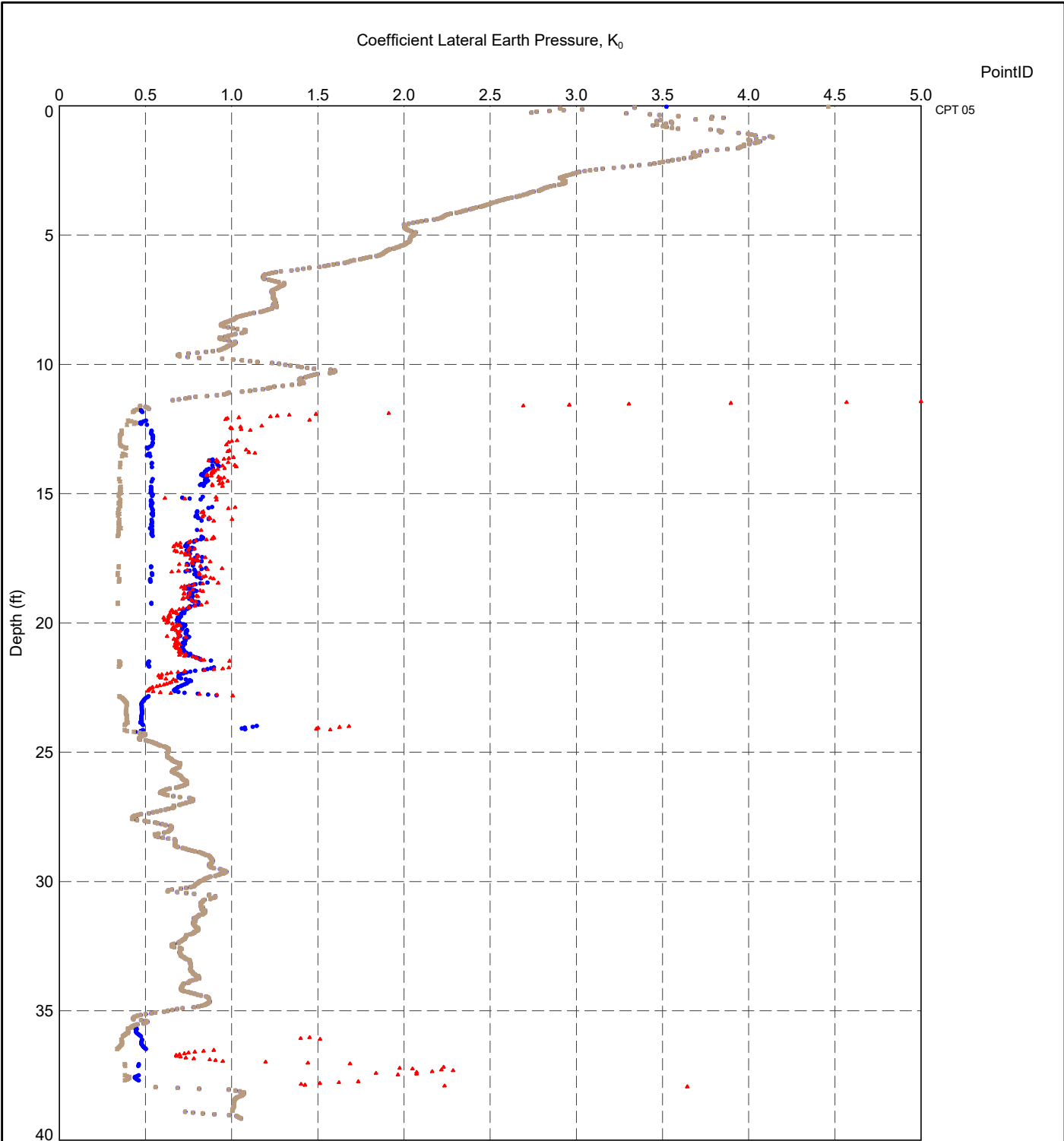
**Geology Unit Legend**

- ★ D - Unit D
- A - Unit A
- B - Unit B
- ▲ C - Unit C
- ◆ F - Unit F
- G - Unit G
- △ H - Unit H
- ⊗ I - Unit I
- ⊕ J - Unit J
- ⊠ K - Unit K
- ◇ R - Rock

PointIDs: V-Beg 01

 <b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	TITLE Client 1 Engineer 1 Somewhere CPT Tool Project Begemann 1965 $q_c$ vs. $f_s$	DRAWN	Datgel	DATE	1/2/2021
	CHECKED	Datgel	DATE	1/2/2021	
	SCALE	Not To Scale			Let
	PROJECT No	4.05.0	FIGURE No	89	

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph: CPT COEFF LATERAL EARTH PRESS DEPTH LETP DATGEL\_CPT TOOL DGD 4.05.0 EN.GPJ <<DrawingFile>> 1/2/2021 20:02:10.01.00.11 Datgel CPT Tool glINT Acid-In



Method:  
 ● Mayne (2007)  
 ■ Mayne (2007)  
 ▲ Kulhawy & Mayne (1990)



TITLE  
 Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Coefficient Lateral Earth Pressure vs. Depth

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	90

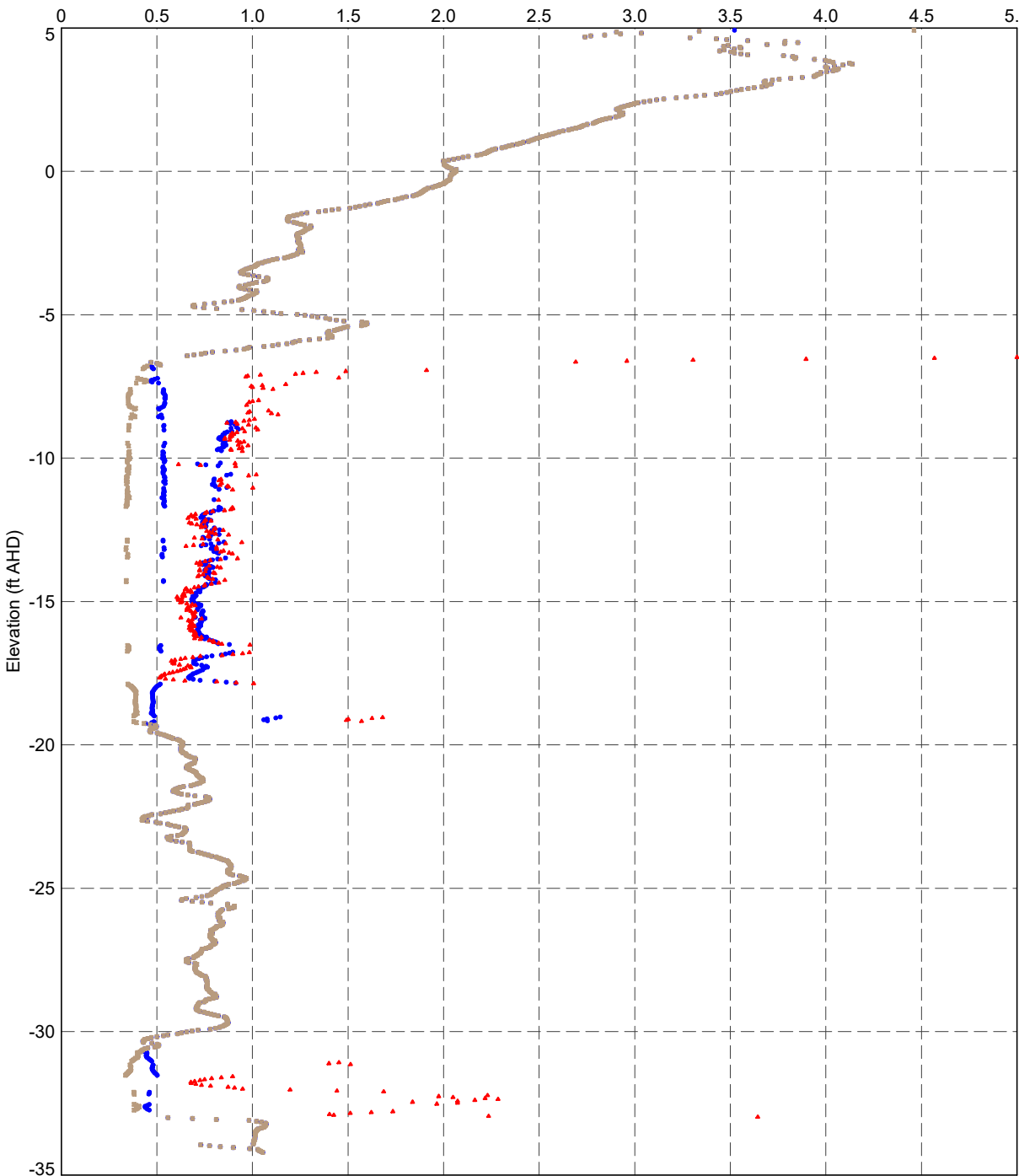
PointID

CPT 05

Coefficient Lateral Earth Pressure,  $K_0$


PointID

CPT 05



- Method:
- Mayne (2007)
  - Mayne (2007)
  - ▲ Kulhawy & Mayne (1990)

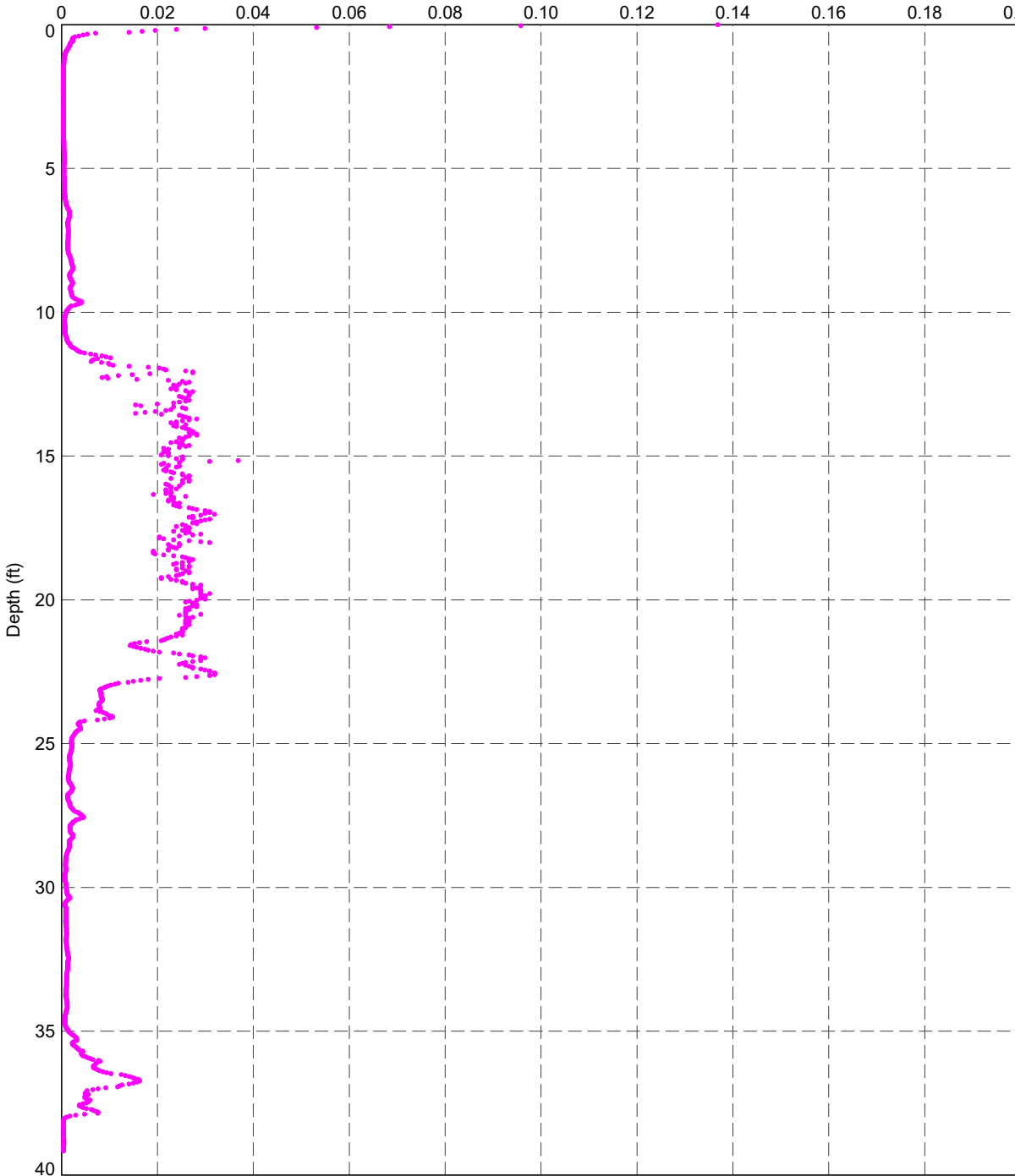
DATGEL\CPT TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT COEFF LATERAL EARTH PRESSURE RL LEIP DATGEL\_CPT TOOL\_DGD\_4.05.0.EN.GPJ <<DrawingFile>> 1/2/2021 10:01:00.11 Datgel\CPT Tool\gINT\_Add.in

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project</p> <p>Coefficient Lateral Earth Pressure vs. Elevation</p>	<p>DRAWN</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>	
		<p>CHECKED</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>	
		<p>SCALE</p> <p>Not To Scale</p>		<p>Let</p>
		<p>PROJECT No</p> <p>4.05.0</p>	<p>FIGURE No</p> <p>91</p>	

Coefficient Volume Change,  $m_v$  (ft<sup>2</sup>/ton)

PointID

CPT 05



Method:

● Derived from Kulhawy & Mayne (1990)

DATGEL\CPT TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT COEFFICIENT VOLUME CHANGE DEPTH LETP DATGEL\_CPT\_TOOL\_DGD\_4.05.0\_EN.GPJ <<DrawingFiles>> 1/2/2021 10:01:00.11 Datgel CPT Tool.gINT\_Add-In



TITLE

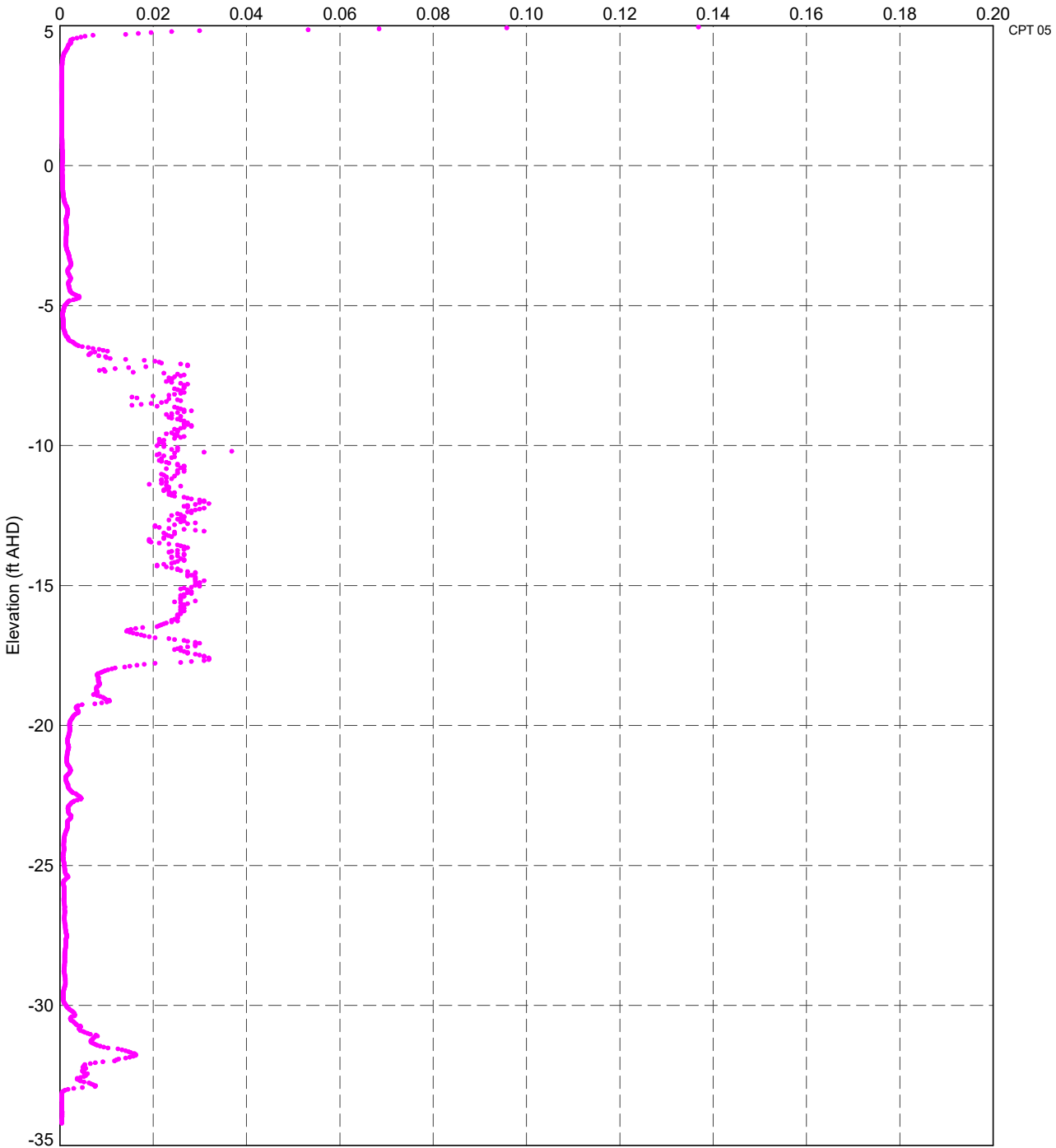
Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project

Coefficient Volume Change versus Depth

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	92

Coefficient Volume Change,  $m_v$  (ft<sup>2</sup>/ton)

PointID



Method:

- Derived from Kulhawy & Mayne (1990)

DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.COEFFICIENT.VOLUME.CHANGE.RL.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <-DrawingFile>> 1/22/2021 20:04 10.01.00.11.Datgel.CPT.Tool.gjINT.Add-In

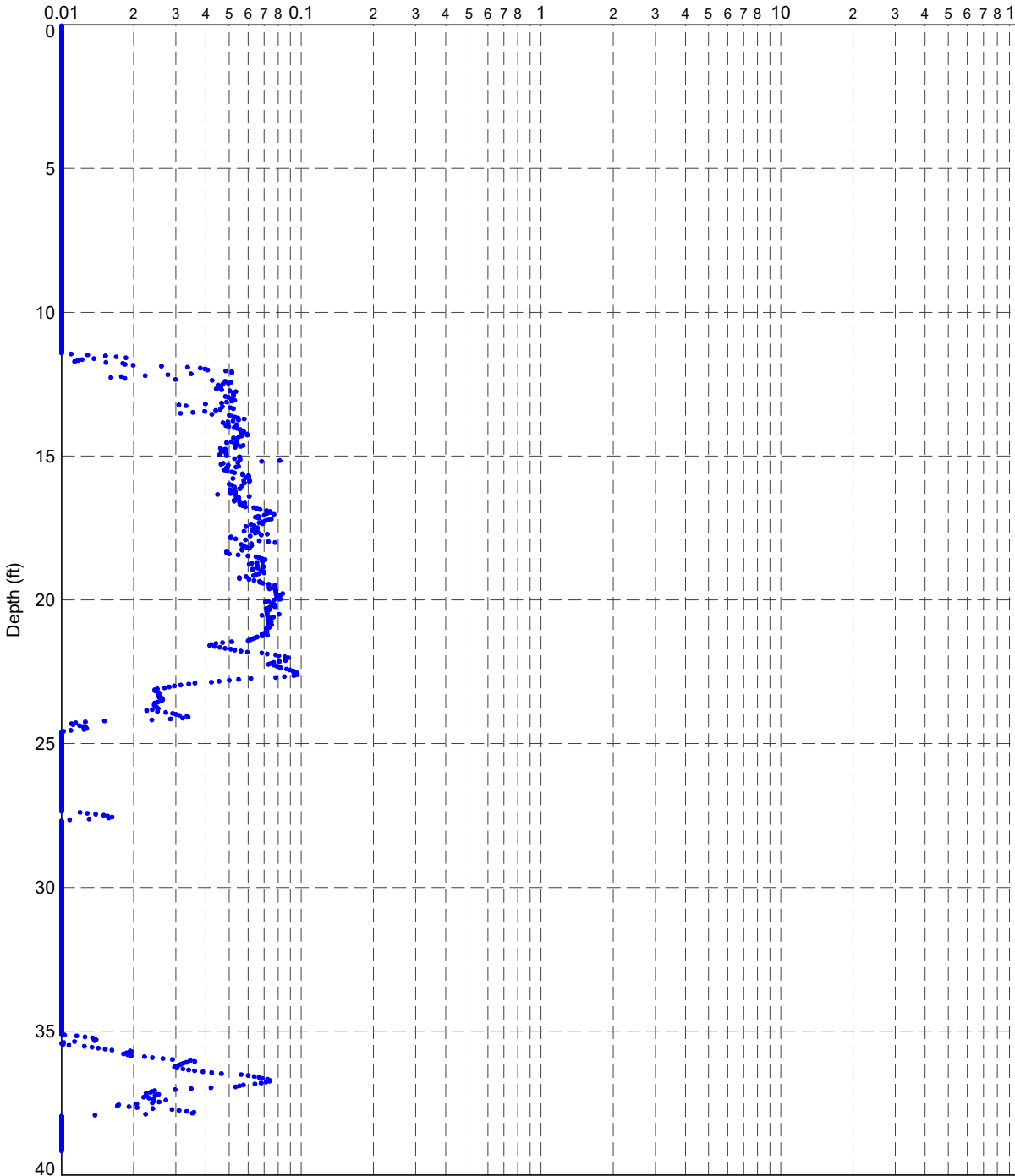
TITLE  
 Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Coefficient Volume Change versus Elevation

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	93

Compression Index,  $C_c$

PointID


CPT 05



Method:

- Derived from Kulhawy & Mayne (1990)

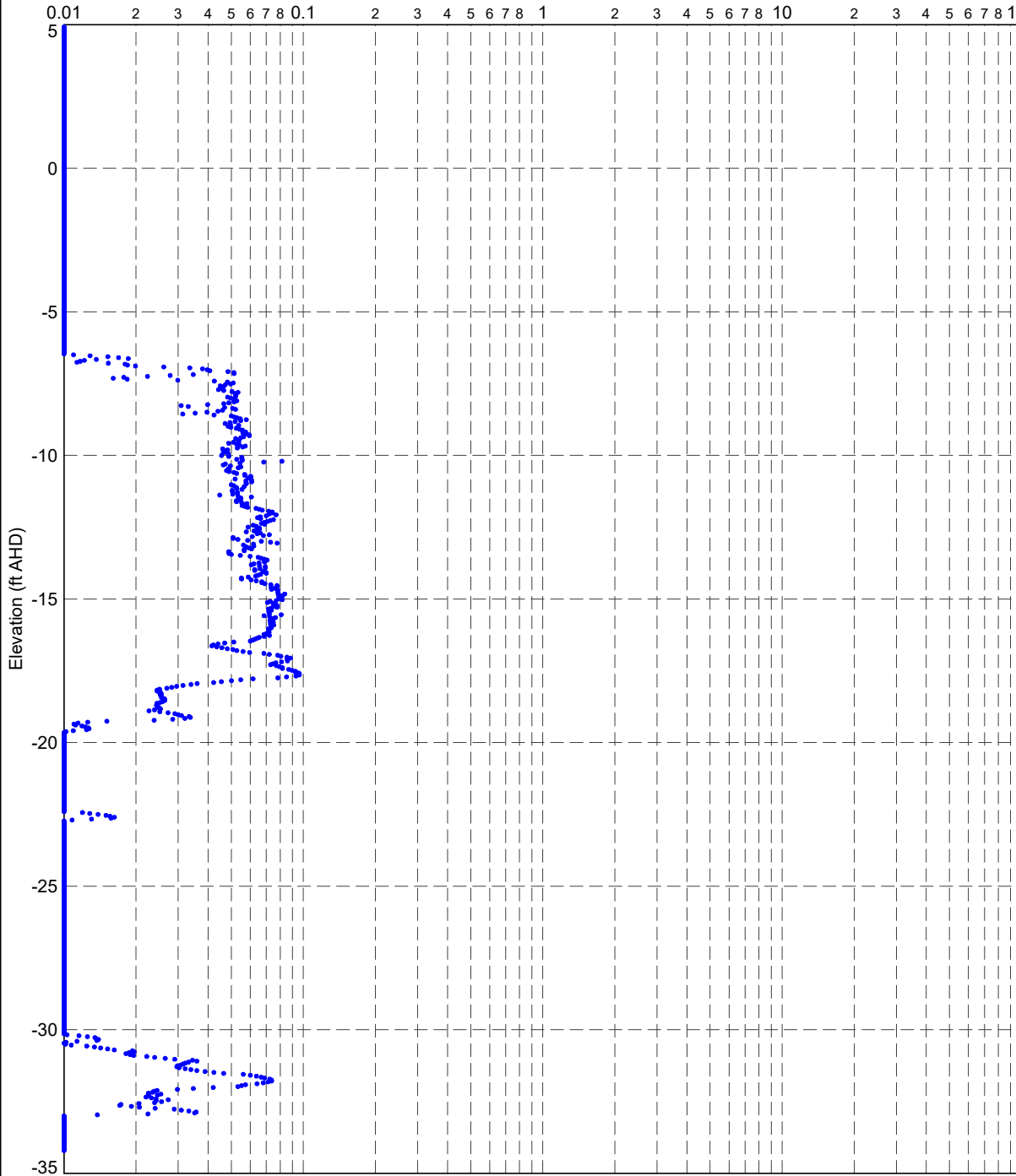
DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.COMPRESSION.INDEX.DEPTH.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ.<<DrawingFiles>>1/2/2021\_20:05:10.01.00.11.Datgel.CPT.Tool.gINT.Add-in

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Compression Index versus Depth</p>	<p>DRAWN Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>CHECKED Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>SCALE Not To Scale</p>		<p>Let</p>
		<p>PROJECT No 4.05.0</p>	<p>FIGURE No 94</p>	

Compression Index,  $C_c$

PointID


CPT 05



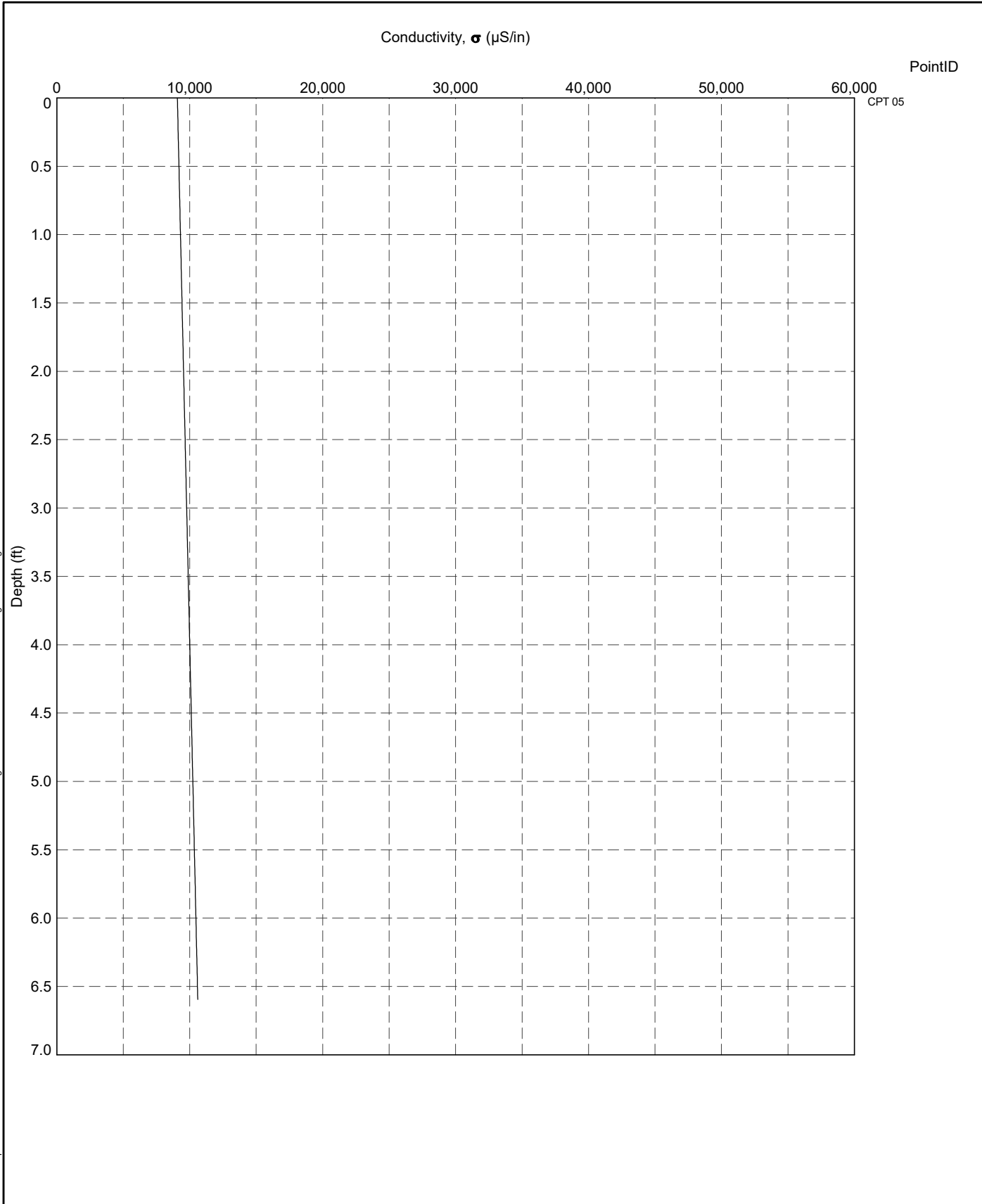
Method:


- Derived from Kulhawy & Mayne (1990)

DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.COMPRESSION.INDEX.RL.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <<DrawingFiles>> 1/2/2021 20:05:10.01.00.11.Datgel.CPT.Tool.gjINT.Add-In

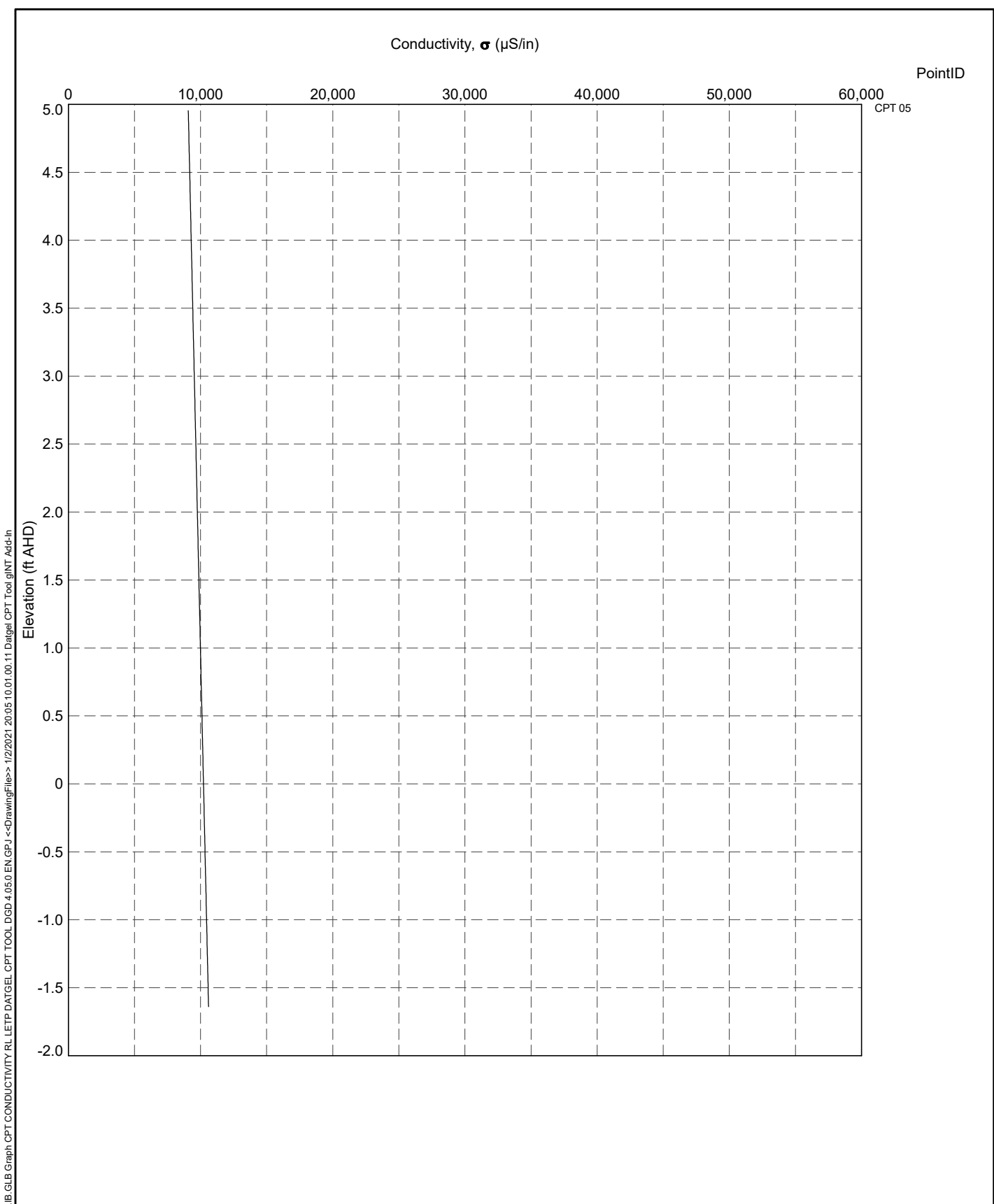
 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Compression Index versus Elevation</p>	<p>DRAWN</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>	
		<p>CHECKED</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>	
		<p>SCALE</p> <p>Not To Scale</p>		<p>Let</p>
		<p>PROJECT No</p> <p>4.05.0</p>	<p>FIGURE No</p> <p>95</p>	

DATGEL CPT TOOL\_DGD\_4.05.0.LIB.GLB Graph CPT CONDUCTIVITY DEPTH.DATGEL CPT TOOL\_DGD\_4.05.0.EN.GPJ <<DrawingFile>> 1/22/2021 20:05 10.01.00.11 Datgel CPT Tool.gINT Add-In




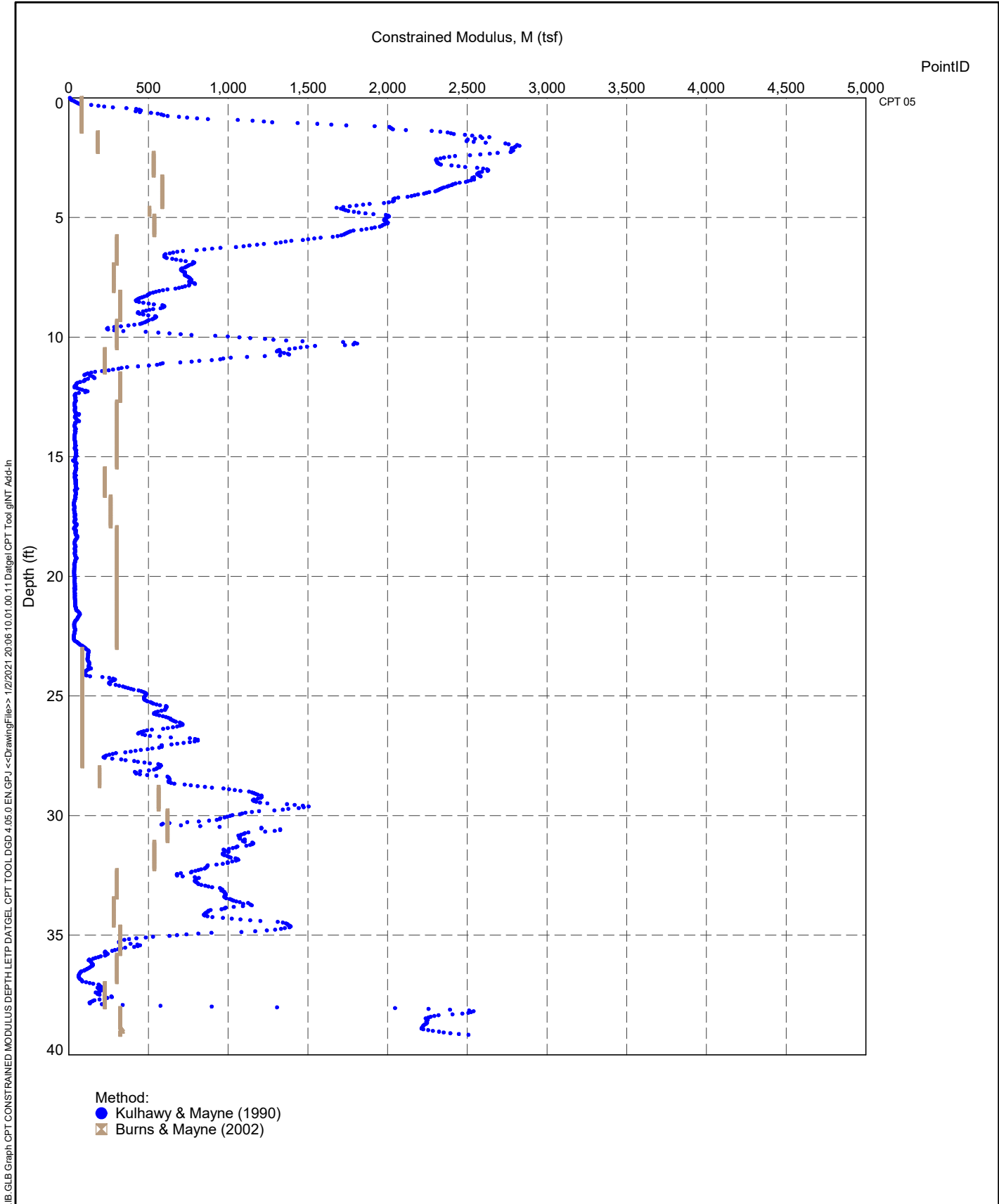
 <b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	TITLE  Client 1 Engineer 1 Somewhere CPT Tool Project Conductivity versus Depth	DRAWN Datgel	DATE 1/2/2021		
	CHECKED Datgel	DATE 1/2/2021			
	SCALE Not To Scale			Let	
	PROJECT No 4.05.0		FIGURE No 96		





DATGEL\CPT TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT CONDUCTIVITY.RL\LETP\DATGEL\CPT TOOL\_DGD\_4.05.0\EN\GPIJ<<DrawingFile>> 1/2/2021 20:05:10.01.00.11 Datgel.CPT.Tool.gINT\_A4d-In

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Conductivity versus Elevation</p>	<p>DRAWN Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>CHECKED Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>SCALE Not To Scale</p>		<p>Let</p>
		<p>PROJECT No 4.05.0</p>	<p>FIGURE No 97</p>	



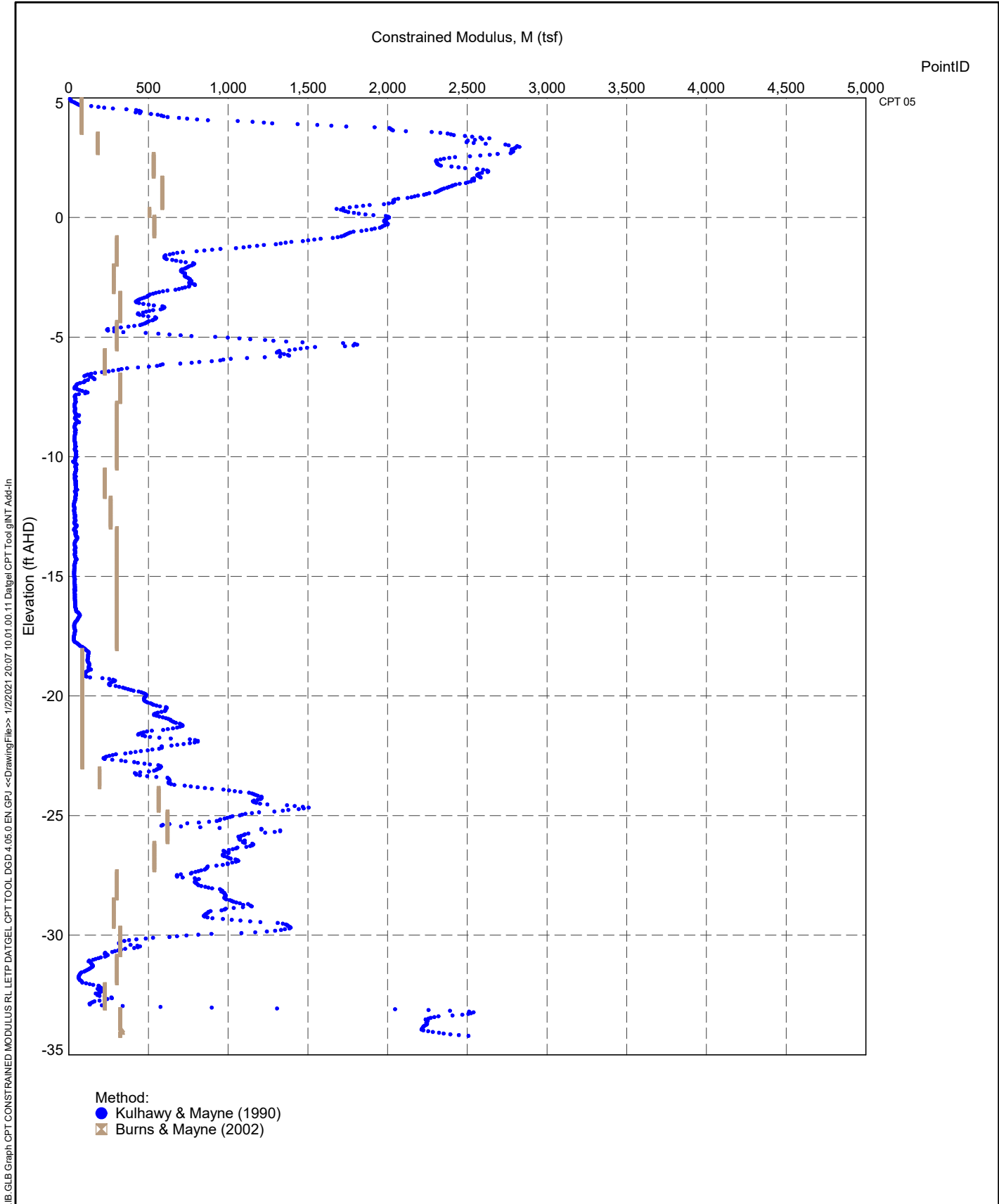
DATGEL\CPT TOOL\_DGD\_4.05.0.LIB.GLB.Graph\CPT CONSTRAINED MODULUS DEPTH.LETP.DATGEL.CPT TOOL.DGD\_4.05.0.EN.GPJ <<DrawingFile>> 1/2/2021 20:06:10.01.00.11.Datgel.CPT.Tool.gINT.Add-In



TITLE

Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Constrained Modulus versus Depth

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	98



Method:  
 ● Kulhawy & Mayne (1990)  
 × Burns & Mayne (2002)

TITLE  
 Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Constrained Modulus versus Elevation

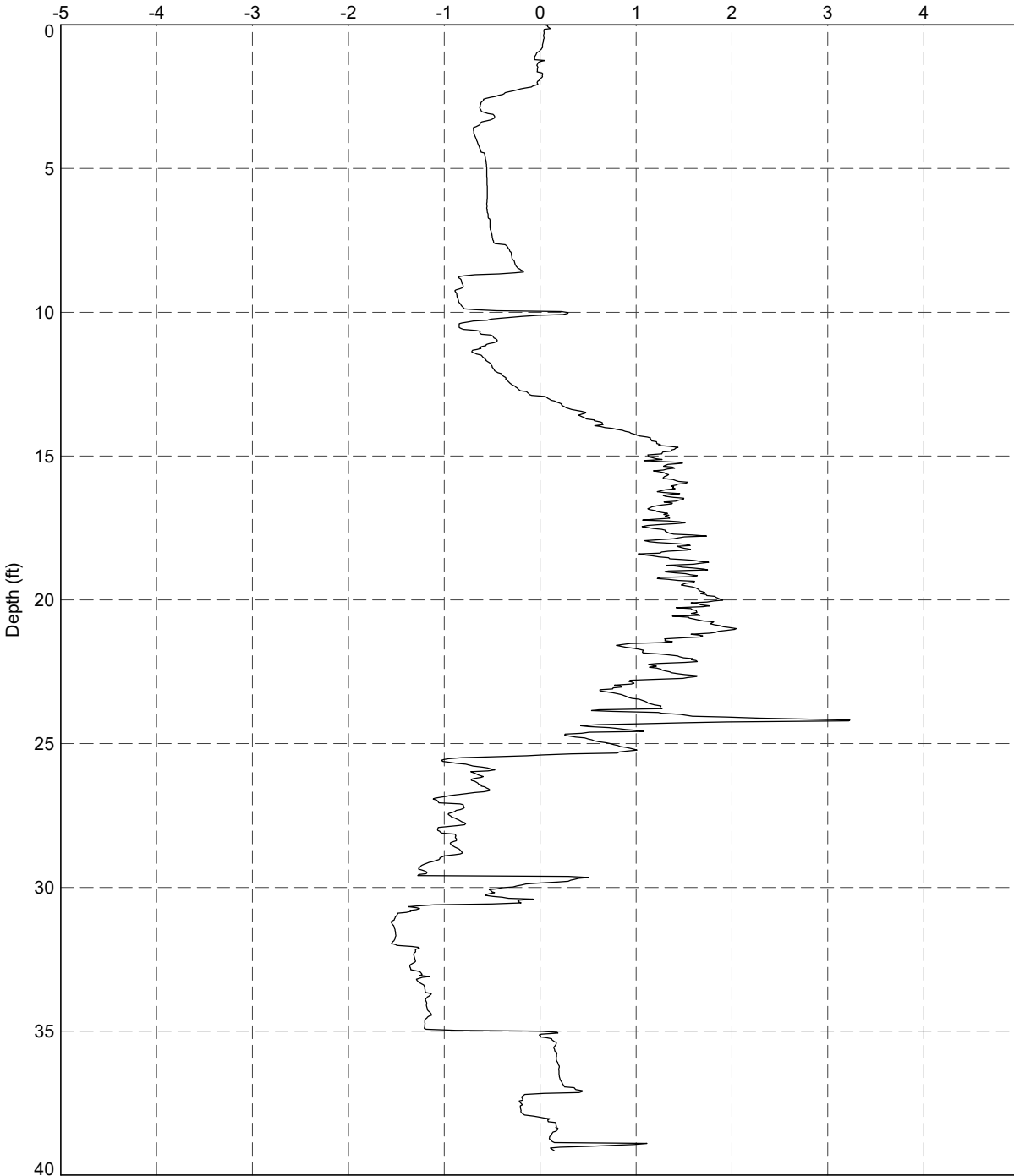
DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	99

DATGEL\CPT\_TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT CONSTRAINED MODULUS R\LETP DATGEL\_CPT\_TOOL\_DGD\_4.05.0\_EN.GPJ <<DrawingFile>> 1/2/2021 20:07:10.01.00.11 Datgel\CPT\_Tool.gINT Add-In

Excess Pore Pressure,  $\Delta u$  (tsf)

PointID

CPT 05



DATGEL\CPT\_TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT\DELTA\_U\_DEPTH\LETP\DATGEL\CPT\_TOOL\_DGD\_4.05.0 EN.GPJ <<DrawingFile>> 1/2/2021 20:07:10.01.00.11 Datgel\CPT\_Tool.glt Add-In



TITLE

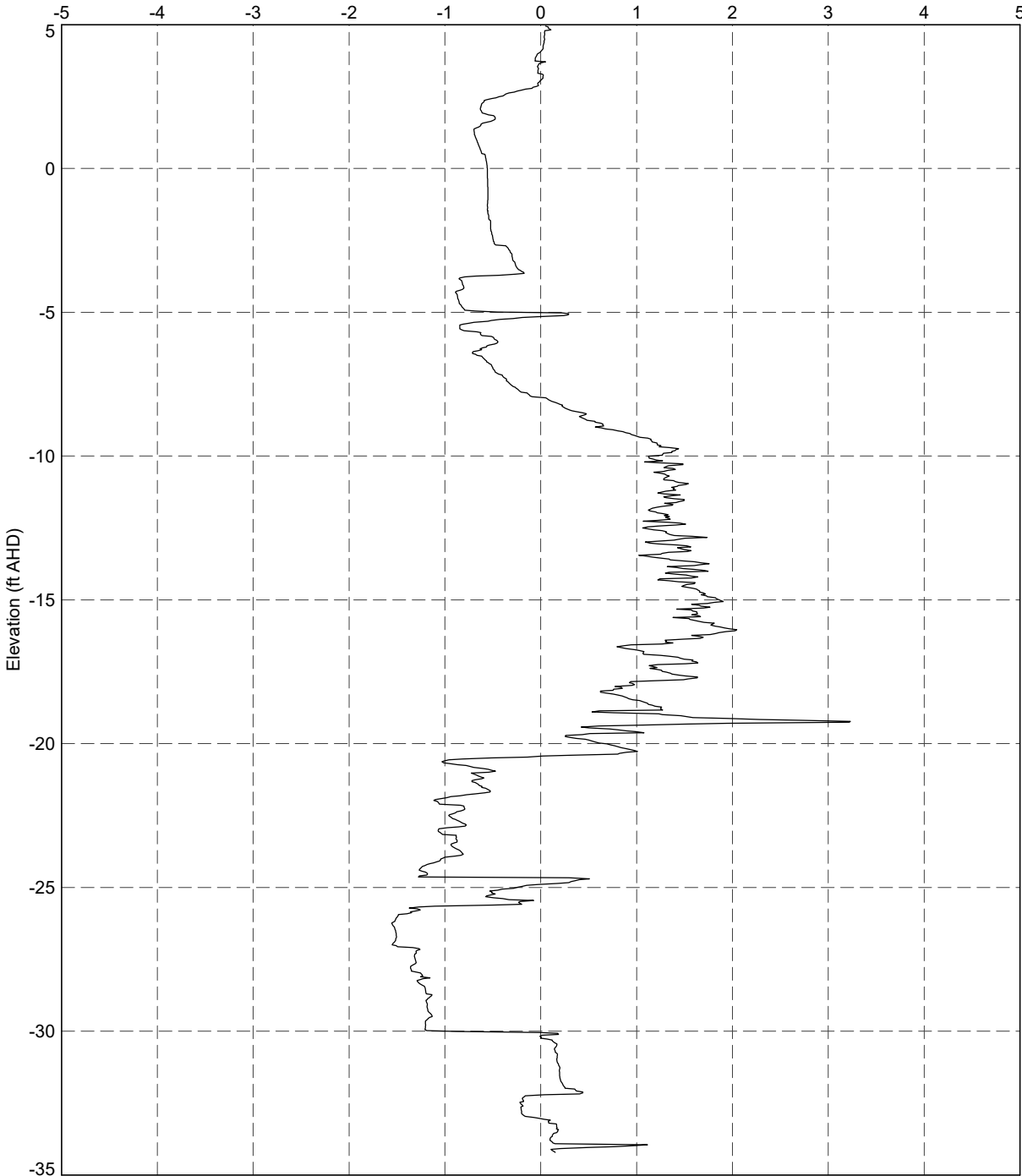
Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Excess Pore Pressure versus Depth

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	100

Excess Pore Pressure,  $\Delta u$  (tsf)

PointID

CPT 05



DATGEL\CPT\_TOOL\_DGD\_4.05.0\LIB\_GLB\_Graph\CPT\DELTA\_U\_RL\_LETP\_DATGEL\CPT\_TOOL\_DGD\_4.05.0\_EN.GPJ <-DrawingFile> 1/2/2021 20:07 10.01.00.11 Datgel CPT Tool.gINT\_Add.in

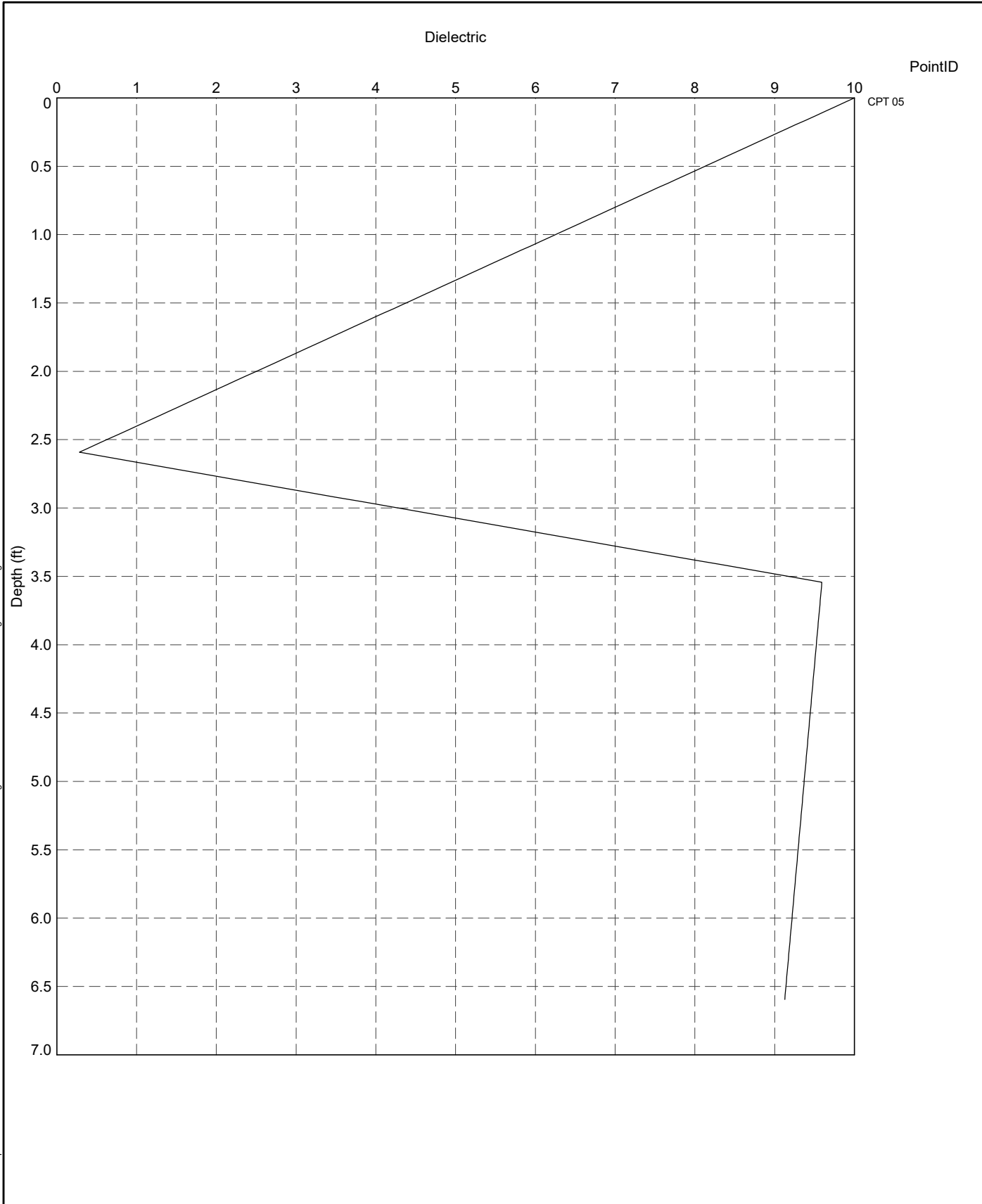



TITLE

Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Excess Pore Pressure versus Elevation

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	101

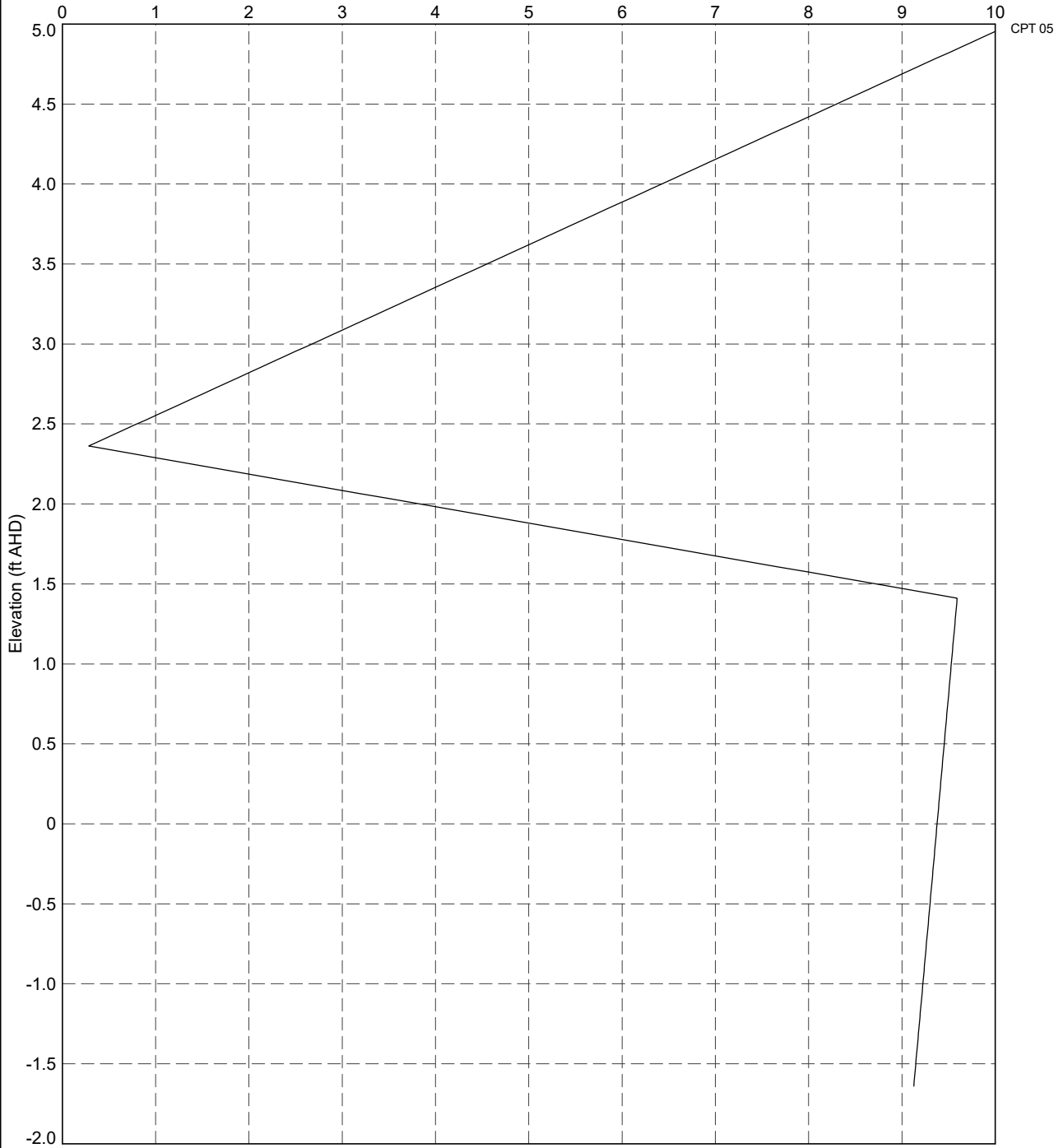
DATGEL CPT TOOL\_DGD\_4.05.0.LIB.GLB Graph CPT DIELECTRIC DEPTH LETP DATGEL\_CPT\_TOOL\_DGD\_4.05.0.EN.GPJ <<DrawingFile>> 1/2/2021\_20:07:10.01.00.11.Datgel CPT Tool.gINT\_Add-In



 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Dielectric versus Depth</p>	<p>DRAWN Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>CHECKED Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>SCALE Not To Scale</p>		<p>Let</p>
		<p>PROJECT No 4.05.0</p>	<p>FIGURE No 102</p>	

Dielectric

PointID



DATGEL\CPT\_TOOL\_DGD\_4.05.0\LIB\_GLB\_Graph\CPT\_DIELECTRIC.RL.LETP.DATGEL\CPT\_TOOL\_DGD\_4.05.0\_EN.GPJ <-DrawingFile>> 1/22/2021 20:07 10.01.00.11.Datgel.CPT.Tool.gINT.Add-In

**Datgel**  
DATA SOLUTIONS  
Geotechnics • Geoenvironment • Laboratory

TITLE

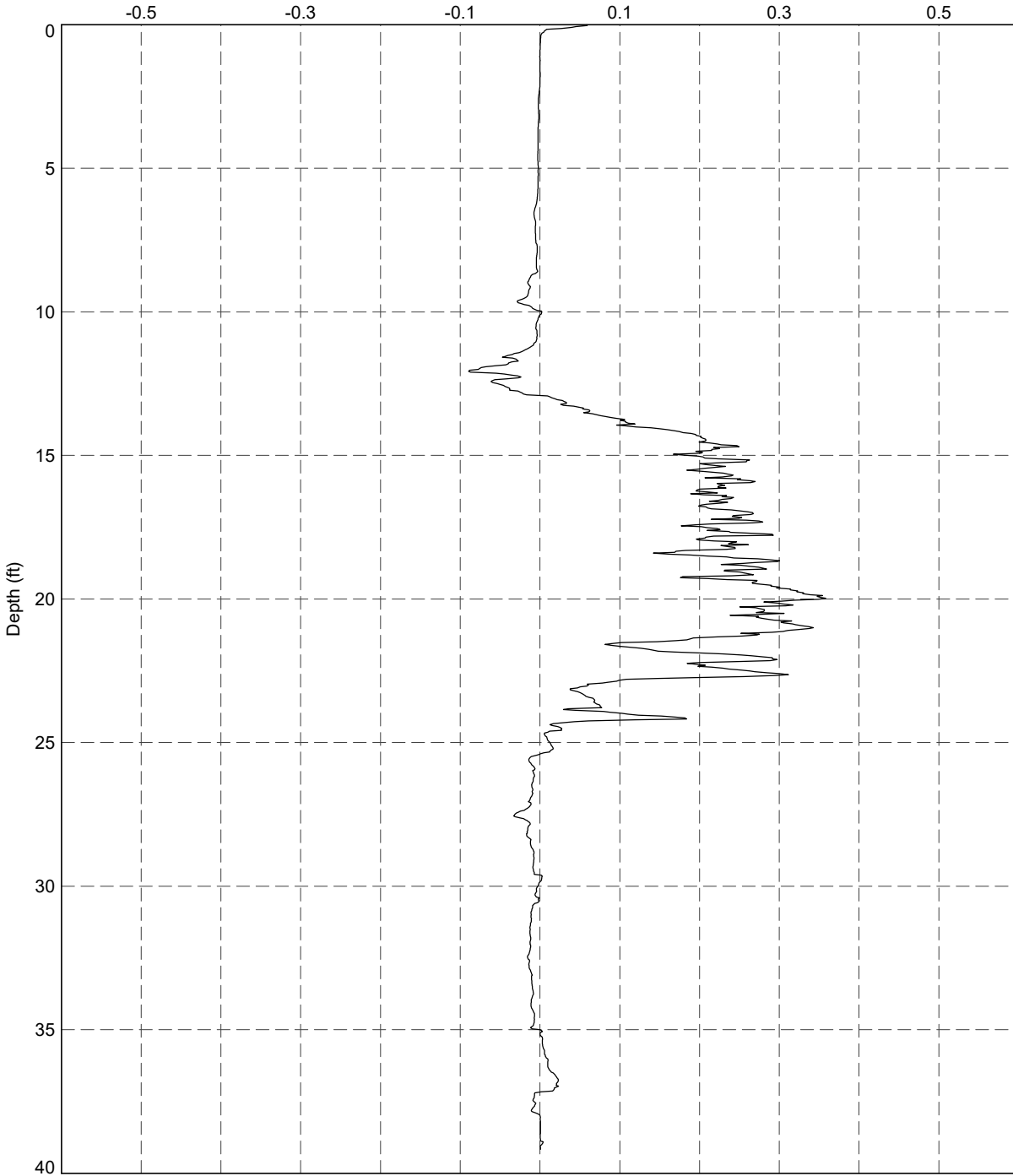
Client 1  
Engineer 1  
Somewhere  
CPT Tool Project  
Dielectric versus Elevation

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	103

Differential Pore Pressure Ratio, DPPR

PointID

CPT 05



DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.DPPR.DEPTH.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <<DrawingFile>> 1/22/2021 20:07:10.01.00.11 Datgel.CPT.Tool.gINT.Add-In

TITLE

Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project

Differential Pore Pressure Ratio versus Depth

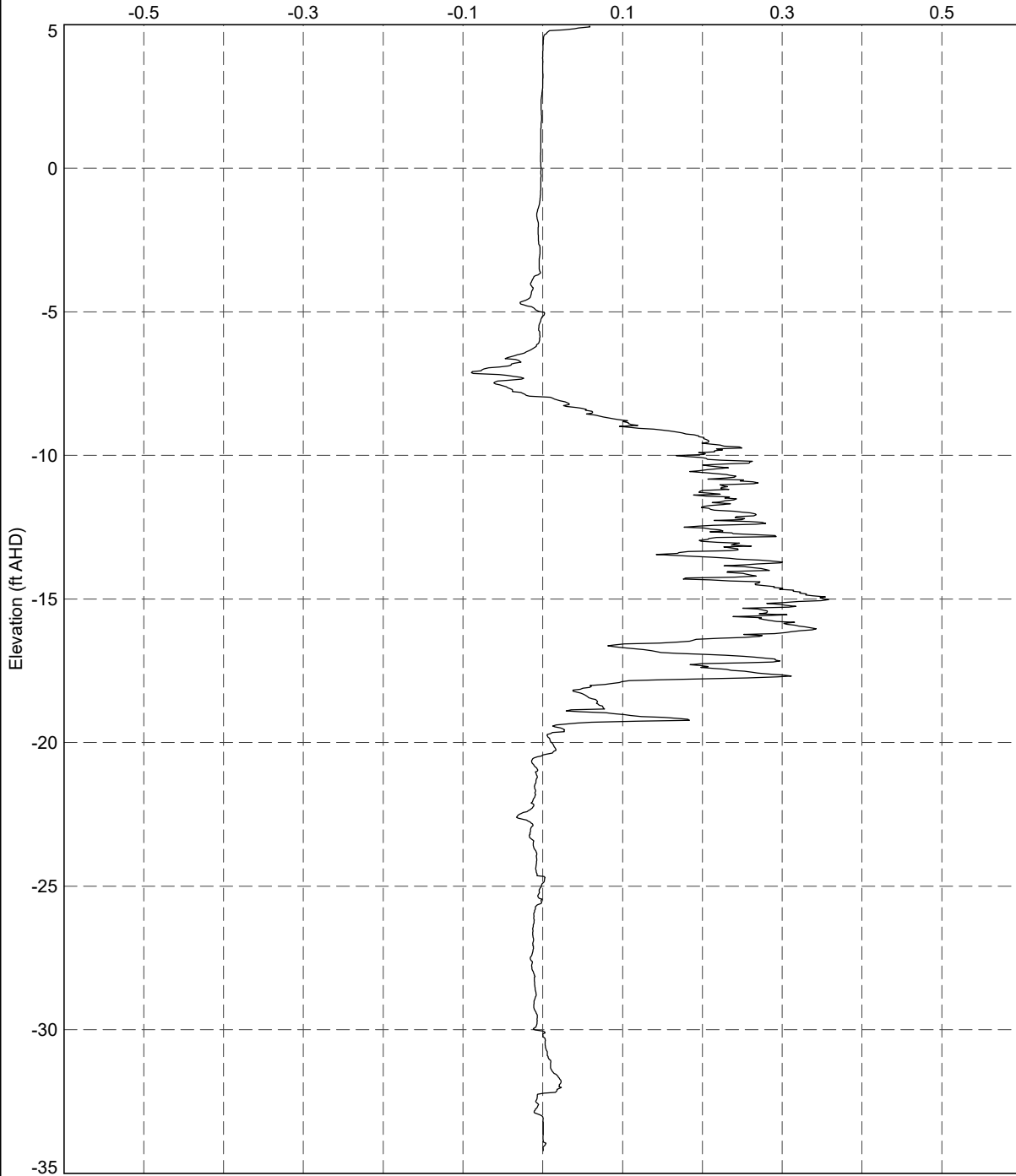
DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	104



Differential Pore Pressure Ratio, DPPR

PointID

CPT 05

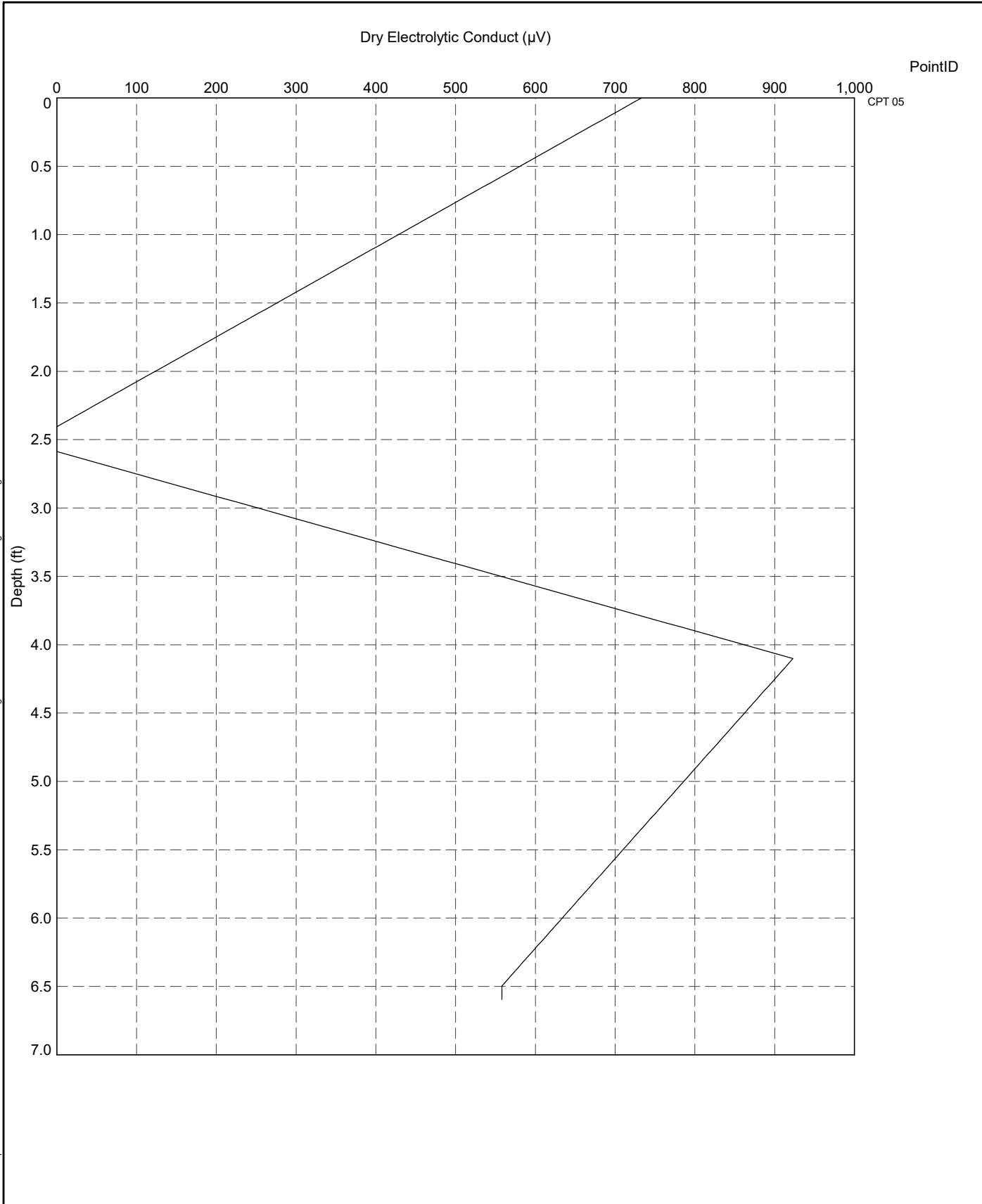



DATGEL\CPT TOOL\_DGD\_4.05.0\LIB\_GLB\_Graph\CPT DPPR RL LETP DATGEL\_CPT TOOL\_DGD\_4.05.0.EN.GPJ <<DrawingFile>> 1/2/2021 20:07:10.01.00.11 Datgel CPT\_Tool.gINT\_Add-In

TITLE  
 Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Differential Pore Pressure Ratio versus Elevation

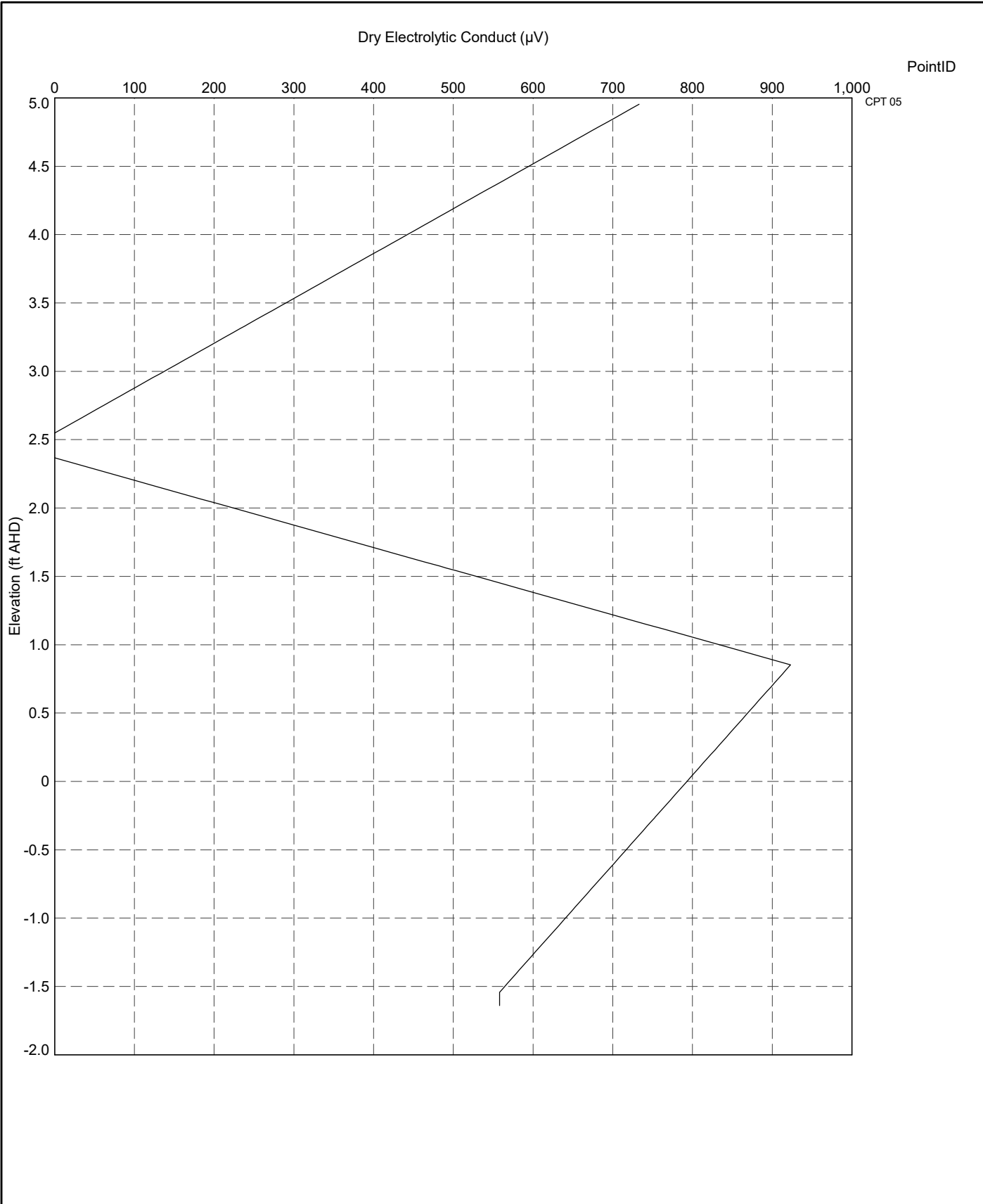
DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	105

DATGEL\CPT TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT DRY ELECTROLYTIC CONDUCT DEPTH LEIF DATGEL\CPT TOOL\_DGD\_4.05.0\EN\GPJ\<<DrawingFile>> 1/2/2021 20:07:10.01.00.11 Datgel\CPT Tool\gINT\_Add-In




 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Dry Electrolytic Conduct versus Depth</p>	<p>DRAWN Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>CHECKED Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>SCALE Not To Scale</p>		<p>Let</p>
		<p>PROJECT No 4.05.0</p>	<p>FIGURE No 106</p>	

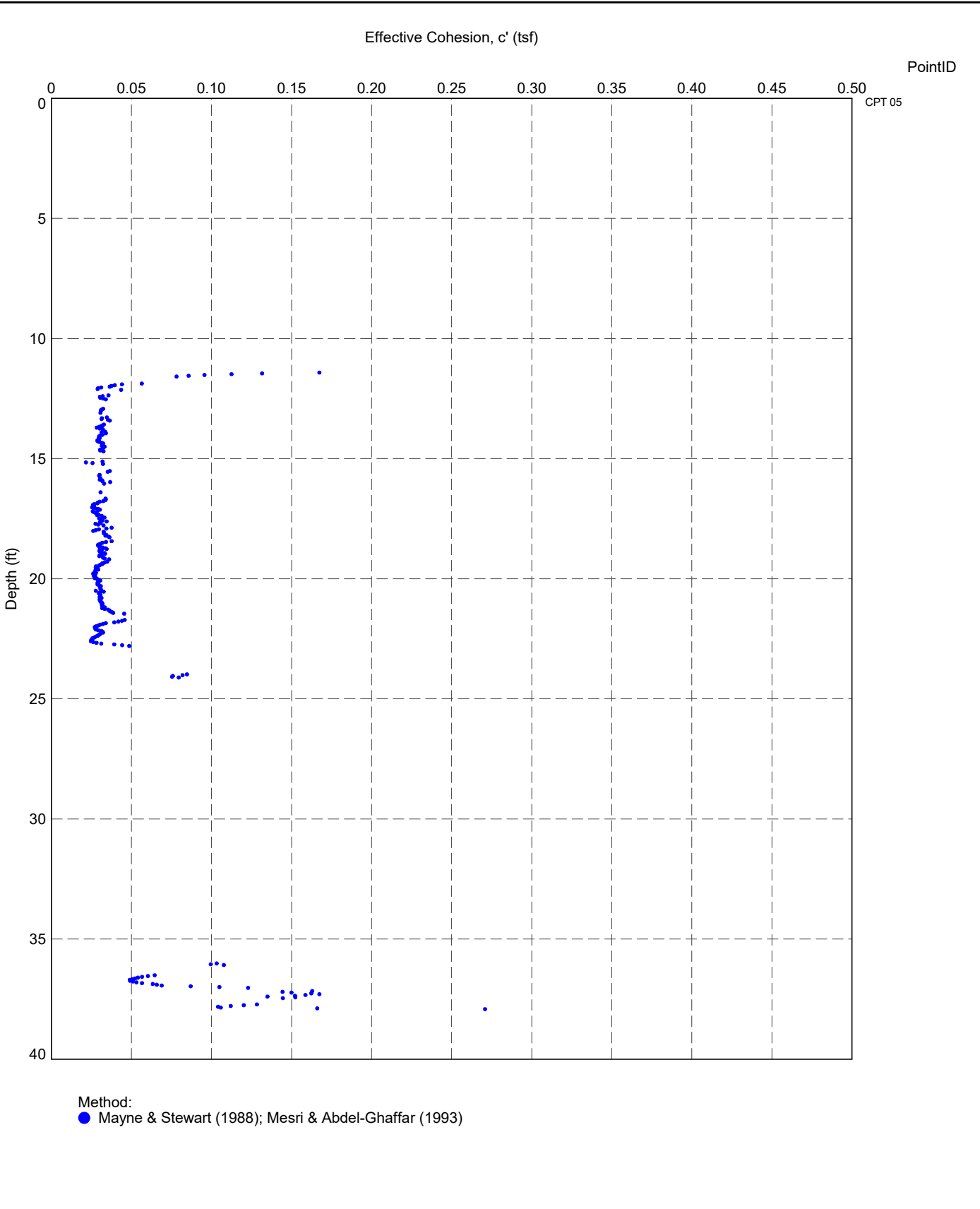
DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.DRY.ELECTROLYTIC.CONDUCT.RL.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ.<-DrawingFiles> 1/2/2021 20:07 10.01.00.11.Datgel.CPT.Tool.gINT.Add.in




PointID  
CPT 05

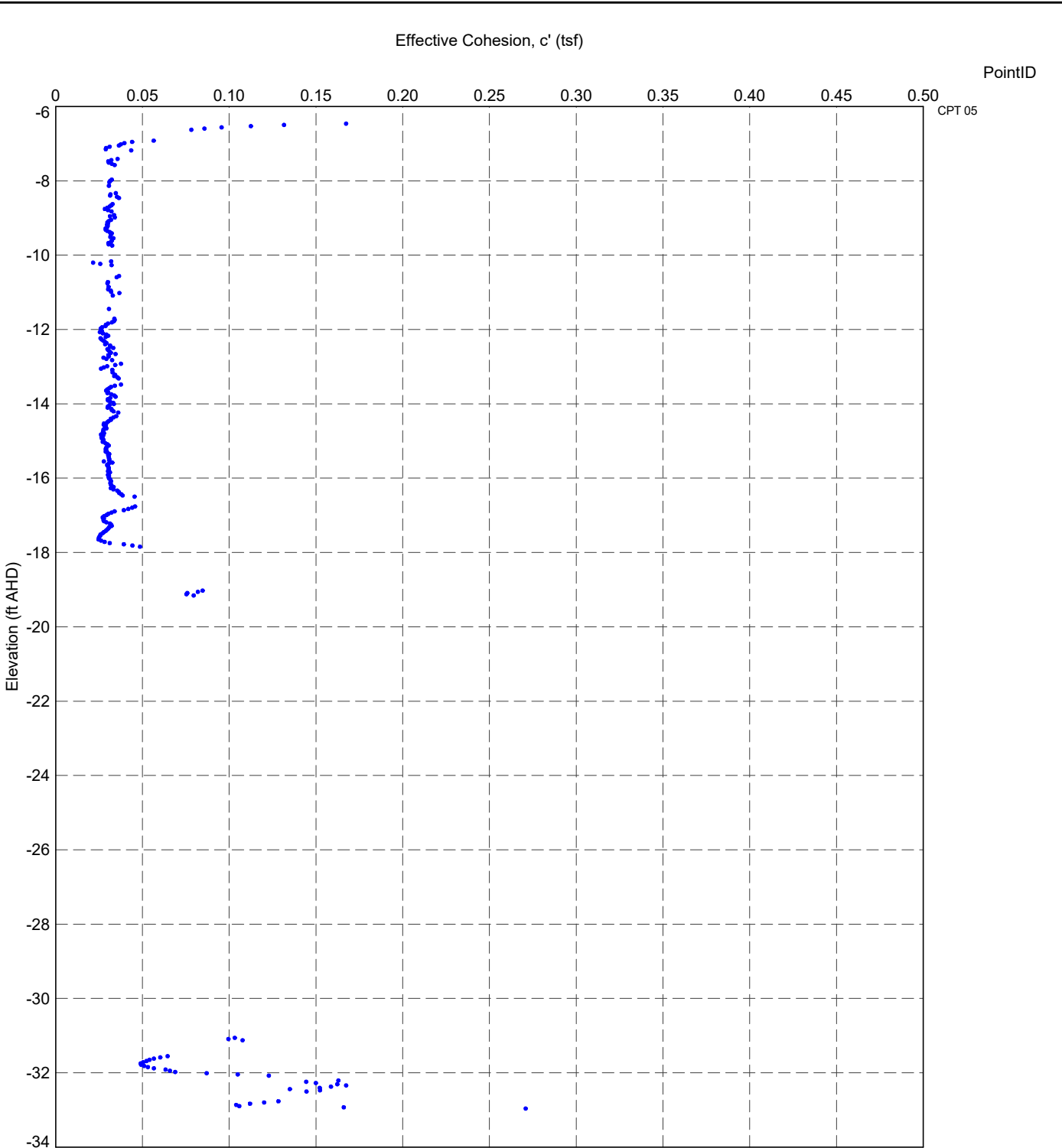
 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project</p> <p>Dry Electrolytic Conduct versus Elevation</p>	<p>DRAWN Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>CHECKED Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>SCALE Not To Scale</p>		<p>Let</p>
		<p>PROJECT No 4.05.0</p>	<p>FIGURE No 107</p>	

DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.EFFECTIVE.COHESSION.DEPTH.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <-DrawingFiles> 1/2/2021 20:08 10.01.00.11.Datgel.CPT.Tool.gINT.Add-In




 <b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	TITLE Client 1 Engineer 1 Somewhere CPT Tool Project Effective Cohesion versus Depth	DRAWN	Datgel	DATE	1/2/2021		
			CHECKED	Datgel	DATE	1/2/2021	
			SCALE			Not To Scale	Let
			PROJECT No	4.05.0	FIGURE No	108	

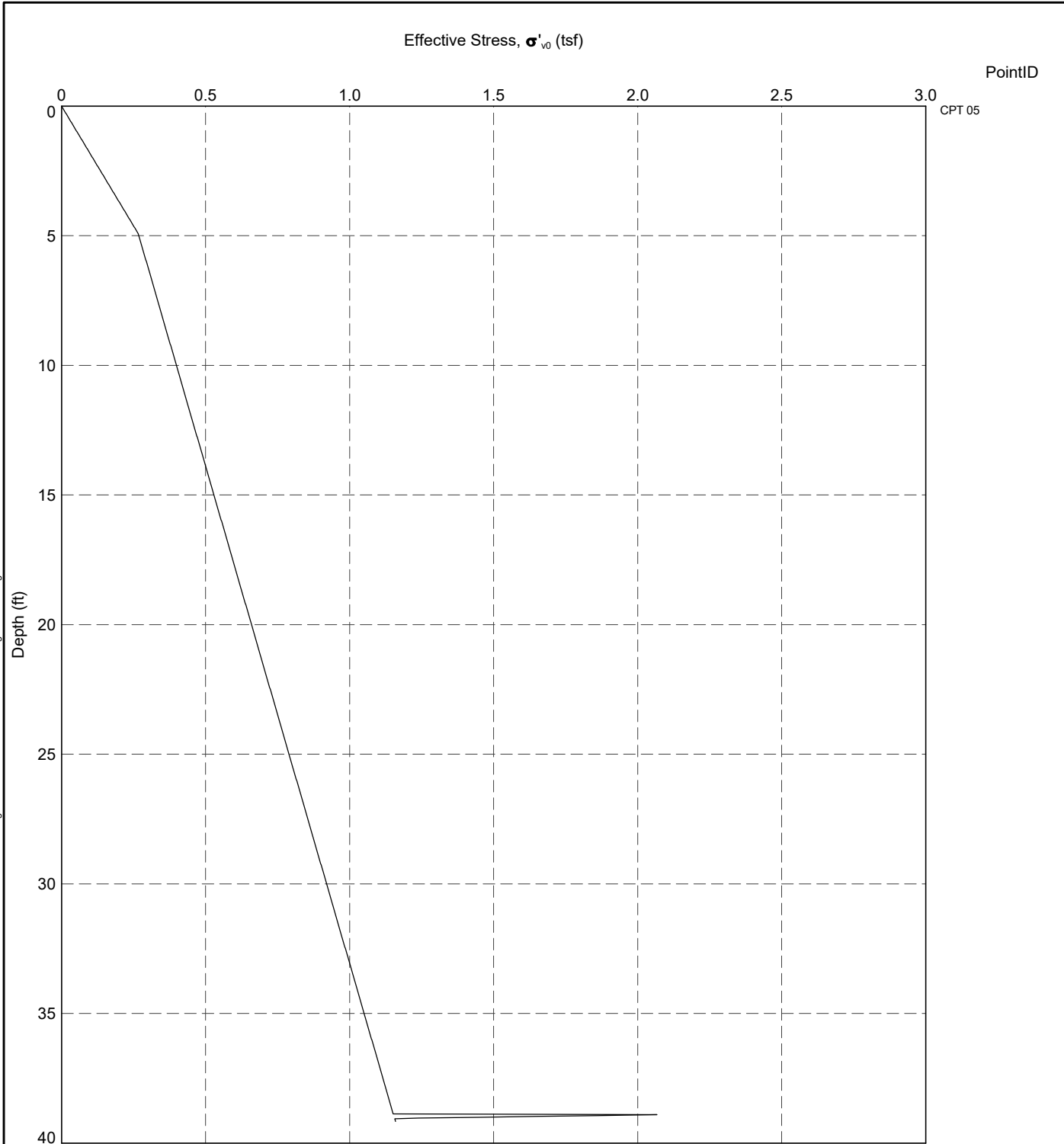
DATGEL CPT TOOL\_DGD\_4.05.0.LIB.GLB Graph: CPT EFFECTIVE COHESION.RL.LETP.DATGEL.CPT TOOL\_DGD\_4.05.0.EN.GPJ <-DrawingFile> 1/2/2021 20:09:10.01.00.11 Datgel.CPT.Tool.gINT.Addd.in




Method:  
● Mayne & Stewart (1988); Mesri & Abdel-Ghaffar (1993)

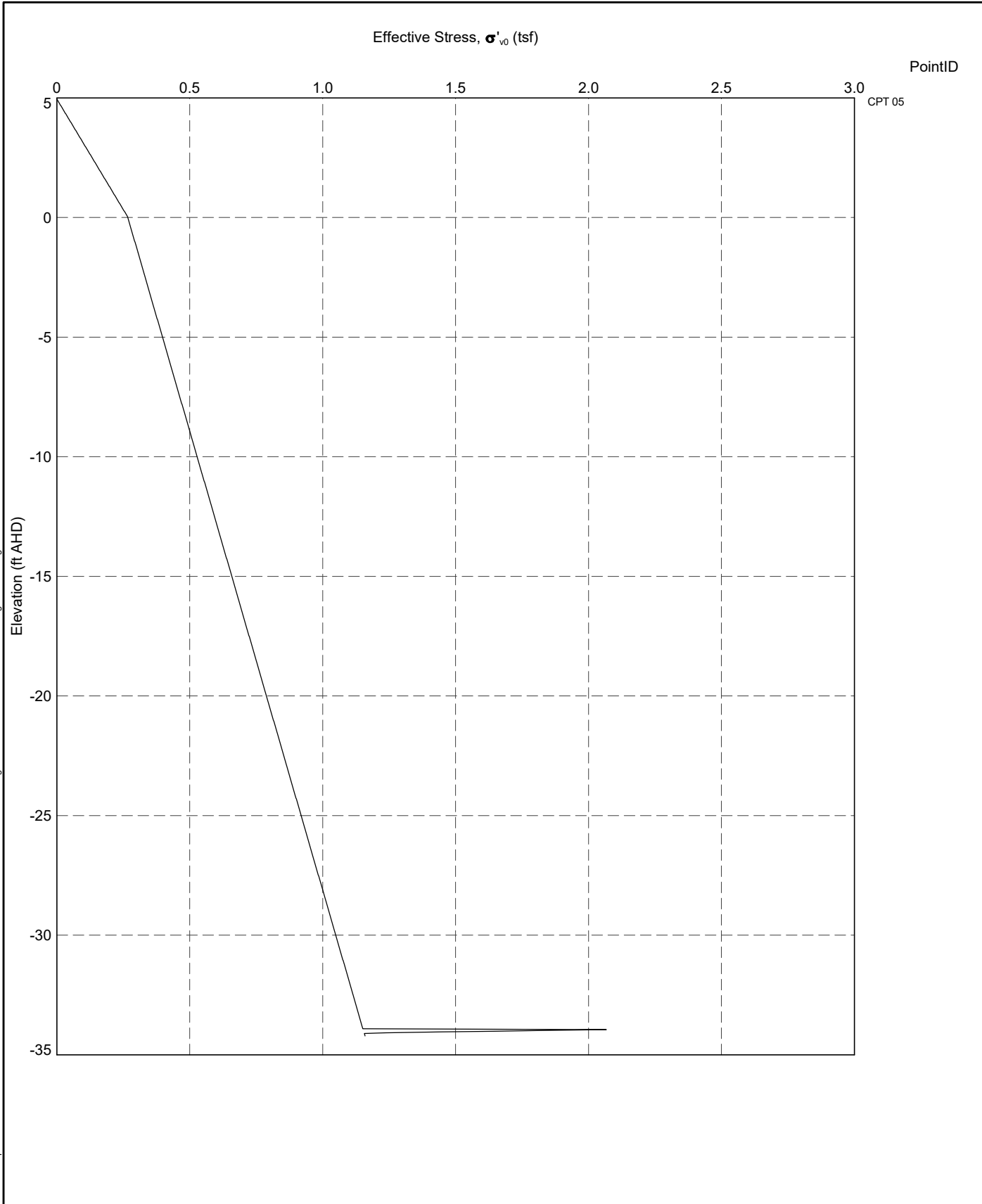
 <b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	TITLE Client 1 Engineer 1 Somewhere CPT Tool Project Effective Cohesion versus Elevation	DRAWN	Datgel	DATE	1/2/2021	
		CHECKED	Datgel	DATE	1/2/2021	
		SCALE	Not To Scale			Let
		PROJECT No	4.05.0		FIGURE No	109

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph: CPT EFFECTIVE STRESS DEPTH LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <-DrawingFile>> 1/2/2021\_20:09:10.01.00.11.Datgel.CPT.Tool.gINT.Addt.in



 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Effective Stress versus Depth</p>	DRAWN	Datgel	DATE	1/2/2021	
		CHECKED	Datgel	DATE	1/2/2021	
		SCALE	Not To Scale			Let
		PROJECT No	4.05.0	FIGURE No	110	

DATGEL CPT TOOL\_DGD\_4.05.0.LIB.GLB Graph CPT EFFECTIVE STRESS RLLETP.DATGEL CPT TOOL\_DGD\_4.05.0.EN.GPJ <-DrawingFiles> 1/2/2021 20:09 10.01.00.11 Datgel CPT Tool gINT Add-In



PointID

CPT 05

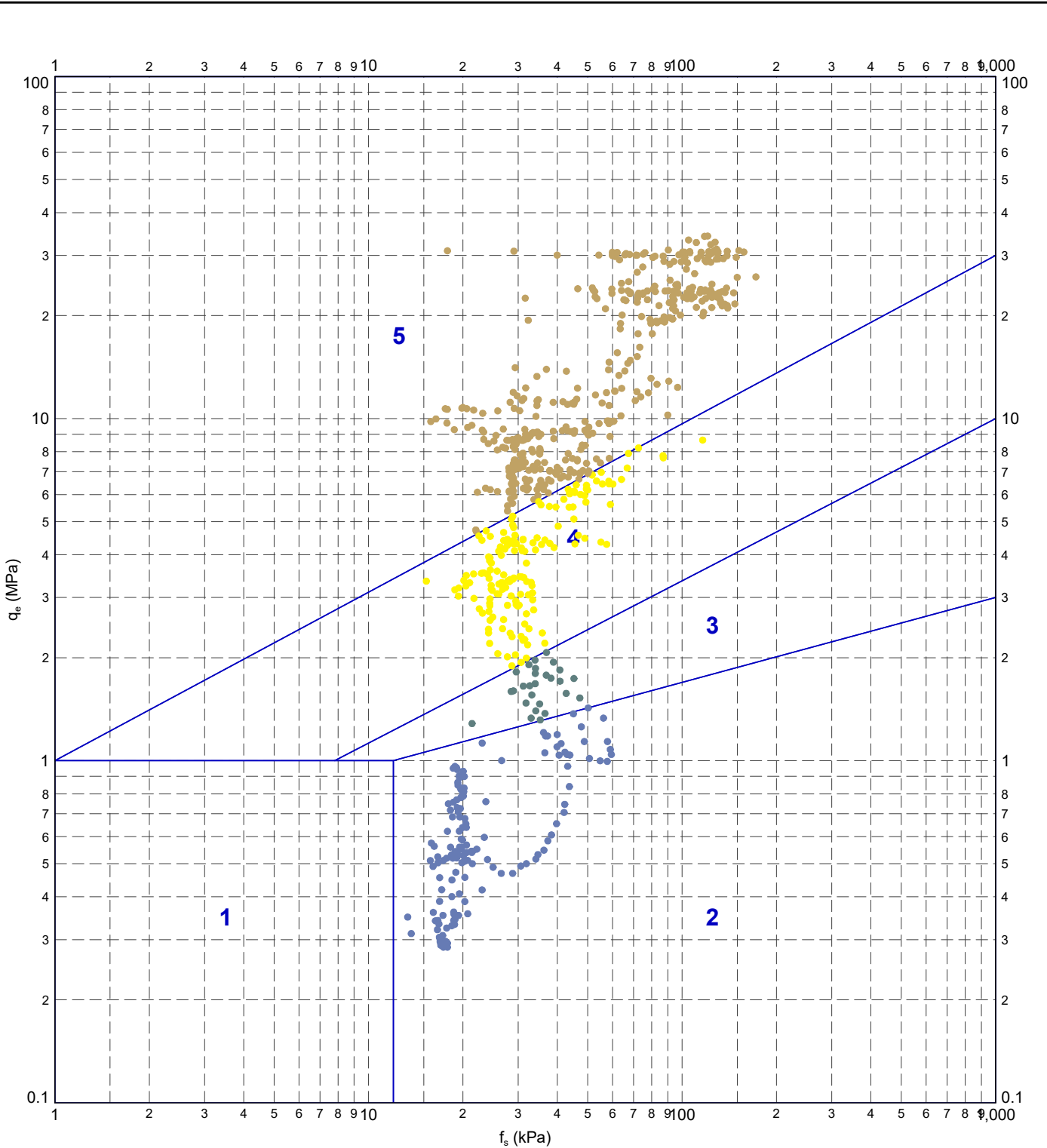


TITLE

Client 1  
Engineer 1  
Somewhere  
CPT Tool Project  
Effective Stress versus Elevation

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	111

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph CPT ESLAMI FELLENIUS 97 QE VS. FS LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <<DrawingFile>> 1/2/2021\_20:09 10:01:00.11 Datgel CPT Tool gINT Add-in



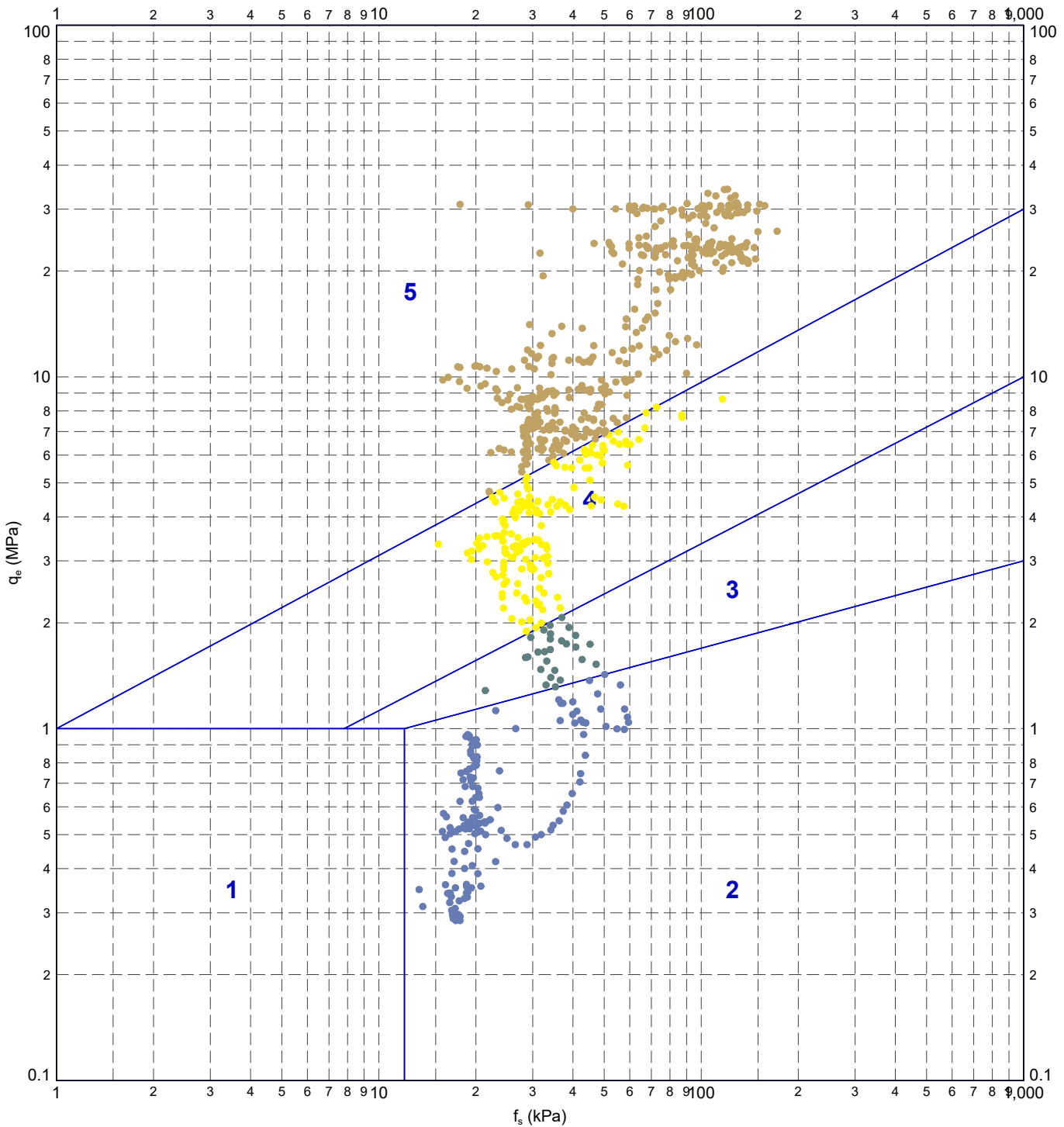
**METHOD: Eslami Fellenius 1997**

- 1 - Sensitive and Collapsible CLAY and/or SILT
- 2 - CLAY and/or SILT
- 3 - Silty CLAY and/or Clayey SILT
- 4 - Sandy SILT and/or Silty SAND
- 5 - SAND and/or Sandy GRAVEL

 <b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	TITLE	Client 1 Engineer 1 Somewhere CPT Tool Project	DRAWN Datgel	DATE 1/2/2021	
	Eslami Fellenius 1997 $q_e$ vs. $f_s$ - CPT 03		CHECKED Datgel	DATE 1/2/2021	
	SCALE			Not To Scale	Let
	PROJECT No		4.05.0	FIGURE No 112	



DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph CPT ESLAMI FELLENIUS 97 QE.VS.FS M LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <<DrawingFile>> 1/2/2021 10:01:00.11.Datgel CPT Tool.gINT.Add-In



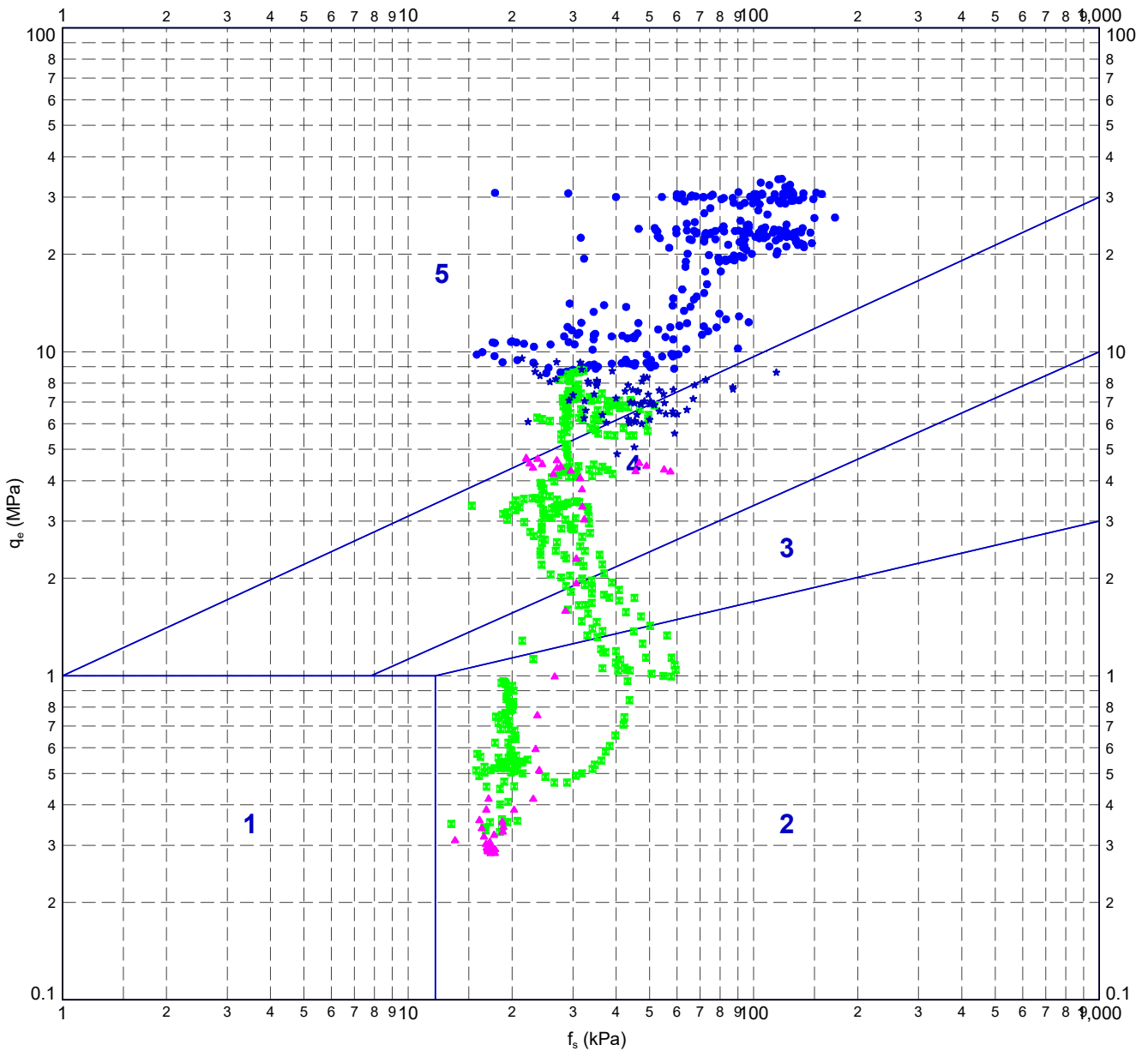
**METHOD: Eslami Fellenius 1997**

- 1 - Sensitive and Collapsible CLAY and/or SILT
- 2 - CLAY and/or SILT
- 3 - Silty CLAY and/or Clayey SILT
- 4 - Sandy SILT and/or Silty SAND
- 5 - SAND and/or Sandy GRAVEL

PointIDs: ● CPT 03

 <b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	TITLE Client 1 Engineer 1 Somewhere CPT Tool Project Eslami Fellenius 1997 $q_e$ vs. $f_s$	DRAWN Datgel	DATE 1/2/2021	
	CHECKED Datgel		DATE 1/2/2021	
	SCALE Not To Scale			Let
	PROJECT No 4.05.0		FIGURE No 113	


DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph CPT ESLAMI FELLENIUS 97 QE.VS.FS U LETP DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <-DrawingFiles> 1/2/2021 20:10:10.01.00.11 Datgel CPT Tool.gINT.Add-in



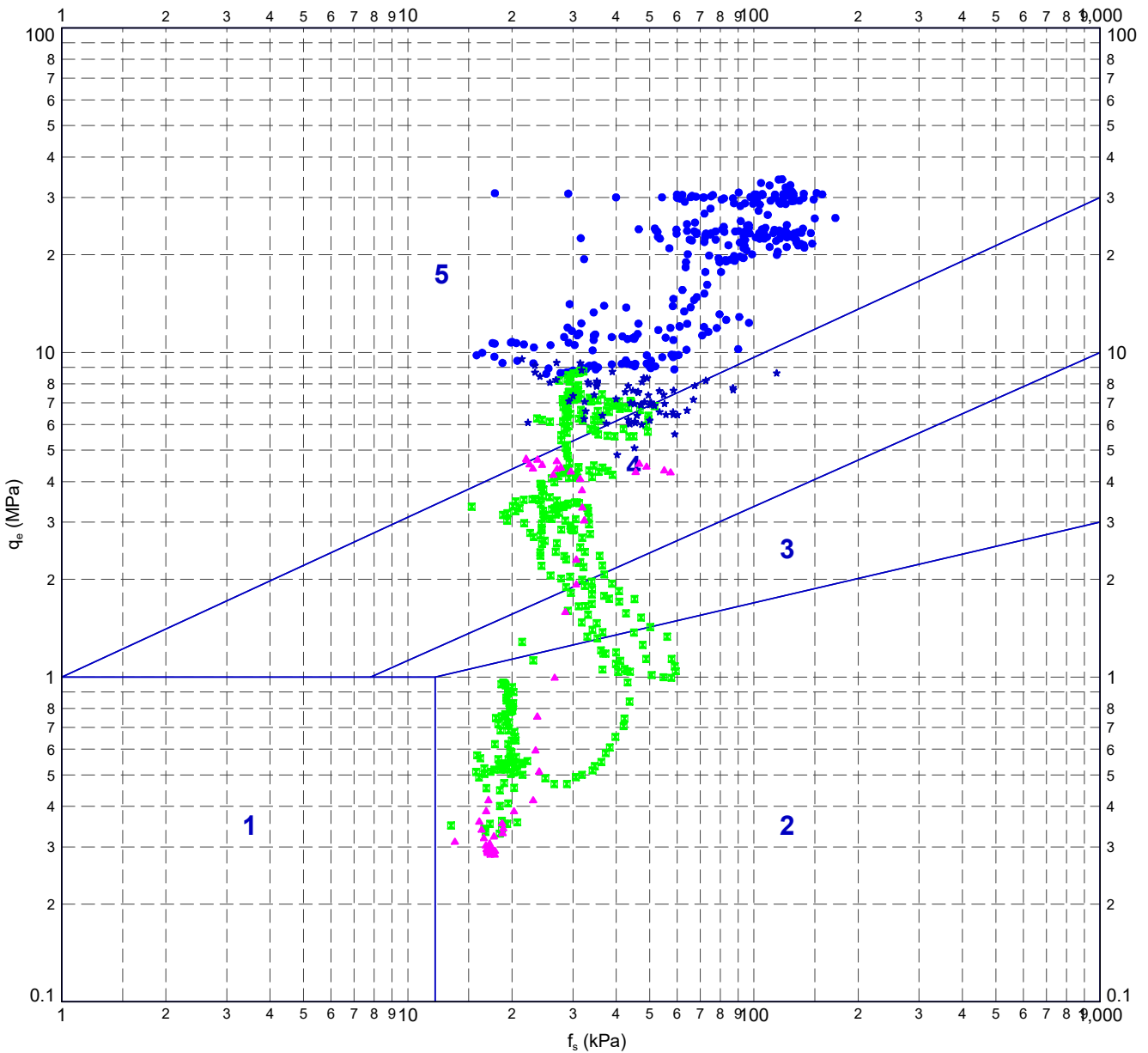
**METHOD: Eslami Fellenius 1997**  
 1 - Sensitive and Collapsible CLAY and/or SILT  
 2 - CLAY and/or SILT  
 3 - Silty CLAY and/or Clayey SILT  
 4 - Sandy SILT and/or Silty SAND  
 5 - SAND and/or Sandy GRAVEL

**Geology Unit Legend**

- ★ D - Unit D
- A - Unit A
- B - Unit B
- ▲ C - Unit C
- ◆ F - Unit F
- G - Unit G
- △ H - Unit H
- ⊗ I - Unit I
- ⊕ J - Unit J
- K - Unit K
- ◇ R - Rock

	TITLE Client 1 Engineer 1 Somewhere CPT Tool Project Eslami Fellenius 1997 $q_e$ vs. $f_s$ - CPT 03	DRAWN Datgel	DATE 1/2/2021	
		CHECKED Datgel	DATE 1/2/2021	
		SCALE Not To Scale		Let
		PROJECT No 4.05.0	FIGURE No 114	

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph CPT ESLAMI FELLENIUS 97 QE VS. FS SUM LET DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <-DrawingFiles> 1/2/2021 10:10:10.11 Datgel CPT Tool.gINT.Add-In



**METHOD: Esлами Fellenius 1997**

- 1 - Sensitive and Collapsible CLAY and/or SILT
- 2 - CLAY and/or SILT
- 3 - Silty CLAY and/or Clayey SILT
- 4 - Sandy SILT and/or Silty SAND
- 5 - SAND and/or Sandy GRAVEL

**Geology Unit Legend**

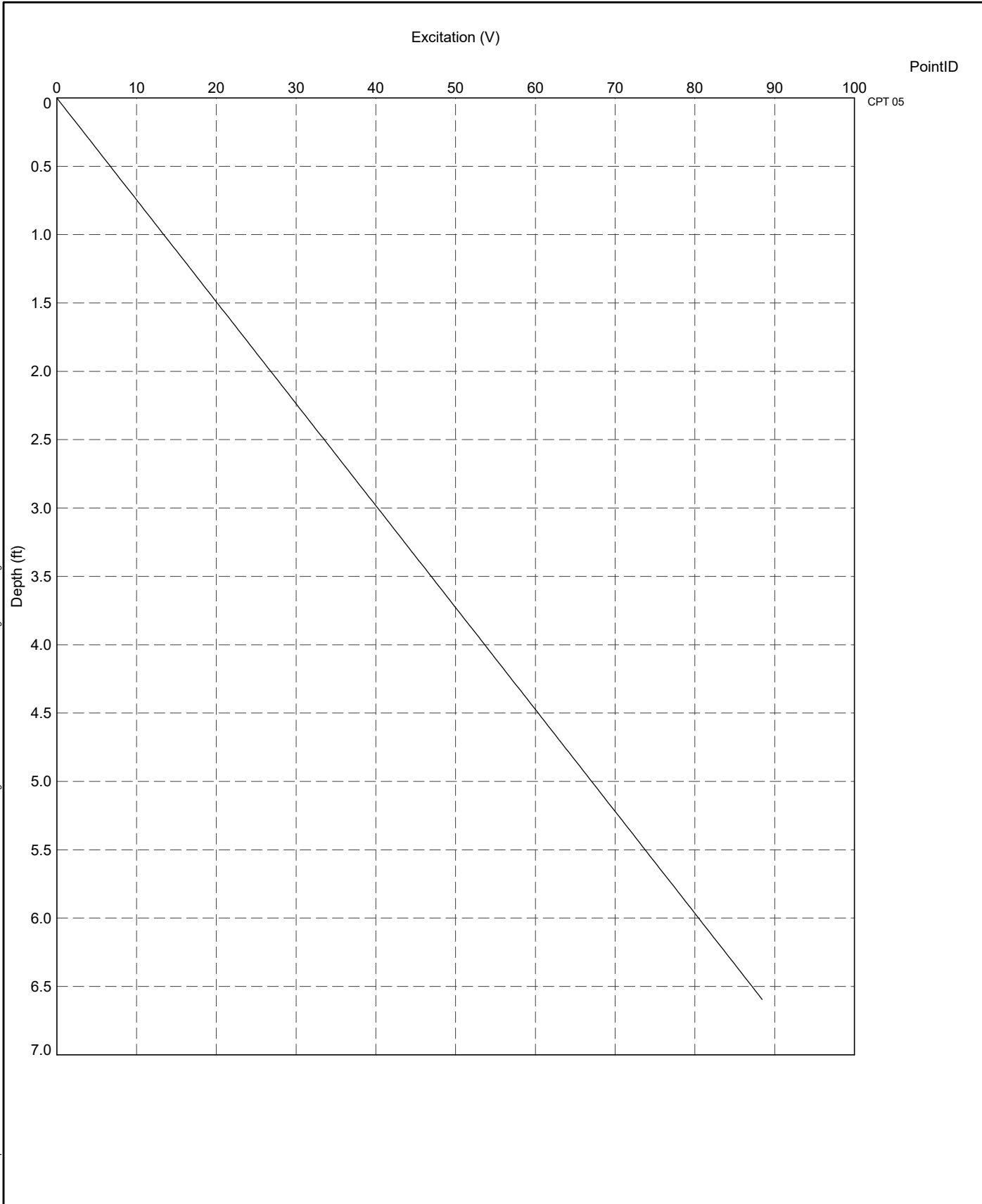
- ★ D - Unit D
- ⊕ J - Unit J
- A - Unit A
- ⊠ K - Unit K
- B - Unit B
- ◇ R - Rock
- ▲ C - Unit C
- 
- ◆ F - Unit F
- 
- G - Unit G
- 
- △ H - Unit H
- 
- ⊗ I - Unit I
- 

PointIDs: CPT 03


TITLE  
 Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Esлами Fellenius 1997  $q_e$  vs.  $f_s$

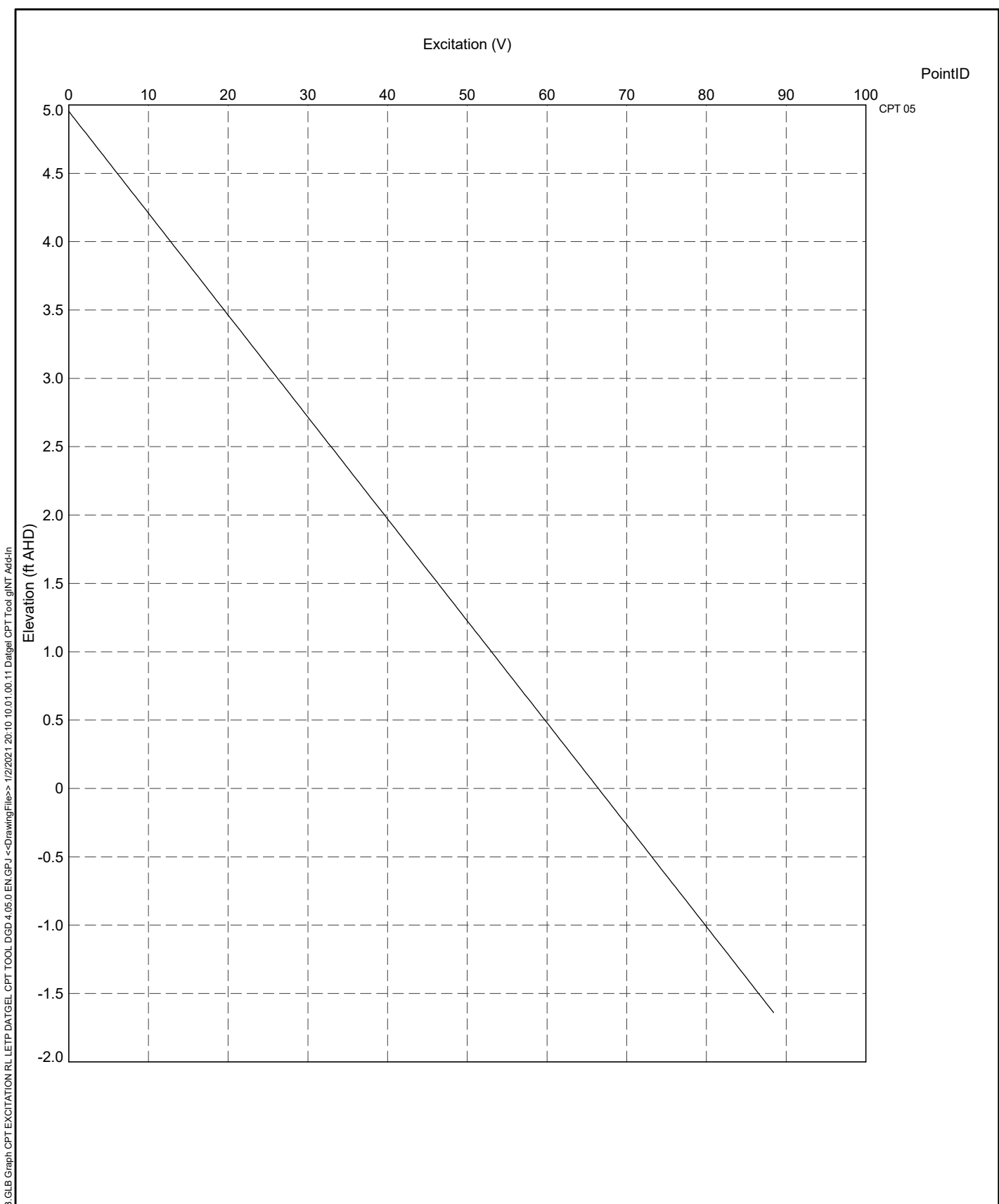
DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	115


DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph CPT EXCITATION DEPTH LETP DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <<DrawingFile>> 1/2/2021 20:10 10.01.00.11 Datgel CPT Tool.gINT Add-In



PointID  
CPT 05

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Excitation versus Depth</p>	<p>DRAWN Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>CHECKED Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>SCALE Not To Scale</p>		<p>Let</p>
		<p>PROJECT No 4.05.0</p>	<p>FIGURE No 116</p>	



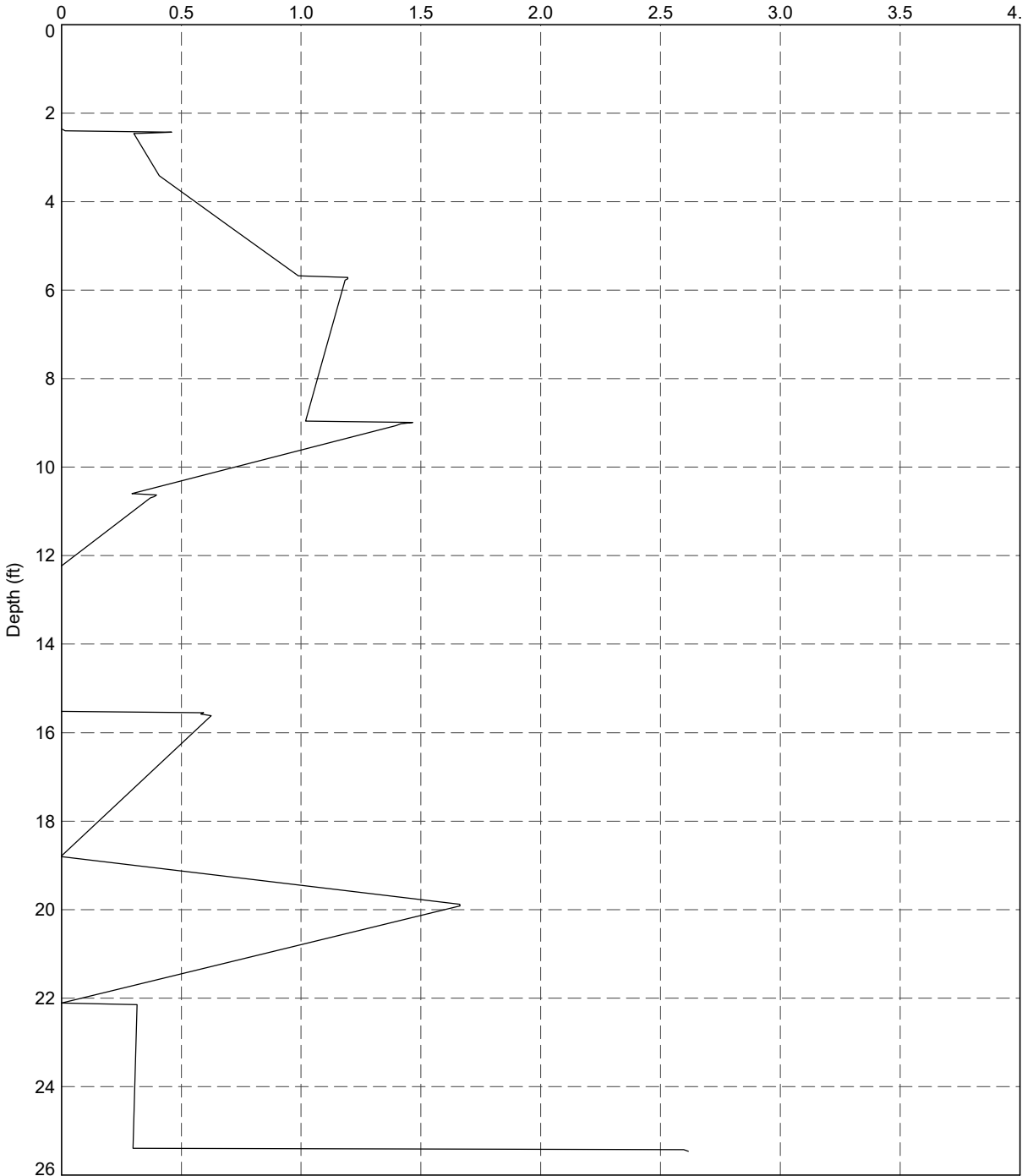
 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Excitation versus Elevation</p>	<p>DRAWN</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>	
		<p>CHECKED</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>	
		<p>SCALE</p> <p>Not To Scale</p>		<p>Let</p>
		<p>PROJECT No</p> <p>4.05.0</p>	<p>FIGURE No</p> <p>117</p>	

DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.EXCITATION.RL.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <-DrawingFiles>> 1/2/2021 20:10:10.01.00.11.Datgel.CPT.Tool.gINT.Add-In


Filtered Sleeve Friction Resistance, Filtered  $f_s$  (tsf)

PointID

GEF 01



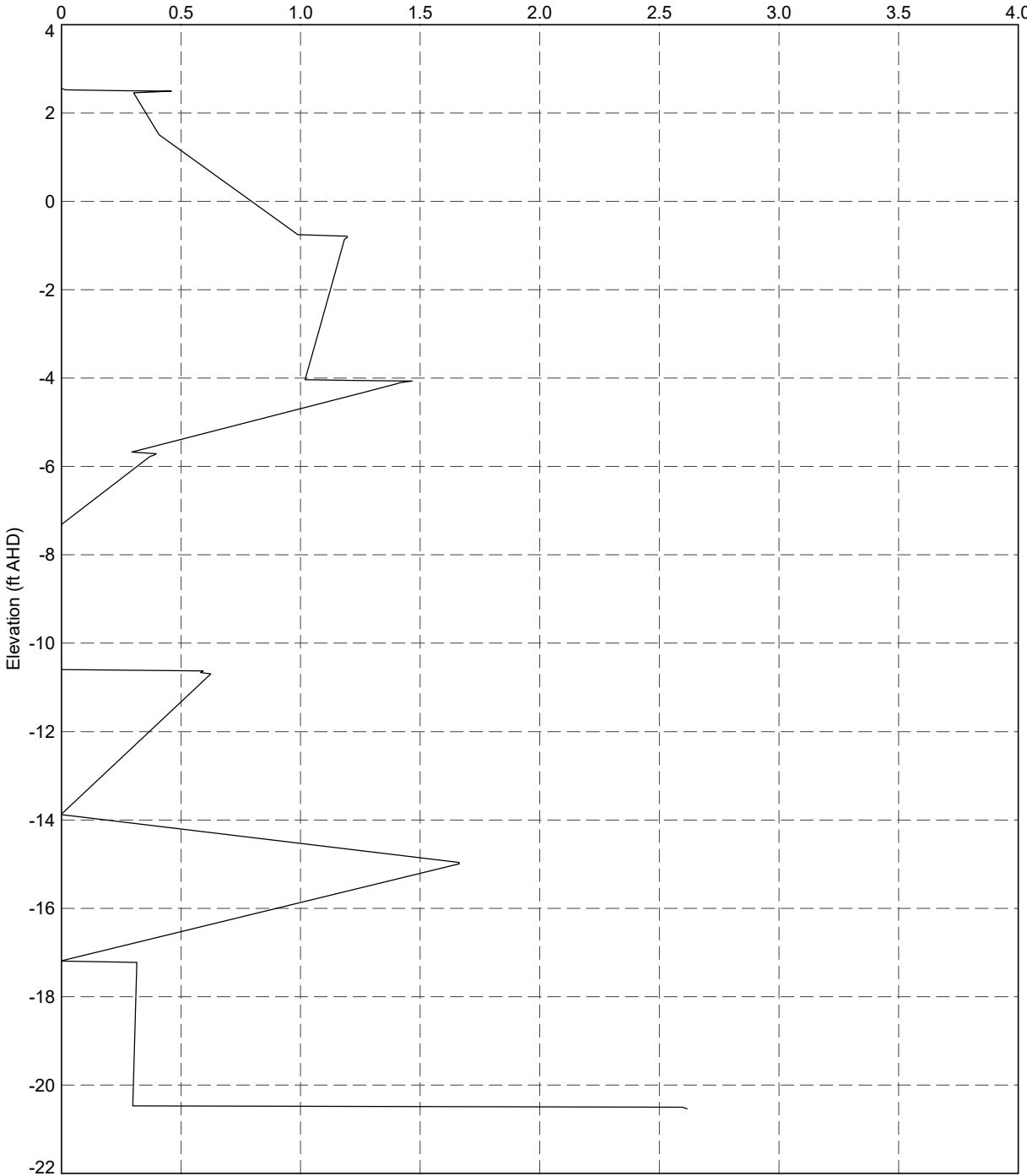
DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph CPT FILTERED FS DEPTH LETP.DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <<DrawingFile>> 1/22/2021 20:10:10.01.00.11 Datgel CPT Tool.gINT Add-In

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project</p> <p>Filtered Sleeve Friction Resistance versus Depth</p>	DRAWN	Datgel	DATE	1/2/2021	
		CHECKED	Datgel	DATE	1/2/2021	
		SCALE	Not To Scale			Let
		PROJECT No	4.05.0	FIGURE No	118	


Filtered Sleeve Friction Resistance, Filtered  $f_s$  (tsf)

PointID

GEF 01



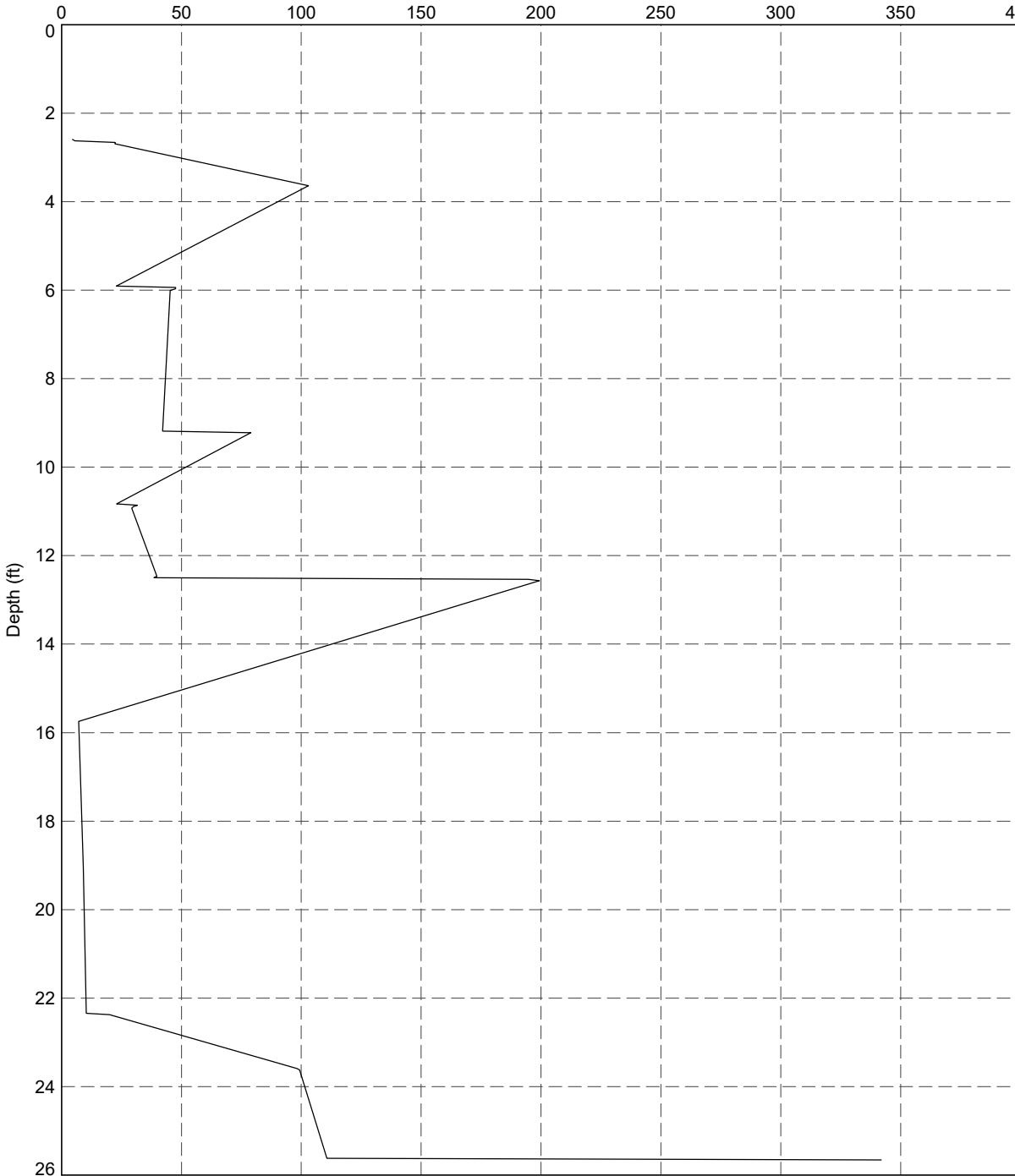
DATGEL CPT TOOL\_DGD\_4.05.0.LIB.GLB Graph CPT FILTERED FS RL LETP DATGEL CPT TOOL\_DGD\_4.05.0.EN.GPJ <<DrawingFile>> 1/2/2021 20:10:10.01.00.11 Datgel CPT\_Tool.gINT\_Add-In

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Filtered Sleeve Friction Resistance versus Elevation</p>	DRAWN	Datgel	DATE	1/2/2021	
		CHECKED	Datgel	DATE	1/2/2021	
		SCALE	Not To Scale			Let
		PROJECT No	4.05.0	FIGURE No	119	

Filtered Cone Resistance, Filtered  $q_c$  (tsf)

PointID

GEF 01



DATGEL\CPT TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT FILTERED OC DEPTH LETP DATGEL\CPT TOOL\_DGD\_4.05.0\EN\GPJ\_<<Drawing Files>>\_1/2/2021 20:10:10.01.00.11 Datgel\CPT Tool\gINT Add-in



TITLE  
 Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Filtered Cone Resistance versus Depth

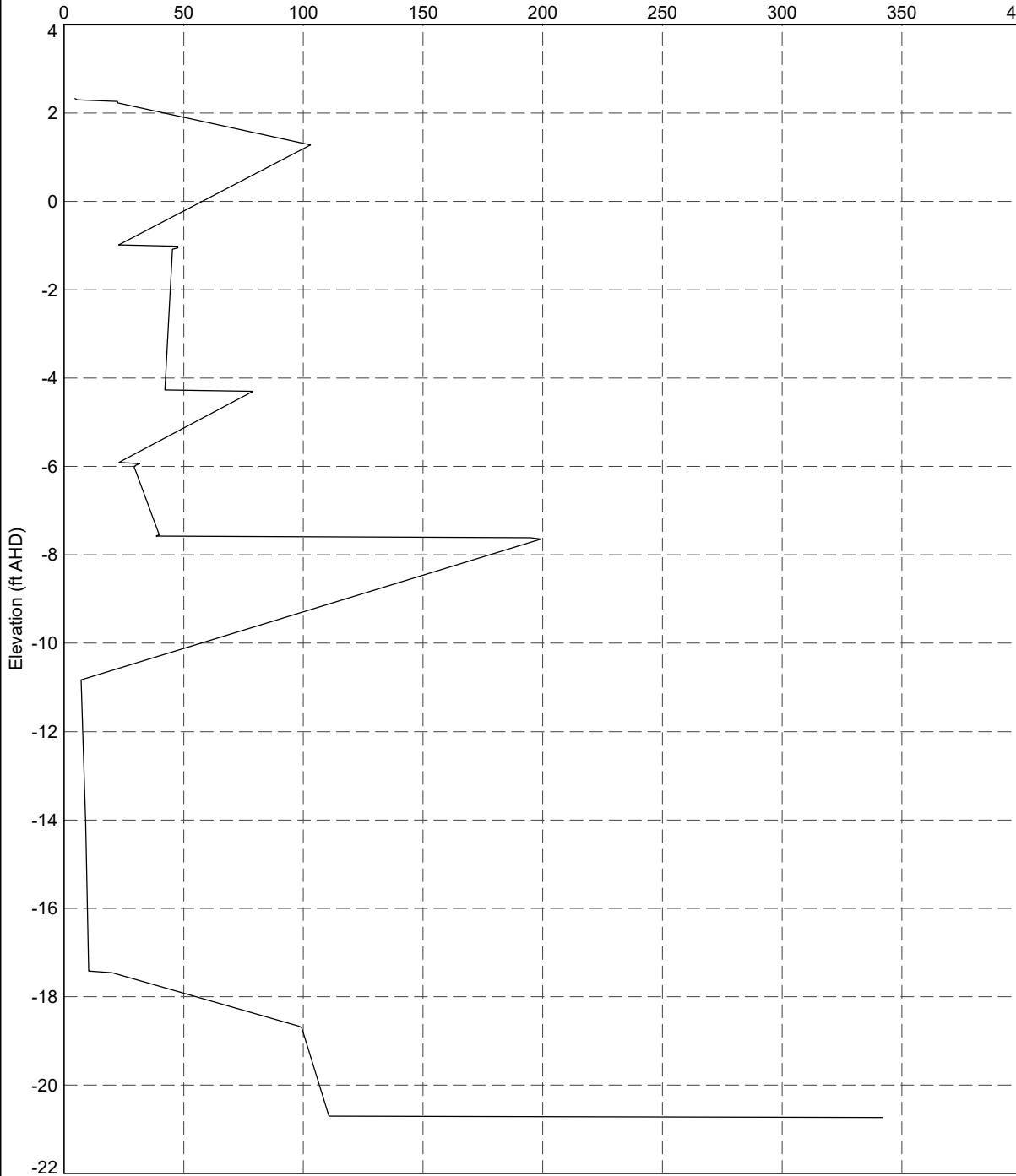
DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	120




Filtered Cone Resistance, Filtered  $q_c$  (tsf)

PointID

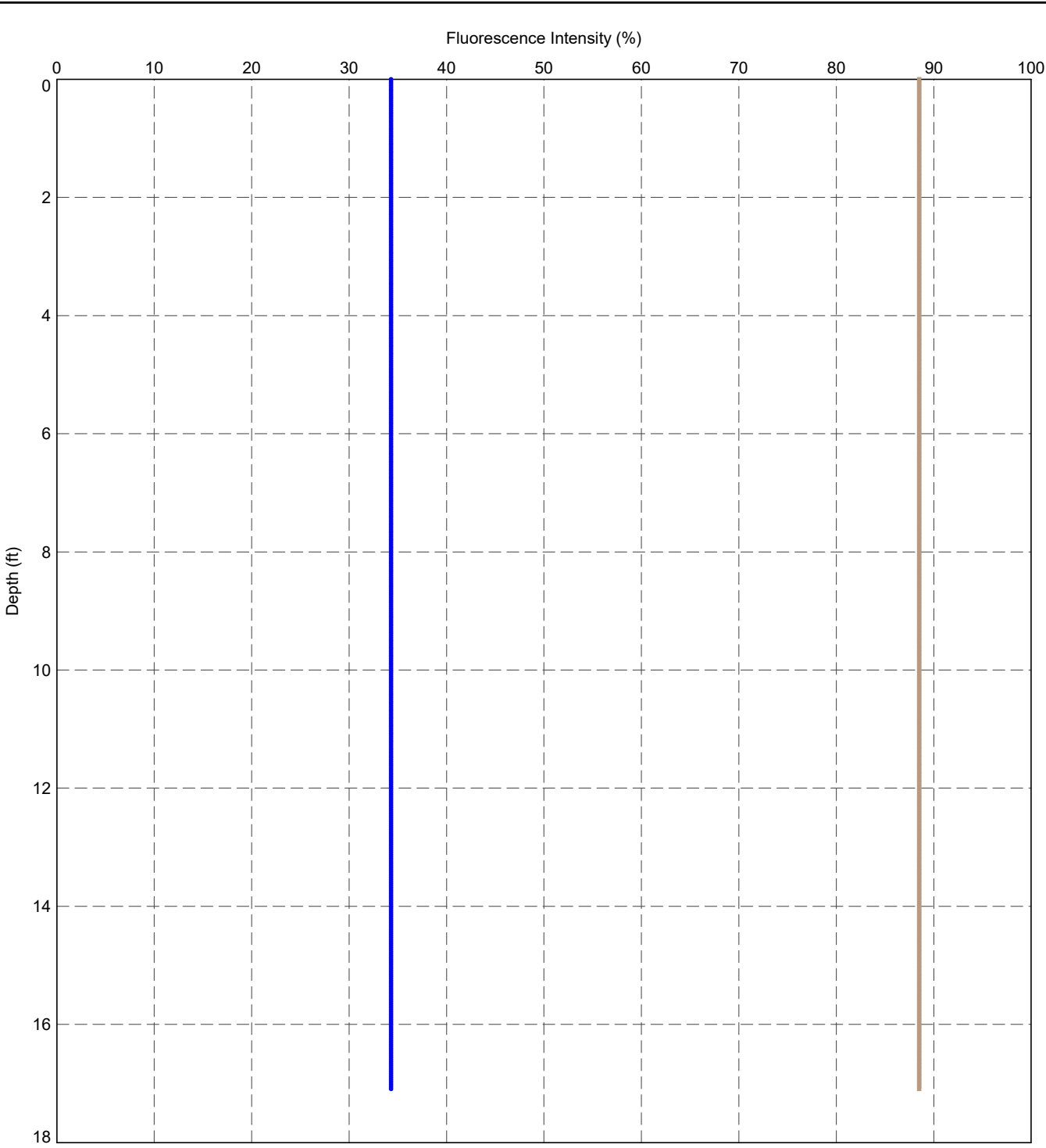
GEF 01



DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.FILTERED.QC.RL.LEIP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ.<<DrawingFile>> 1/2/2021 20:10:10.01.00.11.Datgel.CPT.Tool.gINT.Add.in

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project</p> <p>Filtered Cone Resistance versus Elevation</p>	<p>DRAWN</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>	
		<p>CHECKED</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>	
		<p>SCALE</p> <p>Not To Scale</p>		<p>Let</p>
		<p>PROJECT No</p> <p>4.05.0</p>	<p>FIGURE No</p> <p>121</p>	

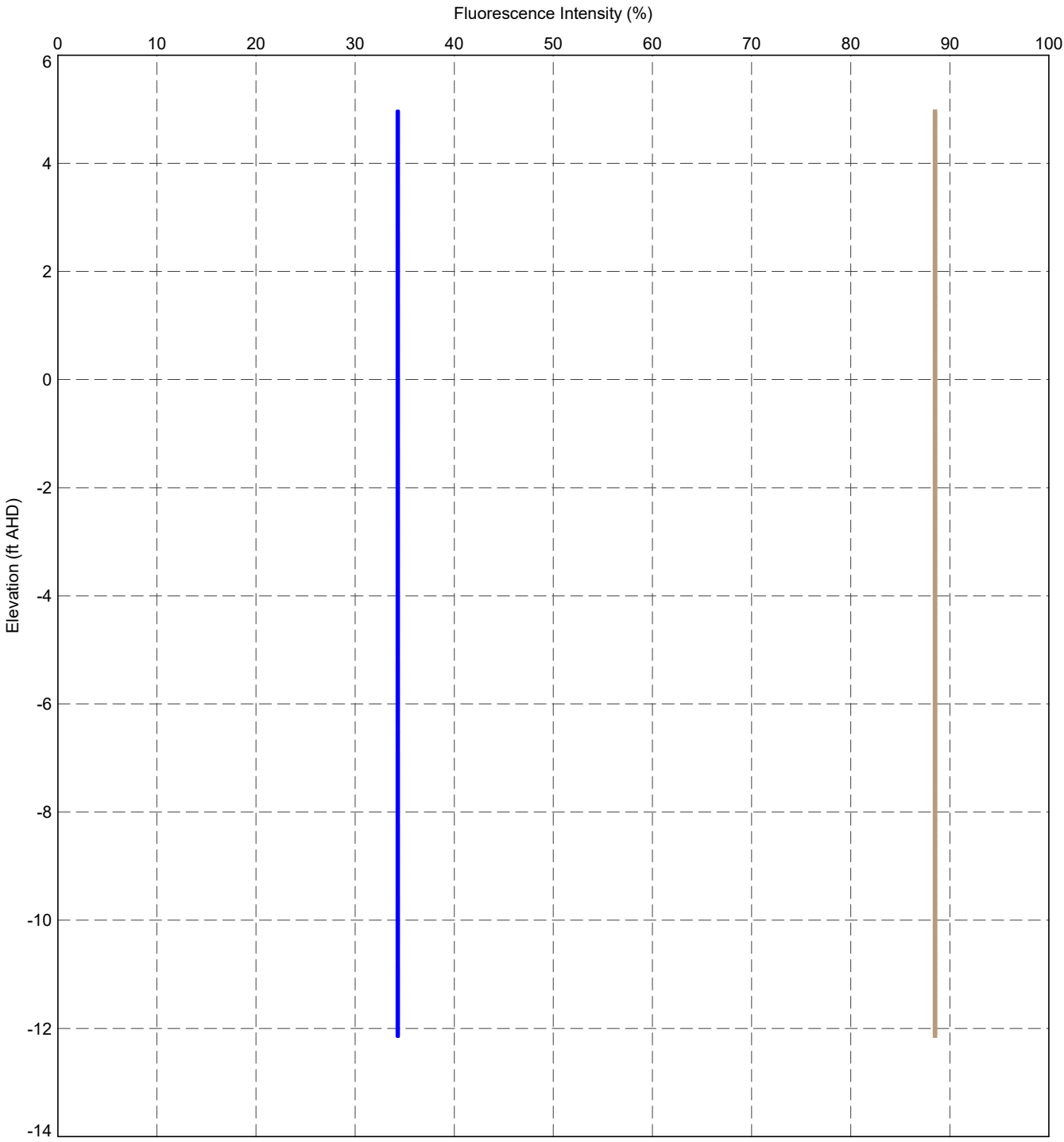
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Legend:  
 ● Fluorescence Intensity 1 (%)  
 ■ Fluorescence Intensity 2 (%)

	TITLE Client 1 Engineer 1 Somewhere CPT Tool Project Soil Fluorescence Intensity versus Depth	DRAWN Datgel	DATE 1/2/2021	
		CHECKED Datgel	DATE 1/2/2021	
		SCALE Not To Scale		Let
		PROJECT No 4.05.0	FIGURE No 122	

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph CPT FLUORESCENCE INTENSITY.RL LEIFP DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <<DrawingFile>> 1/2/2021 10:01:00.11 Datgel CPT Tool.glt Add-In



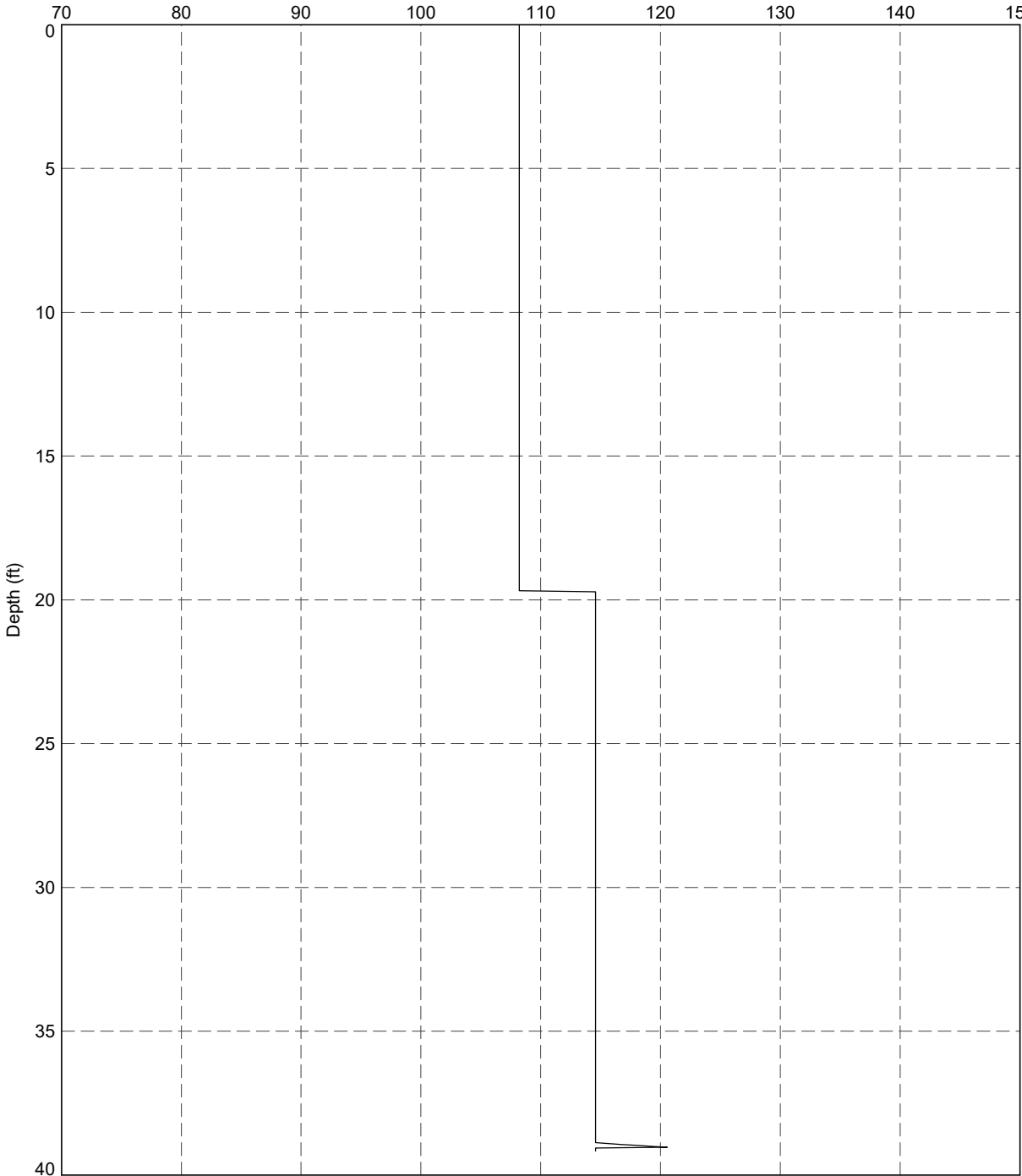
Legend:  
 ● Fluorescence Intensity 1 (%)  
 ■ Fluorescence Intensity 2 (%)

	TITLE Client 1 Engineer 1 Somewhere CPT Tool Project Soil Fluorescence Intensity versus Elevation	DRAWN Datgel	DATE 1/2/2021	
		CHECKED Datgel	DATE 1/2/2021	
		SCALE Not To Scale		Let
		PROJECT No 4.05.0	FIGURE No 123	


Bulk Unit Weight,  $\gamma_b$  (pcf)

PointID

CPT 05

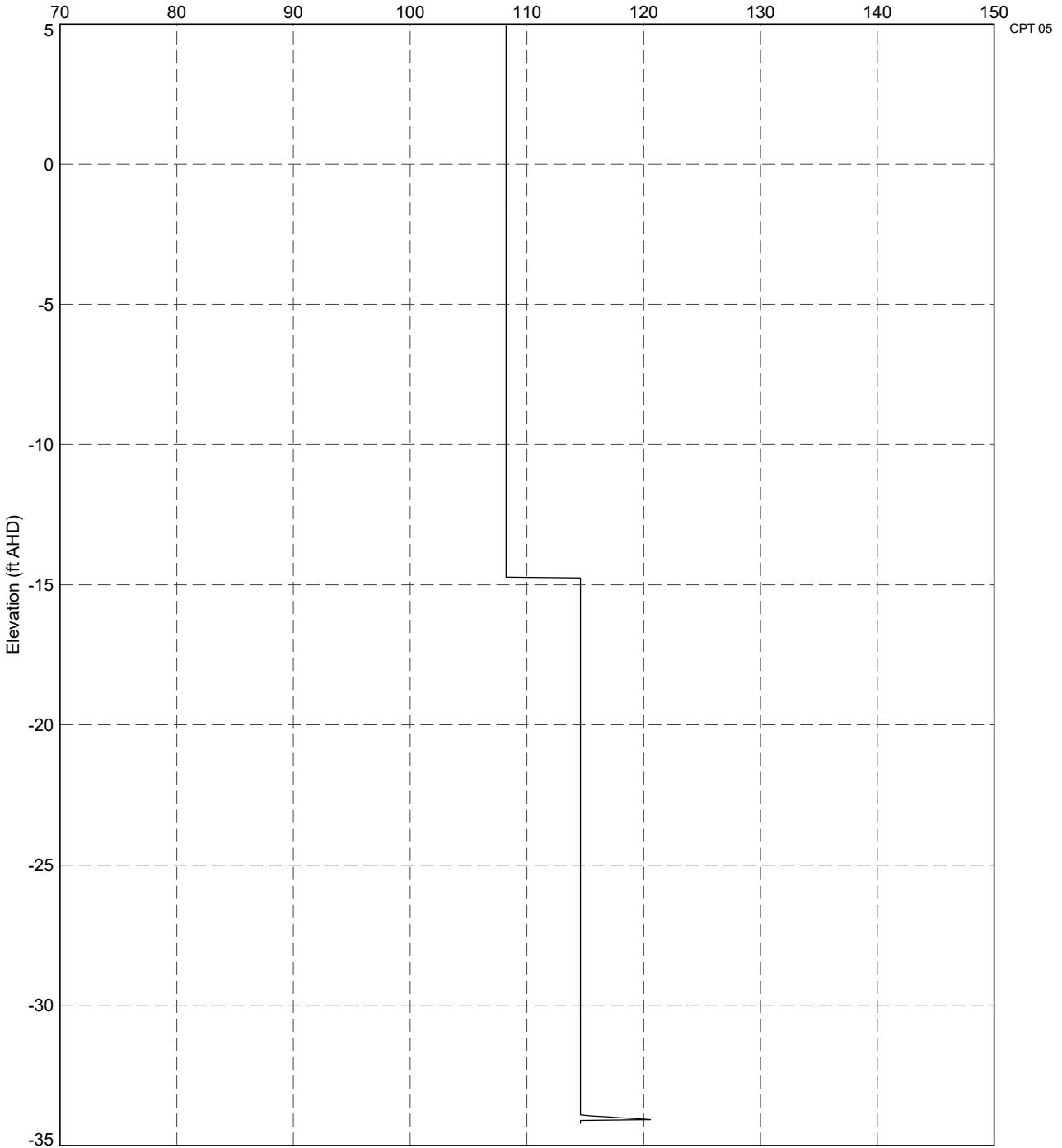


DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.FOUND.BULK.UNIT.WEIGHT.DEPTH.LET.P.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <-DrawingFiles> 1/2/2021.20:12:10.01.00.11.Datgel.CPT.Tool.gINT.Add-in


 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Bulk Unit Weight versus Depth</p>	<p>DRAWN</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>	
		<p>CHECKED</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>	
		<p>SCALE</p> <p>Not To Scale</p>		<p>Let</p>
		<p>PROJECT No</p> <p>4.05.0</p>	<p>FIGURE No</p> <p>124</p>	

Bulk Unit Weight,  $\gamma_b$  (pcf)

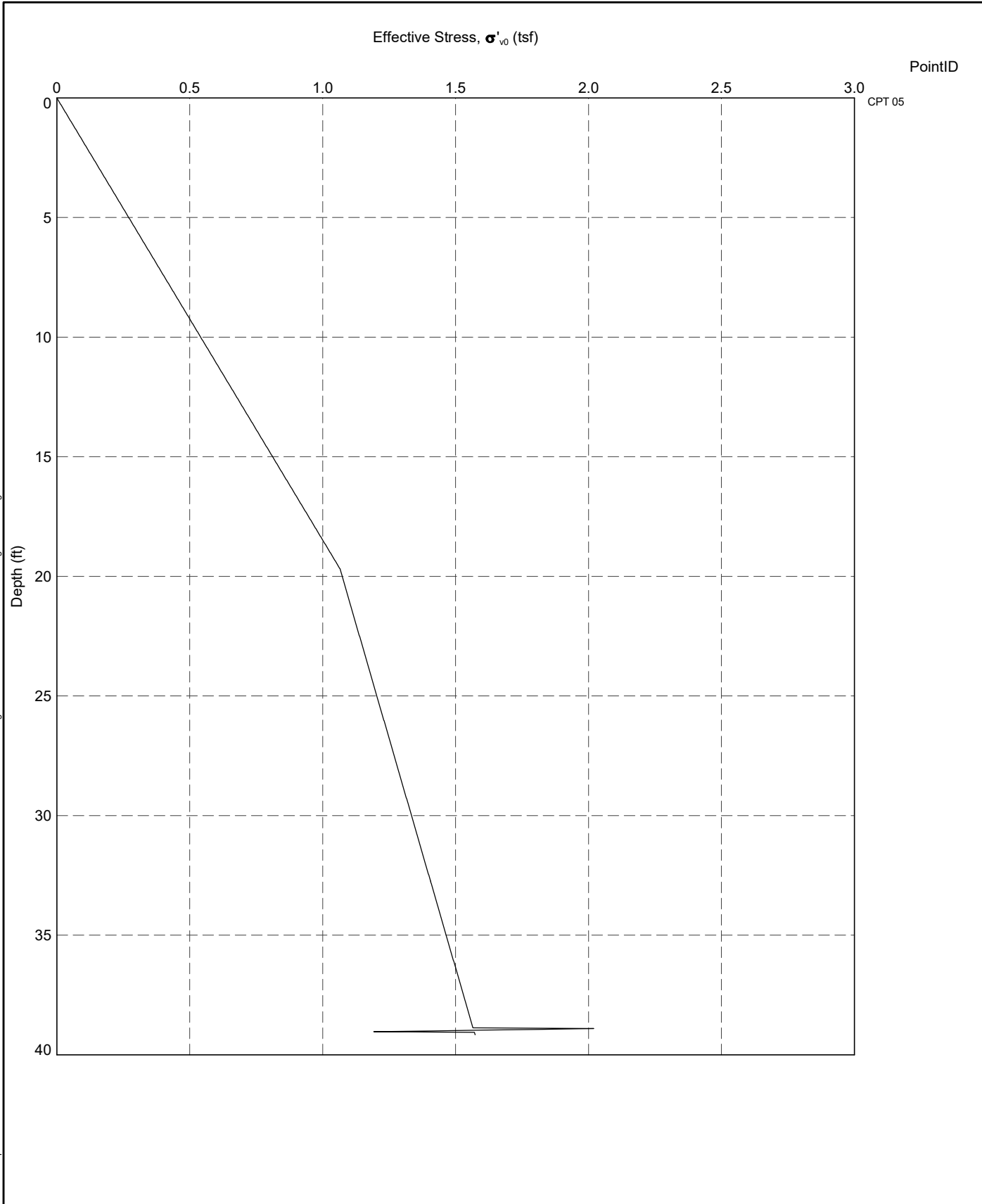
PointID




DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph CPT FOUND BULK UNIT WEIGHT RLLETP.DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <-DrawingFile>> 1/22/2021 20:12 10:01:00.11 Datgel CPT Tool gINT Add-In

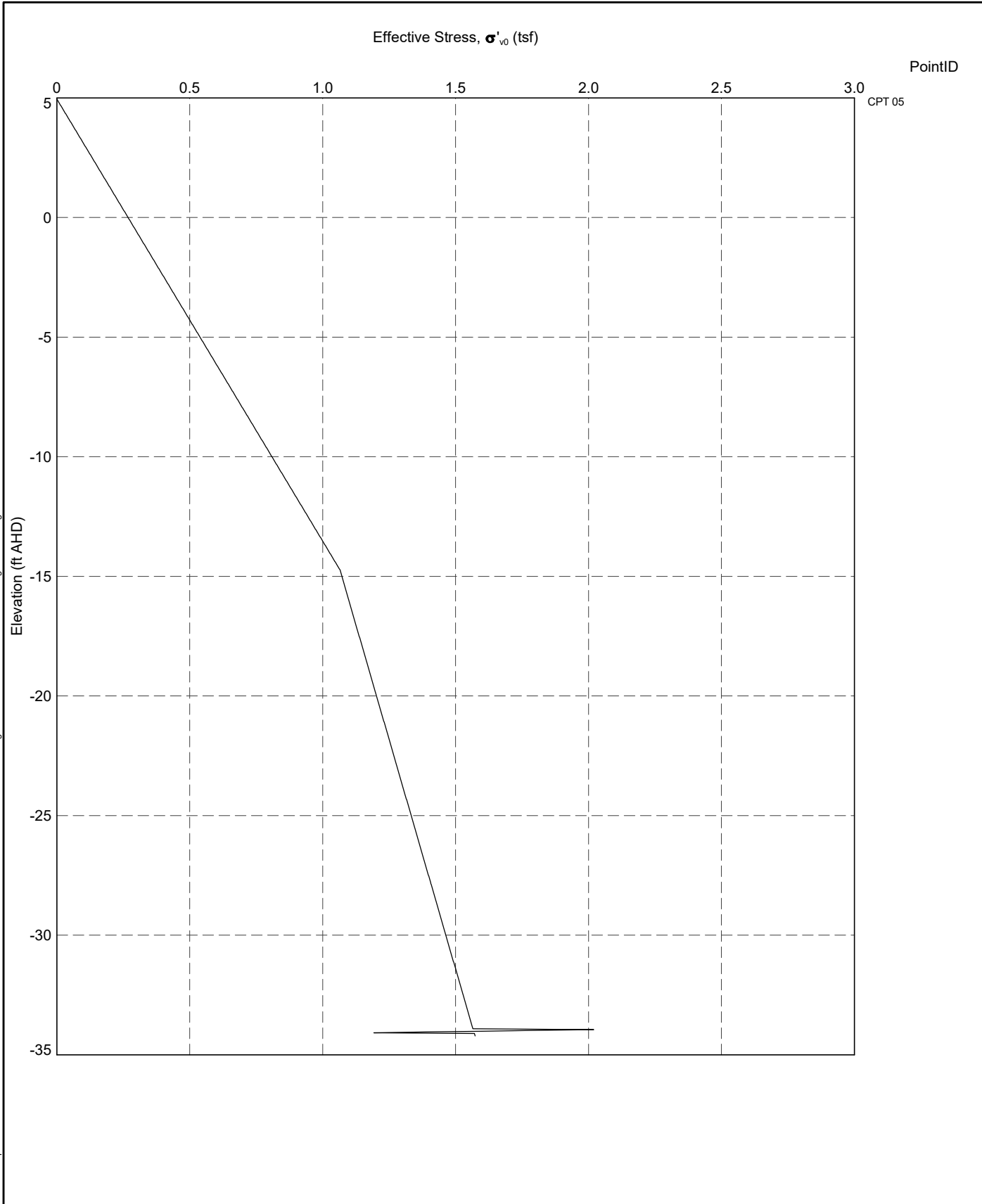
 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Bulk Unit Weight versus Elevation</p>	<p>DRAWN</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>	
		<p>CHECKED</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>	
		<p>SCALE</p> <p>Not To Scale</p>		<p>Let</p>
		<p>PROJECT No</p> <p>4.05.0</p>	<p>FIGURE No</p> <p>125</p>	


DATGEL CPT TOOL\_DGD\_4.05.0.LIB.GLB Graph CPT FOUND EFFECTIVE STRESS DEPTH LETP.DATGEL CPT TOOL\_DGD\_4.05.0.EN.GPJ <-DrawingFiles> 1/2/2021 20:12:10.01.00.11.Datgel.CPT.Tool.gjINT.Add-In

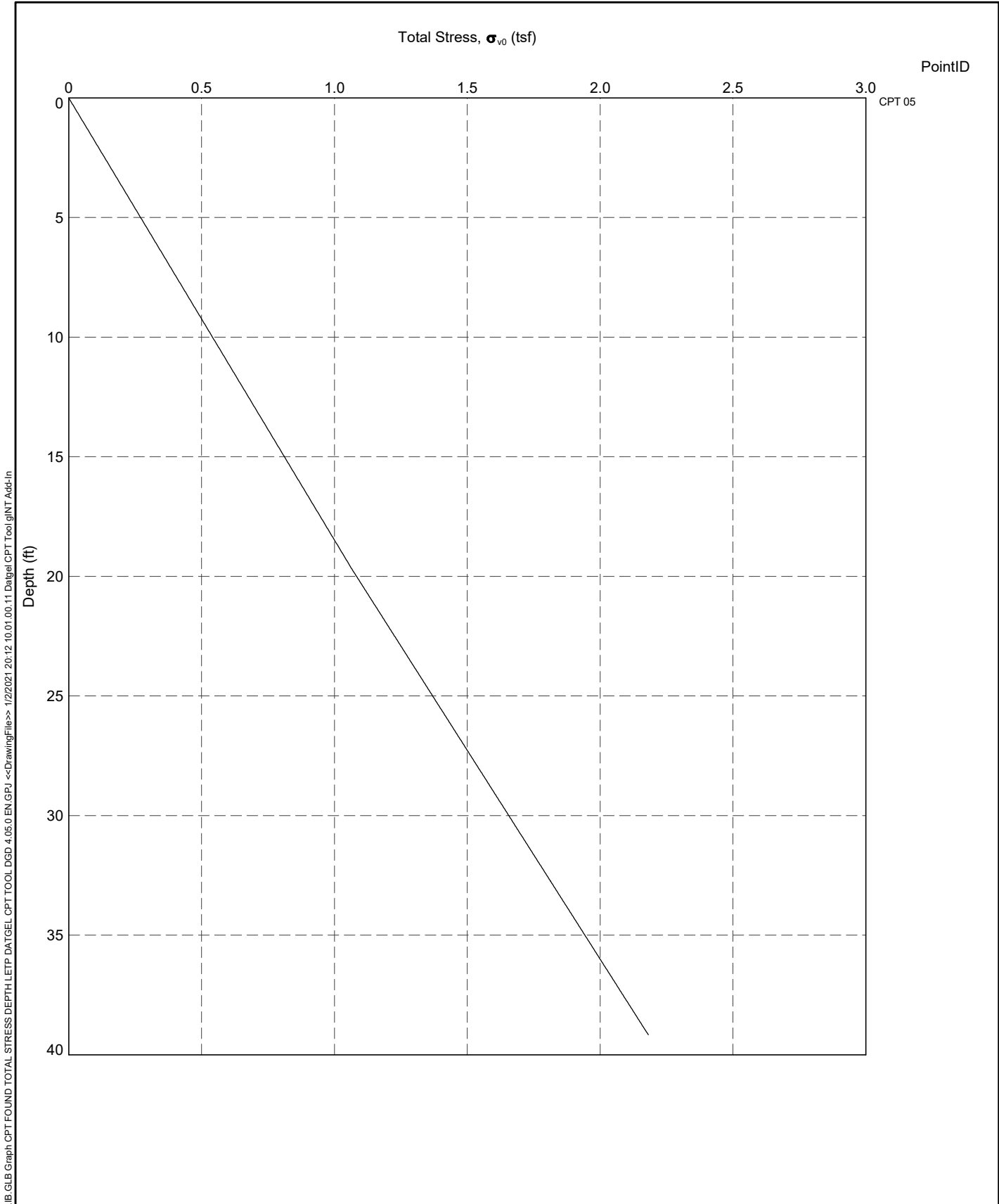


 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Effective Stress versus Depth</p>	DRAWN	Datgel	DATE	1/2/2021	
		CHECKED	Datgel	DATE	1/2/2021	
		SCALE	Not To Scale			Let
		PROJECT No	4.05.0	FIGURE No	126	


DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.FOUND.EFFECTIVE.STRESS.RL.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ.<<DrawingFile>>.1/2/2021.20:12:10.01.00.11.Datgel.CPT.Tool.gjNT.A4d4-In



 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Effective Stress versus Elevation</p>	<p>DRAWN Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>CHECKED Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>SCALE Not To Scale</p>		<p>Let</p>
		<p>PROJECT No 4.05.0</p>	<p>FIGURE No 127</p>	

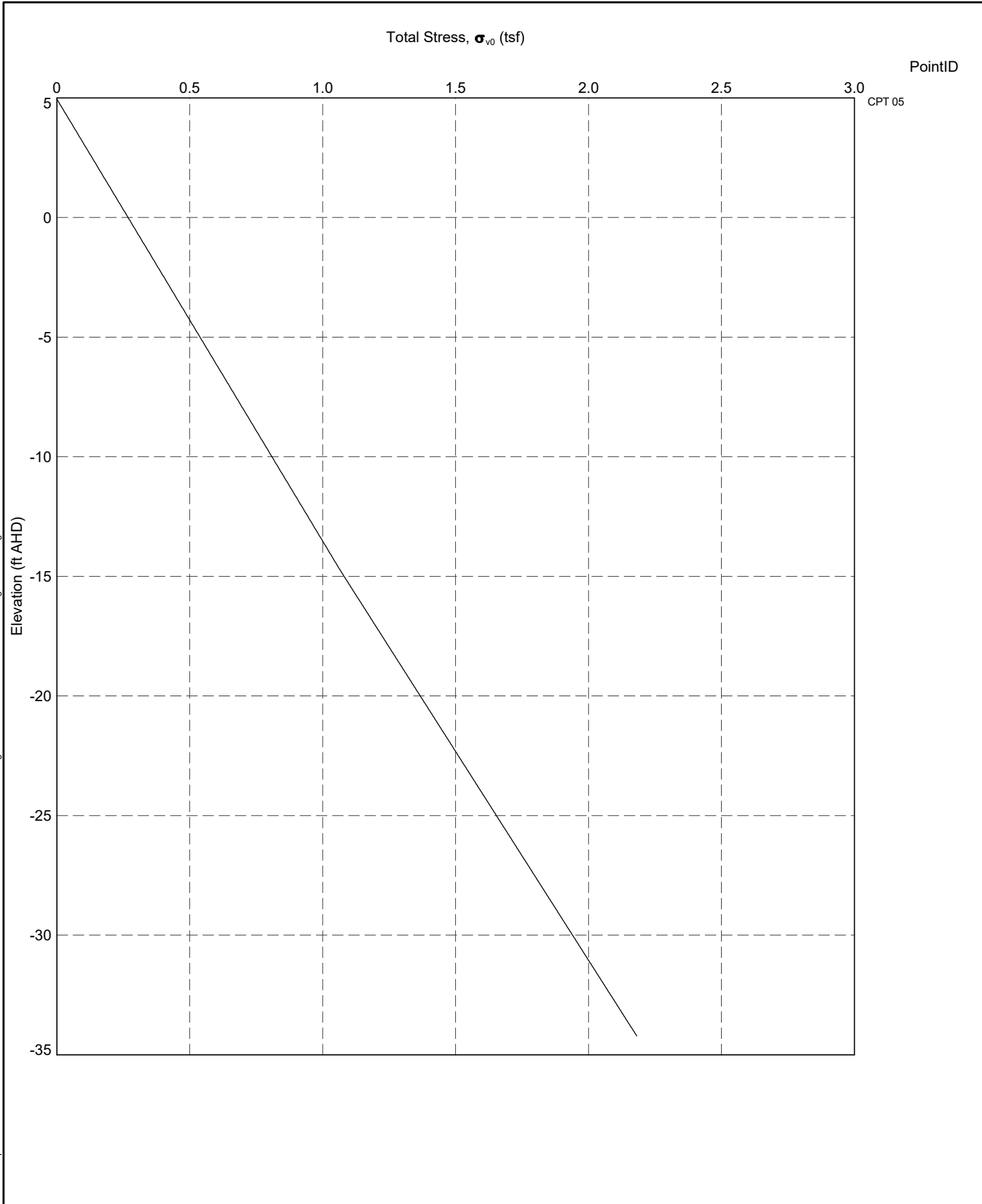



DATGEL\CPT TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT FOUND TOTAL STRESS DEPTH\LETP DATGEL\CPT TOOL\_DGD\_4.05.0 EN.GPJ <-DrawingFile>> 1/22/2021 20:12:10.01.00.11 Datgel\CPT Tool\gINT Add-In

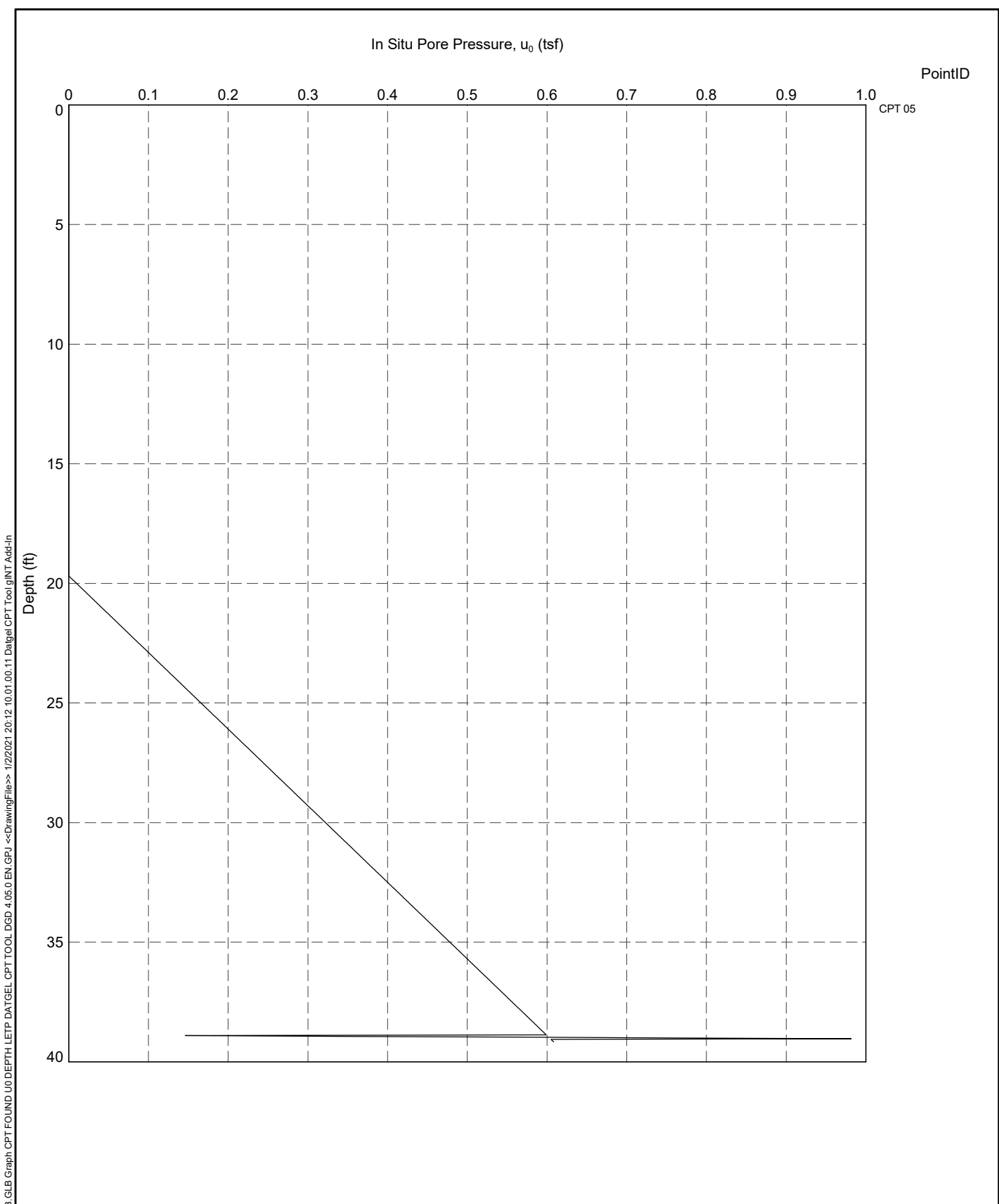
 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Total Stress versus Depth</p>	<p>DRAWN Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>CHECKED Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>SCALE Not To Scale</p>		<p>Let</p>
		<p>PROJECT No 4.05.0</p>	<p>FIGURE No 128</p>	




DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.FOUND.TOTAL.STRESS.RL.LETF.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ.<<DrawingFile>> 1/2/2021 20:12:10.01.00.11.Datgel.CPT.Tool.gINT.Add-In



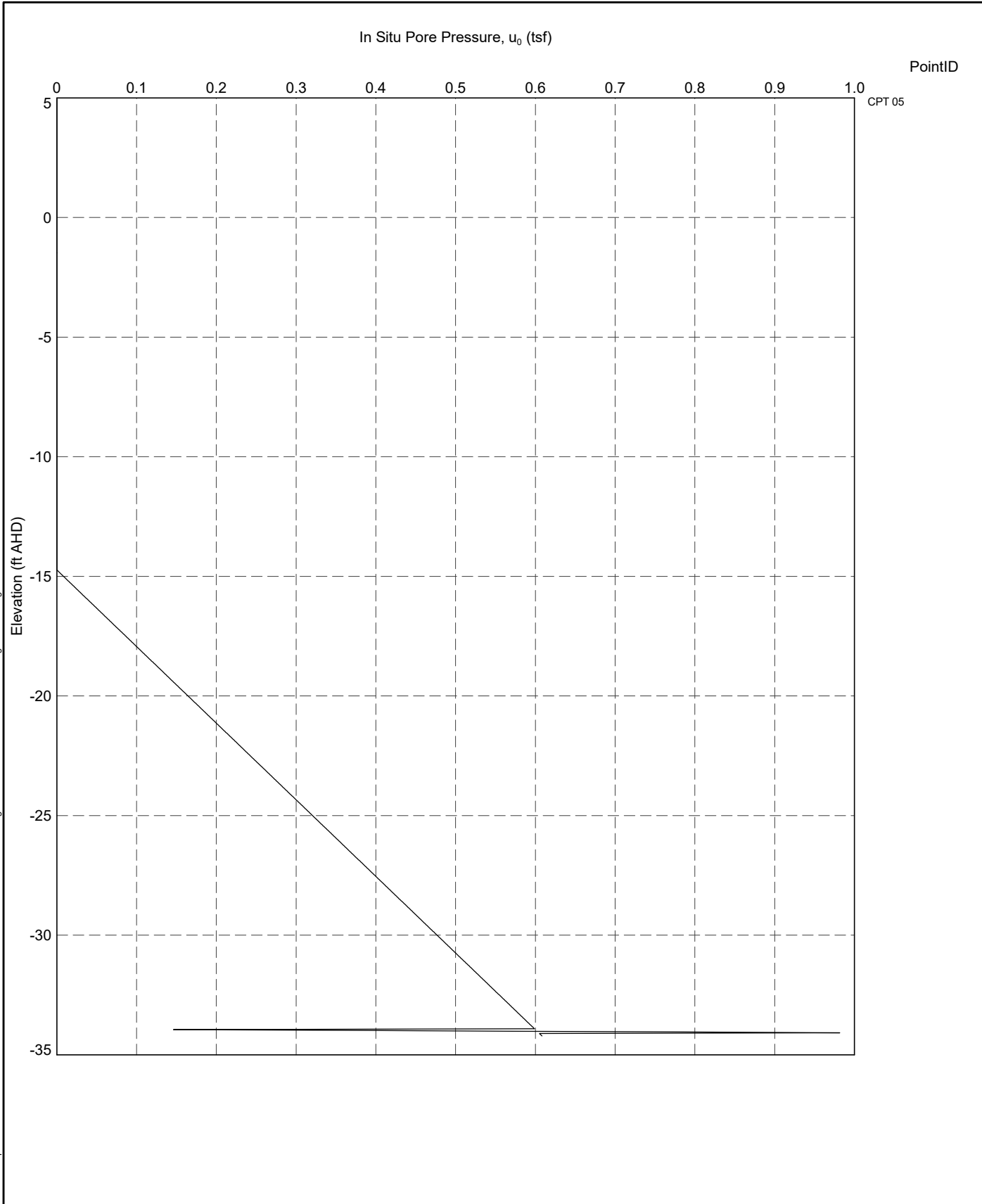
 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Total Stress versus Elevation</p>	DRAWN	Datgel	DATE	1/2/2021	
		CHECKED	Datgel	DATE	1/2/2021	
		SCALE	Not To Scale			Let
		PROJECT No	4.05.0	FIGURE No	129	




DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph CPT FOUND U0 DEPTH LETP DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <-DrawingFile>> 1/22/2021 20:12:10.01.00.11 Datgel CPT Tool.gINT Add-In

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project In Situ Pore Pressure versus Depth</p>	<p>DRAWN</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>	
		<p>CHECKED</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>	
		<p>SCALE</p> <p>Not To Scale</p>		<p>Let</p>
		<p>PROJECT No</p> <p>4.05.0</p>	<p>FIGURE No</p> <p>130</p>	

DATGEL\CPT TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT FOUND U0 RL LETP DATGEL\CPT TOOL\_DGD\_4.05.0 EN.GPJ <<DrawingFile>> 1/2/2021 20:12:10.01.00.11 Datgel.CPT.Tool.gINT.Add-In

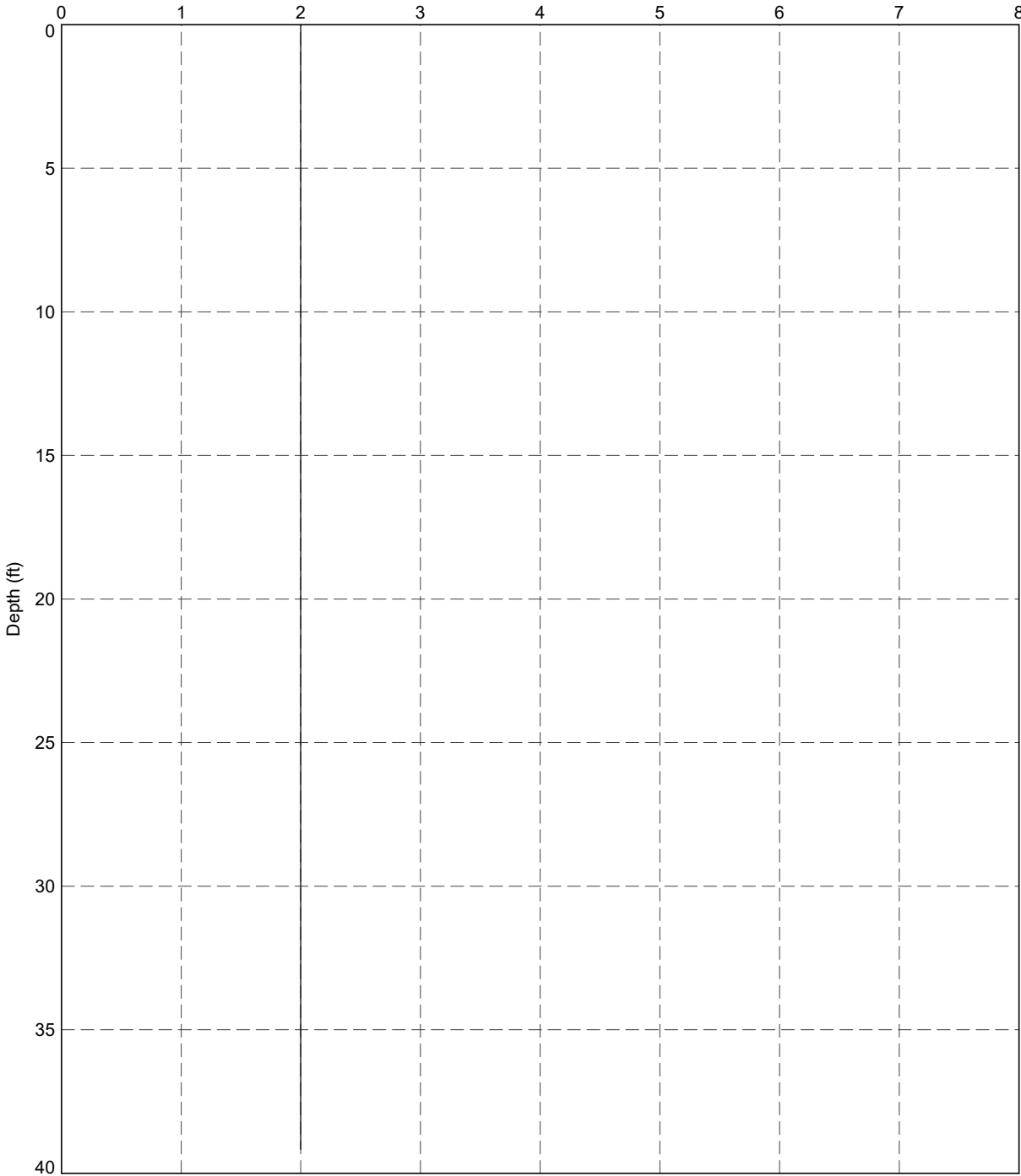


 <b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	TITLE Client 1 Engineer 1 Somewhere CPT Tool Project In Situ Pore Pressure versus Elevation	DRAWN Datgel	DATE 1/2/2021	
			CHECKED Datgel	DATE 1/2/2021
	SCALE Not To Scale			Let
			PROJECT No 4.05.0	FIGURE No 131


Young's Modulus Alpha,  $E_0$  Alpha

PointID

CPT 05



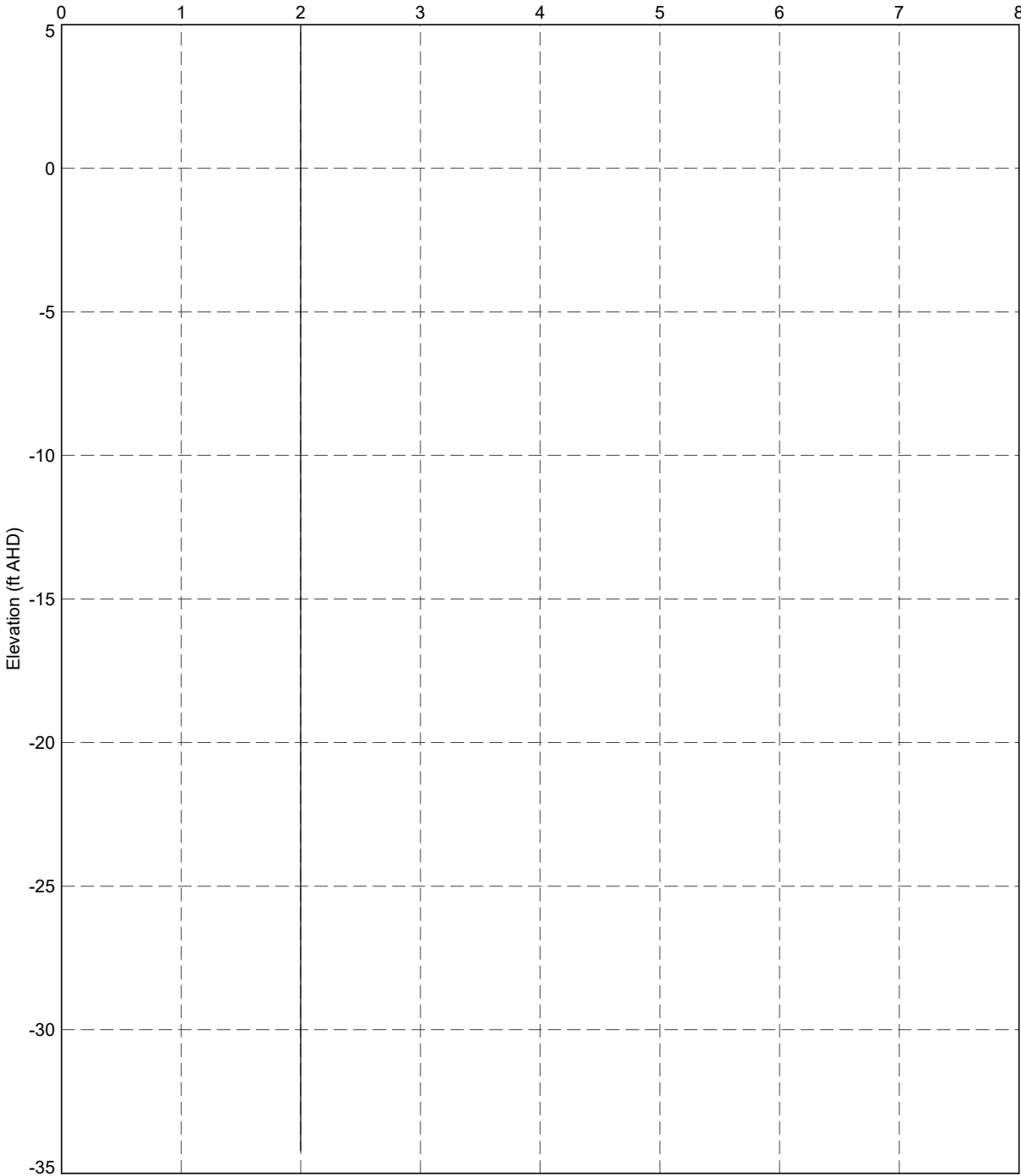
DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.FOUND.YOUNG.MODULUS.ALPHA.DEPTH.LET.P.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ.<<Drawing File>>.1/2/2021.20:12:10.01.00.11.Datgel.CPT.Tool.GINT.Add4.in

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Young's Modulus Alpha versus Depth</p>	<p>DRAWN</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>	
		<p>CHECKED</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>	
		<p>SCALE</p> <p>Not To Scale</p>		<p>Let</p>
		<p>PROJECT No</p> <p>4.05.0</p>	<p>FIGURE No</p> <p>132</p>	

Young's Modulus Alpha,  $E_0$  Alpha

PointID

CPT 05



DATGEL\CPT TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT FOUND YOUNG MODULUS ALPHA.RL\LETP.DATGEL\CPT TOOL\_DGD\_4.05.0\EN.GPJ <<DrawingFile>> 1/2/2021 20:12:10.01.00.11.Datgel\CPT Tool.gINT Add-In



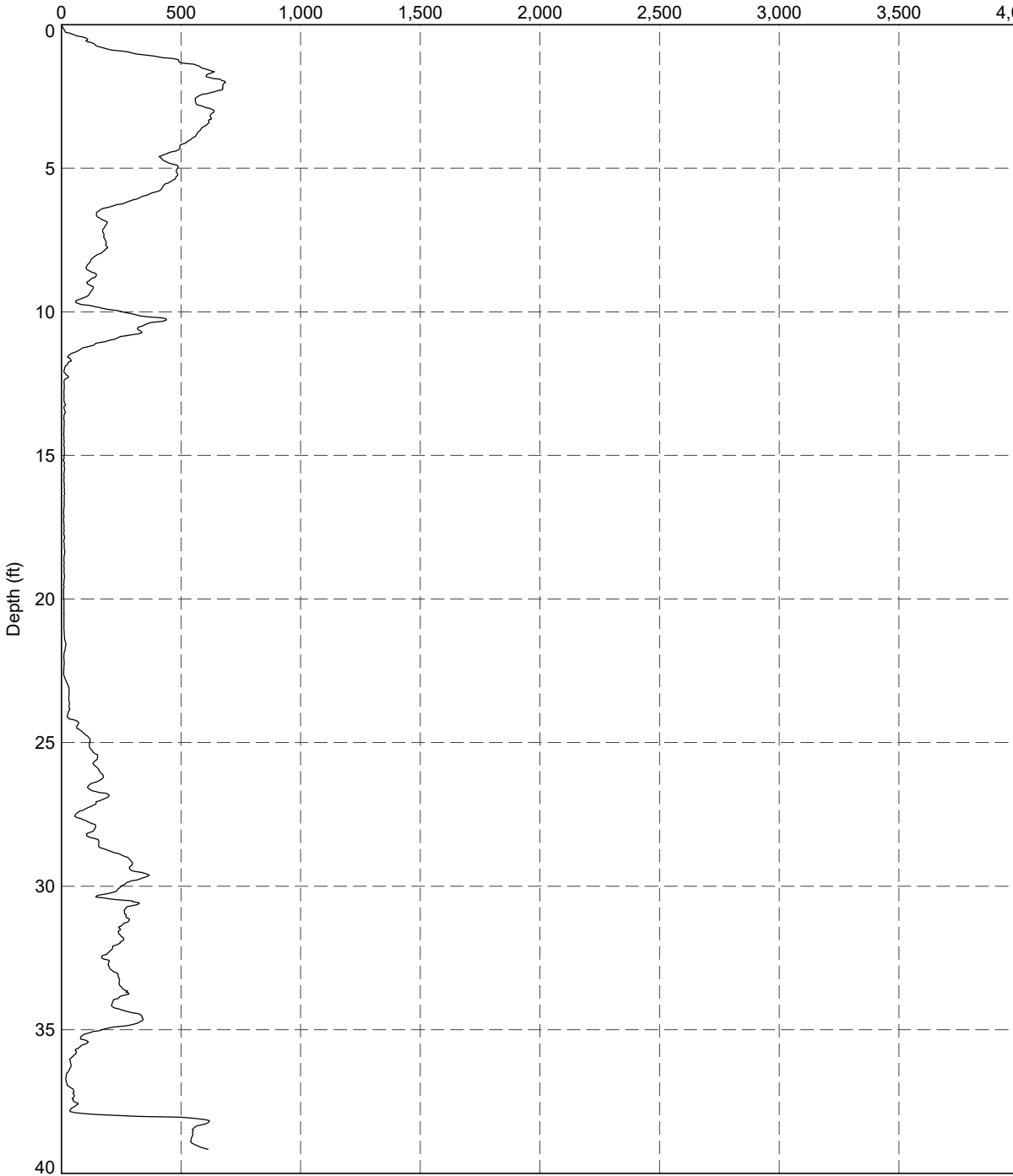
TITLE  
 Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Young Modulus's Alpha versus Elevation

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	133

Young's Modulus,  $E_0$  (tsf)

PointID

CPT 05



DATGEL\CPT TOOL.DGD 4.05.0\LIB\GLB\Graph\CPT FOUND YOUNG MODULUS DEPTH LEIF DATGEL\CPT TOOL.DGD 4.05.0 EN.GPJ <<DrawingFile>> 1/2/2021 10:01:00.11 Datgel\CPT Tool\gINT Add-In

TITLE

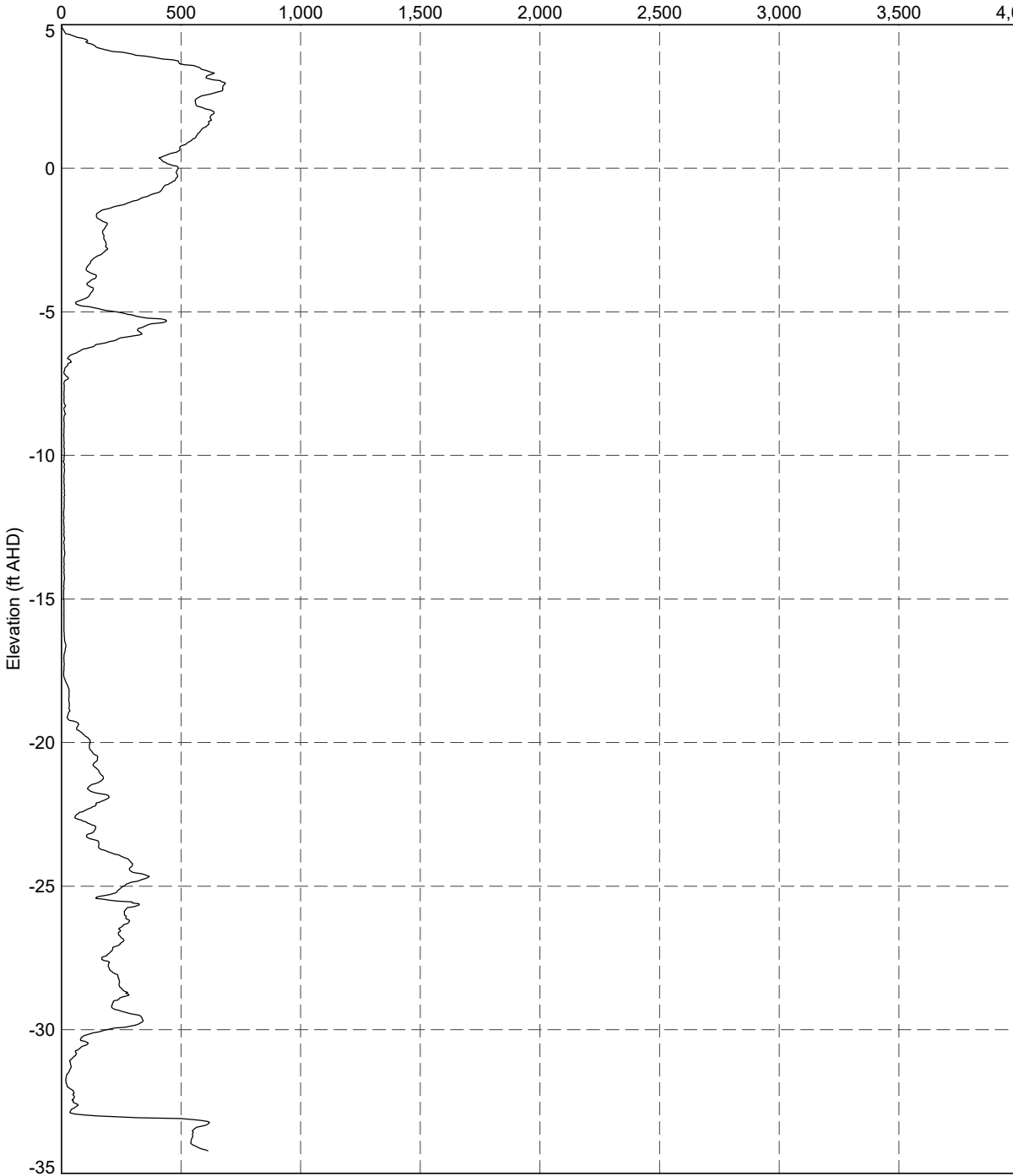
Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Young's Modulus versus Depth

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	134

Young's Modulus,  $E_0$  (tsf)

PointID

CPT 05



DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.FOUND.YOUNG.MODULUS.RL.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ.<-DrawingFiles> 1/2/2021 20:12 10.01.00.11.Datgel.CPT.Tool.gINT.Add.in

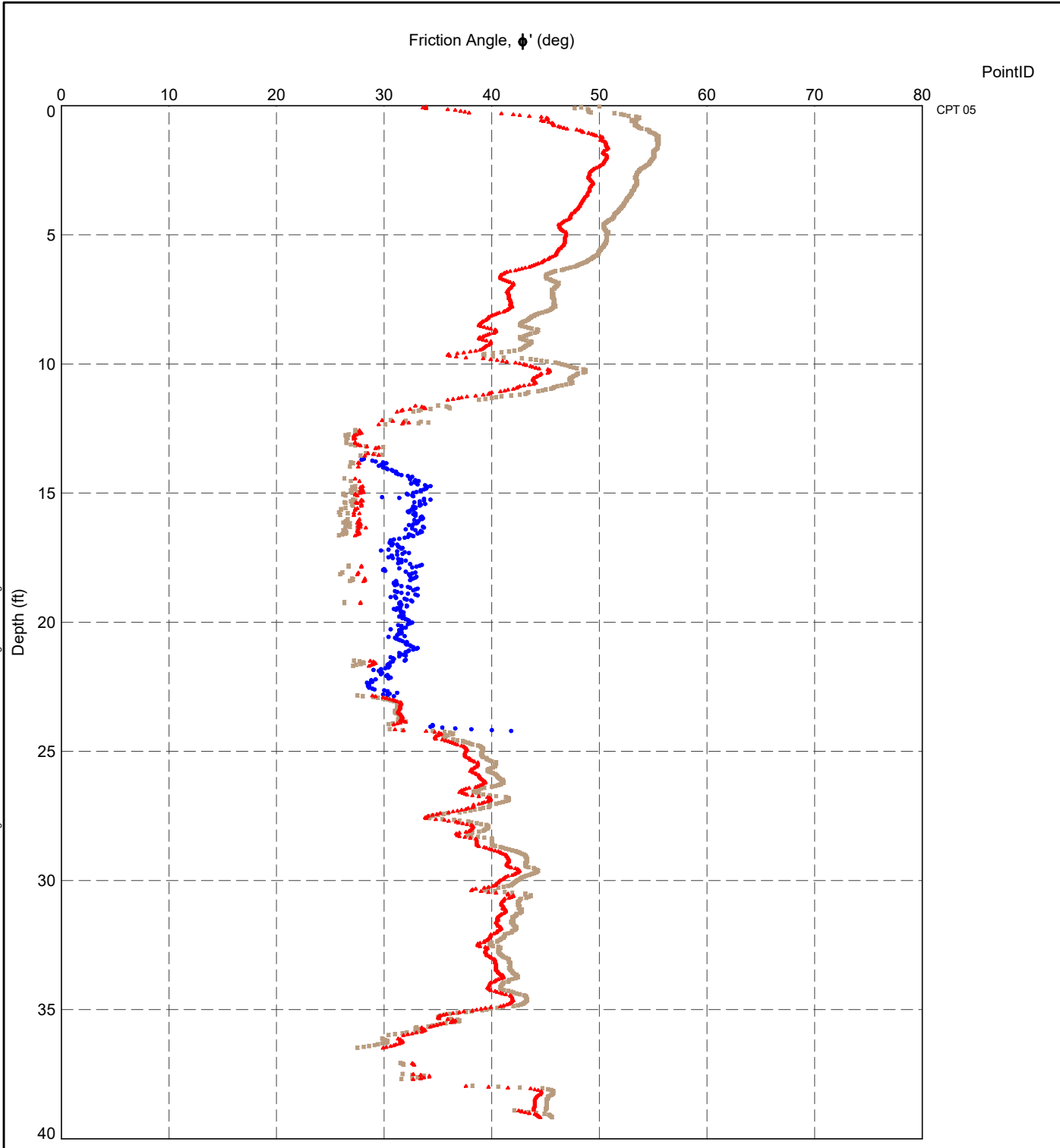
**Datgel**  
DATA SOLUTIONS  
Geotechnics • Geoenvironment • Laboratory

TITLE


Client 1  
Engineer 1  
Somewhere  
CPT Tool Project  
Young's Modulus versus Elevation

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	135

DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.FRICTION.ANGLE.DEPTH.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ.<<DrawingFiles>>1/2/2021.20.13.10.01.00.11.Datgel.CPT.Tool.gINT.Add-In

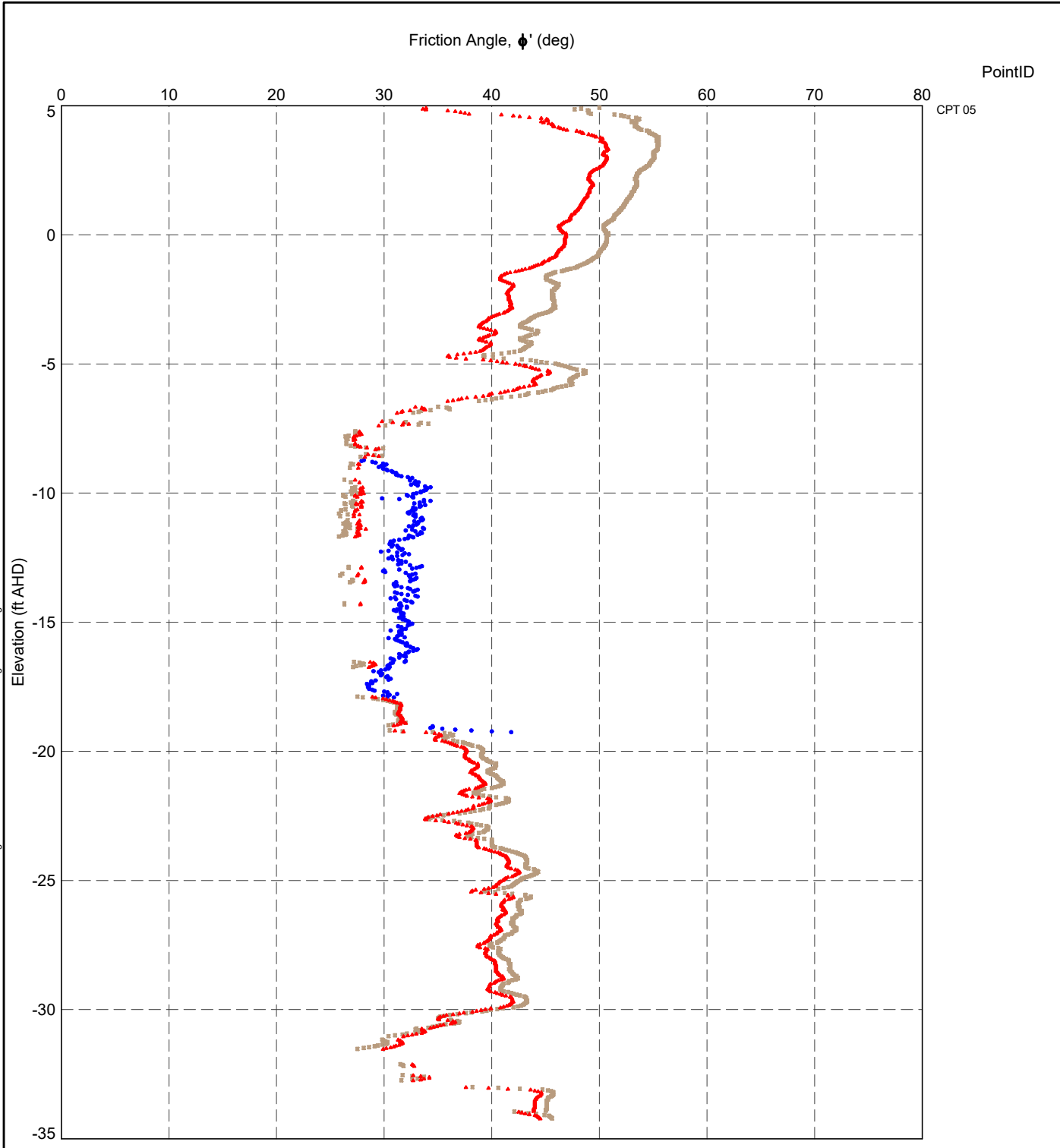


- Method:
- Senneset et al. (1988 & 1989); Mayne & Campanella (2005)
  - Robertson & Campanella (1983)
  - ▲ Kulhawy & Mayne (1990)


 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Friction Angle versus Depth</p>	DRAWN	Datgel	DATE	1/2/2021	
		CHECKED	Datgel	DATE	1/2/2021	
		SCALE	Not To Scale			Let
		PROJECT No	4.05.0	FIGURE No	136	



DATGEL CPT TOOL\_DGD\_4.05.0.LIB.GLB Graph CPT FRICTION ANGLE RLLLETP.DATGEL CPT TOOL\_DGD\_4.05.0.EN.GPJ <<DrawingFile>> 1/22/2021 20:14:10.01.00.11.Datgel.CPT.Tool.gjINT.Add-In



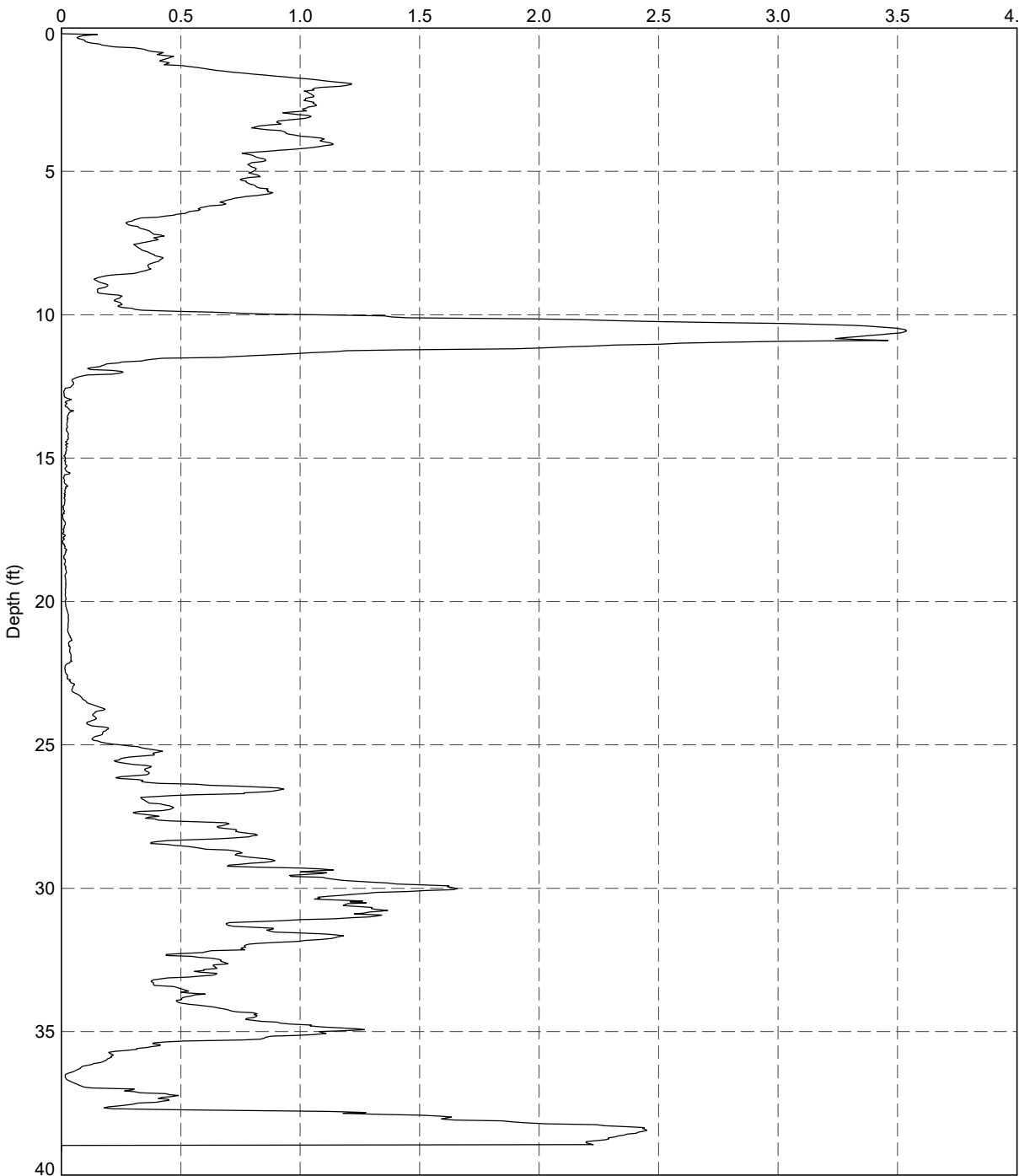
- Method:
- Senneset et al. (1988 & 1989); Mayne & Campanella (2005)
  - Robertson & Campanella (1983)
  - ▲ Kulhawy & Mayne (1990)

 <b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	TITLE <p style="text-align: center;">Client 1 Engineer 1 Somewhere CPT Tool Project Friction Angle versus Elevation</p>	DRAWN <p style="text-align: center;">Datgel</p>	DATE <p style="text-align: center;">1/2/2021</p>	
	CHECKED <p style="text-align: center;">Datgel</p>	DATE <p style="text-align: center;">1/2/2021</p>		
	SCALE <p style="text-align: center;">Not To Scale</p>		Let	
	PROJECT No <p style="text-align: center;">4.05.0</p>		FIGURE No <p style="text-align: center;">137</p>	


Sleeve Friction Resistance,  $f_s$  (tsf)

PointID

CPT 05



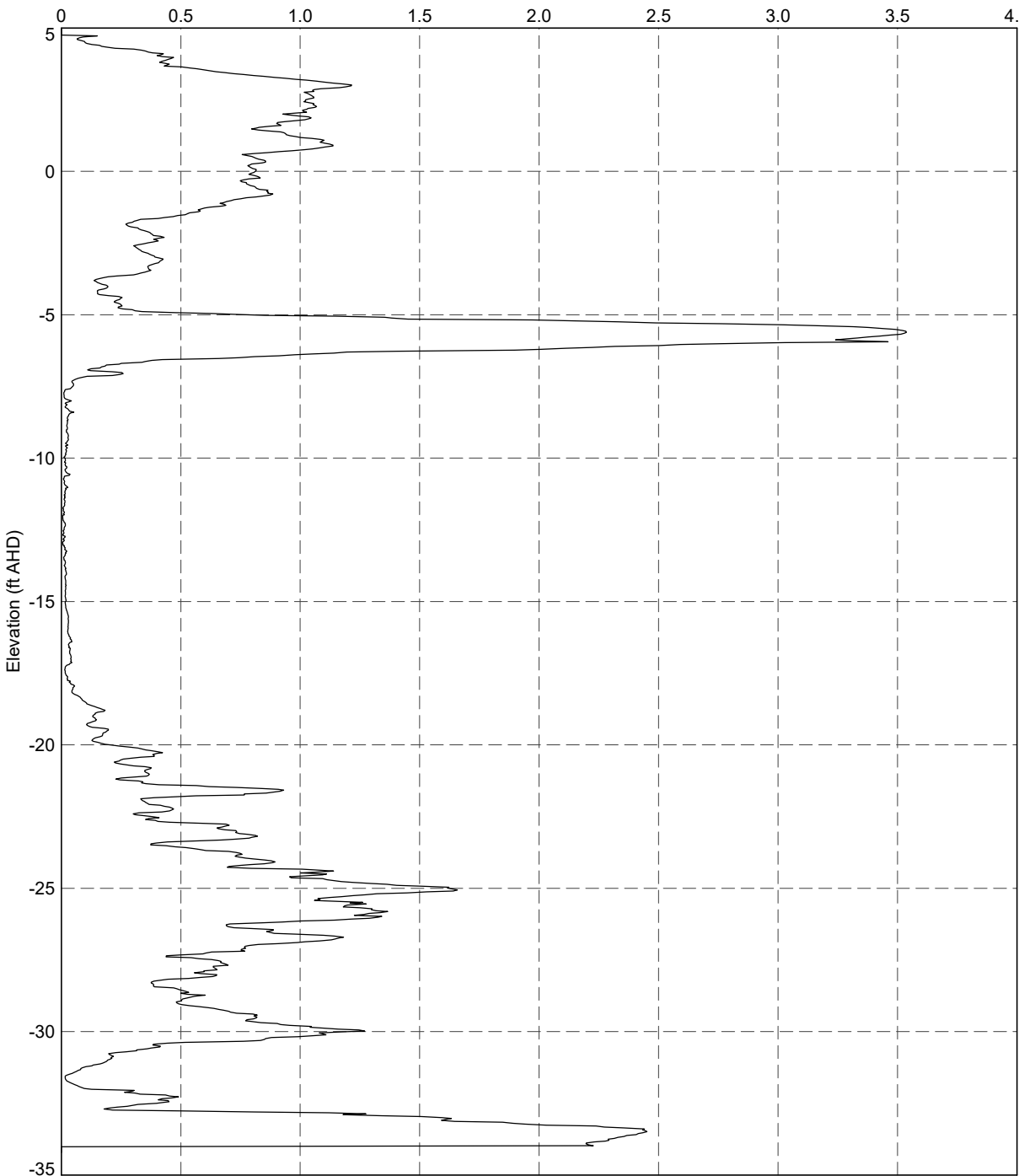
DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.FS.DEPTH.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <<DrawingFile>> 1/2/2021 20:14 10.01.00.11.Datgel.CPT.Tool.gINT.Add-In

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project</p> <p>Sleeve Friction Resistance versus Depth</p>	<p>DRAWN Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>CHECKED Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>SCALE Not To Scale</p>		<p>Let</p>
		<p>PROJECT No 4.05.0</p>	<p>FIGURE No 138</p>	


Sleeve Friction Resistance,  $f_s$  (tsf)

PointID

CPT 05



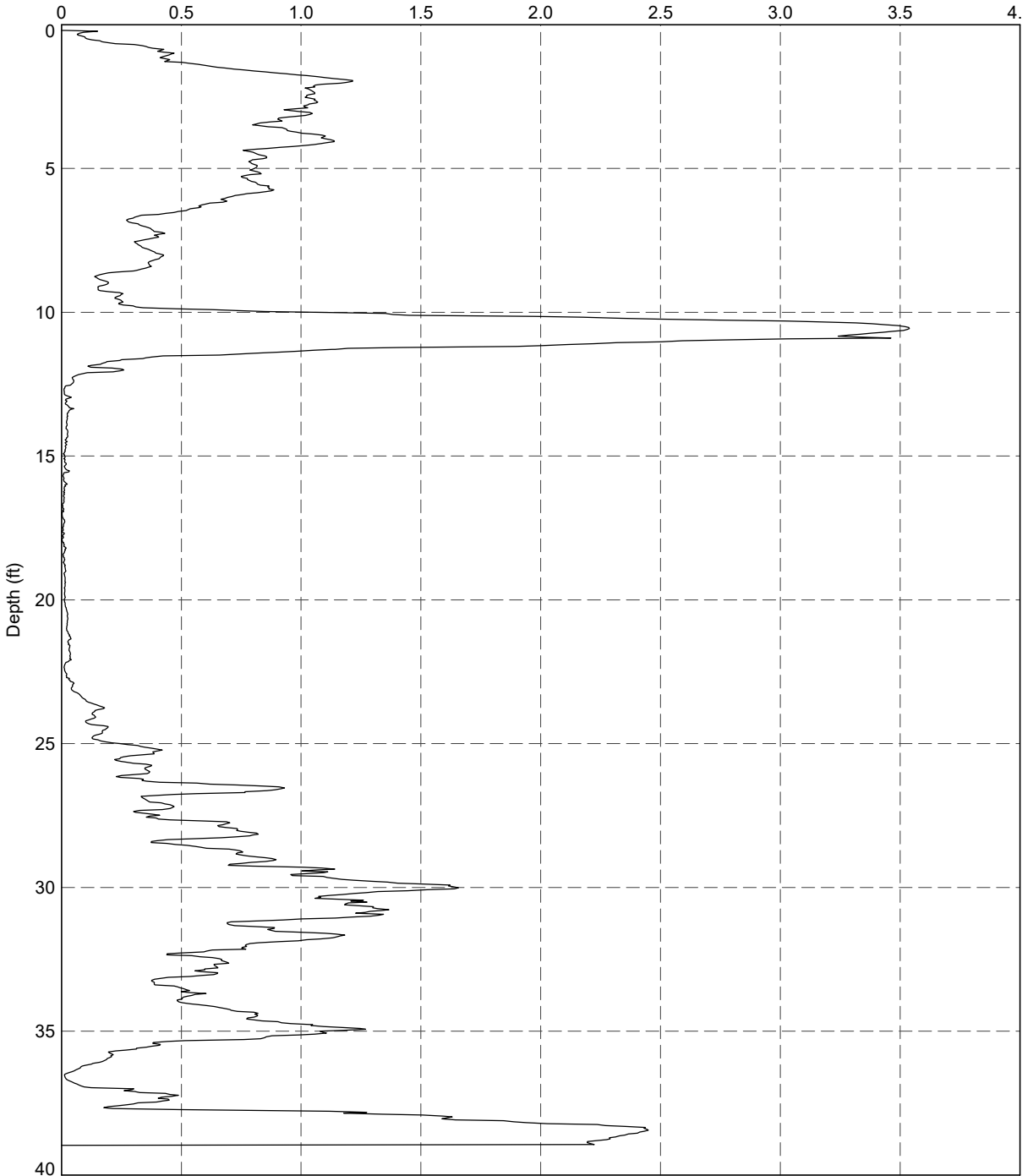
DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.FS.RL.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <<DrawingFile>> 1/2/2021 20:14:10.01.00.11 Datgel.CPT.Tool.g\NT.Add-In

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	TITLE	Client 1 Engineer 1 Somewhere CPT Tool Project	DRAWN Datgel	DATE 1/2/2021
		Sleeve Friction Resistance versus Elevation	CHECKED Datgel	DATE 1/2/2021
			SCALE Not To Scale	Let
			PROJECT No 4.05.0	FIGURE No 139


Corrected Sleeve Friction Resistance,  $f_1$  (tsf)

PointID

V-CPT FT



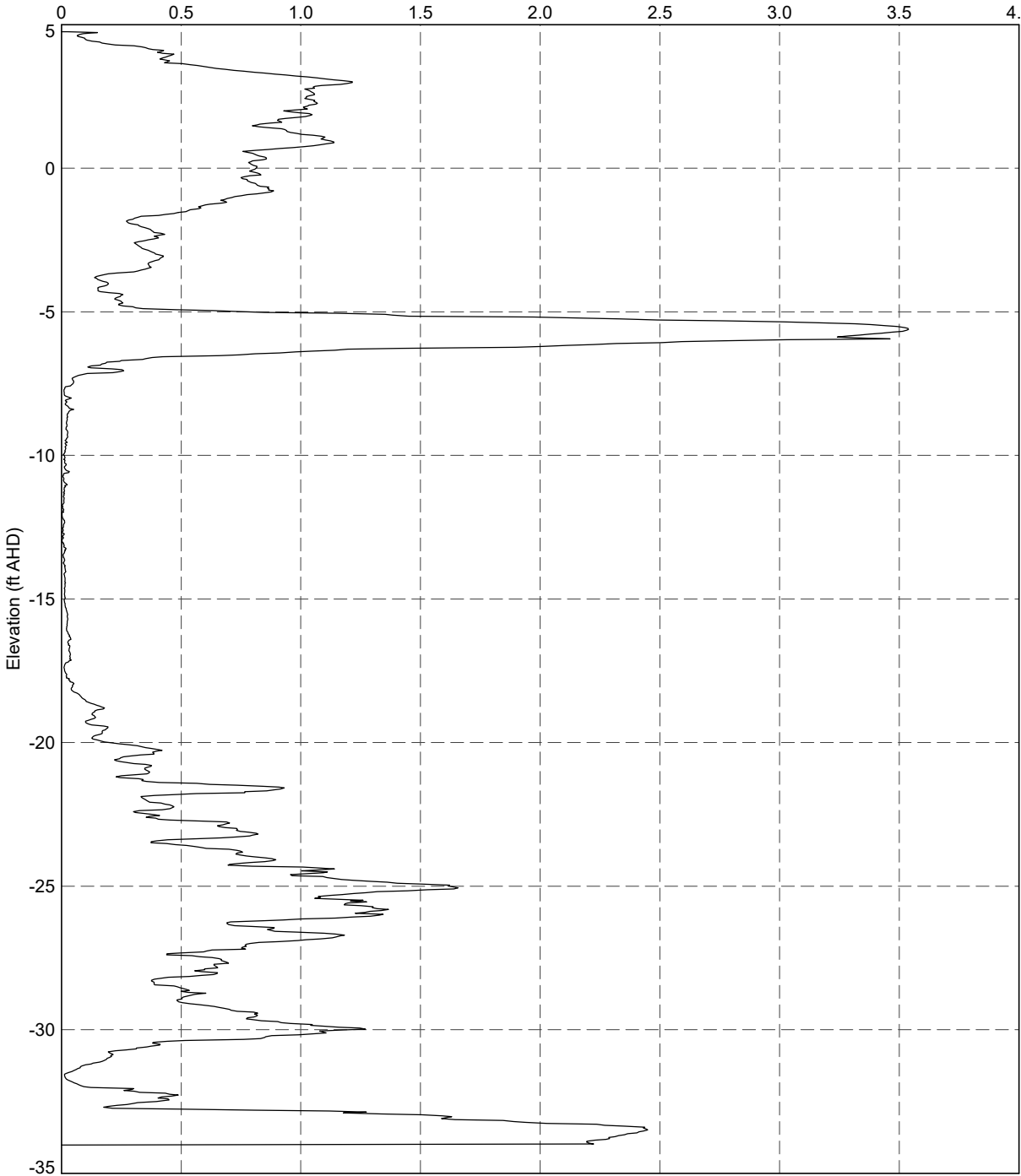
DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.FT.DEPTH.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <<DrawingFile>> 1/2/2021 10:14 10:01:00.11 Datgel CPT Tool gINT Add-in

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Corrected Sleeve Friction Resistance Radiation versus Depth</p>	<p>DRAWN</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>	
		<p>CHECKED</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>	
		<p>SCALE</p> <p>Not To Scale</p>		<p>Let</p>
		<p>PROJECT No</p> <p>4.05.0</p>	<p>FIGURE No</p> <p>140</p>	


Corrected Sleeve Friction Resistance,  $f_1$  (tsf)

PointID

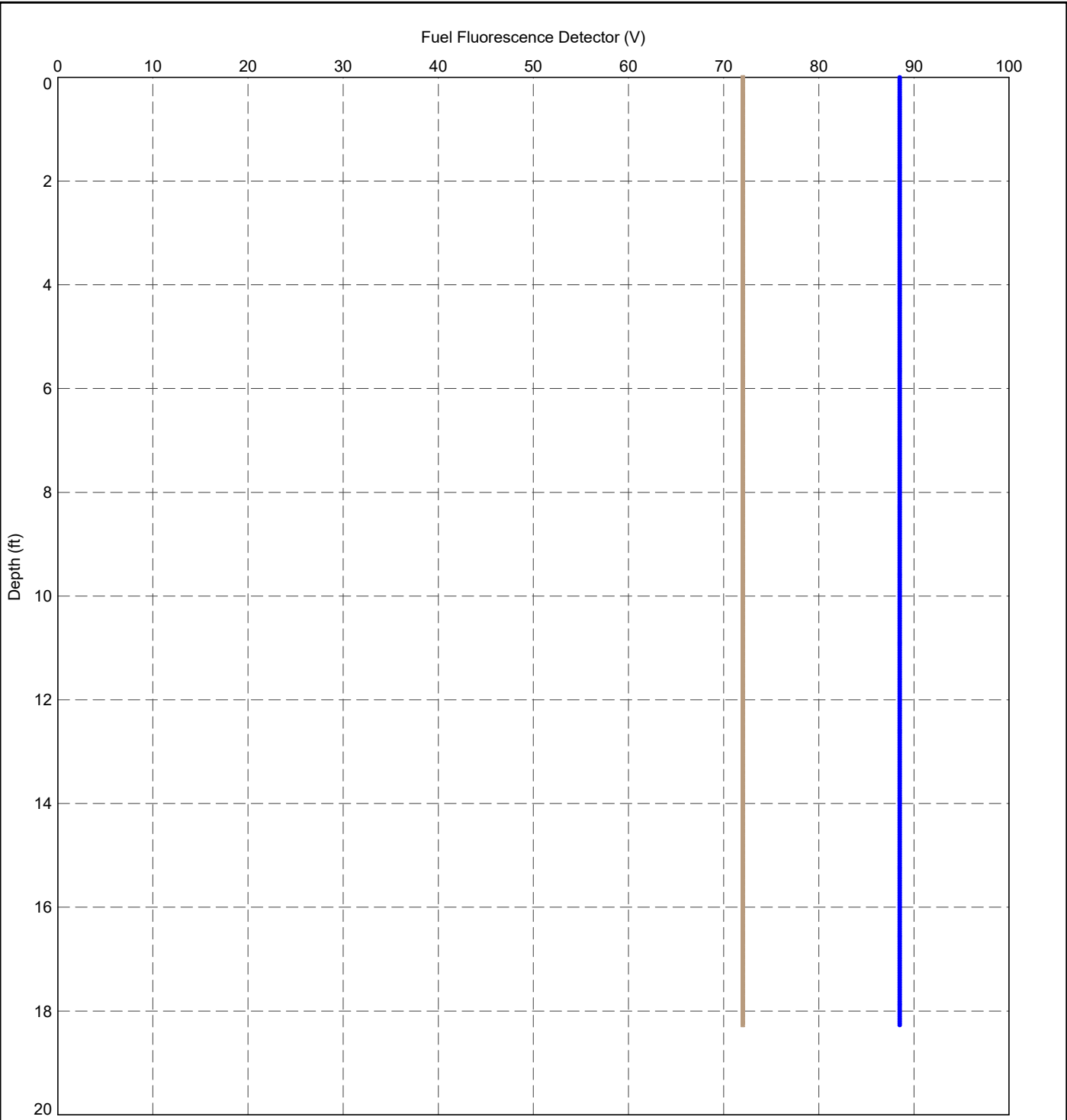
V-CPT FT



DATGEL CPT TOOL DGD 4.05.0 LIB GLB Graph CPT FT RL LETP DATGEL CPT TOOL DGD 4.05.0 EN GPJ <<DrawingFile>> 1/22/2021 20:14:10.01.00.11 Datgel.CPT.Tool.gINT Add-In

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Corrected Sleeve Friction Resistance Radiation versus Elevation</p>	<p>DRAWN</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>
		<p>CHECKED</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>
		<p>SCALE</p> <p>Not To Scale</p>	<p>Let</p>
		<p>PROJECT No</p> <p>4.05.0</p>	<p>FIGURE No</p> <p>141</p>

DATGEL CPT TOOL\_DGD\_4.05.0.LIB.GLB Graph CPT FUEL FLUORESC DETECTOR DEPTH LETP DATGEL CPT TOOL\_DGD\_4.05.0.EN.GPJ <<DrawingFile>> 1/2/2021 20:14:10.0100.11 Datgel CPT Tool gINT Add-In



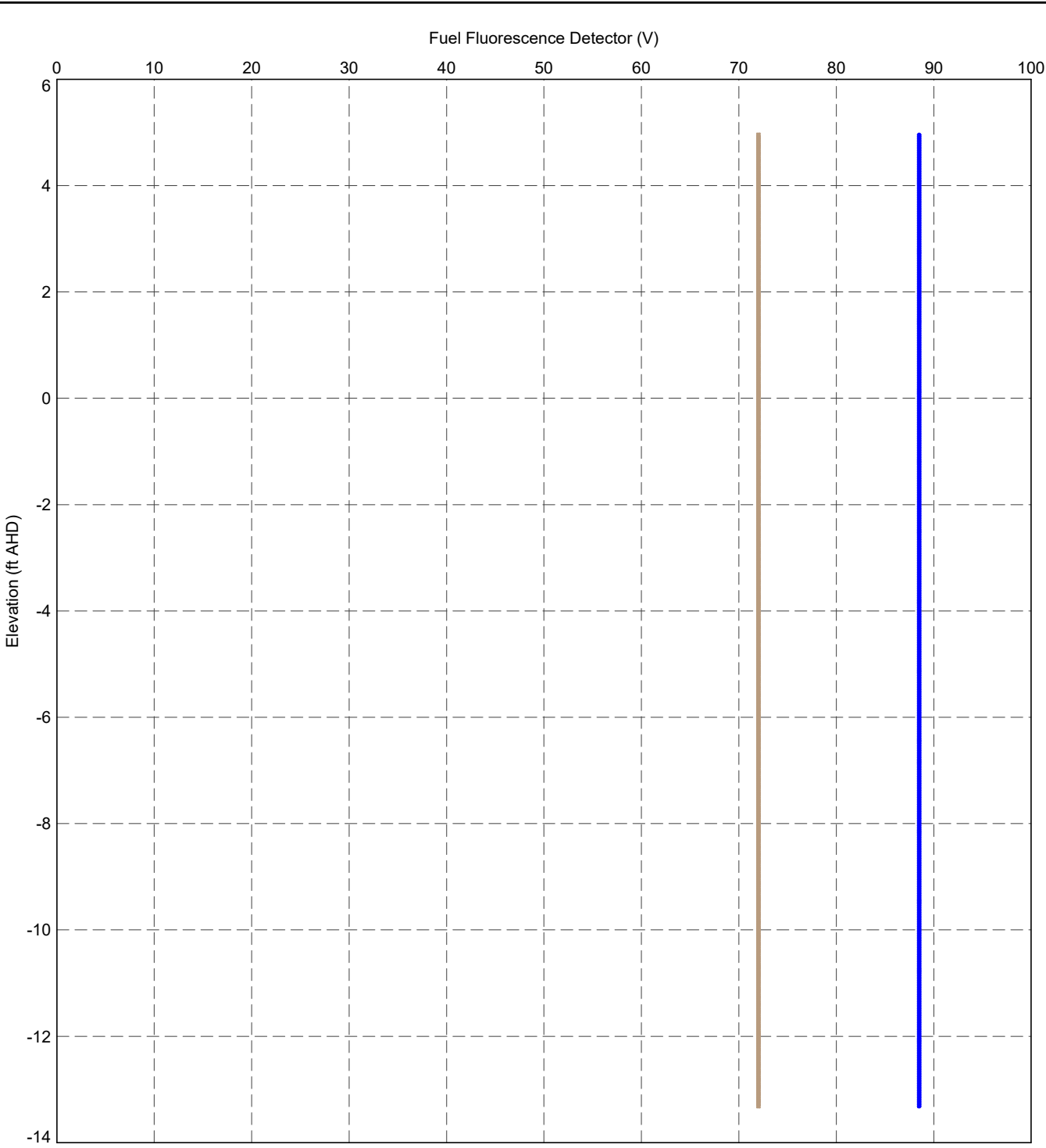
Legend:  
● Light Fuel Fluorescence Detector, LFFD (V)  
■ Heavy Fuel Fluorescence Detector, HFFD (V)



TITLE  
 Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Fuel Fluorescence Detector versus Depth

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	142

DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.FUEL.FLUORESC.DETECTOR.RL.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ.<<DrawingFiles>> 1/2/2021 20:15:10.01.00.11.Datgel.CPT.Tool.gINT.Add-In

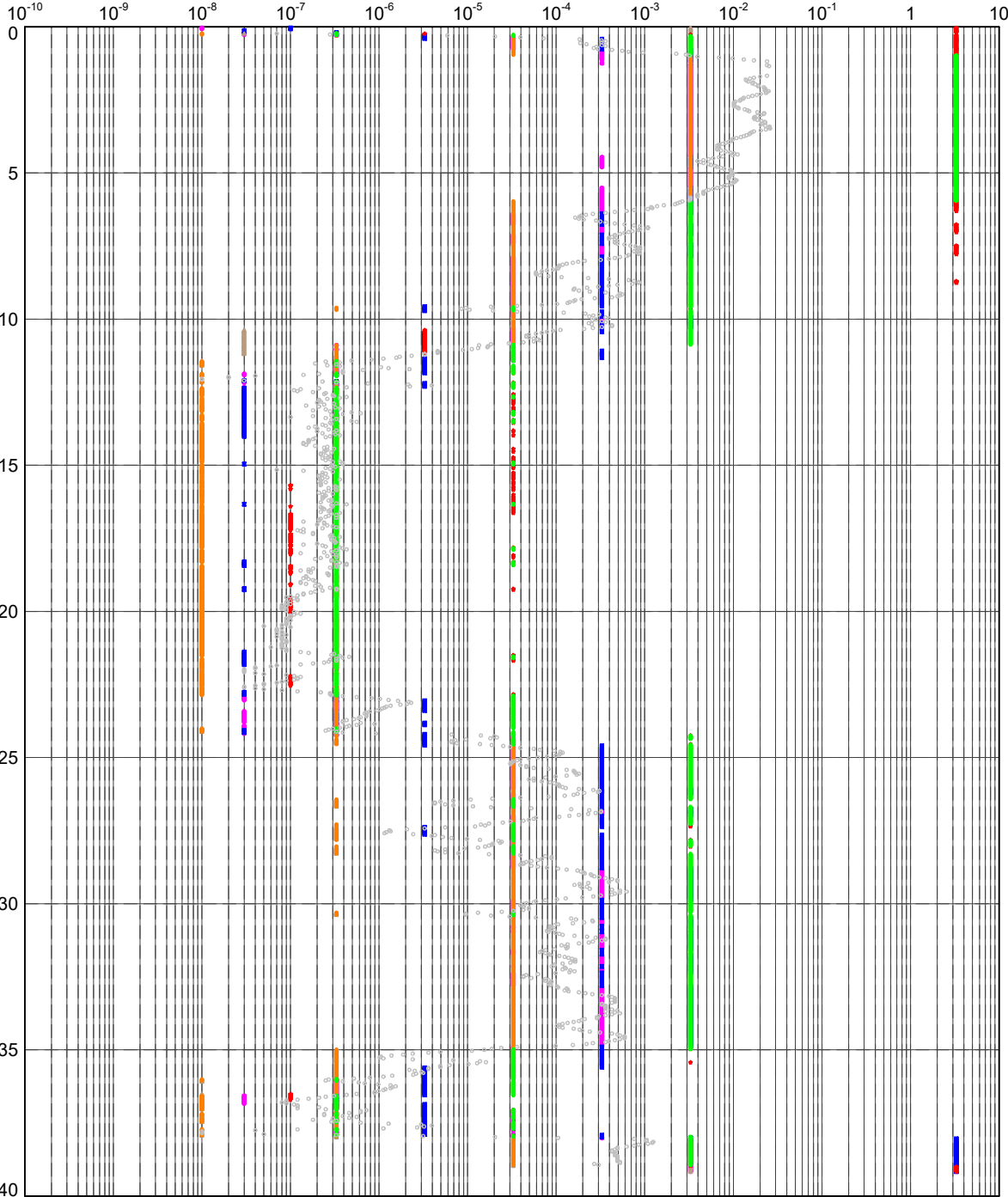


Legend:  
 ● Light Fuel Fluorescence Detector, LFFD (V)  
 ■ Heavy Fuel Fluorescence Detector, HFFD (V)

	TITLE Client 1 Engineer 1 Somewhere CPT Tool Project Fuel Fluorescence Detector versus Elevation	DRAWN Datgel	DATE 1/2/2021	
		CHECKED Datgel	DATE 1/2/2021	
		SCALE Not To Scale		Let
		PROJECT No 4.05.0	FIGURE No 143	

Hydraulic Conductivity, K (ft/s)


PointID



CPT 05

- Method:
- Minimum, Robertson et al. 1986    ○ Robertson 2010
  - ⊠ Maximum, Robertson et al. 1986
  - ▲ Minimum, Robertson 1990
  - ★ Maximum, Robertson 1990
  - Minimum, Robertson 2010
  - ⊕ Maximum, Robertson 2010

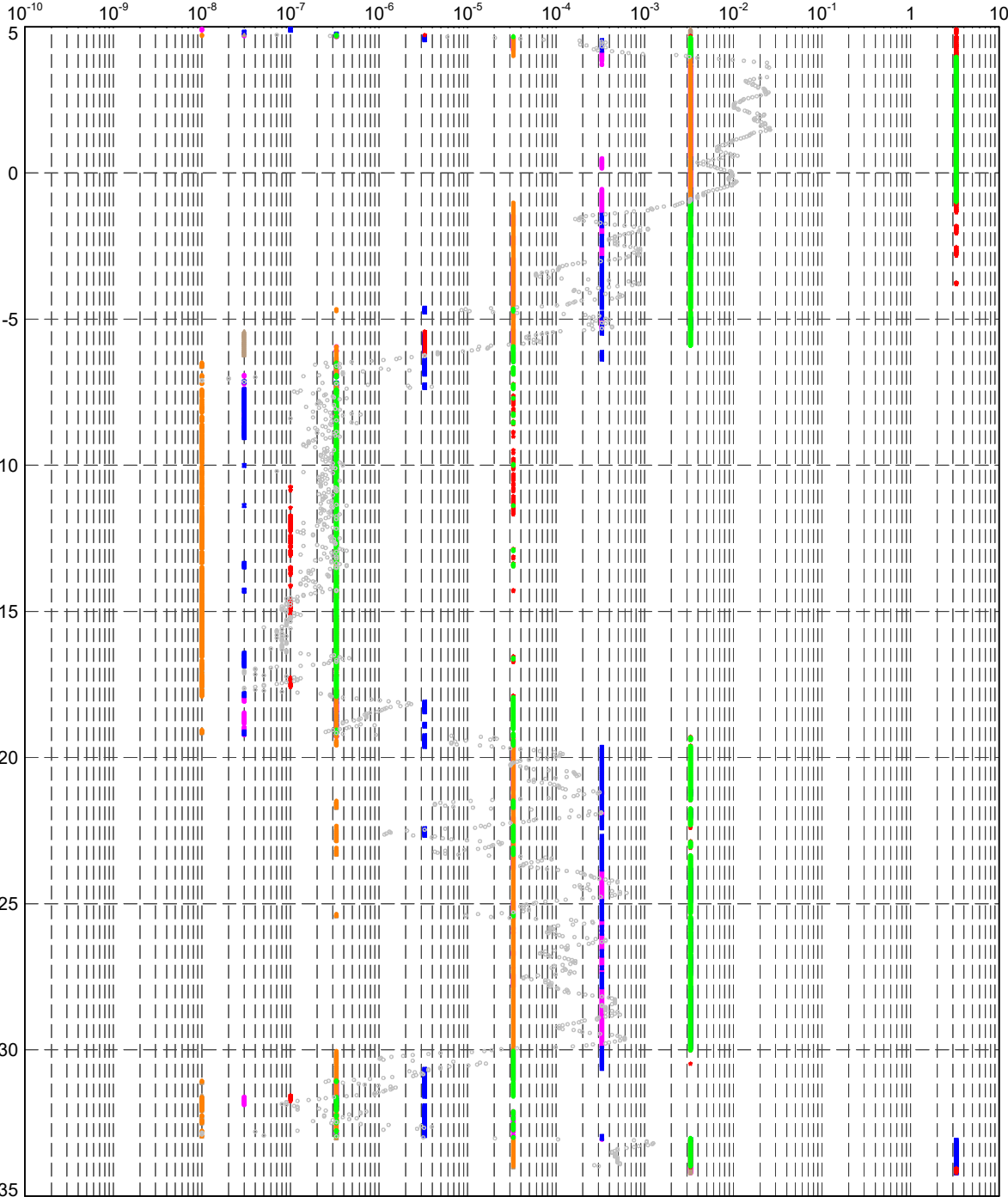
DATGEL\CPT\_TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT\_HYDRAULIC\_CONDUCTIVITY\_DEPTH\LETP\_DATSEL\_CPT\_TOOL\_DGD\_4.05.0\EN\GPJ\_787647.GDW\_1/2/2021\_20:16\_10:01:00.11\_Datgel\_CPT\_Tool.gINT\_Add-in

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	TITLE	Client 1 Engineer 1 Somewhere CPT Tool Project Hydraulic Conductivity versus Depth	DRAWN Datgel	DATE 1/2/2021
			CHECKED Datgel	DATE 1/2/2021
			SCALE Not To Scale	Let
			PROJECT No 4.05.0	FIGURE No 144



Hydraulic Conductivity, K (ft/s)


PointID



CPT 05

- Method:
- Minimum, Robertson et al. 1986    ○ Robertson 2010
  - Maximum, Robertson et al. 1986
  - ▲ Minimum, Robertson 1990
  - ★ Maximum, Robertson 1990
  - Minimum, Robertson 2010
  - ⊕ Maximum, Robertson 2010

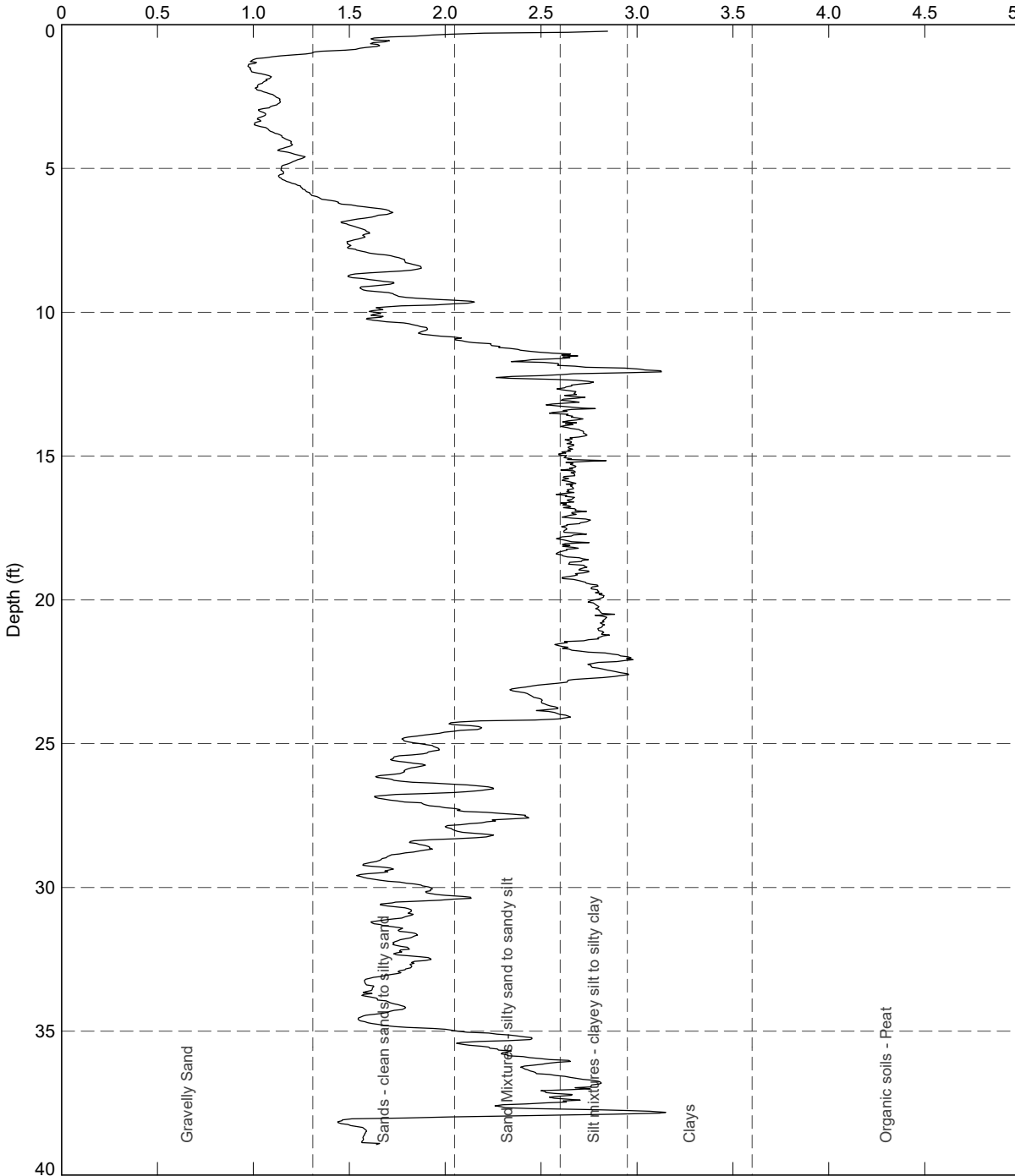
DATGEL CPT TOOL\_DGD\_4.05.0.LIB.GLB.Graph.CPT.HYDRAULIC.CONDUCTIVITY.RL.LET.P.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ.787647.GDW.12/2021.20:17.10.01.00.11.Datgel.CPT.Tool.gjINT.Add-In

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	TITLE	Client 1 Engineer 1 Somewhere CPT Tool Project Hydraulic Conductivity versus Elevation	DRAWN Datgel	DATE 1/2/2021
			CHECKED Datgel	DATE 1/2/2021
			SCALE Not To Scale	Let
			PROJECT No 4.05.0	FIGURE No 146


Soil Behaviour Type Index,  $I_c$ , Robertson and Wride (1998)

PointID

CPT 05

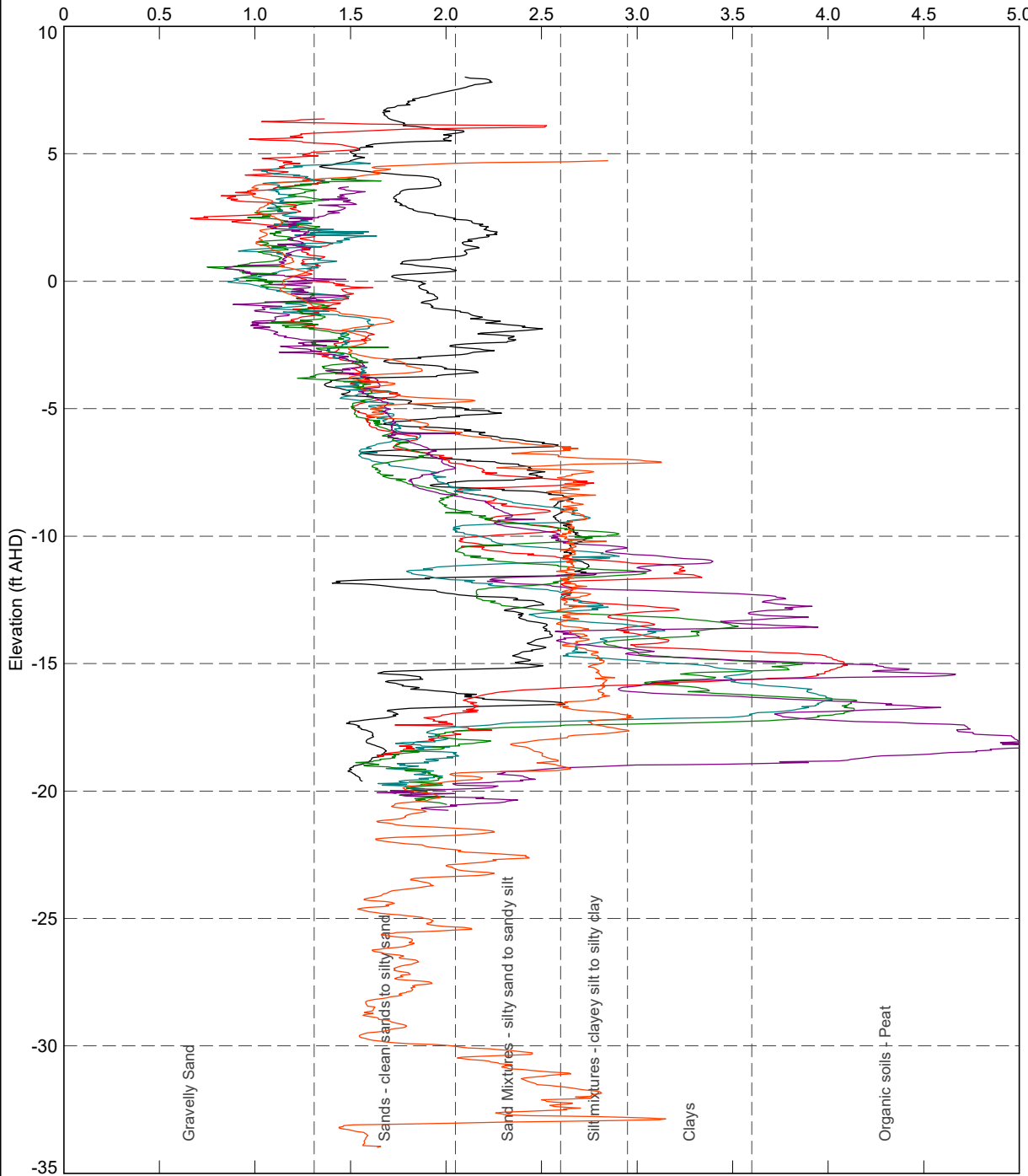


DATGEL CPT TOOL\_DGD\_4.05.0.LIB.GLB.Graph.CPT.IC.1.DEPTH.LET.P.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <DrawingFile>> 1/2/2021 20:18:10.01.00.11.Datgel.CPT.Tool.gINT.Add-In

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Soil Behaviour Type Index versus Depth</p>	<p>DRAWN</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>		
		<p>CHECKED</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>		
		<p>SCALE</p> <p>Not To Scale</p>		<p>Let</p>	
		<p>PROJECT No</p> <p>4.05.0</p>		<p>FIGURE No</p> <p>148</p>	


Soil Behaviour Type Index,  $I_c$ , Robertson and Wride (1998)

PointID



- CPT 00
- CPT 01
- CPT 02
- CPT 03
- CPT 04
- CPT 05

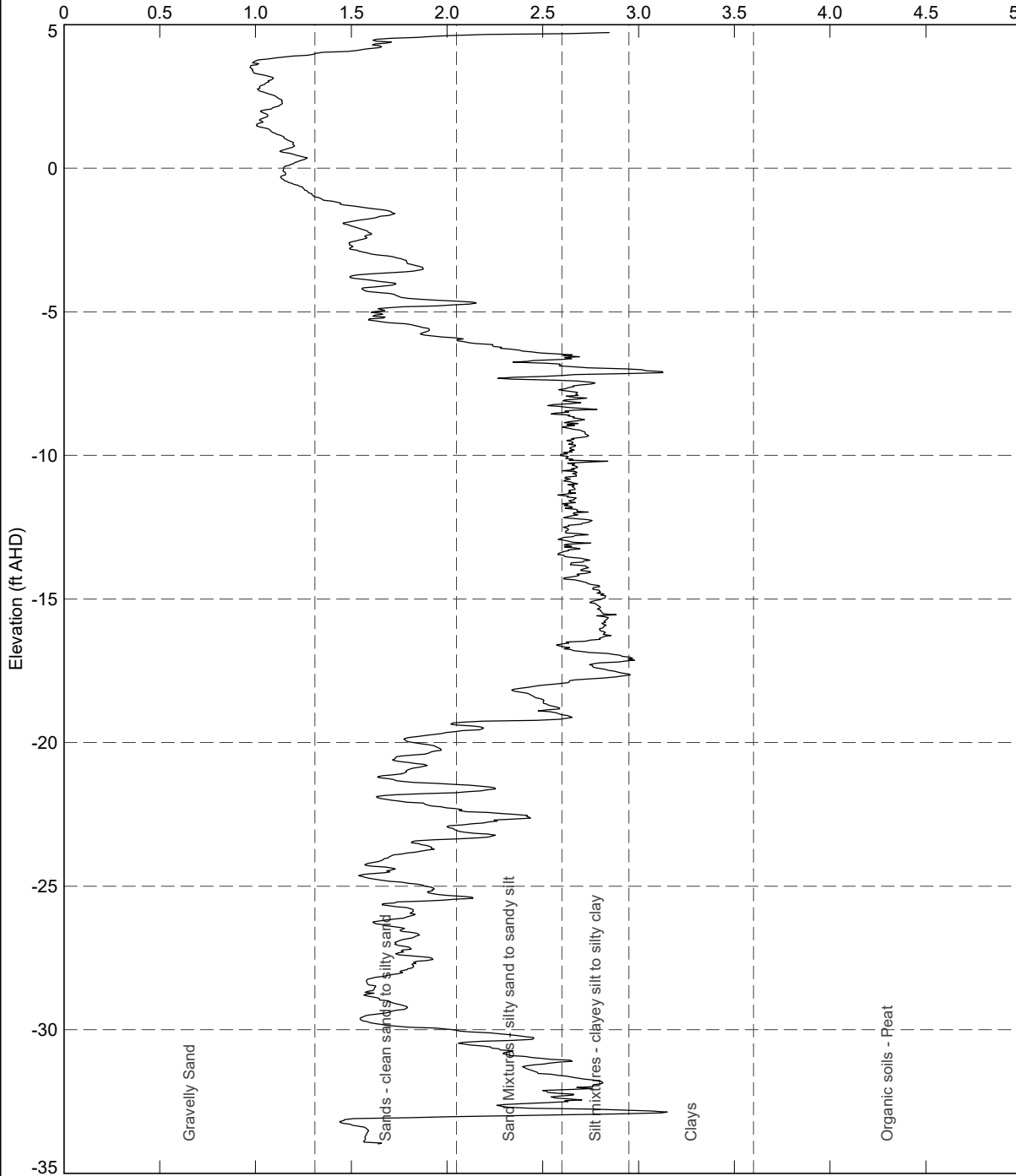
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 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Soil Behaviour Type Index versus Depth</p>	<p>DRAWN</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>
		<p>CHECKED</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>
		<p>SCALE</p> <p>Not To Scale</p>	<p>Let</p>
		<p>PROJECT No</p> <p>4.05.0</p>	<p>FIGURE No</p> <p>149</p>

Soil Behaviour Type Index,  $I_c$ , Robertson and Wride (1998)

PointID

CPT 05



DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.IC.1.RL.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <<DrawingFile>> 1/2/2021 20:18 10.01.00.11.Datgel.CPT.Tool.gINT.Add-In

TITLE

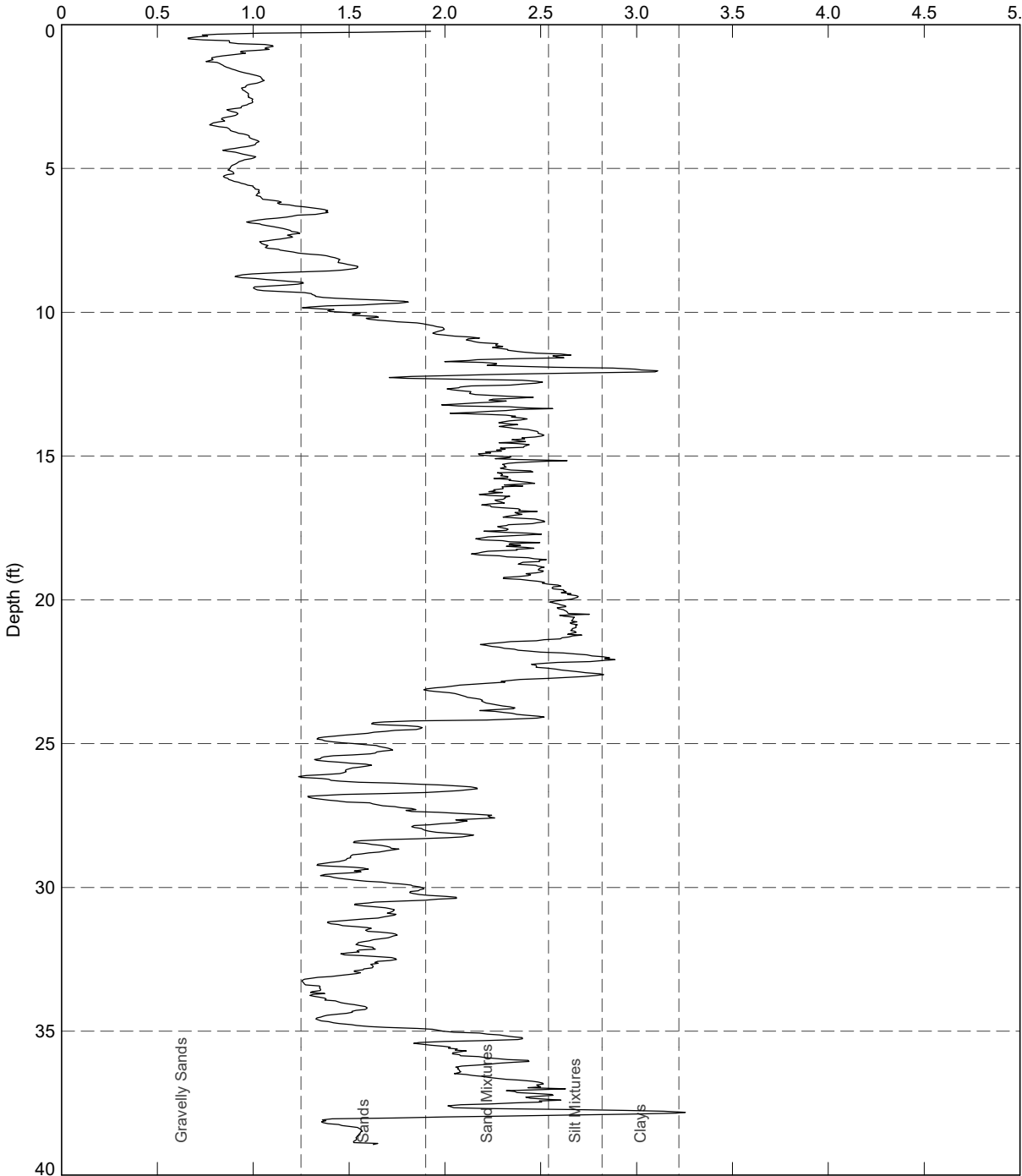
Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Soil Behaviour Type Index versus Depth

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	150


Soil Behaviour Type Index,  $I_c$ , Jefferies and Davies (1993)

PointID

CPT 05

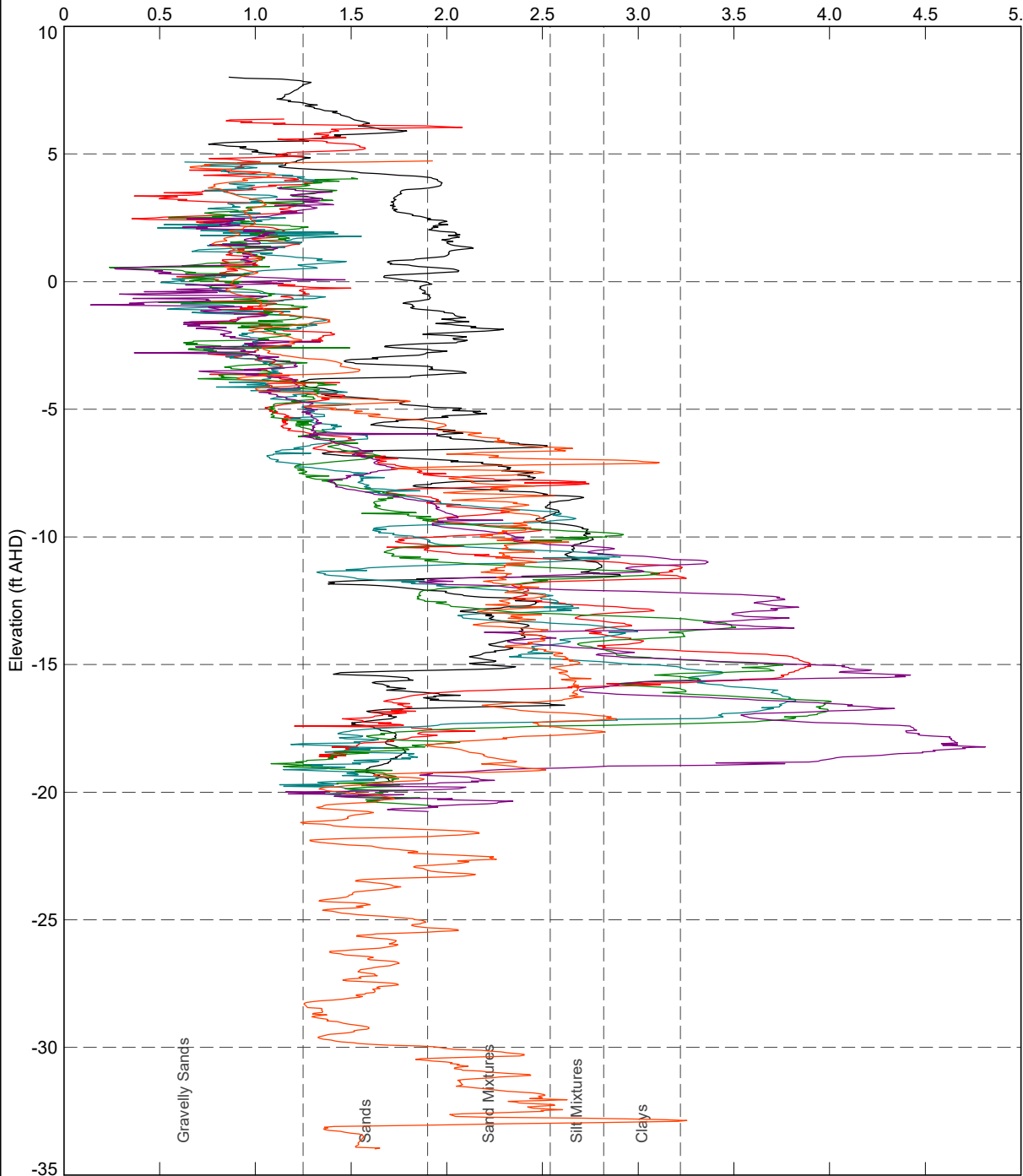


DATGEL\CPT TOOL\_DGD\_4.05.0\LIB\_GLB\_Graph\CPT IC 2 DEPTH LETP DATGEL CPT TOOL\_DGD\_4.05.0 EN.GPJ <<DrawingFile>> 1/2/2021 20:18:10.01.00.11 Datgel CPT Tool.g1NT Add-In

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Soil Behaviour Type Index versus Depth</p>	<p>DRAWN</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>	
		<p>CHECKED</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>	
		<p>SCALE</p> <p>Not To Scale</p>		<p>Let</p>
		<p>PROJECT No</p> <p>4.05.0</p>		<p>FIGURE No</p> <p>151</p>

Soil Behaviour Type Index,  $I_c$ , Jefferies and Davies (1993)

PointID



- CPT 00
- CPT 01
- CPT 02
- CPT 03
- CPT 04
- CPT 05

DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.IC.2.RL.COLOUR.LETF.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ.<<DrawingFile>>.1/2/2021.20:18:10.01.00.11.Datgel.CPT.Tool.gINT.Add-in



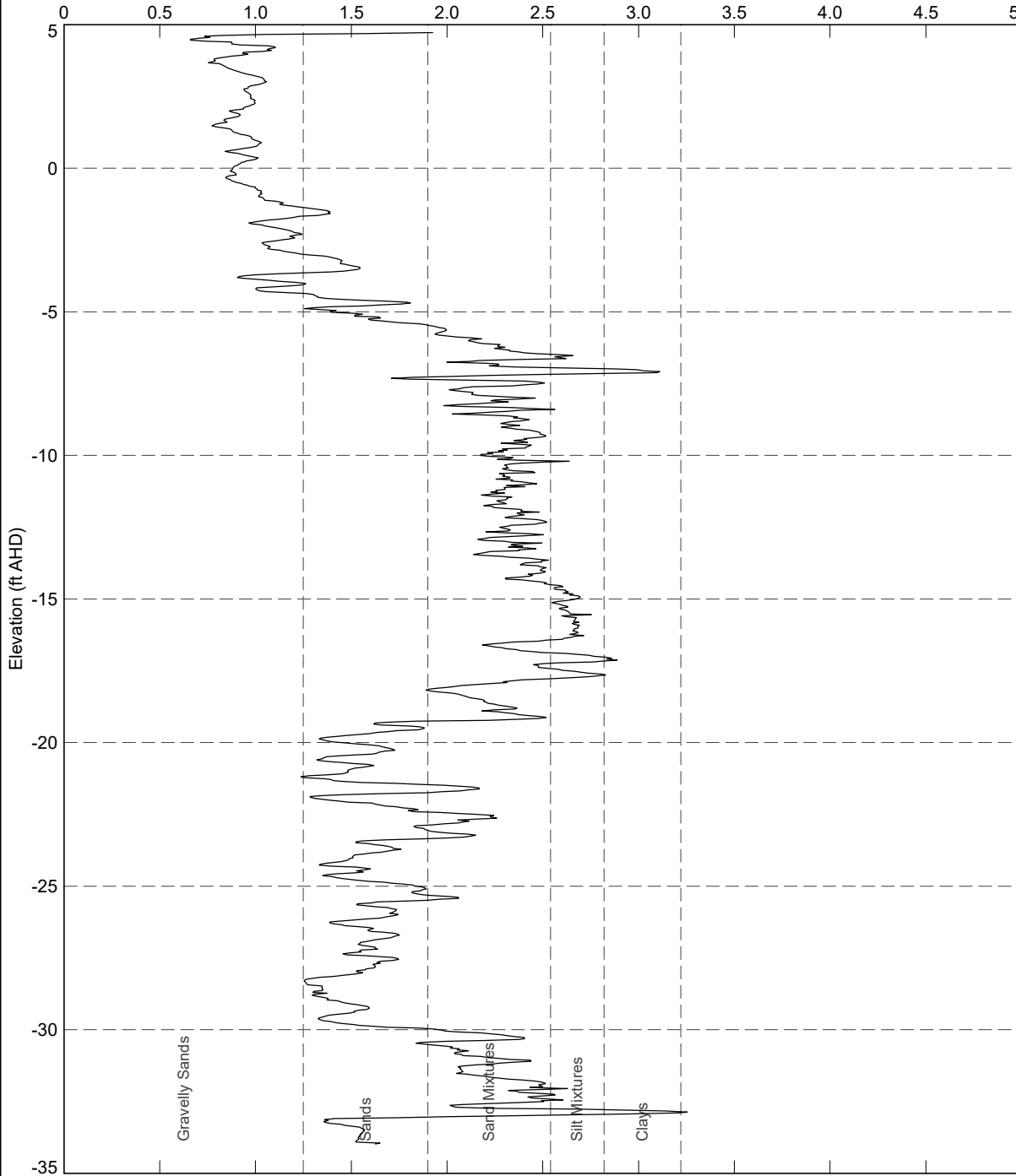
TITLE  
 Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Soil Behaviour Type Index versus Depth

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	152

Soil Behaviour Type Index,  $I_c$ , Jefferies and Davies (1993)

PointID

CPT 05



DATGEL\CPT TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT\IC2.RL.LETP.DATGEL\CPT TOOL\_DGD\_4.05.0.EN.GPJ <<DrawingFile>> 1/2/2021 20:18 10.01.00.11.Datgel CPT Tool.gINT.Add-In

TITLE

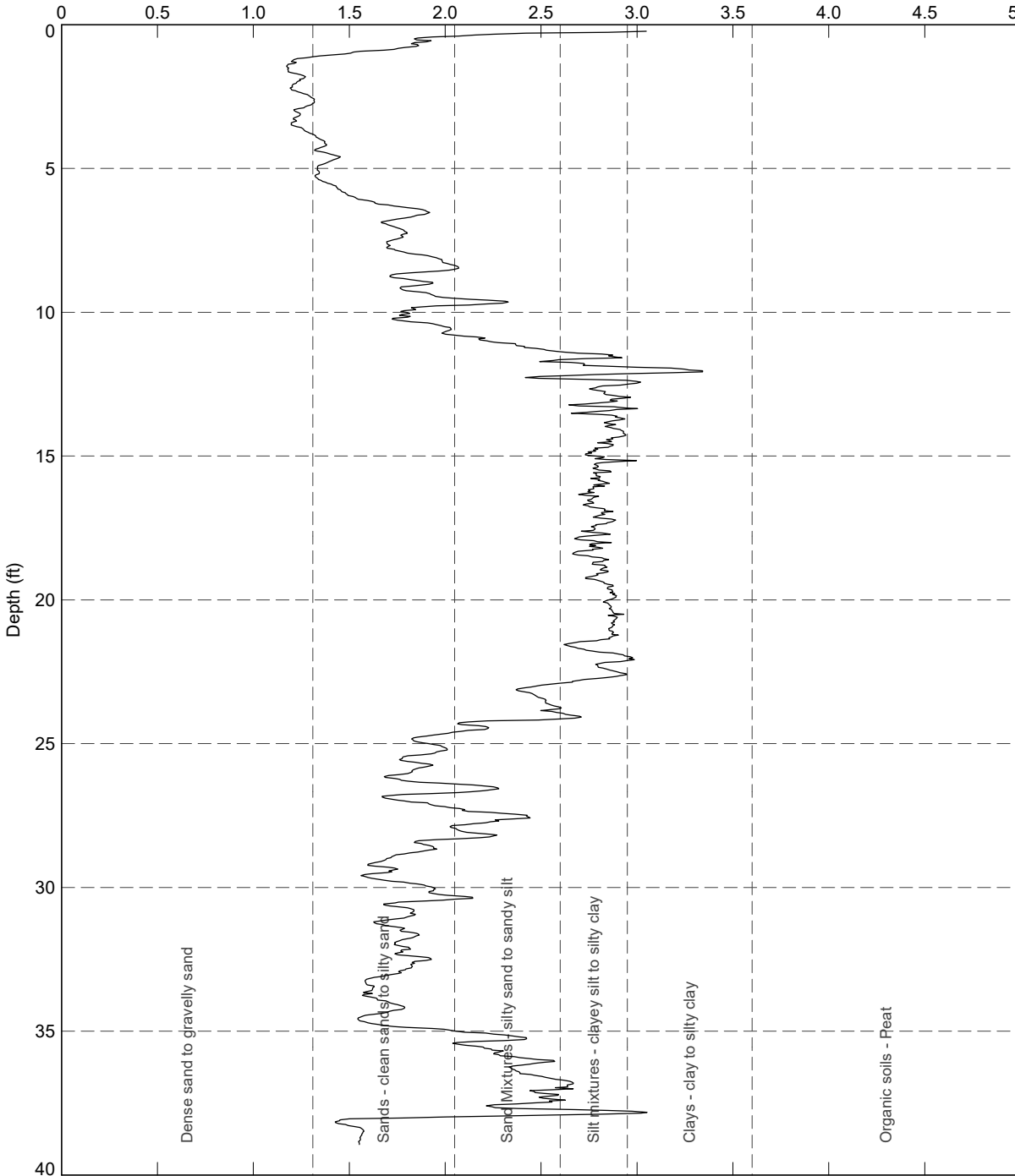
Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Soil Behaviour Type Index versus Depth

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	153


Non-normalized Soil Behaviour Type Index,  $I_{SBT}$ , Robertson (2010)

PointID

CPT 05



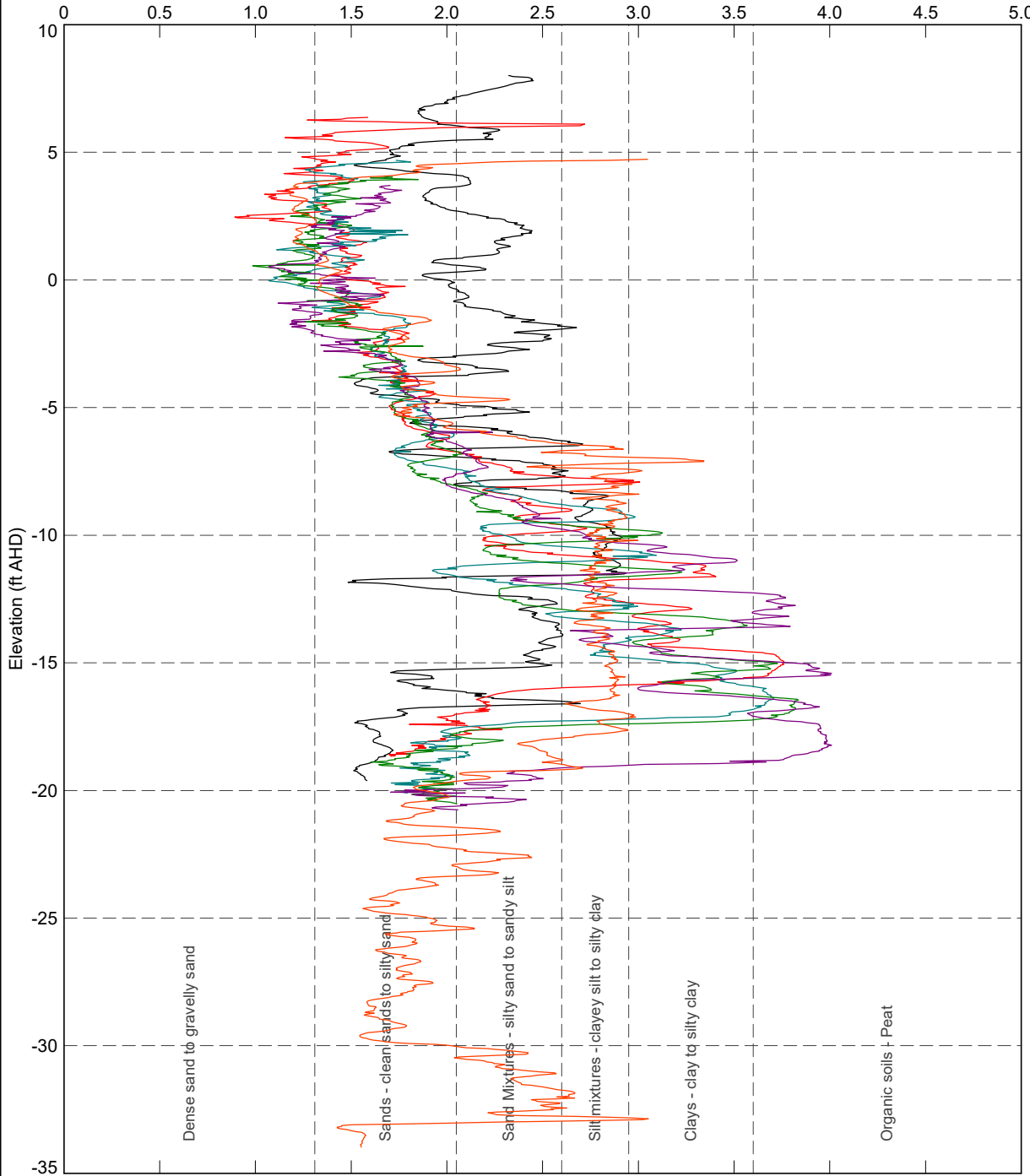
DATGEL CPT TOOL\_DGD\_4.05.0.LIB.GLB Graph CPT IC 3 DEPTH LETP DATGEL CPT TOOL\_DGD\_4.05.0.EN.GPJ <DrawingFile> 1/2/2021 20:18:10.01.00.11 Datgel CPT Tool.giNT\_Add-In

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Soil Behaviour Type Index versus Depth</p>	<p>DRAWN</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>		
		<p>CHECKED</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>		
		<p>SCALE</p> <p>Not To Scale</p>		<p>Let</p>	
		<p>PROJECT No</p> <p>4.05.0</p>		<p>FIGURE No</p> <p>154</p>	




Non-normalized Soil Behaviour Type Index,  $I_{SBT}$ , Robertson (2010)

PointID



- CPT 00
- CPT 01
- CPT 02
- CPT 03
- CPT 04
- CPT 05

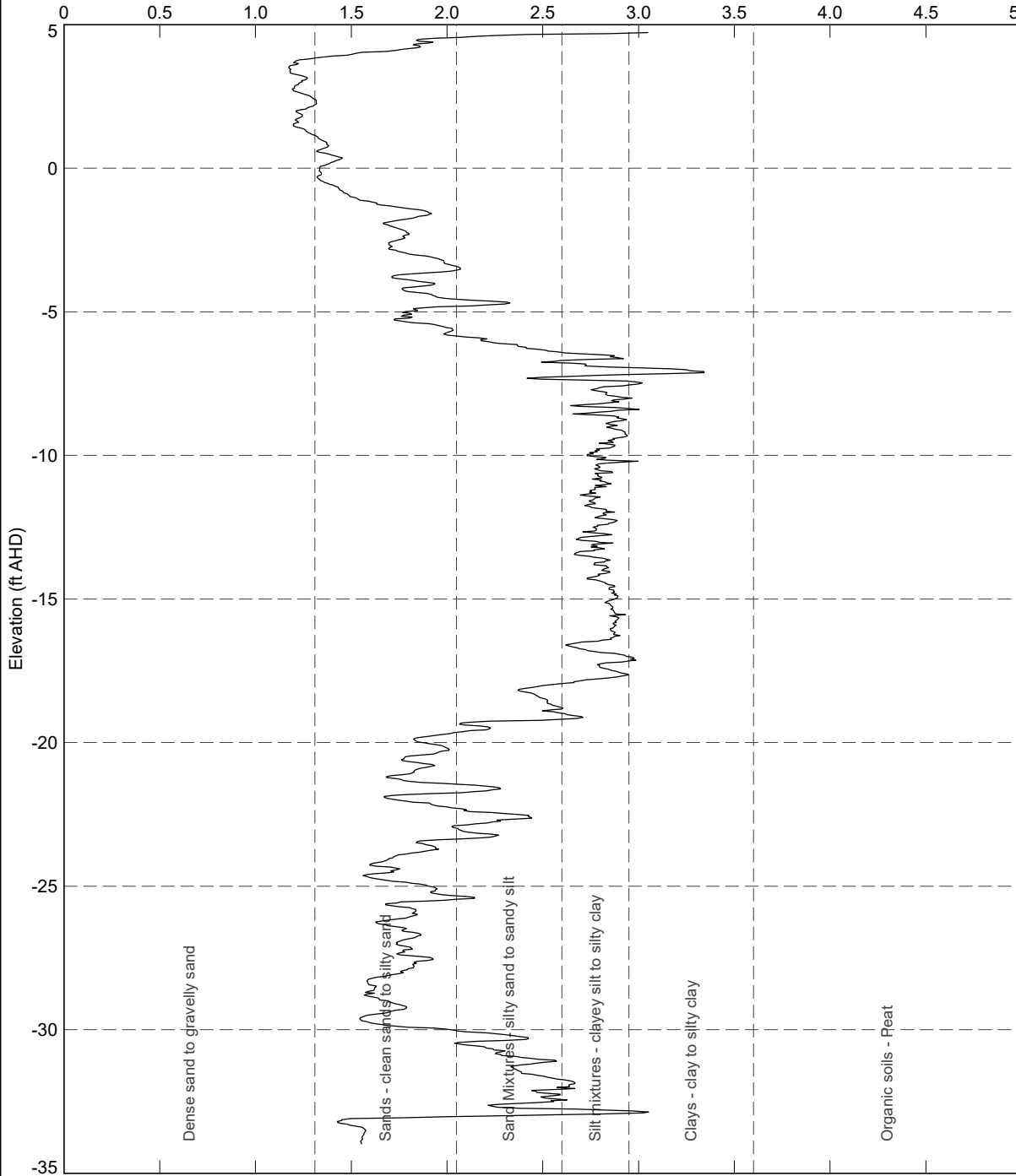
DATGEL\CPT\_TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT\IC\_3\_RL\_COLOUR\_LETF\_DATGEL\CPT\_TOOL\_DGD\_4.05.0\_EN.GPJ <<DrawingFile>> 1/2/2021 20:18:10.0100.11 Datgel\CPT\_Tool.gINT Add-In

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Soil Behaviour Type Index versus Depth</p>	<p>DRAWN</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>
		<p>CHECKED</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>
		<p>SCALE</p> <p>Not To Scale</p>	<p>Let</p>
		<p>PROJECT No</p> <p>4.05.0</p>	<p>FIGURE No</p> <p>155</p>


Non-normalized Soil Behaviour Type Index,  $I_{SBT}$ , Robertson (2010)

PointID

CPT 05



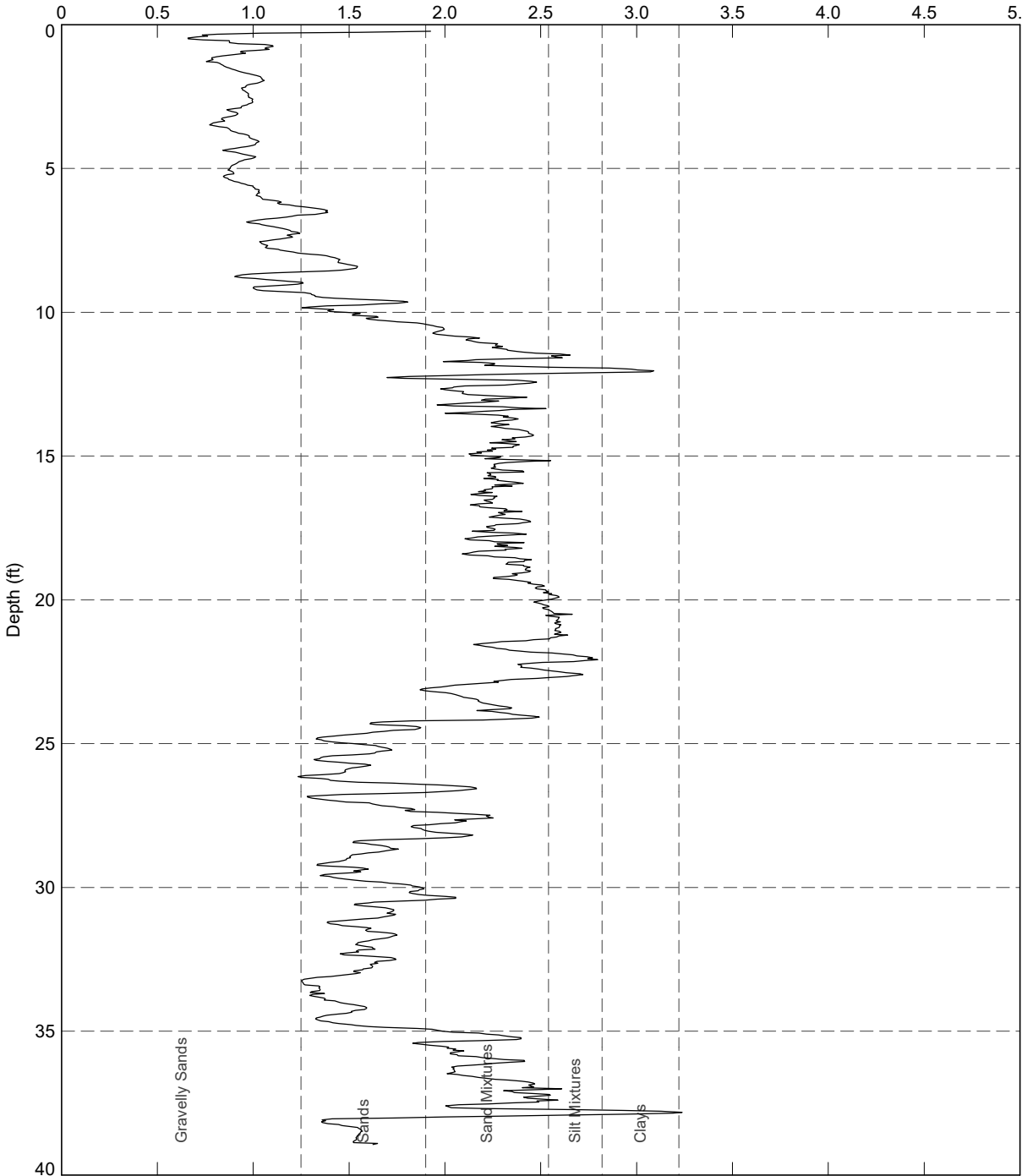
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 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Soil Behaviour Type Index versus Depth</p>	<p>DRAWN</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>
		<p>CHECKED</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>
		<p>SCALE</p> <p>Not To Scale</p>	<p>Let</p>
		<p>PROJECT No</p> <p>4.05.0</p>	<p>FIGURE No</p> <p>156</p>


Soil Behaviour Type Index,  $I_c$ , Been and Jefferies (1992)

PointID

CPT 05

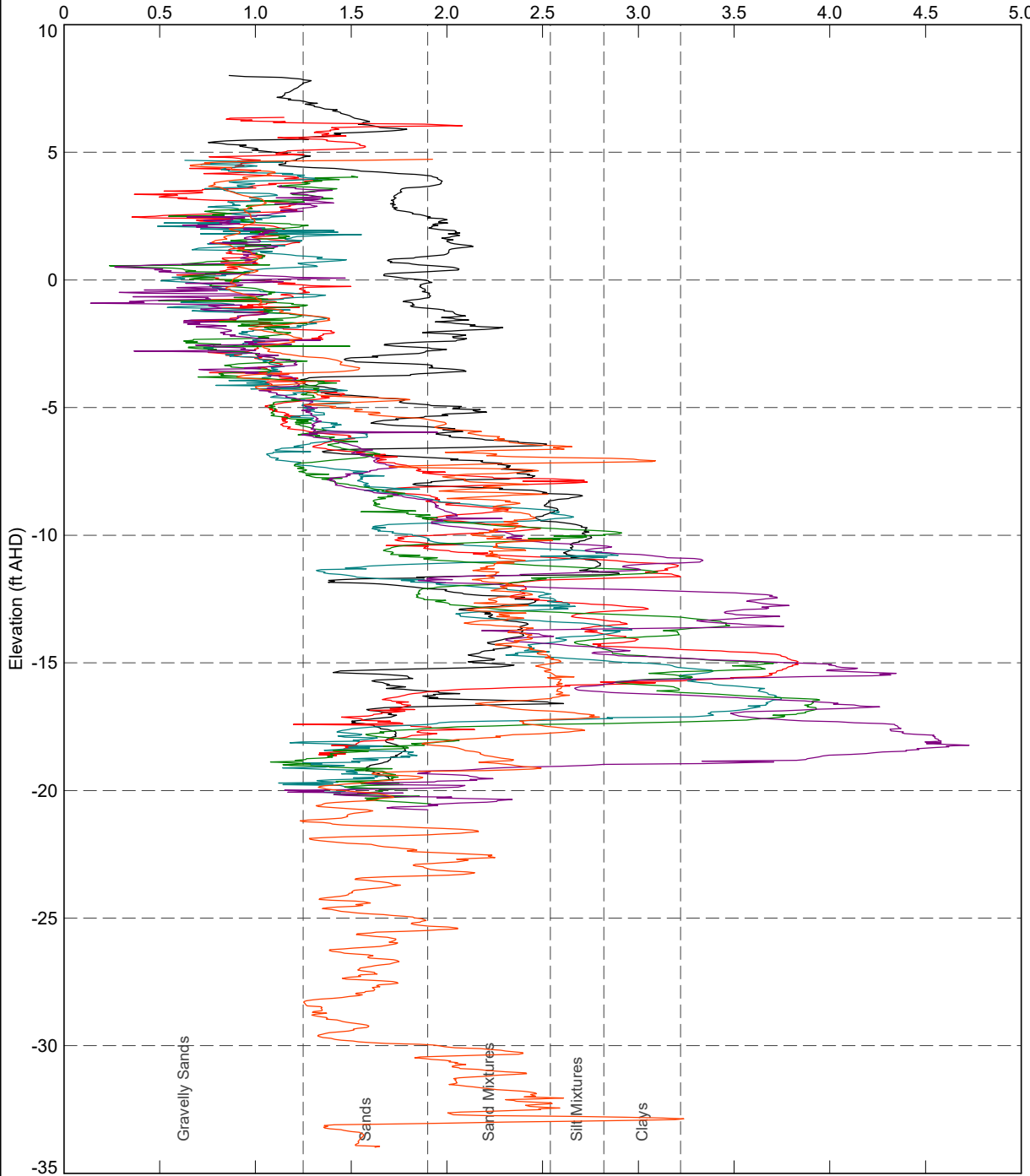


DATGEL\CPT TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT IC 4 DEPTH LETP DATGEL CPT TOOL\_DGD\_4.05.0 EN.GPJ <<DrawingFile>> 1/2/2021 20:18:10.01.00.11 Datgel.CPT.Tool.gINT.Add-In

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Soil Behaviour Type Index versus Depth</p>	<p>DRAWN</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>	
		<p>CHECKED</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>	
		<p>SCALE</p> <p>Not To Scale</p>		<p>Let</p>
		<p>PROJECT No</p> <p>4.05.0</p>	<p>FIGURE No</p> <p>157</p>	

Soil Behaviour Type Index,  $I_c$ , Been and Jefferies (1992)

PointID



DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.IC.4.RL.COLOUR.LETF.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ.<<DrawingFile>>.1/2/2021.20:18.10.01.00.11.Datgel.CPT.Tool.gINT.Add-In

TITLE

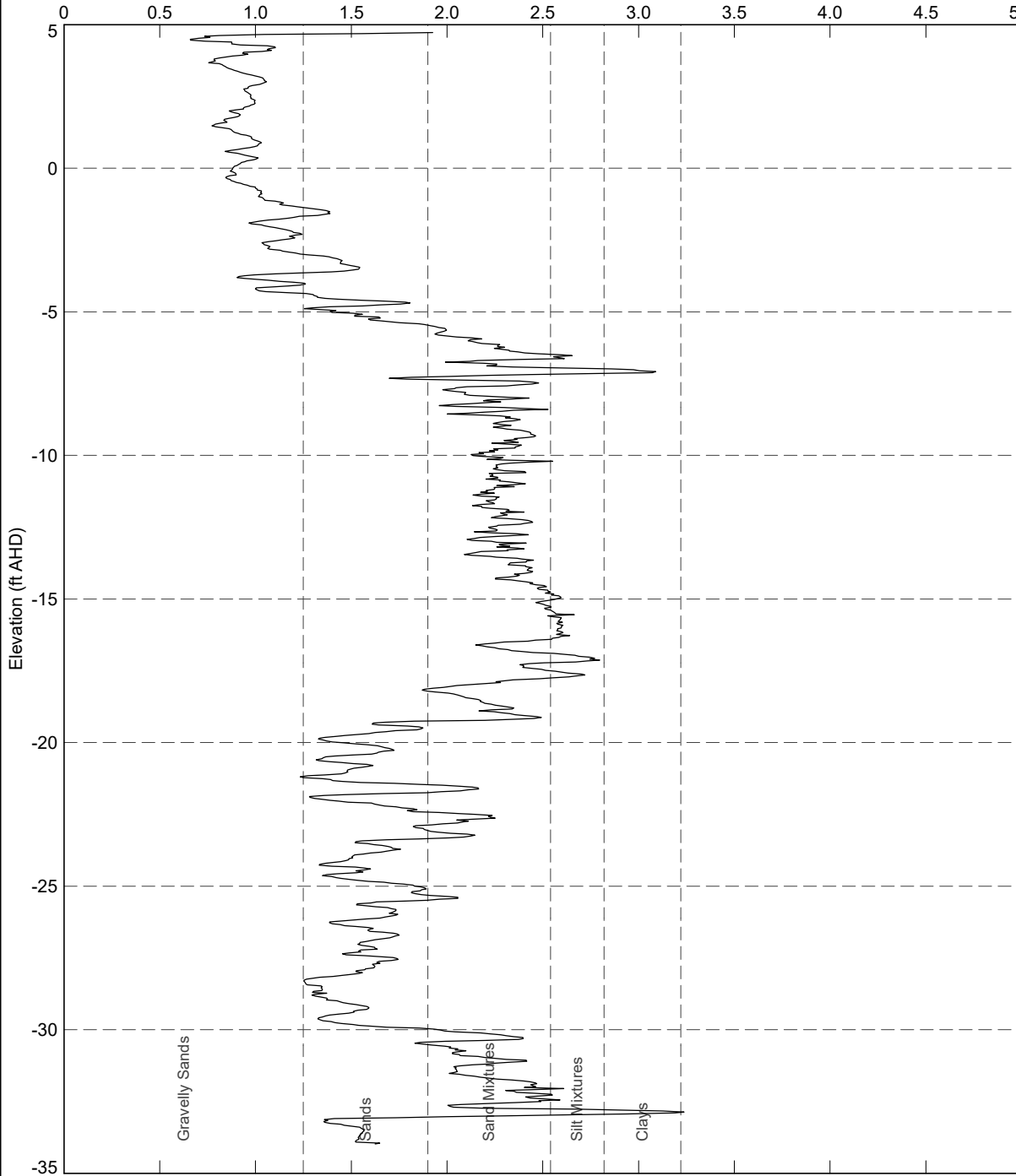
Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Soil Behaviour Type Index vs. Elevation

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	158

Soil Behaviour Type Index,  $I_c$ , Been and Jefferies (1992)

PointID

CPT 05



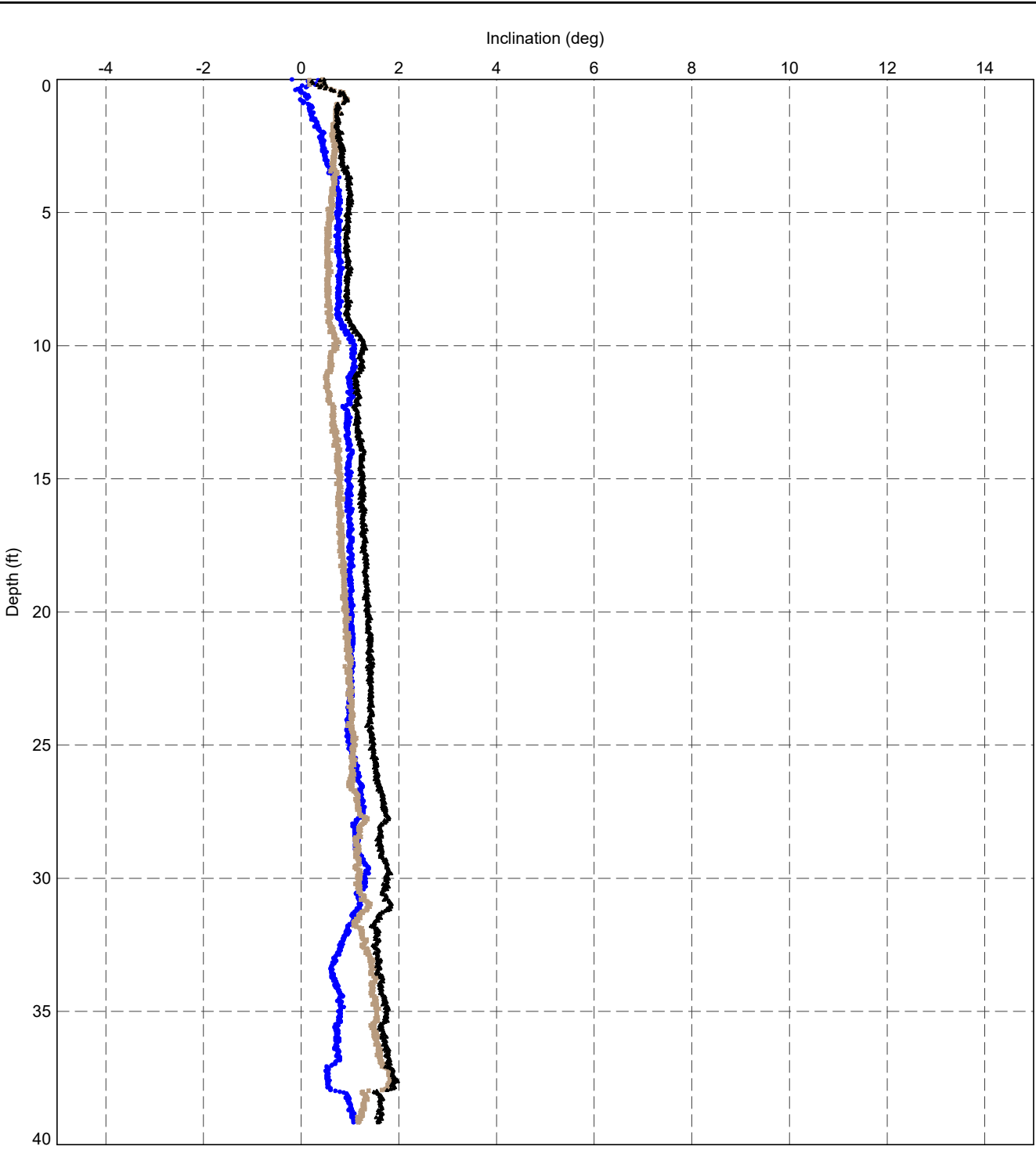
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TITLE


Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Soil Behaviour Type Index vs. Elevation

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	159

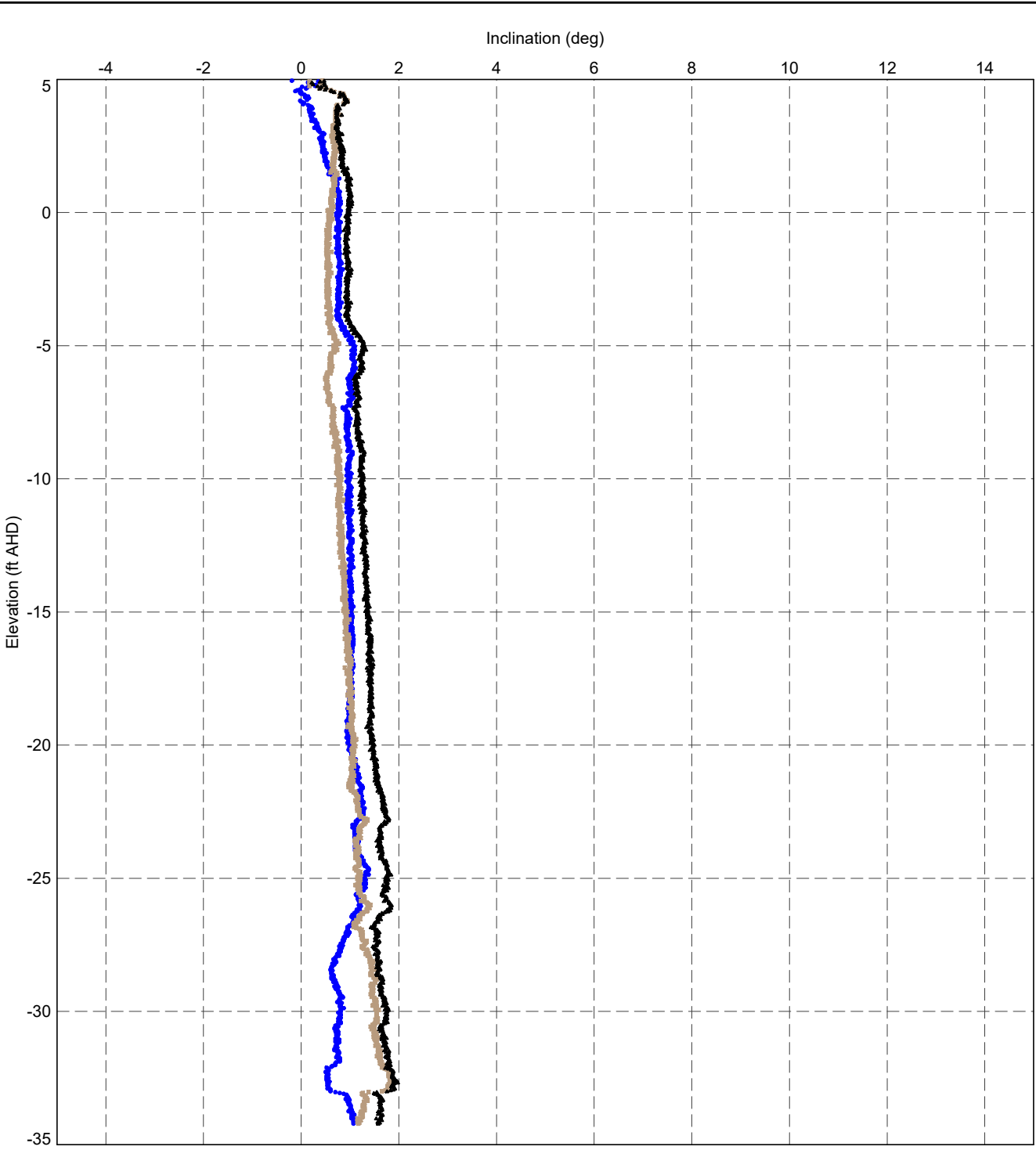
DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph CPT INCLINATION DEPTH LETP.DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <<DrawingFiles>> 1/2/2021 20:19:10.01.00.11 Datgel CPT Tool gINT Add-In




Legend:  
 ● Inclination 1 (°)  
 ■ Inclination 2 (°)  
 ● Inclination (°)

 <b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	TITLE  Client 1 Engineer 1 Somewhere CPT Tool Project Inclination versus Depth	DRAWN Datgel	DATE 1/2/2021	
		CHECKED Datgel	DATE 1/2/2021	
		SCALE Not To Scale		Let
		PROJECT No 4.05.0	FIGURE No 160	

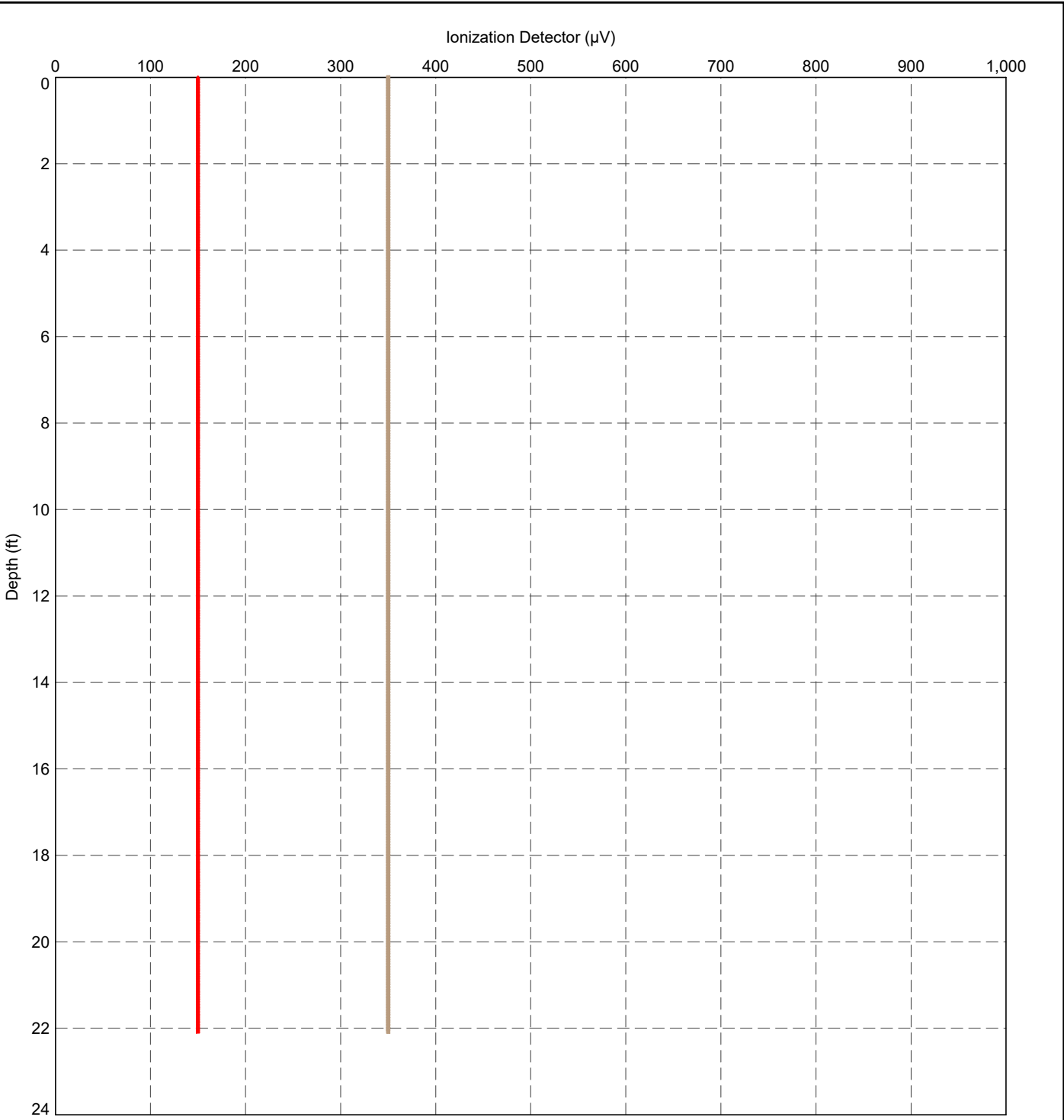
DATGEL\CPT TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT INCLINATION.RL\LETP DATGEL\CPT TOOL\_DGD\_4.05.0 EN.GPJ <<DrawingFiles>> 1/22/2021 20:19:10.0100.11 Datgel\CPT Tool.g\NT\_Add-In




Legend:  
 ● Inclination 1 (°)  
 ■ Inclination 2 (°)  
 ● Inclination (°)

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	TITLE  Client 1 Engineer 1 Somewhere CPT Tool Project Inclination versus Elevation	DRAWN Datgel	DATE 1/2/2021	
		CHECKED Datgel	DATE 1/2/2021	
		SCALE Not To Scale		Let
		PROJECT No 4.05.0	FIGURE No 161	

DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.IONIZATION.DEPTH.LETIP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ.<<DrawingFile>> 1/2/2021 10:01:00.11.Datgel.CPT.Tool.gINT.Add.in

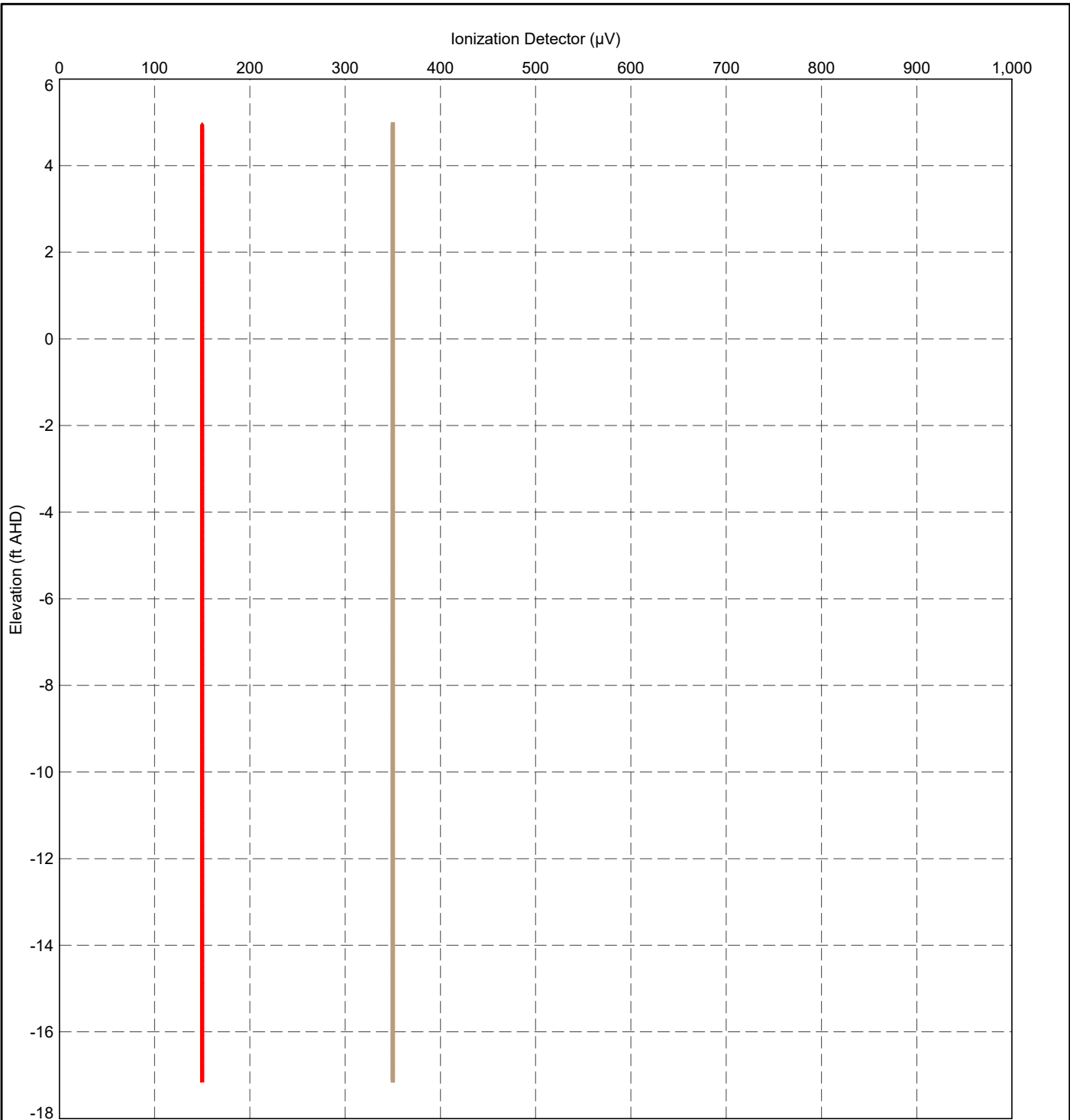


**Legend:**  
■ Flame Ionization Detector, FID (µV)  
▲ Photo Ionization Detector, PID (µV)

 <b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	TITLE  Client 1 Engineer 1 Somewhere CPT Tool Project Ionization versus Depth	DRAWN Datgel	DATE 1/2/2021	
		CHECKED Datgel	DATE 1/2/2021	
		SCALE Not To Scale		Let
		PROJECT No 4.05.0	FIGURE No 162	



DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph CPT IONIZATION.RL LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <<DrawingFile>> 1/2/2021 10:01:00.11.Datgel.CPT.Tool.gINT.Add-In



**Legend:**  
■ Flame Ionization Detector, FID (µV)  
▲ Photo Ionization Detector, PID (µV)



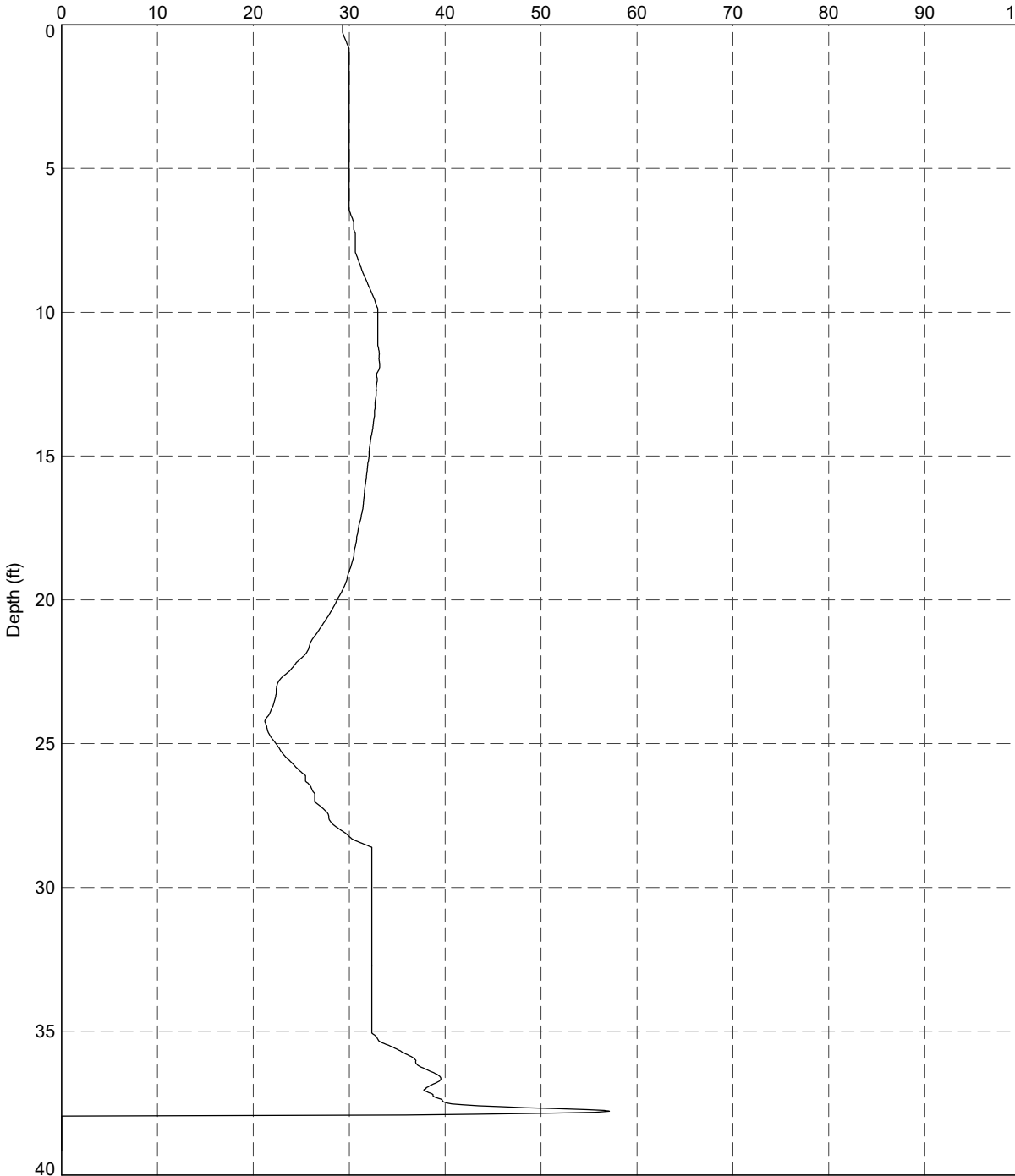
TITLE  
 Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Ionization versus Elevation

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	163

Average FC STPTN15, Avg FC 15 (%)

PointID

CPT 05



DATGEL\CPT TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT LIQ AVG FC\_15\DEPTH\LEIP DATGEL\_CPT TOOL\_DGD\_4.05.0 EN.GPJ <-DrawingFile> 1/2/2021 20:20 10.01.00.11 Datgel CPT Tool.gINT\_Add.in

TITLE

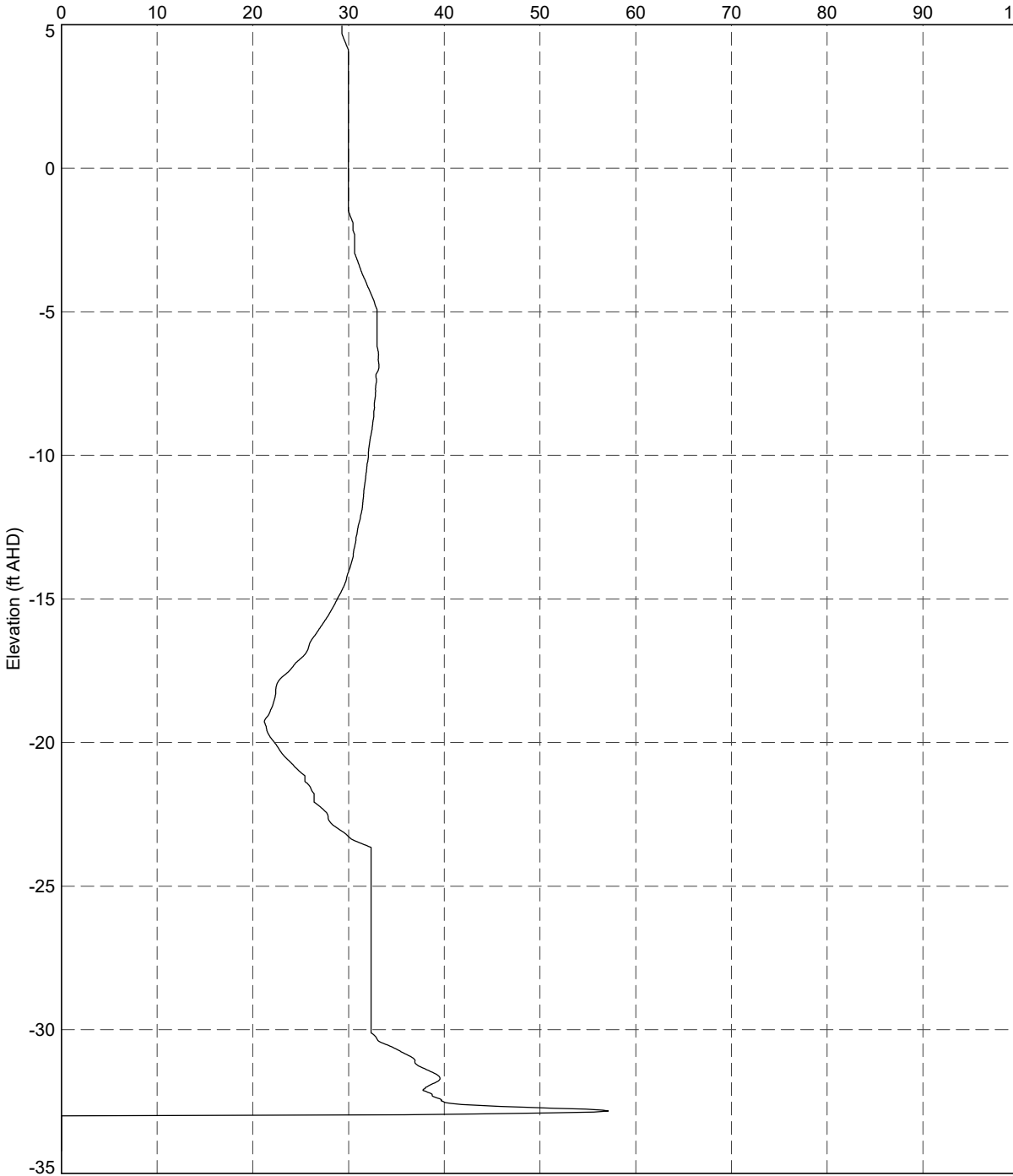
Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Average FC SPT N 15 versus Depth

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	164

Average FC STPTN15, Avg FC 15 (%)

PointID

CPT 05



DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.LIQ.AVG.FC.15.RL.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <-DrawingFile> 1/2/2021 10:01:00.11.Datgel.CPT.Tool.gINT.Add-In

TITLE

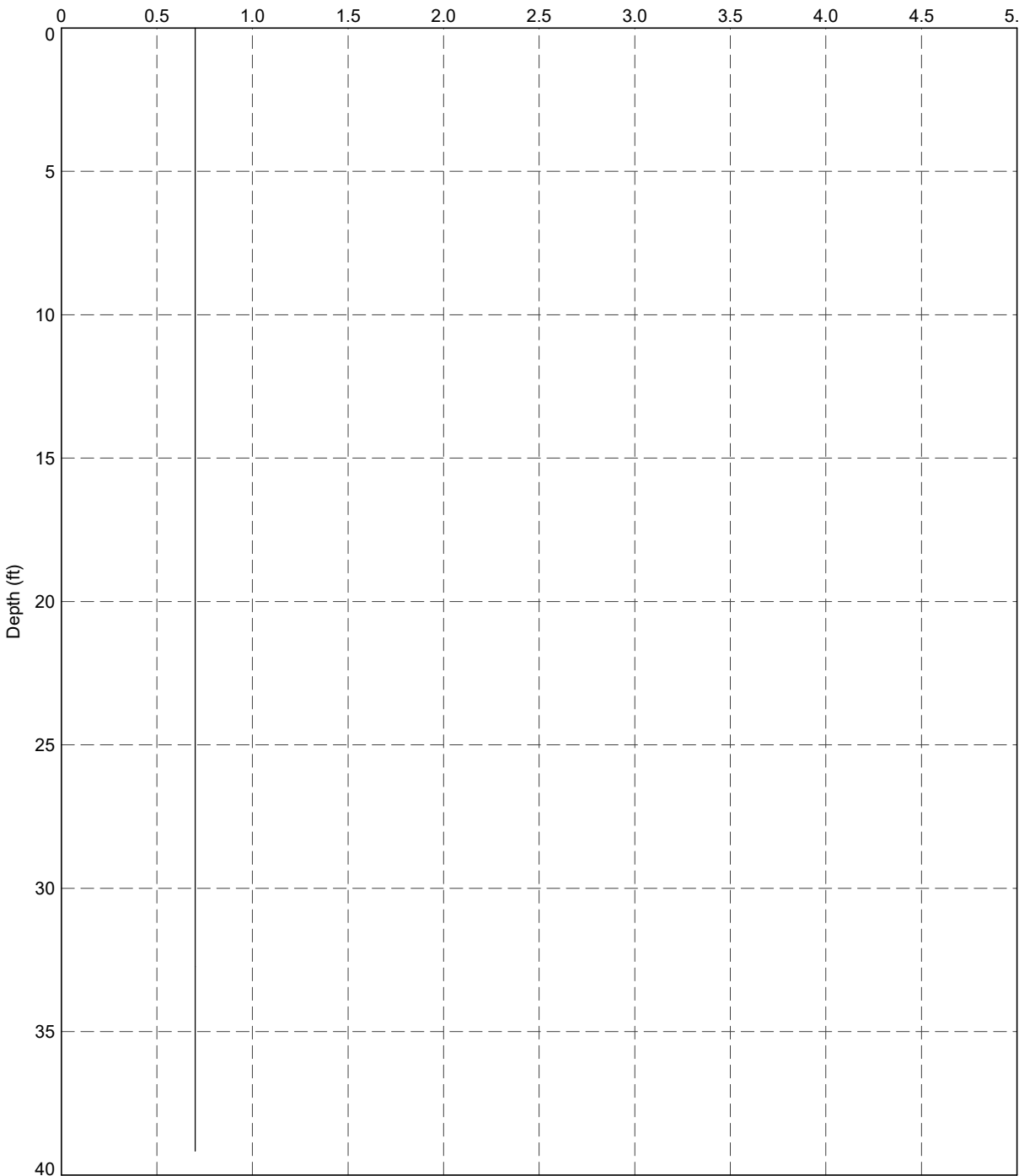
Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Average FC SPT N 15 versus Elevation

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	165

Coefficient Lateral Earth Pressure,  $K_0$

PointID

CPT 05



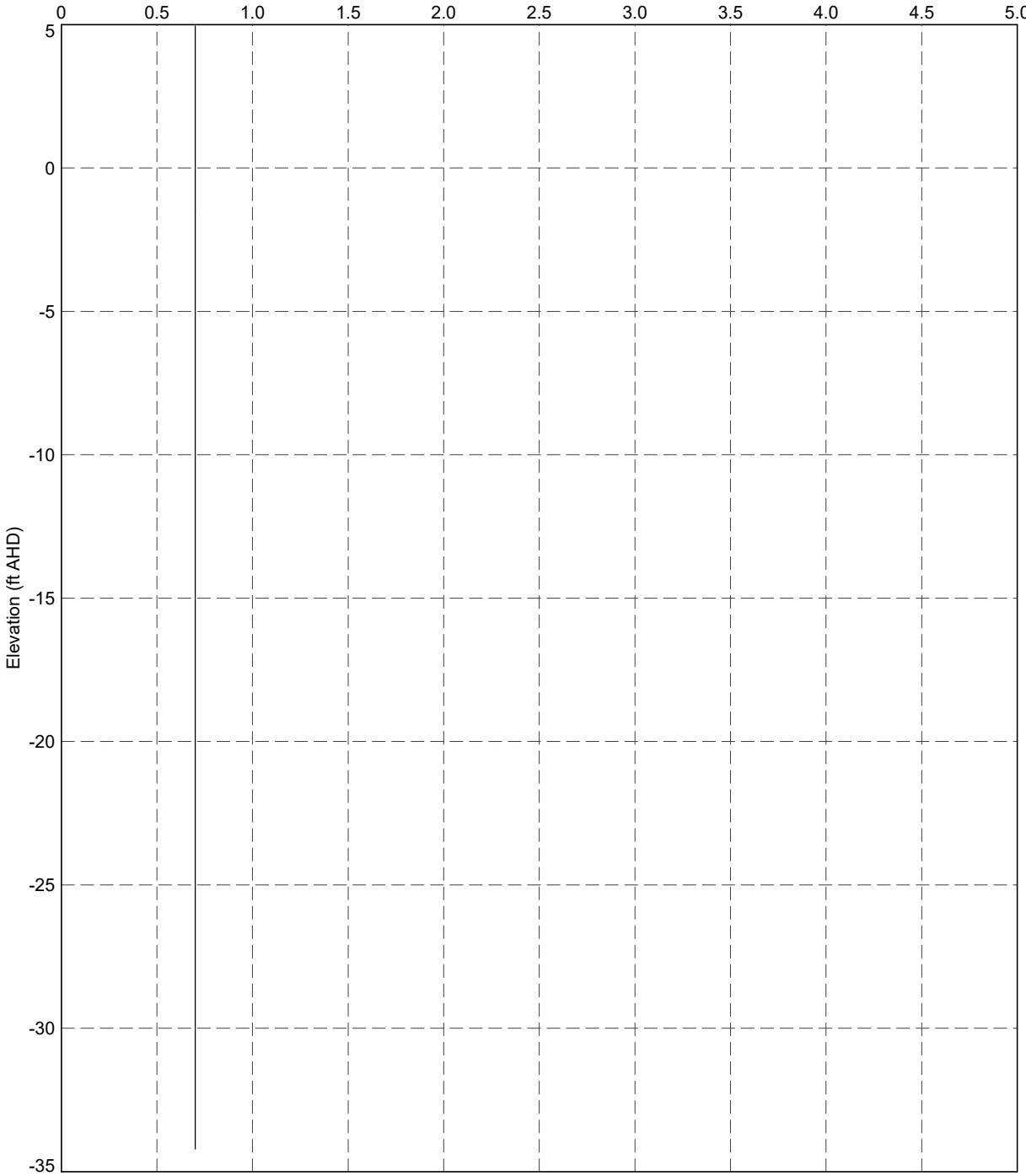
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	TITLE Client 1 Engineer 1 Somewhere CPT Tool Project Coefficient Lateral Earth Pressure versus Depth	DRAWN Datgel	DATE 1/2/2021	
		CHECKED Datgel	DATE 1/2/2021	
		SCALE Not To Scale		Let
		PROJECT No 4.05.0	FIGURE No 166	

Coefficient Lateral Earth Pressure,  $K_0$

PointID

CPT 05



DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.LIQ.COEFF.LAT.EARTH.PRESS.RL.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <-<DrawingFile>> 1/2/2021 10:01:00.11 Datgel.CPT.Tool.gINT.Add-In

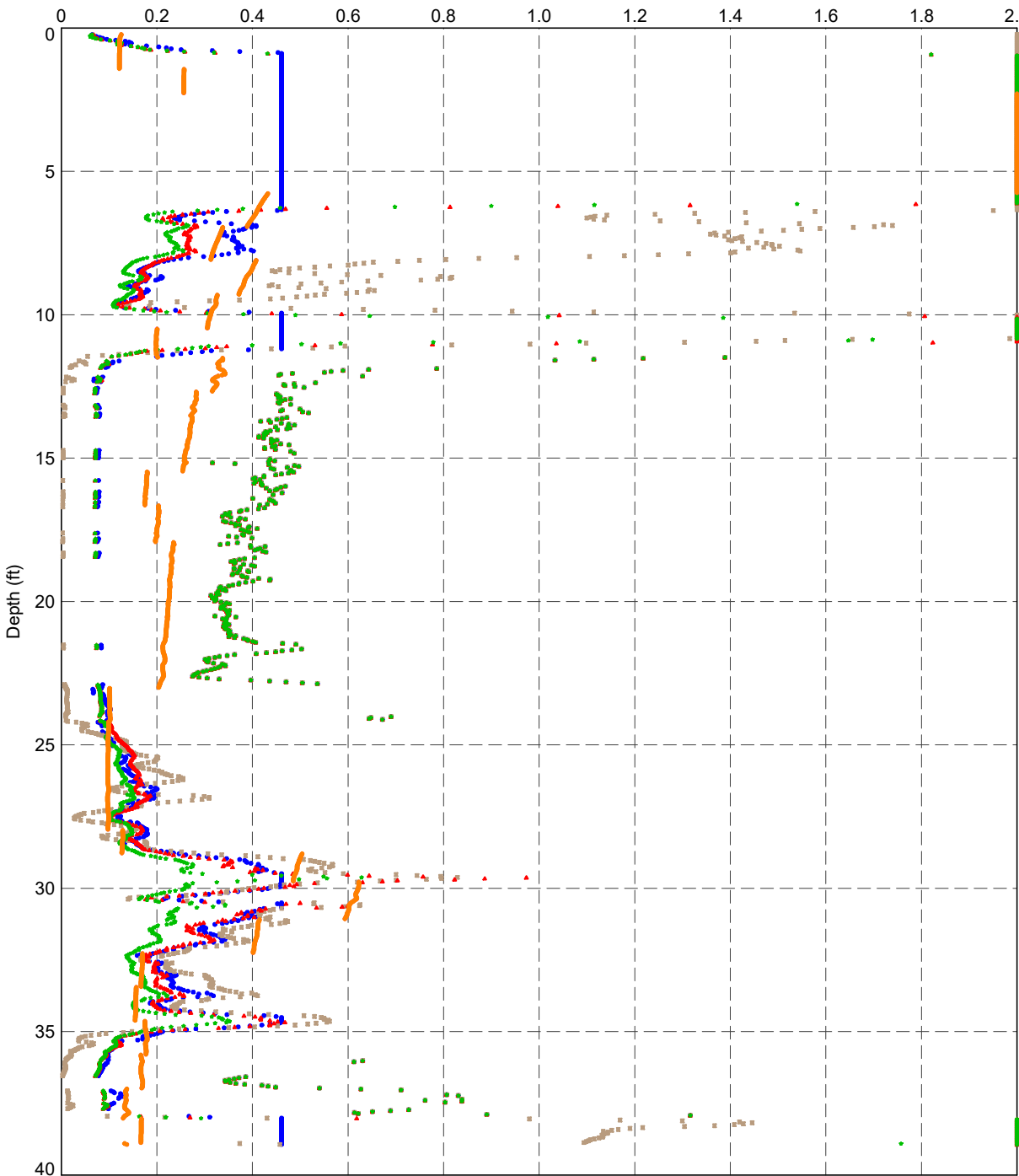


TITLE  
 Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Coefficient Lateral Earth Pressure vs Elevation

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	167

Cyclic Resistance Ratio for M7.5 Earthquake,  $CRR_{7.5}$


PointID



Method:

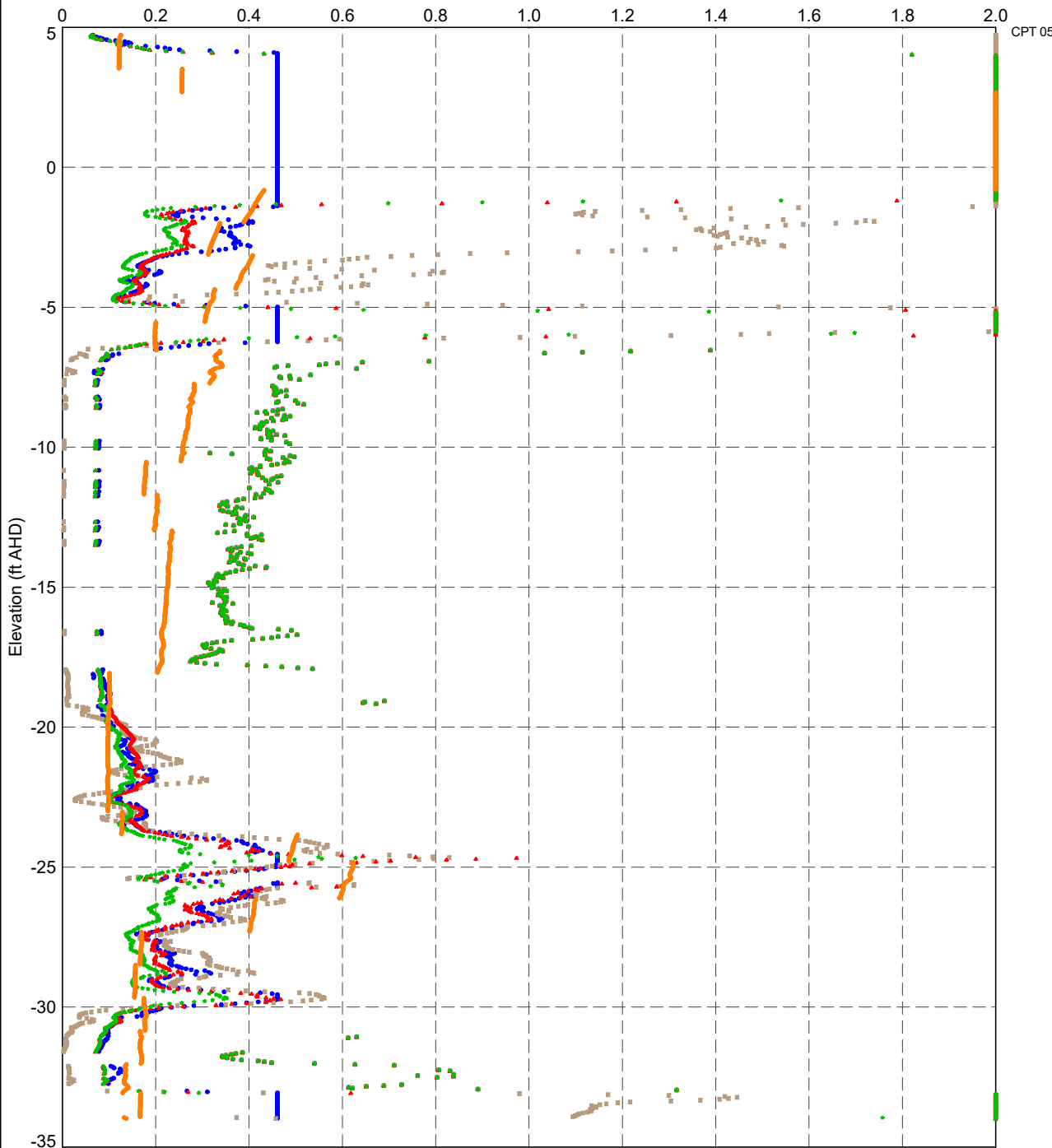
- Robertson & Wride (1998) / NCEER (2001)
- Jefferies & Been (2006)
- ▲ Idriss & Boulanger (2008)
- ★ Idriss & Boulanger (2008) with FC using R&W ('98) / NCEER ('01)
- Moss et al. (2006)
- ◻ Kayen et al. (2013)

DATGEL\CPT TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT\_LIQ\_CRR\_DEPTH\LETP\_DATGEL\CPT TOOL\_DGD\_4.05.0 EN.GPJ <<DrawingFile>> 1/2/2021 20:21:10.01.0011 Datgel\CPT Tool\gINT Add-in

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	TITLE	Client 1 Engineer 1 Somewhere CPT Tool Project Cyclic Resistance Ratio versus Depth	DRAWN Datgel	DATE 1/2/2021
			CHECKED Datgel	DATE 1/2/2021
			SCALE Not To Scale	Let
			PROJECT No 4.05.0	FIGURE No 168


Cyclic Resistance Ratio for M7.5 Earthquake,  $CRR_{7.5}$

PointID



- Method:
- Robertson & Wride (1998) / NCEER (2001)
  - Jefferies & Been (2006)
  - ▲ Idriss & Boulanger (2008)
  - ★ Idriss & Boulanger (2008) with FC using R&W ('98) / NCEER ('01)
  - Moss et al. (2006)
  - ◻ Kayen et al. (2013)

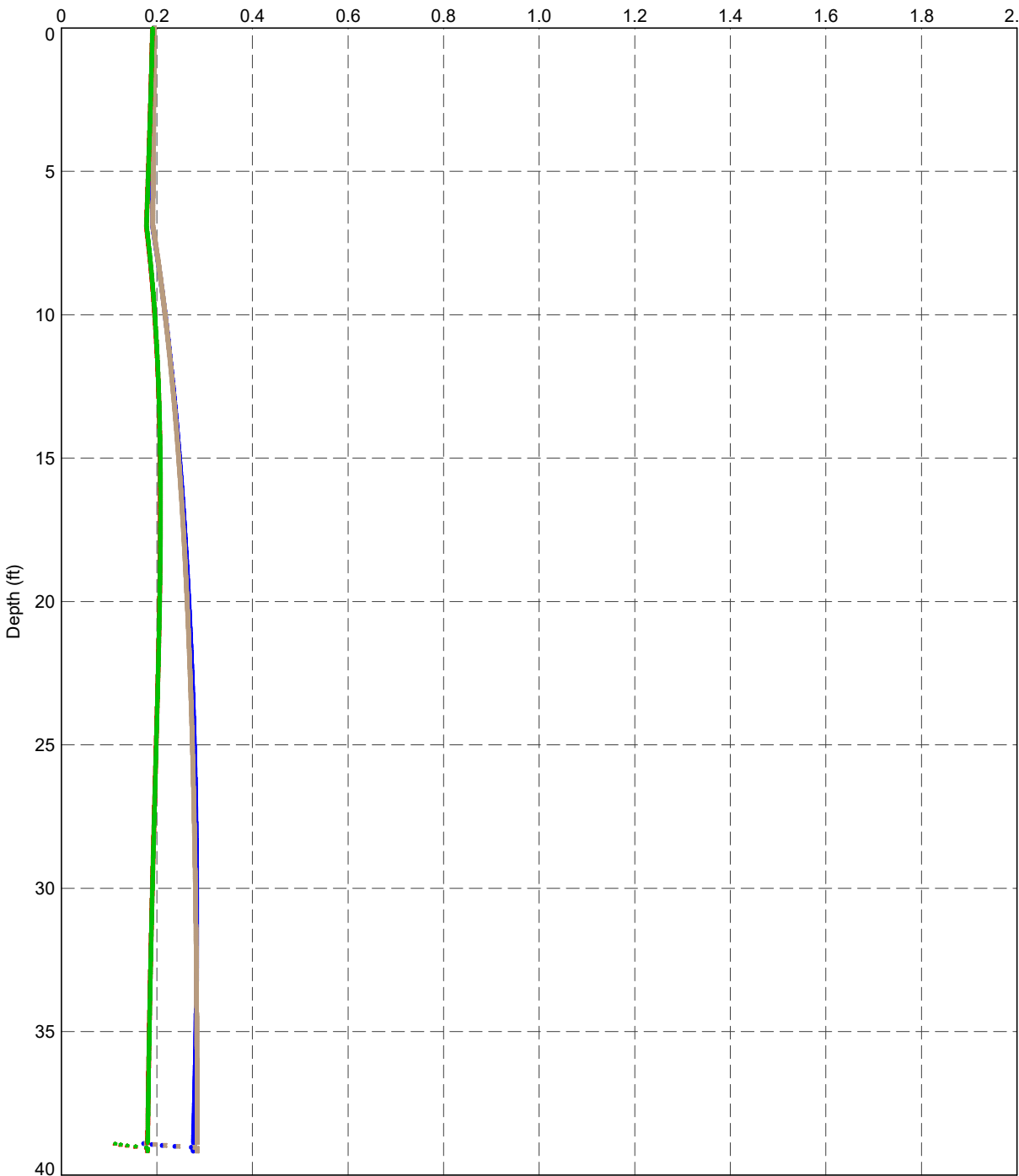
DATGEL\CPT\_TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT\_LIQ\_CRR\_RL\LETP\_DATGEL\_CPT\_TOOL\_DGD\_4.05.0.EN.GPJ <<DrawingFile>> 1/2/2021 20:22:10.01.00.11 Datgel CPT.Tool.gINT\_Add.in

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	TITLE	Client 1 Engineer 1 Somewhere CPT Tool Project Cyclic Resistance Ratio versus Elevation	DRAWN Datgel	DATE 1/2/2021
			CHECKED Datgel	DATE 1/2/2021
			SCALE Not To Scale	Let
			PROJECT No 4.05.0	FIGURE No 169

Cyclic Stress Ratio, CSR

PointID

CPT 05



Method:

- Seed & Idriss (1971)
- Idriss & Boulanger (2008)
- ▲ Moss et al. (2006)
- ★ Kayen et al. (2013)

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph CPT LIQ CSR DEPTH LETP DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <<DrawingFile>> 1/22/2021 20:23:10.01.00.11 Datgel.CPT.Tool.gINT.Add-In



TITLE

Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Cyclic Stress Ratio versus Depth

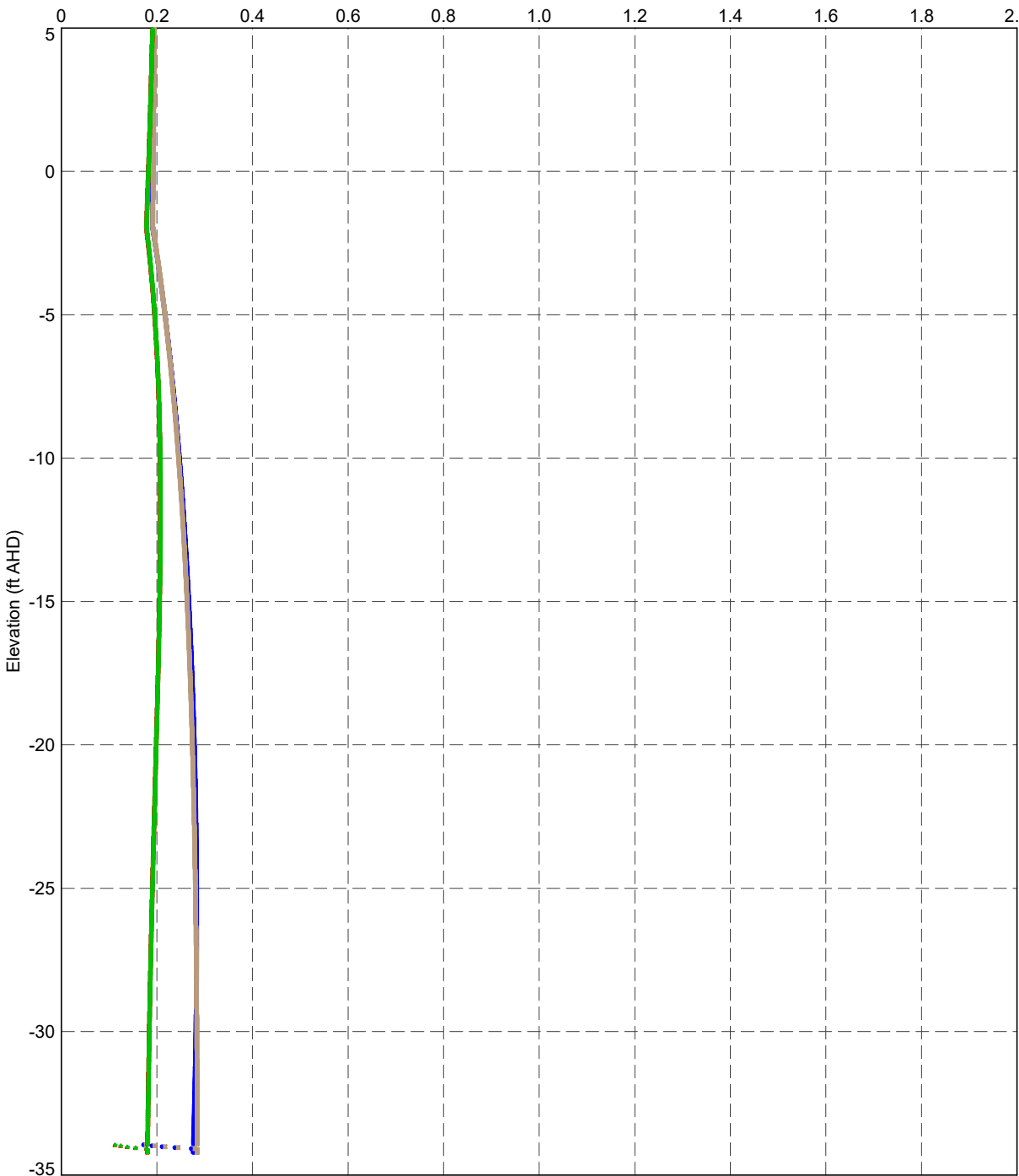
DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	170



Cyclic Stress Ratio, CSR

PointID

CPT 05



- Method:
- Seed & Idriss (1971)
  - Idriss & Boulanger (2008)
  - ▲ Moss et al. (2006)
  - ★ Kayen et al. (2013)

DATGEL\CPT TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT LIQ CSR.RL\LETF DATGEL\CPT TOOL\_DGD\_4.05.0\EN.GPJ <<DrawingFile>> 1/2/2021 20:24:10.01.00.11 Datgel.CPT.Tool.gINT.Add.in

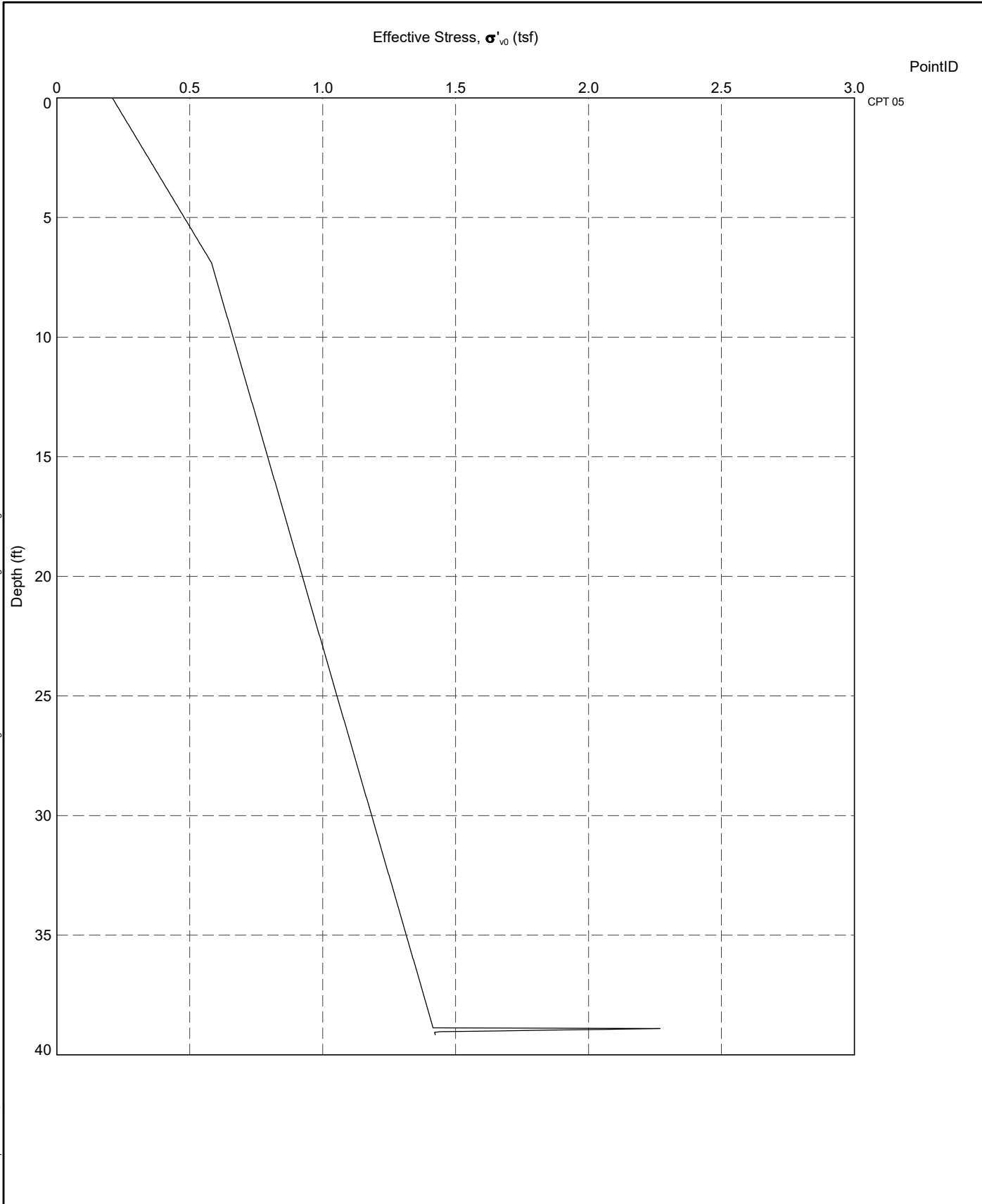



TITLE

Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Cyclic Stress Ratio versus Elevation

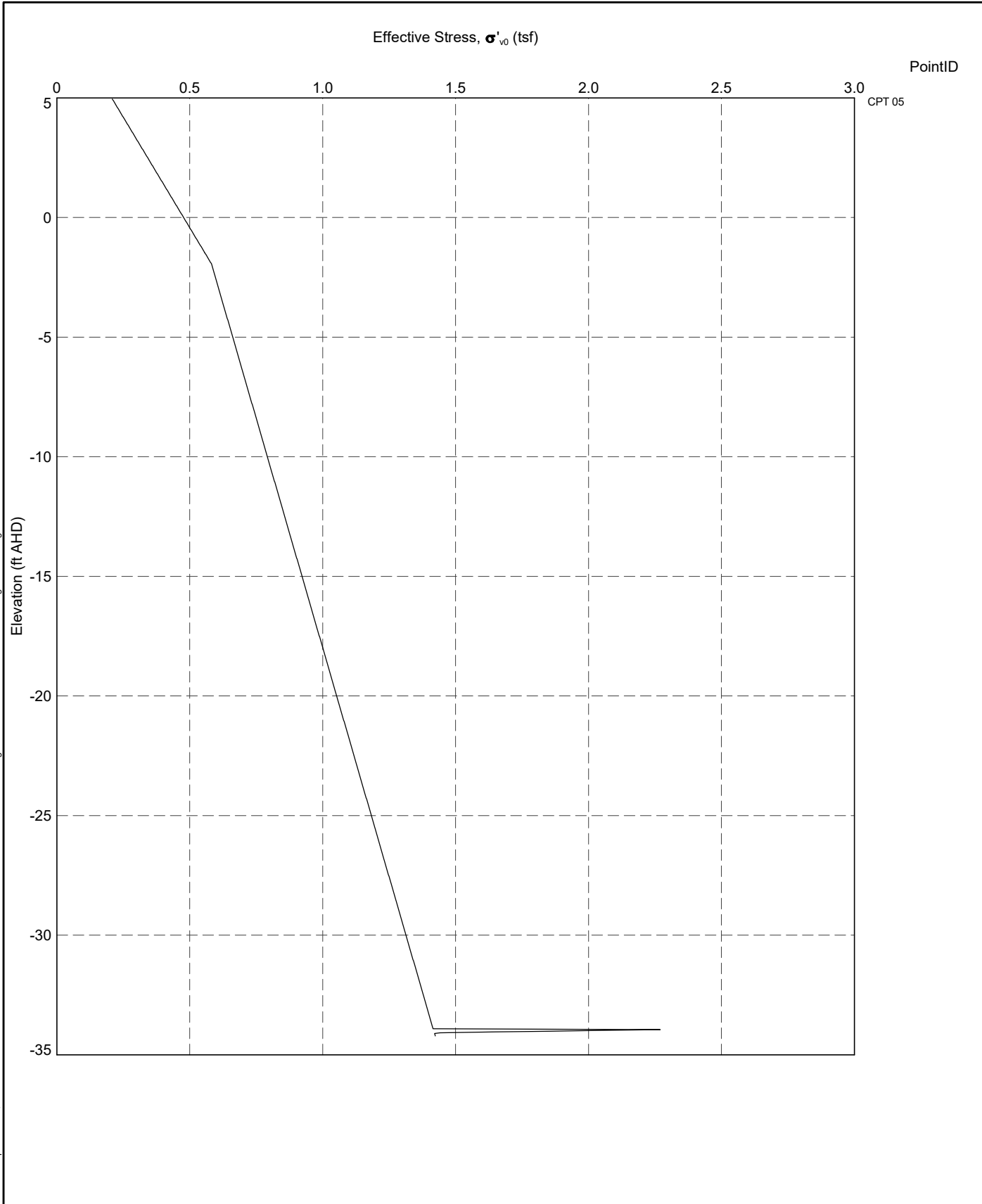
DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	171

DATGEL\CPT TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT LIQ EFFECTIVE STRESS DEPTH LETP DATGEL\CPT TOOL\_DGD\_4.05.0 EN.GPJ <<DrawingFile>> 1/2/2021 20:25 10.01.00.11 Datgel\CPT\_Tool.gINT Add-In




 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Effective Stress versus Depth</p>	<p>DRAWN Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>CHECKED Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>SCALE Not To Scale</p>		<p>Let</p>
		<p>PROJECT No 4.05.0</p>	<p>FIGURE No 172</p>	

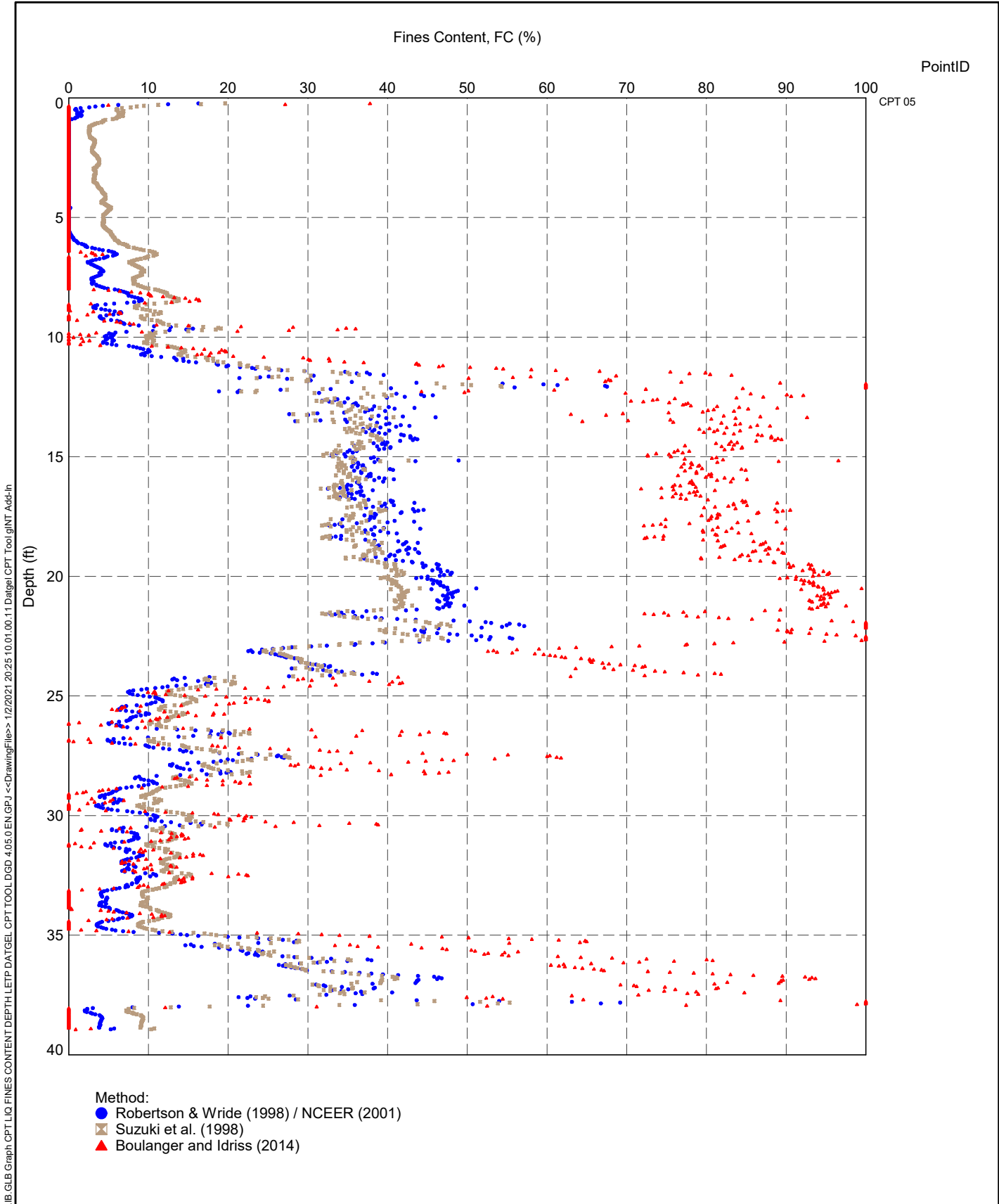
DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph CPT LIQ EFFECTIVE STRESS RL LETP DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <<DrawingFile>> 1/2/2021 20:25 10.01.00.11 Datgel CPT Tool.gINT.Add-In



PointID


CPT 05

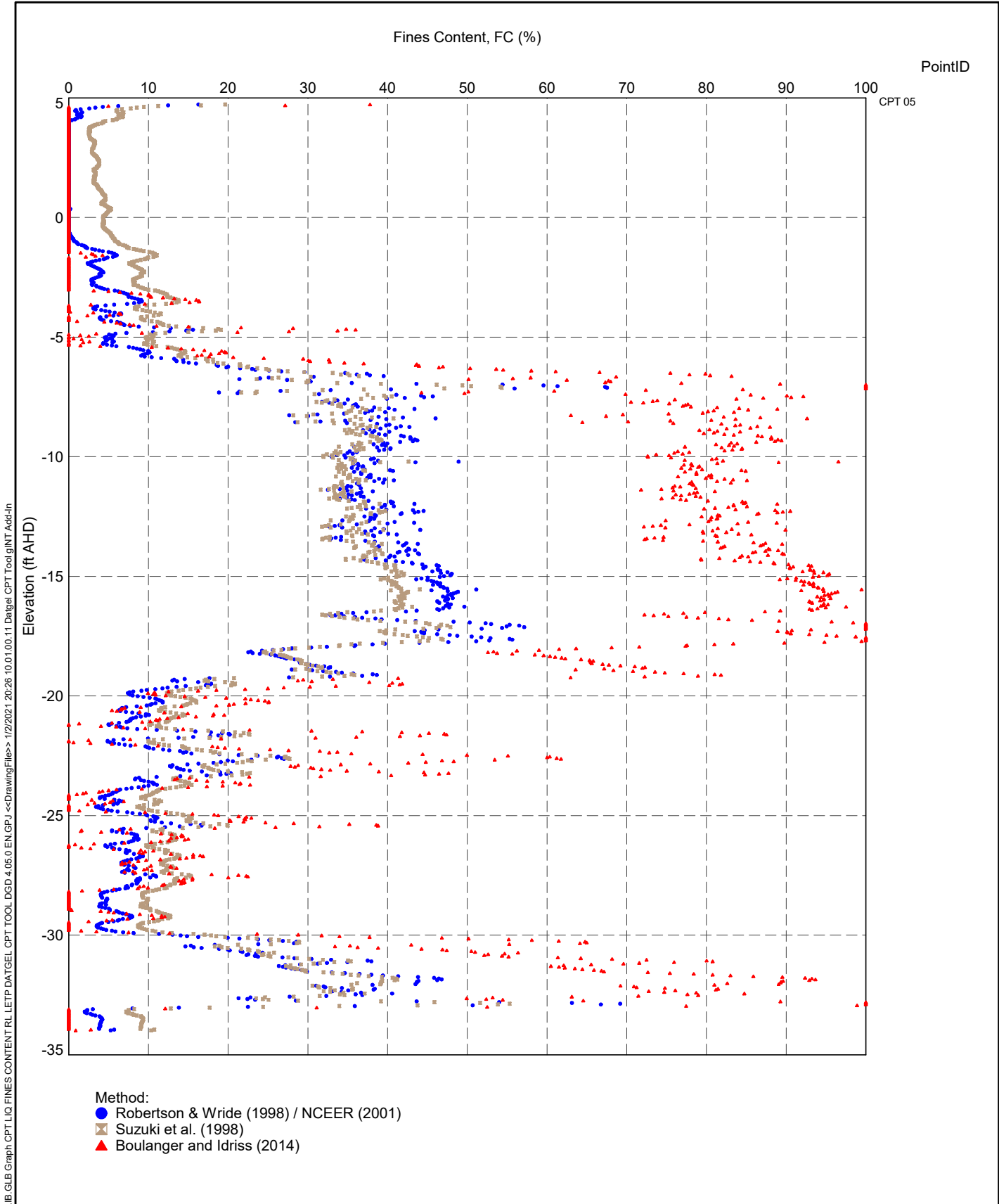
 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Effective Stress versus Elevation</p>	<p>DRAWN Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>CHECKED Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>SCALE Not To Scale</p>		<p>Let</p>
		<p>PROJECT No 4.05.0</p>	<p>FIGURE No 173</p>	



DATGEL\CPT\_TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT\_LIQ\_FINES\_CONTENT\_DEPTH.LETP.DATGEL\CPT\_TOOL\_DGD\_4.05.0\EN\GPJ <<-DrawingFiles>> 1/2/2021 20:25:10.01:00.11\Datgel\CPT\_Tool\gJNT Add-In

- Method:
- Robertson & Wride (1998) / NCEER (2001)
  - Suzuki et al. (1998)
  - ▲ Boulanger and Idriss (2014)

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	TITLE  Client 1 Engineer 1 Somewhere CPT Tool Project Fines Content versus Depth	DRAWN Datgel	DATE 1/2/2021	
		CHECKED Datgel	DATE 1/2/2021	
		SCALE Not To Scale		Let
		PROJECT No 4.05.0	FIGURE No 174	



Method:  
 ● Robertson & Wride (1998) / NCEER (2001)  
 ■ Suzuki et al. (1998)  
 ▲ Boulanger and Idriss (2014)

DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.LIQ.FINES.CONTENT.RL.LET.P.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ.<<DrawingFile>>.1/2/2021.20:26.10:01.00.11.Datgel.CPT.Tool.gINT.A44-in



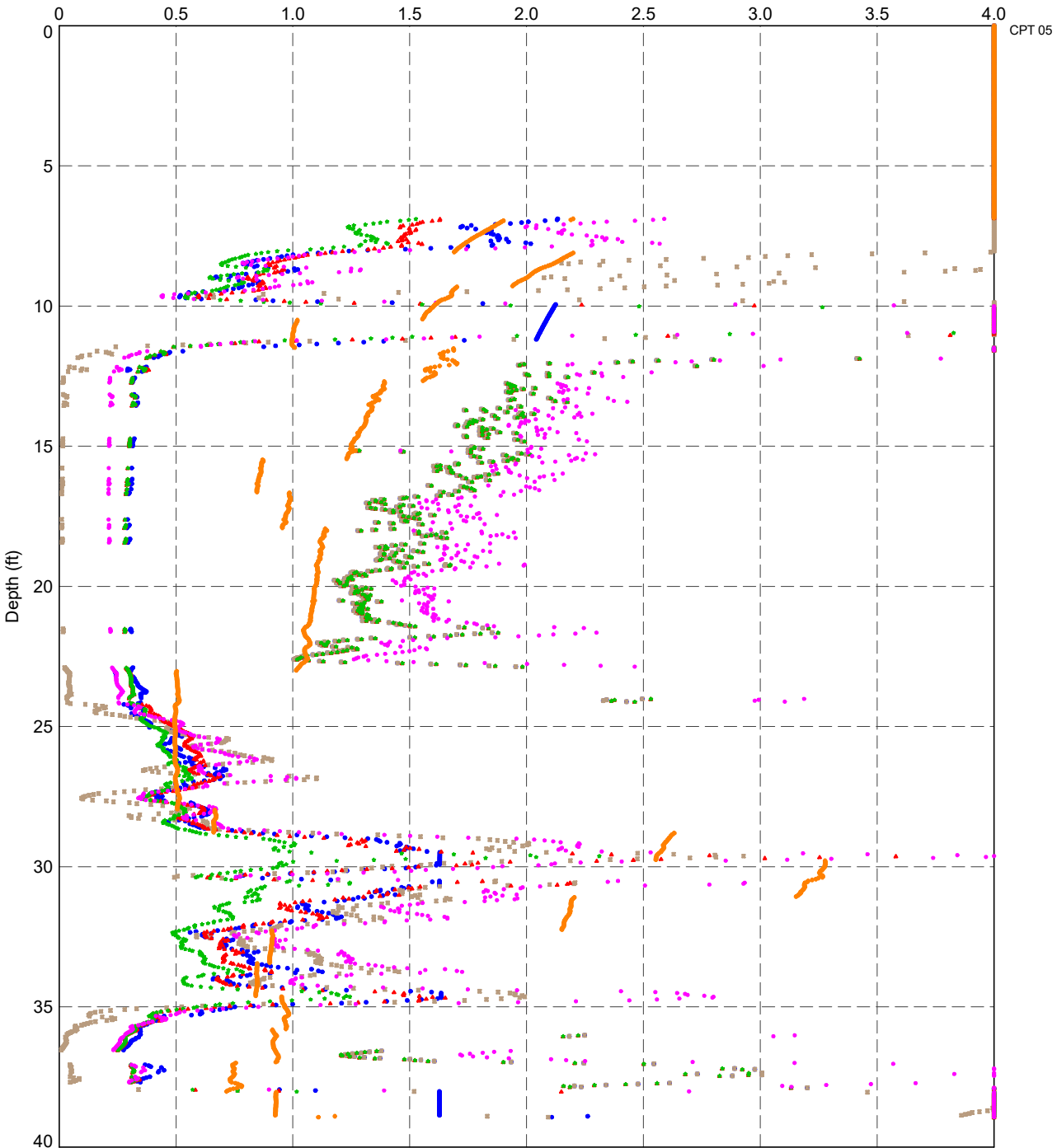
TITLE

Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Fines Content versus Elevation

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	175

Liquefaction Factor of Safety, Liq FoS

PointID



Method:

- Robertson & Wride (1998) / NCEER (2001)
- Jefferies & Been (2006)
- ▲ Idriss & Boulanger (2008)
- ★ Idriss & Boulanger (2008) with FC using R&W ('98) / NCEER ('01)
- Moss et al. (2006)
- ◻ Kayen et al. (2013)

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph CPT LIQ\_FOS DEPTH LETP DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <-DrawingFile>> 1/22/2021 20:28:10.01.11 Datgel CPT Tool gINT Add-In

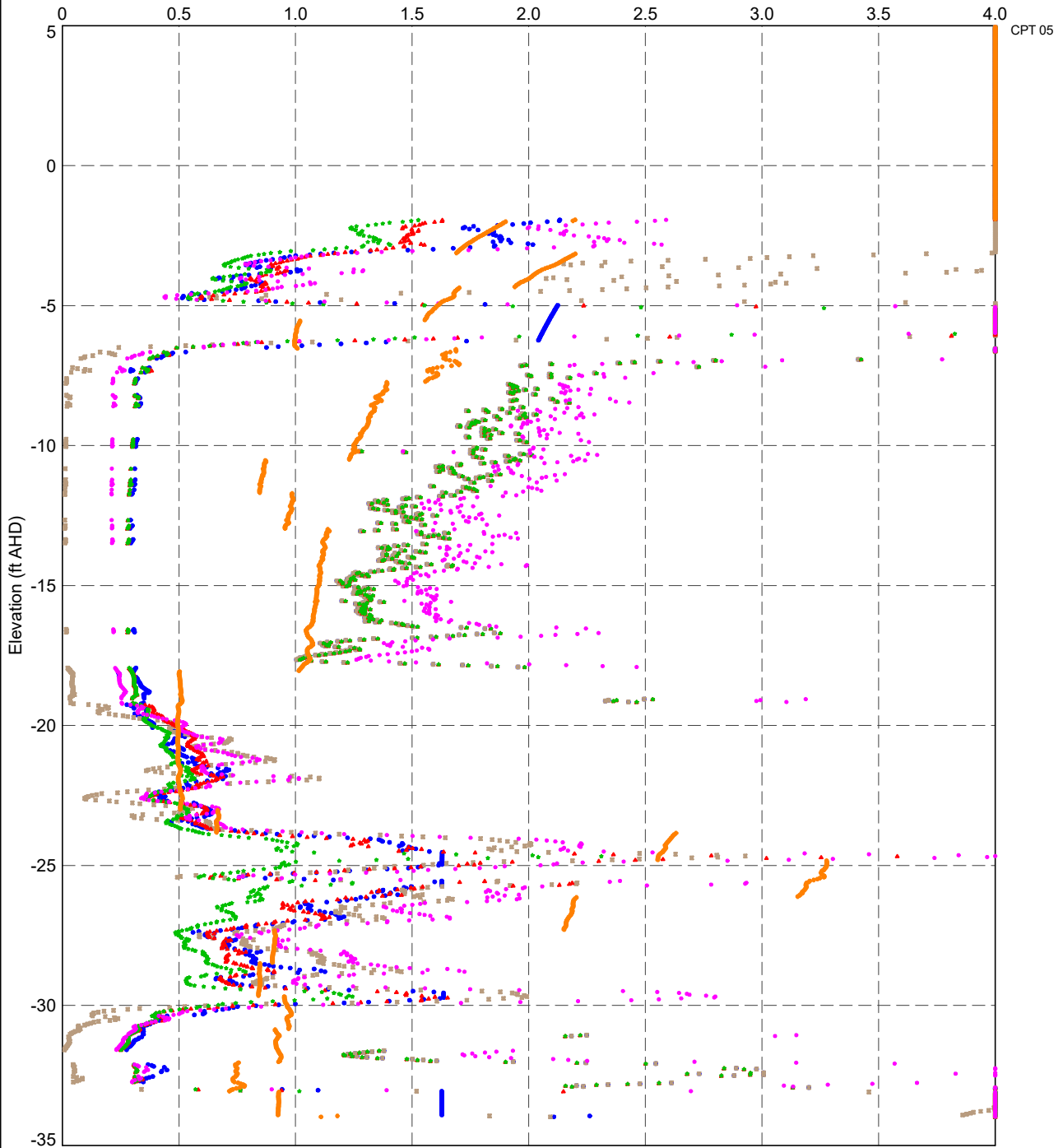


TITLE  
 Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Liquefaction Factor of Safety versus Depth

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	176


Liquefaction Factor of Safety, Liq FoS

PointID



- Method:
- Robertson & Wride (1998) / NCEER (2001)
  - Jefferies & Been (2006)
  - ▲ Idriss & Boulanger (2008)
  - ★ Idriss & Boulanger (2008) with FC using R&W ('98) / NCEER ('01)
  - Moss et al. (2006)
  - ◻ Kayen et al. (2013)

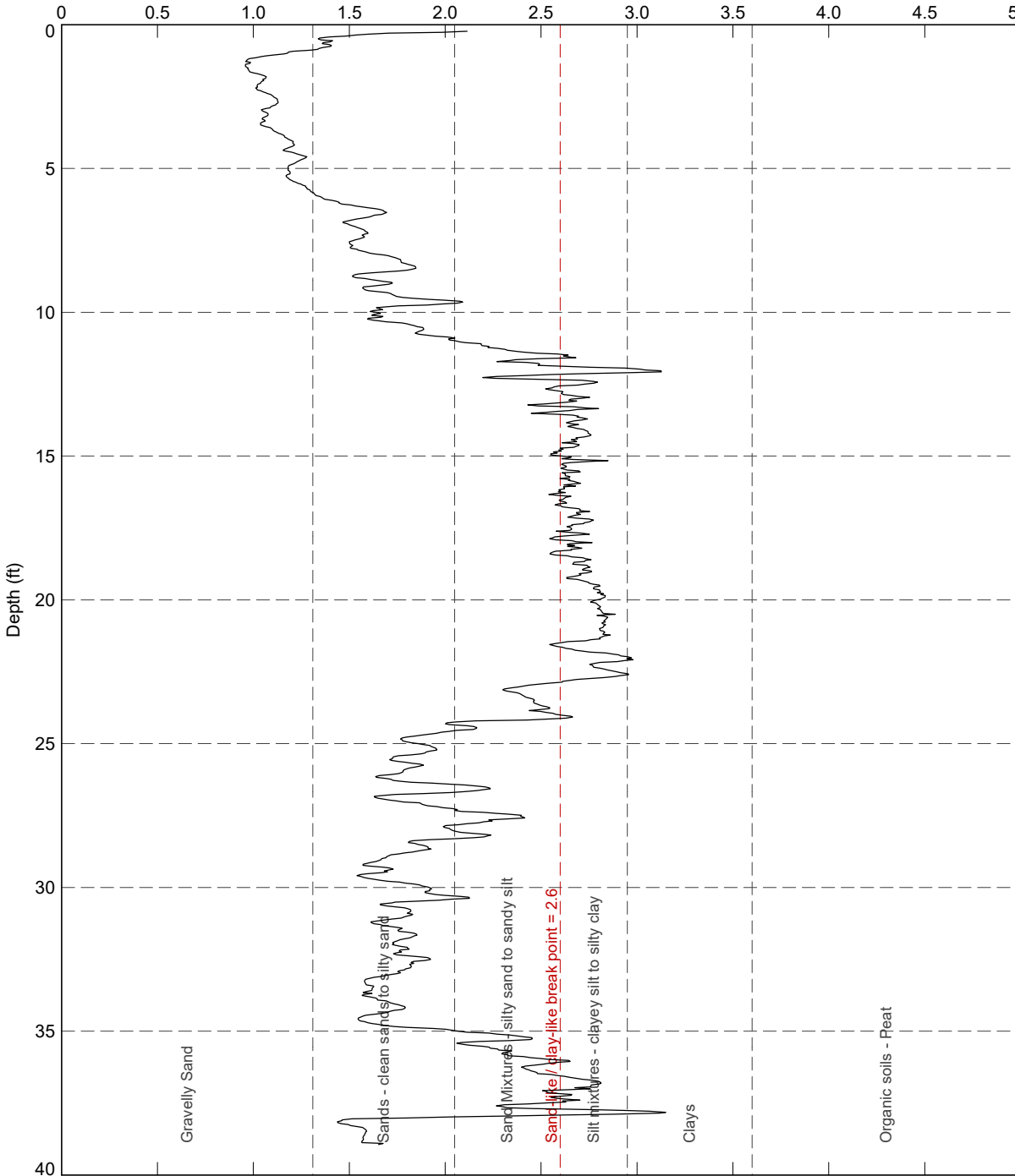
DATGEL\CPT TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT LIQ\_FOS.RL\LETP DATGEL\CPT TOOL\_DGD\_4.05.0\EN.GPJ <<DrawingFile>> 1/2/2021 20:29:10.01.00.11 Datgel\CPT\_Tool.gINT\_Add-In

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project</p> <p>Liquefaction Factor of Safety versus Elevation</p>	<p>DRAWN Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>CHECKED Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>SCALE Not To Scale</p>		<p>Let</p>
		<p>PROJECT No 4.05.0</p>	<p>FIGURE No 177</p>	

Soil Behaviour Type Index,  $I_c$ , Robertson and Wride (1998)

PointID

CPT 05



DATGEL CPT TOOL\_DGD\_4.05.0.LIB.GLB Graph CPT LIQ.IC.1 DEPTH LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <<DrawingFile>> 1/2/2021 20:29 10.01.00.11.Datgel CPT Tool.gINT Add-In

TITLE

Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Soil Behaviour Type Index versus Depth

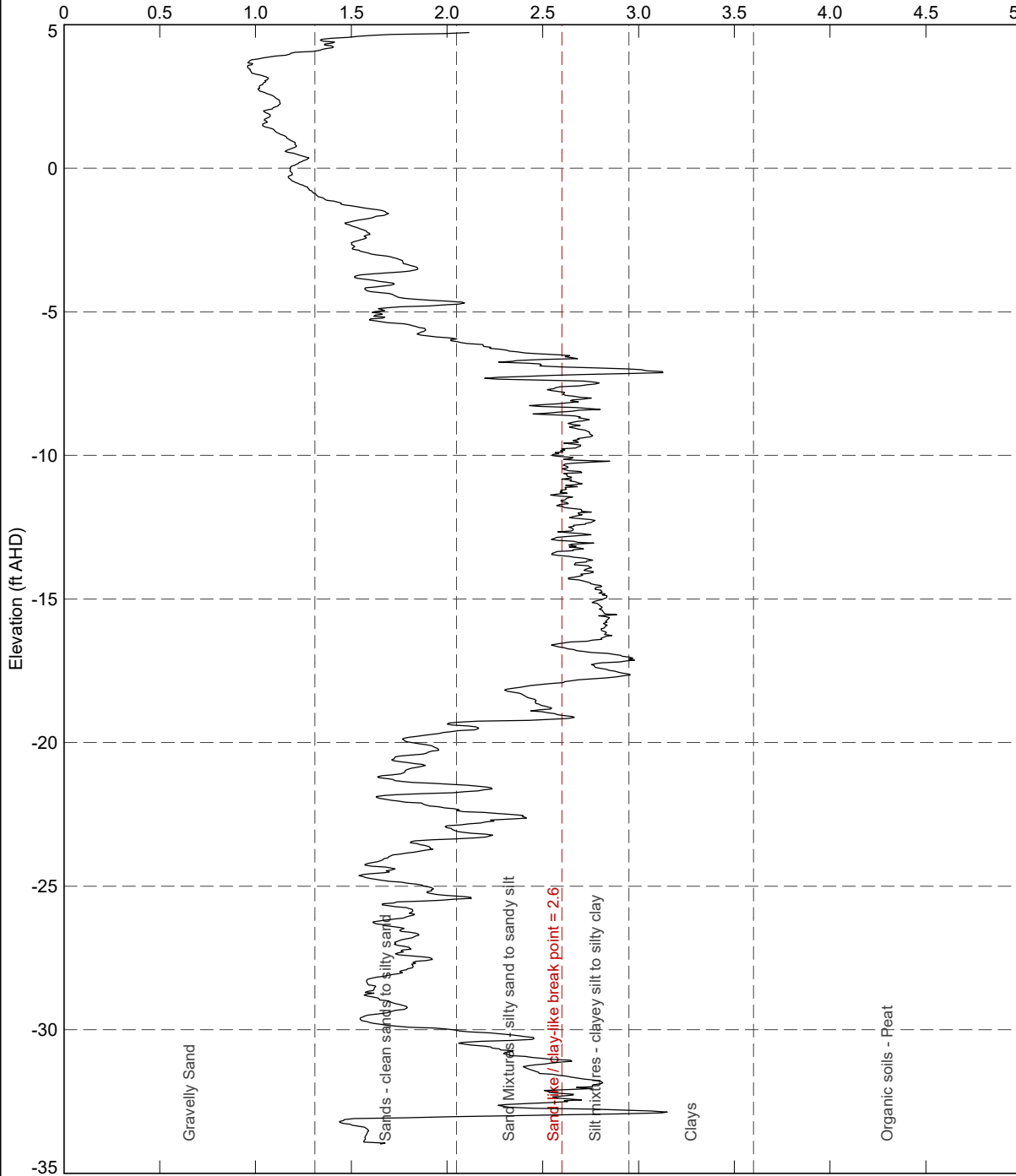
DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	178



Soil Behaviour Type Index,  $I_c$ , Robertson and Wride (1998)

PointID

CPT 05



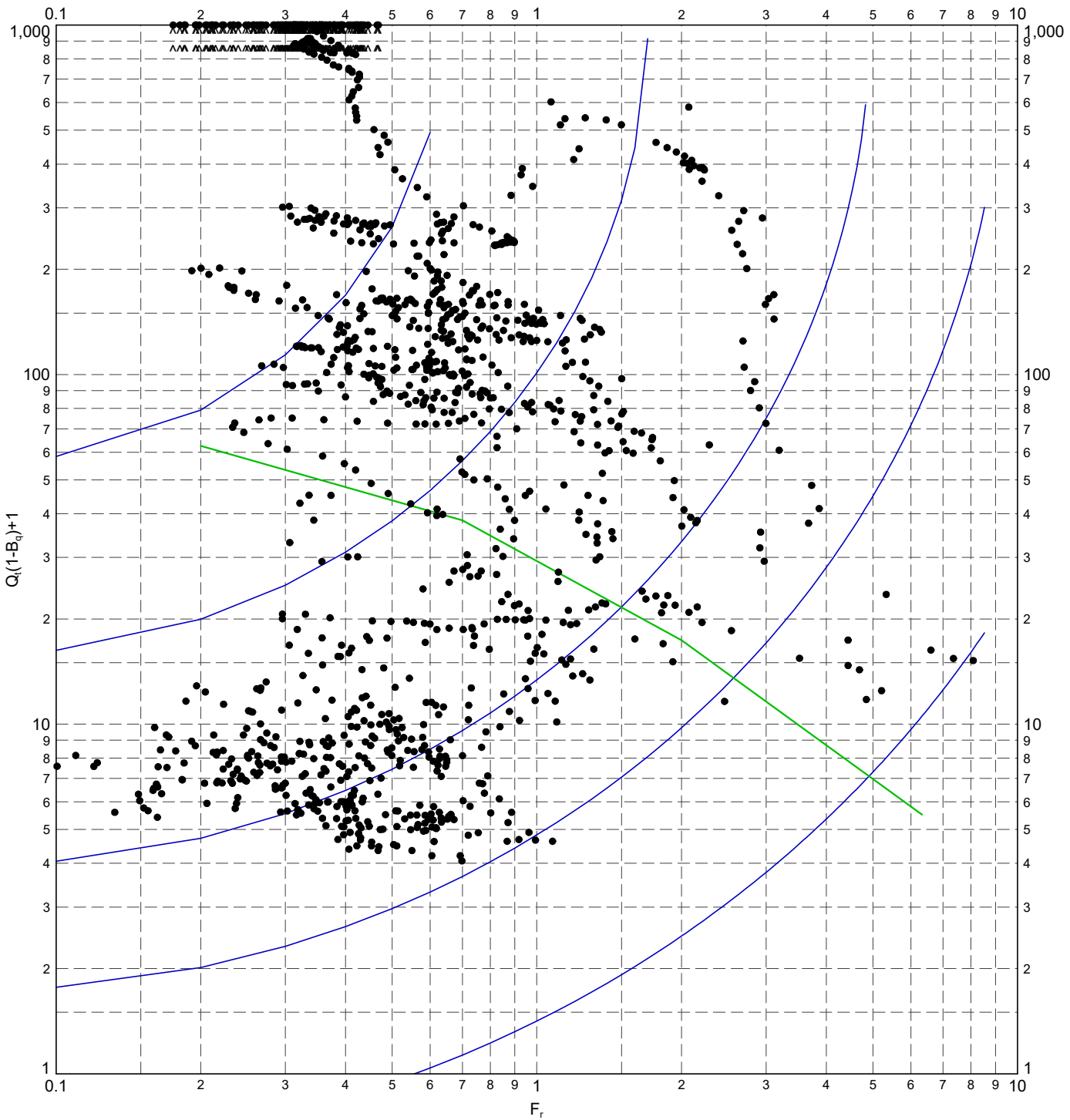
DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.LIQ.IC.1.RL.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <-DrawingFile>> 1/2/2021 20:29:10.01.00.11 Datgel.CPT.Tool.gINT.Add-In

TITLE


Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Soil Behaviour Type Index vs. Elevation

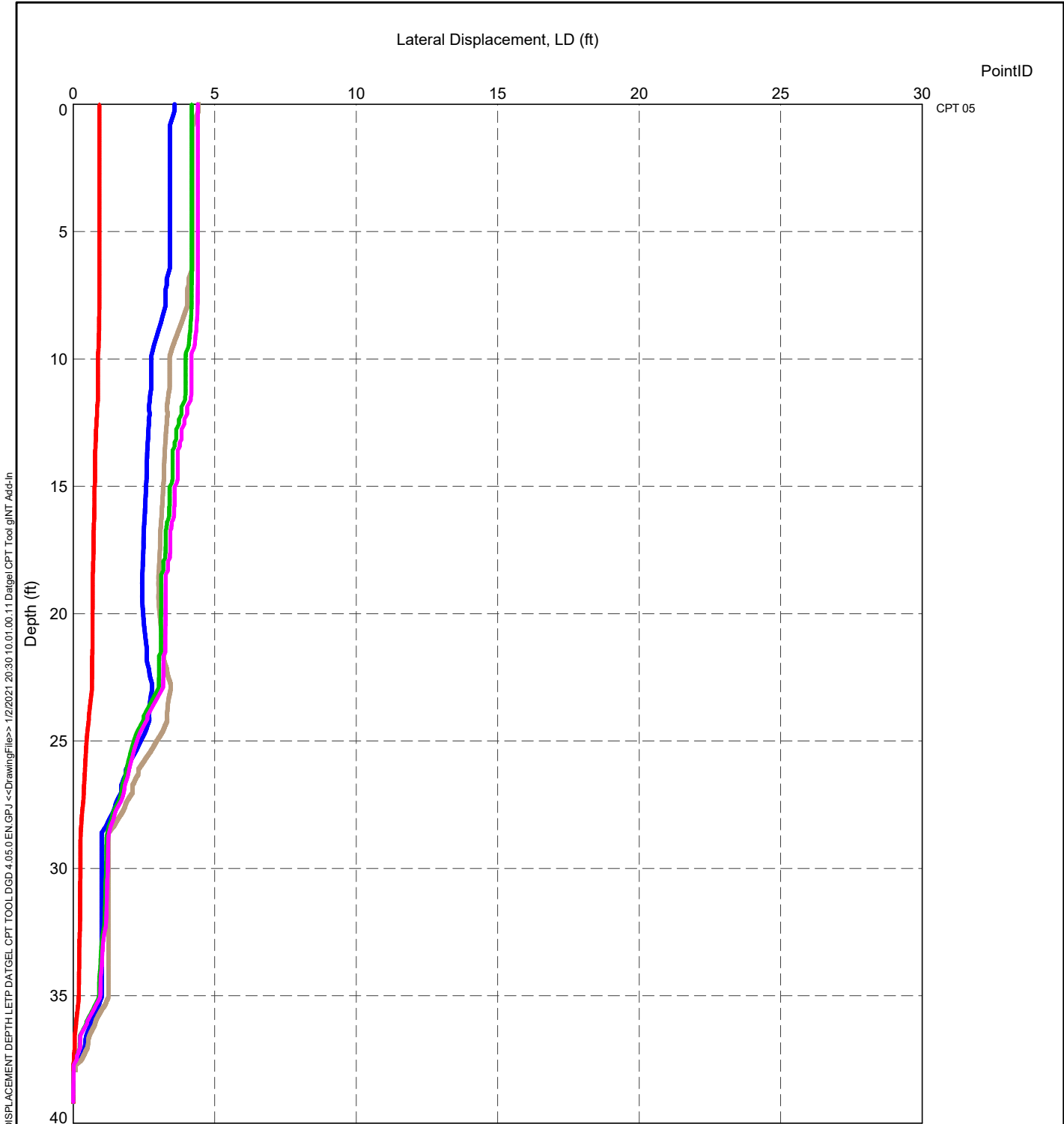
DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	179

DATGEL\CPT\_TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT\_LIQ\_IC\_4\_QT(1-B<sub>q</sub>)+1 LEIP.DATGEL\CPT\_TOOL\_DGD\_4.05.0\EN\GPJ<<DrawingFiles>> 1/2/2021 20:29 10.01.00.11 Datgel CPT Tool.gINT Add-in



Demarcation between strain softening and strain hardening behaviour following initial liquefaction (Shuttle & Cunning, 2008)

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Been and Jefferies (1992) - <math>Q_i(1-B_q)+1</math> vs. <math>F_r</math> - CPT 05</p>	<p>DRAWN</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>	
		<p>CHECKED</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>	
		<p>SCALE</p> <p>Not To Scale</p>		<p>Let</p>
		<p>PROJECT No</p> <p>4.05.0</p>	<p>FIGURE No</p> <p>180</p>	



- Method:
- Youd et al. (2002) gently sloping
  - Youd et al. (2002) free face
  - ▲ Zhang et al. (2004) gently sloping
  - ★ Zhang et al. (2004) free face
  - LDI

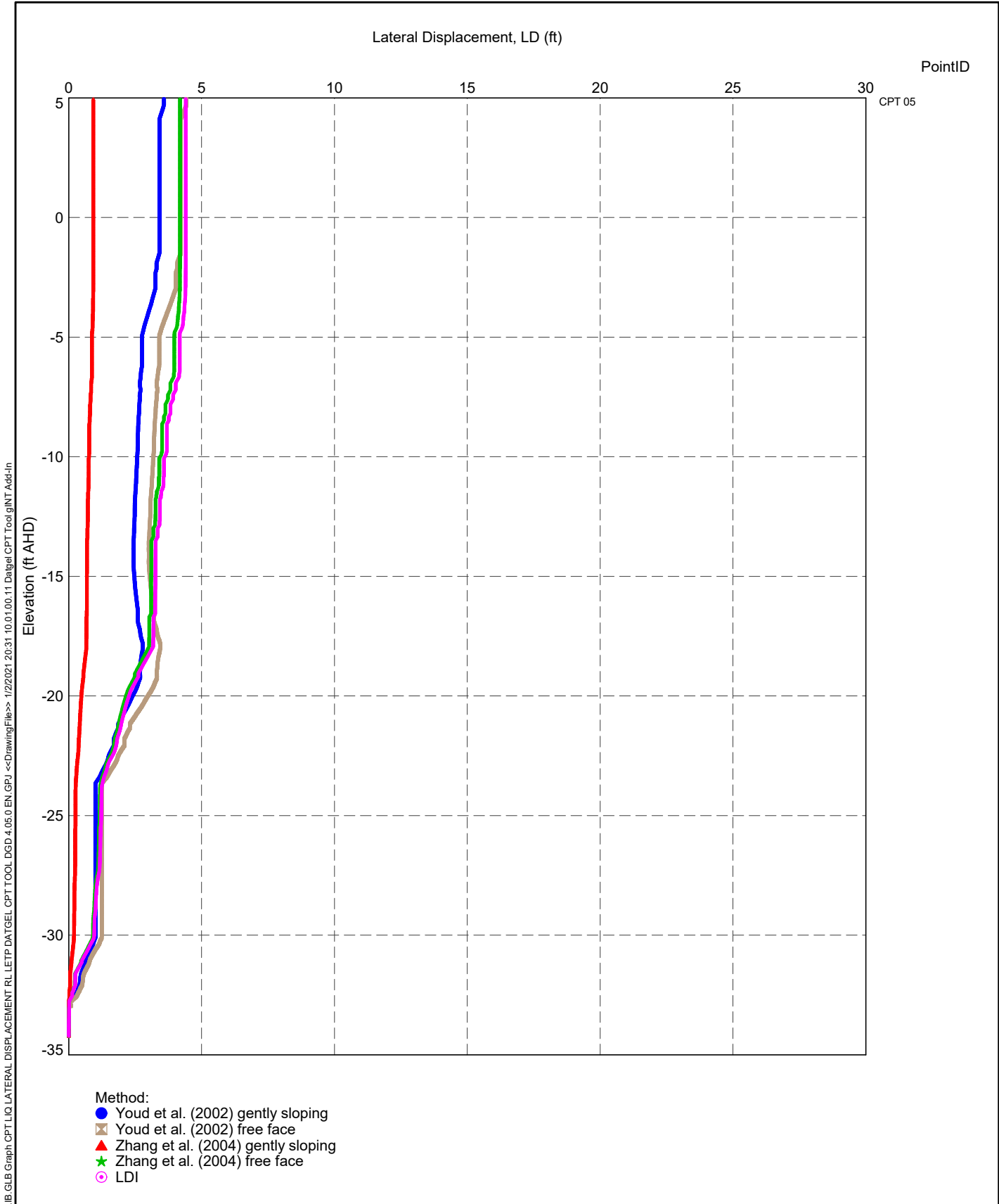
DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.LIQ.LATERAL.DISPLACEMENT.DEPTH.LET.P.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ.<<DrawingFile>> 1/2/2021 20:30:10.00.11.Datgel.CPT.Tool.gINT.Add.in



TITLE

Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Lateral Displacement versus Depth

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	181



- Method:
- Youd et al. (2002) gently sloping
  - Youd et al. (2002) free face
  - ▲ Zhang et al. (2004) gently sloping
  - ★ Zhang et al. (2004) free face
  - LDI

TITLE

Client 1  
Engineer 1  
Somewhere  
CPT Tool Project  
Lateral Displacement versus Elevation

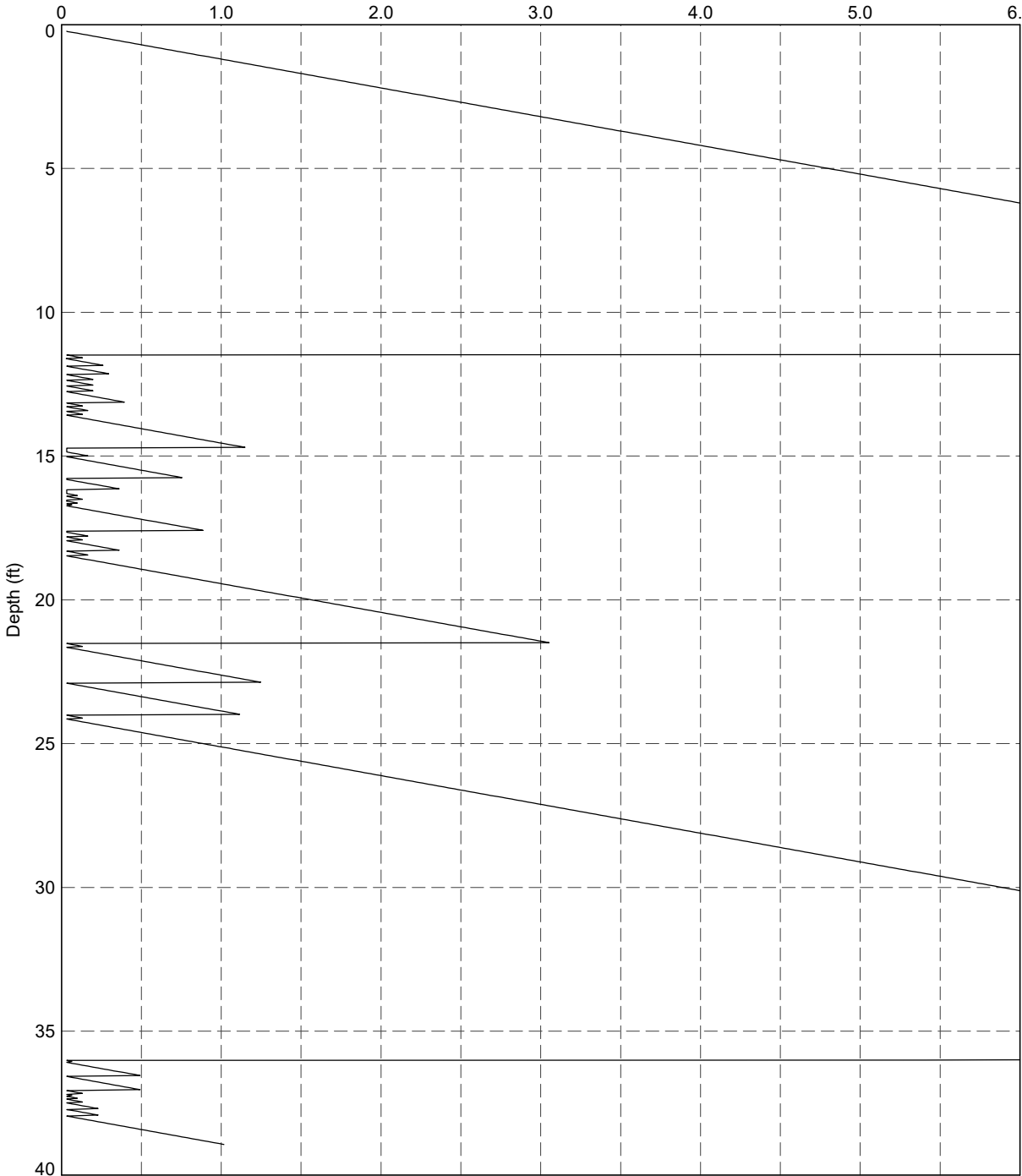
DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	182

DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.LIQ.LATERAL.DISPLACEMENT.RL.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <<DrawingFile>> 1/2/2021 10:01:00.11.Datgel.CPT.Tool.gINT.Add-In

Layer Thickness Calculator (ft)

PointID

CPT 05



DATGEL\CPT TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT LIQ LAYER THICKNESS CALC DEPTH LETP DATGEL\CPT TOOL\_DGD\_4.05.0 EN.GPJ <<DrawingFile>> 1/2/2021 20:31:10.01.00.11 Datgel\CPT Tool\gINT Add-In

TITLE

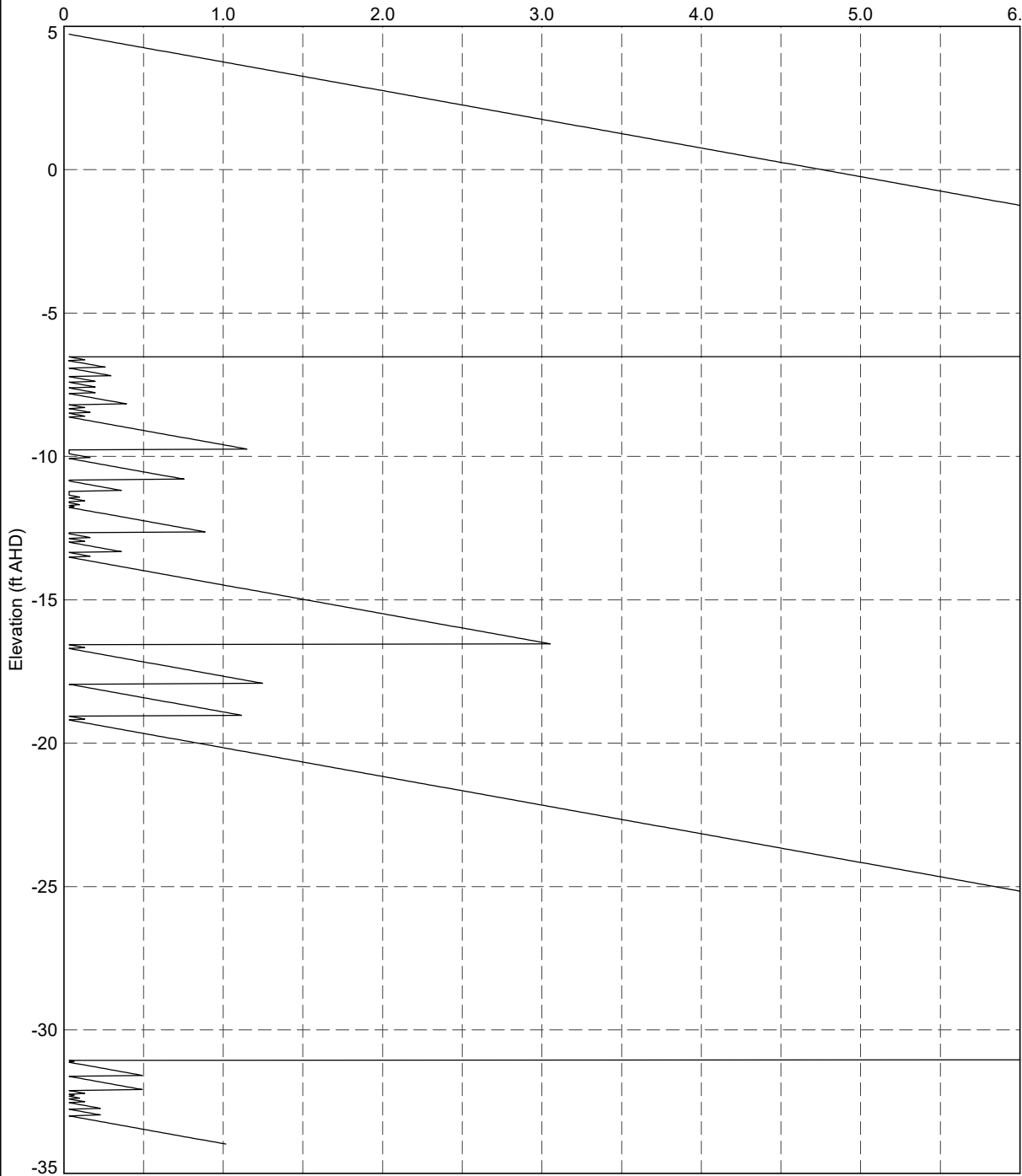
Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Layer Thickness Calculator versus Depth

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	183

Layer Thickness Calculator (ft)

PointID

CPT 05



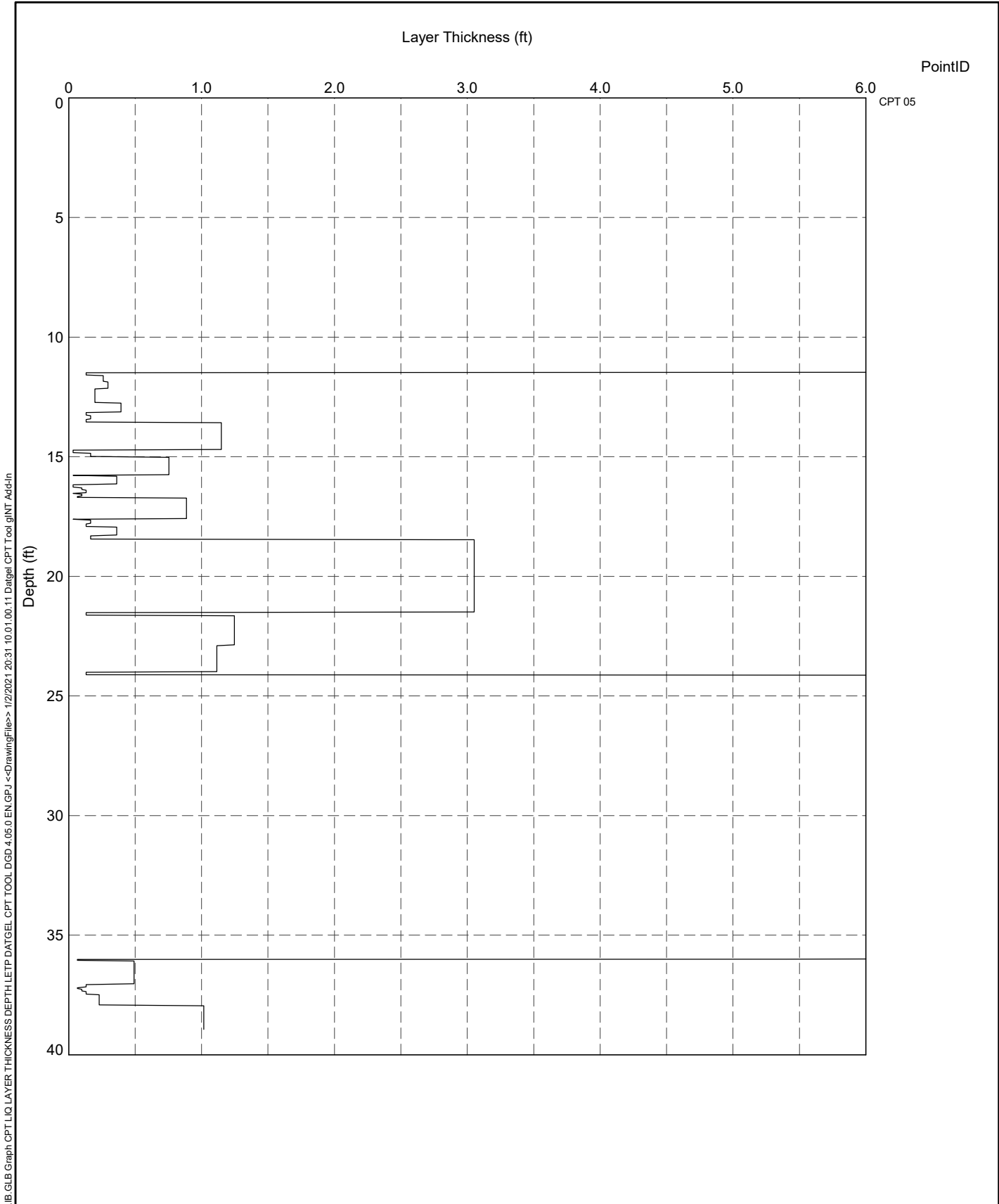
DATGEL\CPT TOOL\_DGD\_4.05.0\LIB\_GLB\_Graph\CPT LIQ\_LAYER\_THICKNESS\_CALC\_RL\LETP\_DATGEL\CPT TOOL\_DGD\_4.05.0\_EN.GPJ <-DrawingFiles> 1/2/2021 20:31:10.01:00.11 Datgel CPT Tool.gINT\_Add-In

TITLE


Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project

Layer Thickness Calculator versus Elevation

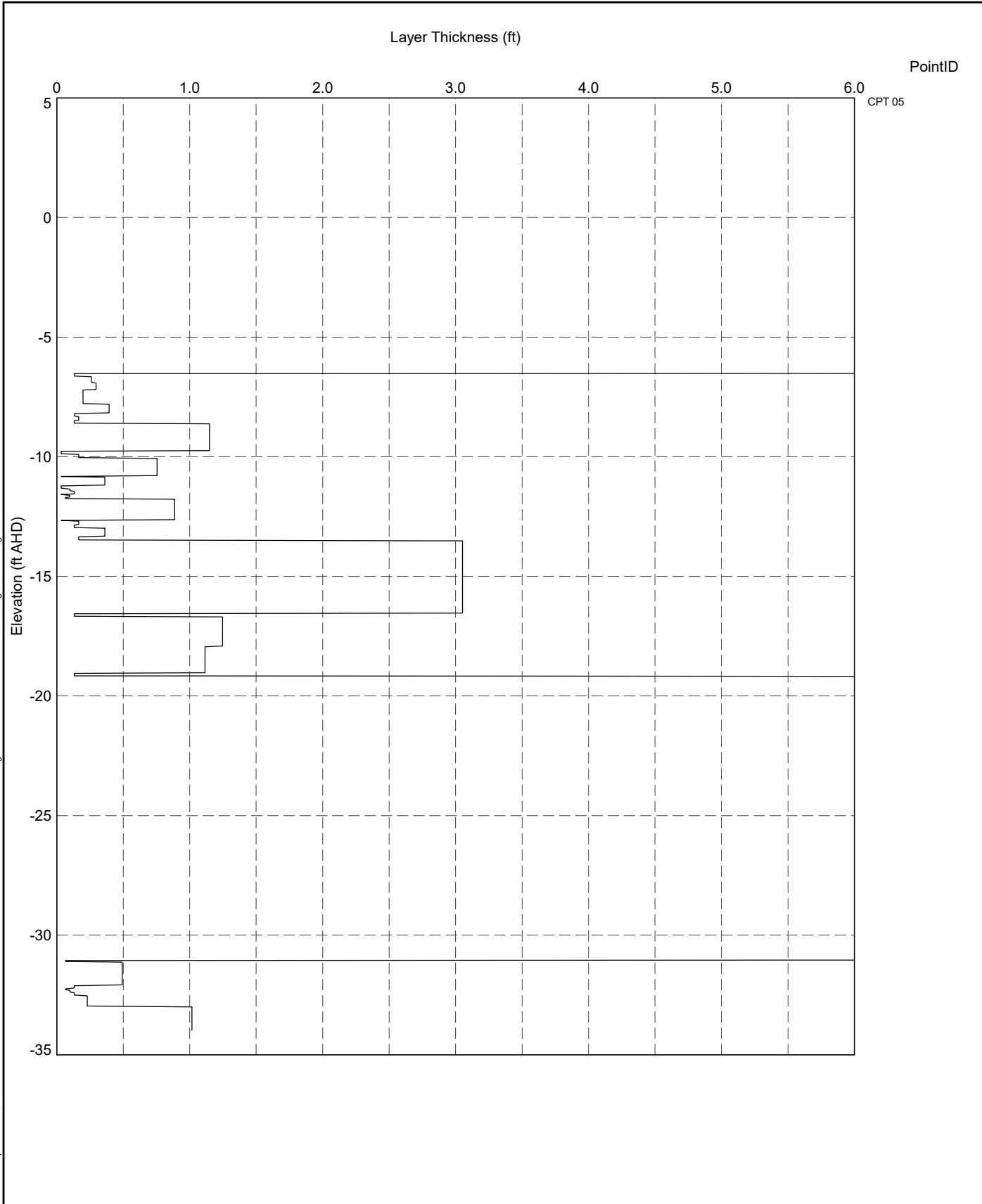
DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	184




DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.LIQ.LAYER.THICKNESS.DEPTH.LET.P.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <-DrawingFiles> 1/2/2021 20:31:10.01:00.11.Datgel.CPT.Tool.gjINT.Add-In

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Liq Layer Thickness versus Depth</p>	<p>DRAWN Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>CHECKED Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>SCALE Not To Scale</p>		<p>Let</p>
		<p>PROJECT No 4.05.0</p>	<p>FIGURE No 185</p>	

DATGEL\CPT\_TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT\_LIQ\_LAYER\_THICKNESS\_RL\_LETP\_DATGEL\CPT\_TOOL\_DGD\_4.05.0\EN\GPI-<DrawingFile>-> 1/2/2021 20:31:10.01.00.11 Datgel\CPT\_Tool\gINT\_A44-in



PointID  
CPT 05

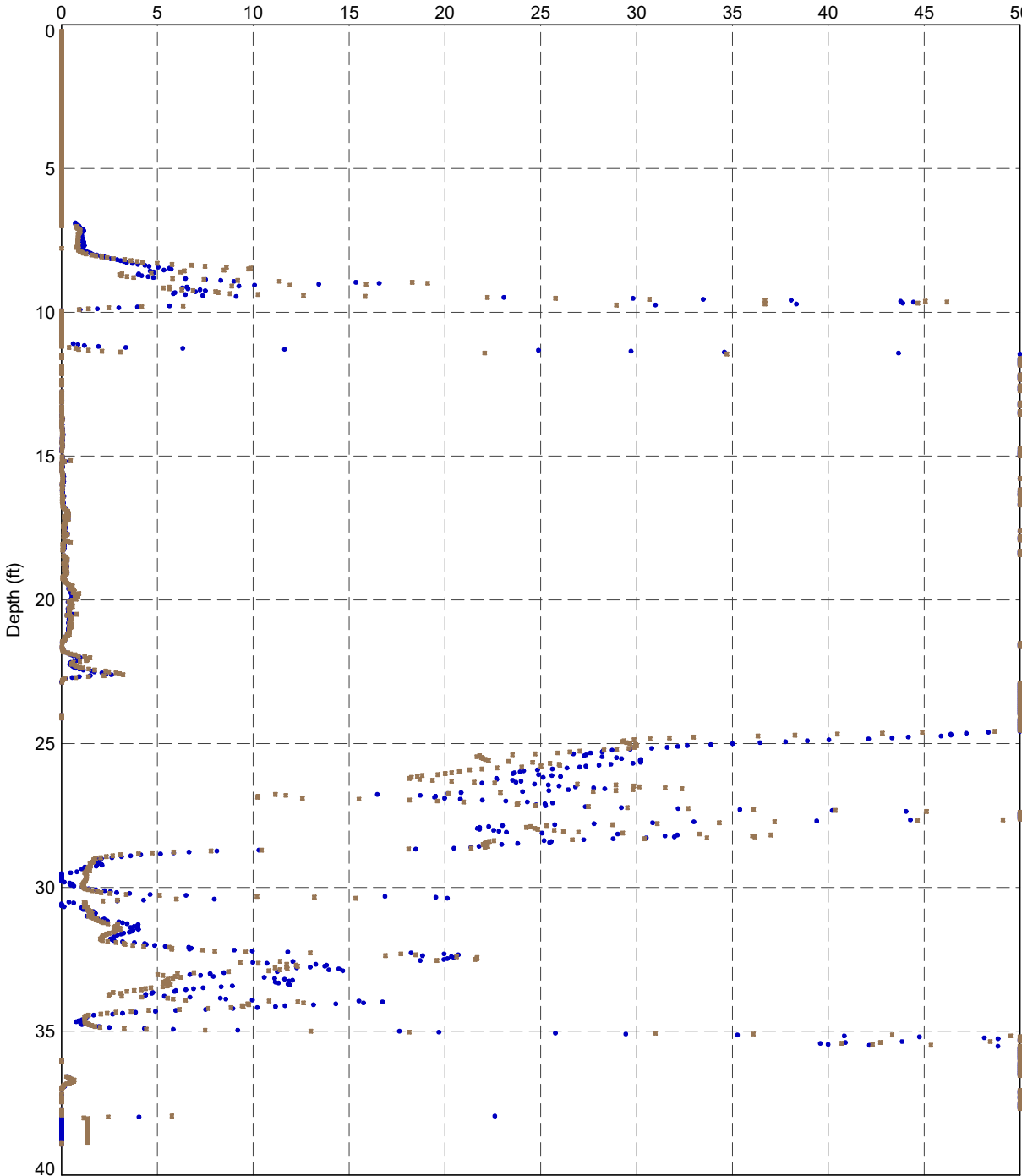
 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p style="text-align: center;">Client 1 Engineer 1 Somewhere CPT Tool Project</p> <p style="text-align: center;">Liq Layer Thickness versus Elevation</p>	<p>DRAWN <b>Datgel</b></p>	<p>DATE <b>1/2/2021</b></p>	
		<p>CHECKED <b>Datgel</b></p>	<p>DATE <b>1/2/2021</b></p>	
		<p>SCALE <b>Not To Scale</b></p>		<p>Let</p>
		<p>PROJECT No <b>4.05.0</b></p>	<p>FIGURE No <b>186</b></p>	



Maximum Shear Strain,  $\gamma_{max}$  (%)

PointID

CPT 05



Method:

- Idriss & Boulanger (2008)
- Zhang et al. (2004)

DATGEL\CPT\_TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT\_LIQ\_MAXIMUM\_SHEAR\_STRAIN\_DEPTH.LETP.DATGEL\CPT\_TOOL\_DGD\_4.05.0.EN.GPJ <-DrawingFile> 1/2/2021 20:32 10.01.00.11 Datgel CPT Tool.gINT\_Add.in



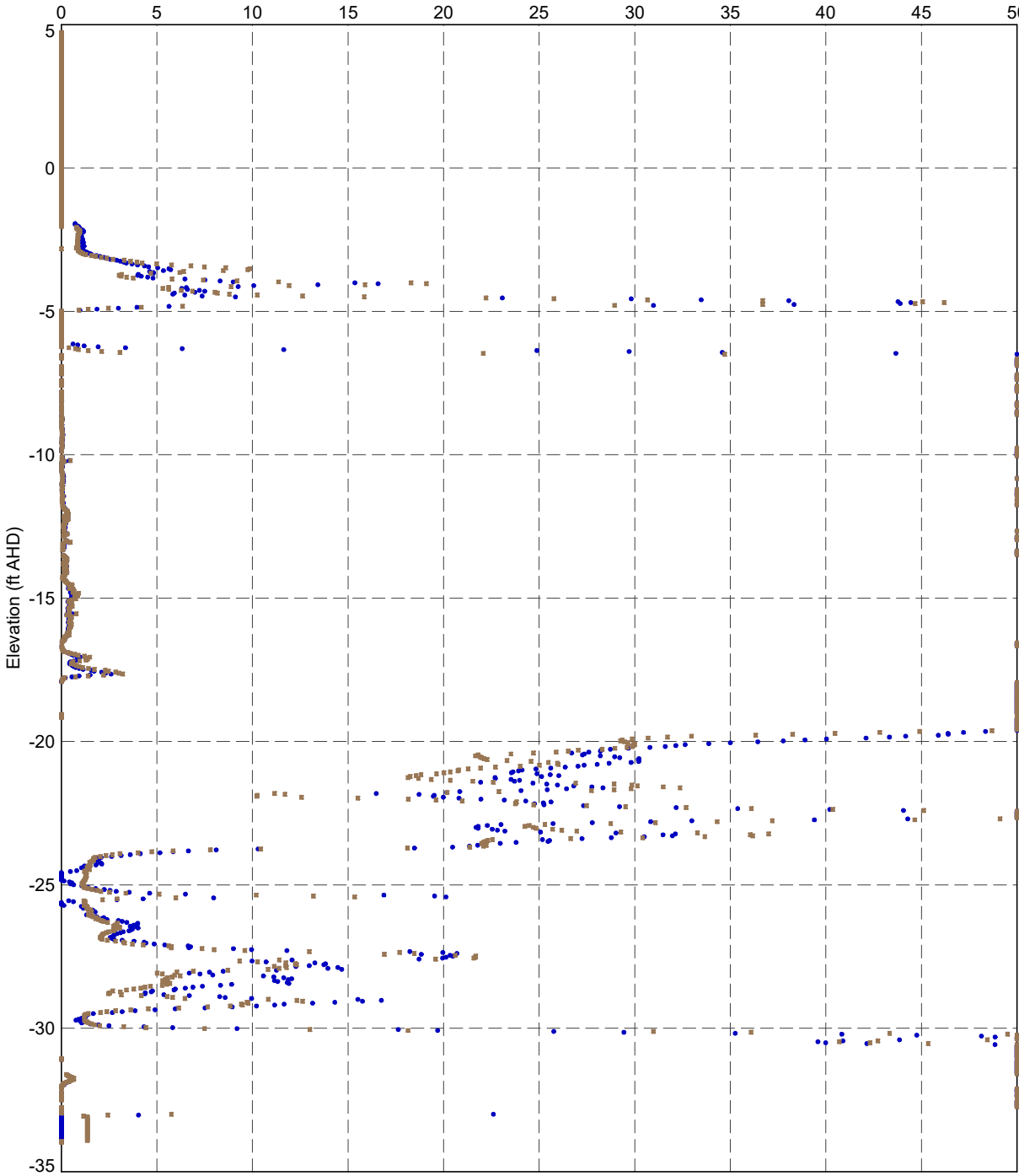
TITLE  
 Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Maximum Shear Strain versus Depth

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	187

Maximum Shear Strain,  $\gamma_{max}$  (%)

PointID

CPT 05



Method:  
 ● Idriss & Boulanger (2008)  
 ■ Zhang et al. (2004)

DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.LIQ.MAXIMUM.SHEAR.STRAIN.RL.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <<DrawingFiles>> 1/2/2021 20:33 10.01.00.11.Datgel.CPT.Tool.gINT.Add-h



TITLE  
 Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Maximum Shear Strain versus Elevation

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	188

Normalised Shear Wave Velocity (ft/s)


PointID

CPT 05



Method:  
● Kayen et al. (2013)

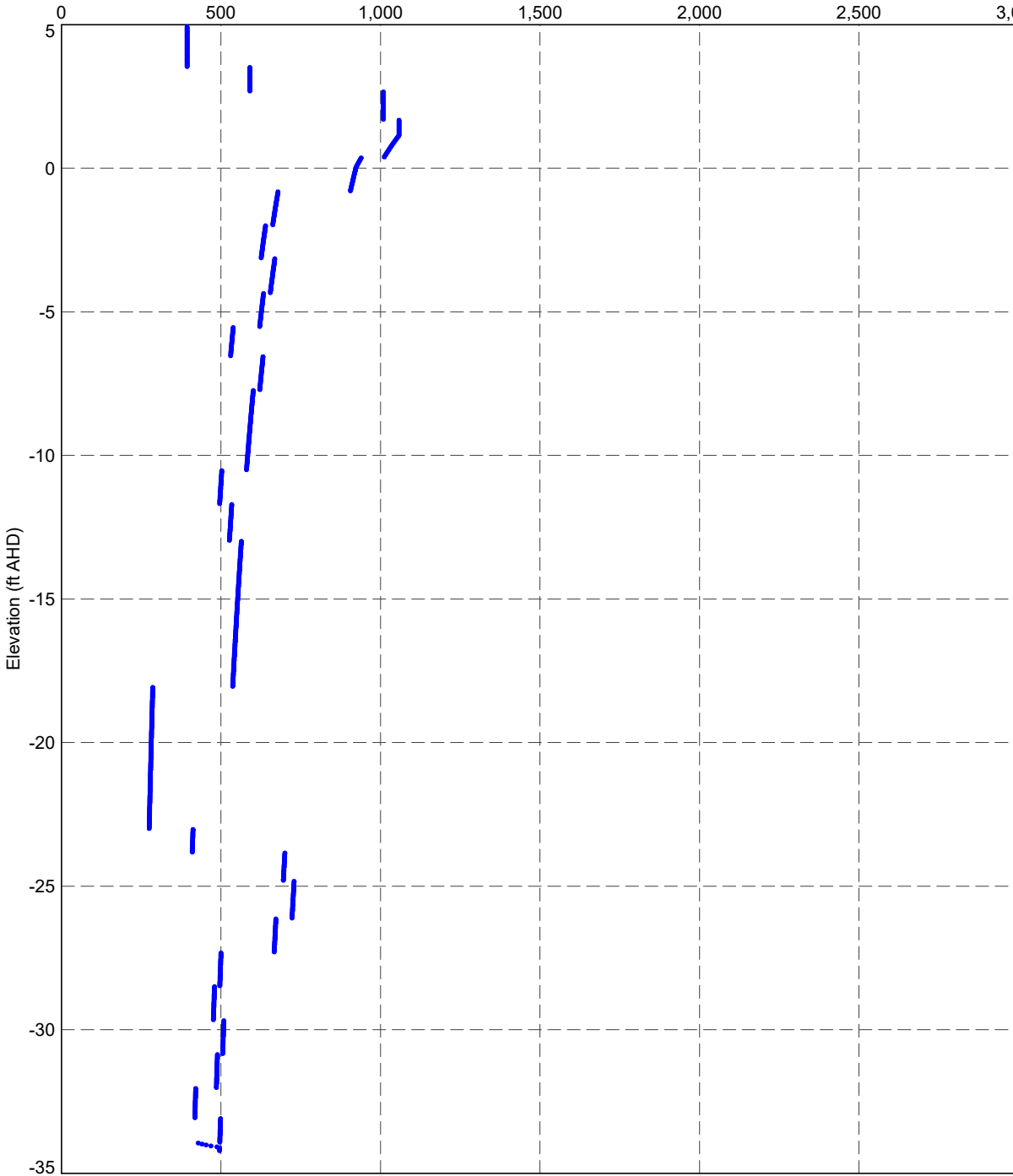
DATGEL\CPT TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT LIQ NORM SHEAR WAVE VEL DEPTH LETP DATGEL\CPT TOOL\_DGD\_4.05.0 EN.GPJ <<DrawingFiles>> 1/2/2021 20:33 10.01.00.11 Datgel CPT Tool.gNT Add-In

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project</p> <p>Normalised Shear Wave Velocity versus Depth</p>	<p>DRAWN</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>	
		<p>CHECKED</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>	
		<p>SCALE</p> <p>Not To Scale</p>		<p>Let</p>
		<p>PROJECT No</p> <p>4.05.0</p>	<p>FIGURE No</p> <p>189</p>	

Normalised Shear Wave Velocity (ft/s)


PointID

CPT 05



Method:  
● Kayen et al. (2013)

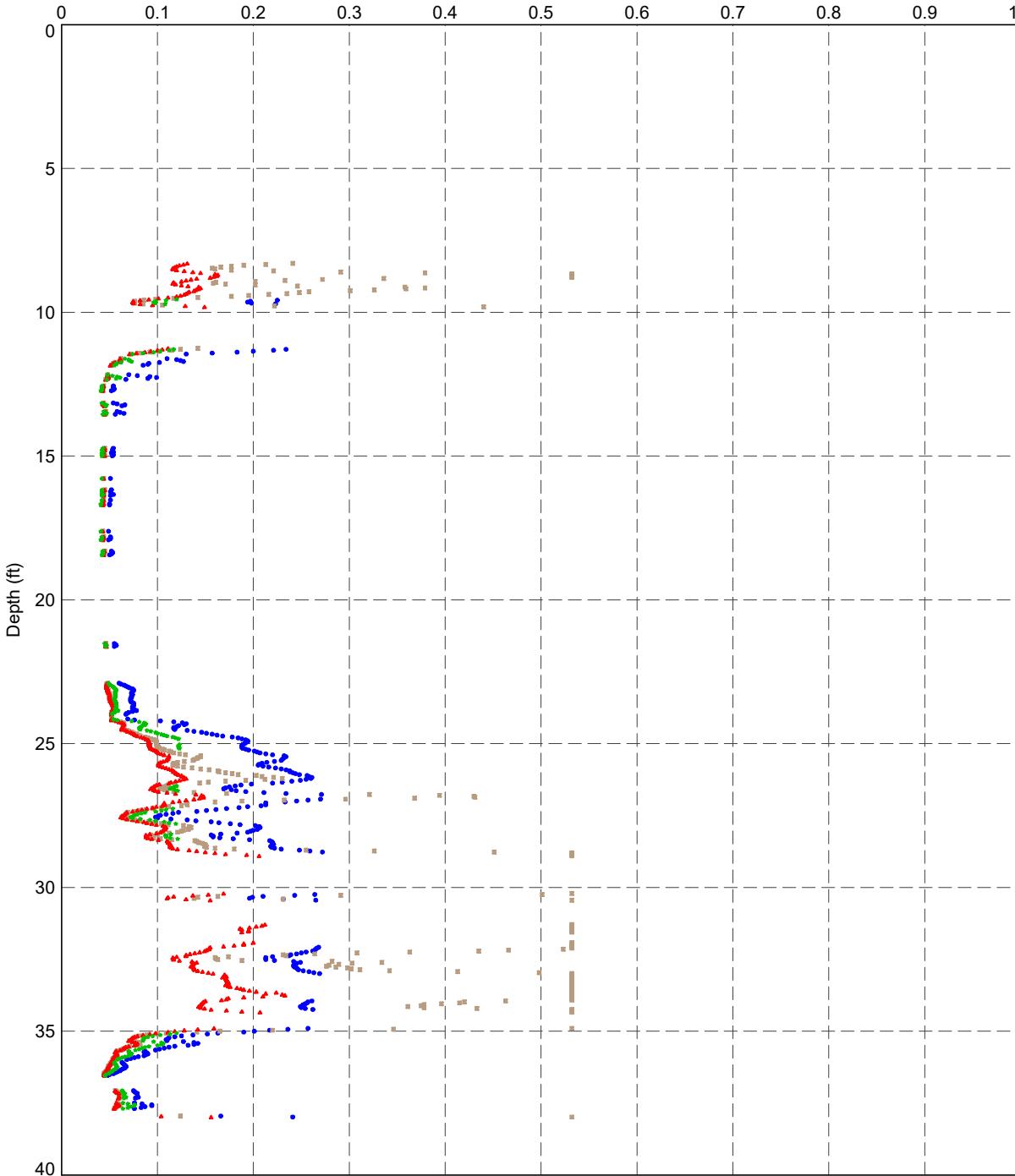
DATGEL\CPT TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT\_LIQ\_NORM\_SHEAR\_WAVE\_VEL\RL\LETP.DATGEL\_CPT\_TOOL\_DGD\_4.05.0.EN.GPJ <-DrawingFiles> 1/2/2021 20:33:10.01.00.11.Datgel\CPT\_Tool.gINT\_Add-In

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project</p> <p>Normalised Shear Wave Velocity vs Elevation</p>	<p>DRAWN Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>CHECKED Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>SCALE Not To Scale</p>		<p>Let</p>
		<p>PROJECT No 4.05.0</p>	<p>FIGURE No 190</p>	

Normalised Residual Shear Strength, Norm.  $s_r$

PointID


CPT 05



Method:

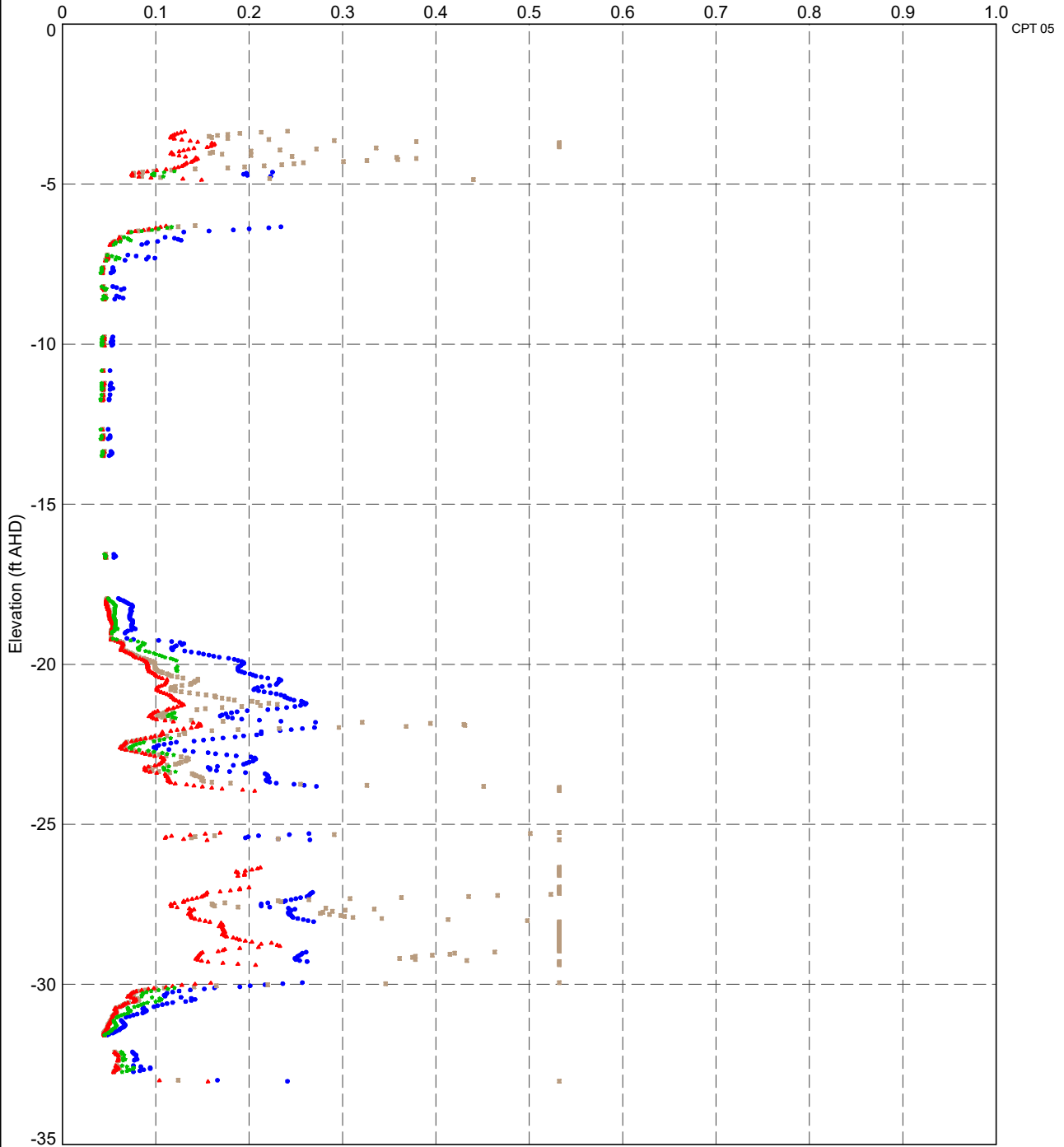
- Jefferies & Been (2006)
- Idriss and Boulanger (2008)
- ▲ Idriss and Boulanger (2008)
- ★ Olson and Stark (2002)

DATGEL\CPT TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT.LIQ.NORM.SR.DEPTH.LETP.DATGEL\CPT TOOL\_DGD\_4.05.0\EN.GPJ\_<<Drawing File>>\_1/2/2021 20:34:10.01.00.11 Datgel.CPT.Tool.gINT Add-In

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Normalised <math>S_r</math> versus Depth</p>	DRAWN	Datgel	DATE	1/2/2021	
		CHECKED	Datgel	DATE	1/2/2021	
		SCALE	Not To Scale			Let
		PROJECT No	4.05.0	FIGURE No	191	

Normalised Residual Shear Strength, Norm.  $s_r$

PointID



Method:

- Jefferies & Been (2006)
- Idriss and Boulanger (2008)
- ▲ Idriss and Boulanger (2008)
- ★ Olson and Stark (2002)

DATGEL\CPT\_TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT\_LIQ\_NORM\_Sr\_RL\_LEIP.DATGEL\CPT\_TOOL\_DGD\_4.05.0\EN.GPJ <<DrawingFile>> 1/2/2021 20:35:10.01.00.11.Datgel\CPT\_Tool.gINT\_Add-In



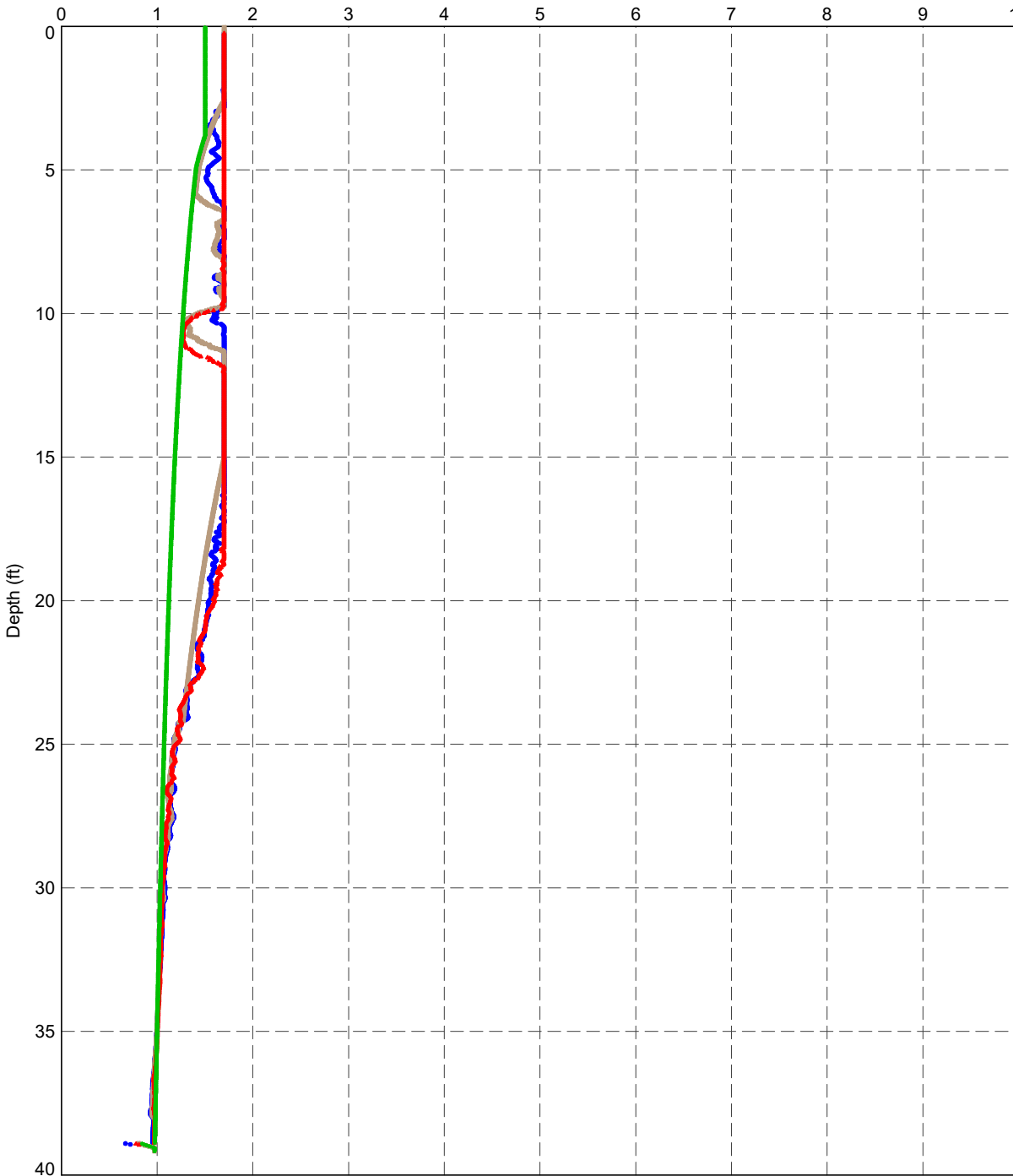
TITLE  
 Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Normalised  $S_r$  versus Depth

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	192

Overburden Correction Factor, CQ


PointID

CPT 05



- Method:
- Roberson & Wride, 1998, and NCEER 2001
  - Idriss & Boulanger 2008
  - ▲ Moss et al. (2006)
  - ★ Kayen et al. (2013)

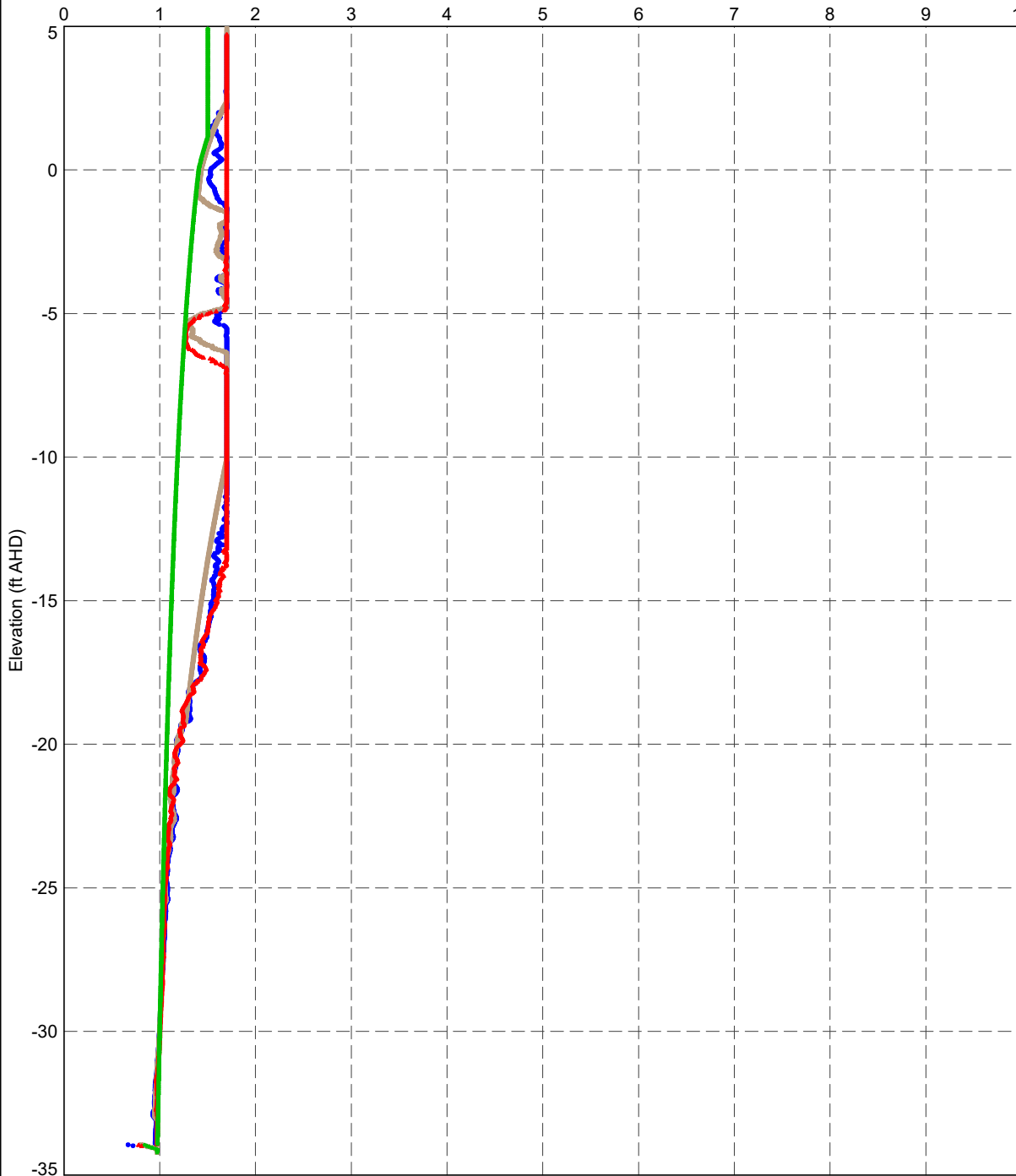
DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.LIQ.OVERBURDEN.CORR.FACTOR.DPTH.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <-DrawingFile> 1/2/2021 20:36:10.01:00.11.Datgel.CPT.Tool.gINT.Add.h

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project</p> <p>Overburden Correction Factor versus Depth</p>	DRAWN	Datgel	DATE	1/2/2021	
		CHECKED	Datgel	DATE	1/2/2021	
		SCALE	Not To Scale			Let
		PROJECT No	4.05.0	FIGURE No	193	

Overburden Correction Factor, CQ

PointID

CPT 05



- Method:
- Roberson & Wride, 1998, and NCEER 2001
  - Idriss & Boulanger 2008
  - ▲ Moss et al. (2006)
  - ★ Kayen et al. (2013)

Datgel CPT Tool DGD 4.05.0 LIB.GLB Graph CPT LIQ OVERBURDEN CORR FACTOR RL LETP DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <<DrawingFile>> 1/2/2021 20:37:10.01.00.11.Datgel CPT Tool.gINT.Add-In

TITLE

Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project

Overburden Correction Factor versus Elevation

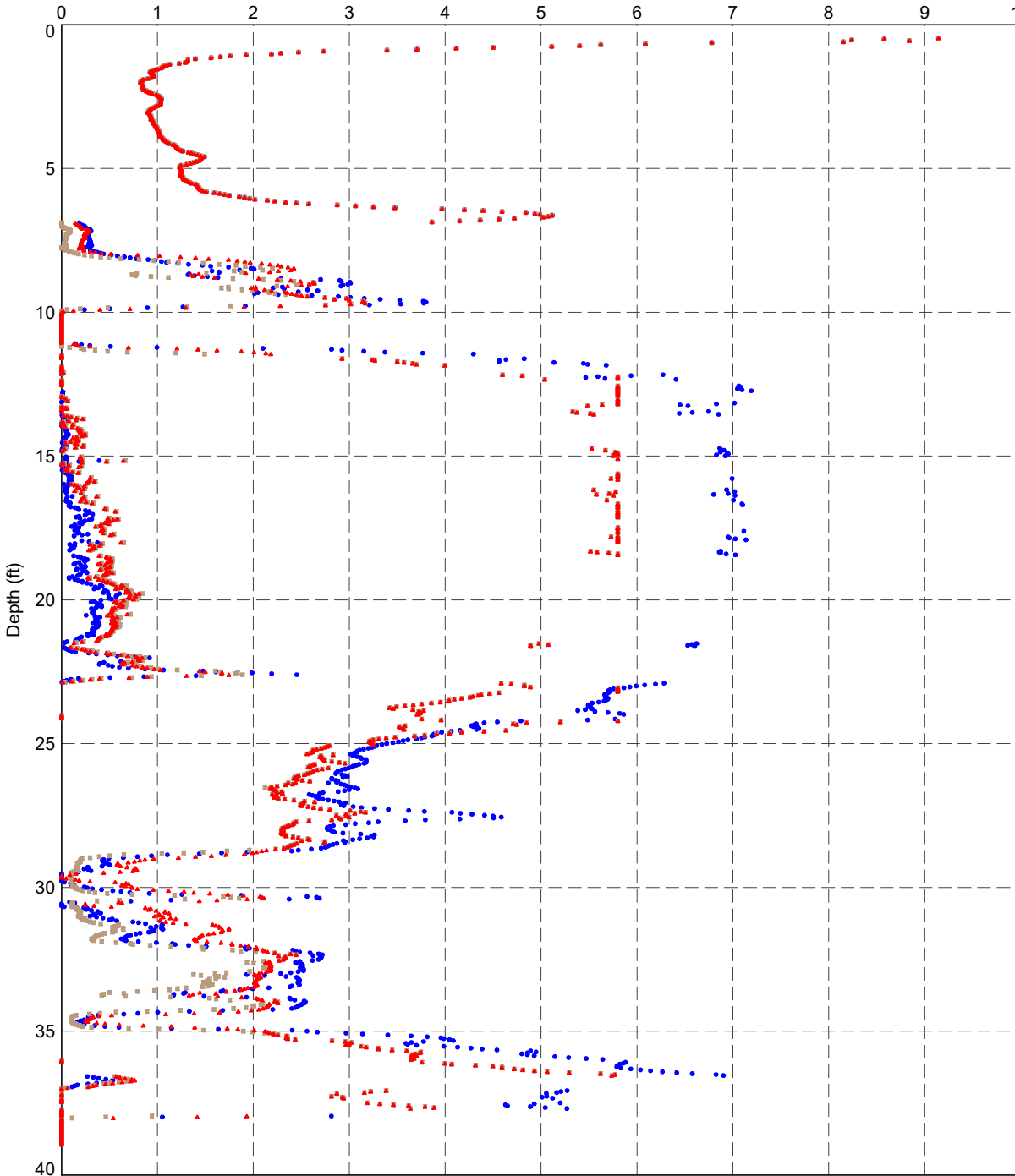
DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	194



Post Liquefaction Volumetric Strain,  $\epsilon_v$  (%)

PointID

CPT 05



- Method:
- Ishihara & Yoshimine (1992)
  - Zhang et al. (2002)
  - ▲ DBH - Zhang et al. (2002)

DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.LIQ.POST.VOL.STRAIN.DEPTH.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPI.<-DrawingFile>> 1/2/2021 20:38 10.01.00.11.Datgel.CPT.Tool.GINT.Add-In

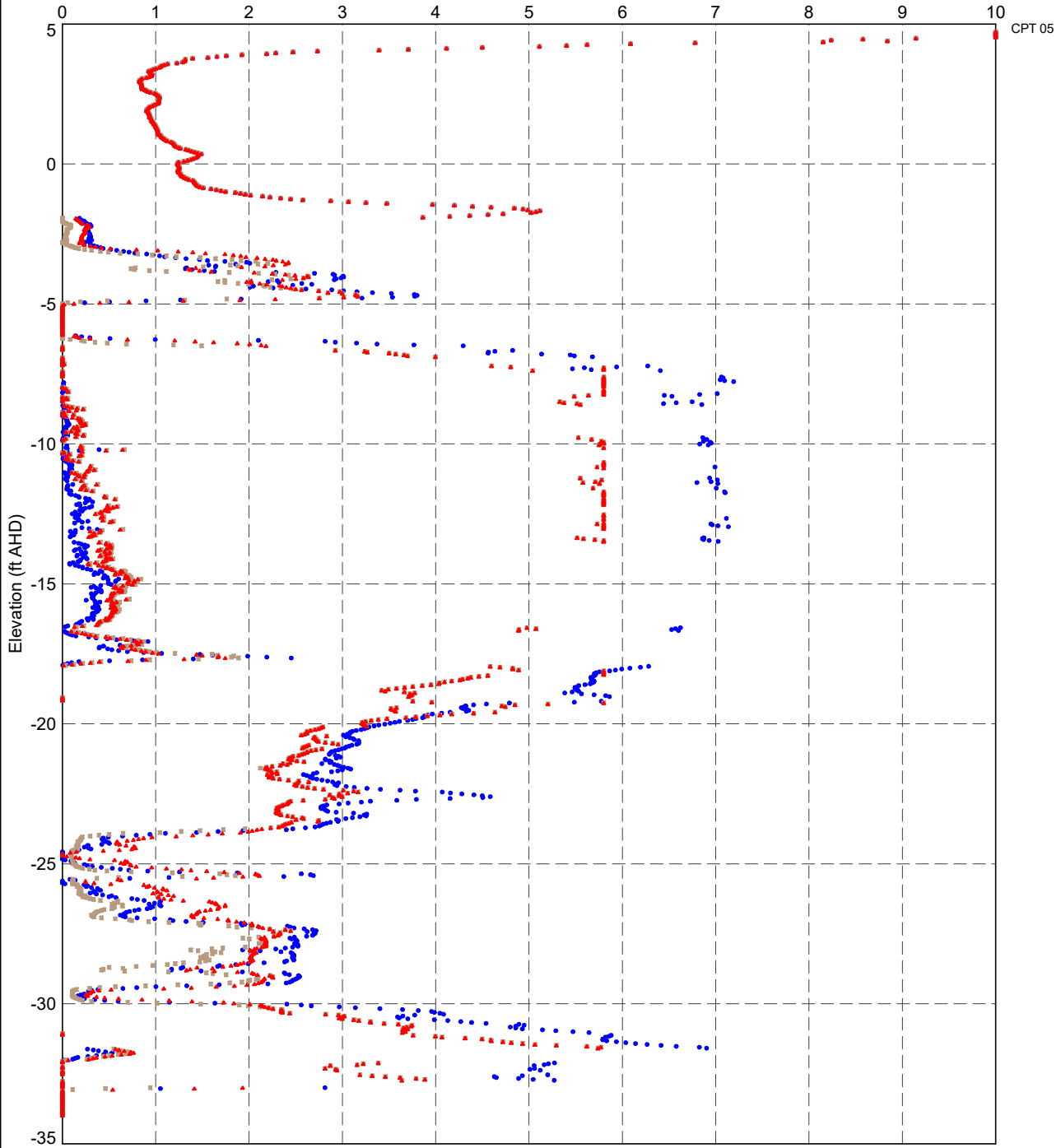


TITLE  
 Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Post Liquefaction Volumetric Strain versus Depth

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	195

Post Liquefaction Volumetric Strain,  $\epsilon_v$  (%)

PointID



- Method:
- Ishihara & Yoshimine (1992)
  - Zhang et al. (2002)
  - ▲ DBH - Zhang et al. (2002)

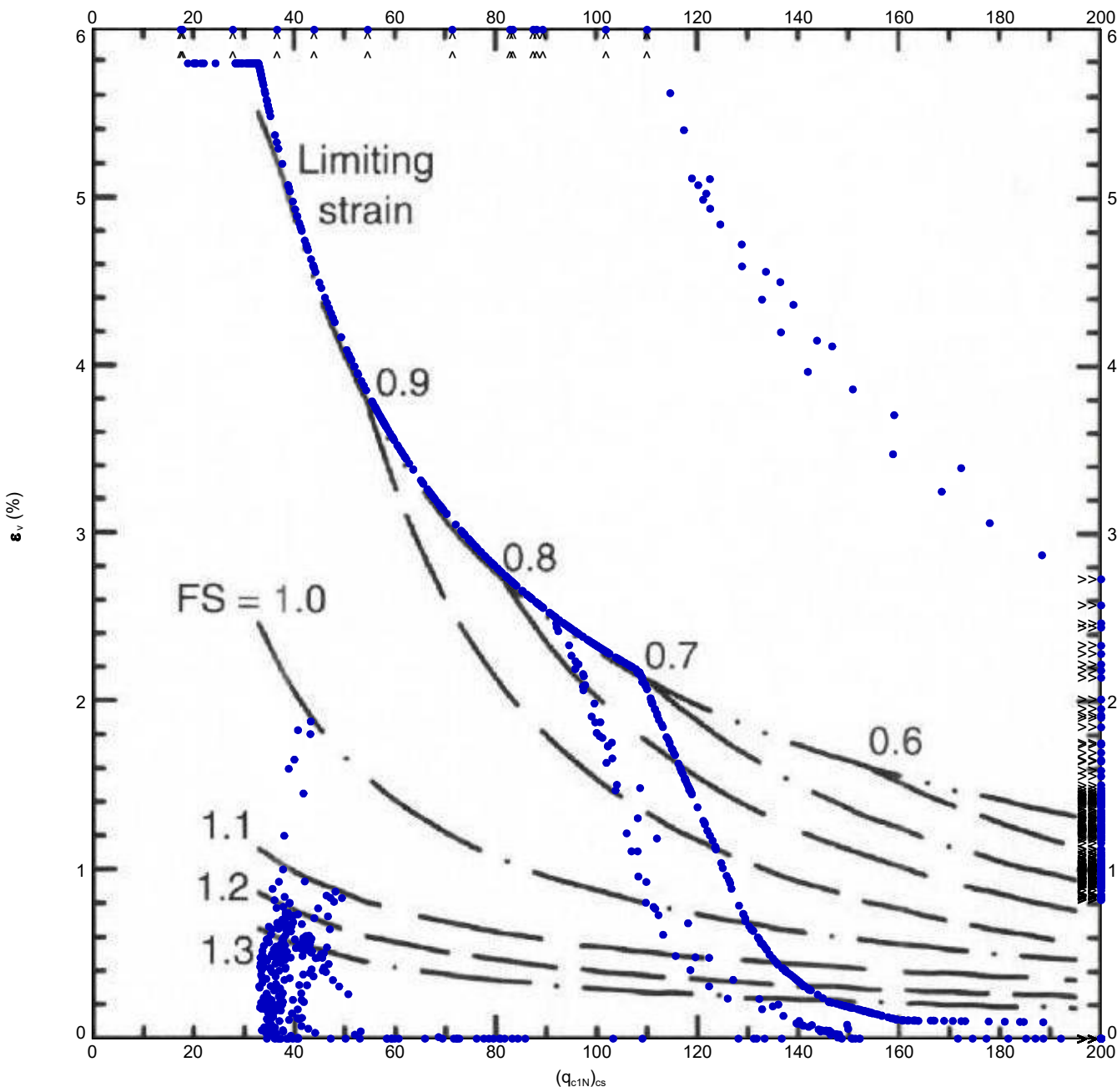
DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.LIQ.POST.VOL.STRAIN.RL.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <-DrawingFiles> 1/2/2021 20:39:10.01:00.11.Datgel.CPT.Tool.gJNT.Add-In


TITLE

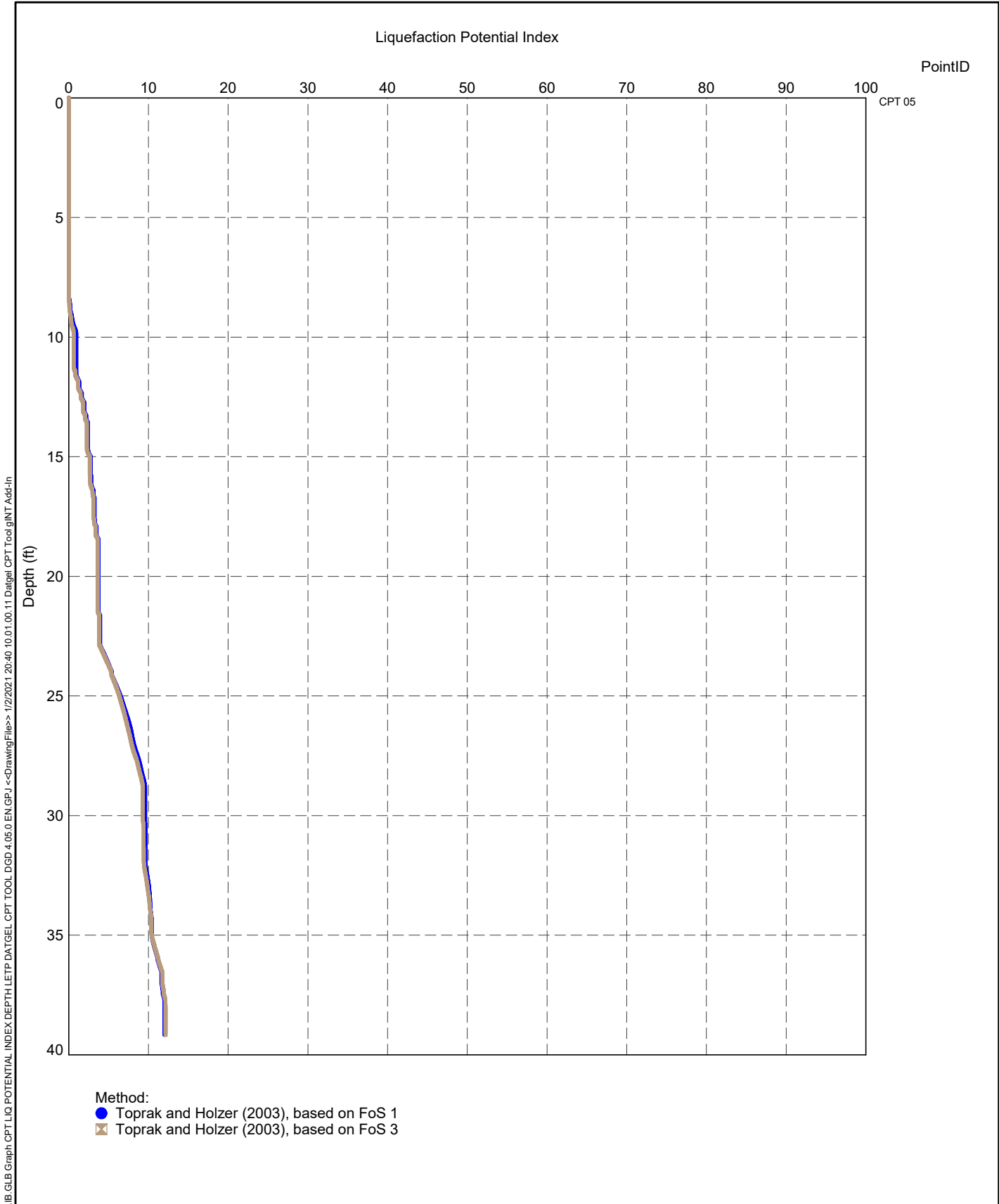
Client 1  
Engineer 1  
Somewhere  
CPT Tool Project  
Post Liquefaction Volumetric Strain versus  
Elevation


DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	196

DATGEL CPT TOOL\_DGD\_4.05.0.LIB.GLB Graph CPT LIQ POST VOL STRAIN ZHANG LETP DATGEL\_CPT\_TOOL\_DGD\_4.05.0.EN.GPJ <-DrawingFiles> 1/2/2021\_20:39 10.01.00.11 Datgel CPT Tool.gINT.Add-In



 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	TITLE	Client 1 Engineer 1 Somewhere CPT Tool Project	DRAWN Datgel	DATE 1/2/2021
		Zhang et al. (2002) - $\epsilon_v$ vs. $(q_{c1N})_{cs}$ - CPT 05	CHECKED Datgel	DATE 1/2/2021
			SCALE Not To Scale	Let
			PROJECT No 4.05.0	FIGURE No 197



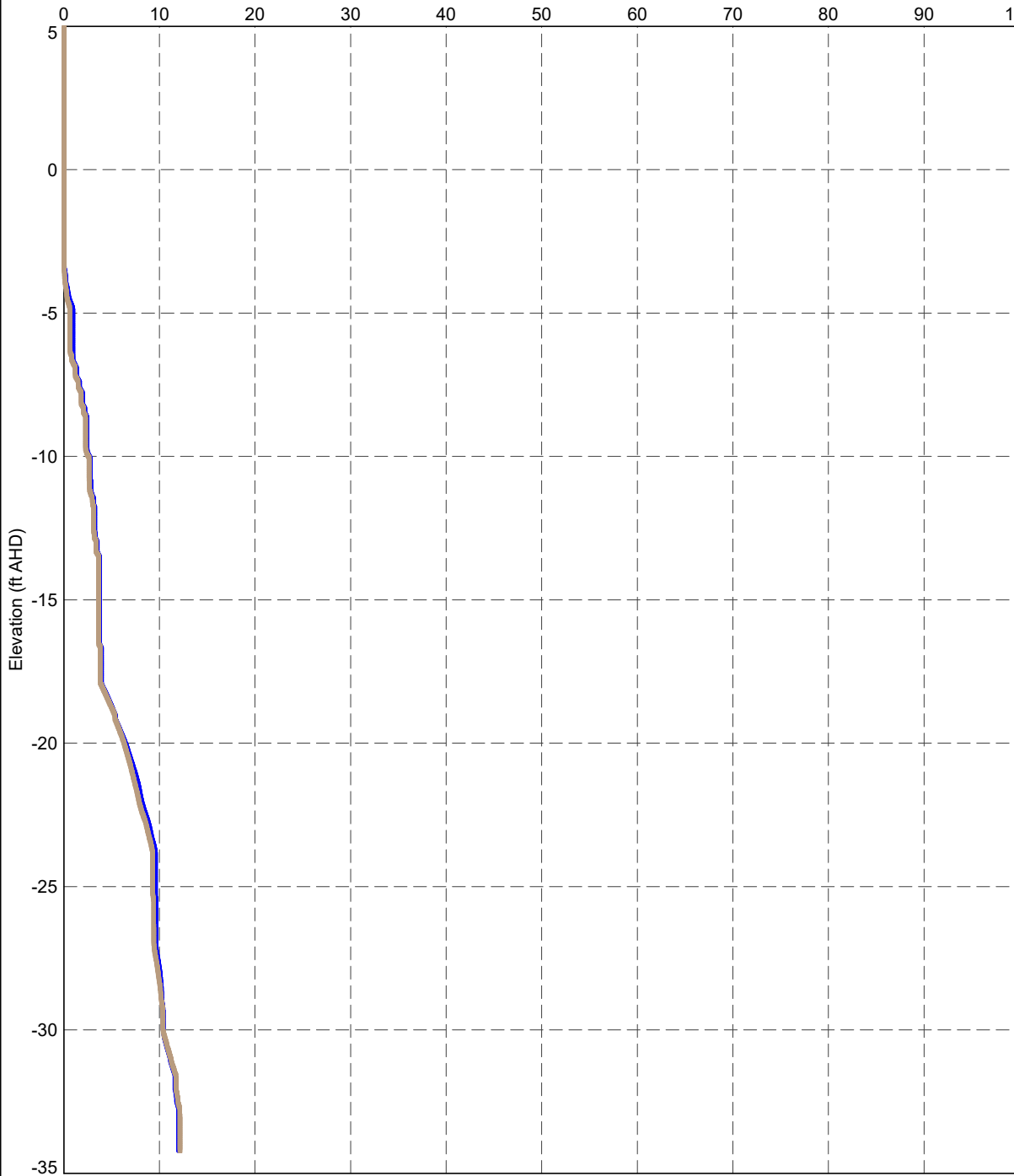
 <b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	TITLE Client 1 Engineer 1 Somewhere CPT Tool Project Liquefaction Potential Index versus Depth	DRAWN Datgel	DATE 1/2/2021	
	CHECKED Datgel		DATE 1/2/2021	
	SCALE Not To Scale			Let
	PROJECT No 4.05.0		FIGURE No 198	

DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.LIQ.POTENTIAL.INDEX.DEPTH.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ.<-DrawingFiles> 1/2/2021.20:40.10.01.00.11.Datgel.CPT.Tool.gINT.Add.in

Liquefaction Potential Index

PointID

CPT 05



Method:

- Toprak and Holzer (2003), based on FoS 1
- Toprak and Holzer (2003), based on FoS 3

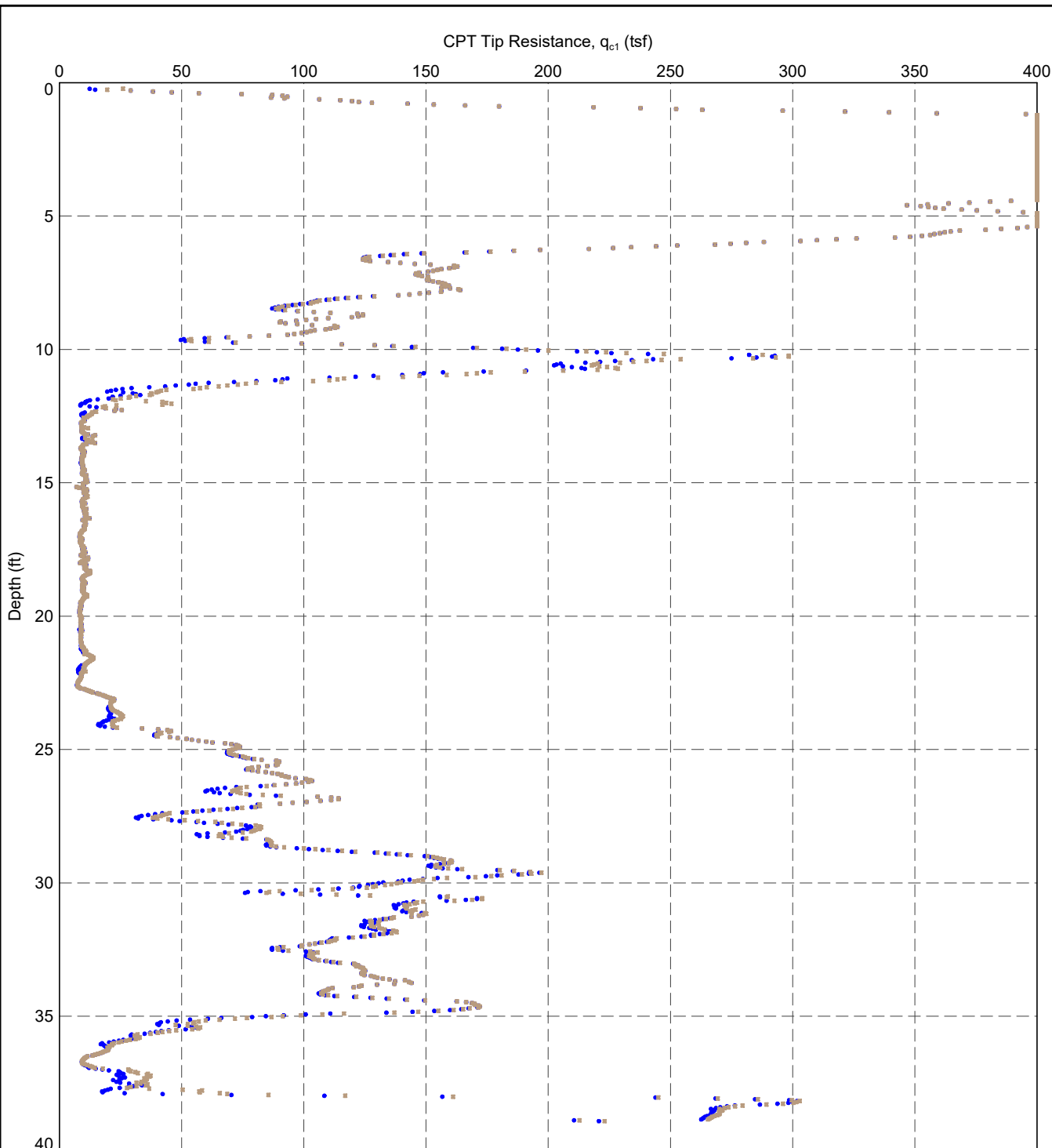
DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.LIQ.POTENTIAL.INDEX.RL.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <-DrawingFiles> 1/2/2021 20:41:10.01.00.11.Datgel.CPT.Tool.gINT.Add-In




TITLE  
 Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Liquefaction Potential Index versus Elevation

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	199

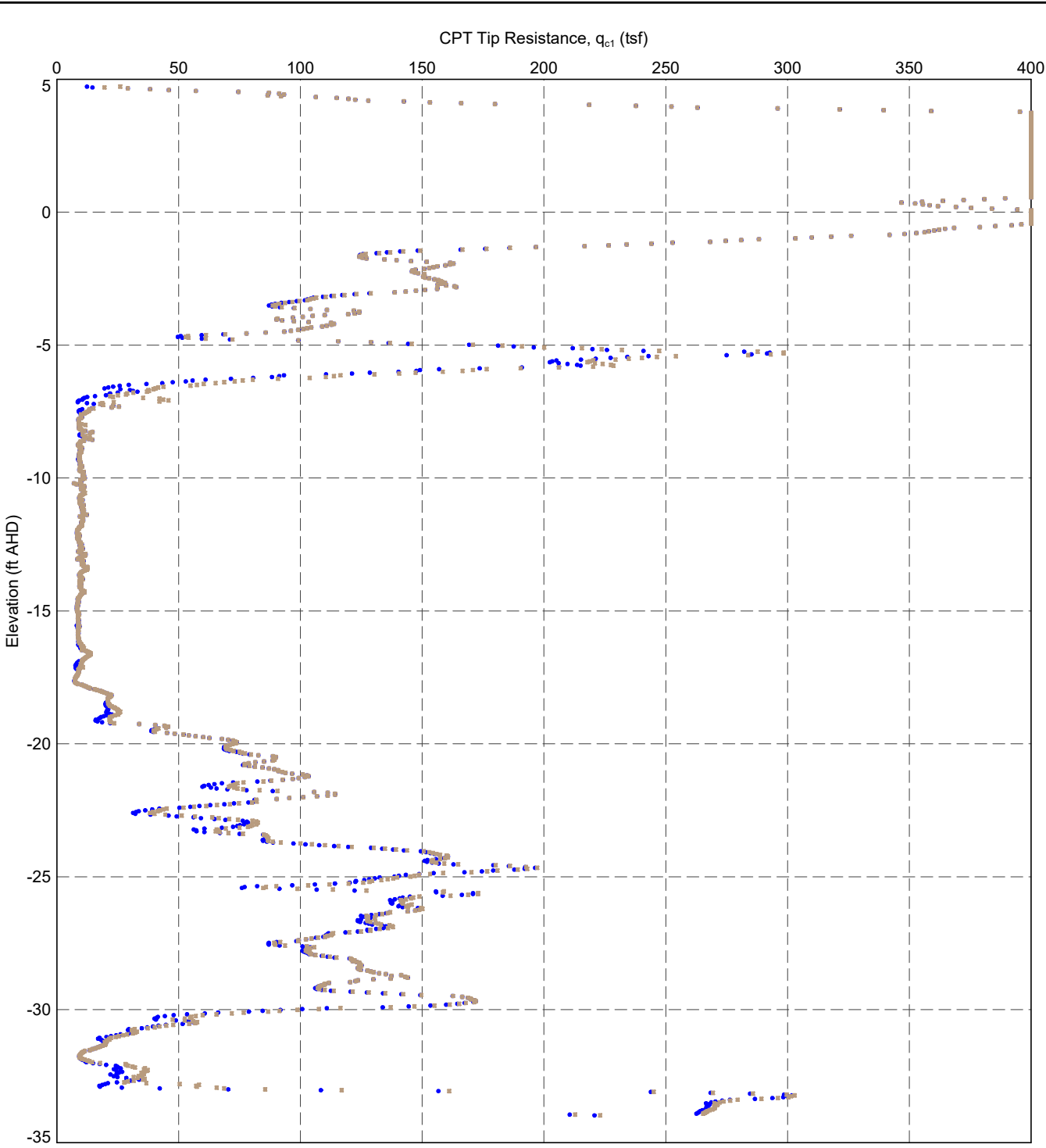
DATGEL\CPT\_TOOL\_DGD\_4.05.0\LIB\_GLB\_Graph\CPT\_LIQ\_OC1\OC1\MOD\_DEPTH\LETP\_DATGEL\CPT\_TOOL\_DGD\_4.05.0\EN\_GPJ <-DrawingFiles> 1/2/2021\_20:41:10:01:00:11\Datgel\CPT\_Tool.gINT Add-In




Legend:  
 ● CPT Tip Resistance,  $q_{c1}$  (tsf)  
 ■ Modified CPT Tip Resistance,  $q_{c1(mod)}$  (tsf)

 <b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	TITLE	Client 1 Engineer 1 Somewhere CPT Tool Project Liquefaction $q_{c1}$ vs Depth - CPT 05	DRAWN Datgel	DATE 1/2/2021
			CHECKED Datgel	DATE 1/2/2021
			SCALE Not To Scale	Let
			PROJECT No 4.05.0	FIGURE No 200

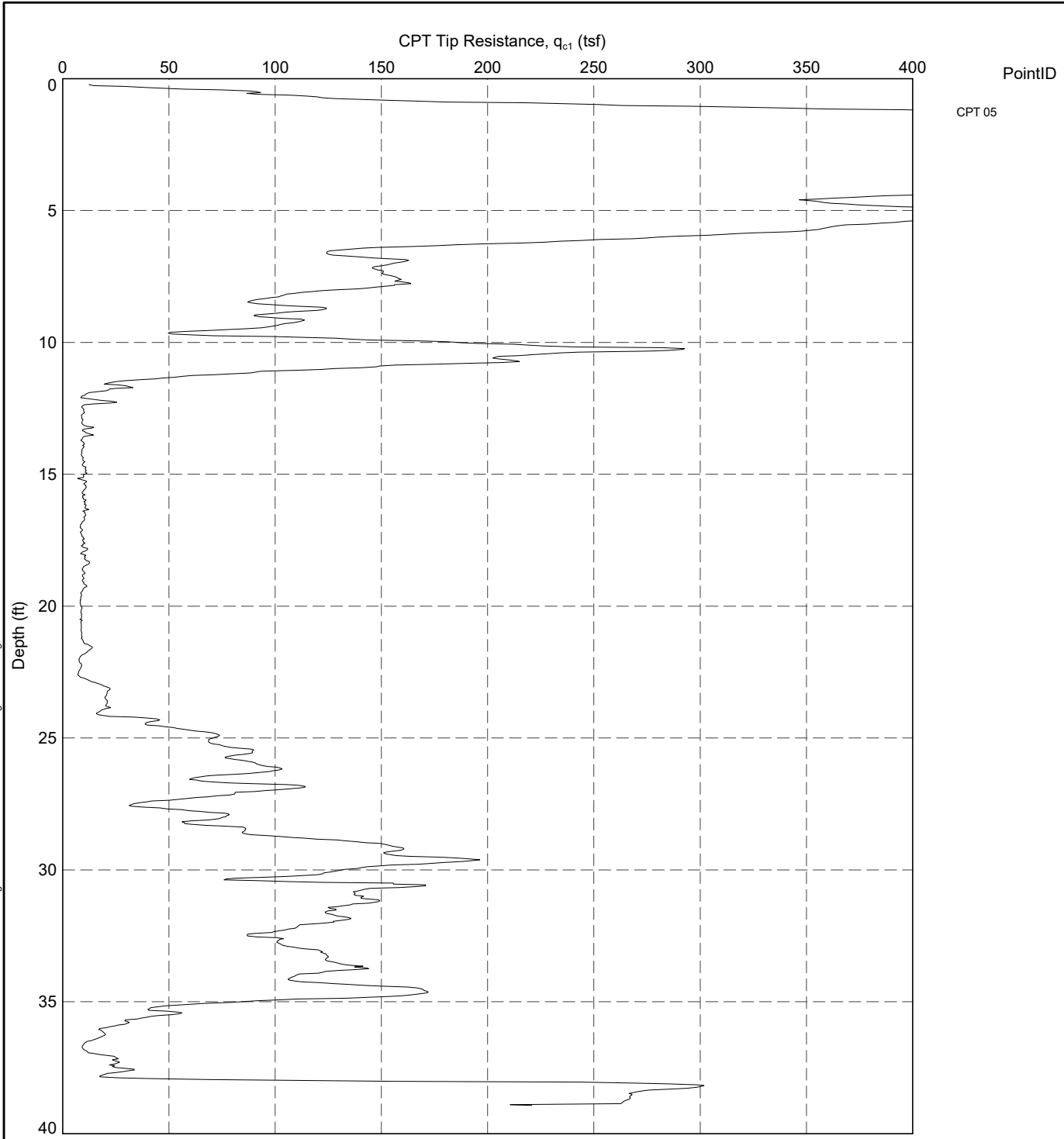
DATGEL CPT TOOL\_DGD\_4.05.0.LIB.GLB Graph CPT LIQ\_OC1 OC1MOD RL\_LETP DATGEL CPT TOOL\_DGD\_4.05.0 EN.GPJ <<DrawingFile>> 1/2/2021 20:42:10.01.00.11 Datgel.CPT.Tool.gINT.Addd-in




Legend:  
 ● CPT Tip Resistance,  $q_{c1}$  (tsf)  
 ■ Modified CPT Tip Resistance,  $q_{c1(mod)}$  (tsf)

 <b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	TITLE	Client 1 Engineer 1 Somewhere CPT Tool Project Liquefaction $q_{c1}$ vs Elevation - CPT 05	DRAWN Datgel	DATE 1/2/2021
			CHECKED Datgel	DATE 1/2/2021
			SCALE Not To Scale	Let
			PROJECT No 4.05.0	FIGURE No 201

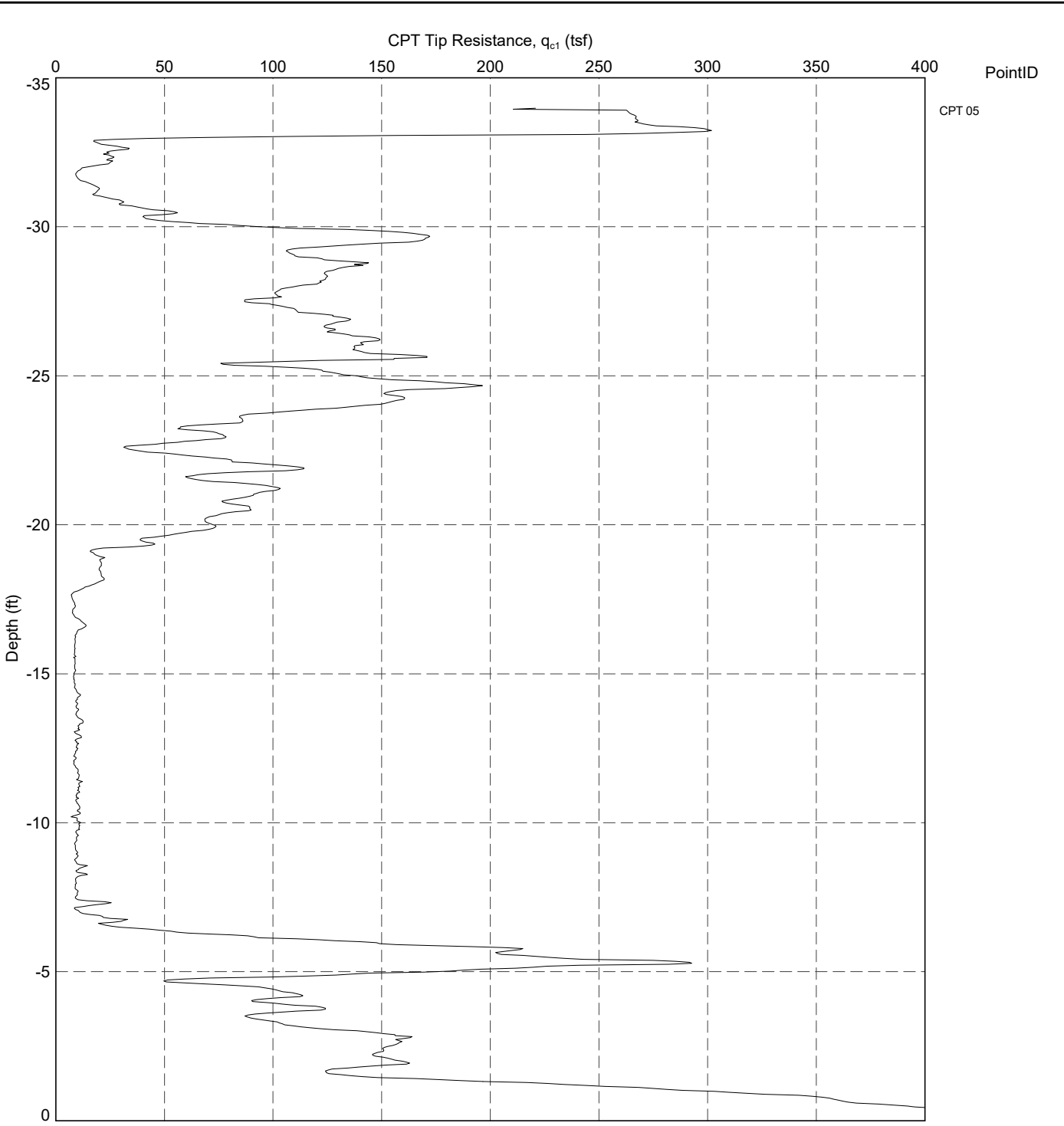
DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph CPT LIQ QC1 DEPTH LE TP.DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <<DrawingFiles>> 1/2/2021 20:42:10.01.00.11 Datgel CPT Tool gINT Add-In




 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Liquefaction <math>q_{c1}</math> vs Depth</p>	<p>DRAWN Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>CHECKED Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>SCALE Not To Scale</p>		<p>Let</p>
		<p>PROJECT No 4.05.0</p>	<p>FIGURE No 202</p>	

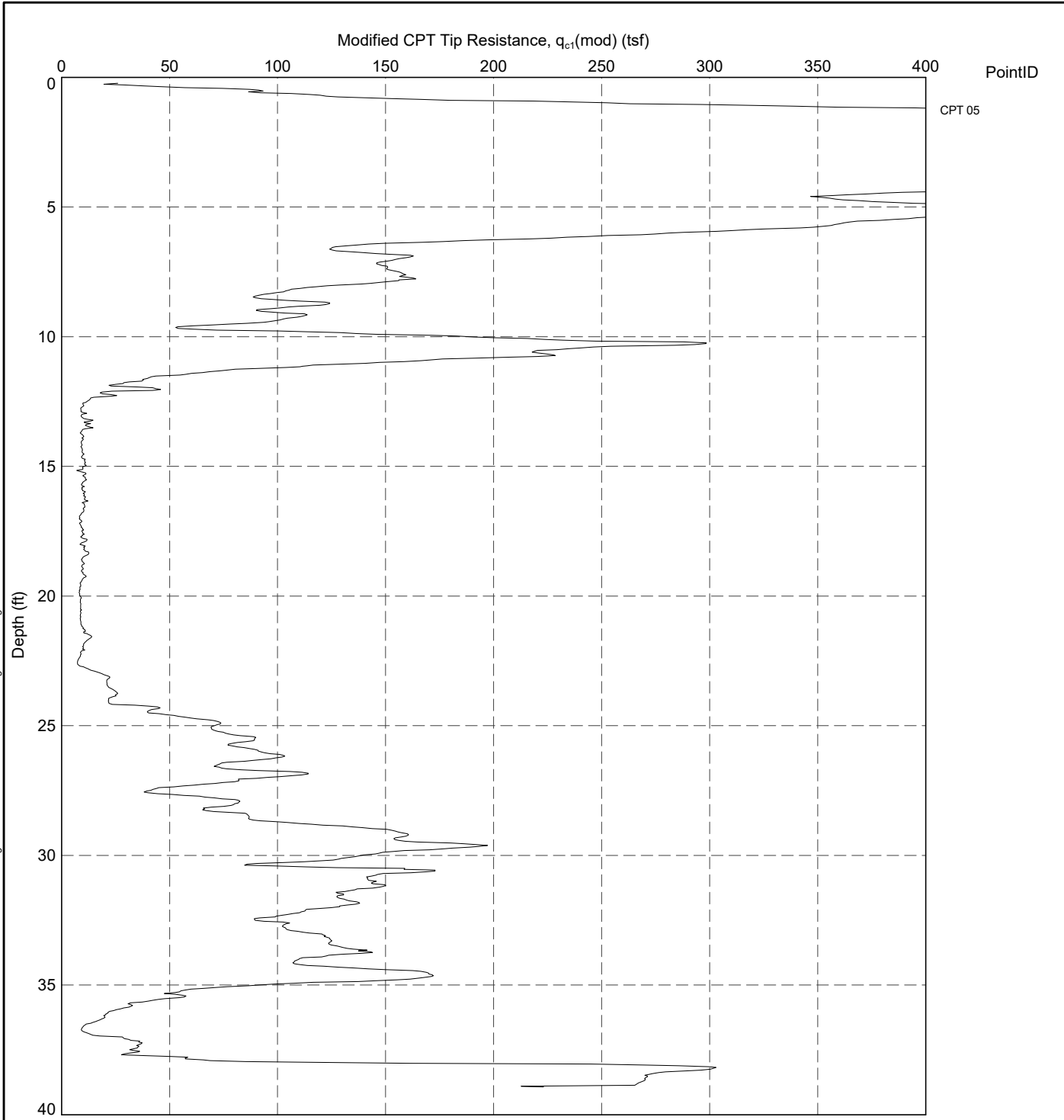



DATGEL CPT TOOL\_DGD\_4.05.0.LIB.GLB.Graph CPT LIQ\_OC1 RL LEIF DATGEL CPT TOOL\_DGD\_4.05.0.EN.GPJ <<DrawingFile>> 1/2/2021 20:42:10.01.00.1.1.Datgel CPT Tool.gINT Add-in



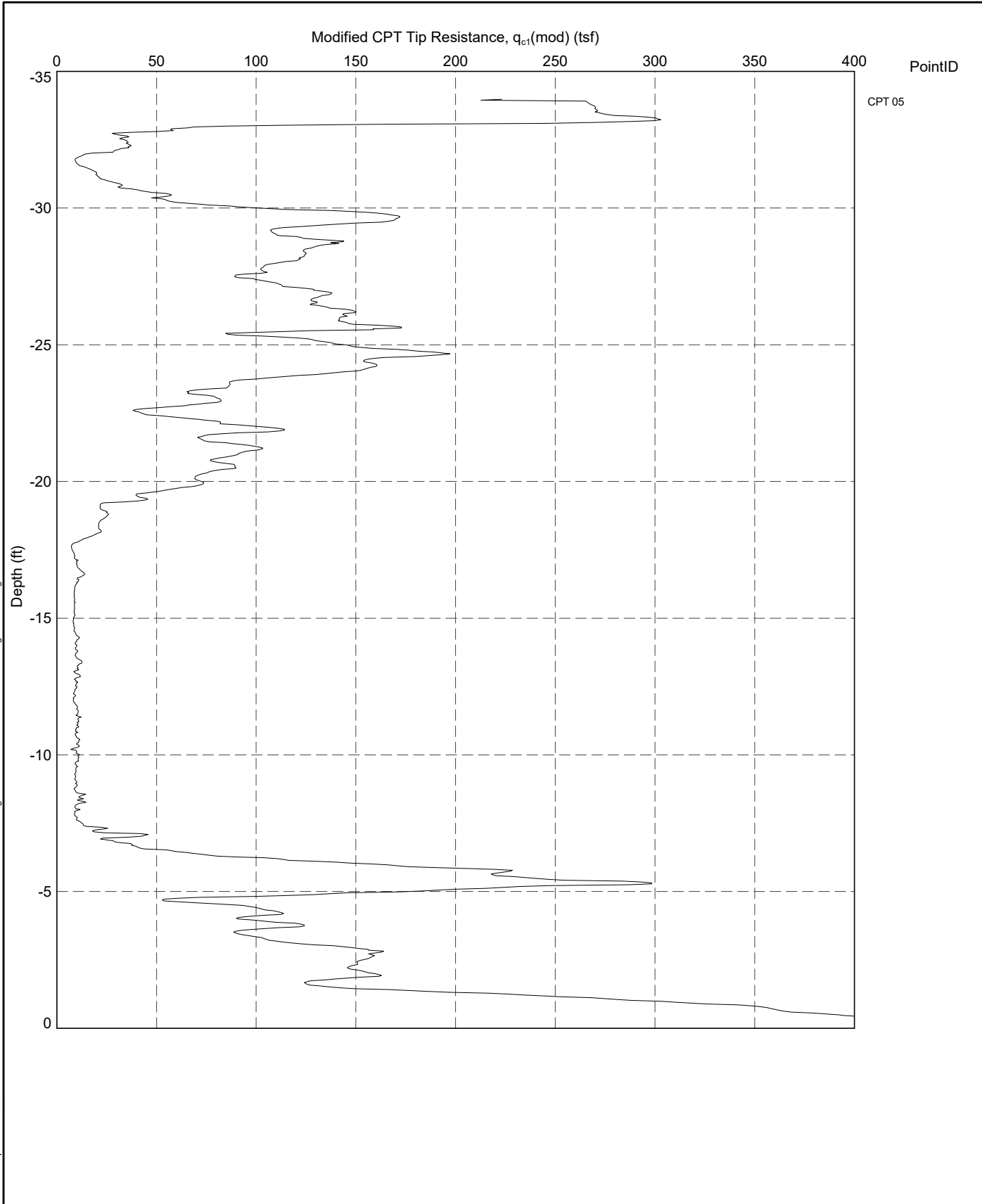
 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Liquefaction <math>q_{c1}</math> vs Elevation</p>	<p>DRAWN Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>CHECKED Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>SCALE Not To Scale</p>		<p>Let</p>
		<p>PROJECT No 4.05.0</p>	<p>FIGURE No 203</p>	


DATGEL CPT TOOL\_DGD\_4.05.0.LIB.GLB Graph CPT LIQ\_OC:MOD DEPTH LETP.DATGEL CPT TOOL\_DGD\_4.05.0.EN.GPJ <<DrawingFile>> 1/22/2021 20:42:10.01.00.11.Datgel CPT Tool.gjINT Add-In



 <b>Datgel</b> <small>DATA SOLUTIONS</small> <small>Geotechnics • Geoenvironment • Laboratory</small>	TITLE  Client 1 Engineer 1 Somewhere CPT Tool Project Liquefaction $q_{c1}$ Mod vs Depth	DRAWN Datgel	DATE 1/2/2021
	CHECKED Datgel	DATE 1/2/2021	
	SCALE Not To Scale		Let
	PROJECT No 4.05.0	FIGURE No 204	

DATGEL CPT TOOL\_DGD\_4.05.0.LIB.GLB Graph CPT LIQ\_OC:MOD RL\_LETP DATGEL CPT TOOL\_DGD\_4.05.0.EN.GPJ <DrawingFile>> 1/2/2021 20:43 10.01.00.11 Datgel.CPT\_Tool.gINT\_A4d-In

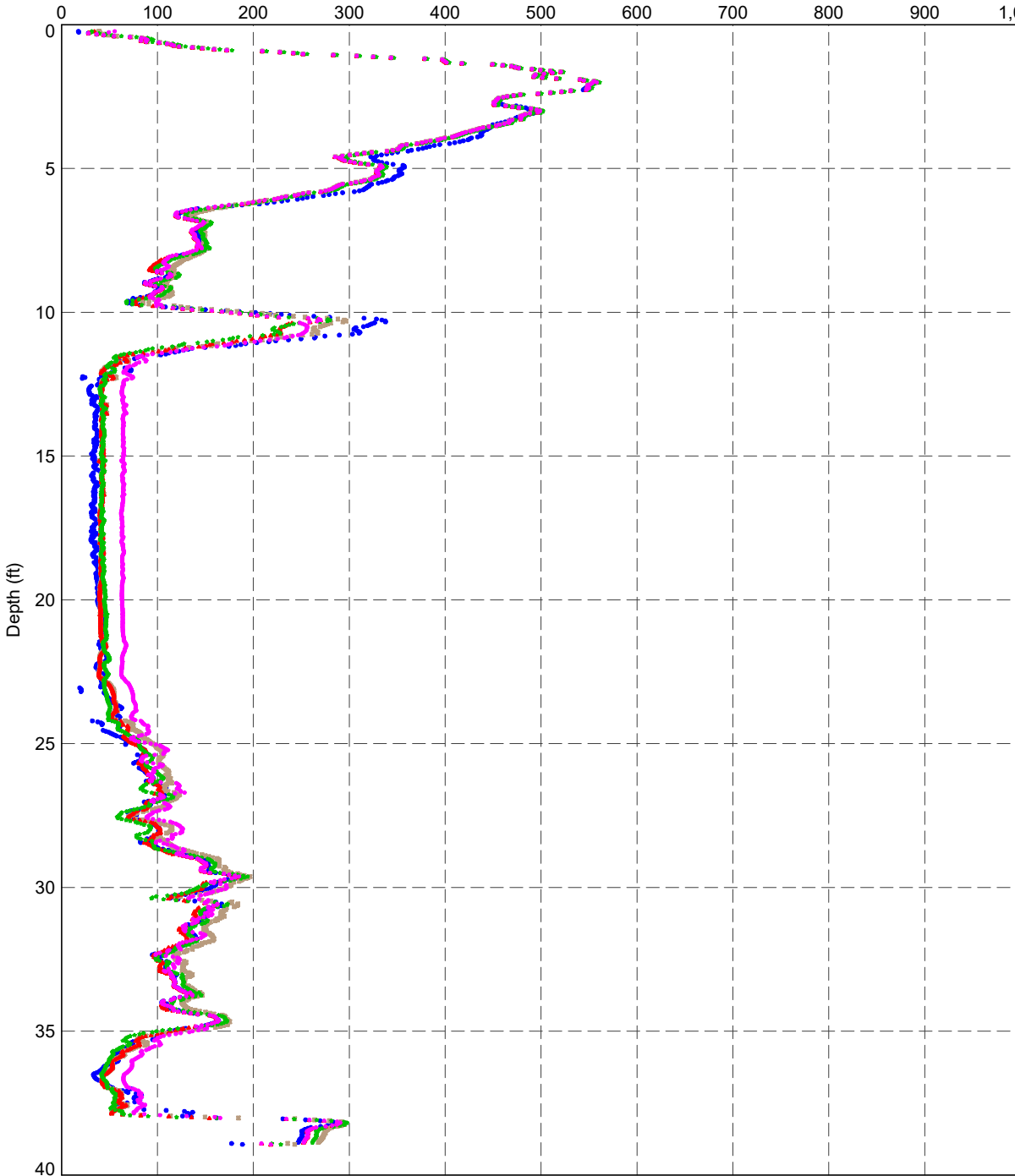


 <p> <b>Datgel</b>            DATA SOLUTIONS            Geotechnics • Geoenvironment • Laboratory         </p>	<p>TITLE</p> <p style="text-align: center;">           Client 1            Engineer 1            Somewhere            CPT Tool Project            Liquefaction <math>q_{c1}</math> Mod vs Elevation         </p>	DRAWN Datgel	DATE 1/2/2021	
		CHECKED Datgel	DATE 1/2/2021	
		SCALE Not To Scale		Let
		PROJECT No 4.05.0	FIGURE No 205	

Clean-Sand Equivalent Normalised Cone Resistance,  $(q_{c1N})_{cs}$

PointID

CPT 05



Method:

- Robertson & Wride (1998) / NCEER (2001)
- Idriss & Boulanger (2008)
- ▲ Idriss & Boulanger (2008) with FC using R&W ('98) / NCEER ('01)
- ★ Idriss & Boulanger (2008) and Seed (1987)
- Boulanger and Idriss (2014)

DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.LIQ.QC1N.CS.DEPTH.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <-<DrawingFiles>> 1/2/2021 20:43 10.01.00.11.Datgel.CPT.Tool.gINT.Add-In

TITLE

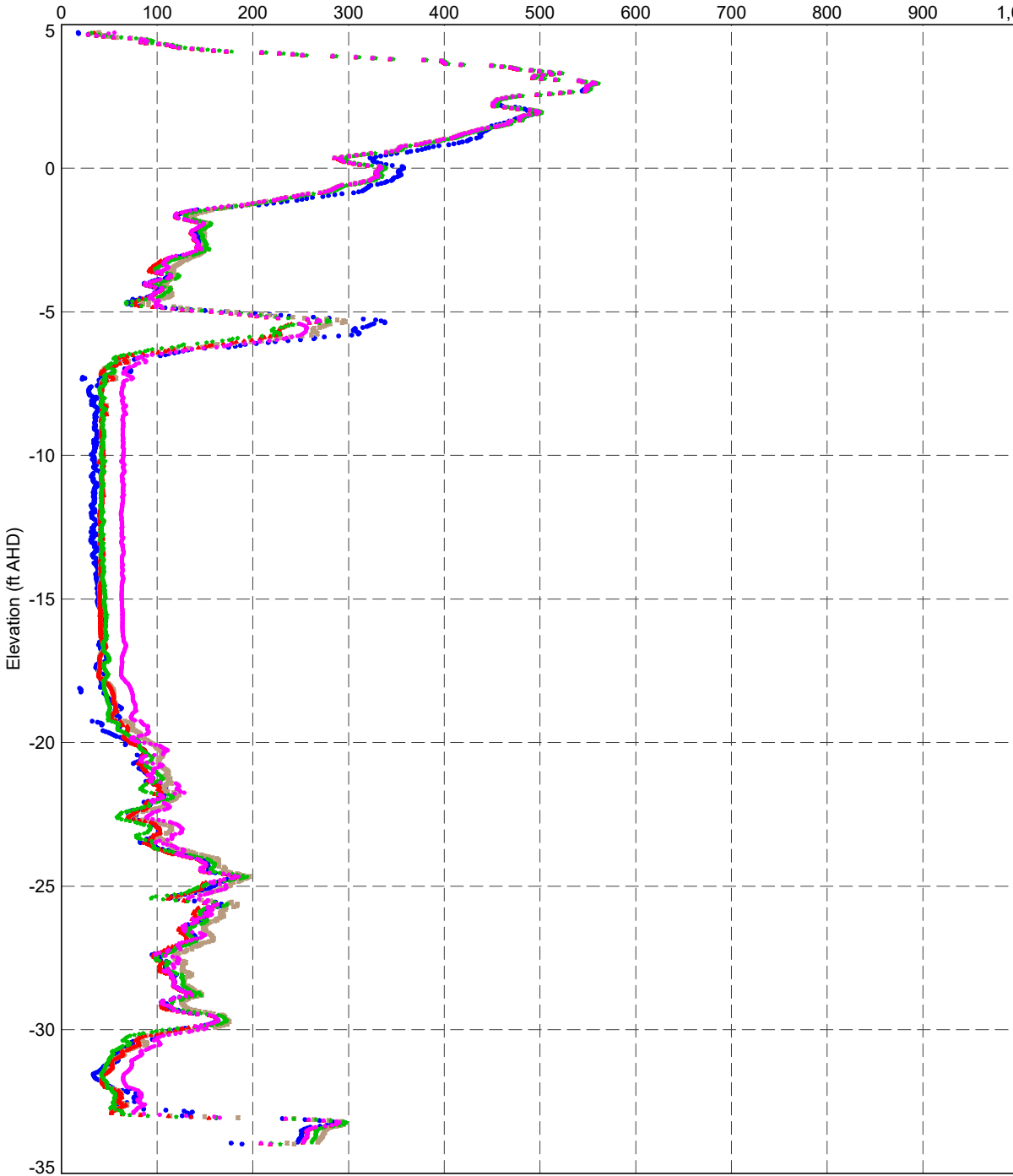
Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 qc1N cs versus Depth

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	206

Clean-Sand Equivalent Normalised Cone Resistance,  $(q_{c1N})_{cs}$

PointID

CPT 05



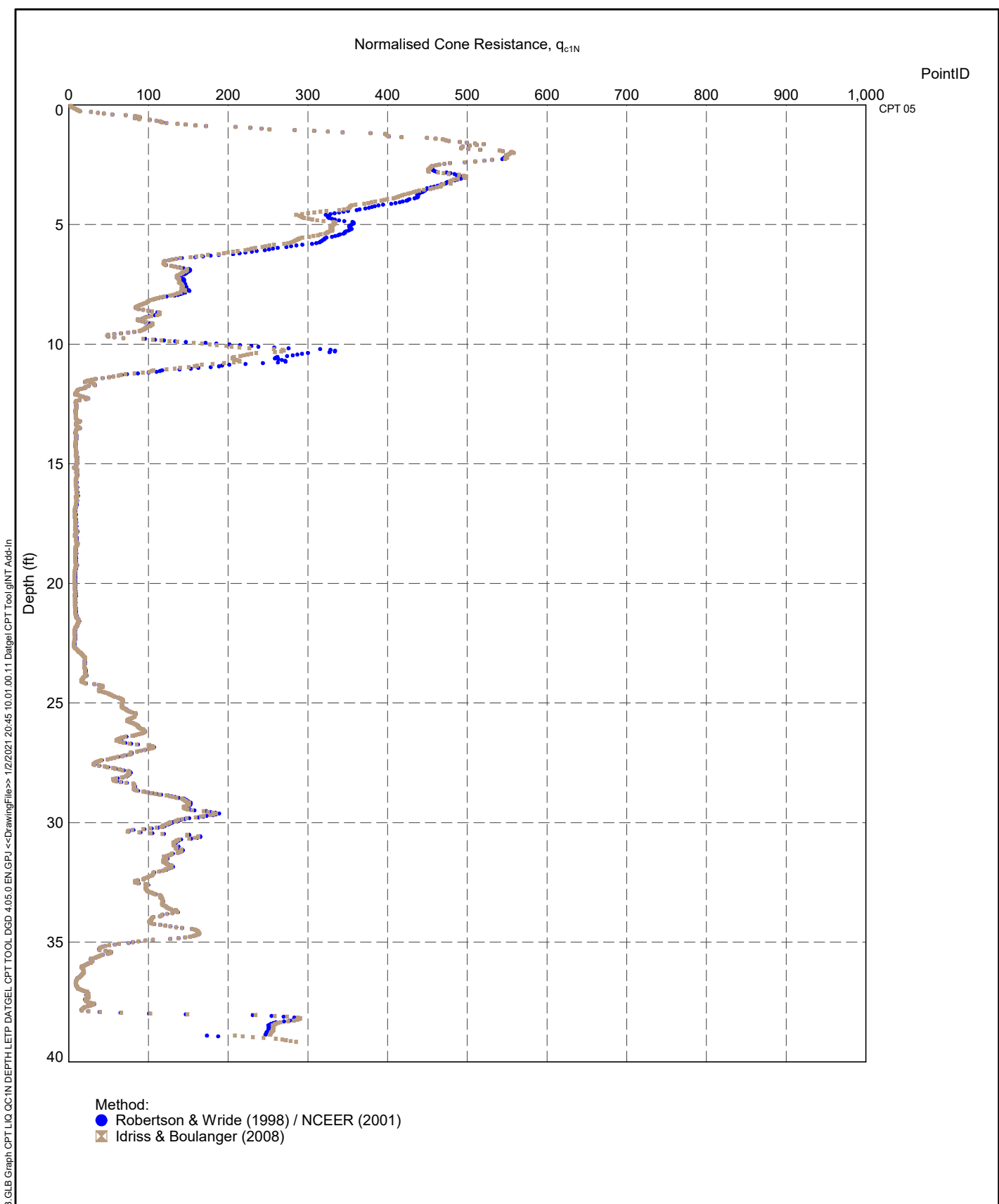
Method:

- Robertson & Wride (1998) / NCEER (2001)
- Idriss & Boulanger (2008)
- ▲ Idriss & Boulanger (2008) with FC using R&W ('98) / NCEER ('01)
- ★ Idriss & Boulanger (2008) and Seed (1987)
- Boulanger and Idriss (2014)

DATGEL\CPT TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT LIQ\_OC1N\_CS\_RL\_LETTP\_DATGEL\_CPT TOOL\_DGD\_4.05.0 EN.GPJ <<DrawingFile>> 1/22/2021 20:45 10.01.00.11 Datgel\CPT Tool.g1NT\_Add-In


TITLE  
 Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 qc1N cs versus Elevation

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	207

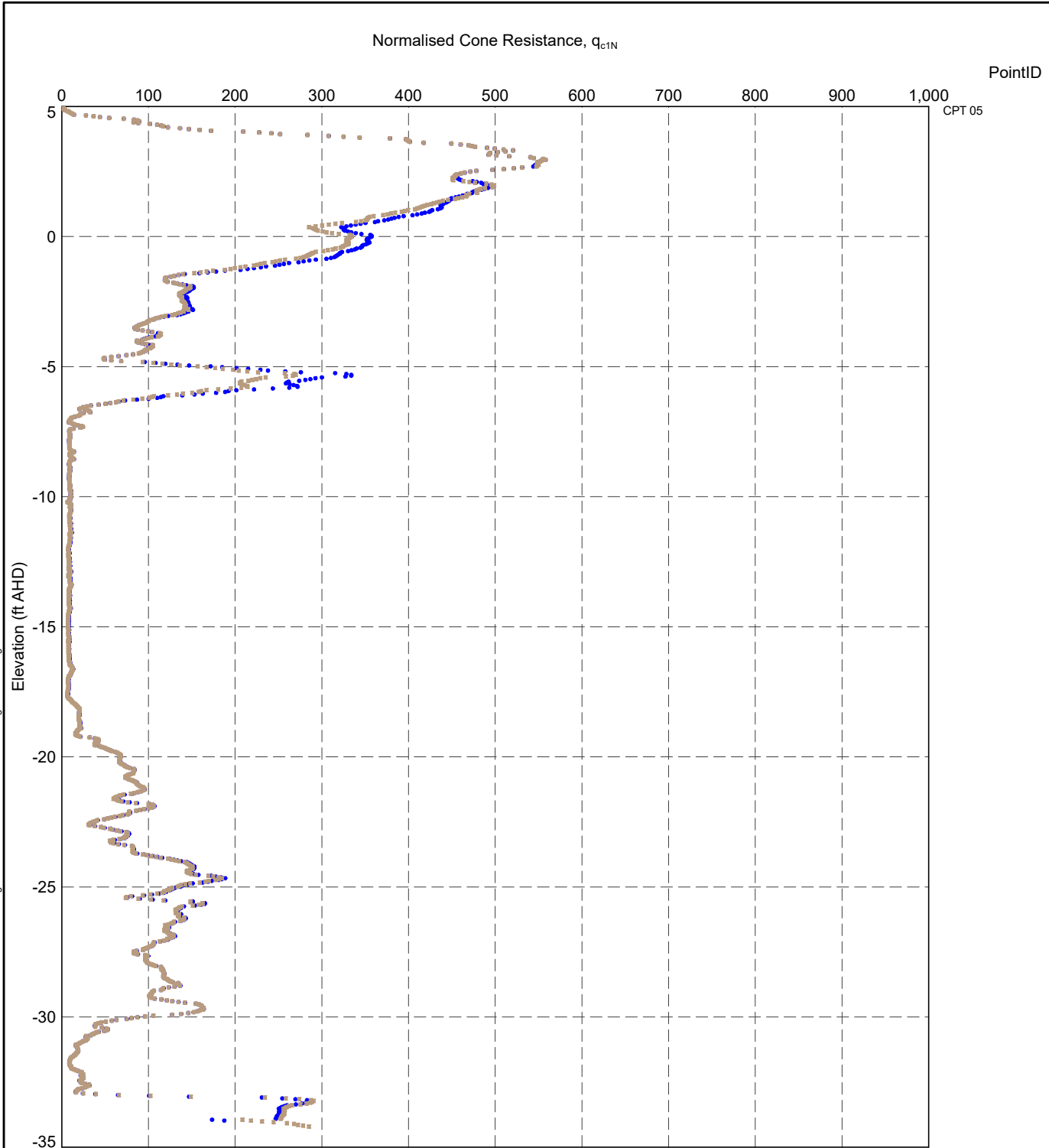


DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.LIQ.QC1N.DEPTH.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ.<<DrawingFile>> 1/2/2021 20:45 10:01:00.11.Datgel.CPT.Tool.gINT.Add.in

Method:  
 ● Robertson & Wride (1998) / NCEER (2001)  
 ■ Idriss & Boulanger (2008)

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	TITLE  Client 1 Engineer 1 Somewhere CPT Tool Project qc1N versus Depth	DRAWN Datgel	DATE 1/2/2021	
		CHECKED Datgel	DATE 1/2/2021	
		SCALE Not To Scale		Let
		PROJECT No 4.05.0	FIGURE No 208	

DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.LIQ.OC1N.RL.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <-DrawingFiles> 1/2/2021 20:46 10.01.00.11.Datgel.CPT.Tool.gjNT.Addc.in



PointID  
CPT 05

Method:  
 ● Robertson & Wride (1998) / NCEER (2001)  
 ■ Idriss & Boulanger (2008)



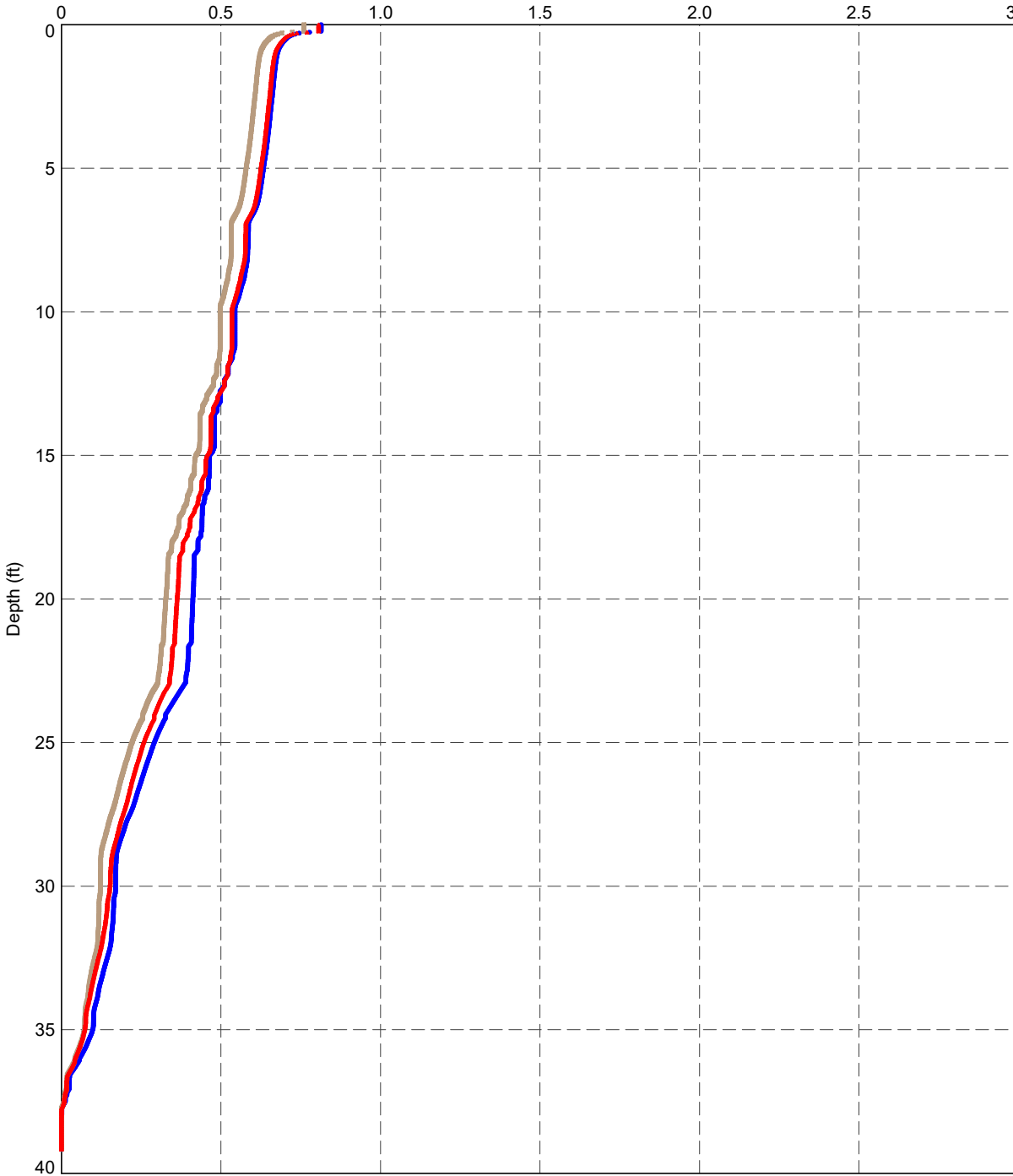
TITLE  
 Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 qc1N versus Elevation

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	209

Post Liquefaction Reconsolidation Settlement,  $S_{Liq}$  (ft)

PointID

CPT 05



Method:

- Ishihara & Yoshimine (1992)
- Zhang et al. (2002)
- ▲ DBH - Zhang et al. (2002)

DATGEL\CPT\_TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT\_LIQ\_RECONS\_SETTLEMENT\_DEPTH.LETP.DATGEL\_CPT\_TOOL\_DGD\_4.05.0.EN.GPJ <-DrawingFile> 1/2/2021 20:47 10.01.00.11.Datgel.CPT.Tool.gINT Add.in



TITLE

Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Post Liquefaction Reconsolidation Settlement  
 versus Depth

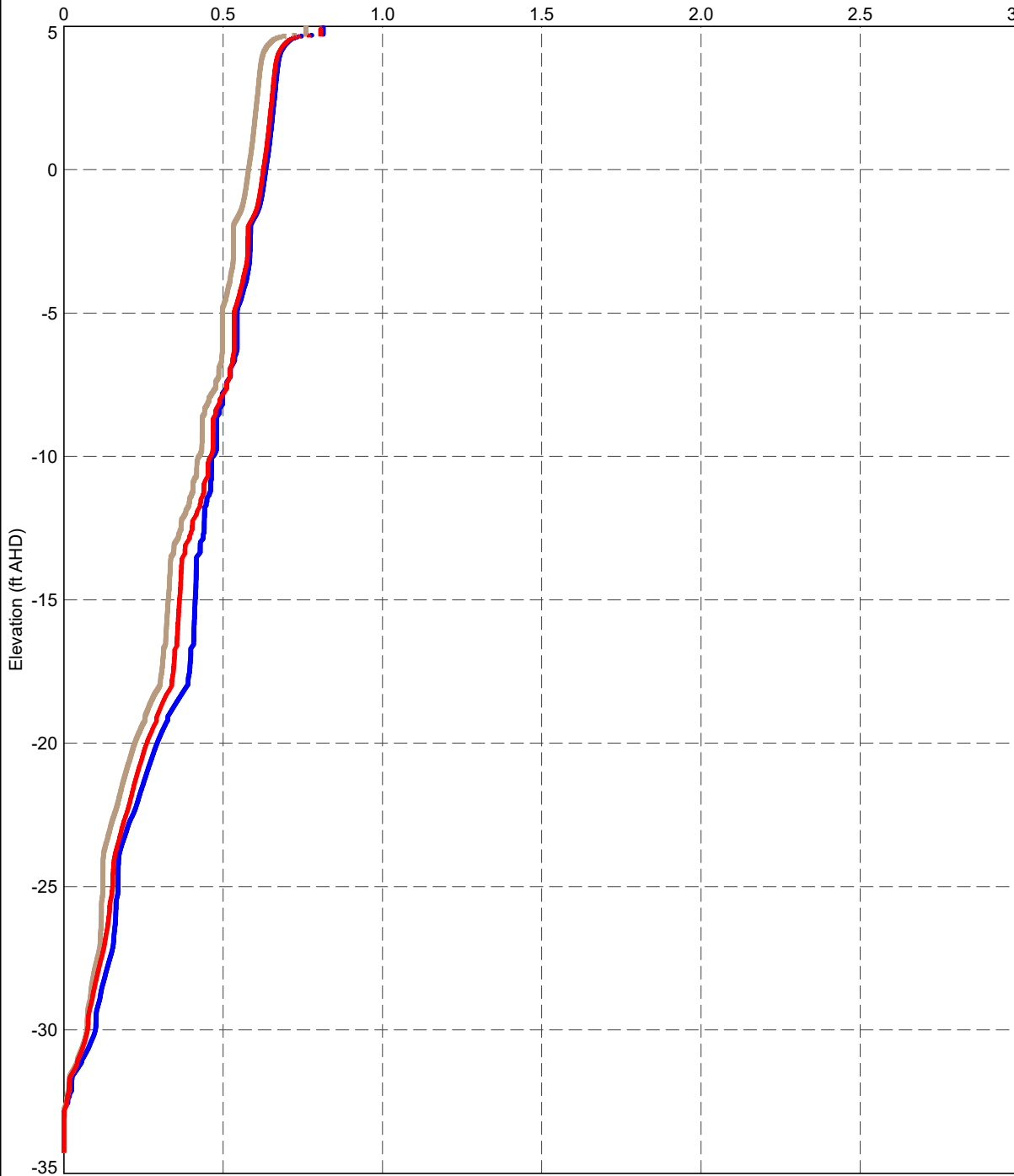
DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	210



Post Liquefaction Reconsolidation Settlement,  $S_{Liq}$  (ft)

PointID

CPT 05



Method:

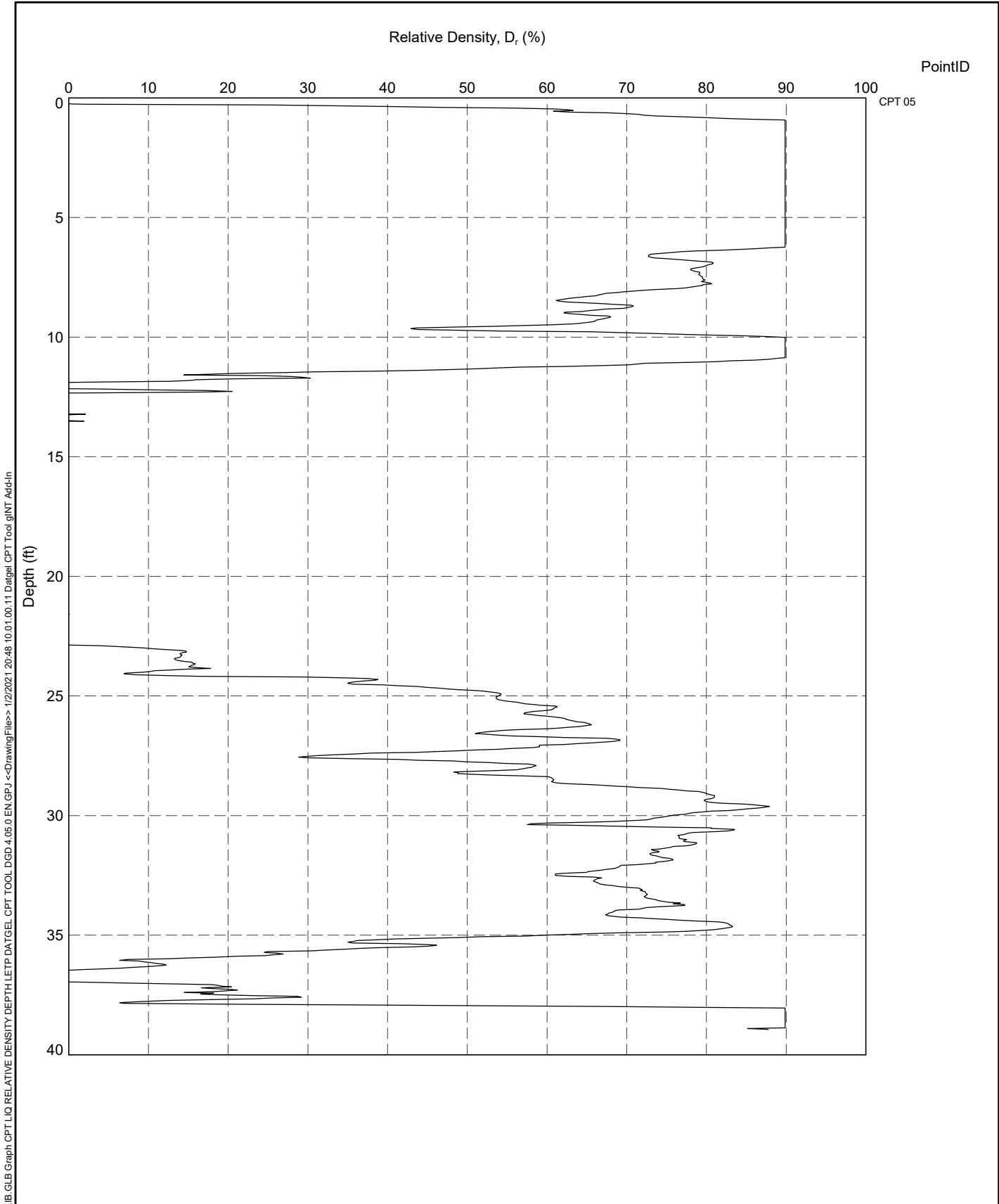
- Ishihara & Yoshimine (1992)
- Zhang et al. (2002)
- ▲ DBH - Zhang et al. (2002)

DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.LIQ.RECONS.SETTLEMENT.RL.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <<DrawingFile>> 1/2/2021\_20:48 10.01.00.11.Datgel.CPT.Tool.gINT.Addt.in




TITLE  
 Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Post Liquefaction Reconsolidation Settlement  
 versus Elevation

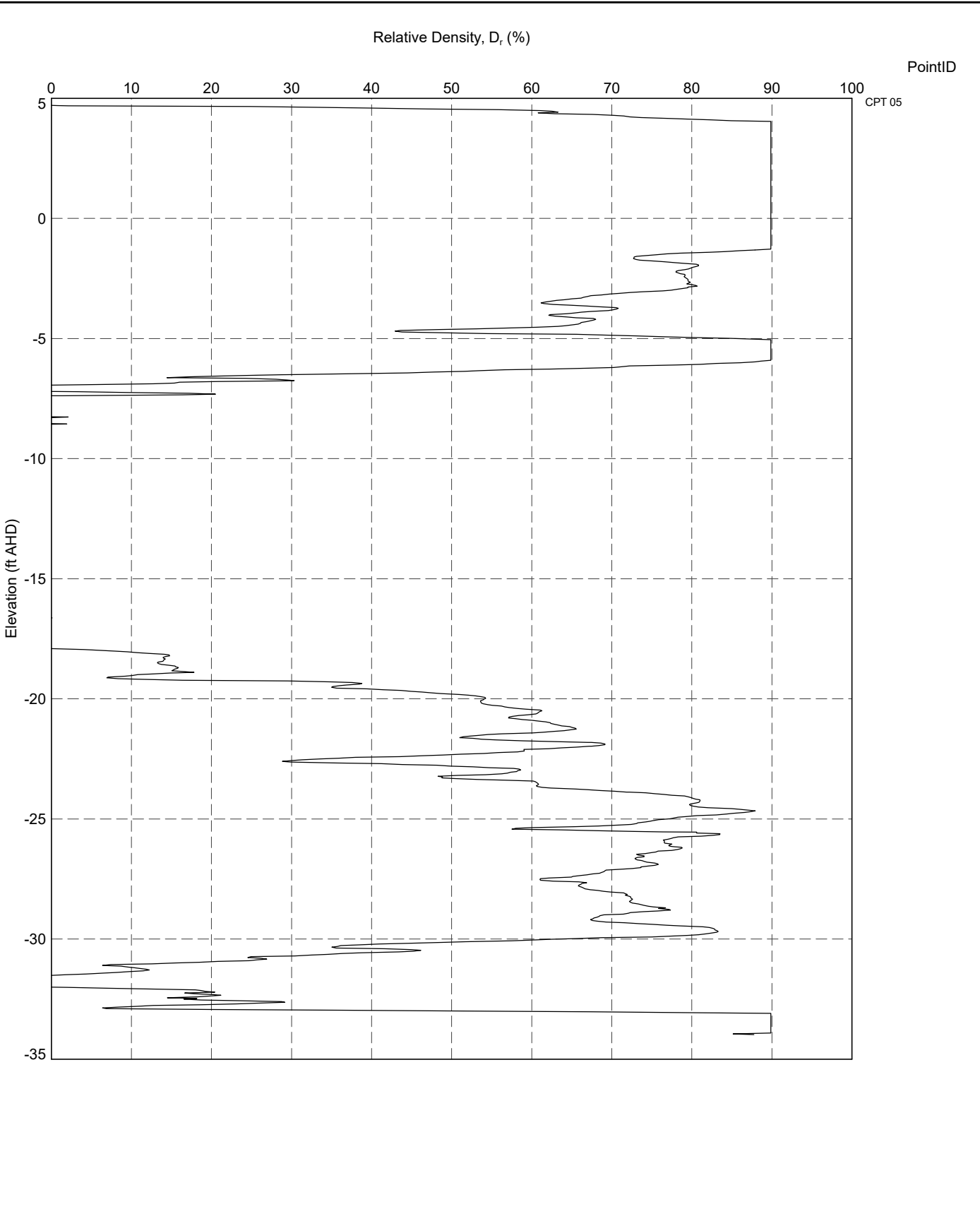
DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	211




DATGEL CPT TOOL\_DGD\_4.05.0.LIB.GLB Graph: CPT\_LIQ\_RELATIVE\_DENSITY\_DEPTH.LETP.DATGEL CPT TOOL\_DGD\_4.05.0.EN.GPJ <<DrawingFiles>> 1/2/2021 20:48 10.01.00.11 Datgel CPT Tool gINT Add-In

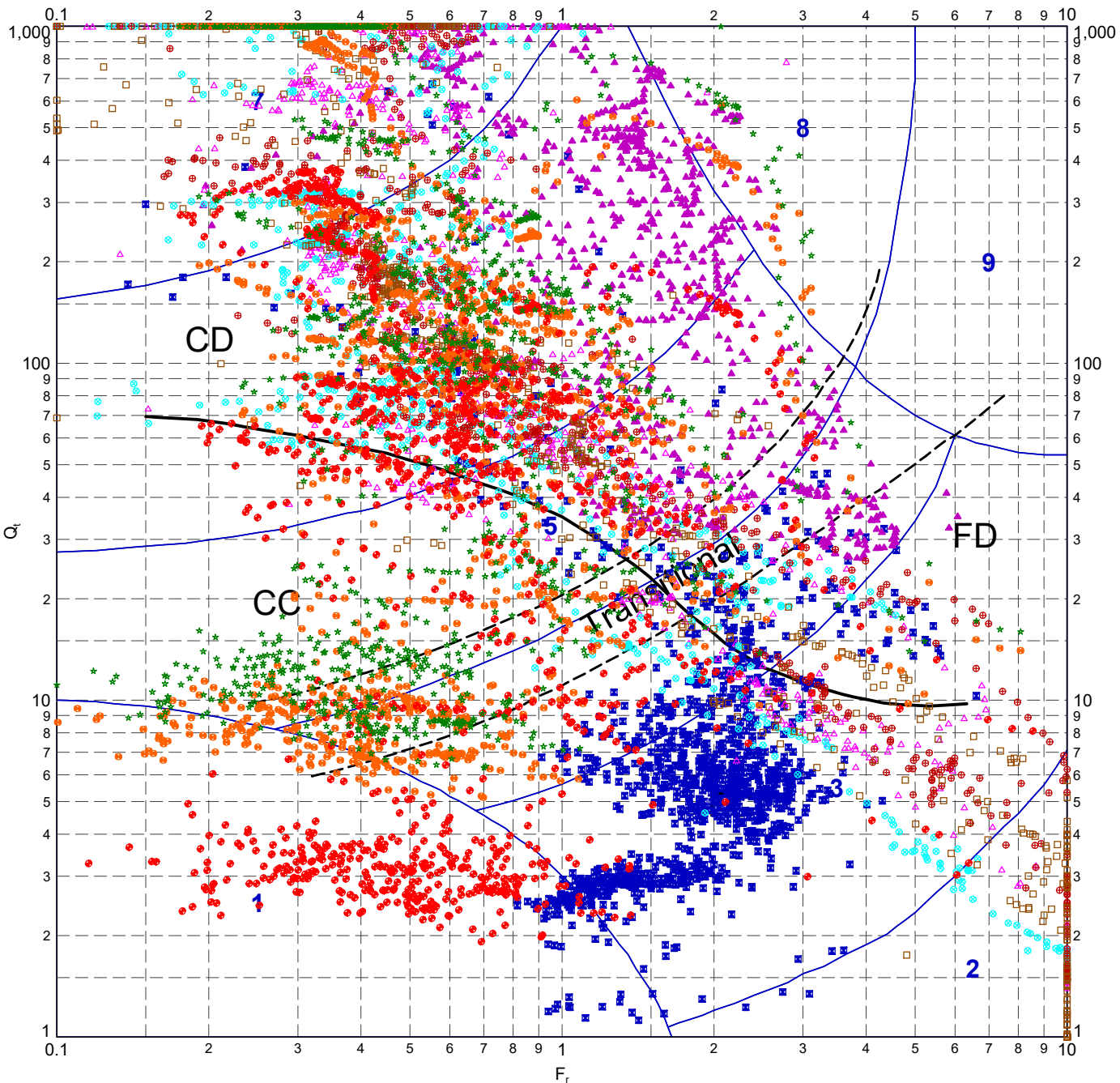
 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	TITLE  Client 1 Engineer 1 Somewhere CPT Tool Project Relative Density versus Depth	DRAWN Datgel	DATE 1/2/2021	
		CHECKED Datgel	DATE 1/2/2021	
		SCALE Not To Scale		Let
		PROJECT No 4.05.0	FIGURE No 212	

DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.LIQ.RELATIVE.DENSITY.RL.LETF.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ.<<DrawingFile>>.1/2/2021.20:48.10.01.00.1.1.Datgel.CPT.Tool.glNT.Add-In



	TITLE  Client 1 Engineer 1 Somewhere CPT Tool Project Relative Density versus Elevation	DRAWN Datgel	DATE 1/2/2021	
		CHECKED Datgel	DATE 1/2/2021	
		SCALE Not To Scale		Let
		PROJECT No 4.05.0	FIGURE No 213	

DATGEL CPT TOOL DGD 4.05.0 LIB GLB Graph CPT LIQ ROBERTSON 90 QT VS FR MAMP DATGEL CPT TOOL DGD 4.05.0 EN GPJ <<DrawingFiles>> 1/2/2021 20:49 10:01:00.11 Datgel CPT Tool gINT Add-In



Modified from Robertson 2012

**Soil Legend**

- CD Coarse-grained Dilative soil - predominately drained CPT
- CC Coarse-grained Contractive soil - predominately drained CPT
- FS Fine-grained Dilative soil - predominately drained CPT
- FC Fine-grained Contractive soil - predominately drained CPT

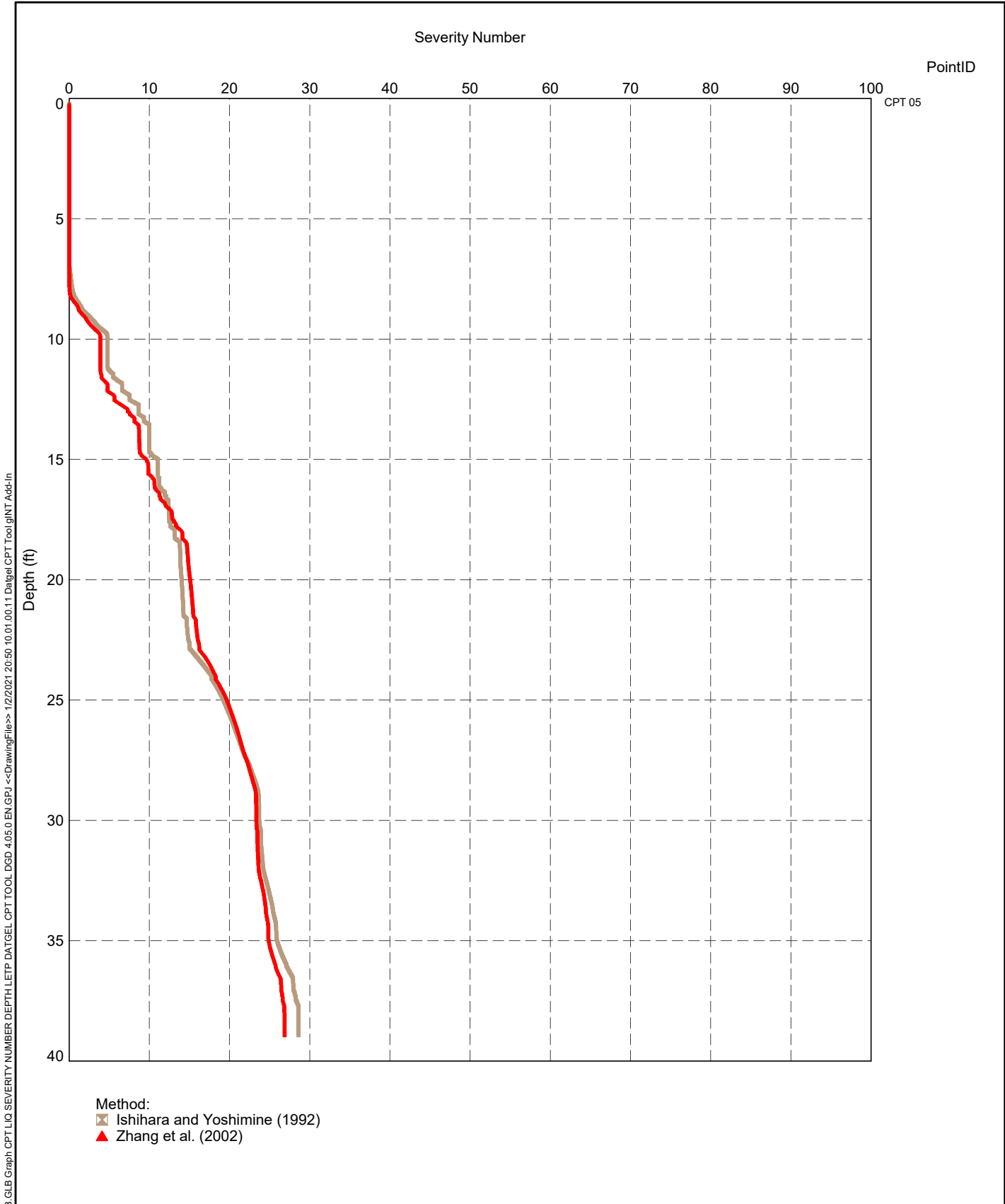
**METHOD: Robertson 1990**

- 1 - Sensitive, fine grained
- 2 - Organic soil - PEATS
- 3 - CLAYS - CLAY to silty CLAY
- 4 - SILT mixtures - clayey SILT to silty CLAY
- 5 - SAND mixtures - silty SAND to sandy SILT
- 6 - SANDS - clean SAND to silty SAND
- 7 - Gravelly SAND to SAND
- 8 - Very stiff SAND to clayey SAND
- 9 - Very stiff fine grained

**PointID Legend**

- ✘ COR-A
- ▲ CPT 00
- △ CPT 01
- ⊗ CPT 02
- ⊕ CPT 03
- CPT 04
- CPT 05
- ★ CPT 05 - BB
- ☆ CPT 05 - SB

 <b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	<b>TITLE</b> Client 1 Engineer 1 Somewhere CPT Tool Project Normalized SBT <sub>n</sub> chart, Qt - F using general large strain 'soil behavior' descriptors	<b>DRAWN</b> Datgel	<b>DATE</b> 1/2/2021	
			<b>CHECKED</b> Datgel	<b>DATE</b> 1/2/2021
			<b>SCALE</b> Not To Scale	<b>A4</b>
			<b>PROJECT No</b> 4.05.0	<b>FIGURE No</b> 214



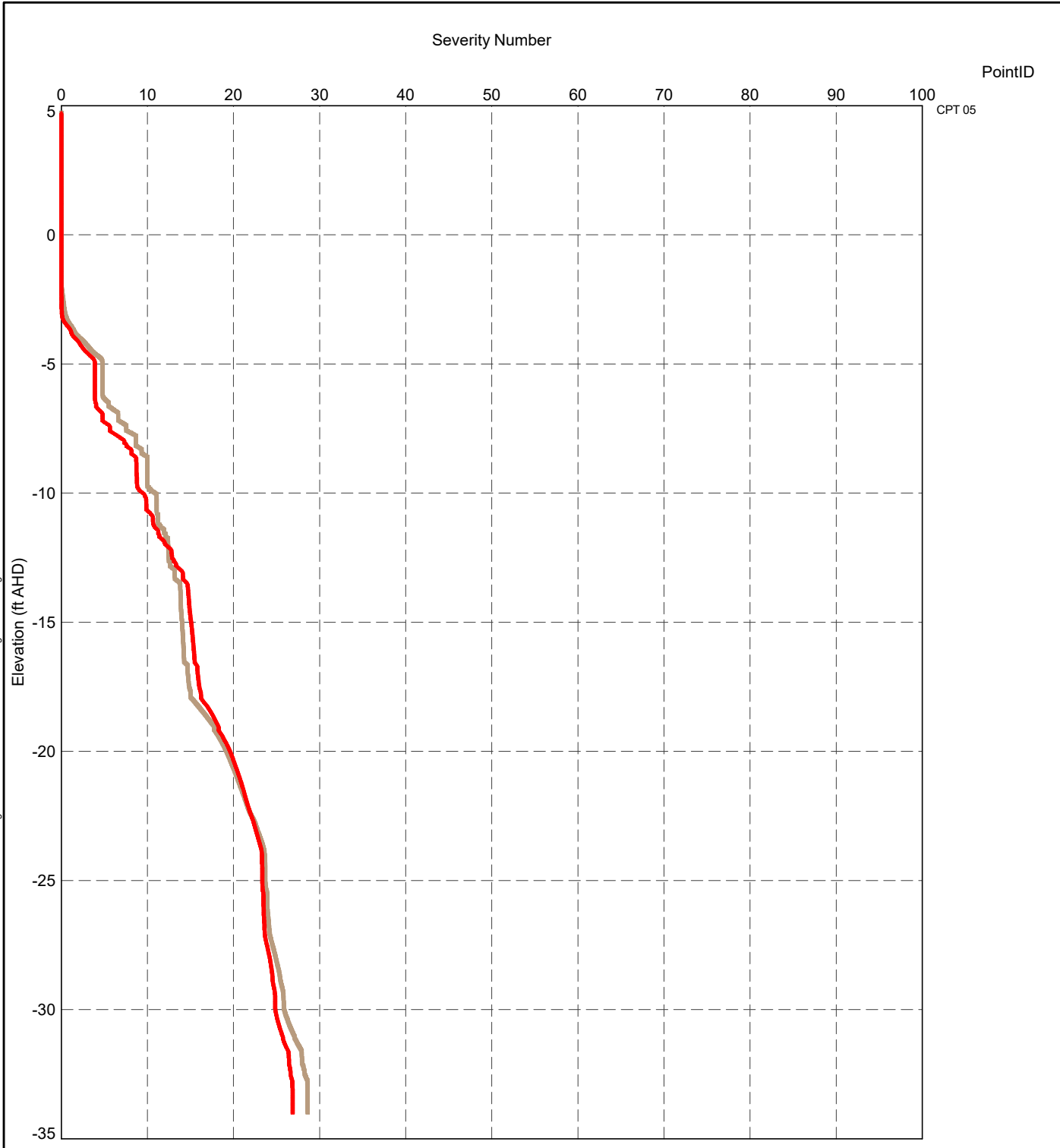
TITLE

Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Liquefaction Severity Number versus Depth


DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	215

DATGEL\CPT TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT LIQ SEVERITY NUMBER DEPTH\LETP.DATGEL\CPT TOOL\_DGD\_4.05.0 EN.GPJ <<DrawingFile>> 1/2/2021 20:50:10.01.00.11 Datgel\CPT Tool\gINT Add-In

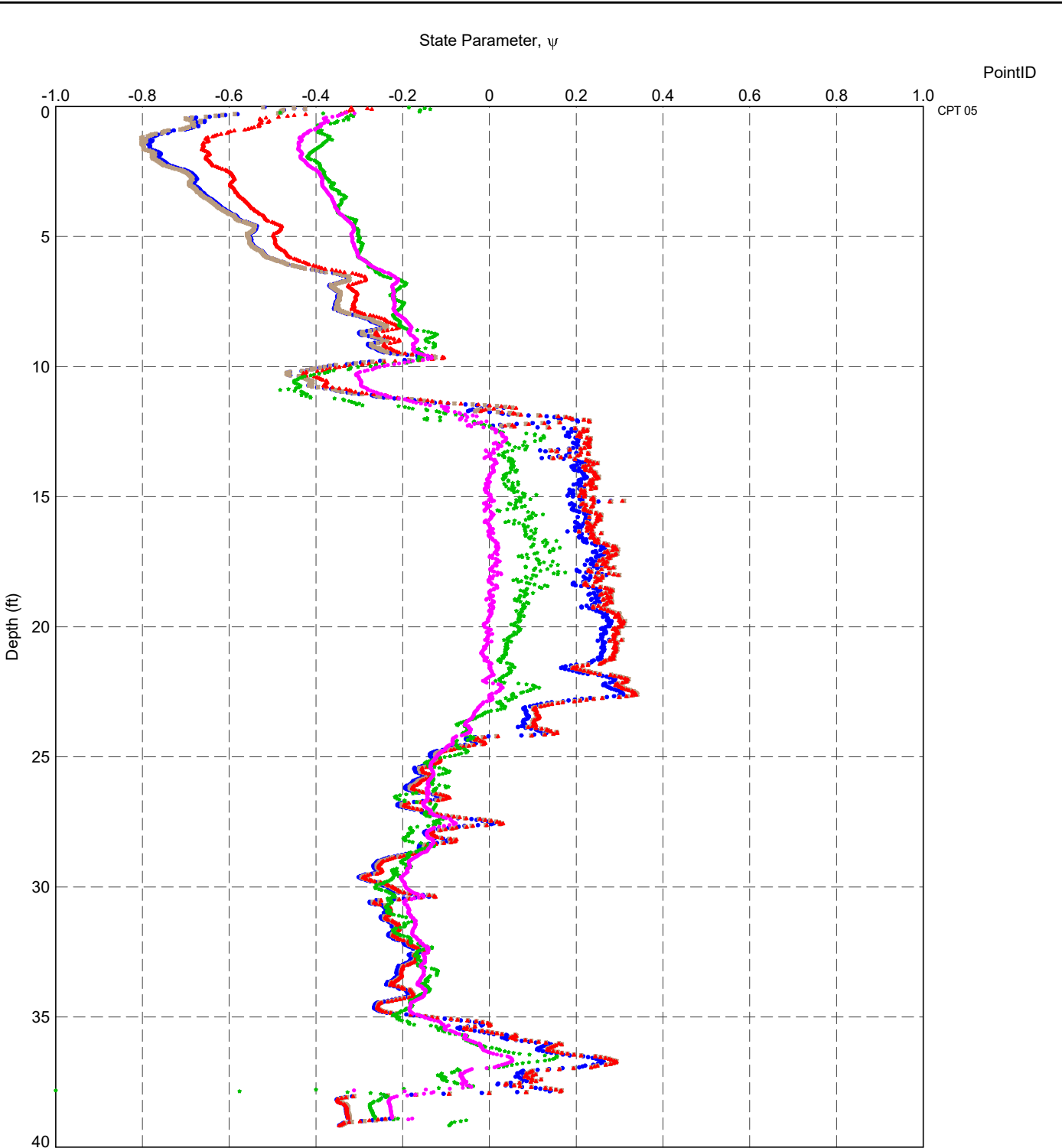
DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.LIQ.SEVERITY.NUMBER.RL.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ.<<DrawingFile>> 1/2/2021 20:50:10.01.11.Datgel.CPT.Tool.gINT.Add.in



Method:  
■ Ishihara and Yoshimine (1992)  
▲ Zhang et al. (2002)


 <b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	TITLE Client 1 Engineer 1 Somewhere CPT Tool Project Liquefaction Severity Number versus Elevation	DRAWN Datgel	DATE 1/2/2021
	CHECKED Datgel	DATE 1/2/2021	
	SCALE Not To Scale		Let
	PROJECT No 4.05.0		FIGURE No 216

DATGEL\CPT\_TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT\_LIQ\_STATE\_PARAMETER\_DEPTH\_LETP\DATGEL\CPT\_TOOL\_DGD\_4.05.0\EN\GPU\_<<DrawingFile>>\_12/2021\_20:52:10.01.00.11\Datgel\CPT\_Tool\glNT\_Add-In

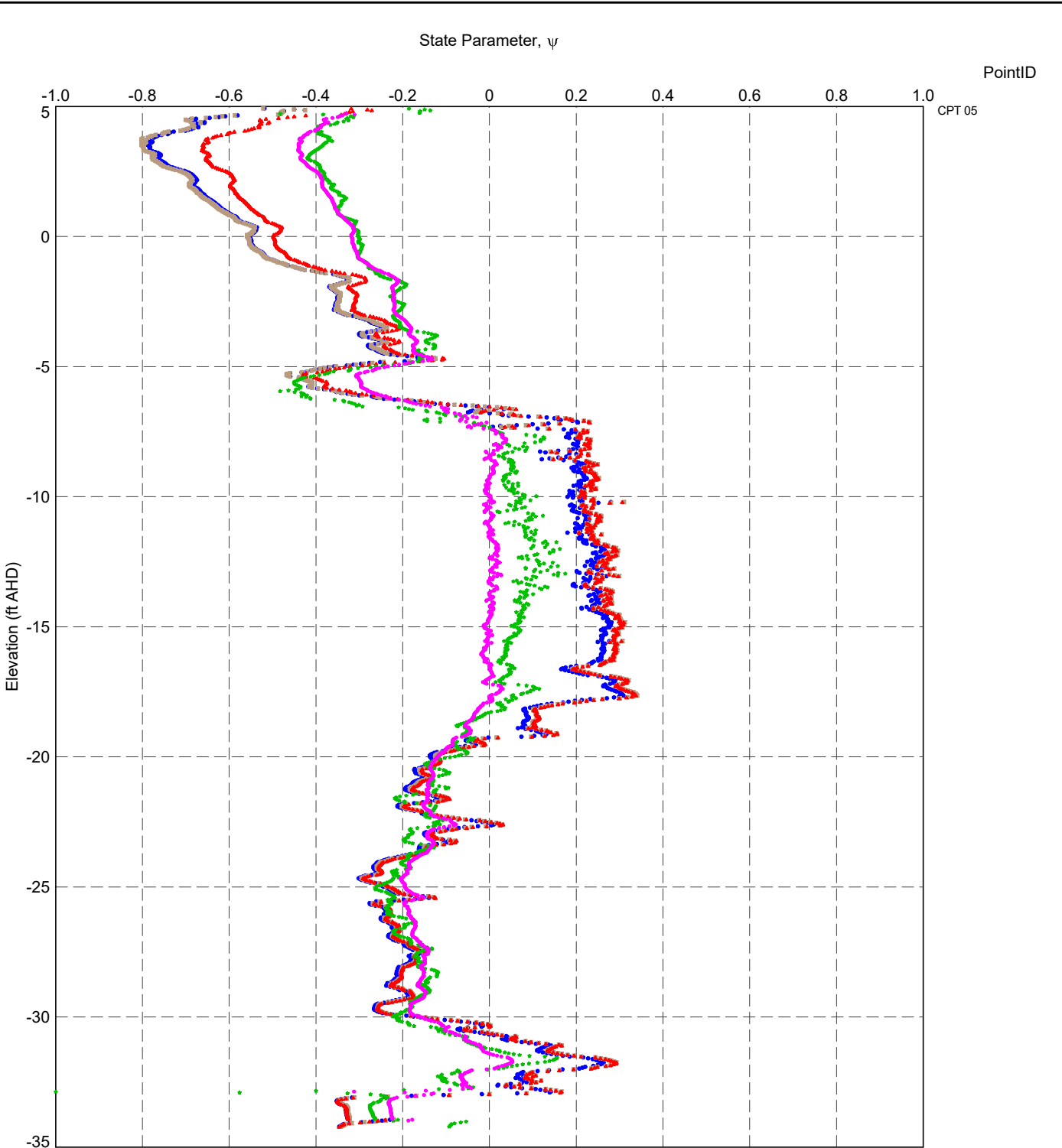


PointID  
CPT 05


- Method:
- Been et al (1987)
  - Shuttle and Jefferies (1998)
  - ▲ Shuttle and Jefferies (1998)
  - ★ Plewes et al (1991)
  - Been and Jefferies (1992)

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project State Parameter versus Depth</p>	DRAWN Datgel	DATE 1/2/2021	
		CHECKED Datgel	DATE 1/2/2021	
		SCALE Not To Scale		Let
		PROJECT No 4.05.0	FIGURE No 217	

DATGEL\CPT\_TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT\_LIQ\_STATE\_PARAMETER.RL\LETP.DATGEL\_CPT\_TOOL\_DGD\_4.05.0.EN.GPJ <-DrawingFile>> 1/2/2021 20:53 10.01.00.11.Datgel.CPT.Tool.gINT\_Add.in

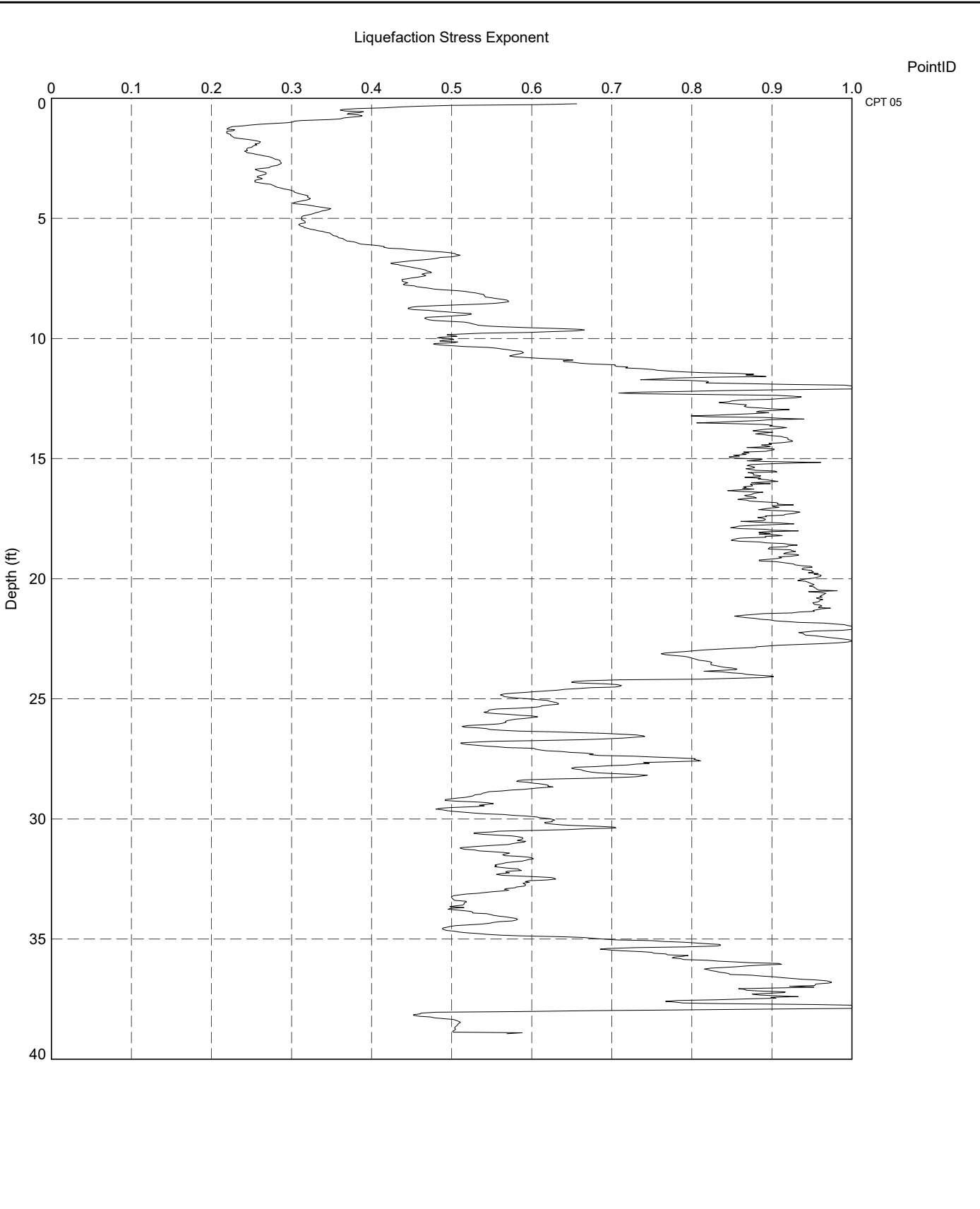



- Method:
- Been et al (1987)
  - Shuttle and Jefferies (1998)
  - ▲ Shuttle and Jefferies (1998)
  - ★ Plewes et al (1991)
  - Been and Jefferies (1992)

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project State Parameter versus Elevation</p>	DRAWN	Datgel	DATE	1/2/2021	
		CHECKED	Datgel	DATE	1/2/2021	
		SCALE	Not To Scale			Let
		PROJECT No	4.05.0	FIGURE No	218	

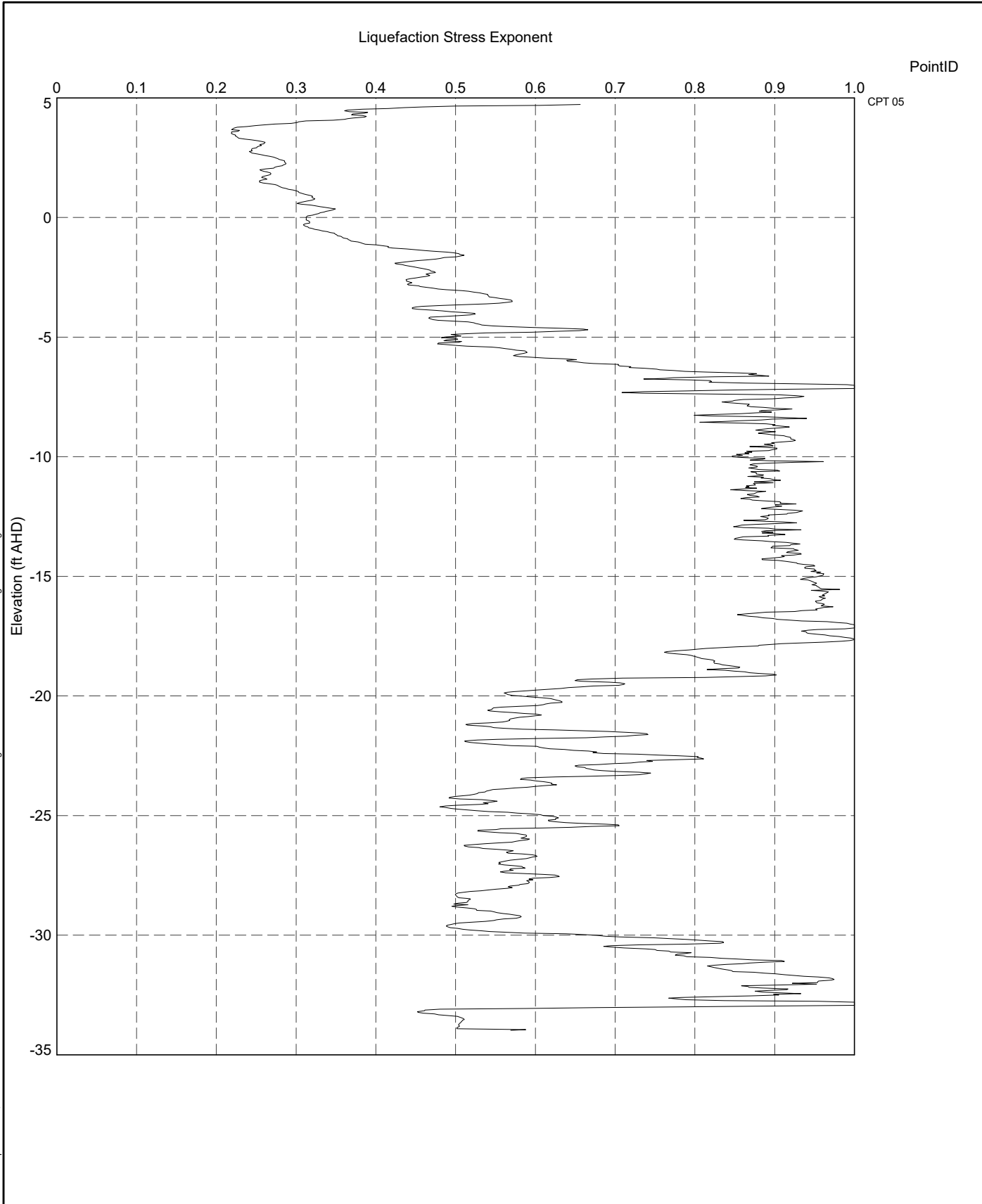



DATGEL\CPT\_TOOL\_DGD\_4.05.0\LIB\_GLB\_Graph\CPT\_LIQ\_STRESS\_EXPONENT\_DEPTH\_LETF\_DATGEL\CPT\_TOOL\_DGD\_4.05.0\EN\_GPJ\_<<DrawingFile>>\_1/2/2021\_20:53\_10.01.00.11.Datgel\CPT\_Tool.glt Add-In



 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p style="text-align: center;">Client 1 Engineer 1 Somewhere CPT Tool Project</p> <p>Liquefaction Stress Exponent versus Depth</p>	<p>DRAWN</p> <p style="text-align: center;">Datgel</p>	<p>DATE</p> <p style="text-align: center;">1/2/2021</p>	
		<p>CHECKED</p> <p style="text-align: center;">Datgel</p>	<p>DATE</p> <p style="text-align: center;">1/2/2021</p>	
		<p>SCALE</p> <p style="text-align: center;">Not To Scale</p>		<p>Let</p>
		<p>PROJECT No</p> <p style="text-align: center;">4.05.0</p>	<p>FIGURE No</p> <p style="text-align: center;">219</p>	

DATGEL CPT TOOL\_DGD\_4.05.0.LIB.GLB Graph CPT LIQ STRESS EXPONENT RL LETP DATGEL\_CPT\_TOOL\_DGD\_4.05.0.EN.GPJ <-DrawingFiles> 1/2/2021 20:53 10.01.00.11.Datgel CPT Tool.gINT.Add-in

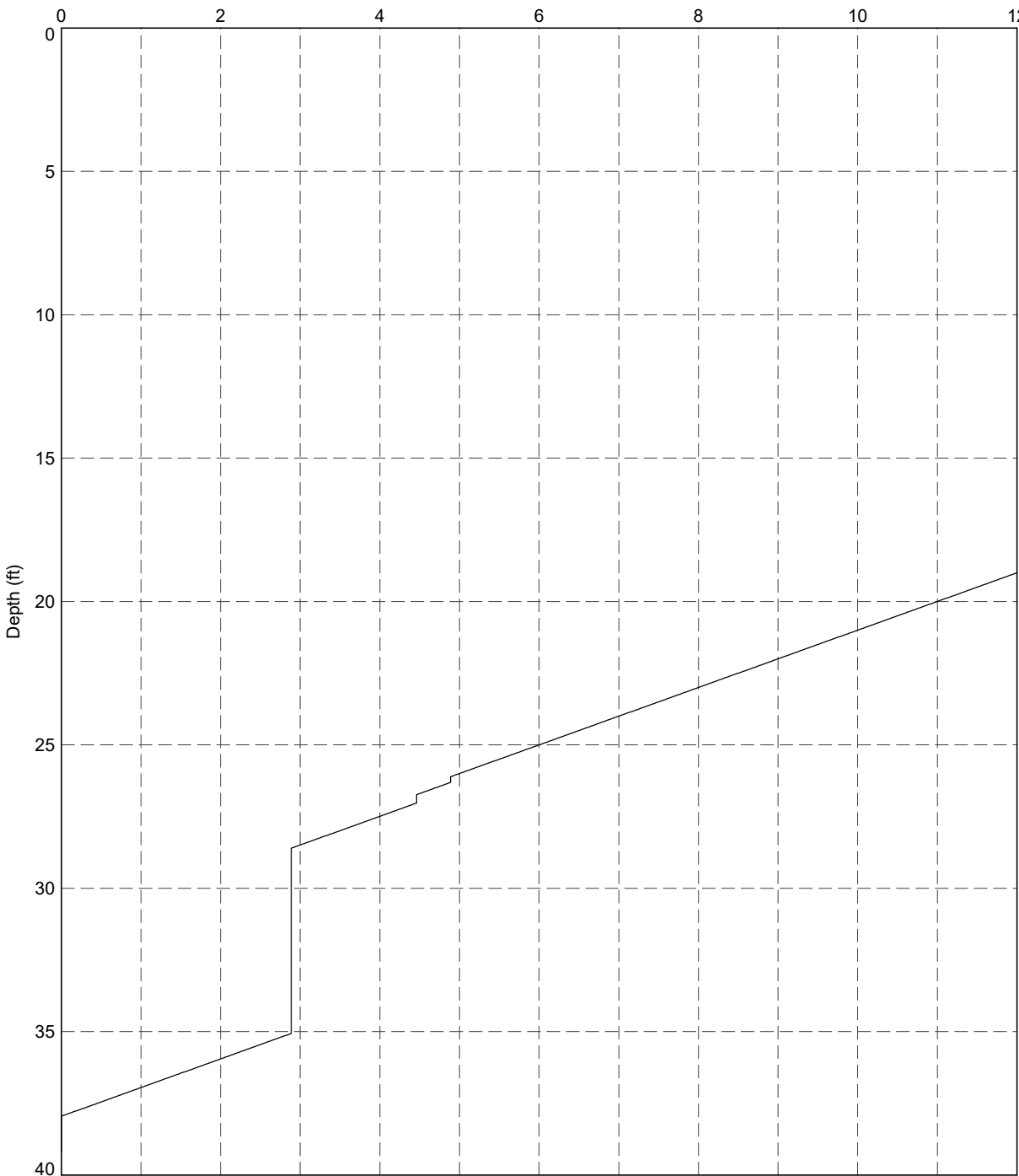


 <b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	TITLE Client 1 Engineer 1 Somewhere CPT Tool Project Liquefaction Stress Exponent versus Elevation	DRAWN Datgel	DATE 1/2/2021	
			CHECKED Datgel	DATE 1/2/2021
	SCALE Not To Scale			Let
			PROJECT No 4.05.0	FIGURE No 220


Cumulative Thickness SPTN15, T15 (ft)

PointID

CPT 05



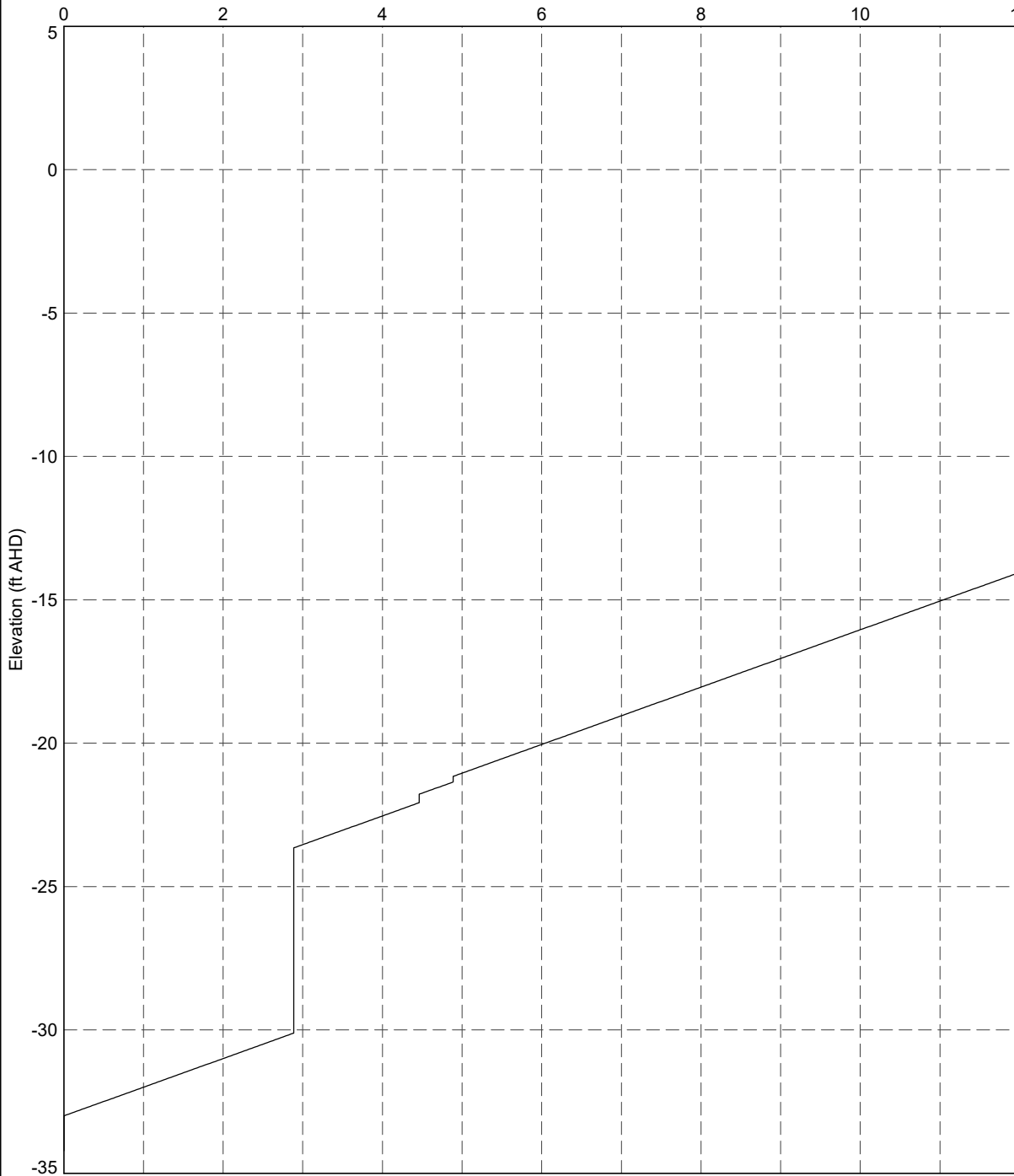
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 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project</p> <p>Cumulative Thickness SPT N 15 versus Depth</p>	<p>DRAWN Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>CHECKED Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>SCALE Not To Scale</p>		<p>Let</p>
		<p>PROJECT No 4.05.0</p>	<p>FIGURE No 221</p>	


Cumulative Thickness SPTN15, T15 (ft)

PointID

CPT 05



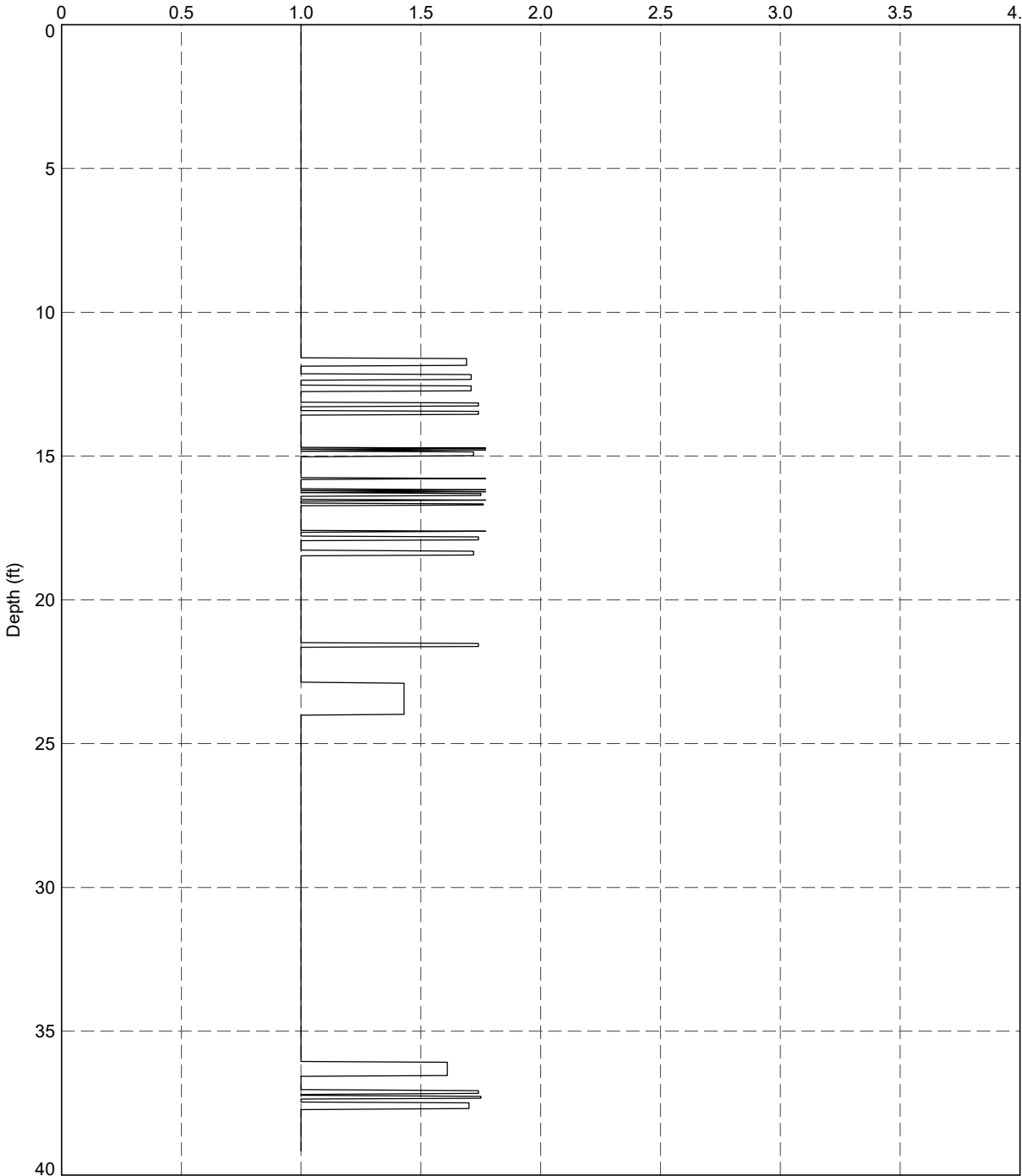
DATGEL\CPT\_TOOL\_DGD\_4.05.0\LIB\_GLB\_Graph\CPT\_LIQ\_THICKNESS\_SPTN15\_RL\_LETP\_DATGEL\_CPT\_TOOL\_DGD\_4.05.0\_EN.GPJ <<DrawingFiles>> 1/2/2021 20:53 10.01.00.11.Datgel\_CPT\_Tool.gINT\_Add-In

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project</p> <p>Cumulative Thickness SPT N 15 vs Elevation</p>	<p>DRAWN Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>CHECKED Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>SCALE Not To Scale</p>		<p>Let</p>
		<p>PROJECT No 4.05.0</p>	<p>FIGURE No 222</p>	


Thin Layer Correction Factor, KH

PointID

CPT 05



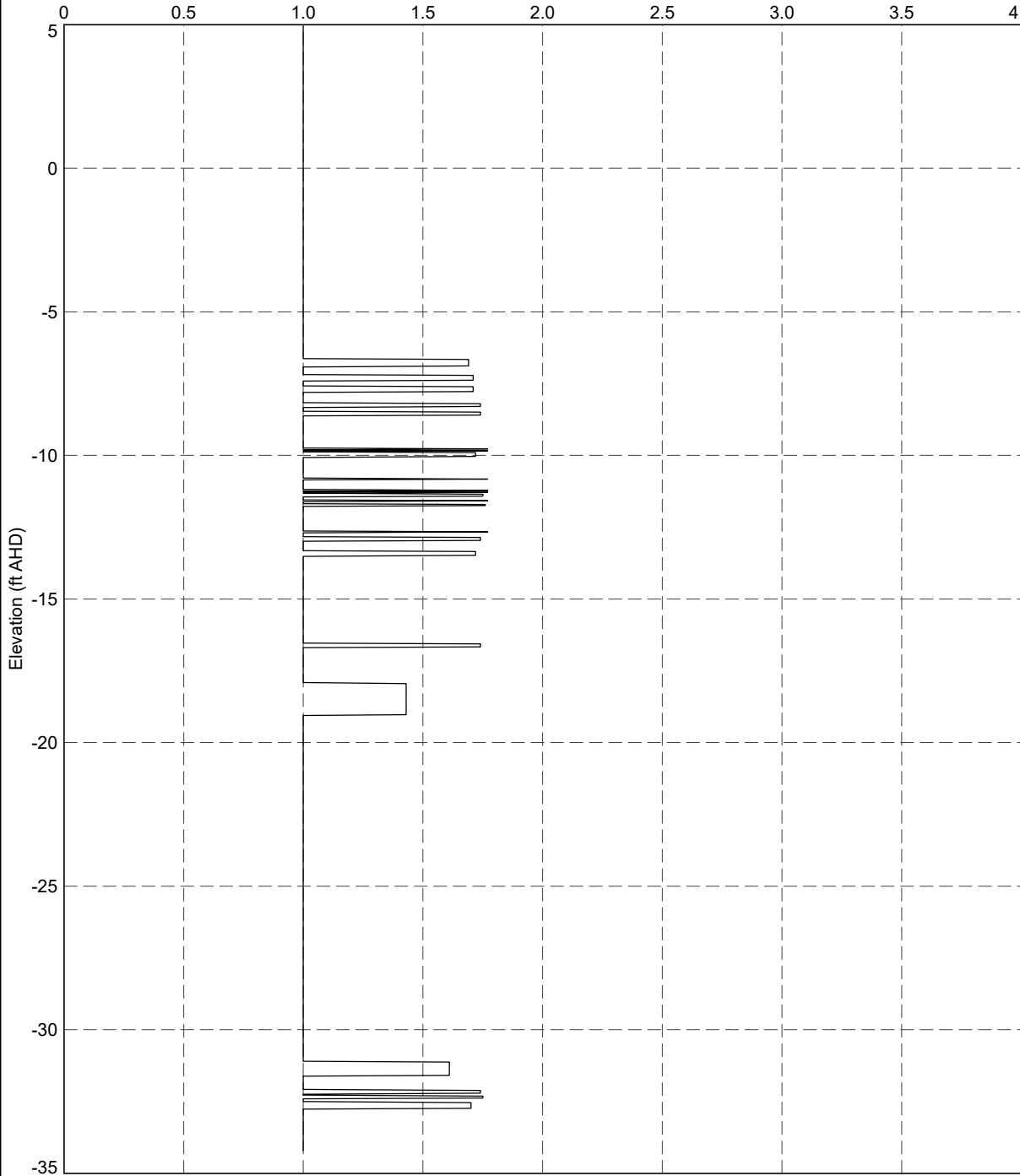
DATGEL\CPT TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT LIQ THIN LAYER CORR FACT DEPTH LETP.DATGEL\CPT TOOL\_DGD\_4.05.0\EN\GPJ\_<<DrawingFile>>\_1/2/2021 20:53:10.01.00.11.Datgel.CPT.Tool.gj\NT\_Add-In

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project</p> <p>Thin Layer Correction Factor versus Depth</p>	<p>DRAWN Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>CHECKED Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>SCALE Not To Scale</p>		<p>Let</p>
		<p>PROJECT No 4.05.0</p>	<p>FIGURE No 223</p>	


Thin Layer Correction Factor, KH

PointID

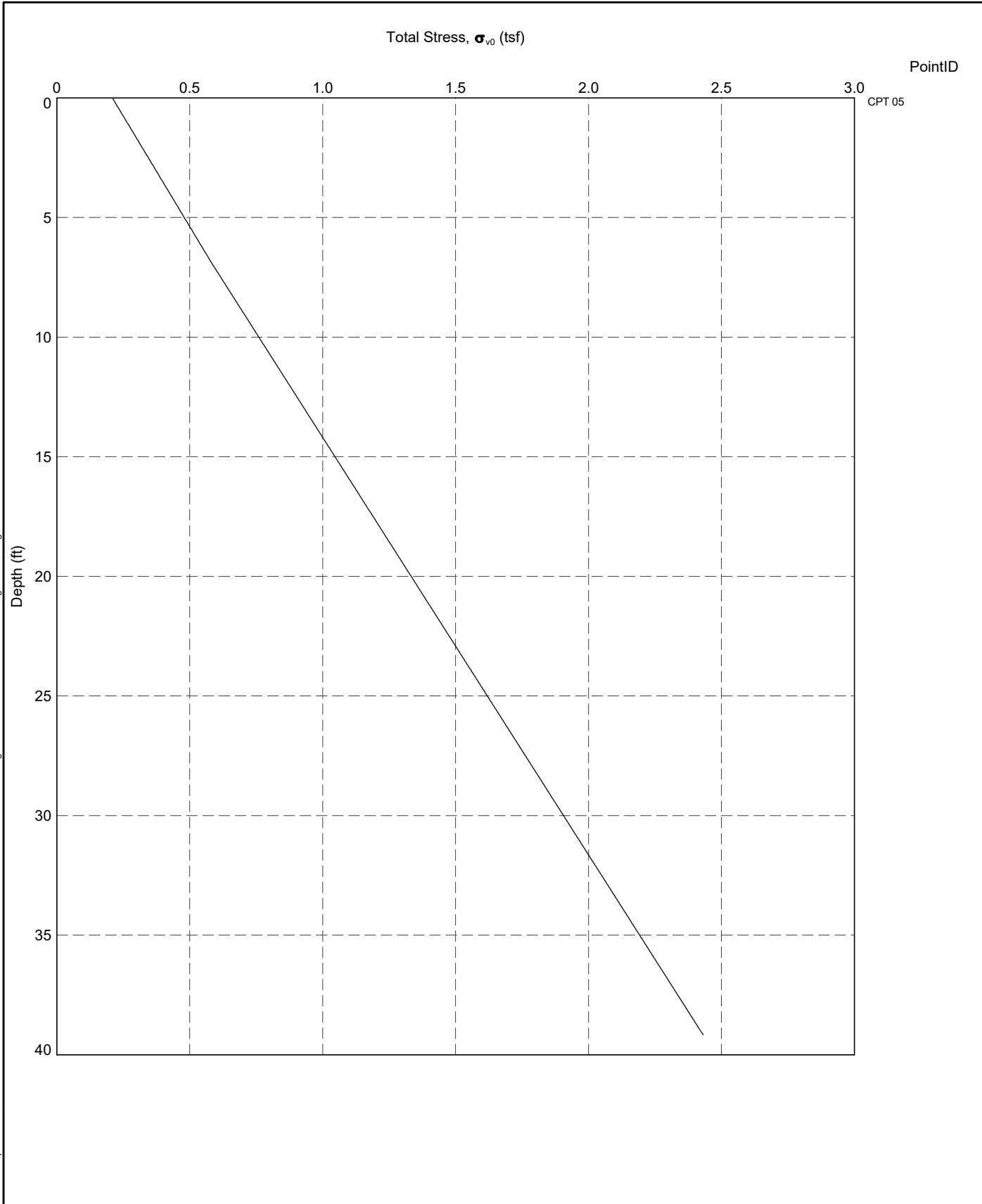
CPT 05



DATGEL\CPT\_TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT.LIQ\_THIN\_LAYER\_CORR\_FACT\_RL.LEIP.DATGEL.CPT\_TOOL\_DGD\_4.05.0.EN.GPJ <-DrawingFile>> 1/2/2021 20:53 10.01.00.11.Datgel.CPT.Tool.gINT.Add.in


 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project</p> <p>Thin Layer Correction Factor versus Elevation</p>	<p>DRAWN Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>CHECKED Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>SCALE Not To Scale</p>		<p>Let</p>
		<p>PROJECT No 4.05.0</p>	<p>FIGURE No 224</p>	

DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.LIQ.TOTAL STRESS.DEPH.LEIP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <-DrawingFile>> 1/2/2021 20:53 10.01.00.11.Datgel.CPT.Tool.gINT.Add.in

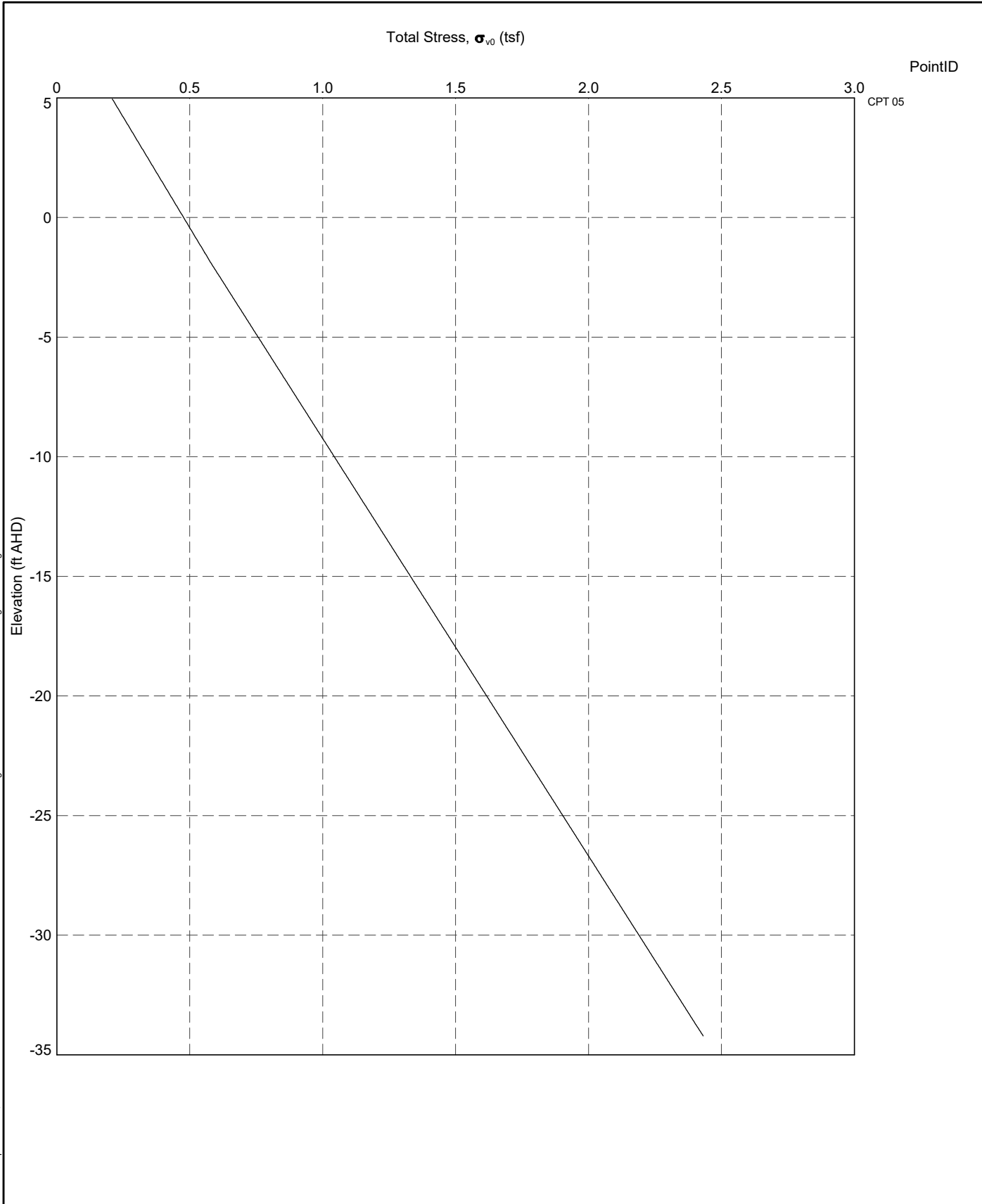



PointID

CPT 05

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p style="text-align: center;">Client 1 Engineer 1 Somewhere CPT Tool Project Total Stress versus Depth</p>	<p>DRAWN <b>Datgel</b>      DATE 1/2/2021</p>
		<p>CHECKED <b>Datgel</b>      DATE 1/2/2021</p>
		<p>SCALE <b>Not To Scale</b>      Let</p>
		<p>PROJECT No <b>4.05.0</b>      FIGURE No <b>225</b></p>

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph CPT LIQ TOTAL STRESS RL LETP DATGEL CPT TOOL DGD 4.05.0 EN GPJ <-DrawingFile> 1/2/2021 20:53 10.01.00.11 Datgel CPT Tool gINT Add-In



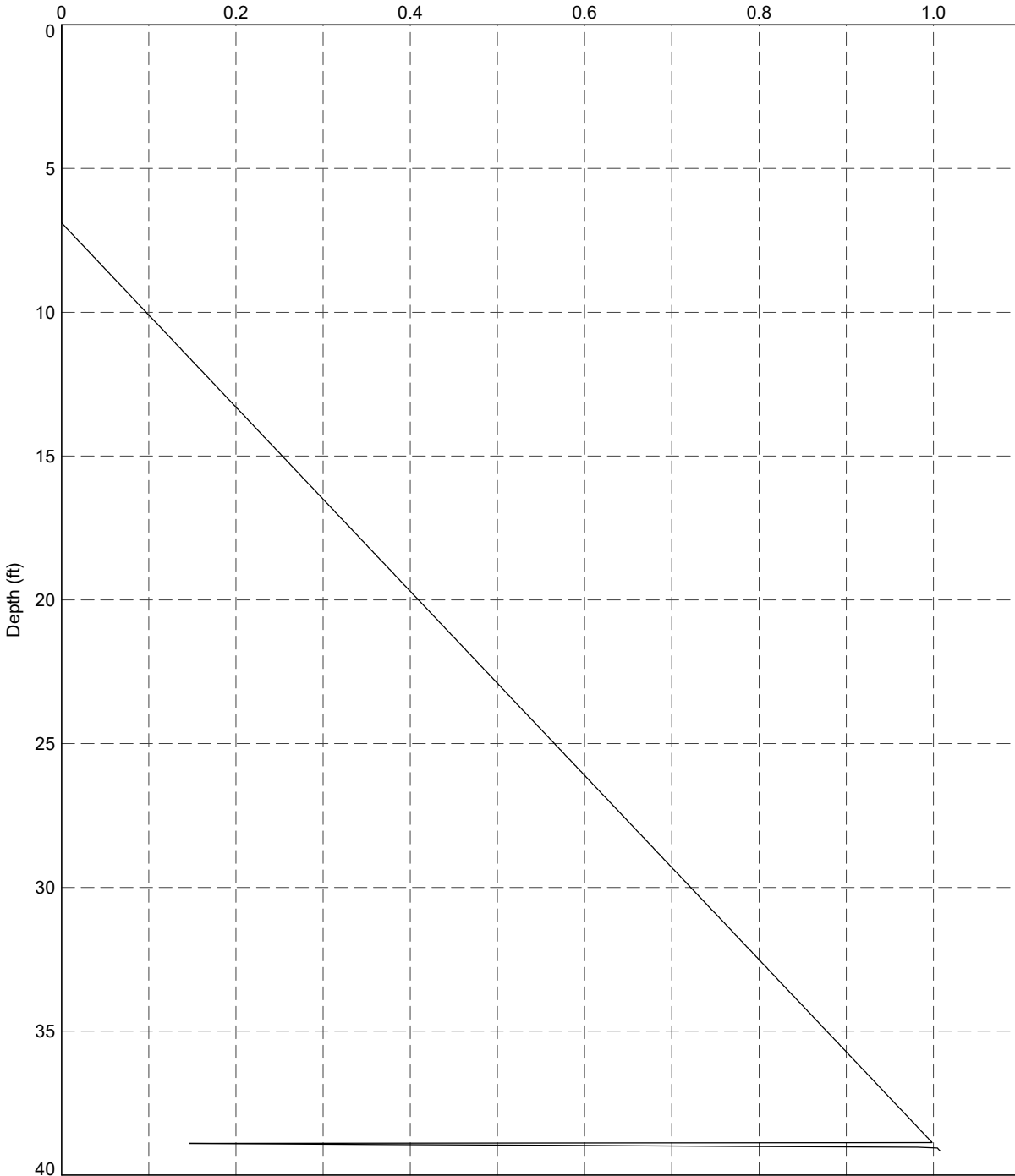
 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Total Stress versus Elevation</p>	<p>DRAWN Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>CHECKED Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>SCALE Not To Scale</p>		<p>Let</p>
		<p>PROJECT No 4.05.0</p>	<p>FIGURE No 226</p>	




In Situ Pore Pressure,  $u_0$  (tsf)

PointID

CPT 05



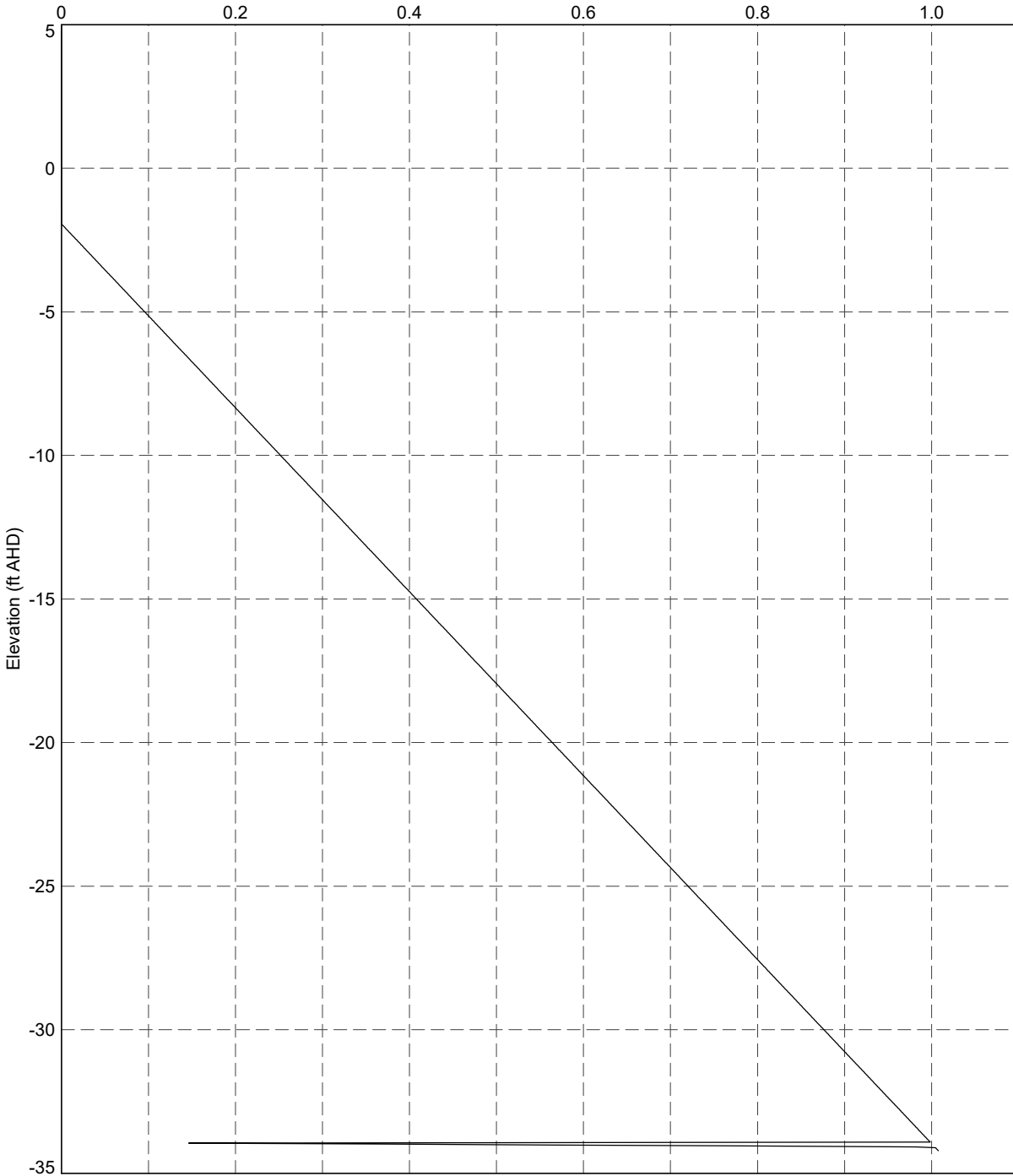
DATGEL\CPT TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT LIQ\_U0\_DEPTH\_LETP DATGEL\_CPT TOOL\_DGD\_4.05.0 EN.GPJ <<DrawingFile>> 1/2/2021 20:53:10.01.00.11 Datgel\CPT.Tool.gINT Add-In

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project In Situ Pore Pressure versus Depth</p>	<p>DRAWN</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>	
		<p>CHECKED</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>	
		<p>SCALE</p> <p>Not To Scale</p>		<p>Let</p>
		<p>PROJECT No</p> <p>4.05.0</p>	<p>FIGURE No</p> <p>227</p>	


In Situ Pore Pressure,  $u_0$  (tsf)

PointID

CPT 05



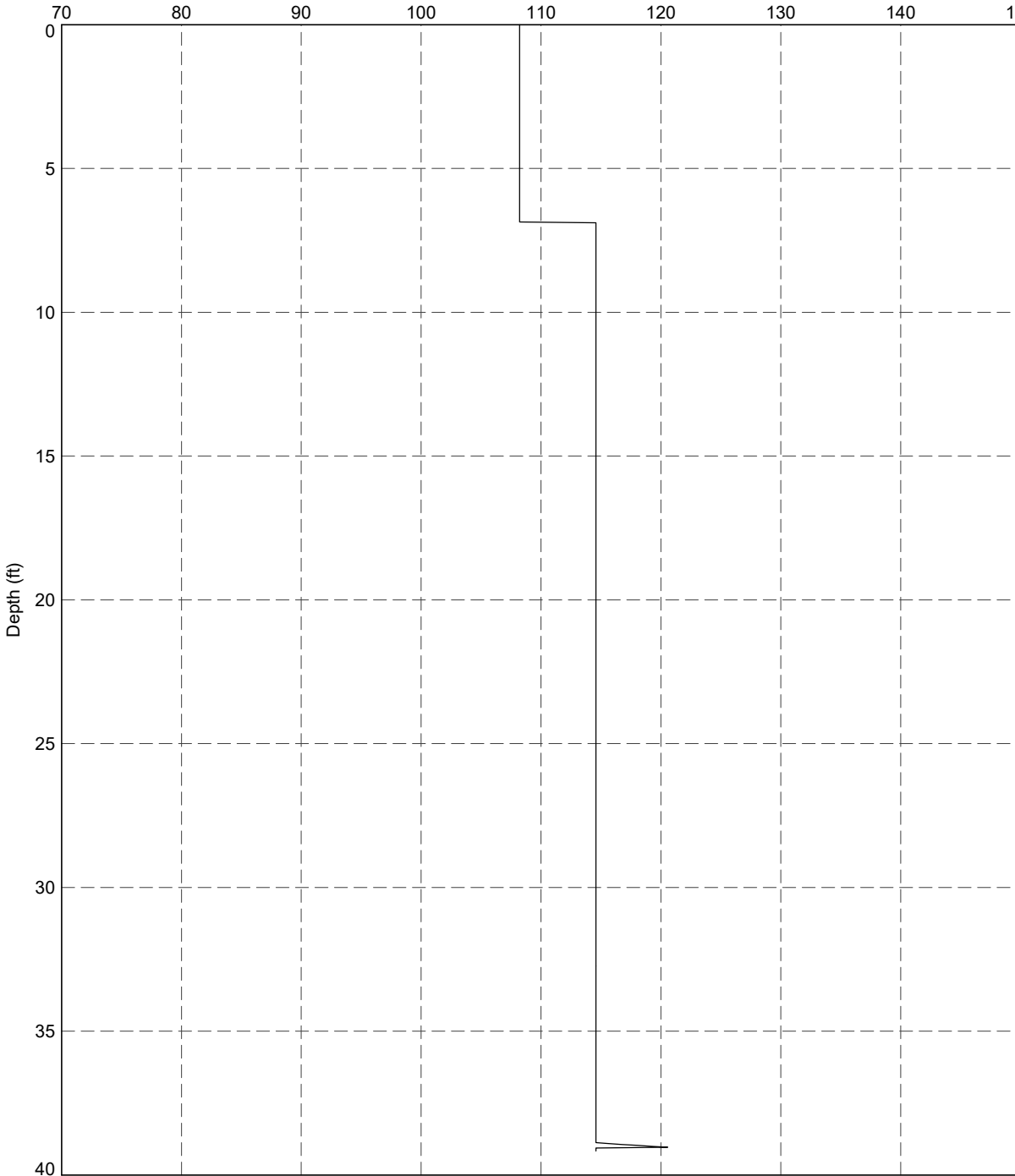
DATGEL\CPT TOOL\_DGD\_4.05.0\LIB\_GLB\_Graph\CPT LIQ\_U0\_RL LETP DATGEL\_CPT TOOL\_DGD\_4.05.0\_EN.GPJ <<DrawingFiles>> 1/2/2021\_20:53 10.01.00.11 Datgel CPT Tool\_gINT\_Add-In

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project In Situ Pore Pressure versus Elevation</p>	<p>DRAWN</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>	
		<p>CHECKED</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>	
		<p>SCALE</p> <p>Not To Scale</p>		<p>Let</p>
		<p>PROJECT No</p> <p>4.05.0</p>	<p>FIGURE No</p> <p>228</p>	


Bulk Unit Weight,  $\gamma_b$  (psf)

PointID

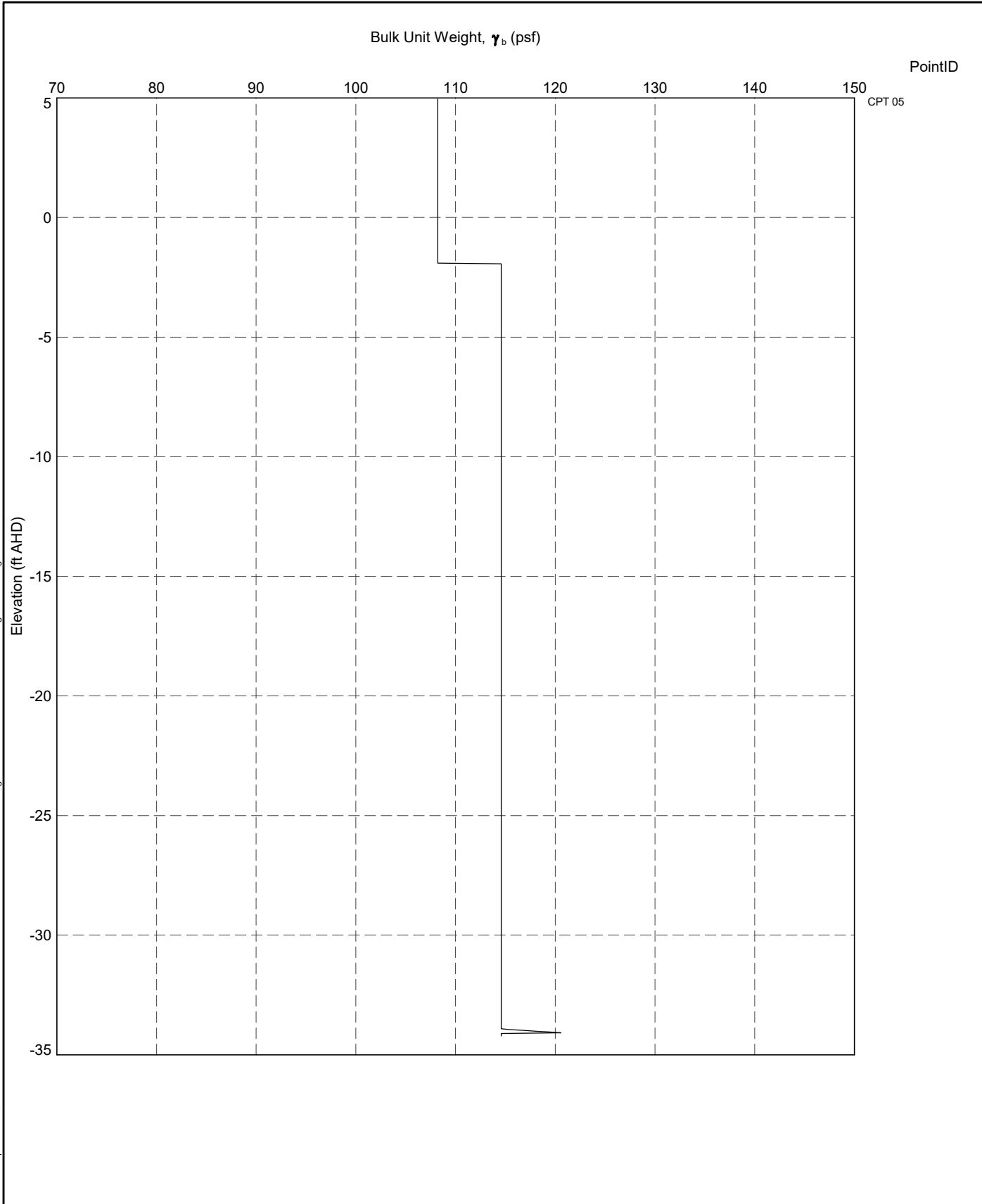
CPT 05




DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.LIQ.UNIT.WEIGHT.DEPTH.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <<DrawingFile>> 1/2/2021\_20:53:10.01.00.11.Datgel.CPT.Tool.gINT.Add-In

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Unit Weight versus Depth</p>	<p>DRAWN Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>CHECKED Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>SCALE Not To Scale</p>		<p>Let</p>
		<p>PROJECT No 4.05.0</p>	<p>FIGURE No 229</p>	

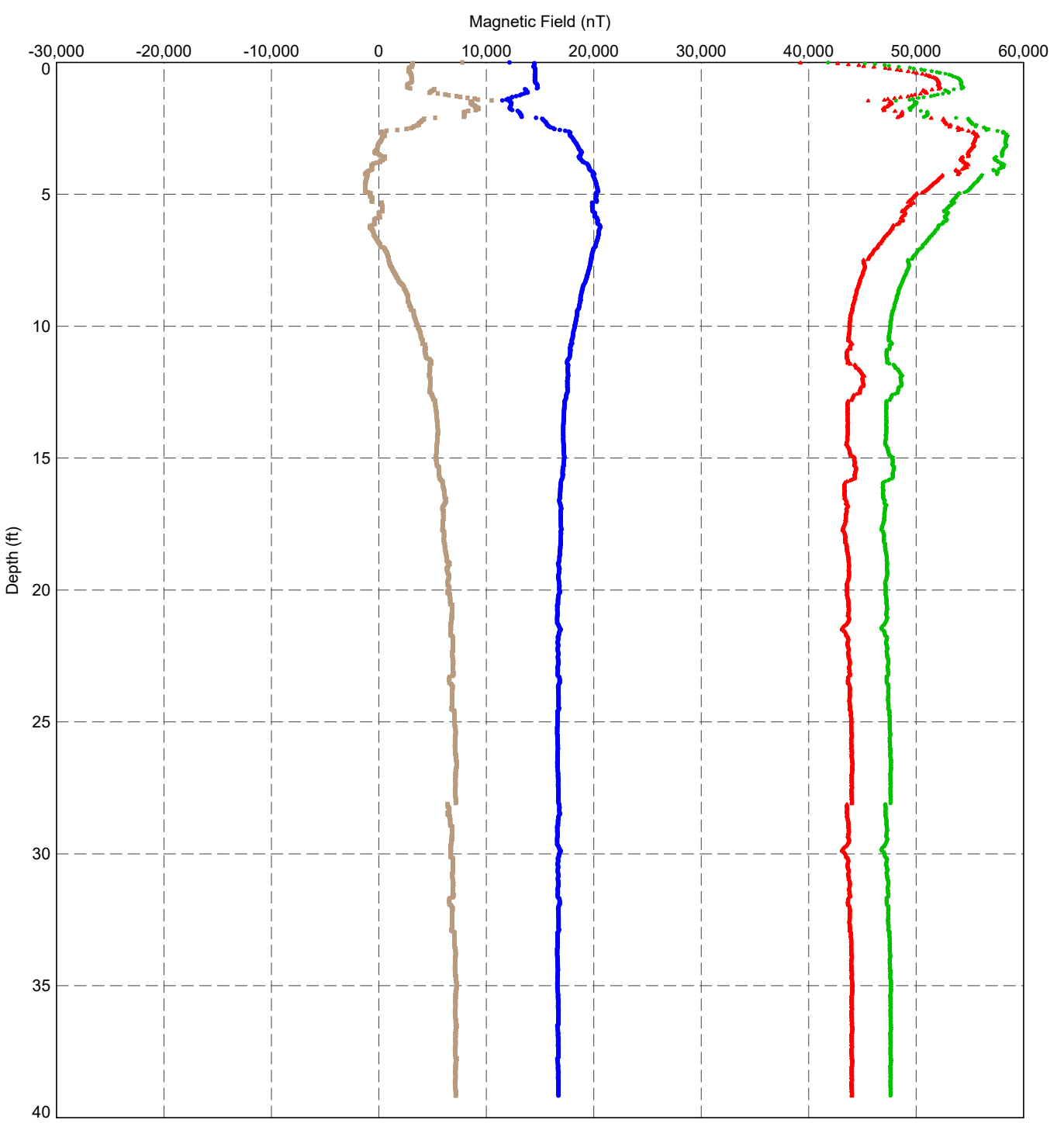
DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph CPT LIQ UNIT WEIGHT RL LETP.DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <<DrawingFiles>> 1/2/2021 20:53 10.01.00.11 Datgel CPT Tool gINT Add-In




PointID  
CPT 05

 <b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	TITLE  Client 1 Engineer 1 Somewhere CPT Tool Project Unit Weight versus Elevation	DRAWN Datgel	DATE 1/2/2021	
		CHECKED Datgel	DATE 1/2/2021	
		SCALE Not To Scale		Let
		PROJECT No 4.05.0	FIGURE No 230	

DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.MAGNETIC.FIELD.DEPTH.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <<DrawingFiles>> 1/2/2021\_20:54\_10.01100.11.Datgel.CPT.Tool.gINT.Add-in



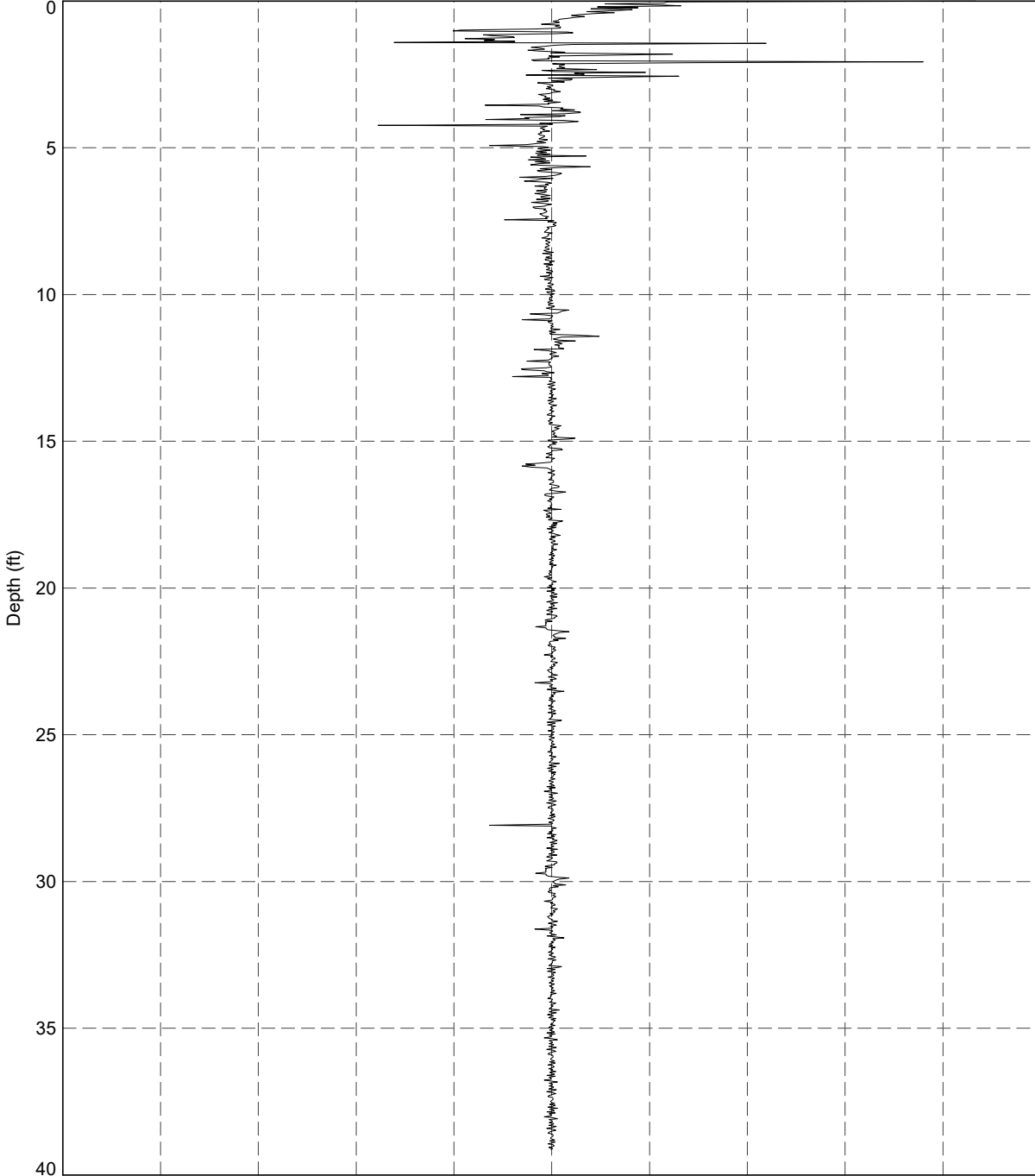
- Legend:
- Magnetic Field X (nT)
  - Magnetic Field Y (nT)
  - ▲ Magnetic Field Z (nT)
  - ★ Magnetic Field Total (nT)

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Magnetic field versus Depth</p>	DRAWN	Datgel	DATE	1/2/2021	
		CHECKED	Datgel	DATE	1/2/2021	
		SCALE	Not To Scale			Let
		PROJECT No	4.05.0	FIGURE No	231	


Magnetic Field Gradient (nT/in)

PointID

-10,000 -8,000 -6,000 -4,000 -2,000 0 2,000 4,000 6,000 8,000 10,000 CPT 05



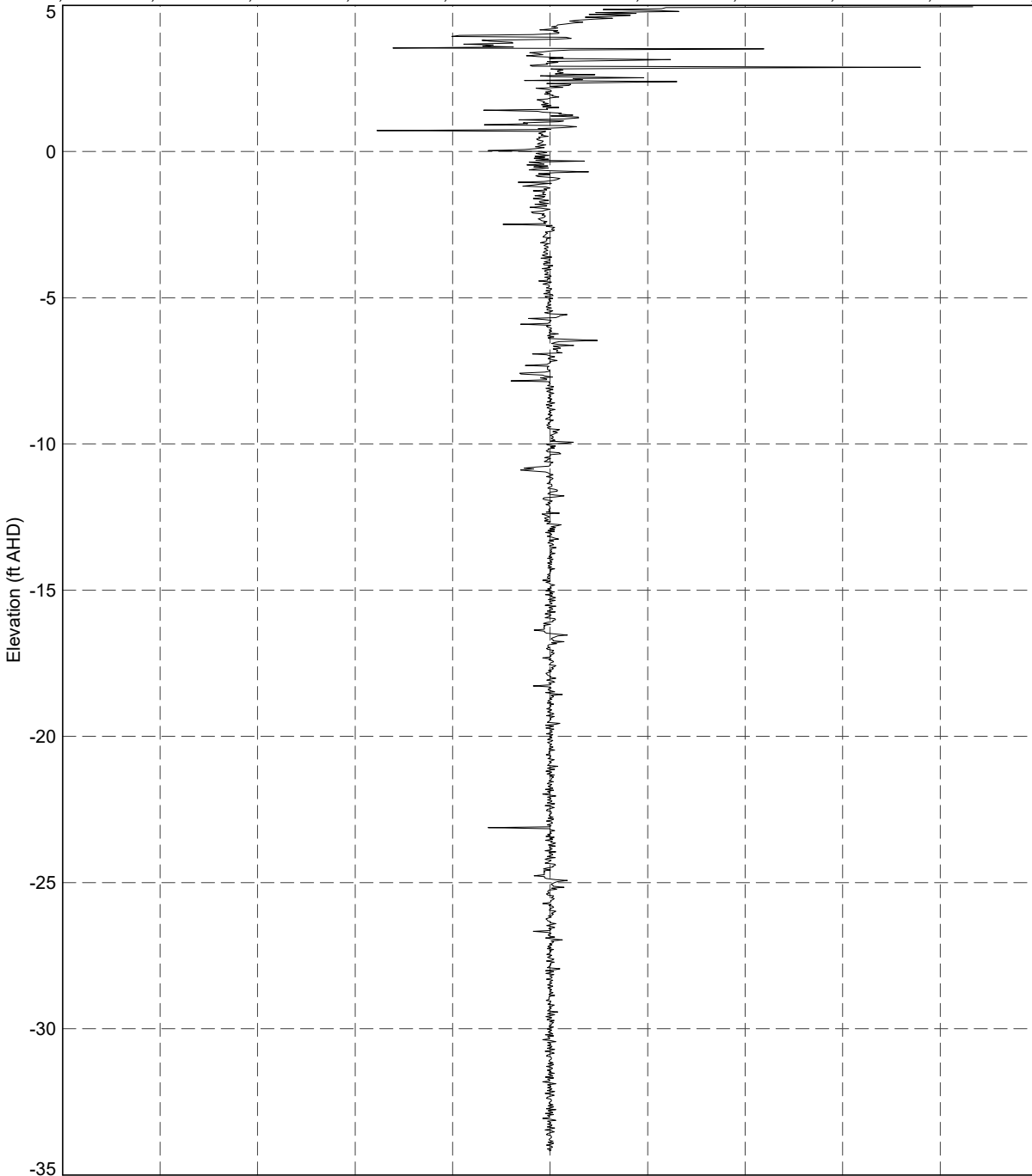
DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.MAGNETIC.FIELD.GRA.DIEN.T.P.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <<DrawingFile>> 1/2/2021 20:54:10.01.00.11.Datgel.CPT.Tool.gINT.Add-In

	TITLE Client 1 Engineer 1 Somewhere CPT Tool Project Magnetic Field versus Depth	DRAWN Datgel	DATE 1/2/2021	
		CHECKED Datgel	DATE 1/2/2021	
		SCALE Not To Scale		Let
		PROJECT No 4.05.0	FIGURE No 232	

Magnetic Field Gradient (nT/in)

PointID

-10,000 -8,000 -6,000 -4,000 -2,000 0 2,000 4,000 6,000 8,000 10,000 CPT 05



DATGEL\CPT TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT\MAGNETIC FIELD GRADIENT\_RL\LETP DATGEL\_CPT TOOL\_DGD\_4.05.0.EN.GPJ <<DrawingFile>> 1/2/2021 20:55 10.01.00.11 Datgel\CPT.Tool.gINT Add-In

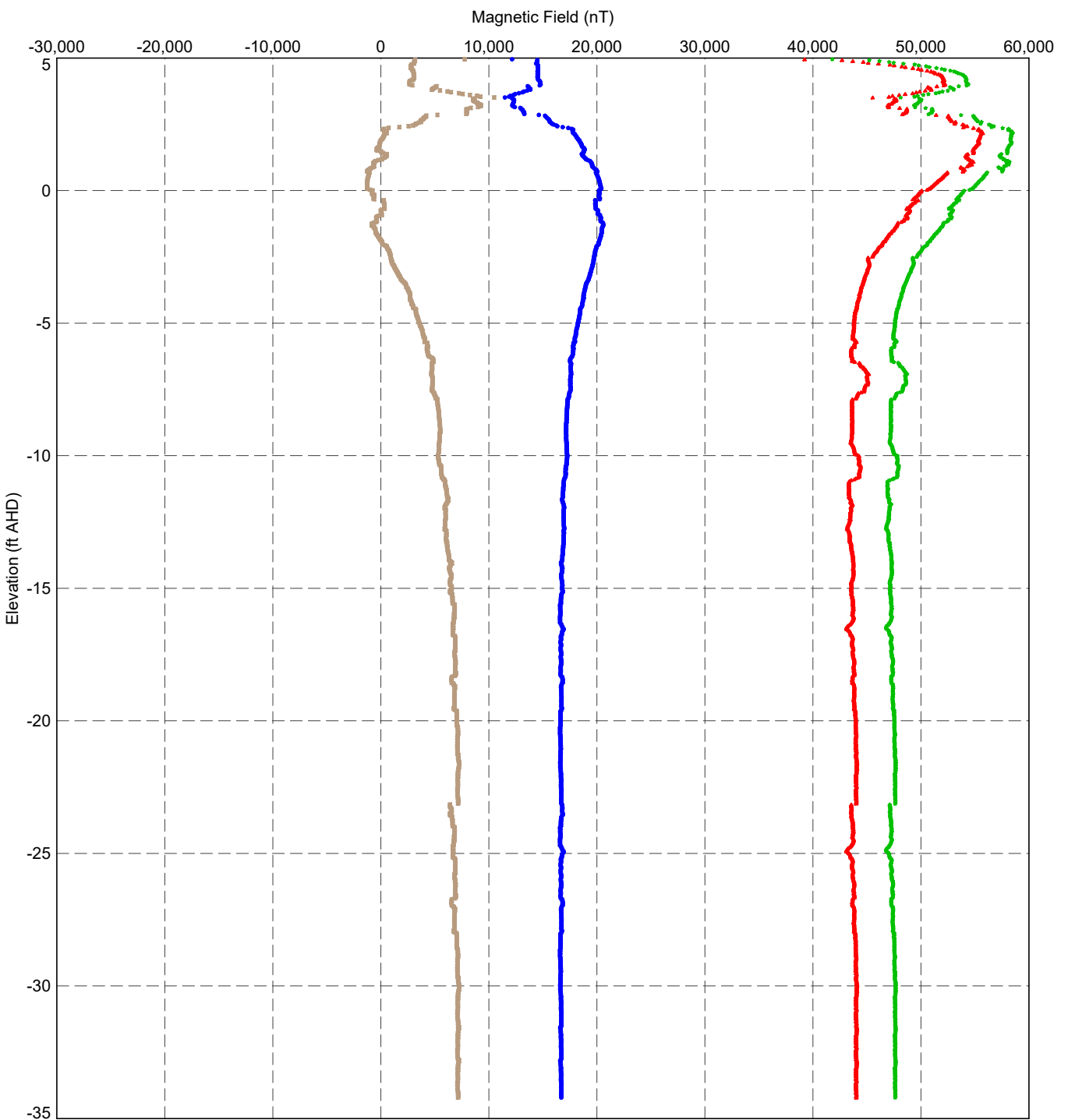


TITLE

Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Magnetic Field versus Elevation

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	233

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph CPT MAGNETIC FIELD RL LETP.DATGEL.CPT TOOL DGD 4.05.0 EN.GPJ <<DrawingFiles>> 1/2/2021 20:55:10.01.00.11.Datgel.CPT.Tool.gINT.Add-In



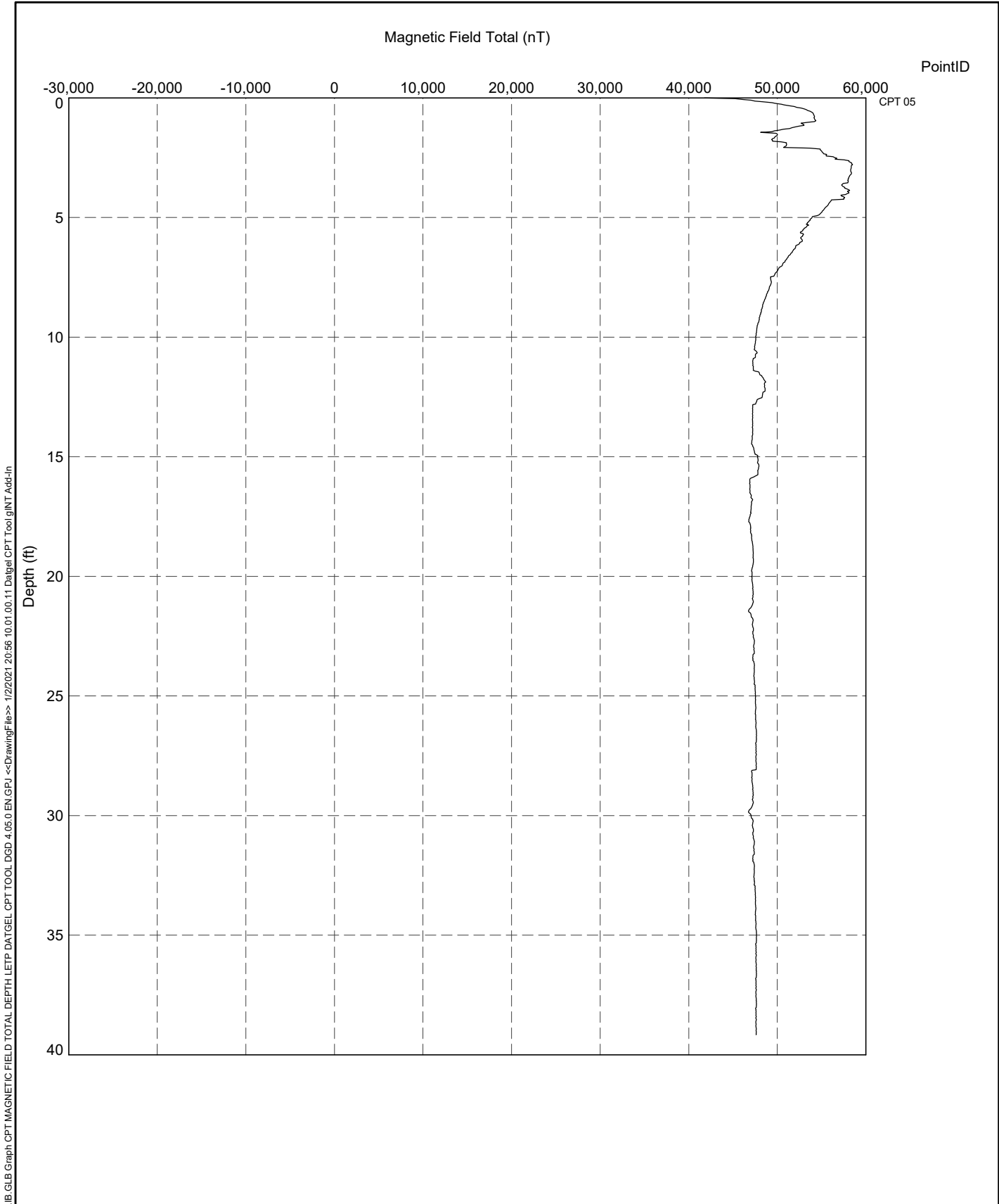
- Legend:
- Magnetic Field X (nT)
  - Magnetic Field Y (nT)
  - ▲ Magnetic Field Z (nT)
  - ★ Magnetic Field Total (nT)

TITLE


Client 1  
Engineer 1  
Somewhere  
CPT Tool Project  
Magnetic Field versus Elevation

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	234

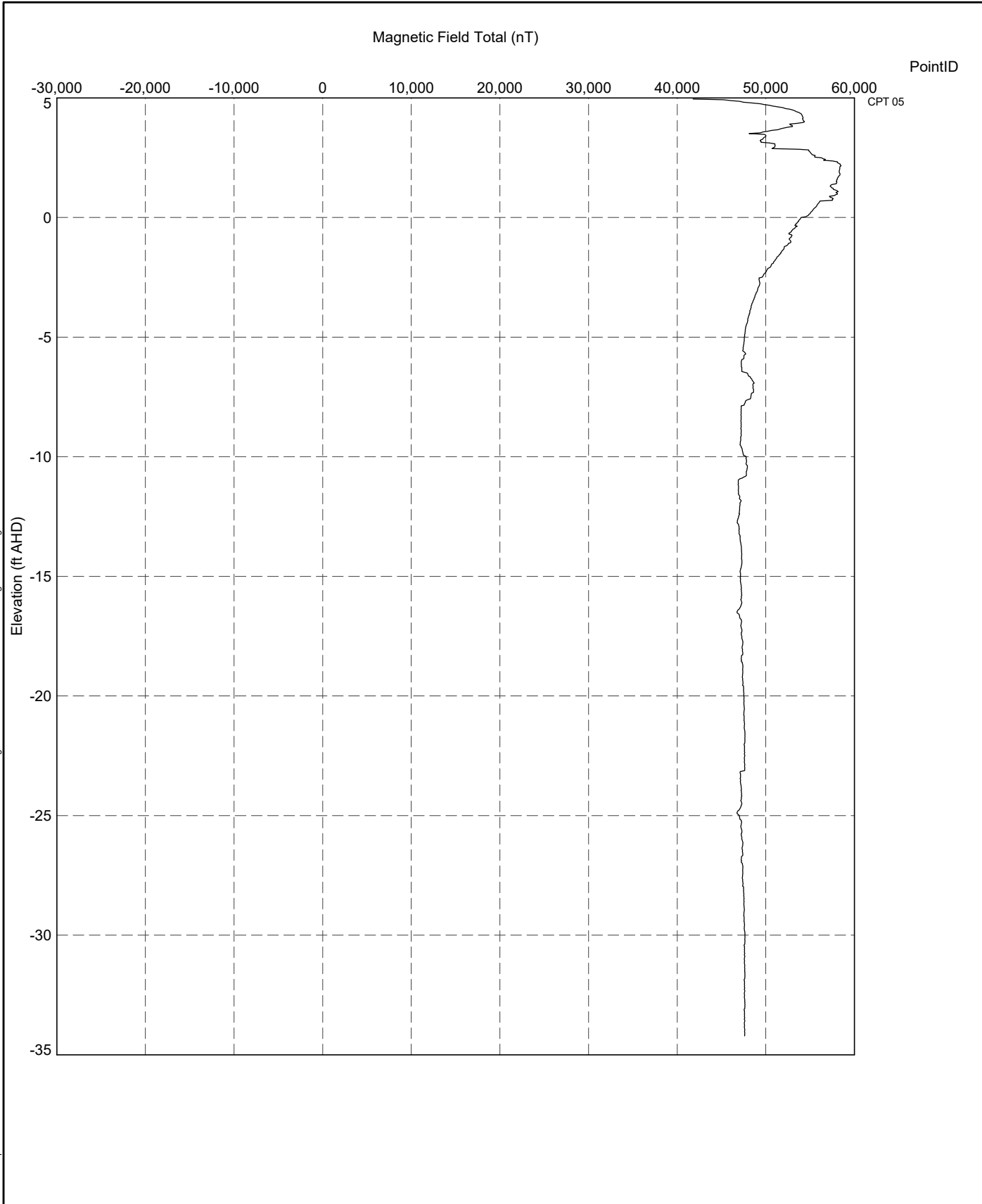





DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.MAGNETIC.FIELD.TOTAL.DEPTH.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <-DrawingFile>> 1/2/2021 20:56 10.01.00.11.Datgel.CPT.Tool.gINT.Add.in

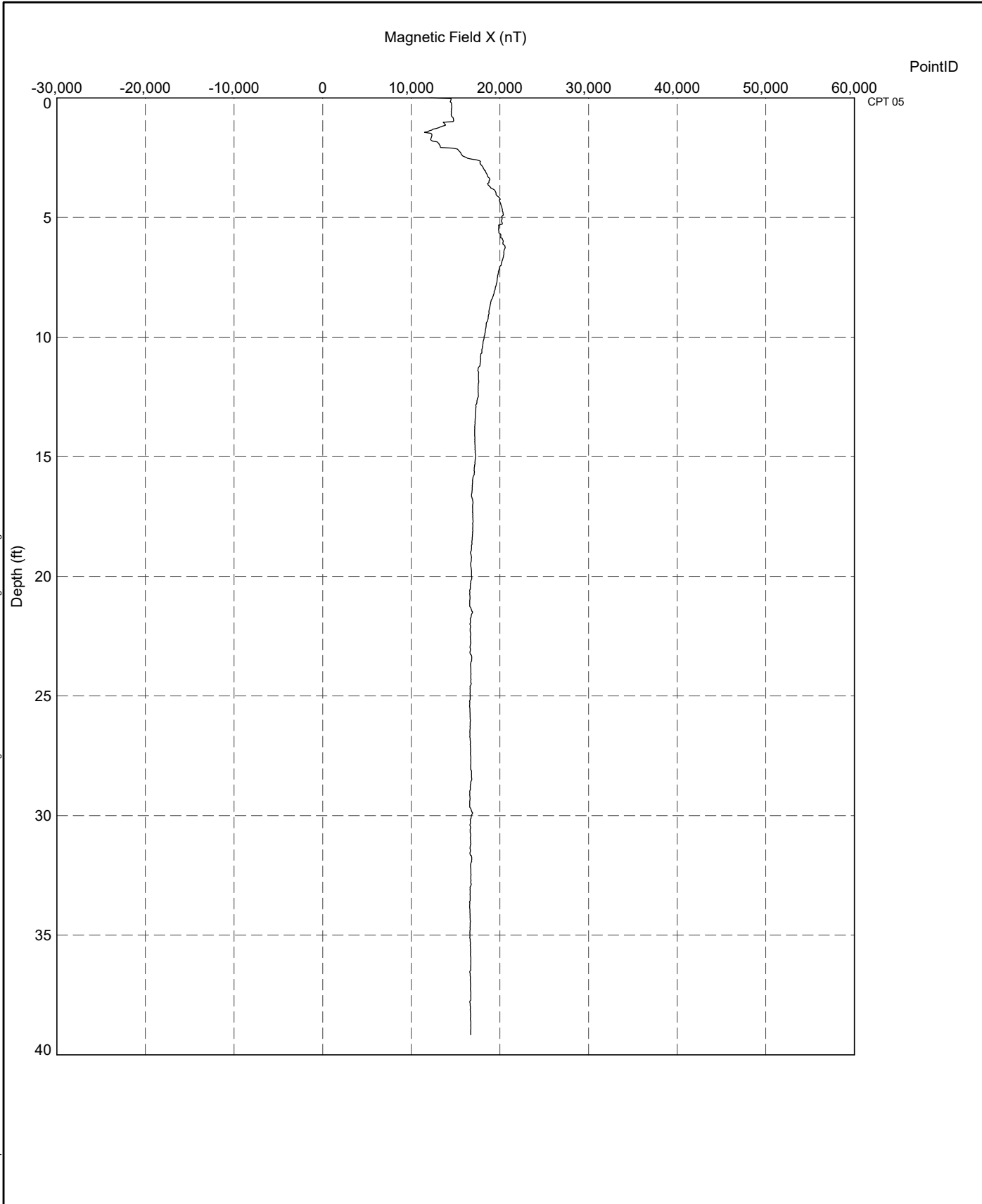
 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Magnetic Field versus Depth</p>	<p>DRAWN</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>	
		<p>CHECKED</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>	
		<p>SCALE</p> <p>Not To Scale</p>		<p>Let</p>
		<p>PROJECT No</p> <p>4.05.0</p>	<p>FIGURE No</p> <p>235</p>	

DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.MAGNETIC.FIELD.TOTAL.RL.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <-DrawingFile> 1/2/2021 20:56 10.01.00.11.Datgel.CPT.Tool.gINT.Add-In




 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Magnetic Field versus Elevation</p>	<p>DRAWN</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>	
		<p>CHECKED</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>	
		<p>SCALE</p> <p>Not To Scale</p>		<p>Let</p>
		<p>PROJECT No</p> <p>4.05.0</p>	<p>FIGURE No</p> <p>236</p>	

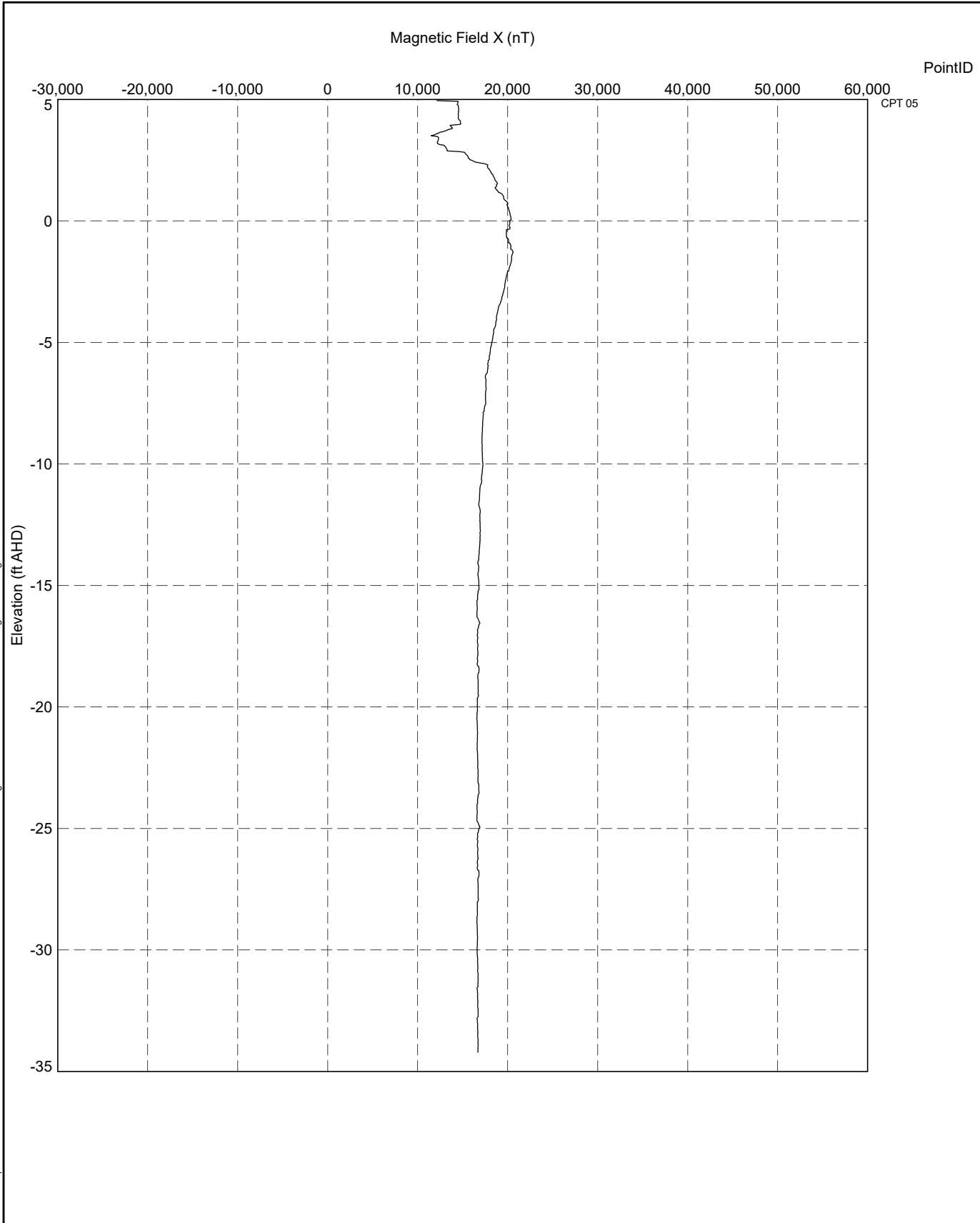
DATGEL\CPT\_TOOL\_DGD\_4.05.0\LIB\_GLB\_Graph\CPT\_MAGNETIC\_FIELD\_X\_DEPTH\_LETP\_DATGEL\_CPT\_TOOL\_DGD\_4.05.0\_EN.GPJ <<DrawingFile>> 1/2/2021 20:56:10.01.00.11 Datgel.CPT.Tool.gINT\_Add.in




PointID  
CPT 05

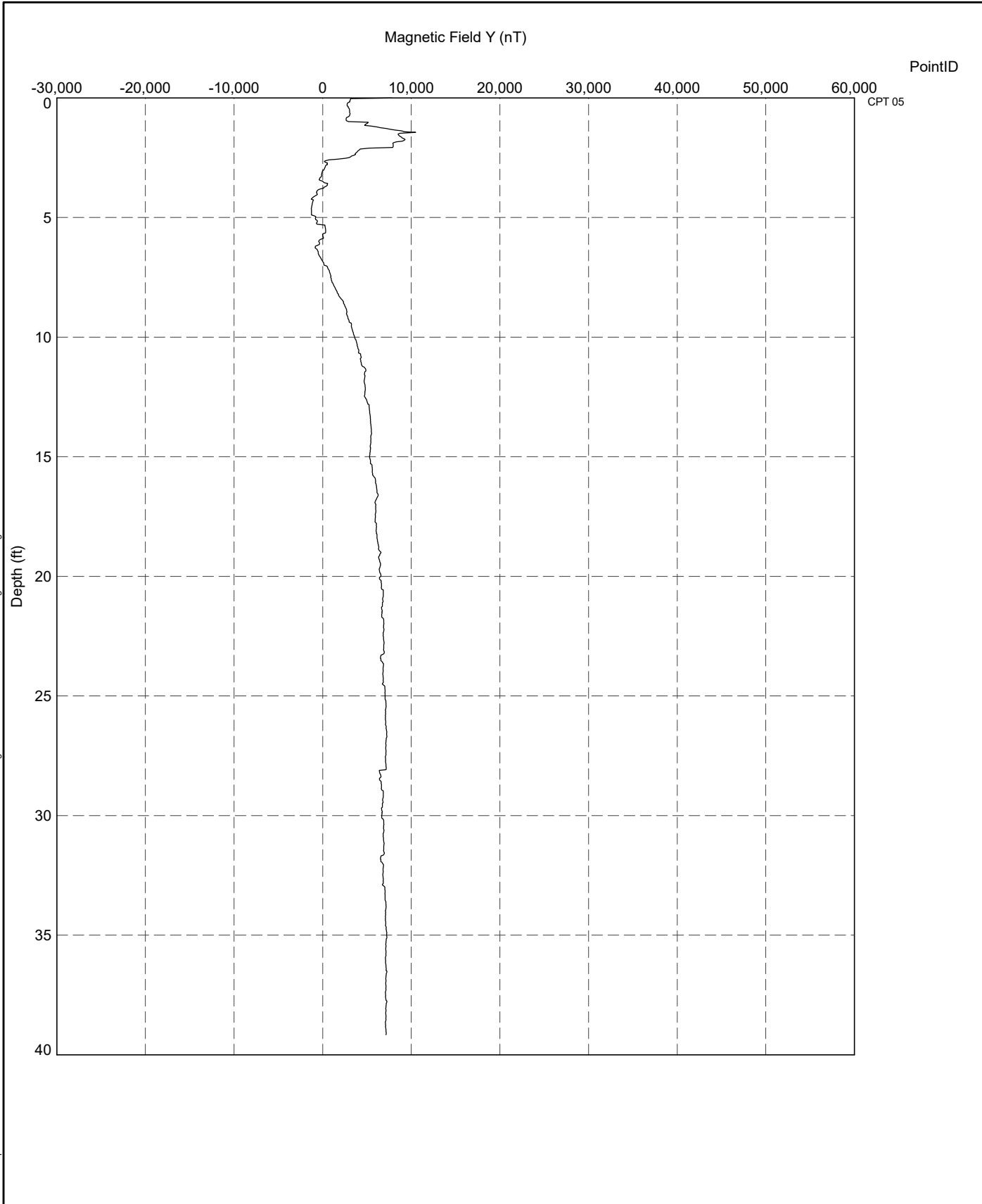
 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Magnetic Field versus Depth</p>	<p>DRAWN Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>CHECKED Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>SCALE Not To Scale</p>		<p>Let</p>
		<p>PROJECT No 4.05.0</p>	<p>FIGURE No 237</p>	

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph CPT MAGNETIC FIELD X.RL LETP DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <<DrawingFile>> 1/2/2021 20:56 10.01.00.11 Datgel CPT Tool.gINT Add-In




 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	TITLE  Client 1 Engineer 1 Somewhere CPT Tool Project Magnetic Field versus Elevation	DRAWN Datgel	DATE 1/2/2021	
		CHECKED Datgel	DATE 1/2/2021	
		SCALE Not To Scale		Let
		PROJECT No 4.05.0	FIGURE No 238	

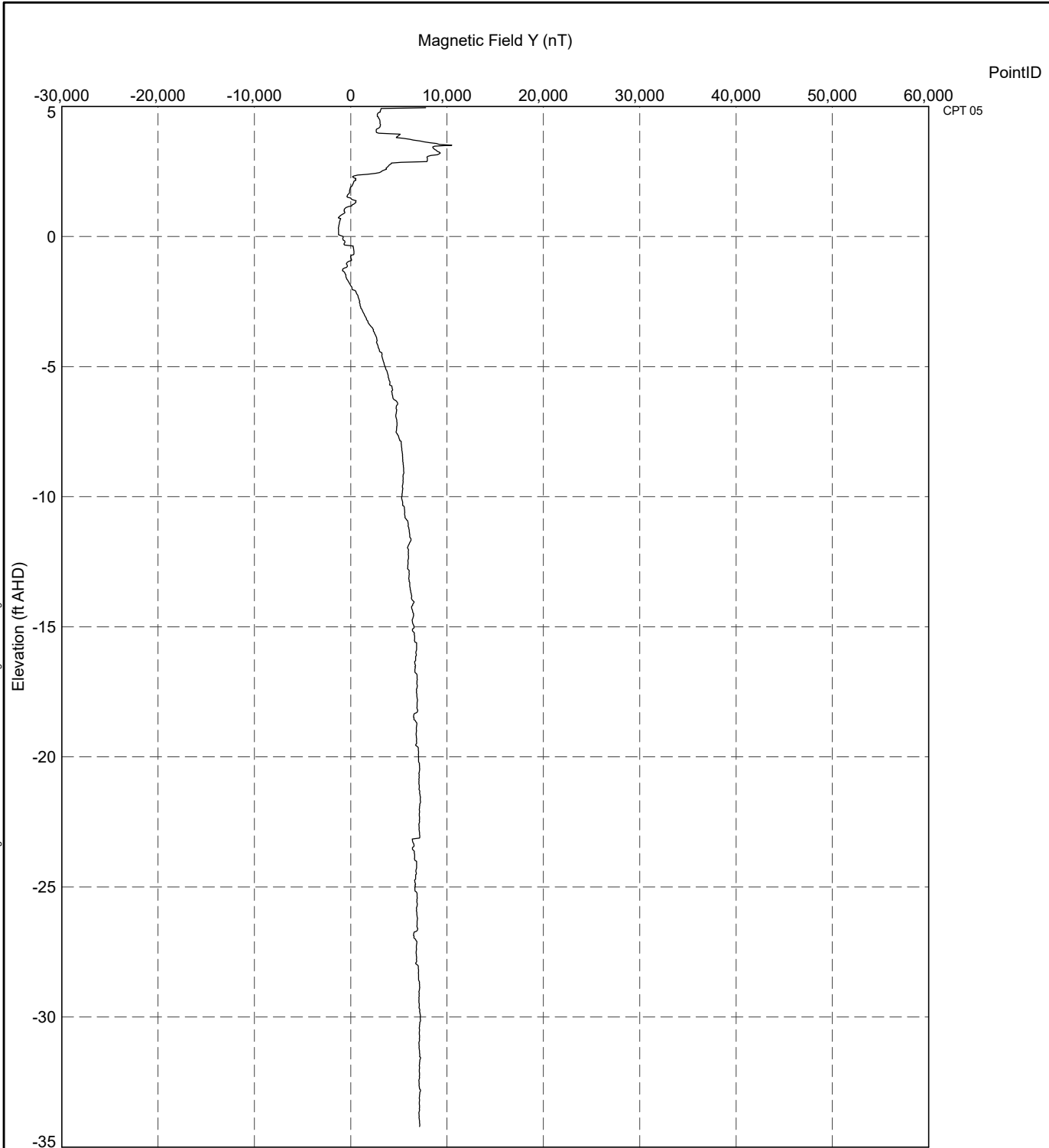
DATGEL\CPT\_TOOL\_DGD\_4.05.0\LIB\_GLB\_Graph\CPT\_MAGNETIC\_FIELD\_Y\_DEPTH\_LETP\_DATGEL\_CPT\_TOOL\_DGD\_4.05.0\_EN.GPJ <<DrawingFile>> 1/2/2021 20:56:10.01.00.11 Datgel.CPT.Tool.gINT\_Add.in




PointID  
CPT 05

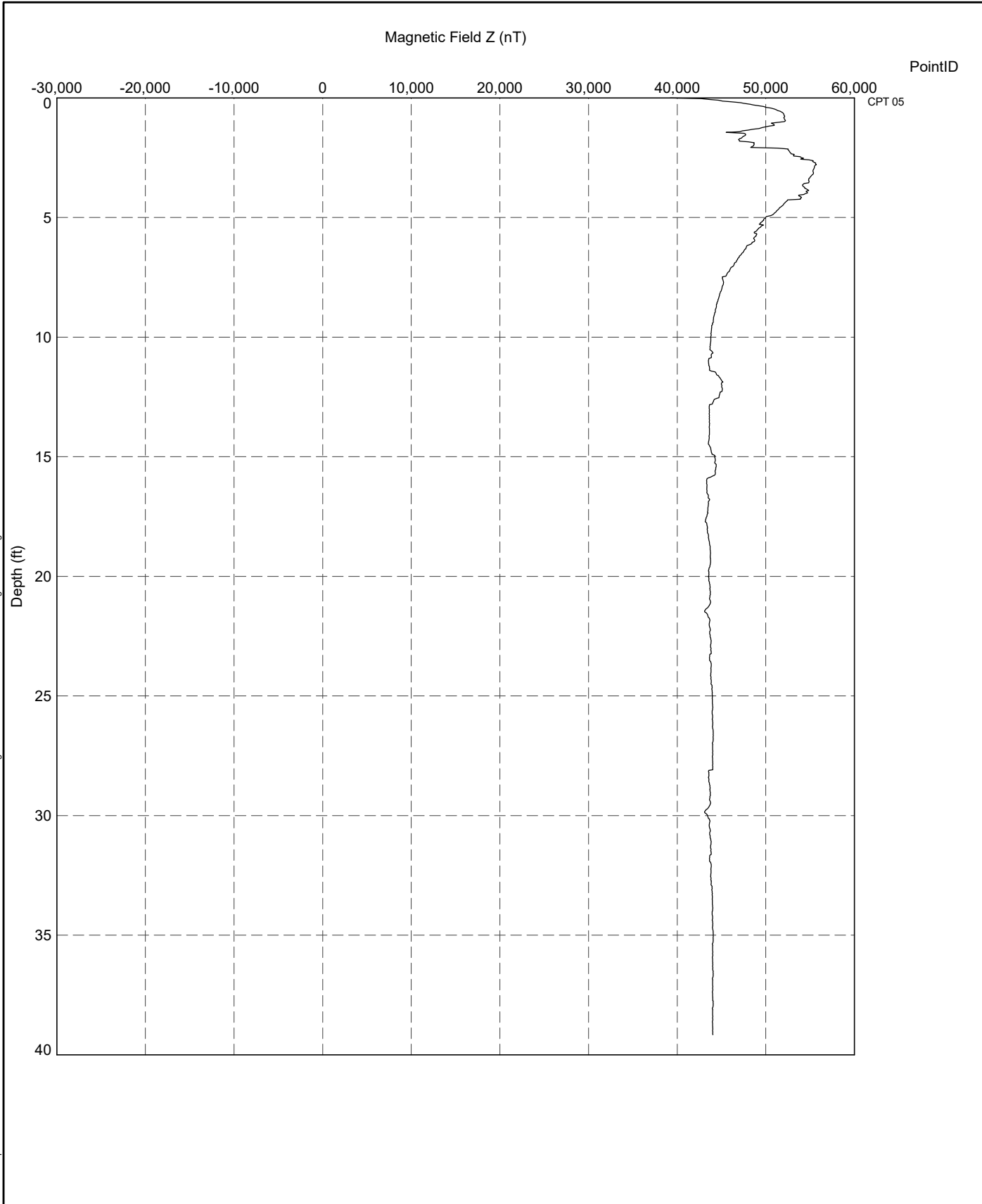
 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Magnetic Field versus Depth</p>	<p>DRAWN</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>	
		<p>CHECKED</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>	
		<p>SCALE</p> <p>Not To Scale</p>		<p>Let</p>
		<p>PROJECT No</p> <p>4.05.0</p>	<p>FIGURE No</p> <p>239</p>	

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph CPT MAGNETIC FIELD Y.RL LETP DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <<DrawingFile>> 1/2/2021 20:56 10.01.00.11 Datgel CPT Tool.gINT Add-In




 <b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	TITLE  Client 1 Engineer 1 Somewhere CPT Tool Project Magnetic Field versus Elevation	DRAWN Datgel	DATE 1/2/2021	
	CHECKED Datgel	DATE 1/2/2021		
	SCALE Not To Scale		Let	
	PROJECT No 4.05.0		FIGURE No 240	

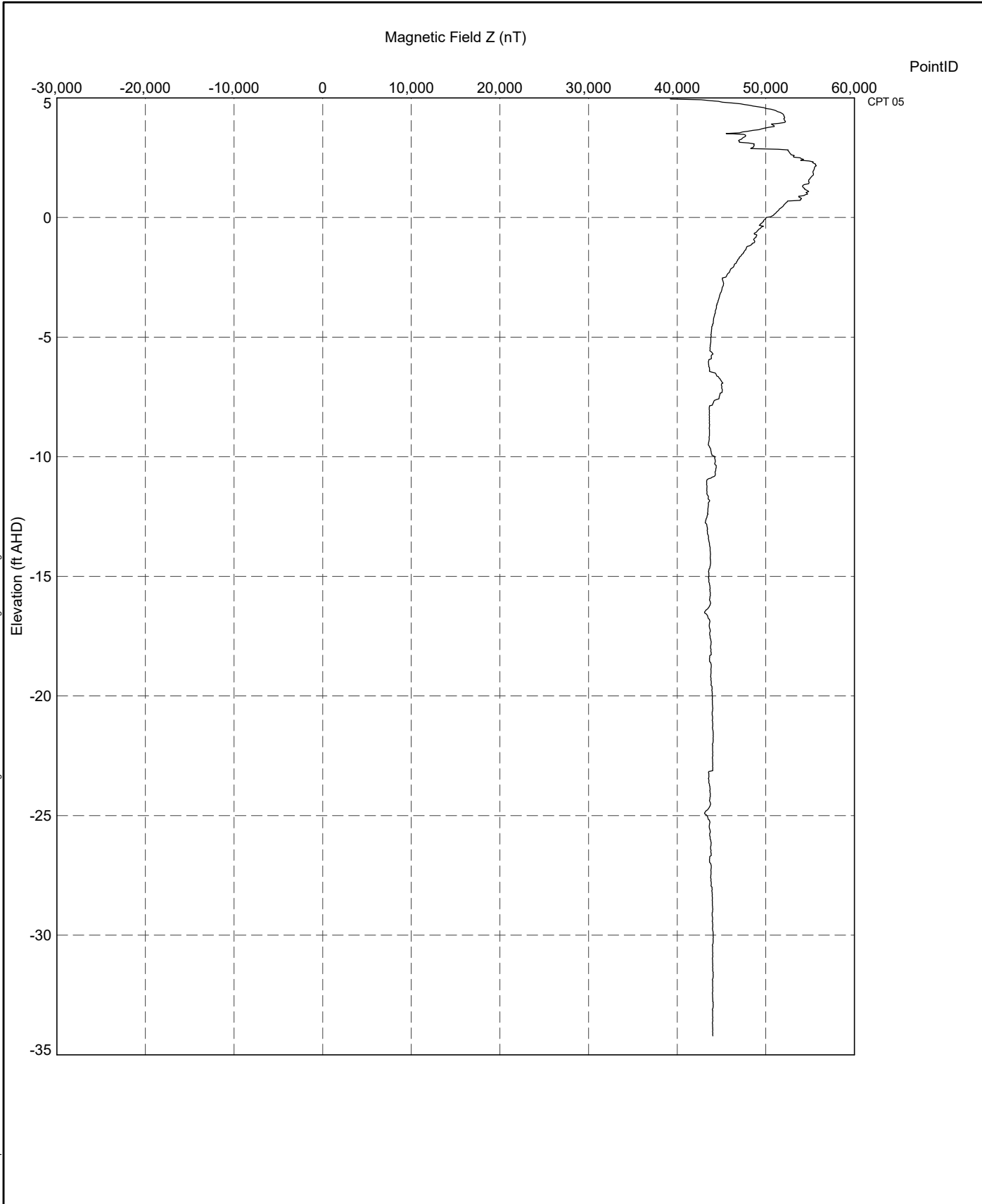
DATGEL\CPT\_TOOL\_DGD\_4.05.0\LIB\_GLB\_Graph\CPT\_MAGNETIC\_FIELD\_Z\_DEPTH\_LETP\_DATGEL\_CPT\_TOOL\_DGD\_4.05.0.EN.GPJ <<DrawingFile>> 1/2/2021 20:57:10.01.00.11 Datgel\CPT\_Tool.gINT Add-In




PointID  
CPT 05

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Magnetic Field versus Depth</p>	<p>DRAWN</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>	
		<p>CHECKED</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>	
		<p>SCALE</p> <p>Not To Scale</p>		<p>Let</p>
		<p>PROJECT No</p> <p>4.05.0</p>	<p>FIGURE No</p> <p>241</p>	

DATGEL CPT TOOL\_DGD\_4.05.0.LIB.GLB Graph CPT MAGNETIC FIELD Z.RL LETP DATGEL.CPT\_TOOL\_DGD\_4.05.0.EN.GPJ <<DrawingFile>> 1/2/2021\_20:57 10.0100.11.Datgel CPT Tool.gINT.Add-in



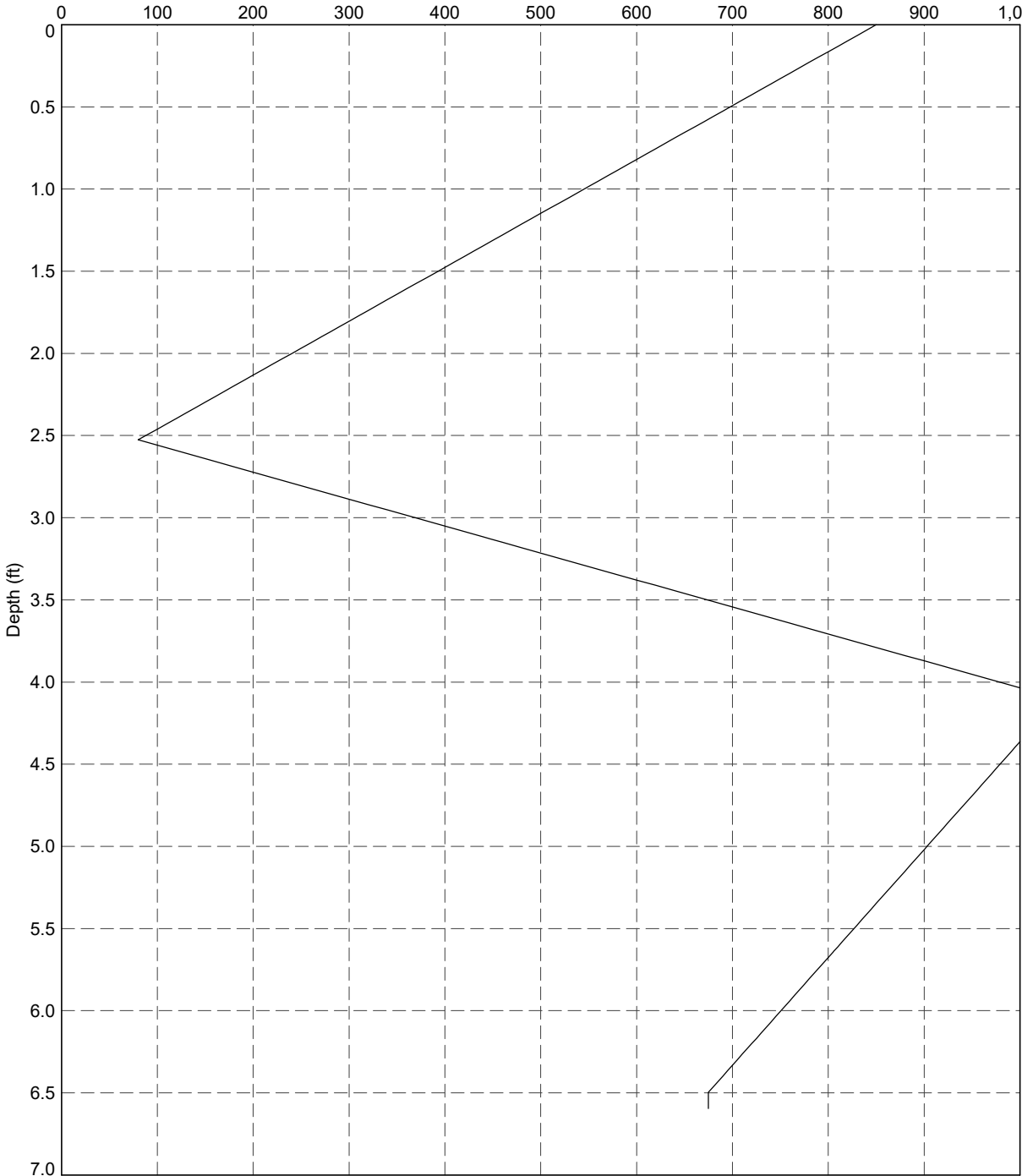
 <b>Datgel</b> <small>DATA SOLUTIONS</small> <small>Geotechnics • Geoenvironment • Laboratory</small>	<small>TITLE</small>  Client 1 Engineer 1 Somewhere CPT Tool Project Magnetic Field versus Elevation	<small>DRAWN</small> Datgel	<small>DATE</small> 1/2/2021		
	<small>CHECKED</small> Datgel	<small>DATE</small> 1/2/2021			
	<small>SCALE</small> Not To Scale		Let		
	<small>PROJECT No</small> 4.05.0		<small>FIGURE No</small> 242		



Natural Gamma Radiation (counts/s)

PointID

CPT 05



DATGEL\CPT TOOL\_DGD\_4.05.0\LIB\_GLB\_Graph\CPT NATURAL GAMMA RADIATION DEPTH LETP.DATGEL\CPT TOOL\_DGD\_4.05.0.EN.GPJ <<DrawingFiles>> 1/2/2021 20:57 10.01.00.11.Datgel CPT Tool.gINT.Add-in



TITLE

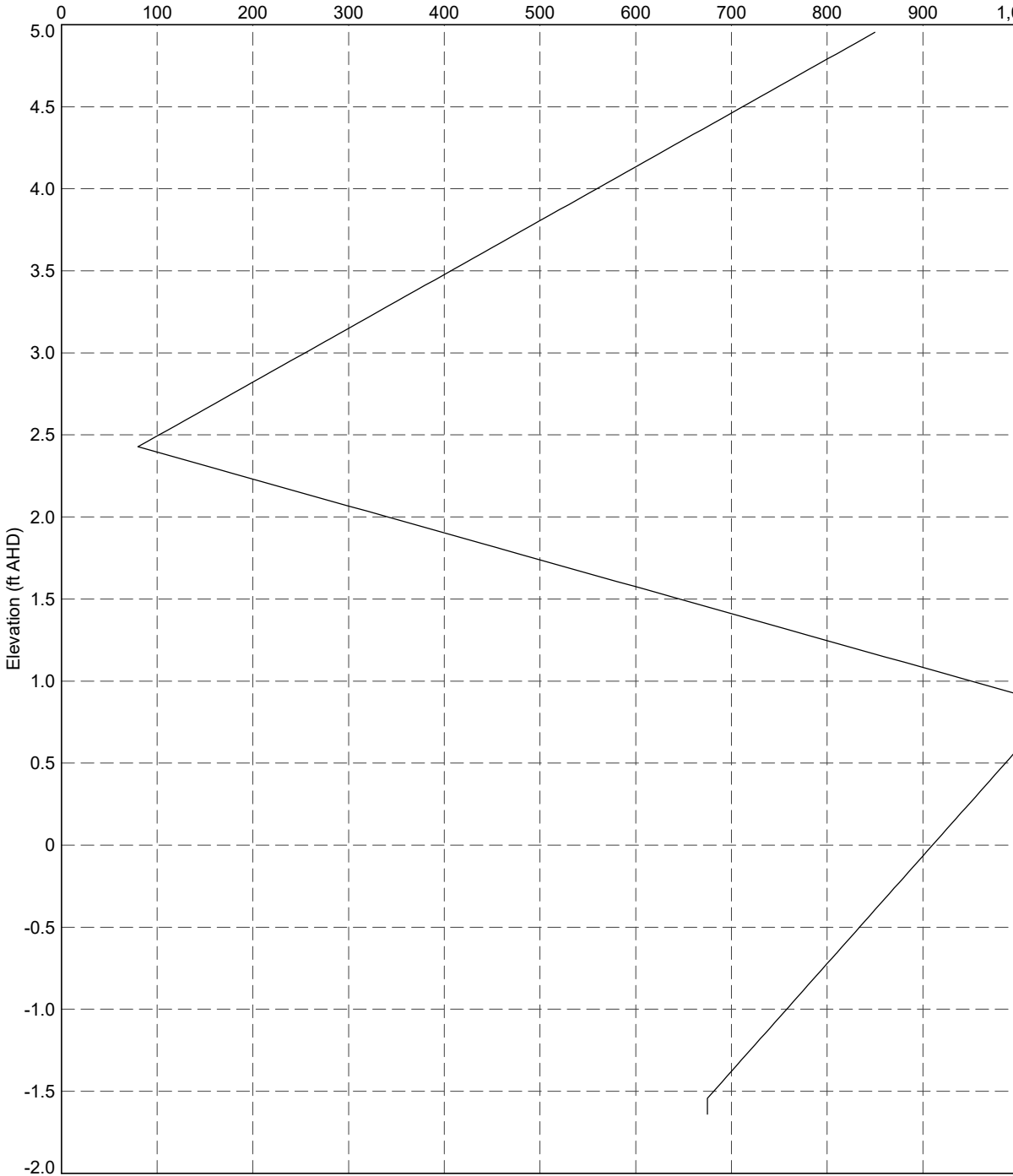
Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Natural Gamma Radiation versus Depth

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	243

Natural Gamma Radiation (counts/s)

PointID

CPT 05



DATGEL\CPT\_TOOL\_DGD\_4.05.0\LIB\_GLB\_Graph\CPT NATURAL GAMMA RADIATION RL LETP.DATGEL\CPT\_TOOL\_DGD\_4.05.0\EN\_GPJ <-DrawingFile>> 1/22/2021 20:57 10:01:00.11.Datgel.CPT.Tool.gINT Add-In



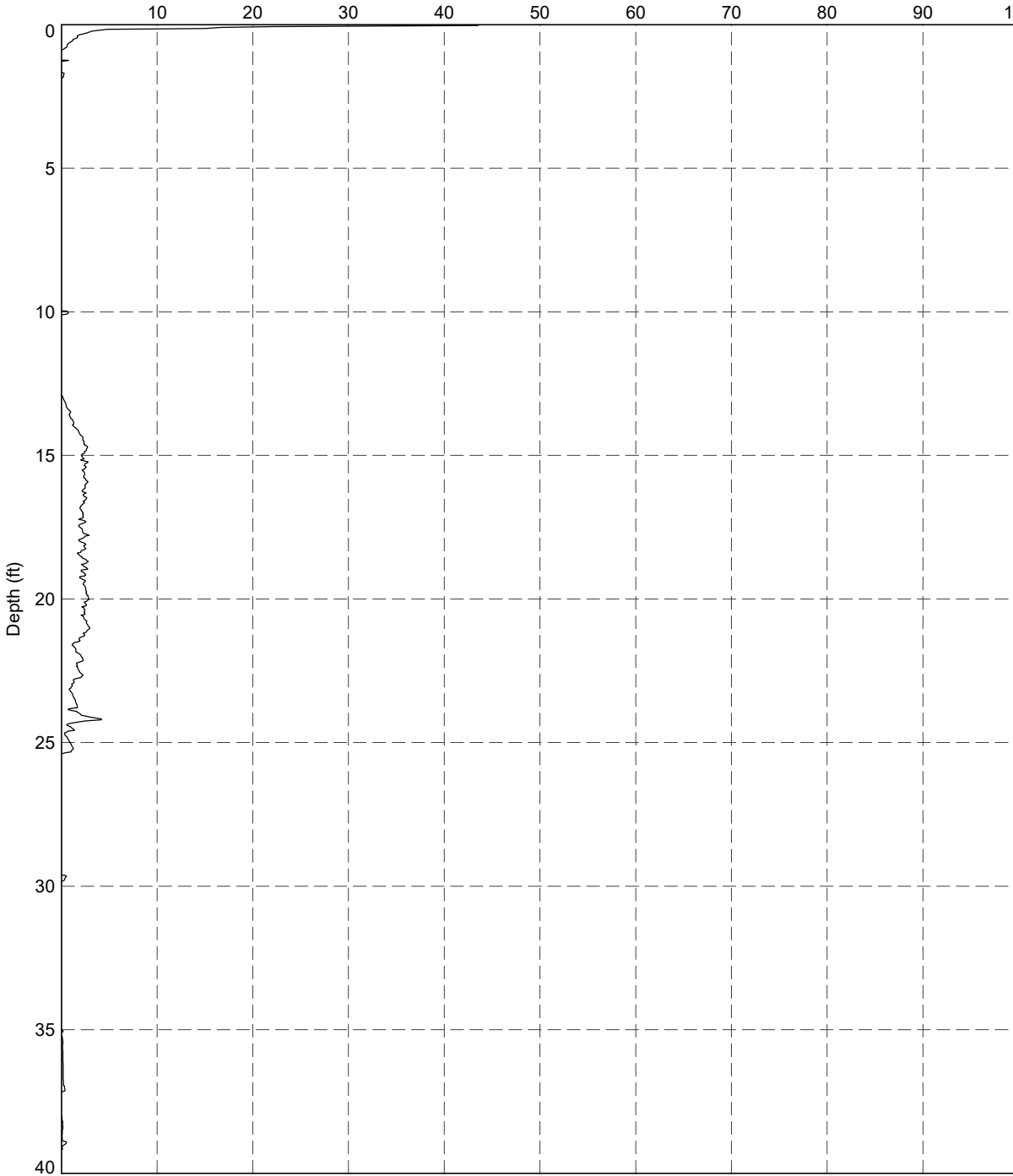
TITLE  
 Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Natural Gamma Radiation versus Elevation

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	244

Normalised Excess Pore Pressure,  $\Delta u_2 / \sigma'_{v0}$

PointID

CPT 05



DATGEL\CPT TOOL\_DGD\_4.05.0.LIB.GLB Graph CPT NORM DELTA U DEPTH.LETP.DATGEL.CPT TOOL.DGD.4.05.0.EN.GPJ <<DrawingFile>> 1/2/2021 20:57 10.01.00.11 Datgel.CPT.Tool.gINT Add-In

**Datgel**  
DATA SOLUTIONS  
Geotechnics • Geoenvironment • Laboratory

TITLE

Client 1  
Engineer 1  
Somewhere  
CPT Tool Project

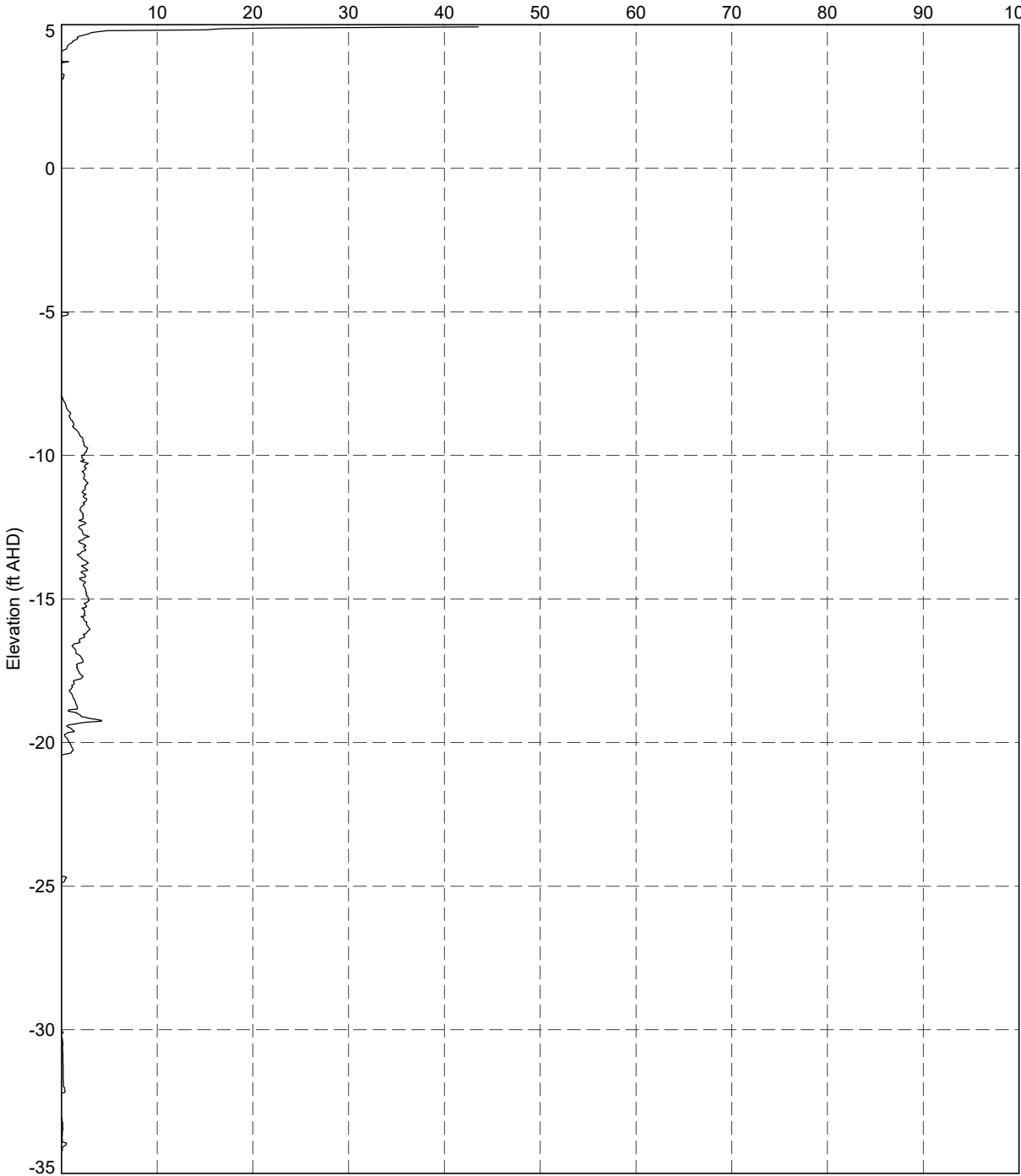
Normalised Excess Pore Pressure vs Depth

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	245

Normalised Excess Pore Pressure,  $\Delta u_2 / \sigma'_{v0}$

PointID

CPT 05



DATGEL CPT TOOL\_DGD\_4.05.0.LIB.GLB Graph: CPT NORM DELTA U RL LETP DATGEL CPT TOOL\_DGD\_4.05.0.EN.GPJ <<DrawingFile>> 1/2/2021 20:57:10.0:1.00.11 Datgel CPT Tool.g/NT Add-In



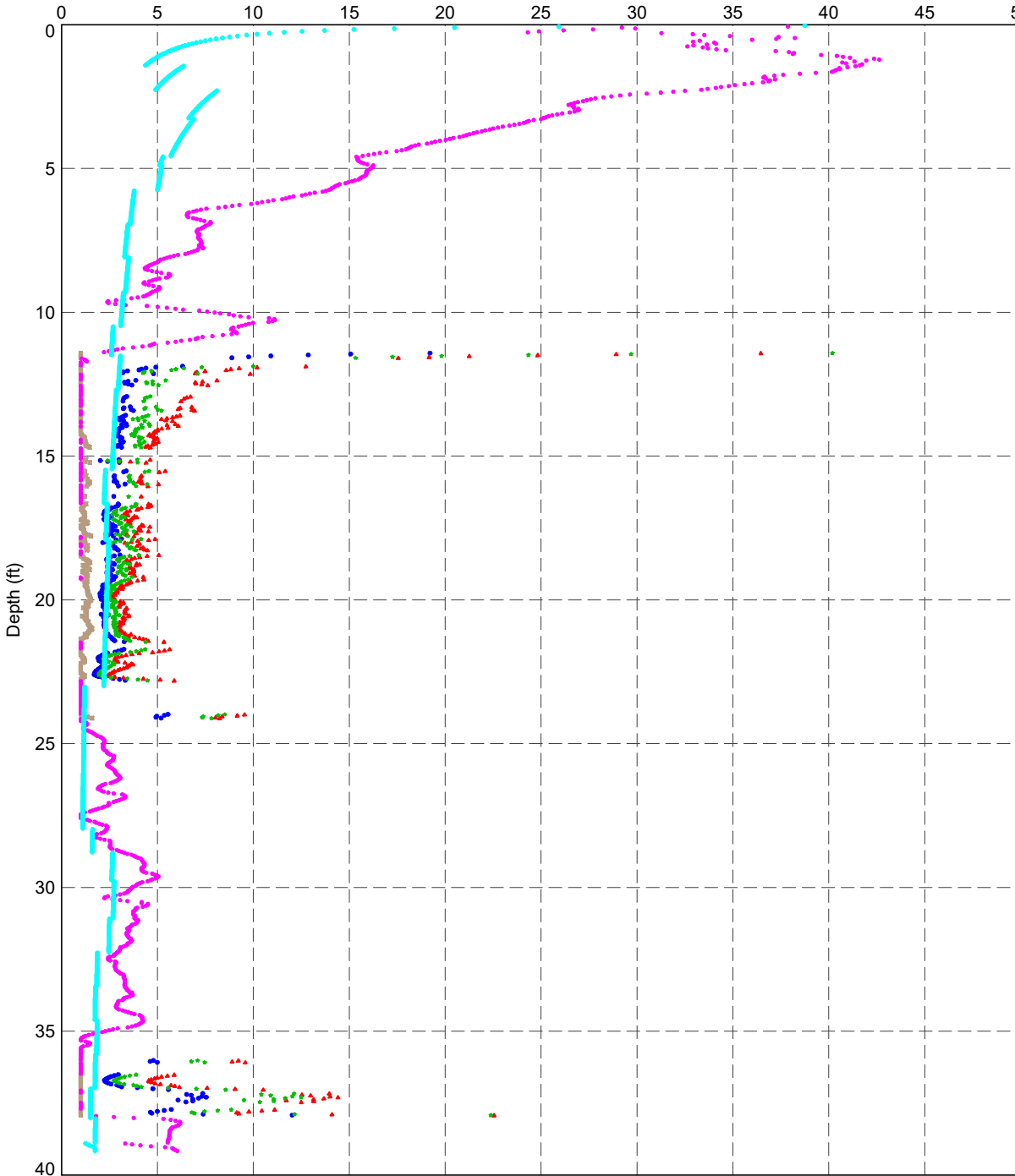
TITLE  
 Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Normalised Excess Pore Pressure vs Elevation

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	246

Overconsolidation Ratio, OCR

PointID


CPT 05



Method:

- Mayne (1995); Demers & Leroueil (2002)
- Chen & Mayne (1996)
- ▲ Mayne (2005)
- ★ Robertson (2009)
- Mayne (2005)
- ⊕ Mayne (2007)

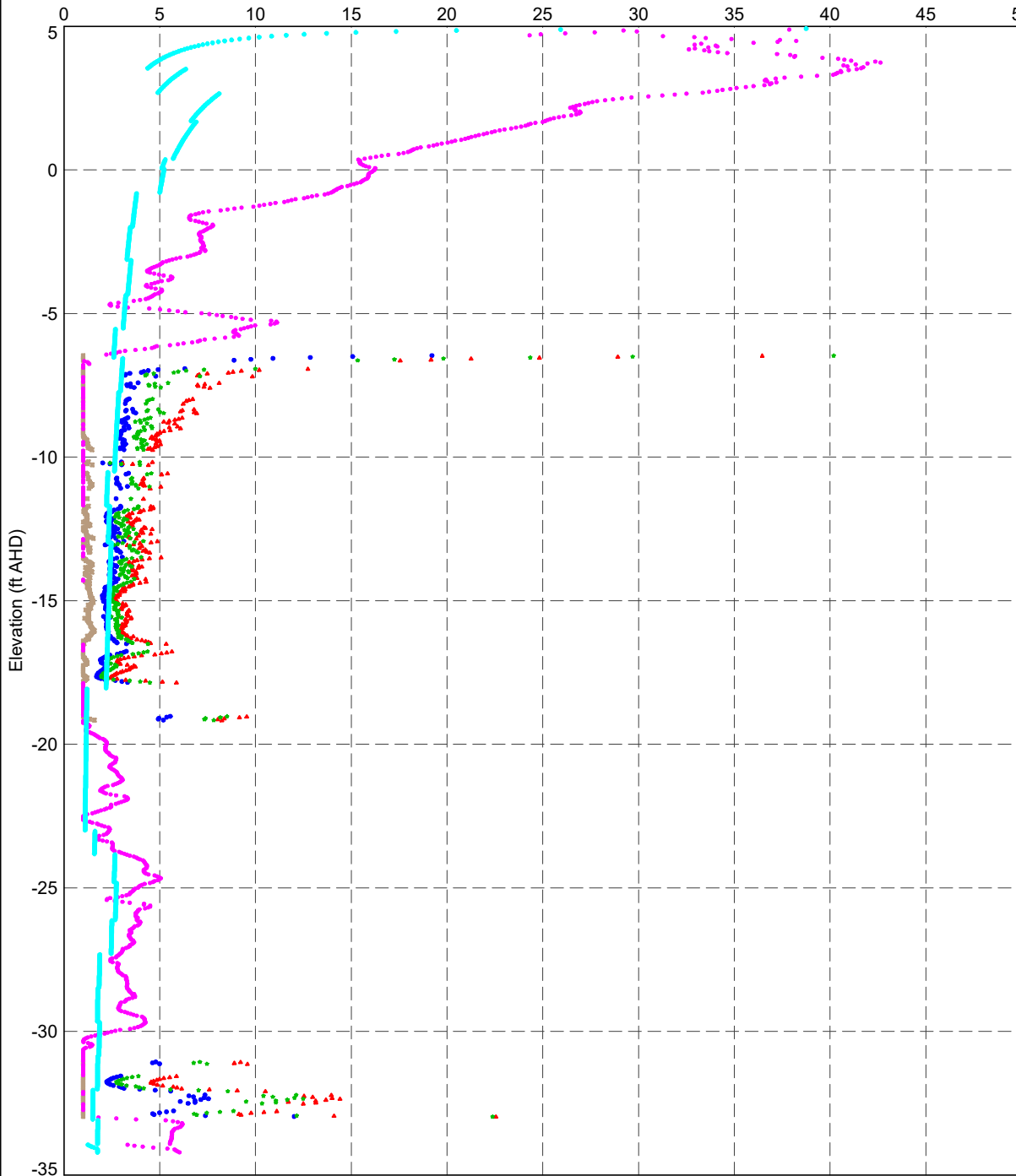
DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.OCR.DEPTH.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ.<<DrawingFile>>.1/2/2021.20:58.10.01.00.11.Datgel.CPT.Tool.gINT.Add-in

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project</p> <p>Overconsolidation Ratio versus Depth</p>	DRAWN	Datgel	DATE	1/2/2021	
		CHECKED	Datgel	DATE	1/2/2021	
		SCALE	Not To Scale			Let
		PROJECT No	4.05.0	FIGURE No	247	

Overconsolidation Ratio, OCR

PointID

CPT 05



- Method:
- Mayne (1995); Demers & Leroueil (2002)
  - Chen & Mayne (1996)
  - ▲ Mayne (2005)
  - ★ Robertson (2009)
  - Mayne (2005)
  - Mayne (2007)

DATGEL\CPT TOOL\_DGD\_4.05.0.LIB.GLB.Graph\CPT OCR RL LETP.DATGEL.CPT TOOL\_DGD\_4.05.0.EN.GPJ <-DrawingFiles> 1/2/2021 20:59:10.01.00.11.Datgel.CPT.Tool.gjNT.Add-In

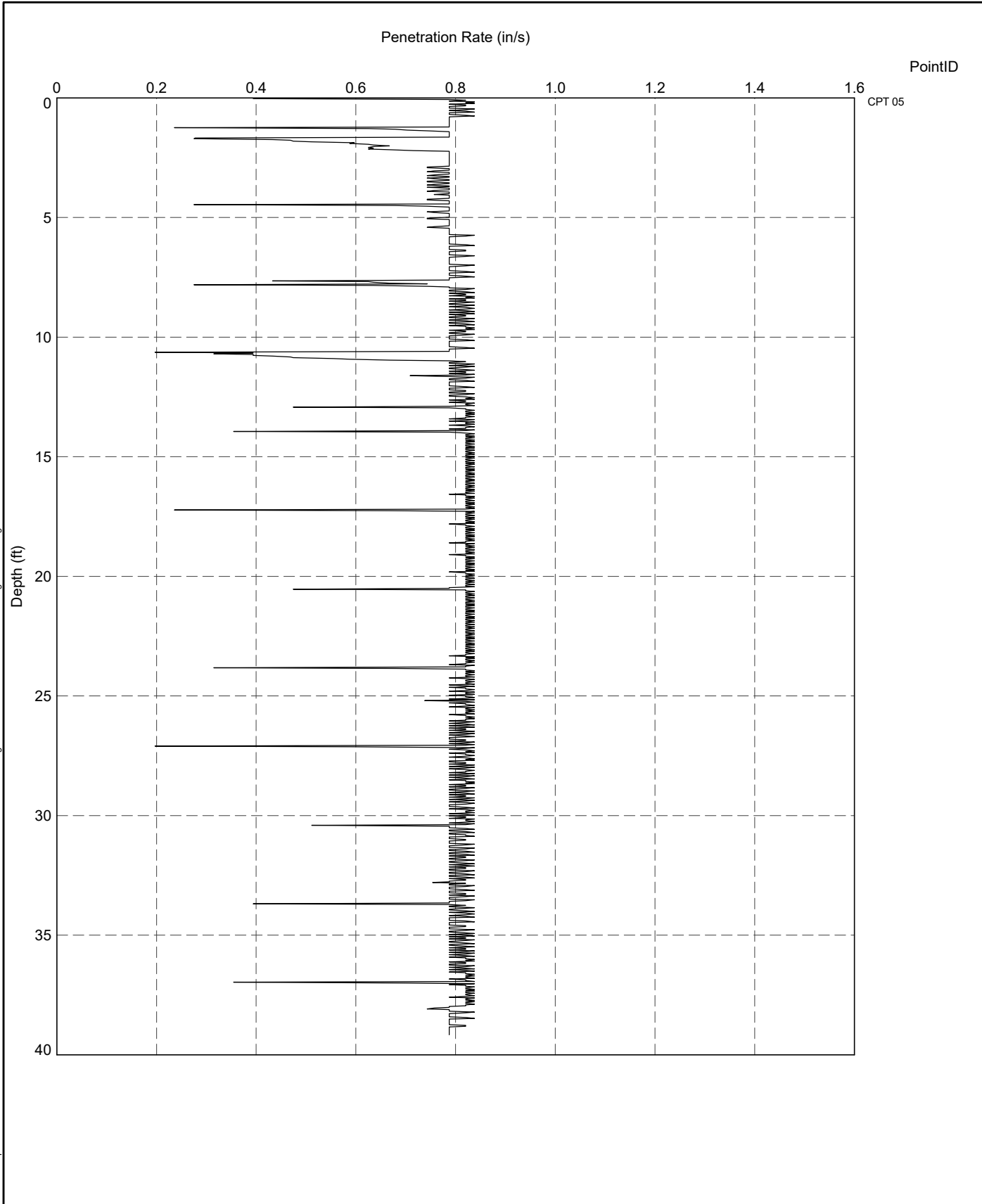
TITLE


Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project

Overconsolidation Ratio versus Elevation

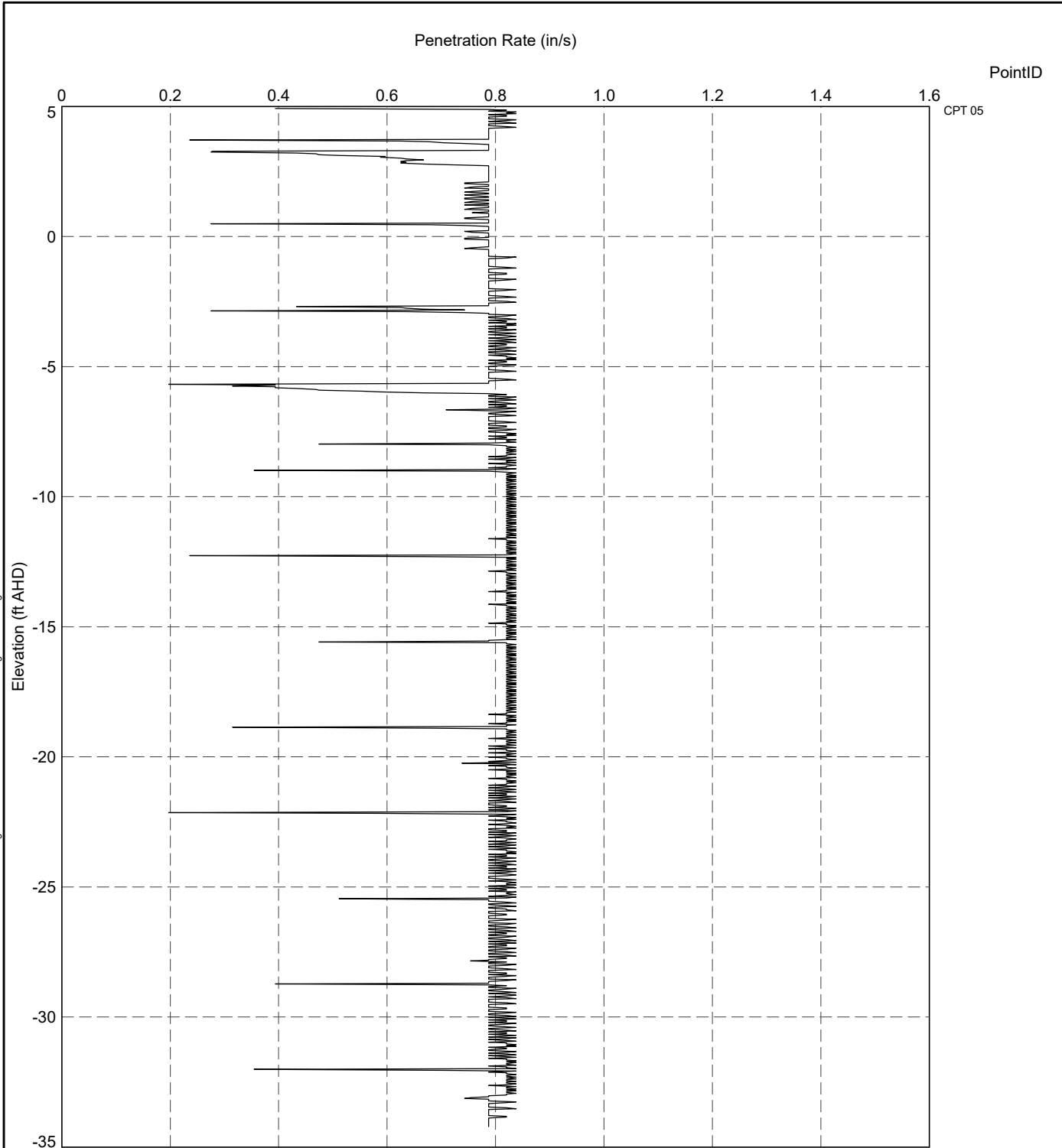
DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	248


DATGEL CPT TOOL\_DGD\_4.05.0.LIB.GLB Graph: CPT PENETRATION RATE DEPTH.LETP.DATGEL CPT TOOL\_DGD\_4.05.0.EN.GPJ <<DrawingFile>> 1/22/2021 20:59 10.01.00.11 Datgel CPT Tool gINT Add-In



 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Penetration Rate versus Depth</p>	<p>DRAWN</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>	
		<p>CHECKED</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>	
		<p>SCALE</p> <p>Not To Scale</p>		<p>Let</p>
		<p>PROJECT No</p> <p>4.05.0</p>	<p>FIGURE No</p> <p>249</p>	

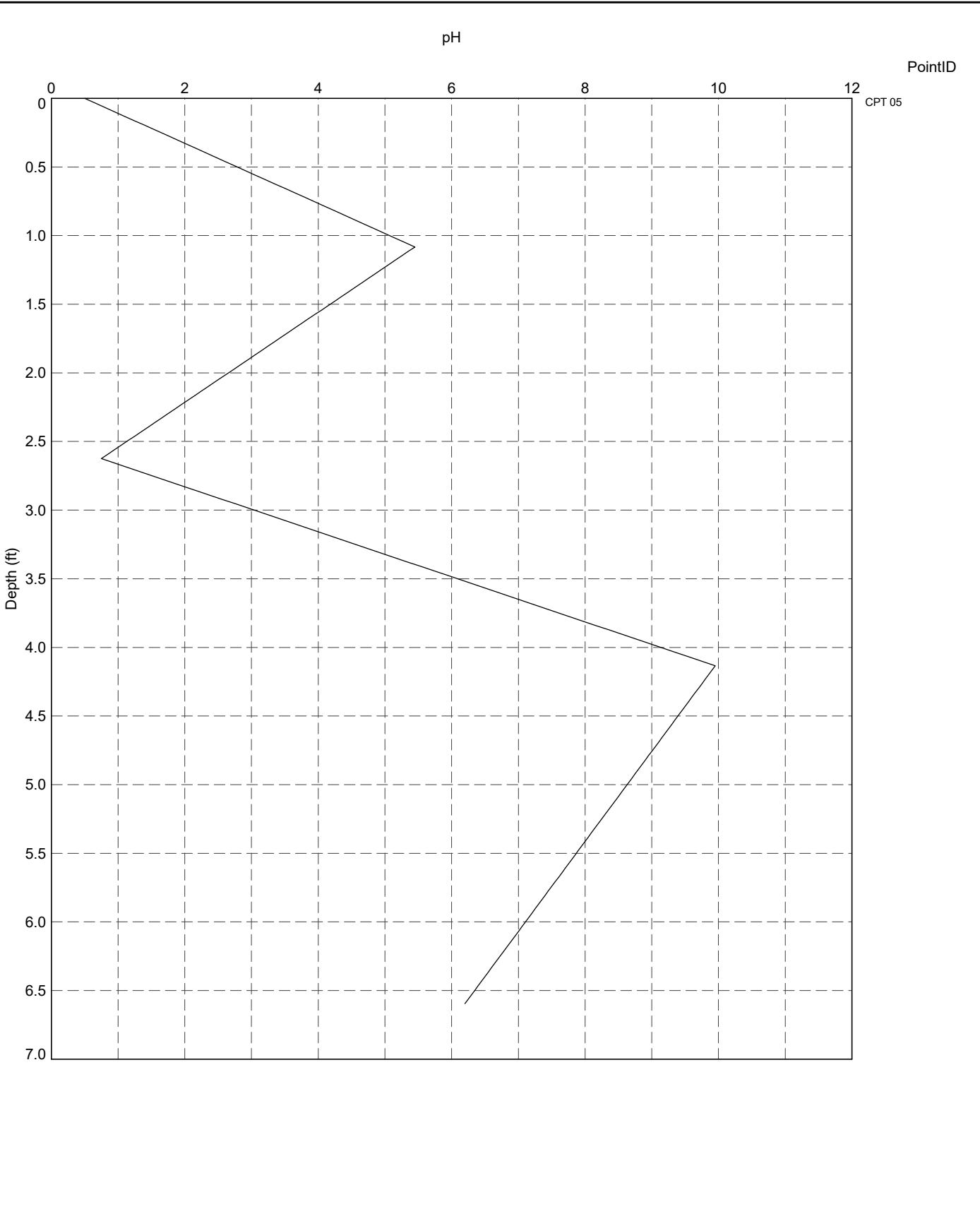
DATGEL CPT TOOL\_DGD\_4.05.0.LIB.GLB Graph: CPT PENETRATION RATE RL LETP DATGEL CPT TOOL\_DGD\_4.05.0.EN.GPJ <<DrawingFile>> 1/2/2021 20:59:10.01.00.11 Datgel CPT\_Tool.gINT\_Add-In




 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Penetration Rate versus Elevation</p>	<p>DRAWN</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>	
		<p>CHECKED</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>	
		<p>SCALE</p> <p>Not To Scale</p>		<p>Let</p>
		<p>PROJECT No</p> <p>4.05.0</p>	<p>FIGURE No</p> <p>250</p>	

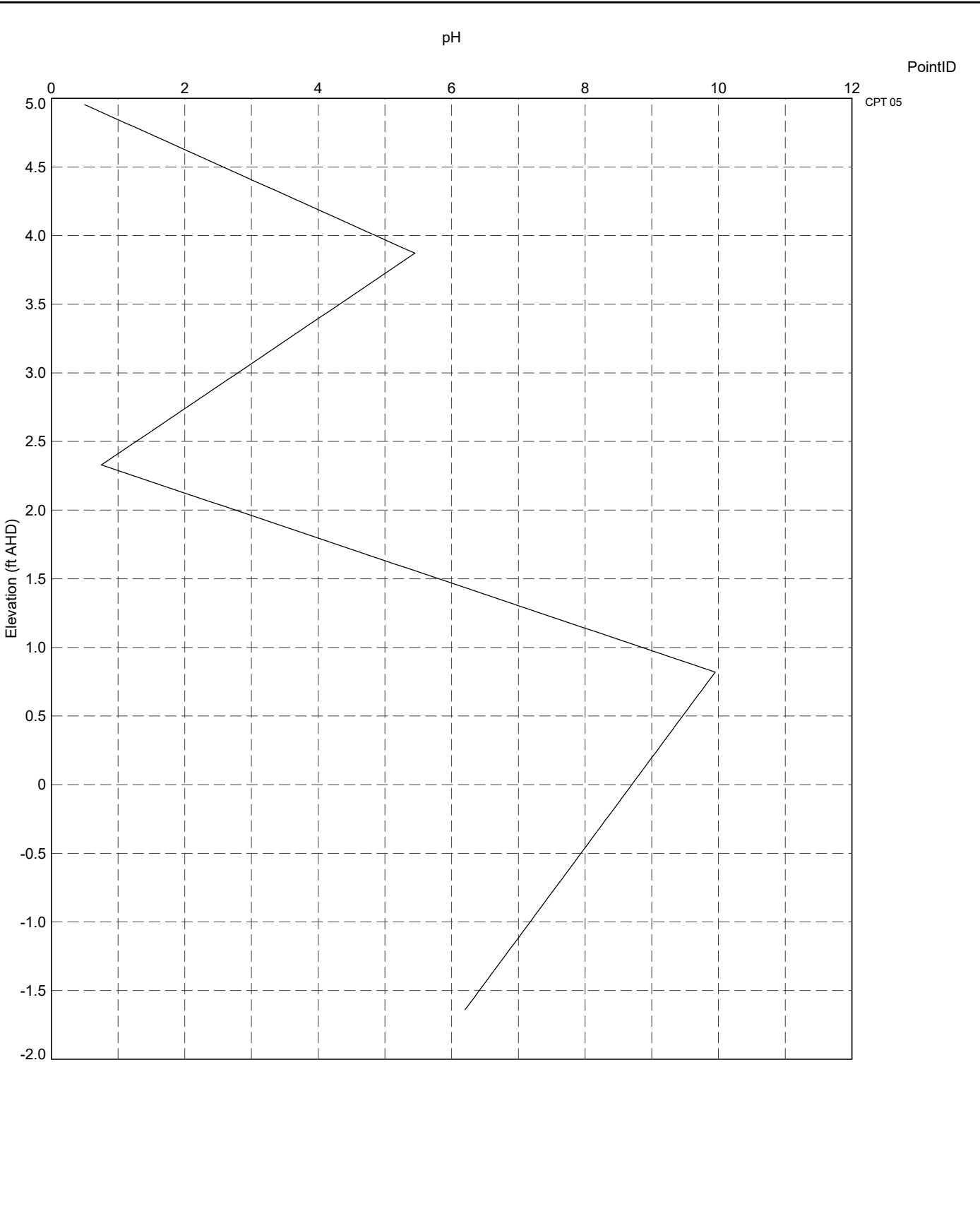


DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph CPT PH DEPTH LETP.DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <<DrawingFiles>> 1/2/2021 20:59:10.01.00.11.Datgel.CPT.Tool.gjINT.Add-In



 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Soil pH versus Depth</p>	<p>DRAWN Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>CHECKED Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>SCALE Not To Scale</p>		<p>Let</p>
		<p>PROJECT No 4.05.0</p>	<p>FIGURE No 251</p>	

DATGEL\CPT TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT PH RL LETP DATGEL\CPT TOOL\_DGD\_4.05.0\EN\GPJ<<DrawingFile>> 1/2/2021 20:59:10.01.00.11 Datgel.CPT.Tool.gINT Add-in



PointID  
CPT 05


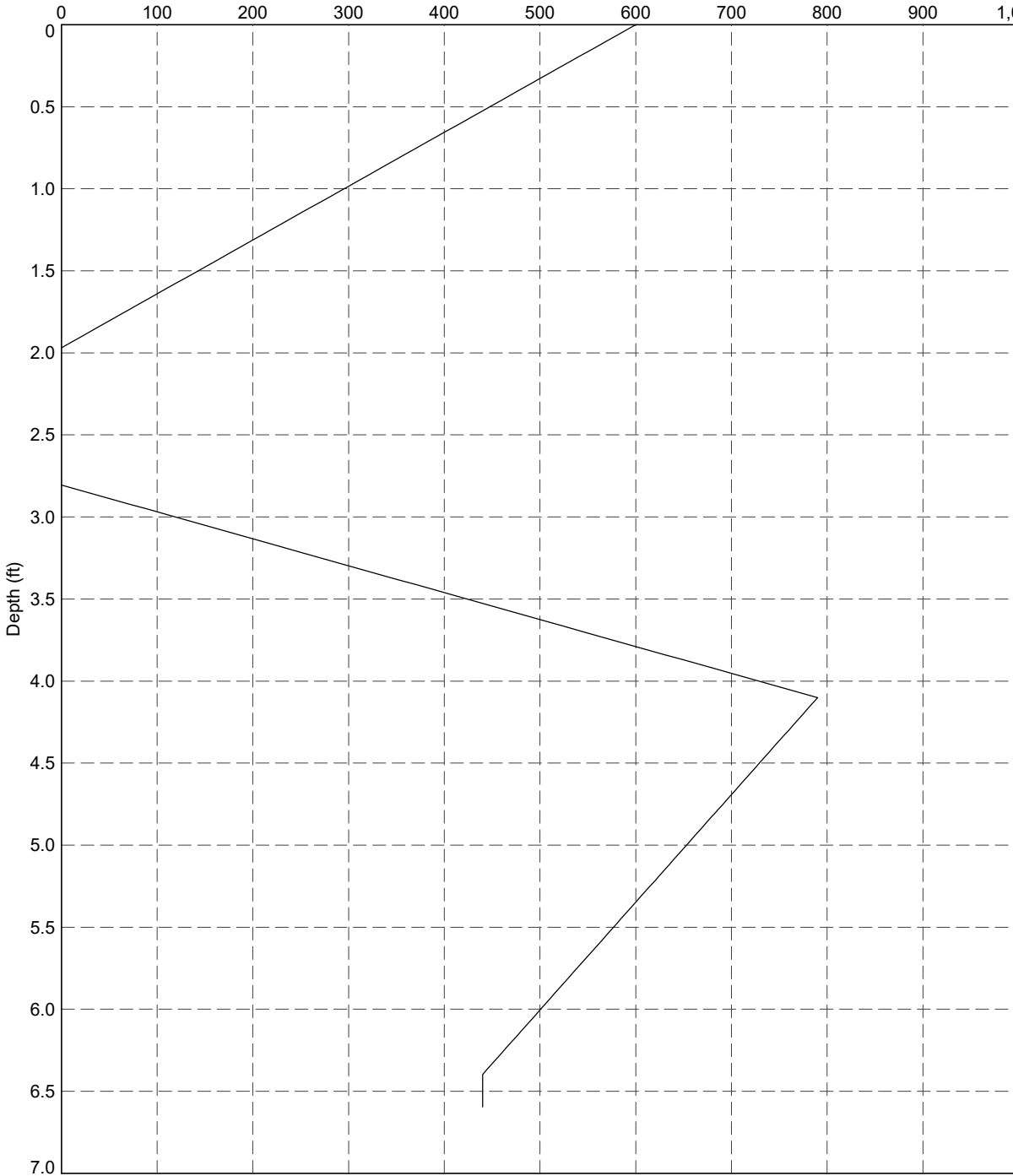
 <b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	TITLE	Client 1 Engineer 1 Somewhere CPT Tool Project Soil pH vs. Elevation	DRAWN Datgel	DATE 1/2/2021
			CHECKED Datgel	DATE 1/2/2021
			SCALE Not To Scale	Let
			PROJECT No 4.05.0	FIGURE No 252

Photo Multiplier Tube (counts/s)

PointID

CPT 05



DATGEL\CPT TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT PHOTO MULTIPLIER TUBE DEPTH LETP.DATGEL\CPT TOOL\_DGD\_4.05.0 EN.GPJ <<DrawingFile>> 1/2/2021 20:59:10.01.00.11 Datgel\CPT Tool\gINT Add-in



TITLE

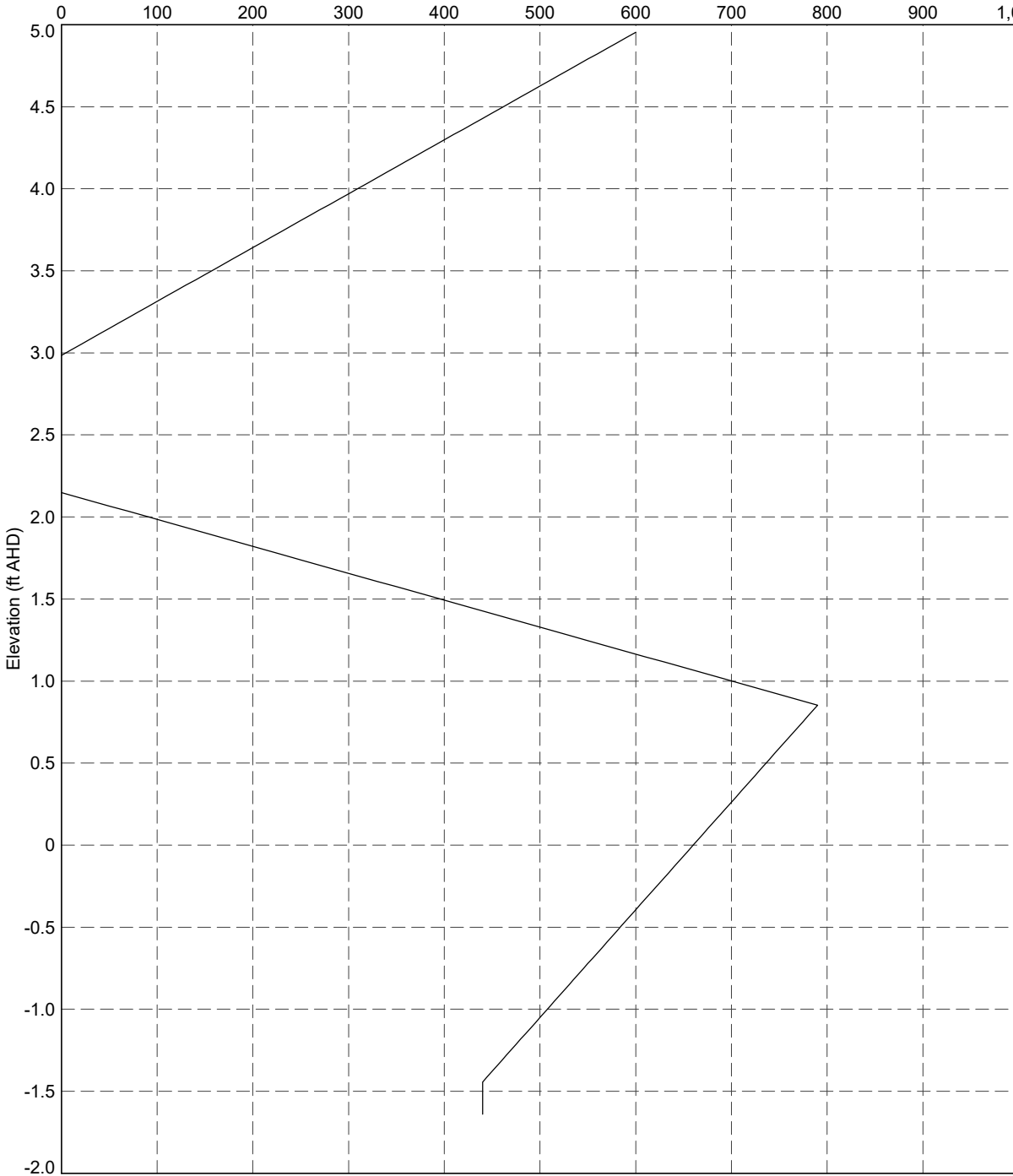
Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Photo Multiplier Tube versus Depth

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	253

Photo Multiplier Tube (counts/s)

PointID

CPT 05



DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.PHOTO.MULTIPLIER.TUBE.RL.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ.<<DrawingFile>> 1/2/2021 20:59:10.01.00.11.Datgel.CPT.Tool.gINT.Add-In



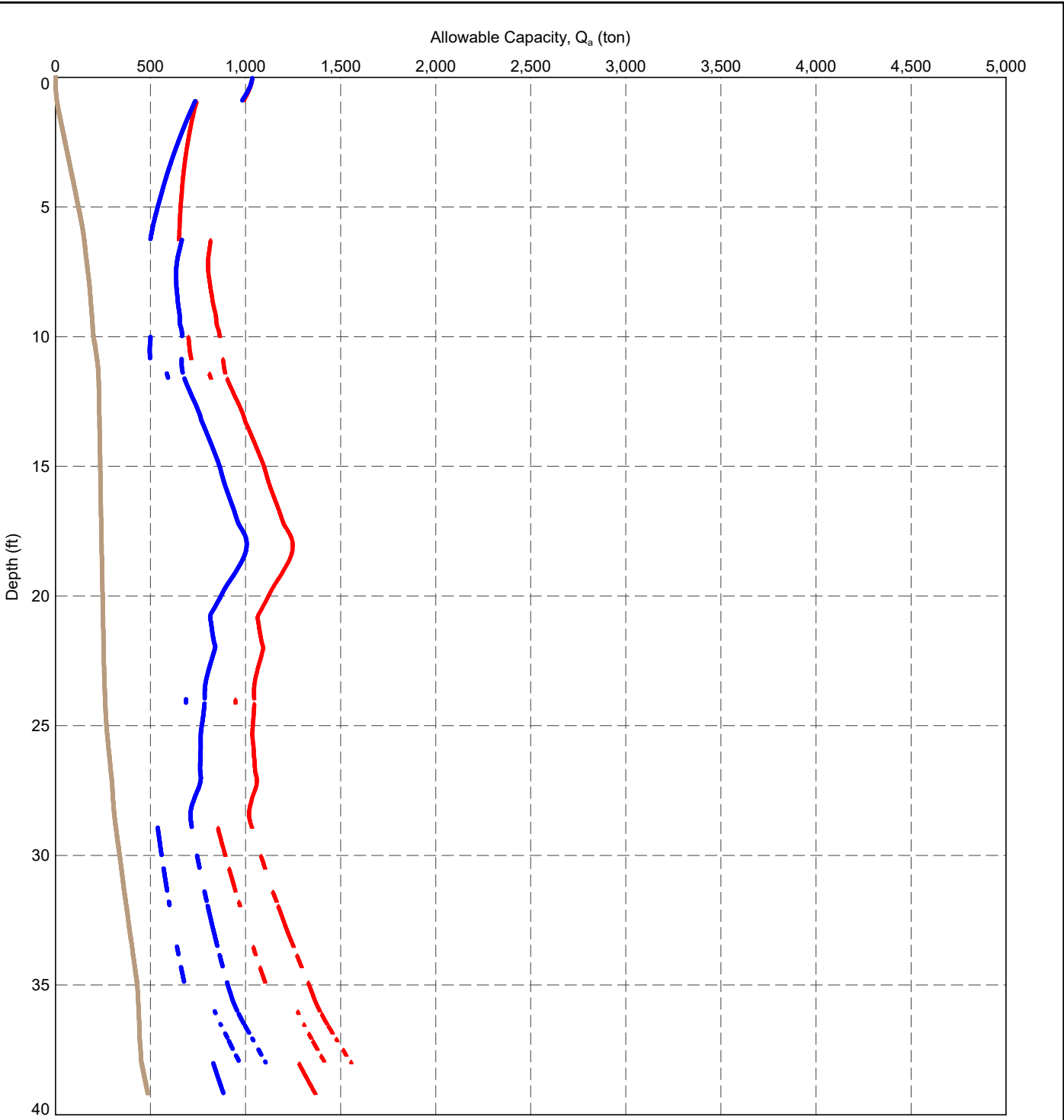
TITLE

Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project

Photo Multiplier Tube versus Elevation

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	254


DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph: CPT PILE AXIAL ALLW CAPACITY DEPTH LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <<DrawingFile>> -1/2/2021 2:1:00 10:01:00.11 Datgel CPT Tool gINT Add-In

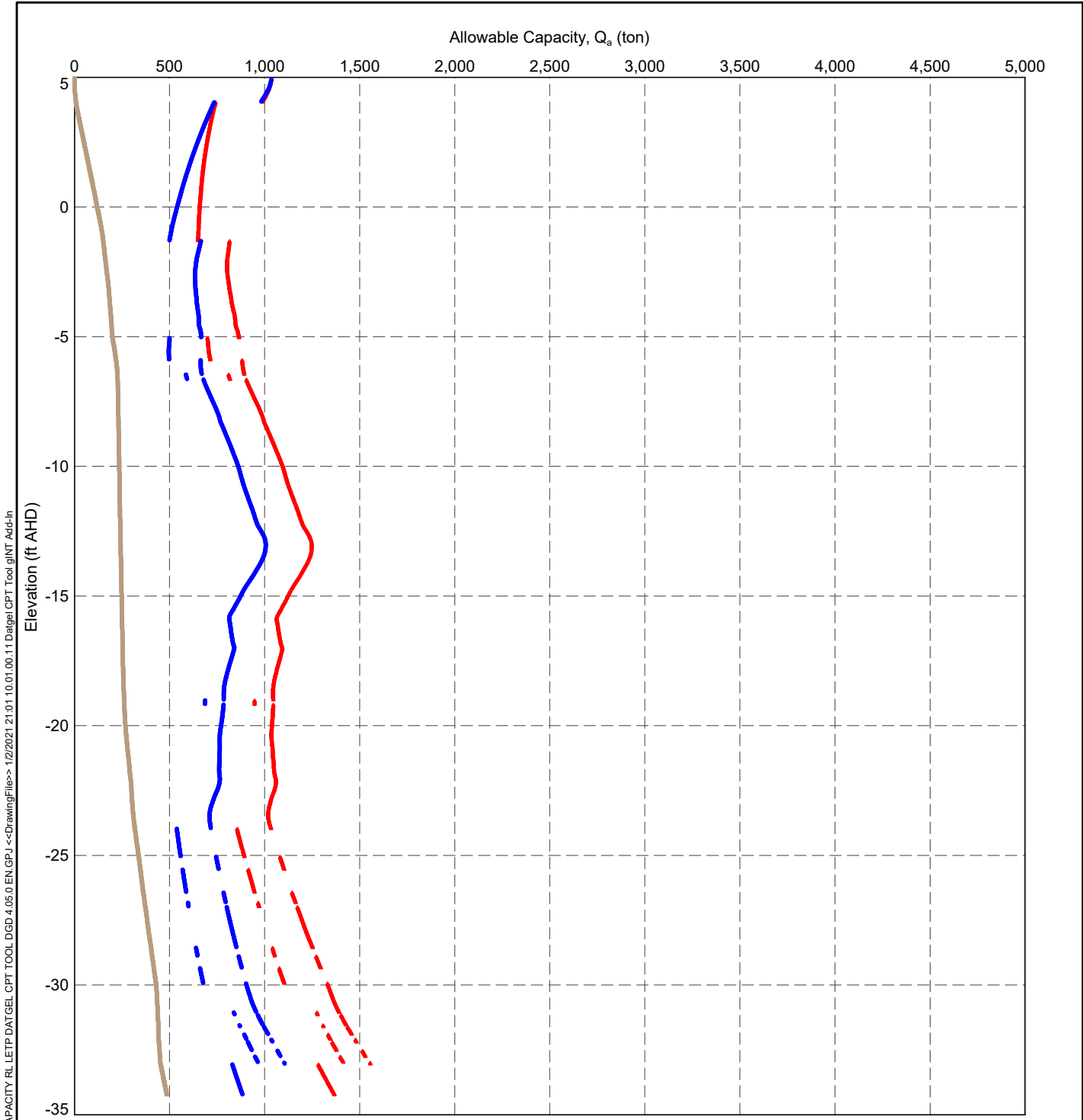


**Legend:**

- ▲ Allowable Capacity,  $Q_a$  (ton)
- Allowable End Bearing,  $q_{ba}$  (ton)
- ⊠ Allowable Side Friction,  $q_{fa}$  (ton)

Bustamante and Gianselli / LCPC (1982)


 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project</p> <p>Pile Axial Capacity versus Depth - CPT 05</p>	DRAWN	Datgel	DATE	1/2/2021	
		CHECKED	Datgel	DATE	1/2/2021	
		SCALE	Not To Scale			Let
		PROJECT No	4.05.0	FIGURE No	255	



Legend:

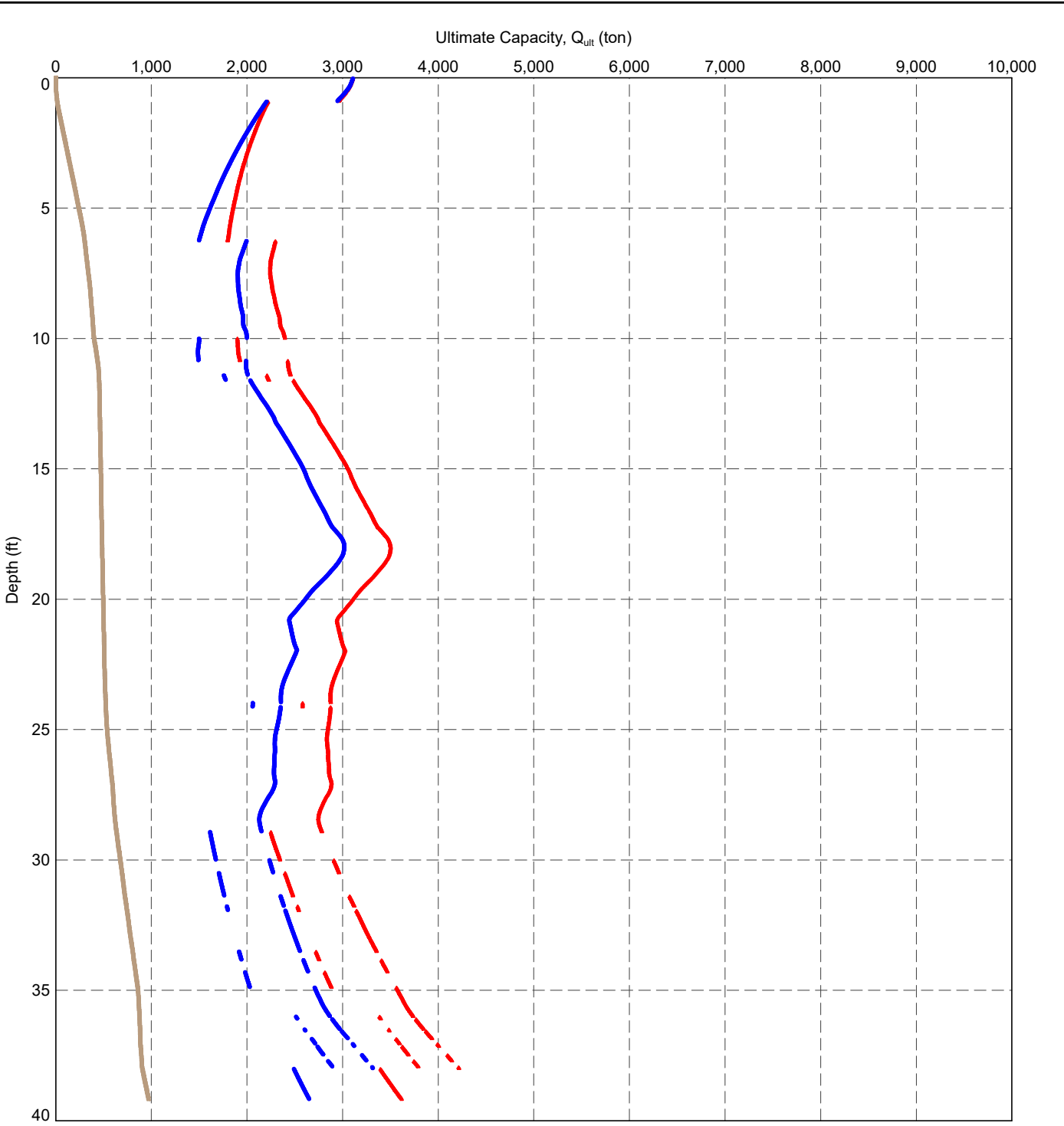
- ▲ Allowable Capacity,  $Q_a$  (ton)
- Allowable End Bearing,  $q_{ba}$  (ton)
- ⊠ Allowable Side Friction,  $q_{fa}$  (ton)

Bustamante and Gianselli / LCPC (1982)

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	TITLE	Client 1 Engineer 1 Somewhere CPT Tool Project	DRAWN Datgel	DATE 1/2/2021
		Pile Axial Capacity versus Elevation - CPT 05	CHECKED Datgel	DATE 1/2/2021
			SCALE Not To Scale	Let
			PROJECT No 4.05.0	FIGURE No 256


DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.PILE.AXIAL.ALL.W.CAPACITY.RL.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <-DrawingFile>> 1/2/2021 21:01:10.01.11.Datgel.CPT.Tool.gINT.Add-In

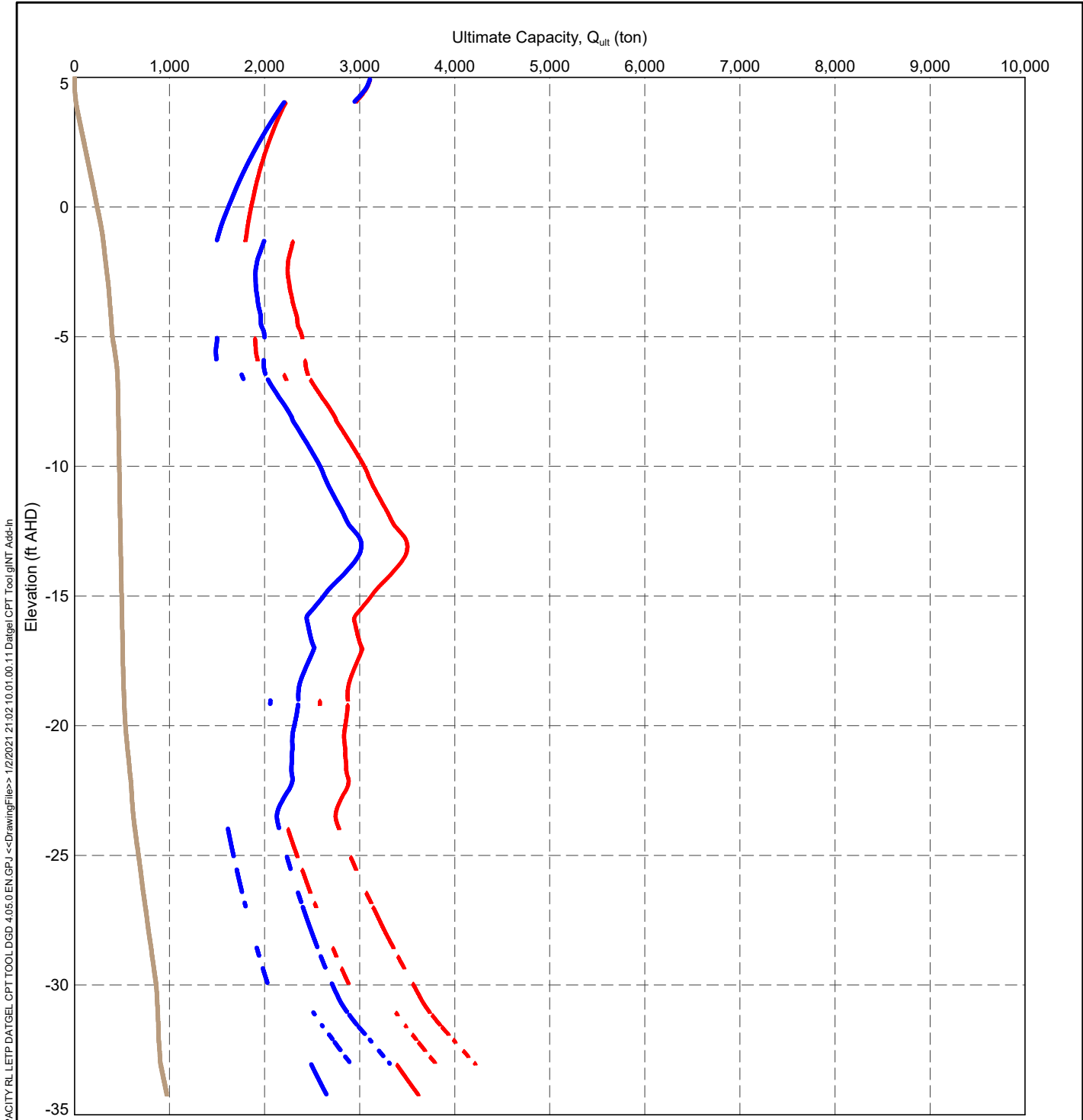
DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph CPT PILE ULT AXIAL CAPACITY DEPTH LETP DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <<DrawingFile>> 1/2/2021 21:01:10.01.00.11 Datgel.CPT.Tool.gINT Add-in



Legend:  
 ▲ Ultimate Capacity,  $Q_{ult}$  (ton)  
 ● Ultimate End Bearing Capacity,  $Q_b$  (ton)  
 ◻ Ultimate Side Friction Capacity,  $Q_f$  (ton)

Bustamante and Gianselli / LCPC (1982)


 <b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	TITLE Client 1 Engineer 1 Somewhere CPT Tool Project Pile Axial Capacity versus Depth - CPT 05	DRAWN Datgel	DATE 1/2/2021	
		CHECKED Datgel	DATE 1/2/2021	
		SCALE Not To Scale		Let
		PROJECT No 4.05.0	FIGURE No 257	



Legend:

- ▲ Ultimate Capacity,  $Q_{ult}$  (ton)
- Ultimate End Bearing Capacity,  $Q_b$  (ton)
- Ultimate Side Friction Capacity,  $Q_f$  (ton)

Bustamante and Gianselli / LCPC (1982)

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project</p> <p>Pile Axial Capacity versus Elevation - CPT 05</p>	<p>DRAWN Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>CHECKED Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>SCALE Not To Scale</p>		<p>Let</p>
		<p>PROJECT No 4.05.0</p>	<p>FIGURE No 258</p>	

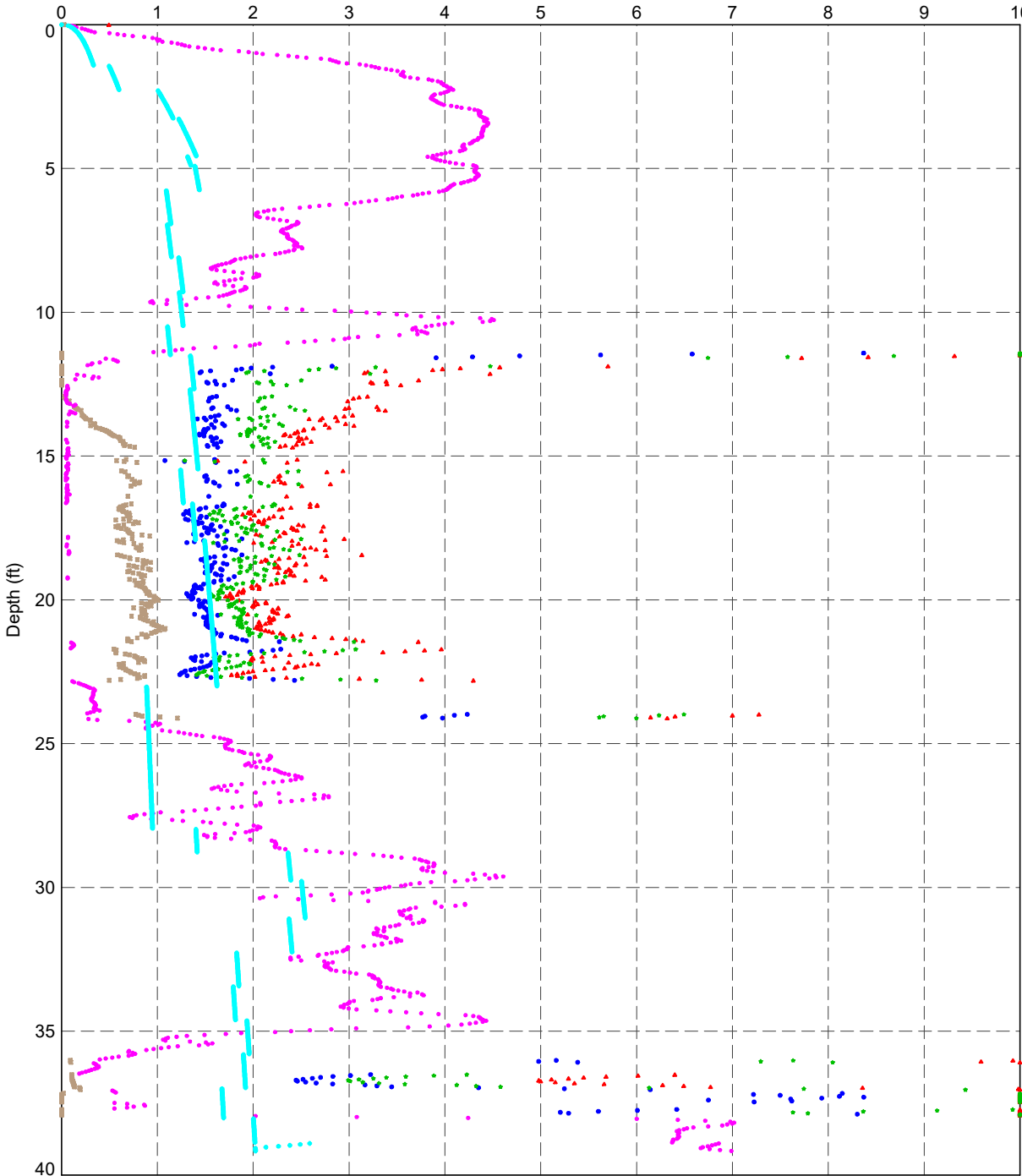
DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.PILE.ULT.AXIAL.CAPACITY.RL.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ.<<DrawingFile>> 1/2/2021 21:02:10.01.00.11.Datgel.CPT.Tool.gINT.Add-In



Preconsolidation Stress,  $\sigma'_p$  (tsf)

PointID

CPT 05



Method:

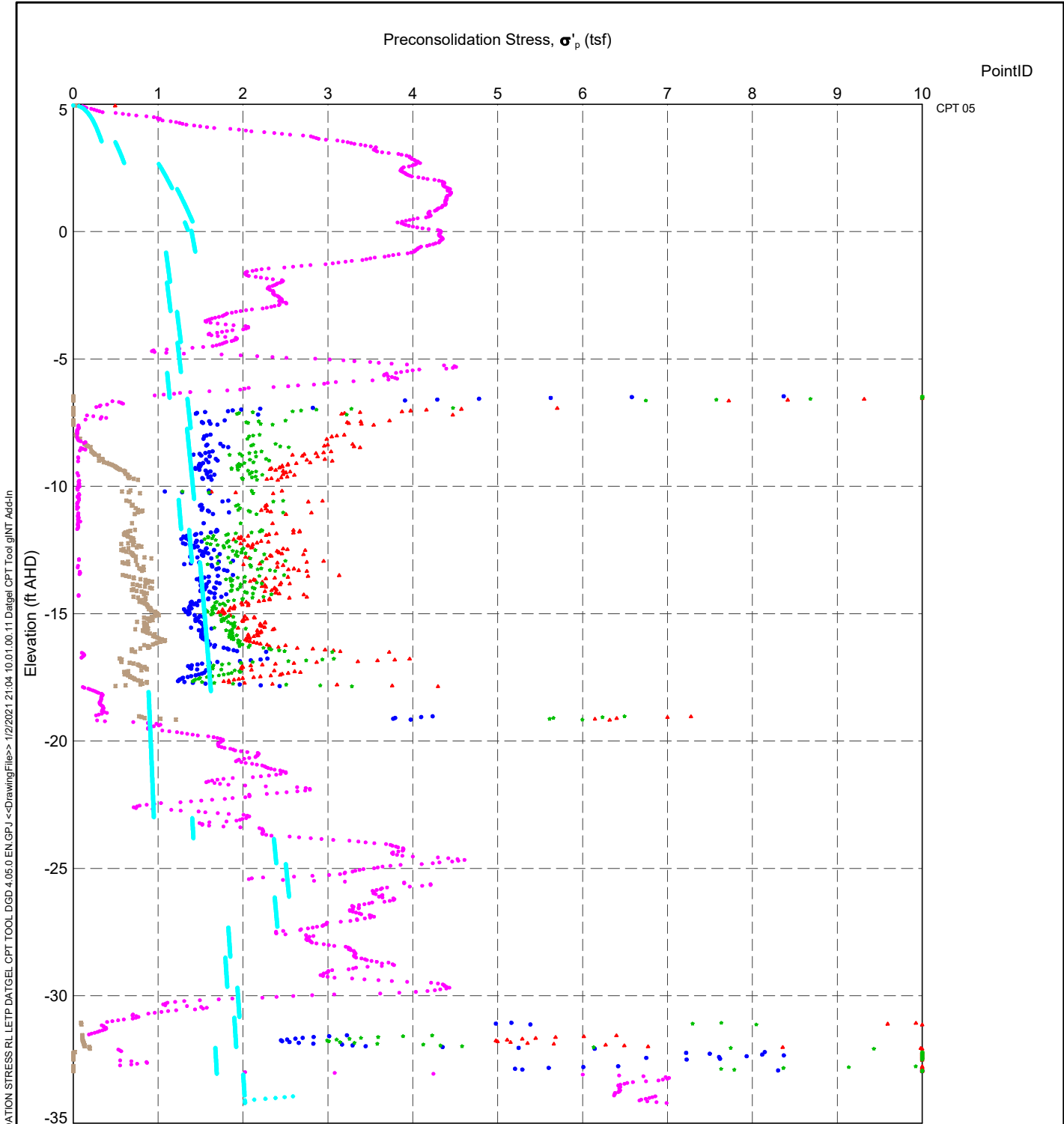
- Mayne (1995); Demers & Leroueil (2002)
- Chen & Mayne (1996)
- ▲ Mayne (2005)
- ★ Robertson (2009)
- Mayne (2005)
- Mayne (2007)

DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.PRECONSOLIDATION.STRESS.DEPTH.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ.<<DrawingFile>>.1/2/2021.21:03.10:01:00:11.Datgel.CPT.Tool.gINT.Add-in

TITLE

Client 1  
Engineer 1  
Somewhere  
CPT Tool Project  
Preconsolidation Stress versus Depth

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	259



- Method:
- Mayne (1995); Demers & Leroueil (2002)
  - Chen & Mayne (1996)
  - ▲ Mayne (2005)
  - ★ Robertson (2009)
  - Mayne (2005)
  - ◻ Mayne (2007)

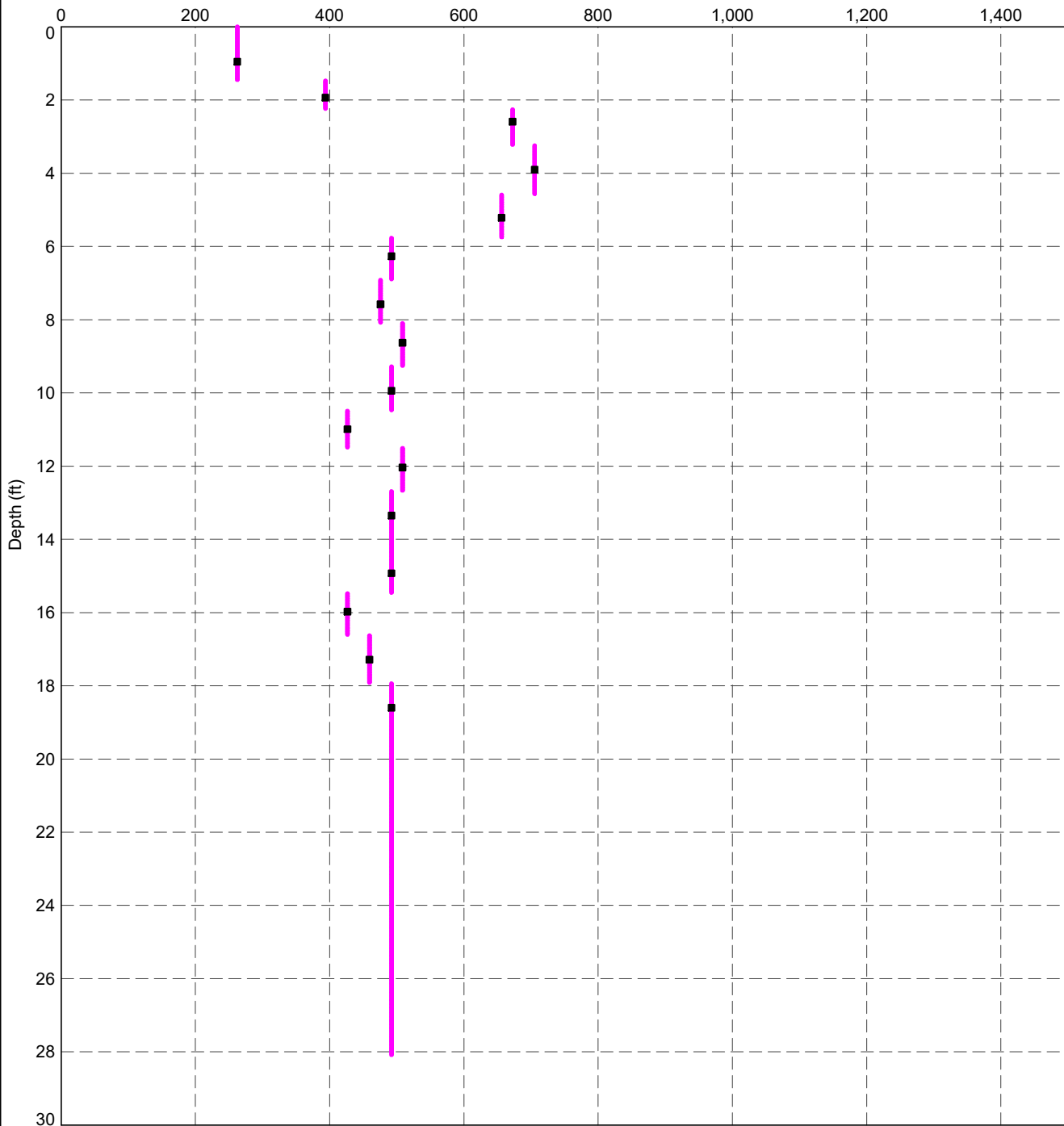
TITLE

Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Preconsolidation Stress versus Elevation

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	260

DATGEL\CPT TOOL\_DGD\_4.05.0.LIB.GLB Graph: CPT PRECONSOLIDATION STRESS RL\LETP.DATGEL\CPT TOOL\_DGD\_4.05.0.EN.GPJ <-DrawingFiles> 1/2/2021 2:10:4 10:01:00.11 Datgel\CPT Tool gINT Add-In

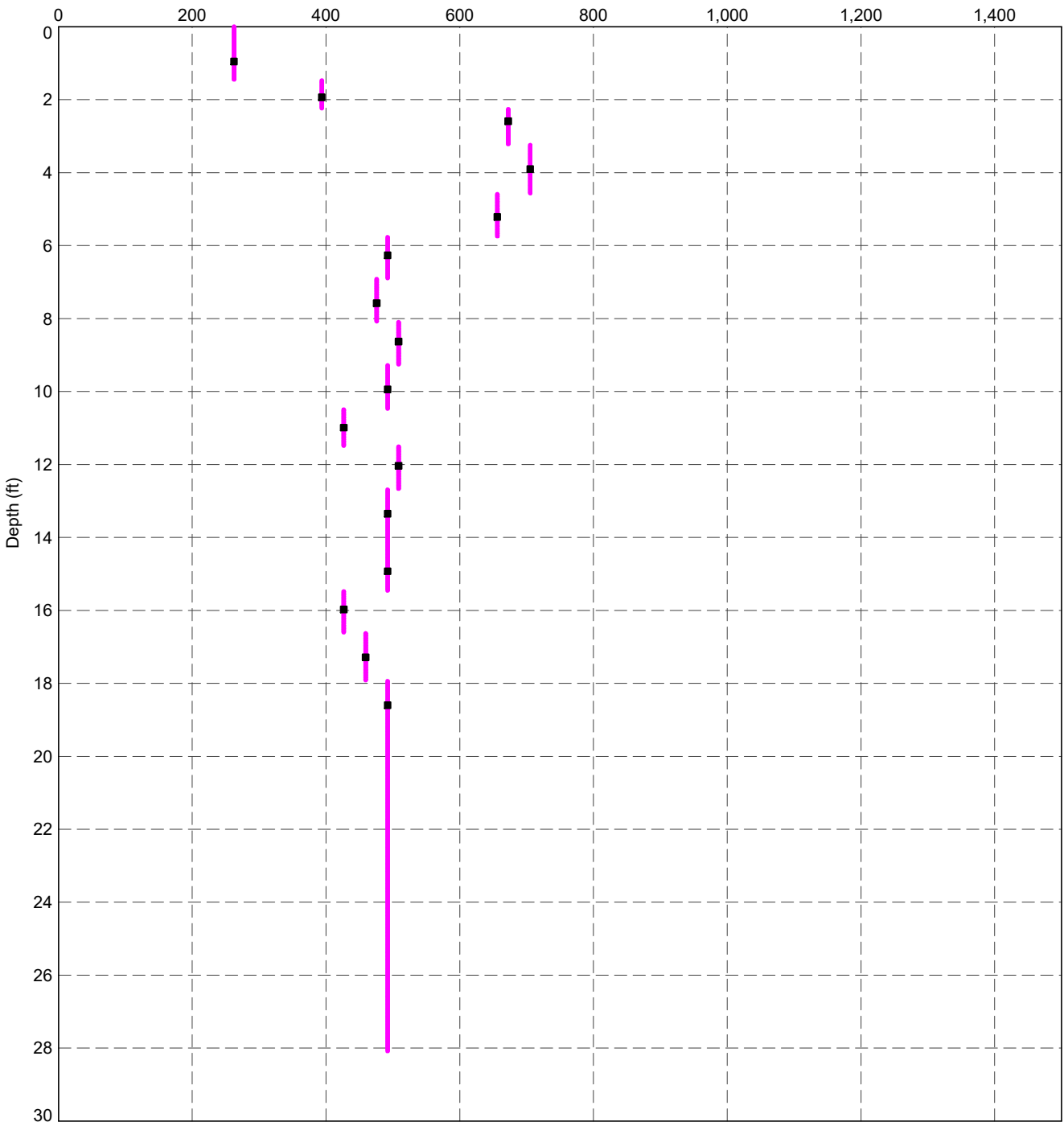
DATGEL\CPT TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT PRIMARY WAVE VELOCITY\_DEPTH\_LEITP DATGEL\_CPT TOOL\_DGD\_4.05.0.EN.GPJ <<DrawingFile>> 1/2/2021 21:04:10.01.00.11 Datgel\CPT Tool.gINT Add-In




Legend:  
 ■ Primary Wave Velocity,  $V_p$  (ft/s)  
 ● Extrapolated Primary Wave Velocity,  $V_p$  Extrapolated (ft/s)

	TITLE Client 1 Engineer 1 Somewhere CPT Tool Project Primary Wave Velocity versus Depth	DRAWN Datgel	DATE 1/2/2021	
		CHECKED Datgel	DATE 1/2/2021	
		SCALE Not To Scale		Let
		PROJECT No 4.05.0	FIGURE No 261	

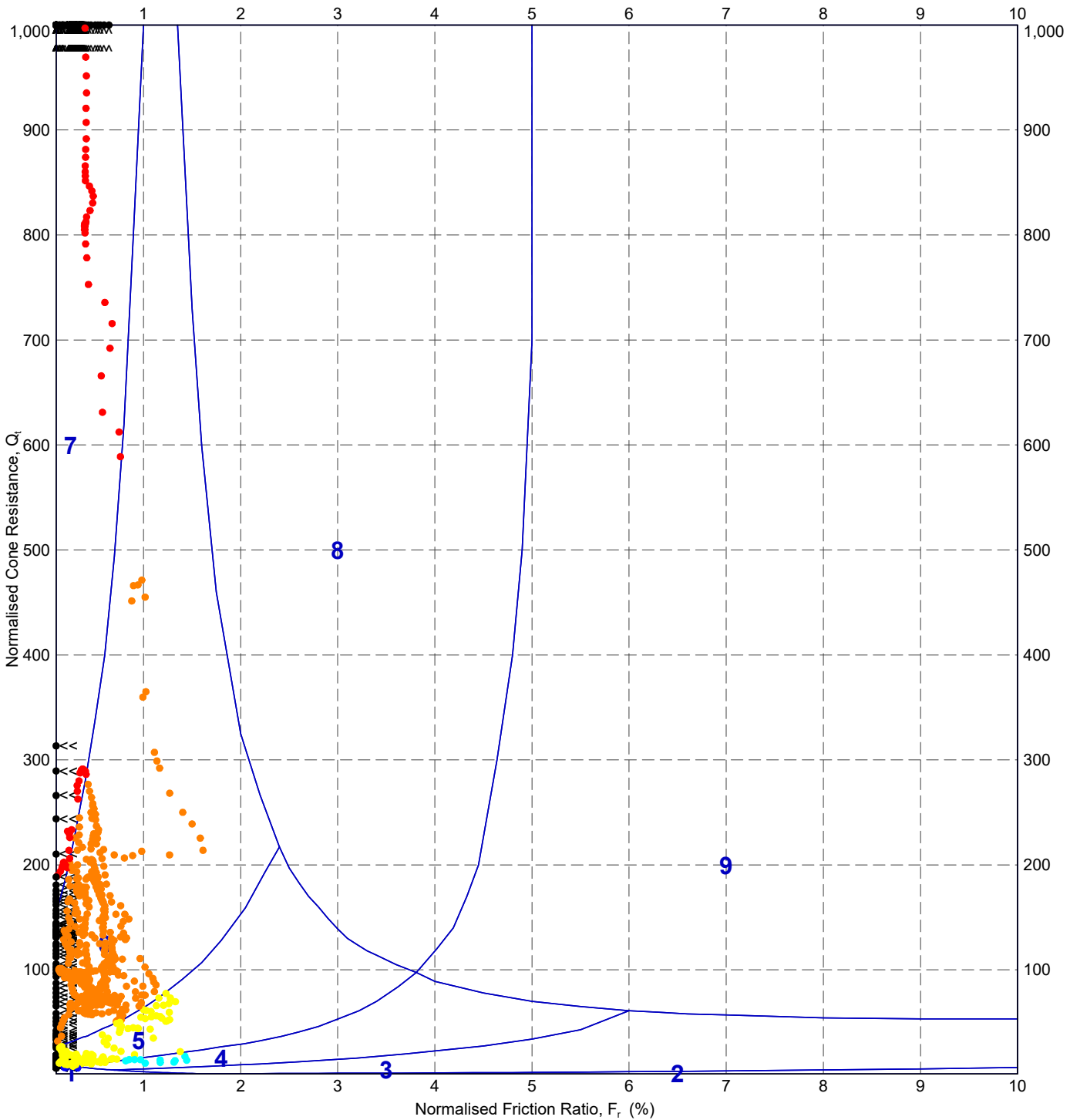
DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.PRIMARY.WAVE.VELOCITY.RL.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ.<<DrawingFile>> 1/2/2021 21:05:10.01.00.11.Datgel.CPT.Tool.gINT.Add-In



Legend:  
 ■ Primary Wave Velocity,  $V_p$  (ft/s)  
 ● Extrapolated Primary Wave Velocity,  $V_p$  Extrapolated (ft/s)

 DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	TITLE	Client 1 Engineer 1 Somewhere CPT Tool Project Primary Wave Velocity versus Elevation	DRAWN Datgel	DATE 1/2/2021
			CHECKED Datgel	DATE 1/2/2021
			SCALE Not To Scale	Let
			PROJECT No 4.05.0	FIGURE No 262

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph CPT PROJECT SBT\_LINEAR-SBT\_LINEAR-LETTP-DATGEL.CPT\_TOOL.DGD.4.05.0.EN.GPJ <-DrawingFiles> 1/2/2021 21:14 10:01:00.11.Datgel.CPT.Tool.gINT.Addch.in



**METHOD: Robertson 1990**

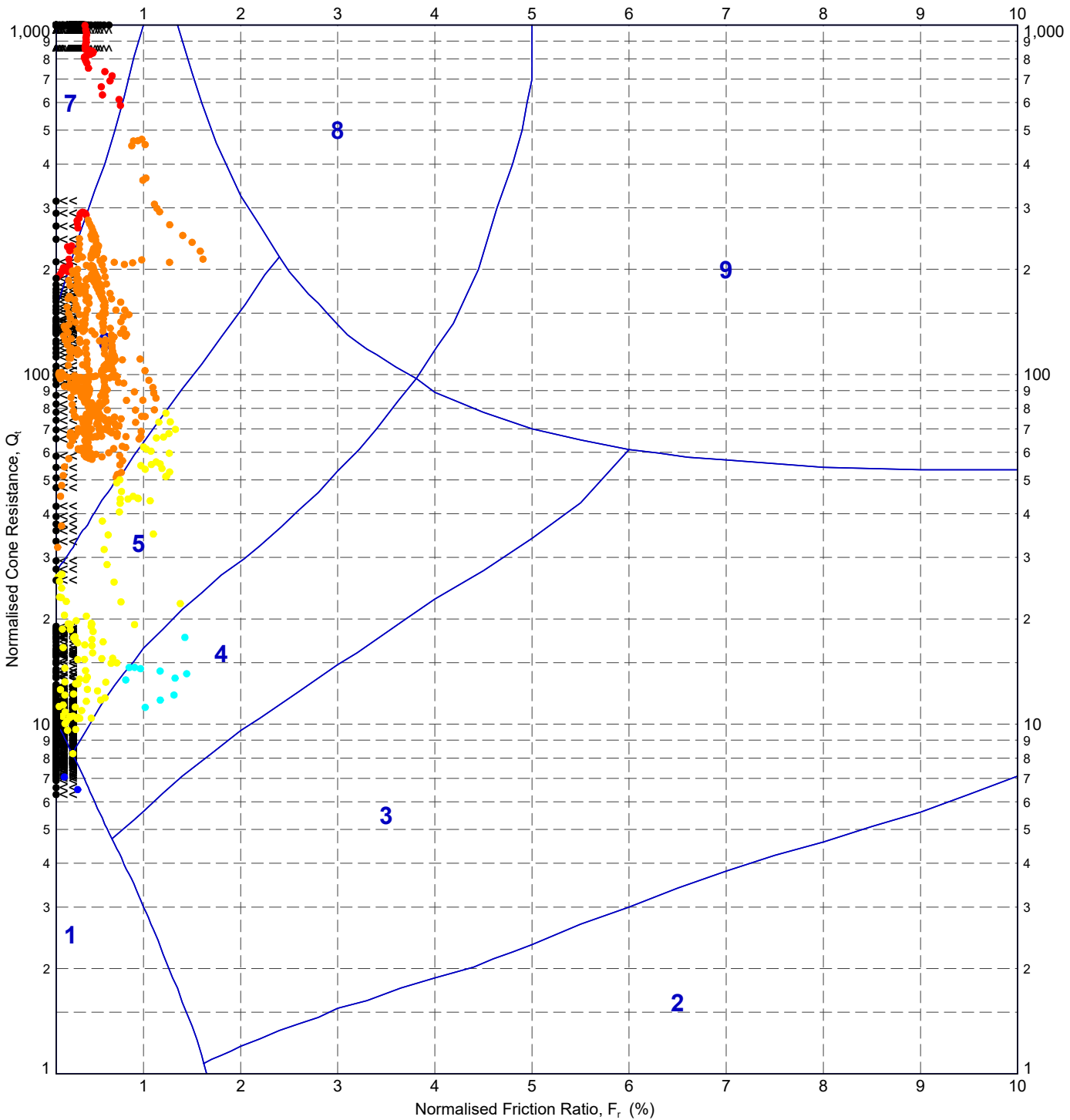
- 1 - Sensitive, fine grained
- 4 - Silt mixtures - clayey silt to silty clay
- 7 - Gravelly sand to sand
- 2 - Organic soil - peats
- 5 - Sand mixtures - silty sand to sandy silt
- 8 - Very stiff sand to clayey sand
- 3 - Clays - clay to silty clay
- 6 - Sands - clean sand to silty sand
- 9 - Very stiff fine grained

TITLE

Client 1  
Engineer 1  
Somewhere  
CPT Tool Project  
Robertson 1990  $F_r$  vs.  $Q_t$  - CPT 06

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	263

DATGEL CPT TOOL\_DGD 4.05.0 LIB\_GLB Graph CPT PROJECT SBT\_LINEAR-LOG LETP DATGEL CPT TOOL\_DGD 4.05.0 EN\_GPL <-DrawingFile>> 1/2/2021 21:24 10.01.00.11 Datgel CPT Tool.gINT Add-In

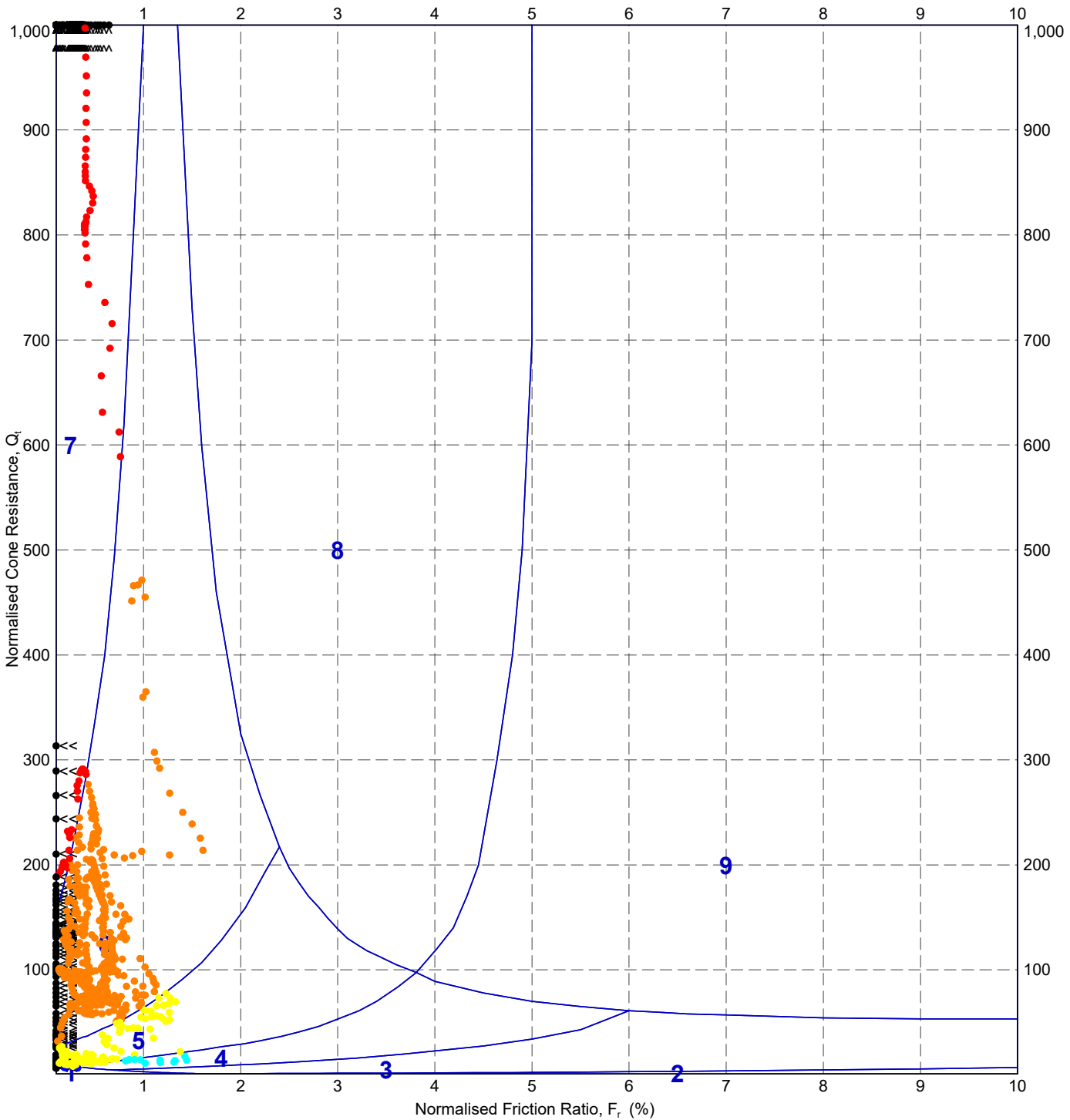


**METHOD: Robertson 1990**

- 1 - Sensitive, fine grained
- 4 - Silt mixtures - clayey silt to silty clay
- 7 - Gravelly sand to sand
- 2 - Organic soil - peats
- 5 - Sand mixtures - silty sand to sandy silt
- 8 - Very stiff sand to clayey sand
- 3 - Clays - clay to silty clay
- 6 - Sands - clean sand to silty sand
- 9 - Very stiff fine grained

 <b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	TITLE Client 1 Engineer 1 Somewhere CPT Tool Project Robertson 1990 $F_r$ vs. $Q_t$ - CPT 06	DRAWN	Datgel	DATE	1/2/2021	
		CHECKED	Datgel	DATE	1/2/2021	
		SCALE	Not To Scale			Let
		PROJECT No	4.05.0		FIGURE No	264

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph CPT PROJECT SBT.LOG-NEAR LETP DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <-DrawingFile>> 1/2/2021 21:33 10:01:00.11 Datgel CPT Tool.gINT Add-In



**METHOD: Robertson 1990**

- 1 - Sensitive, fine grained
- 4 - Silt mixtures - clayey silt to silty clay
- 7 - Gravelly sand to sand
- 2 - Organic soil - peats
- 5 - Sand mixtures - silty sand to sandy silt
- 8 - Very stiff sand to clayey sand
- 3 - Clays - clay to silty clay
- 6 - Sands - clean sand to silty sand
- 9 - Very stiff fine grained

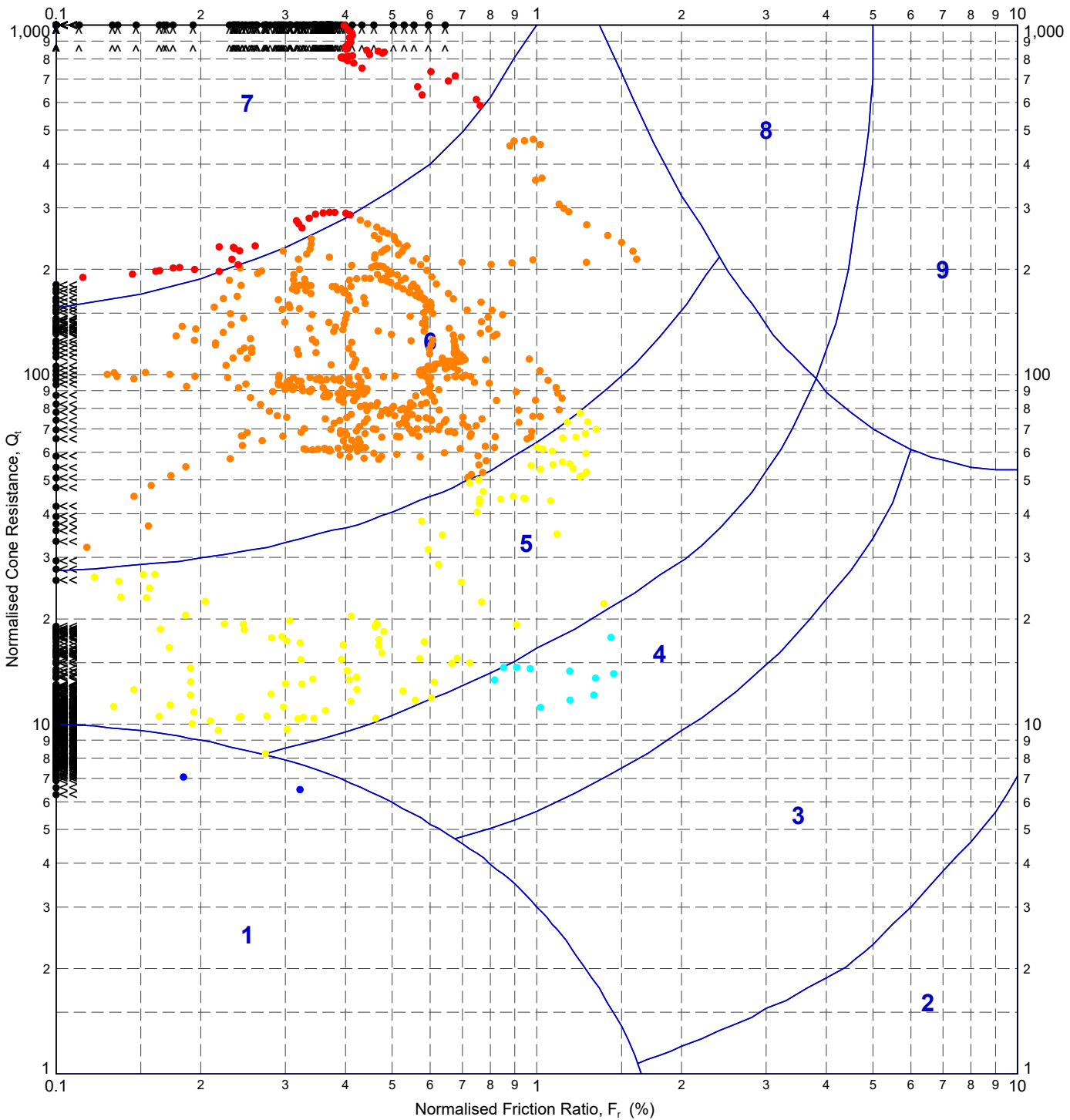


TITLE

Client 1  
Engineer 1  
Somewhere  
CPT Tool Project  
Robertson 1990  $F_r$  vs.  $Q_t$  - CPT 06

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	265

DATGEL CPT TOOL\_DGD\_4.05.0.LIB.GLB Graph CPT PROJECT SBT.LOG-LOG\_LETP DATGEL\_CPT\_TOOL\_DGD\_4.05.0.EN.GPJ <<DrawingFile>> 1/2/2021 21:43:10.01.11 Datgel CPT.Tool.gINT\_Add-In



**METHOD: Robertson 1990**

- 1 - Sensitive, fine grained
- 4 - Silt mixtures - clayey silt to silty clay
- 7 - Gravelly sand to sand
- 2 - Organic soil - peats
- 5 - Sand mixtures - silty sand to sandy silt
- 8 - Very stiff sand to clayey sand
- 3 - Clays - clay to silty clay
- 6 - Sands - clean sand to silty sand
- 9 - Very stiff fine grained

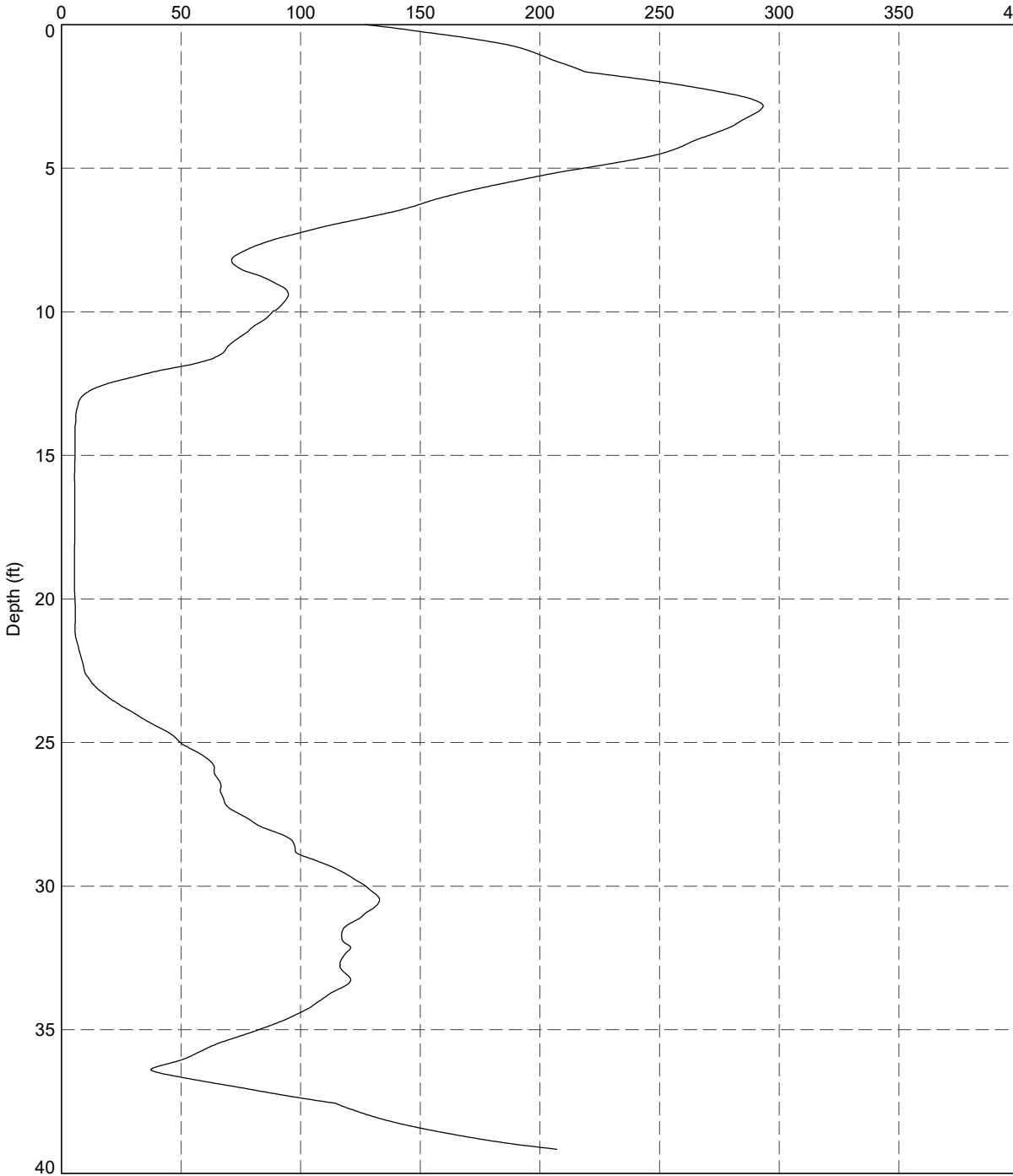
 <b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	TITLE Client 1 Engineer 1 Somewhere CPT Tool Project Robertson 1990 $F_r$ vs. $Q_t$ - CPT 06	DRAWN	Datgel	DATE	1/2/2021	
		CHECKED	Datgel	DATE	1/2/2021	
		SCALE	Not To Scale			Let
		PROJECT No	4.05.0		FIGURE No	266




Cone Resistance Moving Average,  $q_c$  Moving Avg. (tsf)

PointID

CPT 05



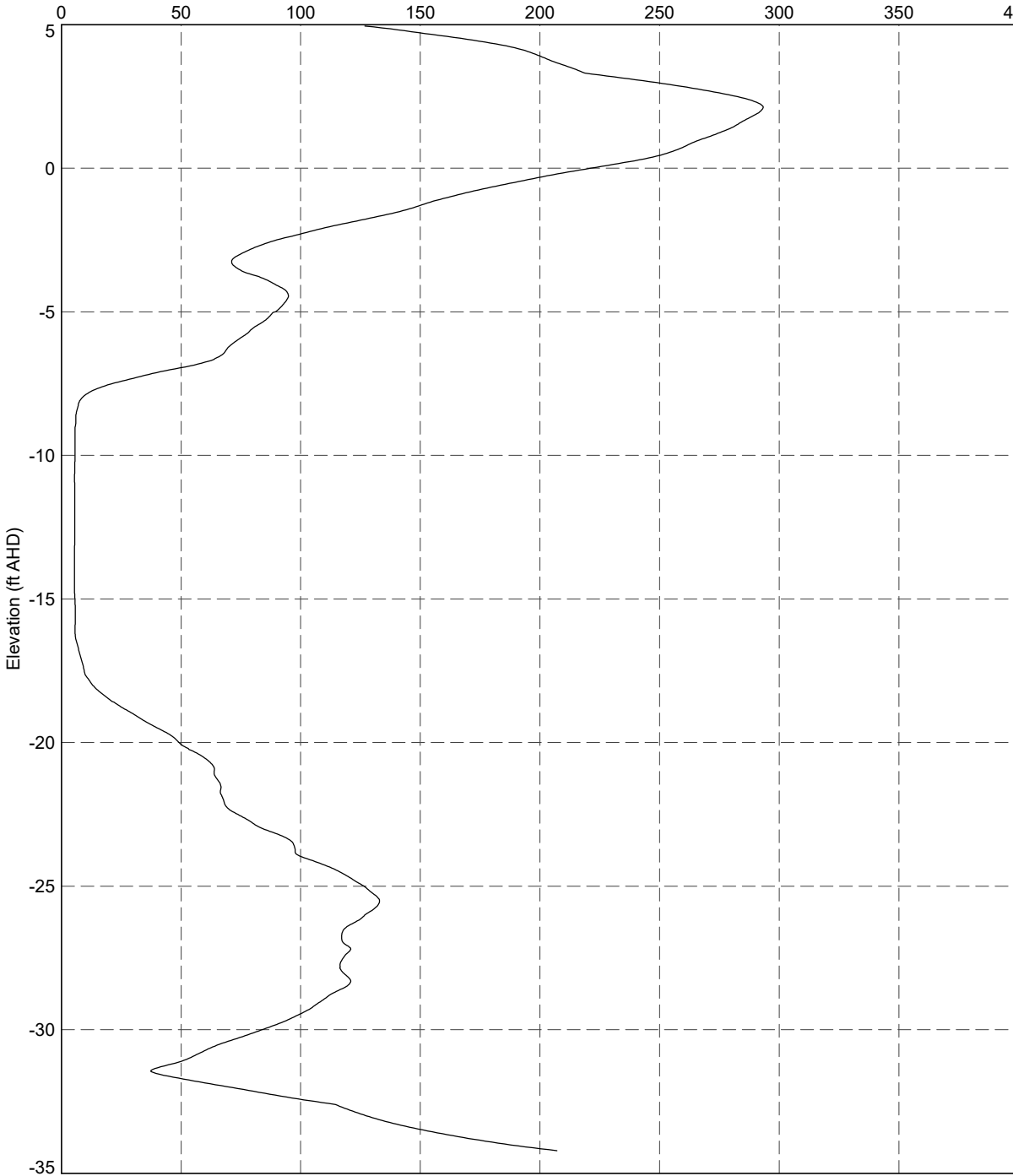
DATGEL\CPT\_TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT\_OC MOVING AVG\DEPTH\LEIP.DATGEL\CPT\_TOOL\_DGD\_4.05.0.EN.GPJ <-DrawingFile>> 1/2/2021 2:43:10.01.00.11.Datgel.CPT.Tool.gINT.Add.in

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Cone Resistance Moving Avg. vs Depth</p>	<p>DRAWN</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>	
		<p>CHECKED</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>	
		<p>SCALE</p> <p>Not To Scale</p>		<p>Let</p>
		<p>PROJECT No</p> <p>4.05.0</p>	<p>FIGURE No</p> <p>267</p>	

Cone Resistance Moving Average,  $q_c$  Moving Avg. (tsf)

PointID

CPT 05



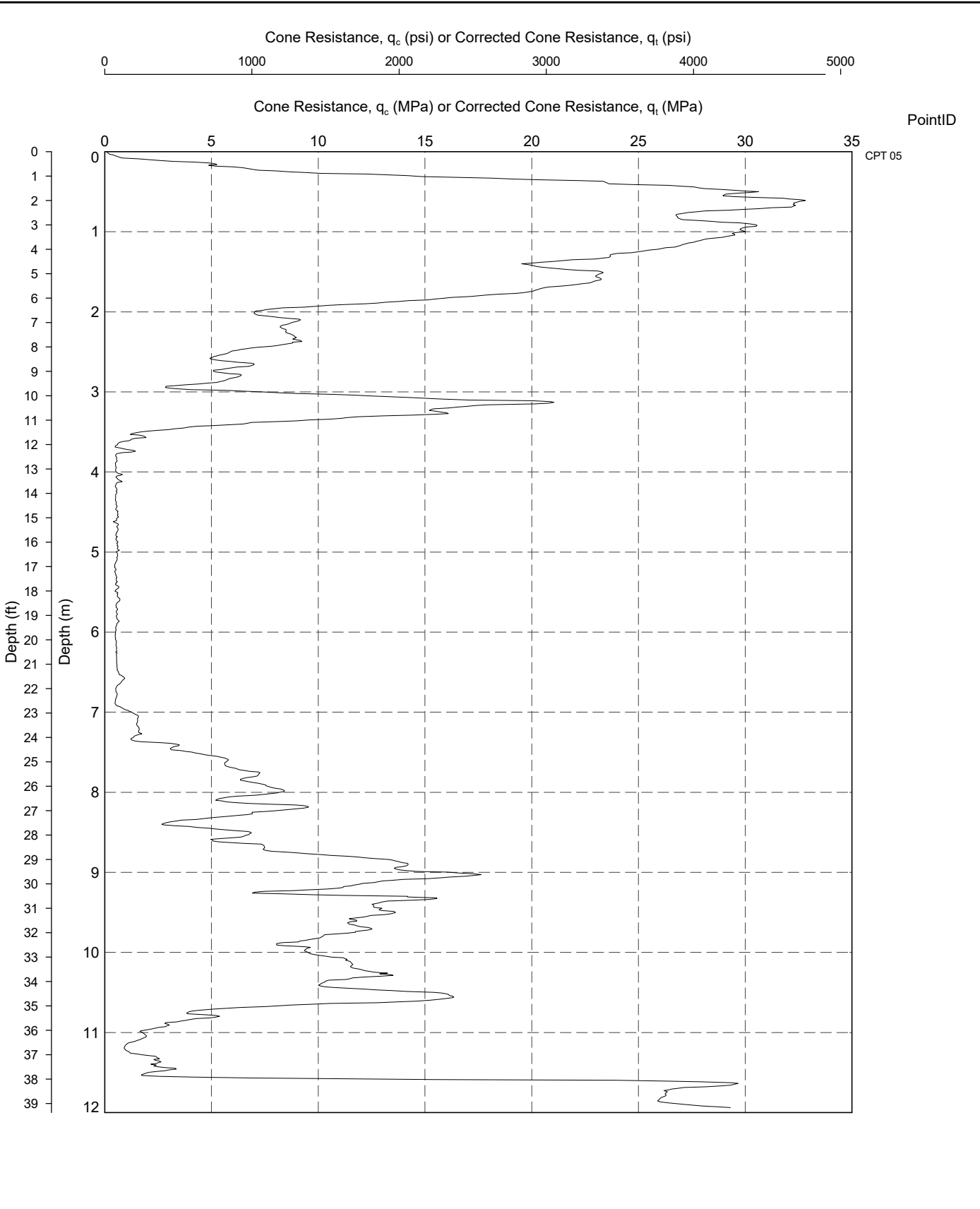
DATGEL\CPT\_TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT\_OC MOVING AVG\RL LETP.DATGEL.CPT\_TOOL\_DGD\_4.05.0.EN.GPJ <-DrawingFile> 1/2/2021 2:14:43 10.01.00.11.Datgel.CPT.Tool.gINT.Add-In




TITLE  
 Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Cone Resistance Moving Avg. vs Elevation

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	268

DATGEL CPT TOOL\_DGD\_4.05.0.LIB.GLB Graph CPT QC QT DEPTH FT.PSI.LETP.DATGEL.CPT.TOOL.DGD\_4.05.0.EN.GPJ <<DrawingFile>> 1/2/2021 21:46:10.01.0011.Datgel.CPT.Tool.gINT.Add-In

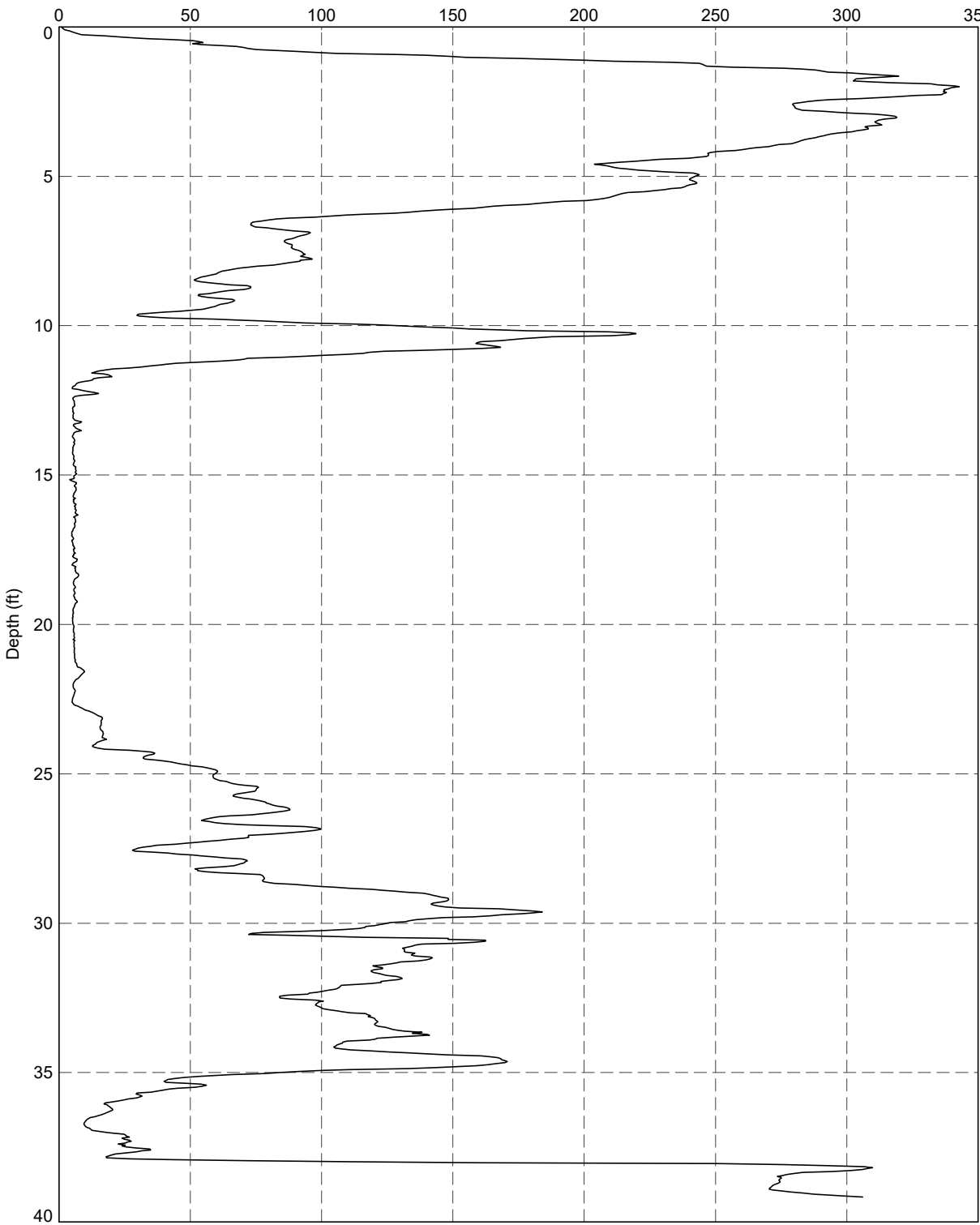


 <b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	TITLE Client 1 Engineer 1 Somewhere CPT Tool Project Cone Resistance versus Depth	DRAWN Datgel	DATE 1/2/2021		
			CHECKED Datgel	DATE 1/2/2021	
			SCALE Not To Scale		Let
			PROJECT No 4.05.0	FIGURE No 269	

Cone Resistance,  $q_c$  (tsf) or Corrected Cone Resistance,  $q_t$  (tsf)

PointID

CPT 05



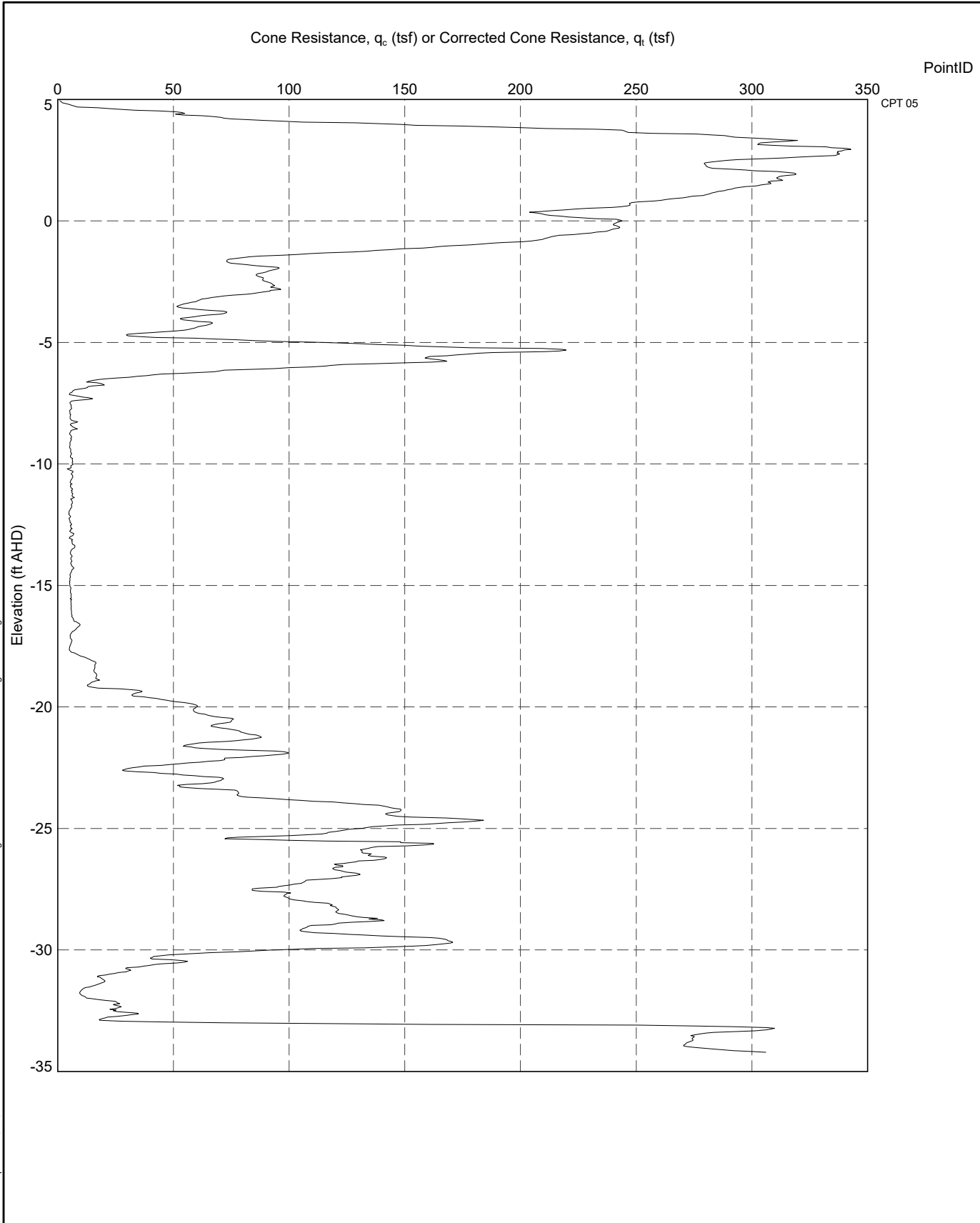
DATGEL\CPT TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT\_OC QT DEPTH LETP DATGEL\_CPT TOOL\_DGD\_4.05.0 EN.GPJ <<DrawingFile>> 1/2/2021 21:46:10.01.00.11 Datgel\CPT.Tool.gINT Add-In


TITLE

Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Cone Resistance versus Depth

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	270

DATGEL CPT TOOL\_DGD\_4.05.0.LIB.GLB Graph CPT.OC QT.RL LETP.DATGEL\_CPT\_TOOL.DGD\_4.05.0.EN.GPJ <<DrawingFile>> 1/2/2021 21:46:10.01.00.11.Datgel CPT Tool.gINT.Add-In

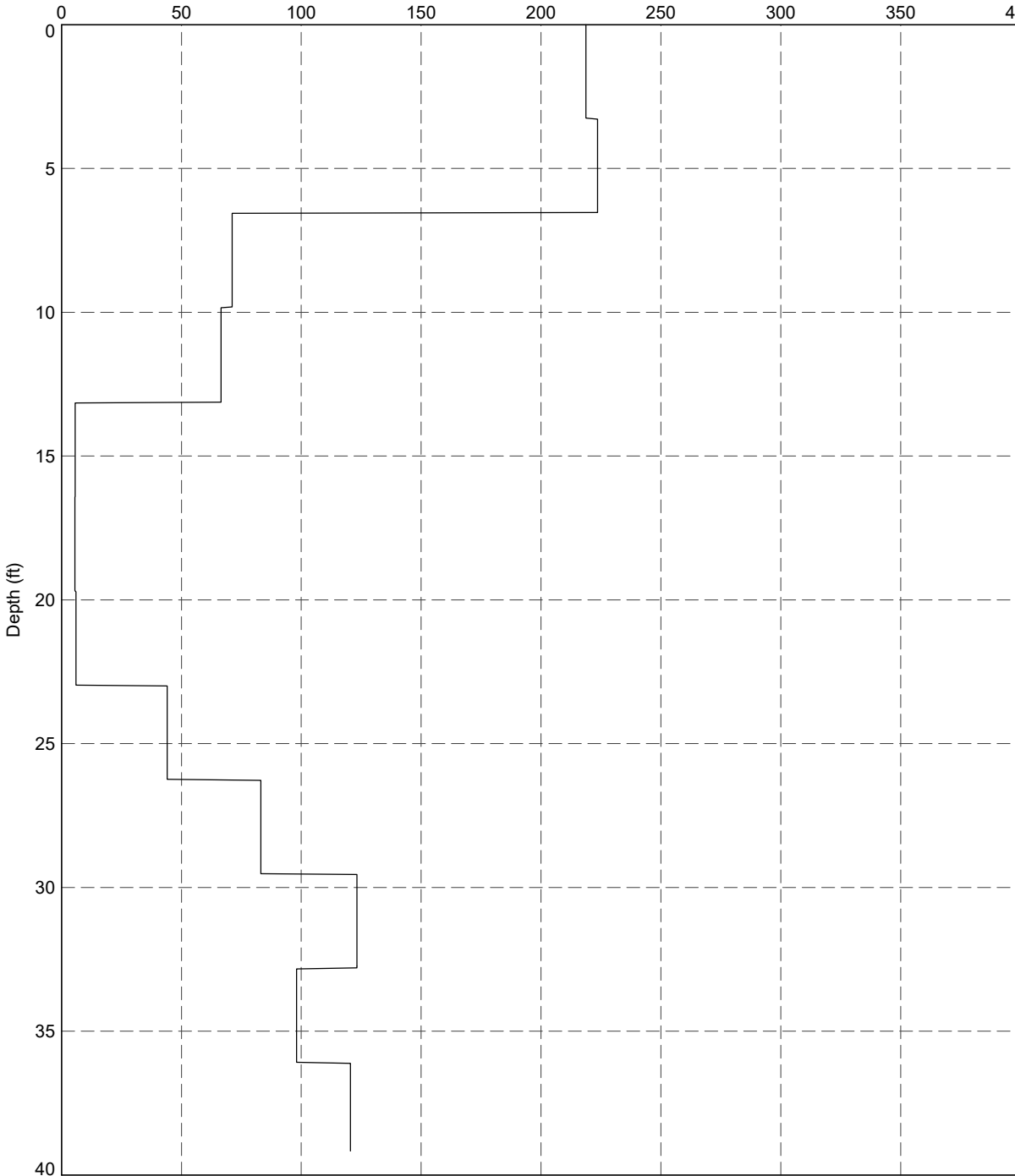


 <b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	TITLE  Client 1 Engineer 1 Somewhere CPT Tool Project Cone Resistance versus Elevation	DRAWN Datgel	DATE 1/2/2021	
	CHECKED Datgel		DATE 1/2/2021	
	SCALE Not To Scale			Let
	PROJECT No 4.05.0		FIGURE No 271	


Cone Resistance Stepped Average,  $q_c$  Stepped Avg. (tsf)

PointID

CPT 05



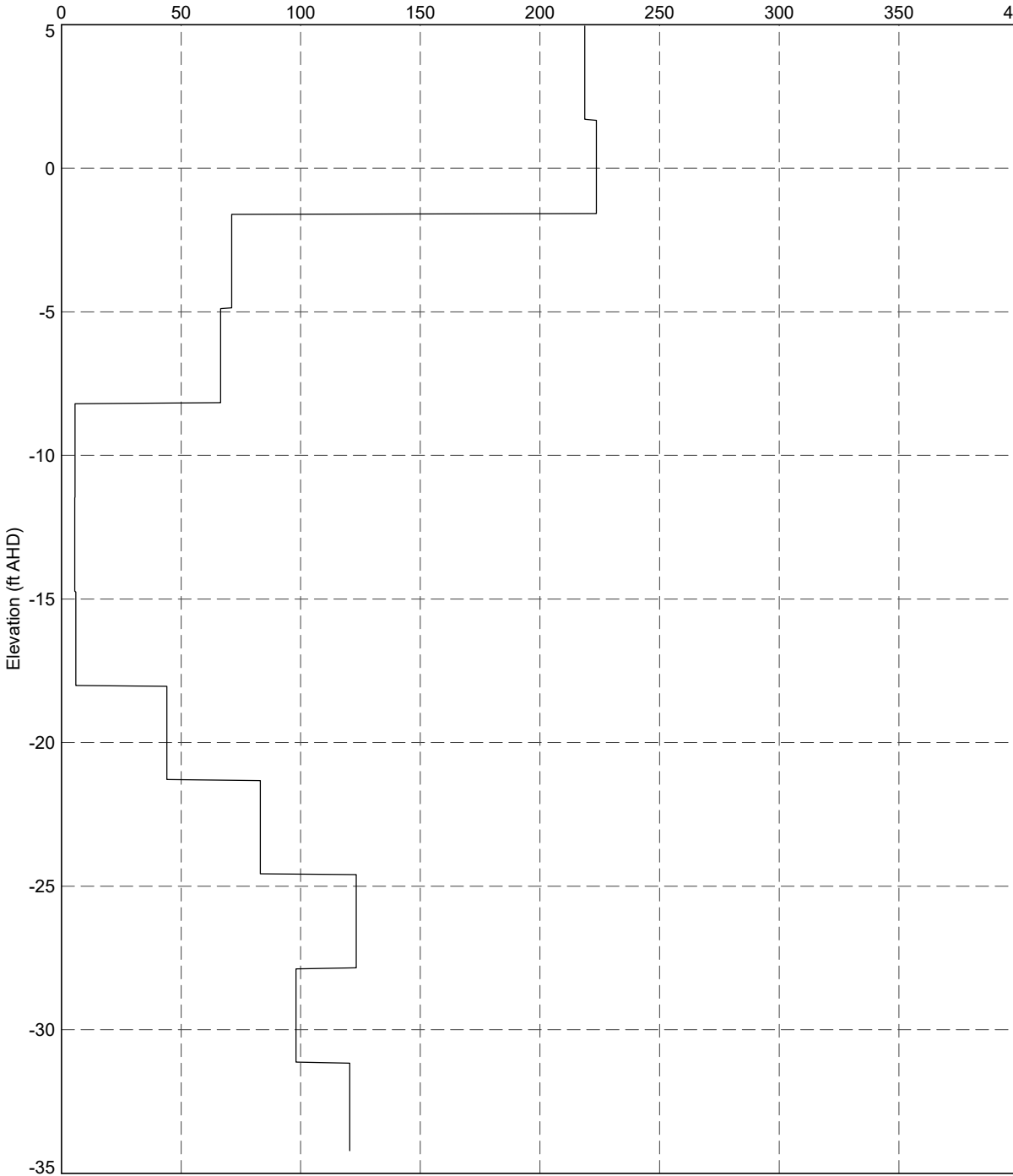
DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.OC.STEPPED.AVG.DEPTH.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <-DrawingFiles> 1/2/2021 21:46:10.01.00.11.Datgel.CPT.Tool.gINT.Add-In

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project</p> <p>Cone Resistance Stepped Avg. vs Depth</p>	<p>DRAWN Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>CHECKED Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>SCALE Not To Scale</p>		<p>Let</p>
		<p>PROJECT No 4.05.0</p>	<p>FIGURE No 272</p>	

Cone Resistance Stepped Average,  $q_c$  Stepped Avg. (tsf)

PointID

CPT 05



DATGEL\CPT\_TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT\_OC STEPPED AVG RL LETP DATGEL\CPT\_TOOL\_DGD\_4.05.0 EN.GPJ <<DrawingFile>> 1/22/2021 21:46 10:01:00.11 Datgel\CPT\_Tool.g\NT\_Add-In



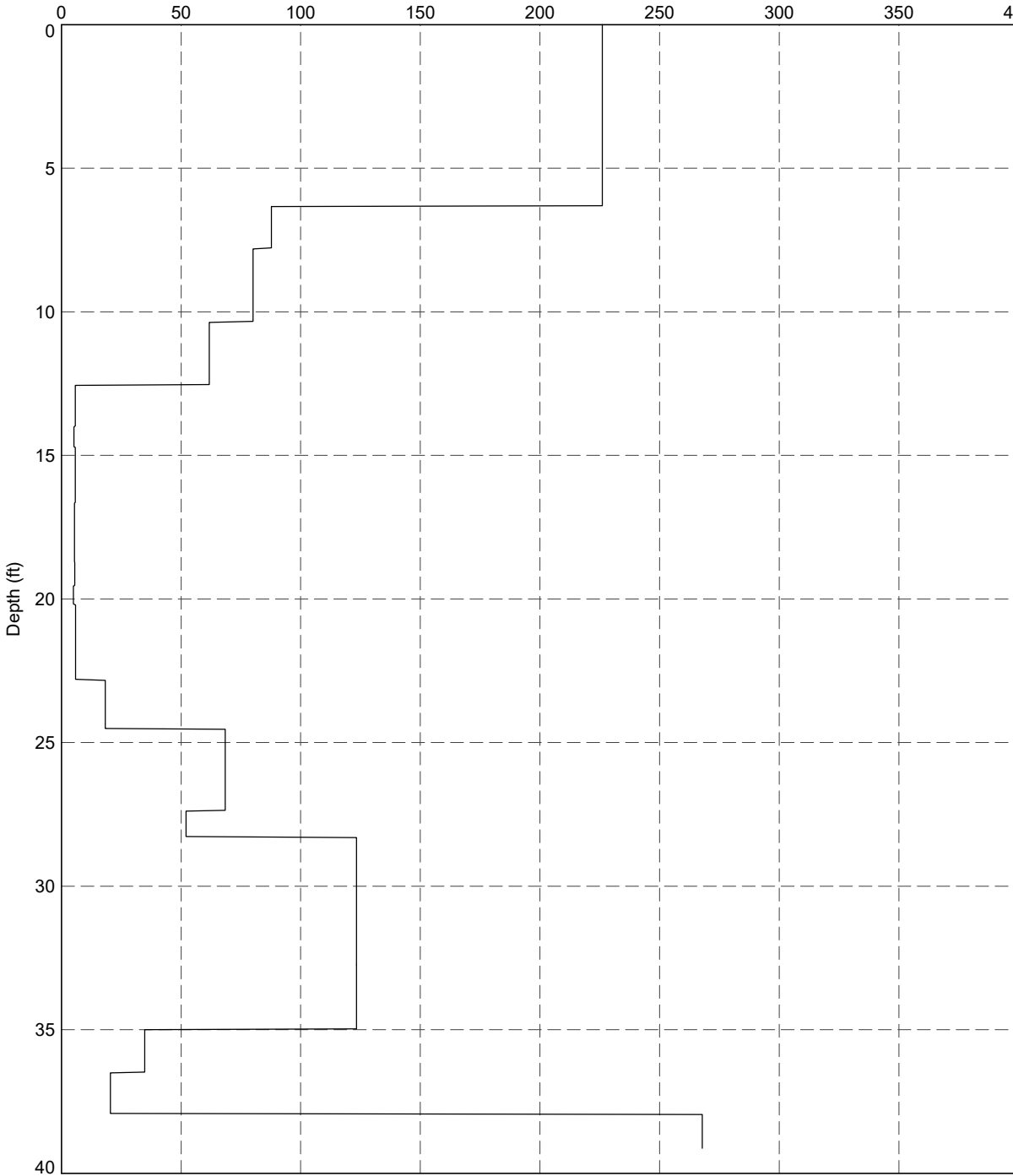
TITLE  
 Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Cone Resistance Stepped Avg. vs Elevation

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	273


Cone Resistance Strata Average,  $q_c$  Strata Avg. (tsf)

PointID

CPT 05



DATGEL\CPT\_TOOL\_DGD\_4.05.0\LIB\_GLB\_Graph\CPT\_OC\_STRATA\_AVG\_DEPTH\_LETP\_DATGEL\CPT\_TOOL\_DGD\_4.05.0\_EN.GPJ <-DrawingFile> 1/2/2021 21:46:10.01.00.11 Datgel\CPT\_Tool.gINT\_AddIn

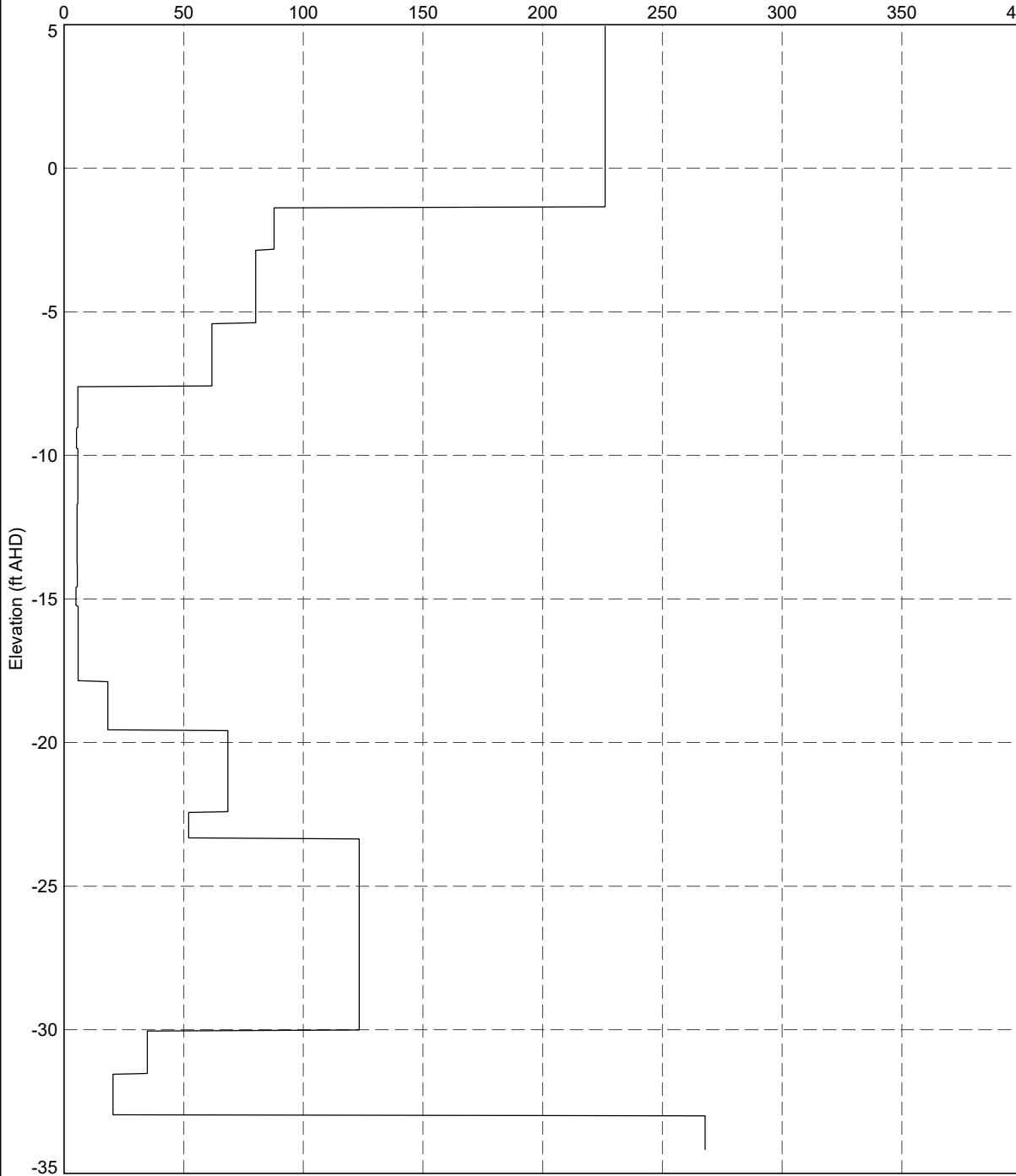
 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Cone Resistance Strata Avg. vs Depth</p>	<p>DRAWN Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>CHECKED Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>SCALE Not To Scale</p>		<p>Let</p>
		<p>PROJECT No 4.05.0</p>	<p>FIGURE No 274</p>	




Cone Resistance Strata Average,  $q_c$  Strata Avg. (tsf)

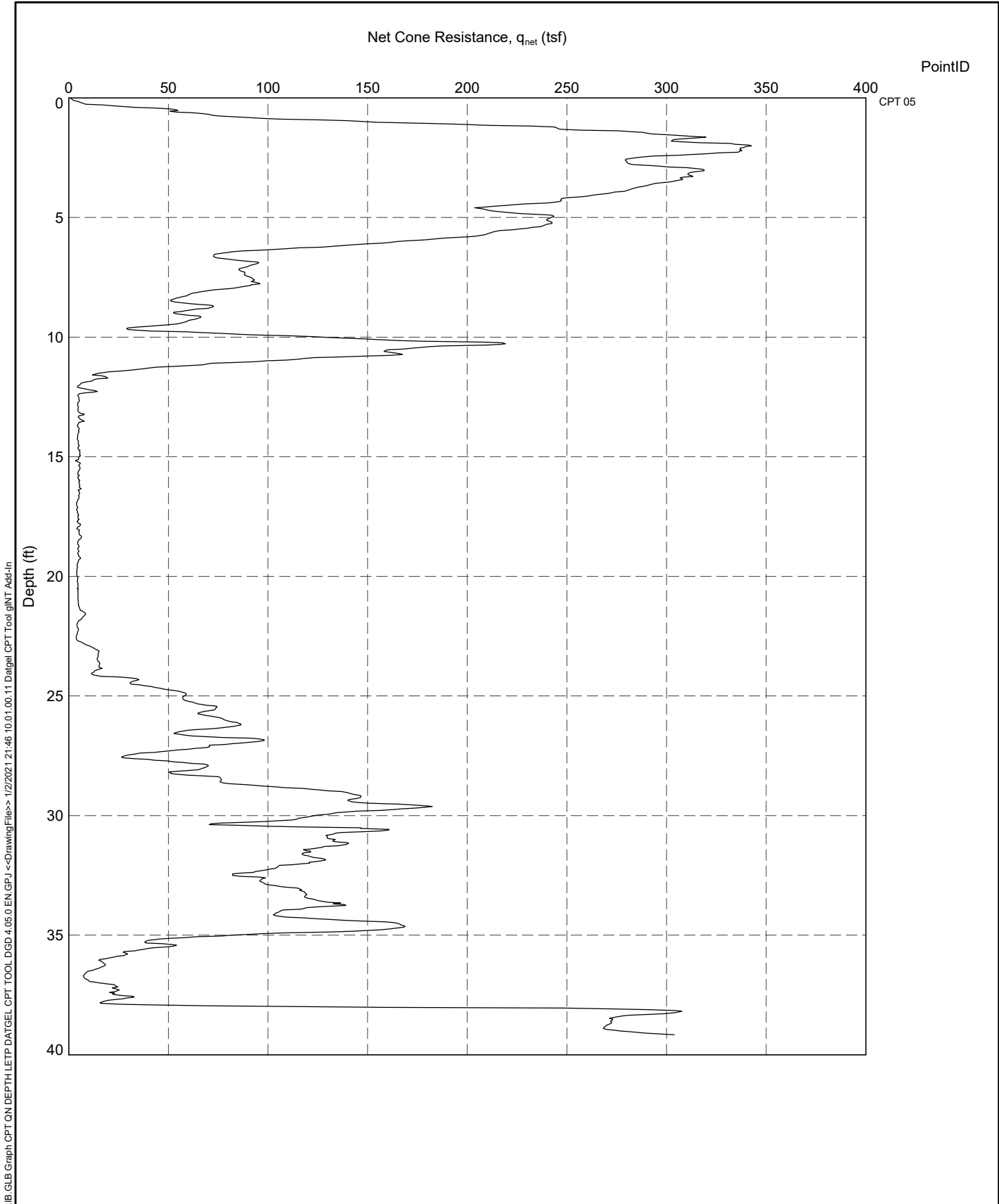
PointID

CPT 05




DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.OC.STRATA.AVG.RL.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ.<<DrawingFile>>1/2/2021.21:46.10.01.00.11.Datgel.CPT.Tool.gINT.Add-in

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Cone Resistance Strata Avg. vs Elevation</p>	<p>DRAWN</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>	
		<p>CHECKED</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>	
		<p>SCALE</p> <p>Not To Scale</p>		<p>Let</p>
		<p>PROJECT No</p> <p>4.05.0</p>	<p>FIGURE No</p> <p>275</p>	



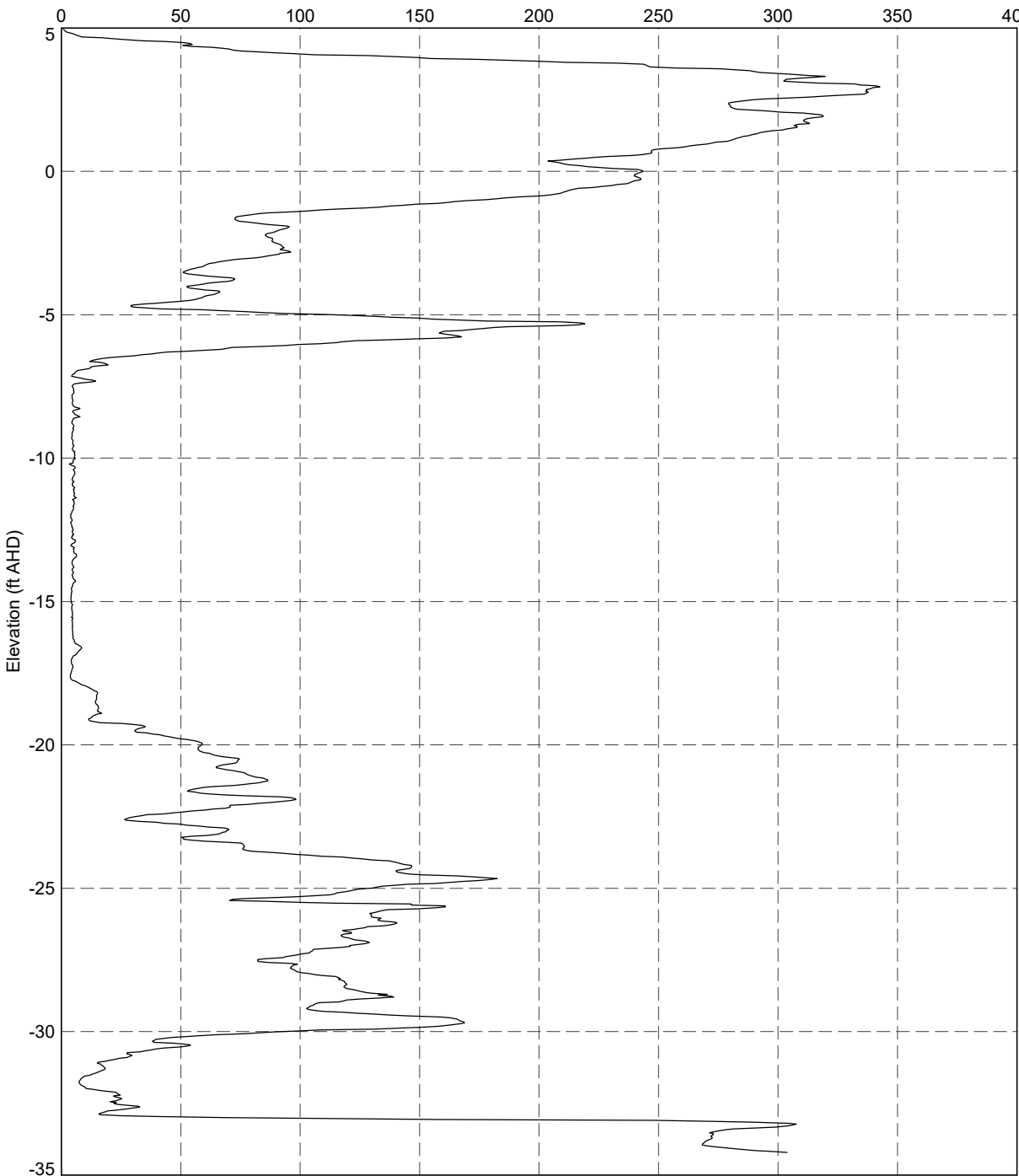
DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.ON.DEPTH.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <<DrawingFile>> 1/2/2021 21:46 10.01.00.11 Datgel.CPT.Tool.gINT.Add-In

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Net Cone Resistance versus Depth</p>	<p>DRAWN Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>CHECKED Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>SCALE Not To Scale</p>		<p>Let</p>
		<p>PROJECT No 4.05.0</p>	<p>FIGURE No 276</p>	


Net Cone Resistance,  $q_{net}$  (tsf)

PointID

CPT 05



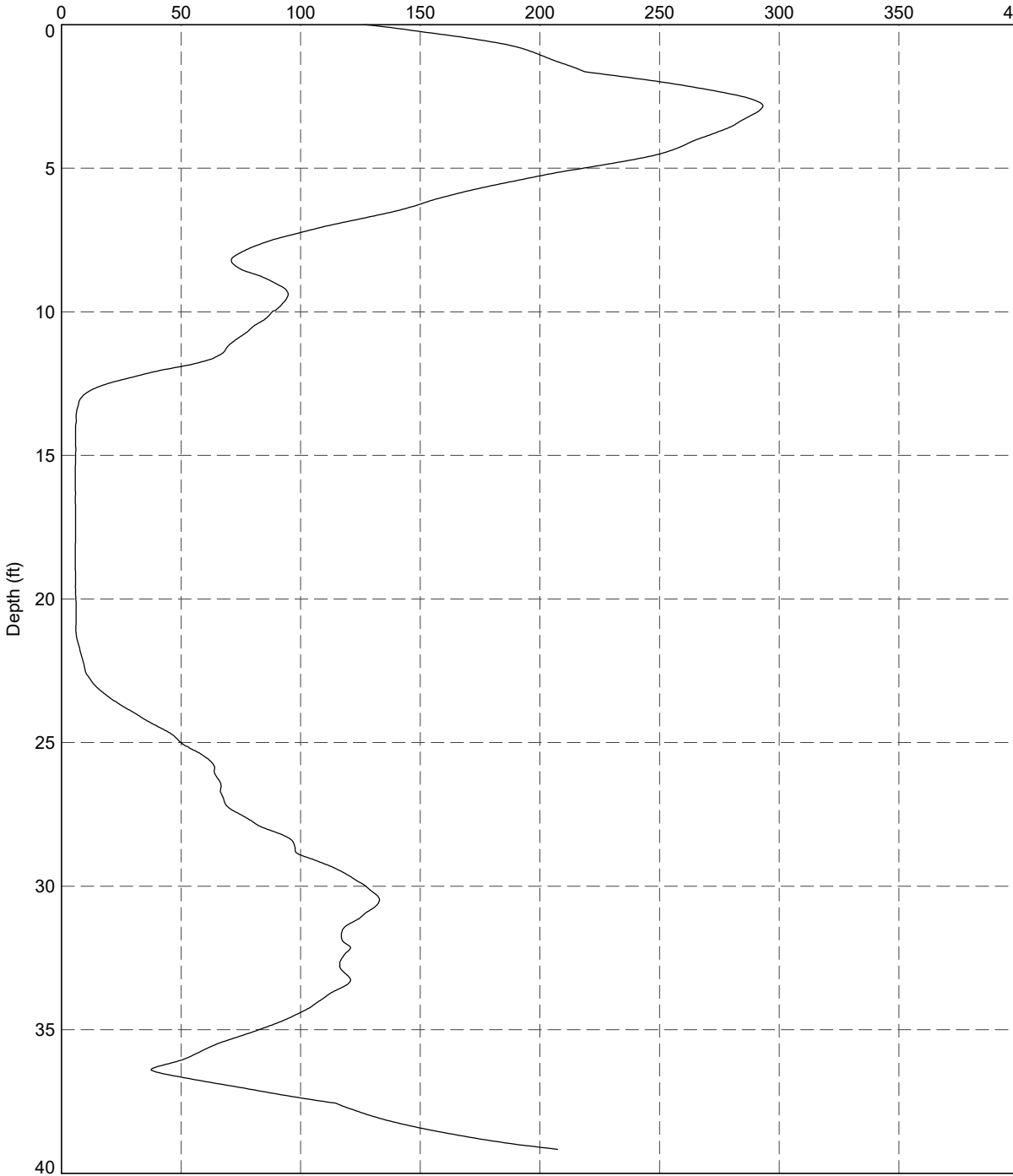
DATGEL\CPT TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT.05\NT\_Add-In

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Net Cone Resistance versus Depth</p>	<p>DRAWN Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>CHECKED Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>SCALE Not To Scale</p>		<p>Let</p>
		<p>PROJECT No 4.05.0</p>	<p>FIGURE No 277</p>	


Corrected Cone Resistance Moving Average,  $q_t$  Moving Avg. (tsf)

PointID

CPT 05



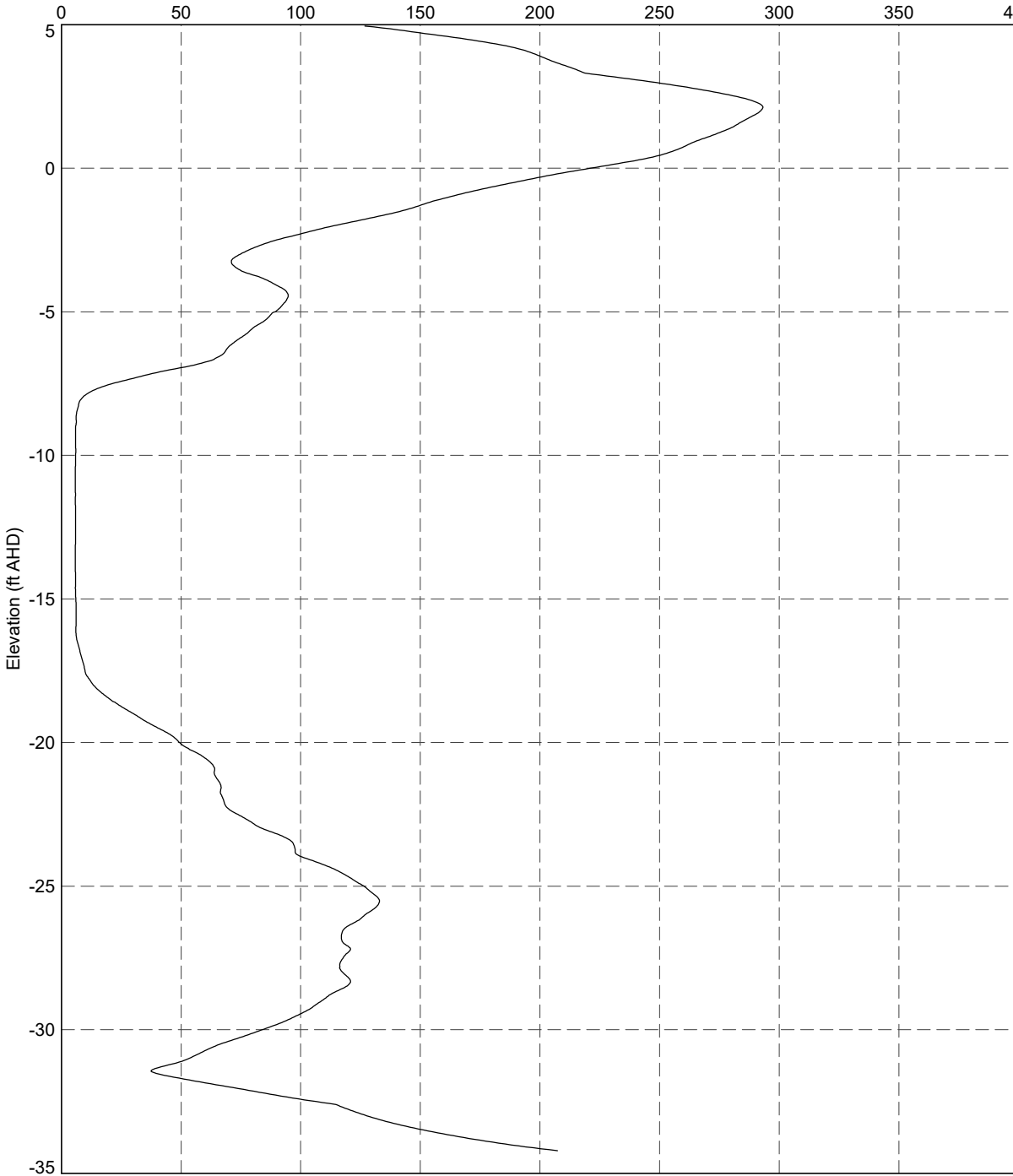
DATGEL\CPT TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT.QT.MOVING\_AVG.DEPTH.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <<DrawingFile>> 1/2/2021 21:47:10.01.00.11 Datgel\CPT.Tool.gINT\_AddIn

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project</p> <p>Corrected Cone Resist. Moving Avg. vs Depth</p>	DRAWN	Datgel	DATE	1/2/2021	
		CHECKED	Datgel	DATE	1/2/2021	
		SCALE	Not To Scale			Let
		PROJECT No	4.05.0	FIGURE No	278	

Corrected Cone Resistance Moving Average,  $q_t$  Moving Avg. (tsf)

PointID

CPT 05



DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.QT.MOVING.AVG.RL.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ.<<DrawingFile>>.1/2/2021.21:47.10.01.00.11.Datgel.CPT.Tool.gINT.Add-in



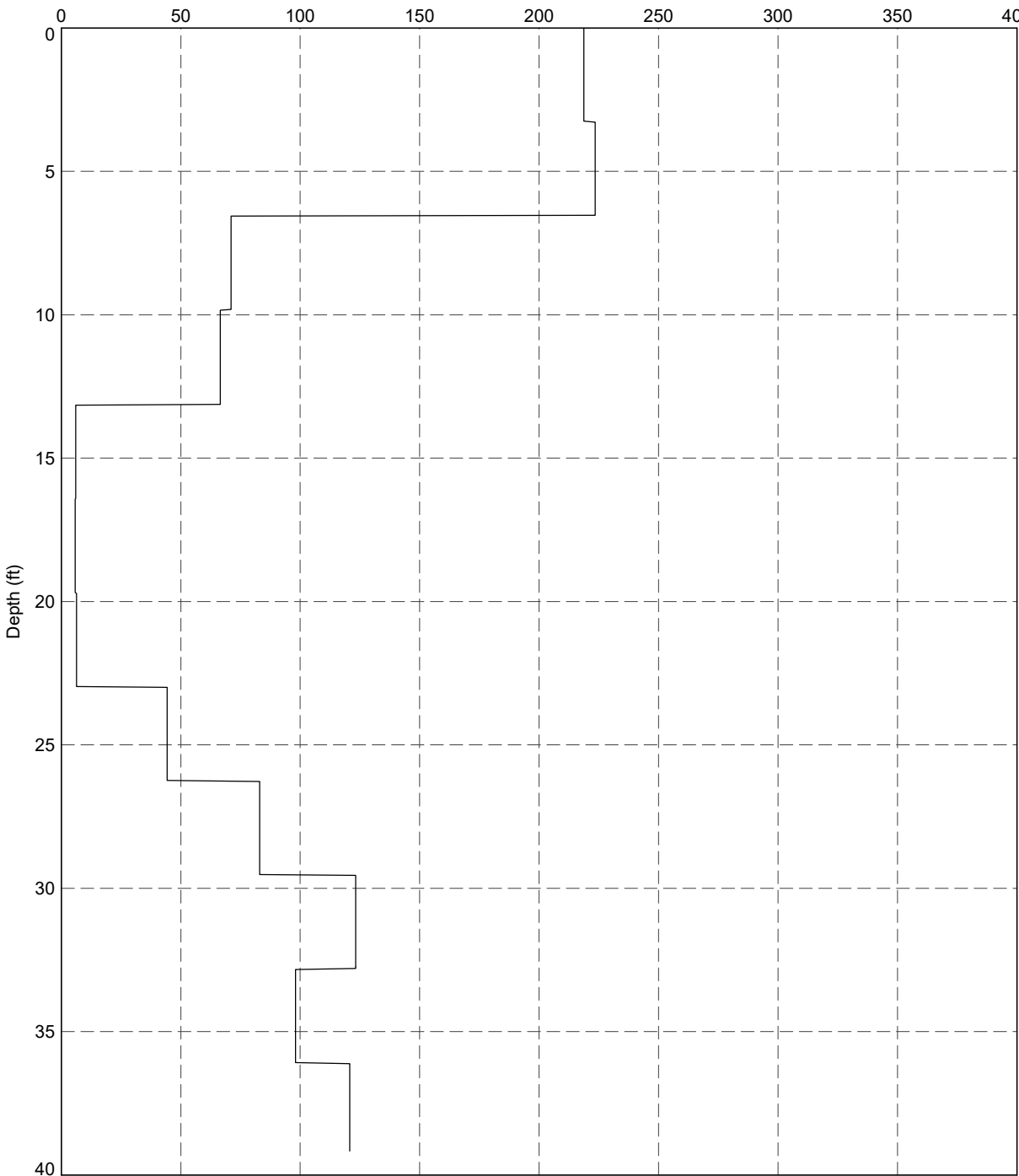
TITLE  
 Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Corrected Cone Resist. Moving Avg. vs Elevation

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	279


Corrected Cone Resistance Stepped Average,  $q_t$  Stepped Avg. (tsf)

PointID

CPT 05



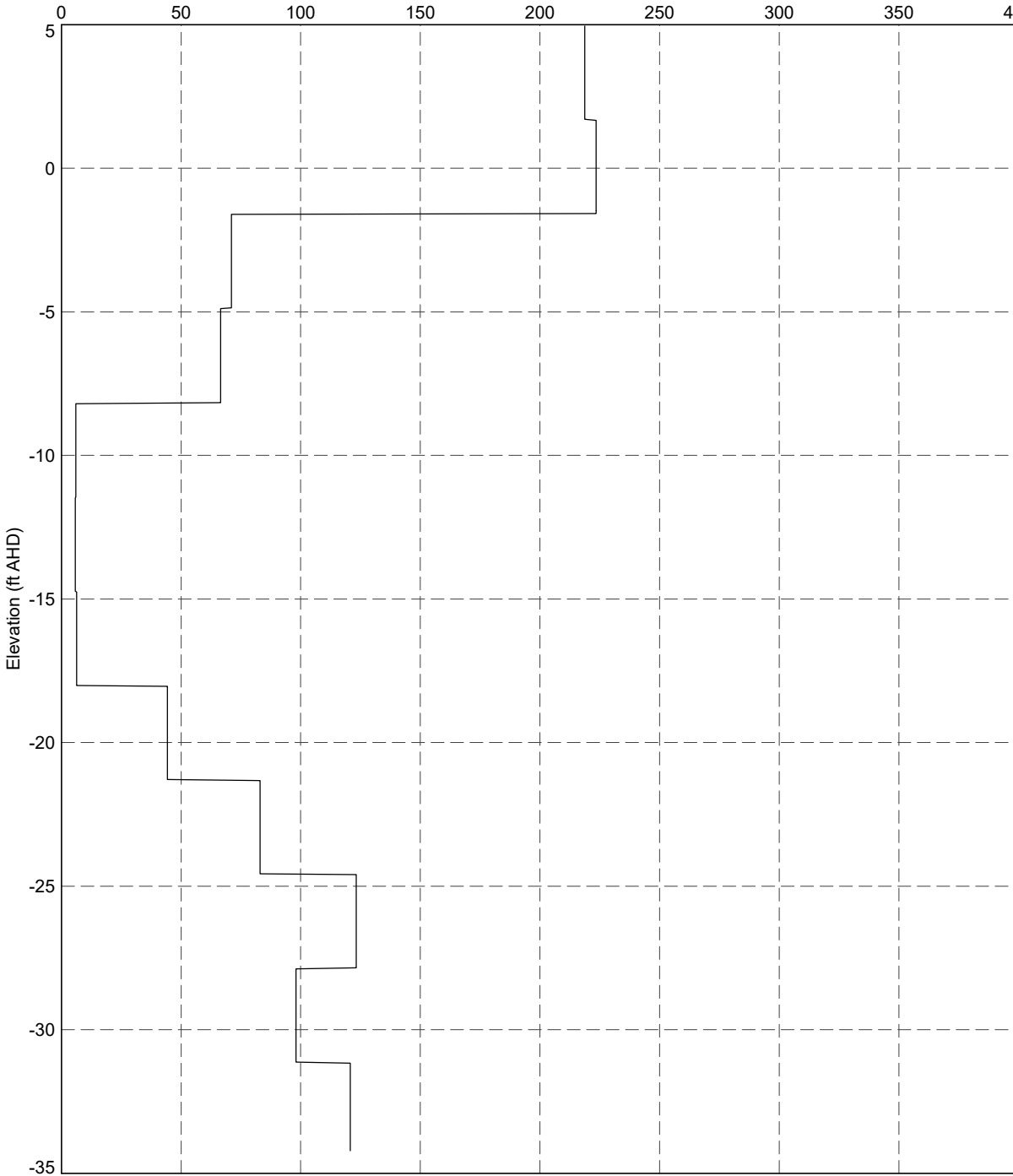
DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.QT.STEPPED.AVG.DEPTH.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <<DrawingFile>> 1/22/2021 2:14:47 10:01:00.11.Datgel.CPT.Tool.gINT.Add-In

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project</p> <p>Corrected Cone Resist. Stepped Avg. vs Depth</p>	<p>DRAWN Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>CHECKED Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>SCALE Not To Scale</p>		<p>Let</p>
		<p>PROJECT No 4.05.0</p>	<p>FIGURE No 280</p>	

Corrected Cone Resistance Stepped Average,  $q_t$  Stepped Avg. (tsf)

PointID

CPT 05



DATGEL\CPT TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT.OT\STEPPED AVG RL\LETP DATGEL\CPT TOOL\_DGD\_4.05.0 EN.GPJ <-<DrawingFile>> 1/2/2021 21:48:10.01.00.11 Datgel.CPT.Tool.gj\NT\_Add-In



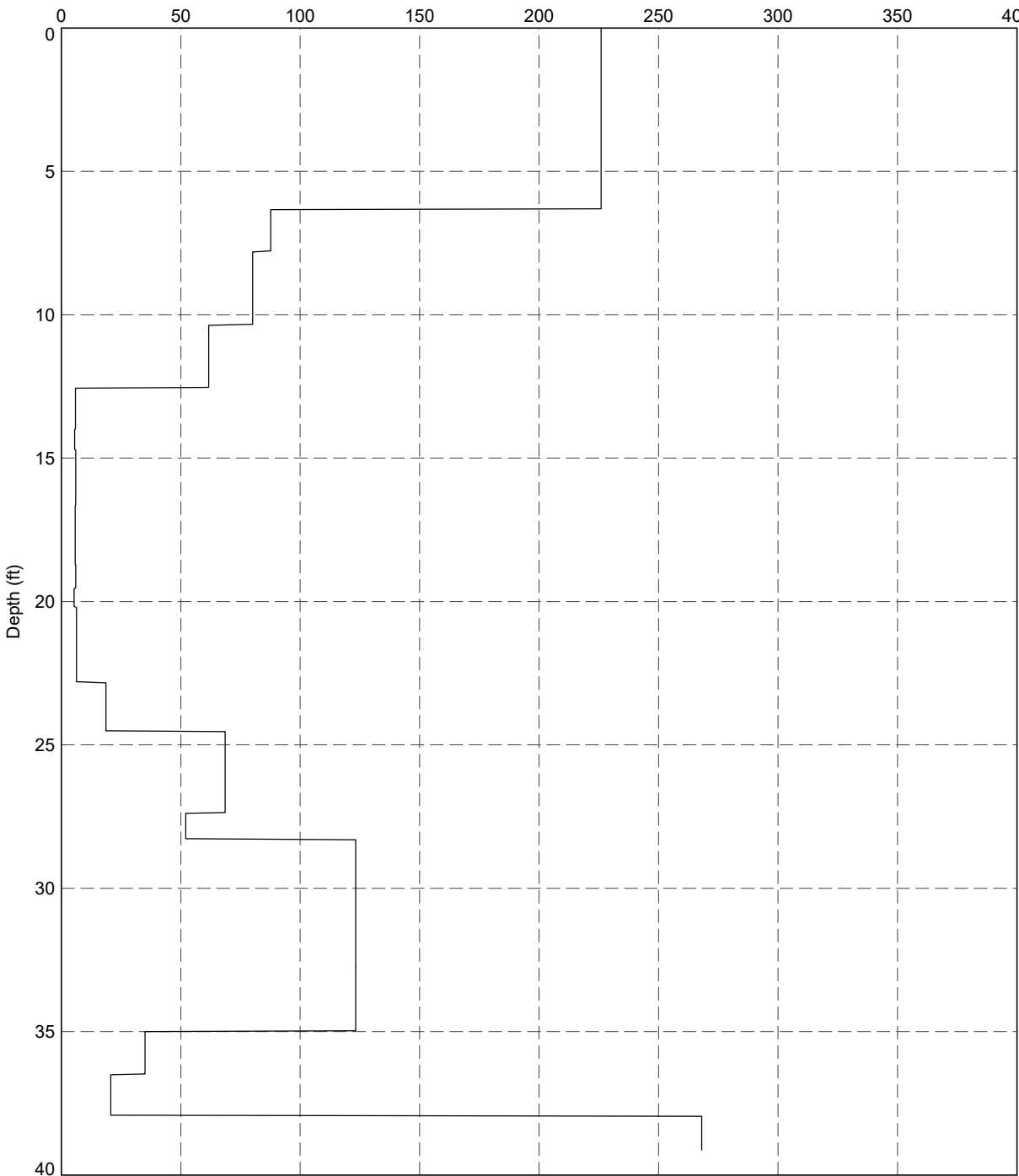
TITLE  
 Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Corrected Cone Resist. Stepped Avg. vs  
 Elevation

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	281


Corrected Cone Resistance Strata Average,  $q_t$  Strata Avg. (tsf)

PointID

CPT 05



DATGEL\CPT\_TOOL\_DGD\_4.05.0\LIB\_GLB\_Graph\CPT\_QT\_STRATA\_AVG\_DEPTH\_LEIF\_DATGEL\CPT\_TOOL\_DGD\_4.05.0\EN\_GPJ\_<<DrawingFile>>\_12\2021\_21\48\_10.01.00.11\_Datgel\CPT\_Tool.gi\NT\_Add-In

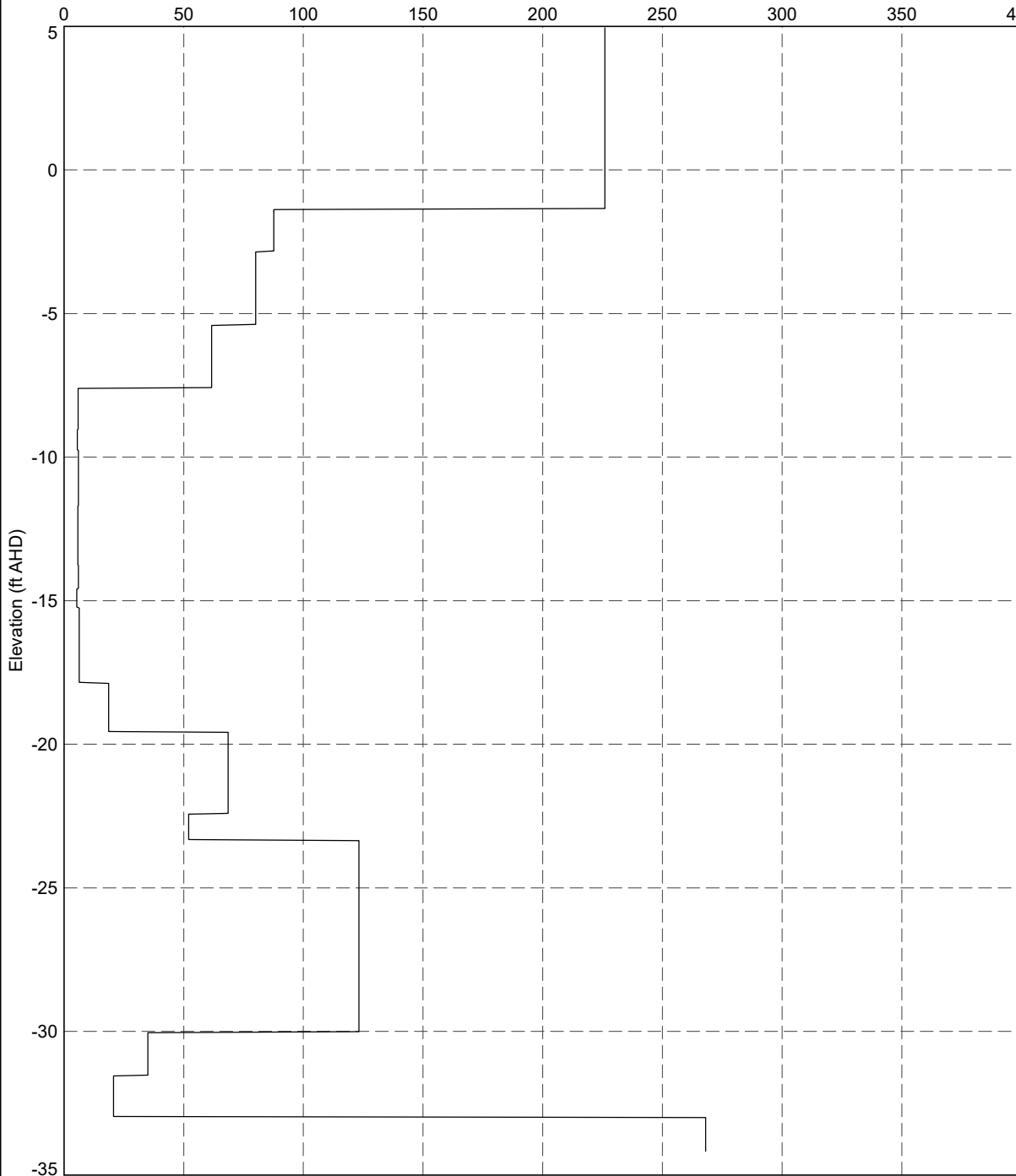
 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project</p> <p>Corrected Cone Resist. Strata Avg. vs Depth</p>	<p>DRAWN</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>
		<p>CHECKED</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>
		<p>SCALE</p> <p>Not To Scale</p>	<p>Let</p>
		<p>PROJECT No</p> <p>4.05.0</p>	<p>FIGURE No</p> <p>282</p>



Corrected Cone Resistance Strata Average,  $q_t$  Strata Avg. (tsf)

PointID

CPT 05

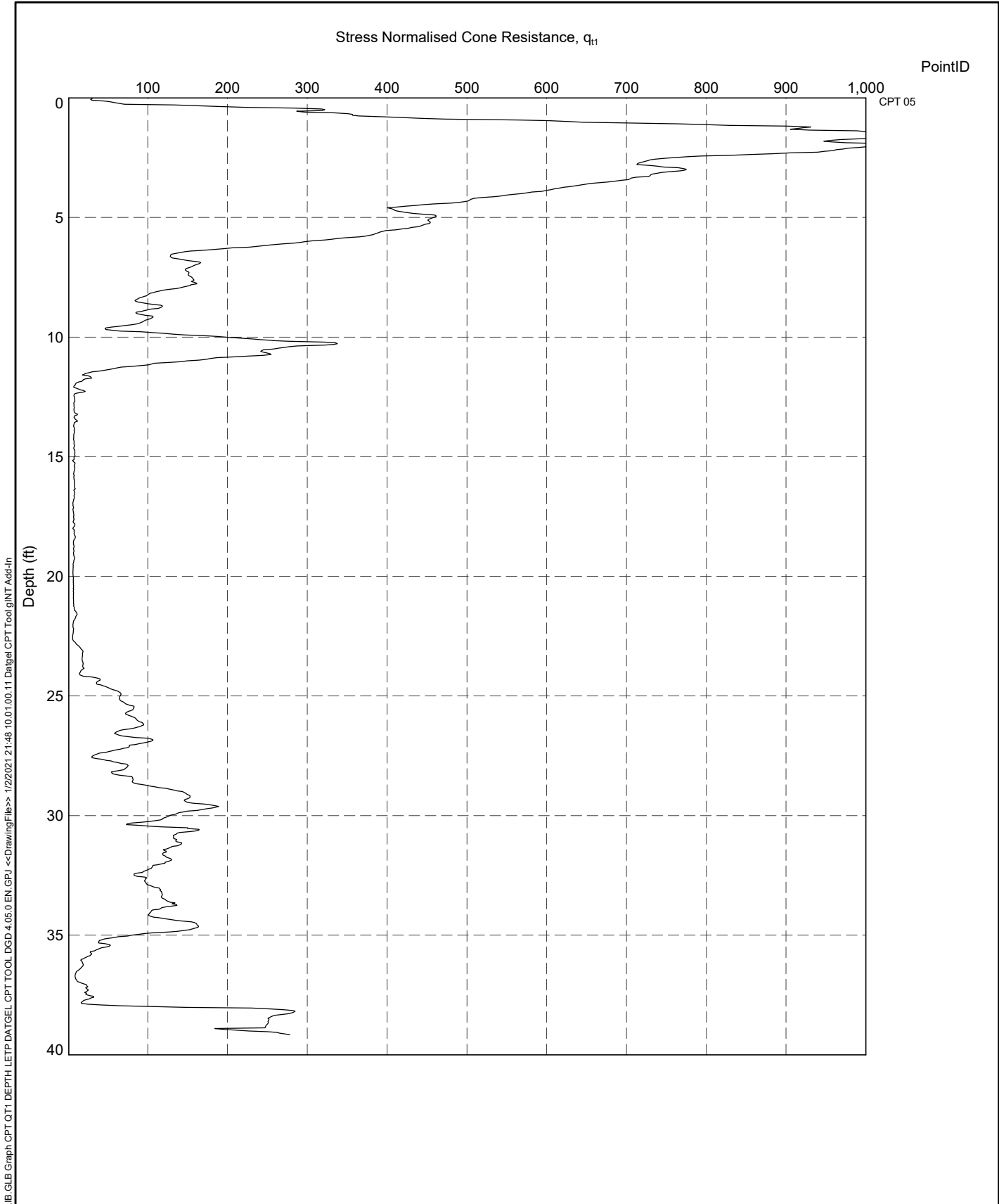



DATGEL\CPT TOOL\_DGD\_4.05.0\LIB\_GLB\_Graph\CPT.OT STRATA.AVG\_RL\_LETP\_DATGEL\_CPT\_TOOL\_DGD\_4.05.0\_EN.GPJ <-DrawingFiles> 1/2/2021 2:48:10.01.00.11.Datgel.CPT.Tool.gINT.Add.in



TITLE  
 Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Corrected Cone Resist. Strata Avg. vs Elevation

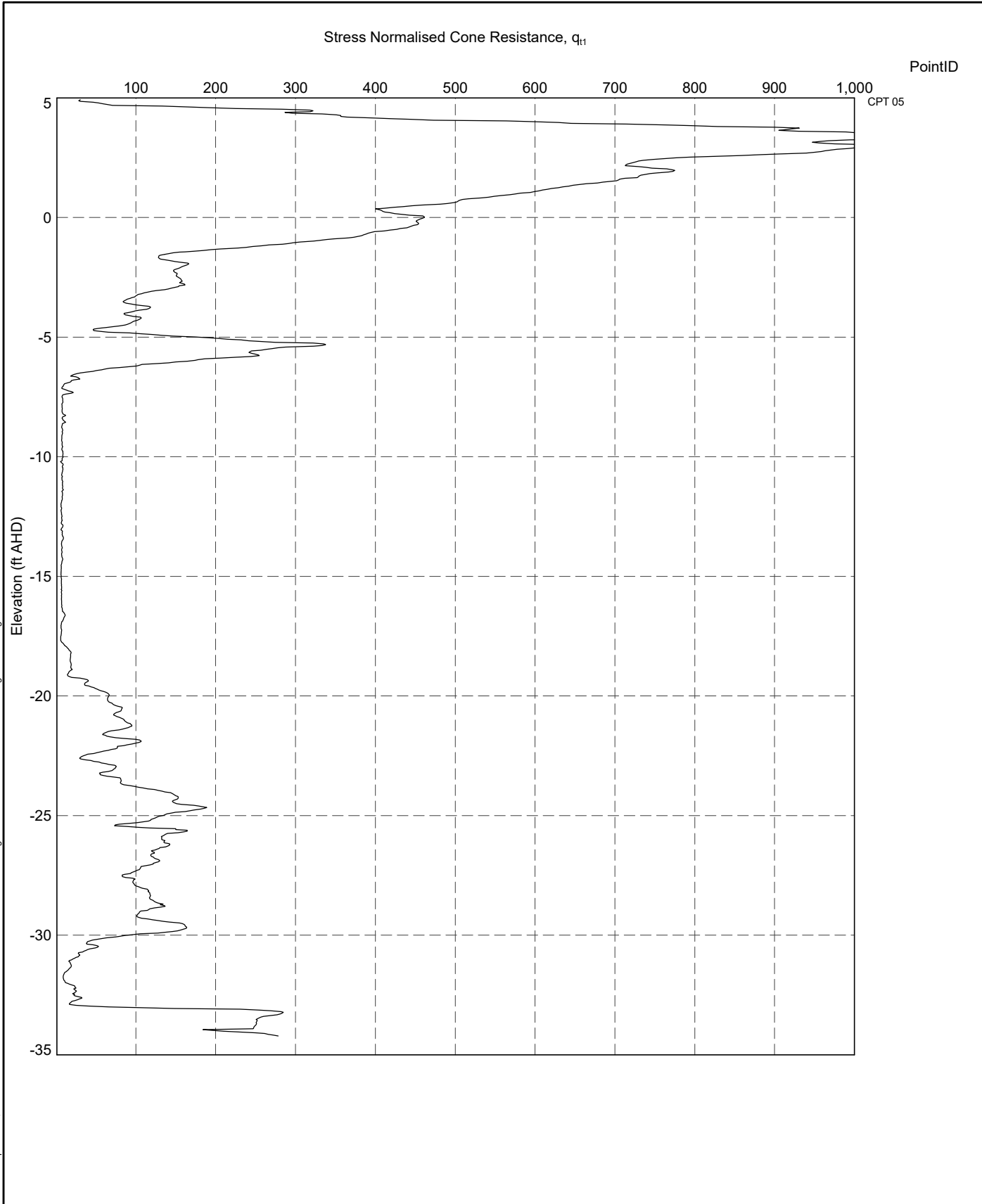
DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	283




 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Stress Normalised Cone Resistance versus Depth</p>	<p>DRAWN</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>	
		<p>CHECKED</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>	
		<p>SCALE</p> <p>Not To Scale</p>		<p>Let</p>
		<p>PROJECT No</p> <p>4.05.0</p>	<p>FIGURE No</p> <p>284</p>	

DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.QT1.DEPTH.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <<DrawingFile>> 1/2/2021 21:48:10.01.00.11.Datgel.CPT.Tool.gINT.Add.in

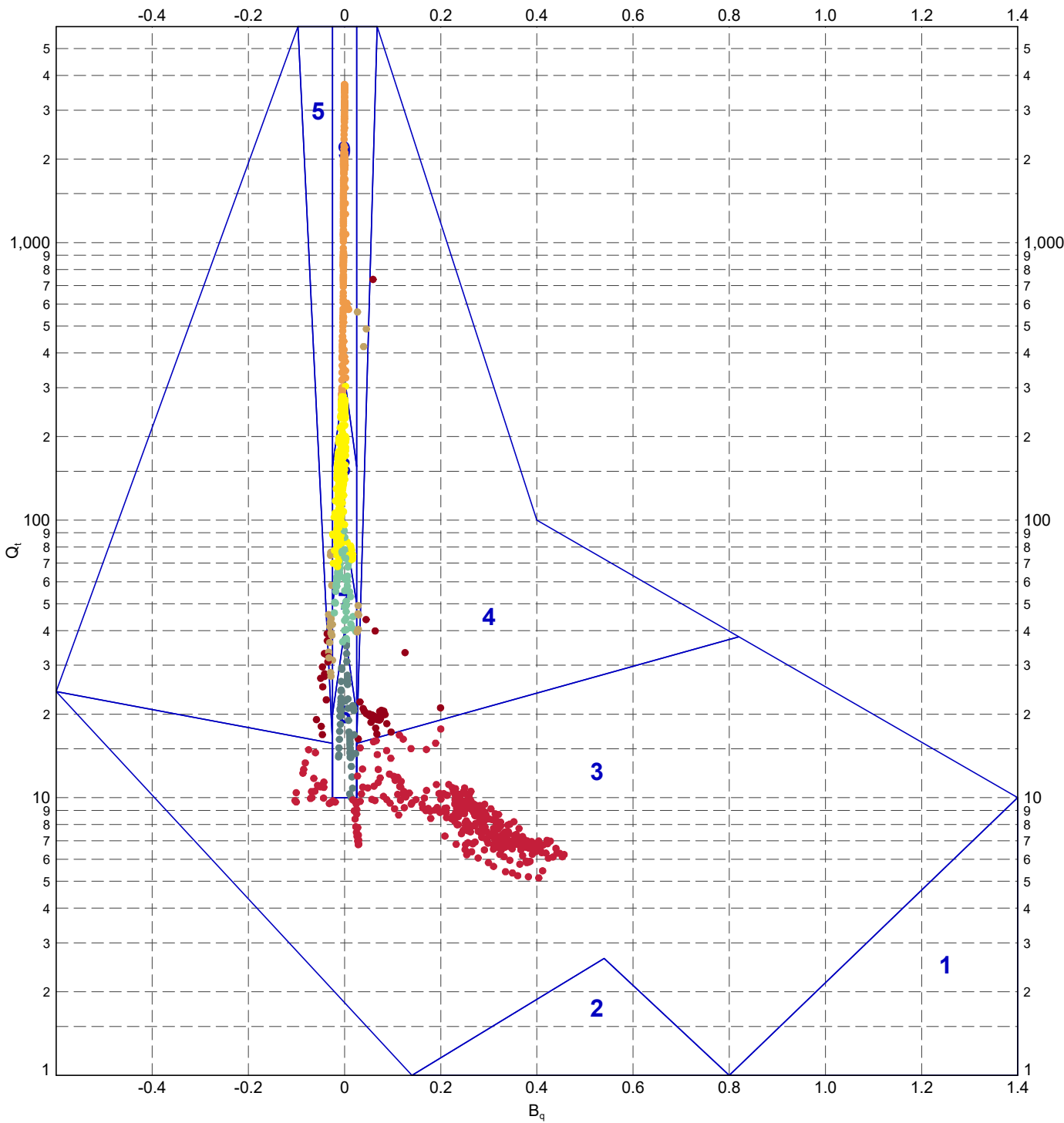
DATGEL CPT TOOL\_DGD\_4.05.0.LIB.GLB Graph CPT QT1 RL LETP DATGEL\_CPT\_TOOL\_DGD\_4.05.0.EN.GPJ <<DrawingFile>> 1/2/2021 21:49 10.01.00.11 Datgel CPT Tool\_gINT\_Add-In



 <b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	TITLE  Client 1 Engineer 1 Somewhere CPT Tool Project	DRAWN	Datgel	DATE	1/2/2021	
		CHECKED	Datgel	DATE	1/2/2021	
		SCALE	Not To Scale			Let
		PROJECT No	4.05.0		FIGURE No	285

Stress Normalised Cone Resistance vs Elevation

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph CPT RAMSEY 2002 QT VS. BOLETP.DATGEL.CPT TOOL DGD 4.05.0 EN.GPJ <-DrawingFile-> 1/2/2021 21:49 10.01.00.11.Datgel.CPT.Tool.gINT.Add-In



**METHOD: Ramsey 2002**

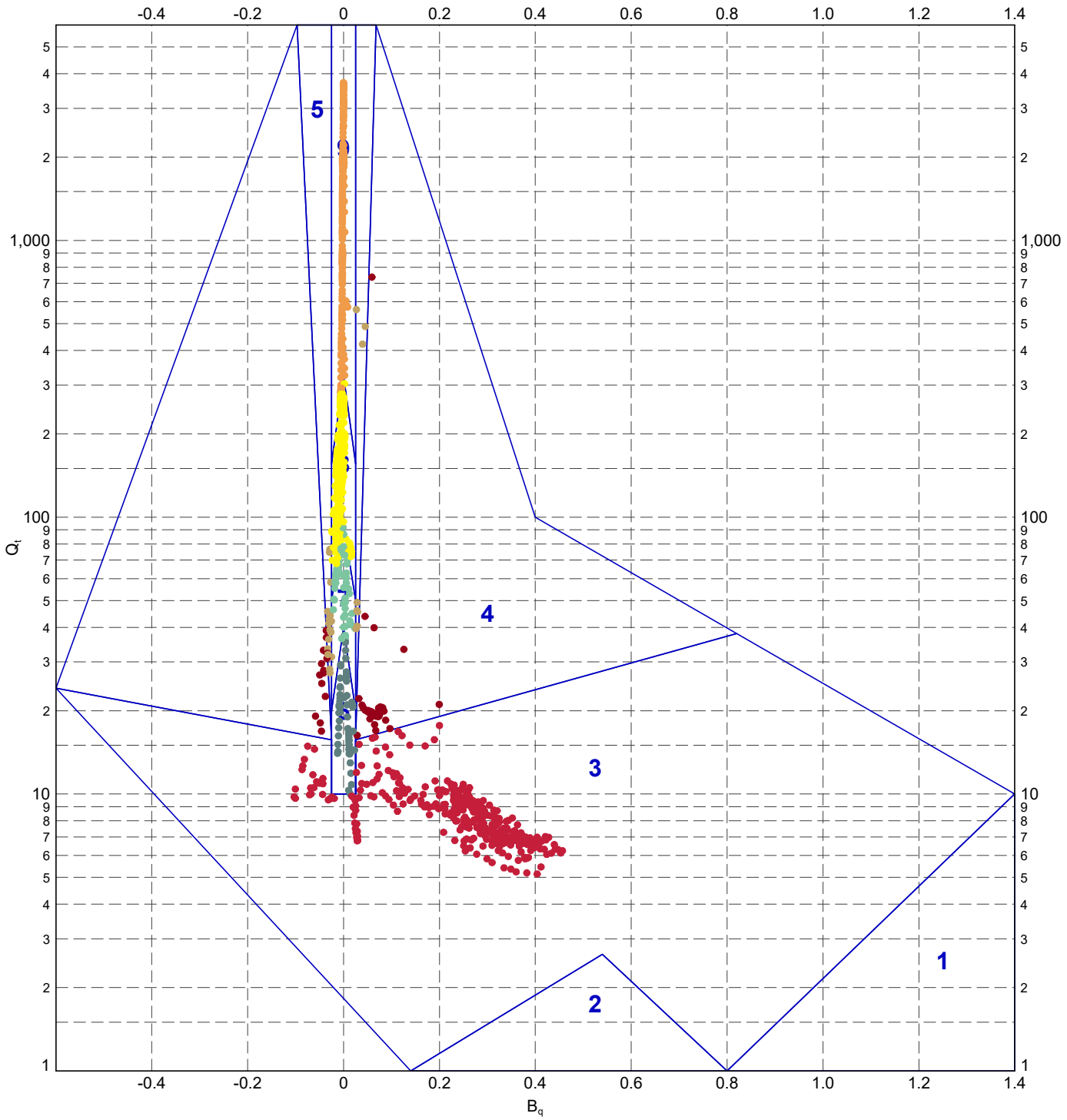
- 1 - Extra sensitive CLAY
- 2 - Organic CLAY and PEAT
- 3 - CLAY (su/po <=1)
- 4 - CLAY (su/po >1)
- 5 - Clayey SAND
- 6 - Sandy very clayey SILT
- 7 - Sandy SILT
- 8 - Silty SAND
- 9 - "Clean" to slightly silty SAND/GRAVEL



TITLE  
 Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Ramsey 2002  $Q_t$  vs.  $B_q$  - CPT 05 (Eslami  
 1997-Ramsey 2002)

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	286


DATGEL\CPT\_TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT\_RAMSEY\_2002\_QT\_VS\_BQM\LETP.DATGEL\_CPT\_TOOL\_DGD\_4.05.0.EN.GPJ <-DrawingFile-> 1/2/2021 21:49 10.01.00.11.Datgel.CPT.Tool.gINT\_Add.in



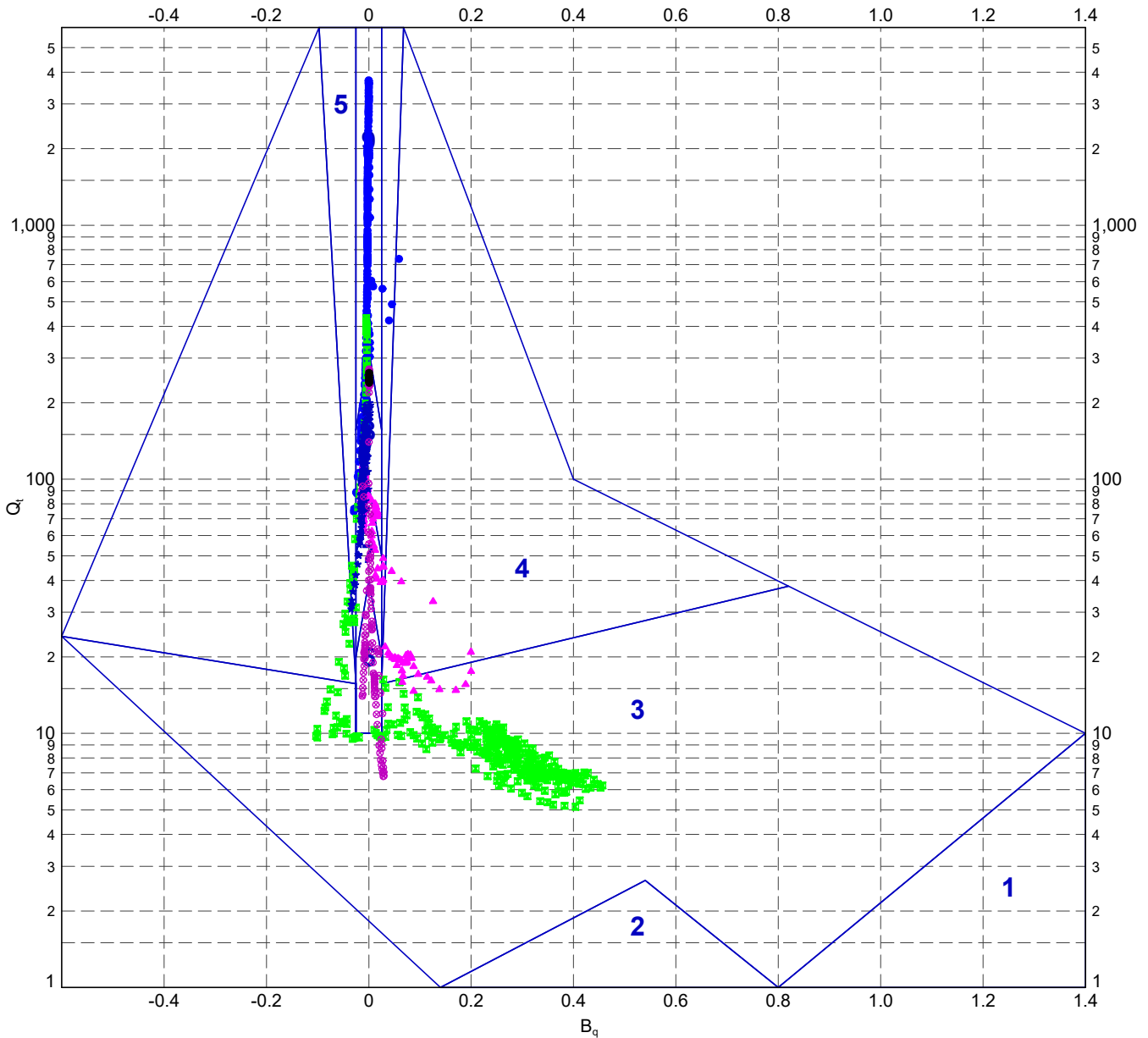
**METHOD: Ramsey 2002**

- 1 - Extra sensitive CLAY
- 2 - Organic CLAY and PEAT
- 3 - CLAY (su/po <=1)
- 4 - CLAY (su/po >1)
- 5 - Clayey SAND
- 6 - Sandy very clayey SILT
- 7 - Sandy SILT
- 8 - Silty SAND
- 9 - "Clean" to slightly silty SAND/GRAVEL

PointIDs: ● CPT 05 (Eslami 1997-Ramsey 2002)

 <b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	TITLE Client 1 Engineer 1 Somewhere CPT Tool Project Ramsey 2002 $Q_t$ vs. $B_q$	DRAWN	Datgel	DATE	1/2/2021	
		CHECKED	Datgel	DATE	1/2/2021	
		SCALE	Not To Scale			Let
		PROJECT No	4.05.0		FIGURE No	287

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph CPT RAMSEY 2002 QT VS. BOU LEIP DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <-DrawingFile>> 1/2/2021 21:49:10.01.00.11 Datgel CPT.Tool.gINT Add-In



**METHOD: Ramsey 2002**

- |                           |                            |   |
|---------------------------|----------------------------|---|
| 1 - Extra sensitive CLAY  | 4 - CLAY (su/po >1)        | 7 - Sandy SILT                            |
| 2 - Organic CLAY and PEAT | 5 - Clayey SAND            | 8 - Silty SAND                            |
| 3 - CLAY (su/po <=1)      | 6 - Sandy very clayey SILT | 9 - "Clean" to slightly silty SAND/GRAVEL |

**Geology Unit Legend**

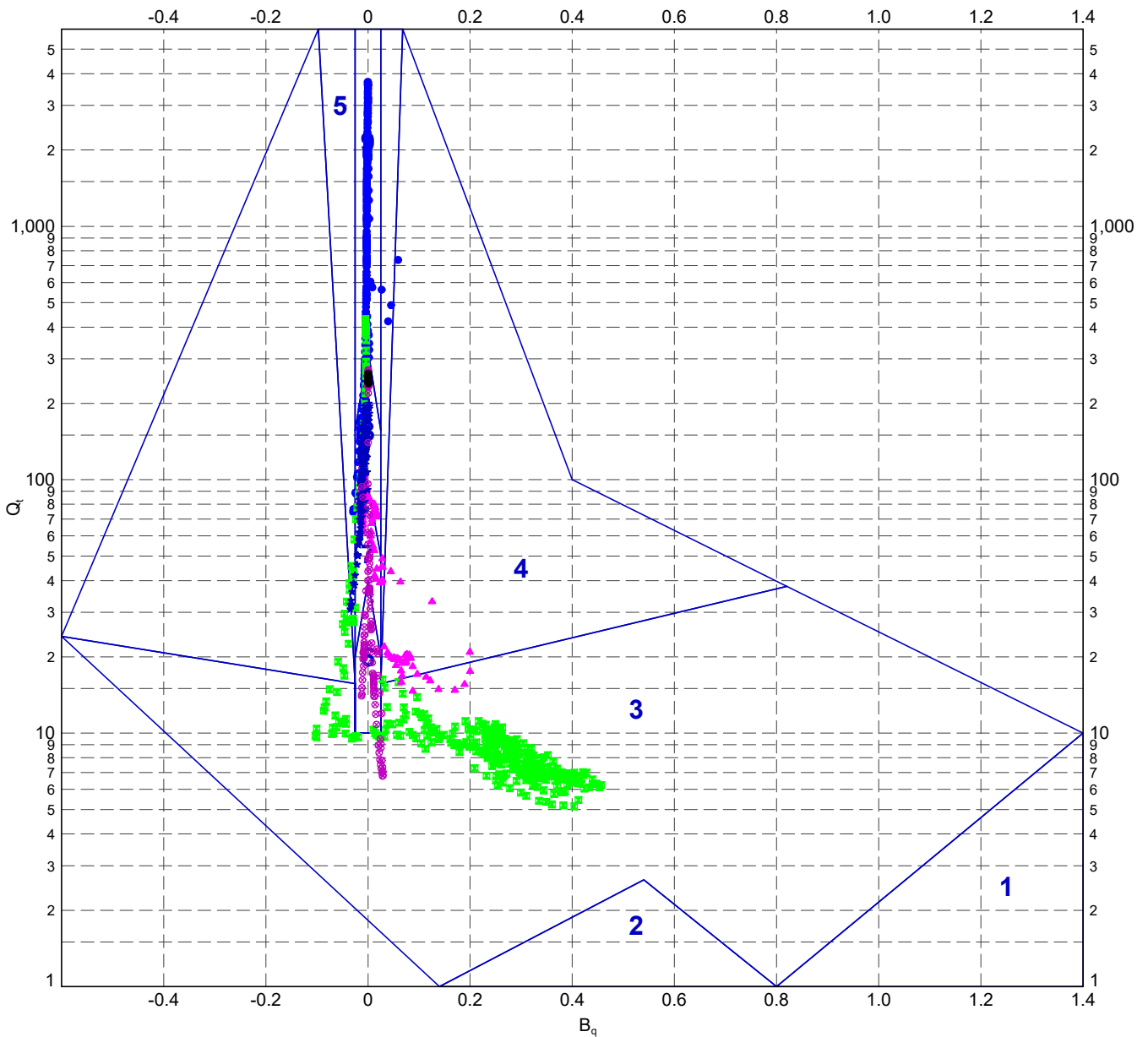
- |              |              |
|--------------|--------------|
| ★ D - Unit D | ⊕ J - Unit J |
| ● A - Unit A | □ K - Unit K |
| ■ B - Unit B | ◇ R - Rock   |
| ▲ C - Unit C |              |
| ◆ F - Unit F |              |
| ○ G - Unit G |              |
| △ H - Unit H |              |
| ⊗ I - Unit I |              |



TITLE  
 Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Ramsey 2002 Q<sub>t</sub> vs. B<sub>q</sub> - CPT 05 (Eslami  
 1997-Ramsey 2002)

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	288

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph CPT RAMSEY 2002 QT vs. Bq UML ETP DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <-DrawingFile>> 1/2/2021 21:50:10.01.00.11 Datgel.CPT.Tool.gINT Add-In



**METHOD: Ramsey 2002**

- |                           |                            |   |
|---------------------------|----------------------------|---|
| 1 - Extra sensitive CLAY  | 4 - CLAY (su/po >1)        | 7 - Sandy SILT                            |
| 2 - Organic CLAY and PEAT | 5 - Clayey SAND            | 8 - Silty SAND                            |
| 3 - CLAY (su/po <=1)      | 6 - Sandy very clayey SILT | 9 - "Clean" to slightly silty SAND/GRAVEL |

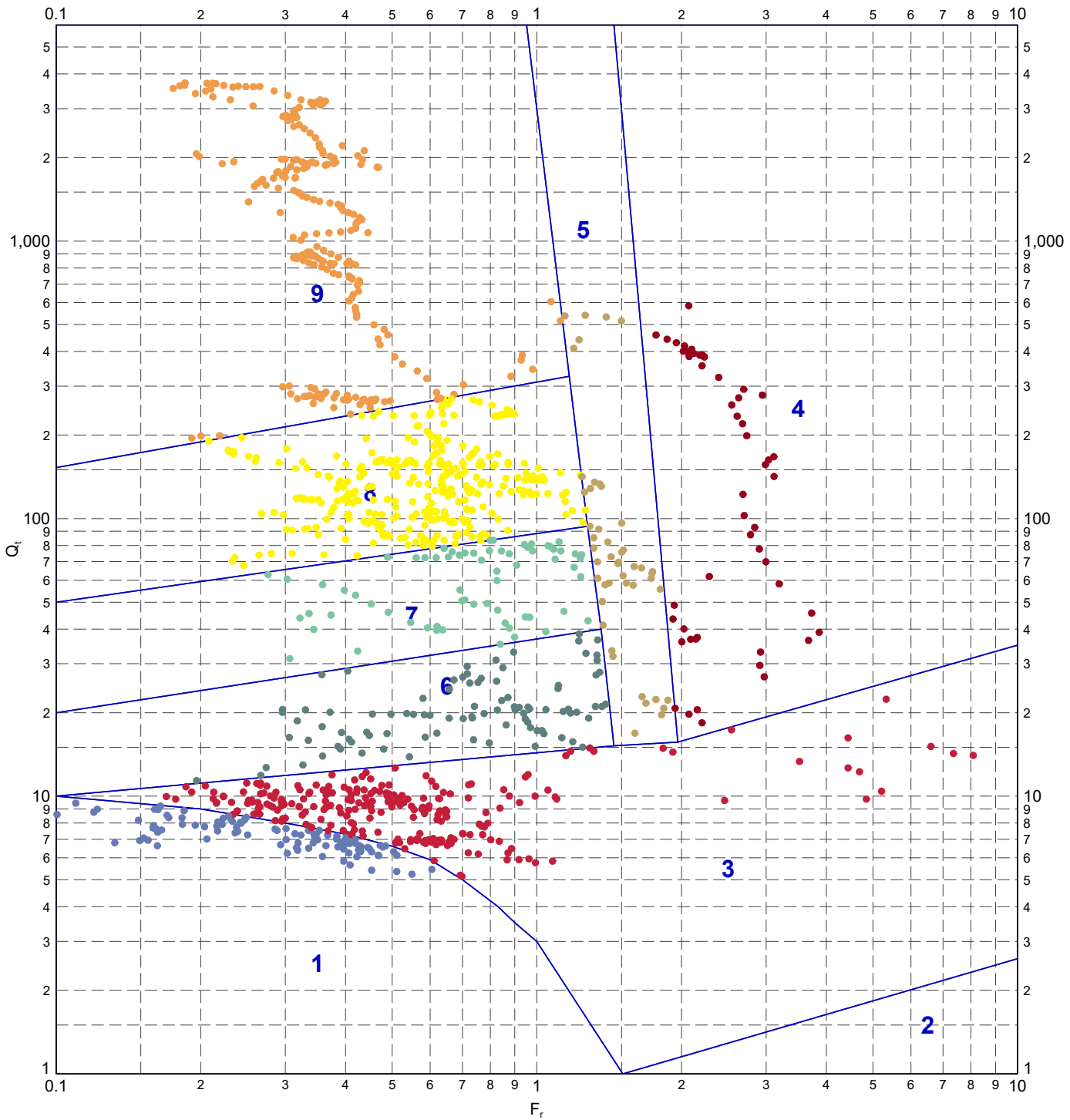
**Geology Unit Legend**

- |              |              |
|--------------|--------------|
| ★ D - Unit D | ⊕ J - Unit J |
| ● A - Unit A | □ K - Unit K |
| ■ B - Unit B | ◇ R - Rock   |
| ▲ C - Unit C |              |
| ◆ F - Unit F |              |
| ○ G - Unit G |              |
| △ H - Unit H |              |
| ⊗ I - Unit I |              |

PointIDs: CPT 05 (Eslami 1997-Ramsey 2002)


	TITLE Client 1 Engineer 1 Somewhere CPT Tool Project Ramsey 2002 $Q_t$ vs. $B_q$	DRAWN Datgel	DATE 1/2/2021
		CHECKED Datgel	DATE 1/2/2021
		SCALE Not To Scale	Let
		PROJECT No 4.05.0	FIGURE No 289

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph CPT RAMSEY 2002 QT VS. FR LETIP DATGEL\_CPT\_TOOL.DGD 4.05.0 EN.GPJ <-DrawingFile> 1/2/2021 21:50:10.01.00.11 Datgel CPT Tool.gINT Add-In



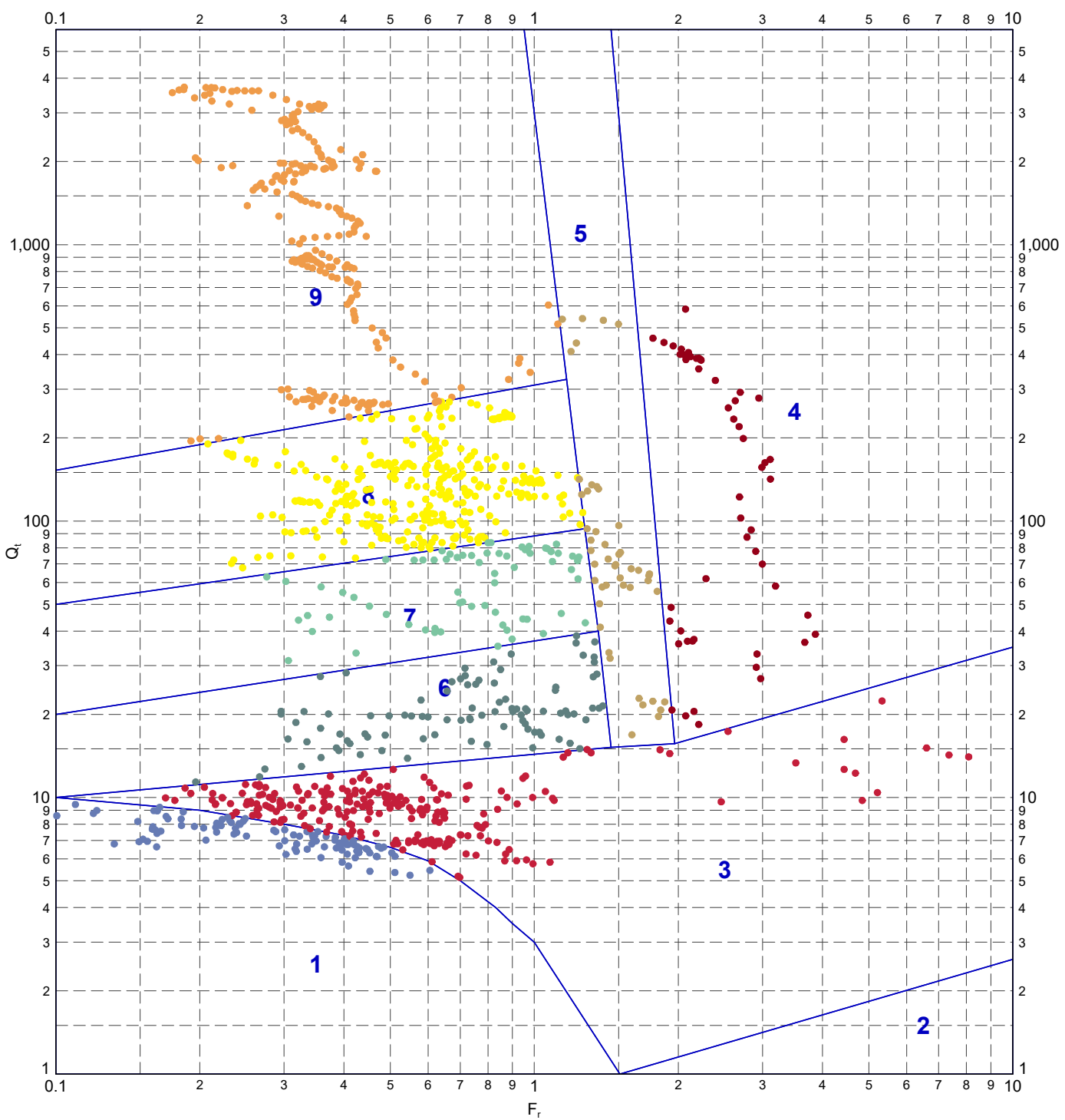
**METHOD: Ramsey 2002**

- 1 - Extra sensitive CLAY
- 2 - Organic CLAY and PEAT
- 3 - CLAY (su/po <=1)
- 4 - CLAY (su/po >1)
- 5 - Clayey SAND
- 6 - Sandy very clayey SILT
- 7 - Sandy SILT
- 8 - Silty SAND
- 9 - "Clean" to slightly silty SAND/GRAVEL

 <b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	TITLE Client 1 Engineer 1 Somewhere CPT Tool Project Ramsey 2002 $Q_t$ vs. $F_r$ - CPT 05 (Eslami 1997-Ramsey 2002)	DRAWN Datgel	DATE 1/2/2021	
	CHECKED Datgel		DATE 1/2/2021	
	SCALE Not To Scale			Let
	PROJECT No 4.05.0		FIGURE No 290	



DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph CPT RAMSEY 2002 QT VS. FR.M.LETP DATGEL\_CPT\_TOOL.DGD 4.05.0 EN.GPJ <-DrawingFile>> 1/2/2021 21:50:10.01.00.11 Datgel CPT Tool gINT Add-In



**METHOD: Ramsey 2002**

- 1 - Extra sensitive CLAY
- 2 - Organic CLAY and PEAT
- 3 - CLAY (su/po <=1)
- 4 - CLAY (su/po >1)
- 5 - Clayey SAND
- 6 - Sandy very clayey SILT
- 7 - Sandy SILT
- 8 - Silty SAND
- 9 - "Clean" to slightly silty SAND/GRAVEL

PointIDs: ● CPT 05 (Eslami 1997-Ramsey 2002)

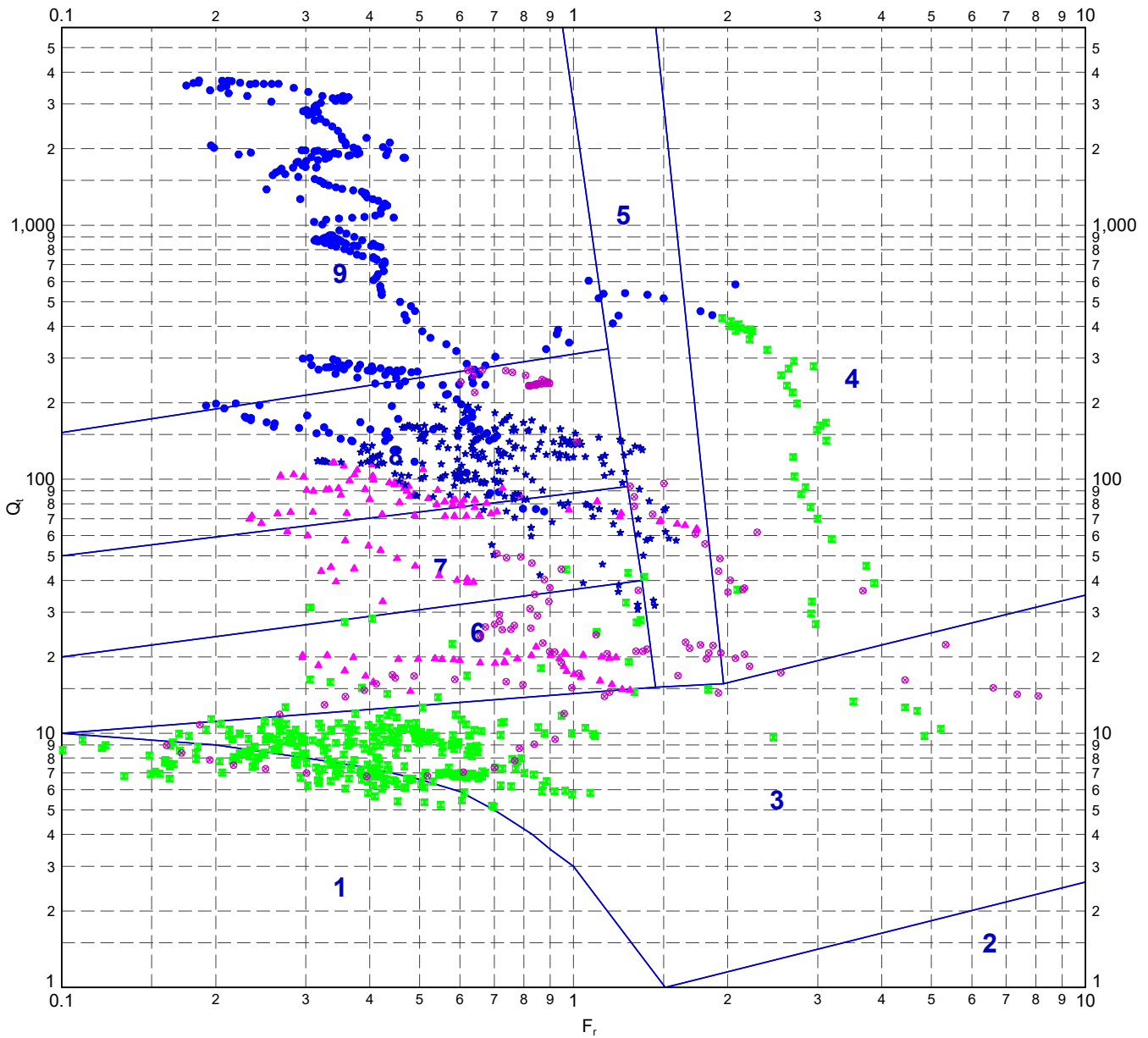


TITLE

Client 1  
Engineer 1  
Somewhere  
CPT Tool Project  
Ramsey 2002  $Q_t$  vs.  $F_r$

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	291

DATGEL CPT TOOL DGD 4.05.0 LIB GLB Graph CPT RAMSEY 2002 QT vs. FR U LETP DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <<DrawingFile>> 1/2/2021 21:50:10.01.00.11 Datgel CPT Tool glNT Add-In




**METHOD: Ramsey 2002**

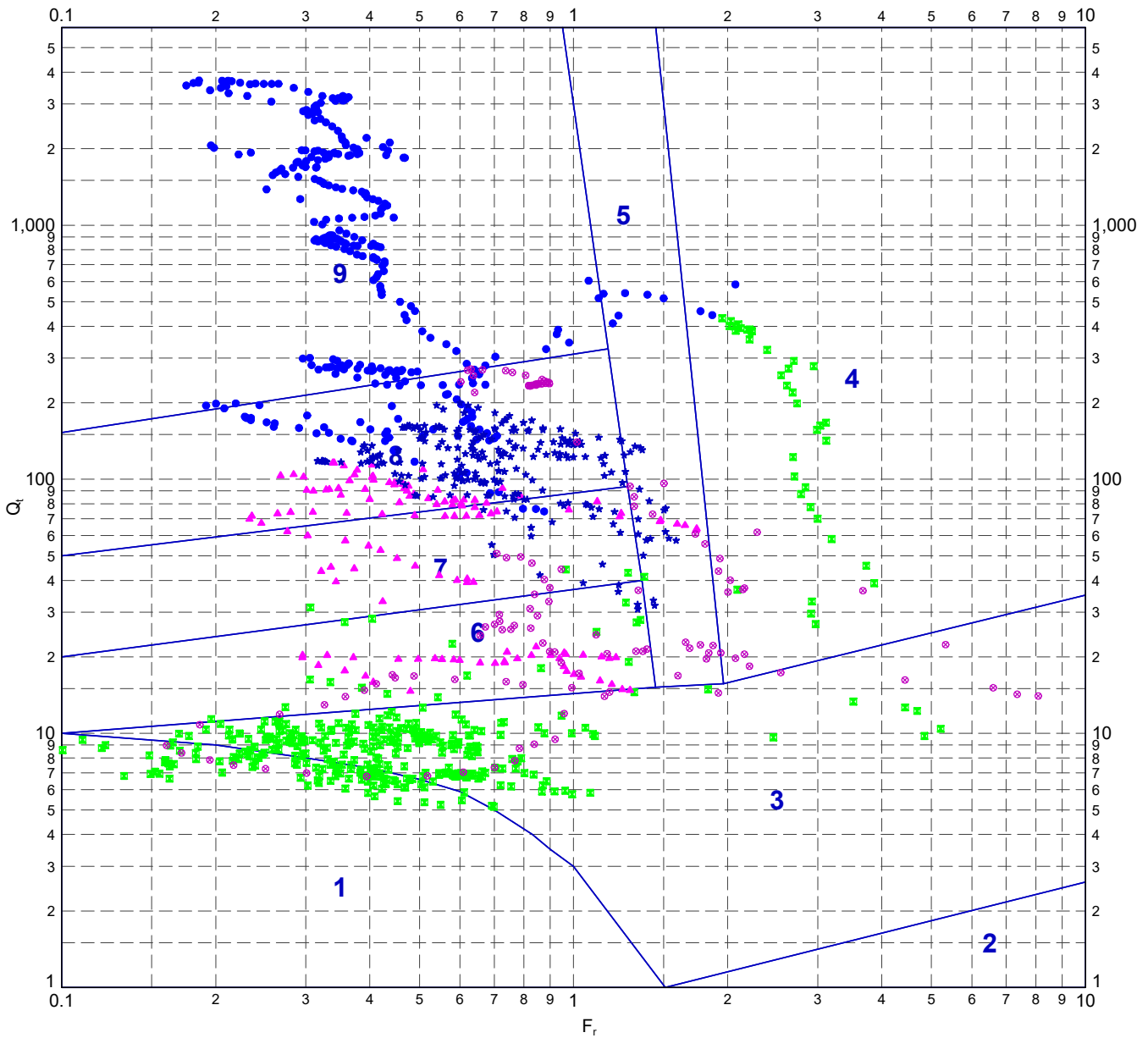
- |                           |                            |   |
|---------------------------|----------------------------|---|
| 1 - Extra sensitive CLAY  | 4 - CLAY (su/po >1)        | 7 - Sandy SILT                            |
| 2 - Organic CLAY and PEAT | 5 - Clayey SAND            | 8 - Silty SAND                            |
| 3 - CLAY (su/po <=1)      | 6 - Sandy very clayey SILT | 9 - "Clean" to slightly silty SAND/GRAVEL |

**Geology Unit Legend**

- |              |              |
|--------------|--------------|
| ★ D - Unit D | ⊕ J - Unit J |
| ● A - Unit A | ⊠ K - Unit K |
| ■ B - Unit B | ◇ R - Rock   |
| ▲ C - Unit C |              |
| ◆ F - Unit F |              |
| ○ G - Unit G |              |
| △ H - Unit H |              |
| ⊗ I - Unit I |              |

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Ramsey 2002 Q<sub>t</sub> vs. F<sub>r</sub> - CPT 05 (Eslami 1997-Ramsey 2002)</p>	<p>DRAWN Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>CHECKED Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>SCALE Not To Scale</p>		<p>Let</p>
		<p>PROJECT No 4.05.0</p>	<p>FIGURE No 292</p>	

DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.RAMSEY.2002.QT.VS.FR.UMLTTP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <<DrawingFile>> 1/2/2021 21:50:10.01:00.11 Datgel.CPT.Tool.gINT.Add-In



**METHOD: Ramse 2002**

- 1 - Extra sensitive CLAY
- 2 - Organic CLAY and PEAT
- 3 - CLAY (su/po <=1)
- 4 - CLAY (su/po >1)
- 5 - Clayey SAND
- 6 - Sandy very clayey SILT
- 7 - Sandy SILT
- 8 - Silty SAND
- 9 - "Clean" to slightly silty SAND/GRAVEL

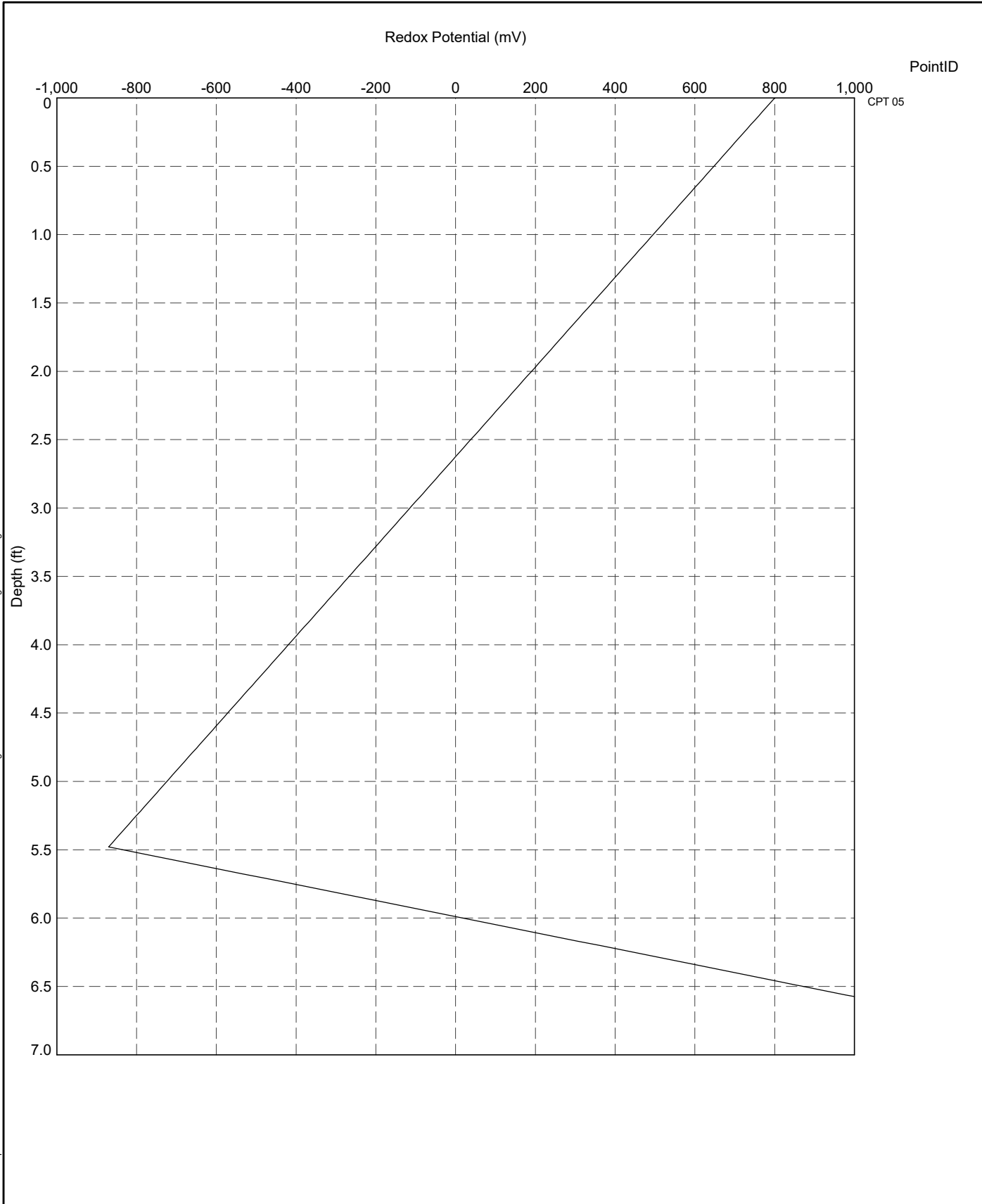
**Geology Unit Legend**


- ★ D - Unit D
- A - Unit A
- B - Unit B
- ▲ C - Unit C
- ◆ F - Unit F
- G - Unit G
- △ H - Unit H
- ⊗ I - Unit I
- ⊕ J - Unit J
- K - Unit K
- ◇ R - Rock

PointIDs: CPT 05 (Eslami 1997-Ramsey 2002)

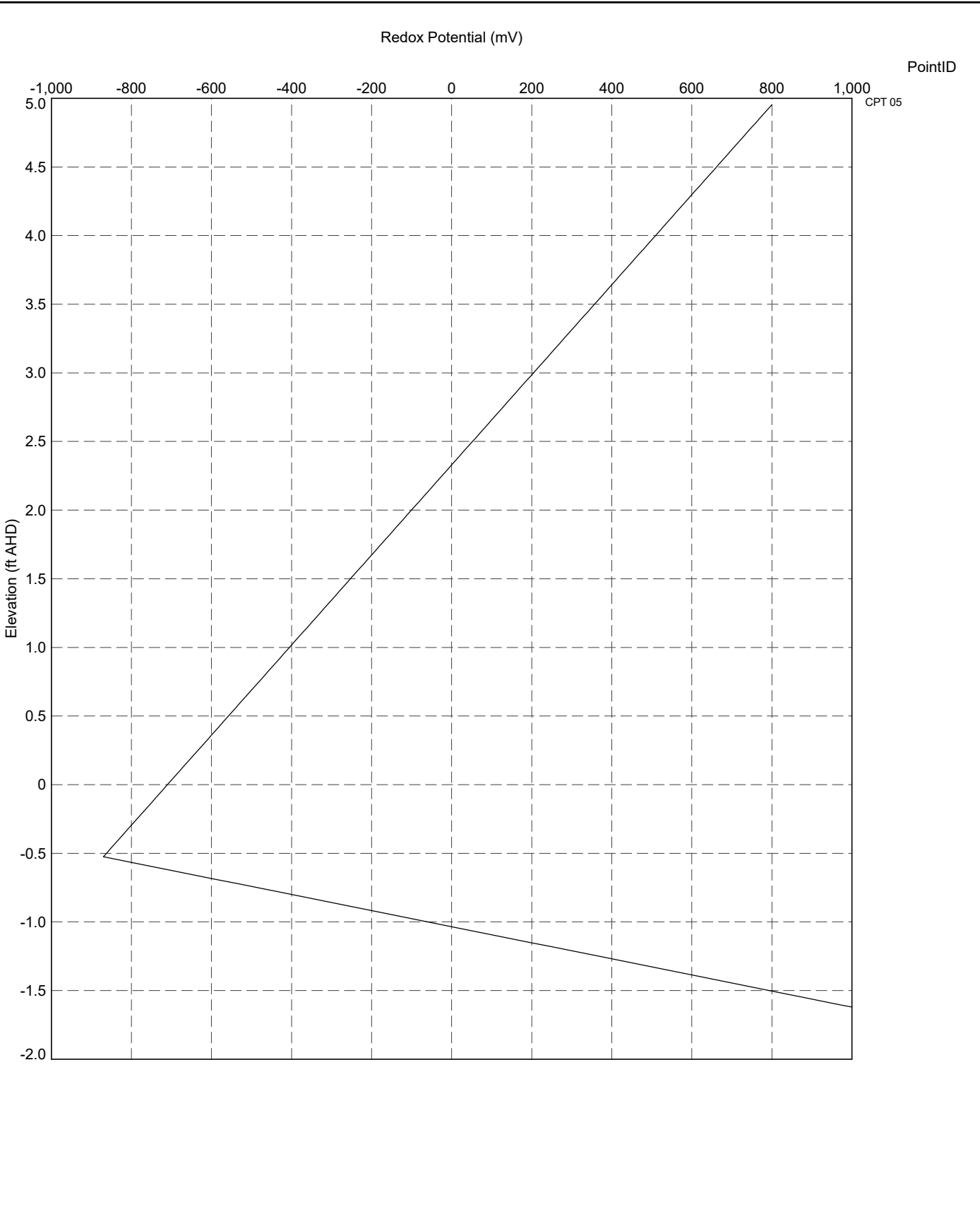
 <b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	TITLE Client 1 Engineer 1 Somewhere CPT Tool Project Ramse 2002 $Q_t$ vs. $F_r$	DRAWN	Datgel	DATE	1/2/2021	
		CHECKED	Datgel	DATE	1/2/2021	
		SCALE	Not To Scale			Let
		PROJECT No	4.05.0		FIGURE No	293

DATGEL\CPT TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT REDOX POTENTIAL\_DEPTH.LETP.DATGEL\CPT\_TOOL\_DGD\_4.05.0.EN.GPJ <-DrawingFile> 1/2/2021 21:50 10.01.00.11.Datgel.CPT.Tool.gINT.Add.in




 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Redox Potential versus Depth</p>	<p>DRAWN Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>CHECKED Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>SCALE Not To Scale</p>		<p>Let</p>
		<p>PROJECT No 4.05.0</p>	<p>FIGURE No 294</p>	

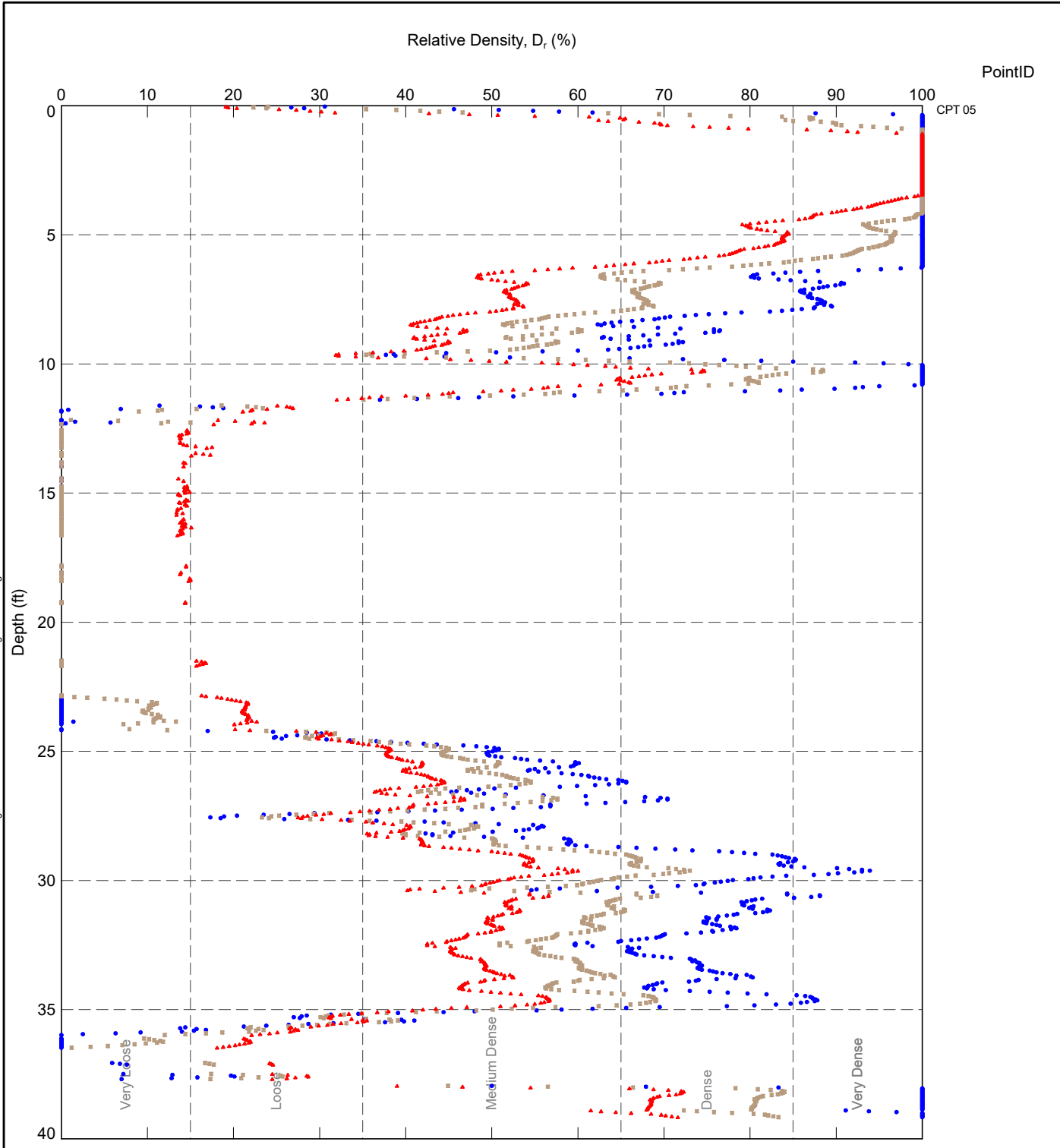
DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.REDOX.POTENTIAL.RL.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ.<<DrawingFile>>1/2/2021.21:50.10.01.00.11.Datgel.CPT.Tool.gINT.Add-In



PointID  
CPT 05

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Redox Potential versus Elevation</p>	<p>DRAWN Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>CHECKED Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>SCALE Not To Scale</p>		<p>Let</p>
		<p>PROJECT No 4.05.0</p>	<p>FIGURE No 295</p>	

DATGEL\CPT\_TOOL\_DGD\_4.05.0\LIB\_GLB\_Graph\CPT\_RELATIVE\_DENSITY\_DEPTH\LETP.DATGEL\_CPT\_TOOL\_DGD\_4.05.0.EN.GPJ <-DrawingFile> 1/2/2021 21:51:10.01.00.11.Datgel.CPT.Tool.gINT\_Add-In

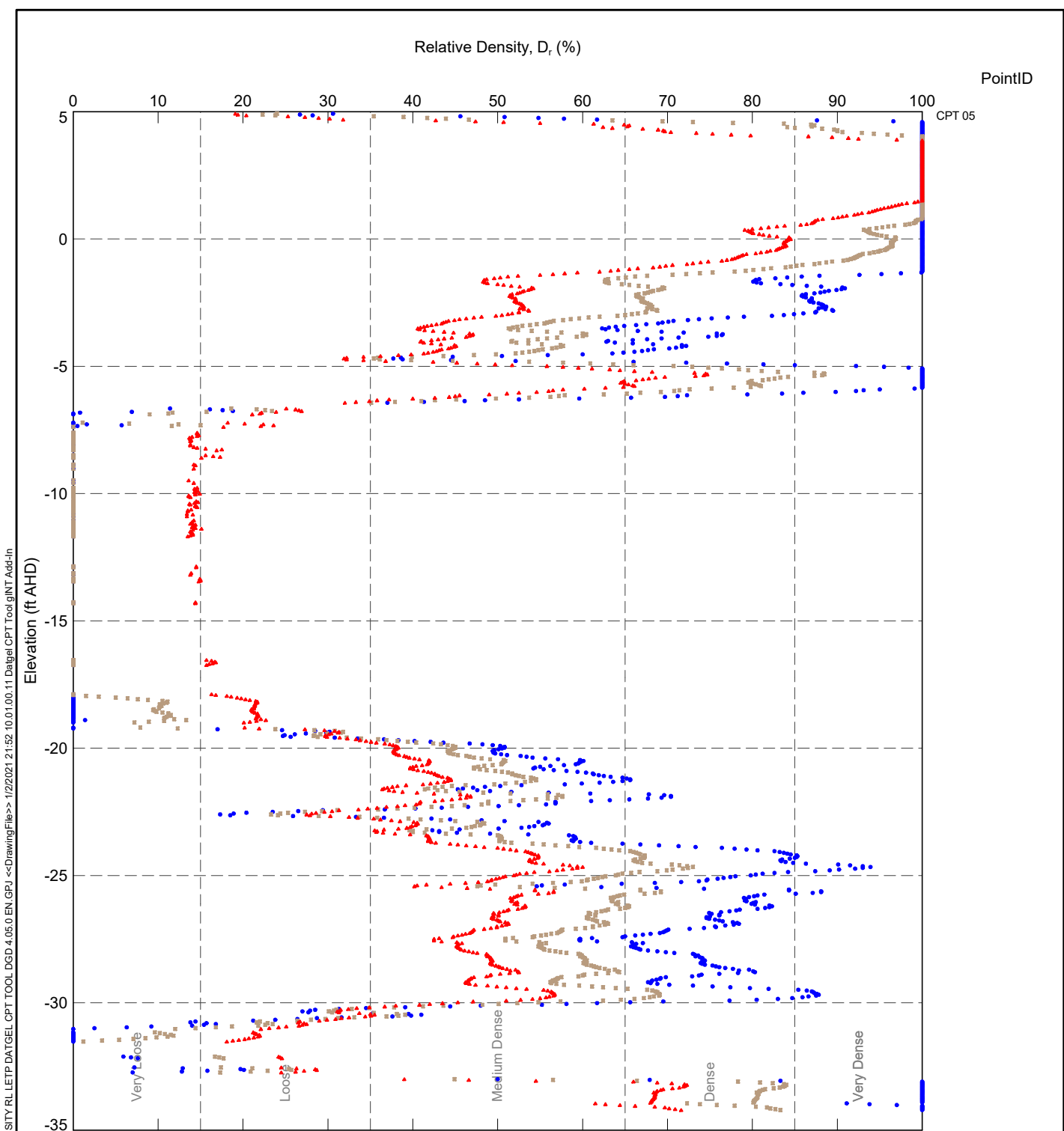


Method:  
 ● Baldi et al. (1986); Al-Homoud & Wehr (2006)  
 ■ Jamiolkowski et al. (2001)  
 ▲ Kulhawy & Mayne (1990)



TITLE  
 Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Relative Density versus Depth

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	296



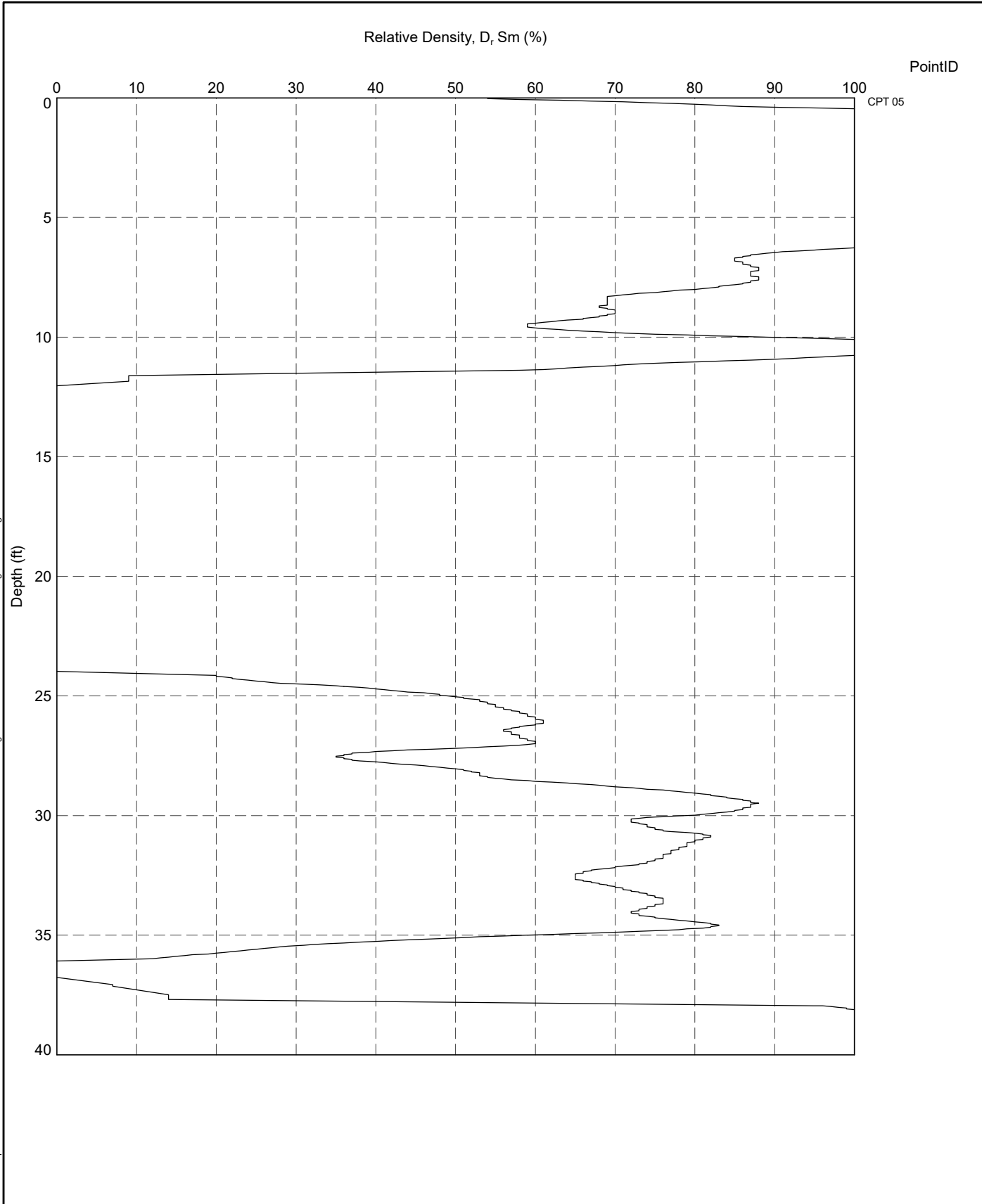
DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.RELATIVE.DENSITY.RL.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <<DrawingFile>> 1/2/2021 2:1:52 10.01.00.11.Datgel.CPT.Tool.GINT.Add-In


- Method:
- Baldi et al. (1986); Al-Homoud & Wehr (2006)
  - Jamiolkowski et al. (2001)
  - ▲ Kulhawy & Mayne (1990)

Very Loose      Loose      Medium Dense      Dense      Very Dense

	TITLE	Client 1 Engineer 1 Somewhere CPT Tool Project Relative Density versus Elevation	DRAWN Datgel	DATE 1/2/2021
			CHECKED Datgel	DATE 1/2/2021
			SCALE Not To Scale	Let
			PROJECT No 4.05.0	FIGURE No 297

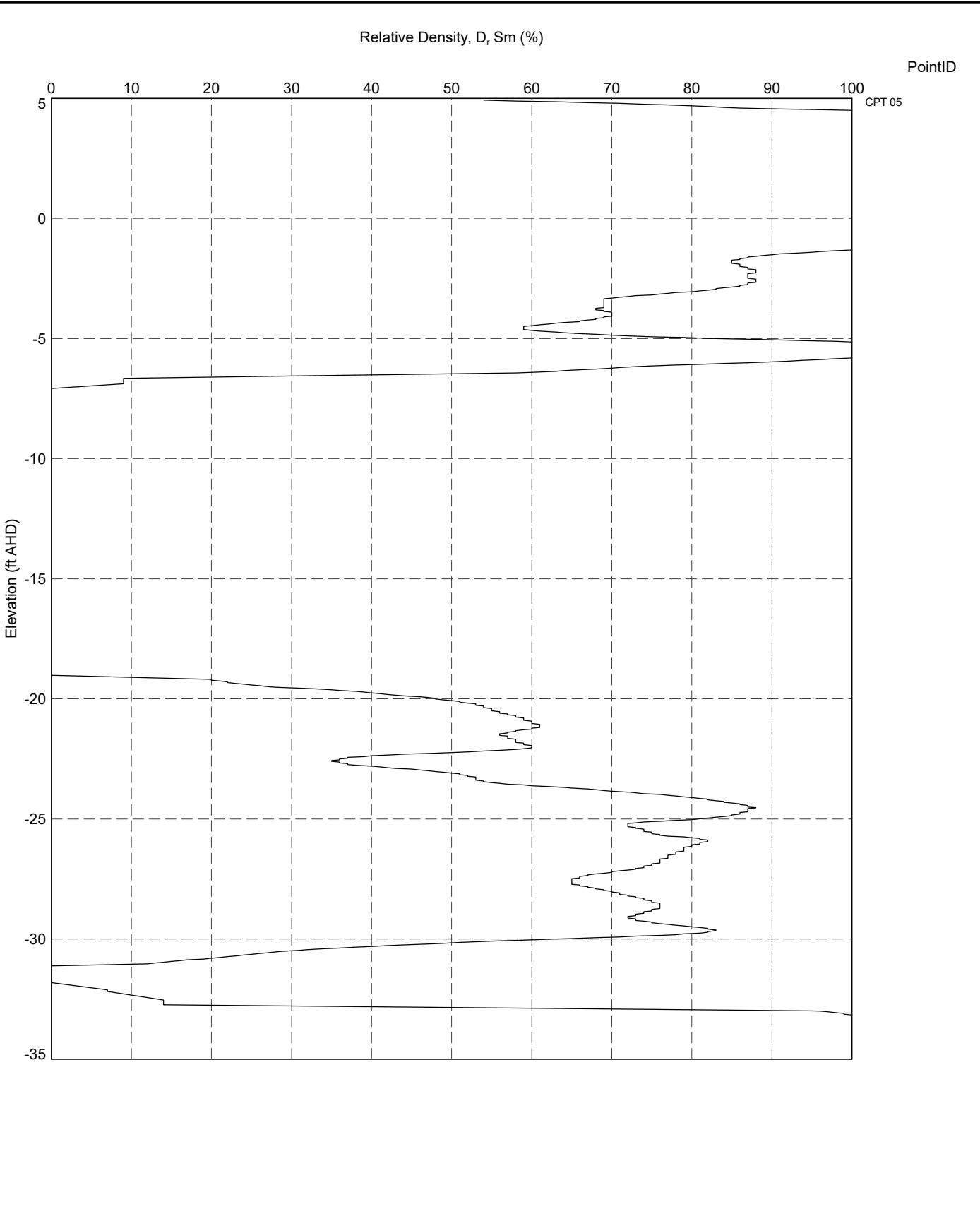
DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.RELATIVE.DENSITY.SM.DEPTH.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <<DrawingFiles>> 1/2/2021 21:52:10.01.00.11.Datgel.CPT.Tool.gjINT.Add-In




 <b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	TITLE Client 1 Engineer 1 Somewhere CPT Tool Project Smoothed Relative Density versus Depth	DRAWN Datgel	DATE 1/2/2021	
			CHECKED Datgel	DATE 1/2/2021
	SCALE Not To Scale			Let
			PROJECT No 4.05.0	FIGURE No 298

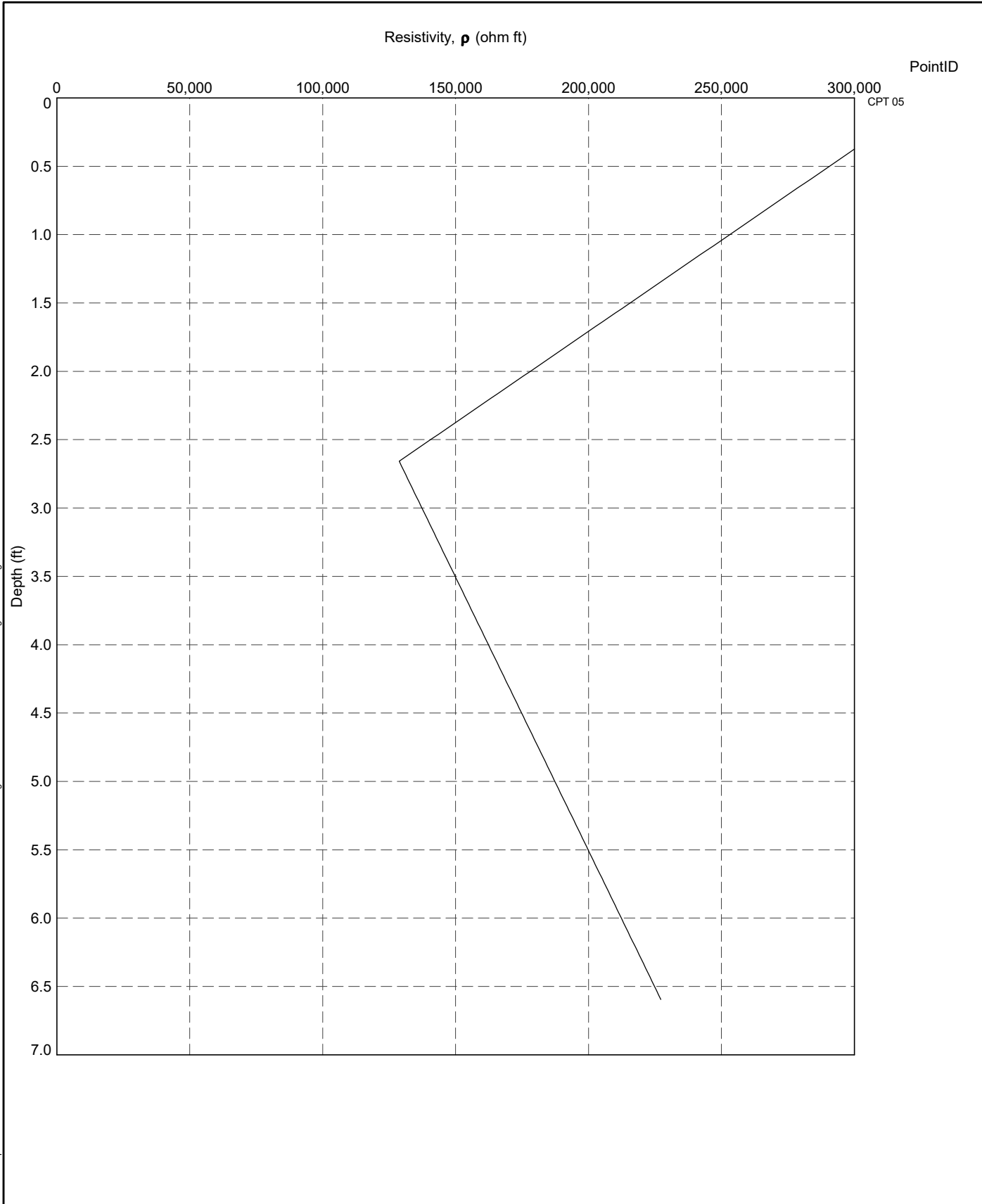



DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.RELATIVE.DENSITY.SM.RL.LET.P.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ.<<DrawingFile>>.1/2/2021.21:52.10.01.00.11.Datgel.CPT.Tool.gINT.A44-in



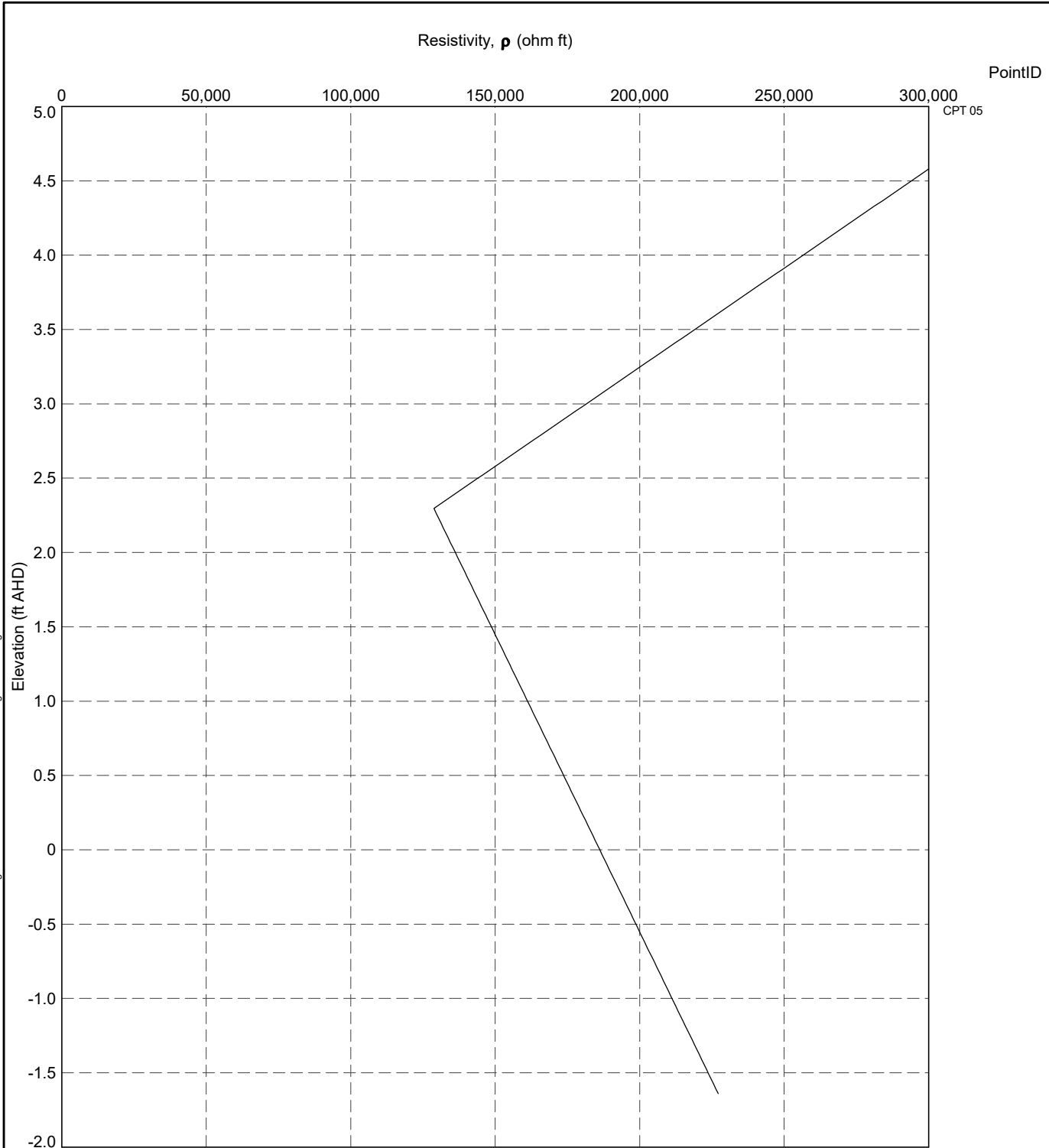
 <b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	TITLE Client 1 Engineer 1 Somewhere CPT Tool Project Smoothed Relative Density versus Elevation	DRAWN Datgel	DATE 1/2/2021
		CHECKED Datgel	DATE 1/2/2021
		SCALE Not To Scale	Let
		PROJECT No 4.05.0	FIGURE No 299

DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.RESISTIVITY.DEPTH.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ.<<DrawingFile>>.1/2/2021.21.52.10.01.00.11.Datgel.CPT.Tool.gINT.Add-In




 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Resistivity versus Depth</p>	DRAWN	Datgel	DATE	1/2/2021	
		CHECKED	Datgel	DATE	1/2/2021	
		SCALE	Not To Scale			Let
		PROJECT No	4.05.0	FIGURE No	300	

DATGEL CPT TOOL\_DGD\_4.05.0.LIB.GLB Graph CPT RESISTIVITY RL LETP DATGEL CPT TOOL\_DGD\_4.05.0.EN.GPJ <-<DrawingFiles>> 1/2/2021 21:52 10.01.00.11 Datgel CPT Tool gINT Add-In



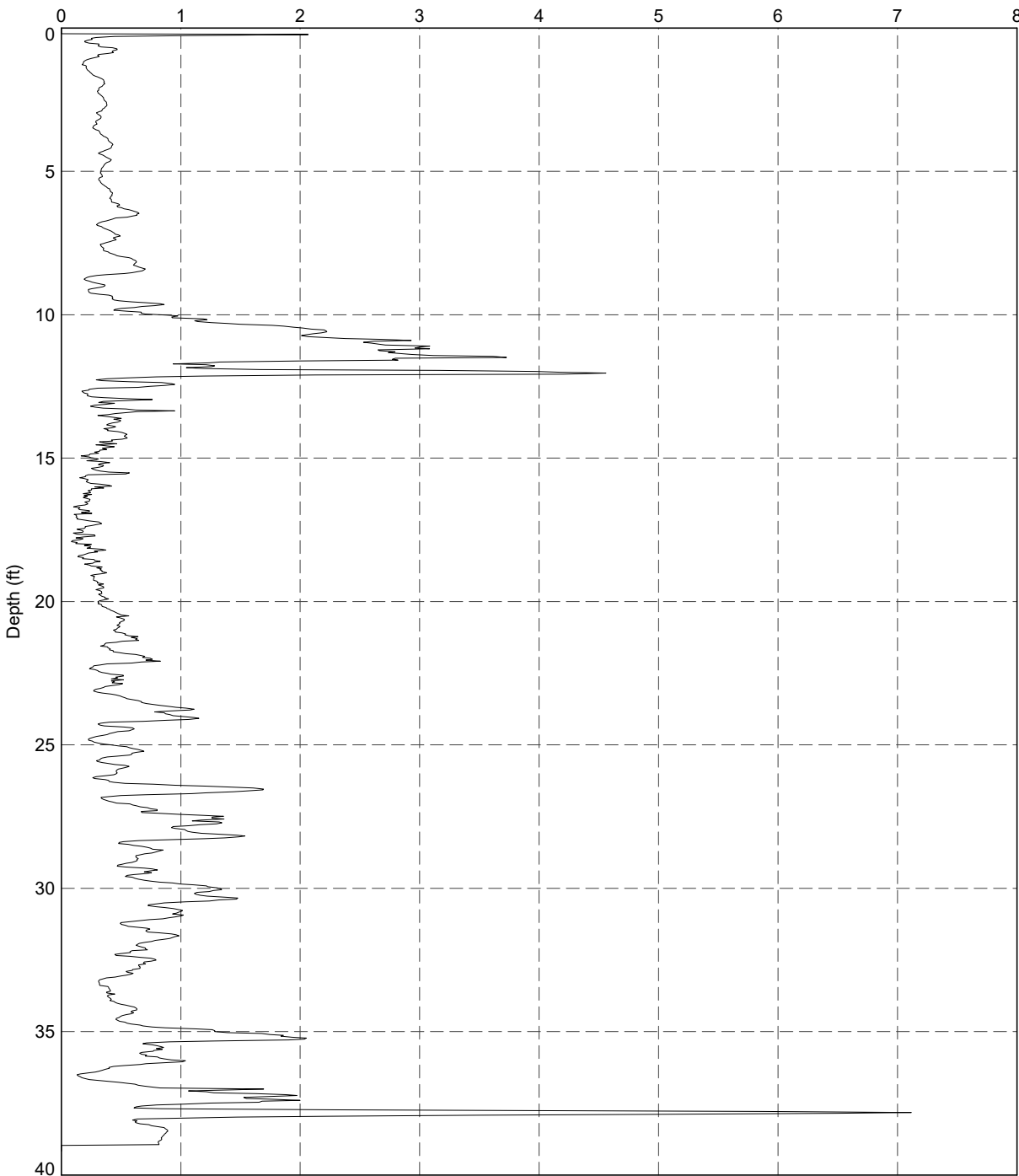
PointID  
CPT 05

 <b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	TITLE  Client 1 Engineer 1 Somewhere CPT Tool Project Resistivity versus Elevation	DRAWN Datgel	DATE 1/2/2021	
		CHECKED Datgel	DATE 1/2/2021	
		SCALE Not To Scale		Let
		PROJECT No 4.05.0	FIGURE No 301	


Friction Ratio,  $R_f$  (%)

PointID

CPT 05



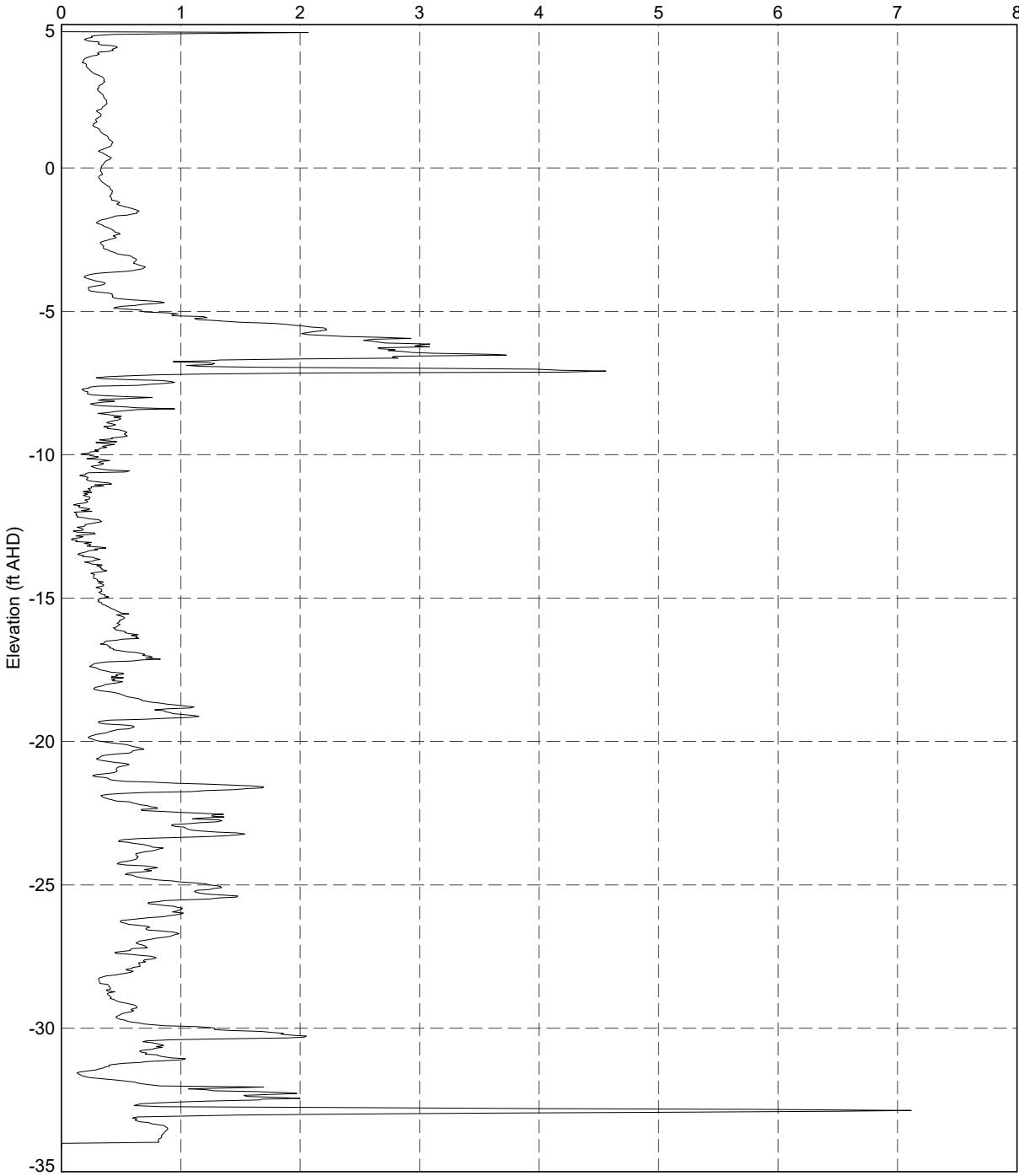
DATGEL\CPT TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT.RF.VS.DEPTH.LETTP.DATGEL\CPT TOOL\_DGD\_4.05.0.EN.GPJ <-<DrawingFile>> 1/2/2021 21:52:10.01.00.11 Datgel\CPT Tool\gINT\_A4d4.in

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Friction Ratio versus Depth</p>	<p>DRAWN</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>	
		<p>CHECKED</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>	
		<p>SCALE</p> <p>Not To Scale</p>		<p>Let</p>
		<p>PROJECT No</p> <p>4.05.0</p>	<p>FIGURE No</p> <p>302</p>	

Friction Ratio,  $R_f$  (%)

PointID

CPT 05

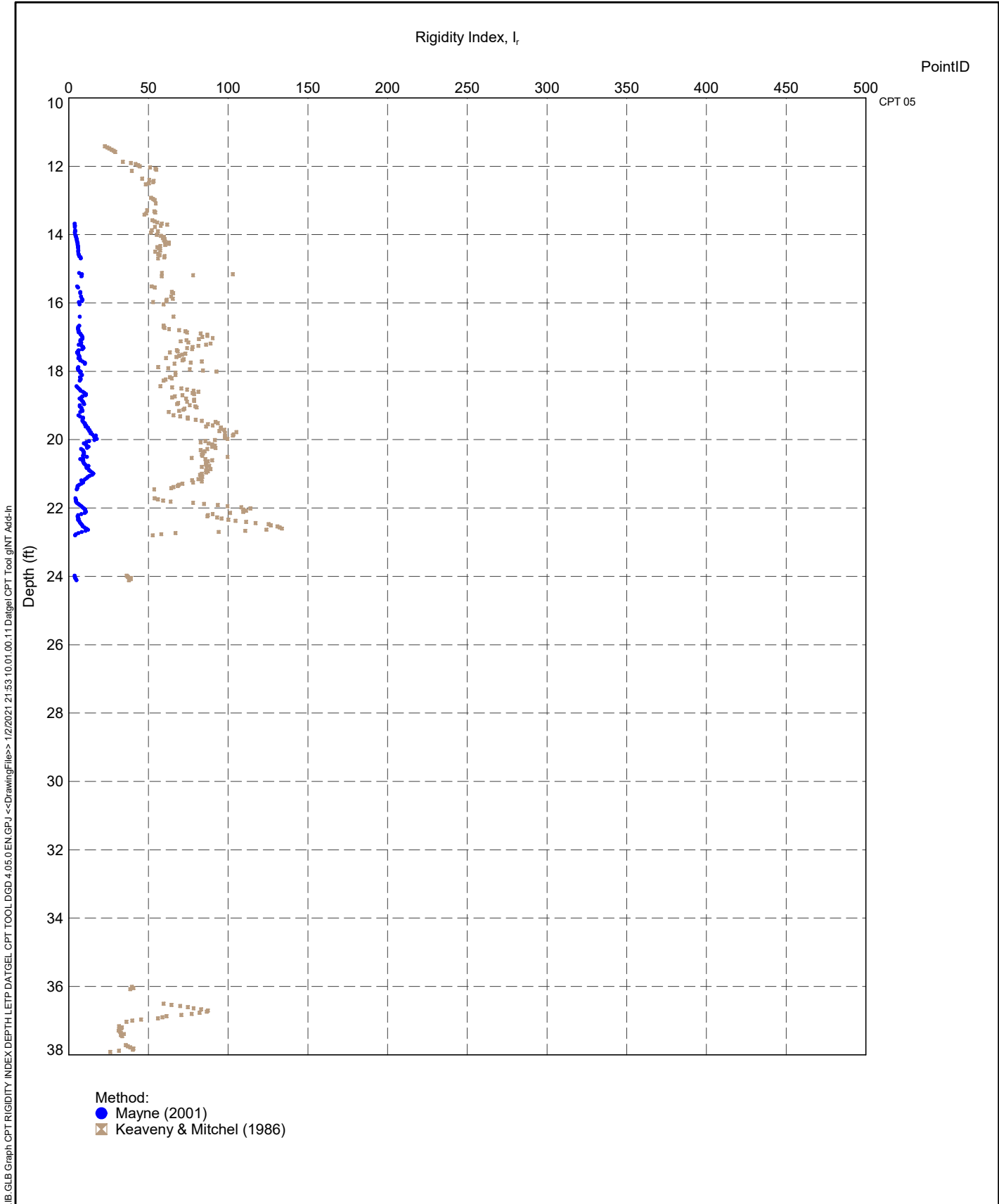


DATGEL\CPT\TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT.RF.VS.RL.LI.P.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <-<DrawingFile>> 1/2/2021 21:52 10.01.00.11.Datgel.CPT.Tool.gINT.Add.in




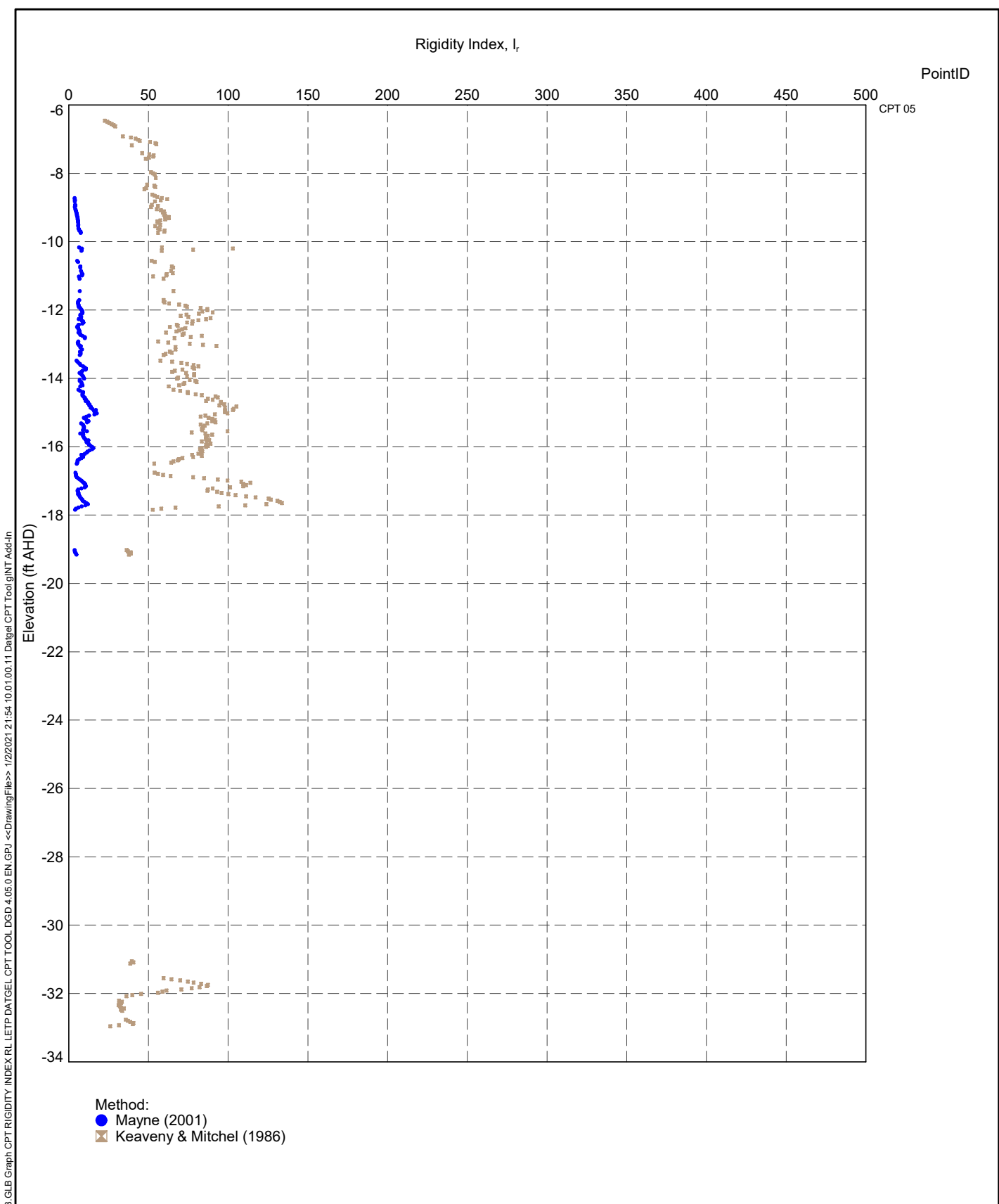
TITLE  
 Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Friction Ratio versus Elevation

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	303



DATGEL\CPT TOOL\_DGD\_4.05.0.LIB.GLB.Graph\CPT RIGIDITY INDEX DEPTH.LETP.DATGEL.CPT TOOL.DGD.4.05.0.EN.GPJ <<DrawingFiles>> 1/2/2021 21:53 10.01.00.11 Datgel.CPT Tool gINT Add-In

 <b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	TITLE  Client 1 Engineer 1 Somewhere CPT Tool Project Rigidity Index versus Depth	DRAWN Datgel	DATE 1/2/2021		
	CHECKED Datgel	DATE 1/2/2021			
	SCALE Not To Scale			Let	
	PROJECT No 4.05.0		FIGURE No 304		



DATGEL\CPT\_TOOL\_DGD\_4.05.0\LIB\_GLB\_Graph\CPT\_RIGIDITY\_INDEX.RI\_LETFP\_DATGEL\_CPT\_TOOL\_DGD\_4.05.0.EN.GPJ <<DrawingFile>> 1/2/2021 21:54:10.0100.11 Datgel\CPT\_Tool\gINT\_Add-In

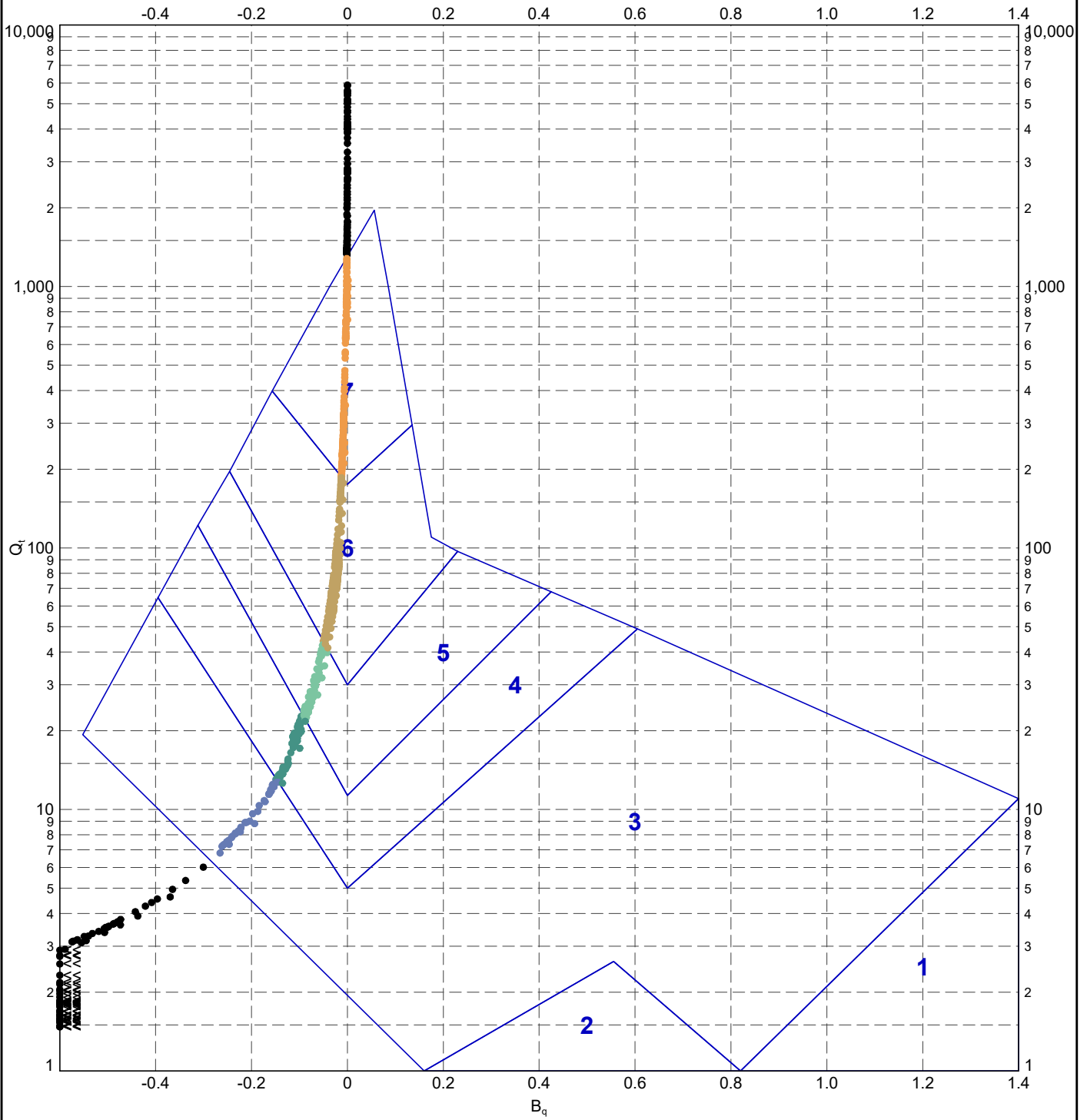


TITLE

Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Rigidity Index versus Elevation

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	305

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph CPT ROBERTSON 90 QT VS. BQ EXTRAP LETP.DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <-DrawingFile>> 1/22/2021 21:54 10.01.00.11.Datgel CPT Tool.gINT Add-In



**METHOD: Robertson 1990**

- 1 - Sensitive, fine grained
- 2 - Organic soil - peats
- 3 - Clays - CLAY to silty CLAY
- 4 - SILT mixtures - clayey SILT to silty CLAY
- 5 - SAND mixtures - silty SAND to sandy SILT
- 6 - Sands - clean SAND to silty SAND
- 7 - Gravelly SAND to SAND
- 8 - Very stiff SAND to clayey SAND
- 9 - Very stiff fine grained

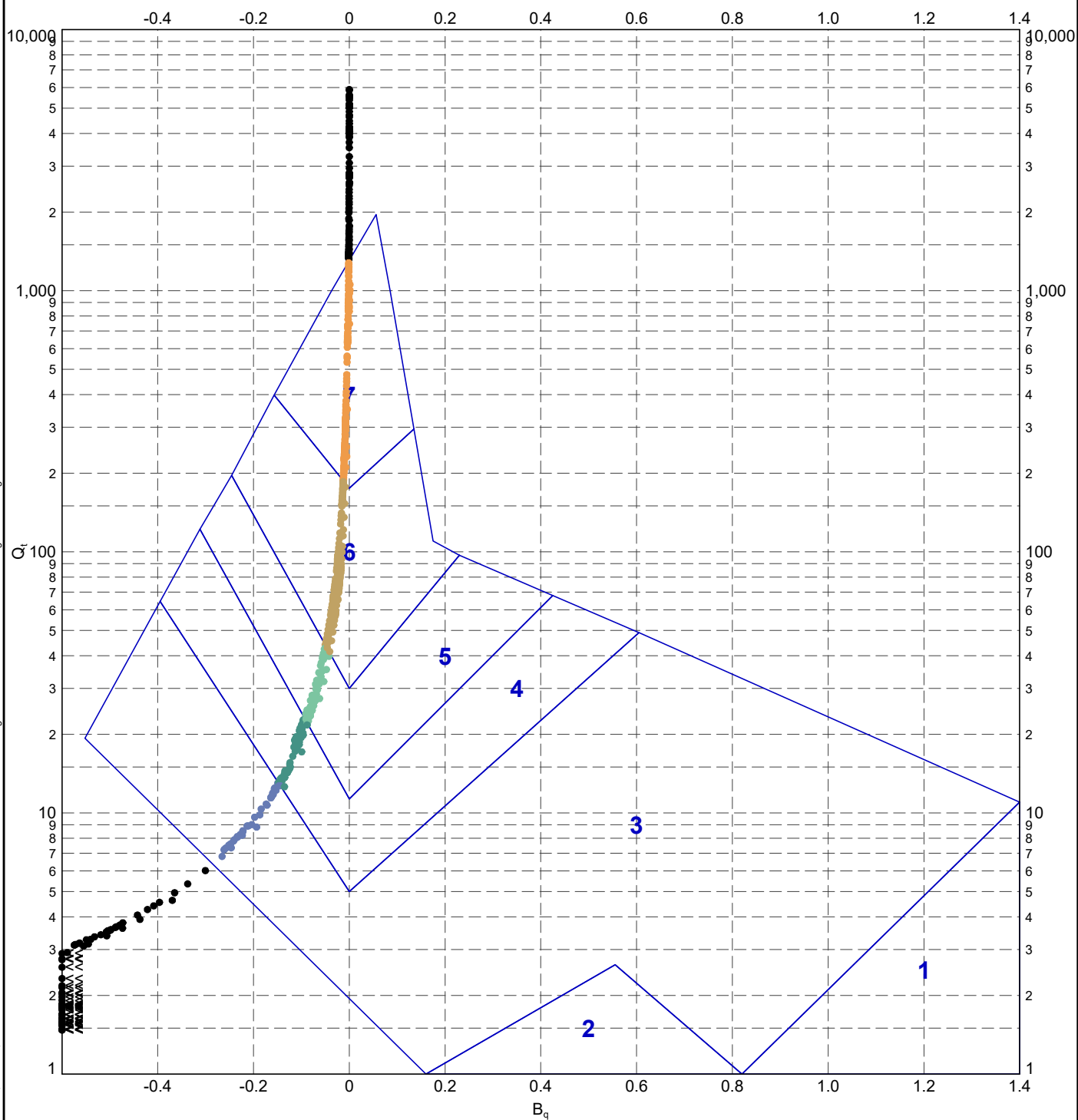


TITLE  
 Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Robertson 1990 Extrap.  $Q_t$  vs.  $B_q$  - CPT 02

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	306



DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph CPT ROBERTSON 90 QT vs. Bq EXTRAP M.LETP.DATGEL.CPT TOOL DGD 4.05.0 EN.GPJ <<DrawingFiles>> 1/2/2021 21:54 10.01.00.11 Datgel CPT Tool gINT Add-in



**METHOD: Robertson 1990**

- 1 - Sensitive, fine grained
- 2 - Organic soil - peats
- 3 - Clays - CLAY to silty CLAY
- 4 - SILT mixtures - clayey SILT to silty CLAY
- 5 - SAND mixtures - silty SAND to sandy SILT
- 6 - Sands - clean SAND to silty SAND
- 7 - Gravelly SAND to SAND
- 8 - Very stiff SAND to clayey SAND
- 9 - Very stiff fine grained

PointIDs: ● CPT 02

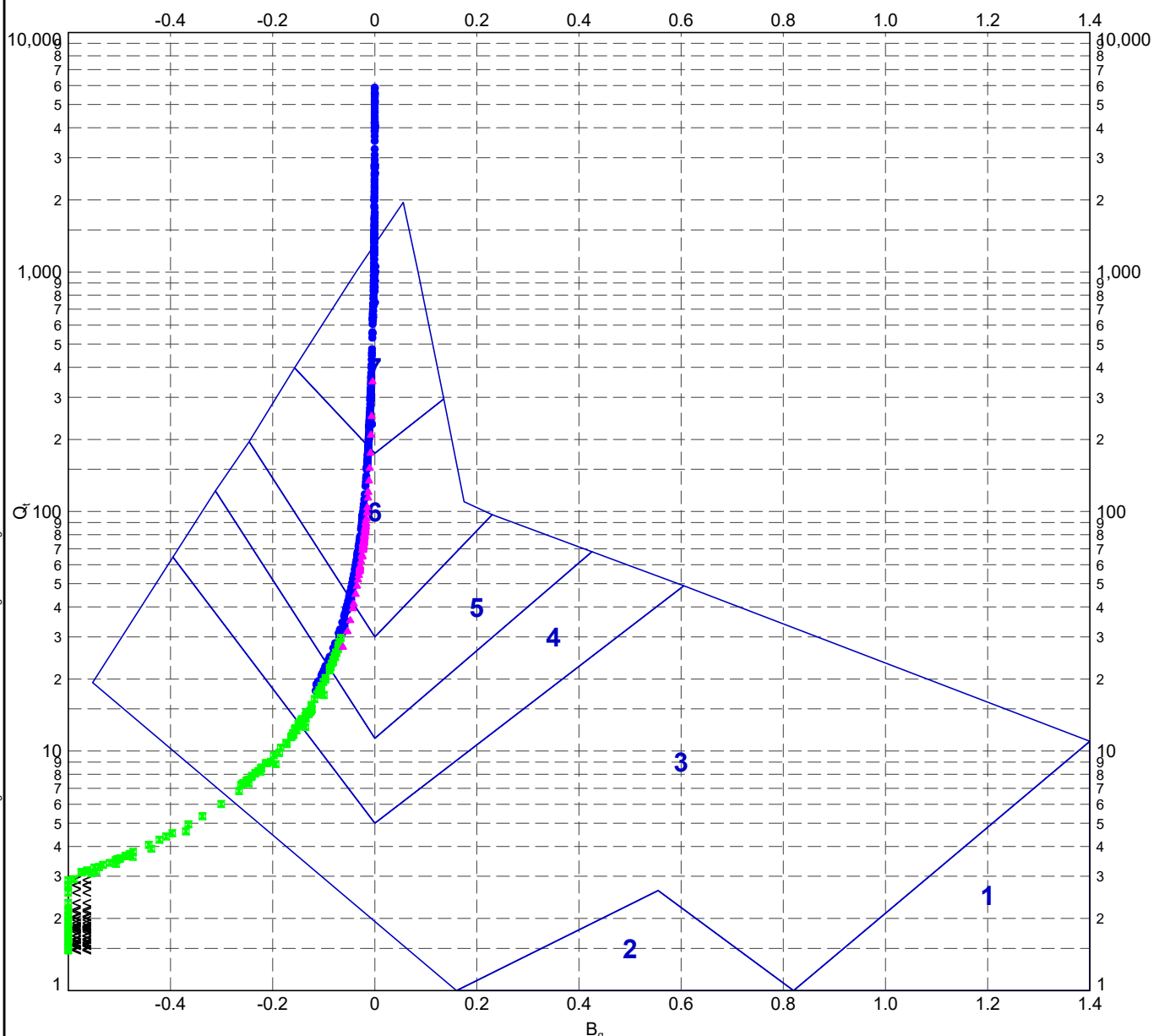


TITLE

Client 1  
Engineer 1  
Somewhere  
CPT Tool Project  
Robertson 1990 Extrap.  $Q_t$  vs.  $B_q$

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	307

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph CPT ROBERTSON 90 QT.VS. BQ EXTRAP U LETP DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <<DrawingFiles>> 1/2/2021 21:54 10.01.00.11 Datgel CPT Tool.gINT Add-in



**METHOD: Robertson 1990**

- |                                |   |                                    |
|--------------------------------|---|------------------------------------|
| 1 - Sensitive, fine grained    | 4 - SILT mixtures - clayey SILT to silty CLAY | 7 - Gravelly SAND to SAND          |
| 2 - Organic soil - peats       | 5 - SAND mixtures - silty SAND to sandy SILT  | 8 - Very stiff SAND to clayey SAND |
| 3 - Clays - CLAY to silty CLAY | 6 - Sands - clean SAND to silty SAND          | 9 - Very stiff fine grained        |

**Geology Unit Legend**

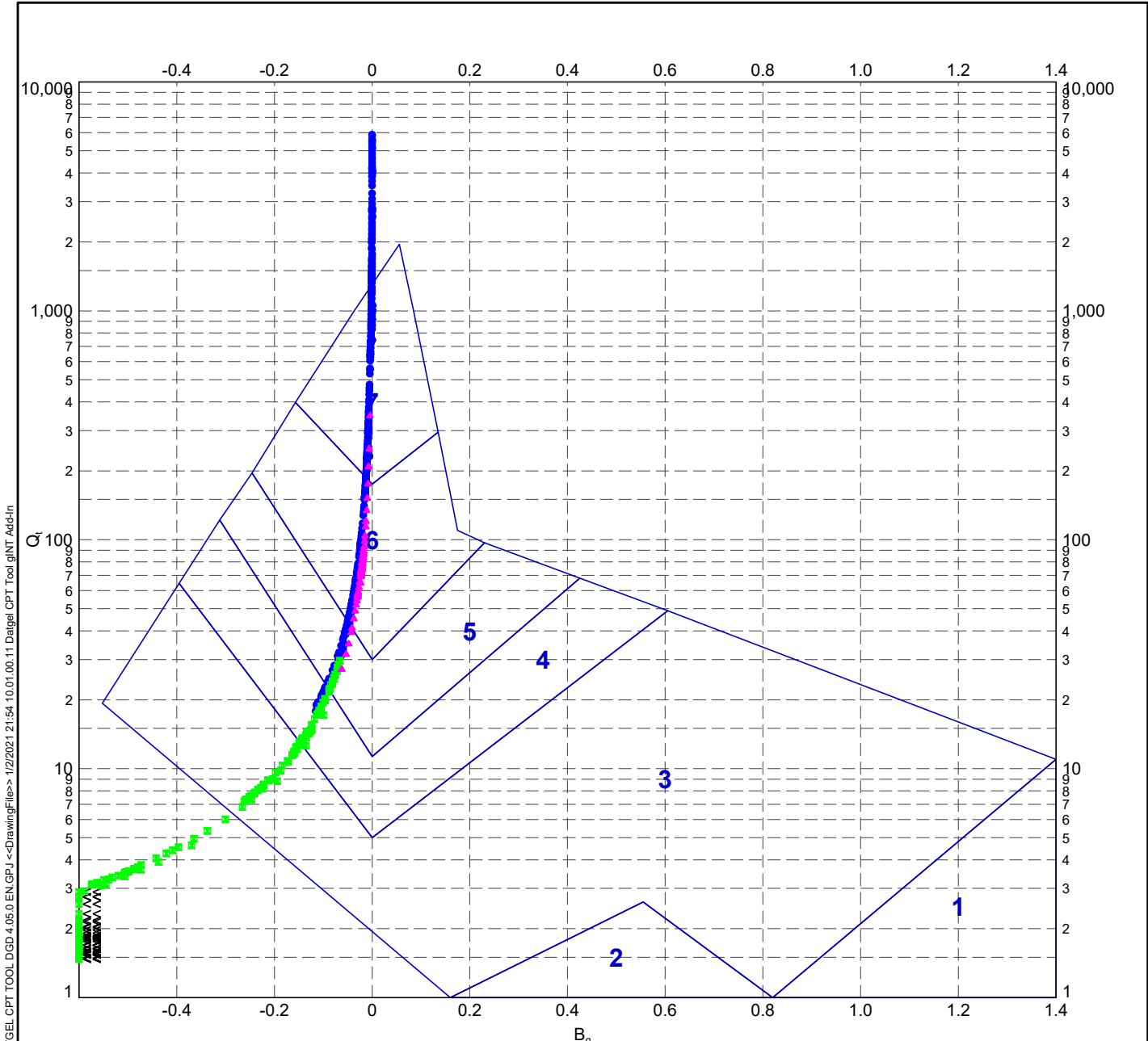
- |              |              |
|--------------|--------------|
| ★ D - Unit D | ⊕ J - Unit J |
| ● A - Unit A | □ K - Unit K |
| ■ B - Unit B | ◇ R - Rock   |
| ▲ C - Unit C |              |
| ◆ F - Unit F |              |
| ○ G - Unit G |              |
| △ H - Unit H |              |
| ⊗ I - Unit I |              |



TITLE

Client 1  
Engineer 1  
Somewhere  
CPT Tool Project  
Robertson 1990 Extrap.  $Q_t$  vs.  $B_q$  - CPT 02

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	308




**METHOD: Robertson 1990**

- 1 - Sensitive, fine grained
- 2 - Organic soil - peats
- 3 - Clays - CLAY to silty CLAY
- 4 - SILT mixtures - clayey SILT to silty CLAY
- 5 - SAND mixtures - silty SAND to sandy SILT
- 6 - Sands - clean SAND to silty SAND
- 7 - Gravelly SAND to SAND
- 8 - Very stiff SAND to clayey SAND
- 9 - Very stiff fine grained

**Geology Unit Legend**

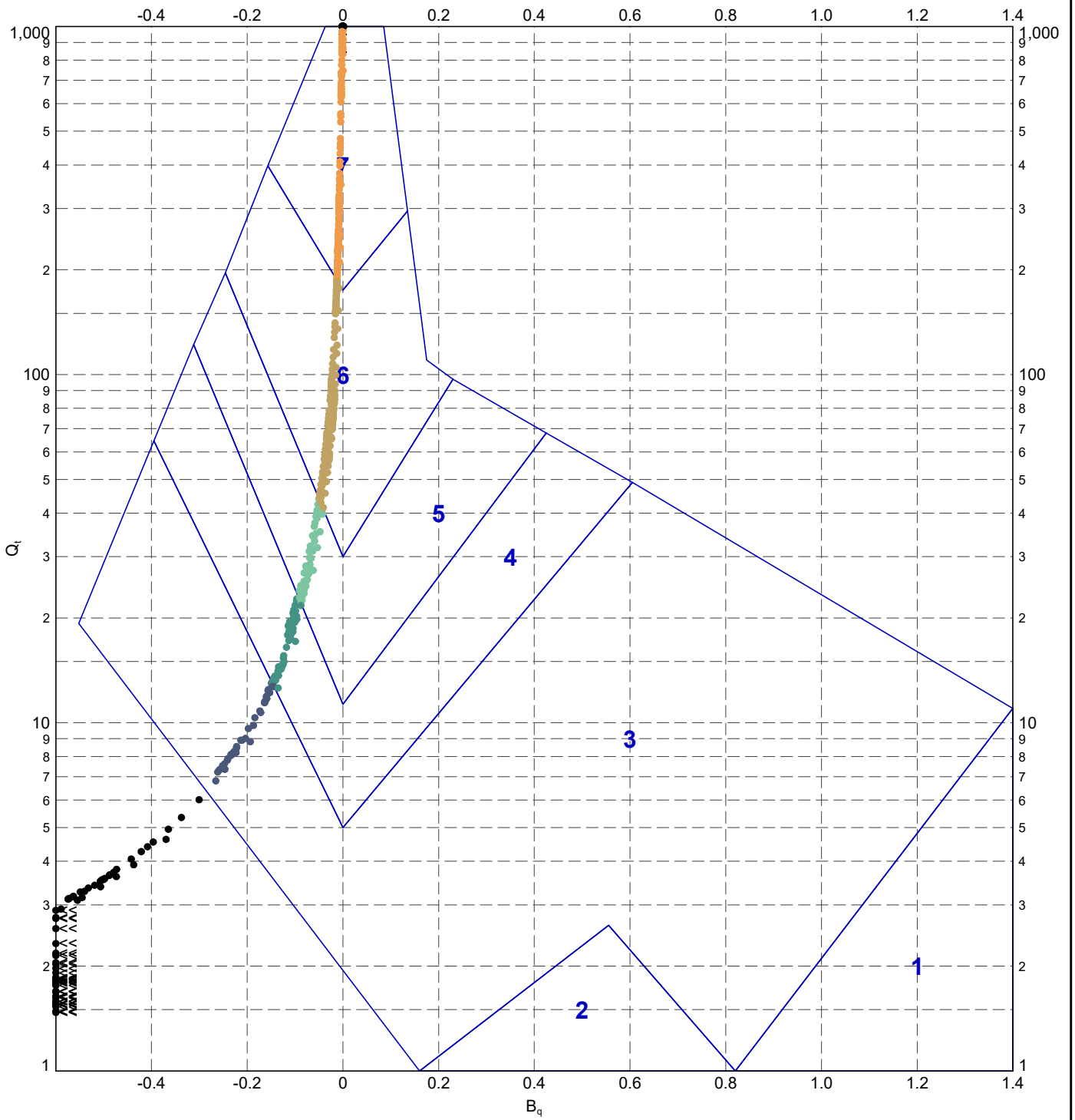
- ★ D - Unit D
- A - Unit A
- B - Unit B
- ▲ C - Unit C
- ◆ F - Unit F
- G - Unit G
- △ H - Unit H
- ⊗ I - Unit I
- ⊕ J - Unit J
- K - Unit K
- ◇ R - Rock

PointIDs: CPT 02

 <b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	TITLE Client 1 Engineer 1 Somewhere CPT Tool Project Robertson 1990 Extrap. $Q_t$ vs. $B_q$	DRAWN	Datgel	DATE	1/2/2021	
		CHECKED	Datgel	DATE	1/2/2021	
		SCALE	Not To Scale			Let
		PROJECT No	4.05.0		FIGURE No	309

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph CPT ROBERTSON 90 QT vs. BQ EXTRAP UML LET DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <-DrawingFile> 1/2/2021 21:54 10.01.00.11.Datgel CPT Tool.gINT AddIn

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph CPT TOOL ROBERTSON 90 QT.VS. BQ.LETP DATGEL CPT TOOL.DGD 4.05.0 EN.GPJ <<DrawingFile>> 1/2/2021 21:55:10.01.00.11 Datgel CPT.Tool.gINT\_Add.in



**METHOD: Robertson 1990**

- 1 - Sensitive, fine grained
- 2 - Organic soil - PEATS
- 3 - CLAYS - CLAY to silty CLAY
- 4 - SILT mixtures - clayey SILT to silty CLAY
- 5 - SAND mixtures - silty SAND to sandy SILT
- 6 - SANDS - clean SAND to silty SAND
- 7 - Gravelly SAND to SAND
- 8 - Very stiff SAND to clayey SAND
- 9 - Very stiff fine grained

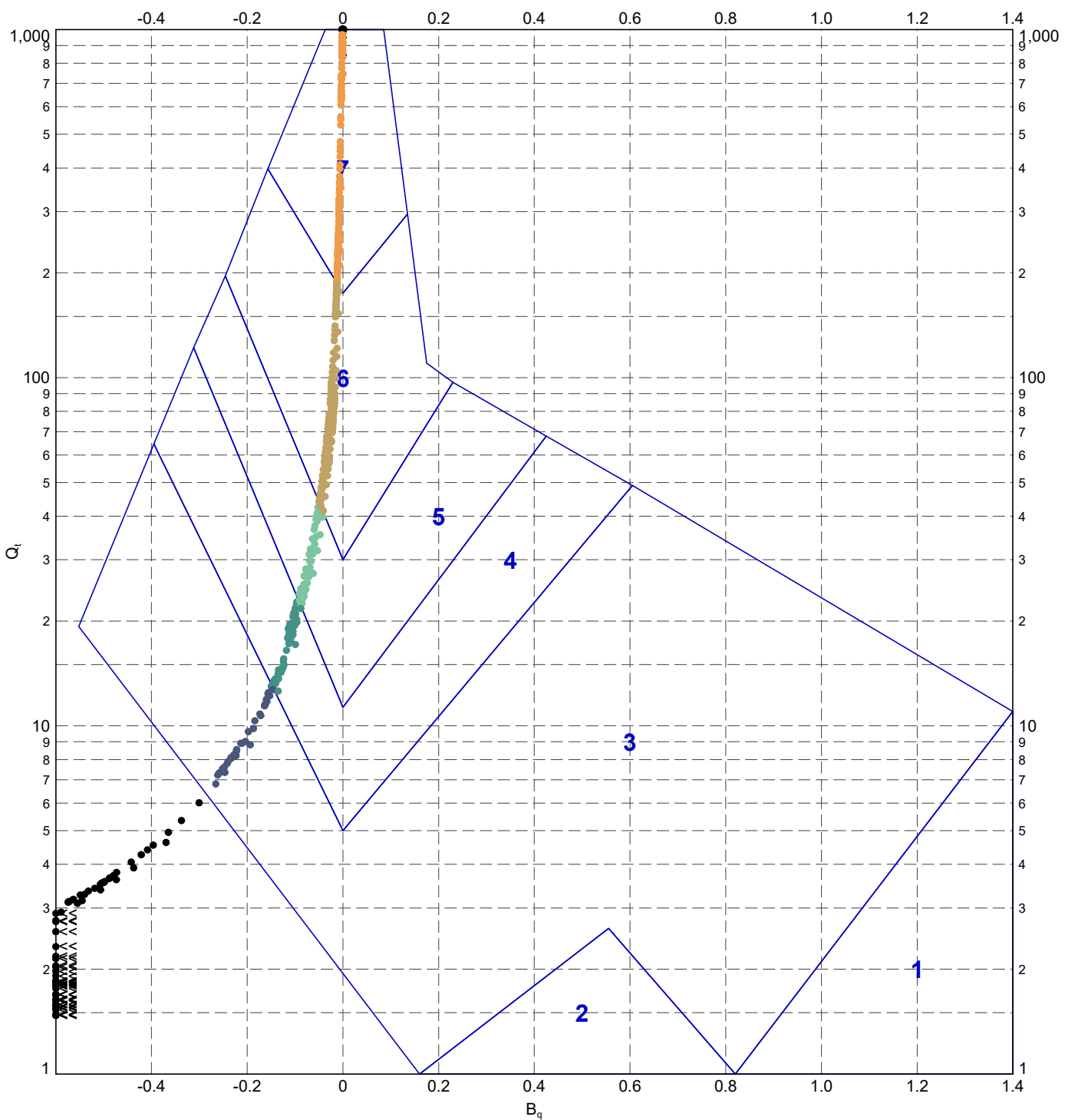


TITLE

Client 1  
Engineer 1  
Somewhere  
CPT Tool Project  
Robertson 1990  $Q_1$  vs.  $B_q$  - CPT 02

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	310


DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph CPT ROBERTSON 90 QT.VS.BQ.M.LETF DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <<DrawingFile>> 1/2/2021 21:55:10.01.00.11 Datgel CPT Tool.gINT Add-In



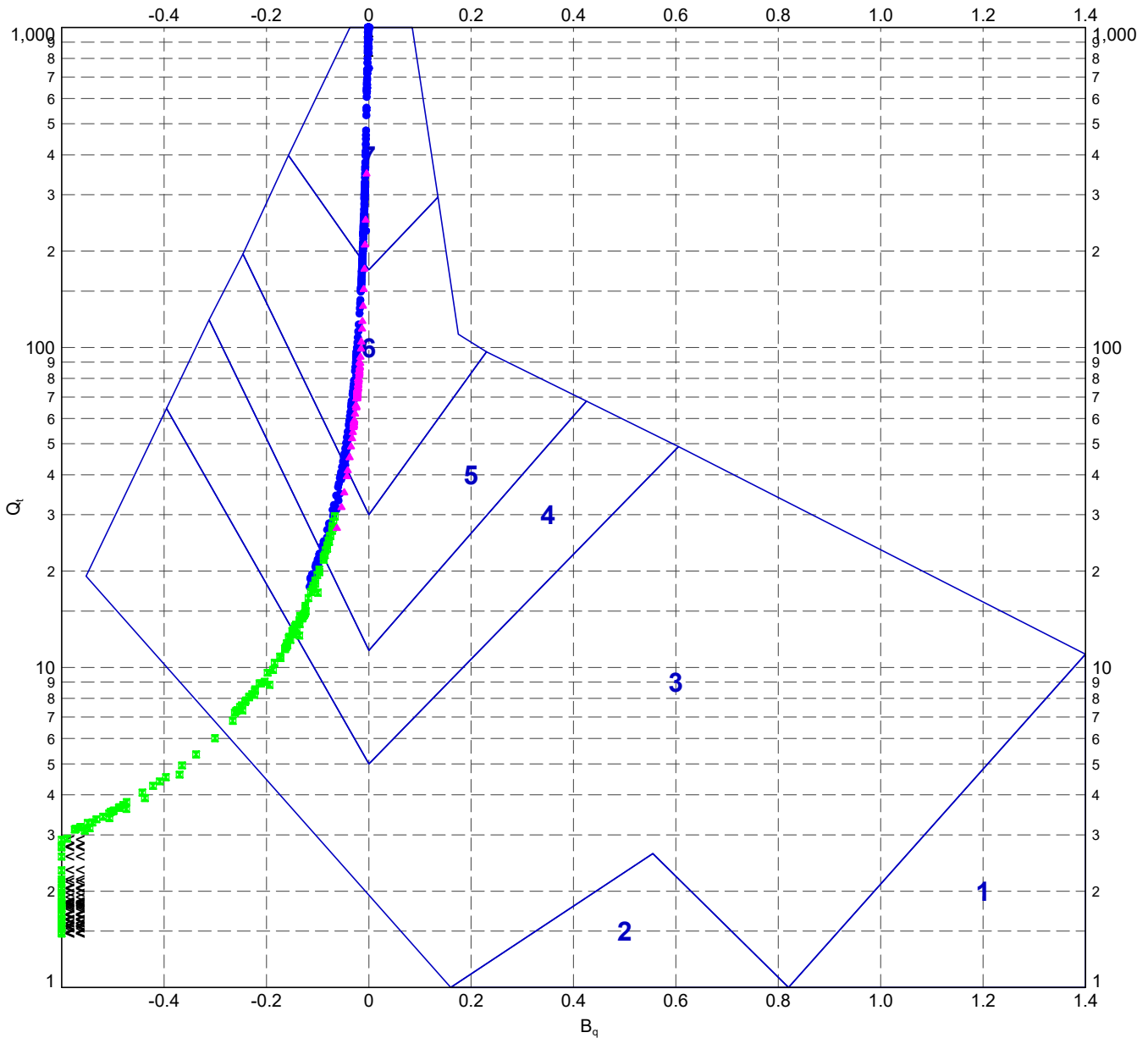
**METHOD: Robertson 1990**

- 1 - Sensitive, fine grained
- 2 - Organic soil - PEATS
- 3 - CLAYS - CLAY to silty CLAY
- 4 - SILT mixtures - clayey SILT to silty CLAY
- 5 - SAND mixtures - silty SAND to sandy SILT
- 6 - SANDS - clean SAND to silty SAND
- 7 - Gravelly SAND to SAND
- 8 - Very stiff SAND to clayey SAND
- 9 - Very stiff fine grained

PointIDs: ● CPT 02

 <b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	TITLE Client 1 Engineer 1 Somewhere CPT Tool Project Robertson 1990 $Q_t$ vs. $B_q$	DRAWN	Datgel	DATE	1/2/2021	
		CHECKED	Datgel	DATE	1/2/2021	
		SCALE	Not To Scale			Let
		PROJECT No	4.05.0		FIGURE No	311

DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.ROBERTSON.90.QT.VS.BQ.U.LETTP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ.<-DrawingFile>>.1/2/2021.21:55.10.01.00.11.Datgel.CPT.Tool.gINT.A4d-In




**METHOD: Robertson 1990**

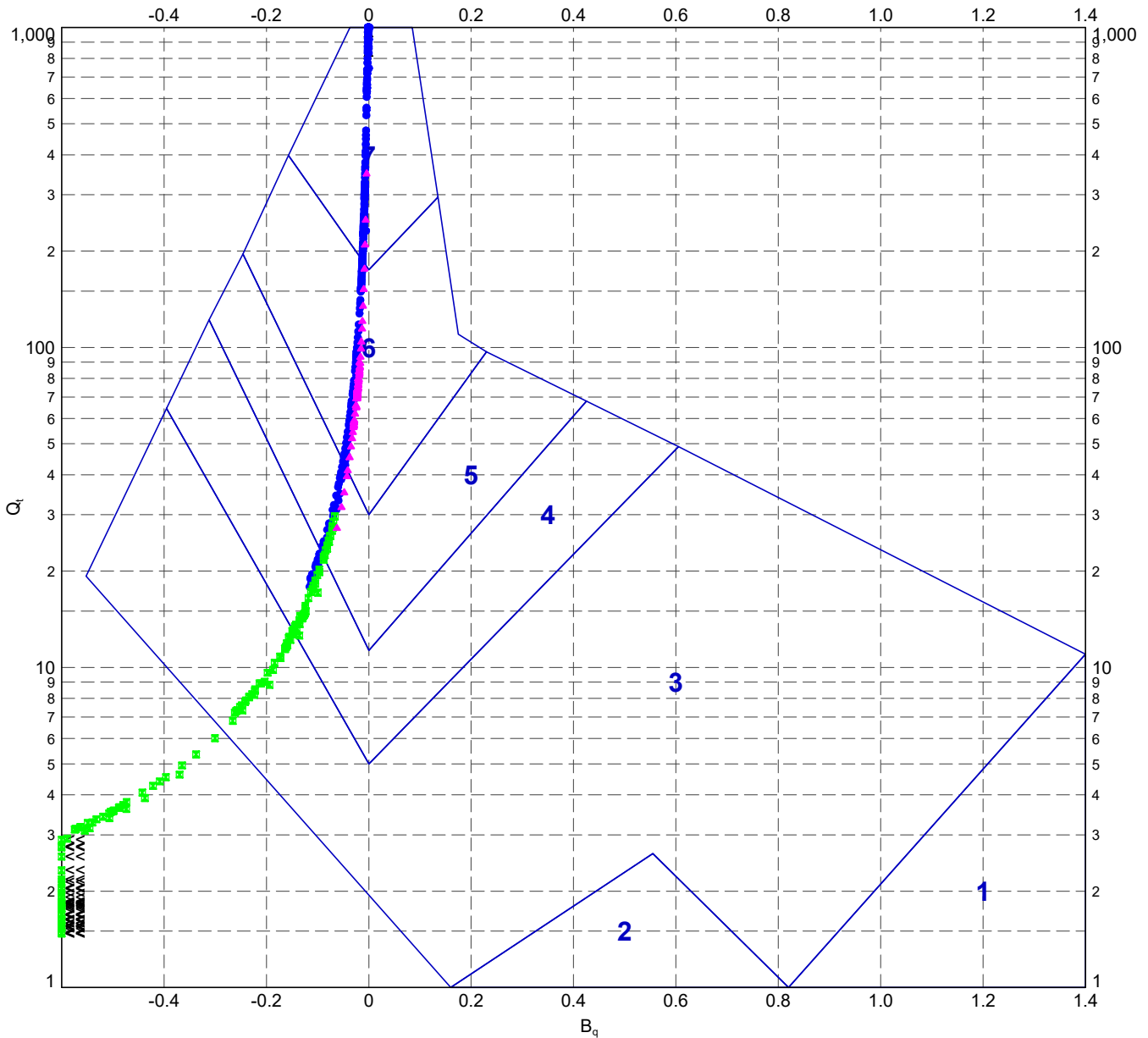
- 1 - Sensitive, fine grained
- 2 - Organic soil - PEATS
- 3 - CLAYS - CLAY to silty CLAY
- 4 - SILT mixtures - clayey SILT to silty CLAY
- 5 - SAND mixtures - silty SAND to sandy SILT
- 6 - SANDS - clean SAND to silty SAND
- 7 - Gravelly SAND to SAND
- 8 - Very stiff SAND to clayey SAND
- 9 - Very stiff fine grained

**Geology Unit Legend**

- ★ D - Unit D
- ⊕ J - Unit J
- A - Unit A
- K - Unit K
- B - Unit B
- ◇ R - Rock
- ▲ C - Unit C
- 
- ◆ F - Unit F
- 
- G - Unit G
- 
- △ H - Unit H
- 
- ⊗ I - Unit I
- 

	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Robertson 1990 <math>Q_t</math> vs. <math>B_q</math> - CPT 02</p>	DRAWN	Datgel	DATE	1/2/2021	
		CHECKED	Datgel	DATE	1/2/2021	
		SCALE	Not To Scale			Let
		PROJECT No	4.05.0		FIGURE No	312

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph CPT ROBERTSON 90 QT.VS. BQ UM LETP.DATGEL.CPT.Tool.gjINT.Add-In 1/2/2021 21:55 10.01.00.11.Datgel.CPT.Tool.gjINT.Add-In



**METHOD: Robertson 1990**

- 1 - Sensitive, fine grained
- 2 - Organic soil - PEATS
- 3 - CLAYS - CLAY to silty CLAY
- 4 - SILT mixtures - clayey SILT to silty CLAY
- 5 - SAND mixtures - silty SAND to sandy SILT
- 6 - SANDS - clean SAND to silty SAND
- 7 - Gravelly SAND to SAND
- 8 - Very stiff SAND to clayey SAND
- 9 - Very stiff fine grained

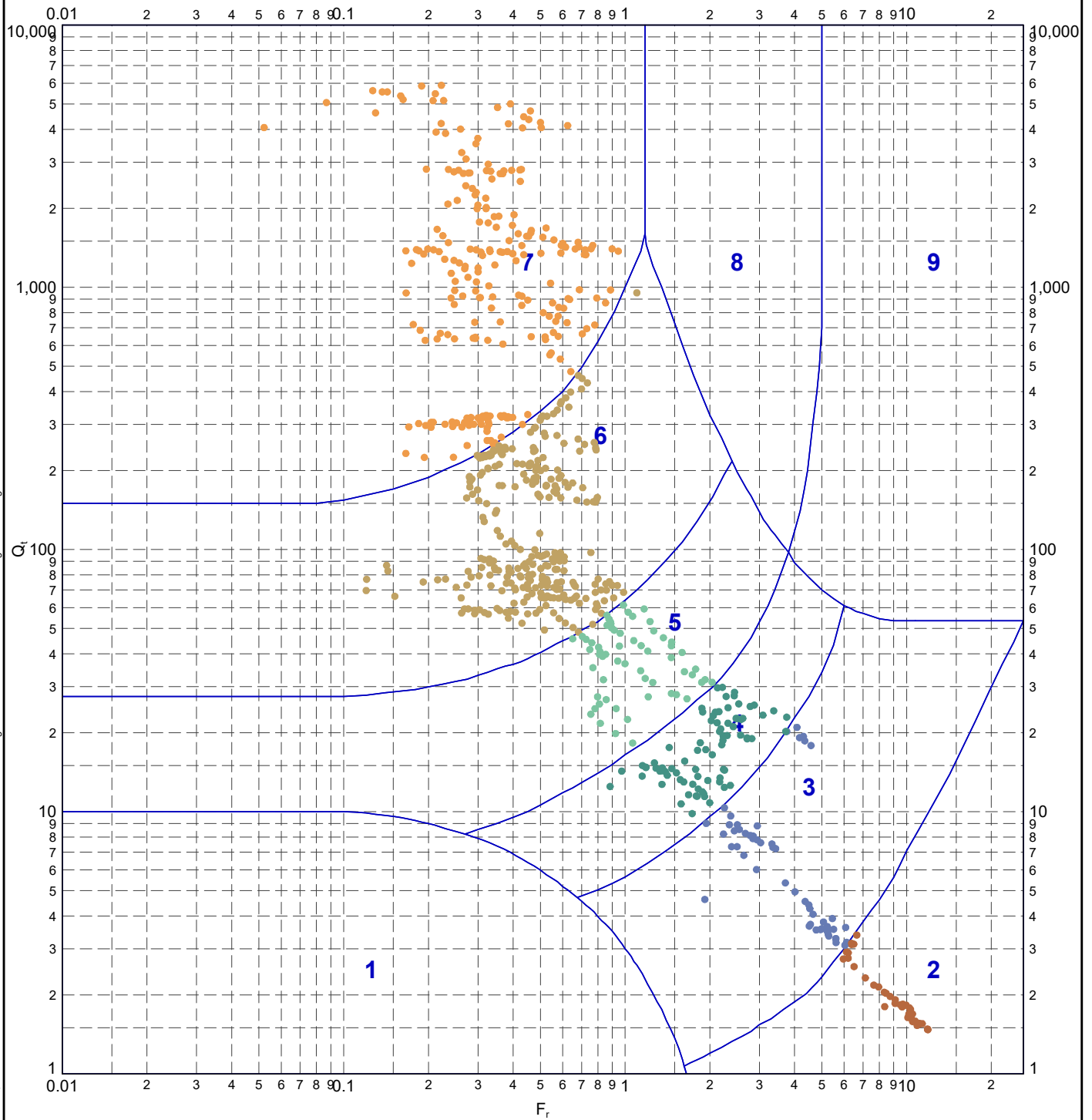
**Geology Unit Legend**

- ★ D - Unit D
- A - Unit A
- B - Unit B
- ▲ C - Unit C
- ◆ F - Unit F
- G - Unit G
- △ H - Unit H
- ◇ I - Unit I
- ⊕ J - Unit J
- K - Unit K
- ◇ R - Rock

PointIDs: CPT 02

 <b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	TITLE Client 1 Engineer 1 Somewhere CPT Tool Project Robertson 1990 $Q_t$ vs. $B_q$	DRAWN	Datgel	DATE	1/2/2021	
		CHECKED	Datgel	DATE	1/2/2021	
		SCALE	Not To Scale			Let
		PROJECT No	4.05.0		FIGURE No	313

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph CPT.ROBERTSON 90.QT.VS.FR EXTRAP.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <<DrawingFile>> 1/2/2021 21:55 10.01.00.11.Datgel CPT Tool gINT Add-In



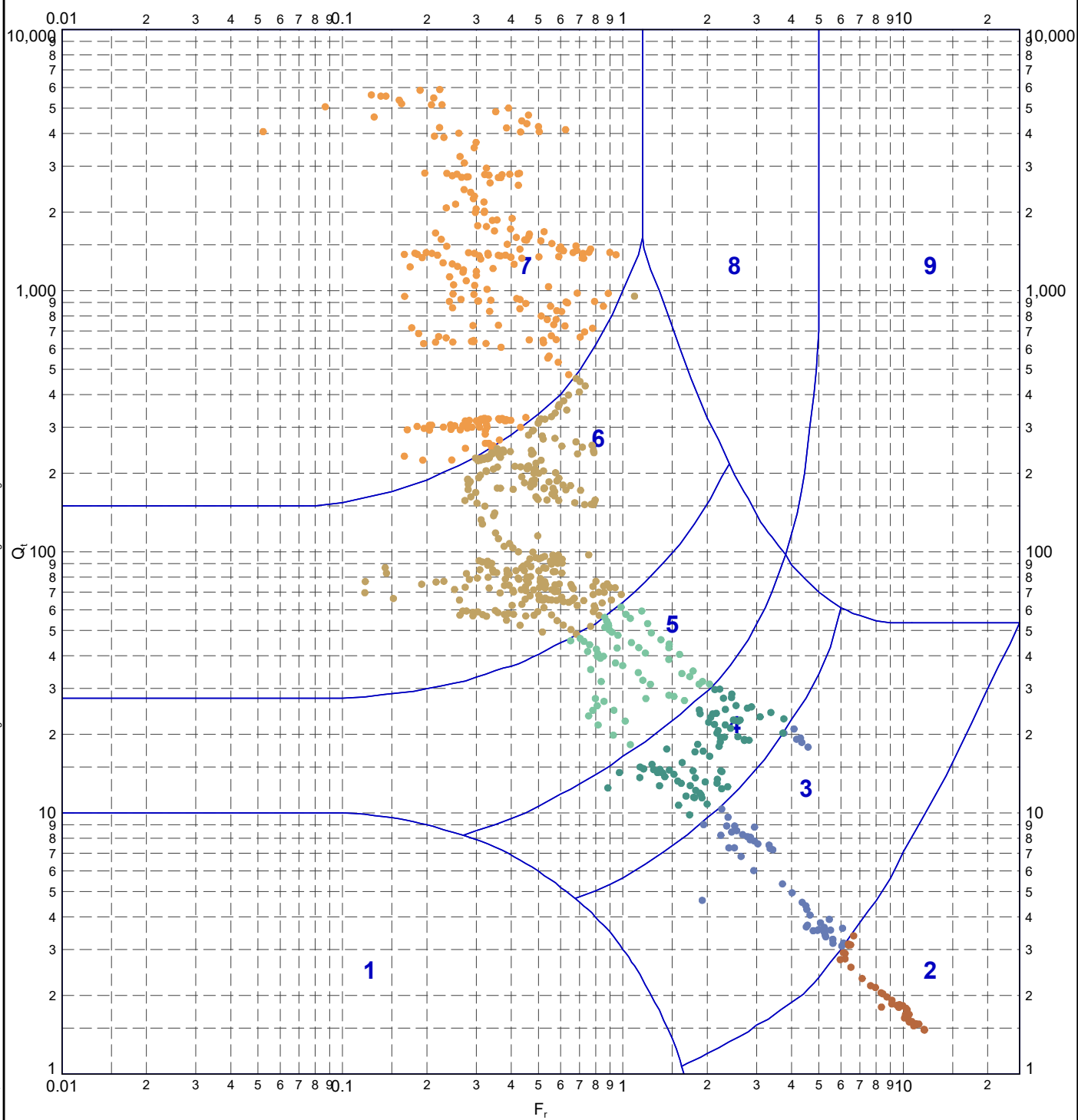
**METHOD: Robertson 1990**

- 1 - Sensitive, fine grained
- 4 - SILT mixtures - clayey SILT to silty CLAY
- 7 - Gravelly SAND to SAND
- 2 - Organic soil - peats
- 5 - SAND mixtures - silty SAND to sandy SILT
- 8 - Very stiff SAND to clayey SAND
- 3 - Clays - CLAY to silty CLAY
- 6 - Sands - clean SAND to silty SAND
- 9 - Very stiff fine grained

 <b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	TITLE Client 1 Engineer 1 Somewhere CPT Tool Project Robertson 1990 Extrap. $Q_t$ vs. $F_r$ - CPT 02	DRAWN	Datgel	DATE	1/2/2021	
		CHECKED	Datgel	DATE	1/2/2021	
		SCALE	Not To Scale			Let
		PROJECT No	4.05.0		FIGURE No	314



DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.ROBERTSON.90.QT.VS.FR.EXTRAP.M.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ.<<DrawingFiles>> 1/2/2021 21:55 10.01.00.11.Datgel.CPT.Tool.gINT.Add.in



**METHOD: Robertson 1990**

- 1 - Sensitive, fine grained
- 2 - Organic soil - peats
- 3 - Clays - CLAY to silty CLAY
- 4 - SILT mixtures - clayey SILT to silty CLAY
- 5 - SAND mixtures - silty SAND to sandy SILT
- 6 - Sands - clean SAND to silty SAND
- 7 - Gravelly SAND to SAND
- 8 - Very stiff SAND to clayey SAND
- 9 - Very stiff fine grained

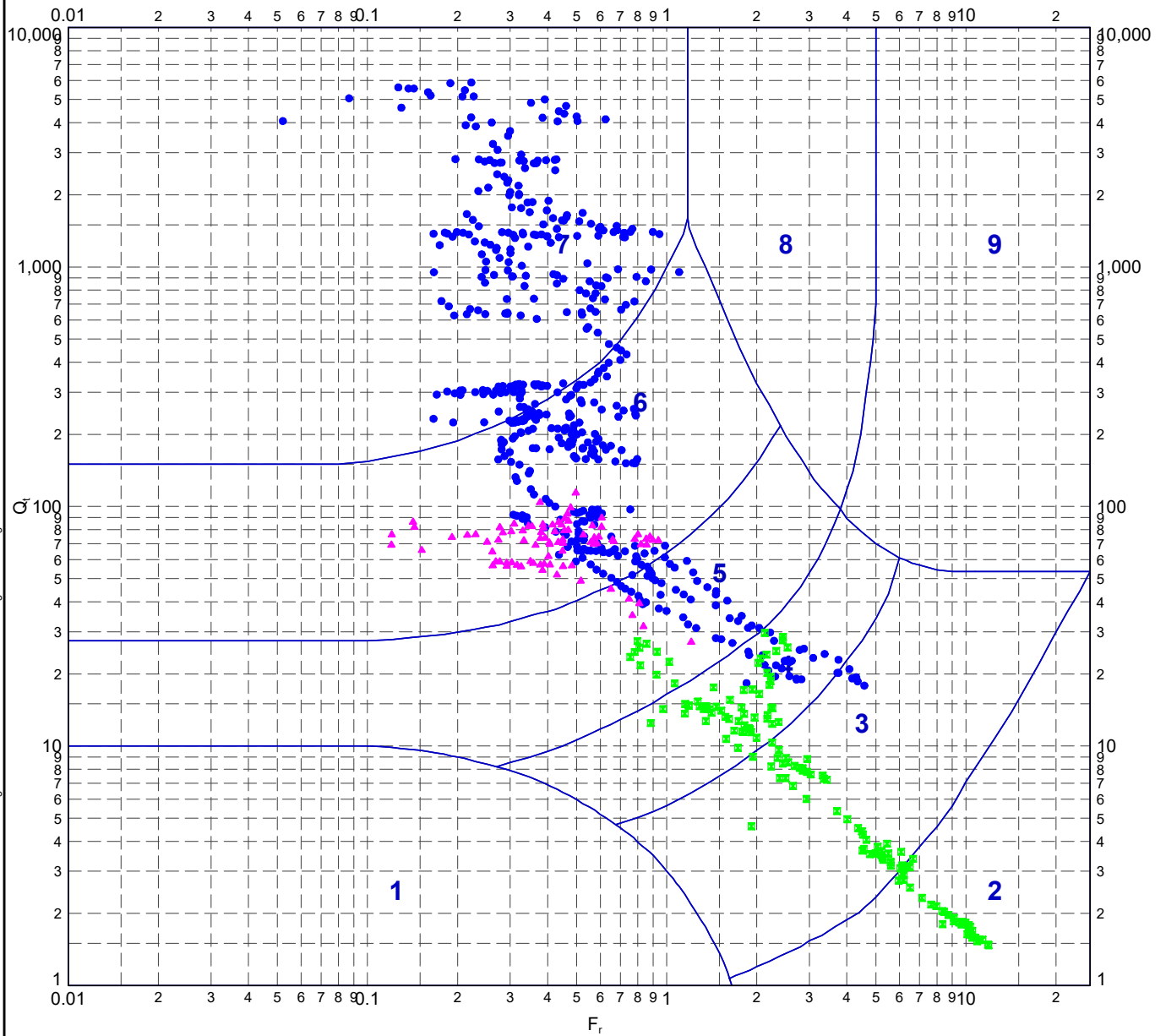
PointIDs: ● CPT 02



Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Robertson 1990 Extrap.  $Q_t$  vs.  $F_r$

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	315

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph CPT ROBERTSON 90 QT.VS.FR EXTRAP.U LETP DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <<DrawingFile>> 1/2/2021 21:55 10.01.00.11 Datgel CPT Tool.gINT.Add-in




**METHOD: Robertson 1990**

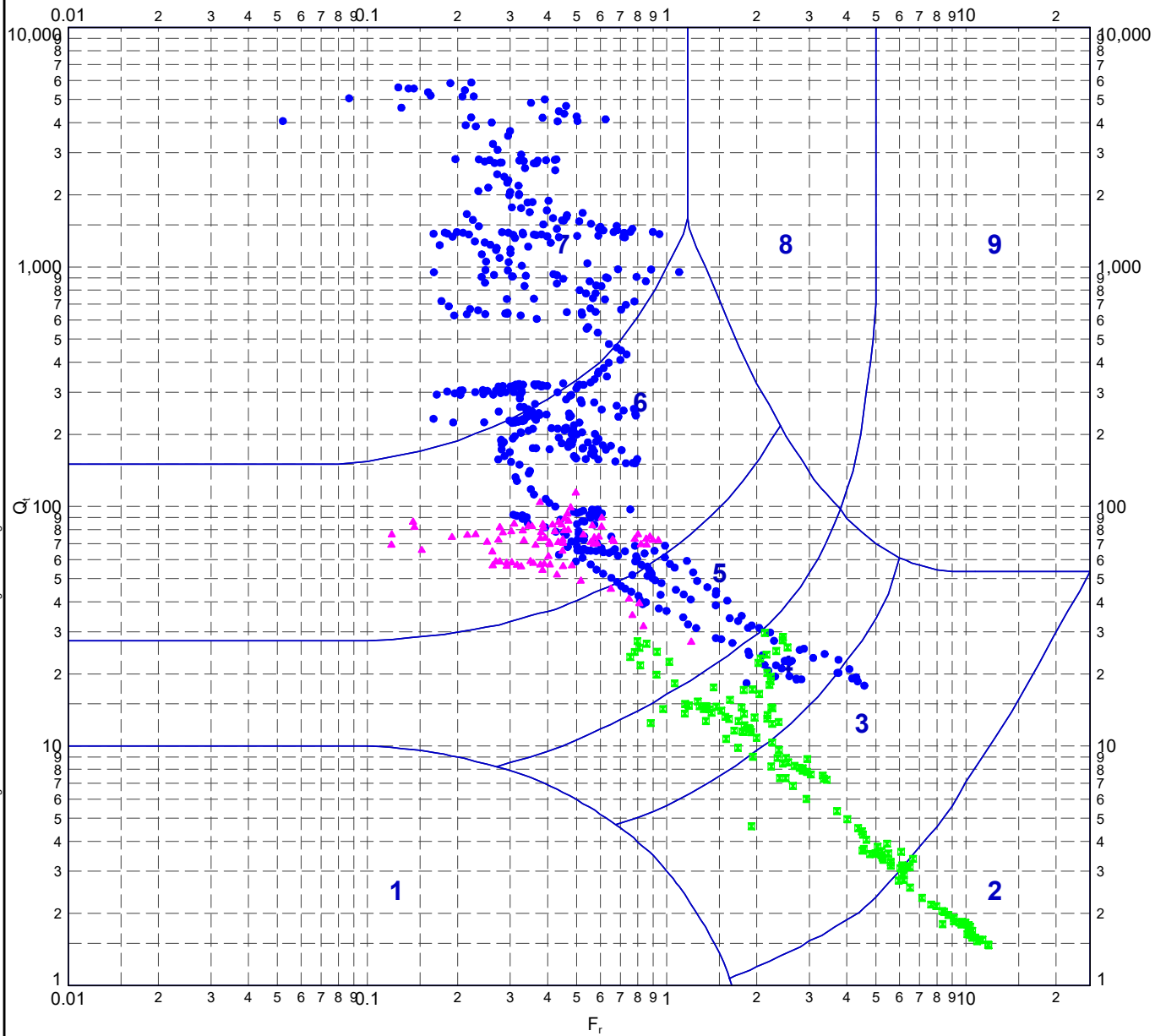
- |                                |   |                                    |
|--------------------------------|---|------------------------------------|
| 1 - Sensitive, fine grained    | 4 - SILT mixtures - clayey SILT to silty CLAY | 7 - Gravelly SAND to SAND          |
| 2 - Organic soil - peats       | 5 - SAND mixtures - silty SAND to sandy SILT  | 8 - Very stiff SAND to clayey SAND |
| 3 - Clays - CLAY to silty CLAY | 6 - Sands - clean SAND to silty SAND          | 9 - Very stiff fine grained        |

**Geology Unit Legend**

- |              |              |
|--------------|--------------|
| ★ D - Unit D | ⊕ J - Unit J |
| ● A - Unit A | □ K - Unit K |
| ■ B - Unit B | ◇ R - Rock   |
| ▲ C - Unit C |              |
| ◆ F - Unit F |              |
| ○ G - Unit G |              |
| △ H - Unit H |              |
| ⊗ I - Unit I |              |

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Robertson 1990 Extrap. <math>Q_r</math> vs. <math>F_r</math> - CPT 02</p>	<p>DRAWN Datgel</p>	<p>DATE 1/2/2021</p>
		<p>CHECKED Datgel</p>	<p>DATE 1/2/2021</p>
		<p>SCALE</p> <p style="text-align: center;">Not To Scale</p>	<p>Let</p>
		<p>PROJECT No 4.05.0</p>	<p>FIGURE No 316</p>

DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.ROBERTSON.90.QT.VS.FR.EXTRAP.UIM.LET.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <<DrawingFile>> 1/2/2021 21:56 10.01.00.11.Datgel.CPT.Tool.gINT.Add-in




**METHOD: Robertson 1990**

- 1 - Sensitive, fine grained
- 2 - Organic soil - peats
- 3 - Clays - CLAY to silty CLAY
- 4 - SILT mixtures - clayey SILT to silty CLAY
- 5 - SAND mixtures - silty SAND to sandy SILT
- 6 - Sands - clean SAND to silty SAND
- 7 - Gravelly SAND to SAND
- 8 - Very stiff SAND to clayey SAND
- 9 - Very stiff fine grained

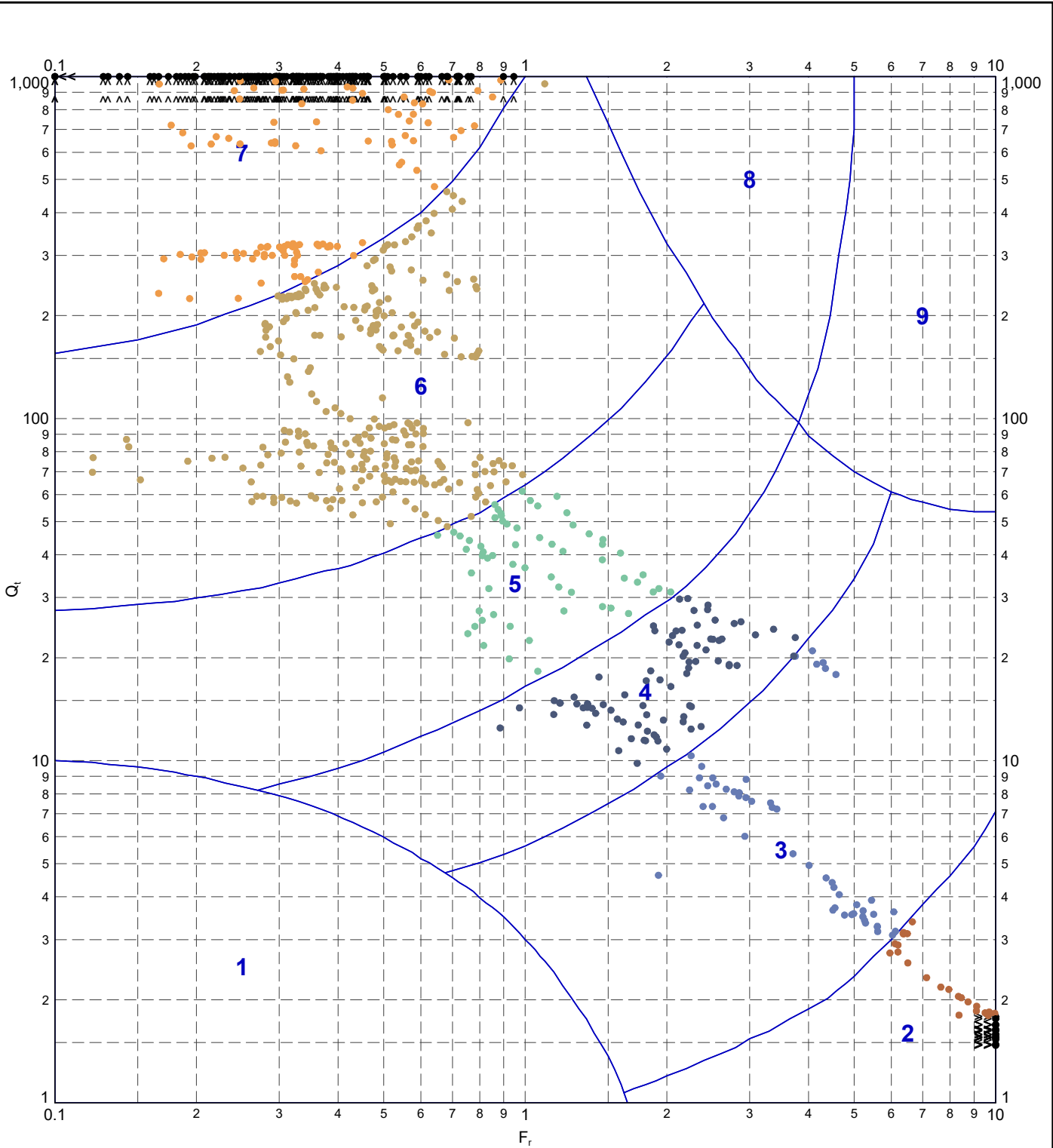
**Geology Unit Legend**

- ★ D - Unit D
- A - Unit A
- B - Unit B
- ▲ C - Unit C
- ◆ F - Unit F
- G - Unit G
- △ H - Unit H
- ⊗ I - Unit I
- ⊕ J - Unit J
- K - Unit K
- ◇ R - Rock

PointIDs: CPT 02

	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Robertson 1990 Extrap. <math>Q_t</math> vs. <math>F_r</math></p>	DRAWN	Datgel	DATE	1/2/2021	
		CHECKED	Datgel	DATE	1/2/2021	
		SCALE	Not To Scale			Let
		PROJECT No	4.05.0		FIGURE No	317

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph CPT TOOL ROBERTSON 90 QT vs. FR LETP DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <<DrawingFile>> 1/2/2021 21:56:10.0100.11 Datgel CPT Tool gINT Add-In

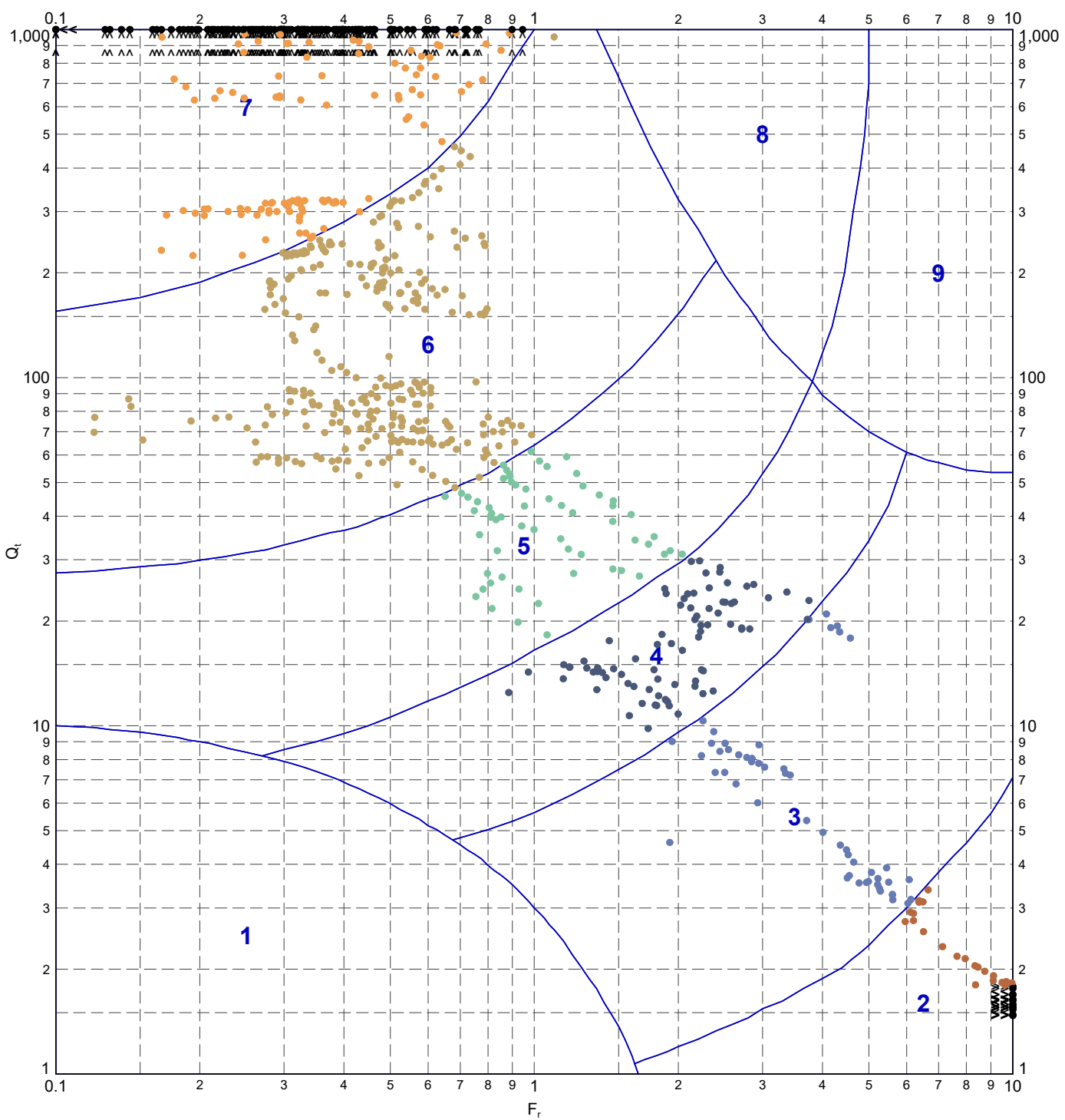


**METHOD: Robertson 1990**

- 1 - Sensitive, fine grained
- 4 - SILT mixtures - clayey SILT to silty CLAY
- 7 - Gravelly SAND to SAND
- 2 - Organic soil - PEATS
- 5 - SAND mixtures - silty SAND to sandy SILT
- 8 - Very stiff SAND to clayey SAND
- 3 - CLAYS - CLAY to silty CLAY
- 6 - SANDS - clean SAND to silty SAND
- 9 - Very stiff fine grained

 <b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	TITLE Client 1 Engineer 1 Somewhere CPT Tool Project Robertson 1990 $Q_t$ vs. $F_r$ - CPT 02	DRAWN	Datgel	DATE	1/2/2021	
		CHECKED	Datgel	DATE	1/2/2021	
		SCALE	Not To Scale			Let
		PROJECT No	4.05.0		FIGURE No	318

DATGEL CPT TOOL\_DGD\_4.05.0.LIB.GLB.Graph.CPT.ROBERTSON 90.QT.VS.FR.M.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ.<DrawingFile> 1/2/2021 21:56 10.01.00.11 Datgel.CPT.Tool.gINT.A4d-In



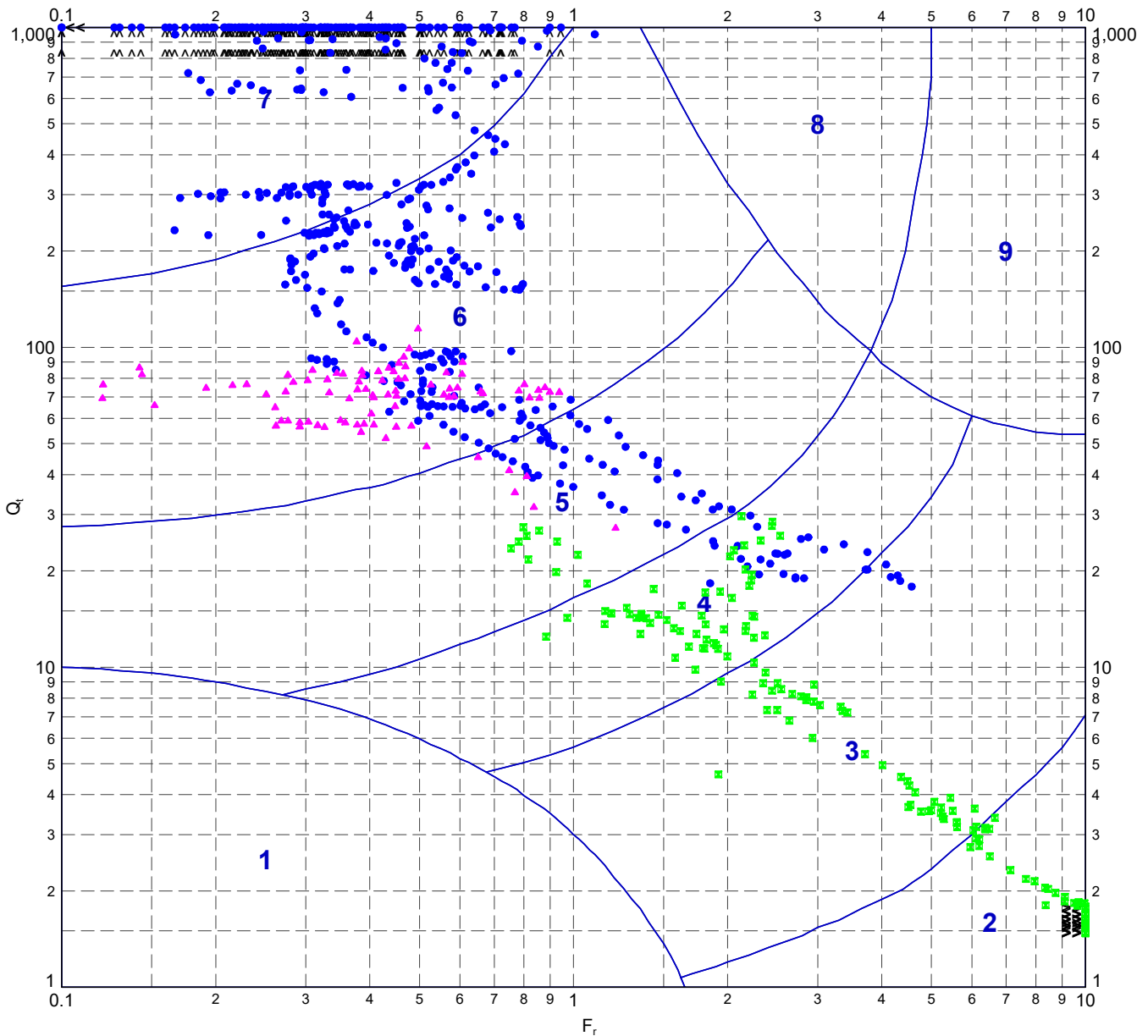
**METHOD: Robertson 1990**

- 1 - Sensitive, fine grained
- 2 - Organic soil - PEATS
- 3 - CLAYS - CLAY to silty CLAY
- 4 - SILT mixtures - clayey SILT to silty CLAY
- 5 - SAND mixtures - silty SAND to sandy SILT
- 6 - SANDS - clean SAND to silty SAND
- 7 - Gravelly SAND to SAND
- 8 - Very stiff SAND to clayey SAND
- 9 - Very stiff fine grained

PointIDs: ● CPT 02

 <b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	TITLE Client 1 Engineer 1 Somewhere CPT Tool Project Robertson 1990 $Q_t$ vs. $F_r$	DRAWN	Datgel	DATE	1/2/2021	
		CHECKED	Datgel	DATE	1/2/2021	
		SCALE	Not To Scale			Let
		PROJECT No	4.05.0		FIGURE No	319

DATGEL CPT TOOL\_DGD\_4.05.0.LIB.GLB Graph CPT ROBERTSON 90\_QT.VS.FR.U.LETTP.DATGEL.CPT.Tool.gINT Add-in 1/2/2021 21:56:10.01.00.11 Datgel.CPT.Tool.gINT Add-in




**METHOD: Robertson 1990**

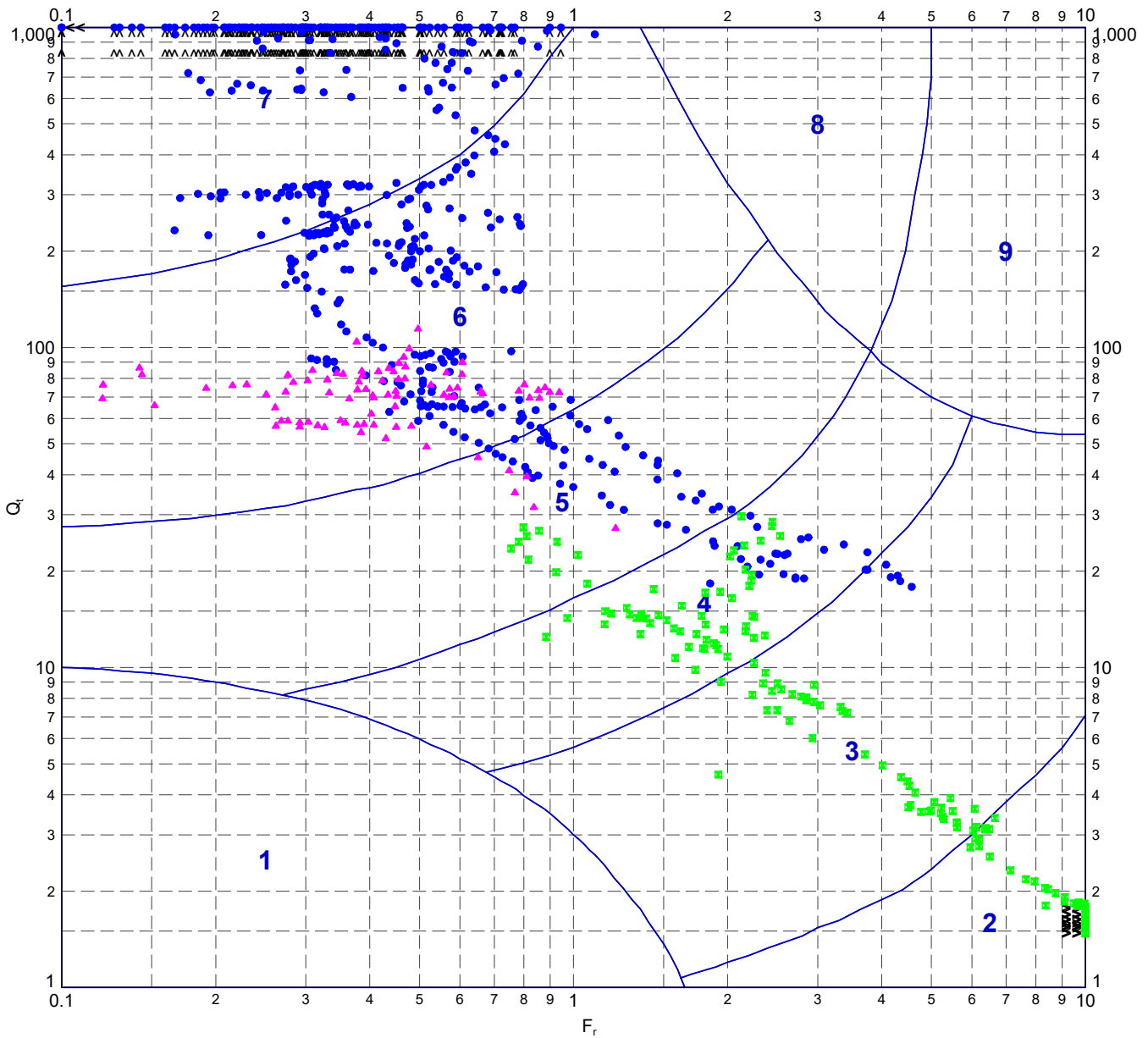
- |                                |   |                                    |
|--------------------------------|---|------------------------------------|
| 1 - Sensitive, fine grained    | 4 - SILT mixtures - clayey SILT to silty CLAY | 7 - Gravelly SAND to SAND          |
| 2 - Organic soil - PEATS       | 5 - SAND mixtures - silty SAND to sandy SILT  | 8 - Very stiff SAND to clayey SAND |
| 3 - CLAYS - CLAY to silty CLAY | 6 - SANDS - clean SAND to silty SAND          | 9 - Very stiff fine grained        |

**Geology Unit Legend**

- |              |              |
|--------------|--------------|
| ★ D - Unit D | ⊕ J - Unit J |
| ● A - Unit A | ⊠ K - Unit K |
| ■ B - Unit B | ◇ R - Rock   |
| ▲ C - Unit C |              |
| ◆ F - Unit F |              |
| ○ G - Unit G |              |
| △ H - Unit H |              |
| ⊗ I - Unit I |              |

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Robertson 1990 <math>Q_t</math> vs. <math>F_r</math> - CPT 02</p>	<p>DRAWN Datgel</p>	<p>DATE 1/2/2021</p>
		<p>CHECKED Datgel</p>	<p>DATE 1/2/2021</p>
		<p>SCALE</p> <p style="text-align: center;">Not To Scale</p>	<p>Let</p>
		<p>PROJECT No 4.05.0</p>	<p>FIGURE No 320</p>

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph CPT ROBERTSON 90 QT VS FR UM LETP.DATGEL.CPT TOOL DGD 4.05.0 EN.GPJ <<DrawingFile>> 1/2/2021 21:56 10.01.00.11.Datgel.CPT.Tool.gINT.Add-In



**METHOD: Robertson 1990**

- 1 - Sensitive, fine grained
- 2 - Organic soil - PEATS
- 3 - CLAYS - CLAY to silty CLAY
- 4 - SILT mixtures - clayey SILT to silty CLAY
- 5 - SAND mixtures - silty SAND to sandy SILT
- 6 - SANDS - clean SAND to silty SAND
- 7 - Gravelly SAND to SAND
- 8 - Very stiff SAND to clayey SAND
- 9 - Very stiff fine grained

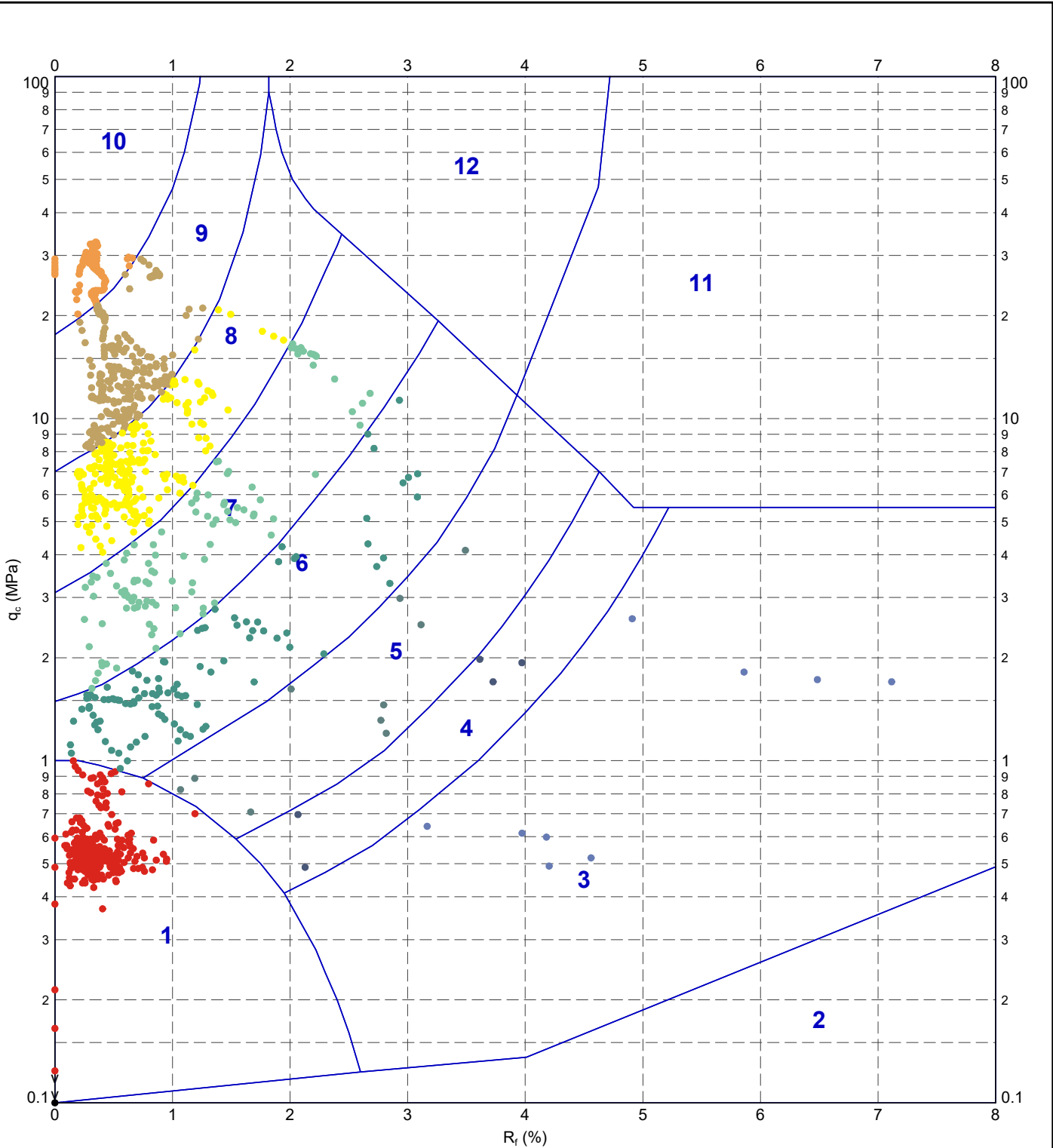
**Geology Unit Legend**

- ★ D - Unit D
- A - Unit A
- B - Unit B
- ▲ C - Unit C
- ◆ F - Unit F
- G - Unit G
- △ H - Unit H
- ◇ I - Unit I
- ⊕ J - Unit J
- K - Unit K
- ◇ R - Rock

PointIDs: CPT 02

 <b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	TITLE Client 1 Engineer 1 Somewhere CPT Tool Project Robertson 1990 $Q_t$ vs. $F_r$	DRAWN	Datgel	DATE	1/2/2021	
		CHECKED	Datgel	DATE	1/2/2021	
		SCALE	Not To Scale			Let
		PROJECT No	4.05.0		FIGURE No	321

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph CPT ROBERTSON ET AL. 86 QC VS. RF LETP DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <-DrawingFile>> 1/2/2021 21:56:10.01.00.11 Datgel CPT Tool (gINT Add-in



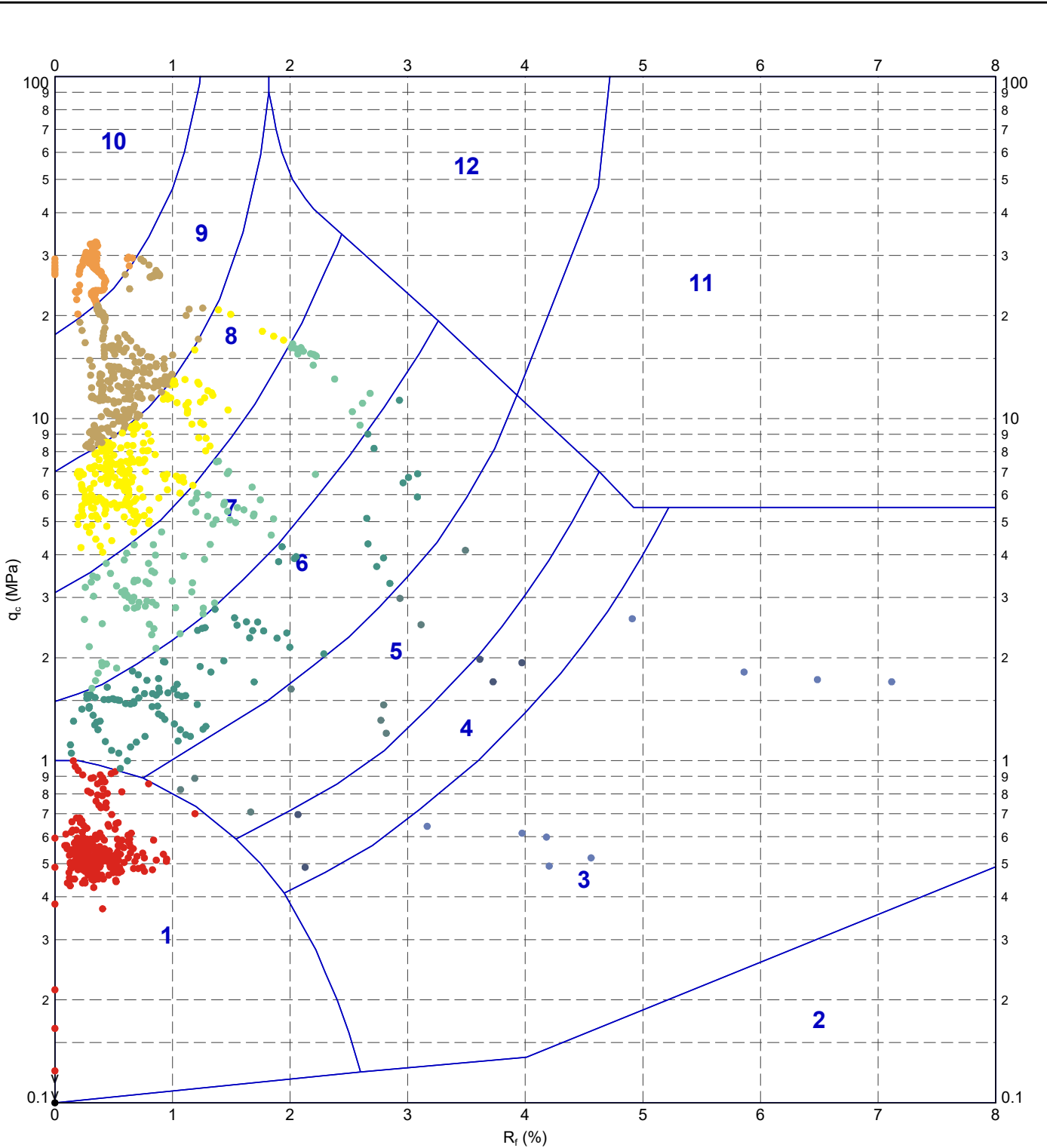
**METHOD: Robertson et al. 1986 qc Rf**

- 1 - Sensitive fine grained material
- 2 - Organic material
- 3 - CLAY
- 4 - Silty CLAY to CLAY
- 5 - Clayey SILT to silty CLAY
- 6 - Sandy SILT to clayey SILT
- 7 - Silty SAND to sandy SILT
- 8 - SAND to silty SAND
- 9 - SAND
- 10 - Gravelly SAND to SAND
- 11 - Very stiff fine grained
- 12 - SAND to clayey SAND

 <b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	TITLE Client 1 Engineer 1 Somewhere CPT Tool Project Robertson et al. 1986 qc vs. Rf - CPT 05 (Robertson 90-Robertson et al 86 qc rf)	DRAWN	Datgel	DATE	1/2/2021
	CHECKED	Datgel	DATE	1/2/2021	
	SCALE	Not To Scale			Let
	PROJECT No	4.05.0	FIGURE No	322	



DATGEL CPT TOOL\_DGD\_4.05.0.LIB.GLB Graph CPT ROBERTSON ET AL\_86 QC VS. Rf M.LETP.DATGEL CPT TOOL\_DGD\_4.05.0.EN.GPJ <-DrawingFiles> 1/2/2021 21:57 10.01.00.11 Datgel CPT Tool gINT Add-In



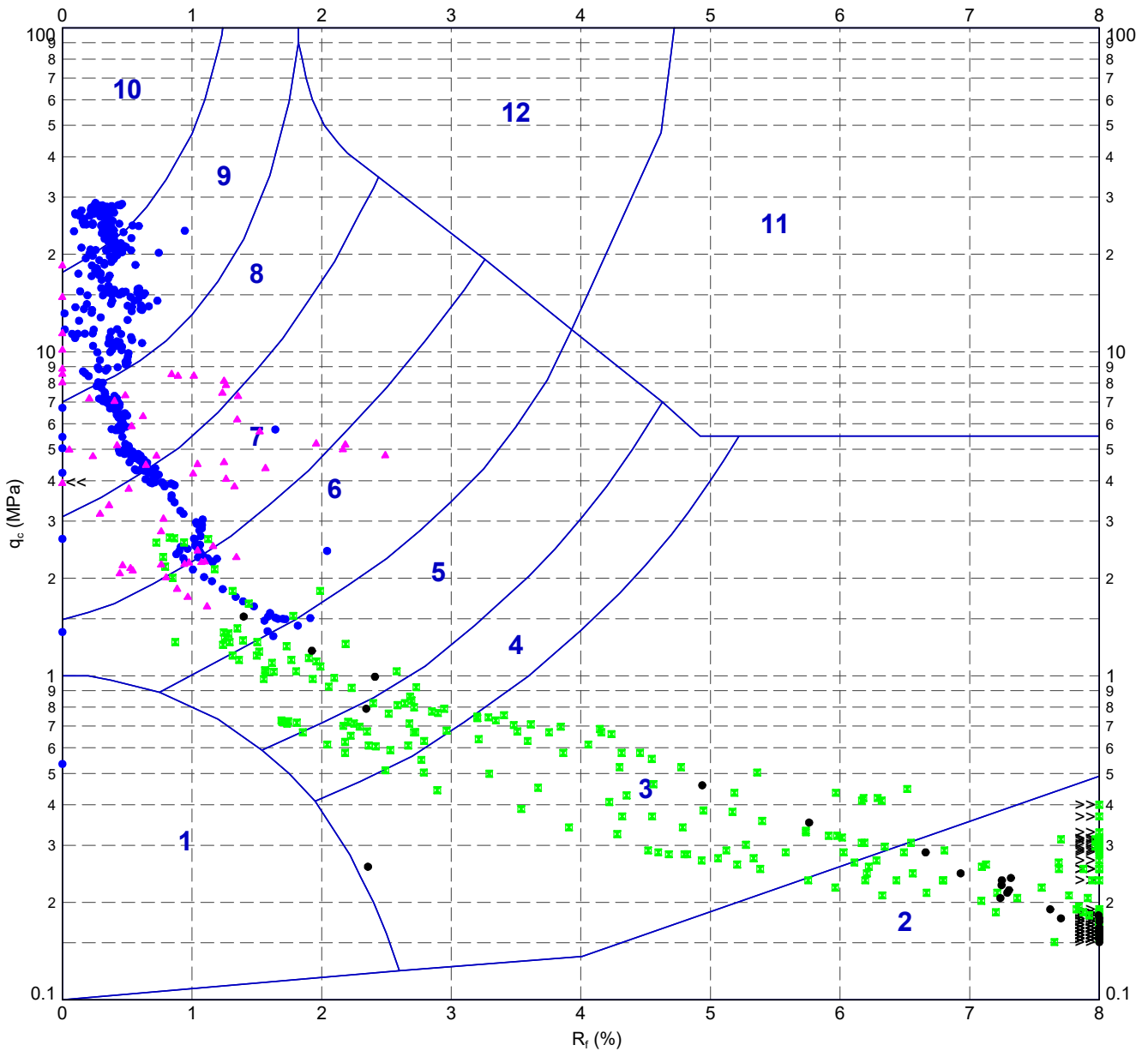
**METHOD: Robertson et al. 1986 qc Rf**

- 1 - Sensitive fine grained material
- 2 - Organic material
- 3 - CLAY
- 4 - Silty CLAY to CLAY
- 5 - Clayey SILT to silty CLAY
- 6 - Sandy SILT to clayey SILT
- 7 - Silty SAND to sandy SILT
- 8 - SAND to silty SAND
- 9 - SAND
- 10 - Gravelly SAND to SAND
- 11 - Very stiff fine grained
- 12 - SAND to clayey SAND

PointIDs: ● CPT 05 (Robertson 90-Robertson et al 86 qc rf)

 <b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	TITLE Client 1 Engineer 1 Somewhere CPT Tool Project Robertson et al. 1986 qc vs. Rf	DRAWN	Datgel	DATE	1/2/2021	
		CHECKED	Datgel	DATE	1/2/2021	
		SCALE	Not To Scale			Let
		PROJECT No	4.05.0		FIGURE No	323

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph CPT ROBERTSON ET AL. 86 QC VS. Rf U LETP.DATGEL.CPT TOOL DGD 4.05.0 EN.GPJ <-DrawingFile>> 1/22/2021 21:57 10.01.00.11 Datgel CPT Tool.gjINT Add-In



**METHOD: Robertson et al. 1986 qc Rf**

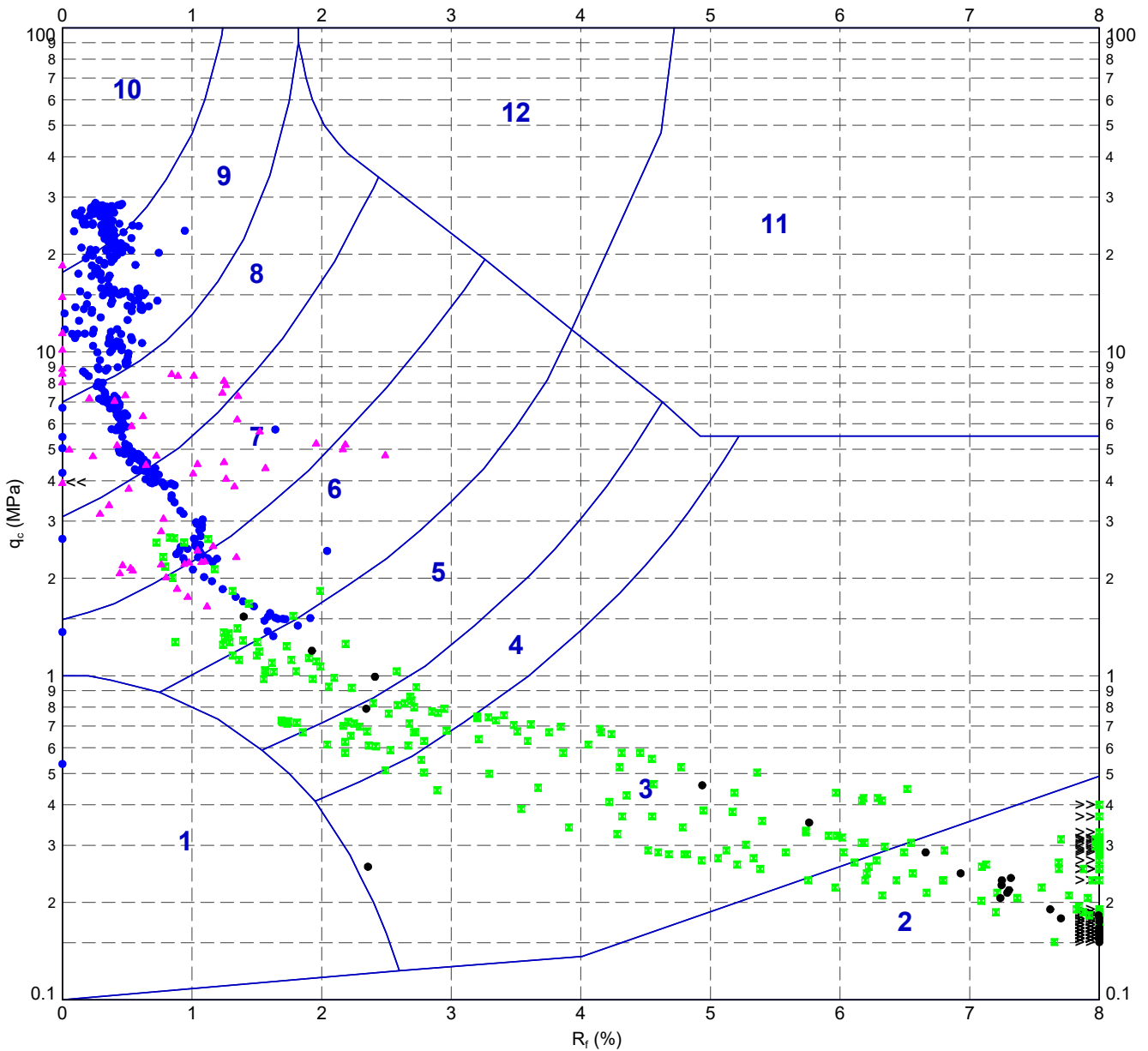
- |                                     |                               |                              |                              |
|-------------------------------------|-------------------------------|------------------------------|------------------------------|
| 1 - Sensitive fine grained material | 4 - Silty CLAY to CLAY        | 7 - Silty SAND to sandy SILT | 10 - Gravelly SAND to SAND   |
| 2 - Organic material                | 5 - Clayey SILT to silty CLAY | 8 - SAND to silty SAND       | 11 - Very stiff fine grained |
| 3 - CLAY                            | 6 - Sandy SILT to clayey SILT | 9 - SAND                     | 12 - SAND to clayey SAND     |

**Geology Unit Legend**

- |              |              |
|--------------|--------------|
| ★ D - Unit D | ⊕ J - Unit J |
| ● A - Unit A | ⊠ K - Unit K |
| ■ B - Unit B | ◇ R - Rock   |
| ▲ C - Unit C |              |
| ◆ F - Unit F |              |
| ○ G - Unit G |              |
| △ H - Unit H |              |
| ⊗ I - Unit I |              |

	TITLE	Client 1 Engineer 1 Somewhere CPT Tool Project Robertson et al. 1986 qc vs. Rf - CPT 04	DRAWN Datgel	DATE 1/2/2021
			CHECKED Datgel	DATE 1/2/2021
			SCALE Not To Scale	Let
			PROJECT No 4.05.0	FIGURE No 324

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph CPT ROBERTSON ET AL. 86 QC VS. RF UMLLET DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <<DrawingFile>> 1/2/2021 21:57:10.01.00.11 Datgel.CPT.Tool.gINT.Add-in



**METHOD: Robertson et al. 1986 qc Rf**

- |                                     |                               |                              |                              |
|-------------------------------------|-------------------------------|------------------------------|------------------------------|
| 1 - Sensitive fine grained material | 4 - Silty CLAY to CLAY        | 7 - Silty SAND to sandy SILT | 10 - Gravelly SAND to SAND   |
| 2 - Organic material                | 5 - Clayey SILT to silty CLAY | 8 - SAND to silty SAND       | 11 - Very stiff fine grained |
| 3 - CLAY                            | 6 - Sandy SILT to clayey SILT | 9 - SAND                     | 12 - SAND to clayey SAND     |

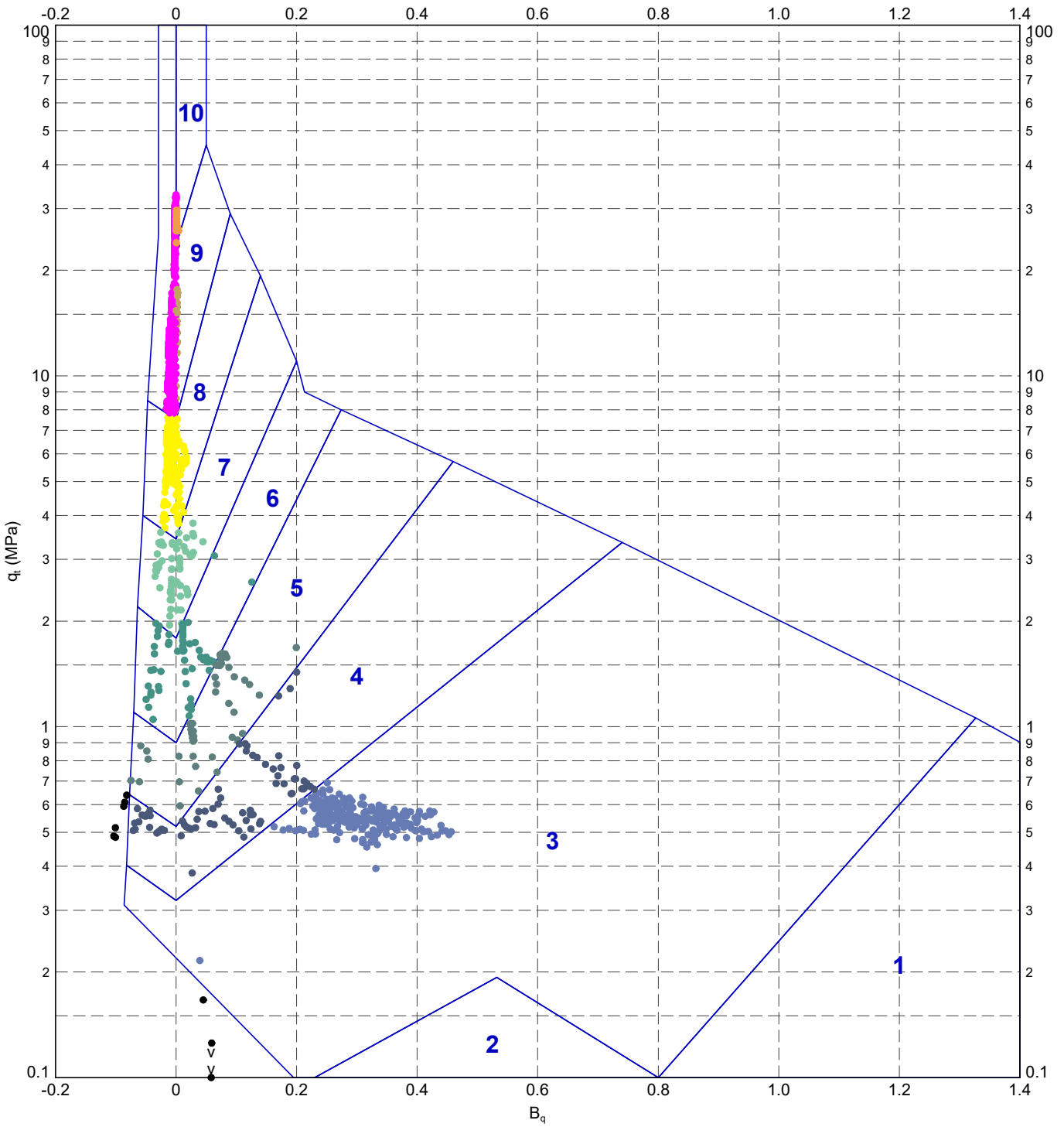
**Geology Unit Legend**

- |              |              |
|--------------|--------------|
| ★ D - Unit D | ⊕ J - Unit J |
| ● A - Unit A | ⊞ K - Unit K |
| ■ B - Unit B | ◇ R - Rock   |
| ▲ C - Unit C |              |
| ⊕ F - Unit F |              |
| ○ G - Unit G |              |
| △ H - Unit H |              |
| ⊗ I - Unit I |              |

PointIDs: CPT 04

	TITLE	Client 1 Engineer 1 Somewhere CPT Tool Project Robertson et al. 1986 qc vs. Rf	DRAWN	Datgel	DATE	1/2/2021
			CHECKED	Datgel	DATE	1/2/2021
			SCALE	Not To Scale		Let
			PROJECT No	4.05.0	FIGURE No	325

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph CPT ROBERTSON ET AL. 86 QT.VS. BQ.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <-DrawingFile>> 1/2/2021 21:57:10.01.00.11 Datgel.CPT.Tool.gINT.Add-In



**METHOD: Robertson et al. 1986**

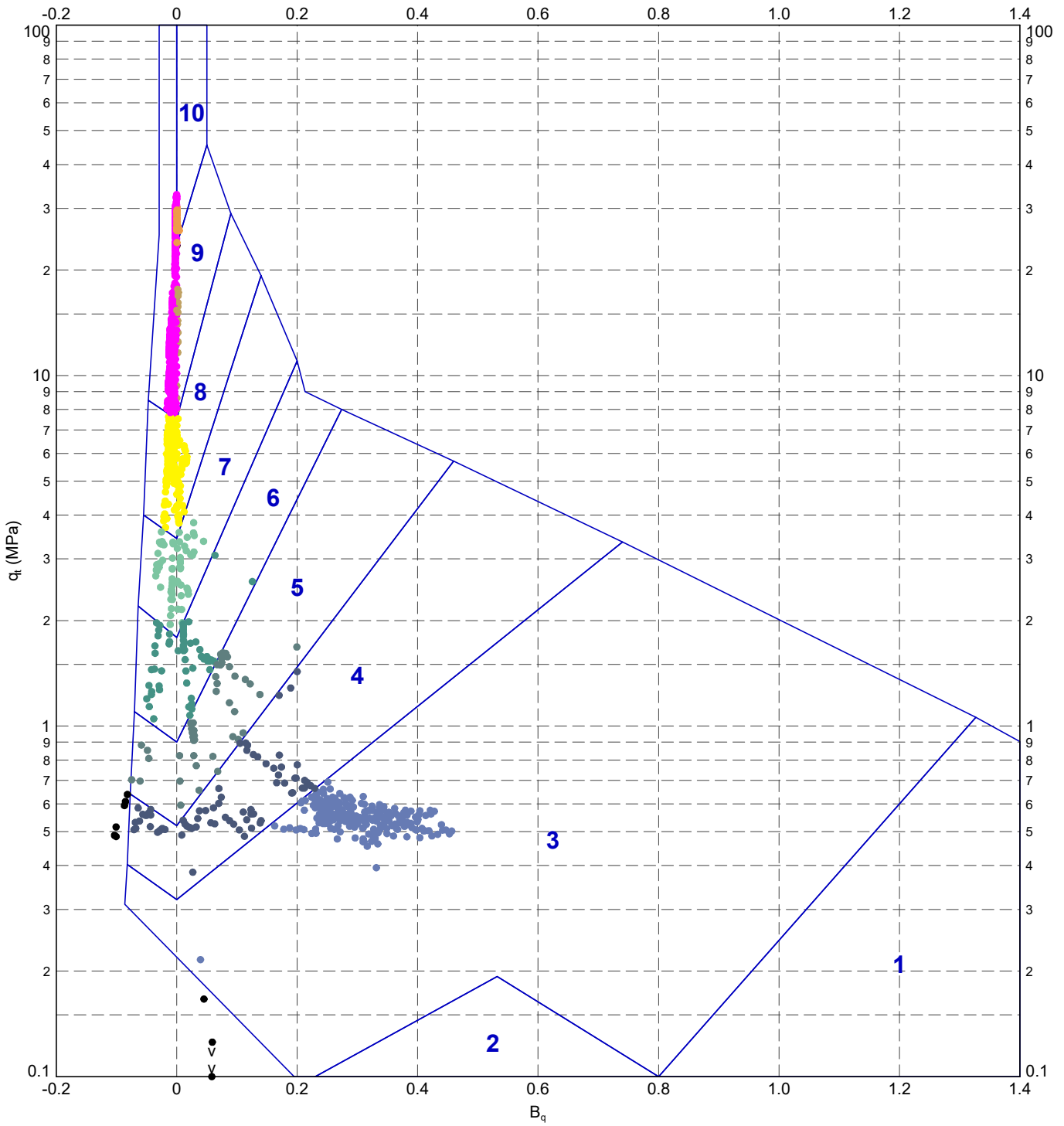
- |                                     |                               |                              |                              |
|-------------------------------------|-------------------------------|------------------------------|------------------------------|
| 1 - Sensitive fine grained material | 4 - Silty CLAY to CLAY        | 7 - Silty SAND to sandy SILT | 10 - Gravelly SAND to SAND   |
| 2 - Organic material                | 5 - Clayey SILT to silty CLAY | 8 - SAND to silty SAND       | 11 - Very stiff fine grained |
| 3 - CLAY                            | 6 - Sandy SILT to clayey SILT | 9 - SAND                     | 12 - SAND to clayey SAND     |



TITLE  
 Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Robertson et al. 1986  $q_t$  vs.  $B_q$  - CPT 05

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	326

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph CPT ROBERTSON ET AL. 86 QT.VS. BQ.MLETP.DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <-DrawingFile>> 1/22/2021 2:15:7 10.01.00.11 Datgel CPT Tool gINT Add-In



**METHOD: Robertson et al. 1986**

- |                                     |                               |                              |                              |
|-------------------------------------|-------------------------------|------------------------------|------------------------------|
| 1 - Sensitive fine grained material | 4 - Silty CLAY to CLAY        | 7 - Silty SAND to sandy SILT | 10 - Gravelly SAND to SAND   |
| 2 - Organic material                | 5 - Clayey SILT to silty CLAY | 8 - SAND to silty SAND       | 11 - Very stiff fine grained |
| 3 - CLAY                            | 6 - Sandy SILT to clayey SILT | 9 - SAND                     | 12 - SAND to clayey SAND     |

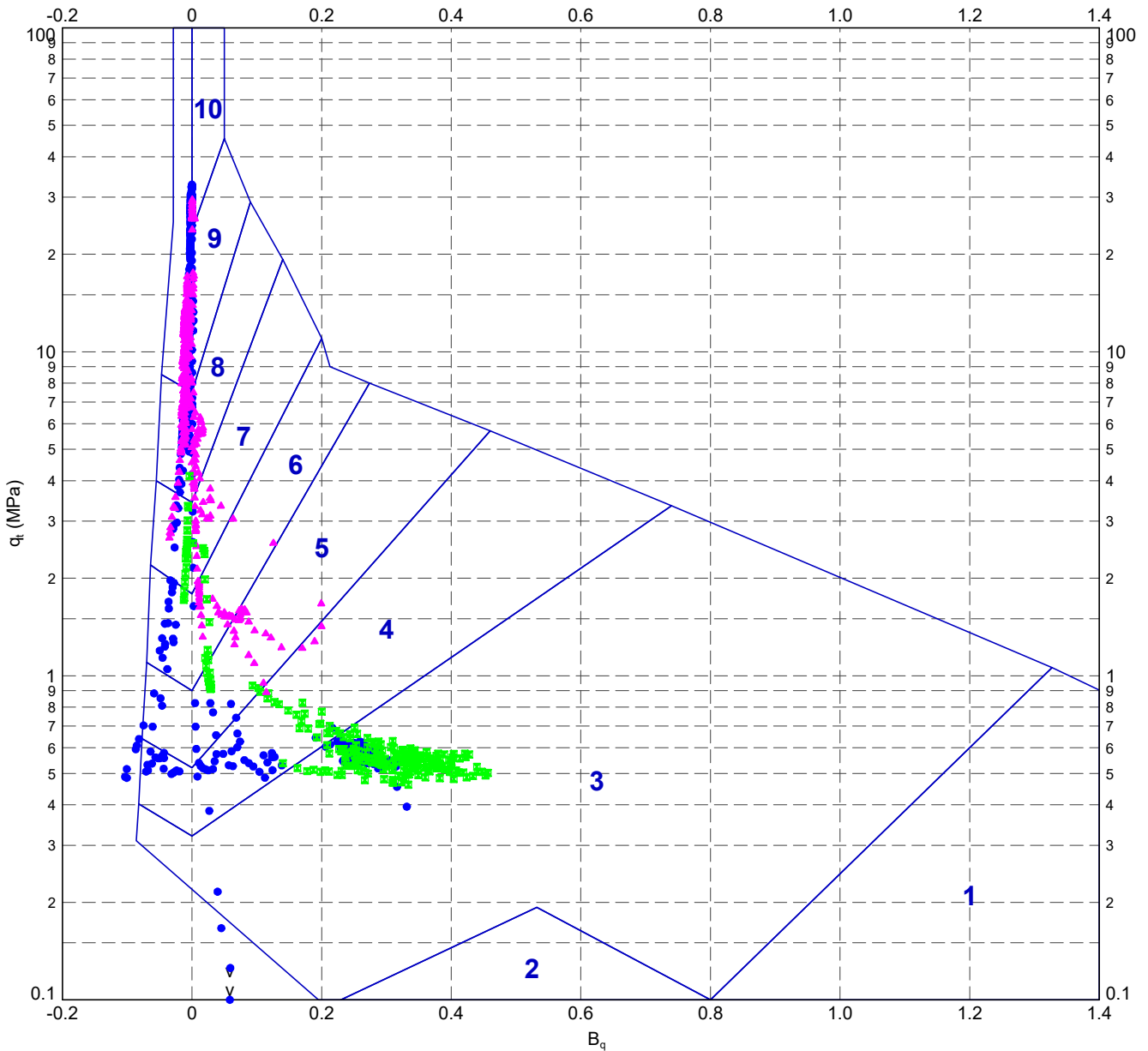
PointIDs: ● CPT 05



TITLE  
 Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Robertson et al. 1986  $q_t$  vs.  $B_q$

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	327

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph CPT ROBERTSON ET AL. 86 QT.VS. BQ.U LETP.DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <<DrawingFiles>> 1/2/2021 21:58:10.01.00.11.Datgel.CPT.Tool.gjINT.Add-In



**METHOD: Robertson et al. 1986**

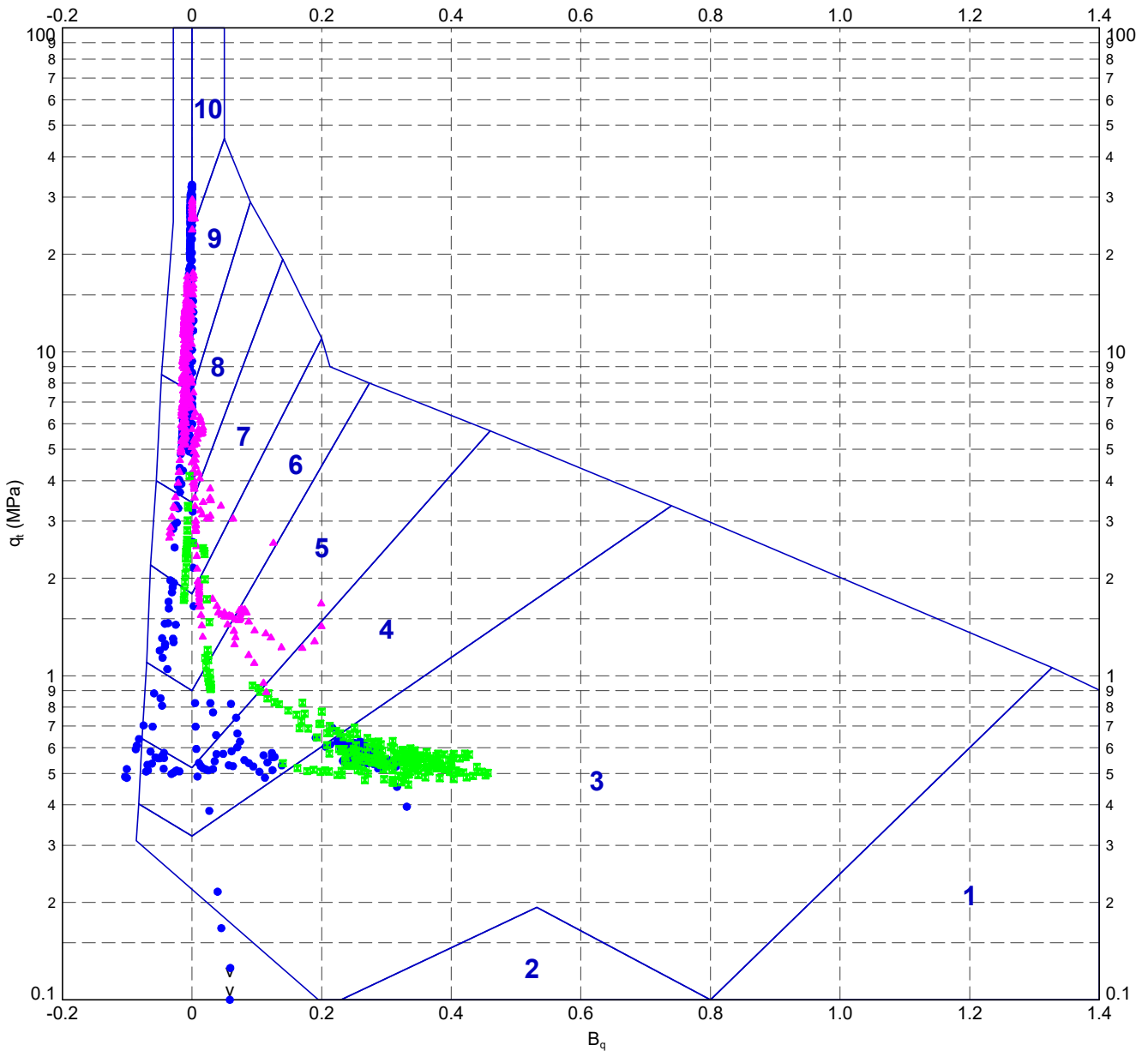
- |                                     |                               |                              |                              |
|-------------------------------------|-------------------------------|------------------------------|------------------------------|
| 1 - Sensitive fine grained material | 4 - Silty CLAY to CLAY        | 7 - Silty SAND to sandy SILT | 10 - Gravelly SAND to SAND   |
| 2 - Organic material                | 5 - Clayey SILT to silty CLAY | 8 - SAND to silty SAND       | 11 - Very stiff fine grained |
| 3 - CLAY                            | 6 - Sandy SILT to clayey SILT | 9 - SAND                     | 12 - SAND to clayey SAND     |

**Geology Unit Legend**

- |              |              |
|--------------|--------------|
| ★ D - Unit D | ⊕ J - Unit J |
| ● A - Unit A | □ K - Unit K |
| ■ B - Unit B | ◇ R - Rock   |
| ▲ C - Unit C |              |
| ◆ F - Unit F |              |
| ○ G - Unit G |              |
| △ H - Unit H |              |
| ⊗ I - Unit I |              |

	TITLE	Client 1 Engineer 1 Somewhere CPT Tool Project Robertson et al. 1986 $q_t$ vs. $B_q$ - CPT 05	
	DRAWN	Datgel	DATE 1/2/2021
	CHECKED	Datgel	DATE 1/2/2021
	SCALE	Not To Scale	
PROJECT No	4.05.0	FIGURE No	328

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph CPT ROBERTSON ET AL. 86 QT VS. BQ UMLET DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <<DrawingFiles>> 1/2/2021 2:1:58 10:01:00.11 Datgel.CPT.Tool.gINT.Add-In



**METHOD: Robertson et al. 1986**

- |                                     |                               |                              |                              |
|-------------------------------------|-------------------------------|------------------------------|------------------------------|
| 1 - Sensitive fine grained material | 4 - Silty CLAY to CLAY        | 7 - Silty SAND to sandy SILT | 10 - Gravelly SAND to SAND   |
| 2 - Organic material                | 5 - Clayey SILT to silty CLAY | 8 - SAND to silty SAND       | 11 - Very stiff fine grained |
| 3 - CLAY                            | 6 - Sandy SILT to clayey SILT | 9 - SAND                     | 12 - SAND to clayey SAND     |

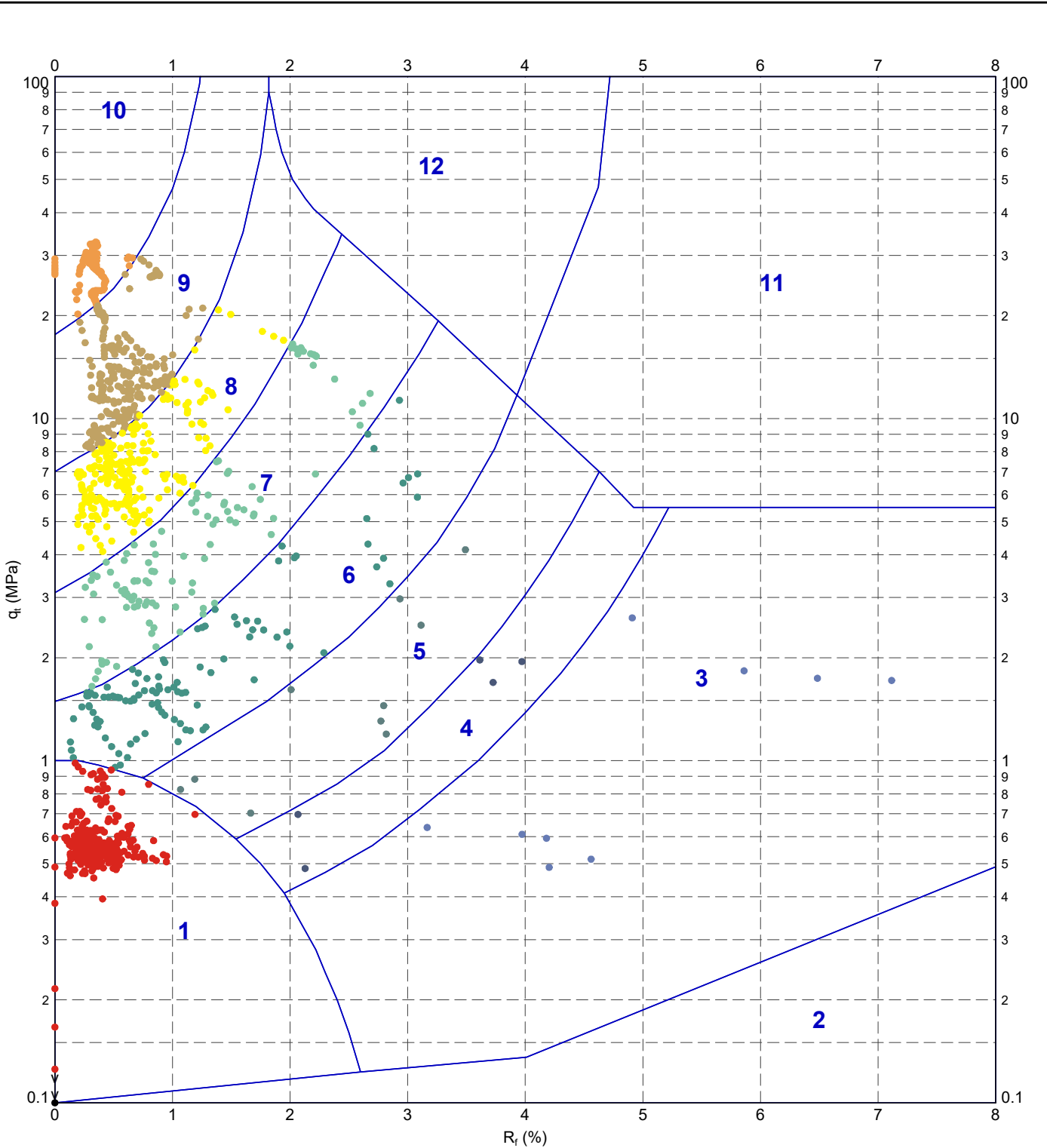
**Geology Unit Legend**

- |              |              |
|--------------|--------------|
| ★ D - Unit D | ⊕ J - Unit J |
| ● A - Unit A | □ K - Unit K |
| ■ B - Unit B | ◇ R - Rock   |
| ▲ C - Unit C |              |
| ⊕ F - Unit F |              |
| ○ G - Unit G |              |
| △ H - Unit H |              |
| ⊗ I - Unit I |              |

PointIDs: CPT 05


	TITLE	Client 1 Engineer 1 Somewhere CPT Tool Project Robertson et al. 1986 $q_t$ vs. $B_q$	DRAWN Datgel	DATE 1/2/2021
			CHECKED Datgel	DATE 1/2/2021
			SCALE Not To Scale	Let
			PROJECT No 4.05.0	FIGURE No 329

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph CPT ROBERTSON ET AL. 86 QT.VS. RF LETP.DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <<DrawingFiles>> 1/2/2021 21:58 10.01.00.11 Datgel CPT Tool gINT Add-In



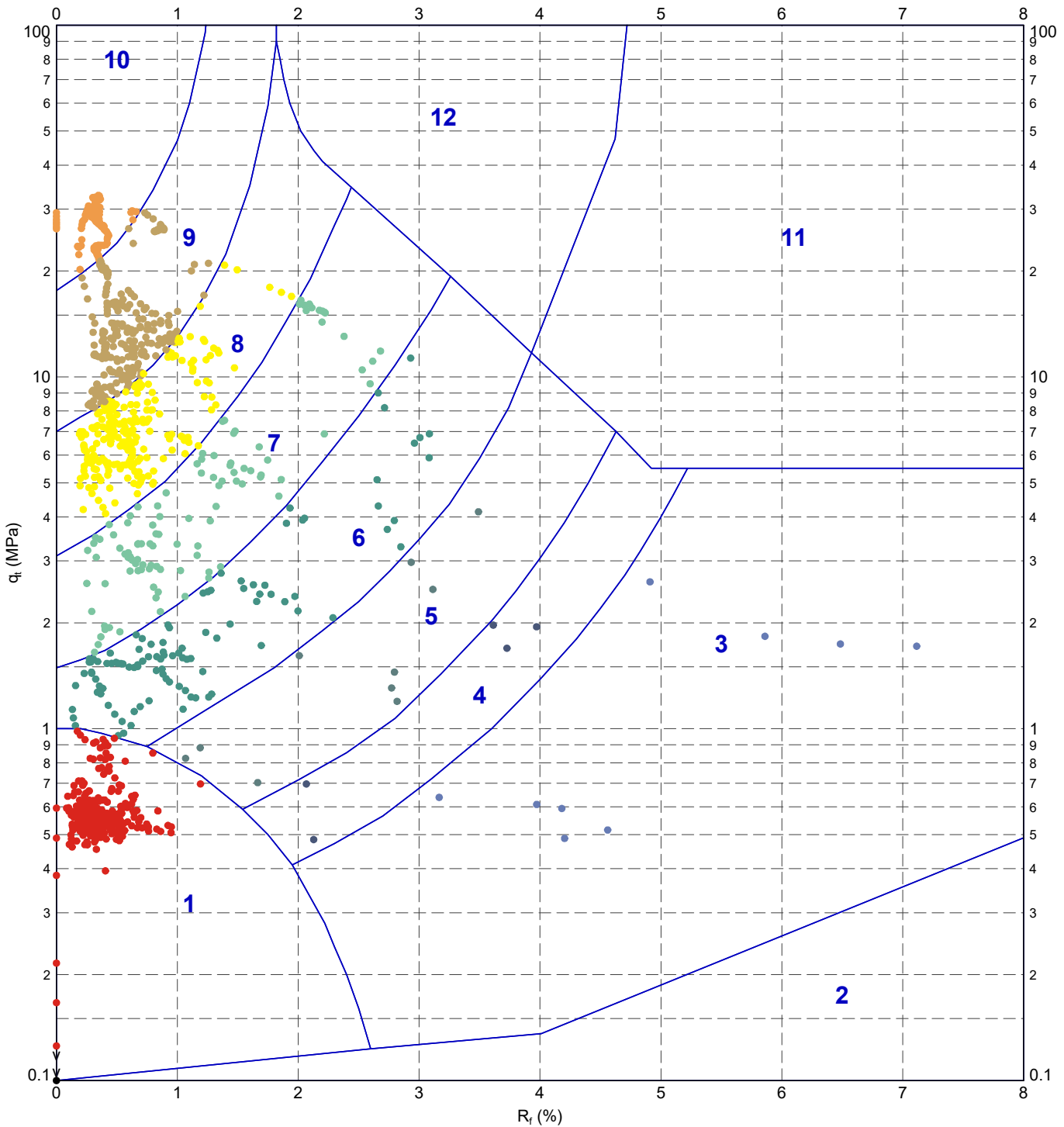
**METHOD: Robertson et al. 1986**

- 1 - Sensitive fine grained material
- 2 - Organic material
- 3 - CLAY
- 4 - Silty CLAY to CLAY
- 5 - Clayey SILT to silty CLAY
- 6 - Sandy SILT to clayey SILT
- 7 - Silty SAND to sandy SILT
- 8 - SAND to silty SAND
- 9 - SAND
- 10 - Gravelly SAND to SAND
- 11 - Very stiff fine grained
- 12 - SAND to clayey SAND

	<b>TITLE</b> Client 1 Engineer 1 Somewhere CPT Tool Project Robertson et al. 1986 $q_t$ vs. $R_f$ - CPT 05	<b>DRAWN</b> Datgel	<b>DATE</b> 1/2/2021	
		<b>CHECKED</b> Datgel	<b>DATE</b> 1/2/2021	
		<b>SCALE</b> Not To Scale		<b>Let</b>
		<b>PROJECT No</b> 4.05.0	<b>FIGURE No</b> 330	



DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph CPT.ROBERTSON ET AL. 86 QT.VS. RF M.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <<DrawingFile>> 1/2/2021 21:59:10.01.00.11.Datgel.CPT.Tool.gjINT.Add-In



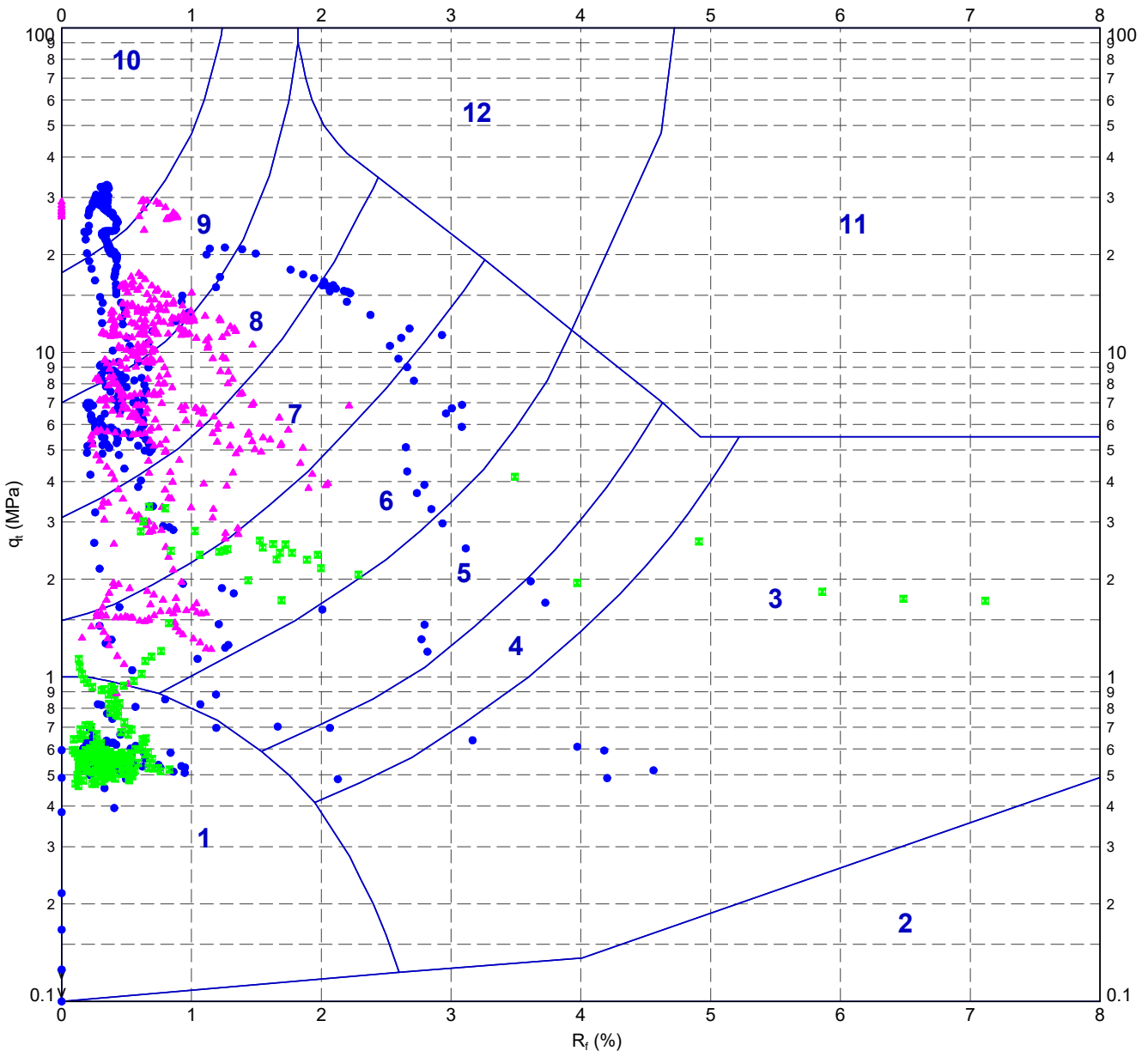
**METHOD: Robertson et al. 1986**

- 1 - Sensitive fine grained material
- 4 - Silty CLAY to CLAY
- 7 - Silty SAND to sandy SILT
- 10 - Gravelly SAND to SAND
- 2 - Organic material
- 5 - Clayey SILT to silty CLAY
- 8 - SAND to silty SAND
- 11 - Very stiff fine grained
- 3 - CLAY
- 6 - Sandy SILT to clayey SILT
- 9 - SAND
- 12 - SAND to clayey SAND

PointIDs: ● CPT 05

 <b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	TITLE Client 1 Engineer 1 Somewhere CPT Tool Project Robertson et al. 1986 $q_t$ vs. $R_f$	DRAWN Datgel	DATE 1/2/2021	
		CHECKED Datgel	DATE 1/2/2021	
		SCALE Not To Scale		Let
		PROJECT No 4.05.0	FIGURE No 331	

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph CPT ROBERTSON ET AL. 86 QT.VS. RF U.LETTP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <-DrawingFiles> 1/2/2021 21:59 10.01.00.11.Datgel.CPT.Tool.gINT.Acd:h



**METHOD: Robertson et al. 1986**

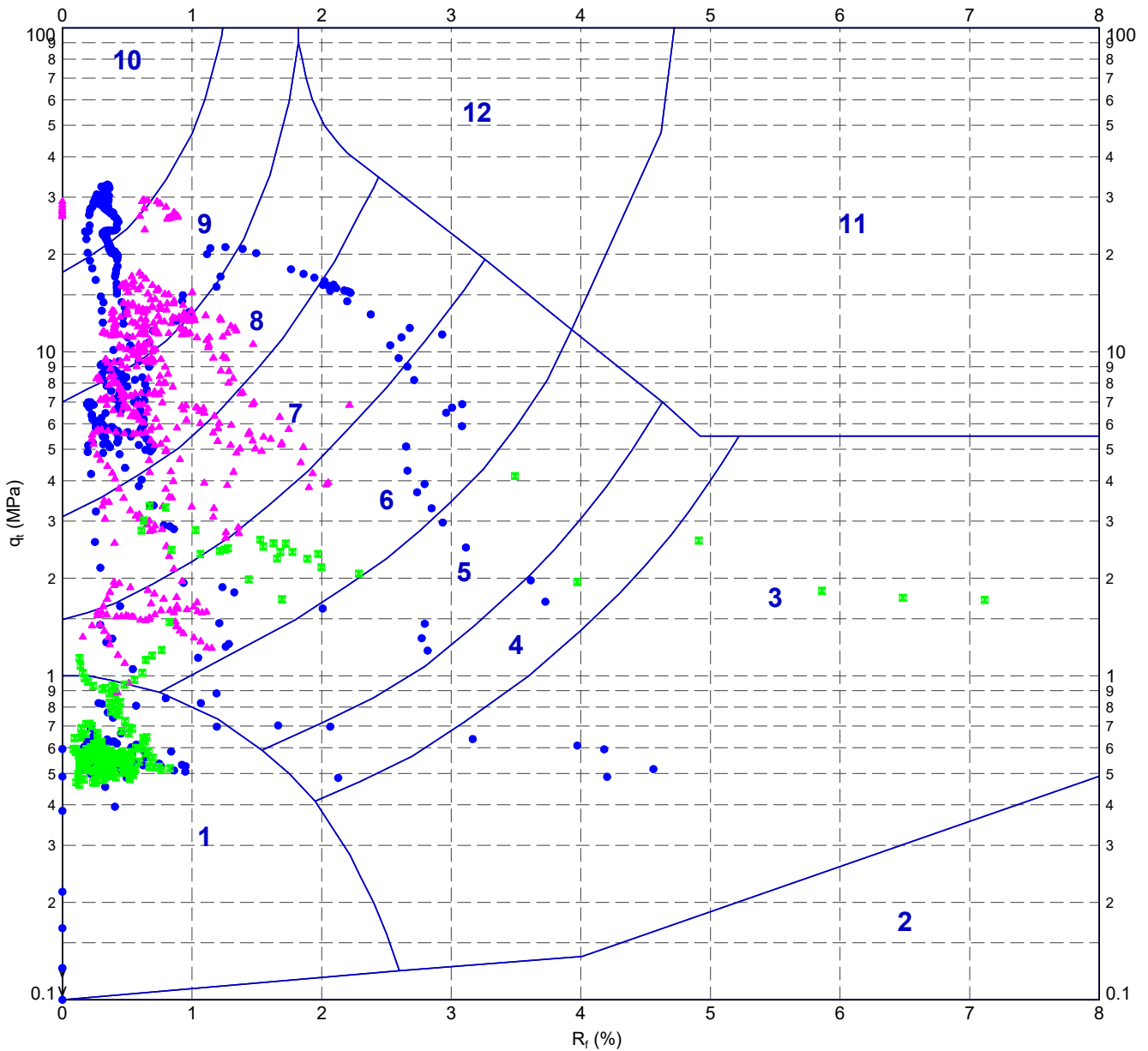
- |                                     |                               |                              |                              |
|-------------------------------------|-------------------------------|------------------------------|------------------------------|
| 1 - Sensitive fine grained material | 4 - Silty CLAY to CLAY        | 7 - Silty SAND to sandy SILT | 10 - Gravelly SAND to SAND   |
| 2 - Organic material                | 5 - Clayey SILT to silty CLAY | 8 - SAND to silty SAND       | 11 - Very stiff fine grained |
| 3 - CLAY                            | 6 - Sandy SILT to clayey SILT | 9 - SAND                     | 12 - SAND to clayey SAND     |

**Geology Unit Legend**

- |              |              |
|--------------|--------------|
| ★ D - Unit D | ⊕ J - Unit J |
| ● A - Unit A | ⊠ K - Unit K |
| ■ B - Unit B | ◇ R - Rock   |
| ▲ C - Unit C |              |
| ◆ F - Unit F |              |
| ○ G - Unit G |              |
| △ H - Unit H |              |
| ⊗ I - Unit I |              |

	TITLE	Client 1 Engineer 1 Somewhere CPT Tool Project Robertson et al. 1986 $q_t$ vs. $R_f$ - CPT 05	DRAWN Datgel	DATE 1/2/2021
			CHECKED Datgel	DATE 1/2/2021
			SCALE Not To Scale	Let
			PROJECT No 4.05.0	FIGURE No 332

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph CPT ROBERTSON ET AL. 86 QT VS. Rf UML LET DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <-DrawingFiles> 1/2/2021 21:59:10.01.00.11 Datgel CPT Tool gINT Add-In




**METHOD: Robertson et al. 1986**

- |                                     |                               |                              |                              |
|-------------------------------------|-------------------------------|------------------------------|------------------------------|
| 1 - Sensitive fine grained material | 4 - Silty CLAY to CLAY        | 7 - Silty SAND to sandy SILT | 10 - Gravelly SAND to SAND   |
| 2 - Organic material                | 5 - Clayey SILT to silty CLAY | 8 - SAND to silty SAND       | 11 - Very stiff fine grained |
| 3 - CLAY                            | 6 - Sandy SILT to clayey SILT | 9 - SAND                     | 12 - SAND to clayey SAND     |

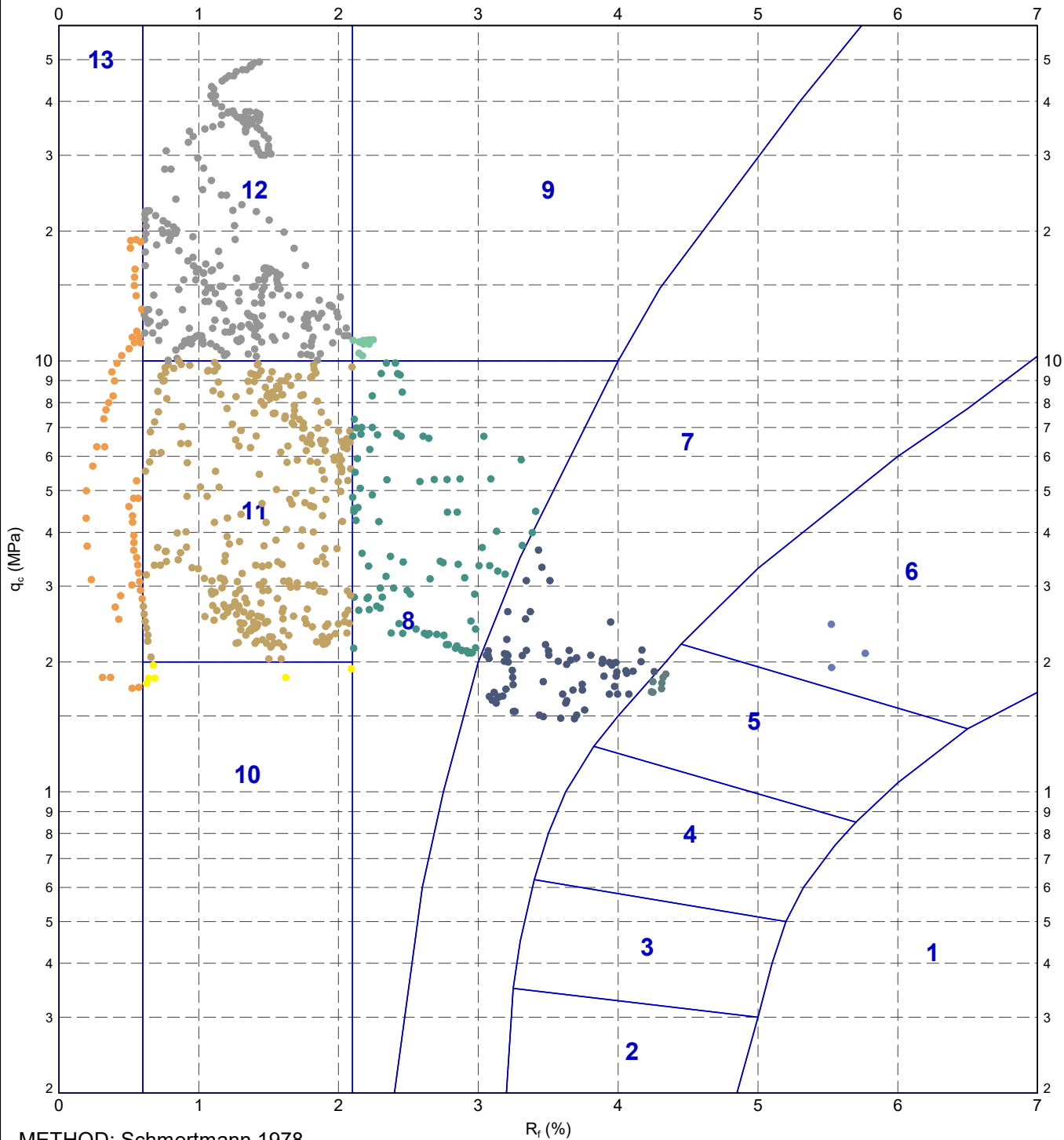
**Geology Unit Legend**

- |              |              |
|--------------|--------------|
| ★ D - Unit D | ⊕ J - Unit J |
| ● A - Unit A | □ K - Unit K |
| ■ B - Unit B | ◇ R - Rock   |
| ▲ C - Unit C |              |
| ◆ F - Unit F |              |
| ○ G - Unit G |              |
| △ H - Unit H |              |
| ⊗ I - Unit I |              |

PointIDs: CPT 05

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Robertson et al. 1986 <math>q_t</math> vs. <math>R_f</math></p>	<p>DRAWN Datgel</p>	<p>DATE 1/2/2021</p>
		<p>CHECKED Datgel</p>	<p>DATE 1/2/2021</p>
		<p>SCALE Not To Scale</p>	<p>Let</p>
		<p>PROJECT No 4.05.0</p>	<p>FIGURE No 333</p>

DATGEL CPT TOOL.DGD 4.05.0 LIB.GLB Graph: CPT SCHMIERTMANN 1978 LETP DATGEL CPT TOOL.DGD 4.05.0 EN.GPJ <<DrawingFile>> 1/22/2021 21:59:10.01.00.11 Datgel CPT Tool glINT Acid-In



**METHOD: Schmertmann 1978**

- |   |  |                             |                                  |
|---|--|-----------------------------|----------------------------------|
| 1 - Organic CLAYS & Mixed Soils                       | 5 - Stiff insensitive non-fissured inorganic CLAY      | 9 - SILT-SAND Mixtures      | 13 - Very SHELL SANDS, LIMEROCKS |
| 2 - Very soft insensitive non-fissured inorganic CLAY | 6 - Very stiff Insensitive non-fissured inorganic CLAY | 10 - Loose SAND             |                                  |
| 3 - Soft insensitive non-fissured inorganic CLAY      | 7 - Sandy and silty CLAYS                              | 11 - SAND                   |                                  |
| 4 - Medium insensitive non-fissured inorganic CLAY    | 8 - Clayey-SANDS and SILTS                             | 12 - Dense or cemented SAND |                                  |

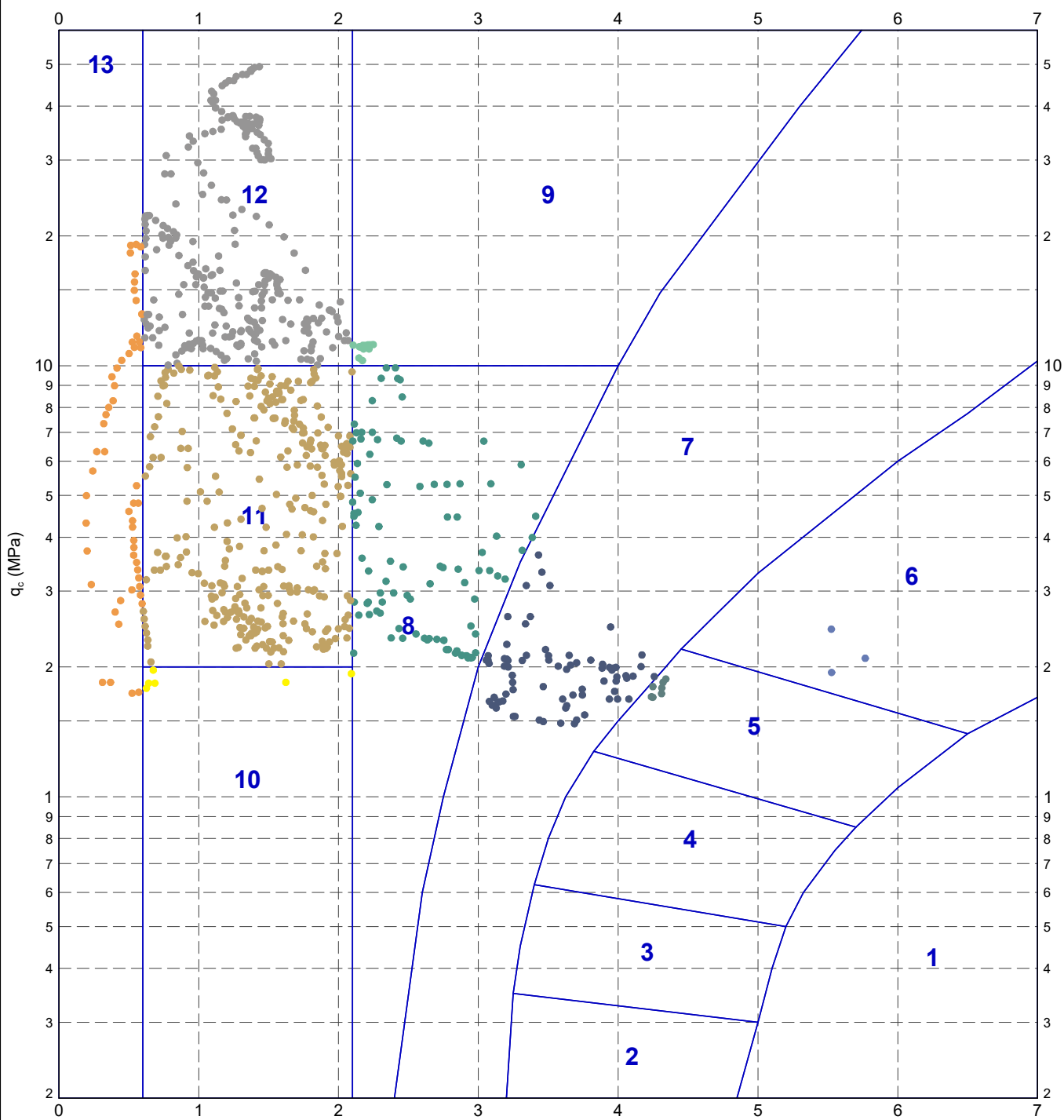


TITLE

Client 1  
Engineer 1  
Somewhere  
CPT Tool Project  
Schmertmann 1978  $q_c$  vs.  $R_f$  - CPT 00

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	334

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph: CPT SCHMIERTMANN 1978 M LETTP DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <<DrawingFile>> 1/2/2021 22:00 10.01.00.11 Datgel CPT Tool.gINT Add-In



**METHOD: Schmertmann 1978**

- 1 - Organic CLAYS & Mixed Soils
- 5 - Stiff insensitive non-fissured inorganic CLAY
- 9 - SILT-SAND Mixtures
- 13 - Very SHELL SANDS, LIMEROCKS
- 2 - Very soft insensitive non-fissured inorganic CLAY
- 6 - Very stiff Insensitive non-fissured inorganic CLAY
- 10 - Loose SAND
- 3 - Soft insensitive non-fissured inorganic CLAY
- 7 - Sandy and silty CLAYS
- 11 - SAND
- 4 - Medium insensitive non-fissured inorganic CLAY
- 8 - Clayey-SANDS and SILTS
- 12 - Dense or cemented SAND

PointIDs: ● CPT 00

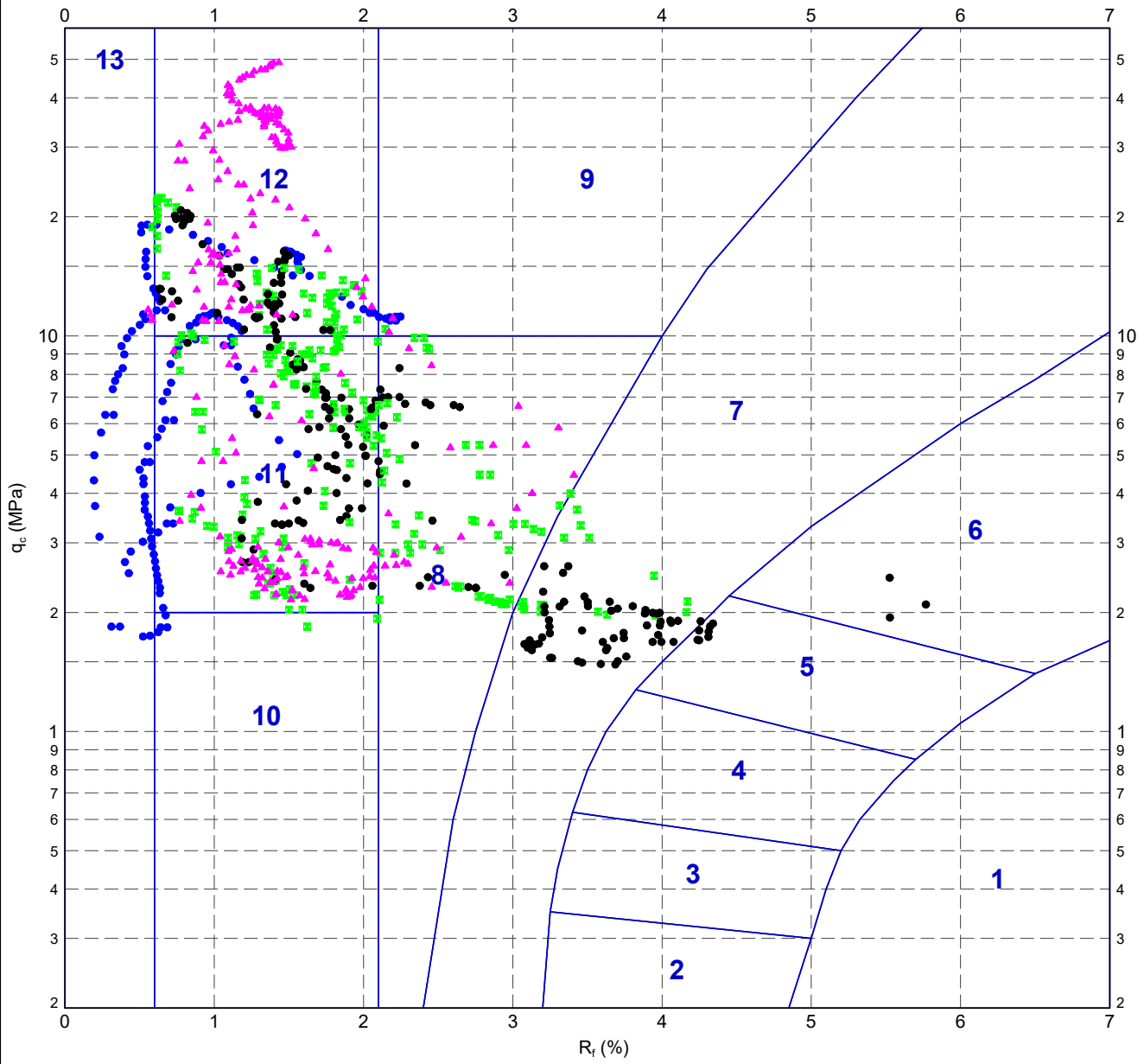


TITLE

Client 1  
Engineer 1  
Somewhere  
CPT Tool Project  
Schmertmann 1978  $q_c$  vs.  $R_f$

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	335

DATGEL CPT TOOL\_DGD 4.05.0 LIB.GLB Graph CPT SCHMERTMANN 1978 U LETP DATGEL CPT TOOL\_DGD 4.05.0 EN.GPJ <<DrawingFile>> 1/2/2021 22:00 10.01.00.11 Datgel CPT Tool gINT Add-In



**Geology Unit Legend**

- ★ D - Unit D
- A - Unit A
- B - Unit B
- ▲ C - Unit C
- ◆ F - Unit F
- G - Unit G
- △ H - Unit H
- ⊗ I - Unit I
- ⊕ J - Unit J
- K - Unit K
- ◇ R - Rock

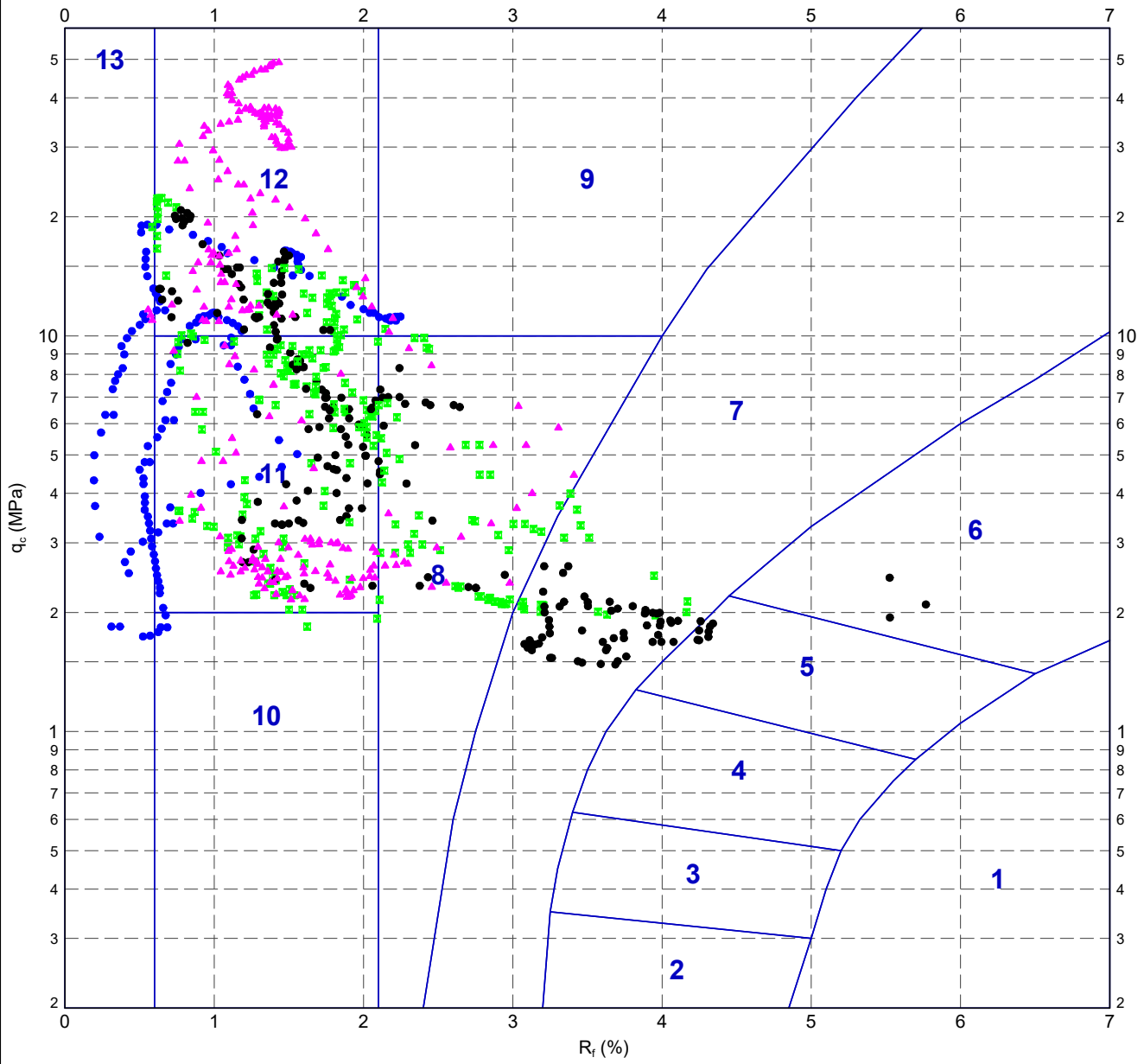


TITLE

Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Schmertmann 1978  $q_c$  vs.  $R_f$  - CPT 00

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	336

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph CPT SCHMIERTMANN 1978 UM LETP DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <-DrawingFiles> 1/22/2021 22:00 10.01.00.11 Datgel CPT Tool gINT Add-in



**Geology Unit Legend**

- ★ D - Unit D
- A - Unit A
- B - Unit B
- ▲ C - Unit C
- ◆ F - Unit F
- G - Unit G
- △ H - Unit H
- ⊗ I - Unit I
- ⊕ J - Unit J
- K - Unit K
- ◇ R - Rock

PointIDs: CPT 00

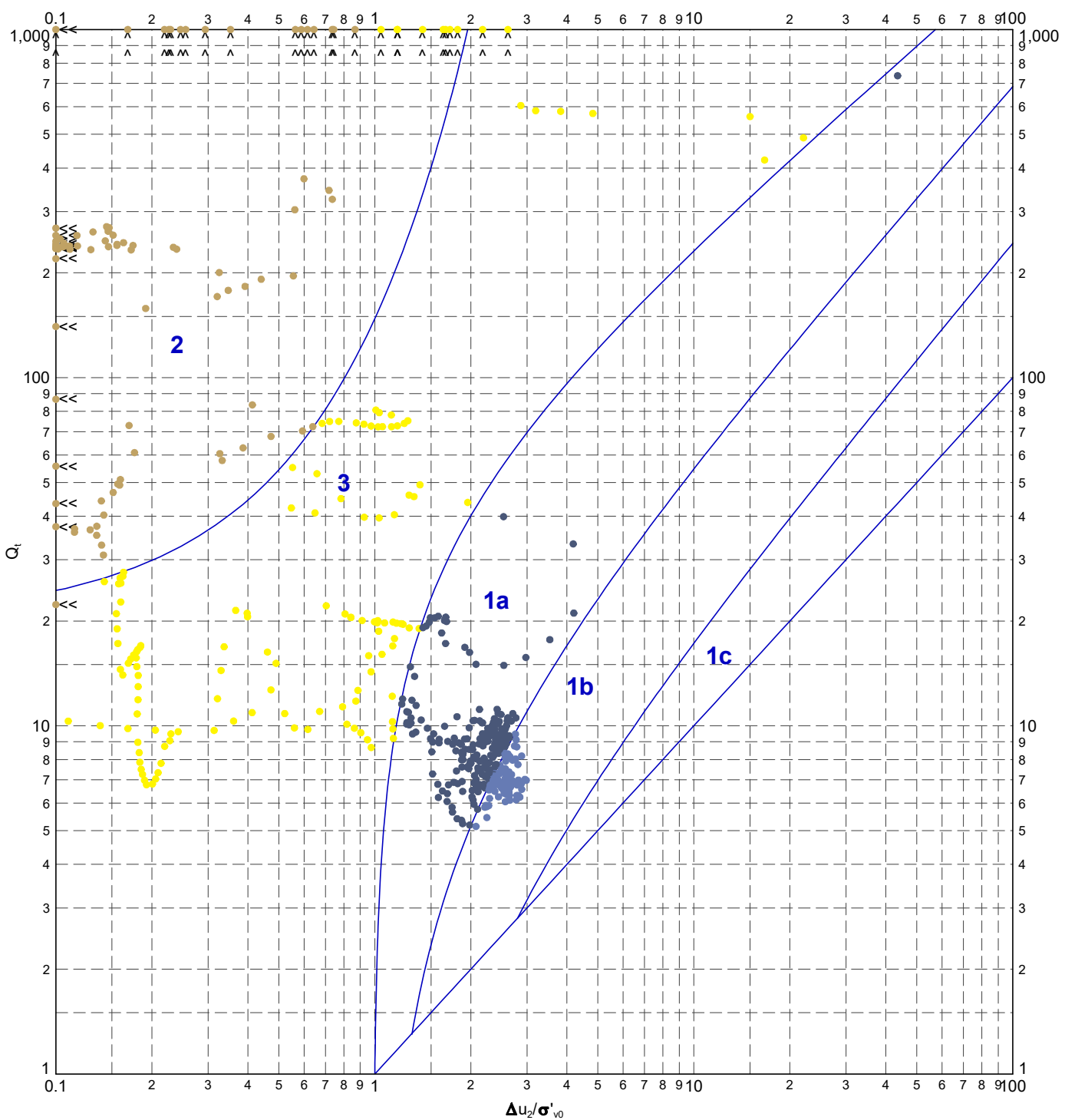


TITLE

Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Schmertmann 1978  $q_c$  vs.  $R_f$


DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	337

DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.SCHNEIDER.ET.AL.08.LOG-LOG.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPI.<-DrawingFile>> 1/2/2021 22:00 10.01.00.11.Datgel.CPT.Tool.gINT.Add-in



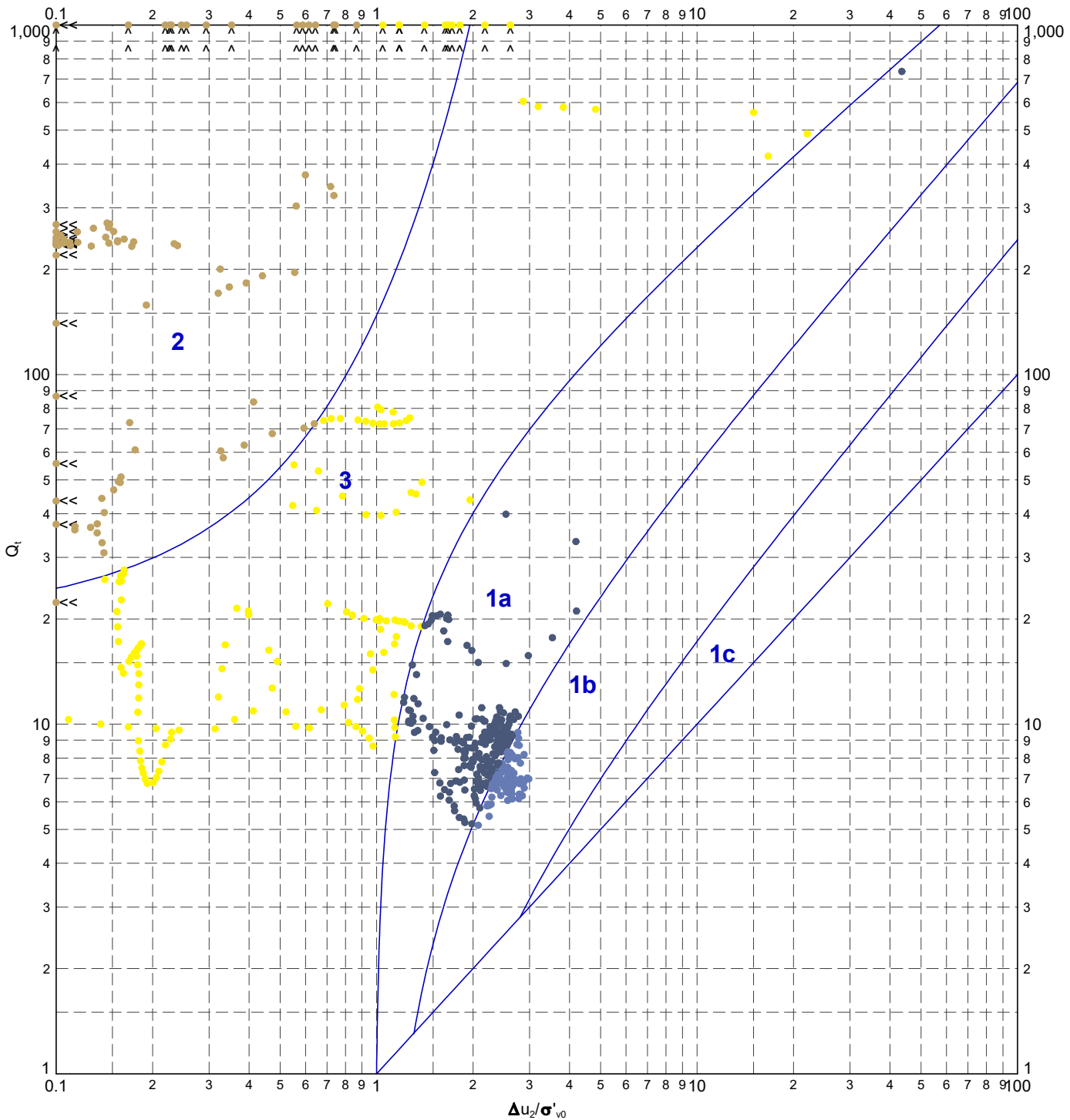
**METHOD: Schneider et al. 2008**

- 1a - Silts and 'Low I<sub>r</sub>' CLAYS
- 1b - CLAYS
- 1c - Sensitive CLAYS
- 2 - Essentially drained SANDS
- 3 - Transitional soils

 <b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	<b>TITLE</b> Client 1 Engineer 1 Somewhere CPT Tool Project Schneider et al. 2008 $Q_t$ vs. $\Delta u_2 / \sigma'_{v0}$ - CPT 05 Schneider	<b>DRAWN</b> Datgel	<b>DATE</b> 1/2/2021	
	<b>CHECKED</b> Datgel		<b>DATE</b> 1/2/2021	
	<b>SCALE</b> Not To Scale			Let
	<b>PROJECT No</b> 4.05.0		<b>FIGURE No</b> 338	



DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph CPT SCHNEIDER ET AL\_08.LOG-LOG.MLETF DATGEL CPT TOOL DGD 4.05.0.EN.GPJ <<DrawingFile>> 1/2/2021 22:00:10.01.00.11 Datgel CPT Tool gINT Add-In



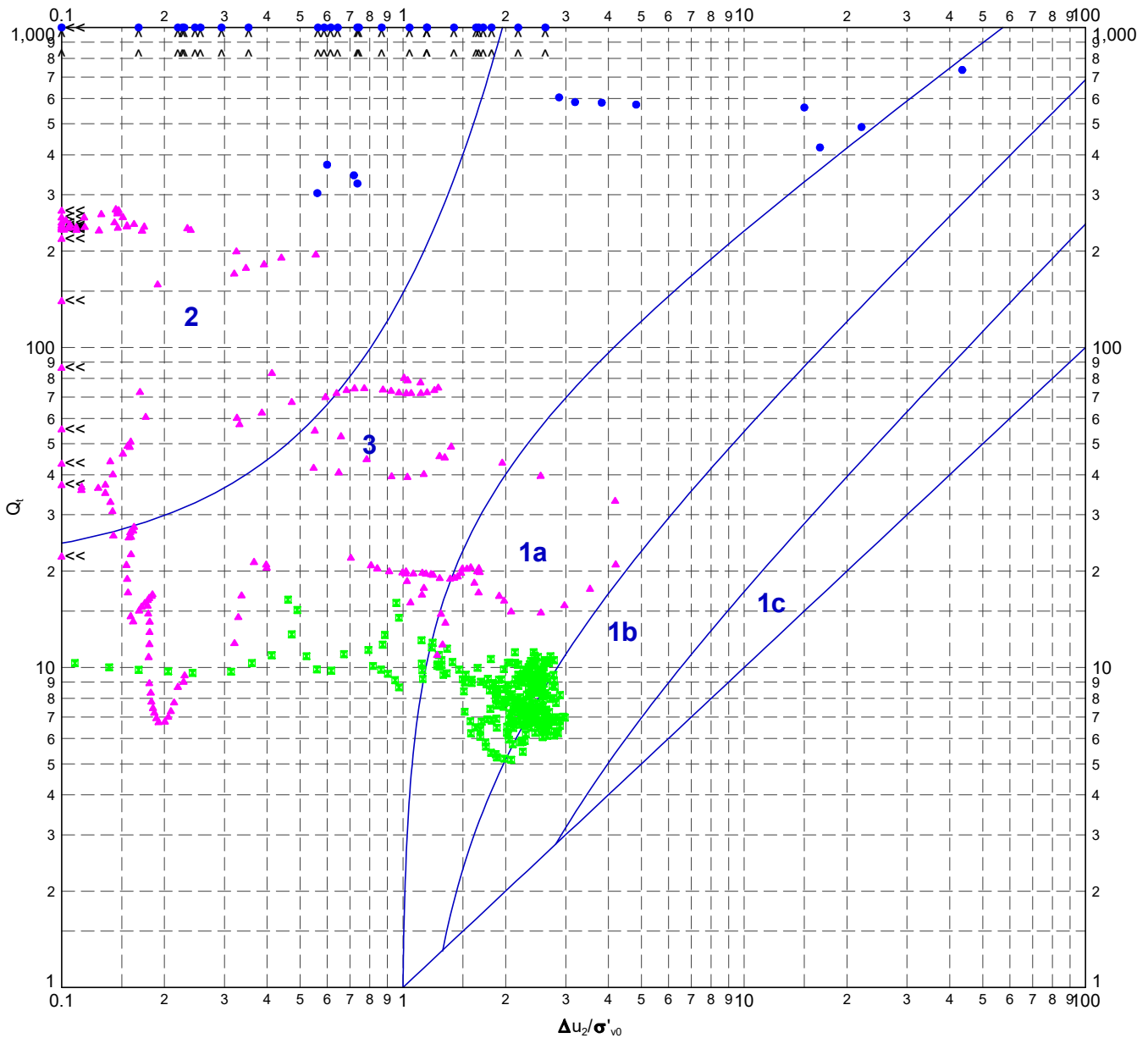
**METHOD: Schneider et al. 2008**

- 1a - Silts and 'Low I<sub>r</sub>' CLAYS
- 1b - CLAYS
- 1c - Sensitive CLAYS
- 2 - Essentially drained SANDS
- 3 - Transitional soils

PointIDs: ● CPT 05 Schneider

	TITLE Client 1 Engineer 1 Somewhere CPT Tool Project Schneider et al. 2008 $Q_t$ vs. $\Delta u_2 / \sigma'_{v0}$		DRAWN Datgel	DATE 1/2/2021	
			CHECKED Datgel	DATE 1/2/2021	
	SCALE Not To Scale			Let	
	PROJECT No 4.05.0		FIGURE No 339		

DATGEL CPT TOOL\_DGD\_4.05.0.LIB.GLB Graph CPT SCHNEIDER ET AL\_08.LOG-I.OG.U.LETTP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <<DrawingFile>> 1/22/2021 22:00:10.01.00.11 Datgel CPT Tool gINT Add-In



**METHOD: Schneider et al. 2008**

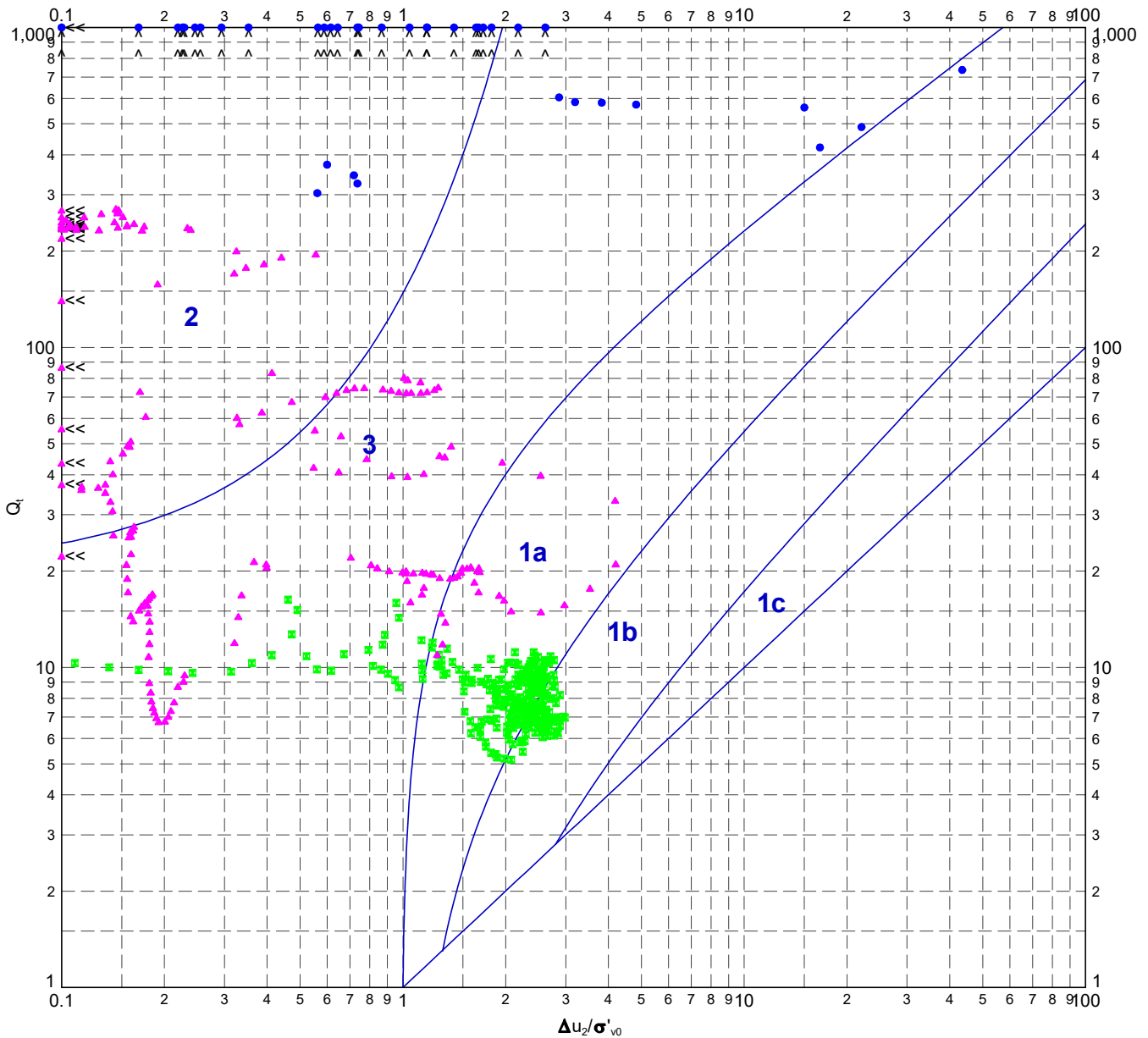
- 1a - Silts and 'Low Ir' CLAYS
- 1b - CLAYS
- 1c - Sensitive CLAYS
- 2 - Essentially drained SANDS
- 3 - Transitional soils

**Geology Unit Legend**

- ★ D - Unit D
- ⊕ J - Unit J
- A - Unit A
- K - Unit K
- B - Unit B
- ◇ R - Rock
- ▲ C - Unit C
- 
- ◆ F - Unit F
- 
- G - Unit G
- 
- △ H - Unit H
- 
- ⊗ I - Unit I
- 

<p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Schneider et al. 2008 <math>Q_t</math> vs. <math>\Delta u_2 / \sigma'_{v0}</math> - CPT 05 Schneider</p>	DRAWN	Datgel	DATE	1/2/2021	
			CHECKED	Datgel	DATE	1/2/2021
			SCALE	Not To Scale		Let
			PROJECT No	4.05.0	FIGURE No	340

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph CPT SCHNEIDER ET AL\_08.LOG-I.OG UM LETP.DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <-DrawingFile>> 1/22/2021 22:01 10.01.00.11 Datgel CPT Tool.gjINT Add-In



**METHOD: Schneider et al. 2008**

- 1a - Silts and 'Low Ir' CLAYS
- 1b - CLAYS
- 1c - Sensitive CLAYS
- 2 - Essentially drained SANDS
- 3 - Transitional soils

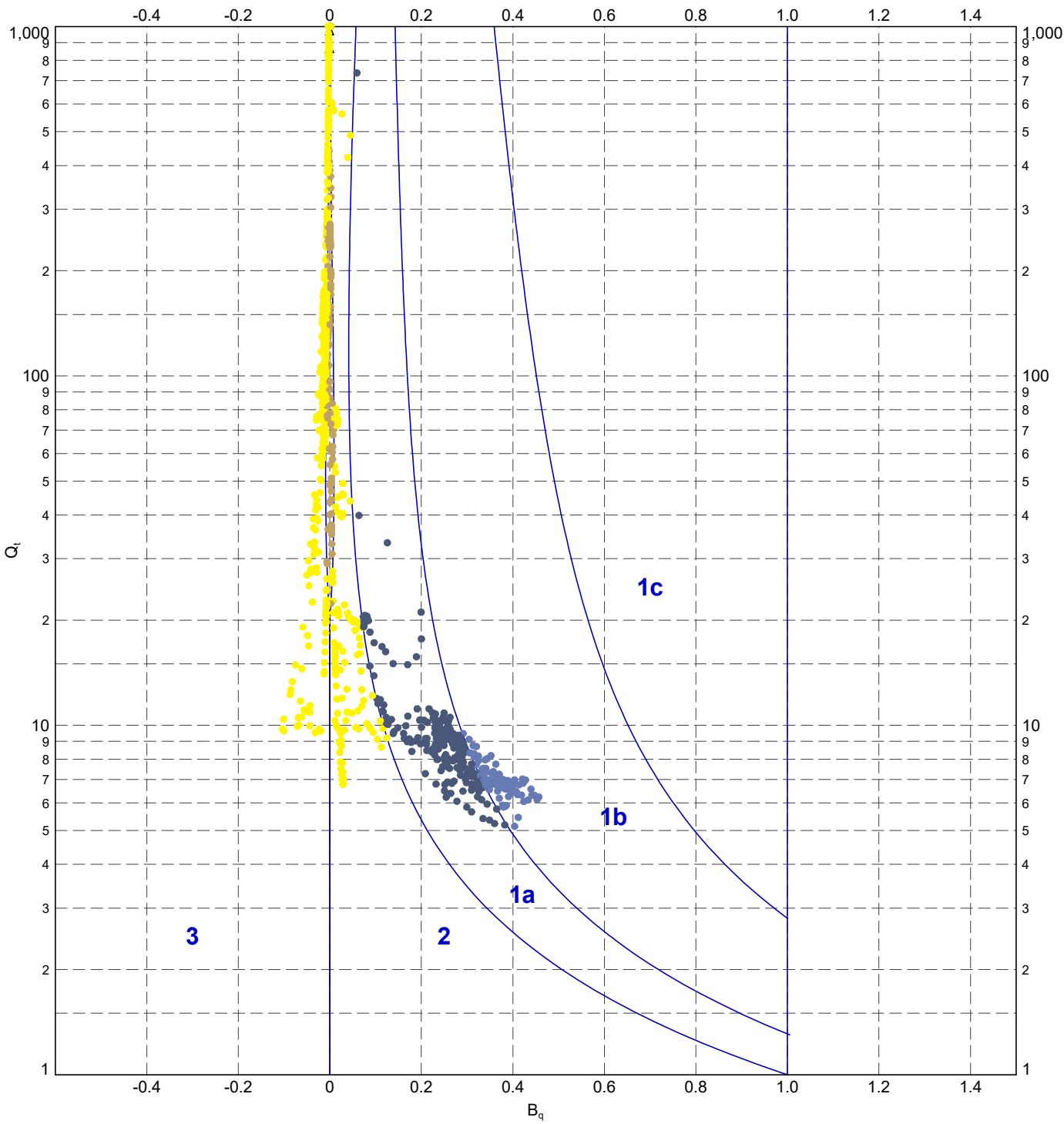
**Geology Unit Legend**

- ★ D - Unit D
- ⊕ J - Unit J
- A - Unit A
- K - Unit K
- B - Unit B
- ◇ R - Rock
- ▲ C - Unit C
- 
- ◆ F - Unit F
- 
- G - Unit G
- 
- △ H - Unit H
- 
- ⊗ I - Unit I
- 

PointIDs: CPT 05 Schneider

 <b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	TITLE Client 1 Engineer 1 Somewhere CPT Tool Project Schneider et al. 2008 $Q_t$ vs. $\Delta u_2 / \sigma'_{v0}$	DRAWN	Datgel	DATE	1/2/2021
	CHECKED	Datgel	DATE	1/2/2021	
	SCALE	Not To Scale			Let
	PROJECT No	4.05.0	FIGURE No	341	

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph CPT SCHNEIDER ET AL\_08.QT VS. BOLETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <-DrawingFile>> 1/2/2021 22:01 10.01.00.11 Datgel CPT Tool.gINT Add-In



**METHOD: Schneider et al. 2008**

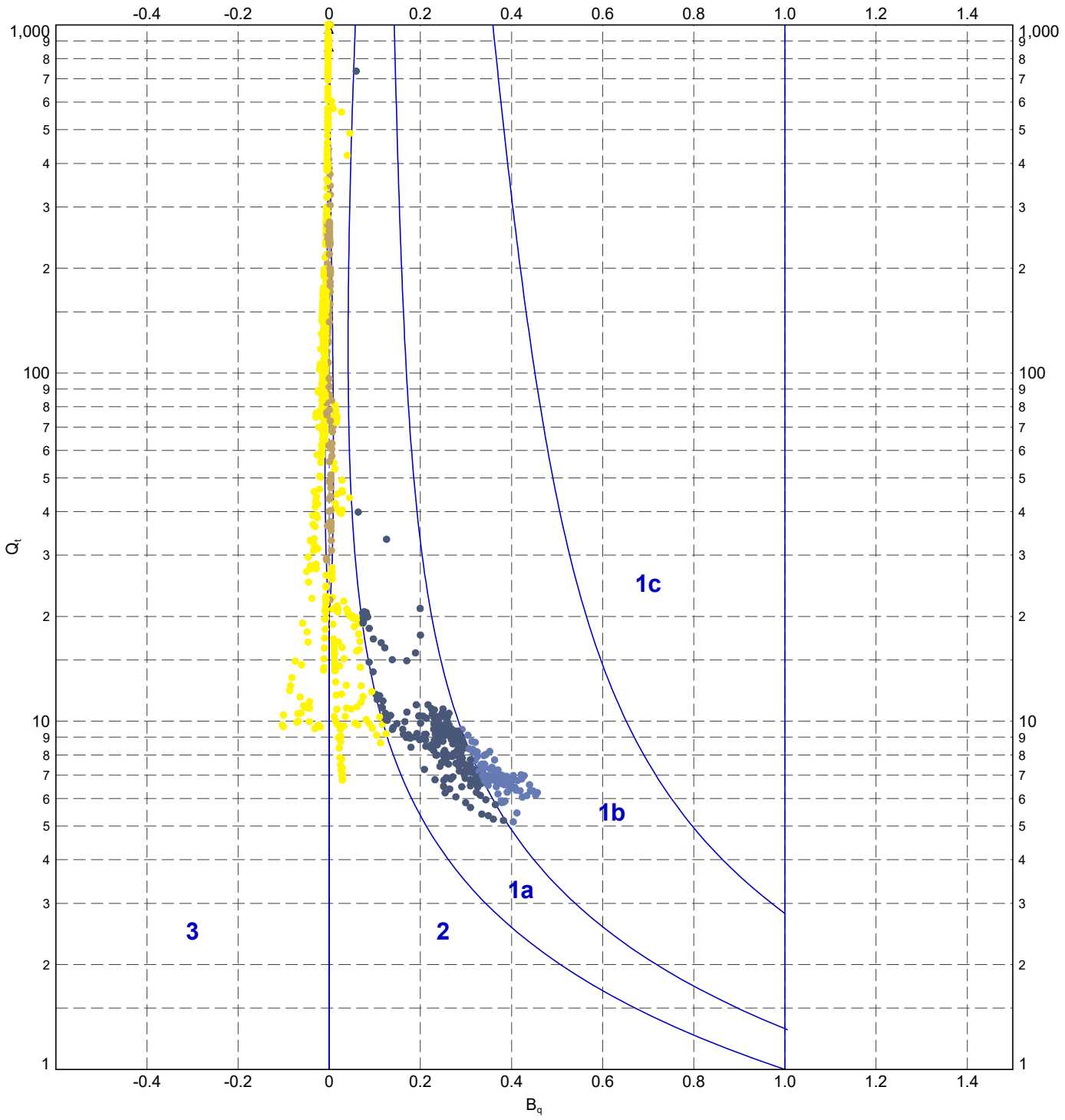
- 1a - Silts and 'Low I<sub>r</sub>' CLAYS
- 1b - CLAYS
- 1c - Sensitive CLAYS
- 2 - Essentially drained SANDS
- 3 - Transitional soils



TITLE  
 Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Schneider et al. 2008  $Q_t$  vs.  $B_q$  - CPT 05  
 Schneider

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	342

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph CPT SCHNEIDER ET AL\_08\_QT VS. BQM LETP DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <<DrawingFiles>> 1/2/2021 22:01 10.01.00.11 Datgel CPT Tool.gINT.Add-in



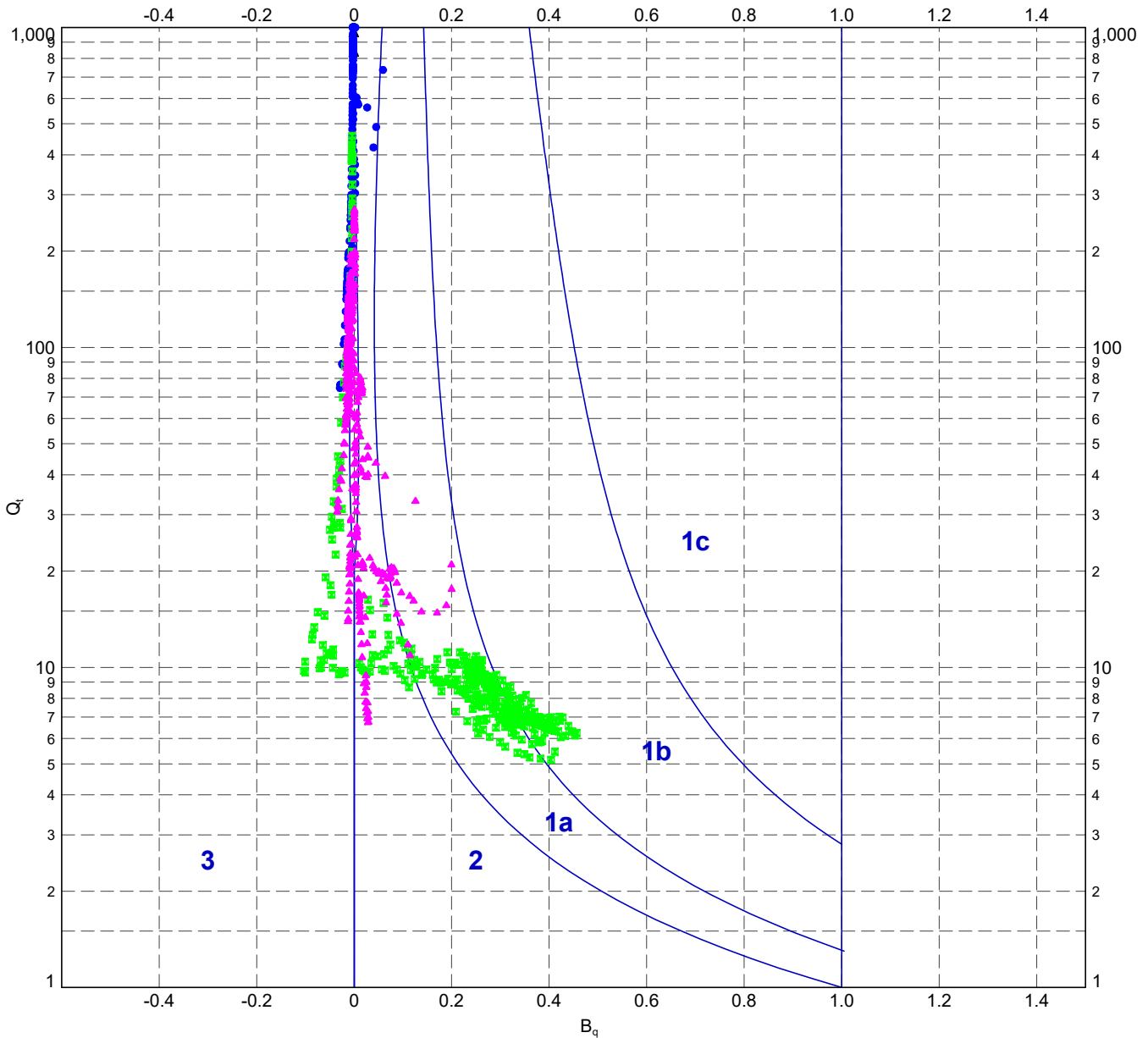
**METHOD: Schneider et al. 2008**

- 1a - Silts and 'Low I<sub>r</sub>' CLAYS
- 1b - CLAYS
- 1c - Sensitive CLAYS
- 2 - Essentially drained SANDS
- 3 - Transitional soils

PointIDs: ● CPT 05 Schneider

 <b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	TITLE Client 1 Engineer 1 Somewhere CPT Tool Project Schneider et al. 2008 $Q_t$ vs. $B_q$	DRAWN	Datgel	DATE	1/2/2021	
		CHECKED	Datgel	DATE	1/2/2021	
		SCALE	Not To Scale			Let
		PROJECT No	4.05.0		FIGURE No	343

DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.SCHNEIDER.ET.AL\_08.QT.VS.BQ.U.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <-DrawingFile-> 1/2/2021 22:01 10.01.00.11.Datgel.CPT.Tool.gINT.Add-In



**METHOD: Schneider et al. 2008**

- 1a - Silts and 'Low I<sub>r</sub>' CLAYS
- 1b - CLAYS
- 1c - Sensitive CLAYS
- 2 - Essentially drained SANDS
- 3 - Transitional soils

**Geology Unit Legend**

- ★ D - Unit D
- ⊕ J - Unit J
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- K - Unit K
- B - Unit B
- ◇ R - Rock
- ▲ C - Unit C
- 
- ◆ F - Unit F
- 
- G - Unit G
- 
- △ H - Unit H
- 
- ⊗ I - Unit I
- 

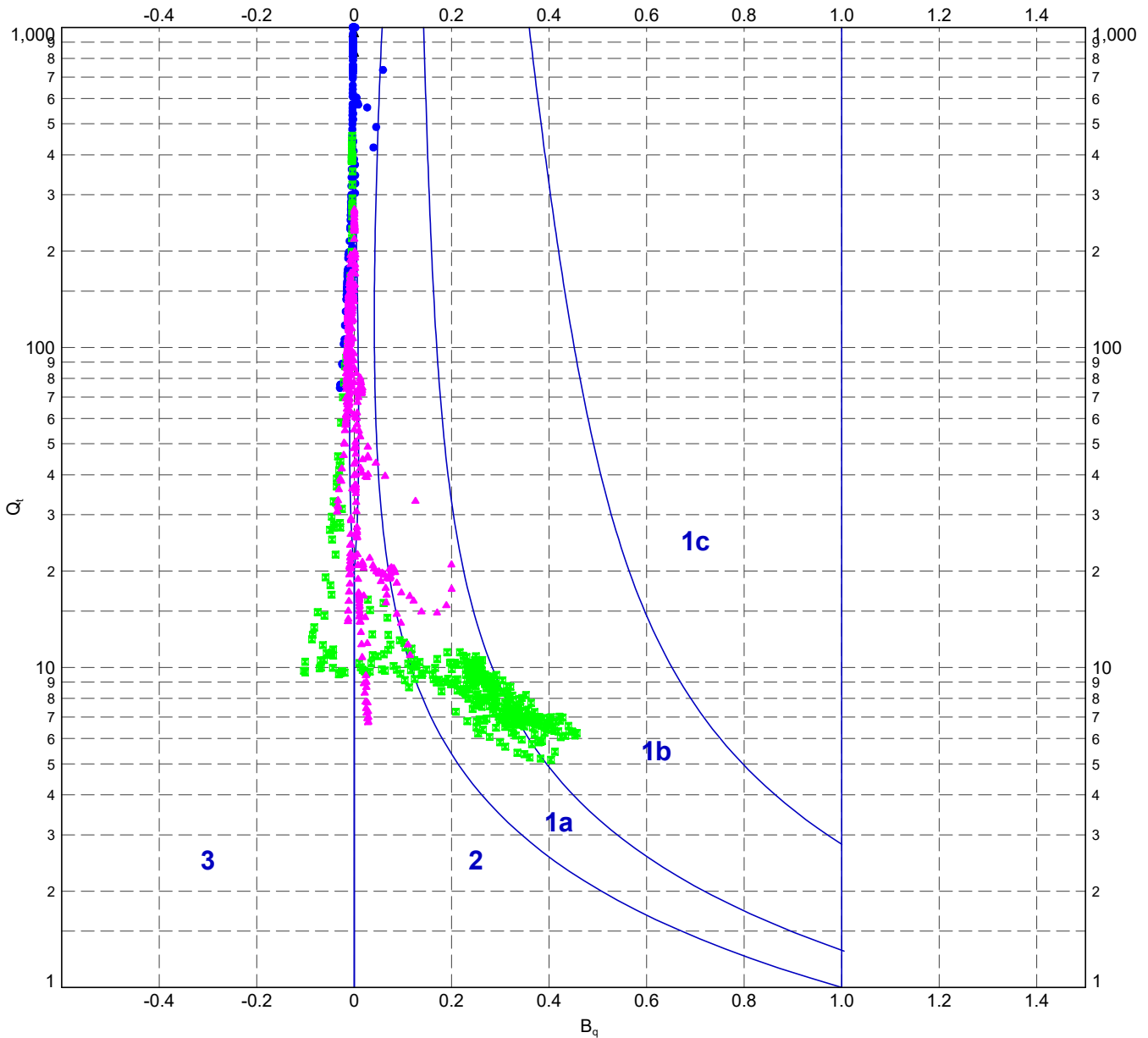


TITLE

Client 1  
Engineer 1  
Somewhere  
CPT Tool Project  
Schneider et al. 2008  $Q_t$  vs.  $B_q$  - CPT 05  
Schneider

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	344

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph CPT SCHNEIDER ET AL\_08.QT.VS.BO.UIM.LET.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <<DrawingFile>> 1/2/2021 22:01 10.01.00.11.Datgel.CPT.Tool.gINT.Add-in



**METHOD: Schneider et al. 2008**

- 1a - Silts and 'Low I<sub>r</sub>' CLAYS
- 1b - CLAYS
- 1c - Sensitive CLAYS
- 2 - Essentially drained SANDS
- 3 - Transitional soils

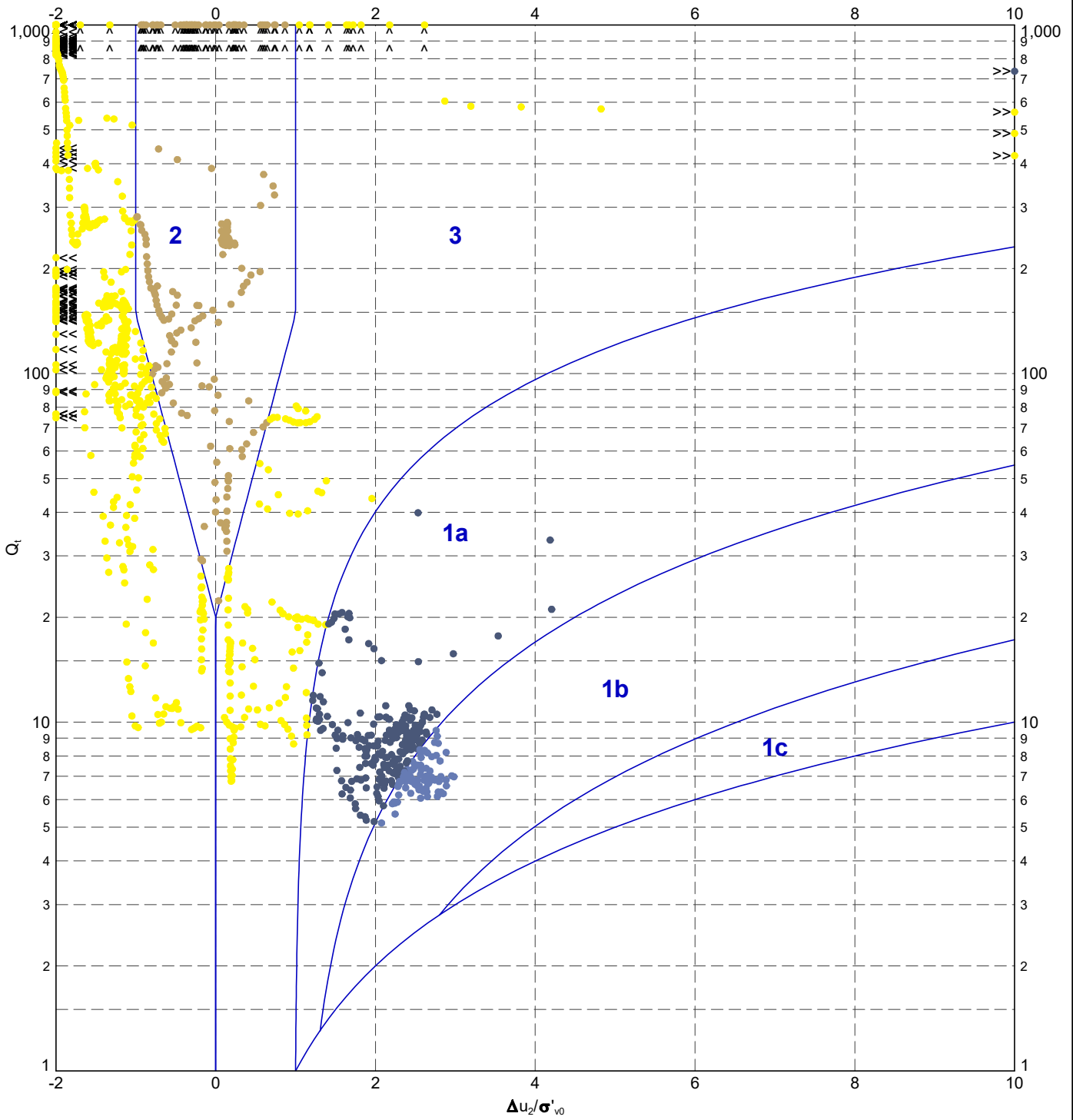
**Geology Unit Legend**

- ★ D - Unit D
- ⊕ J - Unit J
- A - Unit A
- K - Unit K
- B - Unit B
- ◇ R - Rock
- ▲ C - Unit C
- 
- ⊕ F - Unit F
- 
- G - Unit G
- 
- △ H - Unit H
- 
- ⊗ I - Unit I
- 

PointIDs: CPT 05 Schneider

 <b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	TITLE Client 1 Engineer 1 Somewhere CPT Tool Project Schneider et al. 2008 $Q_t$ vs. $B_q$	DRAWN	Datgel	DATE	1/2/2021	
		CHECKED	Datgel	DATE	1/2/2021	
		SCALE	Not To Scale			Let
		PROJECT No	4.05.0		FIGURE No	345

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph CPT SCHNEIDER ET AL\_08\_SEMI-LOG LETP DATGEL.CPT TOOL DGD 4.05.0 EN.GPJ <<DrawingFile>> 1/2/2021 22:02 10.01.00.11 Datgel CPT Tool.gINT Add-in



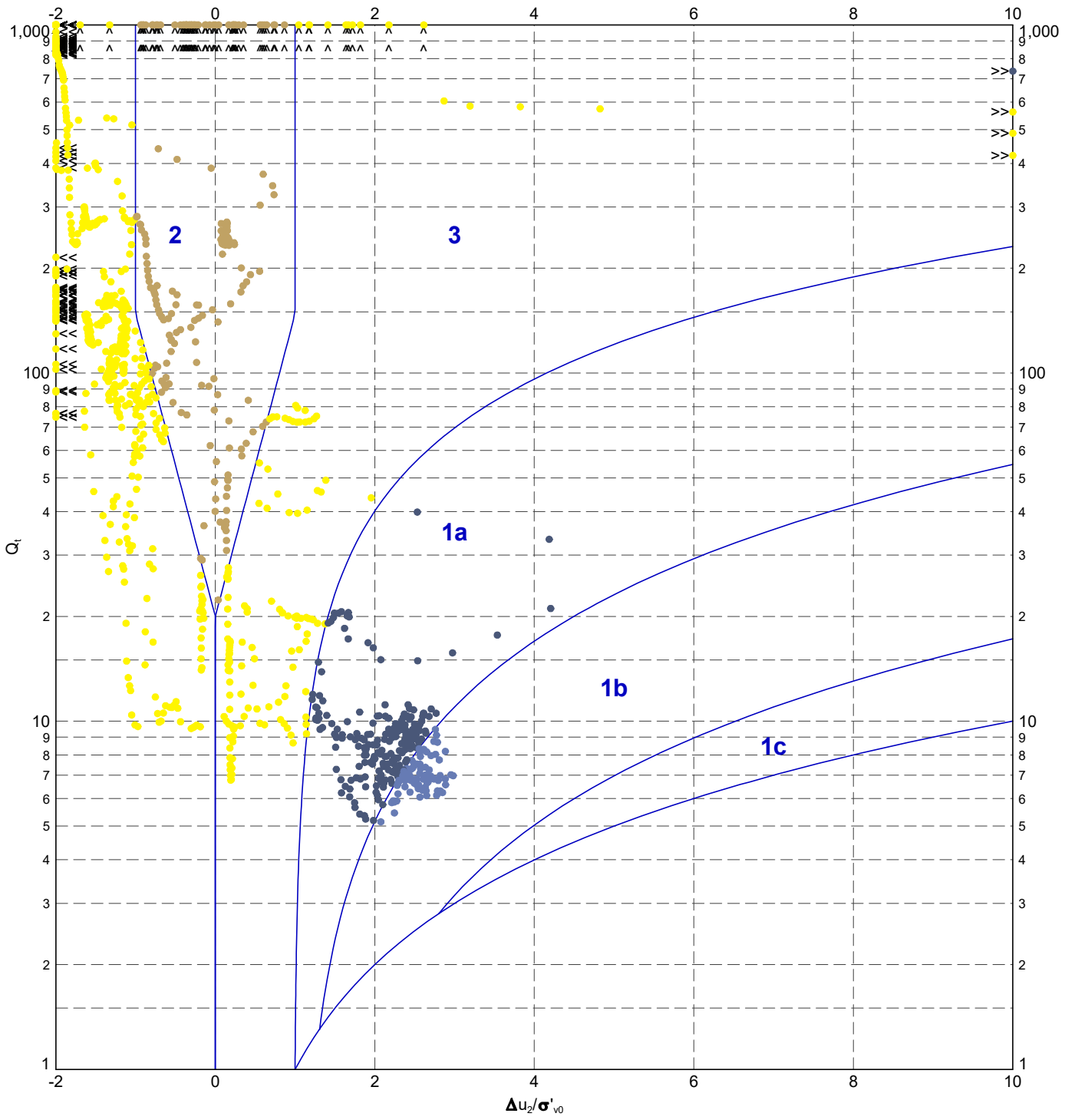
**METHOD: Schneider et al. 2008**

- 1a - Silts and 'Low I<sub>r</sub>' CLAYS
- 1b - CLAYS
- 1c - Sensitive CLAYS
- 2 - Essentially drained SANDS
- 3 - Transitional soils

 <b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	TITLE Client 1 Engineer 1 Somewhere CPT Tool Project Schneider et al. 2008 $Q_t$ vs. $\Delta u_2 / \sigma'_{v0}$ - CPT 05 Schneider	DRAWN Datgel	DATE 1/2/2021	
	CHECKED Datgel		DATE 1/2/2021	
	SCALE Not To Scale			Let
	PROJECT No 4.05.0		FIGURE No 346	



DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph CPT SCHNEIDER ET AL\_08 SEMI-LOG M LETP DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <-DrawingFiles> 1/2/2021 22:02 10.01.00.11 Datgel CPT Tool.gINT.Add-in



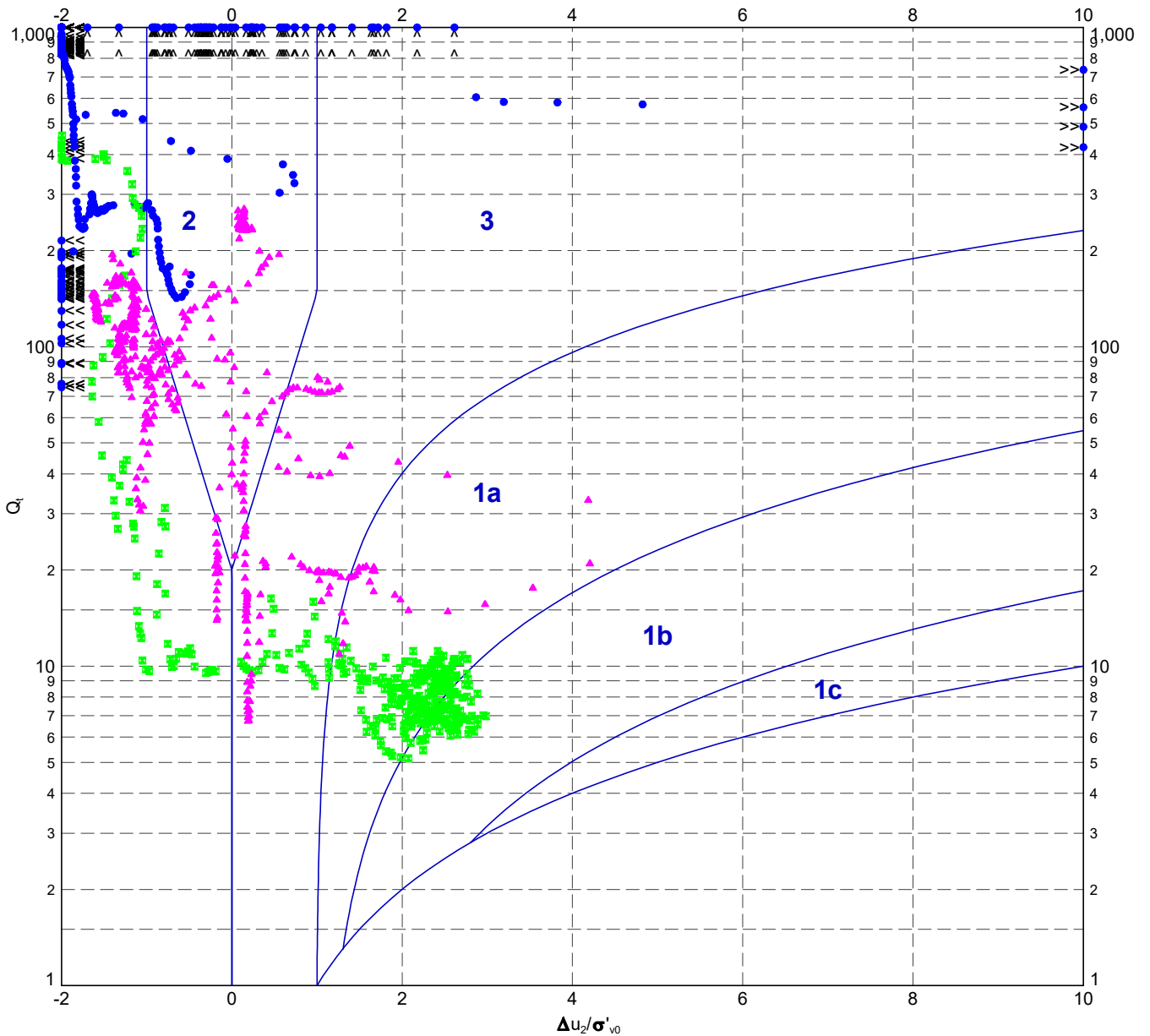
**METHOD: Schneider et al. 2008**

- 1a - Silts and 'Low I<sub>r</sub>' CLAYS
- 1b - CLAYS
- 1c - Sensitive CLAYS
- 2 - Essentially drained SANDS
- 3 - Transitional soils

PointIDs: ● CPT 05 Schneider

 <b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	TITLE Client 1 Engineer 1 Somewhere CPT Tool Project Schneider et al. 2008 $Q_t$ vs. $\Delta u_2 / \sigma'_{v0}$	DRAWN	Datgel	DATE	1/2/2021	
		CHECKED	Datgel	DATE	1/2/2021	
		SCALE	Not To Scale			Let
		PROJECT No	4.05.0		FIGURE No	347

DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.SCHNEIDER.ET.AL\_08.SEMI-LOG.U.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <-DrawingFile-> 1/2/2021 22:02 10.01.00.11.Datgel.CPT.Tool.gINT.Add.in



**METHOD: Schneider et al. 2008**

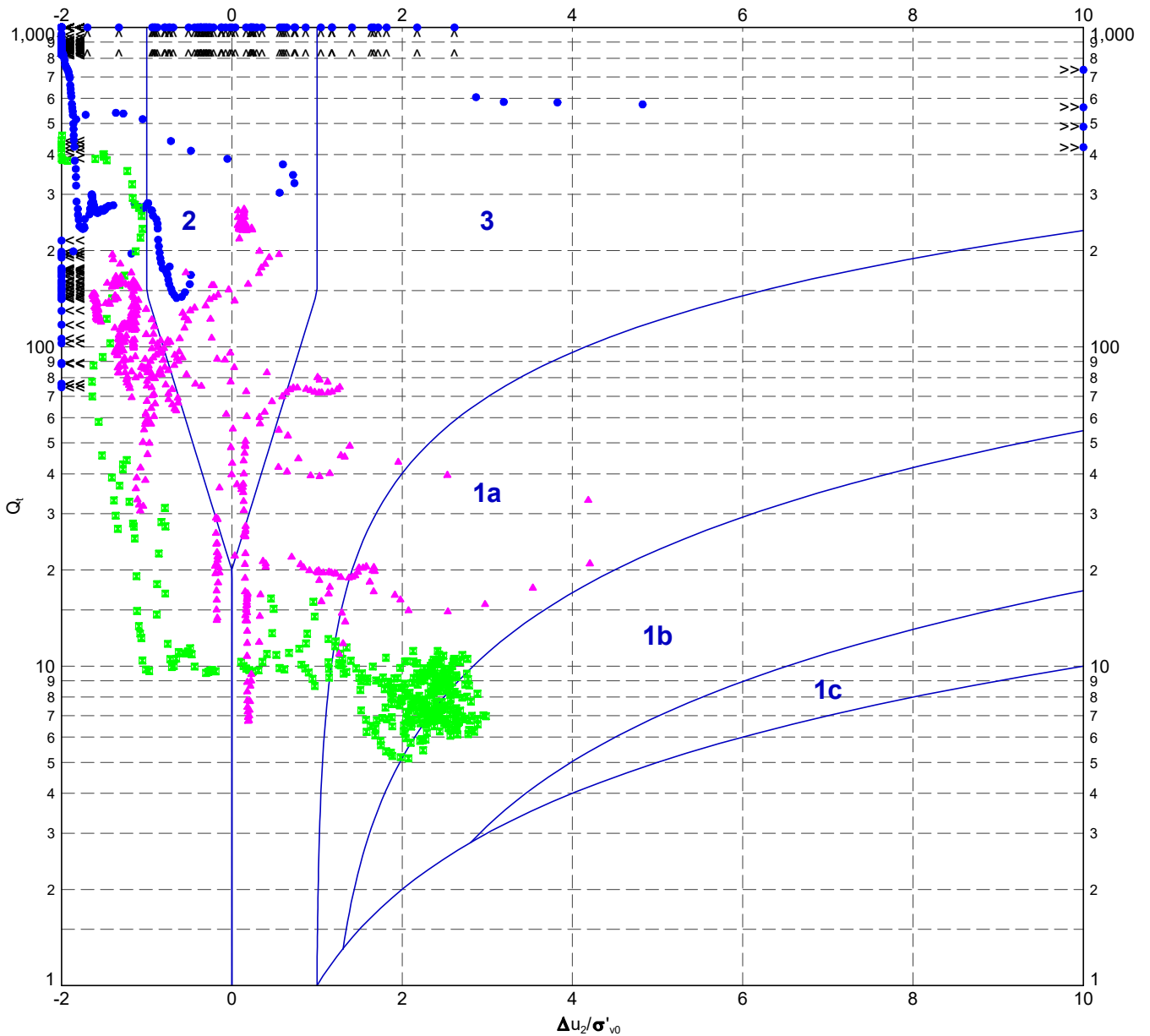
- 1a - Silts and 'Low Ir' CLAYS
- 1b - CLAYS
- 1c - Sensitive CLAYS
- 2 - Essentially drained SANDS
- 3 - Transitional soils

**Geology Unit Legend**

- ★ D - Unit D
- ⊕ J - Unit J
- A - Unit A
- K - Unit K
- B - Unit B
- ◇ R - Rock
- ▲ C - Unit C
- 
- ◆ F - Unit F
- 
- G - Unit G
- 
- △ H - Unit H
- 
- ⊗ I - Unit I
- 

 <b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	TITLE Client 1 Engineer 1 Somewhere CPT Tool Project Schneider et al. 2008 $Q_t$ vs. $\Delta u_2 / \sigma'_{v0}$ - CPT 05 Schneider	DRAWN	DATE	
		Datgel	1/2/2021	
	CHECKED	Datgel	DATE	1/2/2021
	SCALE	Not To Scale		Let
	PROJECT No	4.05.0	FIGURE No	348

DATGEL CPT TOOL DGD\_4.05.0 LIB.GLB Graph: CPT SCHNEIDER ET AL\_08\_SEMI-LOG UML ETP DATGEL CPT TOOL DGD\_4.05.0 EN.GPJ <-DrawingFile>> 1/2/2021 22:02:10.01.00.11 Datgel.CPT.Tool.gjNT.Add-In



**METHOD: Schneider et al. 2008**

- 1a - Silts and 'Low Ir' CLAYS
- 1b - CLAYS
- 1c - Sensitive CLAYS
- 2 - Essentially drained SANDS
- 3 - Transitional soils

**Geology Unit Legend**

- ★ D - Unit D
- ⊕ J - Unit J
- A - Unit A
- K - Unit K
- B - Unit B
- ◇ R - Rock
- ▲ C - Unit C
- ◆ F - Unit F
- ⊕ G - Unit G
- △ H - Unit H
- ⊗ I - Unit I

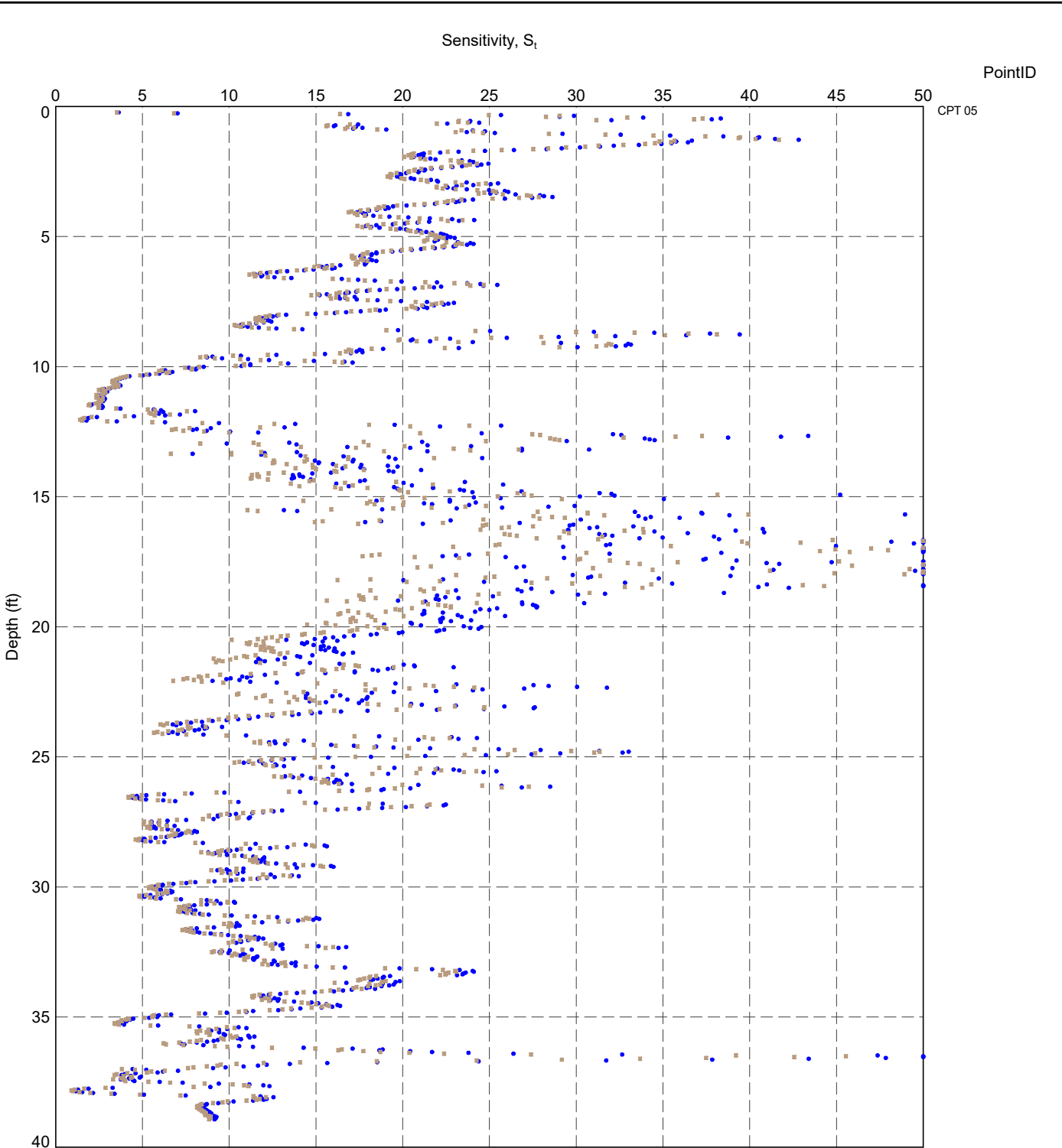
PointIDs: CPT 05 Schneider




TITLE  
 Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Schneider et al. 2008  $Q_t$  vs.  $\Delta u_2 / \sigma'_{v0}$

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	349

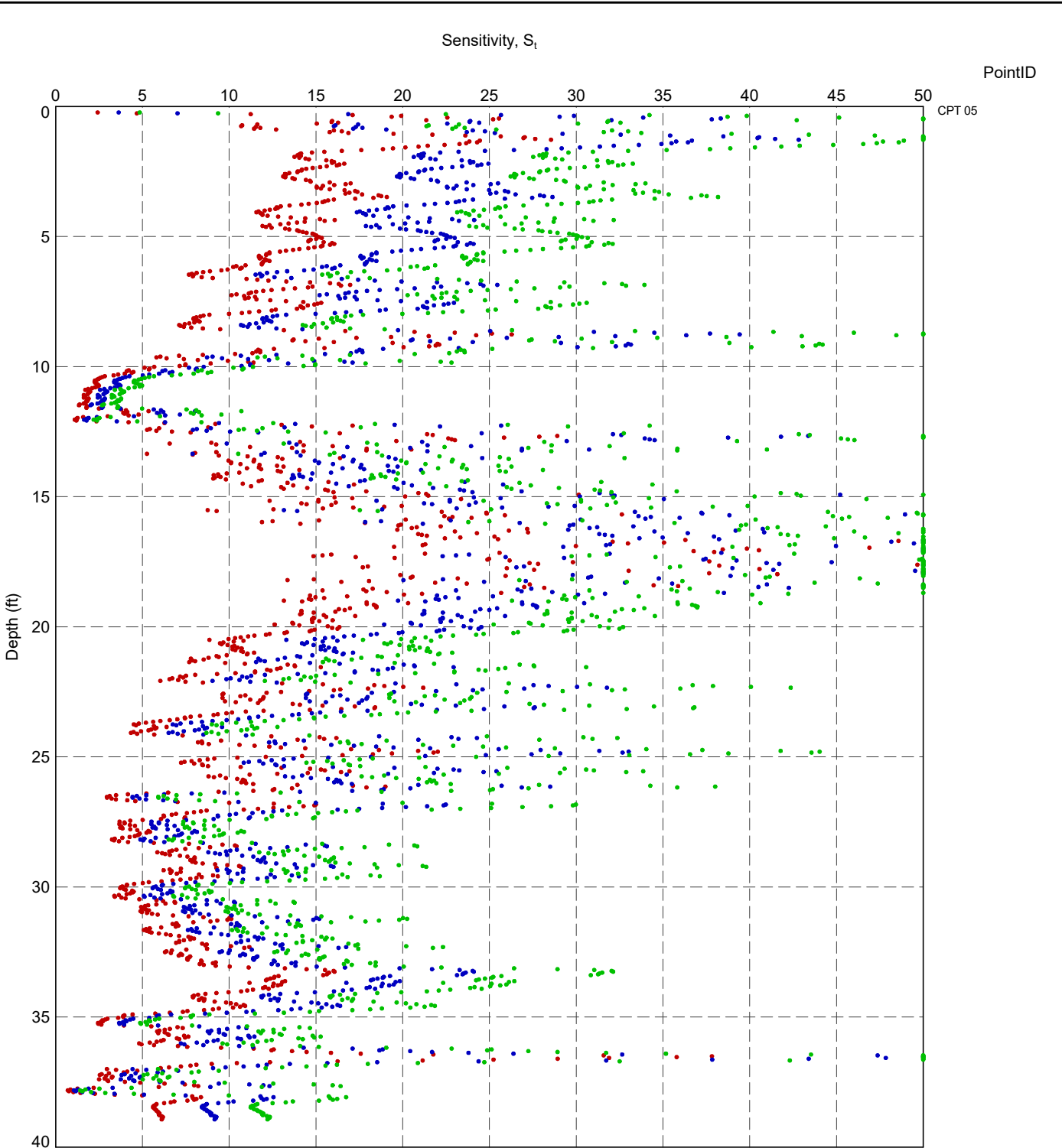
DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.SENSITIVITY.DEPTH.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <-DrawingFile>> 1/2/2021 22:03 10.01.00.11.Datgel.CPT.Tool.gINT.Add-In




Method:  
 ● Schmertmann (1978); Rad & Lunne (1986)  
 ● Mayne (2007)

 <b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	TITLE	Client 1 Engineer 1 Somewhere CPT Tool Project Sensitivity versus Depth	DRAWN Datgel	DATE 1/2/2021
			CHECKED Datgel	DATE 1/2/2021
			SCALE Not To Scale	Let
			PROJECT No 4.05.0	FIGURE No 350

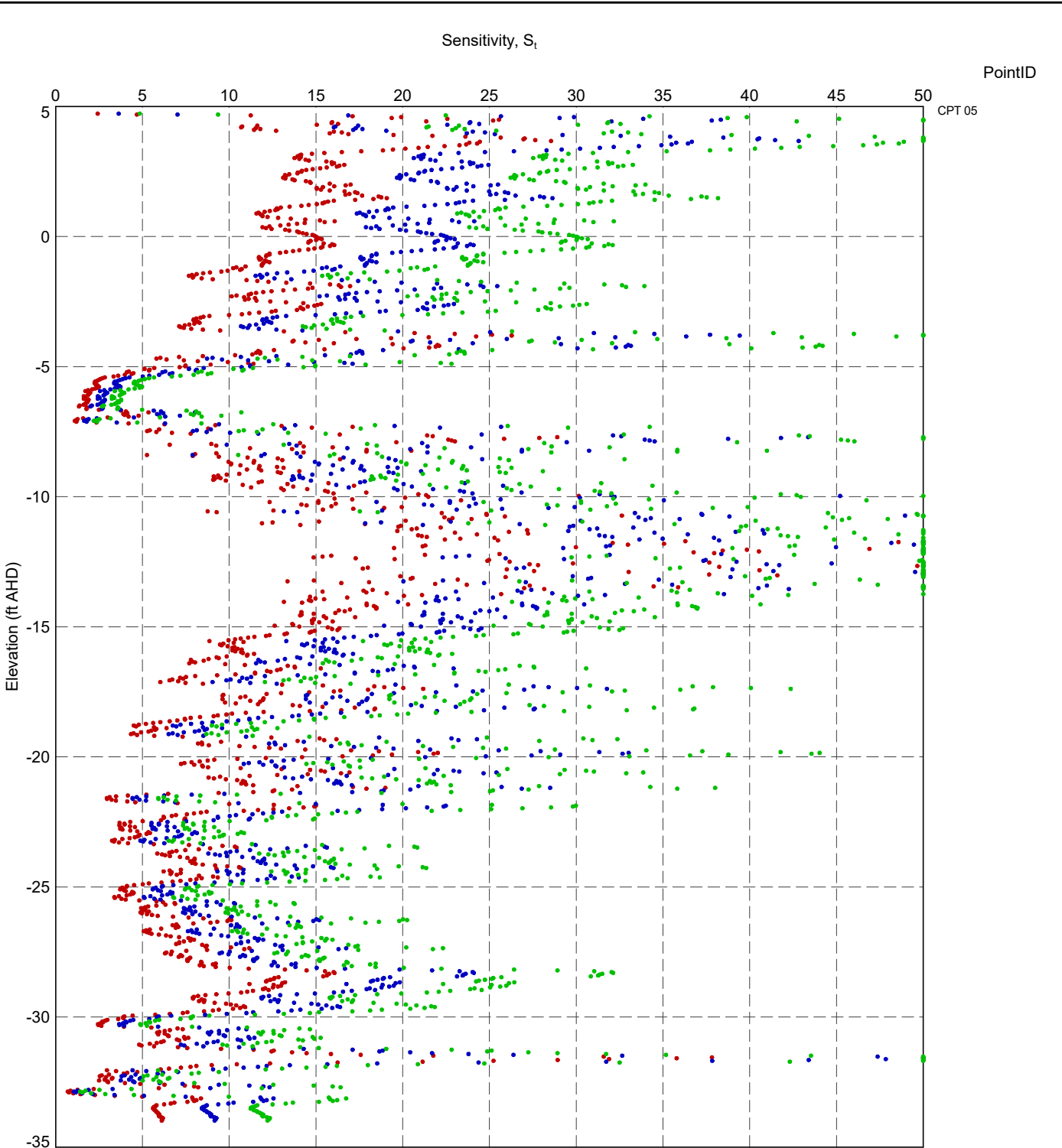
DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.SENSITIVITY.LB.BE.UB.DEPTH.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ.<-DrawingFile>> 1/2/2021 22:04 10.01.00.11.Datgel.CPT.Tool.gINT.Add-In




- Method:
- $S_t$  LB, Schmertmann (1978); Rad & Lunne (1986)
  - $S_t$  BE, Schmertmann (1978); Rad & Lunne (1986)
  - $S_t$  UB, Schmertmann (1978); Rad & Lunne (1986)

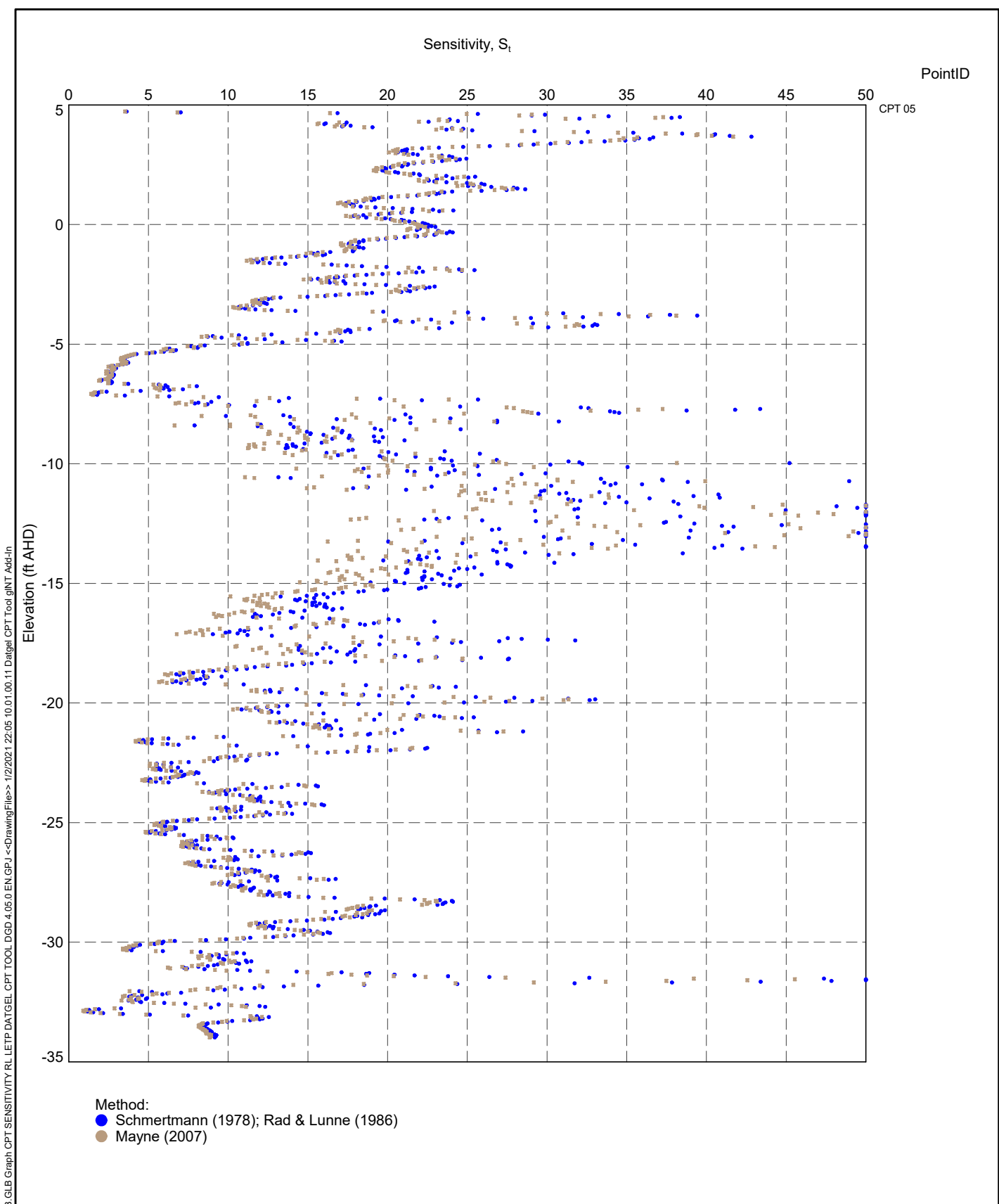
 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Sensitivity versus Depth</p>	DRAWN	Datgel	DATE	1/2/2021	
		CHECKED	Datgel	DATE	1/2/2021	
		SCALE	Not To Scale			Let
		PROJECT No	4.05.0	FIGURE No	351	

DATGEL\CPT\_TOOL\_DGD\_4.05.0\LB\_GLB\_Graph\CPT\_SENSITIVITY\LB\_BE\_UB\_RL\_LETP\_DATGEL\_CPT\_TOOL\_DGD\_4.05.0\_EN.GPJ <-DrawingFiles> 1/2/2021 22:04 10:01:00.11.Datgel.CPT.Tool.gjINT.Add-In



Method:  
 ●  $S_t$  LB, Schmertmann (1978); Rad & Lunne (1986)  
 ●  $S_t$  BE, Schmertmann (1978); Rad & Lunne (1986)  
 ●  $S_t$  UB, Schmertmann (1978); Rad & Lunne (1986)

 DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	TITLE	Client 1 Engineer 1 Somewhere CPT Tool Project Sensitivity versus Elevation	DRAWN Datgel	DATE 1/2/2021
			CHECKED Datgel	DATE 1/2/2021
			SCALE Not To Scale	Let
			PROJECT No 4.05.0	FIGURE No 352



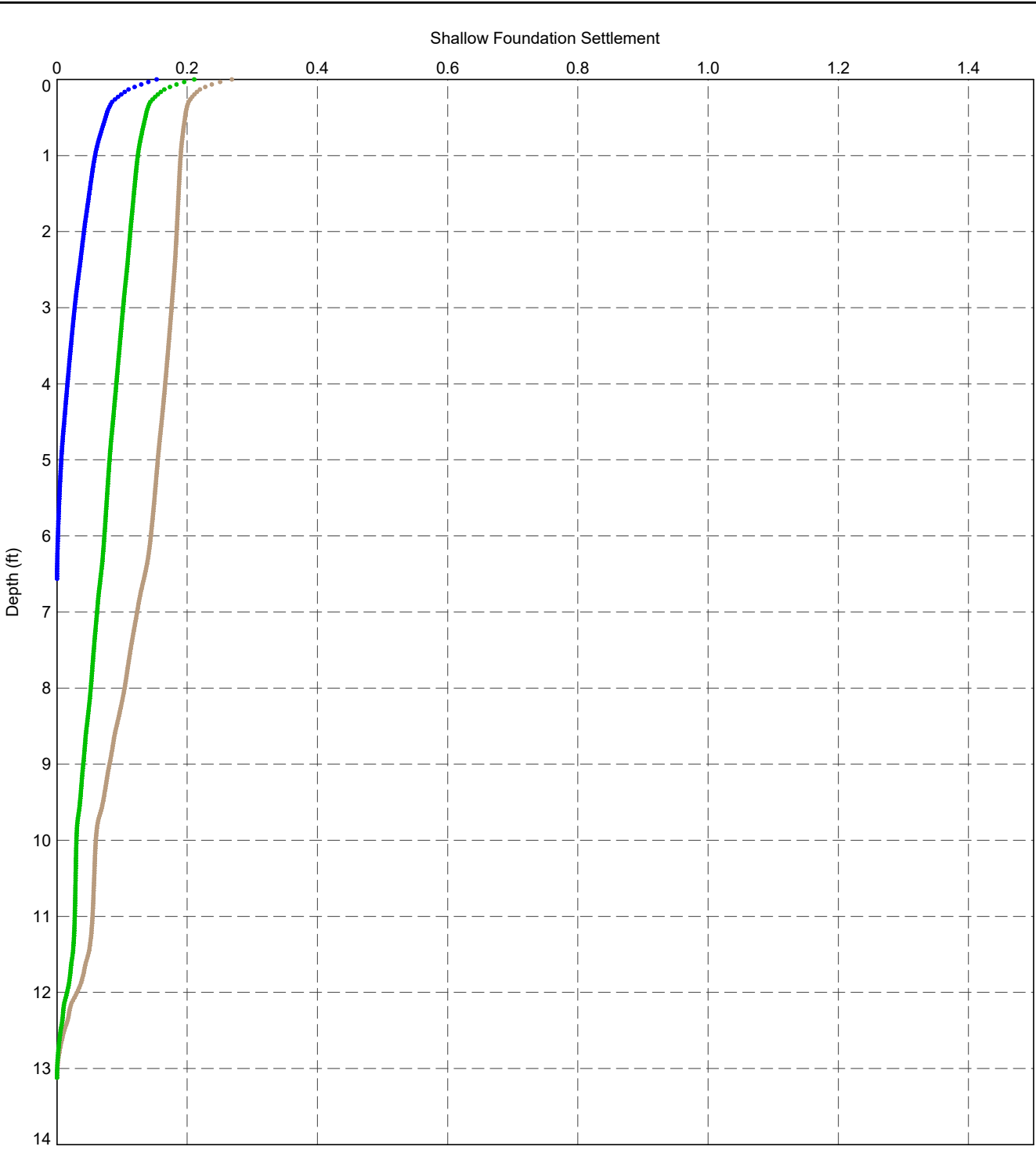
Method:  
 ● Schmertmann (1978); Rad & Lunne (1986)  
 ● Mayne (2007)

TITLE  
 Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Sensitivity versus Elevation

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	353


DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.SENSITIVITY.RL.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <<DrawingFiles>> 1/2/2021 22:05:10.01.00.11 Datgel.CPT.Tool.gINT Add-In

DATGEL\CPT\_TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT SHALLOW FOUND SETTLEMENT DEPTH LETP.DATGEL\CPT\_TOOL\_DGD\_4.05.0\EN.GPJ <-DrawingFiles> 1/2/2021 22:06 10.01.00.11.Datgel.CPT.Tool.gINT.Add-in



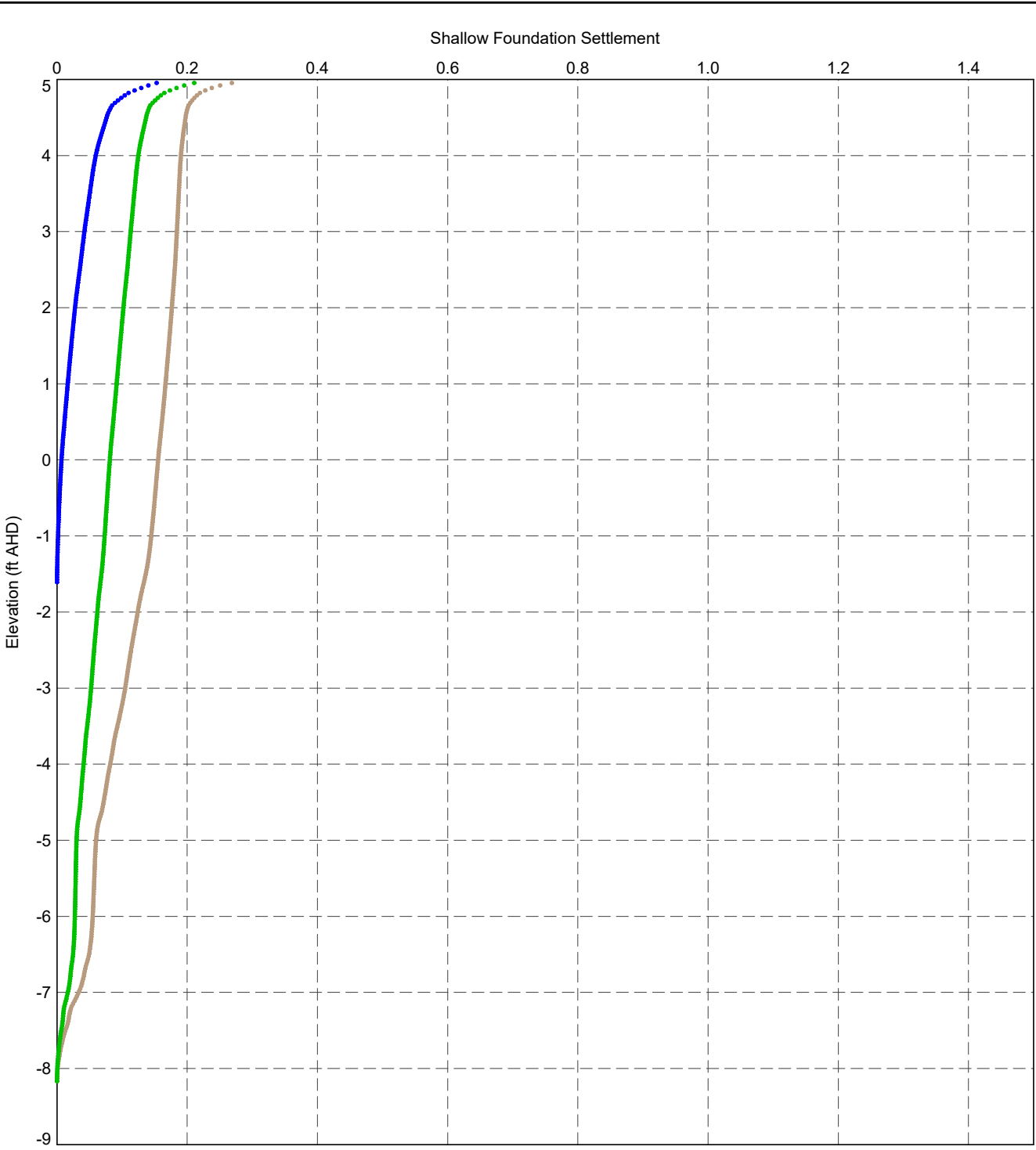
- Legend:
- Shallow Square Settlement, (L/B > 10) (ft)
  - Shallow Strip Settlement, (1 <= L/B <= 10) (ft)
  - Shallow Rectangular Settlement, (L/B = 1) (ft)

Schmertmann (1970)

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Shallow Foundation Settlement versus Depth - CPT 05</p>	DRAWN	Datgel	DATE	1/2/2021	
		CHECKED	Datgel	DATE	1/2/2021	
		SCALE	Not To Scale			Let
		PROJECT No	4.05.0	FIGURE No	354	




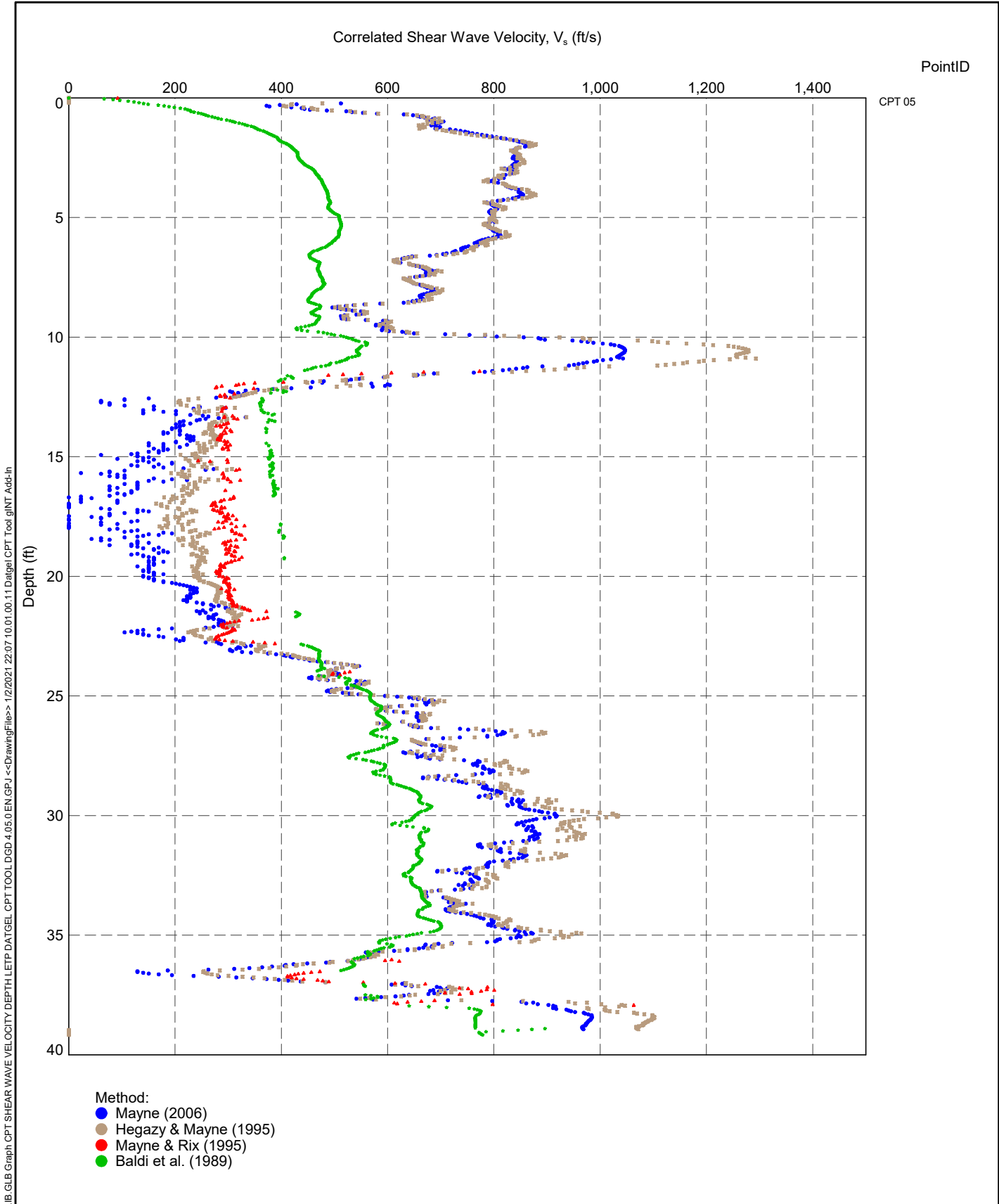
DATGEL\CPT\_TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT\_SHALLOW FOUND SETTLEMENT.RL LETP.DATGEL.CPT\_TOOL.DGD.4.05.0.EN.GPJ <-DrawingFiles> 1/2/2021 22:06 10:01:00.11.Datgel.CPT.Tool.gINT Add-In



- Legend:
- Shallow Square Settlement, (L/B > 10) (ft)
  - Shallow Strip Settlement, (1 ≤ L/B ≤ 10) (ft)
  - Shallow Rectangular Settlement, (L/B = 1) (ft)

Schmertmann (1970)

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p style="text-align: center;">Client 1 Engineer 1 Somewhere CPT Tool Project Shallow Foundation Settlement versus Elevation - CPT 05</p>	<p>DRAWN</p> <p style="text-align: center;">Datgel</p>	<p>DATE</p> <p style="text-align: center;">1/2/2021</p>	
		<p>CHECKED</p> <p style="text-align: center;">Datgel</p>	<p>DATE</p> <p style="text-align: center;">1/2/2021</p>	
		<p>SCALE</p> <p style="text-align: center;">Not To Scale</p>		<p>Let</p>
		<p>PROJECT No</p> <p style="text-align: center;">4.05.0</p>	<p>FIGURE No</p> <p style="text-align: center;">355</p>	



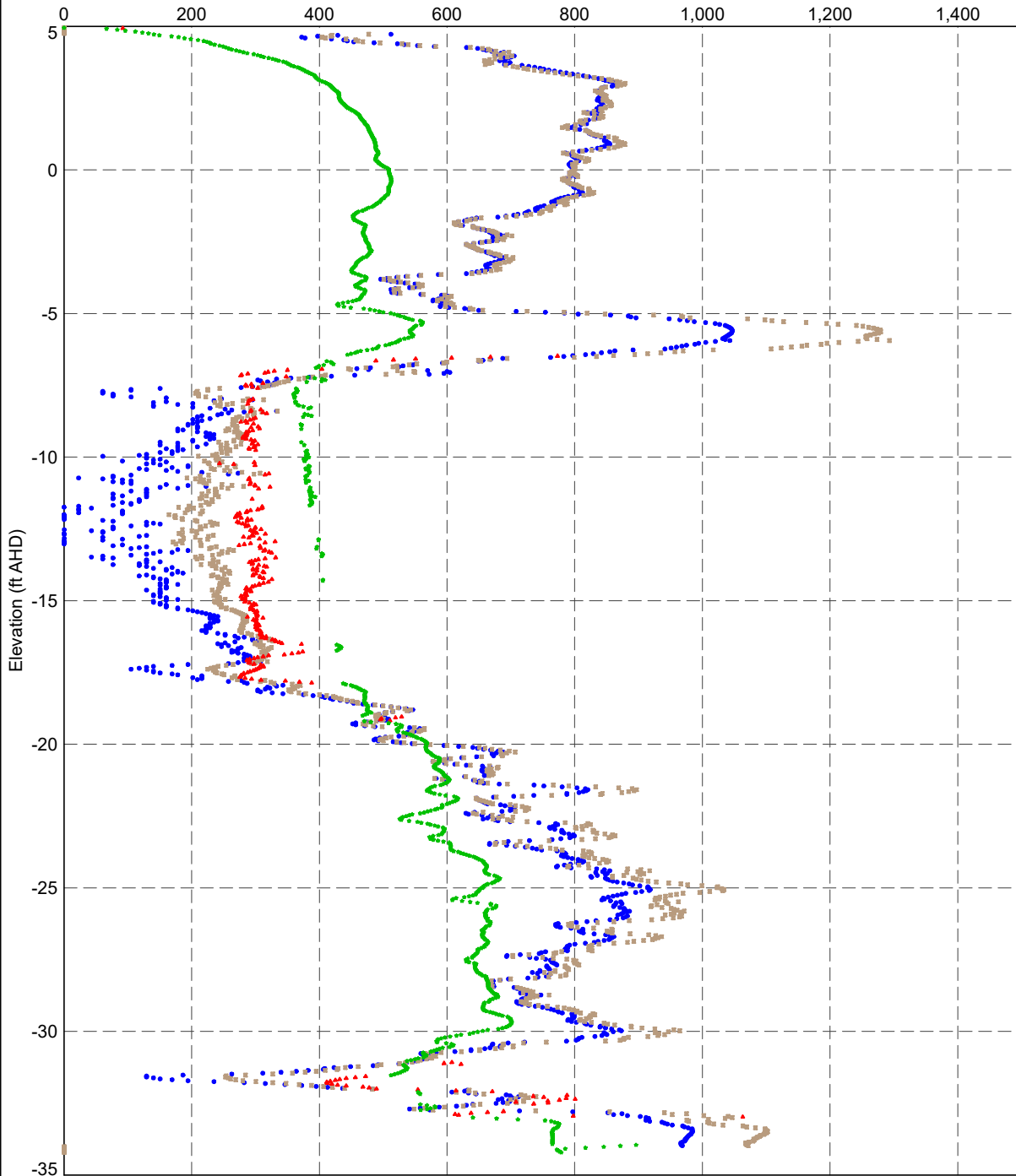
<p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Shear Wave Velocity versus Depth</p>	<p>DRAWN Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>CHECKED Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>SCALE Not To Scale</p>		<p>Let</p>
		<p>PROJECT No 4.05.0</p>	<p>FIGURE No 356</p>	

DATGEL\CPT\_TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT\_SHEAR\_WAVE\_VELOCITY\_DEPTH\LETP.DATGEL\_CPT\_TOOL\_DGD\_4.05.0.EN.GPJ <-DrawingFile> 1/2/2021 22:07:10.01.00.11.Datgel\CPT\_Tool.gINT\_Add-In

Correlated Shear Wave Velocity,  $V_s$  (ft/s)

PointID

CPT 05



- Method:
- Mayne (2006)
  - Hegazy & Mayne (1995)
  - Mayne & Rix (1995)
  - Baldi et al. (1989)

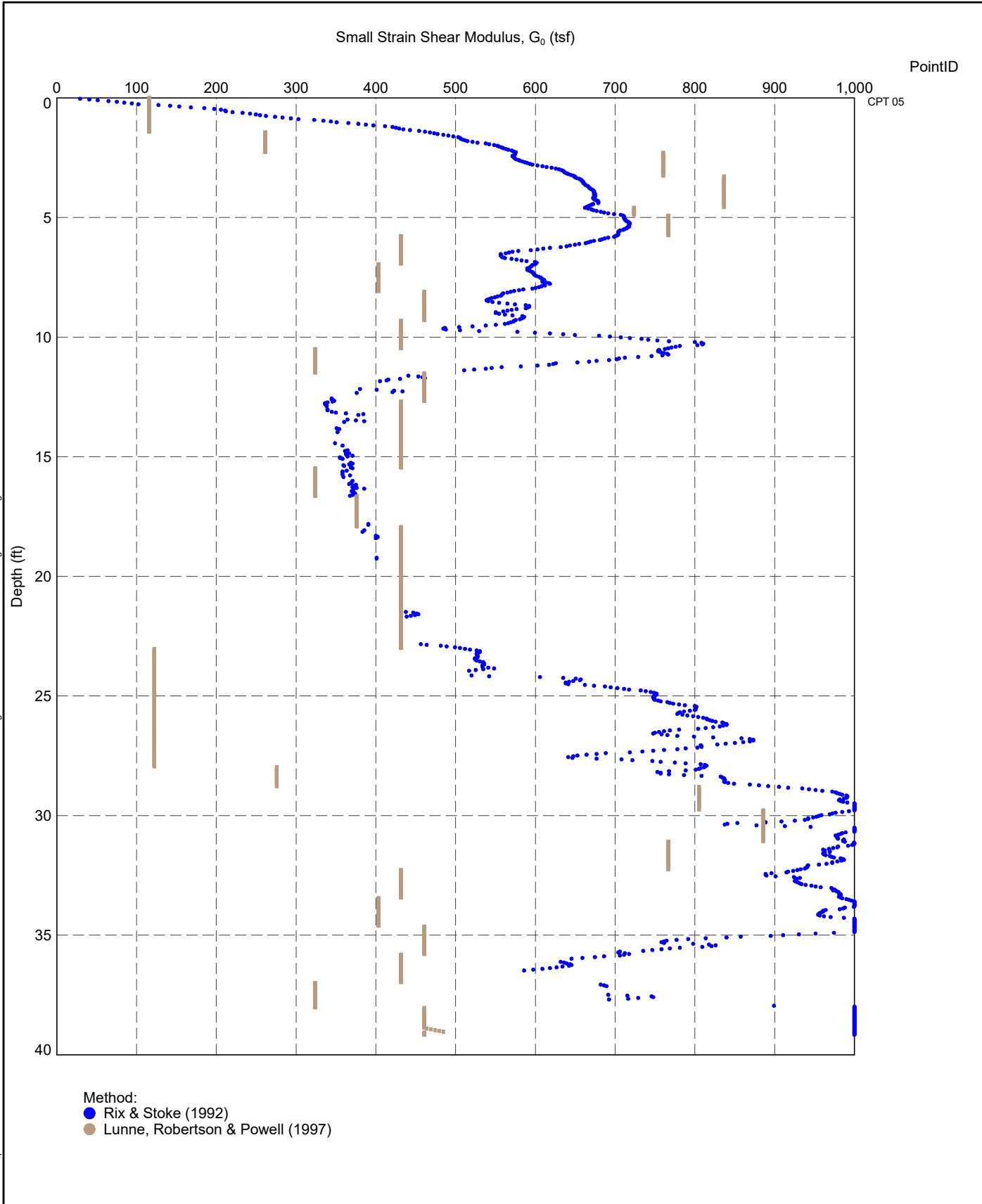
DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.SHEAR.WAVE.VELOCITY.RL.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <<DrawingFile>> 1/2/2021 22:08 10.01.00.11.Datgel.CPT.Tool.gINT.Add-In




TITLE  
 Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Shear Wave Velocity versus Elevation

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	357

DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.SMALL.STRAIN.SHEAR.MOD.DEPTH.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <-DrawingFiles> 1/2/2021 22:09 10.01.00.11.Datgel.CPT.Tool.gINT.Add-In

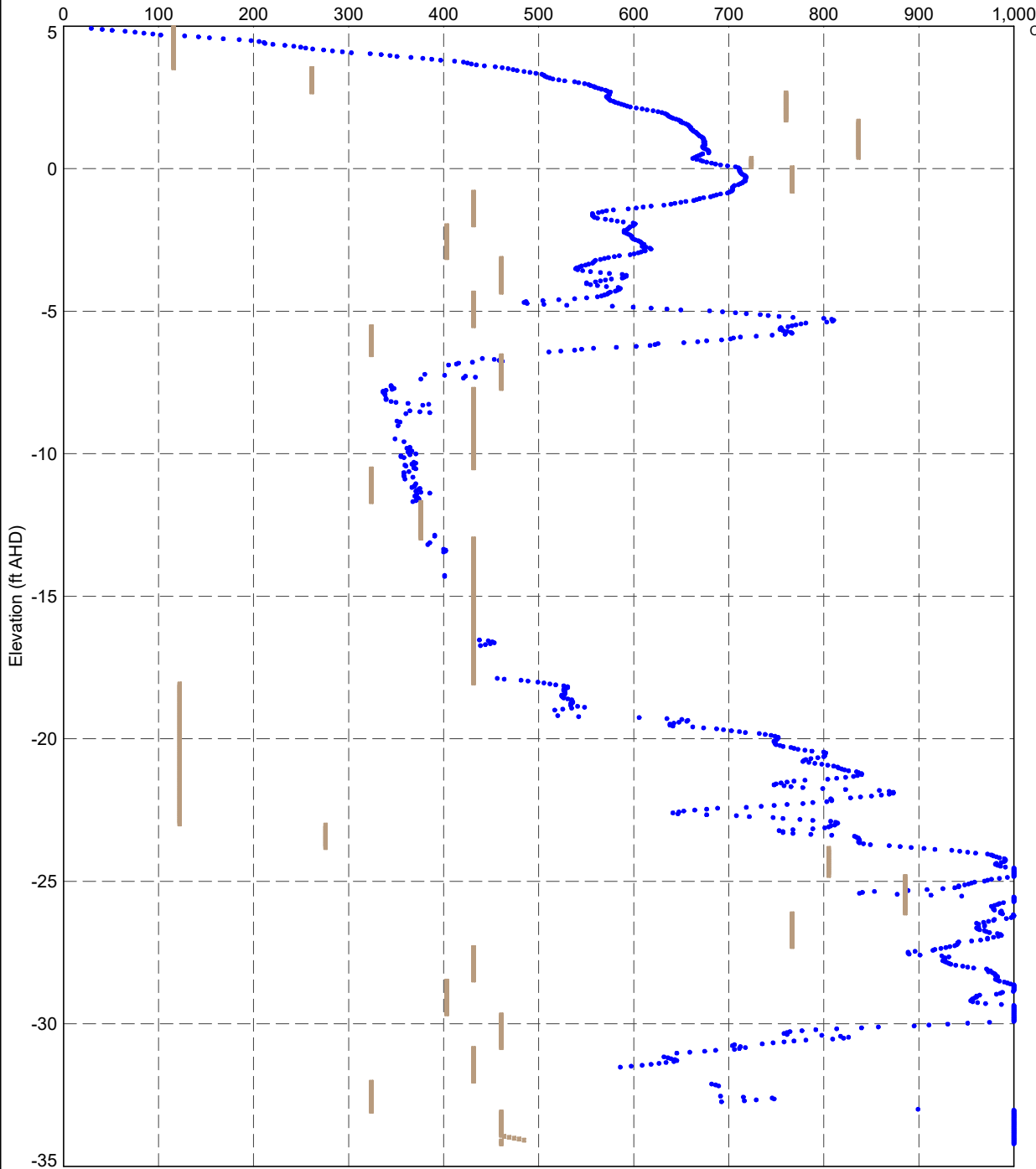


 <b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	TITLE Client 1 Engineer 1 Somewhere CPT Tool Project Small Strain Shear Modulus versus Depth	DRAWN	Datgel	DATE	1/2/2021	
		CHECKED	Datgel	DATE	1/2/2021	
		SCALE	Not To Scale			Let
		PROJECT No	4.05.0		FIGURE No	358

Small Strain Shear Modulus,  $G_0$  (tsf)

PointID


CPT 05



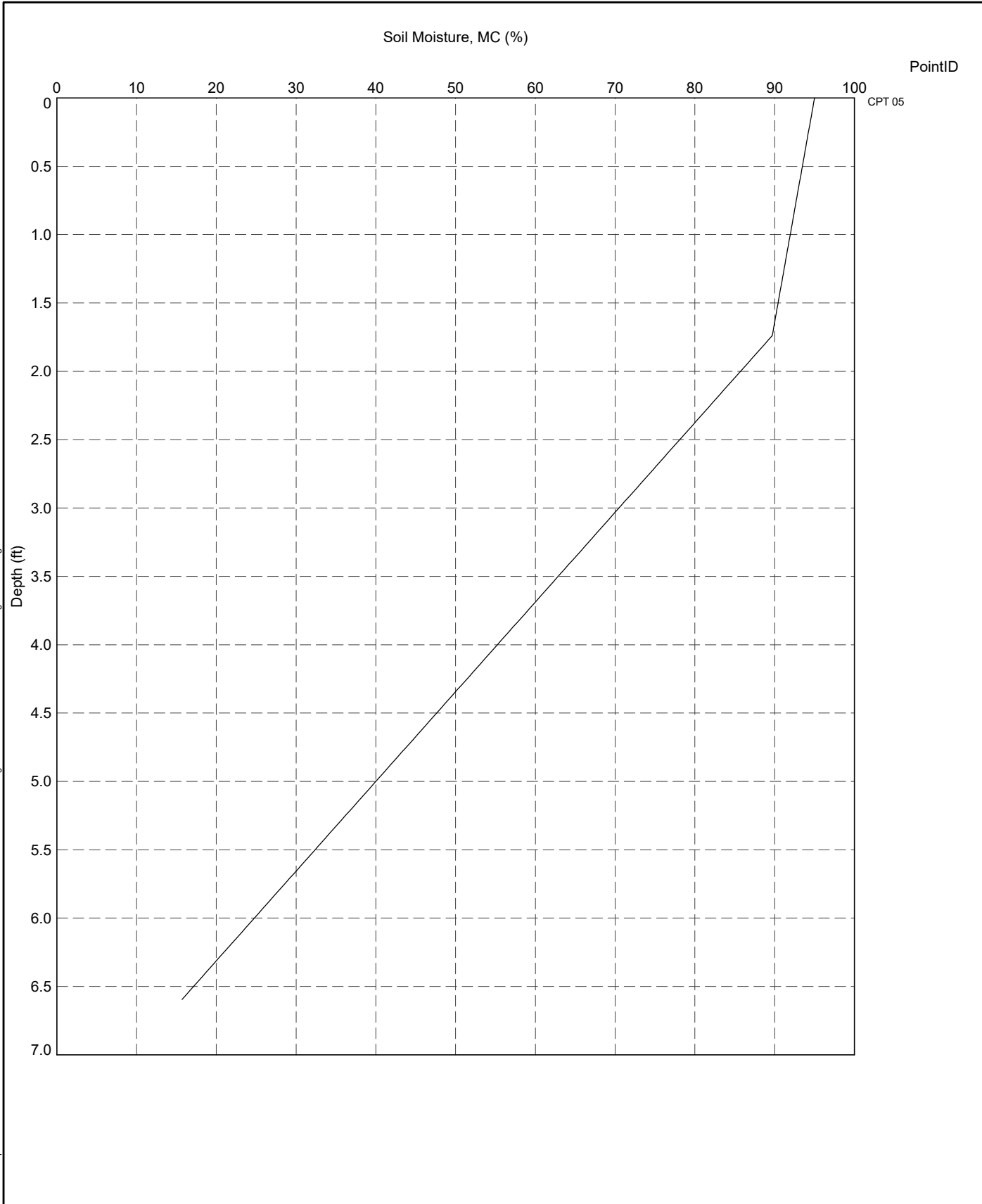
Method:


- Rix & Stoke (1992)
- Lunne, Robertson & Powell (1997)

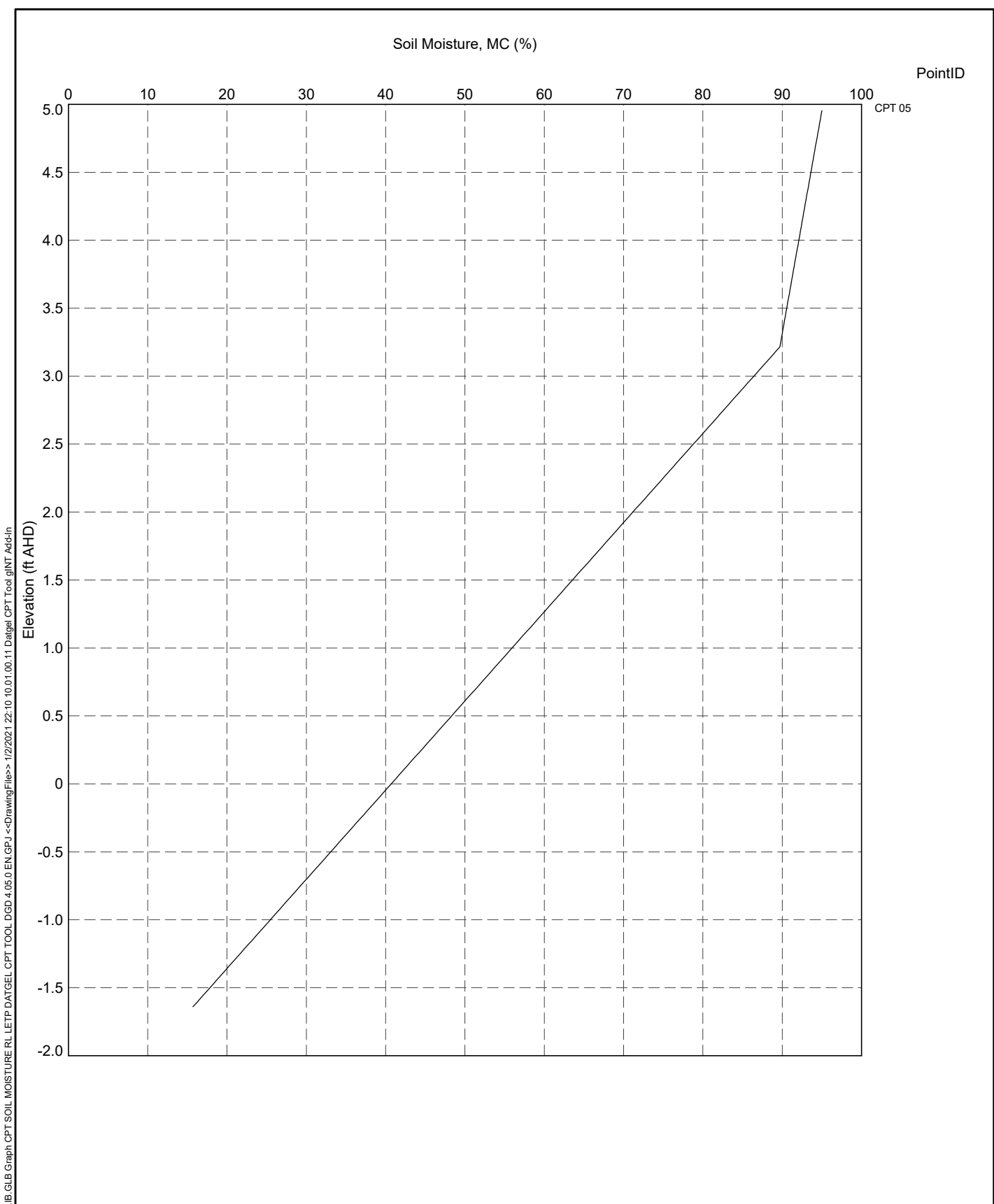
DATGEL CPT TOOL\_DGD\_4.05.0.LIB.GLB Graph CPT SMALL STRAIN SHEAR MODULUS RL LETP DATGEL CPT TOOL\_DGD\_4.05.0.EN.GPJ <<DrawingFile>> 1/2/2021 22:10:10.01.00.11 Datgel CPT\_Tool.gINT\_Add-In

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project</p> <p>Small Strain Shear Modulus versus Elevation</p>	<p>DRAWN Datgel</p>	<p>DATE 1/2/2021</p>
		<p>CHECKED Datgel</p>	<p>DATE 1/2/2021</p>
		<p>SCALE Not To Scale</p>	<p>Let</p>
		<p>PROJECT No 4.05.0</p>	<p>FIGURE No 359</p>


DATGEL\CPT TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT SOIL MOISTURE DEPTH LETP DATGEL\CPT TOOL\_DGD\_4.05.0 EN.GPJ <-DrawingFile>> 1/2/2021 22:10:10.01.00.11 Datgel\CPT Tool\gINT\_A4d4-in



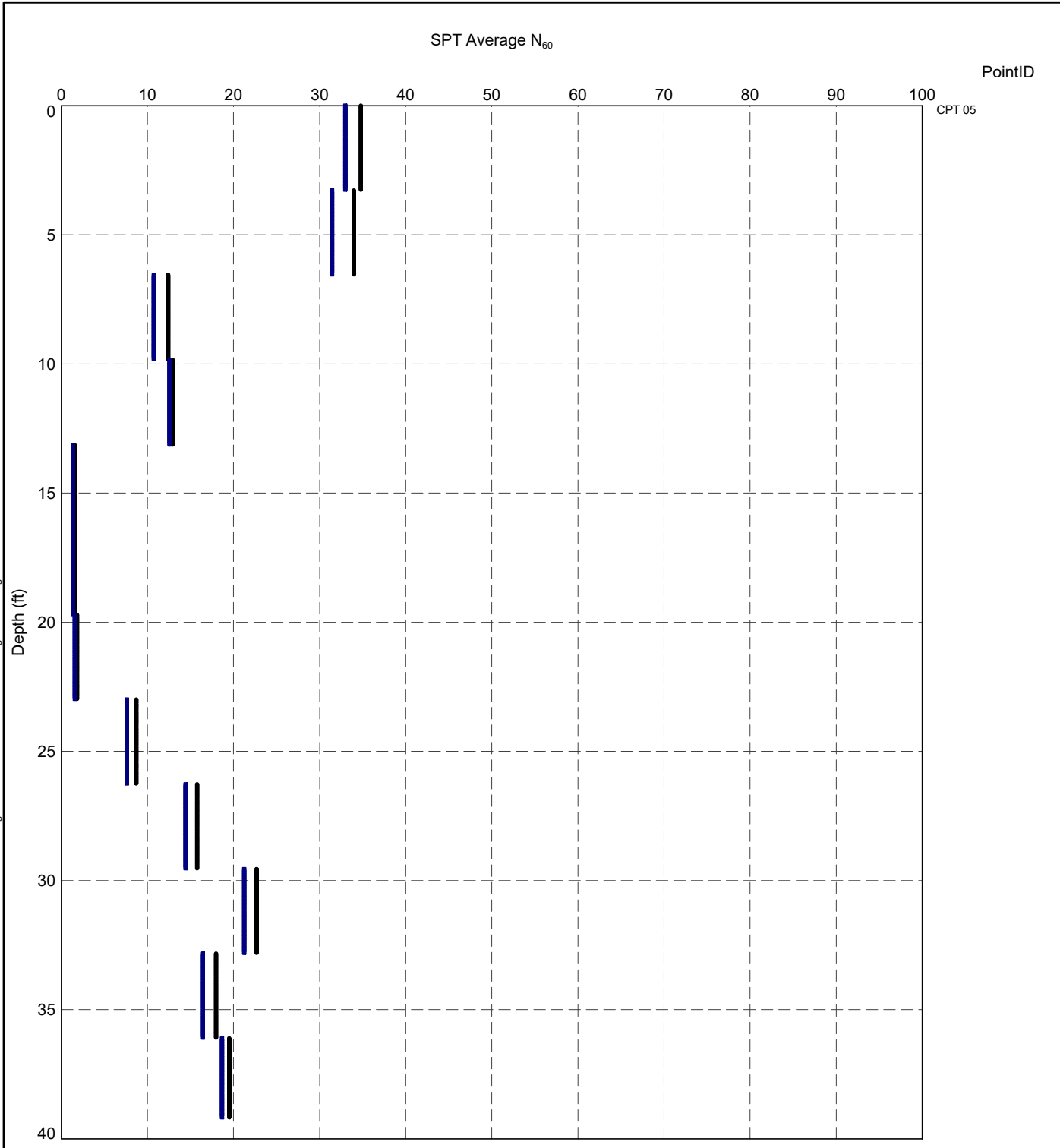
 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Soil Moisture versus Depth</p>	<p>DRAWN Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>CHECKED Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>SCALE Not To Scale</p>		<p>Let</p>
		<p>PROJECT No 4.05.0</p>	<p>FIGURE No 360</p>	



DATGEL\CPT TOOL\_DGD\_4.05.0\LIB\_GLB\_Graph\CPT SOIL MOISTURE\_RL\_LETP.DATGEL\_CPT\_TOOL\_DGD\_4.05.0.EN.GPJ <-<DrawingFile>> 1/2/2021 22:10:10.01.00.11.Datgel.CPT.Tool.gINT.Add.in

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	TITLE  Client 1 Engineer 1 Somewhere CPT Tool Project Soil Moisture versus Elevation	DRAWN Datgel	DATE 1/2/2021	
		CHECKED Datgel	DATE 1/2/2021	
		SCALE Not To Scale		Let
		PROJECT No 4.05.0	FIGURE No 361	

DATGEL CPT TOOL\_DGD\_4.05.0.LIB.GLB Graph: CPT SPT AVERAGE N60 DEPTH LETP DATGEL CPT TOOL\_DGD\_4.05.0.EN.GPJ <<DrawingFile>> 1/22/2021 22:11:10.01.00.11 Datgel CPT Tool.g/NT Add-In



Method:  
 ● Robertson and Wride (1998)  
 ☒ Jefferies and Davies (1993)

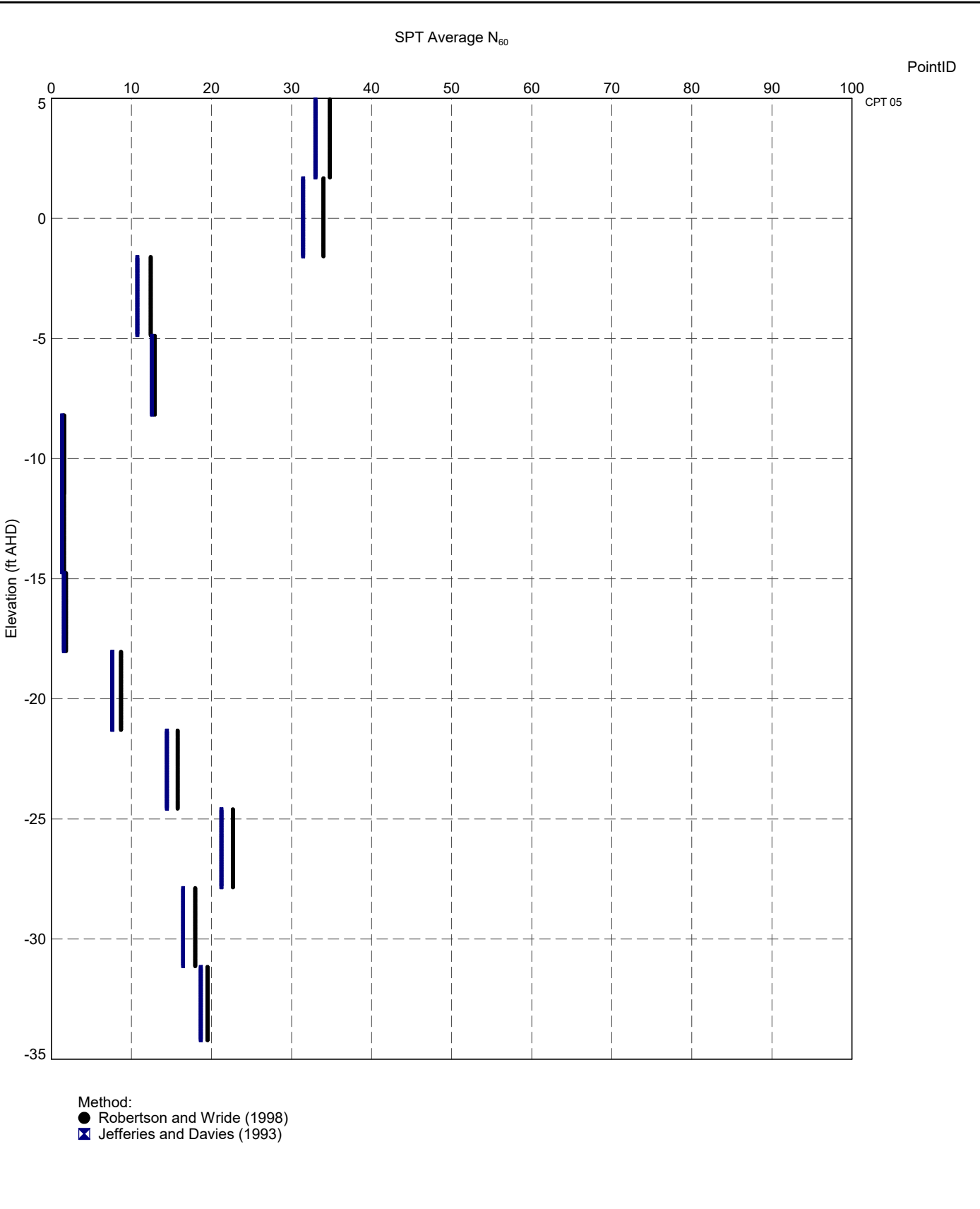



TITLE  
 Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 SPT Average N<sub>60</sub> versus Depth

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	362

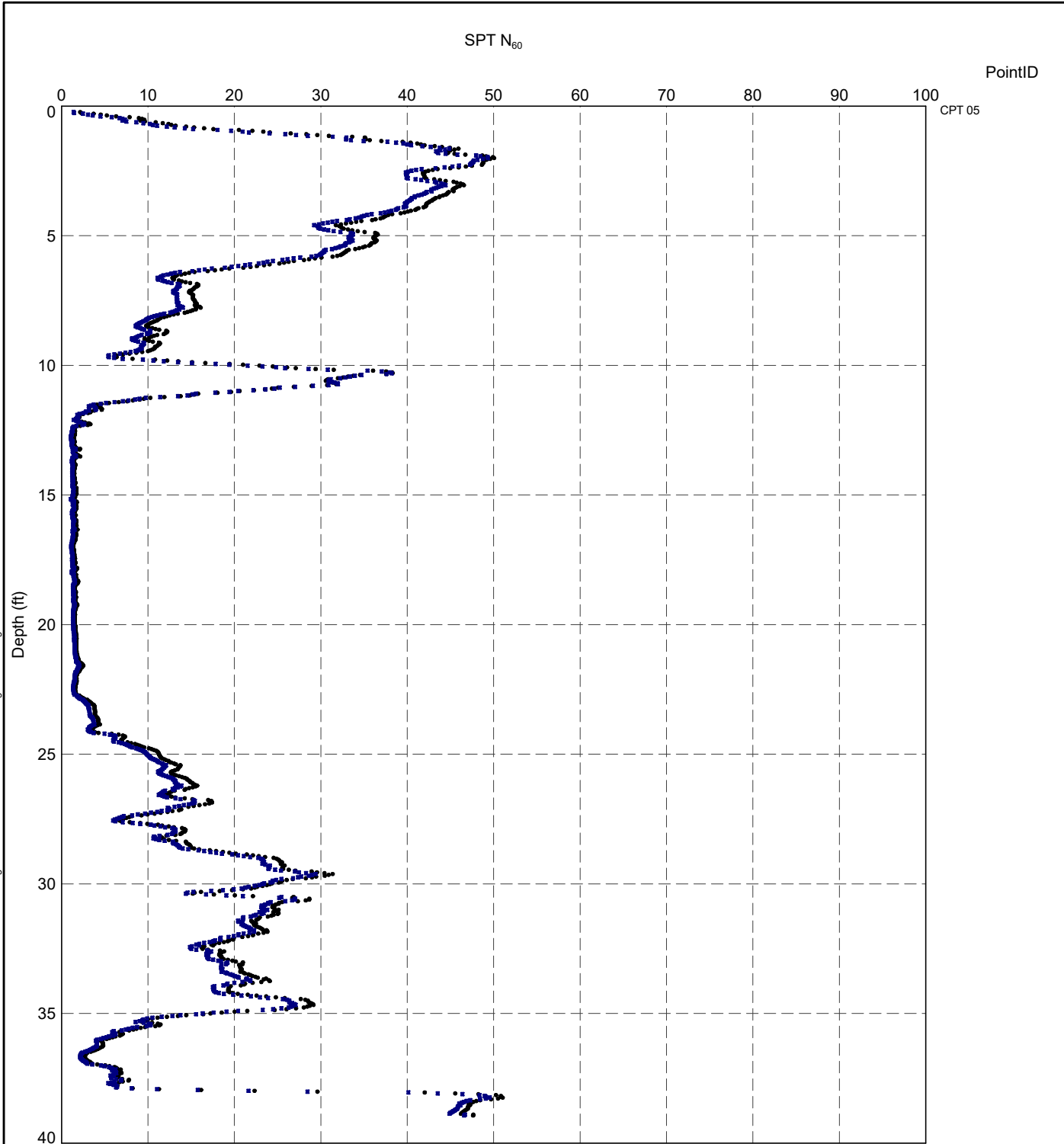


DATGEL\CPT TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT\_SPT\_AVERAGE\_N60\_RL\_LETP.DATGEL\CPT\_TOOL\_DGD\_4.05.0\EN.GPJ <<DrawingFile>> 1/2/2021 22:11 11.01.00.11 Datgel\CPT\_Tool.gINT\_Add-In




 <b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	TITLE Client 1 Engineer 1 Somewhere CPT Tool Project SPT Average $N_{60}$ versus Elevation	DRAWN Datgel	DATE 1/2/2021	
			CHECKED Datgel	DATE 1/2/2021
	SCALE Not To Scale			Let
			PROJECT No 4.05.0	FIGURE No 363

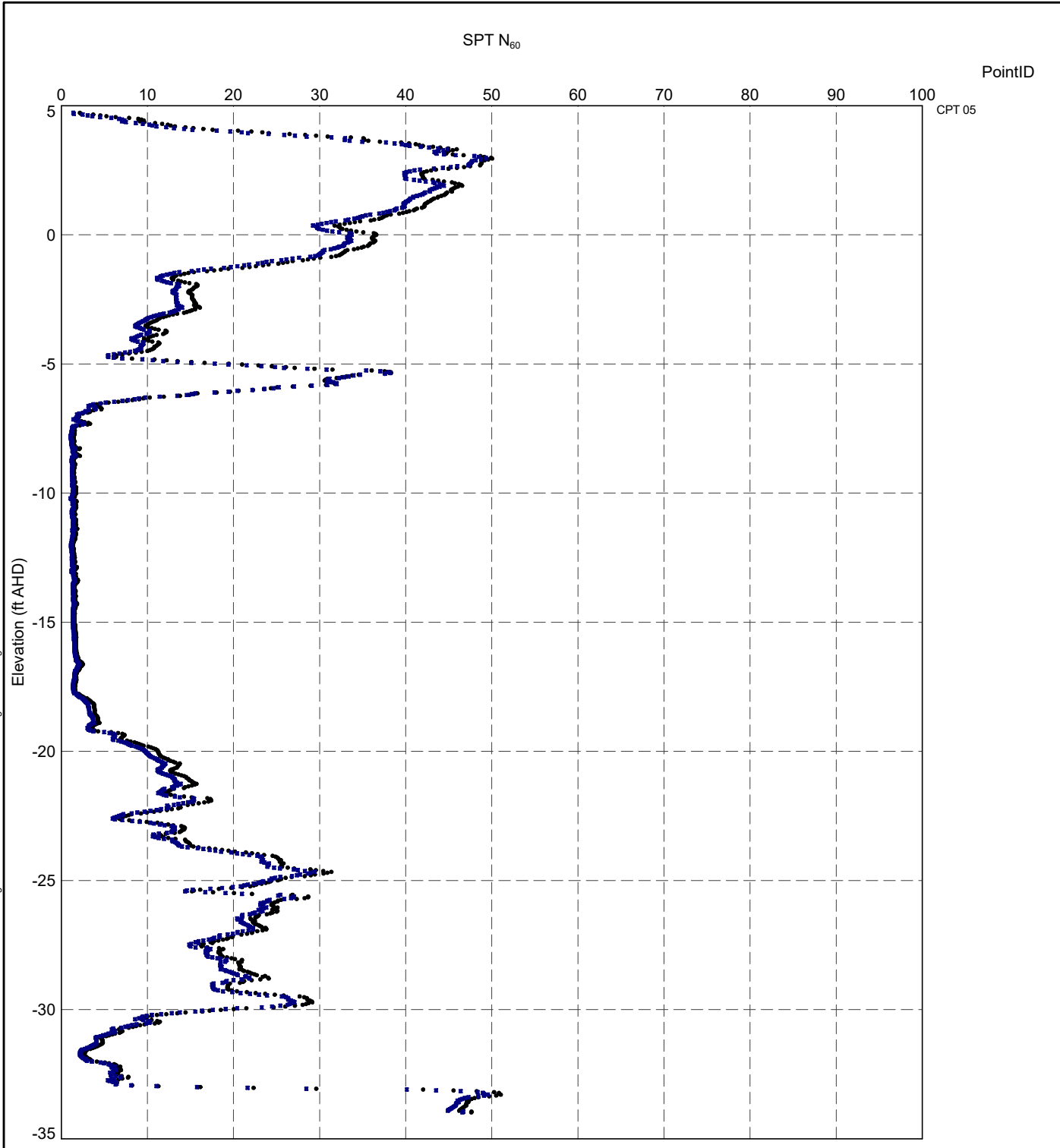
DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.SPT.N60.DEPTH.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <<DrawingFile>> 1/2/2021 22:12:10.01.00.11 Datgel.CPT.Tool.gINT.Add-In




Method:  
 ● Robertson and Wride (1998)  
 ⊠ Jefferies and Davies (1993)

 <b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	TITLE	Client 1 Engineer 1 Somewhere CPT Tool Project SPT N60 versus Depth	DRAWN Datgel	DATE 1/2/2021
			CHECKED Datgel	DATE 1/2/2021
			SCALE Not To Scale	Let
			PROJECT No 4.05.0	FIGURE No 364

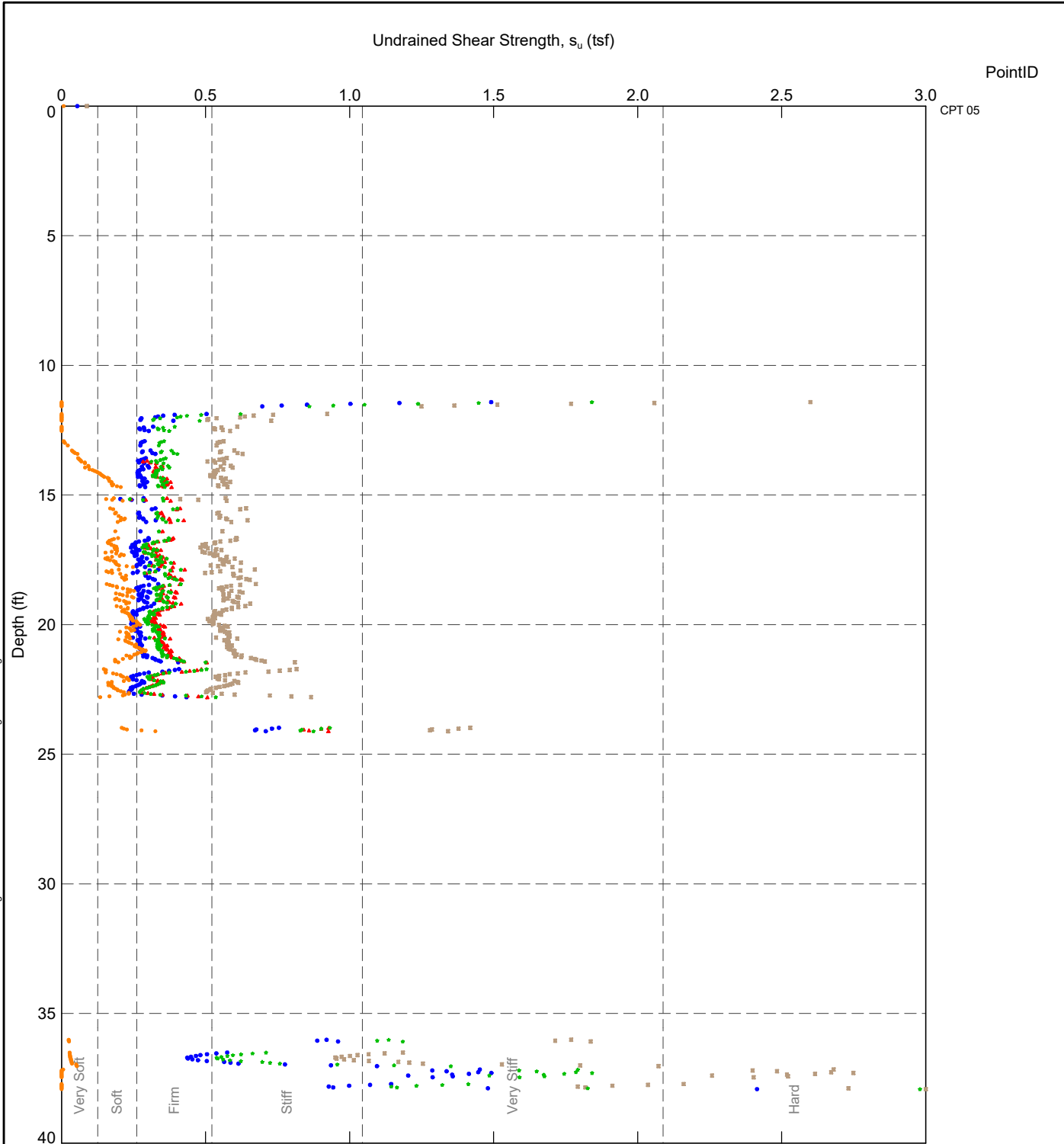
DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.SPT.N60.RL.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <<DrawingFile>> 1/2/2021 22:13:10.01.00.11.Datgel.CPT.Tool.gINT.Add-In




Method:  
 ● Robertson and Wride (1998)  
 ☒ Jefferies and Davies (1993)

 <b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	TITLE	Client 1 Engineer 1 Somewhere CPT Tool Project SPT N60 versus Elevation	DRAWN Datgel	DATE 1/2/2021
			CHECKED Datgel	DATE 1/2/2021
			SCALE Not To Scale	Let
			PROJECT No 4.05.0	FIGURE No 365

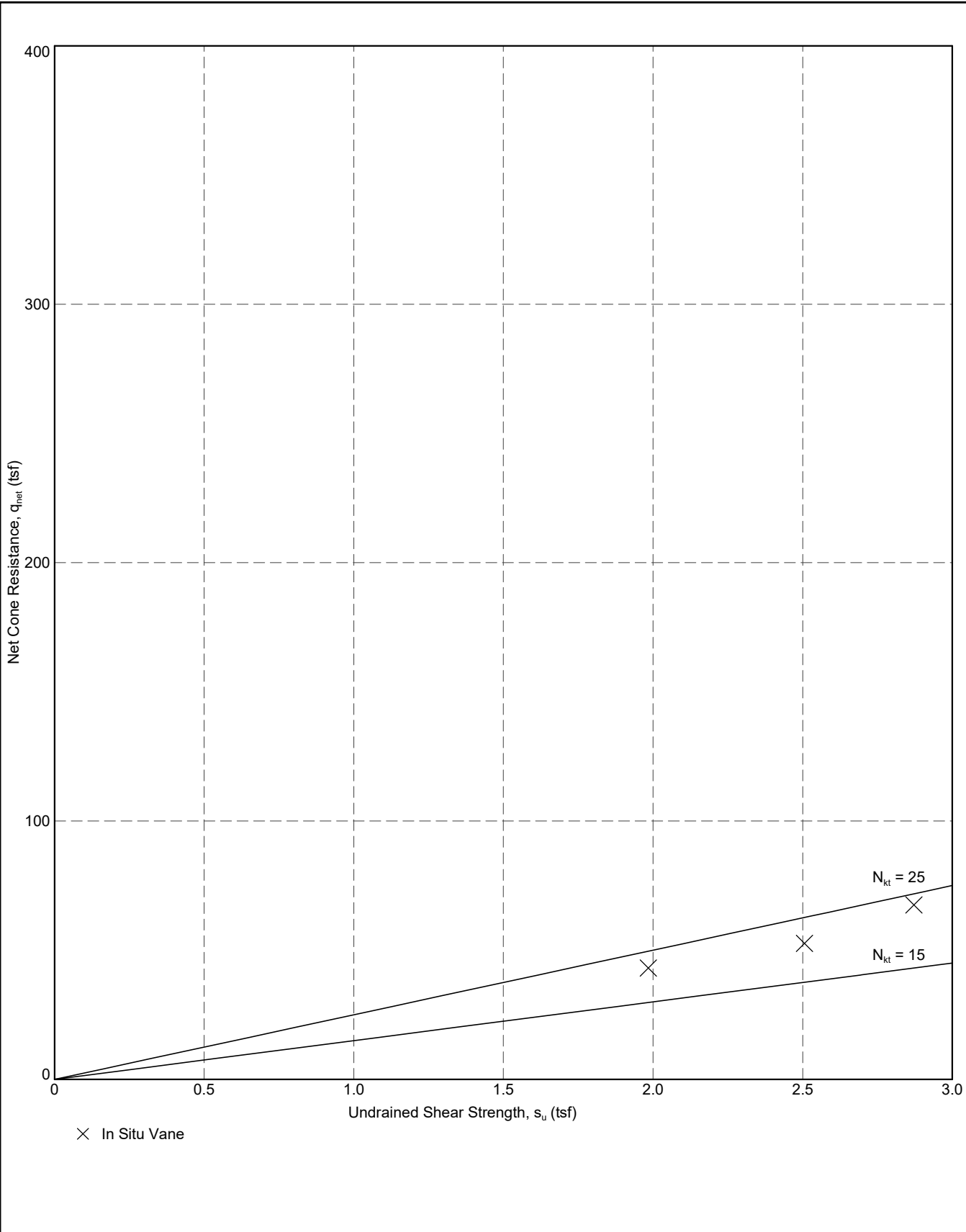
DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph CPT SU DEPTH LETP.DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <<DrawingFiles>> 1/2/2021 22:14 10.01.00.11.Datgel CPT Tool.gjINT Add-In



- Method:
- Classical approach, when  $q_t$  has data  $s_u = (q_t - \sigma_{vo})/N_{kt}$ ; else,  $s_u = (q_c - \sigma_{vo})/N_k$ , where  $N_{kt}$  = Varies &  $N_k$  = Varies
  - Variation on classical approach, when  $q_t$  has data  $s_u = q_t/N_{kt}$ ; else,  $s_u = q_c/N_k$ , where  $N_{kt}$  = Varies &  $N_k$  = Varies
  - ▲ Wroth (1984)
  - ★ Trak et al. (1980), Terzaghi et al. (1996)
  - Robertson (2009),  $s_u = \Delta u/N$

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	TITLE	Client 1 Engineer 1 Somewhere CPT Tool Project Undrained Shear Strength versus Depth	DRAWN Datgel	DATE 1/2/2021
			CHECKED Datgel	DATE 1/2/2021
			SCALE Not To Scale	Let
			PROJECT No 4.05.0	FIGURE No 366

DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.SU.IS.VANE. PEAK VS QNET.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ.<-DrawingFile>> 1/2/2021 22:14 10.01.00.11.Datgel.CPT.Tool.gINT.Add-In



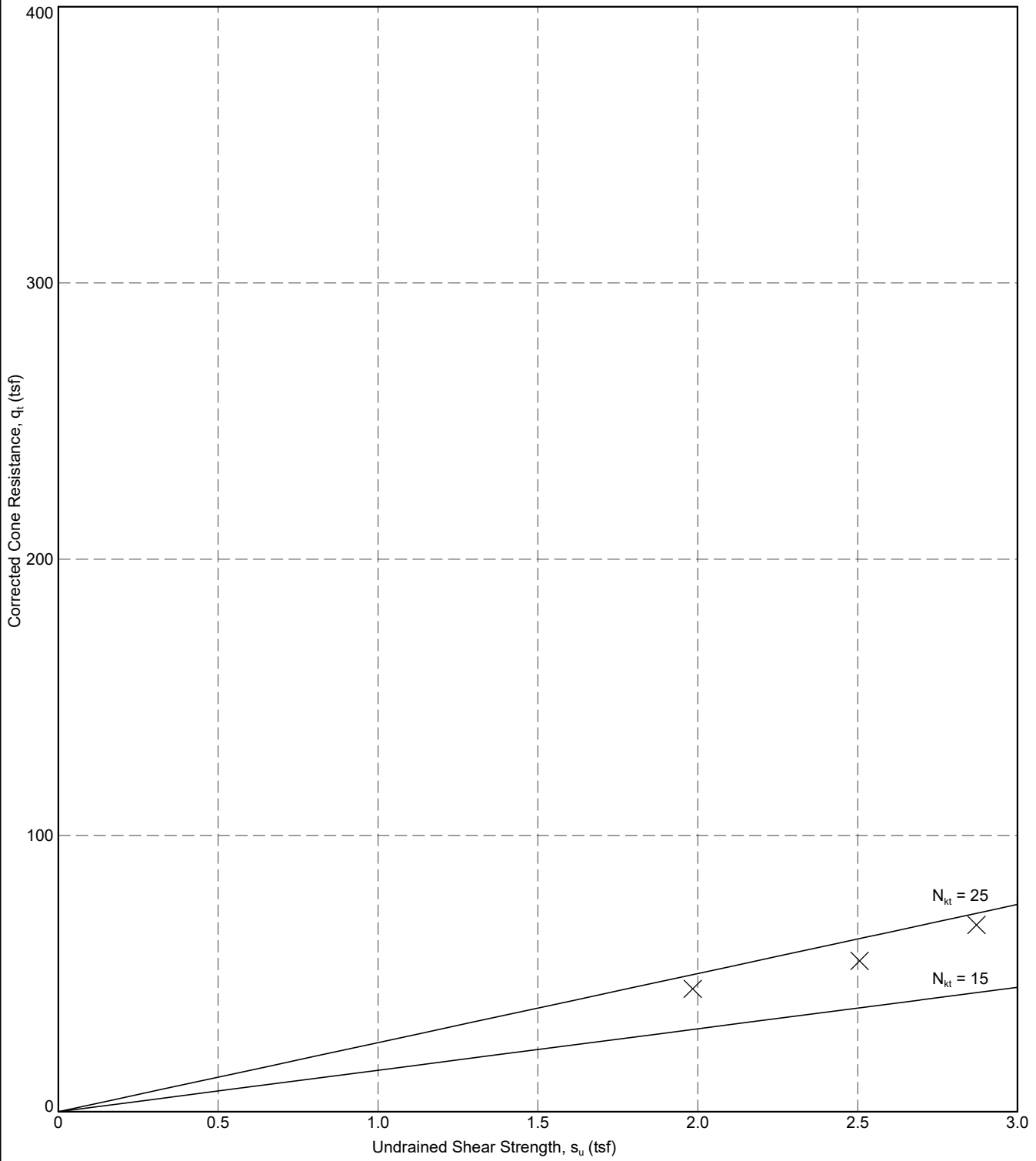
× In Situ Vane



TITLE  
 Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 $q_{net}$  vs. In Situ Vane Shear  $s_u$  - CPT 05

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	367

DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.SU.IS.VANE.PEAK.VS.QT.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <-DrawingFile>> 1/2/2021 22:14:10.01.00.11.Datgel.CPT.Tool.gINT.Add-In



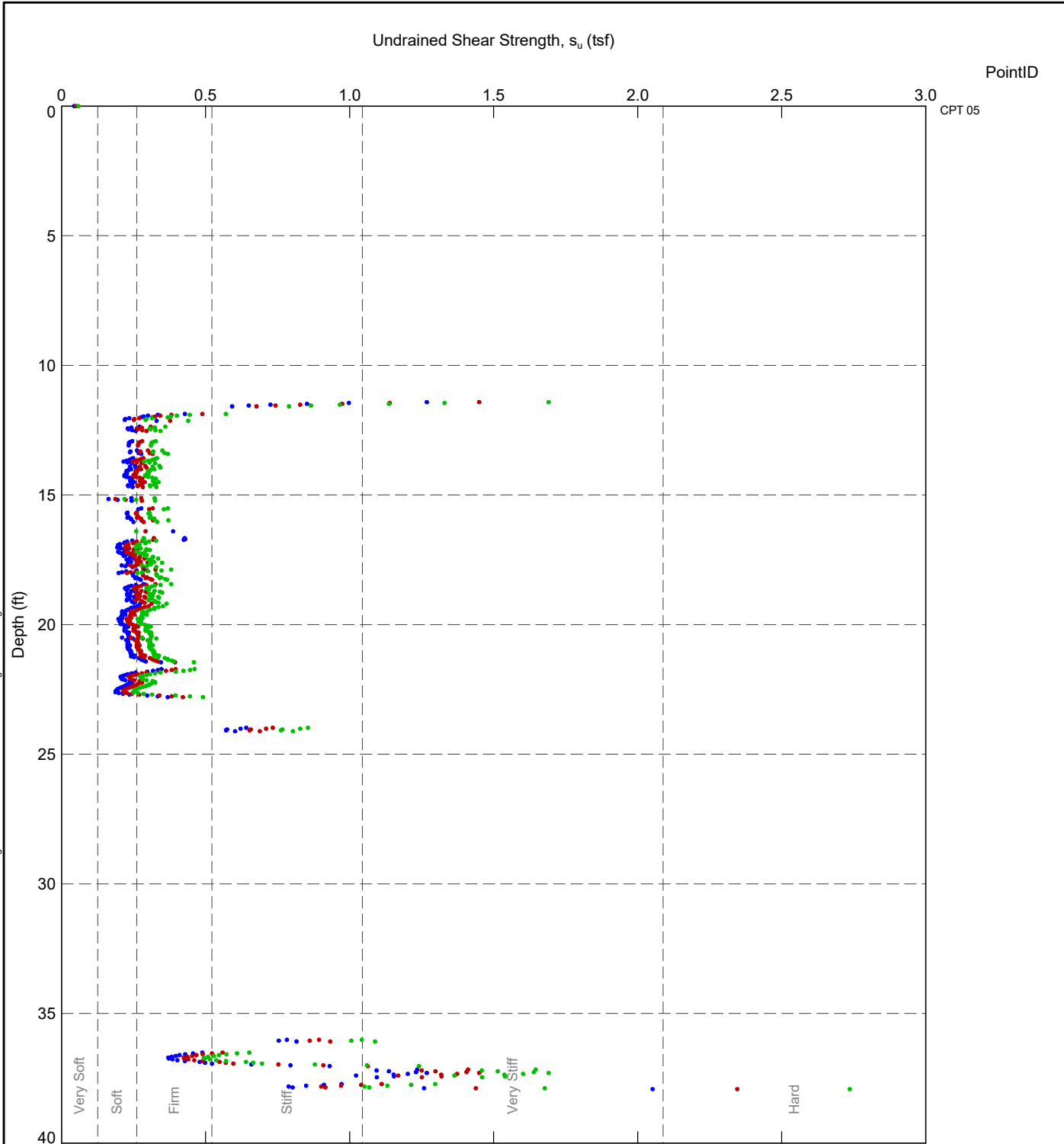
× In Situ Vane



TITLE  
 Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 $q_t$  vs. In Situ Vane Shear  $s_u$  - CPT 05

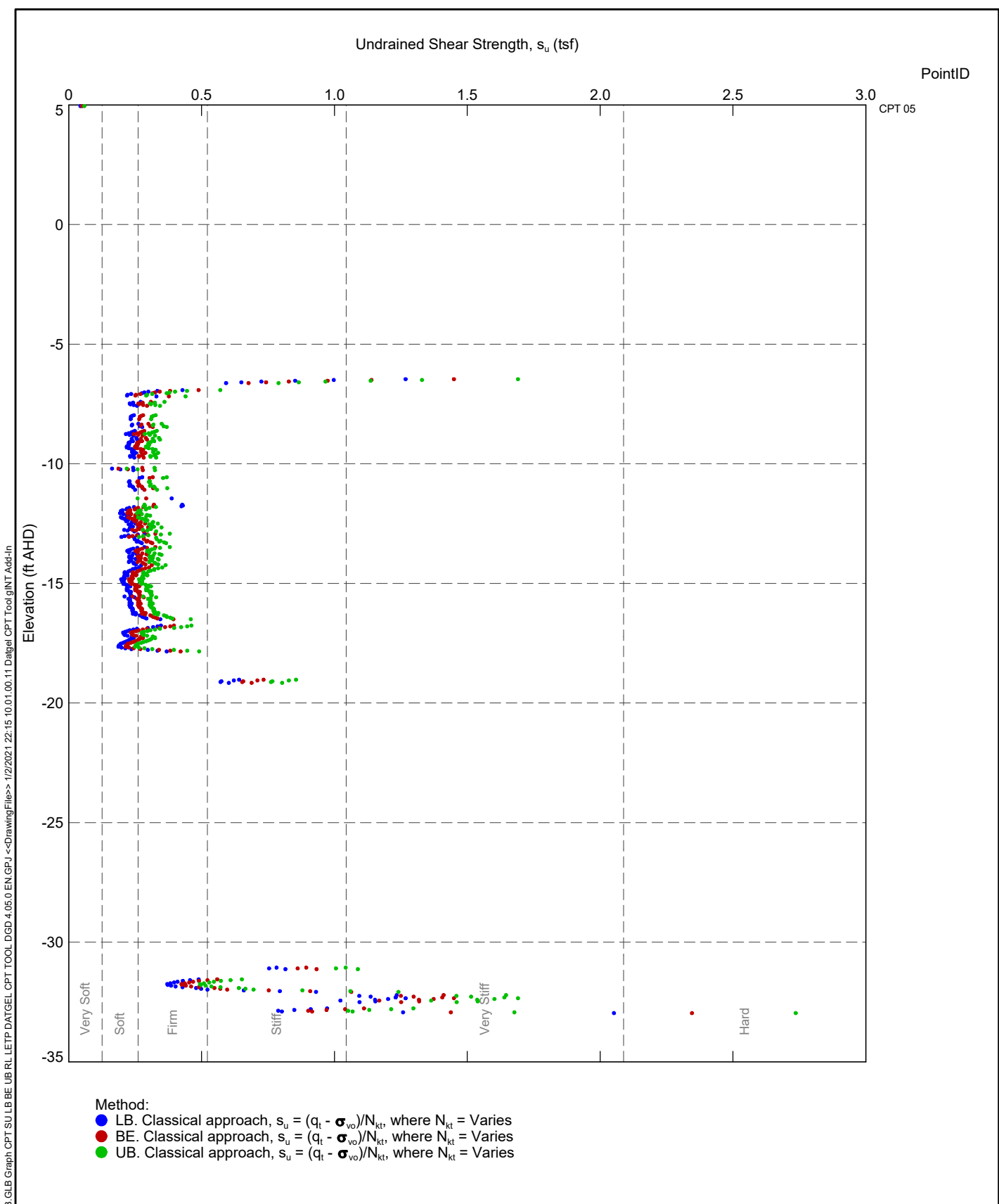
DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	368

DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.SU.LB.BE.UB.DEPTH.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <<DrawingFile>> 1/2/2021 22:15 10.01.00.11.Datgel.CPT.Tool.gINT.Add-In




Method:  
 ● LB. Classical approach,  $s_u = (q_t - \sigma_{vo})/N_{kt}$ , where  $N_{kt}$  = Varies  
 ● BE. Classical approach,  $s_u = (q_t - \sigma_{vo})/N_{kt}$ , where  $N_{kt}$  = Varies  
 ● UB. Classical approach,  $s_u = (q_t - \sigma_{vo})/N_{kt}$ , where  $N_{kt}$  = Varies

 <b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	TITLE Client 1 Engineer 1 Somewhere CPT Tool Project Undrained Shear Strength versus Depth	DRAWN	Datgel	DATE	1/2/2021	
		CHECKED	Datgel	DATE	1/2/2021	
		SCALE	Not To Scale			Let
		PROJECT No	4.05.0		FIGURE No	369



DATGEL\CPT TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT\_SU\LB\BE\UB\RL\LETP\DATGEL\CPT TOOL\_DGD\_4.05.0\EN\GPJ <<DrawingFile>> 1/2/2021 22:15:10.01.00.11 Datgel\CPT Tool\gINT\_Add-In

**Method:**  
 ● LB. Classical approach,  $s_u = (q_t - \sigma_{vo}) / N_{kt}$ , where  $N_{kt}$  = Varies  
 ● BE. Classical approach,  $s_u = (q_t - \sigma_{vo}) / N_{kt}$ , where  $N_{kt}$  = Varies  
 ● UB. Classical approach,  $s_u = (q_t - \sigma_{vo}) / N_{kt}$ , where  $N_{kt}$  = Varies

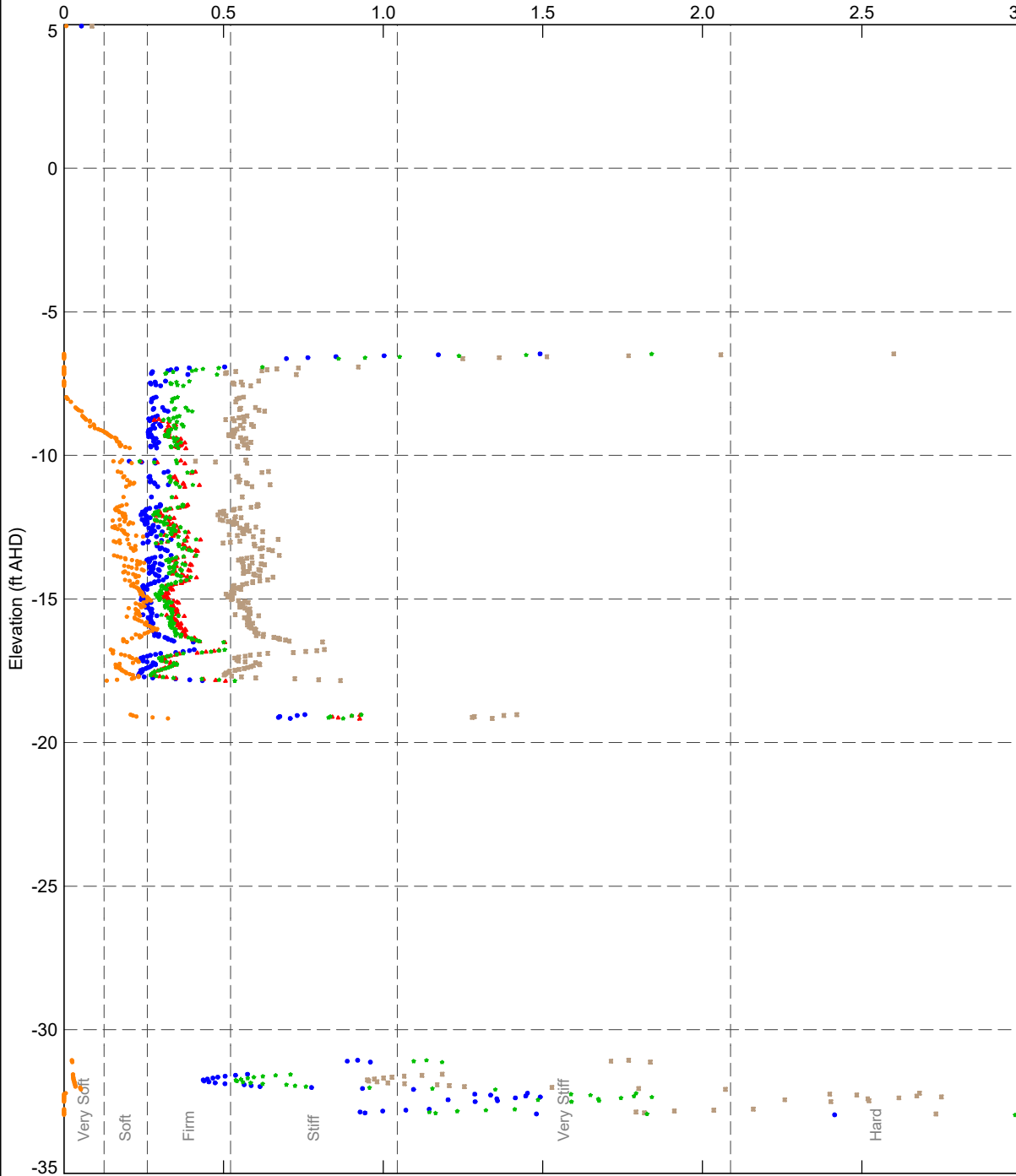
 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	TITLE	Client 1 Engineer 1 Somewhere CPT Tool Project Undrained Shear Strength versus Elevation	DRAWN	Datgel	DATE	1/2/2021
			CHECKED	Datgel	DATE	1/2/2021
			SCALE	Not To Scale		Let
			PROJECT No	4.05.0	FIGURE No	370



Undrained Shear Strength,  $s_u$  (tsf)

PointID

CPT 05



Method:

- Classical approach, when  $q_t$  has data  $s_u = (q_t - \sigma_{vo})/N_{kt}$ ; else,  $s_u = (q_c - \sigma_{vo})/N_k$ , where  $N_{kt} = \text{Varies}$  &  $N_k = \text{Varies}$
- Variation on classical approach, when  $q_t$  has data  $s_u = q_t/N_{kt}$ ; else,  $s_u = q_c/N_k$ , where  $N_{kt} = \text{Varies}$  &  $N_k = \text{Varies}$
- ▲ Wroth (1984)
- ★ Trak et al. (1980), Terzaghi et al. (1996)
- Robertson (2009),  $s_u = \Delta u/N$

DATGEL\CPT TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT SU R\LETP\DATGEL\CPT TOOL\_DGD\_4.05.0 EN.GPJ <<DrawingFile>> 1/2/2021 22:16 10:01:00.11 Datgel.CPT Tool.gj\NT Add-in



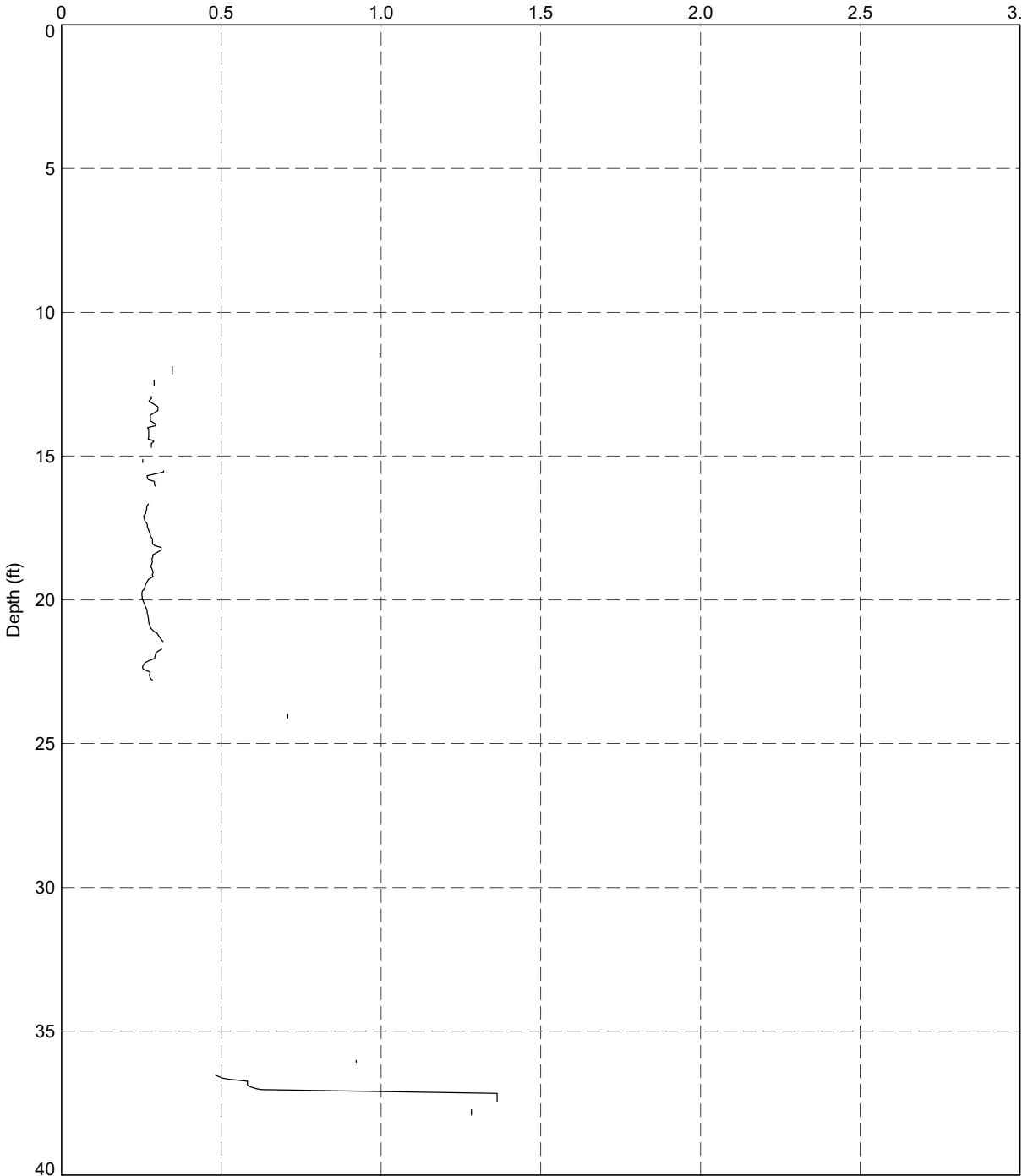
TITLE  
 Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Undrained Shear Strength versus Elevation

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	371


Undrained Shear Strength Smoothed,  $s_u$  Sm (tsf)

PointID

CPT 05



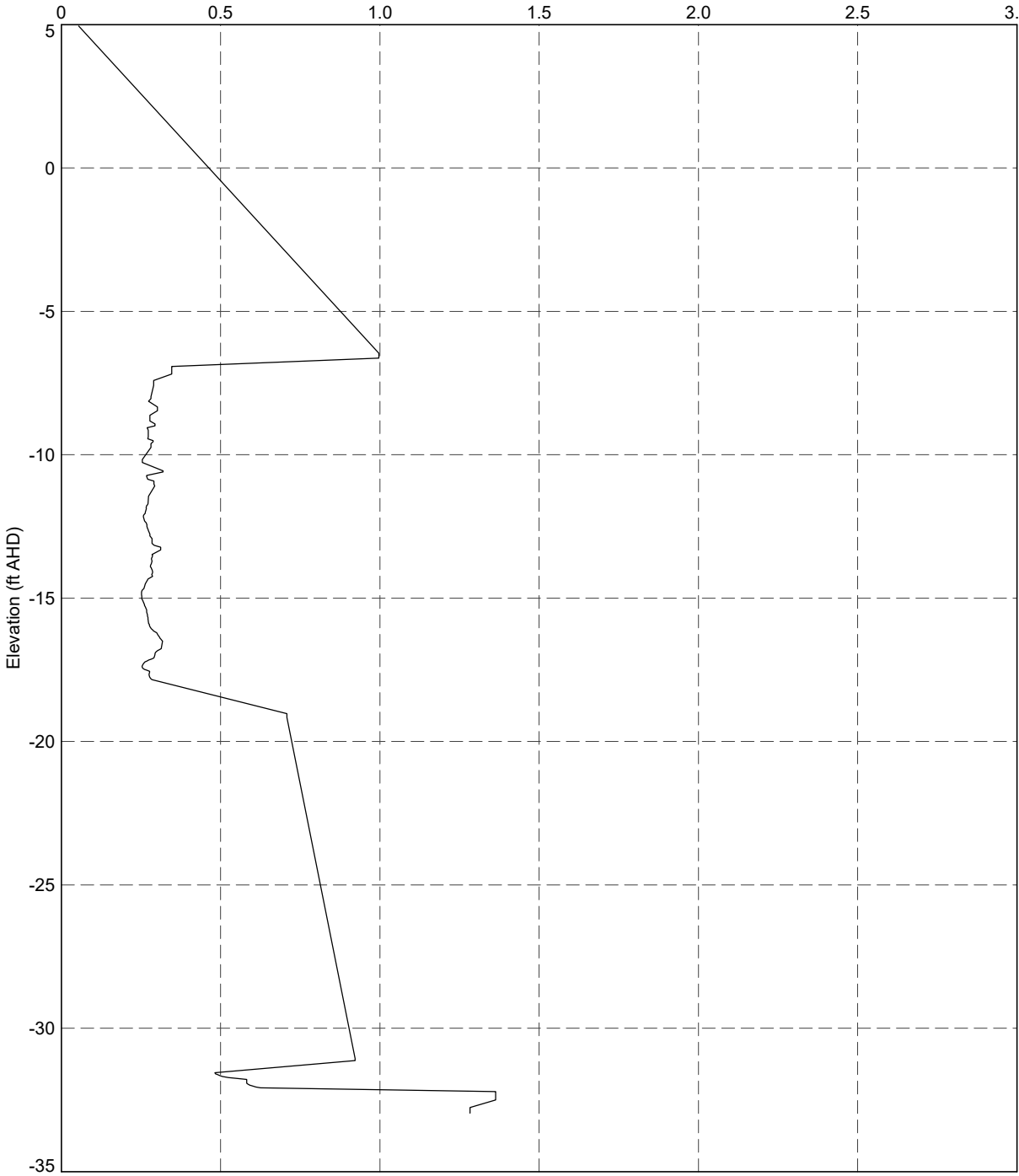
DATGEL\CPT TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT SU SM DEPTH LEIP DATGEL\CPT TOOL\_DGD\_4.05.0\EN.GPJ <<DrawingFile>> 1/2/2021 22:16:10.01.00.11 Datgel\CPT.Tool.gINT Add-In

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Smoothed <math>s_u</math> versus Depth</p>	<p>DRAWN Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>CHECKED Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>SCALE Not To Scale</p>		<p>Let</p>
		<p>PROJECT No 4.05.0</p>	<p>FIGURE No 372</p>	

Undrained Shear Strength Smoothed,  $s_u$  Sm (tsf)

PointID

CPT 05



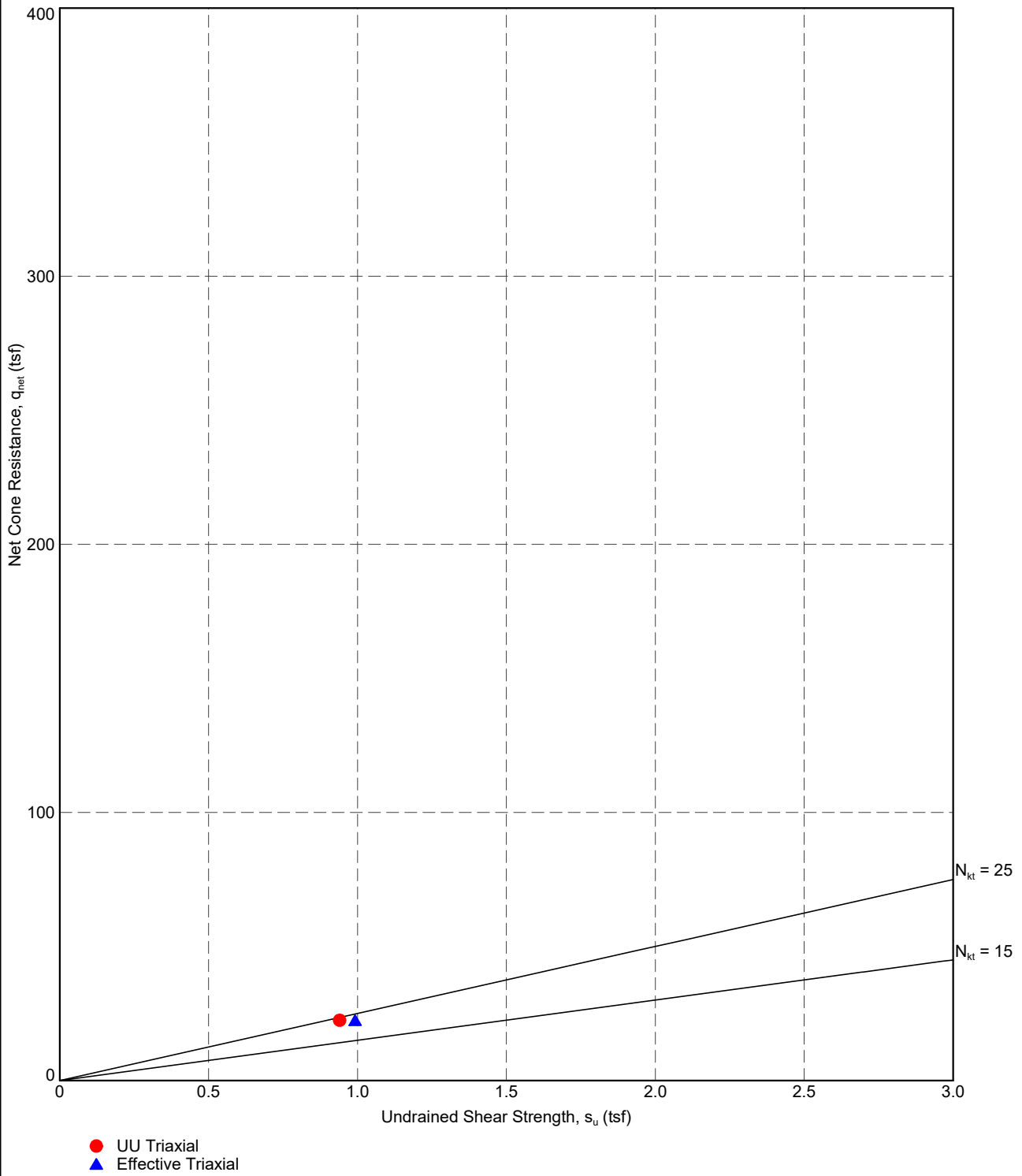
DATGEL CPT TOOL\_DGD\_4.05.0.LIB.GLB Graph CPT SU SM RL LETP DATGEL CPT TOOL\_DGD\_4.05.0.EN.GPJ <<DrawingFile>> 1/2/2021 22:16 10.01.00.11 Datgel CPT Tool.gINT.Add-in



TITLE  
 Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Smoothed  $s_u$  versus Elevation

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	373

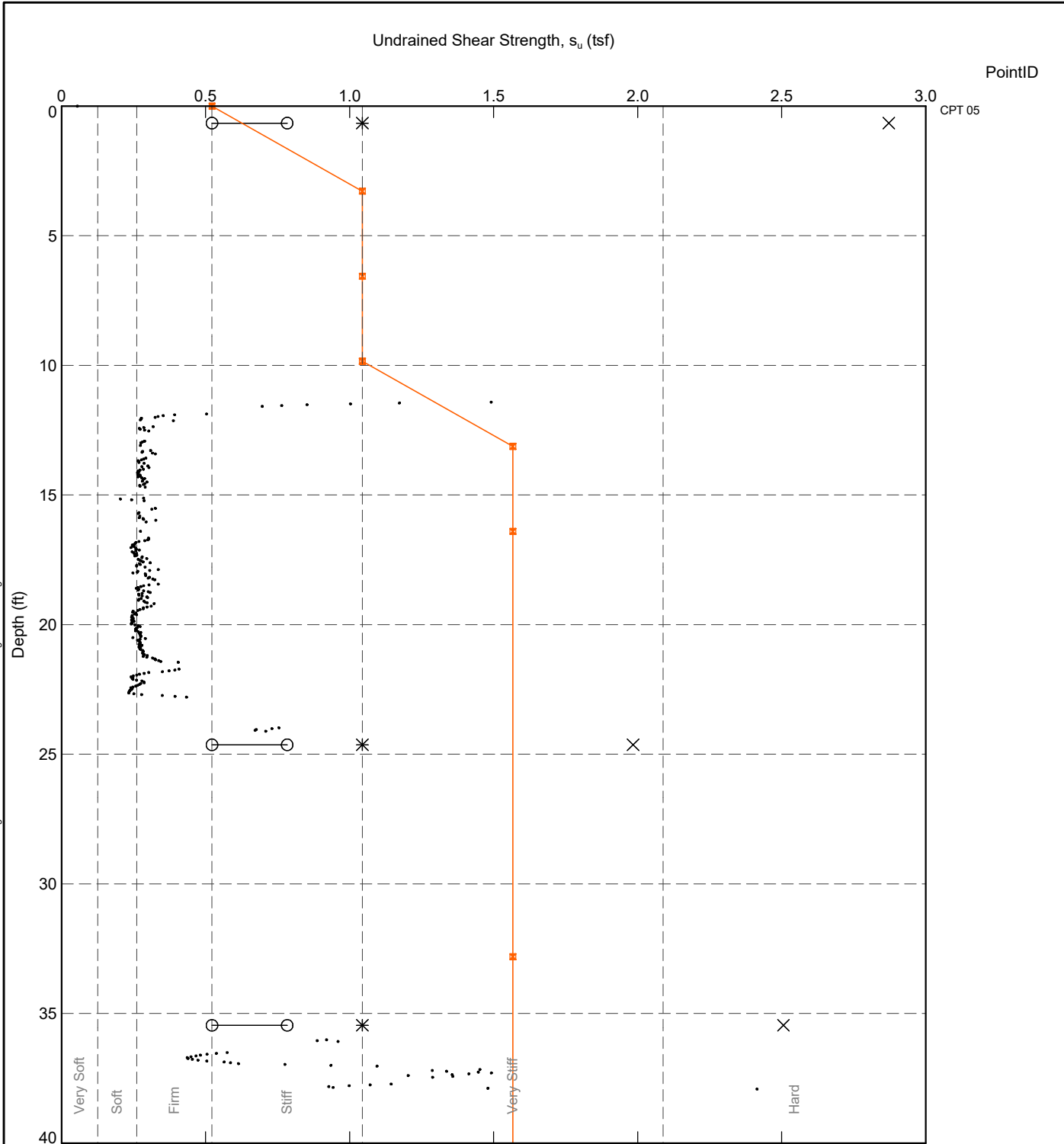
DATGEL CPT TOOL\_DGD\_4.05.0.LIB.GLB Graph CPT SU TRIAXIAL VS QNET LEIP DATGEL CPT TOOL\_DGD\_4.05.0.EN.GPJ <-DrawingFile>> 1/2/2021 22:16 10.01.00.11 Datgel CPT Tool.gINT.Add-In



TITLE  
 Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 $q_{net}$  vs. Triaxial  $s_u$  - CPT 05

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	374

DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.SU.VS.DEPTH.VANE.TV.PP.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ.<-DrawingFile>>.1/2/2021.22:16.10:01.00.11.Datgel.CPT.Tool.gINT.A4d-In

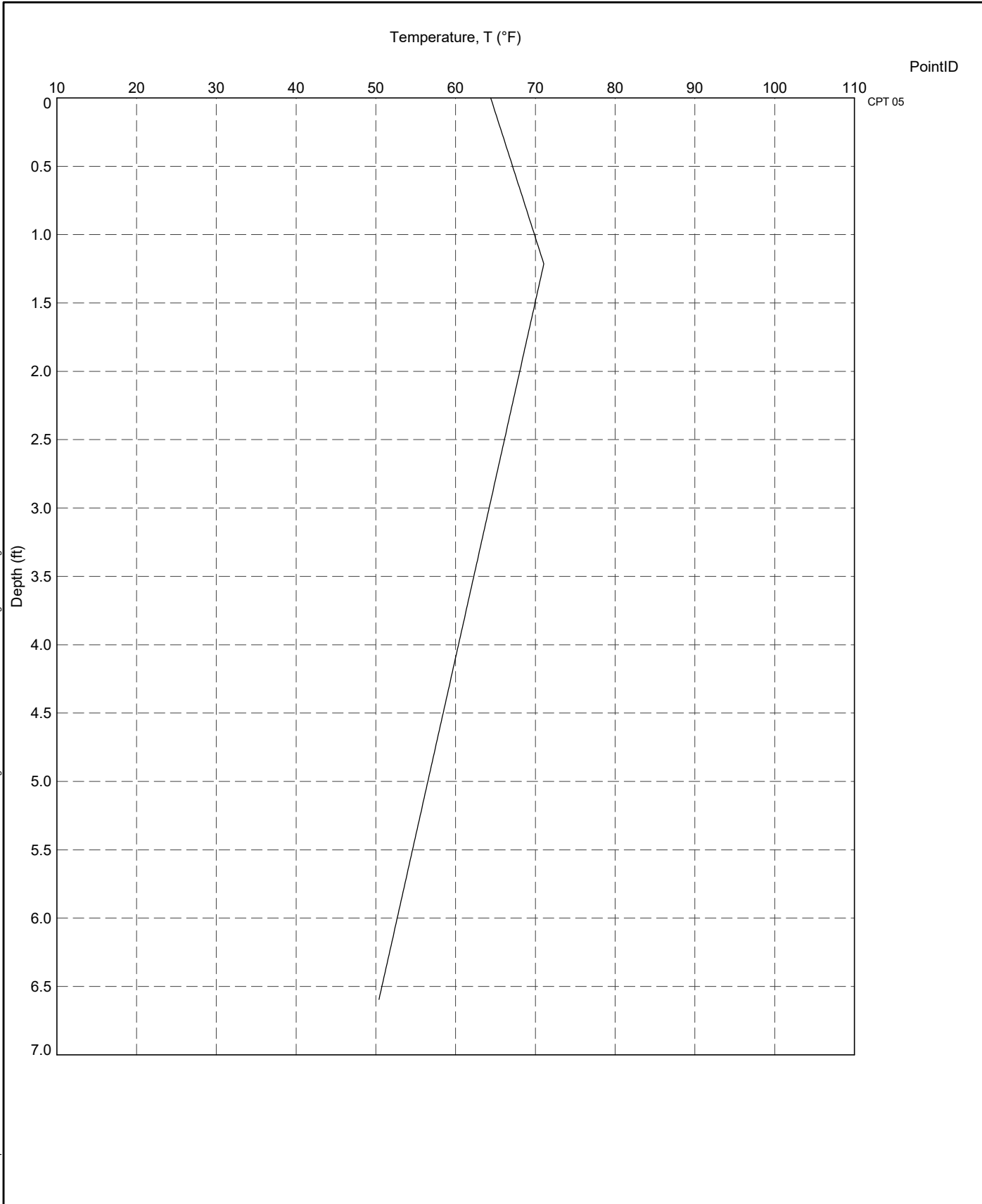



- Legend**
- CPT Correlation 1
  - × Vane
  - \* Torvane
  - Pocket Penetrometer

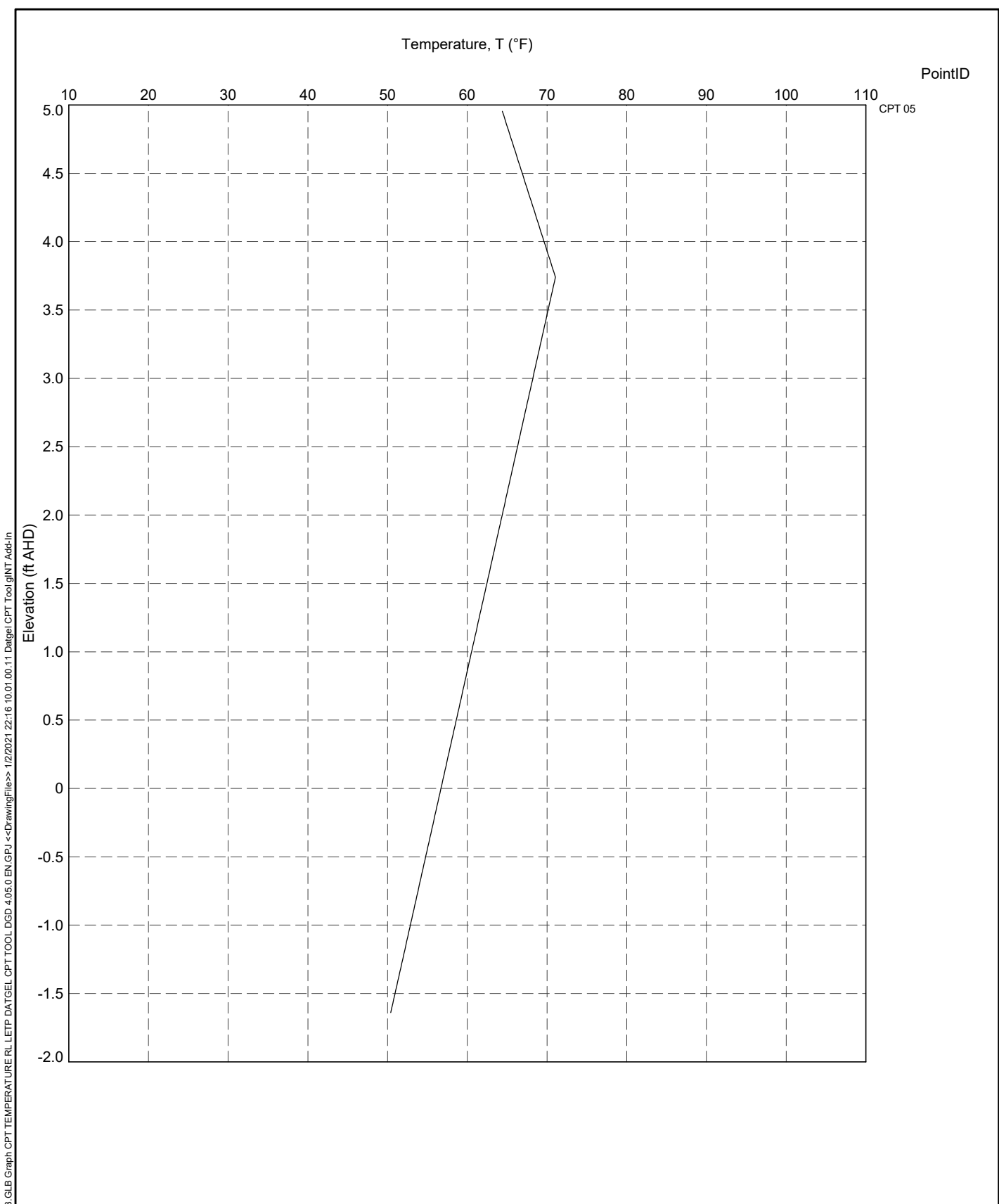
—■— DC 10TONS

 <b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	TITLE Client 1 Engineer 1 Somewhere CPT Tool Project Undrained Shear Strength versus Depth	DRAWN Datgel	DATE 1/2/2021	
	CHECKED Datgel		DATE 1/2/2021	
	SCALE Not To Scale			Let
	PROJECT No 4.05.0		FIGURE No 375	


DATGEL CPT TOOL\_DGD\_4.05.0.LIB.GLB Graph CPT TEMPERATURE DEPTH LETP.DATGEL CPT TOOL\_DGD\_4.05.0.EN.GPJ <-DrawingFile> 1/2/2021 22:16 10.01.00.11 Datgel CPT Tool gINT Add-In



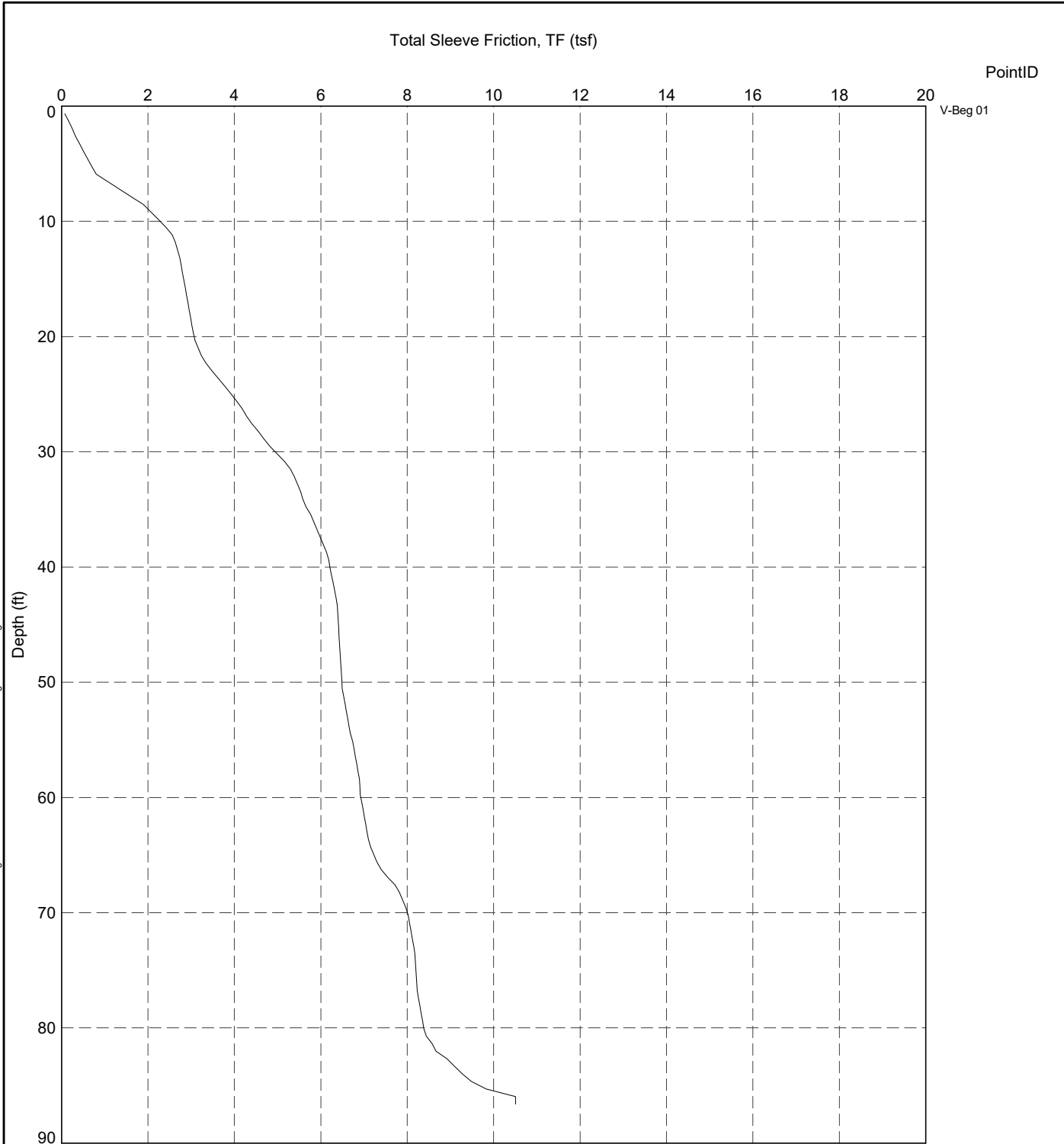
 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Temperature versus Depth</p>	DRAWN	Datgel	DATE	1/2/2021	
		CHECKED	Datgel	DATE	1/2/2021	
		SCALE	Not To Scale			Let
		PROJECT No	4.05.0	FIGURE No	376	




DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.TEMPERATURE.RL.LET.P.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ.<<DrawingFile>>.1/2/2021.22:16.10:01.00.11.Datgel.CPT.Tool.gINT.Add-In

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	TITLE  Client 1 Engineer 1 Somewhere CPT Tool Project Temperature versus Elevation	DRAWN Datgel	DATE 1/2/2021	
		CHECKED Datgel	DATE 1/2/2021	
		SCALE Not To Scale		Let
		PROJECT No 4.05.0	FIGURE No 377	

DATGEL CPT TOOL\_DGD\_4.05.0.LIB.GLB Graph CPT TOTAL FS DEPTH LETP DATGEL CPT TOOL\_DGD\_4.05.0.EN.GPJ <<DrawingFile>> 1/2/2021 22:16 10.01.00.11 Datgel CPT Tool.gINT Add-in

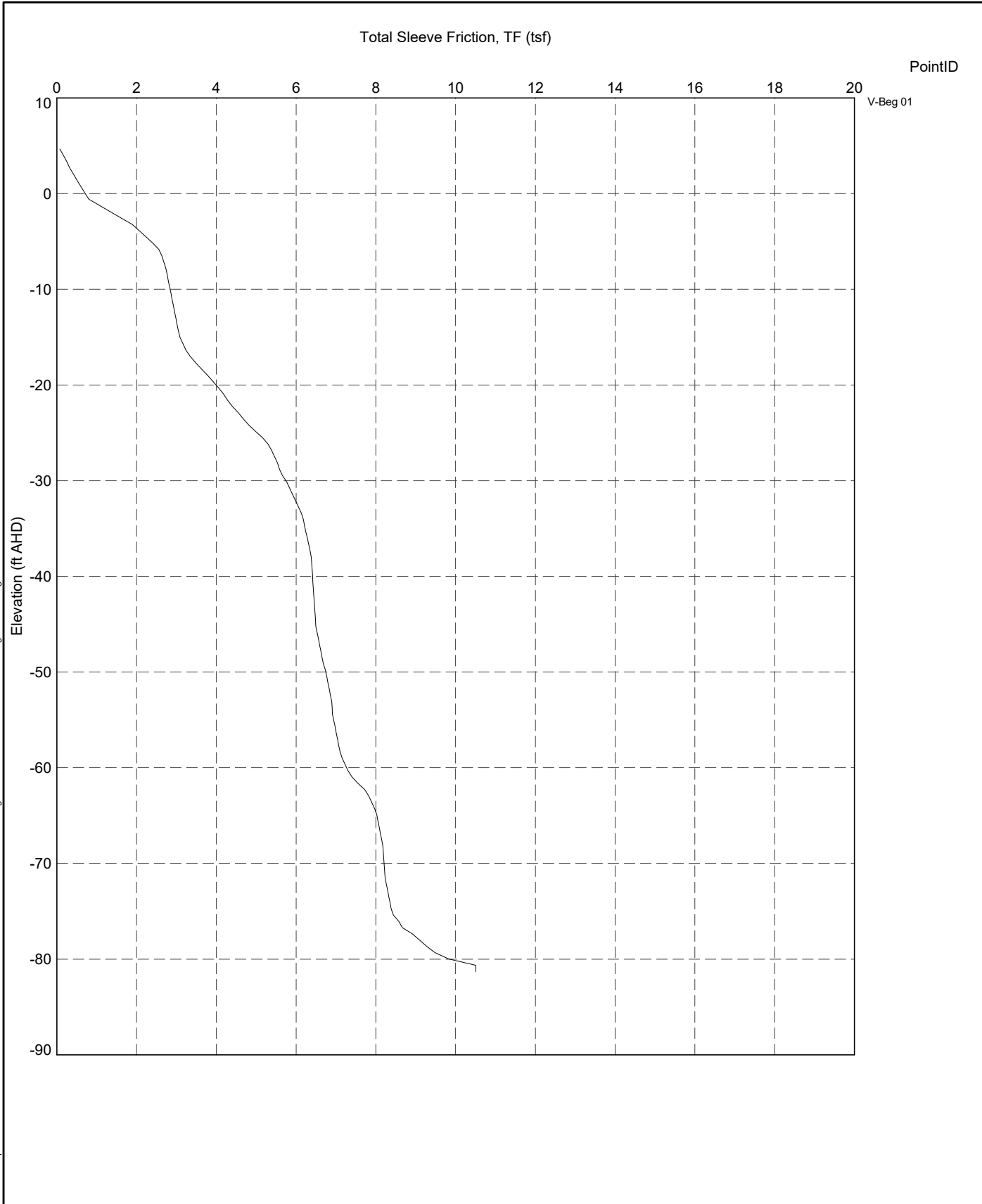


PointID  
V-Beg 01


 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project</p> <p>Total Sleeve Friction Resistance vs Depth</p>	<p>DRAWN Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>CHECKED Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>SCALE Not To Scale</p>		<p>Let</p>
		<p>PROJECT No 4.05.0</p>	<p>FIGURE No 378</p>	



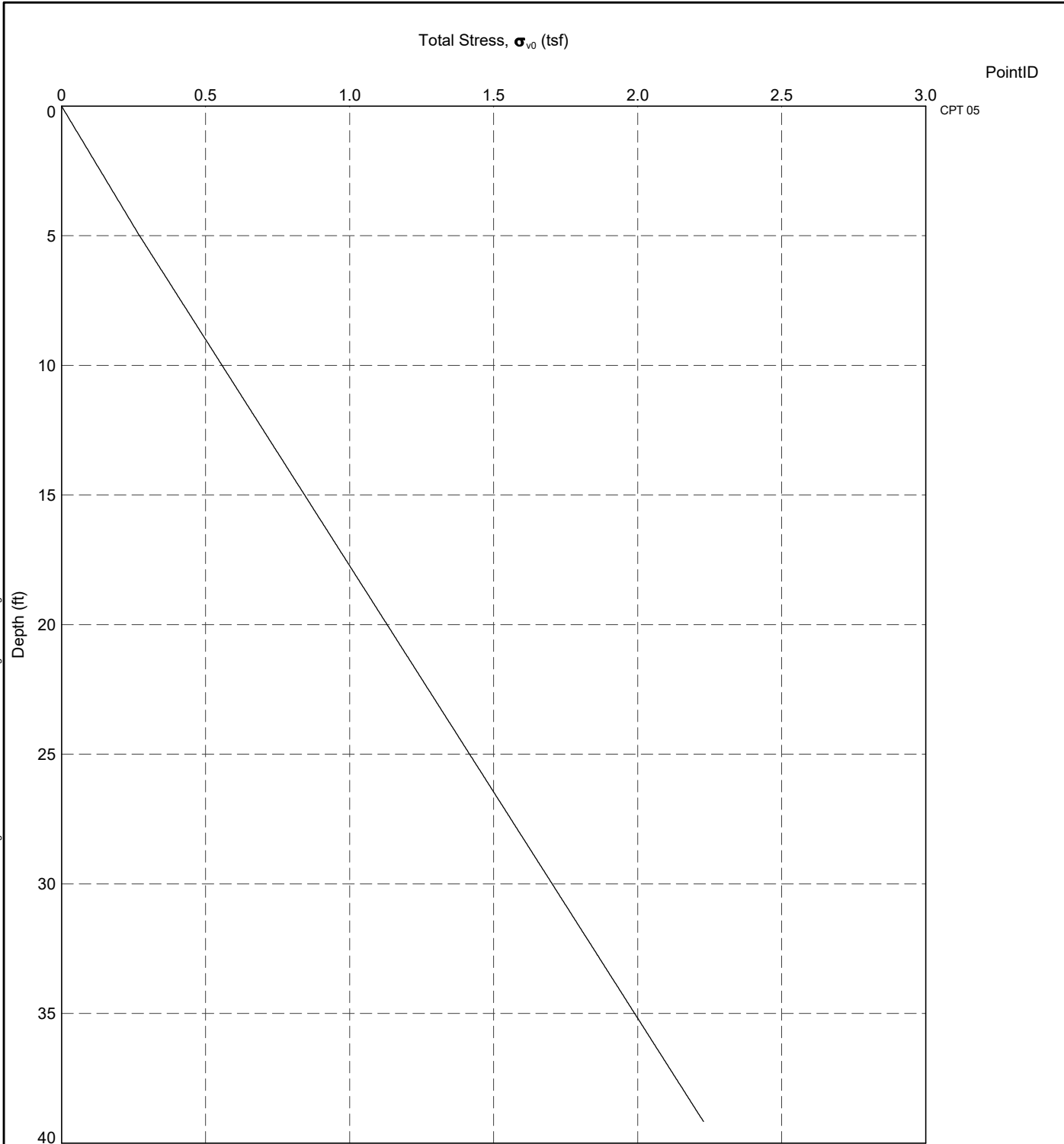
DATGEL CPT TOOL\_DGD\_4.05.0.LIB.GLB Graph CPT TOTAL FS VS RL LETP DATGEL CPT TOOL\_DGD\_4.05.0.EN.GPJ <<DrawingFiles>> 1/22/2021 22:16:10.01.00.11 Datgel CPT Tool.g/NT Add-In




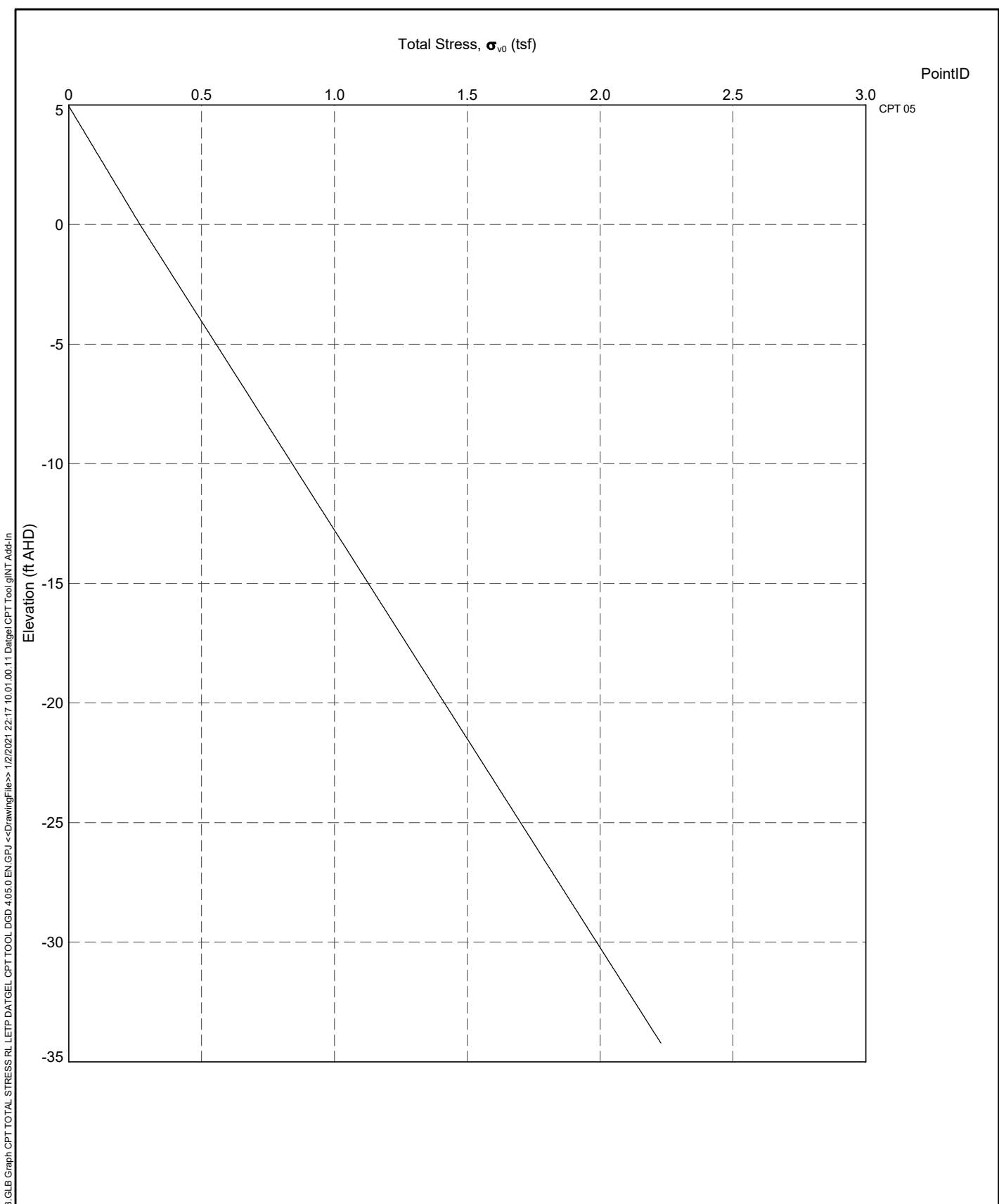
PointID  
V-Beg 01

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project</p> <p>Total Sleeve Friction Resistance vs Elevation</p>	<p>DRAWN</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>	
		<p>CHECKED</p> <p>Datgel</p>	<p>DATE</p> <p>1/2/2021</p>	
		<p>SCALE</p> <p>Not To Scale</p>		<p>Let</p>
		<p>PROJECT No</p> <p>4.05.0</p>	<p>FIGURE No</p> <p>379</p>	


DATGEL CPT TOOL\_DGD.4.05.0.LIB.GLB Graph CPT TOTAL STRESS DEPTH LETP.DATGEL CPT TOOL\_DGD.4.05.0.EN.GPJ <-DrawingFiles> 1/2/2021 22:17:10.01.00.11.Datgel.CPT.Tool.gjINT.Add-In

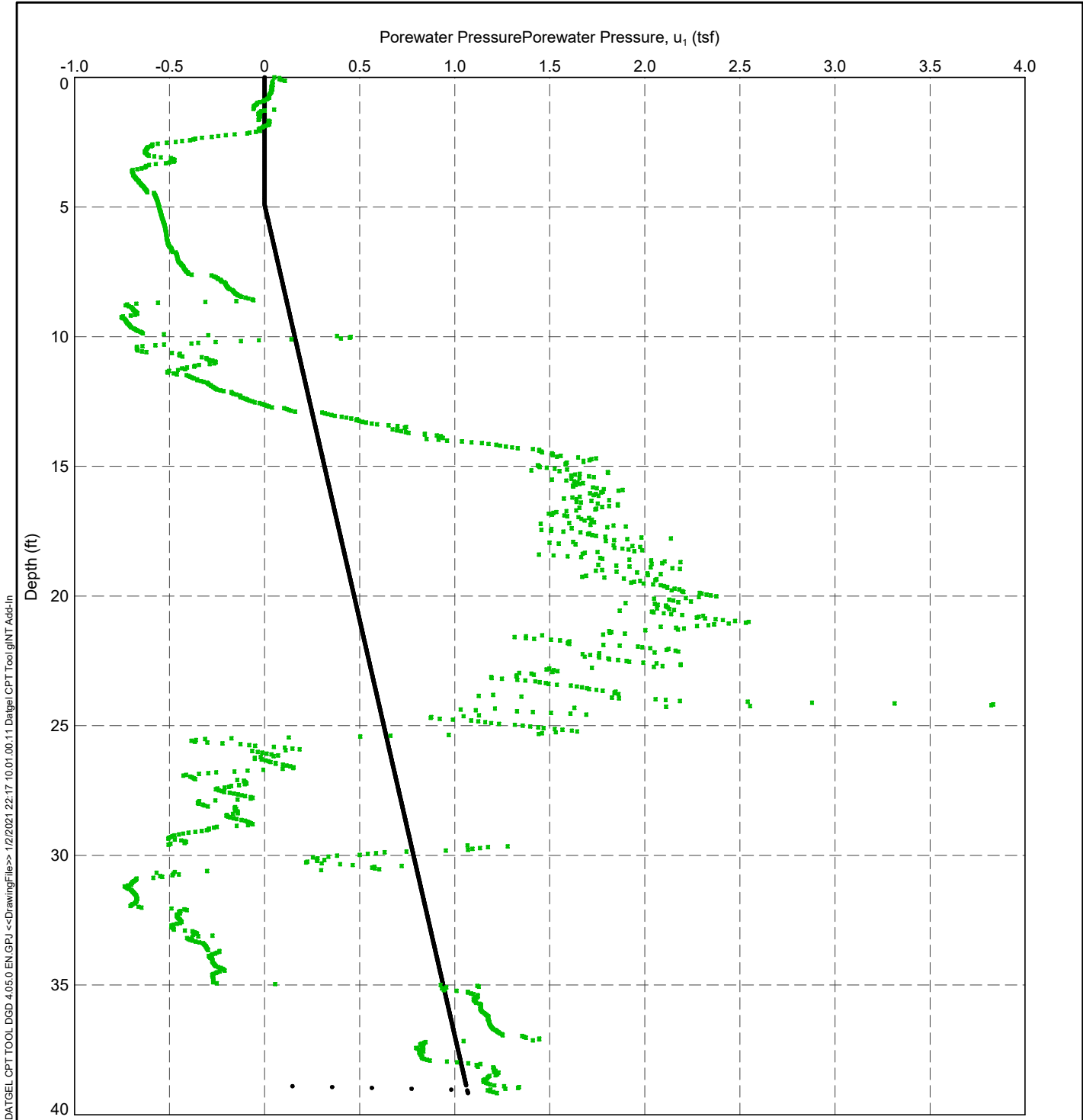


 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Total Stress versus Depth</p>	DRAWN	Datgel	DATE	1/2/2021	
		CHECKED	Datgel	DATE	1/2/2021	
		SCALE	Not To Scale			Let
		PROJECT No	4.05.0	FIGURE No	380	



DATGEL\CPT TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT TOTAL STRESS.RL LETP DATGEL\CPT TOOL\_DGD\_4.05.0 EN.GPJ <-DrawingFile>> 1/2/2021 22:17:10.01.00.11 Datgel\CPT Tool\gINT Add-In

 <b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	TITLE  Client 1 Engineer 1 Somewhere CPT Tool Project Total Stress versus Elevation	DRAWN Datgel	DATE 1/2/2021	
		CHECKED Datgel	DATE 1/2/2021	
		SCALE Not To Scale		Let
		PROJECT No 4.05.0	FIGURE No 381	



Legend:  
 ● Porewater Pressure,  $u_1$  (tsf)  
 ● In Situ Pore Pressure,  $u_0$  (tsf)

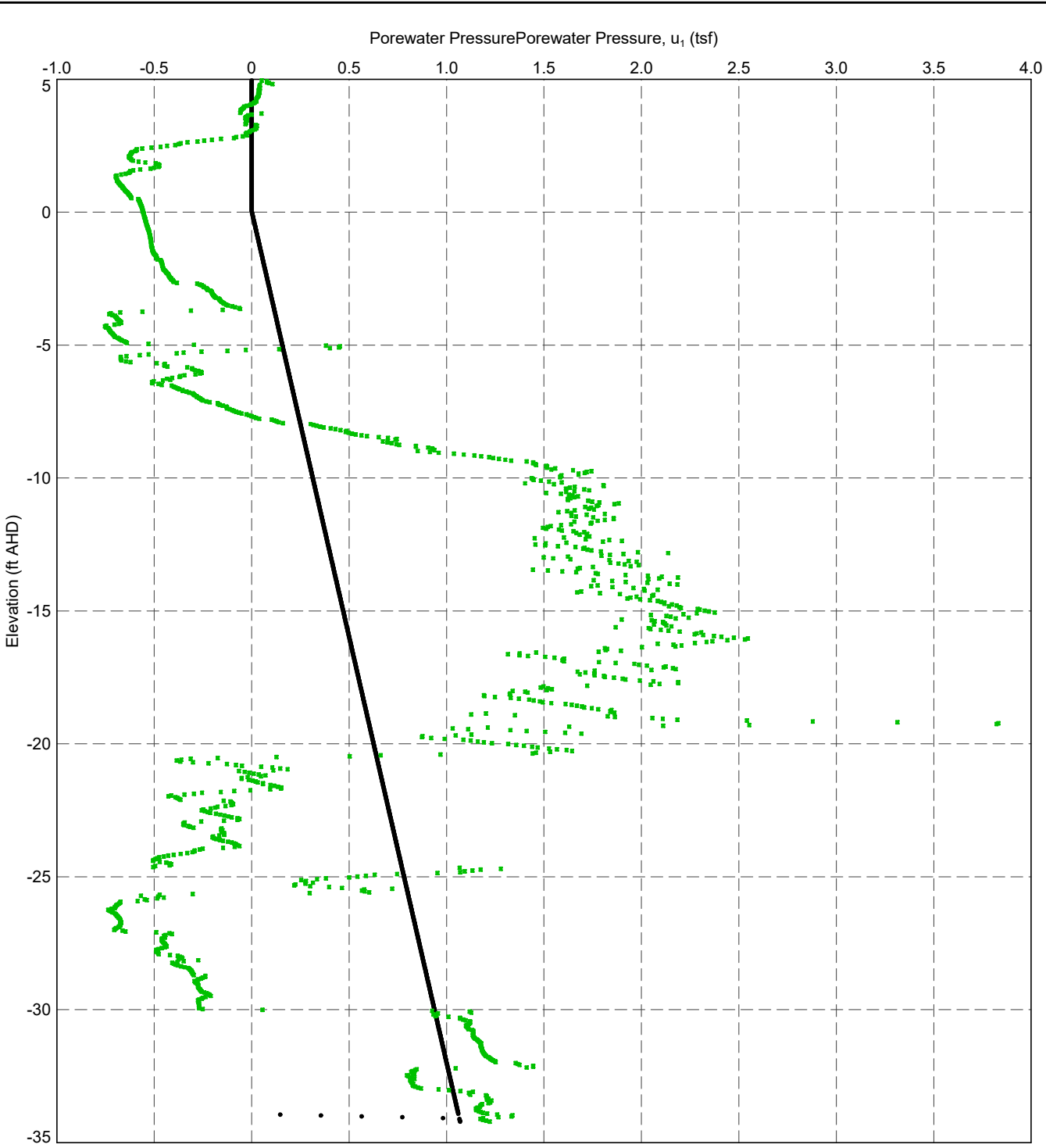


TITLE  
 Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Porewater Pressure versus Depth


DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	382

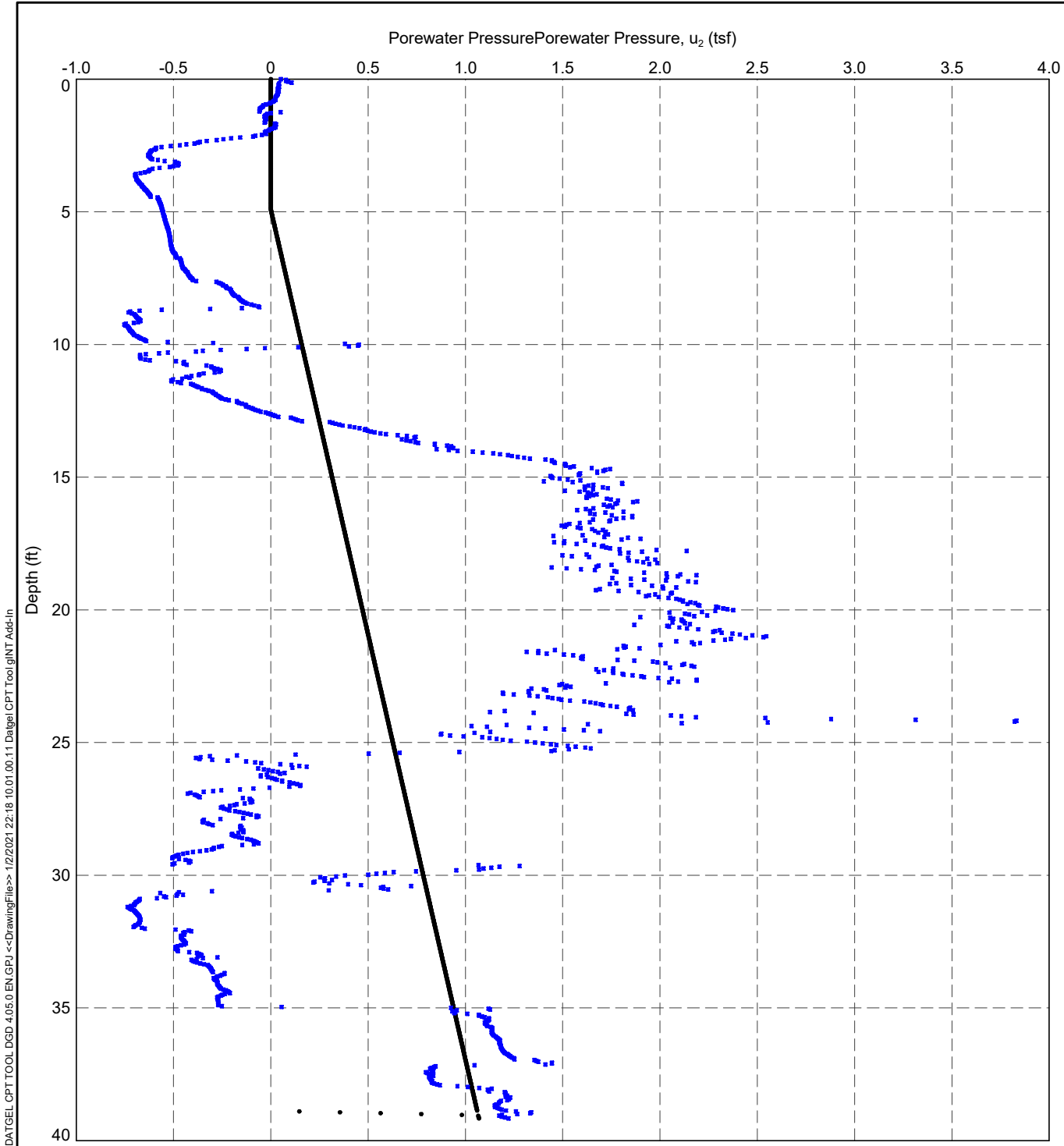
DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.U0.U1.DEPTH.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <<DrawingFile>> 1/2/2021 22:17:10.01.00.11.Datgel.CPT.Tool.gINT.Add-in

DATGEL\CPT TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT\_U0\_U1\_RLLETP DATGEL\_CPT\_TOOL\_DGD\_4.05.0.EN.GPJ <<DrawingFile>> 1/2/2021 22:17:10.01.00.11 Datgel CPT.Tool.gINT Add.in




Legend:  
● Porewater Pressure,  $u_1$  (tsf)  
● In Situ Pore Pressure,  $u_0$  (tsf)

 <p><b>Datgel</b>          DATA SOLUTIONS          Geotechnics • Geoenvironment • Laboratory</p>	TITLE Client 1 Engineer 1 Somewhere CPT Tool Project Porewater Pressure versus Elevation	DRAWN Datgel	DATE 1/2/2021	
		CHECKED Datgel	DATE 1/2/2021	
		SCALE Not To Scale		Let
		PROJECT No 4.05.0	FIGURE No 383	

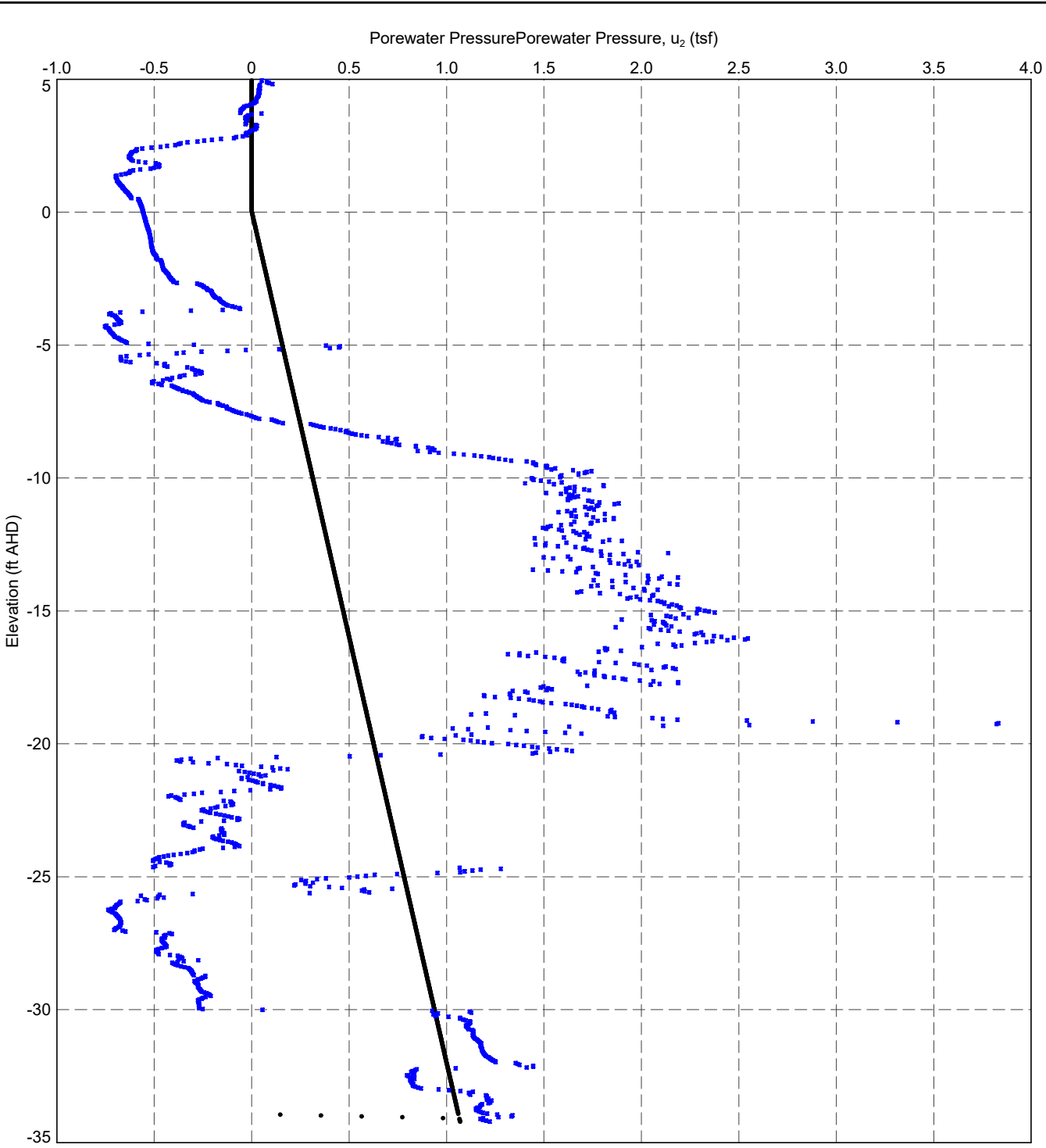


Legend:  
 ● Porewater Pressure,  $u_2$  (tsf)  
 ● In Situ Pore Pressure,  $u_0$  (tsf)


DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.U0.U2.DEPTH.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ.<<DrawingFile>>.1/2/2021.22:18:10.01.00.11.Datgel.CPT.Tool.gINT.Add-in

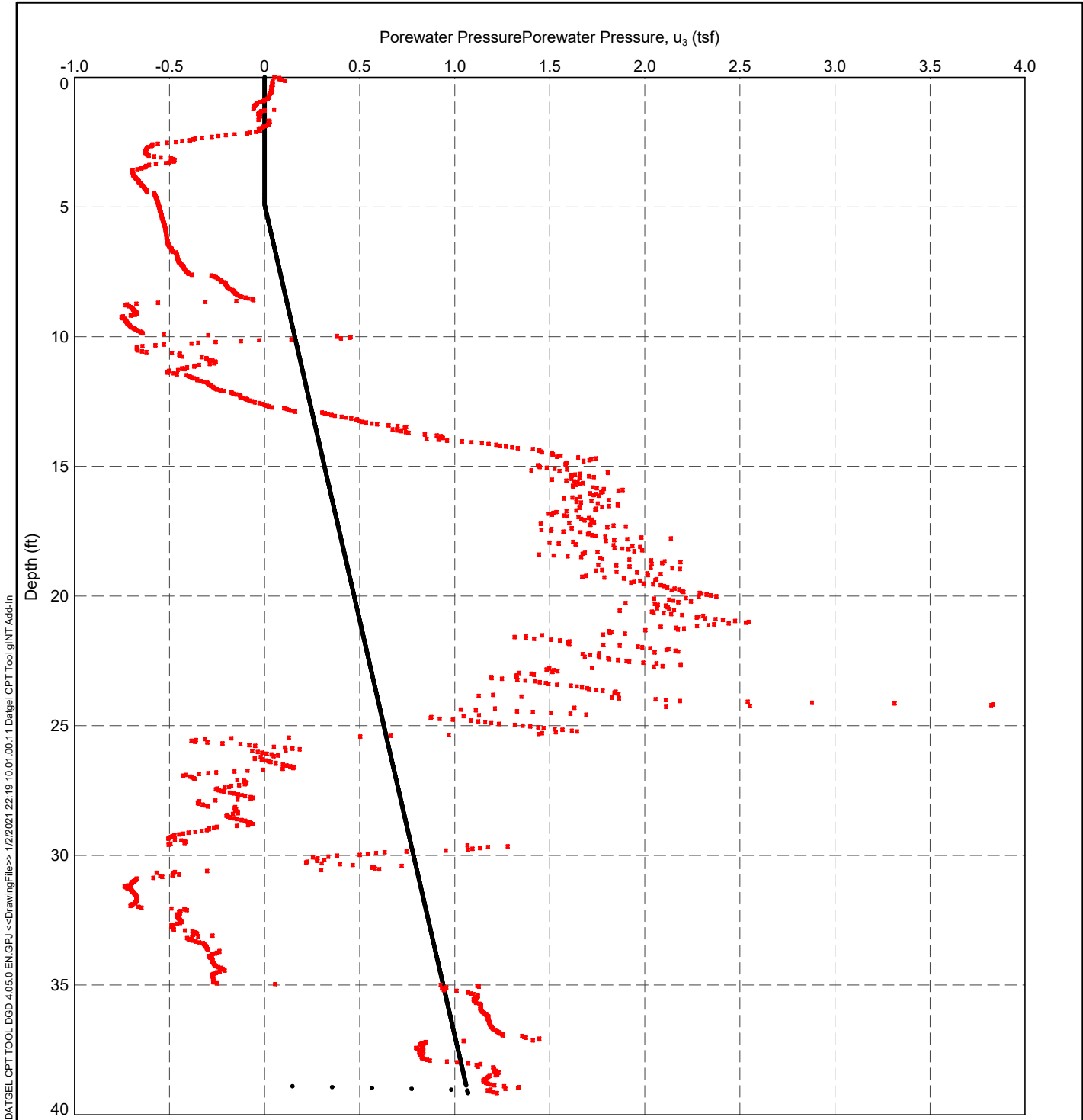
 <b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	TITLE	Client 1 Engineer 1 Somewhere CPT Tool Project Porewater Pressure versus Depth	DRAWN Datgel	DATE 1/2/2021
			CHECKED Datgel	DATE 1/2/2021
			SCALE Not To Scale	Let
			PROJECT No 4.05.0	FIGURE No 384

DATGEL\CPT TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT\_U0\_U2\_RL\LETP DATGEL\_CPT\_TOOL\_DGD\_4.05.0.EN.GPJ <-DrawingFile> 1/2/2021 22:18:10.01.00.11 Datgel CPT.Tool.gINT\_Add.in




Legend:  
 ● Porewater Pressure,  $u_2$  (tsf)  
 ● In Situ Pore Pressure,  $u_0$  (tsf)

 <p><b>Datgel</b>                  DATA SOLUTIONS                  Geotechnics • Geoenvironment • Laboratory</p>	TITLE Client 1 Engineer 1 Somewhere CPT Tool Project Porewater Pressure versus Elevation	DRAWN Datgel	DATE 1/2/2021	
		CHECKED Datgel	DATE 1/2/2021	
		SCALE Not To Scale		Let
		PROJECT No 4.05.0	FIGURE No 385	



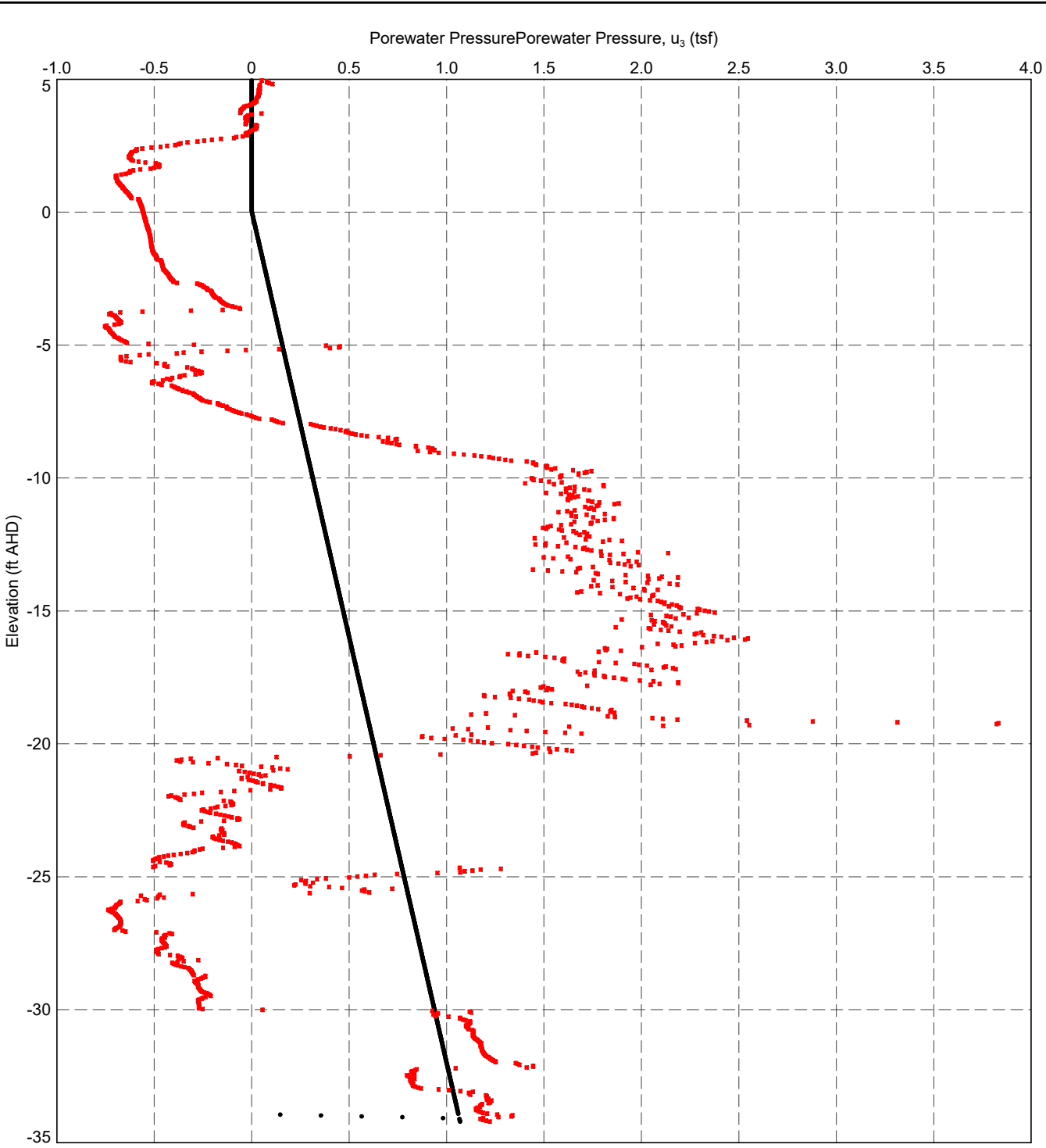
DATGEL\CPT TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT\_U0\_U3\_DEPTH.LETP.DATGEL\CPT TOOL\_DGD\_4.05.0\EN\GPI-<<DrawingFile>> 1/2/2021 22:19:10.01.00.11.Datgel\CPT Tool\gINT Add-in

**Legend:**  
 ● Porewater Pressure,  $u_3$  (tsf)  
 ● In Situ Pore Pressure,  $u_0$  (tsf)


 <b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	TITLE	Client 1 Engineer 1 Somewhere CPT Tool Project Porewater Pressure versus Depth	DRAWN Datgel	DATE 1/2/2021
			CHECKED Datgel	DATE 1/2/2021
			SCALE Not To Scale	Let
			PROJECT No 4.05.0	FIGURE No 386



DATGEL\CPT TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT\_U0\_U3\_RLLETP DATGEL\_CPT\_TOOL\_DGD\_4.05.0.EN.GPJ <-DrawingFile> 1/2/2021 22:19:10.01.00.11 Datgel CPT.Tool.gINT Add.in



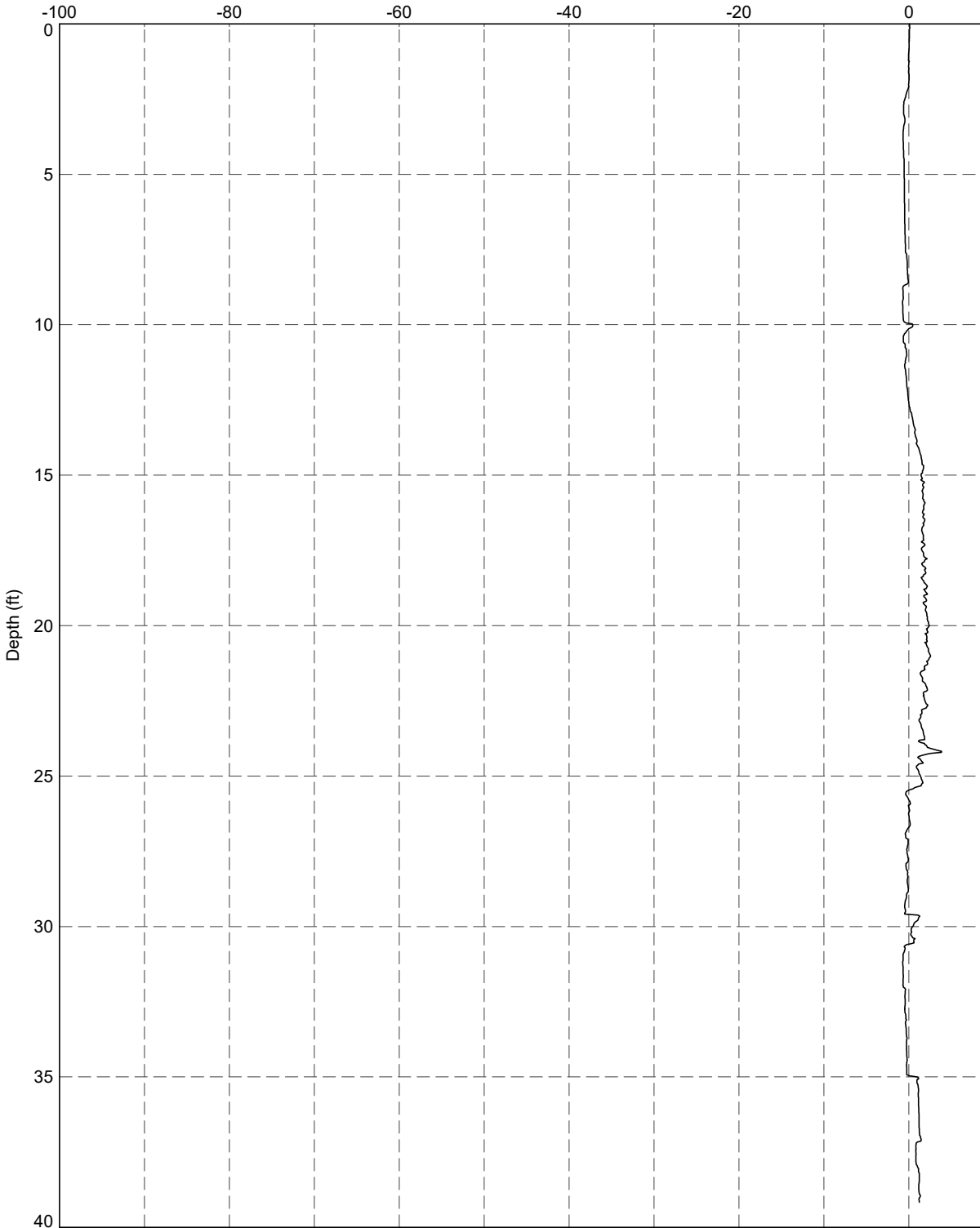
Legend:  
 ● Porewater Pressure,  $u_3$  (tsf)  
 ● In Situ Pore Pressure,  $u_0$  (tsf)

 <b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory	TITLE	Client 1 Engineer 1 Somewhere CPT Tool Project Porewater Pressure versus Elevation	DRAWN Datgel	DATE 1/2/2021
			CHECKED Datgel	DATE 1/2/2021
			SCALE Not To Scale	Let
			PROJECT No 4.05.0	FIGURE No 387

Porewater Pressure,  $u_1$  (tsf)

PointID

CPT 05 Filr



DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.U1.DEPTH.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <-DrawingFiles> 1/2/2021 22:19 10.01.00.11.Datgel.CPT.Tool.gINT.Add-h



TITLE

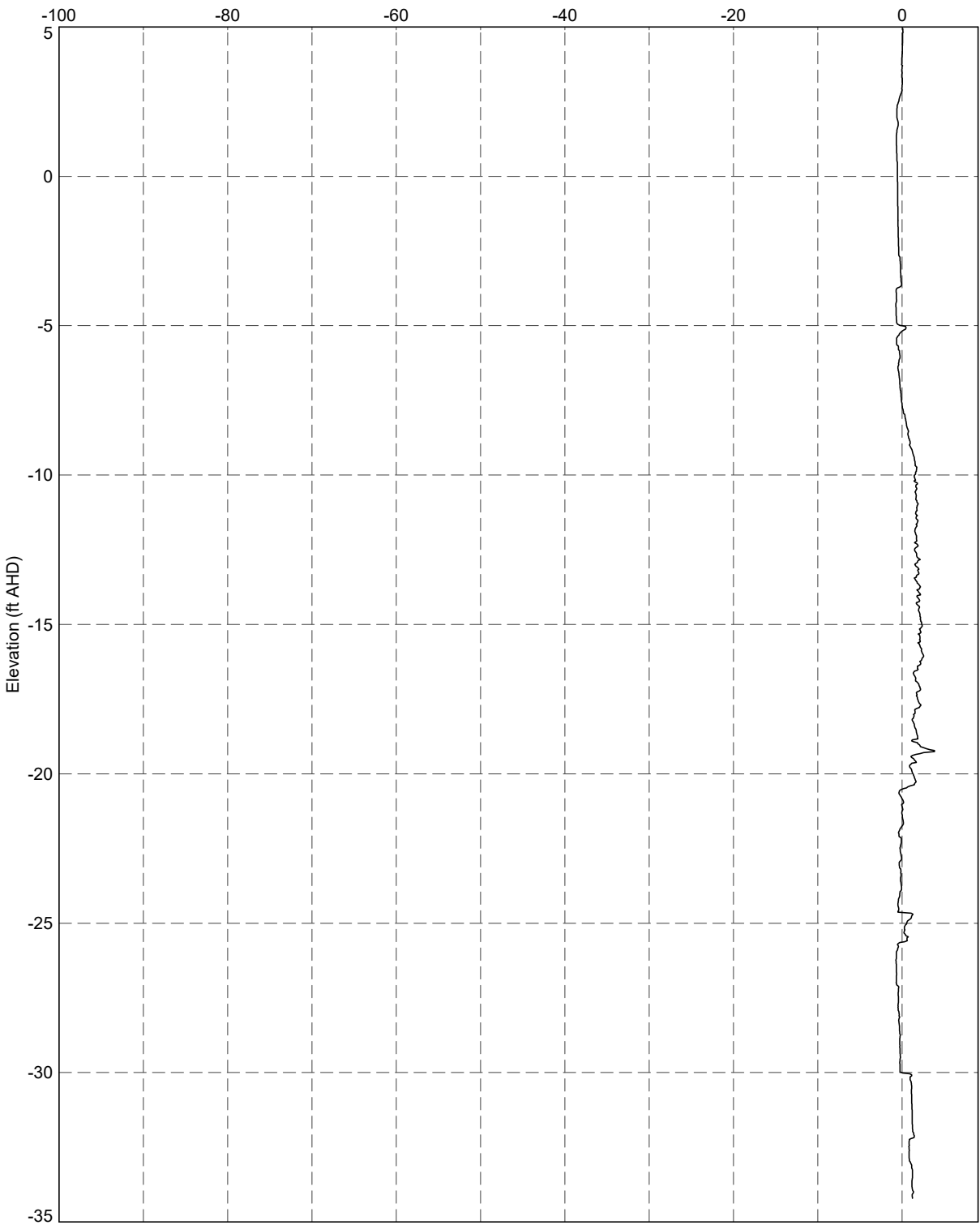
Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Porewater Pressure 1 ( $u_1$ ) vs Depth

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	388


Porewater Pressure,  $u_1$  (tsf)

PointID

CPT 05 Filr



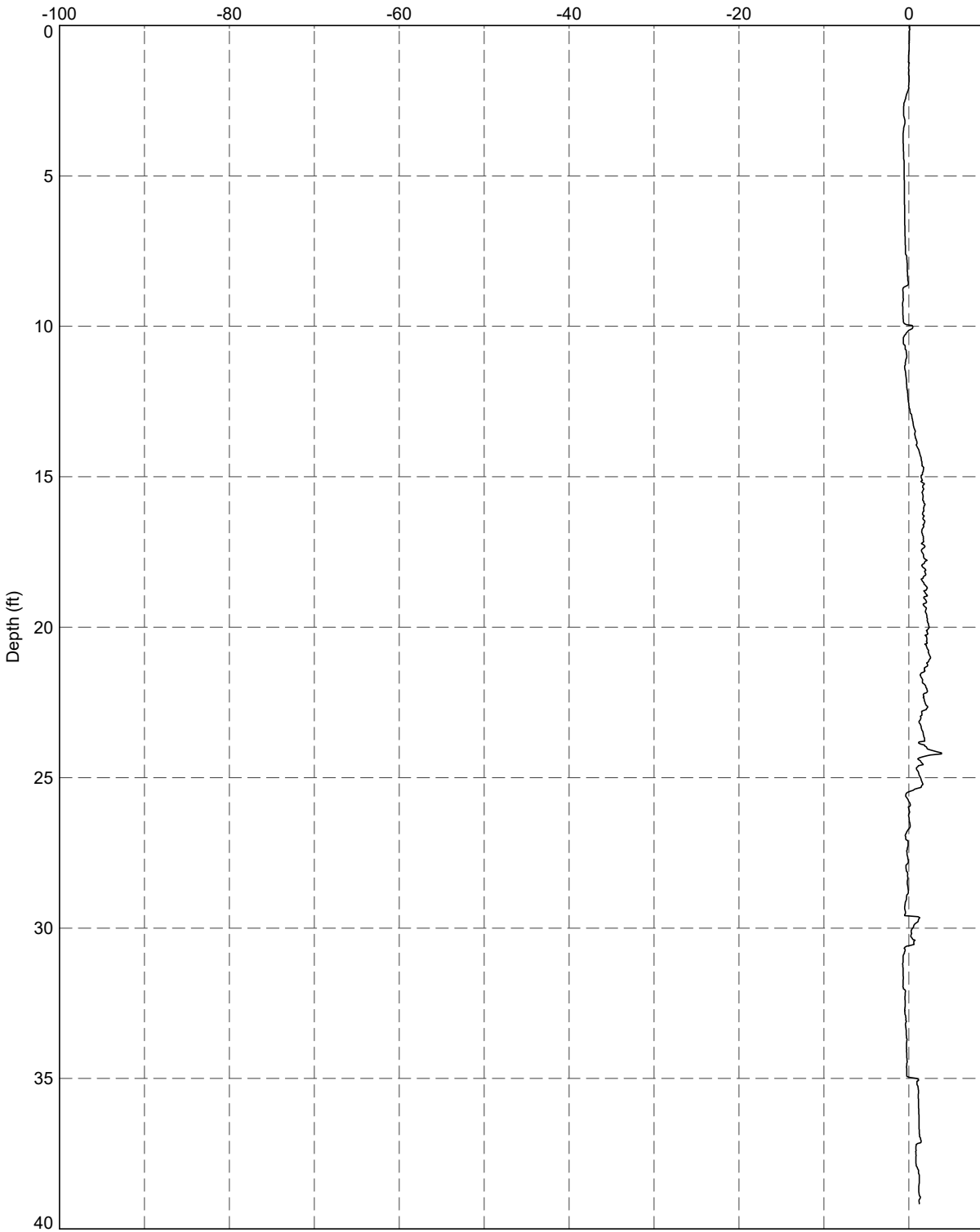
DATGEL\CPT TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT U1 RL\LETP.DATGEL\CPT TOOL\_DGD\_4.05.0 EN.GPJ <-DrawingFile>> 1/2/2021 22:19:10.01.00.11 Datgel\CPT Tool\gINT Add-In

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Porewater Pressure 1 (<math>u_1</math>) vs Elevation</p>	<p>DRAWN Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>CHECKED Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>SCALE Not To Scale</p>		<p>Let</p>
		<p>PROJECT No 4.05.0</p>	<p>FIGURE No 389</p>	


Porewater Pressure,  $u_2$  (tsf)

PointID

CPT 05



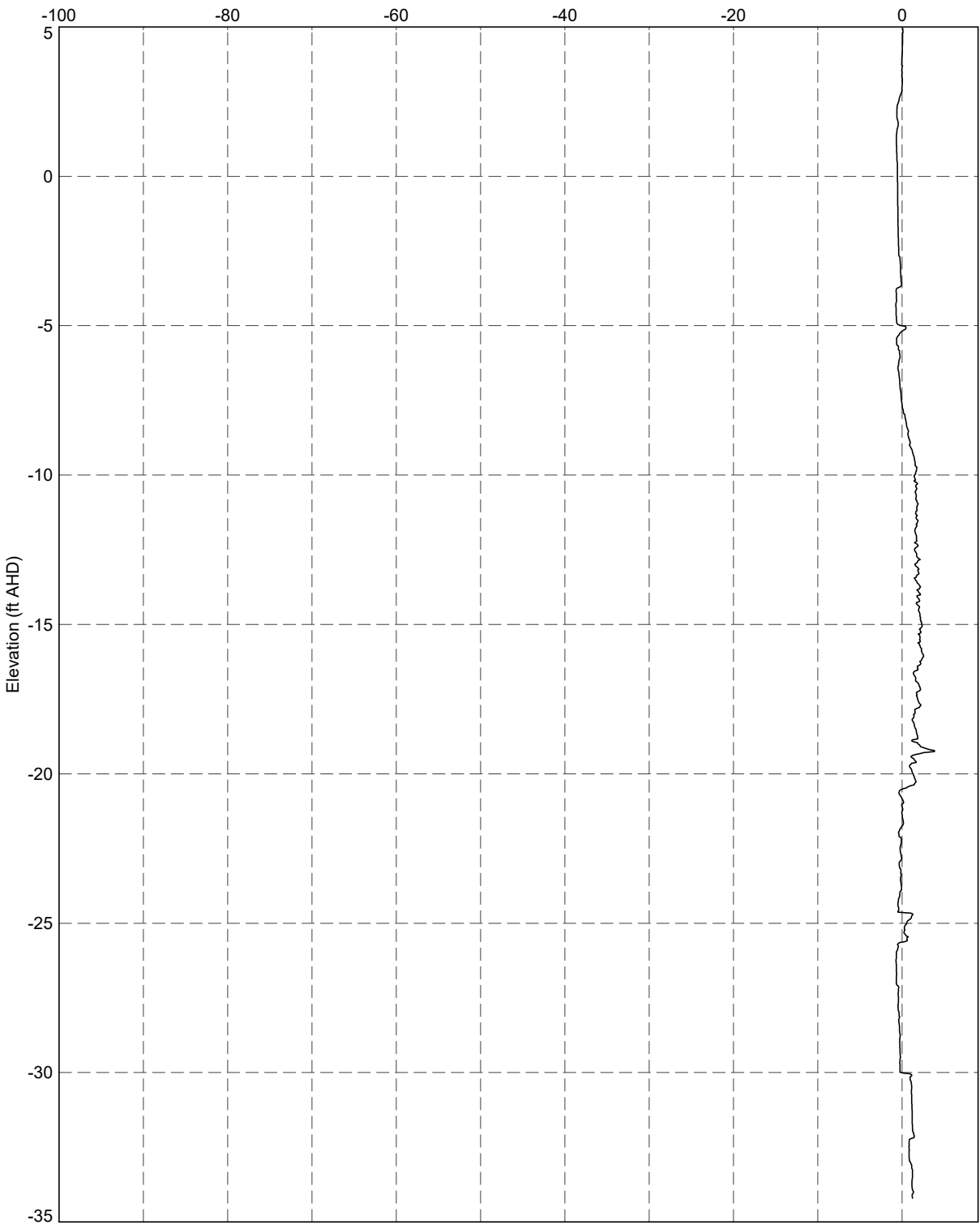
DATGEL.CPT.TOOL.DGD.4.05.0.LIB.GLB.Graph.CPT.U2.DEPTH.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <-DrawingFiles> 1/2/2021 22:19 10.01.00.11.Datgel.CPT.Tool.gINT.Add-h

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Porewater Pressure 2 (<math>u_2</math>) vs Depth</p>	<p>DRAWN Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>CHECKED Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>SCALE Not To Scale</p>		<p>Let</p>
		<p>PROJECT No 4.05.0</p>	<p>FIGURE No 390</p>	


Porewater Pressure,  $u_2$  (tsf)

PointID

CPT 05



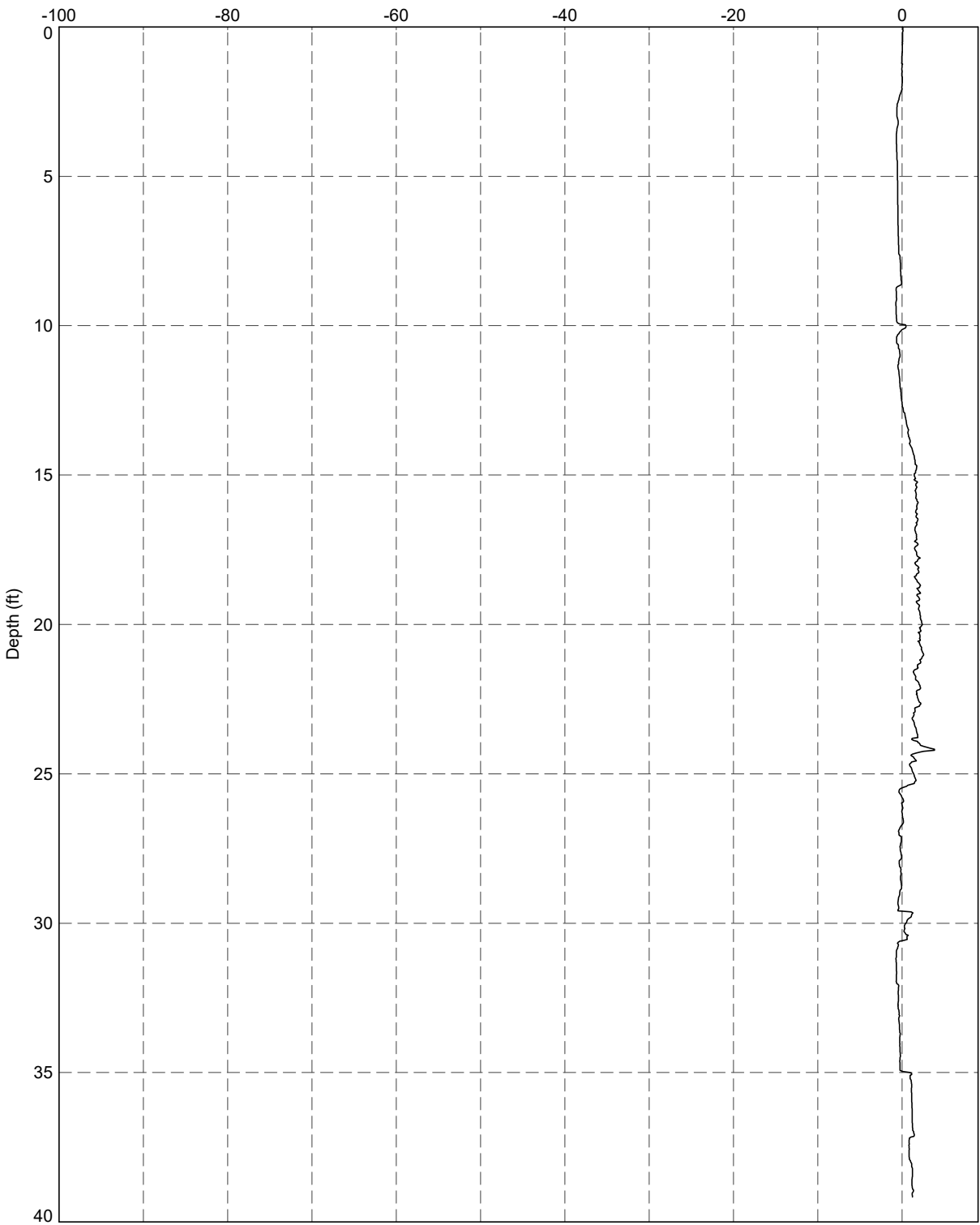
DATGEL\CPT TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT U2 RL\LETP.DATGEL\CPT TOOL\_DGD\_4.05.0 EN.GPJ <-DrawingFile>> 1/2/2021 22:19:10.01.00.11 Datgel.CPT Tool.gINT Add-In

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Porewater Pressure 2 (<math>u_2</math>) vs Elevation</p>	<p>DRAWN Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>CHECKED Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>SCALE Not To Scale</p>		<p>Let</p>
		<p>PROJECT No 4.05.0</p>	<p>FIGURE No 391</p>	


Porewater Pressure,  $u_3$  (tsf)

PointID

CPT 05 Filr



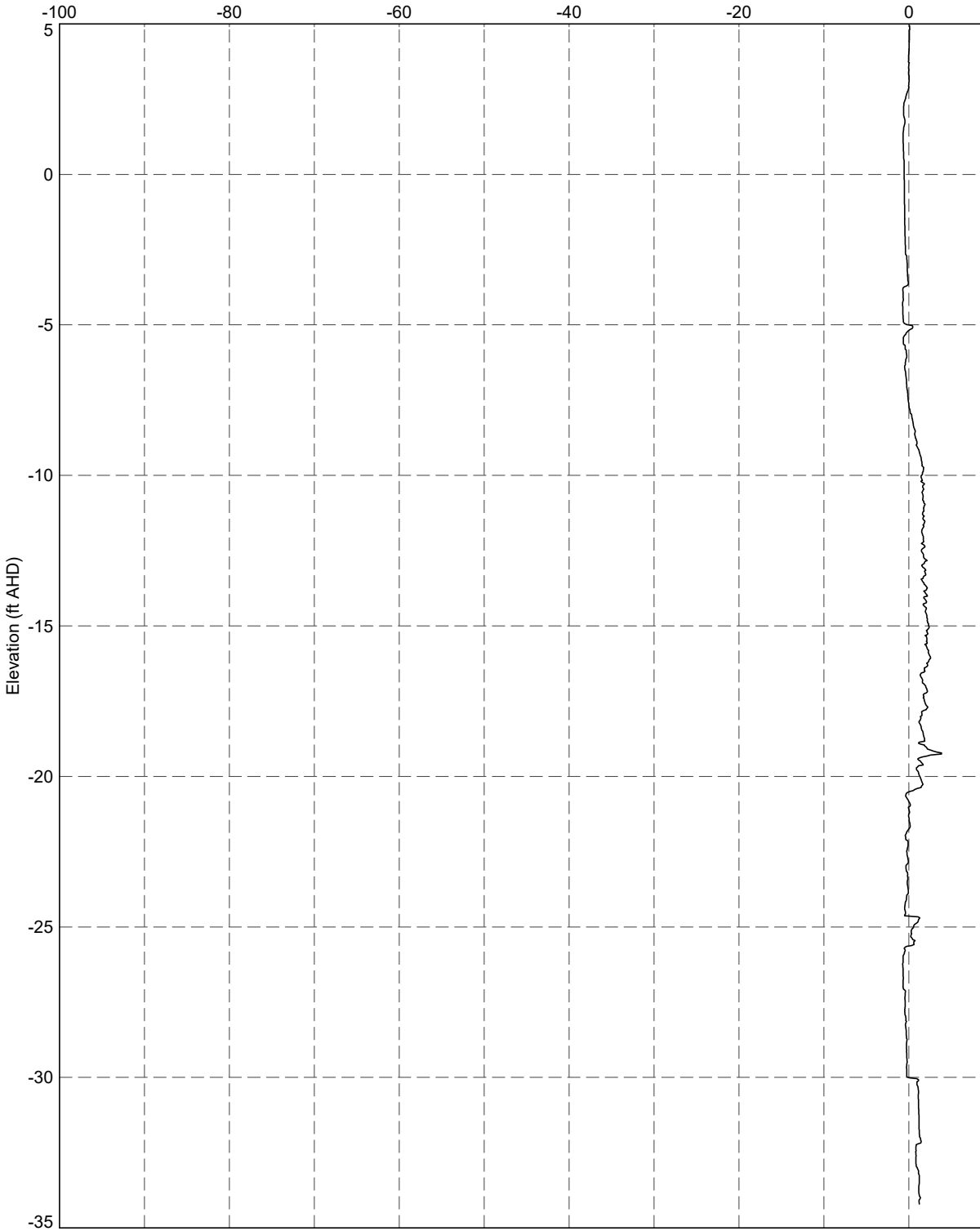
DATGEL\CPT TOOL\_DGD\_4.05.0\LIB\_GLB\_Graph\CPT U3 DEPTH.LETP.DATGEL.CPT TOOL\_DGD\_4.05.0.EN.GPJ <-DrawingFiles> 1/2/2021 22:19 10.01.00.11.Datgel.CPT Tool.gINT Add-h

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Porewater Pressure 3 (<math>u_3</math>) vs Depth</p>	<p>DRAWN Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>CHECKED Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>SCALE Not To Scale</p>		<p>Let</p>
		<p>PROJECT No 4.05.0</p>	<p>FIGURE No 392</p>	

Porewater Pressure,  $u_3$  (tsf)

PointID

CPT 05 Filr



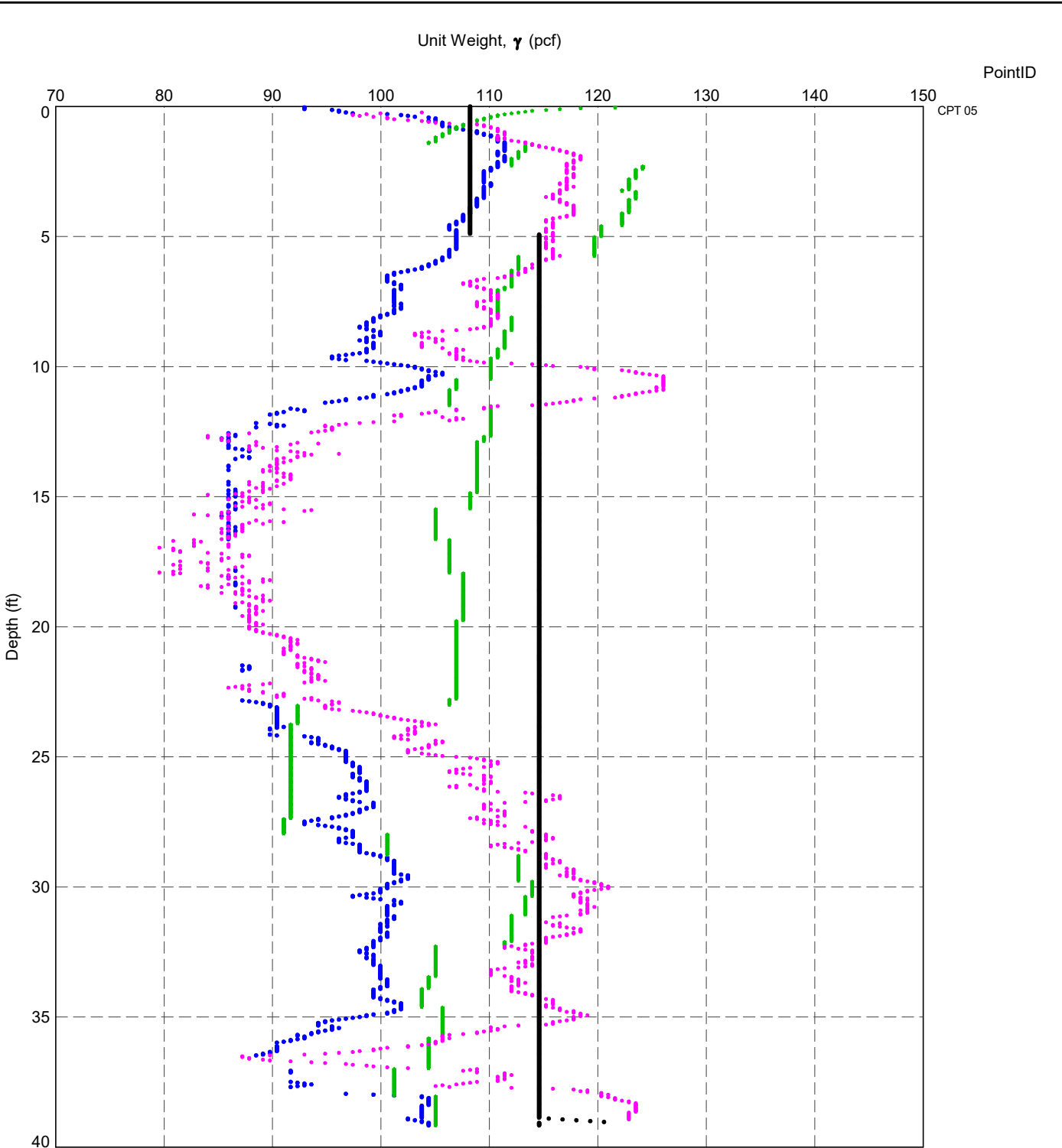
DATGEL\CPT TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT U3 RL\LETP DATGEL\CPT TOOL\_DGD\_4.05.0 EN.GPJ <<DrawingFile>> 1/2/2021 22:19:10.01.00.11 Datgel\CPT Tool\gINT Add-In



TITLE  
 Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Porewater Pressure 3 ( $u_3$ ) vs Elevation

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	393


DATGEL CPT TOOL\_DGD\_4.05.0.LIB.GLB Graph CPT UNIT WEIGHT DEPTH LETP DATGEL CPT TOOL\_DGD\_4.05.0.EN.GPJ <<Drawing File>> 1/2/2021 22:20 10:01:00.11 Datgel.CPT.Tool.gINT Add-In



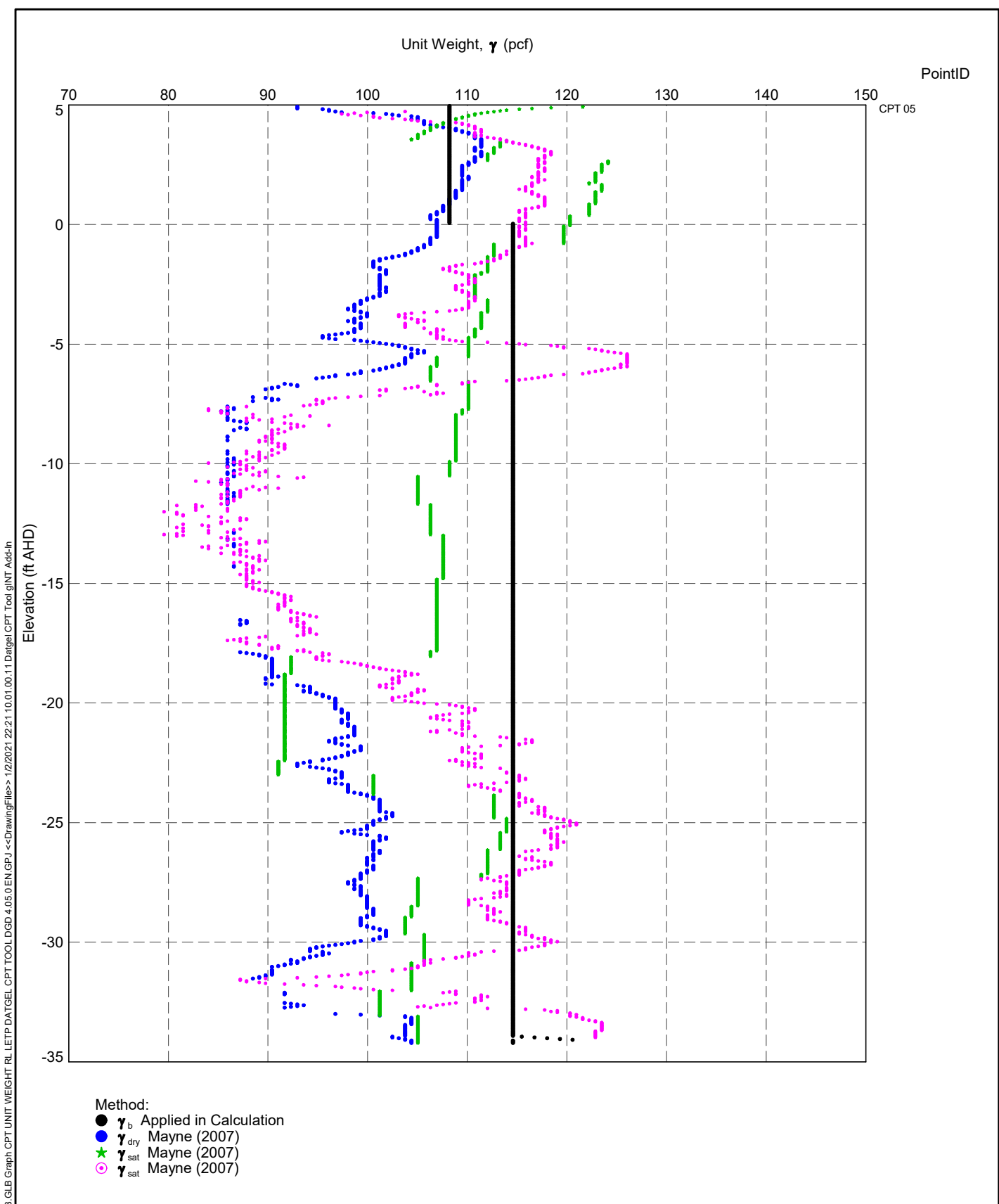
PointID

CPT 05


- Method:
- $\gamma_b$  Applied in Calculation
  - $\gamma_{dry}$  Mayne (2007)
  - ★  $\gamma_{sat}$  Mayne (2007)
  - $\gamma_{sat}$  Mayne (2007)

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Unit Weight versus Depth</p>	<p>DRAWN</p> <p style="text-align: center;">Datgel</p>	<p>DATE</p> <p style="text-align: center;">1/2/2021</p>	
		<p>CHECKED</p> <p style="text-align: center;">Datgel</p>	<p>DATE</p> <p style="text-align: center;">1/2/2021</p>	
		<p>SCALE</p> <p style="text-align: center;">Not To Scale</p>		<p>Let</p>
		<p>PROJECT No</p> <p style="text-align: center;">4.05.0</p>	<p>FIGURE No</p> <p style="text-align: center;">394</p>	





- Method:
- $\gamma_b$  Applied in Calculation
  - $\gamma_{dry}$  Mayne (2007)
  - ★  $\gamma_{sat}$  Mayne (2007)
  - $\gamma_{sat}$  Mayne (2007)

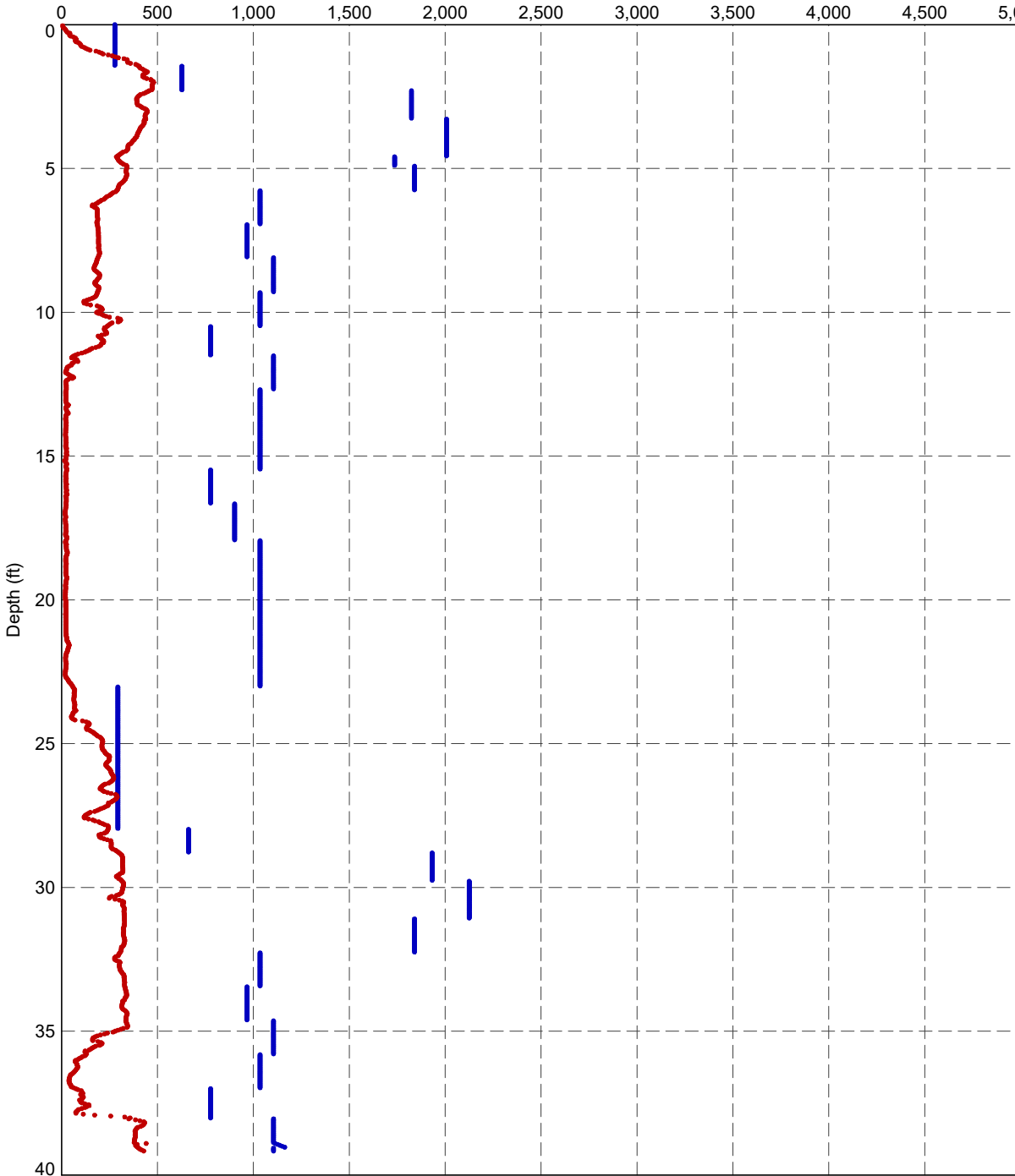
 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	<p>TITLE</p> <p>Client 1 Engineer 1 Somewhere CPT Tool Project Unit Weight versus Elevation</p>	<p>DRAWN Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>CHECKED Datgel</p>	<p>DATE 1/2/2021</p>	
		<p>SCALE Not To Scale</p>		<p>Let</p>
		<p>PROJECT No 4.05.0</p>	<p>FIGURE No 395</p>	

DATGEL\CPT\_TOOL\_DGD\_4.05.0\LIB\_GLB\_Graph\CPT\_UNIT\_WEIGHT\_RL\_LETP.DATGEL\_CPT\_TOOL\_DGD\_4.05.0.EN.GPJ <-<DrawingFile>> 1/2/2021 22:21 10.01.00.11.Datgel.CPT.Tool.gINT\_Add-In

Small Strain Young's Modulus,  $E_0$  (tsf)

PointID


CPT 05



Method:

- Lunne, Robertson & Powell (1997)
- CPT in Geotechnical Practice

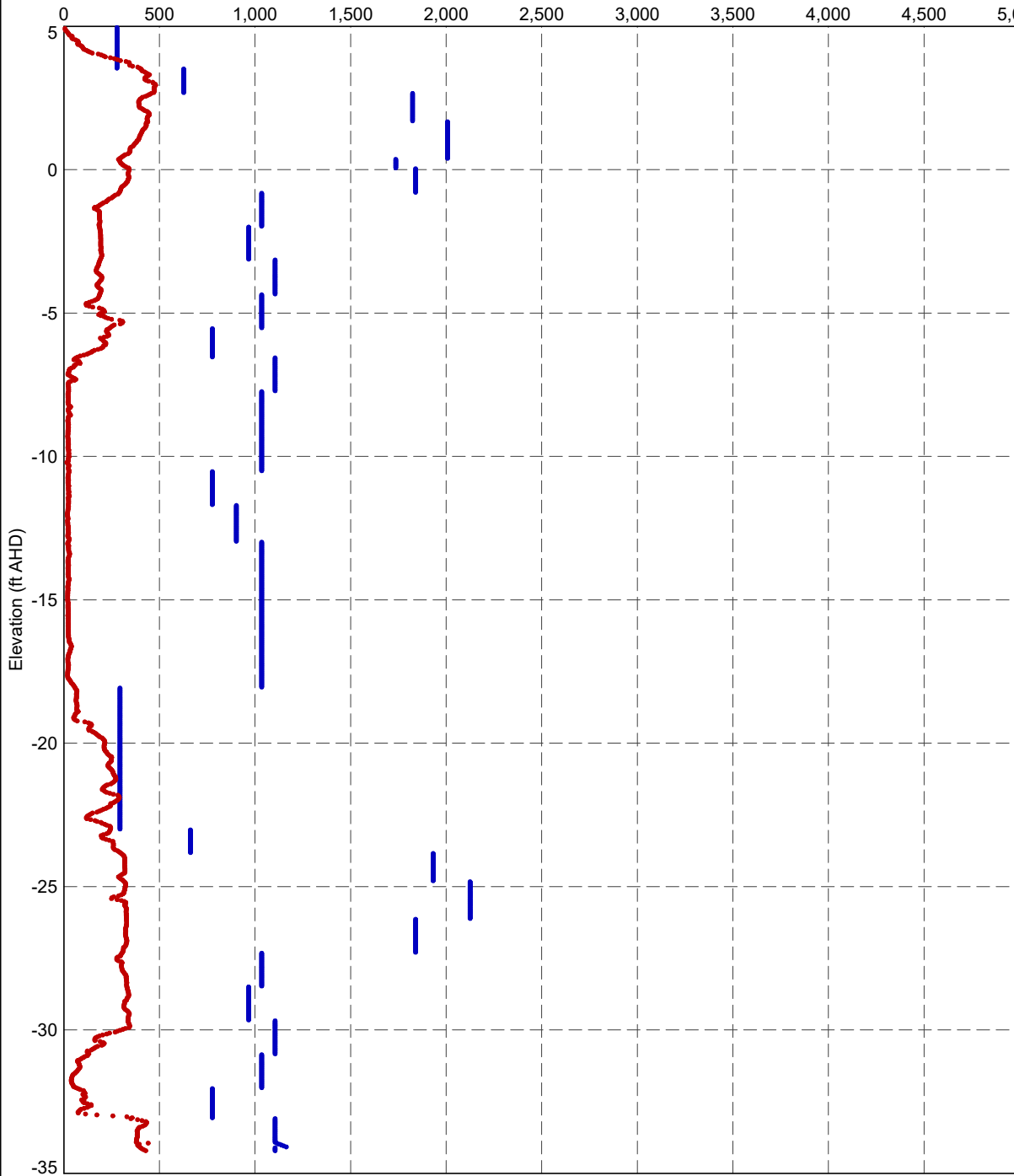
DATGEL\CPT TOOL\_DGD\_4.05.0\LIB\GLB\Graph\CPT YOUNG'S MODULUS DEPTH LETP.DATGEL\CPT TOOL\_DGD\_4.05.0\EN.GPJ <-DrawingFile>> 1/2/2021 22:22 10.01.00.11 Datgel\CPT Tool\JINT Add-In

 <p><b>Datgel</b> DATA SOLUTIONS Geotechnics • Geoenvironment • Laboratory</p>	TITLE	Client 1 Engineer 1 Somewhere CPT Tool Project Youngs Modulus versus Depth	DRAWN Datgel	DATE 1/2/2021
			CHECKED Datgel	DATE 1/2/2021
			SCALE Not To Scale	Let
			PROJECT No 4.05.0	FIGURE No 396

Small Strain Young's Modulus,  $E_0$  (tsf)

PointID

CPT 05



Method:

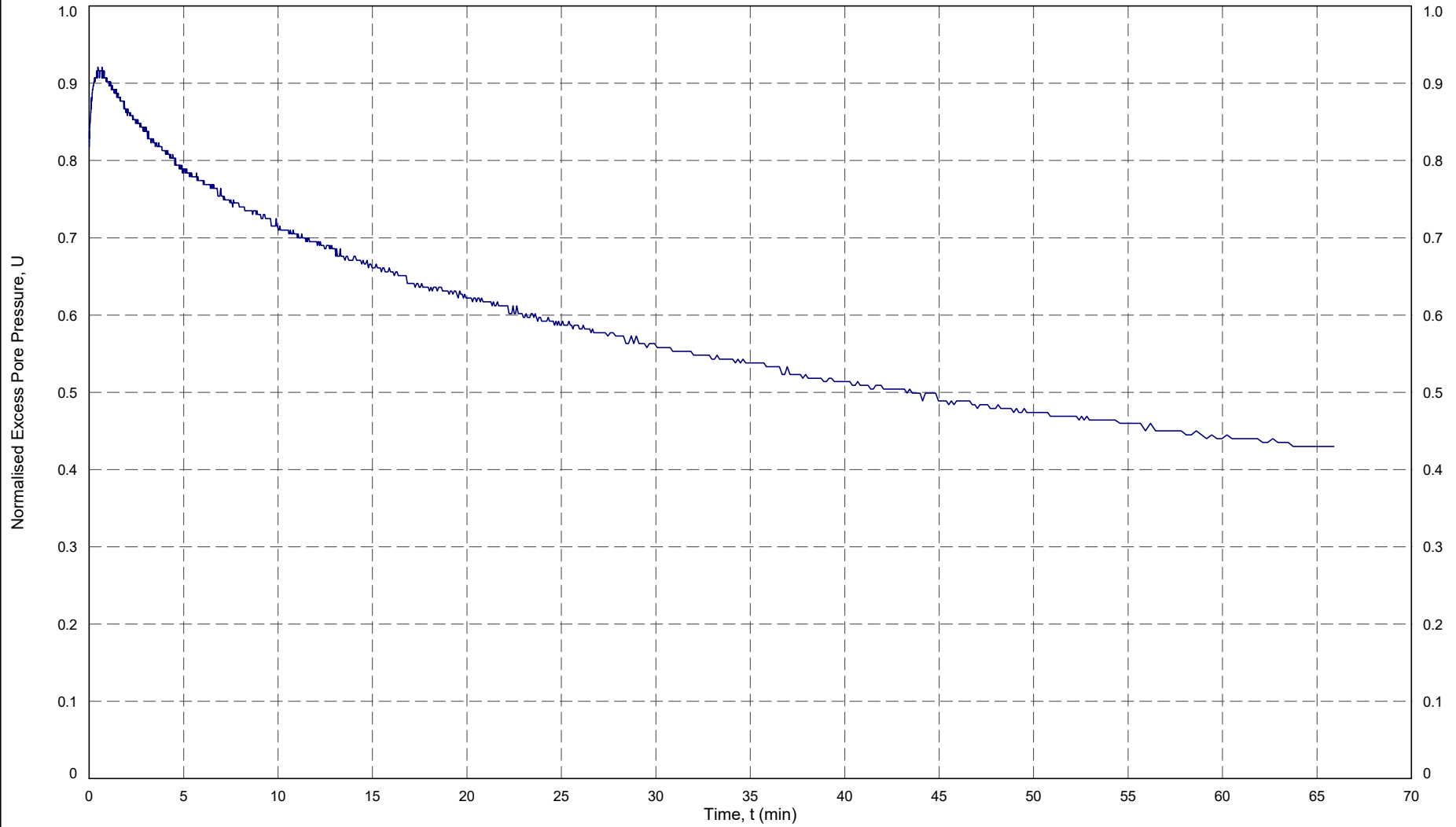
- Lunne, Robertson & Powell (1997)
- CPT in Geotechnical Practice

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph CPT YOUNG'S MODULUS RL LETP.DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <-DrawingFile> 1/2/2021 22:23 10.01.00.11 Datgel CPT Tool gINT Add-In

TITLE

Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Youngs Modulus versus Elevation

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	397



— 24.57 ft



TITLE

Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Dissipation Test - V-Diss test OC

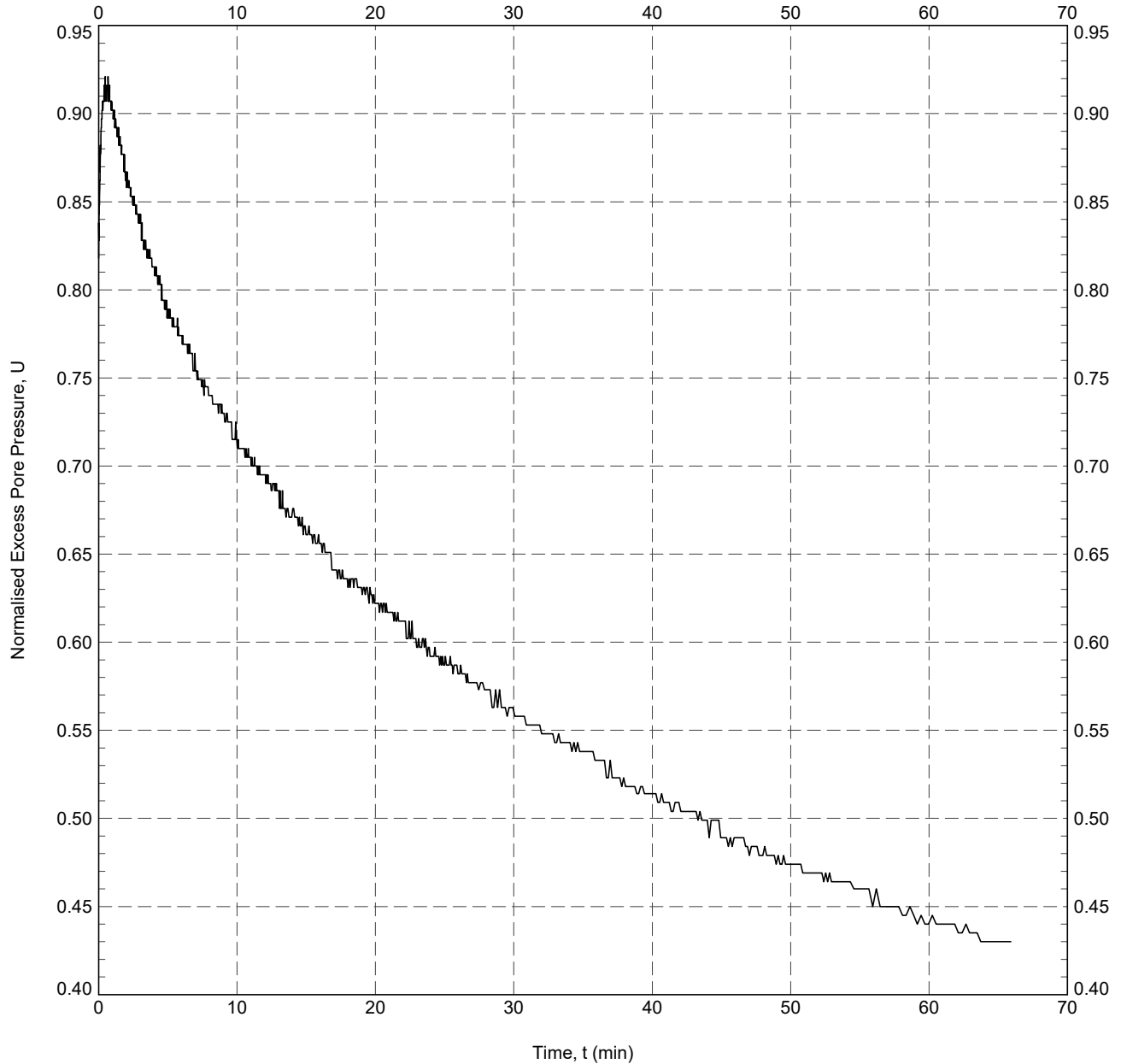
DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	398

Test ID  
**V-Diss test OC - 24.57 m**

CLIENT : Client 1  
 ENGINEER : Engineer 1  
 PROJECT : CPT Tool Project  
 LOCATION : Somewhere  
 PROJECT No. : 4.05.0

AREA : Place  
 EASTING :  
 NORTHING :  
 COORD. SYS.: MGA2020 Zone 56  
 ELEVATION :

SHEET : 1 OF 1  
 STATUS : 3  
 DATE : 01/01/09



In Situ Pore Pressure, $u_0$ :	1 tsf	Rigidity Index, $I_r$ :	200
Initial Pore Pressure, $u_i$ :	3 tsf	Horizontal Coefficient of Consolidation, $c_h$ :	$1.43 \times 10^2$ ft <sup>2</sup> /yr
Final Pore Pressure:	2 tsf	Ratio $c_h/c_v$ :	5
Back Extrapolated Pore Pressure, $u_c$ :	3 tsf	Vertical Coefficient of Consolidation, $c_v$ :	$2.86 \times 10^1$ ft <sup>2</sup> /yr
Degree of Dissipation:	50%		
Dissipation Pressure:	1.8 tsf		
Time for 50% Dissipation, $t_{50}$ :	43.55 min		

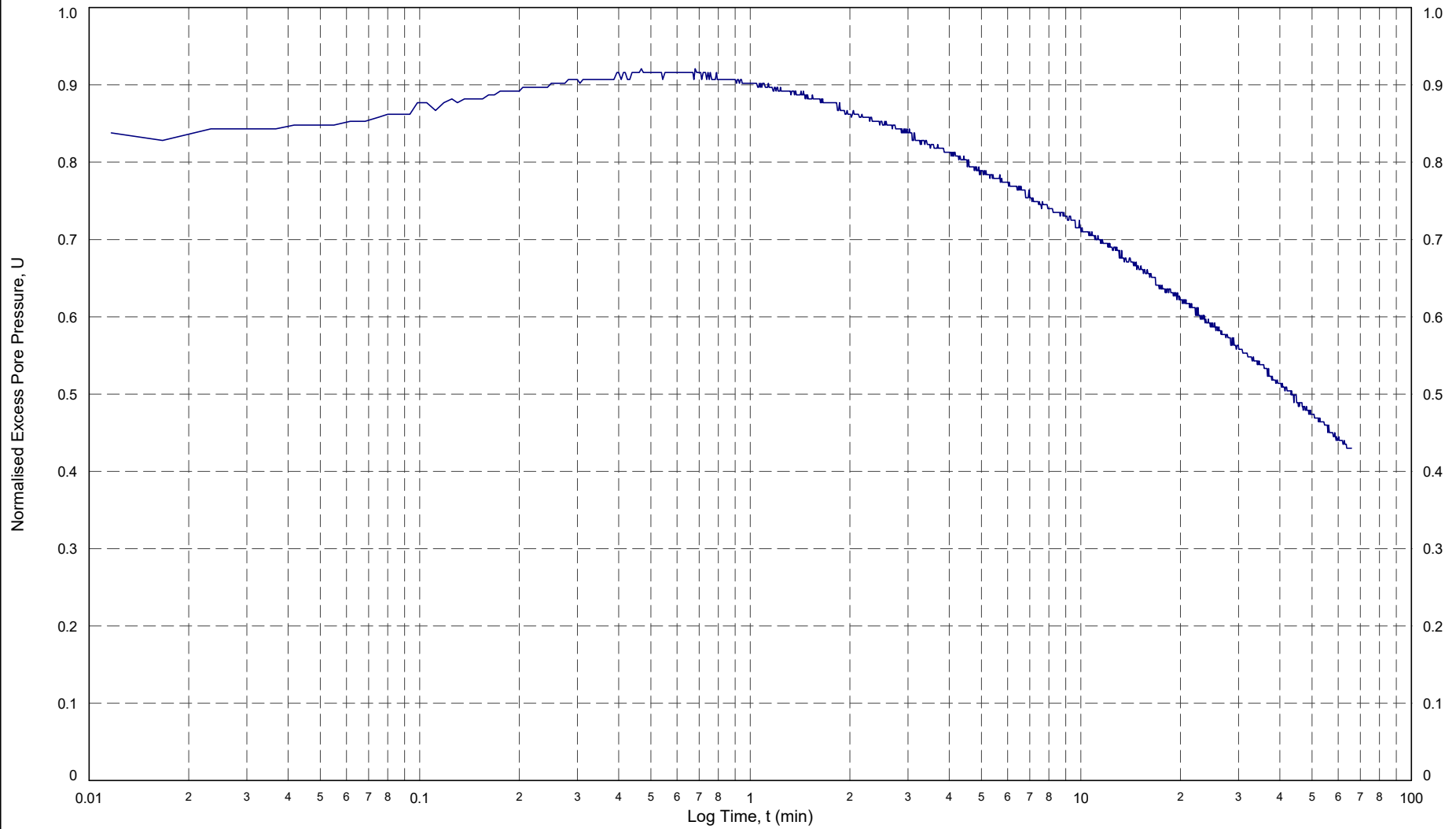
RIG : CPT Rig  
 CONE TYPE : ABC  
 CONE ID : 3167  
 OPERATOR : TB

ANALYSED BY : PB  
 CHECKED BY : CB  
 APPROVED BY : AB

DATE: 02/01/2009  
 DATE: 03/01/2009  
 DATE: 04/01/2009

REMARK  
 adsf; var

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph.PPDT NORMALISED EX.U VS. LIN TLETP.DATGEL.CPT TOOL DGD 4.05.0 EN.GPJ <<DrawingFiles>> 1/2/2021 22:23:10.01.00.11.Datgel.CPT.Tool.gINT.Add-In



— 24.57 ft



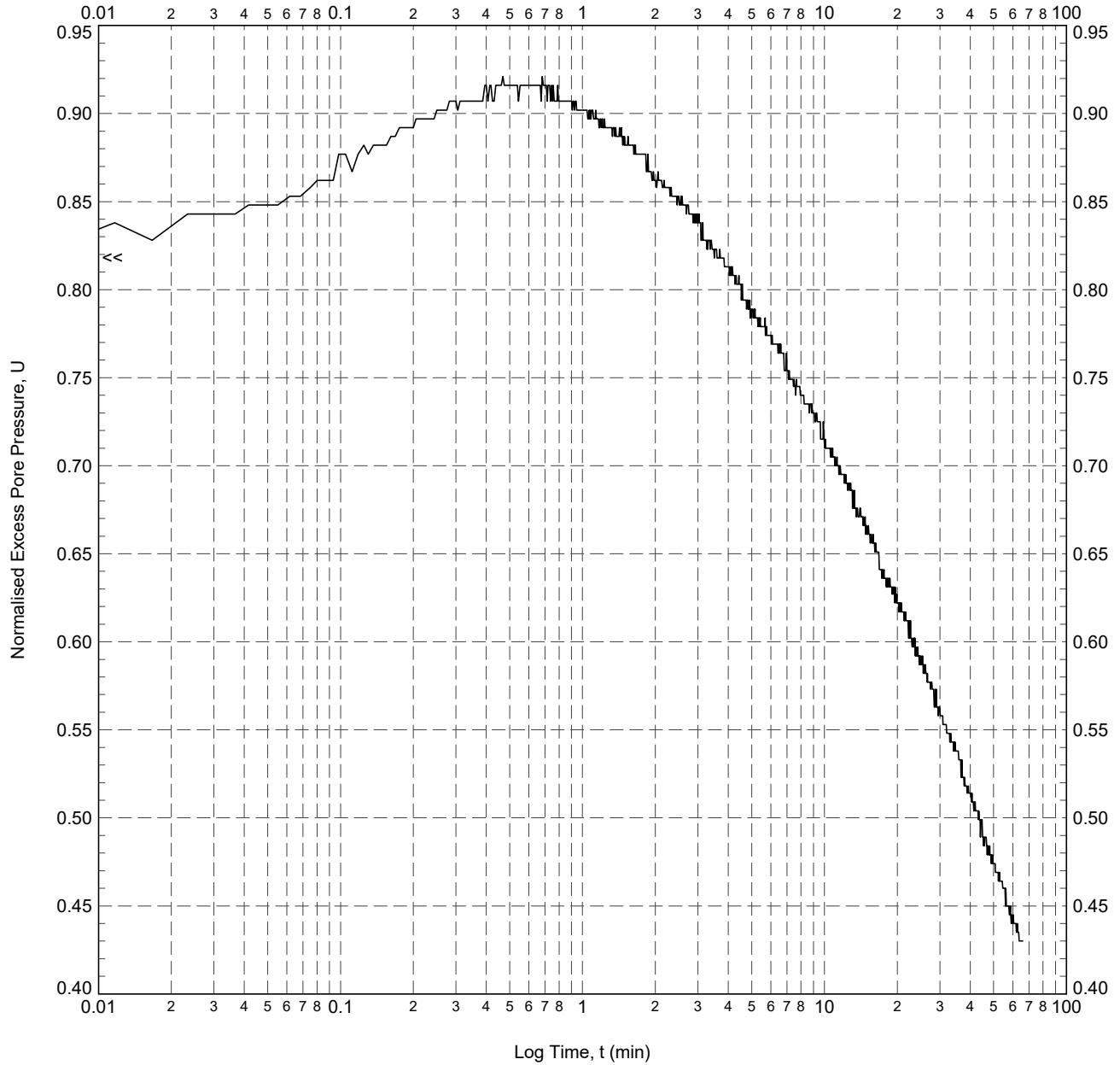
TITLE

Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Dissipation Test - V-Diss test OC

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	400

Test ID  
**V-Diss test OC - 24.57 m**

CLIENT : Client 1	AREA : Place	SHEET : 1 OF 1
ENGINEER : Engineer 1	EASTING :	STATUS : 3
PROJECT : CPT Tool Project	NORTHING :	DATE : 01/01/09
LOCATION : Somewhere	COORD. SYS.: MGA2020 Zone 56	
PROJECT No. : 4.05.0	ELEVATION :	

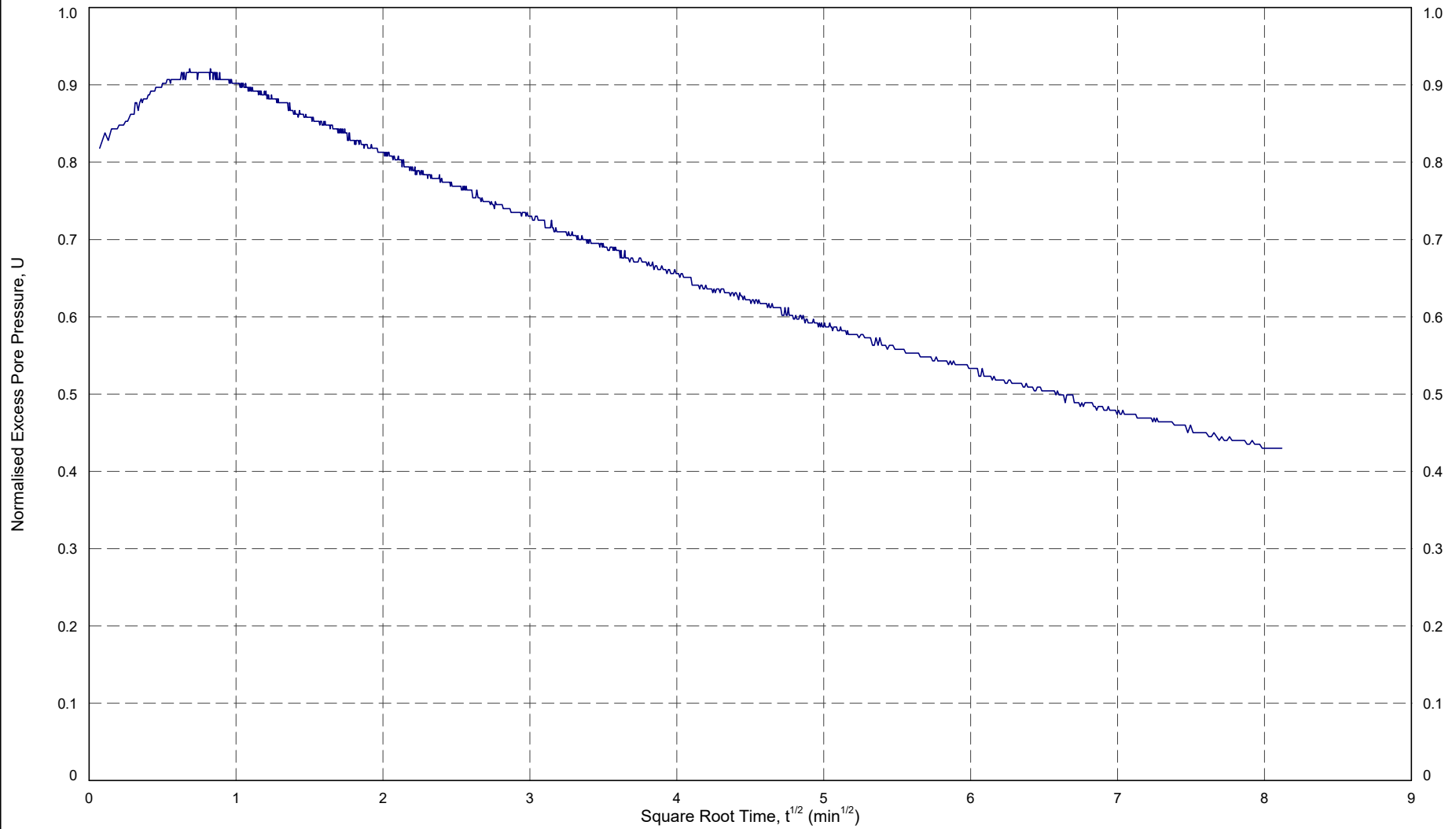


In Situ Pore Pressure, $u_0$ :	1 tsf	Rigidity Index, $I_r$ :	200
Initial Pore Pressure, $u_i$ :	3 tsf	Horizontal Coefficient of Consolidation, $c_h$ :	$1.43 \times 10^2 \text{ ft}^2/\text{yr}$
Final Pore Pressure:	2 tsf	Ratio $c_h/c_v$ :	5
Back Extrapolated Pore Pressure, $u_c$ :	3 tsf	Vertical Coefficient of Consolidation, $c_v$ :	$2.86 \times 10^1 \text{ ft}^2/\text{yr}$
Degree of Dissipation:	50%		
Dissipation Pressure:	1.8 tsf		
Time for 50% Dissipation, $t_{50}$ :	43.55 min		

RIG : CPT Rig	ANALYSED BY : PB	DATE: 02/01/2009
CONE TYPE : ABC	CHECKED BY : CB	DATE: 03/01/2009
CONE ID : 3167	APPROVED BY : AB	DATE: 04/01/2009
OPERATOR : TB		

REMARK  
 adsf; var

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph PPDT NORMALISED EX U VS LOG T LE TP DATGEL CPT TOOL DGD 4.05.0 EN.GPJ <<DrawingFile>> 1/2/2021 22:23 10:01:00.11 Datgel.CPT.Tool.gINT Add-In



— 24.57 ft



TITLE

Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Dissipation Test - V-Diss test OC

DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	402

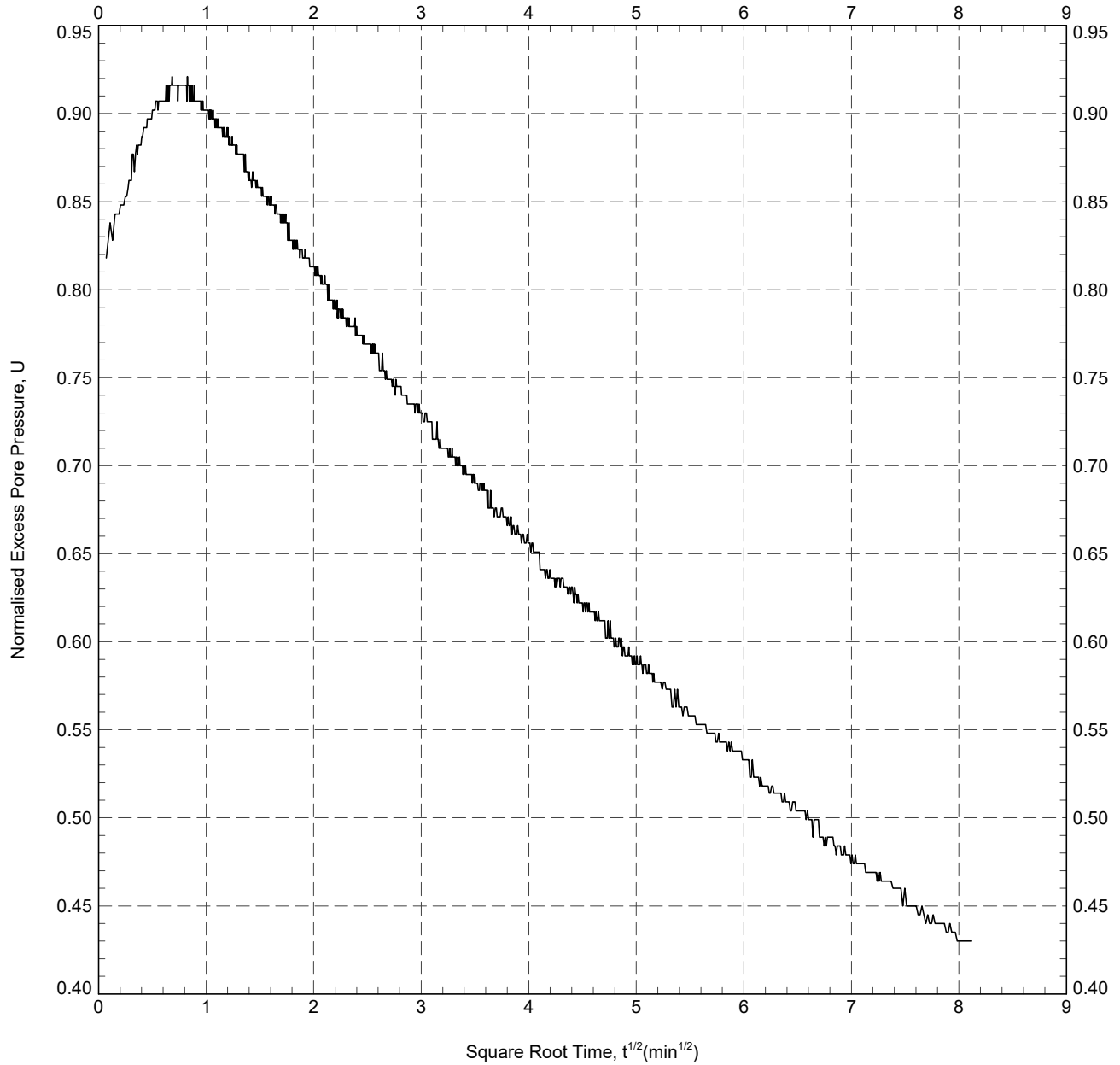


Test ID  
**V-Diss test OC - 24.57 m**

CLIENT : Client 1  
 ENGINEER : Engineer 1  
 PROJECT : CPT Tool Project  
 LOCATION : Somewhere  
 PROJECT No. : 4.05.0

AREA : Place  
 EASTING :  
 NORTHING :  
 COORD. SYS.: MGA2020 Zone 56  
 ELEVATION :

SHEET : 1 OF 1  
 STATUS : 3  
 DATE : 01/01/09



In Situ Pore Pressure, $u_0$ :	1 tsf	Rigidity Index, $I_r$ :	200
Initial Pore Pressure, $u_i$ :	3 tsf	Horizontal Coefficient of Consolidation, $c_h$ :	$1.43 \times 10^2 \text{ ft}^2/\text{yr}$
Final Pore Pressure:	2 tsf	Ratio $c_h/c_v$ :	5
Back Extrapolated Pore Pressure, $u_c$ :	3 tsf	Vertical Coefficient of Consolidation, $c_v$ :	$2.86 \times 10^1 \text{ ft}^2/\text{yr}$
Degree of Dissipation:	50%		
Dissipation Pressure:	1.8 tsf		
Time for 50% Dissipation, $t_{50}$ :	43.55 min		

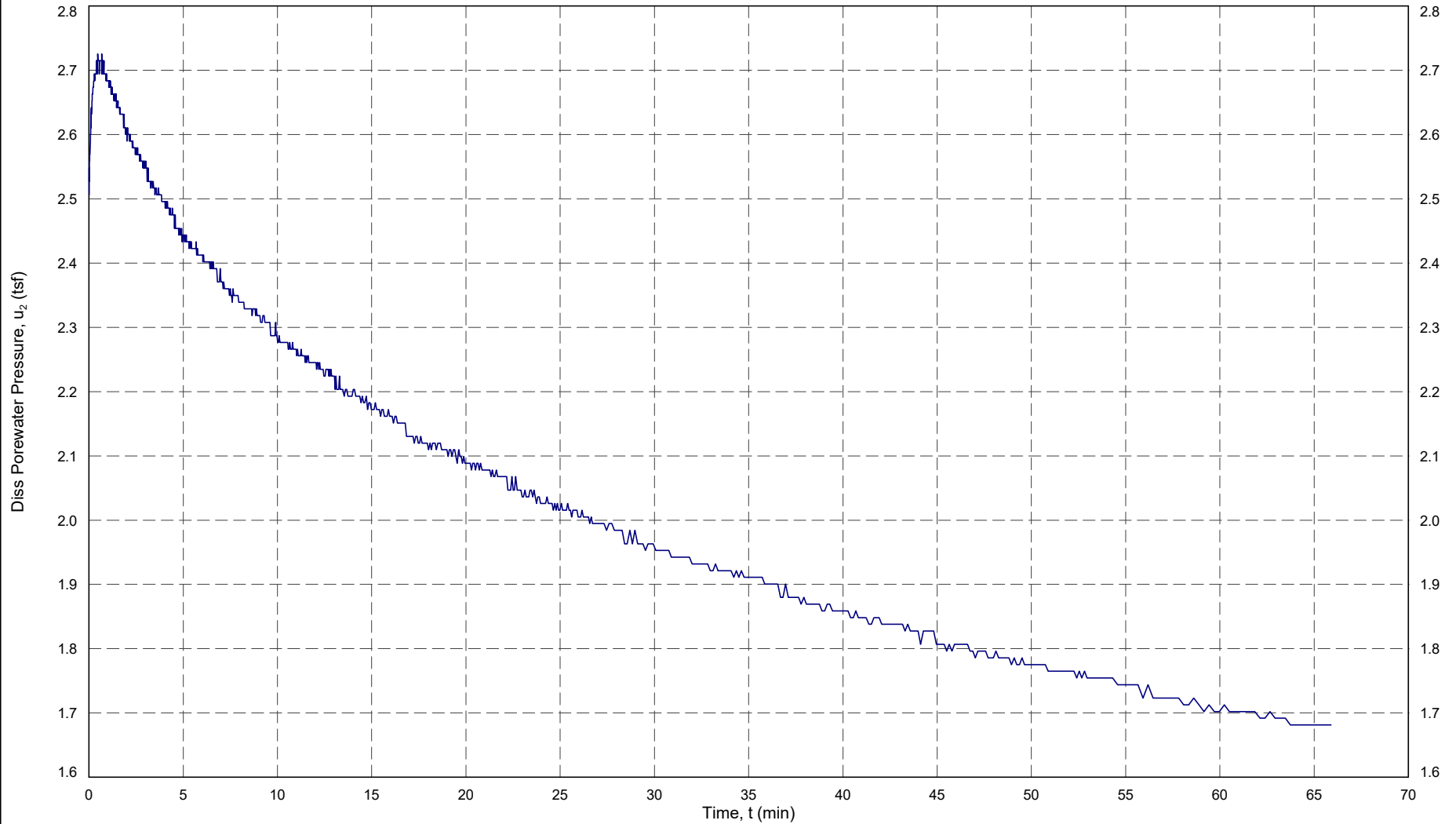
RIG : CPT Rig  
 CONE TYPE : ABC  
 CONE ID : 3167  
 OPERATOR : TB

ANALYSED BY : PB  
 CHECKED BY : CB  
 APPROVED BY : AB

DATE: 02/01/2009  
 DATE: 03/01/2009  
 DATE: 04/01/2009

REMARK  
 adsf, var

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph.PPDT NORMALISED EX.U VS. SQR.T.LETP.DATGEL.CPT.TOOL.DGD.4.05.0.EN.GPJ <<DrawingFile>> 1/2/2021 22:23:10.01.00.11 Datgel.CPT.Tool.gINT Add-In



— 24.57 ft



TITLE

Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Dissipation Test - V-Diss test OC

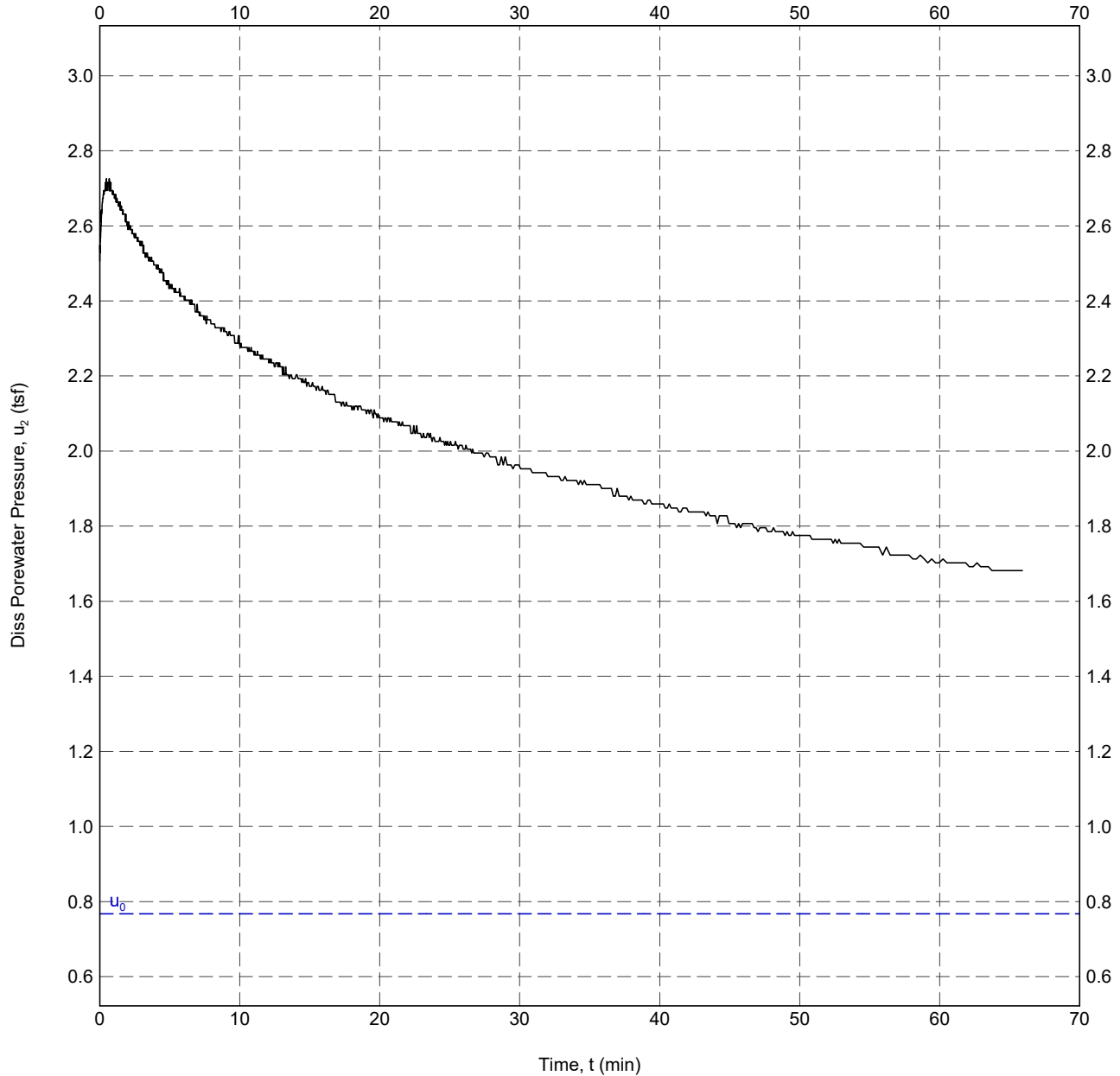
DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	404

Test ID  
**V-Diss test OC - 24.57 m**

CLIENT : Client 1  
 ENGINEER : Engineer 1  
 PROJECT : CPT Tool Project  
 LOCATION : Somewhere  
 PROJECT No. : 4.05.0

AREA : Place  
 EASTING :  
 NORTHING :  
 COORD. SYS.: MGA2020 Zone 56  
 ELEVATION :

SHEET : 1 OF 1  
 STATUS : 3  
 DATE : 01/01/09



In Situ Pore Pressure, $u_0$ :	1 tsf	Rigidity Index, $I_r$ :	200
Initial Pore Pressure, $u_i$ :	3 tsf	Horizontal Coefficient of Consolidation, $c_h$ :	$1.43 \times 10^2$ ft <sup>2</sup> /yr
Final Pore Pressure:	2 tsf	Ratio $c_h/c_v$ :	5
Back Extrapolated Pore Pressure, $u_c$ :	3 tsf	Vertical Coefficient of Consolidation, $c_v$ :	$2.86 \times 10^1$ ft <sup>2</sup> /yr
Degree of Dissipation:	50%		
Dissipation Pressure:	1.8 tsf		
Time for 50% Dissipation, $t_{50}$ :	43.55 min		

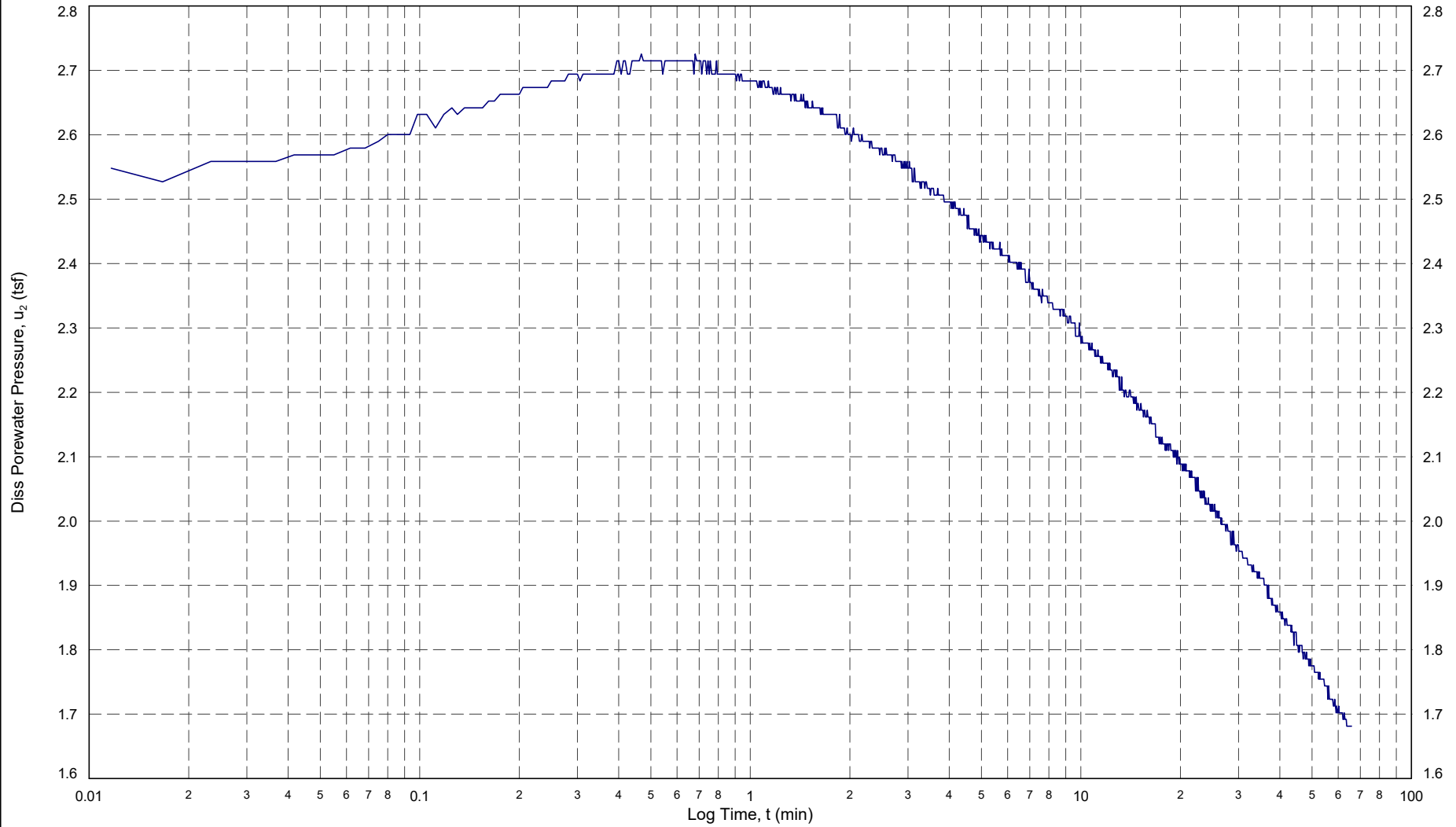
RIG : CPT Rig  
 CONE TYPE : ABC  
 CONE ID : 3167  
 OPERATOR : TB

ANALYSED BY : PB  
 CHECKED BY : CB  
 APPROVED BY : AB

DATE: 02/01/2009  
 DATE: 03/01/2009  
 DATE: 04/01/2009

REMARK  
 adsf; var

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph.PPDT PORE PRESSURE VS. LIN T.LETP.DATGEL CPT TOOL.DGD.4.05.0 EN.GPJ <<DrawingFile>> 1/2/2021 22:23:10.01.00.11 Datgel.CPT.Tool.gINT.Add-In



— 24.57 ft



TITLE

Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Dissipation Test - V-Diss test OC

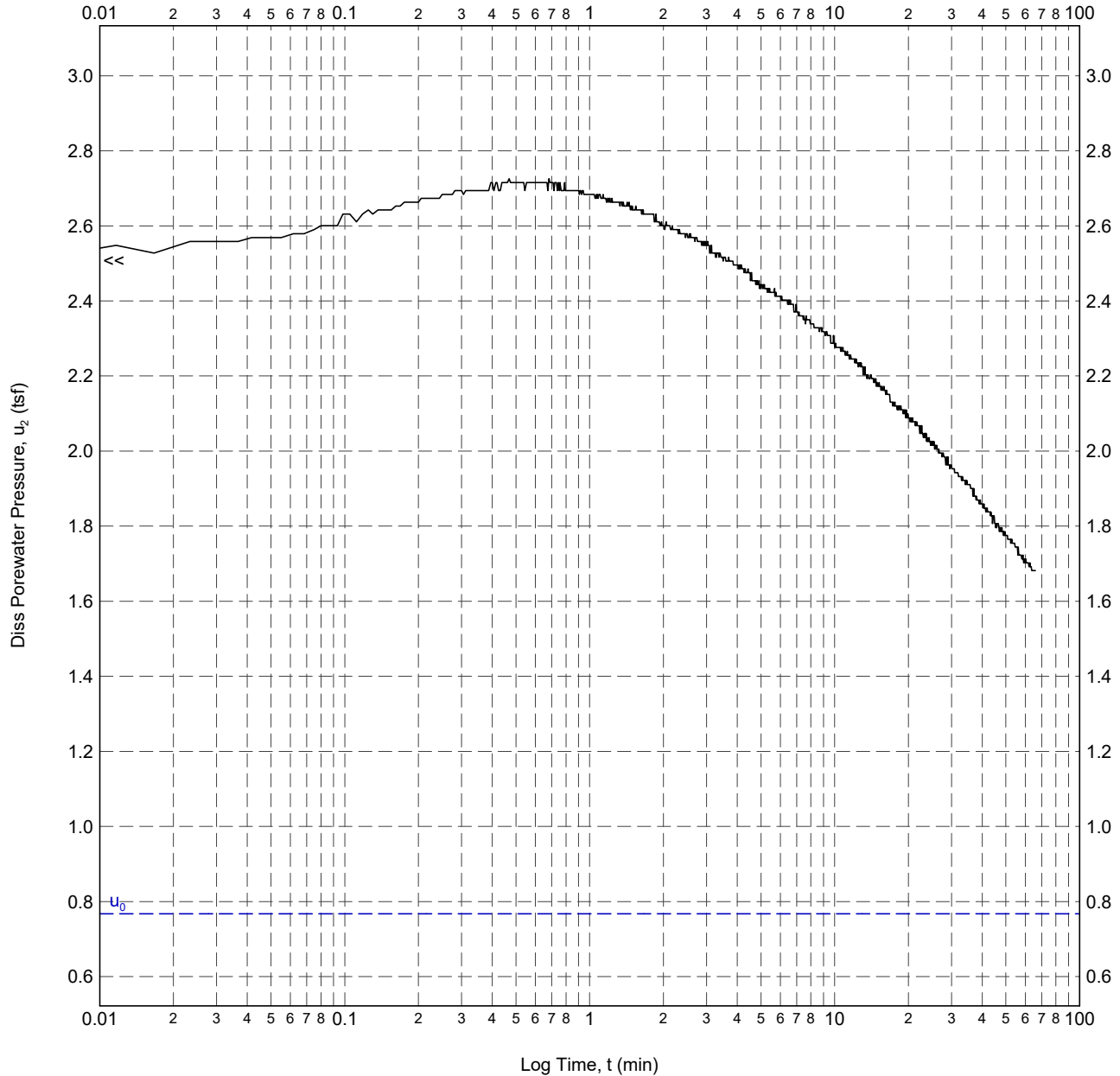
DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	406

Test ID  
**V-Diss test OC - 24.57 m**

CLIENT : Client 1  
 ENGINEER : Engineer 1  
 PROJECT : CPT Tool Project  
 LOCATION : Somewhere  
 PROJECT No. : 4.05.0

AREA : Place  
 EASTING :  
 NORTHING :  
 COORD. SYS.: MGA2020 Zone 56  
 ELEVATION :

SHEET : 1 OF 1  
 STATUS : 3  
 DATE : 01/01/09



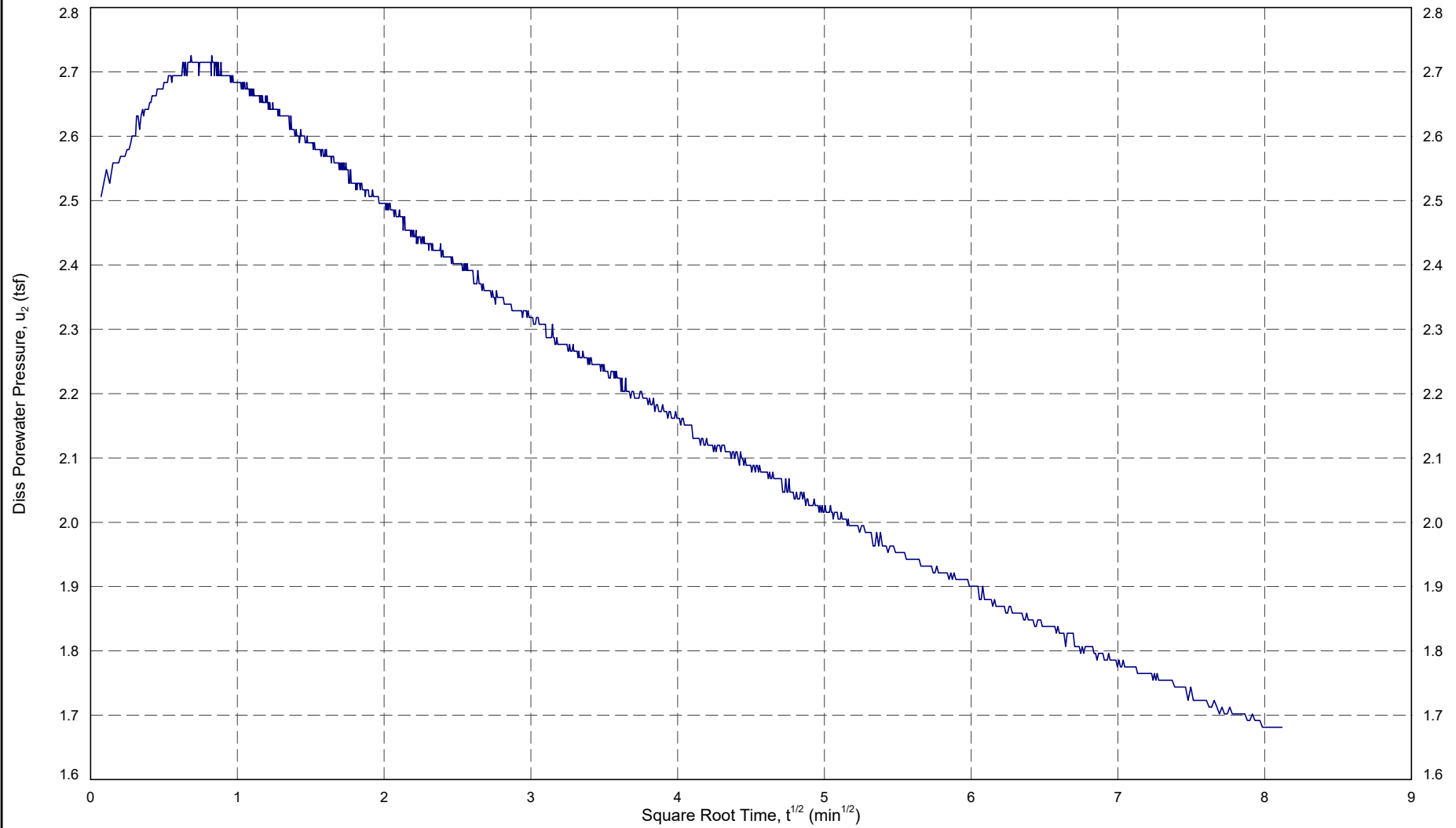
In Situ Pore Pressure, $u_0$ :	1 tsf	Rigidity Index, $I_r$ :	200
Initial Pore Pressure, $u_i$ :	3 tsf	Horizontal Coefficient of Consolidation, $c_h$ :	$1.43 \times 10^2 \text{ ft}^2/\text{yr}$
Final Pore Pressure:	2 tsf	Ratio $c_h/c_v$ :	5
Back Extrapolated Pore Pressure, $u_c$ :	3 tsf	Vertical Coefficient of Consolidation, $c_v$ :	$2.86 \times 10^1 \text{ ft}^2/\text{yr}$
Degree of Dissipation:	50%		
Dissipation Pressure:	1.8 tsf		
Time for 50% Dissipation, $t_{50}$ :	43.55 min		

RIG : CPT Rig  
 CONE TYPE : ABC  
 CONE ID : 3167  
 OPERATOR : TB

ANALYSED BY : PB  
 CHECKED BY : CB  
 APPROVED BY : AB

DATE: 02/01/2009  
 DATE: 03/01/2009  
 DATE: 04/01/2009

REMARK  
 adsf; var



— 24.57 ft



TITLE

Client 1  
 Engineer 1  
 Somewhere  
 CPT Tool Project  
 Dissipation Test - V-Diss test OC

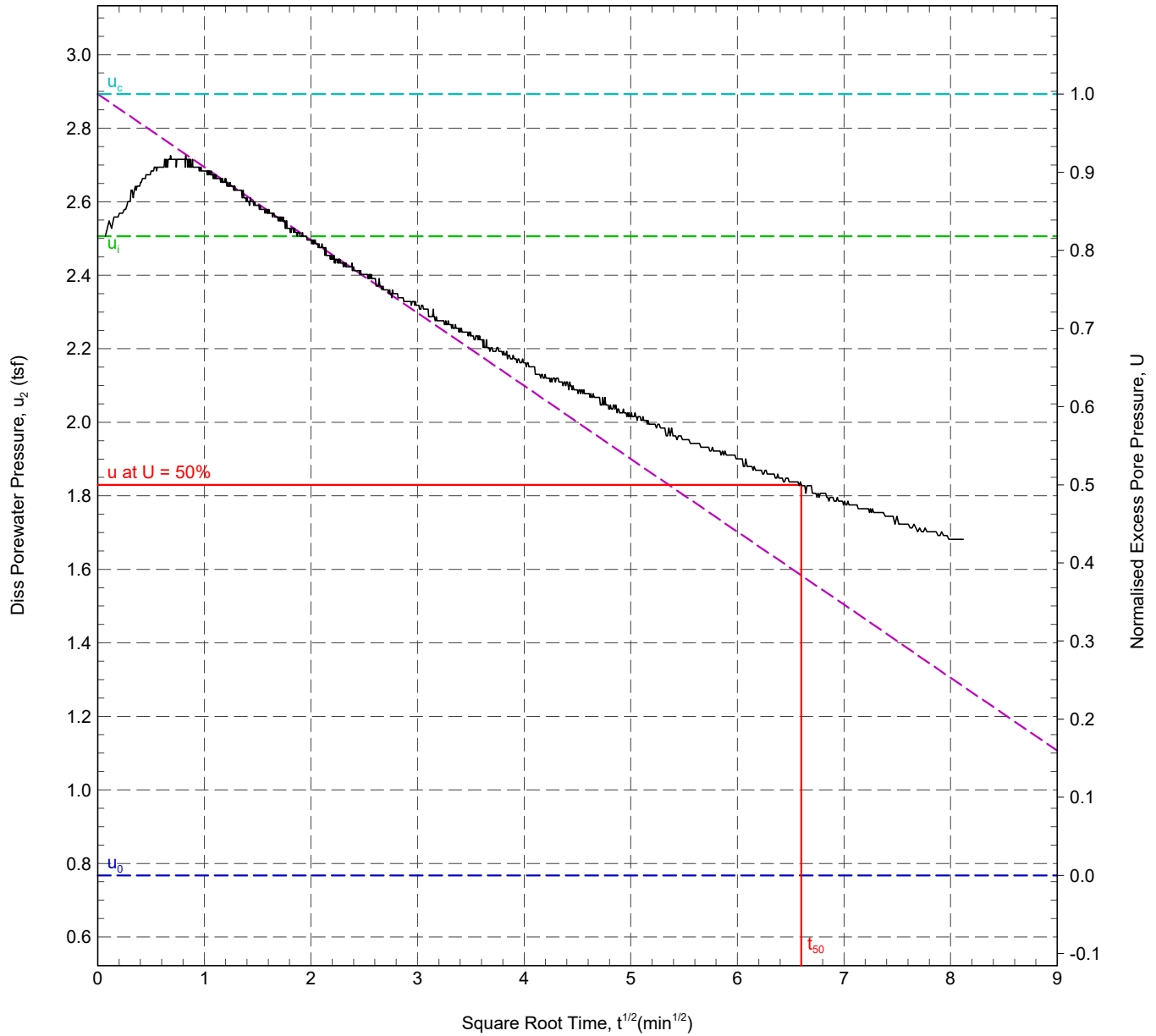
DRAWN	Datgel	DATE	1/2/2021
CHECKED	Datgel	DATE	1/2/2021
SCALE	Not To Scale		Let
PROJECT No	4.05.0	FIGURE No	408

Test ID  
**V-Diss test OC - 24.57 m**

CLIENT : Client 1  
 ENGINEER : Engineer 1  
 PROJECT : CPT Tool Project  
 LOCATION : Somewhere  
 PROJECT No. : 4.05.0

AREA : Place  
 EASTING :  
 NORTHING :  
 COORD. SYS.: MGA2020 Zone 56  
 ELEVATION :

SHEET : 1 OF 1  
 STATUS : 3  
 DATE : 01/01/09



In Situ Pore Pressure, $u_0$ :	1 tsf	Rigidity Index, $I_r$ :	200
Initial Pore Pressure, $u_i$ :	3 tsf	Horizontal Coefficient of Consolidation, $c_h$ :	$1.43 \times 10^2$ ft <sup>2</sup> /yr
Final Pore Pressure:	2 tsf	Ratio $c_h/c_v$ :	5
Back Extrapolated Pore Pressure, $u_c$ :	3 tsf	Vertical Coefficient of Consolidation, $c_v$ :	$2.86 \times 10^1$ ft <sup>2</sup> /yr
Degree of Dissipation:	50%		
Dissipation Pressure:	1.8 tsf		
Time for 50% Dissipation, $t_{50}$ :	43.55 min		

RIG : CPT Rig  
 CONE TYPE : ABC  
 CONE ID : 3167  
 OPERATOR : TB

ANALYSED BY : PB  
 CHECKED BY : CB  
 APPROVED BY : AB

DATE: 02/01/2009  
 DATE: 03/01/2009  
 DATE: 04/01/2009

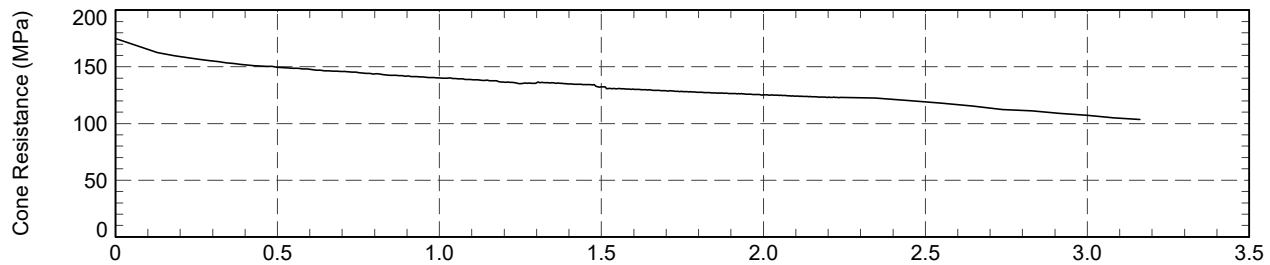
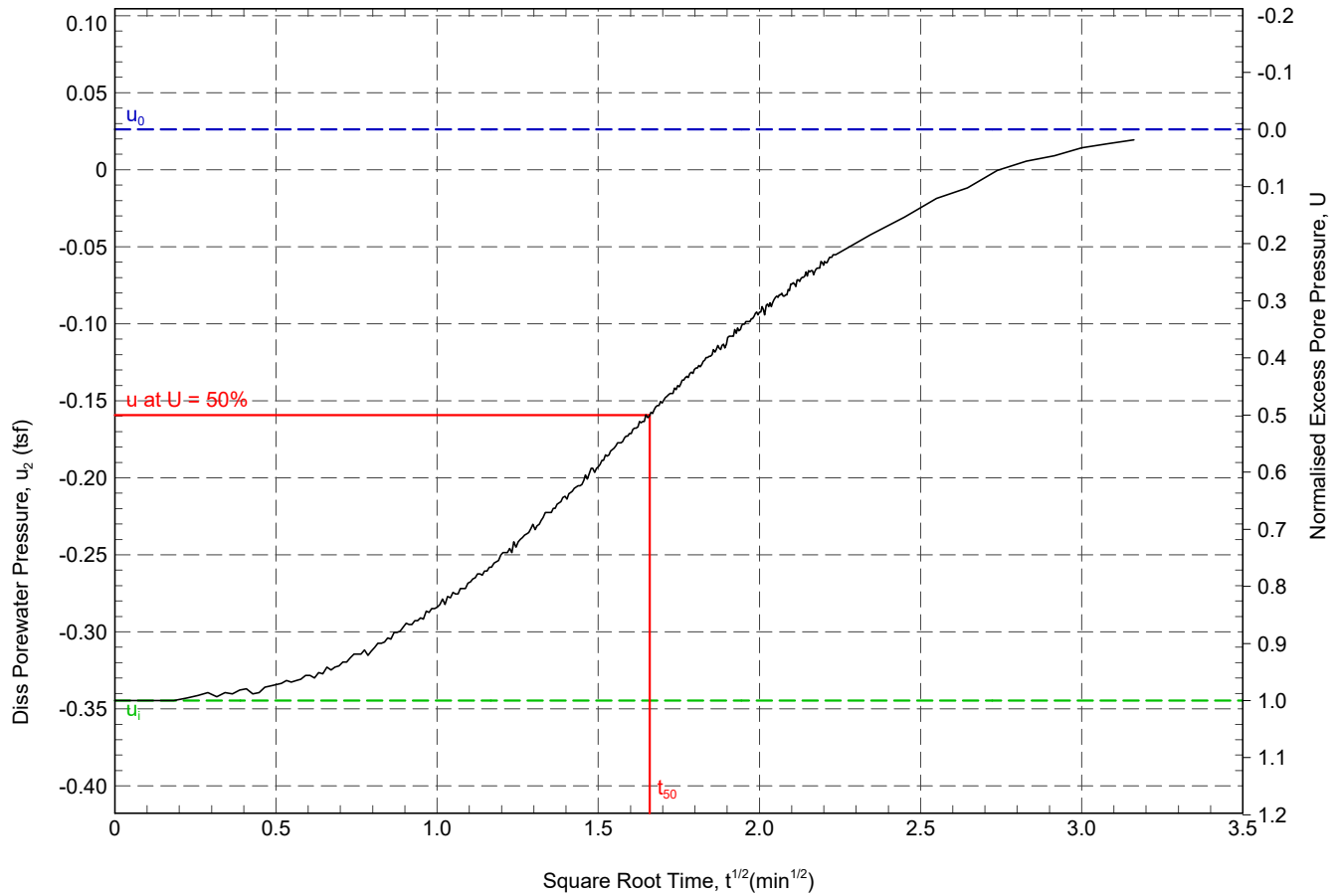
REMARK  
 adsf; var

Test ID  
**V-Diss OC Type V - 3.61 m**

CLIENT : Client 1  
 ENGINEER : Engineer 1  
 PROJECT : CPT Tool Project  
 LOCATION : Somewhere  
 PROJECT No. : 4.05.0

AREA :  
 EASTING :  
 NORTHING :  
 COORD. SYS.: MGA2020 Zone 56  
 ELEVATION : 0.00 ft AHD

SHEET : 1 OF 1  
 STATUS : 2  
 DATE : 01/07/10



In Situ Pore Pressure, $u_0$ :	0 tsf	Rigidity Index, $I_r$ :	150
Initial Pore Pressure, $u_i$ :	0 tsf	Horizontal Coefficient of Consolidation, $c_h$ :	$1.96 \times 10^3 \text{ ft}^2/\text{yr}$
Final Pore Pressure:	0 tsf	Ratio $c_h/c_v$ :	0.5
Degree of Dissipation:	50%	Vertical Coefficient of Consolidation, $c_v$ :	$3.93 \times 10^3 \text{ ft}^2/\text{yr}$
Dissipation Pressure:	-0.2 tsf		
Time for 50% Dissipation, $t_{50}$ :	2.76 min		

RIG : Datgel anchoring  
 CONE TYPE : ABC  
 CONE ID : C10CFIP.D71  
 OPERATOR : TB

ANALYSED BY : PB  
 CHECKED BY : CB  
 APPROVED BY : AB

DATE: 02/07/2010  
 DATE: 03/07/2010  
 DATE: 04/07/2010

REMARK

DATGEL CPT TOOL DGD 4.05.0 LIB.GLB Graph.PPDT PORE PRESSURE VS. SQR T.OC.LETP.DATGEL CPT TOOL DGD 4.05.0 EN.GPJ 787647.GDW 1/2/2021 22:24 10.01.00.11.Datgel CPT Tool.gINT.Add-h