THIS RECORD IS AN INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

DRILLING COMPANY/DRILLING EQUIPMENT
Boart Longyear / 600T Trusonic drill rig

DRILLING METHOD
Sonic Coring

BOREHOLE LOCATION
692+57, Rt 16 feet

DATES DRILLED
2/14/2011 - 2/18/2011

HOLE DIAMETER
6 inches

GROUND EL.
249 feet

GROUND-WATER READINGS
Ground-water level not measured.

BORING NO.
S-111 (Continued)

ELEVATION (ft)	DEPTH (ft)	BOX #	RUN #	% RECOVERY	MOISTURE CONTENT (% of dry wt.)	PERCENT PASSING No. 200 SIEVE	SAMPLE LOC.		
					8.4	20		SM	Becomes fine to coarse sand, more gravel
205	45		6	100	8.2	12		GP-GC	POORLY GRADED GRAVEL with CLAY and SAND - dense, wet, dark olive gray (5Y 3/2), medium to coarse sand, some fine, gravel (up to 1 inch in size), alternating with Clayey Sand and Silty Sand
								SM	SILTY SAND with GRAVEL - dense, wet, fine to coarse shale gravel, trace clay, some quartz, iron
200	50		7	100	8.5	13		GC-GM	SILTY CLAYEY GRAVEL with SAND - wet, dark olive gray (5Y 3/2), fine to coarse sand, subrounded to well rounded slate gravel (up to 3 inches in size), cobbles (up to 3½ inches in size)
								SW	WELL GRADED SAND with GRAVEL - wet, dark olive gray, gravel (up to ½ inch in size)
								GC-GM	SILTY CLAYEY GRAVEL with SAND - dense, wet, very dark grayish brown (10YR 3/2), fine to coarse sand, slate gravel (up to 1 inch in size), some sandstone
					22.7	89		CL	LEAN CLAY - moist, olive brown (2.5Y 4/3), some fine sand
195	55		8	100				CL-ML	SILTY CLAY - hard, moist, grayish brown (2.5Y 5/2), fine sand, some clay Becomes very moist, trace wood and charcoal fragments
								SC	**LAKEWOOD FORMATION [Qlw]** CLAYEY SAND - dense, moist, olive (5Y 5/3), fine grained
Tunnel									
	60		9	100	5.0	16		SM	SILTY SAND - dense, moist, olive (5Y 5/4), fine grained, some medium, layers of Poorly Graded Sand with Silt Becomes light olive (5Y 6/3)

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: DL
Prepared/Date: PK/WL 10/1/2011
Checked/Date: HP/PE 10/2/2011

MTA Westside Subway Extension
Los Angeles, California

amec

LOG OF BORING

Project No.: 4953-10-1561 Figure: A-3.11c

DRILLING COMPANY/DRILLING EQUIPMENT		BORING NO.
Boart Longyear / 600T Trusonic drill rig		**S-111 (Continued)**
DRILLING METHOD	**BOREHOLE LOCATION**	
Sonic Coring	692+57, Rt 16 feet	
DATES DRILLED	**HOLE DIAMETER**	**GROUND EL.**
2/14/2011 - 2/18/2011	6 inches	249 feet
GROUND-WATER READINGS		
Ground-water level not measured.		

THIS RECORD IS AN INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

ELEVATION (ft)	DEPTH (ft)	BOX #	RUN #	% RECOVERY	MOISTURE CONTENT (% of dry wt.)	PERCENT PASSING No. 200 SIEVE	SAMPLE LOC.	
							SM	
							SC-SM	SILTY CLAYEY SAND - dense, moist, olive gray (5Y 5/2), fine grained
							SM	SILTY SAND - dense, wet, pale olive (5Y 6/3) and olive yellow (5Y 6/8) mottling, fine grained, some iron oxide
							SC-SM	SILTY CLAYEY SAND - dense, wet, pale olive (5Y 5/2), fine grained
			10	100			SP-SM	POORLY GRADED SAND with SILT - medium dense, wet, olive yellow (5Y 6/3 and 5Y 6/8) and mottled pale olive, fine to medium grained
	65				15.8			Becomes light olive, (5Y 6/4)
Tunnel								
			11	100				Becomes wet, 1 inch mottled with iron oxide stains, vague stratification at base
	70				16.9	10		
							SM	SILTY SAND - medium dense, wet, pale olive (5Y 6/4), fine grained
								No core recovery from 72 to 74'
					13.3			Trace medium grained, (2.5Y 5/6)
	75		12	80			SP-SM	POORLY GRADED SAND with SILT - wet, light olive brown (2.5Y 5/4), fine to medium grained, trace coarse, some gravels (up to ¾ inch in size), predominantly slate
							GP-GM	POORLY GRADED GRAVEL with SILT and SAND - dense, wet, light brown, fine to coarse sand, slate gravel (up to 1½ inches in size), quartzite
170					8.2	11		
	80							

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: DL
Prepared/Date: PK/WL 10/1/2011
Checked/Date: HP/PE 10/2/2011

MTA Westside Subway Extension
Los Angeles, California

amec

LOG OF BORING

Project No.: 4953-10-1561 Figure: A-3.11d

DRILLING COMPANY/DRILLING EQUIPMENT		BORING NO.
Boart Longyear / 600T Trusonic drill rig		**S-111 (Continued)**
DRILLING METHOD	**BOREHOLE LOCATION**	
Sonic Coring	692+57, Rt 16 feet	
DATES DRILLED	**HOLE DIAMETER**	**GROUND EL.**
2/14/2011 - 2/18/2011	6 inches	249 feet

GROUND-WATER READINGS
Ground-water level not measured.

THIS RECORD IS AN INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

ELEVATION (ft)	DEPTH (ft)	BOX #	RUN #	% RECOVERY	MOISTURE CONTENT (% of dry wt.)	PERCENT PASSING No. 200 SIEVE	SAMPLE LOC.		
					19.6			SP-SM	POORLY GRADED SAND with SILT - wet, olive yellow (2.5Y 6/8), very fine to fine grained, trace subrounded to well rounded trace gravel (up to 1½ inches in size)
								SM	SILTY SAND - wet, light olive brown (5Y 5/4) and dark yellowish brown (10YR 4/6) mottling, fine grained, trace medium, iron oxide
					21.6	14			
165			13	100					Fine to medium grained, dark yellowish brown (10YR 4/6) to dark brown
	85								Becomes dark yellowish brown (10YR 4/6)
					15.6				Alternating with layers of Poorly Graded Sand, fine to medium grained, trace silt, trace gravel (up to ¾ inch in size)
					17.1	13			Becomes wet, light brownish gray (10YR 6/2), iron oxide dark yellowish brown (10YR 4/6)
160			14	100					
	90							SP-SM	POORLY GRADED SAND with SILT - wet, light brownish gray (10YR 6/2) and dark yellowish brown (10YR 4/6), fine grained, some subrounded to well rounded slate gravel (up to ½ inch in size), quartz, some iron oxide stain
								SM	SILTY SAND - wet, light brownish gray, fine to very fine grained, iron, some manganese oxide staining, some subparallel subhorizontal dips
								SP-SM	POORLY GRADED SAND with SILT- wet, fine to medium grained, predominately fine quartz, iron oxide
155			15	100	22.1				
	95								Interfingering Silty Sand, wet, light olive brown (2.5Y 5/4), very fine to fine grained, some iron oxide (10YR 4/3) Various colors (2.5Y 5/3 to 2.5Y 4/3)
									No recovery from 97 to 98½'
			16	70				SM	**SAN PEDRO FORMATION [Qsp]** SILTY SAND - wet, very dark gray (5Y 3/1), fine grained, occasional fossils intact gastropod shells
150									
	100								

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: DL
Prepared/Date: PK/WL 10/1/2011
Checked/Date: HP/PE 10/2/2011

MTA Westside Subway Extension
Los Angeles, California

amec

LOG OF BORING

Project No.: 4953-10-1561 Figure: A-3.11e

DRILLING COMPANY/DRILLING EQUIPMENT		BORING NO.
Boart Longyear / 600T Trusonic drill rig		**S-111 (Continued)**
DRILLING METHOD	**BOREHOLE LOCATION**	
Sonic Coring	692+57, Rt 16 feet	
DATES DRILLED	**HOLE DIAMETER**	**GROUND EL.**
2/14/2011 - 2/18/2011	6 inches	249 feet

GROUND-WATER READINGS
Ground-water level not measured.

ELEVATION (ft)	DEPTH (ft)	BOX #	RUN #	% RECOVERY	MOISTURE CONTENT (% of dry wt.)	PERCENT PASSING No. 200 SIEVE	SAMPLE LOC.	
145	105		17	100				SM
140	110		18	100				ML
135	115		19	100				ML
130	120		20	100				

Alternating with layers of Sandy Silt, wet, very dark gray, fine to very fine grained

3-inch cemented zone containing gastropods, very dark gray (5Y 3/1), calcium carbonate nodules, small wood fragment, gastropod shells (up to ½ inch in size)

Less gastropod shells
3-inch thick carbonate cemented zone

2-inch by 3-inch carbonate cemented zone, some silt

Becomes wet, very dark gray (5Y 3/1), trace to few shell fragments (gastropods, bivalves), occasional subrounded rock fragments

3-inch thick cementation with gastropod fragments

SANDY SILT - wet, dark gray, very fine to fine sand, trace scattered shell fragments, some intact gastropods

Trace clay

3-inch thick carbonate concretion
Volcanic rock fragments, gravel concretionary clast containing sublong slate fragments (up to ½ inch in size), shell fragments

SILT - hard, moist, very dark gray (5Y 3/1), trace coarse sand, some granitic rock fragments, some clay

Becomes greenish black, ½ inch granite clasts

Layers of Sandy Silt with Clay, very stiff to hard, fine to coarse sand

THIS RECORD IS AN INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: DL
Prepared/Date: PK/WL 10/1/2011
Checked/Date: HP/PE 10/2/2011

MTA Westside Subway Extension
Los Angeles, California

amec

LOG OF BORING

Project No.: 4953-10-1561 Figure: A-3.11f

DRILLING COMPANY/DRILLING EQUIPMENT		BORING NO.
Boart Longyear / 600T Trusonic drill rig		**S-111 (Continued)**
DRILLING METHOD	**BOREHOLE LOCATION**	
Sonic Coring	692+57, Rt 16 feet	
DATES DRILLED	**HOLE DIAMETER**	**GROUND EL.**
2/14/2011 - 2/18/2011	6 inches	249 feet
GROUND-WATER READINGS		
Ground-water level not measured.		

THIS RECORD IS AN INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

ELEVATION (ft)	DEPTH (ft)	BOX #	RUN #	% RECOVERY	MOISTURE CONTENT (% of dry wt.)	PERCENT PASSING No. 200 SIEVE	SAMPLE LOC.		
125	125		21	52				ML	Becomes 3 inches clast, subrounded, scattered granitic rock fragments (up to ½ inch in size)
								SC	CLAYEY SAND - very dark greenish gray (10Y 1-3/10GY), fine to coarse grained
									No core recovery from 124.6 to 127'
120	130		22	98				GP-GM	POORLY GRADED GRAVEL with SAND and SILT - very dense, moist, dark grayish green (5GY 4/2), fine to medium sand, subangular to well rounded gravel (up to 2 inches in size), locally clast supported
									Layers of Poorly Graded Sand, fine grained, trace subrounded to well rounded gravel
									Becomes dense, moist, subrounded to well rounded gravel (up to 3 inches in size)
									Layers of Silty Sand - moist, (5GY 4/2), fine to medium grained, occasional gravels at base (up to 1 inch in size)
									Gravel (up to 1½ inches in size)
									No core recovery from 132 to 132.8'
115	135		23	84				SP-SM	POORLY GRADED SAND with SILT and GRAVEL - moist, grayish green (5GY 5/2), fine grained, fine to coarse gravel (up to 3 inches in size)
								SM	SILTY SAND with GRAVEL - moist, greenish gray, fine grained, gravel (up to 1 inch in size)
								SP-SM	POORLY GRADED SAND with SILT and GRAVEL - moist, greenish gray (10GY 5/1), gravel (up to ½ inch in size), granite, some slate and quartzite
									Becomes medium grained, trace fine gravel (up to ½ inch in size) at base of bed
110	140		24	98					Becomes light greenish gray (5GY 7/1), trace subrounded to well rounded gravel (up to 1½ inches in size)
									Becomes dense, dark greenish gray (10GY 4/1), fine to medium grained
									Trace well rounded gravel (up to 1 inch in size)
								SM	

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: DL
Prepared/Date: PK/WL 10/1/2011
Checked/Date: HP/PE 10/2/2011

MTA Westside Subway Extension
Los Angeles, California

amec

LOG OF BORING

Project No.: 4953-10-1561 Figure: A-3.11g

DRILLING COMPANY/DRILLING EQUIPMENT		BORING NO.
Boart Longyear / 600T Trusonic drill rig		**S-111 (Continued)**
DRILLING METHOD	**BOREHOLE LOCATION**	
Sonic Coring	692+57, Rt 16 feet	
DATES DRILLED	**HOLE DIAMETER**	**GROUND EL.**
2/14/2011 - 2/18/2011	6 inches	249 feet

GROUND-WATER READINGS
Ground-water level not measured.

ELEVATION (ft)	DEPTH (ft)	BOX #	RUN #	% RECOVERY	MOISTURE CONTENT (% of dry wt.)	PERCENT PASSING No. 200 SIEVE	SAMPLE LOC.	
							SP-SM	SILTY SAND with GRAVEL - moist, very dark greenish gray (5G-1/ 3/1), fine grained, trace subrounded to well rounded gravels (up to 1 inch in size) POORLY GRADED SAND with SILT - dense, moist, very dark greenish gray (10Y 4/1), fine grained, trace fine gravel
105	145		25	100			SM	SILTY SAND - wet, very dark greenish gray (5G-1 3/1), very fine to fine grained Thick bed, massive
100	150		26	100				Becomes dense, moist, greenish black (10Y 2.5/1), fine grained, few gravel (up to ¾ inch in size), well rounded to rounded Occasional rounded to well rounded gravels (up to 1 inch in size)
95	155							END OF BORING AT 150 FEET
90	160							

NOTES:

Consistency description on this log is based on pocket penetrometer test results and/or visual observation of soil samples.

Hand augered upper 8½ feet to avoid damage to utilites.

Borehole grouted with cement-bentonite slurry and patched with asphalt concrete.

Field Tech: DL
Prepared/Date: PK/WL 10/1/2011
Checked/Date: HP/PE 10/2/2011

THIS RECORD IS AN INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

METRO SOIL CORE MC 200 TUNNEL ZONE S:\70131 GEOTECH\GINTW\LIBRARY MACTEC JUNE2011.GLB
G:\PROJECT_DIRECTORIES\4953\2010\101561_METRO_WESTSIDE_EXTENSION\6.2.3.1 GEOTECHNICAL DESIGN\3.2 ALL FIELD NOTES\GINT LOG\NEW TEMPLATE - MARCH 14, 2011\SONIC GINT LOGS\101561 SONIC (111-120).GPJ 10/3/11

MTA Westside Subway Extension
Los Angeles, California

amec

LOG OF BORING
Project No.: 4953-10-1561 Figure: A-3.11h

GREGG

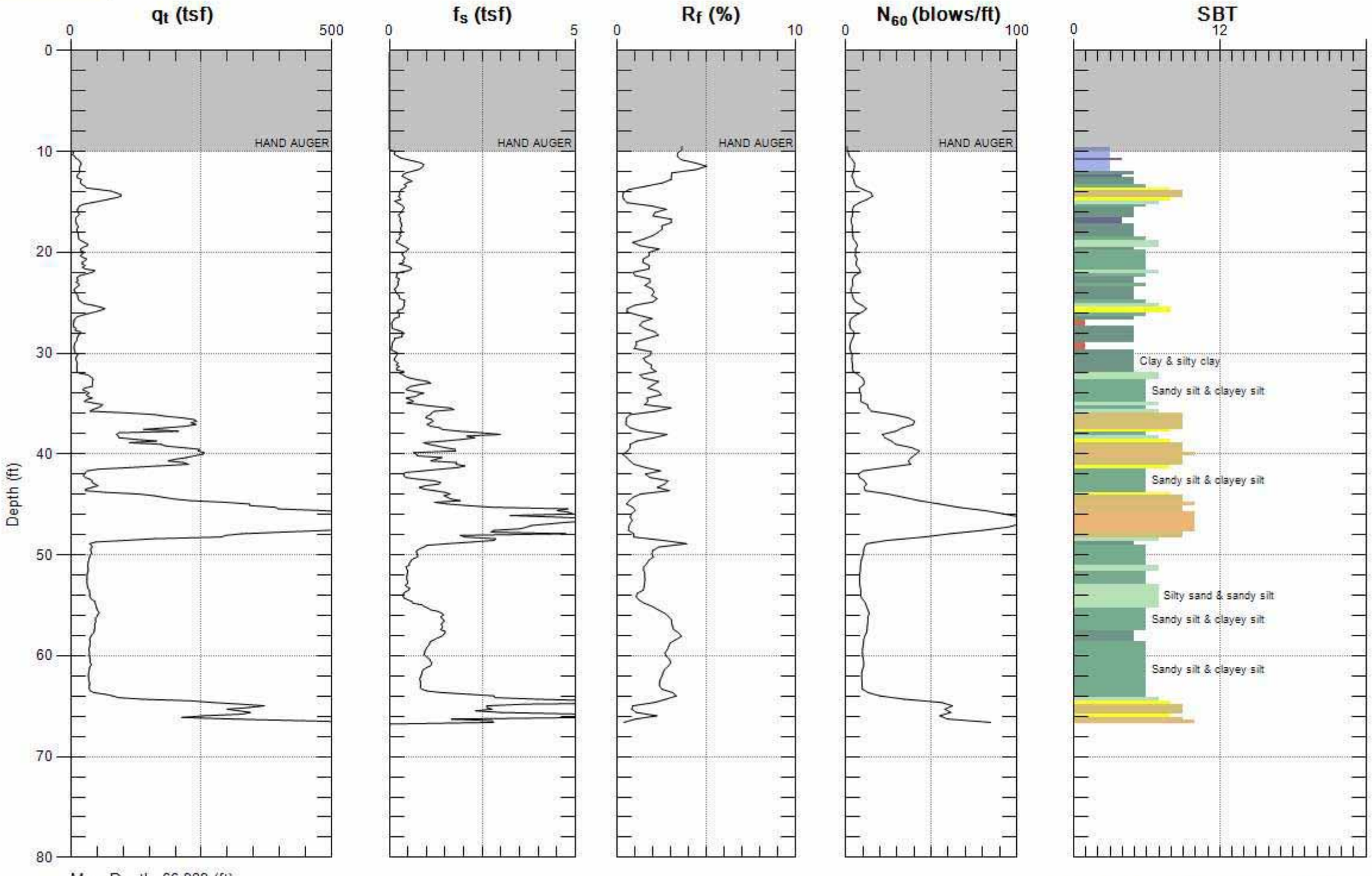
MACTEC

Site: MTA

Sounding: C-115

Engineer: G.CITO

Date: 2/8/2011 10:04



Max. Depth: 66.929 (ft)

Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

Figure A-4.11

GREGG

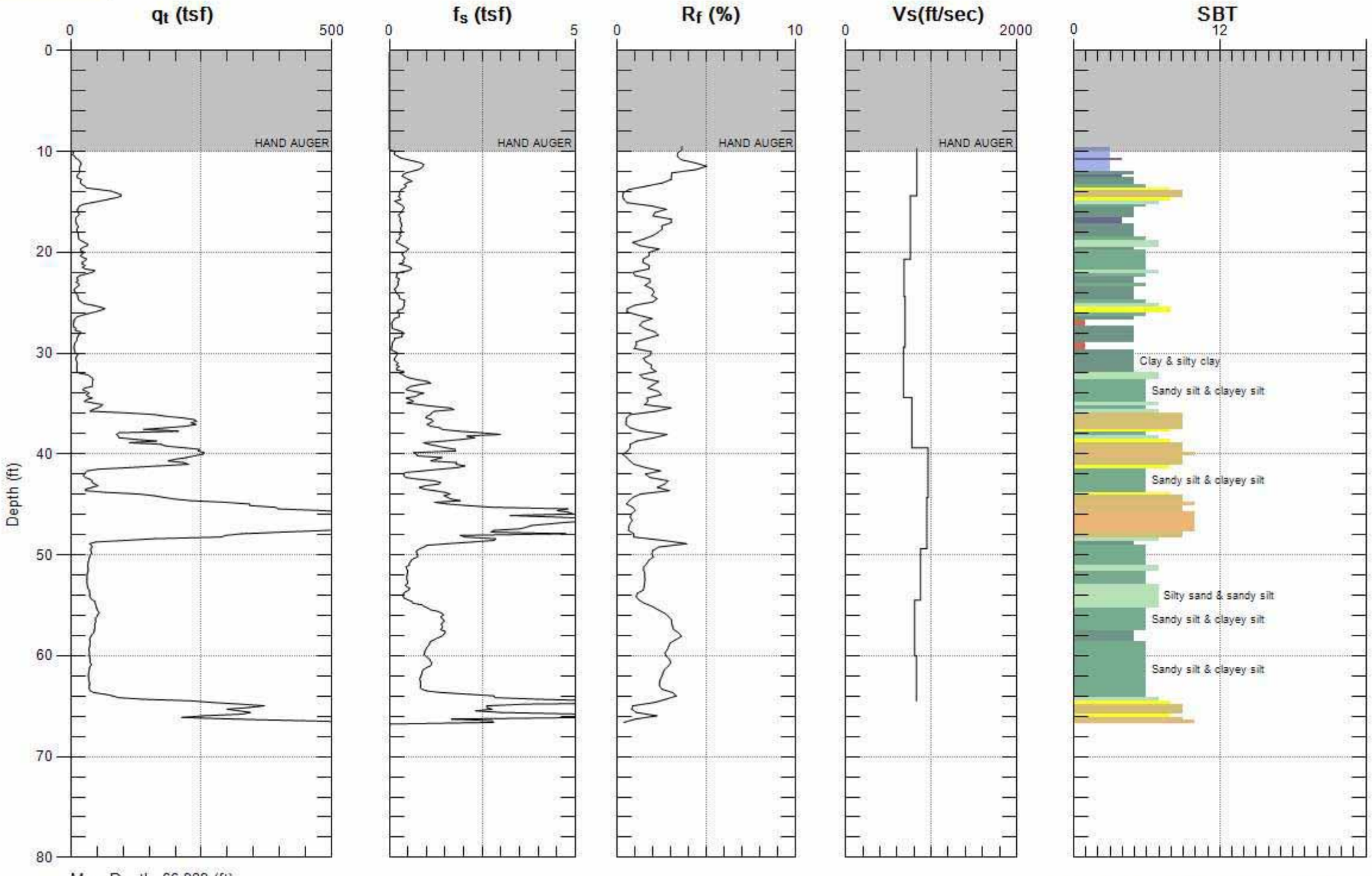
MACTEC

Site: MTA

Sounding: C-115

Engineer: G.CITO

Date: 2/8/2011 10:04



Max. Depth: 66.929 (ft)

Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

Figure A-4.12

GREGG

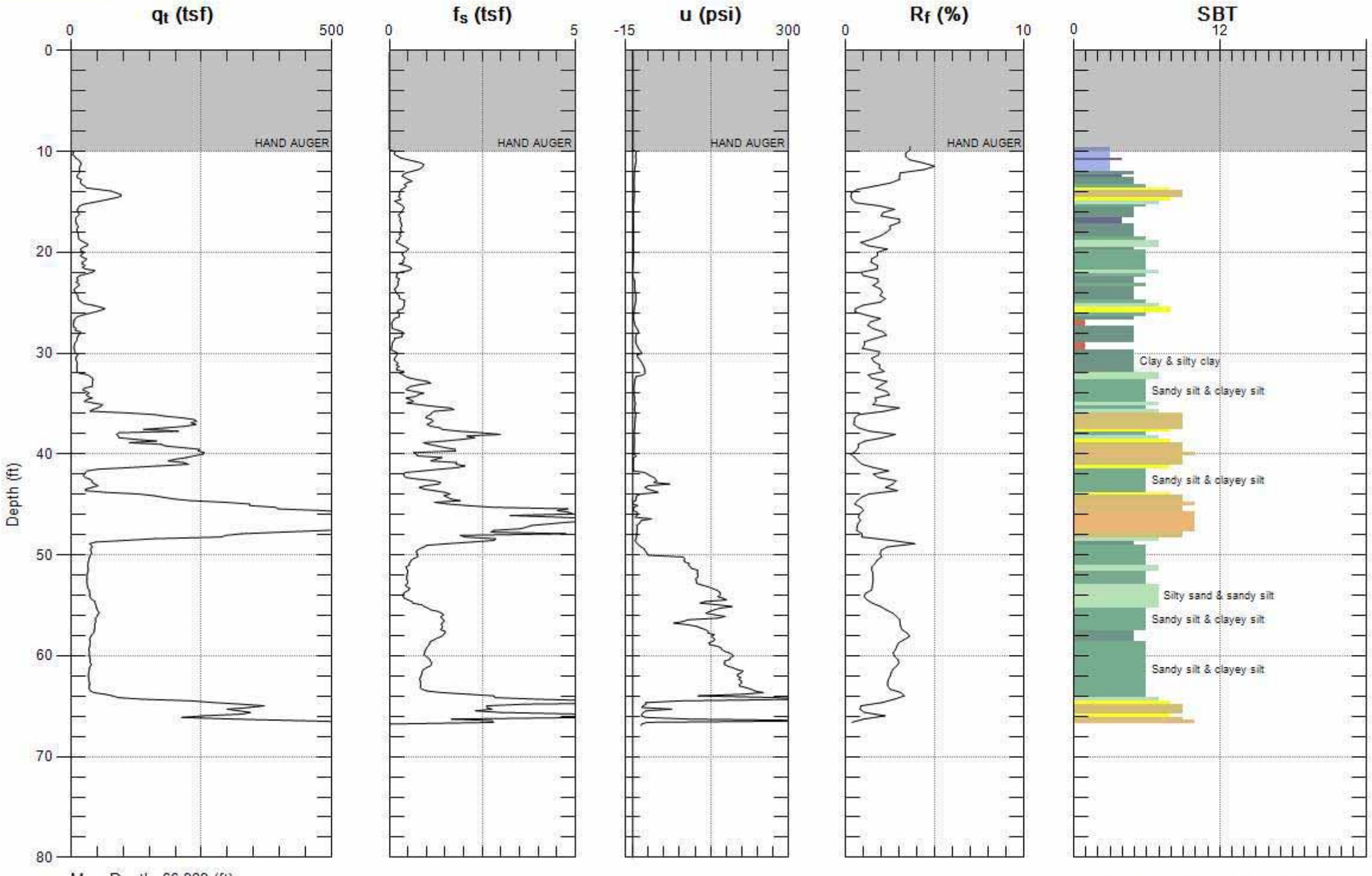
MACTEC

Site: MTA

Sounding: C-115

Engineer: G.CITO

Date: 2/8/2011 10:04



Max. Depth: 66.929 (ft)

Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

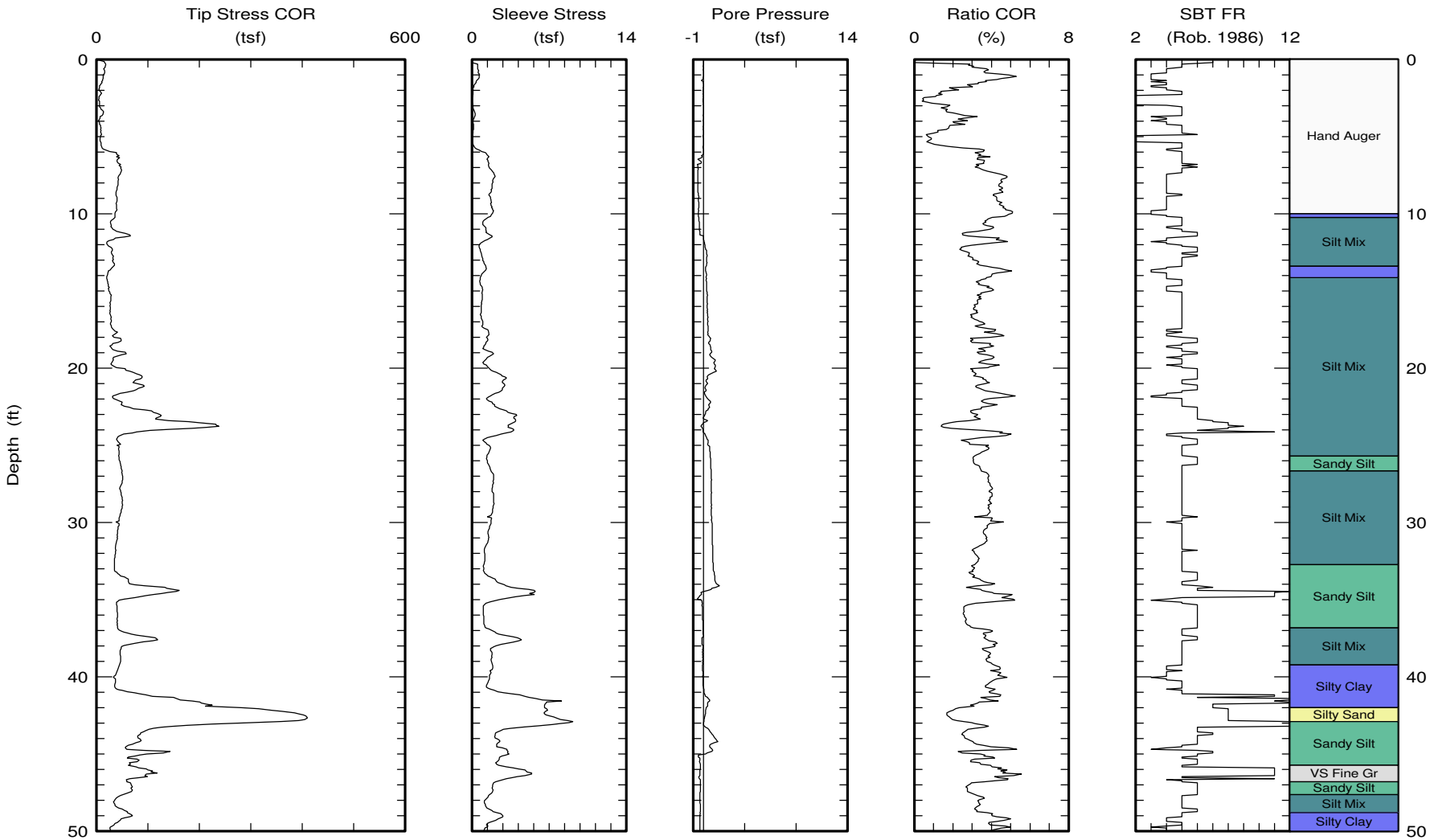
Figure A-4.13

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 05/Mar/2011
Test ID: C-117
Project: LosAngeles

Customer: MACTEC
Job Site: Beverly Hills High School



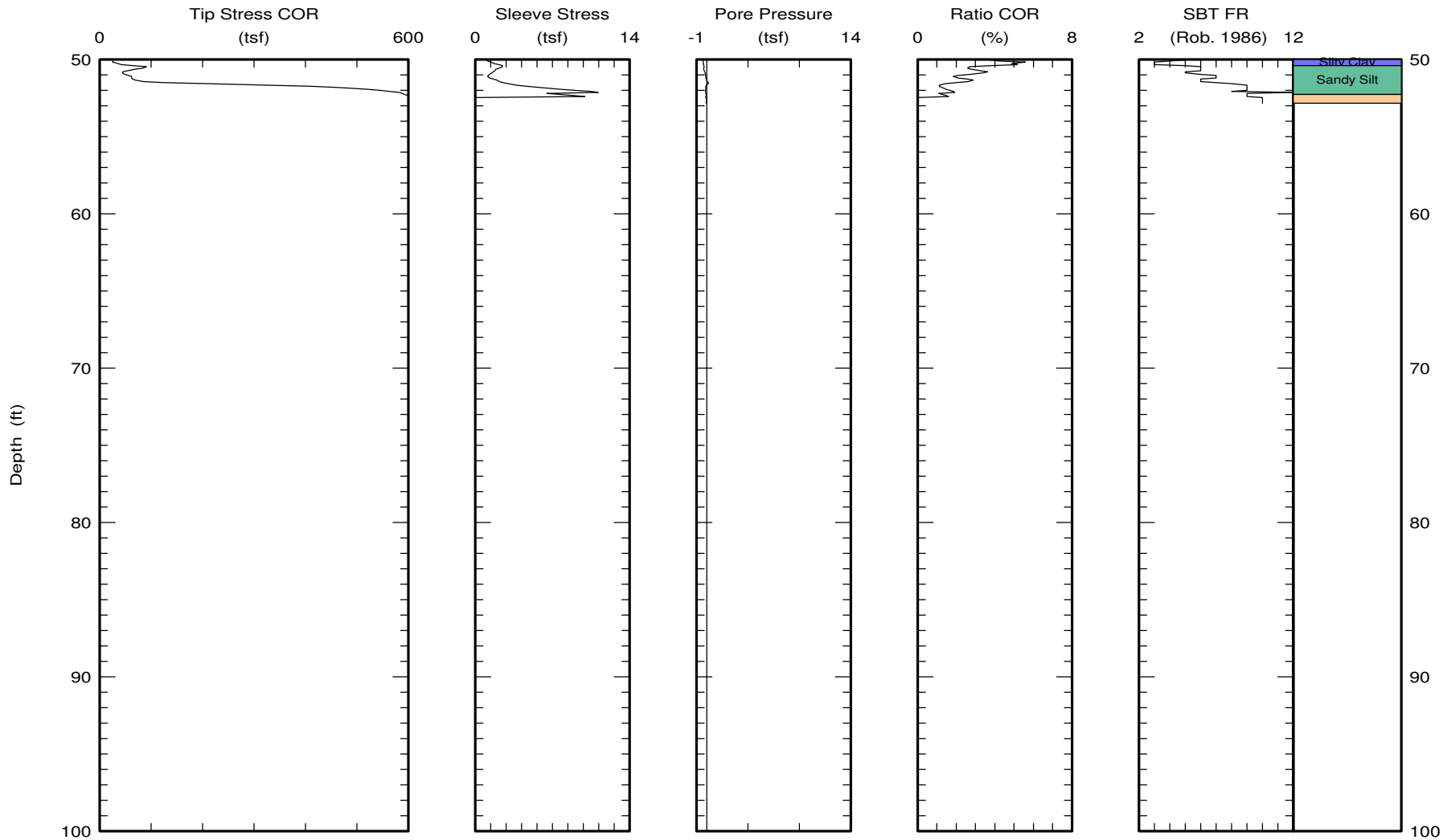
Maximum depth: 52.84 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 05/Mar/2011
Test ID: C-117
Project: LosAngeles

Customer: MACTEC
Job Site: Beverly Hills High School



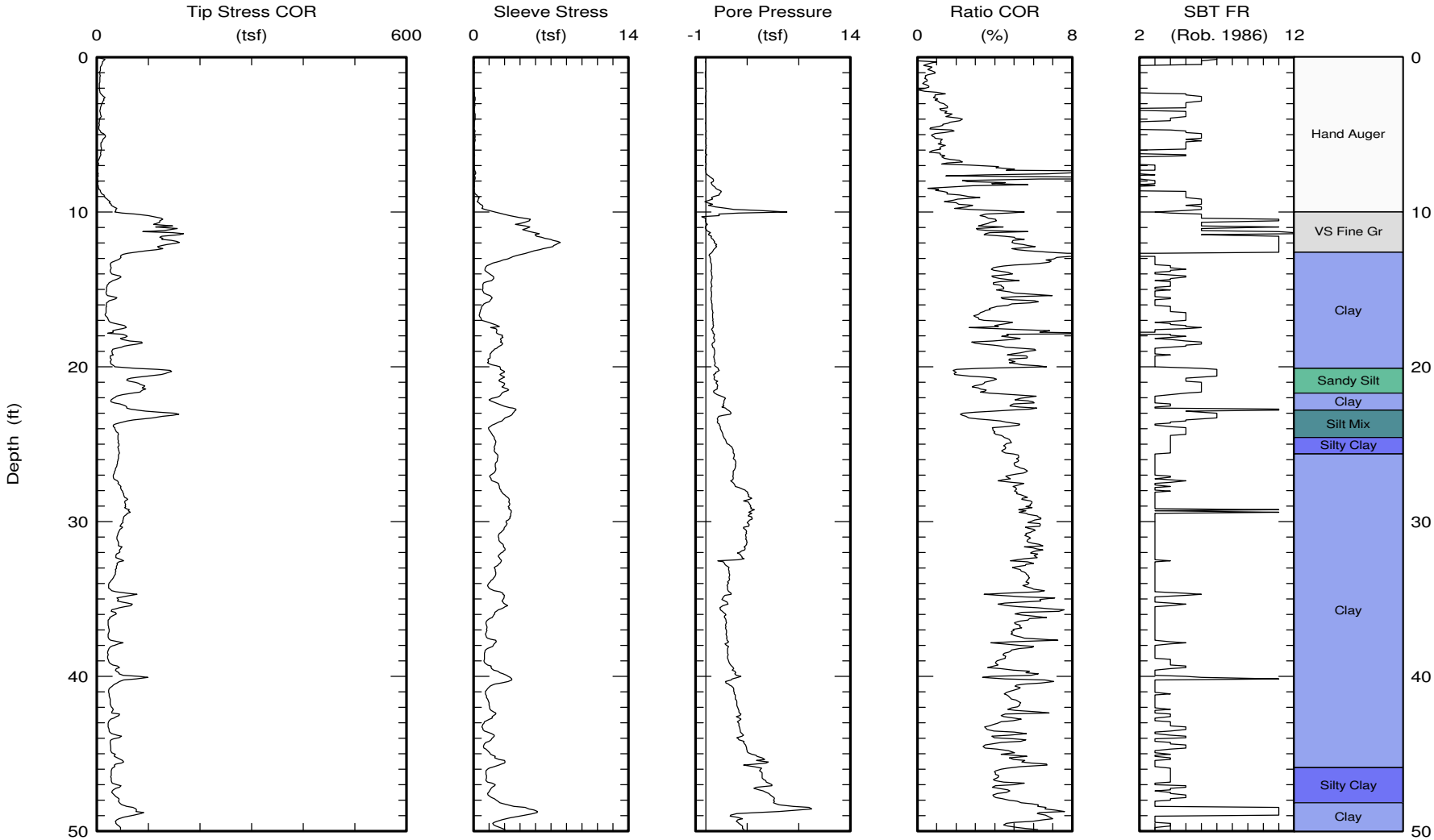
Maximum depth: 52.84 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 26/Feb/2011
Test ID: C-118
Project: LosAngeles

Customer: MACTEC
Job Site: Beverly Hills High School



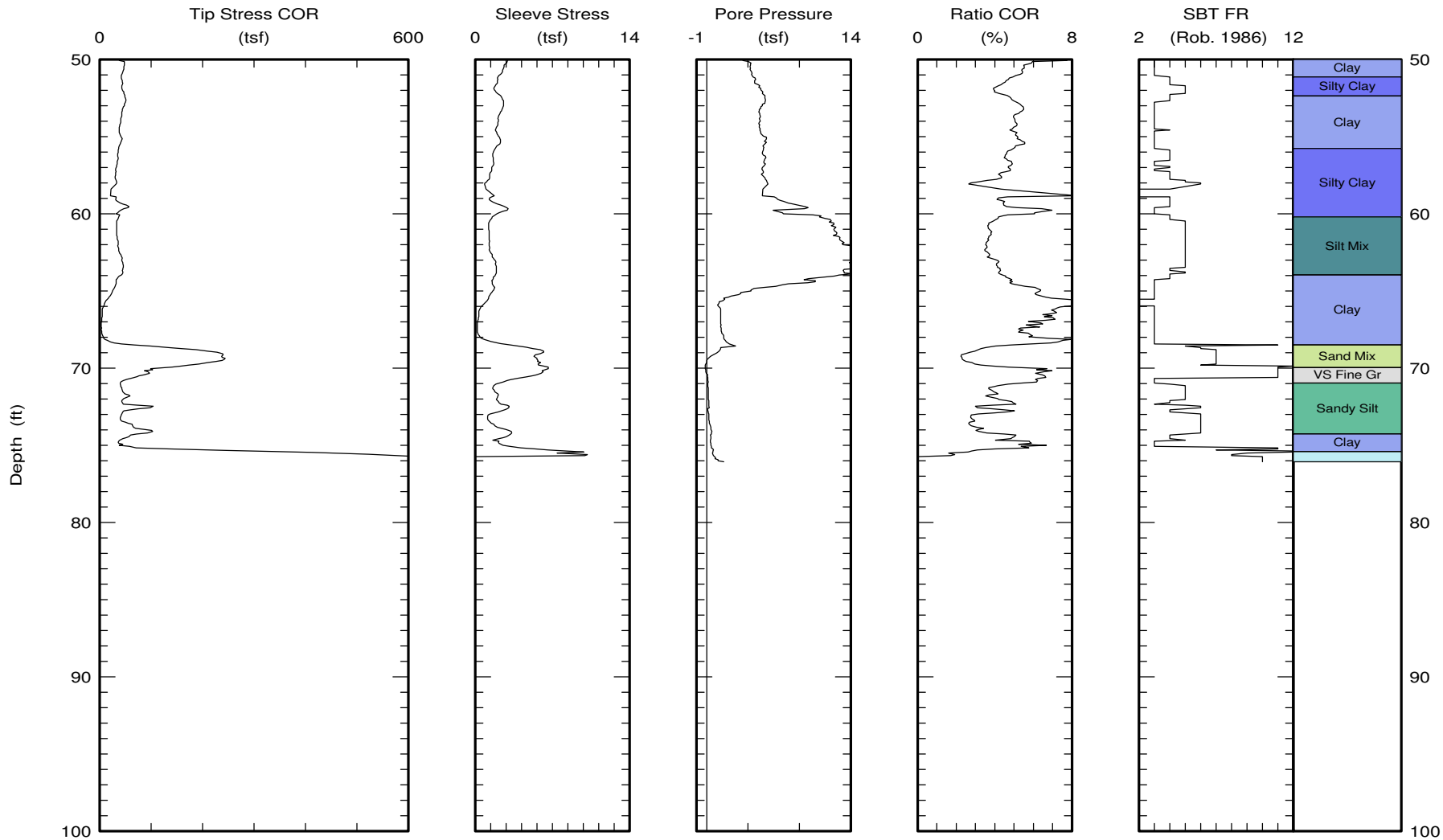
Maximum depth: 76.08 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

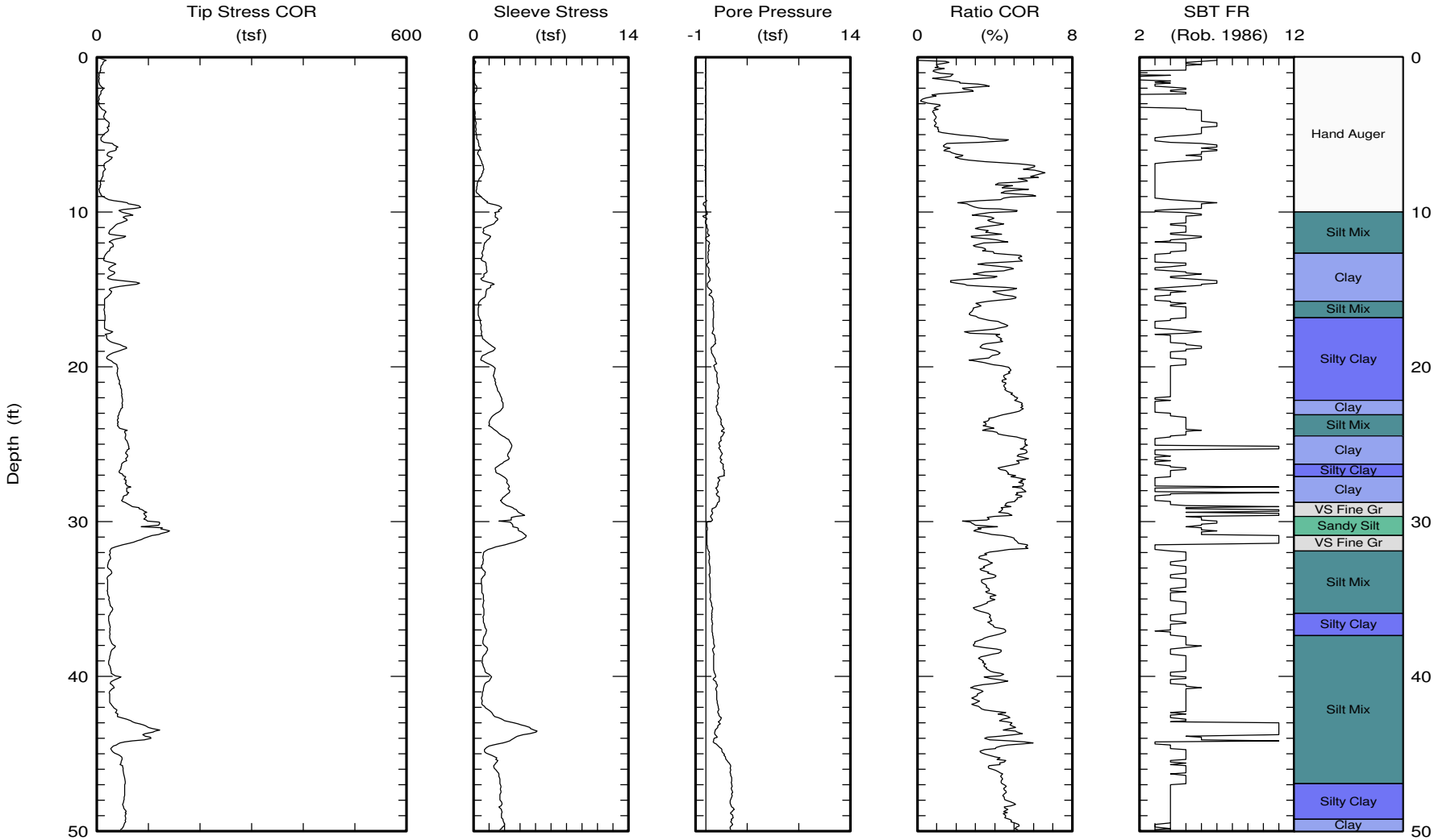
Date: 26/Feb/2011
Test ID: C-118
Project: LosAngeles

Customer: MACTEC
Job Site: Beverly Hills High School



Maximum depth: 76.08 (ft)

Kehoe Testing & Engineering Office: (714) 901-7270 Fax: (714) 901-7289 rich@kehoetesting.com www.kehoetesting.com	CPT Data 30 ton rig	Date: 05/Mar/2011 Test ID: C-119 Project: LosAngeles
	Customer: MACTEC Job Site: Beverly Hills High School	



Maximum depth: 73.84 (ft)

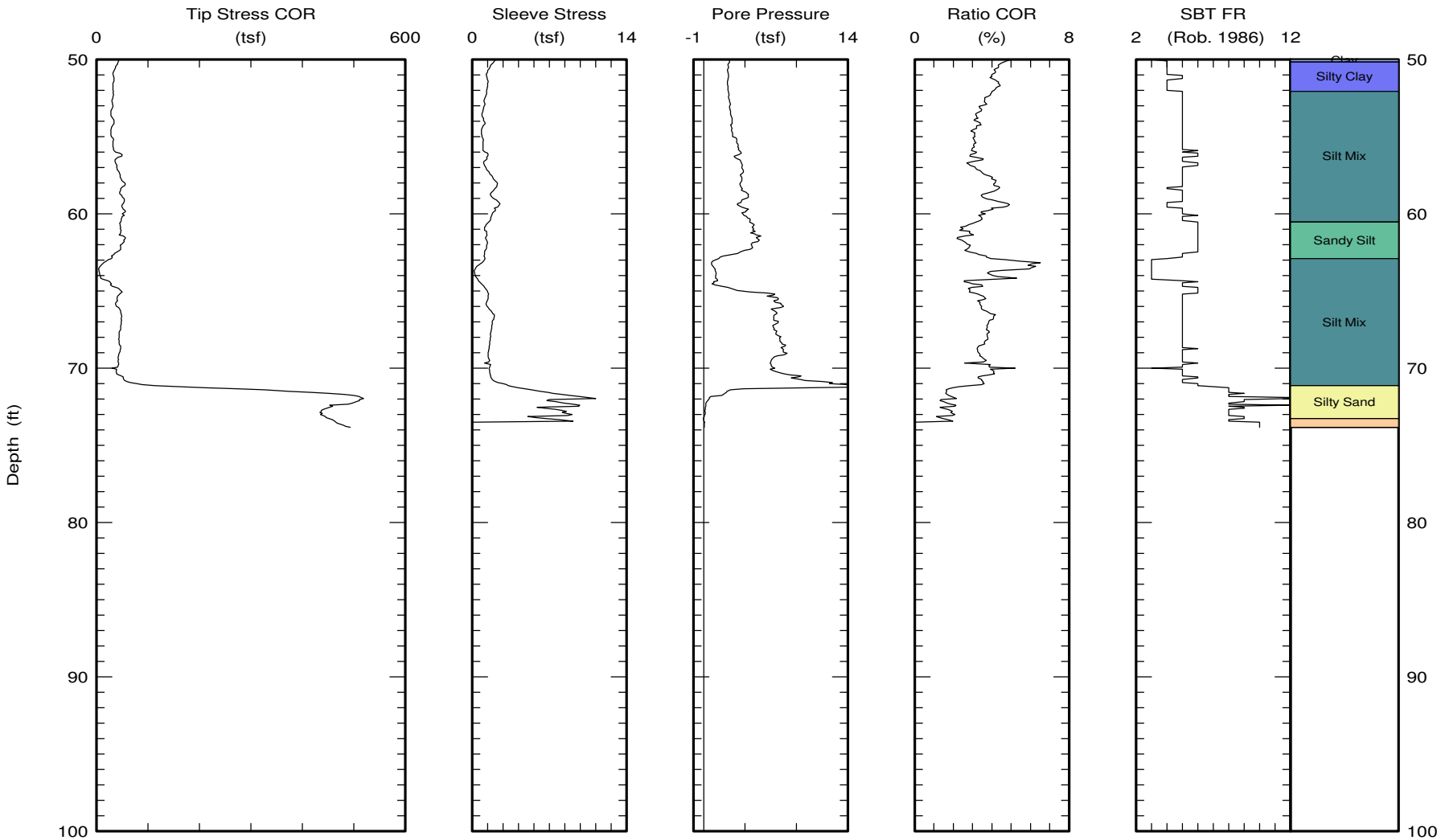
Figure A-4.21 Test ID: C-119
File: Z05M1103C.ECP

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 05/Mar/2011
Test ID: C-119
Project: LosAngeles

Customer: MACTEC
Job Site: Beverly Hills High School



Maximum depth: 73.84 (ft)

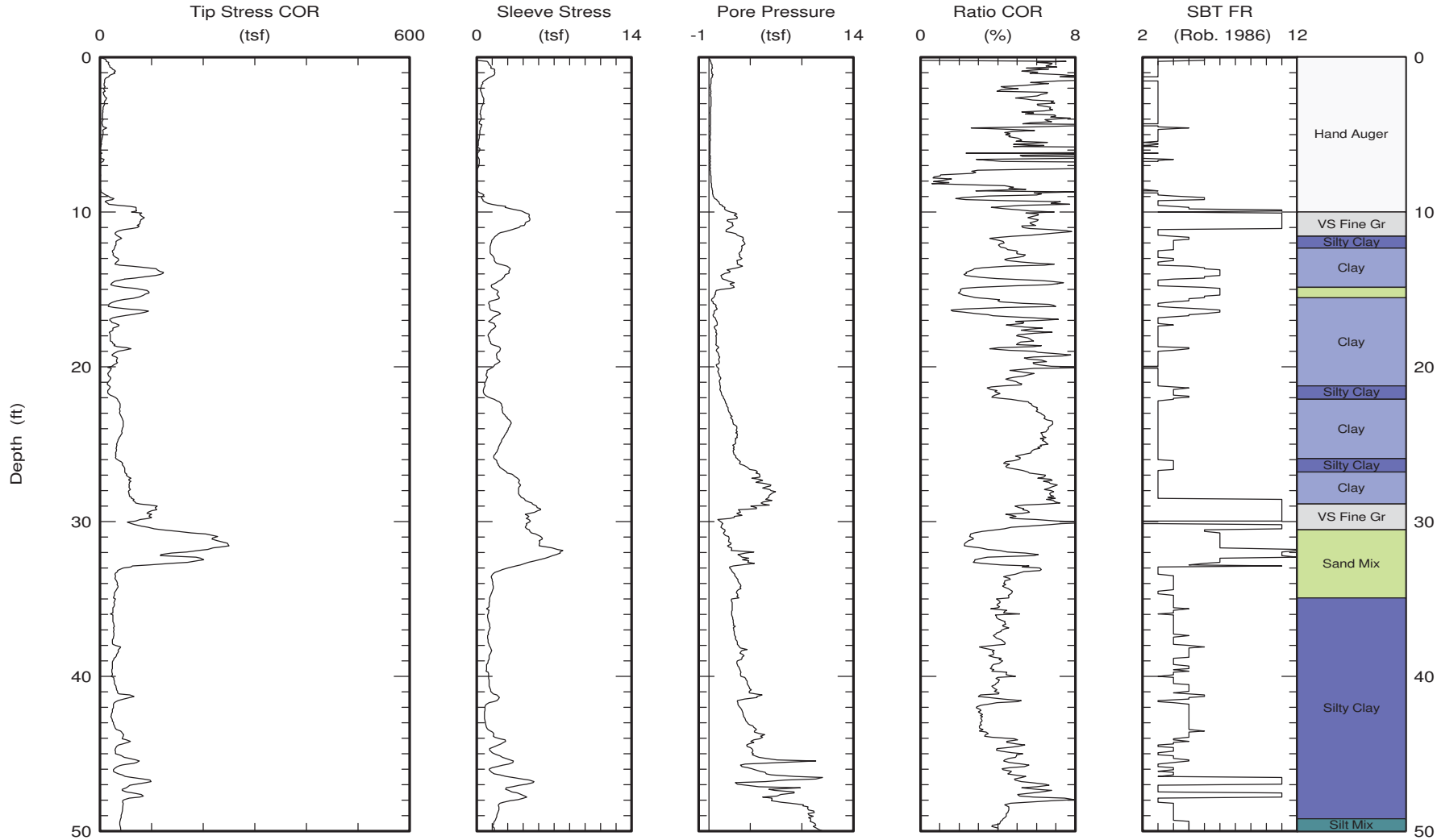
Figure A-4.22 Test ID: C-119
File: Z05M1103C.ECP

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 26/Feb/2011
Test ID: C-119A
Project: LosAngeles

Customer: MACTEC
Job Site: Beverly Hills High School



Maximum depth: 75.03 (ft)

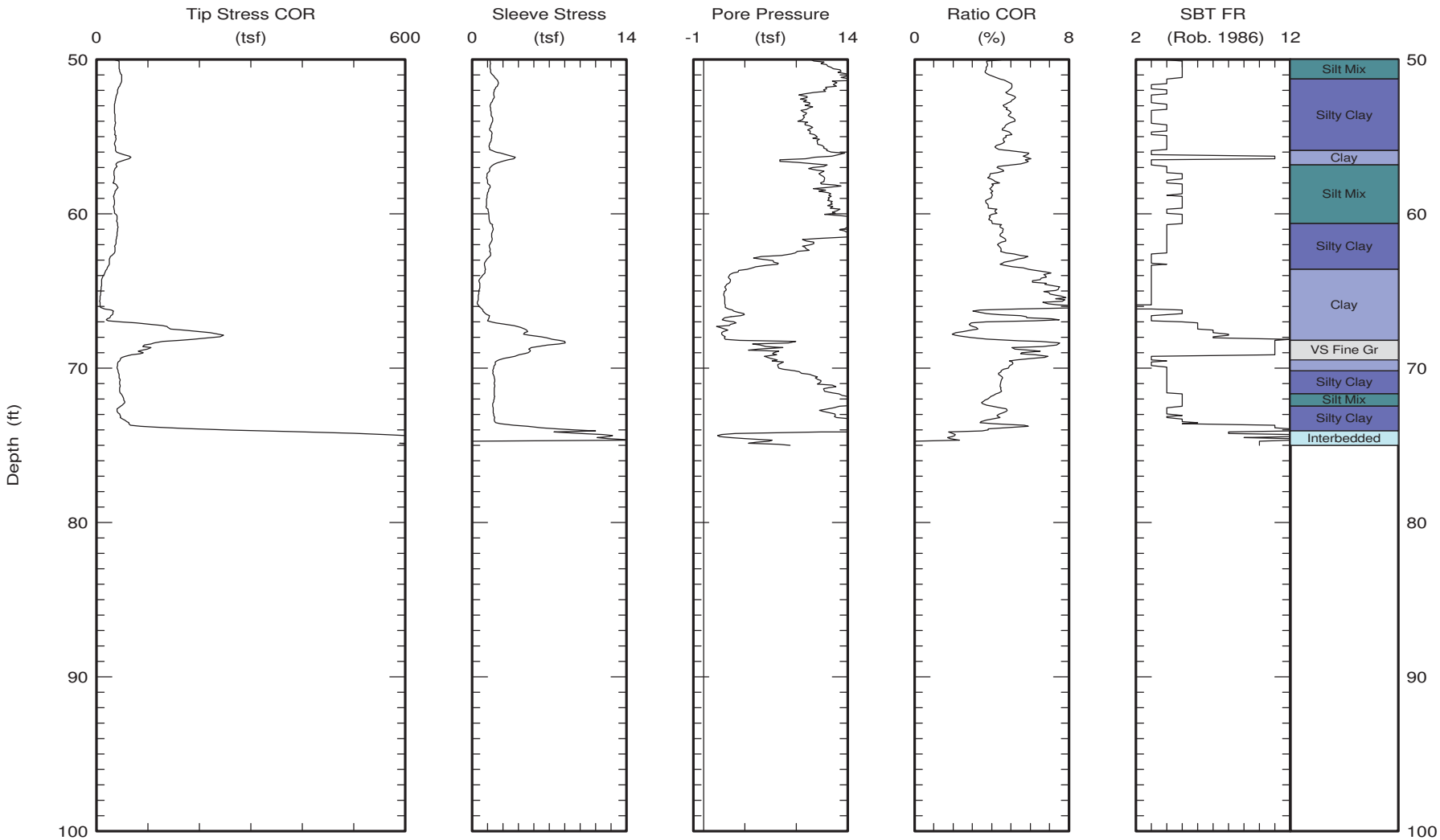
Test ID: C-119B
File: Z26F1103C.ECP

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 26/Feb/2011
Test ID: C-119**A**
Project: LosAngeles

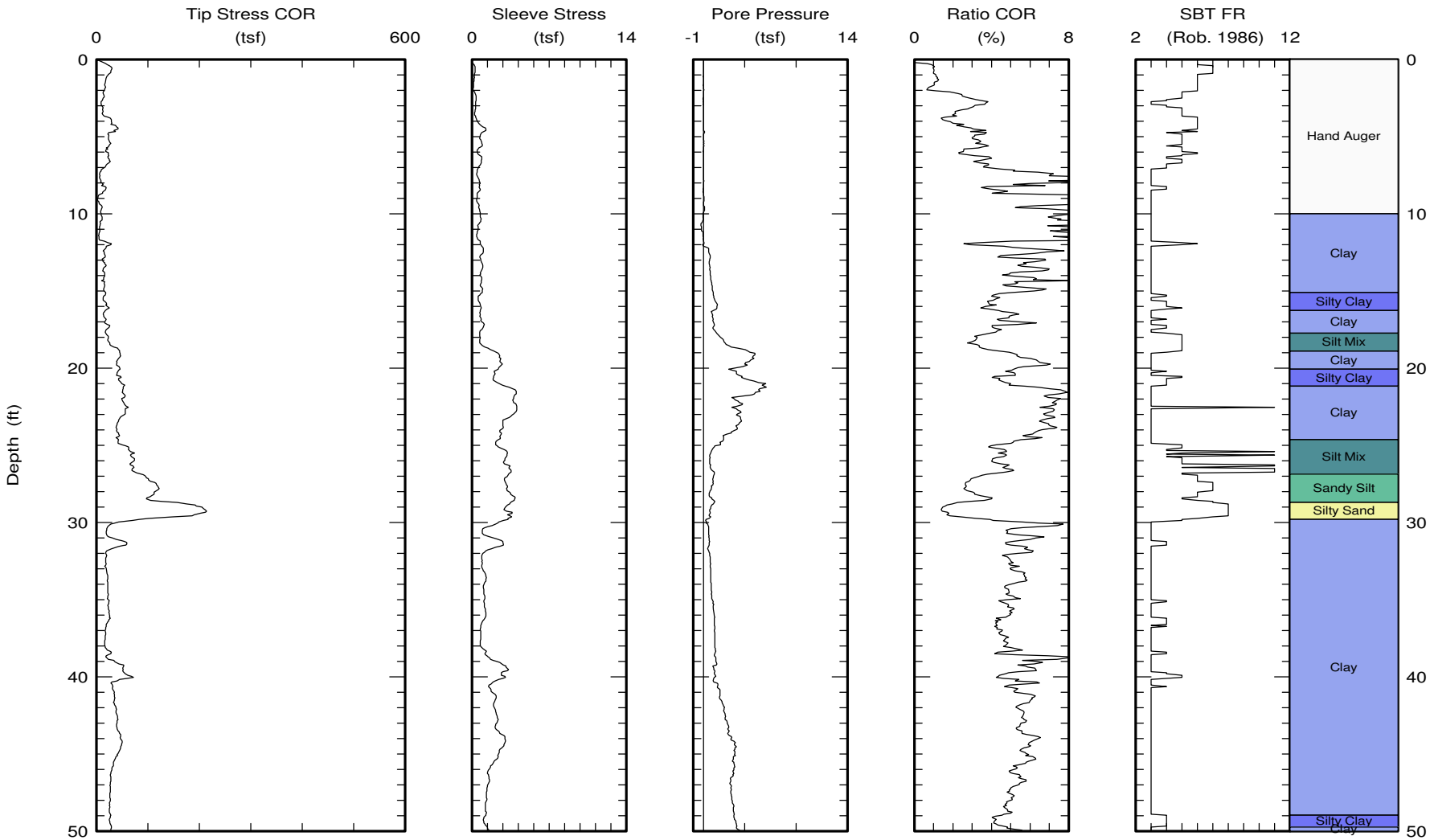
Customer: MACTEC
Job Site: Beverly Hills High School



Maximum depth: 75.03 (ft)

Test ID: C-119B
File: Z26F1103C.ECP

Kehoe Testing & Engineering Office: (714) 901-7270 Fax: (714) 901-7289 rich@kehoetesting.com www.kehoetesting.com	CPT Data 30 ton rig	Date: 26/Feb/2011 Test ID: C-120 Project: LosAngeles
	Customer: MACTEC Job Site: Beverly Hills High School	



Maximum depth: 70.01 (ft)

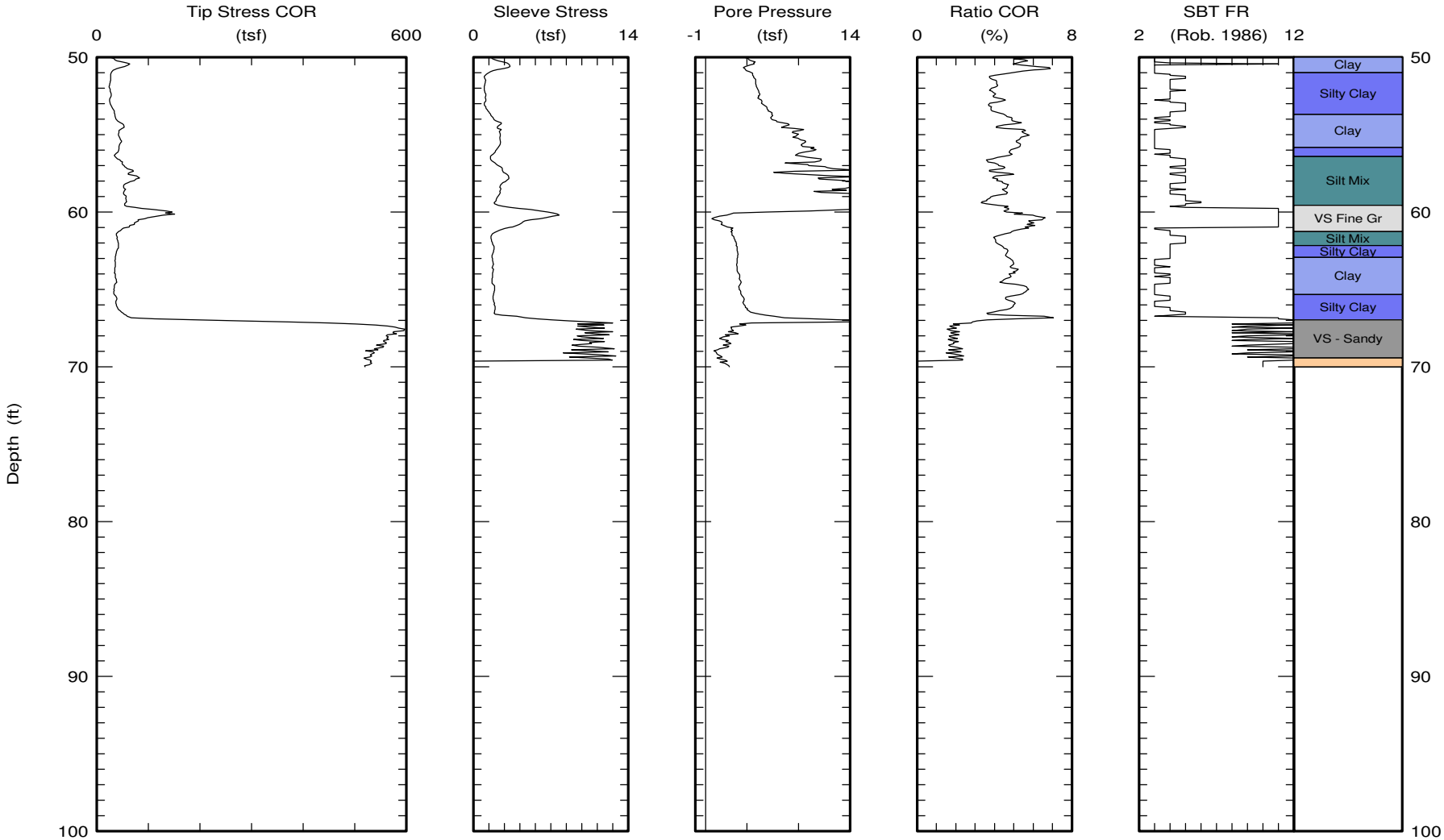
Figure A-4.25 Test ID: C-120
File: Z26F1102C.ECP

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 26/Feb/2011
Test ID: C-120
Project: LosAngeles

Customer: MACTEC
Job Site: Beverly Hills High School



Maximum depth: 70.01 (ft)

Figure A-4.26 Test ID: C-120
File: Z26F1102C.ECP

GREGG

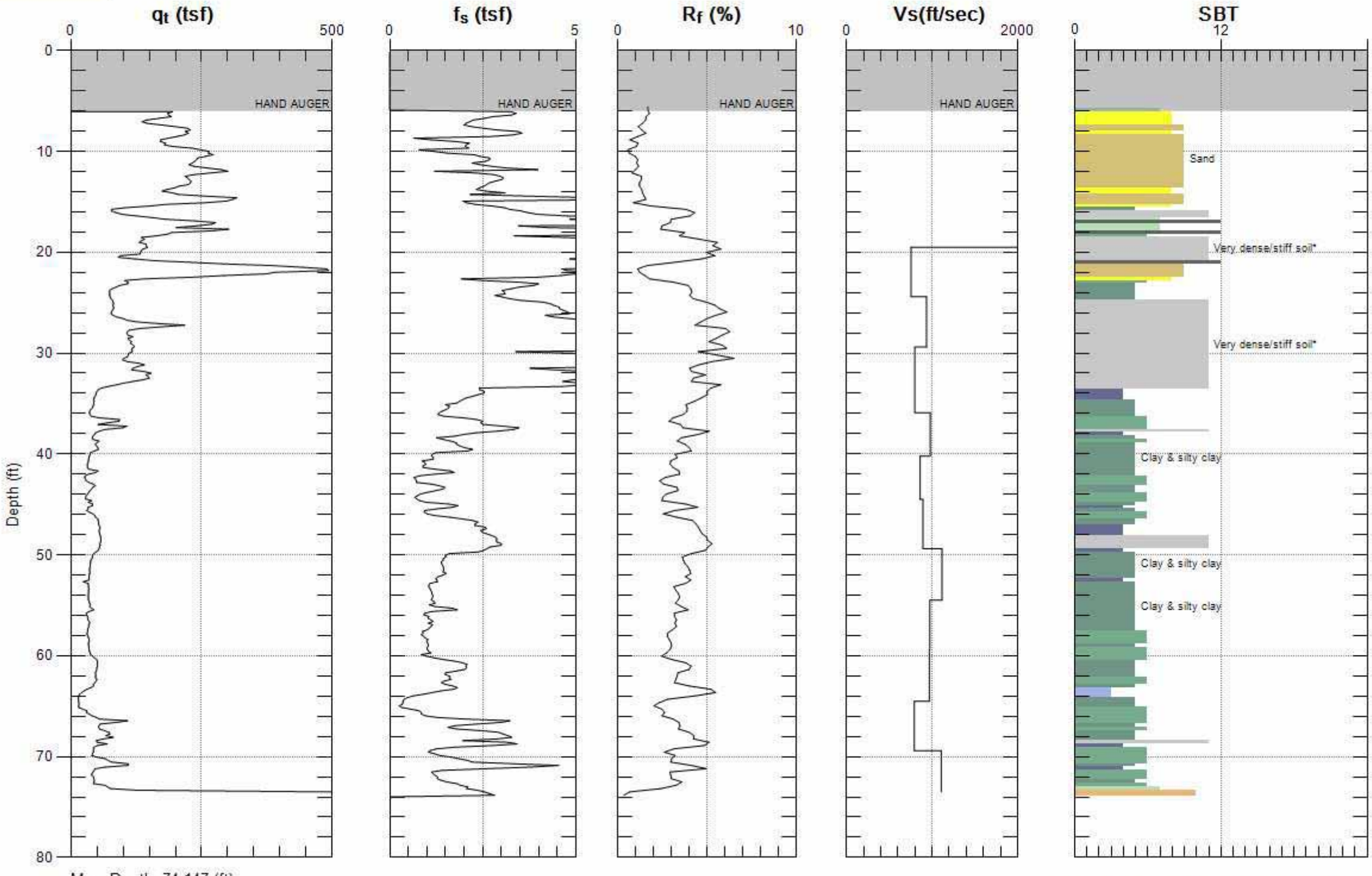
MACTEC

Site: MTA

Sounding: C-120A

Engineer: G.CITO

Date: 2/26/2011 01:10



Max. Depth: 74.147 (ft)

Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

Figure A-4.27

GREGG

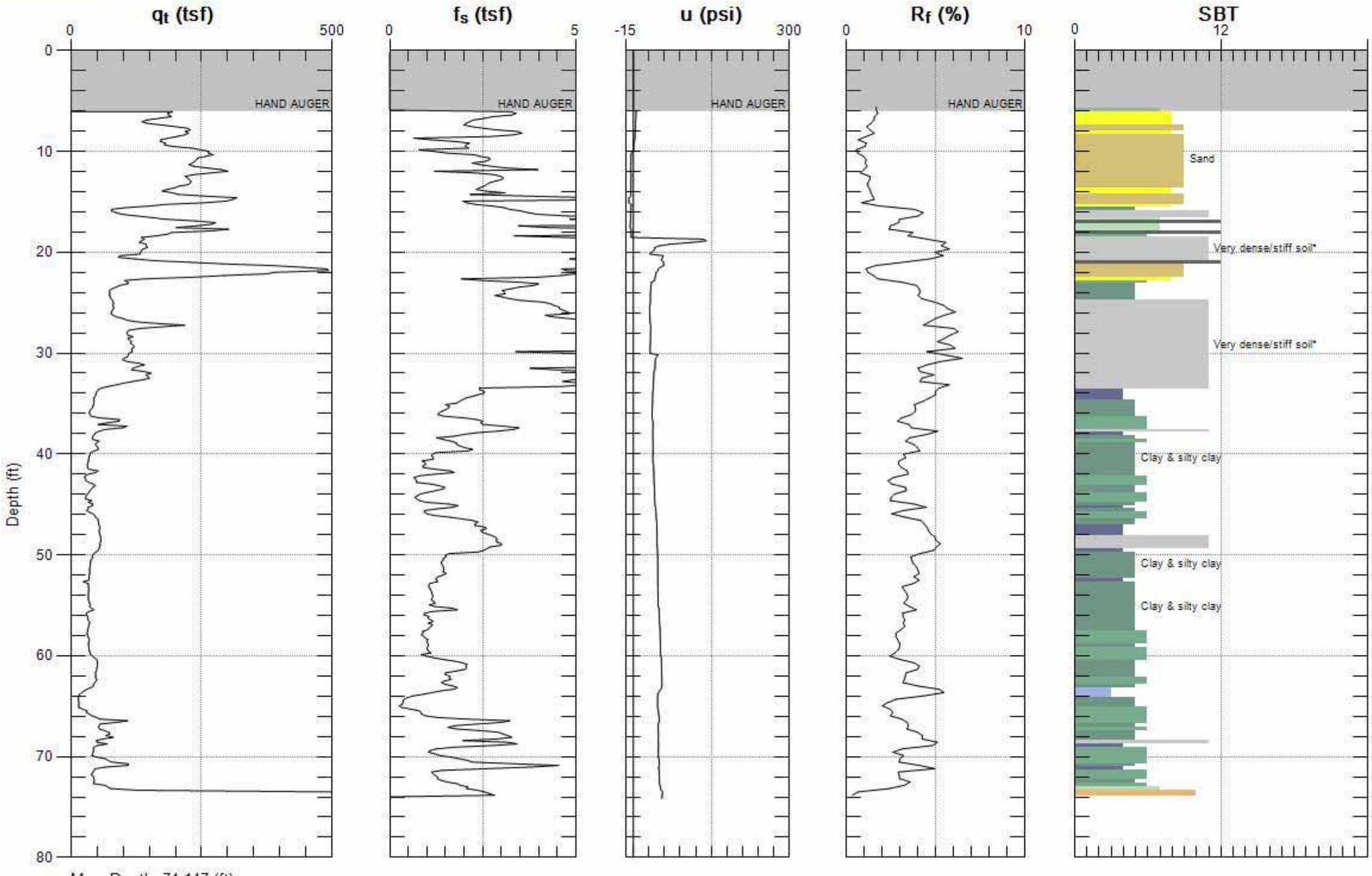
MACTEC

Site: MTA

Sounding: C-120A

Engineer: G.CITO

Date: 2/26/2011 01:10



Max. Depth: 74.147 (ft)

Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

Figure A-4.28

GREGG

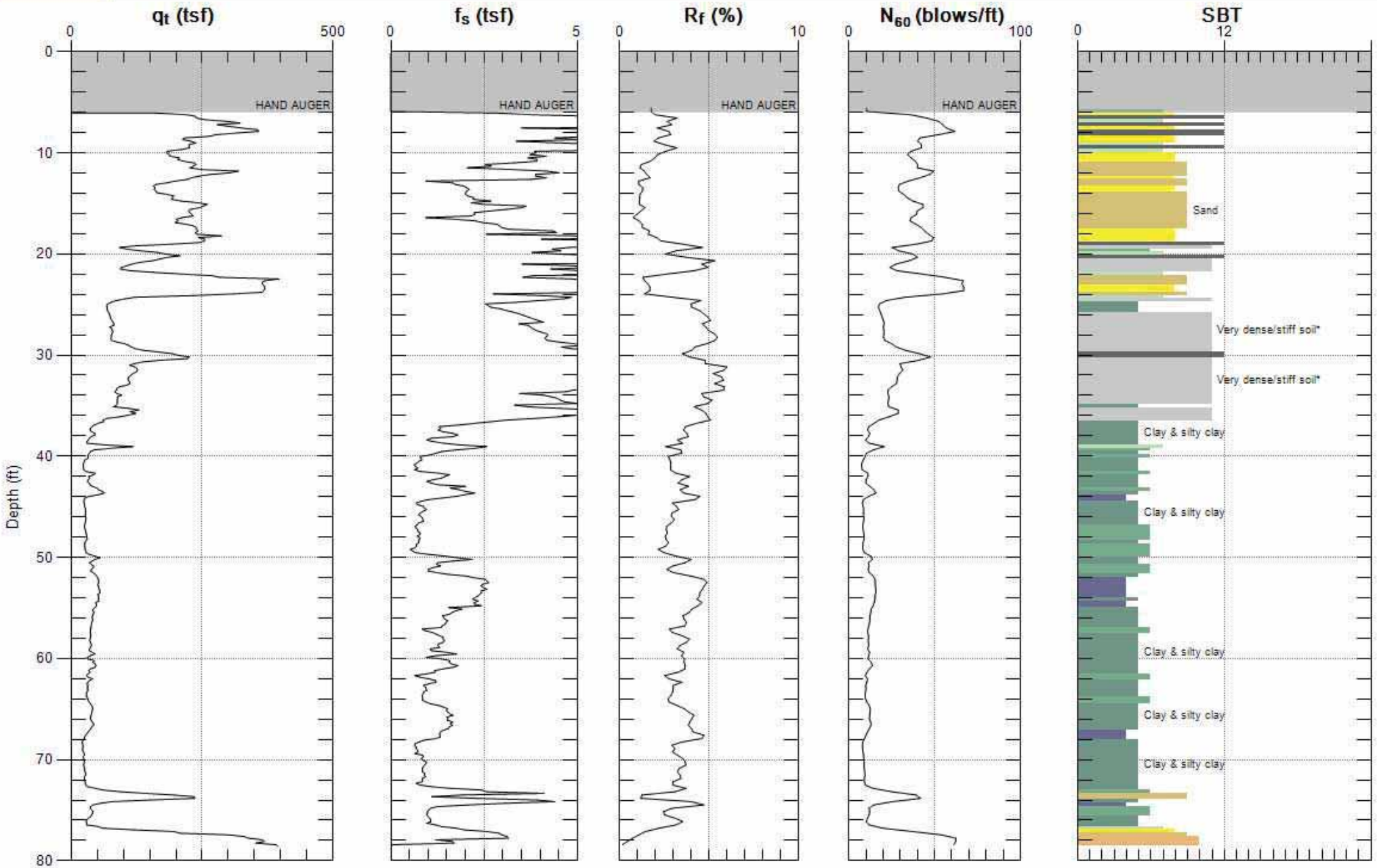
MACTEC

Site: MTA

Sounding: C-120A1

Engineer: G.CITO

Date: 2/26/2011 10:47



Max. Depth: 78.576 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GREGG

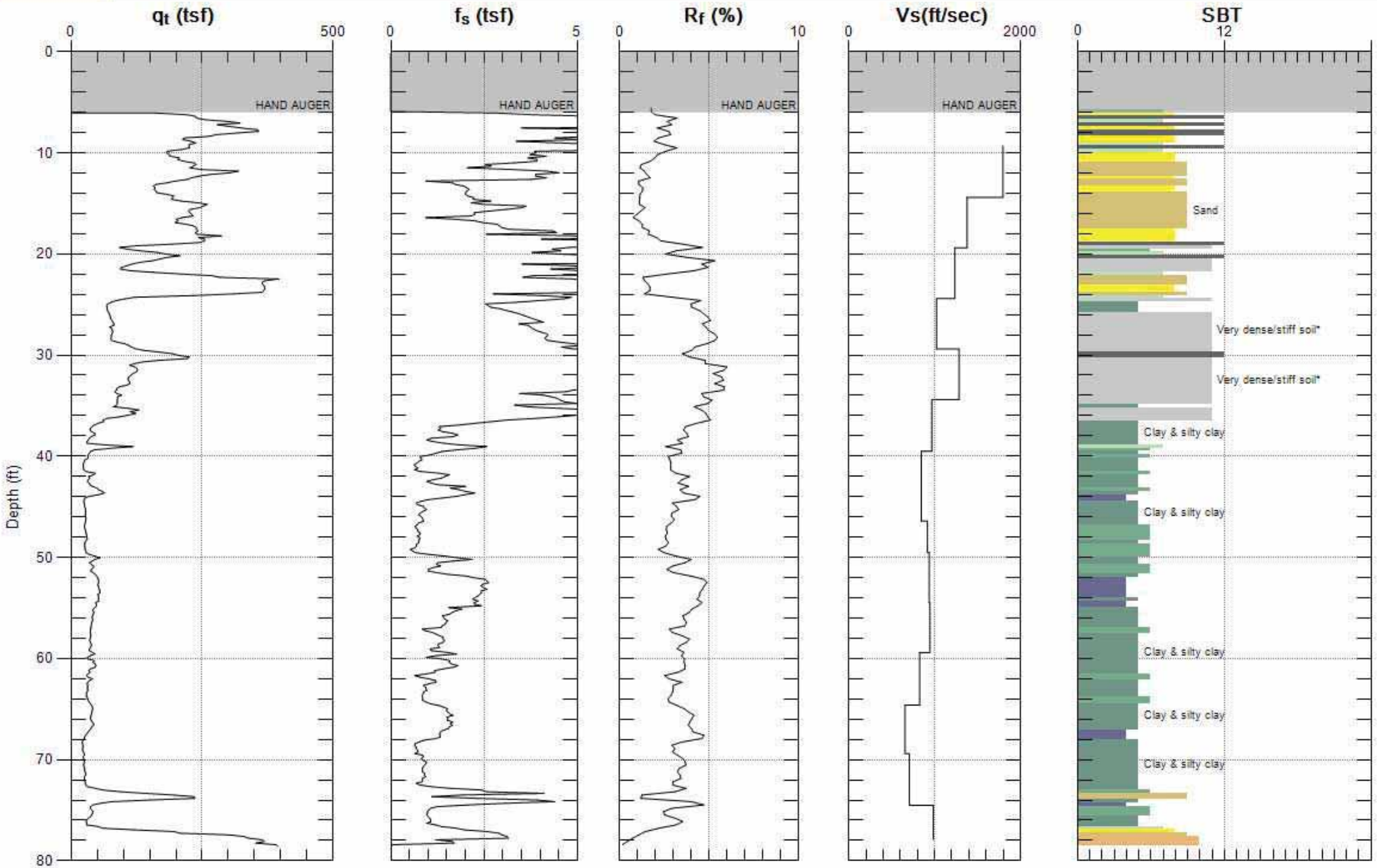
MACTEC

Site: MTA

Sounding: C-120A1

Engineer: G.CITO

Date: 2/26/2011 10:47



Max. Depth: 78.576 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GREGG

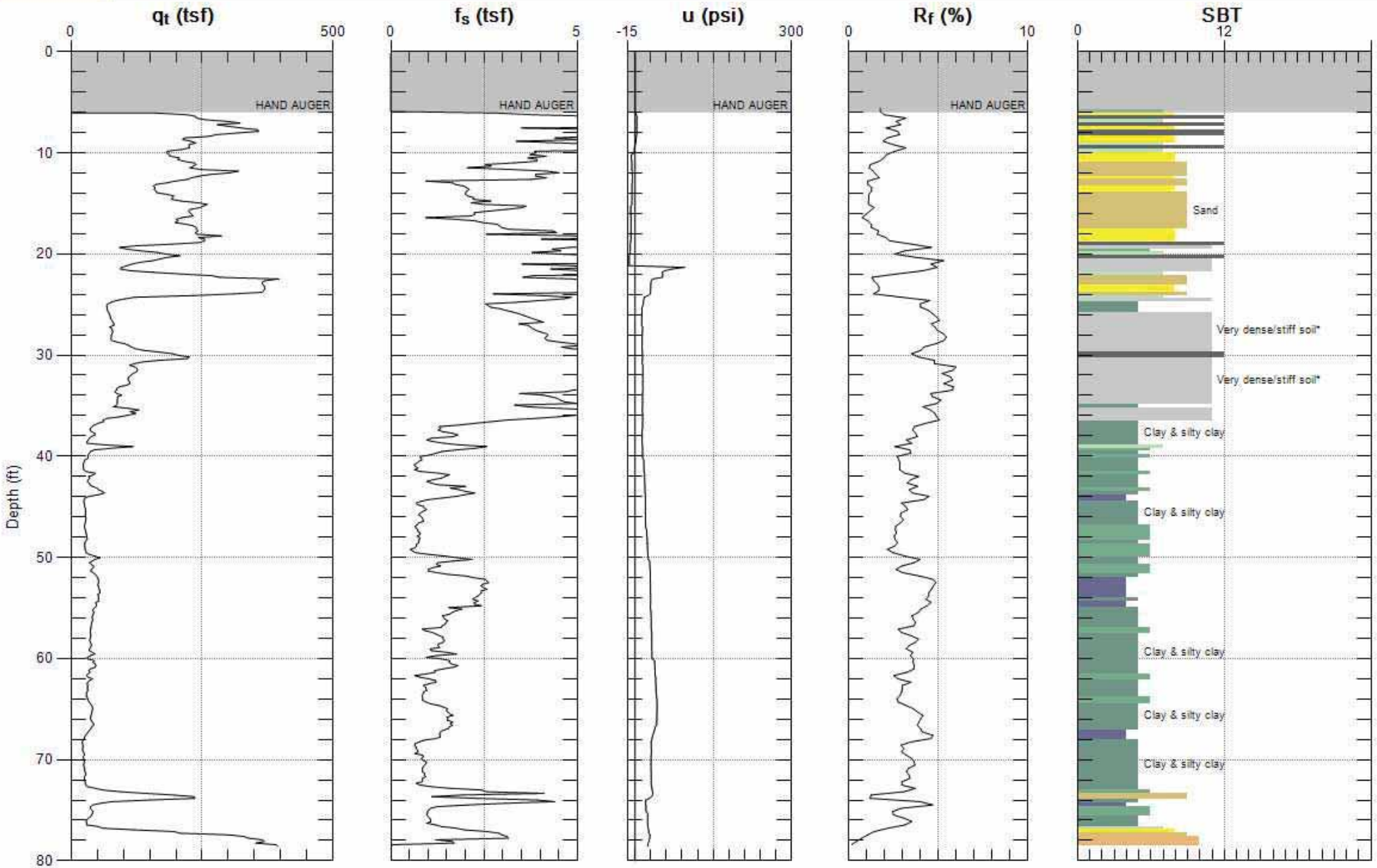
MACTEC

Site: MTA

Sounding: C-120A1

Engineer: G.CITO

Date: 2/26/2011 10:47



Max. Depth: 78.576 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

APPENDIX C-3 LOGS OF BORINGS – PREVIOUS INVESTIGATION

G-13 and G-14 (MACTEC, 2010)

SB-1 and SB-2 (MACTEC, 2010)

67-065B-19 (LeRoy Crandall and Associates, 1968)

69-036-1, 69-036- 5, 69-036- 9 (LeRoy Crandall and Associates, 1969)

71-174-1, 71-174-2A (LeRoy Crandall and Associates, 1971)

84-ADE277-03 (LeRoy Crandall and Associates, 1984)

BORING G-13

DATE DRILLED: May 28, 2009
EQUIPMENT USED: Rotary Wash
HOLE DIAMETER (in.): 5 LOCATION: AVE. OF THE STARS & SANTA MONICA BL.
ELEVATION: 282 ** LATITUDE: 34.06194 º LONGITUDE: -118.41752

THIS RECORD IS A REASONABLE INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE; REFER TO PLOT PLAN FOR MORE ACCURATE LOCATION INFORMATION. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

ELEVATION (ft)	DEPTH (ft)	"N" VALUE STD.PEN.TEST	OVA(ppm)***	MOISTURE (% of dry wt.)	DRY DENSITY (pcf)	BLOW COUNT* (blows/ft)	SAMPLE LOC.		
280	0							SM	FILL - SILTY SAND - moist, brown
	5		0.3	--	--	9		ML	QUATERNARY YOUNGER ALLUVIUM [Qal] SANDY SILT - stiff, moist, very dark brown, shale fragments (51.0% Passing No. 200 Sieve)
275	10	13	0.2					CL	SANDY LEAN CLAY - stiff, moist, brown, shale fragments up to 3/4-inch diameter
270	15		0.5	13.7	114	5		SC	CLAYEY SAND with Gravel - loose to dense, moist, reddish brown, fine, trace shale fragments (47.3% Passing No. 200 Sieve)
265	20	45	0.3						Increased sand content, very dark gray with rust mottling (17.3% Passing No. 200 Sieve)
260	25					4			Sample not recovered, low blow count due to heavy rig chatter caused by gravel in cuttings
255									Wet
	30	63	0.2						Abundant shale fragments
250								SM	QUATERNARY OLDER ALLUVIUM [Qalo] SILTY SAND - moist, brown to reddish brown, trace shale fragments
	35		0	27.4	94	27		CH	FAT CLAY - hard, wet, gray with brown mottling, shale fragments, trace fine sand
245	40								

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: DW
Prepared By: NH
Checked By:

MTA Westside Extension
Los Angeles, California

MACTEC

LOG OF BORING
Project: 4953-09-0472 Figure: A-1.13a

B15SOIL_CRANDALL 90472.GPJ LAW_CRAN.GDT 2/2/10

BORING G-13 (Continued)

DATE DRILLED: May 28, 2009
EQUIPMENT USED: Rotary Wash
HOLE DIAMETER (in.): 5 LOCATION: AVE. OF THE STARS & SANTA MONICA BL.
ELEVATION: 282 ** LATITUDE: 34.06194 º LONGITUDE: -118.41752

THIS RECORD IS A REASONABLE INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE; REFER TO PLOT PLAN FOR MORE ACCURATE LOCATION INFORMATION. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

ELEVATION (ft)	DEPTH (ft)	"N" VALUE STD.PEN.TEST	OVA(ppm)***	MOISTURE (% of dry wt.)	DRY DENSITY (pcf)	BLOW COUNT* (blows/ft)	SAMPLE LOC.		
240	45	31	0.2						(LL=54, PI=28)
235	50					26			Sample not recovered
230	55	42	0.3					CL	SANDY LEAN CLAY - hard, wet, gray with brown mottling, trace subrounded and subangular gravel (69.8% Passing No. 200 Sieve, LL=42, PI=22)
225	60					27			Sample not recovered
220	65	71	0.1					SC	CLAYEY SAND - very dense, wet, brown, fine, trace medium, trace silt, contains carbonate-lined root cracks and carbonate nodules (39.8% Passing No. 200 Sieve)
215	70					70			Sample not recovered
210	75	90						CH	FAT CLAY - wet, brown
205	80					30		SM	SILTY SAND - very dense, wet, reddish brown, fine to medium, trace clay (NP, NP)
									Sample not recovered

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: DW
Prepared By: NH
Checked By:

MTA Westside Extension
Los Angeles, California

MACTEC

LOG OF BORING
Project: 4953-09-0472 Figure: A-1.13b

B15SOIL_CRANDALL 90472.GPJ LAW_CRAN.GDT 2/2/10

BORING G-13 (Continued)

DATE DRILLED: May 28, 2009
EQUIPMENT USED: Rotary Wash
HOLE DIAMETER (in.): 5 LOCATION: AVE. OF THE STARS & SANTA MONICA BL.
ELEVATION: 282 ** LATITUDE: 34.06194 º LONGITUDE: -118.41752

ELEVATION (ft)	DEPTH (ft)	"N" VALUE STD.PEN.TEST	OVA(ppm)***	MOISTURE (% of dry wt.)	DRY DENSITY (pcf)	BLOW COUNT* (blows/ft)	SAMPLE LOC.		
200	85	54						CL	LEAN CLAY - hard, wet, brown with gray mottling
195	90			19.4	108	67		SM	Increased sand content SILTY SAND - very dense, wet, brown with gray mottling, fine to medium, some slate gravel
190	95	92/9"						SP	POORLY GRADED SAND with Gravel - very dense, wet, brown with gray mottling, fine to medium Gravel and cobbles up to at least 3-inch diameter
185	100			10.0	118	100/6"			
180	105			15.9	113	100/9"			END OF BORING AT 101 FEET
175	110								
170	115								
165	120								

NOTES:

Ground-water level measured at 27 feet on June 1, 2009 after 4 day hiatus in drilling. Boring grouted with a cement-bentonite slurry from the bottom up.

*Number of blows required to drive Crandall Sampler 12 inches using 300 pound downhole hammer falling 18 inches.

THIS RECORD IS A REASONABLE INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE; REFER TO PLOT PLAN FOR MORE ACCURATE LOCATION INFORMATION. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

Field Tech: DW
Prepared By: NH
Checked By:

MTA Westside Extension
Los Angeles, California

MACTEC

LOG OF BORING
Project: 4953-09-0472 Figure: A-1.13c

B15SOIL_CRANDALL 90472.GPJ LAW_CRAN.GDT 2/2/10

BORING G-14

DATE DRILLED: 07/14/2009 to 07/15/2009
EQUIPMENT USED: Rotary Wash
HOLE DIAMETER (in.): 5 LOCATION: AVE. OF THE STARS & SANTA MONICA BL.
ELEVATION: 281 ** LATITUDE: 34.06136 º LONGITUDE: -118.41840

THIS RECORD IS A REASONABLE INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE; REFER TO PLOT PLAN FOR MORE ACCURATE LOCATION INFORMATION. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

ELEVATION (ft)	DEPTH (ft)	"N" VALUE STD.PEN.TEST	OVA(ppm)***	MOISTURE (% of dry wt.)	DRY DENSITY (pcf)	BLOW COUNT* (blows/ft)	SAMPLE LOC.		
280	0								FILL - SANDY CLAY - moist, brown and gray
									Becomes dark gray
	5							SM	FILL - SILTY SAND with Gravel - loose, moist, brown, fine to medium with some coarse
275				14.4	112	8			(39.3% Passing No. 200 Sieve)
	10							CL	QUATERNARY YOUNGER ALLUVIUM [Qal]
270		12		22.0	--				SANDY CLAY - stiff, moist, brown, some slate gravel
	15							SM	SILTY SAND - loose to medium dense, moist, brown, fine to medium, some gravel
265				23.4	96	7			
	20								
260		22		17.3	--				
	25								
255						3			Sample not recovered
	30								
250		5/6"		17.3	--				(32.4% Passing No. 200 Sieve)
	35								
245						8			Sample not recovered
	40								

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: AR
Prepared By: NH
Checked By:

MTA Westside Extension
Los Angeles, California

MACTEC

LOG OF BORING
Project: 4953-09-0472 Figure: A-1.14a

B15SOIL_CRANDALL 90472.GPJ LAW_CRAN.GDT 2/8/10

BORING G-14 (Continued)

DATE DRILLED: 07/14/2009 to 07/15/2009
EQUIPMENT USED: Rotary Wash
HOLE DIAMETER (in.): 5 LOCATION: AVE. OF THE STARS & SANTA MONICA BL.
ELEVATION: 281 ** LATITUDE: 34.06136 º LONGITUDE: -118.41840

THIS RECORD IS A REASONABLE INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE; REFER TO PLOT PLAN FOR MORE ACCURATE LOCATION INFORMATION. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

ELEVATION (ft)	DEPTH (ft)	"N" VALUE STD.PEN.TEST	OVA(ppm)***	MOISTURE (% of dry wt.)	DRY DENSITY (pcf)	BLOW COUNT* (blows/ft)	SAMPLE LOC.		
240		50/5"							QUATERNARY OLDER ALLUVIUM [Qalo] Grades to Gravelly Sand
	45								Approximate 2-inch thick Clay layer at 43 feet
235						50/6"			Sample not recovered due to 3-inch cobble in bit
	50							CH	FAT CLAY - very stiff to hard, moist, brown, some slate gravel, trace fine sand (LL=65, PI=33)
230		38		45.8	--				
	55								
225				18.0	112	18			
	60								
220		80		24.8	--				
	65								No sample due to pressure meter test
215								SM	SILTY SAND with Gravel - dense, moist, brown, fine to coarse
	70								Thin layer of Lean Clay
210				14.8	112	35		SP	POORLY GRADED SAND with Gravel - moist, light brown, fine to coarse
	75							SW	WELL GRADED SAND with Gravel - very dense, moist, light brown, fine to coarse Thin layer of Sandy Clay (50.6% Passing No. 200 Sieve)
205		50/6"		21.2	--				
	80								

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: AR
Prepared By: NH
Checked By:

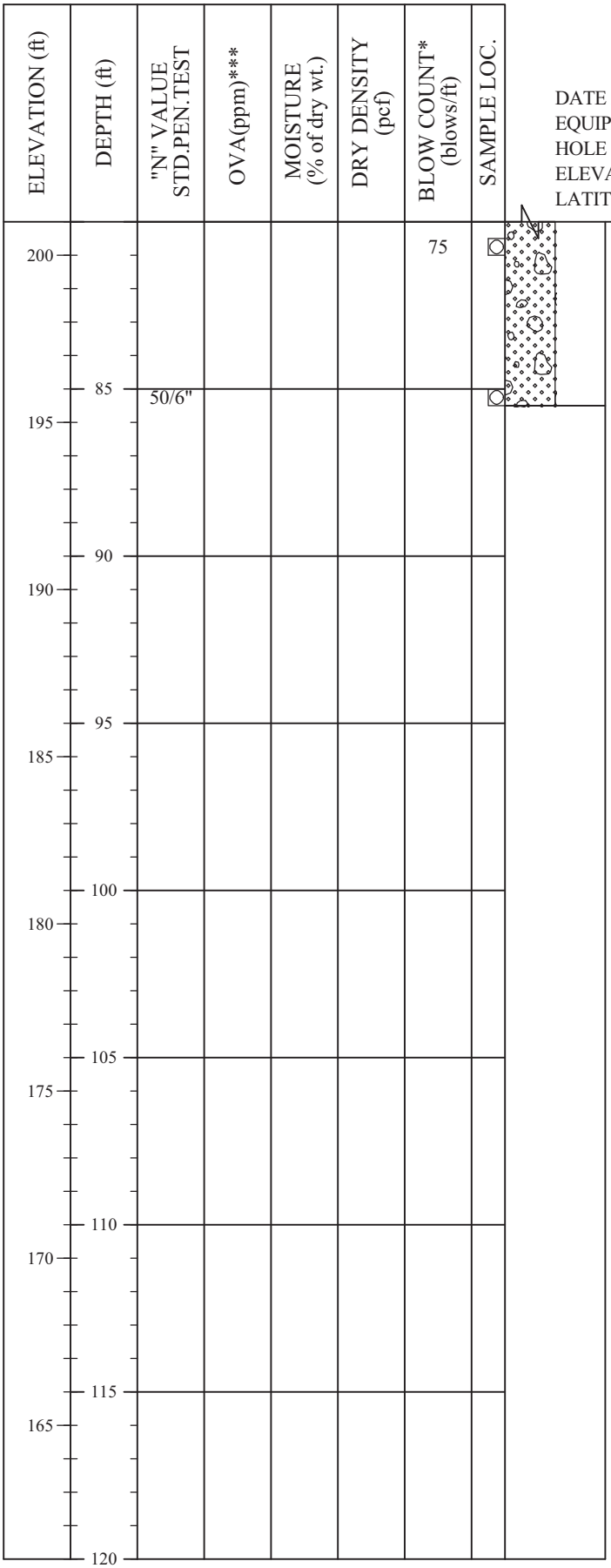
MTA Westside Extension
Los Angeles, California

MACTEC

LOG OF BORING
Project: 4953-09-0472 Figure: A-1.14b

BORING G-14 (Continued)

DATE DRILLED: 07/14/2009 to 07/15/2009
EQUIPMENT USED: Rotary Wash
HOLE DIAMETER (in.): 5 LOCATION: AVE. OF THE STARS & SANTA MONICA BL.
ELEVATION: 281 ** LATITUDE: 34.06136 º LONGITUDE: -118.41840



Sample not recovered

6- to 8-inch diameter cobble

Sample not recovered due to large gravel in bit
END OF BORING AT 85.5 FEET

NOTES:

Hand augered top 5 feet due to utilities.
Pressure meter test performed at 65 feet.
Two separate 1-inch diameter ground-water monitoring wells extending to 20 feet and 49 feet, respectively, installed in borehole upon completion of drilling (see well construction diagram for G-14).

*Number of blows required to drive Crandall Sampler 12 inches using 340 pound downhole hammer falling 18 inches.

THIS RECORD IS A REASONABLE INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE; REFER TO PLOT PLAN FOR MORE ACCURATE LOCATION INFORMATION. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

Field Tech: AR
Prepared By: NH
Checked By:

MTA Westside Extension
Los Angeles, California

MACTEC

LOG OF BORING
Project: 4953-09-0472 Figure: A-1.14c

B15SOIL_CRANDALL 90472.GPJ LAW_CRAN.GDT 2/8/10

BORING SB-1

DATE DRILLED: 6/2/10
EQUIPMENT USED: Sonic Rig
HOLE DIAMETER (in.): 6" outer casing/4" core diameter
ELEVATION: **

THIS RECORD IS A REASONABLE INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE; REFER TO PLOT PLAN FOR MORE ACCURATE LOCATION INFORMATION. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

ELEVATION (ft)	DEPTH (ft)	MOISTURE (% of dry wt.)	DRY DENSITY (pcf)	BLOW COUNT* (blows/ft)	SAMPLE LOC.	
	0					7" of thick Asphaltic Concrete
						Artificial Fill
						Older Alluvial Fan deposits (Qalo) Clayey Silt (ML) with trace medium to coarse sand grains and sub-angular gray slate fragments, moist
						Less clay content from 3 to 4 ft
						Sandy Silt with trace clay and scattered sub-angular slate fragments, moist, red-brown (5 YR)
	5					
						Argillic between soil horizon, Clayey to Silty fine Sand (SC-SM) with few medium to coarse grains and trace slate fragments, moist, red-brown (5 YR)
						Grading to Silty Sand (ML), fine grained with few medium to coarse grains, trace clay, moist
						Clayey Sand (SC)
						Clayey Silt with slate fragments (ML), moist
	10					
	15					
						Silty Sand (SM) and Clayey fine Sand (SC), abundant sub-angular to sub-rounded slate and shale rock fragments less than or equal to 1", moist, appears dense, dark yellowish brown (10 YR 3/6) to dark grayish brown (10 YR 4/2), pocket pen: 3.5 ton/ft
						Gradational contact
						Fine Sandy Silt to Clayey Silt (ML) with discontinuous dark lamellae, abundent carbonate debris/fragments, very dense, olive gray (5 Y 4/2), slightly moist to moist, pocket pen: +4.5 ton/ft
	20					

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: DLP/MAE
Prepared By:
Checked By:

Metro WSE
Los Angeles County, California

MACTEC

LOG OF BORING

Project: 4953-09-0473 Figure: A-c

BORING SB-1 (Continued)

DATE DRILLED: 6/2/10
EQUIPMENT USED: Sonic Rig
HOLE DIAMETER (in.): 6" outer casing/4" core diameter
ELEVATION: **

THIS RECORD IS A REASONABLE INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE; REFER TO PLOT PLAN FOR MORE ACCURATE LOCATION INFORMATION. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

ELEVATION (ft)	DEPTH (ft)	MOISTURE (% of dry wt.)	DRY DENSITY (pcf)	BLOW COUNT* (blows/ft)	SAMPLE LOC.	
	25					Silty fine to medium Sand (SM) to Clayey Sand (SC), with occassional rounded to sub-rounded gray slate rock fragments/gravel less than or equal to 1/2", few shell fragments/debris with lenses of silty sand, olive brown (2.5 YR 4/4) to dark grayish brown (2.5 YR 4/2) and oxidized lenses dark yellowish brown (10 YR 4/6), pocket pen: 4.0 to +4.5 ton/ft
	30					Silty fine to medium Sand (SM) to Clayey Sand (SC), increase in abundance and size of gray slate plus shale rock fragments/gravels, sub-rounded to sub-angular, many elongate and are less than or equal to 2", pocket pen: 4.0 to +4.5 ton/ft
	35					Silty fine Sand (SM) with some sub-rounded slate and shale rock fragments less than or equal to 1/2", but mostly less than 1/4", moist, dense, massive to mottled, dark yellowish brown (10 YR 3/6 to 3/4), pocket pen: 4.0 ton/ft
	40					Very fine Sandy Silt (ML) with scattered sub-rounded carbonate nodules, rock fragments less than or equal to 1/4", moist to very moist, dense, massive to slightly mottled, dark yellowish brown (10 YR 3/6 to 4/6), pocket pen: 3.5 ton/ft

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: DLP/MAE
Prepared By:
Checked By:

Metro WSE
Los Angeles County, California

MACTEC

LOG OF BORING
Project: 4953-09-0473 Figure: A-c

B11SOIL_CRANDALL 90473_CORE_SONIC.GPJ LAW_CRAN.GDT 9/28/10

BORING SB-1 (Continued)

DATE DRILLED: 6/2/10
EQUIPMENT USED: Sonic Rig
HOLE DIAMETER (in.): 6" outer casing/4" core diameter
ELEVATION: **

THIS RECORD IS A REASONABLE INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE; REFER TO PLOT PLAN FOR MORE ACCURATE LOCATION INFORMATION. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

ELEVATION (ft)	DEPTH (ft)	MOISTURE (% of dry wt.)	DRY DENSITY (pcf)	BLOW COUNT* (blows/ft)	SAMPLE LOC.
	45				
	50				
	55				
	60				

Very fine Sandy Silt (ML) with scattered sub-rounded carbonate nodules, rock fragments less than or equal to 1/4", moist to very moist, dense, massive to slightly mottled, dark yellowish brown (10 YR 3/6 to 4/6), pocket pen: 3.5 ton/ft

Silty fine Sand (SM) with occassional sub-rounded slate fragments less than or equal to 1/4", dense, dark brown (10 YR 3/3) to dark yellowish brown (10 YR 4/3), trace clays

Silty fine to medium Sand with some clays (SM-SC), abundant sub-rounded slate and other granite rock fragments that are less than or equal to 1.5", dense, slightly moist to moist, massive, pocket pen: 4.0 ton/ft

Saturated zone, groundwater encountered, pocket pen: 0.5 to 3.5 ton/ft

Clayey Silt (ML) with trace fine sand, occassional sub-rounded slate and other rock fragments/gravels that are less than or equal to 1/4", abundant carbonate forams/shell fragments and sub-angular rock fragments that are less than or equal to 1/4", very stiff to hard, moist, mottled to slightly lenticular, clayey silt is dark brown (10 YR 3/3), thin laminae of sandy silt is dark yellowish brown (10 YR 4/4), pocket pen: 3.5 to +4.5 ton/ft

Increase in Sandy Silt lenticular bedding, dense, increasing sub-rounded to sub-angular gravels, slate and other rock fragments with depth less than or equal to 1", mottled appearance, dark yellowish brown (10 YR 4/4), pocket pen: 4.5 ton/ft

Sandy Silt to Silty Sand (ML/SM), sub-angular to sub-rounded slate and other gravels less than or equal to 1"
Silty fine Sand to Sandy Silt (ML/SM) with Clayey Silt (ML) and occassional sub-rounded to sub-angular slate, carbonate, and shaley gravels less than or equal to 1/2", moist, stiff, mottled to faintly layered/lenticular (SP-SM), iron-oxide stained and grayish, mostly dark yellowish brown (10 YR 3/4) to olive brown (2.5 Y 4/3), pocket pen: 2.75 to 4.5 ton/ft

Field Tech: DLP/MAE
Prepared By:
Checked By:

(CONTINUED ON FOLLOWING FIGURE)

Metro WSE
Los Angeles County, California

MACTEC

LOG OF BORING

Project: 4953-09-0473 Figure: A-c

BORING SB-1 (Continued)

DATE DRILLED: 6/2/10
EQUIPMENT USED: Sonic Rig
HOLE DIAMETER (in.): 6" outer casing/4" core diameter
ELEVATION: **

THIS RECORD IS A REASONABLE INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE; REFER TO PLOT PLAN FOR MORE ACCURATE LOCATION INFORMATION. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

ELEVATION (ft)	DEPTH (ft)	MOISTURE (% of dry wt.)	DRY DENSITY (pcf)	BLOW COUNT* (blows/ft)	SAMPLE LOC.	
						Silty fine Sand to Sandy Silt (ML/SM) with Clayey Silt (ML) and occassional sub-rounded to sub-angular slate, carbonate, and shaley gravels less than or equal to 1/2", moist, stiff, mottled to faintly layered/lenticular (SP-SM), iron-oxide stained and grayish, mostly dark yellowish brown (10 YR 3/4) to olive brown (2.5 Y 4/3), pocket pen: 2.75 to 4.5 ton/ft
	65					Silty Sand (SM) with sub-rounded to sub-angular slate and other gravels plus cemented shale gravels that are less than or equal to 1/2", moist, abundant iron-oxide staining and black organics, dark olive brown (2.5 Y 3/3)
						Clayey Silt (ML) to Silty Clay (CL), stiff, moist, mottled to massive, abundant iron-oxide staining where silty, olive brown (2.5 Y 4/4), pocket pen: 2.5 ton/ft Very moist to wet at 67 to 68.5 ft
						Thin layer of Silty Sand (SP) with sub-rounded gravels less than or equal to 1/8"
						Clayey Silt (ML) to Silty Clay (CL), stiff, moist to wet, olive gray (5 Y 4/2) to olive (5 Y 4/3), pocket pen: 3.5 to 4.5 ton/ft
	70					Silty fine to medium Sand (SM) and sub-rounded to sub-angular slate and other gravels that are less than or equal to 2", iron-oxide staining and mottled throughout, few layers/lens of sandy silt (ML) 70.2 to 71 ft Olive Brown (2.5 Y 4/4) 71 to 72.8 ft Olive (5 Y 4/3) with Fe staining 72.8 to 73.7 ft Olive Brown (2.5 Y 4/4)
						Gradational coarsening up sequence from Sandy Silt (ML) to Silty fine Sand (SM)
	75					Clayey Silt (ML), stiff, moist, olive (5 Y 5/3), pocket pen: 3.0 to 4.? ton/ft Clayey Silt (ML) to Silty Clay (CL), increase in carbonate debris
						[No recovery from 76 to 76.3 ft]
						Clayey Silt (CL), very firm, abundant carbonate organics or debris, less than or equal to 1/2", dark gray (5 Y 4/1) to olive gray (5 Y 4/2), massive to slightly mottled, pocket pen: 2.5 to 3.5 ton/ft
						Gradational transition into Sandy Silt
	80					Sandy Silt (ML) interlayered with Silty fine Sand (SM), olive brown (2.5Y4/4)

Field Tech: DLP/MAE
Prepared By:
Checked By:

(CONTINUED ON FOLLOWING FIGURE)

Metro WSE
Los Angeles County, California

MACTEC

LOG OF BORING

Project: 4953-09-0473 Figure: A-c

BORING SB-1 (Continued)

DATE DRILLED: 6/2/10
EQUIPMENT USED: Sonic Rig
HOLE DIAMETER (in.): 6" outer casing/4" core diameter
ELEVATION: **

THIS RECORD IS A REASONABLE INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE; REFER TO PLOT PLAN FOR MORE ACCURATE LOCATION INFORMATION. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

ELEVATION (ft)	DEPTH (ft)	MOISTURE (% of dry wt.)	DRY DENSITY (pcf)	BLOW COUNT* (blows/ft)	SAMPLE LOC.	
	85					Clayey Sand to Silty Sand (SC-SM), abundant sub-angular rock fragments that are less than or equal to 1/2", charcoal fragments, moist, very mottled
						Silty fine Sand interlayered with Sandy Silt (SM) with olive brown (2.5 Y 4/4), moist to very moist
						Clayey Sand to Silty Sand (SC-SM), abundant sub-rounded rock fragments less than or equal to 1", olive (5 Y 4/4 to 5/6) to light olive gray (5 Y 6/2), few scattered charcoal fragments, moist, decrease in gravels with depth, pocket pen: 2.5 to 4.0 ton/ft
						Silty fine Sand to Sandy Silt (SM/ML), with trace clays
						Thin layer of Sandy Clay (SC) to Silty Clay (CL) at 88.4 to 88.5 ft
	90					Sandy Clay (SC) to Silty Clay (CL), moist, stiff, abundant organics-carbonate and thin black lamellae, mottled to massive, occassional gray sub-rounded slate rock fragments/gravels that are less than or equal to 1/4", olive (5 Y 4/4 to 4/3), pocket pen: 2.75 to 4.0 ton/ft
						Silty fine to medium Sand (SM) with trace clays, decrease in size and an abundance of sub-rounded to sub-angular slate gravels with depth, mottled, olive brown (2.5 Y 4/3 - 4/4) with iron-oxide staining, pocket pen: +4.5 ton/ft
						Black organic discontinuous lamellae/lenses
	95					Silty fine Sand to fine Sandy Silt (SM/ML), occassional and few sub-rounded slate and other gravels less than or equal to 1/4"
						Silty Sand (SM) to Sand with Silt (SP), moist, massive to vague lenticular layers/beds, occassional rounded to sub-rounded slate and granitic rock fragments that are less than or equal to 1/2", slightly mottled, dark yellowish brown (10 YR 2/2) occassional iron-oxide staining to moderate yellowish brown (10 YR 5/4), pocket pen: 2.5 to 4.25 ton/ft
	100					Fine Sand with Silt (SP-SM), slightly moist

Field Tech: DLP/MAE
Prepared By:
Checked By:

(CONTINUED ON FOLLOWING FIGURE)

Metro WSE
Los Angeles County, California

MACTEC

LOG OF BORING

Project: 4953-09-0473 Figure: A-c

BORING SB-1 (Continued)

DATE DRILLED: 6/2/10
EQUIPMENT USED: Sonic Rig
HOLE DIAMETER (in.): 6" outer casing/4" core diameter
ELEVATION: **

THIS RECORD IS A REASONABLE INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE; REFER TO PLOT PLAN FOR MORE ACCURATE LOCATION INFORMATION. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

ELEVATION (ft)	DEPTH (ft)	MOISTURE (% of dry wt.)	DRY DENSITY (pcf)	BLOW COUNT* (blows/ft)	SAMPLE LOC.	
						Lens of Sandy Silt (SM), moderate yellowish brown (10 YR 5/4) at 99.6 to 99.7 feet
						Clayey Silt to Silt (ML-CL), very stiff, olive gray (5 Y 4/1-4/2), moist
						Clayey Silt to Silt (ML-CL), as above, very moist
						Clayey Silt (CL), very stiff to hard, abundant carbonate/organic debris, dark gray (5Y 4/1), massive, pocket pen: 4.5 ton/ft
	105					Gradational contact, slightly mottled
						Silt with trace clays (ML) grades to fine sandy silt (SM), very stiff, mottled to massive, light olive brown (2.5 Y 5/3) to grayish brown (2.5 Y 5/2), moist Pocket Pen: +4.5 ton/ft
						Silty Clay (CL), massive, abundant carbonate fragments/debris, very moist to moist, dark olive gray (5 Y 3/2) to very dark gray (5 Y 3/1)
						Mottled with lenticular zones of abundant carbonate debris, gray to light gray (5 Y 6/1), pocket pen: +4.0 ton/ft
	110					Fine Sandy Clay (CL), mottled, less than or equal to 1/8", rock fines
						Very fine Sandy Clay (SC) to Silty Clay (CL) with abundant carbonate debris, very stiff to hard, abundant carbonate debris, pocket pen: +4.5 ton/ft
						Silty Clay (CL) with abundant carbonate debris, very dense
	115					Fine Sandy Silt (ML) to Silty Sand (SM)
						Silty Clay (CL) to Silt (ML)
						Silt (ML) with trace clays, occassional sub-rounded gravels that are less than or equal to 1/4", dark greenish gray (5 GY 4/1) to greenish black (5 G 2/1)
						Sandy Silt to Silty Sand (ML/SM), occassional sub-rounded gravels that are less than or equal to 1/2", mostly massive, probable forams, pocket pen: 4.0 ton/ft
						[No recovery from 118.5 to 119.5 ft]
	120					

Field Tech: DLP/MAE
Prepared By:
Checked By:

(CONTINUED ON FOLLOWING FIGURE)

Metro WSE
Los Angeles County, California

MACTEC

LOG OF BORING
Project: 4953-09-0473 Figure: A-c

BORING SB-1 (Continued)

DATE DRILLED: 6/2/10
EQUIPMENT USED: Sonic Rig
HOLE DIAMETER (in.): 6" outer casing/4" core diameter
ELEVATION: **

THIS RECORD IS A REASONABLE INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE; REFER TO PLOT PLAN FOR MORE ACCURATE LOCATION INFORMATION. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

ELEVATION (ft)	DEPTH (ft)	MOISTURE (% of dry wt.)	DRY DENSITY (pcf)	BLOW COUNT* (blows/ft)	SAMPLE LOC.	
	125					Clayey Silt (ML), very stiff to hard, massive, abundant foram debris, pocket pen: +4.5 ton/ft
						[No recovery from 121.5 to 122.5 ft]
						Clayey Silt (ML), hard, massive, abundant foram debris, pocket pen: +4.5 ton/ft
						Increase in foram debris, occassional sub-rounded gravels that are less than or equal to 1/2"
						Sandy Silt to Clayey Silt (SM-ML)
						Sandy Silt (SM), pocket pen: 2.75 ton/ft
						Clayey Silt (ML), hard, occassional sub-rounded gravels that are less than or equal to 1/2", some shell or foram debris fragments, pocket pen +4.5 ton/ft
	130					Clayey Silt (ML) to Silty Clay (CL), some shell and foram debris fragments, decrease in gravel content, very firm, massive, dark greenish gray (5 G 4/1) to greenish black (5 G 2/1)
						Total Depth 133 ft
	135					Notes: No Caving Groundwater at depths indicated on log Grouted from 133 to 1 foot bgs on 06/04/2010 Cement (Rediset) from 1 foot bgs to surface
	140					

Field Tech: DLP/MAE
Prepared By:
Checked By:

Metro WSE
Los Angeles County, California

MACTEC

LOG OF BORING

Project: 4953-09-0473 Figure: A-c

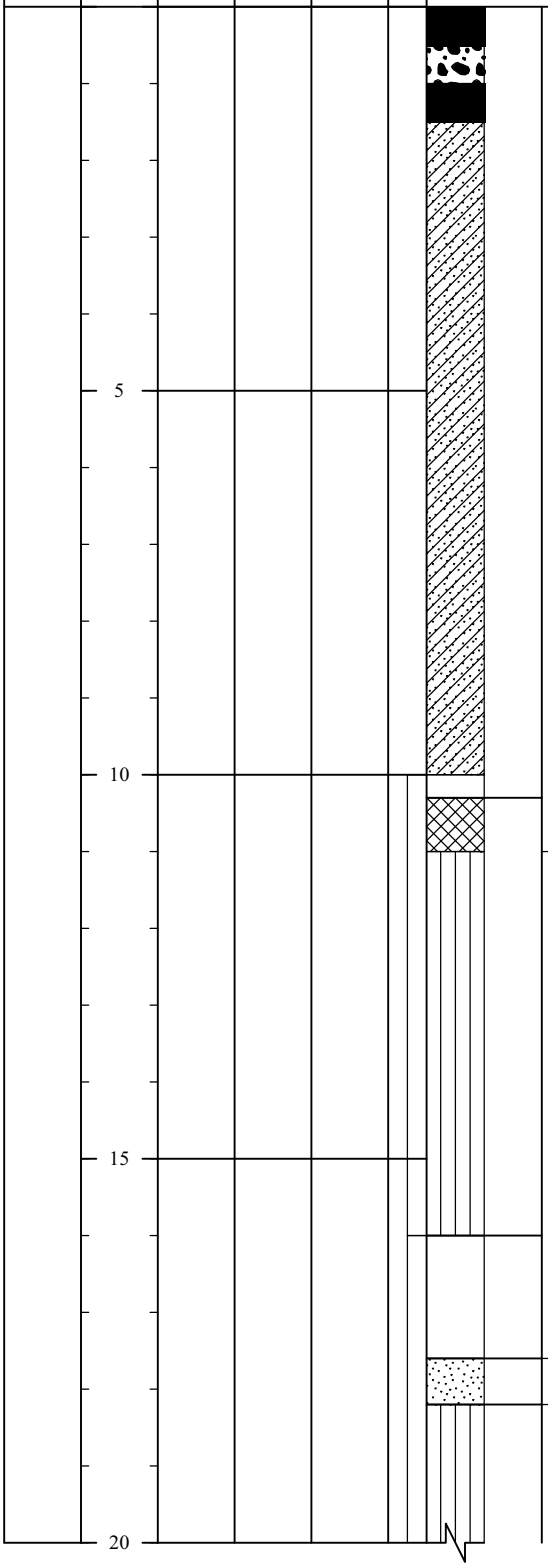
B11SOIL_CRANDALL 90473_CORE_SONIC.GPJ LAW_CRAN.GDT 9/28/10

BORING SB-2

DATE DRILLED: 6/7/10
EQUIPMENT USED: Sonic Rig
HOLE DIAMETER (in.): 6" outer casing/4" core diameter
ELEVATION: **

THIS RECORD IS A REASONABLE INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE; REFER TO PLOT PLAN FOR MORE ACCURATE LOCATION INFORMATION. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

ELEVATION (ft)	DEPTH (ft)	MOISTURE (% of dry wt.)	DRY DENSITY (pcf)	BLOW COUNT* (blows/ft)	SAMPLE LOC.



Asphalt

Base Gravel

Asphalt

Older Alluvial Deposits (Qalo)
Sandy Clay (CL)/Clayey Sand (SC)

Slough from 10 to 10.3 ft

Sandy Clay (CL) to Clayey Silt (ML), mottled, abundant rock fragments that are less than or equal to 1/8", dark gray

Sandy Silt (ML), very fine sand, trace clays, very stiff to hard, mottled, massive, abundent rock fragments/gravel that is less than or equal to 1/4", sub-rounded to angular shale fragments, lenticular to discontinuous vague layers, black maganese coating some clasts, yellowish brown (10 YR 5/4), pocket pen: +4.5 ton/ft

[No recovery from 16 to 17.6 ft]

Fine to medium grained Sand (SP), trace silt, occassional rounded to sub-rounded gravel that is less than or equal to 1/2"

Silt (ML), mottled, dark yellowish brown (10 YR 4/6), very stiff, pocket pen: +4.5 ton/ft

Field Tech: DLP/MAE
Prepared By:
Checked By:

(CONTINUED ON FOLLOWING FIGURE)

Metro WSE
Los Angeles County, California

MACTEC

LOG OF BORING

Project: 4953-09-0473 Figure: A-c

B11SOIL_CRANDALL 90473_CORE_SONIC.GPJ LAW_CRAN.GDT 9/28/10

BORING SB-2 (Continued)

DATE DRILLED: 6/7/10
EQUIPMENT USED: Sonic Rig
HOLE DIAMETER (in.): 6" outer casing/4" core diameter
ELEVATION: **

THIS RECORD IS A REASONABLE INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE; REFER TO PLOT PLAN FOR MORE ACCURATE LOCATION INFORMATION. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

ELEVATION (ft)	DEPTH (ft)	MOISTURE (% of dry wt.)	DRY DENSITY (pcf)	BLOW COUNT* (blows/ft)	SAMPLE LOC.	
						Grades to fine Sandy Silt (ML), yellowish brown (10 YR 5/4), stiff, moist, pocket pen: +4.5 ton/ft
						Clayey Silt to Silty Clay (ML/CL), trace very fine sand, very stiff, moist, olive brown (2.5 Y 4/4), pocket pen: +4.5 ton/ft
	25					Clayey Silt to Clay (ML/CL), very stiff, moist, olive brown (2.5 Y 4/4), pocket pen: +4.5 ton/ft
	30					Clayey Silt to Silt (ML), stiff, mottled to faintly laminated, iron-oxide stained throughout, dark yellowish brown (10 YR 4/4) to light olive brown (2.5 Y 5/4), occassional fine sand to sandy silt within discontinuous lenses, pocket pen: 2.5 to +4.5 ton/ft
	35					Silty fine to medium Sand (SM), trace clays, olive brown (2.5 Y 4/4)
	40					Fine to medium grained Sand (SP), loose, dry, light yellowish brown (2.5 Y 6/4), thinly bedded, iron-oxide stained and black maganese layers/lenses, very thin layers

Field Tech: DLP/MAE
Prepared By:
Checked By:

(CONTINUED ON FOLLOWING FIGURE)

Metro WSE
Los Angeles County, California

MACTEC

LOG OF BORING

Project: 4953-09-0473 Figure: A-c

BORING SB-2 (Continued)

DATE DRILLED: 6/7/10
EQUIPMENT USED: Sonic Rig
HOLE DIAMETER (in.): 6" outer casing/4" core diameter
ELEVATION: **

THIS RECORD IS A REASONABLE INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE; REFER TO PLOT PLAN FOR MORE ACCURATE LOCATION INFORMATION. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

ELEVATION (ft)	DEPTH (ft)	MOISTURE (% of dry wt.)	DRY DENSITY (pcf)	BLOW COUNT* (blows/ft)	SAMPLE LOC.	
						Fine to medium Sand (SP), light yellowish brown (2.5 Y 6/3), few gravels, thinly layered/bedded consisting of alternating iron-oxide and maganese oxide stained layers
						Fine to medium Sand with trace Silt (SP-SM) with silty clast nodules, slightly moist, olive (5 Y 4/3)
	45					Medium to coarse Sand (SP), trace fine grains, loose and dry, iron-oxide stained and black maganese, thin layers/lenses, pale olive (5 Y 6/4)
						[No recovery from 46 to 46.7 ft]
						Fine to coarse Sand (SP) with abundant angular to sub-rounded gravel of varying lithologies (granitics and shale) that are less than or equal to 3", some elongate, slightly moist, loose, vague bedding, iron-oxide stained layers
	50					Fine Sandy Silt to Silty Sand (ML/SM), slightly moist, iron-oxide stained layers
						Angular to sub-rounded gravels
						Pocket Pen: 2.5 ton/ft
						Fine to medium Sand (SP), slightly moist
						Silty, very fine Sand (SM), slightly moist, iron-oxide stained layers of thin beds, very few sub-angular slate fragments/gravels that are less than or equal to 1/8"
	55					Silty fine Sand (SM), abundant iron-oxide stained zone
						[No recovery from 56 to 56.3 ft]
						Fine Sand to Silty fine Sand (SP-SM), thinly bedded to laminated, iron-oxide stained layers throughout, slightly undulatory beds, dry to slightly moist, occassional rounded to sub-rounded gravels that are less than or equal to 2", light yellowish brown (2.5 Y 6/3) to olive yellow (2.5 Y 6/6)
	60					Fine Sandy Silt (ML), trace fine sand, slightly moist, stiff, pale olive (5 Y 6/4) to pale yellow (5 Y 7/4), thinly bedded, iron-oxide stained and organics/black layers, pocket pen: ~3.0 ton/ft

Field Tech: DLP/MAE
Prepared By:
Checked By:

(CONTINUED ON FOLLOWING FIGURE)

Metro WSE
Los Angeles County, California

MACTEC

LOG OF BORING

Project: 4953-09-0473 Figure: A-c

BORING SB-2 (Continued)

DATE DRILLED: 6/7/10
EQUIPMENT USED: Sonic Rig
HOLE DIAMETER (in.): 6" outer casing/4" core diameter
ELEVATION: **

THIS RECORD IS A REASONABLE INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE; REFER TO PLOT PLAN FOR MORE ACCURATE LOCATION INFORMATION. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

ELEVATION (ft)	DEPTH (ft)	MOISTURE (% of dry wt.)	DRY DENSITY (pcf)	BLOW COUNT* (blows/ft)	SAMPLE LOC.
	65				
	70				
	75				
	80				

Fine Sandy Silt (ML), pale olive yellow (5 Y 6/4) to pale yellow (5 Y 7/4)

Very fine, Sandy Silt (ML), moist, stiff, mottled olive gray (5 Y 5/2) to iron-oxide stained light olive brown (2.5 Y 5/6), occassional rounded gravel that is less than or equal to 1/2", pocket pen: 2.5 to 4.0 ton/ft

Less iron-oxide staining, increased moisture

Clayey Silt to Silty Clay (ML/CL) with abundant shell or foram debris

Very fine Sandy Silt (ML), moist, stiff, vaguely bedded to massive, olive gray (5 Y 5/2) to iron-oxide stained light olive brown (2.5 Y 5/6), pocket pen: 4.5 ton/ft

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: DLP/MAE
Prepared By:
Checked By:

Metro WSE
Los Angeles County, California

MACTEC

LOG OF BORING
Project: 4953-09-0473 Figure: A-c

BORING SB-2 (Continued)

DATE DRILLED: 6/7/10
EQUIPMENT USED: Sonic Rig
HOLE DIAMETER (in.): 6" outer casing/4" core diameter
ELEVATION: **

THIS RECORD IS A REASONABLE INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE; REFER TO PLOT PLAN FOR MORE ACCURATE LOCATION INFORMATION. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

ELEVATION (ft)	DEPTH (ft)	MOISTURE (% of dry wt.)	DRY DENSITY (pcf)	BLOW COUNT* (blows/ft)	SAMPLE LOC.	
						Fine to medium grained Sand with silt (SP-SM), rounded to sub-angular gravels (slate, andesite, shale) that are less than or equal to 3.5", light olive brown (2.5 Y 5/6)
						Fine to medium Sand (SP), trace silts, some thinnly undulatory bedding, iron-oxide stained layers, darker silty layers, occassional sub-angular to sub-rounded andesite gravels that are less than or equal to 3", olive brown (2.5 Y 4/4), pocket pen: 2.5-3.5 ton/ft
						Fragments are ~3", elongated, fractured sub-angular to sub-rounded andesitic gravel
						Silty Clay to Clay (CL), very stiff, trace organic fragments, massive, very dark gray (5Y 3/1)
	85					Darker blackish undulatory layer from 84.5 to 84.6 ft
						Black Clay (CL), very moist, moderately plastic
						[No recovery from 86 to 86.4 ft]
						Silty Clay to Clay (CL), very stiff, moist, massive, very dark gray (5 Y 3/1), trace organic fragments, pocket pen: 3.5 to 4.5 ton/ft
	90					Fine to medium Sand (SP) with trace silts, occassional organic debris/fragments, minor and few sub-angular to sub-rounded shale and shell gravels that are less than or equal to 1/8", wet, slightly firm, very few rounded gravels that are less than or equal to 1/2", dark yellowish brown (10 YR 4/6-3/6), massive to mottled occassional silty clay (CL) lens
						Gravelly Silty Sand to Clayey Sand (SC) with shell fragments, andesitic gravels that are less than or equal to 1", angular to sub-angular
						Silty Clay and Clay (CL) with occassional shell fragments that are less than or equal to 1/4"
	95					Fine to medium Sand with Silts and Clay (SP-SC), few silty clay (CL) layers/lenses, moist, slightly firm, massive to slightly bedded, dark yellowish brown (10 YR 3/6), pocket pen: 1.5 to 2.0 ton/ft
						Silty Sand (SM), fine grained with trace medium grains, dark yellowish brown (10 YR 4/6), very moist to wet, saturated at 97 ft (free water)
						Contains black to olive gray Clayey Silt lenses about 1/2" thick from 98.1 to 98.9 ft, pocket pen: 1.5 to 2.0 ton/ft
						Clayey Silt to Silty Clay (ML-CL), moist, slightly firm/stiff, abundant organic debris, reaction with HCl, greenish black (10 Y 2.5/1), pocket pen: 3.5 ton/ft
	100					

Field Tech: DLP/MAE
Prepared By:
Checked By:

(CONTINUED ON FOLLOWING FIGURE)

Metro WSE
Los Angeles County, California

MACTEC

LOG OF BORING

Project: 4953-09-0473 Figure: A-c

BORING SB-2 (Continued)

DATE DRILLED: 6/7/10
EQUIPMENT USED: Sonic Rig
HOLE DIAMETER (in.): 6" outer casing/4" core diameter
ELEVATION: **

THIS RECORD IS A REASONABLE INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE; REFER TO PLOT PLAN FOR MORE ACCURATE LOCATION INFORMATION. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

ELEVATION (ft)	DEPTH (ft)	MOISTURE (% of dry wt.)	DRY DENSITY (pcf)	BLOW COUNT* (blows/ft)	SAMPLE LOC.	
	105					Fine to medium grained Sand with trace Silt (SP-SM), rounded to sub-angular slate, granite and andesite gravels from 1/4" to 3.5", poorly sorted, slightly moist, gray (N 5/0) Increase in gravel content ~25-30% at 101 to 101.7 feet
						Very fine Sandy Silt (ML), slightly moist, greenish gray (10 Y 5/1)
						Silty fine to coarse Sand (SM), rounded to sub-angular slate, granite and andesite gravels that are less than or equal to 3.5", poorly sorted, slightly moist, very dark greenish gray (10 Y 3/1)
	110					Alternating thin beds and lenses of silty fine to medium coarse grained Sand (SM), fine Sandy Silt, and Clayey Silt (ML), several sub-rounded to sub-angular gravels that are less than or equal to 1.5", abundant shell/foram debris fragments that are less than or equal to 1/16", moist to slightly moist, very dark greenish gray (5 GY 3/1), pocket pen: 4.0 ton/ft
						Silty fine to medium Sand (SM) and Sandy Silt (ML) trace clays, abundant sub-rounded to sub-angular gravels and shell/foram debris that are less than or equal to 2.5", very dark greenish gray (10 Y 3/1), slightly moist, pocket pen: 4.0 to 4.5 ton/ft
	115					Fine Sandy Silt (ML) to Silty Clay (CL), abundant carbonate (shell/foram) debris, moist Silty Clay (CL), decrease in carbonate debris, very stiff, moist, greenish black (10 Y 2.5/1), pocket pen: 4.5 ton/ft
						[No recovery from 116 to 116.5 ft]
						Clayey Silt (ML), abundant whitish grains that are less than or equal to 1/32", some rounded gravel that are less than or equal to 1/2", very stiff to hard, moist, very dark greenish gray (10 GY 3/1) to greenish black (10 GY 2.5/1), pocket pen: +4.5 ton/ft
						Silty fine Sand (SM), slightly stiff, moist, occassional rounded gravel that is less than or equal to 1/4", greenish black (5 GY 2.5/1), massive, pocket pen: +4.5 ton/ft
	120					Fine to medium Sand (SP), slightly moist, occassional rounded gravel that is less than or equal to 1/4", dark greenish gray (10 Y 4/1)

Field Tech: DLP/MAE
Prepared By:
Checked By:

(CONTINUED ON FOLLOWING FIGURE)

Metro WSE
Los Angeles County, California

MACTEC

LOG OF BORING

Project: 4953-09-0473 Figure: A-c

BORING SB-2 (Continued)

DATE DRILLED: 6/7/10
EQUIPMENT USED: Sonic Rig
HOLE DIAMETER (in.): 6" outer casing/4" core diameter
ELEVATION: **

THIS RECORD IS A REASONABLE INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE; REFER TO PLOT PLAN FOR MORE ACCURATE LOCATION INFORMATION. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

ELEVATION (ft)	DEPTH (ft)	MOISTURE (% of dry wt.)	DRY DENSITY (pcf)	BLOW COUNT* (blows/ft)	SAMPLE LOC.
	125				
	130				
	135				
	140				

[No recovery from 120 to 122 ft, dumped in drum inadvertantly]

Slough from 121.3 to 122 ft

Silty fine Sand (SM), dense, very moist, massive, occassional sub-rounded to sub-angular gravel that is less than or equal to 1/2", greenish black (5 GY 2.5/1)

Fine Sand (SP), slightly moist, occassional rounded gravel that is less than or equal to 1/4", grey (N 5/0)

Gradational increase in moisture and Silt
Silty fine Sand (SM), moist, occassional silt nodule clast that is less than or equal to 1/2", sub-rounded to sub-angular gravel that is less than or equal to 1/2", greenish black (5 GY 2.5/1)

Silty fine to medium Sand and Clayey Sand (SM-SC) with gravels that are less than or equal to 1.5", sub-rounded to sub-angular, very moist, very dark bluish gray (10B 3/1) to very dark greenish gray (10 Y 3/1), pocket pen: 2.5 to 3.5 ft

[No recovery from 127 to 136 ft]

Gravelly sand, well cemented with calcite, abundant varying angular to rounded gravels (granitics, mafics, shell fragments) that are less than or equal to 1", gray (N 6/0) to light gray (N 7/0)

[No recovery from 137 to 141 ft]

Field Tech: DLP/MAE
Prepared By:
Checked By:

(CONTINUED ON FOLLOWING FIGURE)

Metro WSE
Los Angeles County, California

MACTEC

LOG OF BORING

Project: 4953-09-0473 Figure: A-c

BORING SB-2 (Continued)

DATE DRILLED: 6/7/10
EQUIPMENT USED: Sonic Rig
HOLE DIAMETER (in.): 6" outer casing/4" core diameter
ELEVATION: **

THIS RECORD IS A REASONABLE INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE; REFER TO PLOT PLAN FOR MORE ACCURATE LOCATION INFORMATION. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

ELEVATION (ft)	DEPTH (ft)	MOISTURE (% of dry wt.)	DRY DENSITY (pcf)	BLOW COUNT* (blows/ft)	SAMPLE LOC.
	145				
	150				
	155				
	160				

Silty fine to medium Sand (SM) and Sandy Silt (ML), rounded to sub-angular gravels that are less than or equal to 2", some elongate, moist, very dark greenish gray (5 GY 3/1), pocket pen: 2.0 ton/ft

Silty fine to medium Sand (SM), slightly moist to moist, moderately sorted, very dark grey (N 3/0), occassional sub-rounded to sub-angular andesitic gravels that are less then or equal to 1/4", pocket pen: 1.0 ton/ft

Increase in sub-rounded to sub-angular andesitic gravels that are less than or equal to 3"

Silty fine Sand to Sandy Silt (SM/ML), occassional sub-rounded to sub-angular andesitic gravels that are less than or equal to 1/2", moist, dark gray (5 Y 4/1) to very dark gray (5 Y 3/1), pocket pen: 2.5 ton/ft

Sandy Silt (ML), thin layer from 149.9 to 150 feet

Saturated zone from 151 to 151.7 ft

dark gray (N 4/0) to very dark gray (N 3/0)

Fine to medium Sand with Silt (SP-SM), slightly moist, pocket pen: 2.5 to 3.5 ton/ft

Fine Sandy Silt to Silty Sand (ML/SM), slightly moist, very dark greenish gray (10 Y 3/1), slightly firm, pocket pen: 3.0 ton/ft

Fine Sandy Silt to Silty Sand (ML/SM), slightly moist, slightly firm, gray (5 Y 6/1 to 5/1)

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: DLP/MAE
Prepared By:
Checked By:

Metro WSE
Los Angeles County, California

MACTEC

LOG OF BORING
Project: 4953-09-0473 Figure: A-c

BORING SB-2 (Continued)

DATE DRILLED: 6/7/10
EQUIPMENT USED: Sonic Rig
HOLE DIAMETER (in.): 6" outer casing/4" core diameter
ELEVATION: **

THIS RECORD IS A REASONABLE INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE; REFER TO PLOT PLAN FOR MORE ACCURATE LOCATION INFORMATION. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

ELEVATION (ft)	DEPTH (ft)	MOISTURE (% of dry wt.)	DRY DENSITY (pcf)	BLOW COUNT* (blows/ft)	SAMPLE LOC.	
						Fine Sandy Silt to Silty Sand (ML/SM), slightly moist, very dark greenish gray (10 Y 3/1), slightly firm, pocket pen: 3.0 ton/ft
						Very fine Sandy Silt (ML), slightly moist, very dark gray (5 Y 3/1)
	165					As above, moist to wet, stiff, occassional sub-rounded to sub-angular andesitic gravel that is mostly less than or equal to 1/2", pocket pen: 2.5 ton/ft wet from 166.5 to 167.2 ft
	170					Sub-angular andesitic cobble that is ~4" wet from 169.4 to 171 ft
	175					As above with trace clay, moist to wet, stiff, occassional carbonate (shell/foram) debris/fragments that are angular to sub-angular and elongated with depth, less than or equal to 1/32", very thinly bedded/banded discontinuous to lenticular and undulatory, gray (5 Y 3/1) to greenish black (10 Y 2.5/1)
	180					

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: DLP/MAE
Prepared By:
Checked By:

Metro WSE
Los Angeles County, California

MACTEC

LOG OF BORING
Project: 4953-09-0473 Figure: A-c

BORING SB-2 (Continued)

DATE DRILLED: 6/7/10
EQUIPMENT USED: Sonic Rig
HOLE DIAMETER (in.): 6" outer casing/4" core diameter
ELEVATION: **

THIS RECORD IS A REASONABLE INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE; REFER TO PLOT PLAN FOR MORE ACCURATE LOCATION INFORMATION. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

ELEVATION (ft)	DEPTH (ft)	MOISTURE (% of dry wt.)	DRY DENSITY (pcf)	BLOW COUNT* (blows/ft)	SAMPLE LOC.
	185				
	190				
	195				
	200				

As above with trace clay, moist to wet, stiff, occassional carbonate (shell/foram) debris/fragments that are angular to sub-angular and elongated with depth, less than or equal to 1/32", very thinly bedded/banded discontinuous to lenticular and undulatory, gray (5 Y 3/1) to greenish black (10 Y 2.5/1)

Silty Clay to Clayey Silt (ML/CL), very stiff, very moist to wet, trace very fine sand within lenticular bedding, very thinly bedded/banded to lenticular and discontinuous, greenish black (10 Y 2.5/1) to very dark greenish gray (10 GY 3/1) and dark gray (N 4/0), occassional carbonate (shell/foram) debris/fragments that are less than or equal to 1/16", pocket pen: 3.5 to +4.5 ton/ft

Silty Clay to Clayey Silt (ML-CL), very stiff, very moist to wet, some very fine sandy silt lenticular to discontinuous bedding, lamellae of maganese, black to dark gray, undulatory, thin bedding/banding, greenish black (10 Y 2.5/1) to dark gray (N 4/0), occassional carbonate shell/foram debris or fragments that are less than or equal to 1/16", pocket pen: 4.0 to +4.5 ton/ft

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: DLP/MAE
Prepared By:
Checked By:

Metro WSE
Los Angeles County, California

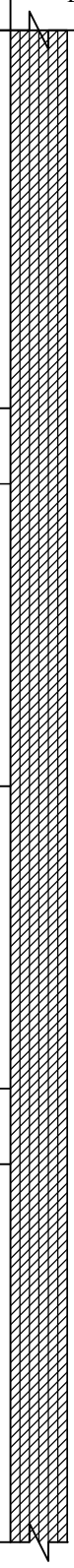
MACTEC

LOG OF BORING
Project: 4953-09-0473 Figure: A-c

BORING SB-2 (Continued)

DATE DRILLED: 6/7/10
EQUIPMENT USED: Sonic Rig
HOLE DIAMETER (in.): 6" outer casing/4" core diameter
ELEVATION: **

ELEVATION (ft)	DEPTH (ft)	MOISTURE (% of dry wt.)	DRY DENSITY (pcf)	BLOW COUNT* (blows/ft)	SAMPLE LOC.
	205				
	210				
	215				
	220				



Silty Clay to Clayey Silt (ML-CL), very stiff, very moist to wet, some very fine sandy silt lenticular to discontinuous bedding, lamellae of maganese, black to dark gray, undulatory, thin bedding/banding, greenish black (10 Y 2.5/1) to dark gray (N 4/0), occassional carbonate shell/foram debris or fragments that are less than or equal to 1/16", pocket pen: 4.0 to +4.5 ton/ft

Slough from 206 to 206.5 ft

Silty Clay to Clayey Silt (ML-CL), very stiff, very moist to wet, trace very fine sand within thinly bedded/lenticular beds, greenish black (10 Y 2.5/1), occassional carbonate (shell/foram) debris/fragments that are less than or equal to 1/8 to 1/16", pocket pen: +4.5 ton/ft

Silty Clay to Clayey Silt (CL-ML), very stiff, moist to wet, trace very fine sand, thinnly bedded to lenticular beds, greenish black (10 Y 2.5/1), occassional carbonate (shell/foram) debris fragment, pocket pen: 3.0 to +4.5 ton/ft

THIS RECORD IS A REASONABLE INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE; REFER TO PLOT PLAN FOR MORE ACCURATE LOCATION INFORMATION. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

Field Tech: DLP/MAE
Prepared By:
Checked By:

(CONTINUED ON FOLLOWING FIGURE)

Metro WSE
Los Angeles County, California

MACTEC

LOG OF BORING
Project: 4953-09-0473 Figure: A-c

BORING SB-2 (Continued)

DATE DRILLED: 6/7/10
EQUIPMENT USED: Sonic Rig
HOLE DIAMETER (in.): 6" outer casing/4" core diameter
ELEVATION: **

ELEVATION (ft)	DEPTH (ft)	MOISTURE (% of dry wt.)	DRY DENSITY (pcf)	BLOW COUNT* (blows/ft)	SAMPLE LOC.
	225				
	230				
	235				
	240				

Silty Clay to Clayey Silt (CL-ML), very stiff, moist to wet, trace very fine sand, thinnly bedded to lenticular beds, greenish black (10 Y 2.5/1), occassional carbonate (shell/foram) debris fragment, pocket pen: 3.0 to +4.5 ton/ft

Total Depth 223'

Notes:
Grouted from 223 feet to 1 foot below ground surface (bgs).
Rapid set cement from 1 foot bgs to surface.

THIS RECORD IS A REASONABLE INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE; REFER TO PLOT PLAN FOR MORE ACCURATE LOCATION INFORMATION. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

Field Tech: DLP/MAE
Prepared By:
Checked By:

Metro WSE
Los Angeles County, California

MACTEC

LOG OF BORING
Project: 4953-09-0473 Figure: A-c

B11SOIL_CRANDALL 90473_CORE_SONIC.GPJ LAW_CRAN.GDT 9/28/10

BORING 19

DATE DRILLED: May 17, 1968
EQUIPMENT USED: 24"-Diameter Bucket

ELEVATION 285.3

ELEVATION (ft.)	DEPTH (ft.)	MOISTURE (% of dry wt.)	DRY DENSITY (lbs./cu.ft.)	SAMPLE		
		9.9	110	■	SM	FILL - SILTY SAND - well graded, brown
		11.7	122	■	SC	CLAYEY SAND - well graded, 10% to 15% gravel, mottled brown
280					ML	CLAYEY SILT - few gravel, brown
		22.2	101	■		
	10				ML	SANDY SILT - mottled brown
		31.4	90	■	ML	CLAYEY SILT - brown
						Layer of SILTY SAND
270		33.7	88	■	CL	SILTY CLAY - light greyish-brown 5% to 10% gravel
	20	18.2	113	■		
		19.0	110	■	ML	SANDY SILT - greyish-brown
260		23.7	100	■	ML	CLAYEY SILT - greyish-brown
	30	28.5	94	■	SM	SILTY SAND - fine, yellowish-brown
250		10.1	90	■		
		10.4	98	■		
	40	7.0	108	■	SP	SAND - fine, yellowish-brown and greyish-brown
		7.5	112	■		Greyish-brown
240		10.6	104	■		15% to 20% gravel, 5% to 10% cobbles (to 6" in diameter)
	50	4.7	100	■		No gravel
230		8.2	108	■		Light yellowish-grey Lenses of SILTY SAND
	60	15.1	91	■	SM	SILTY SAND - fine, grey
220		6.3	97	■		Layer of SAND - fine, light grey Layer of SANDY SILT - grey
	70	9.2	103	■		Cemented layer (GAD AND CHOPPING BUCKET USED)
210		4.9	112	■	SP	SAND - fine, few gravel, grey Layer of SILTY SAND - fine, dark grey 10% gravel
	80	6.1	96	■		
200		14.2	113	■	CL	SILTY CLAY - black Layer of SILTY SAND Highly cemented at 88½'
	90					(BORING TERMINATED DUE TO CAVING AND TO FIRM DRILLING)

NOTE: Water not encountered. Heavy caving from 84' to 86½'.

JOB A-67065-B DATE 6-14-68 O.E. CHKD.

LOG OF BORING

LEROY CRANDALL AND ASSOCIATES

PLATE 2-B

BORING 1

DATE DRILLED : March 11 & 13, 1969
EQUIPMENT USED : 5"-Diameter Rotary Wash

ELEVATION 279.5*

ELEVATION (ft.)	DEPTH (ft.)	MOISTURE (% of dry wt.)	DRY DENSITY (lbs./cu. ft.)	SAMPLE		
		11.5	116	■	CL	SILTY CLAY - some Sand, few gravel, brown
						Layer of SAND
		14.0	115	■		
270	10	11.5	121	■	SW	SAND - well graded, about 25% gravel some Clay, brown
		11.4	118	■		
		22.4	104	■	CL	SILTY CLAY - very silty, some Sand, mottled grey and brown
260	20	17.1	113	■		
		16.4	114	■		
250	30	15.3	119	■		Layer of SILTY SAND
		18.9	110	■		
		23.2	101	■		
240	40	30.5	92	■		
		5.2	110	■	SP	SAND - fine, few gravel, grey
230	50	7.4	108	■		
		10.0	116	■		
		10.2	105	■		
220	60	10.1	99	■		
		13.1	110	■		
210	70	7.8	108	■		Layer of CLAY
		9.3	108	■	SM	SILTY SAND - fine, dark grey
		10.1	103	■		
200	80	13.4	118	■		Few shells
						Cemented layers
190	90	5.2	103	■	SP	SAND - fine, dark grey
						Cemented layer
		12.1	122	■		Layer of SILTY SAND - fine, dark grey
180	100	9.9	114	■		Large amount of gravel
		8.6	111	■	SM	SILTY SAND - fine, few gravel, dark grey
170	110	21.1	97	■		Occasional cemented layers
		13.1	109	■		
160	120	13.0	101	■		
		13.9	100	■		
150	130	12.3	96	■		Cemented layers
140	140	19.2	97	■		
130	150	24.4	98	■		
120	160	22.6	102	■		Few shells
110	170					Cemented layer (very hard)
		31.1	89	■		Few shells
100	180					

* Elevations refer to datum of reference survey; see Plate 1.

Soils classified in accordance with the Unified Soil Classification System.

NOTE: Drilling mud used in drilling process. Water level not established.

LOG OF BORING

LEROY CRANDALL AND ASSOCIATES

PLATE A-1

BORING 5

DATE DRILLED February 19, 10, 27, & 18, 1969
EQUIPMENT USED 6"-Diameter Rotary Wash

ELEVATION 283.3

ELEVATION (ft.)	DEPTH (ft.)	MOISTURE (% of dry wt.)	DRY DENSITY (lbs./cu. ft.)	SAMPLE		
280		21.9	104	■	CL	SILTY CLAY - some Sand, brown
		16.4	112	■		
	10	22.5	103	■		Mottled greyish-brown Few gravel
270		18.9	107	■		Layer of SAND - fine
		25.8	98	■		
	20					
260		21.2	106	■		
		23.8	102	■		
	30					
250		24.1	102	■		
		12.3	112	■		Layer of SILTY SAND - fine, grey Grey
	40					
240		24.4	102	■		
		7.1	116	■	SP	SAND - fine, few gravel, light grey
	50	7.0	112	■		
230		16.2	101	■		
		6.8	120	■	SM	SILTY SAND - fine, grey
	60					
220		12.3	102	■		
		12.3	106	■		Clayey
	70	9.3	105	■		Few shells
210		15.0	113	■		
		10.1	109	■		
	80	21.9	100	■	SP	SAND - fine, few gravel, light grey
200		20.2	105	■	SM	SILTY SAND - fine, dark grey
		31.9	87	■		
	90	25.4	92	■		
190		16.9	109	■		Layer of SILTY CLAY - grey Cemented layers Few shells
	100				SP	SAND - fine, few gravel, grey
180		9.9	120	■		
	110					
170		7.7	110	■	SM	SILTY SAND - fine, few gravel, grey
	120					
160		10.5	103	■		
						Cemented layer (very hard)
	130					
150						
	140	11.7	99	■		
140						
	150					Few shells
130						
	160	26.1	99	■		Few shells
120						
	170	27.0	96	■		
110						
	180					

NOTE: Drilling mud used in drilling process in rotary wash hole. A bucket hole was drilled to a depth of 86' adjacent to the rotary wash hole. Slight water seepage encountered at a depth of 29'. Water level at a depth of 84' at completion of drilling. Caving from 29' to 34' (to 3' in diameter) in bucket hole.

LOG OF BORING

LEROY CRANDALL AND ASSOCIATES

PLATE A-5

BORING 9

DATE DRILLED : March 20 & 24, 1969
EQUIPMENT USED : 5"-Diameter Rotary Wash

ELEVATION 292.2

ELEVATION (ft.)	DEPTH (ft.)	MOISTURE (% of dry wt.)	DRY DENSITY (lbs./cu. ft.)	SAMPLE		
290		16.8	112		CL SP	FILL - SILTY CLAY - SAND MIXTURE - yellowish-brown
	10	18.1	110		CL	SILTY CLAY - few gravel, brown
280						
	20					
270		22.2	104			Few rootlets
						Some Sand
	30	23.1	102			
260		8.0	103		SP	SAND - fine, few gravel, yellowish-brown
	40					
250		5.2	108			
	50	10.0	114			More gravel
240						
		13.9	111		SM	SILTY SAND - fine, yellowish-brown
	60					
230					SP	SAND - fine, few gravel, brown and bluish-grey
	70					Layer of SILTY CLAY - grey
220						Lenses of Silt
		6.2	106			Cemented layers
	80	10.0	109			Lenses of Silt
210						Bluish-grey and black
						More gravel
		39.0	82		CL	SILTY CLAY - few shells, organic matter, dark grey and black
	90	11.5	105		SM	SILTY SAND - fine, few shells, dark grey
200						
	100					Layer of SILTY CLAY - dark grey
190						Very silty
		15.2	118			Large amount of gravel
	110					
180						
	120	12.6	98			

NOTE: Drilling mud used in drilling process. Mud removed after drilling completed; no water observed in the hole one-half hour after removing mud.

JOB A-[illegible] DATE [illegible] CHKD [illegible]

LOG OF BORING

LEROY CRANDALL AND ASSOCIATES

PLATE A-9

BORING 1

DATE DRILLED: August 18, 1971
EQUIPMENT USED: 18"-Diameter Bucket

ELEVATION 272.9

ELEVATION (ft.)	DEPTH (ft.)	MOISTURE (% of dry wt.)	DRY DENSITY (lbs./cu. ft.)	SAMPLE		DESCRIPTION
						2½" Asphaltic Paving - 3" Base Course
		17.4	114	■	ML CL	FILL - CLAYEY SILT - SANDY SILT - SILTY CLAY - few pieces of wood, mottled brown
270						
	5	13.8	117	■		
265		22.7	99	■		
	10	19.8	103	■		
260		21.1	107	■		
	15	16.4	111	■		
255						
	20	20.2	104	■		Few gravel
250		19.2	104	■		
	25	20.6	105	■		Piece of concrete
245		11.1	129	■	ML	SANDY SILT - some clay, dark brown
	30	12.9	100	■		
240		14.2	102	■		Few gravel
	35	9.8	108	■		Layer of Silty Sand and Gravel
235		15.8	96	■		
	40					

(CONTINUED ON FOLLOWING PLATE)

LOG OF BORING

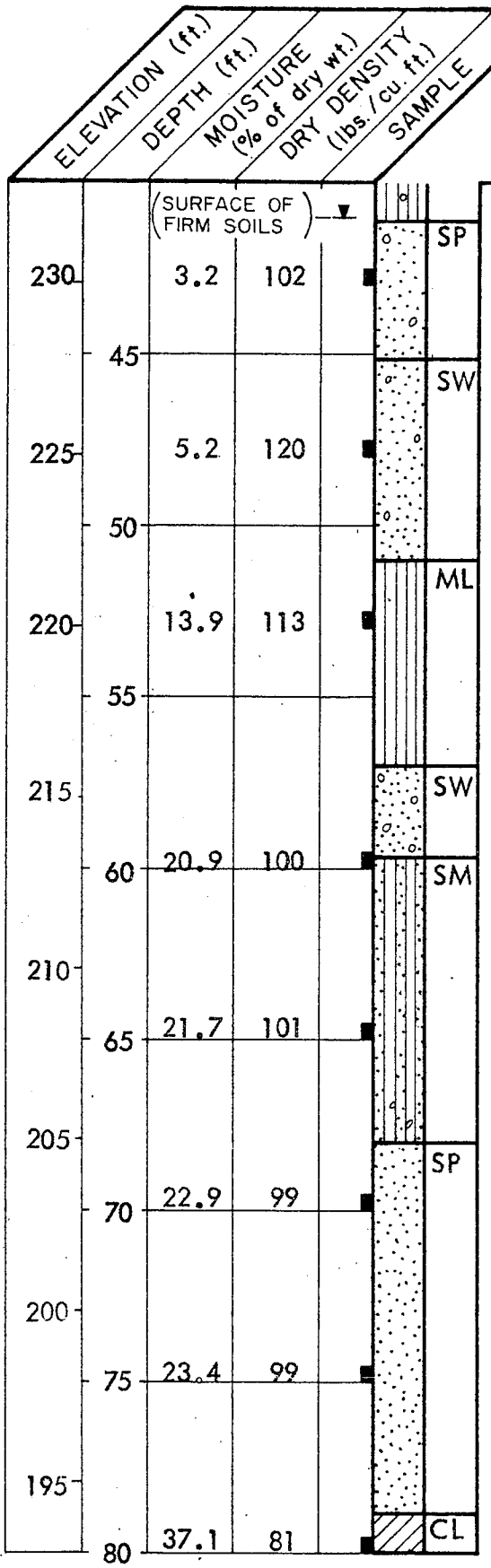
LEROY CRANDALL AND ASSOCIATES

JOB	A-71174
DATE	8-31-71
DR.	[illegible]
O.E.	[illegible]
CHKD.	[illegible]

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

JOB A-7174 DATE 8-31-71 BY O.E.B.S. CHKD.

BORING 1 (CONTINUED)
DATE DRILLED: August 18, 1971
EQUIPMENT USED: 18"-Diameter Bucket



SAND - fine, few gravel, greyish-brown

SAND - well graded, 10% to 15% gravel, brown

SANDY SILT - some clay, brown

SAND - well graded, 15% to 20% gravel, brown

SILTY SAND - fine, very silty, light greyish-brown

Yellowish-brown
Few gravel

▽ _____ (WATER ENCOUNTERED)

SAND - fine, grey

Patches of Clay

NOTE: Water encountered at a depth of 68'. Water level at a depth of 69' 20 minutes after completion of drilling. Caving from 68' to 79'.

SILTY CLAY - black
(BORING TERMINATED DUE TO HEAVY CAVING)

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

LOG OF BORING

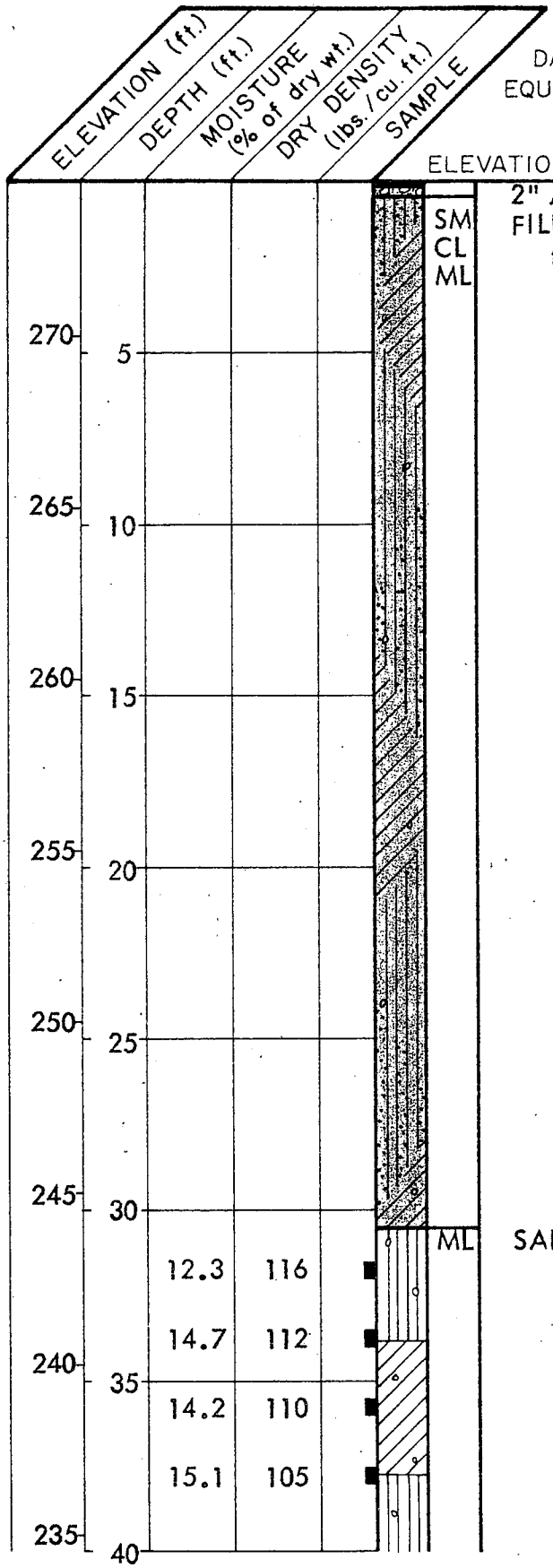
LEROY CRANDALL AND ASSOCIATES

PLATE A-2

JOB A-71174 DATE 9-1-71 DR. SH O.E.B. CHKD.

BORING 2-A

DATE DRILLED: August 18, 1971
EQUIPMENT USED: 18"-Diameter Bucket



2" Asphaltic Paving - 2" Base Course
FILL - SILTY SAND - SILTY CLAY - CLAYEY SILT - few gravel, mottled brown

SANDY SILT - some clay, few gravel, dark brown

Layer of Sandy Clay - few gravel, brown

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

(CONTINUED ON FOLLOWING PLATE)

LOG OF BORING

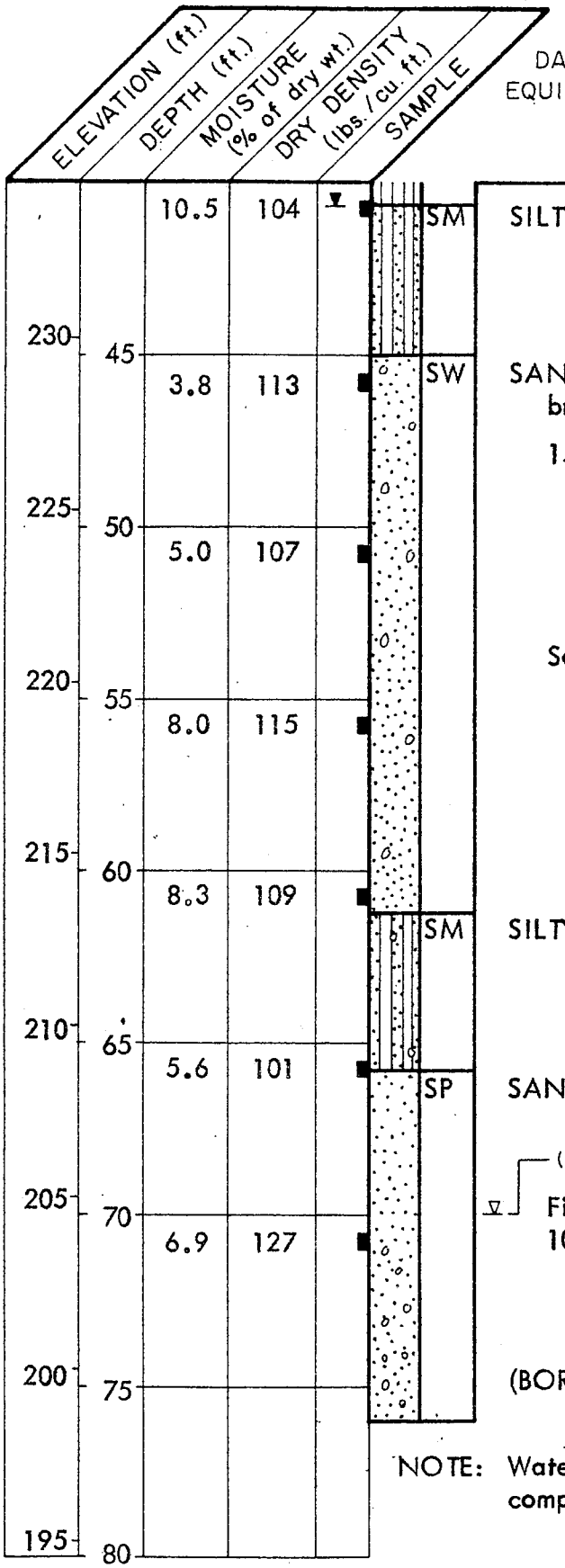
LEROY CRANDALL AND ASSOCIATES

PLATE A-4

JOB A-71174 DATE 9-1-71 BY SM O.E.I.C. CHKD. RC

BORING 2-A (CONTINUED)

DATE DRILLED: August 18, 1971
EQUIPMENT USED: 18"-Diameter Bucket



SILTY SAND - fine, brown

SAND - well graded, about 10% gravel, greyish-brown

15% to 20% gravel

Some Clay

SILTY SAND - fine, few gravel, grey and brown

SAND - fine, light bluish-grey

(WATER ENCOUNTERED)

Fine and coarse
10% to 20% gravel

(BORING TERMINATED DUE TO HEAVY CAVING)

NOTE: Water level at a depth of 70' 10 minutes after completion of drilling. Caving below 70'.

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

LOG OF BORING

LEROY CRANDALL AND ASSOCIATES

PLATE A-5

BORING 3

DATE DRILLED: September 18, 1984

EQUIPMENT USED: 5"-Diameter Rotary Wash

ELEVATION 286.4

ELEVATION (ft.)	DEPTH (ft.)	"N" VALUE STD. PEN. TEST	MOISTURE (% of dry wt.)	DRY DENSITY (lbs./cu. ft.)	DRIVE ENERGY (ft.-kips/ft.)	SAMPLE LOC.		
285	0		15.6	112	5		CL	3" Asphaltic Paving FILL - SILTY CLAY - few gravel, brown Few pieces of metal
	5							Greyish-brown
280			20.8	108	5			Some Sand
	10		18.2	114	10			Little to no Sand
275			17.3	111	6			
	15							
270			14.2	121	13			Some Sand
	20							
265			15.4	116	9		ML	FILL - CLAYEY SILT - some Sand, greyish-brown
	25							
260			14.1	113	11			
	30		13.2	125	10		CL	FILL - SILTY CLAY - dark grey
255							ML	SANDY SILT - slightly Clayey, few gravel, dark grey
	35		12.9	116	10			
250							SM	SILTY SAND - fine to medium, some gravel, greyish-brown
	40		15.1	118	11			

(CONTINUED ON FOLLOWING PLATE)

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

LOG OF BORING

LeROY CRANDALL AND ASSOCIATES

BORING 3 (CONTINUED)

DATE DRILLED: September 18, 1984

EQUIPMENT USED: 5"-Diameter Rotary Wash

ELEVATION (ft.)	DEPTH (ft.)	"N" VALUE STD. PEN. TEST	MOISTURE (% of dry wt.)	DRY DENSITY (lbs./cu. ft.)	DRIVE ENERGY (ft.-kips/ft.)	SAMPLE LOC.		
245			9.9	128	11			
	45		7.1	121	54		SP	SAND - fine to coarse, about 30% gravel, grey
240			8.9	118	54			
	50		10.2	111	54			
235								Few gravel, greyish-brown
	55		11.6	123	35			
230							SM	SILTY SAND - fine, light brownish-grey
	60		14.5	110	48			
225							SP	SAND - fine, light grey
	65		19.6	104	54			
220							SM	SILTY SAND - fine, light grey
	70		16.4	114	43			
215							SP	SAND - fine, light bluish-grey
	75		10.6	104	43			
210								About 50% gravel
	80							

(CONTINUED ON FOLLOWING PLATE)

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

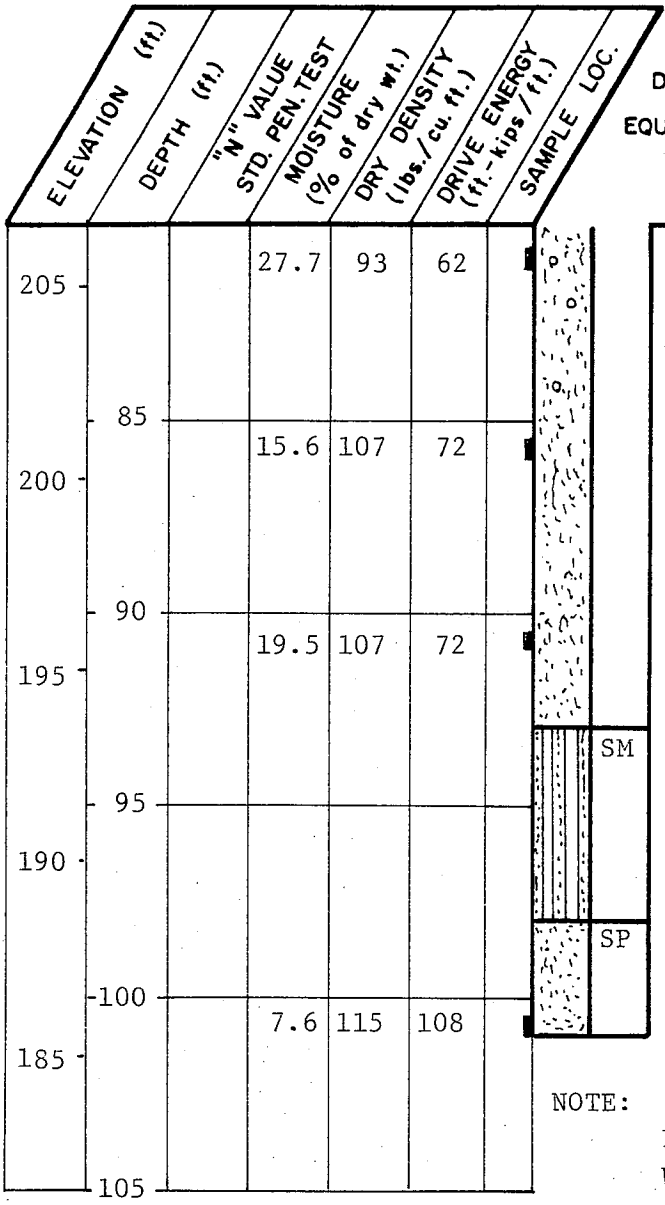
LOG OF BORING

LeROY CRANDALL AND ASSOCIATES

BORING 3 (CONTINUED)

DATE DRILLED: September 18, 1984

EQUIPMENT USED: 5"-Diameter Rotary Wash



Few gravel

Light grey

SILTY SAND - fine, dark grey

SAND - fine, light bluish-grey

NOTE: Drilling mud used in drilling process. Removed mud after completion of drilling. Water level not established.

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

LOG OF BORING

LeROY CRANDALL AND ASSOCIATES

PLATE A-1.3c

APPENDIX C-4 CPT DATA – CURRENT FAULT INVESTIGATION

Amec, Current Fault Investigation

T1-C1 through T1-C10, T1-C12 through T1-C20, T1-C22, T1-C25 through T1-C33

T2-C1, T2-C3, T2-C5, T2-C7, T2-C8, T2-C10 through T2-C12, T2-C14, T2-C15, T2-C18, T2-C20 through T2-C23, T2-C25, T2-C27, T2-C29, T2-C31, T2-C33, T2-C35, T2-C37, and T2-C41

T2E-C1 through T2E-C34

T3-C1 through T3-C27, T3-29 through T3-C39

T4-C1 through T4-C7, T4-C9 through T4-C31

T7-C1 through T7-C5, T7-C7 through T7-C21

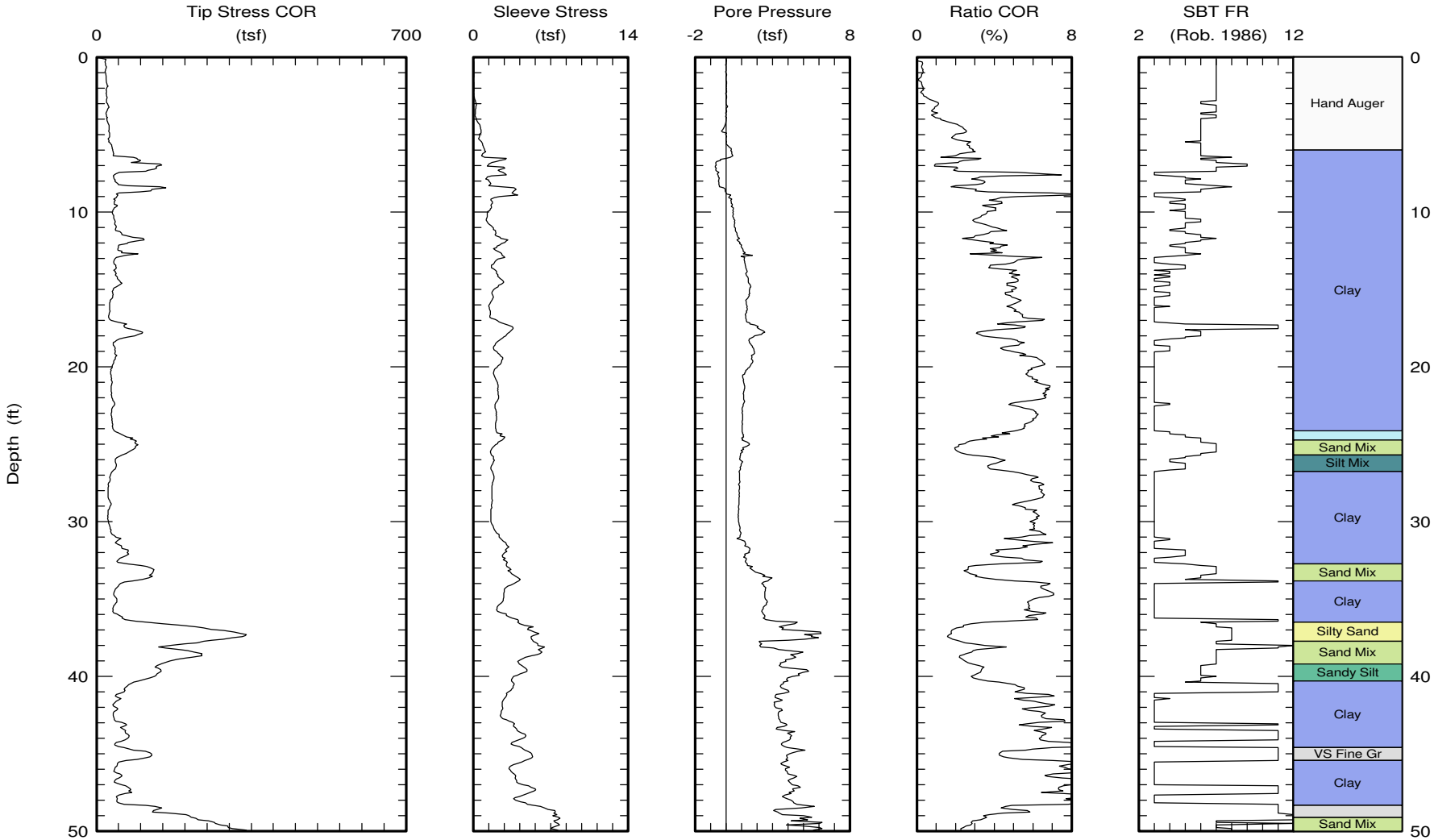
T8-C1 through T8-C15

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 14/Feb/2011
Test ID: T1-C1
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension/Ave Of The Stars



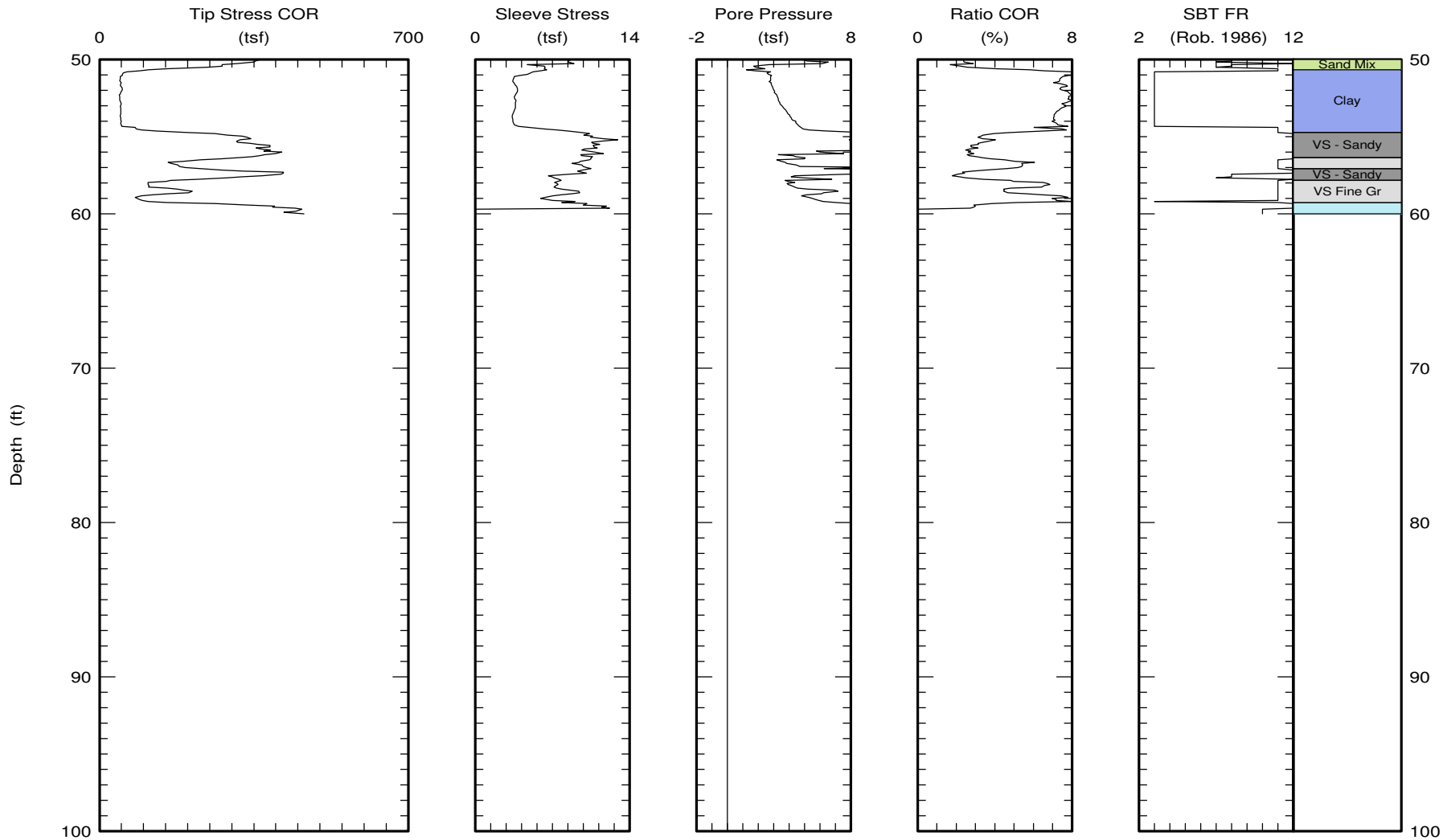
Maximum depth: 60.02 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 14/Feb/2011
Test ID: T1-C1
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension/Ave Of The Stars



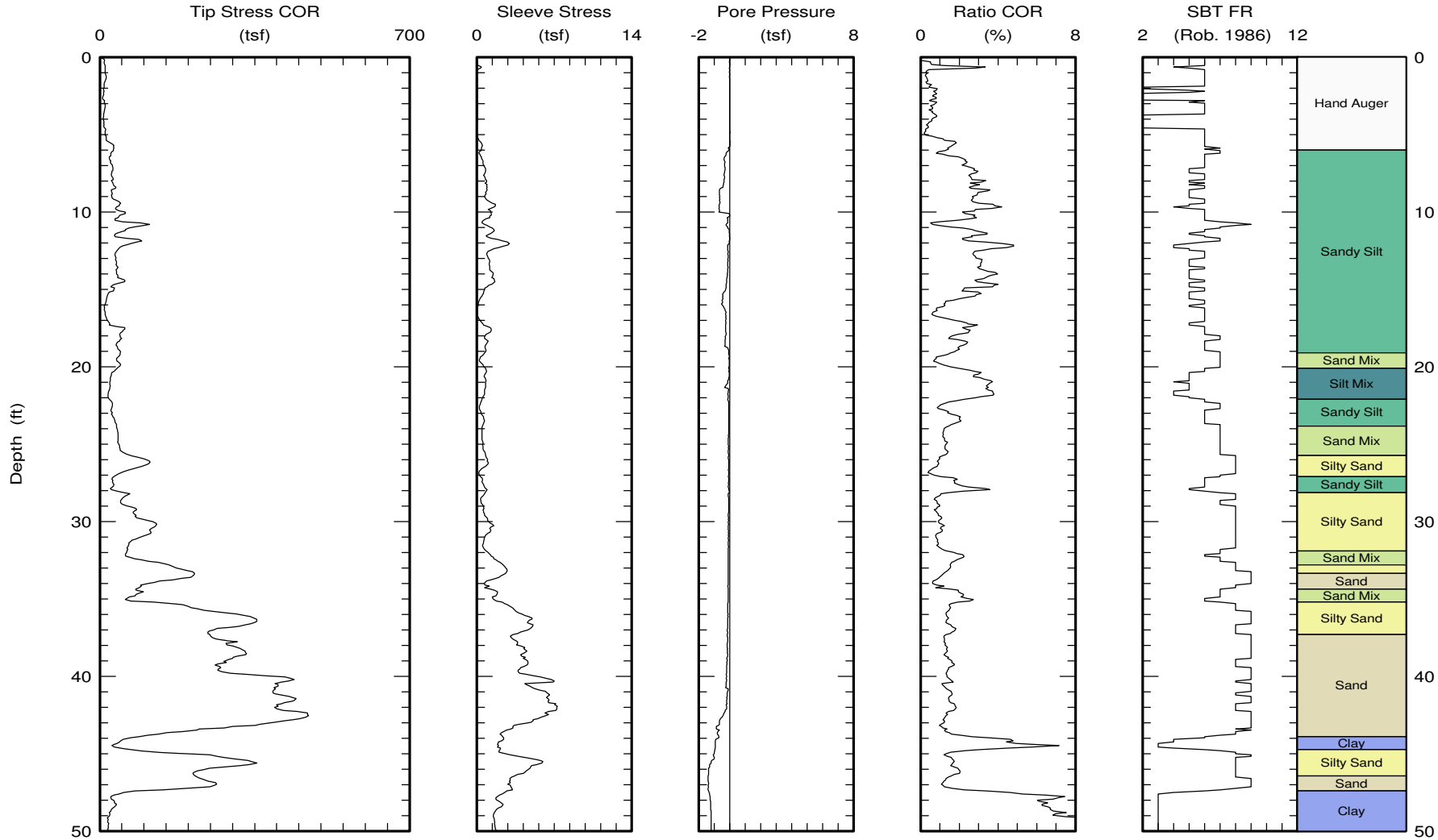
Maximum depth: 60.02 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

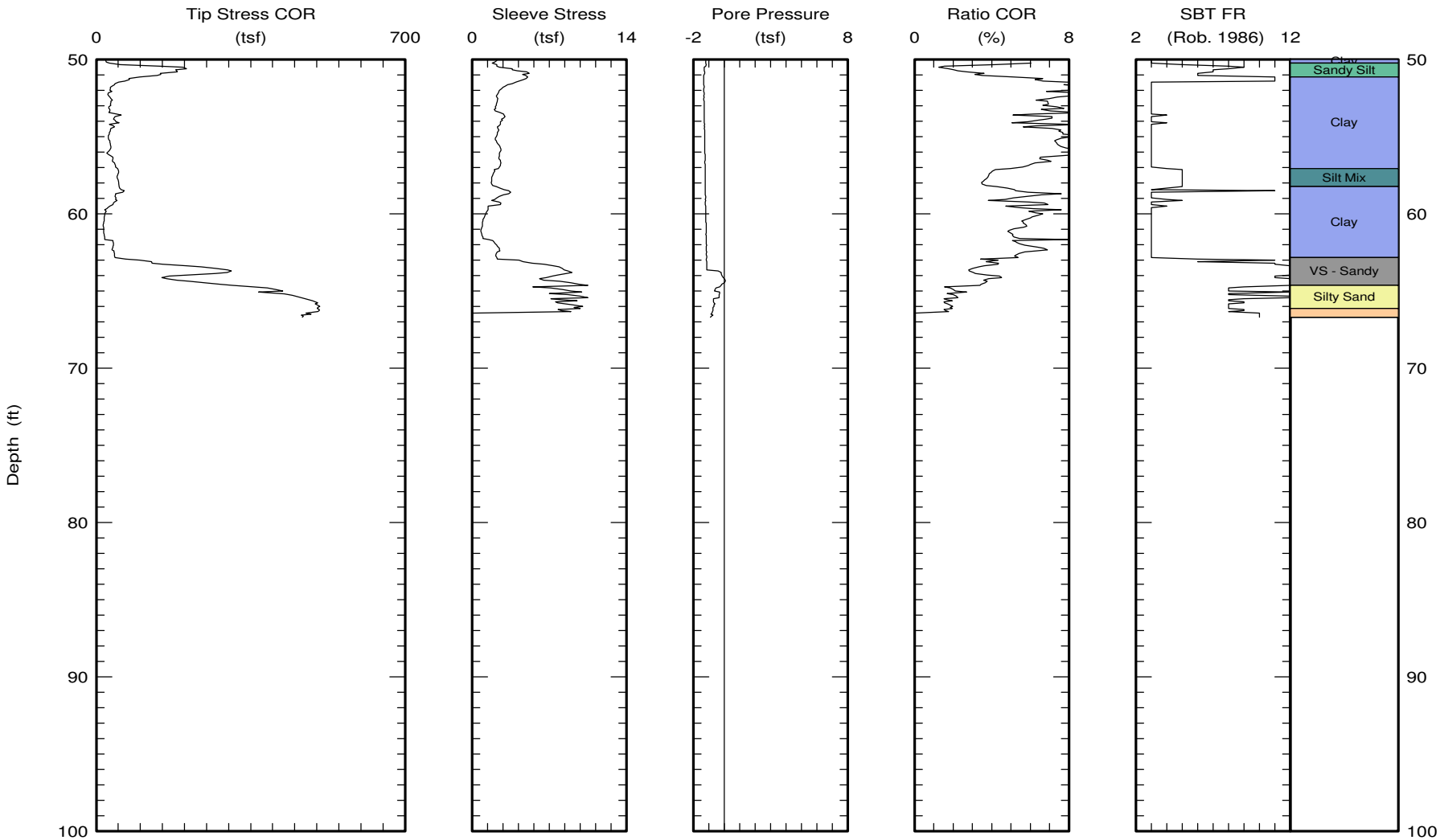
Date: 14/Feb/2011
Test ID: T1-C2
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension/Ave Of The Stars



Maximum depth: 66.73 (ft)

Kehoe Testing & Engineering Office: (714) 901-7270 Fax: (714) 901-7289 rich@kehoetesting.com www.kehoetesting.com	CPT Data 30 ton rig	Date: 14/Feb/2011 Test ID: T1-C2 Project: LosAngeles
	Customer: MACTEC Job Site: Westside Subway Extension/Ave Of The Stars	



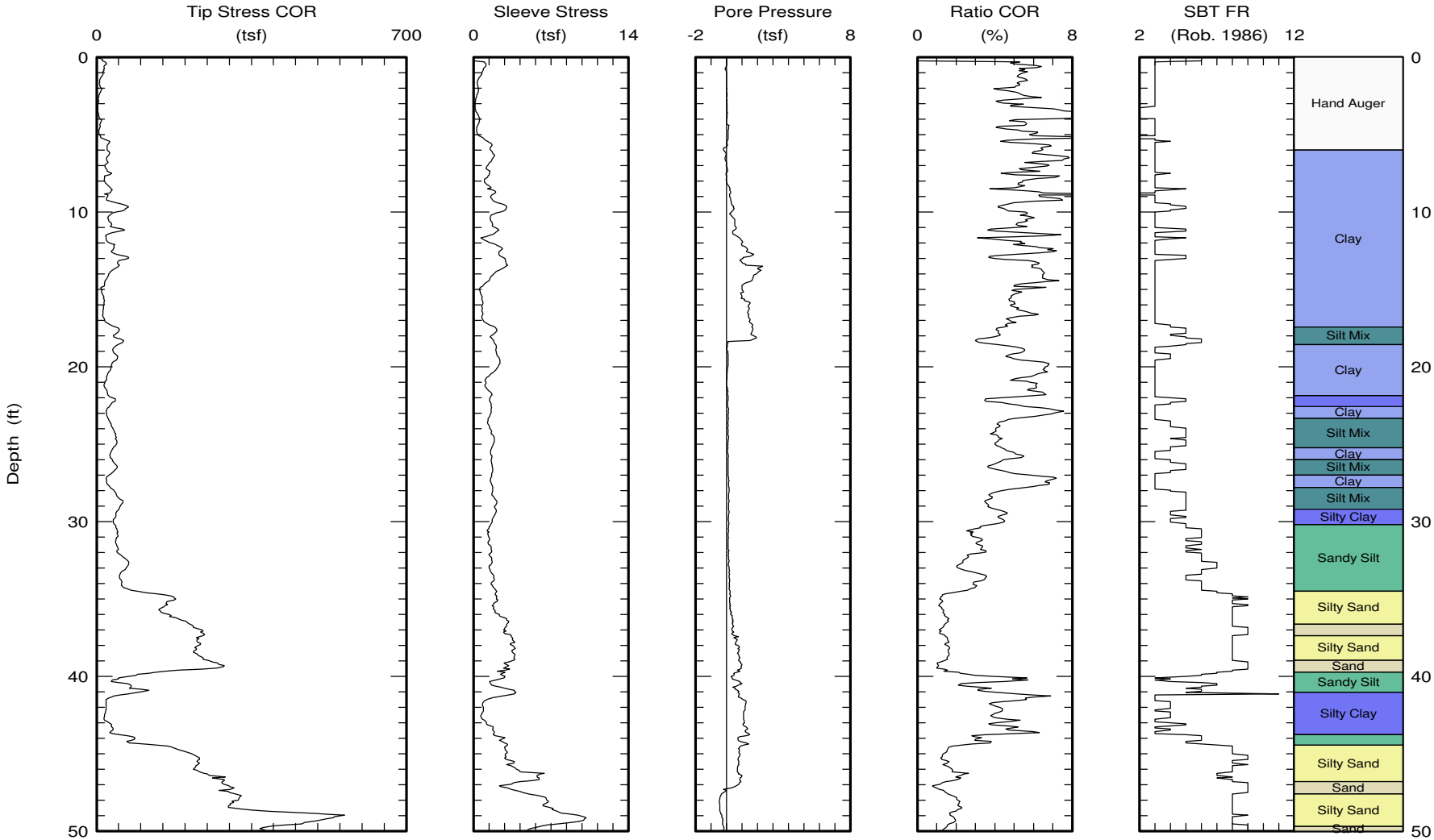
Maximum depth: 66.73 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 14/Feb/2011
Test ID: T1-C3
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension/Ave Of The Stars



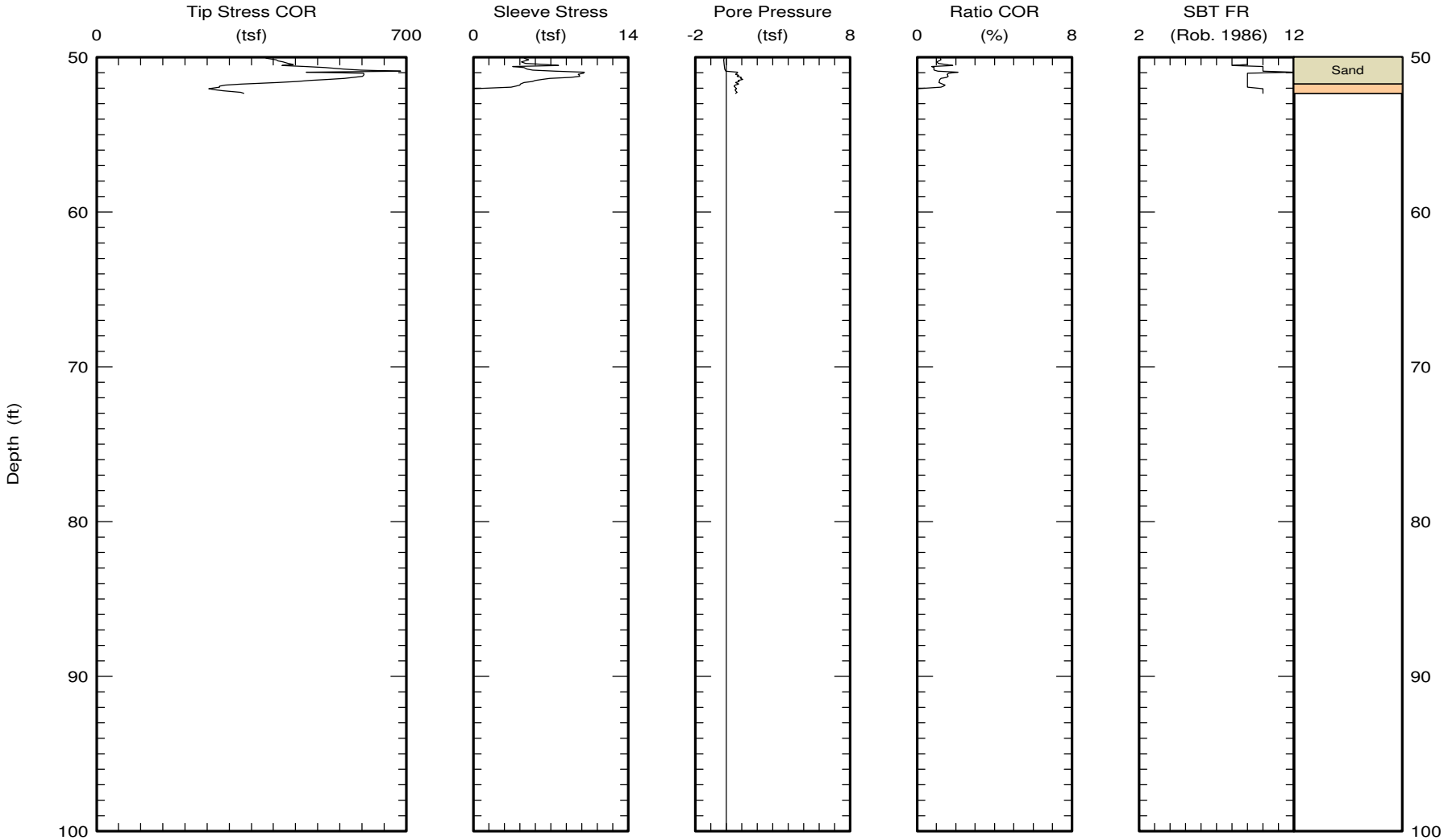
Maximum depth: 52.35 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 14/Feb/2011
Test ID: T1-C3
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension/Ave Of The Stars



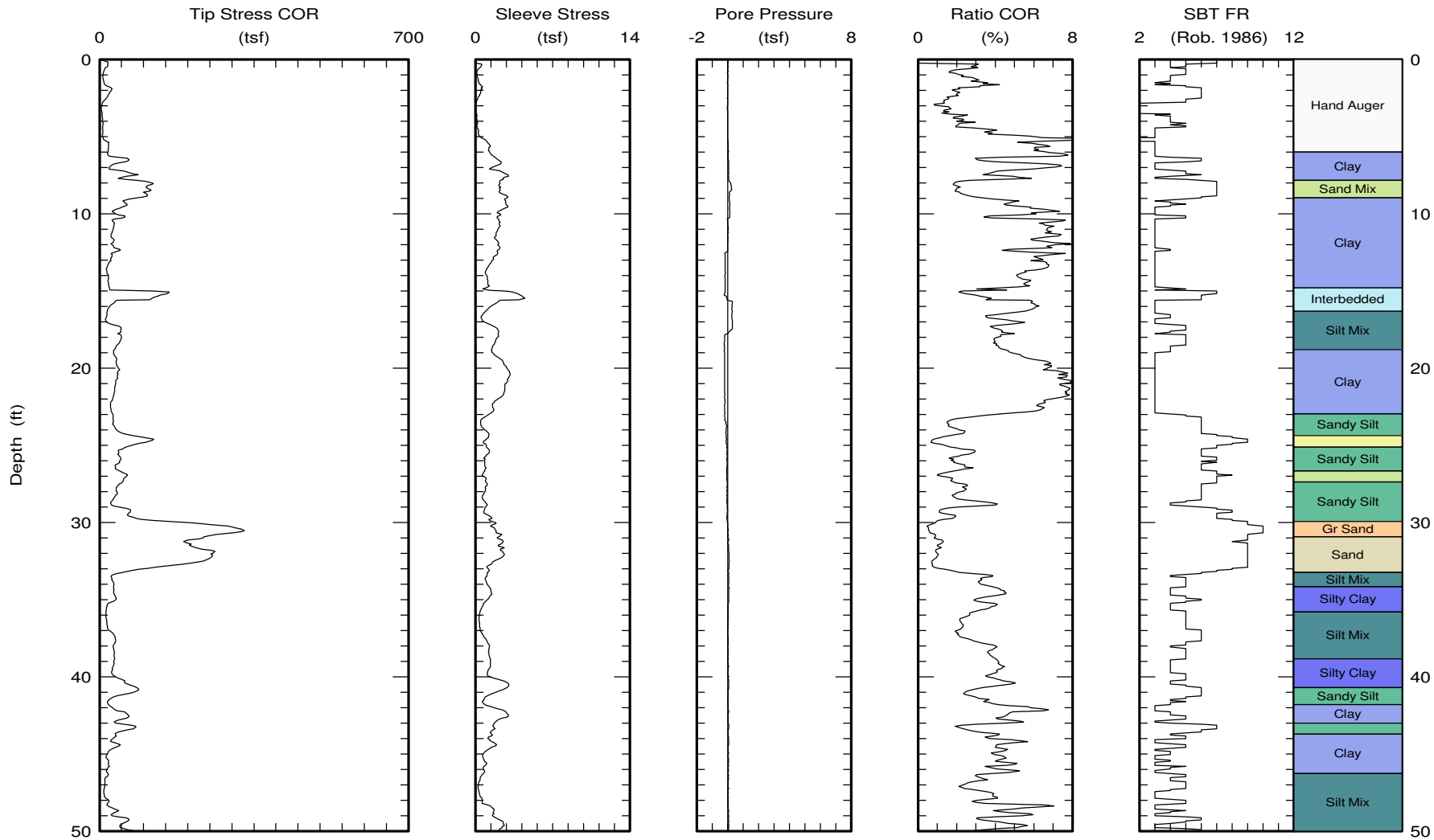
Maximum depth: 52.35 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 14/Feb/2011
Test ID: T1-C4
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension/Ave Of The Stars



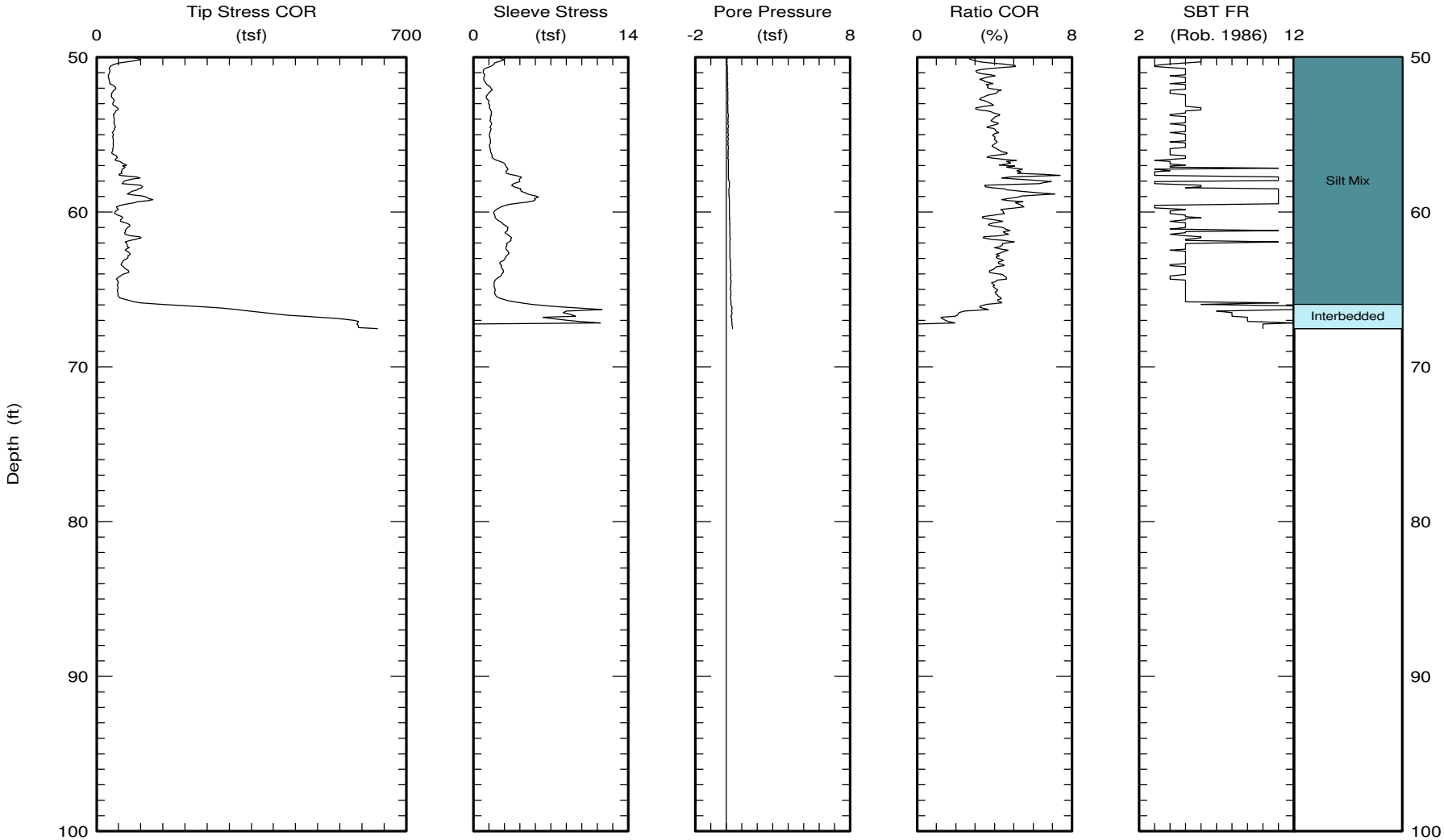
Maximum depth: 67.54 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 14/Feb/2011
Test ID: T1-C4
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension/Ave Of The Stars



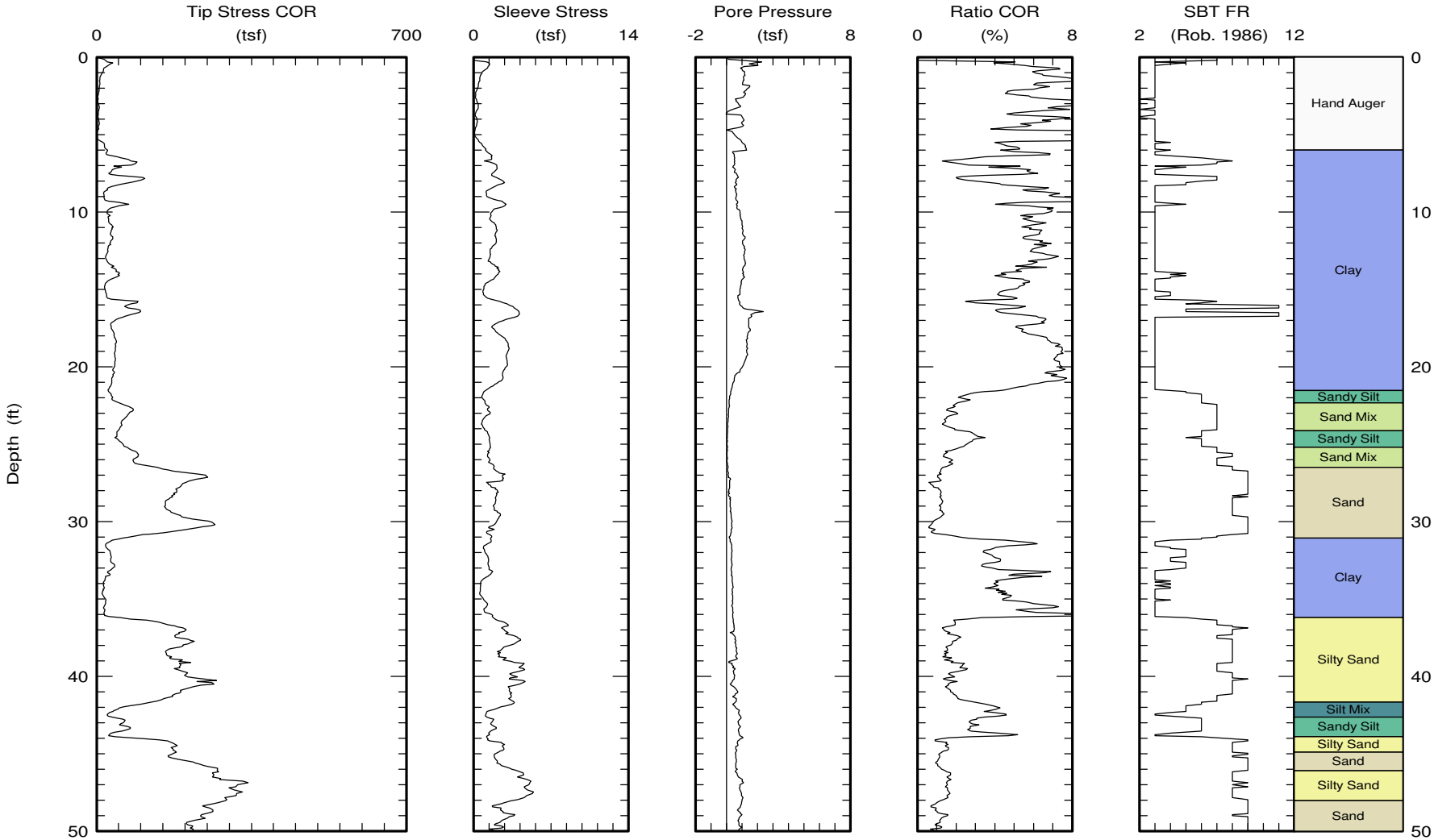
Maximum depth: 67.54 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 16/Feb/2011
Test ID: T1-C5
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension/Ave Of The Stars



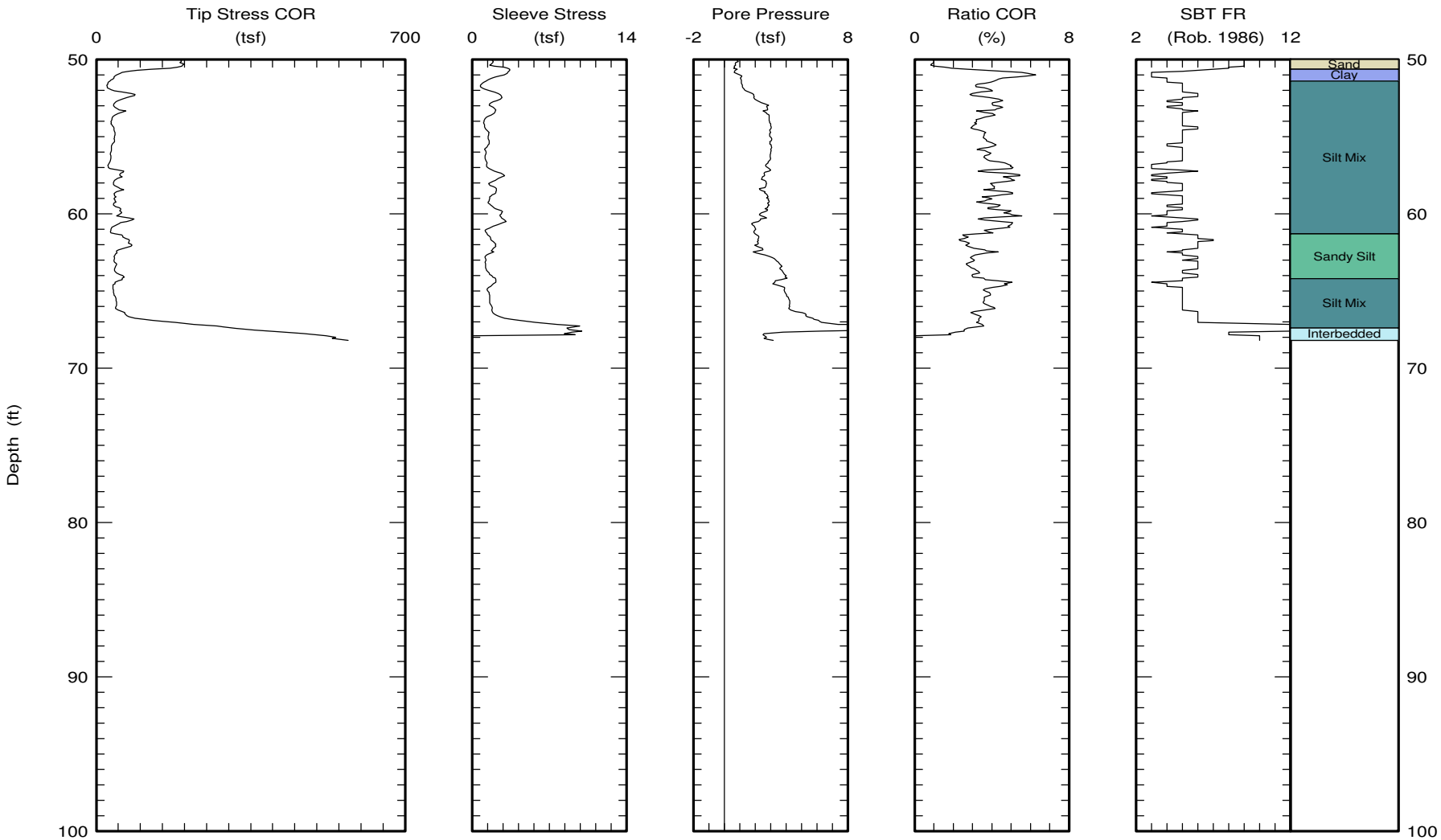
Maximum depth: 68.22 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 16/Feb/2011
Test ID: T1-C5
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension/Ave Of The Stars



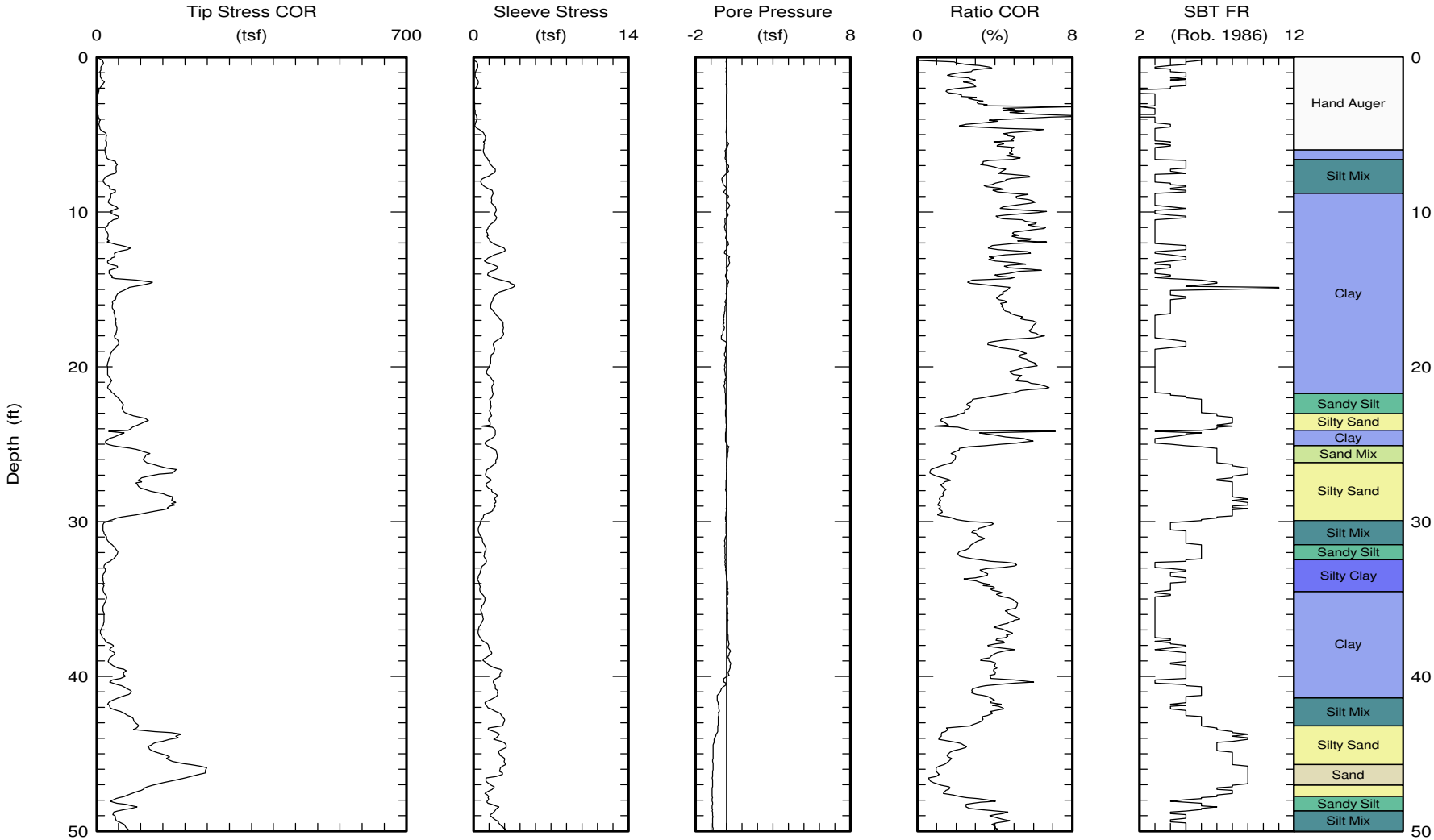
Maximum depth: 68.22 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 07/Mar/2011
Test ID: T1-C6
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension/Ave Of The Stars



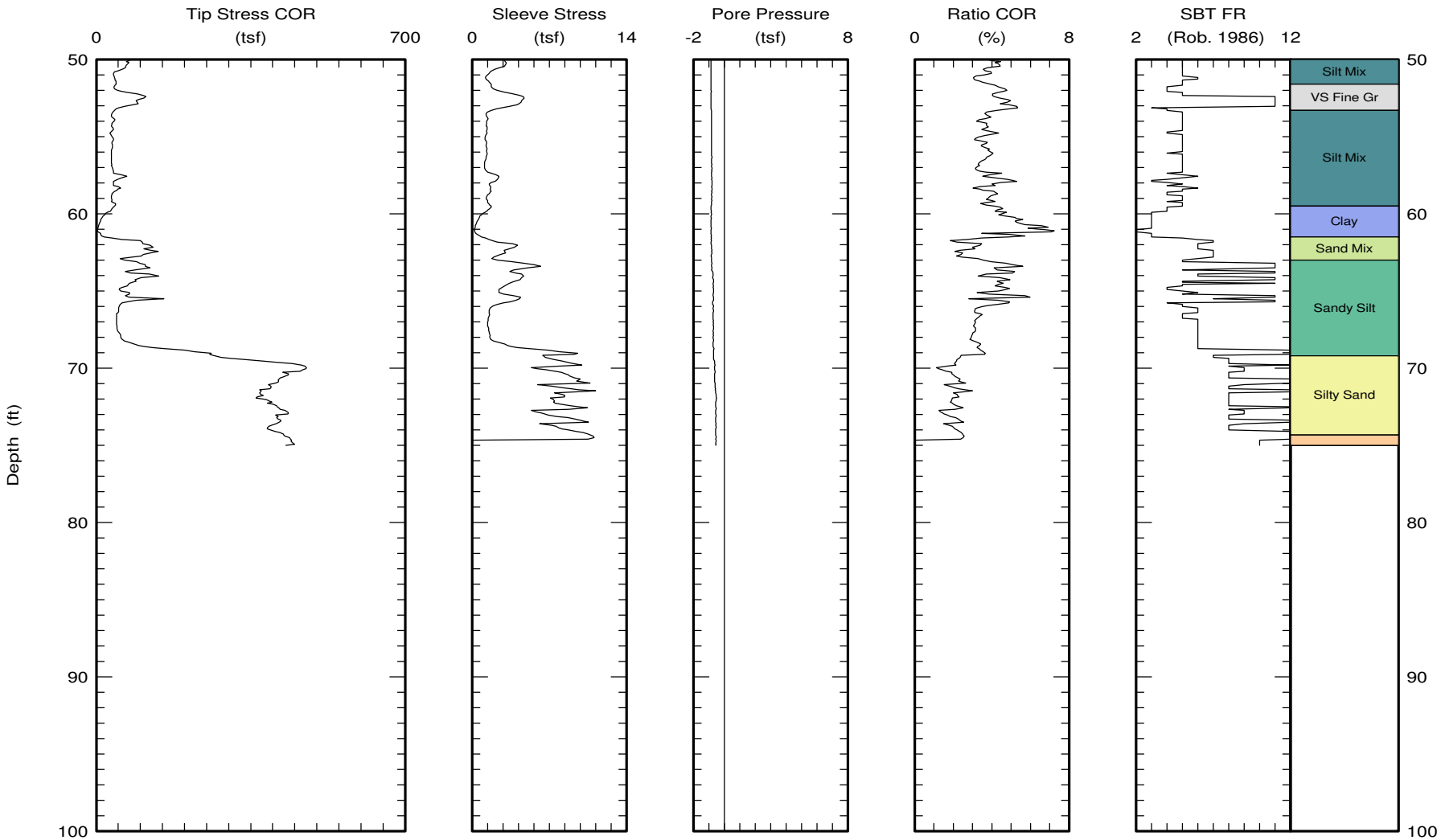
Maximum depth: 75.02 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 07/Mar/2011
Test ID: T1-C6
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension/Ave Of The Stars



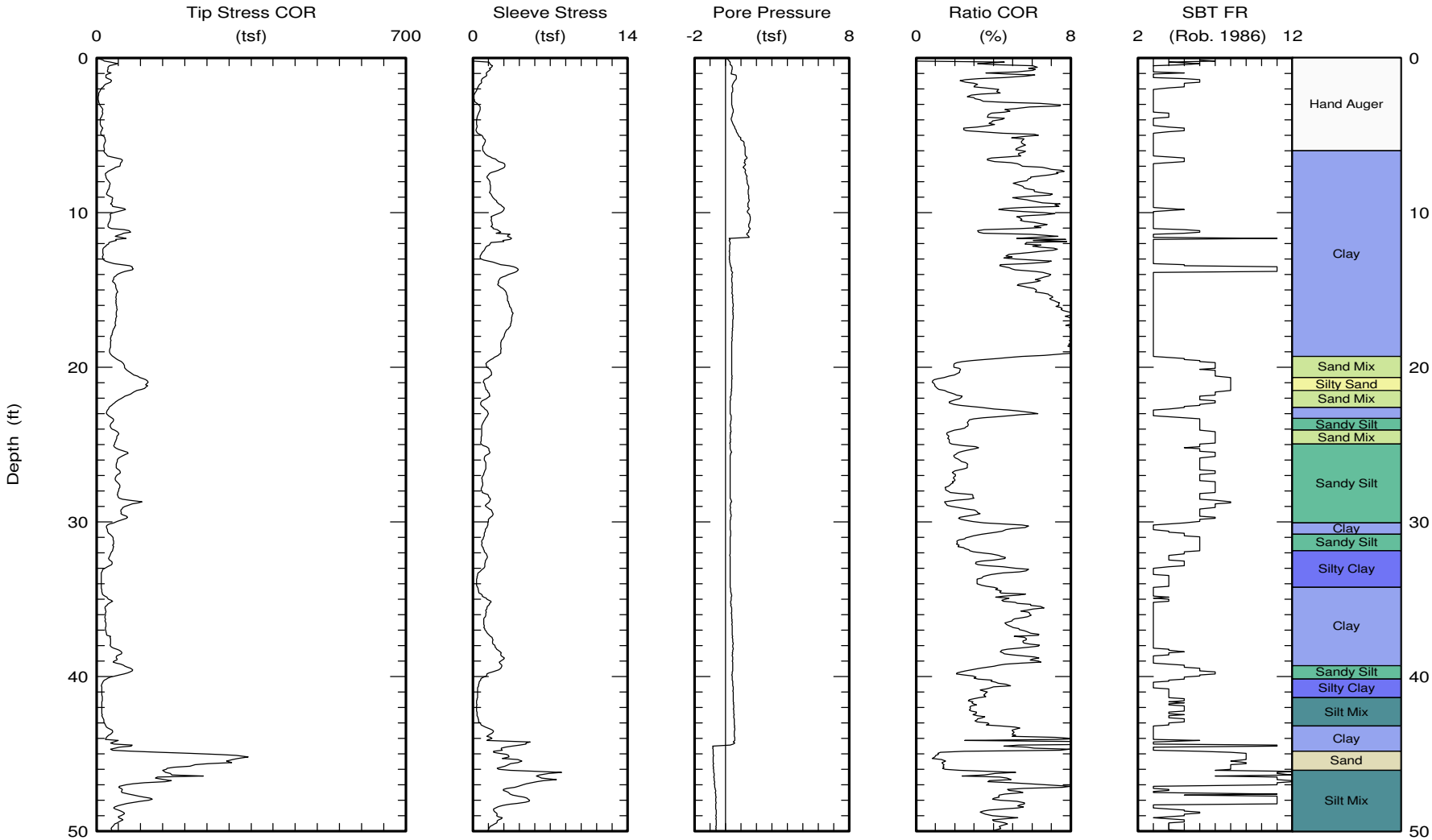
Maximum depth: 75.02 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 16/Feb/2011
Test ID: T1-C7
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension/Ave Of The Stars



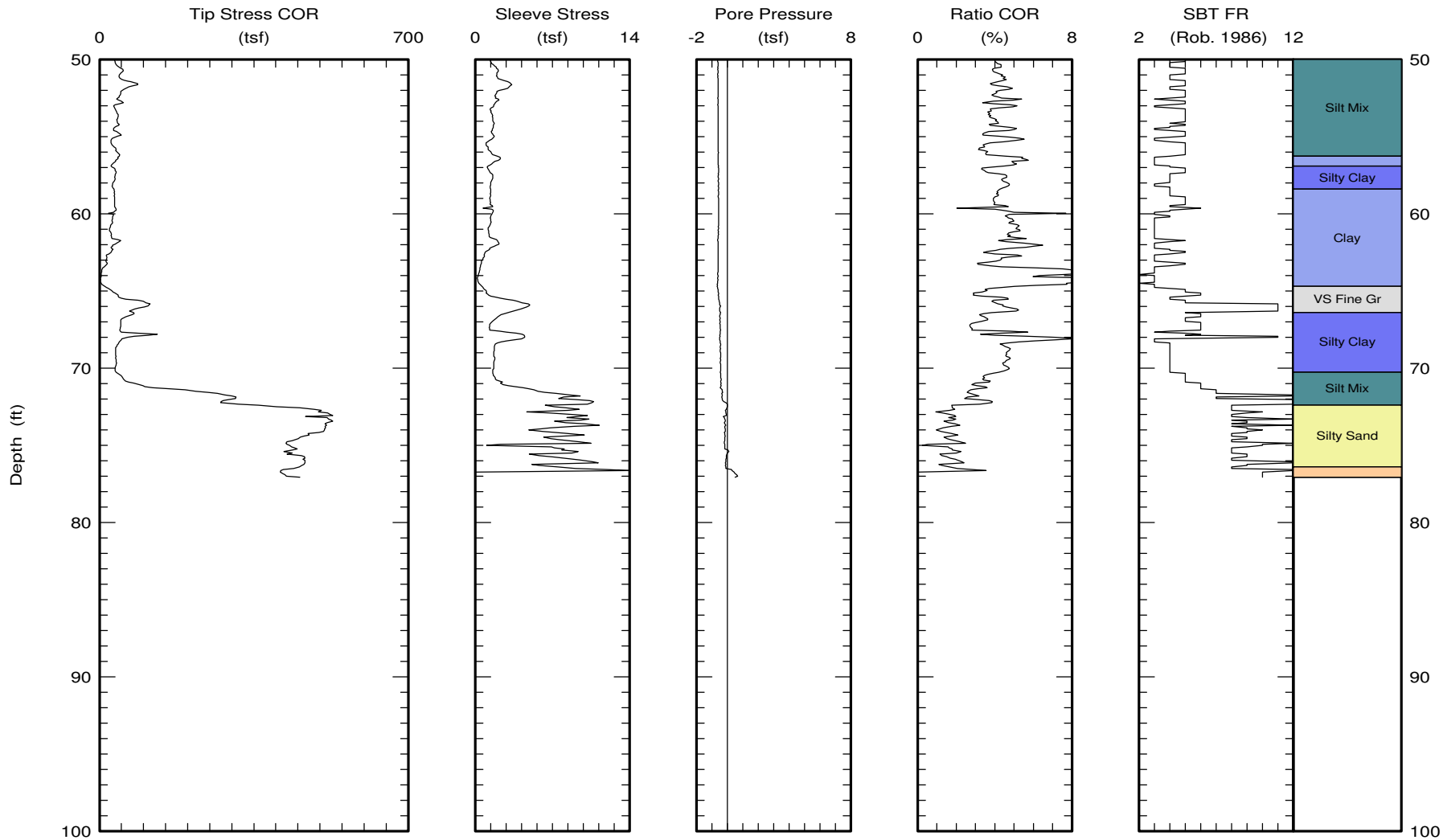
Maximum depth: 77.08 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 16/Feb/2011
Test ID: T1-C7
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension/Ave Of The Stars



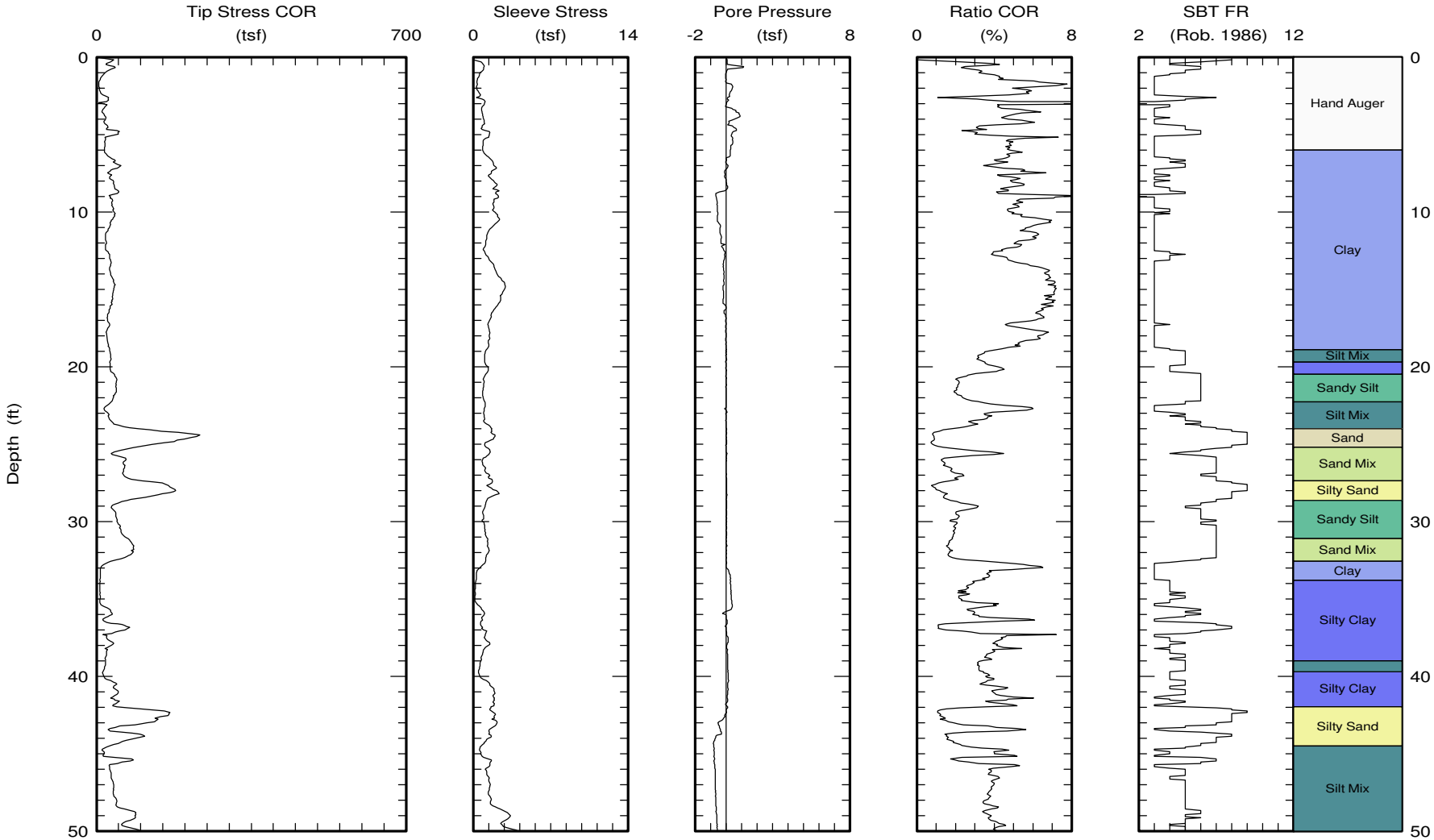
Maximum depth: 77.08 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 17/Feb/2011
Test ID: T1-C8
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension/Ave Of The Stars



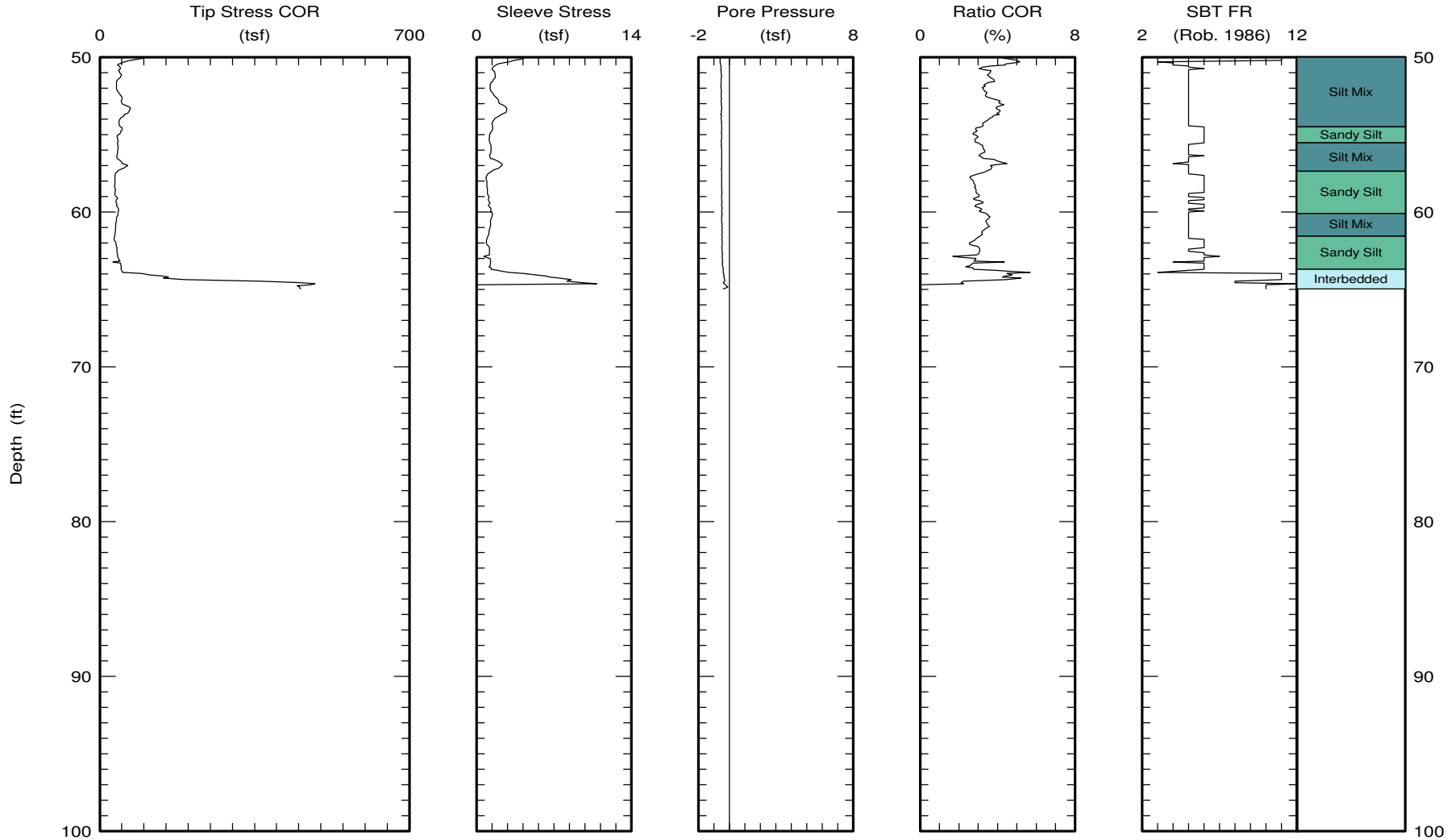
Maximum depth: 64.99 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 17/Feb/2011
Test ID: T1-C8
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension/Ave Of The Stars



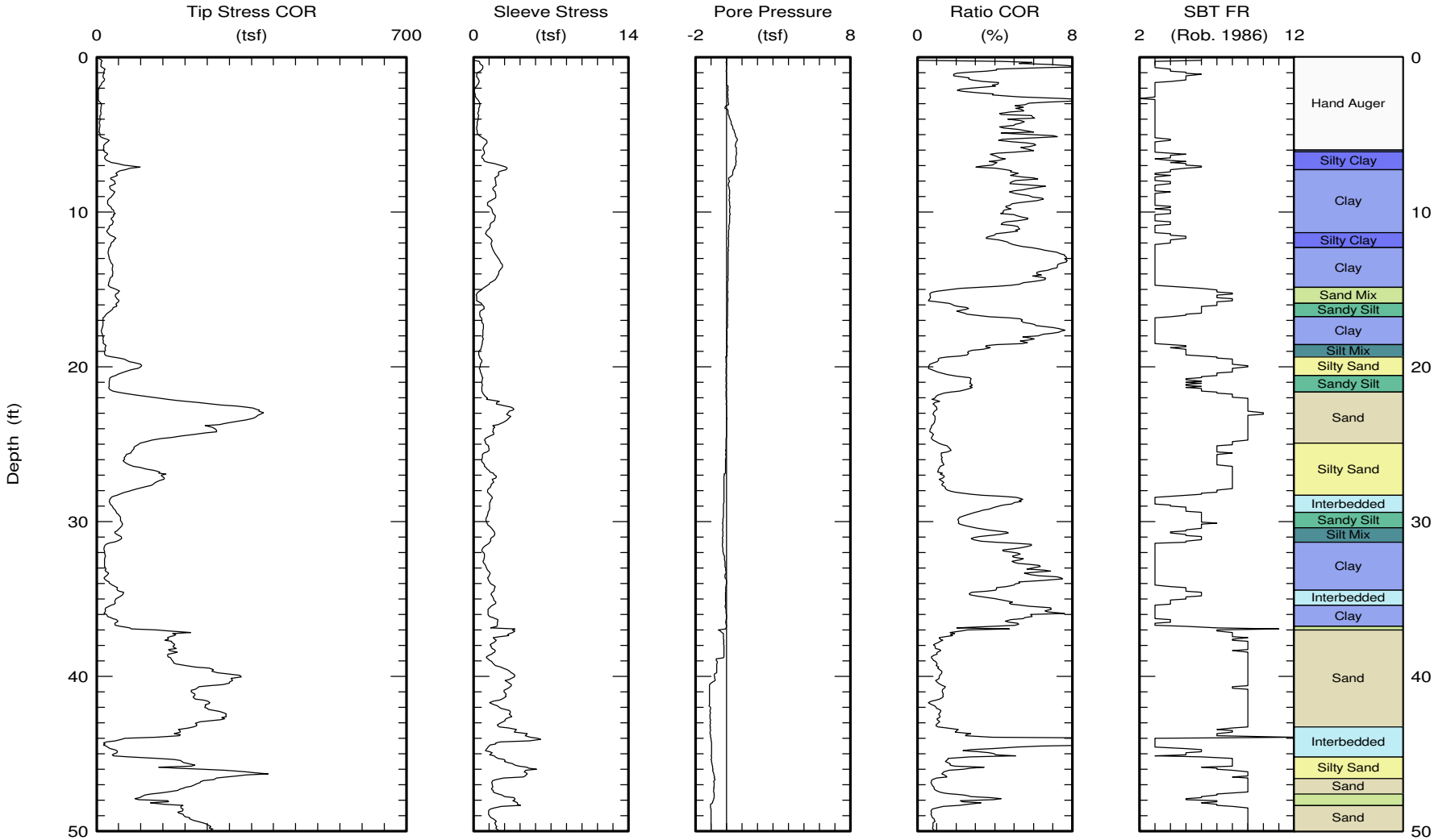
Maximum depth: 64.99 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

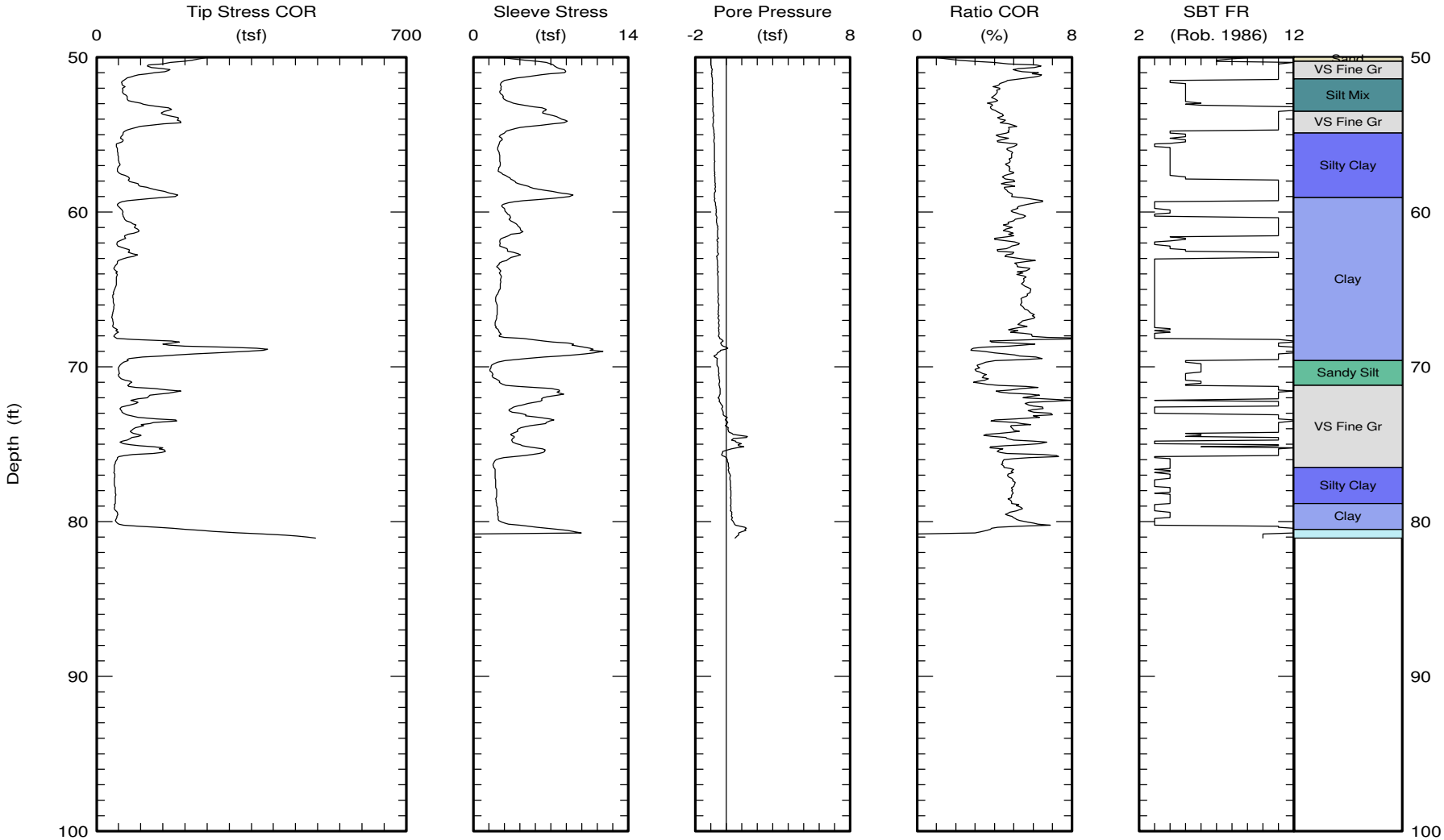
Date: 16/Feb/2011
Test ID: T1-C9
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension/Ave Of The Stars



Maximum depth: 81.09 (ft)

Kehoe Testing & Engineering Office: (714) 901-7270 Fax: (714) 901-7289 rich@kehoetesting.com www.kehoetesting.com	CPT Data 30 ton rig	Date: 16/Feb/2011 Test ID: T1-C9 Project: LosAngeles
	Customer: MACTEC Job Site: Westside Subway Extension/Ave Of The Stars	



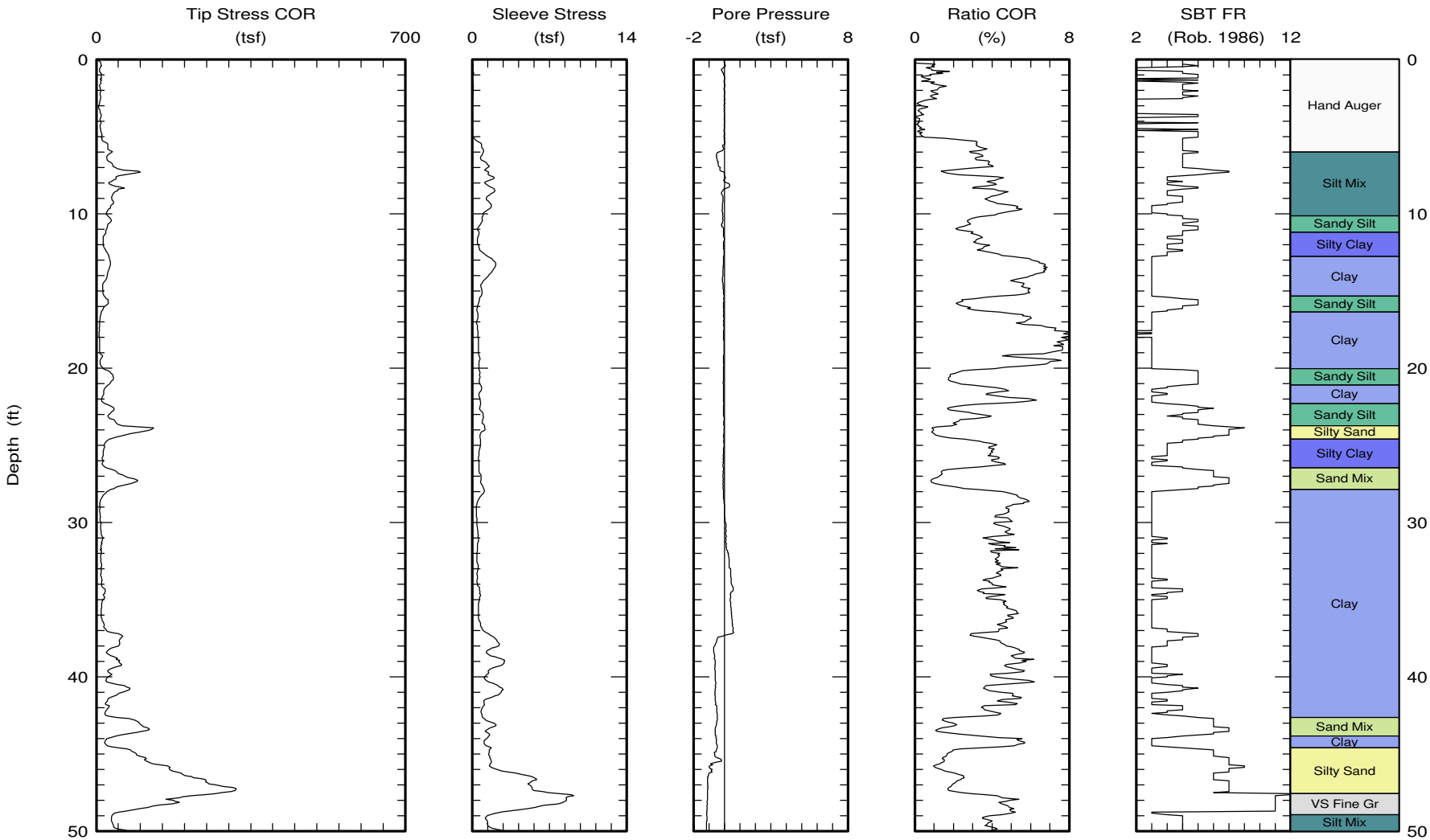
Maximum depth: 81.09 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 16/Feb/2011
Test ID: T1-C10
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension/Ave Of The Stars



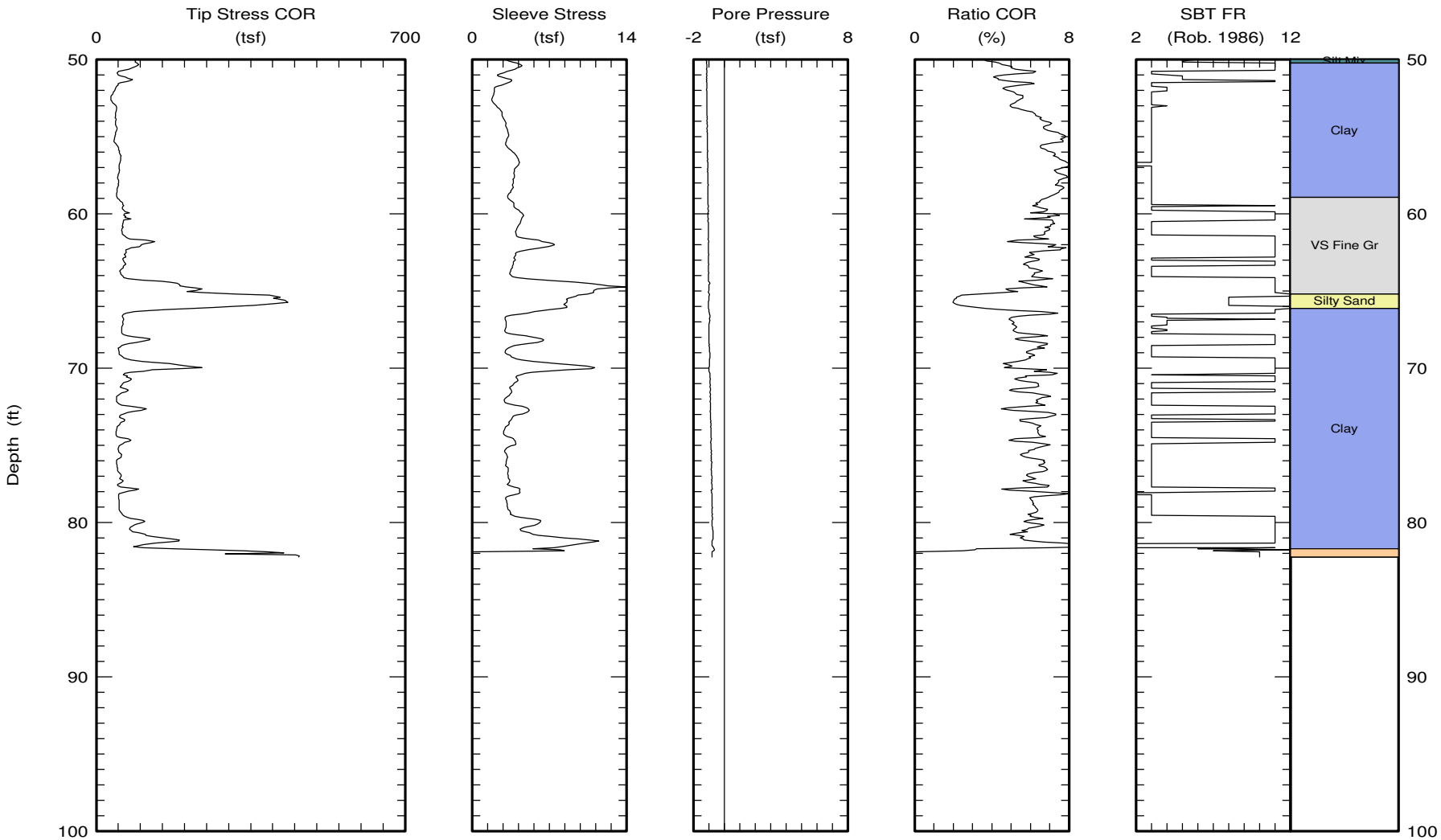
Maximum depth: 82.25 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 16/Feb/2011
Test ID: T1-C10
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension/Ave Of The Stars



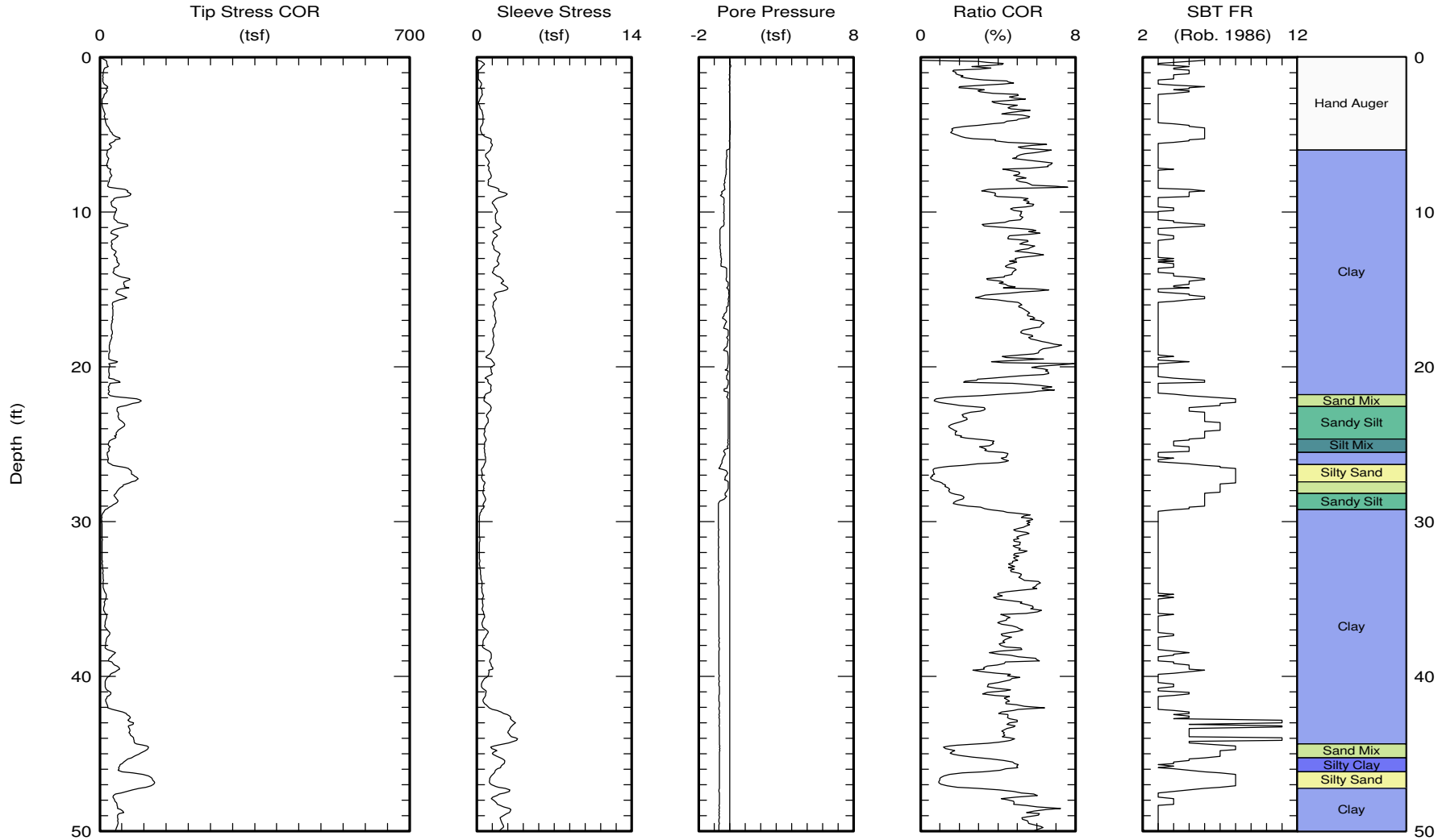
Maximum depth: 82.25 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 15/Feb/2011
Test ID: T1-C12
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension/Ave Of The Stars



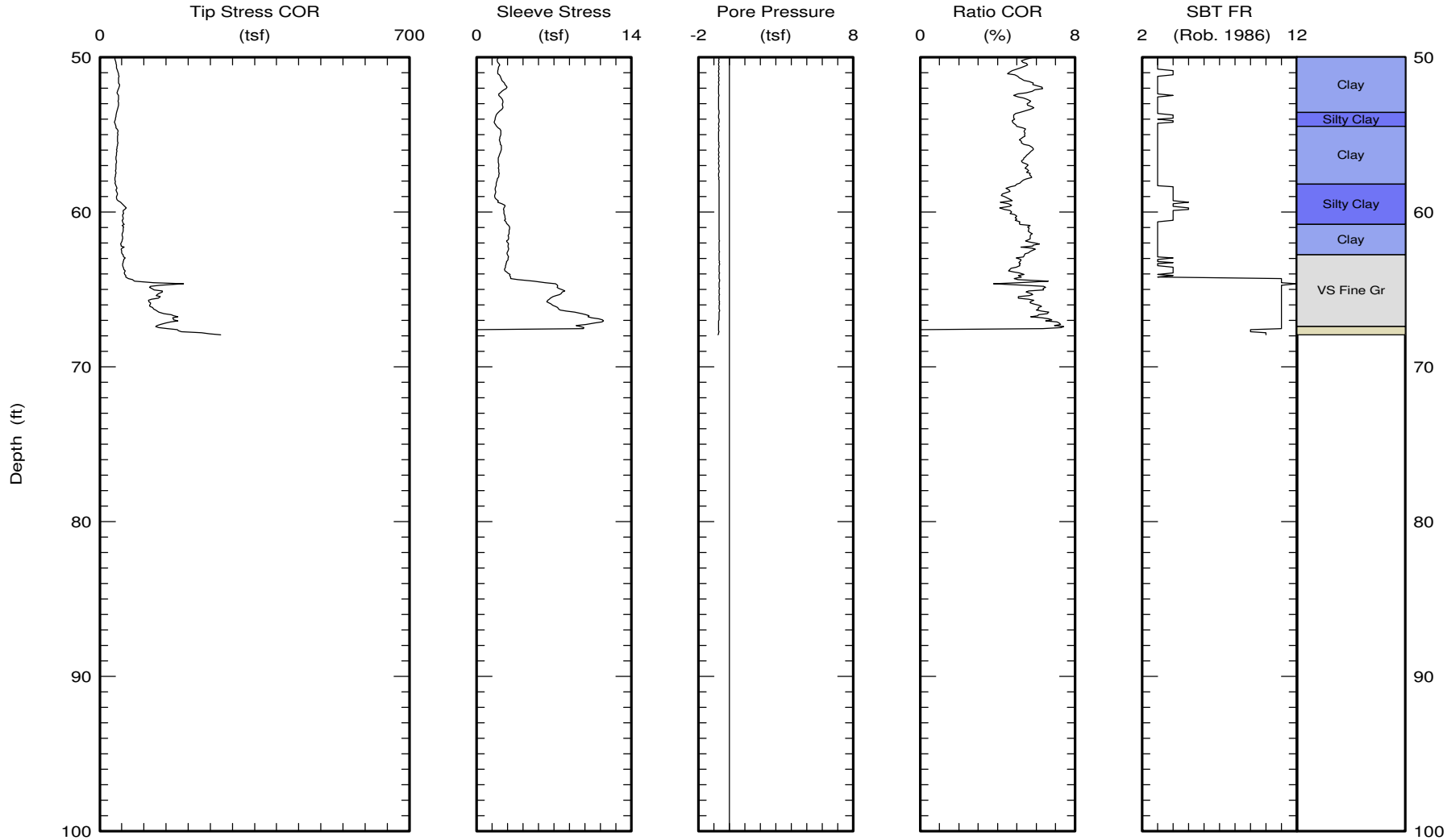
Maximum depth: 67.96 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 15/Feb/2011
Test ID: T1-C12
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension/Ave Of The Stars



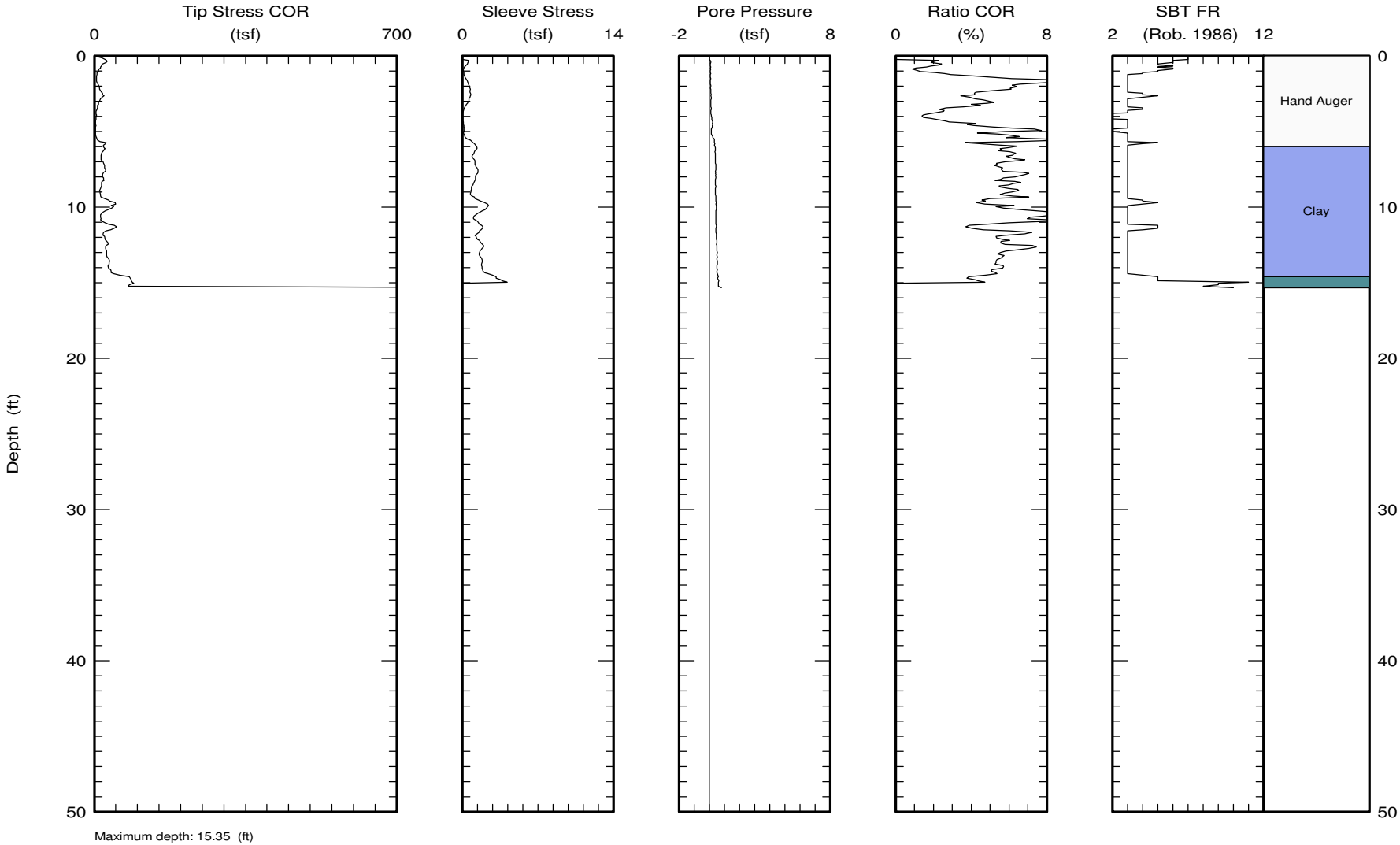
Maximum depth: 67.96 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 15/Feb/2011
Test ID: T1-C13
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension/Ave Of The Stars



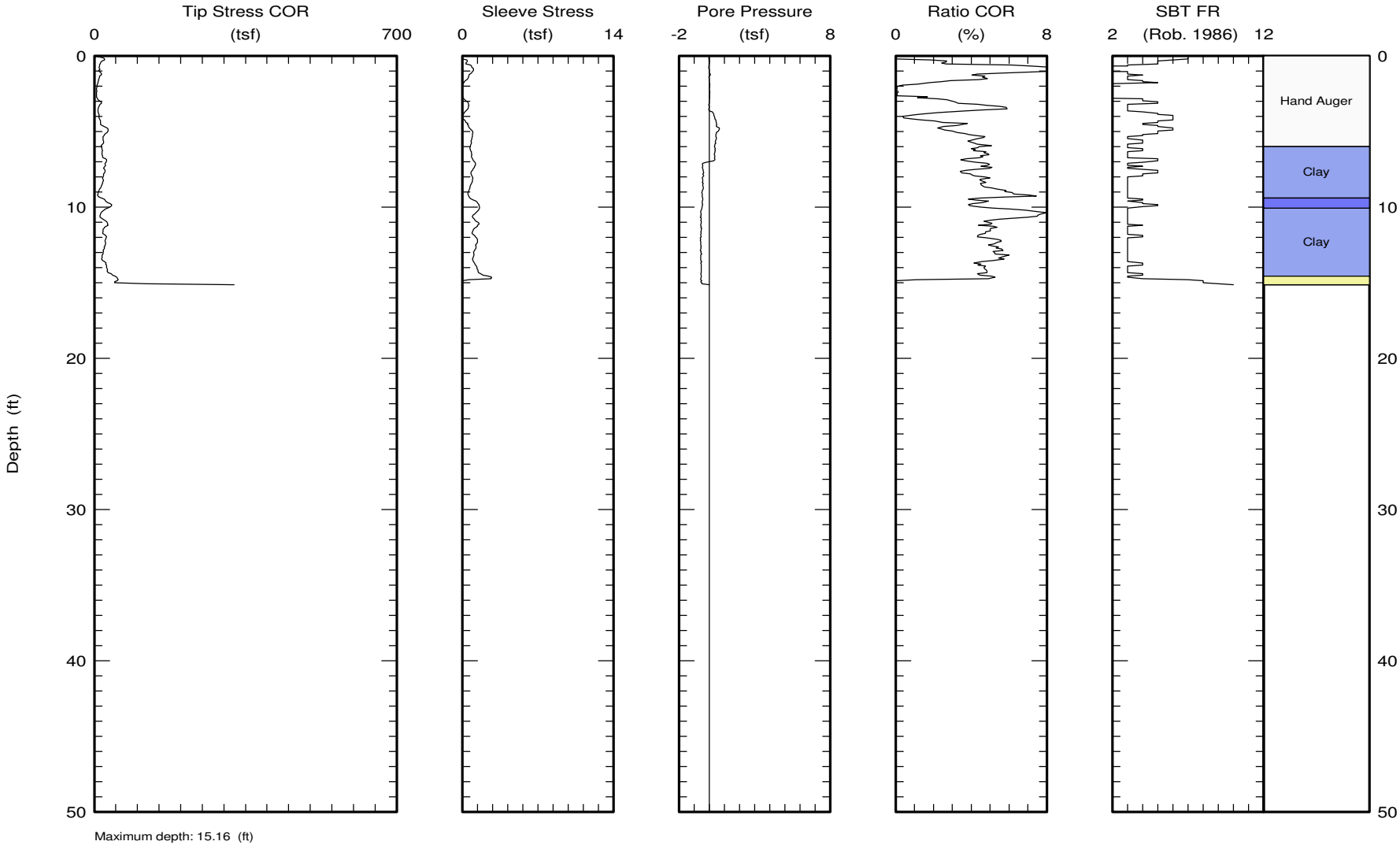
Maximum depth: 15.35 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 17/Feb/2011
Test ID: T1-C13C
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension/Ave Of The Stars



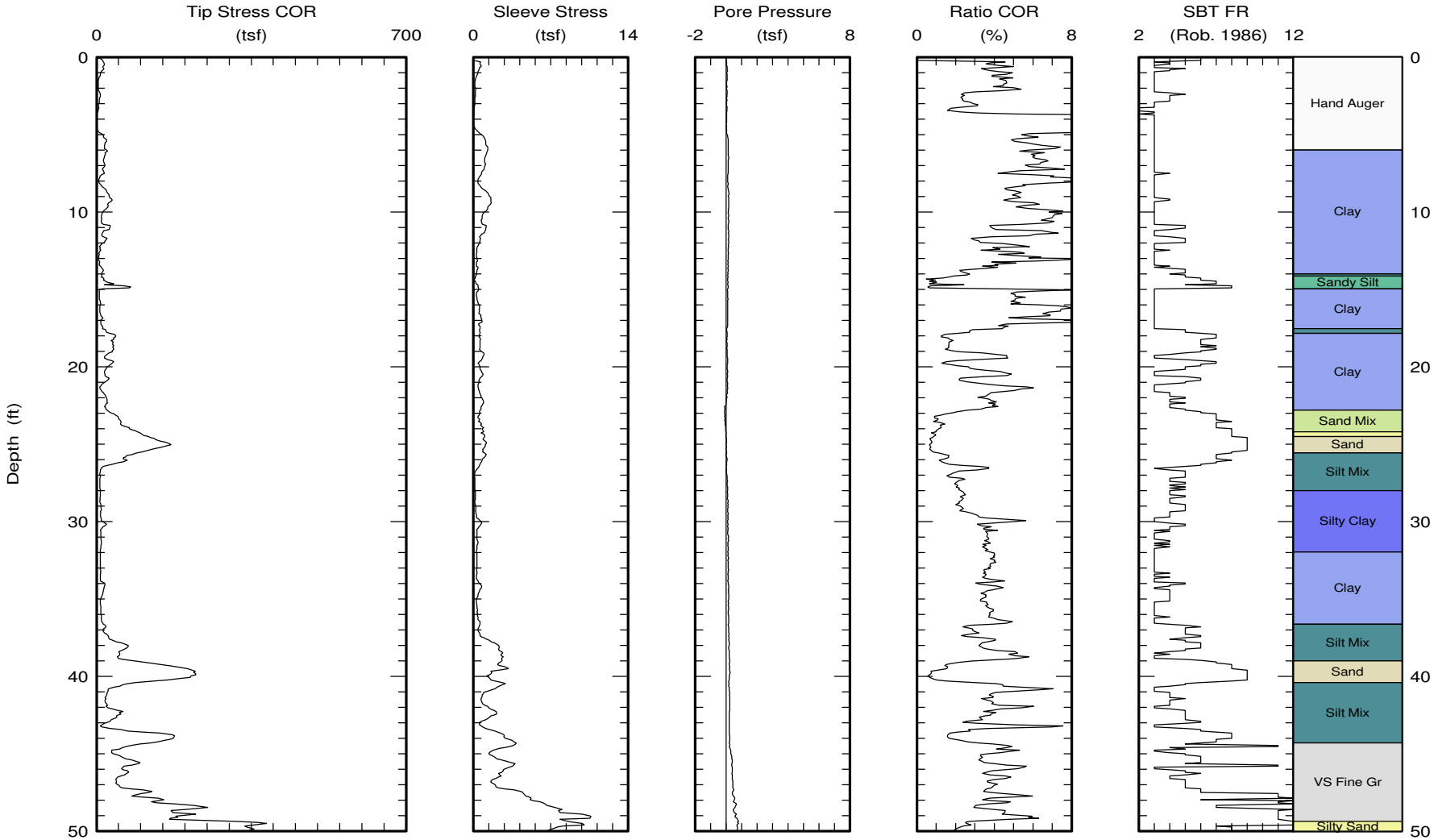
Maximum depth: 15.16 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 15/Feb/2011
Test ID: T1-C14
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension/Ave Of The Stars



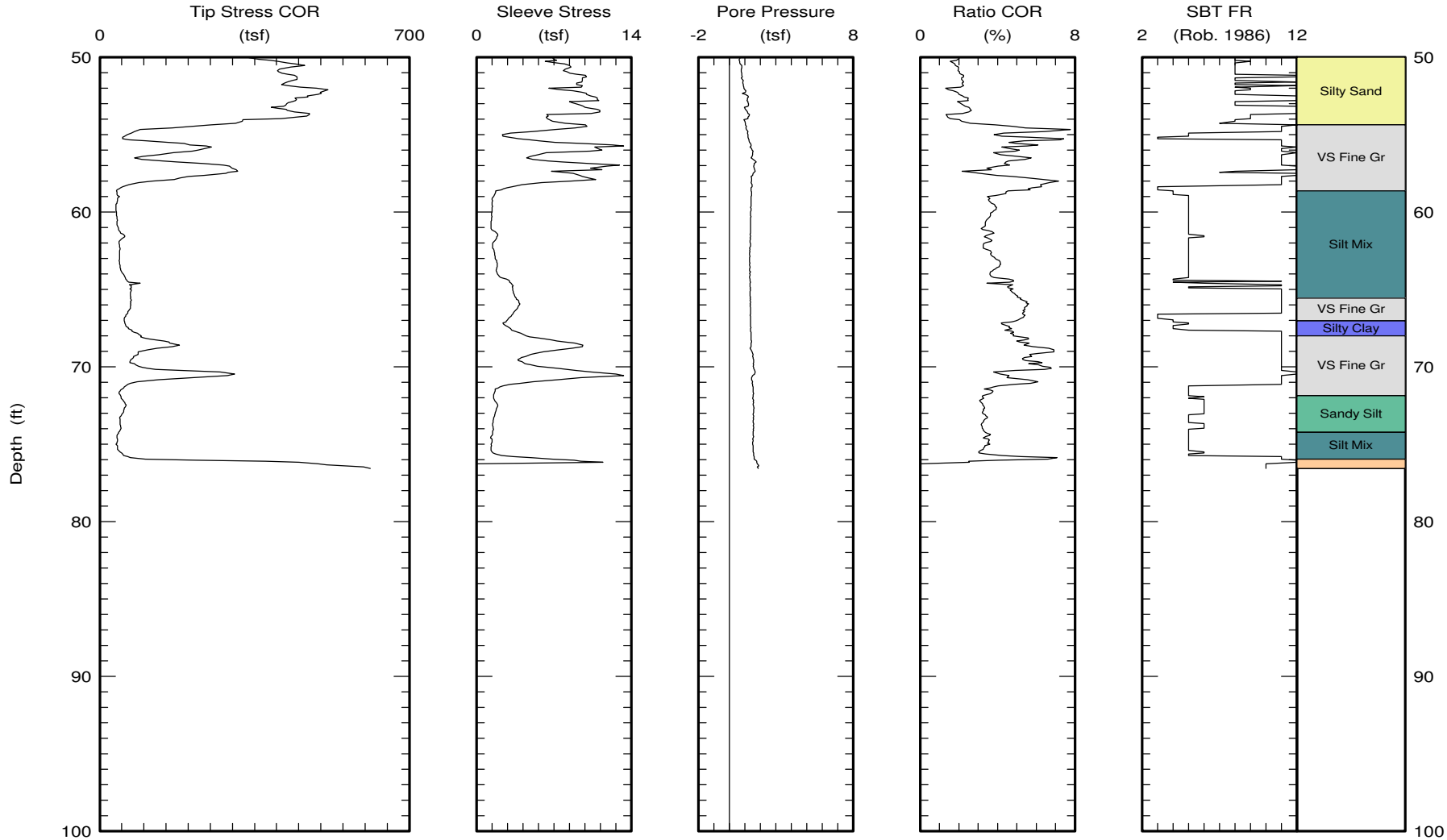
Maximum depth: 76.57 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 15/Feb/2011
Test ID: T1-C14
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension/Ave Of The Stars



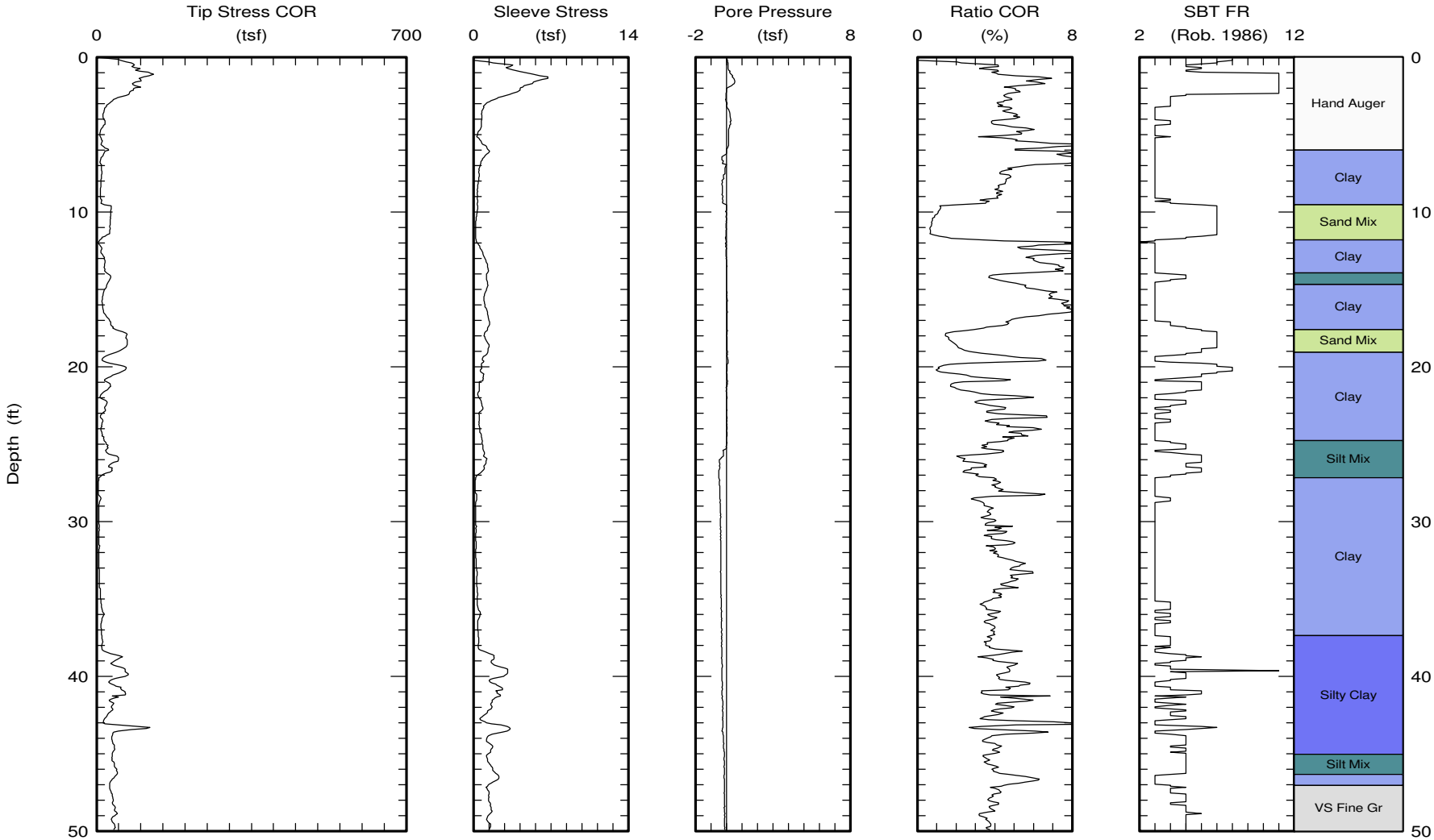
Maximum depth: 76.57 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 17/Feb/2011
Test ID: T1-C15
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension/Ave Of The Stars



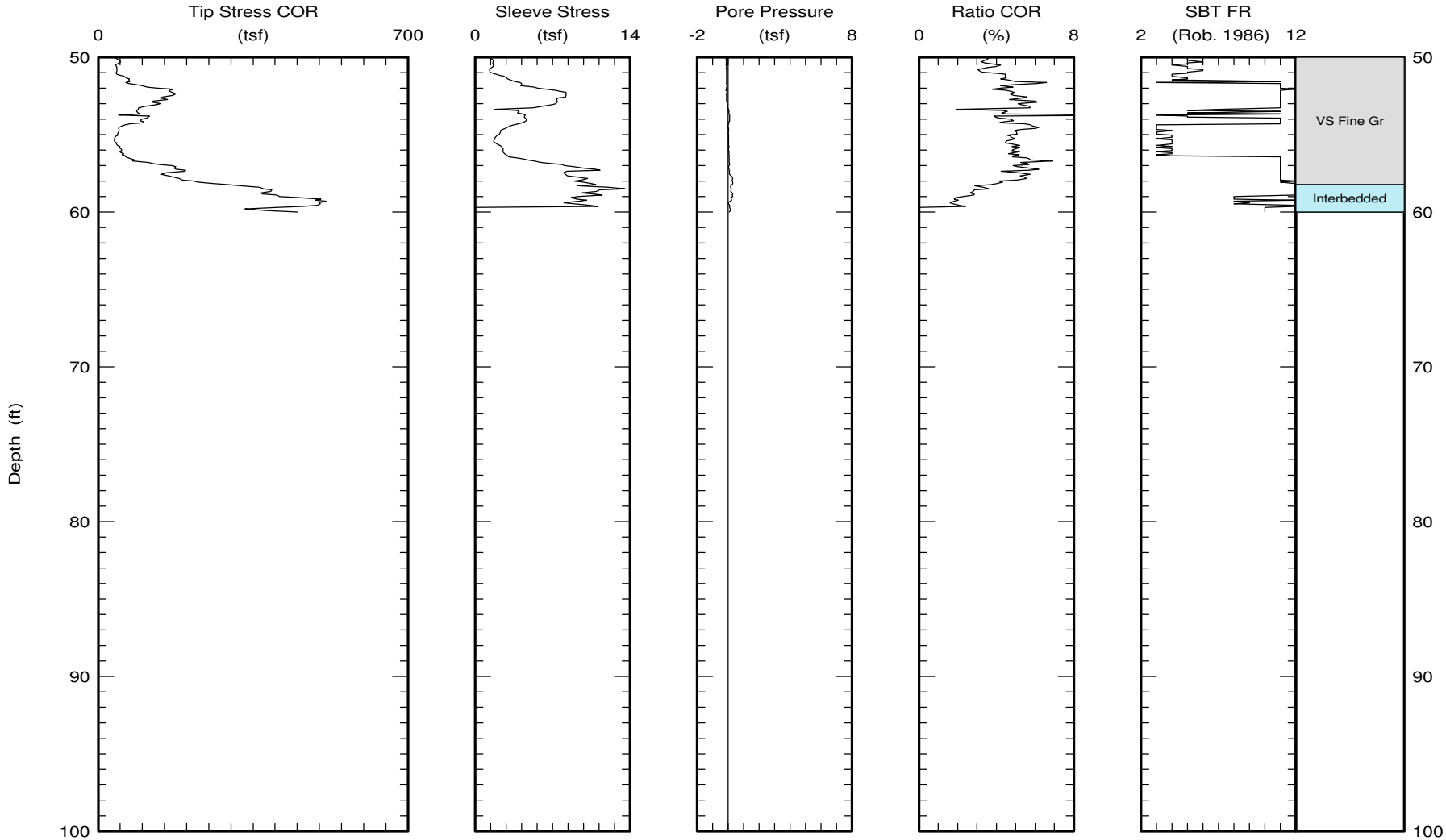
Maximum depth: 60.01 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 17/Feb/2011
Test ID: T1-C15
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension/Ave Of The Stars



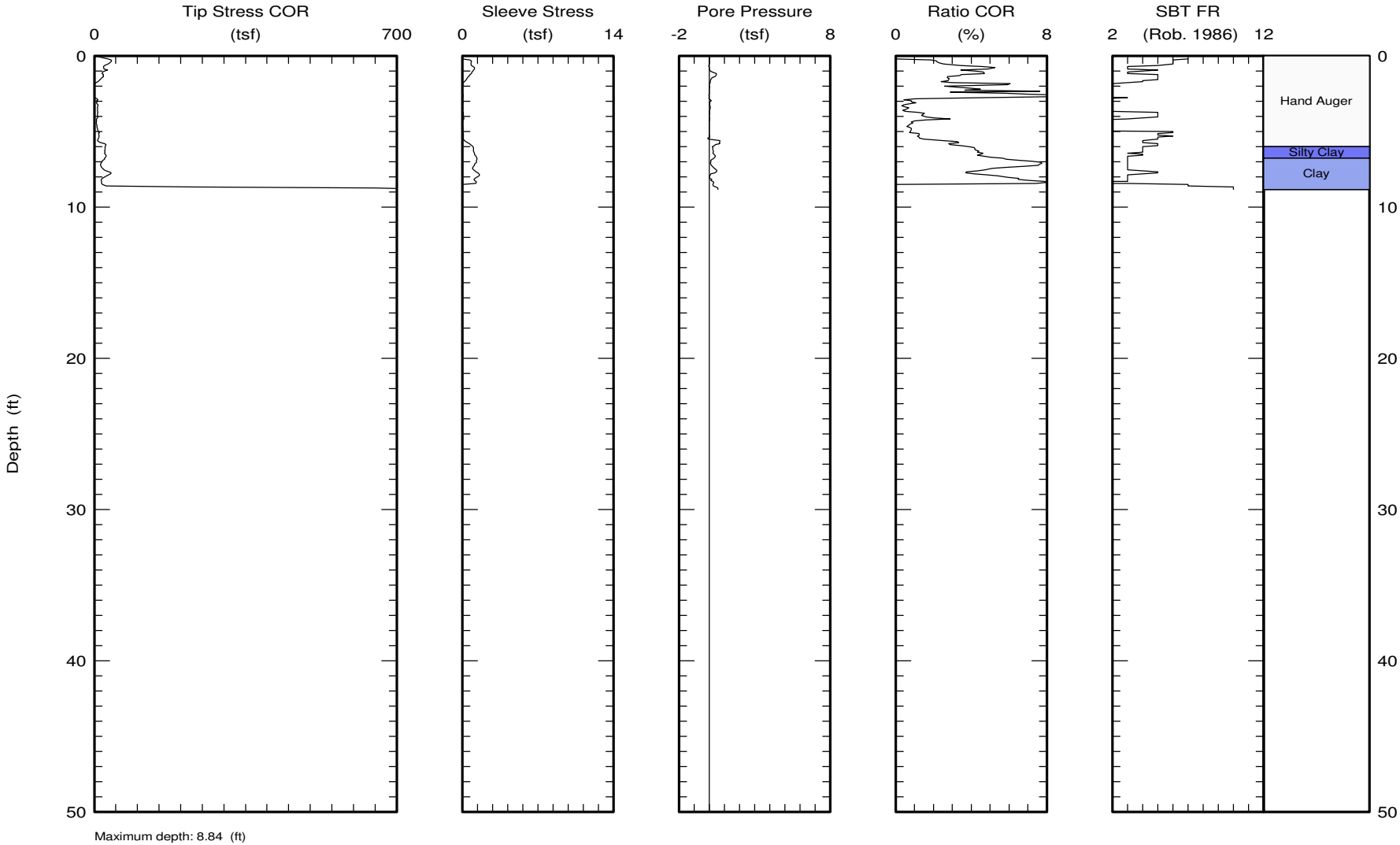
Maximum depth: 60.01 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 04/Mar/2011
Test ID: T1-C16
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension/Century Park



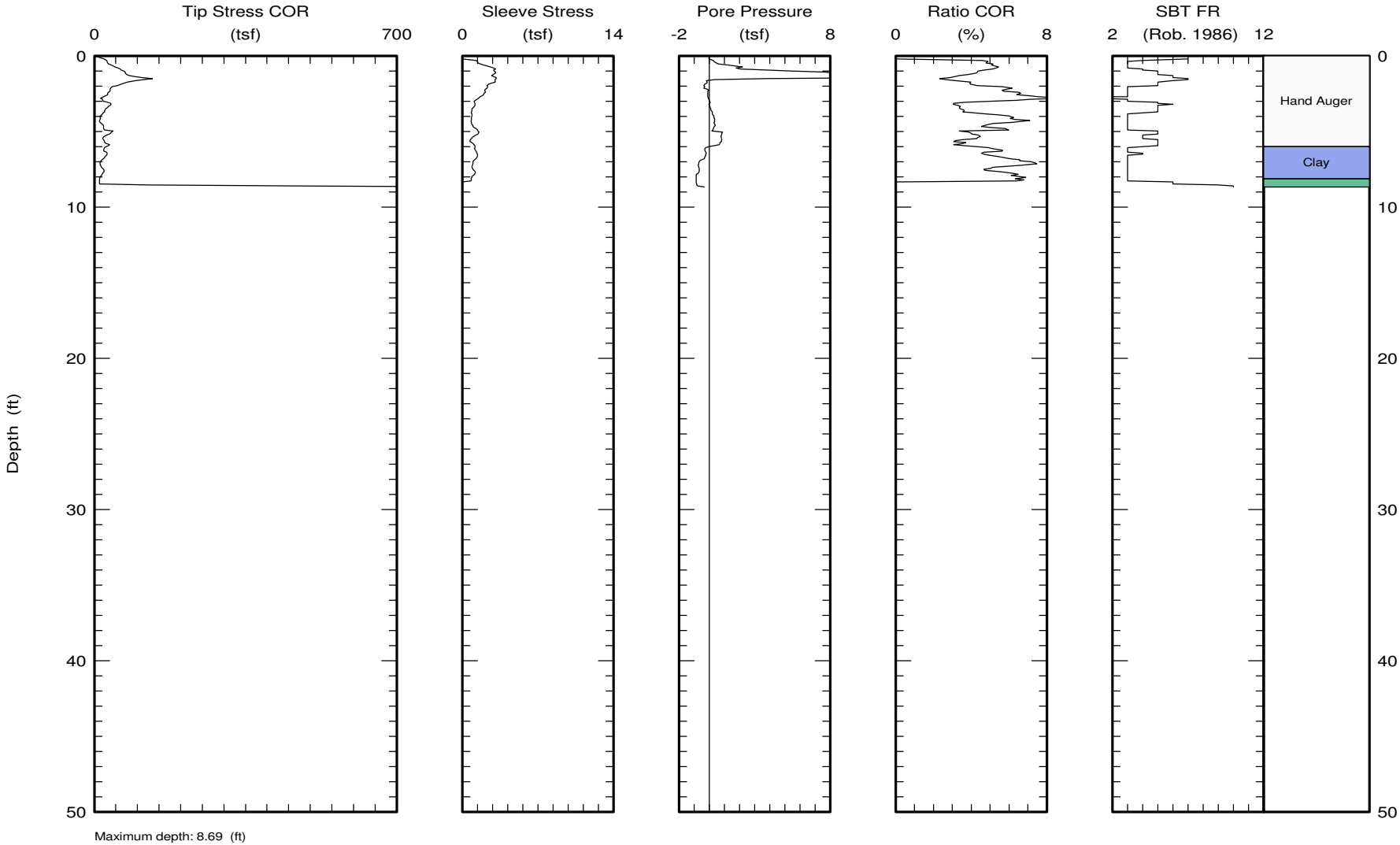
Maximum depth: 8.84 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 10/Mar/2011
Test ID: T1-C16B
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension/Ave Of The Stars



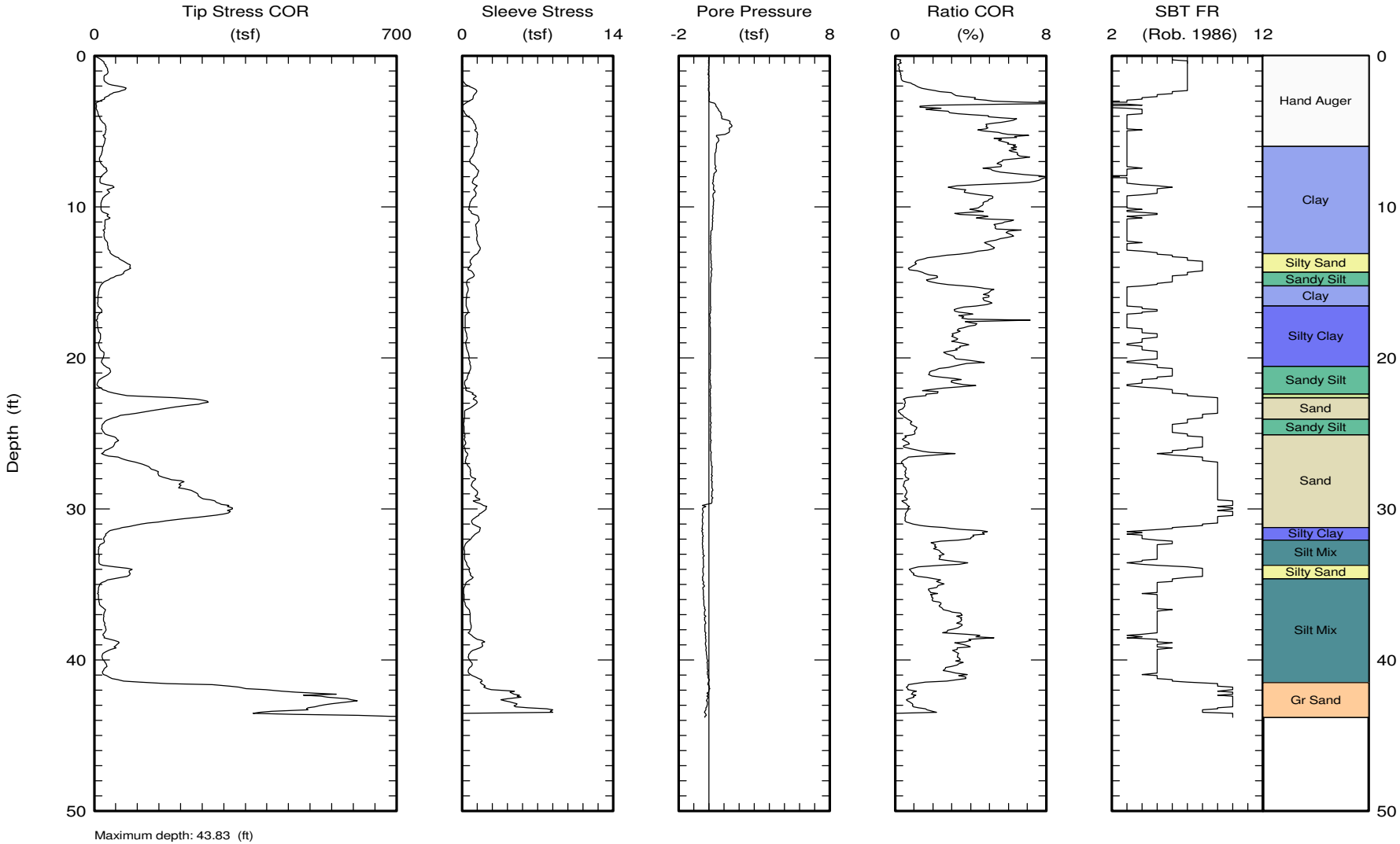
Maximum depth: 8.69 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 04/Mar/2011
Test ID: T1-C17
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension/Century Park



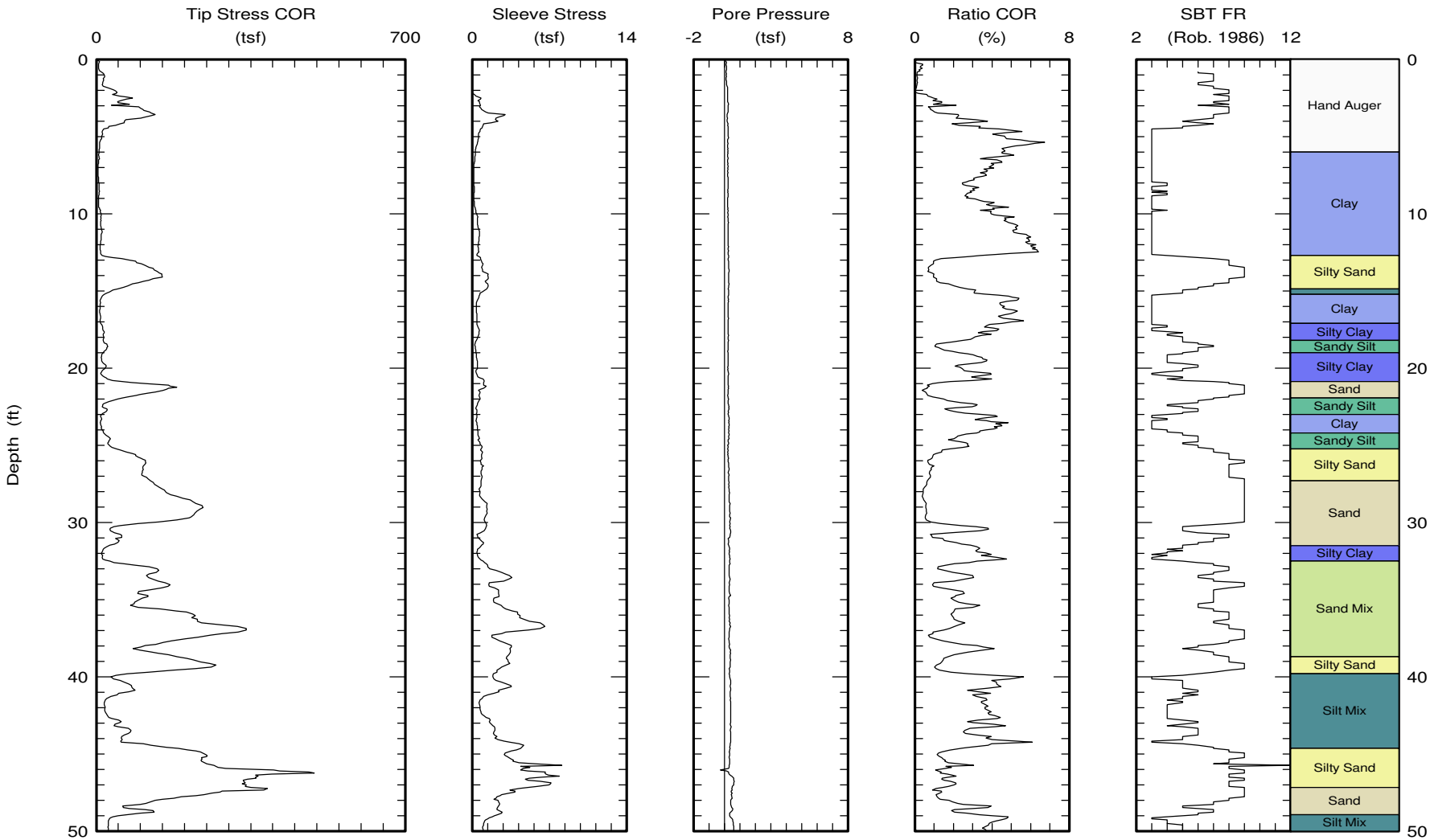
Maximum depth: 43.83 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 03/Mar/2011
Test ID: T1-C18
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension/Ave Of The Stars



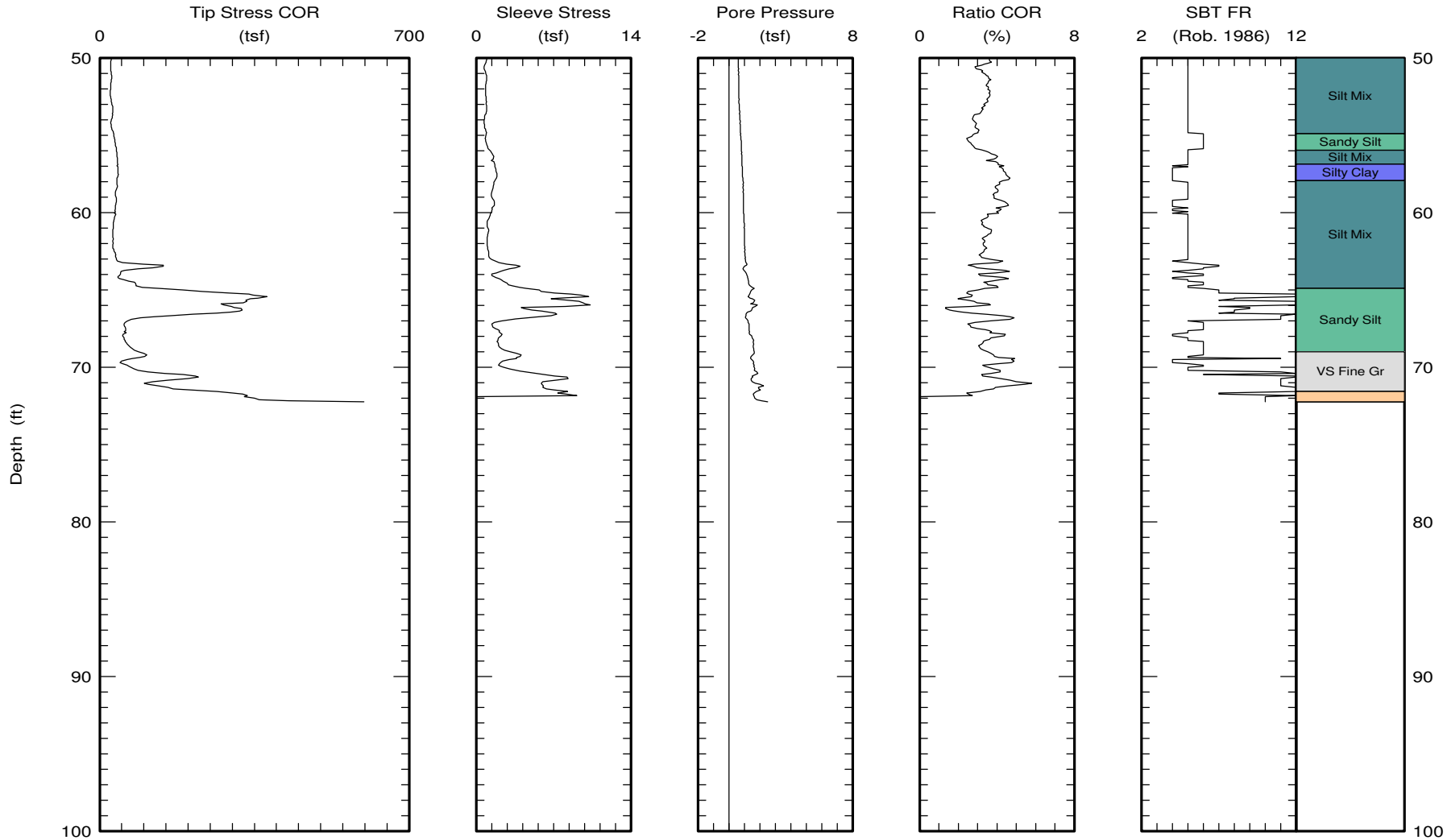
Maximum depth: 72.26 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 03/Mar/2011
Test ID: T1-C18
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension/Ave Of The Stars



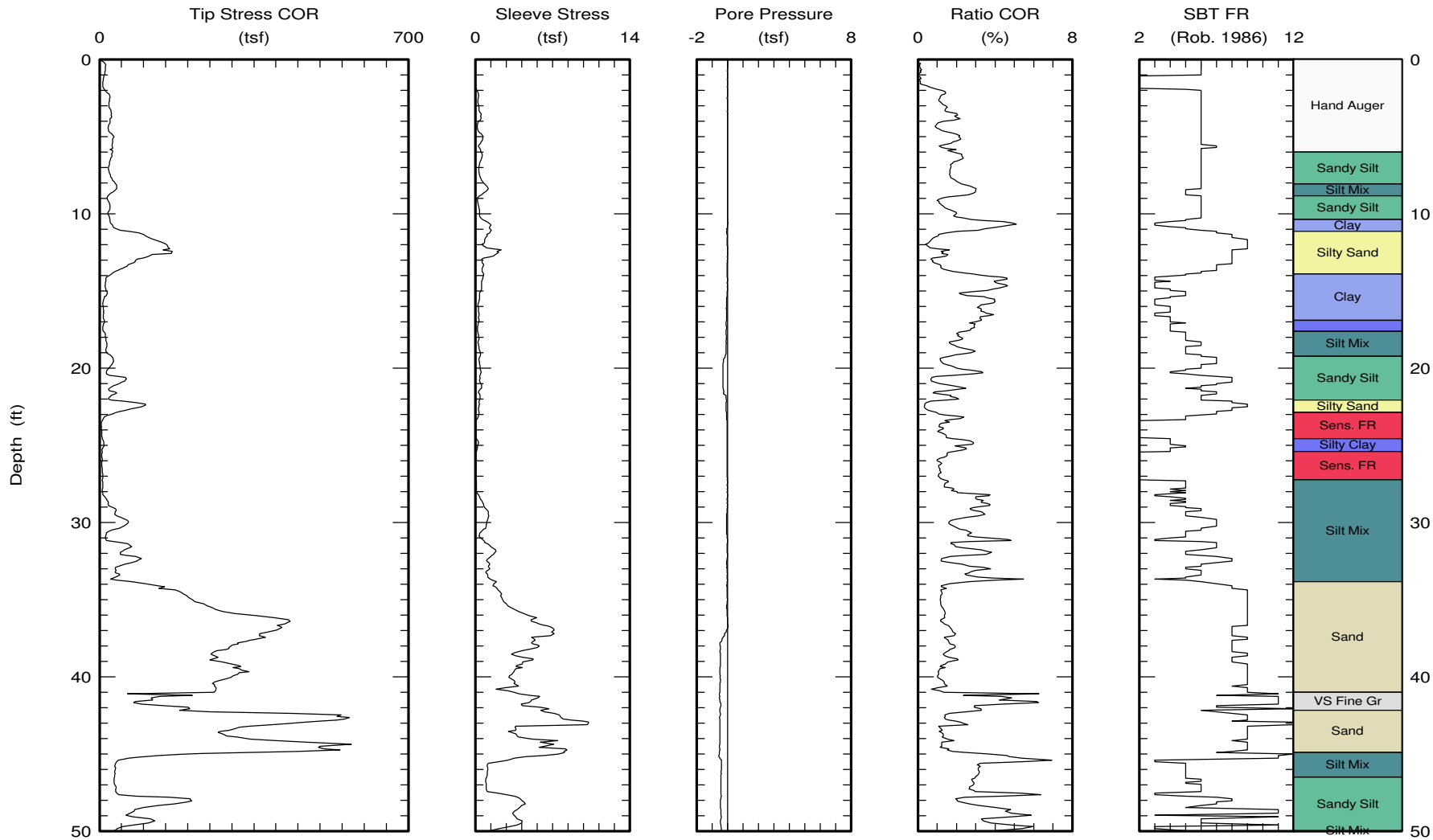
Maximum depth: 72.26 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 07/Mar/2011
Test ID: T1-C19
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension/Ave Of The Stars



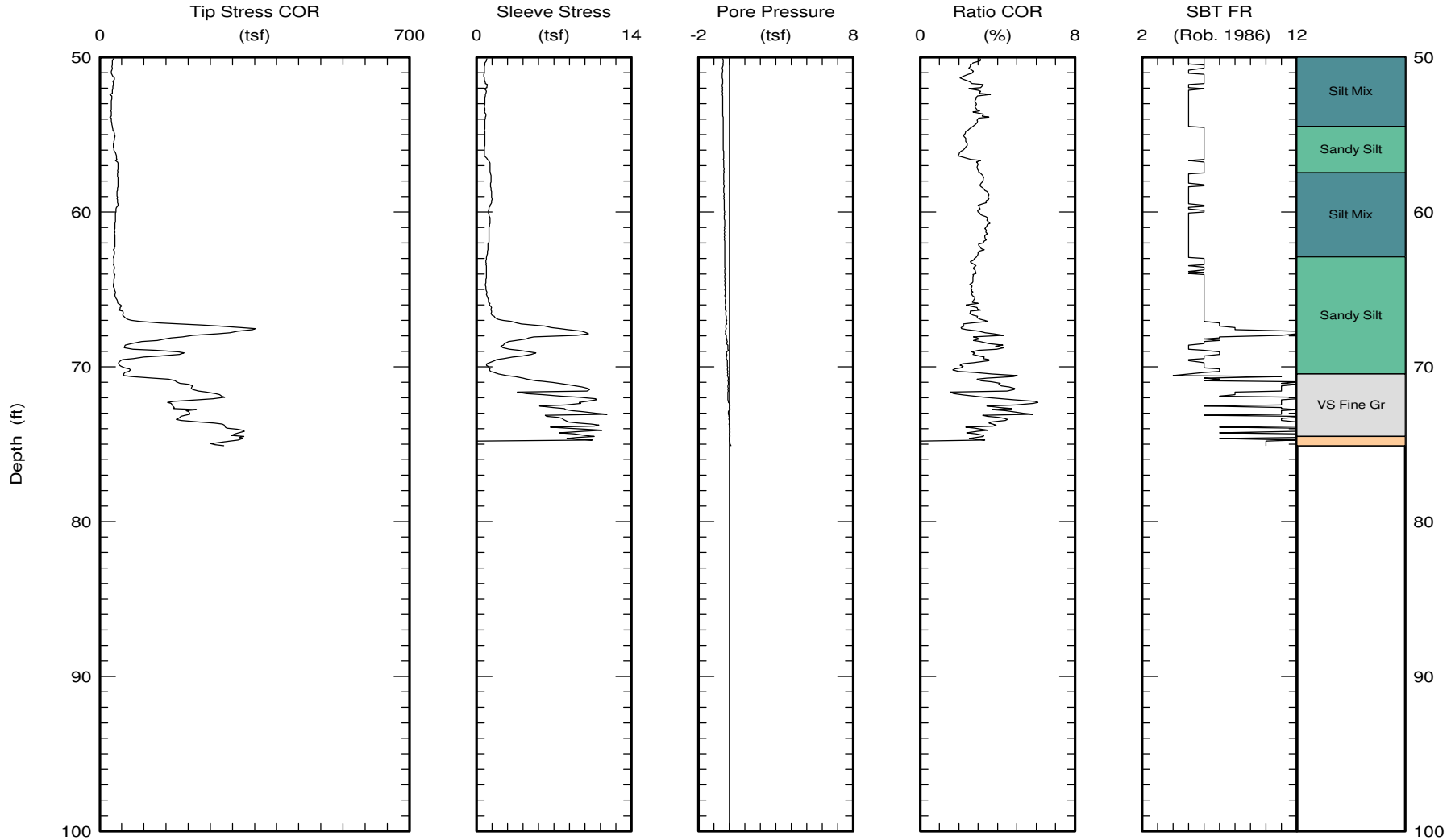
Maximum depth: 75.11 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 07/Mar/2011
Test ID: T1-C19
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension/Ave Of The Stars



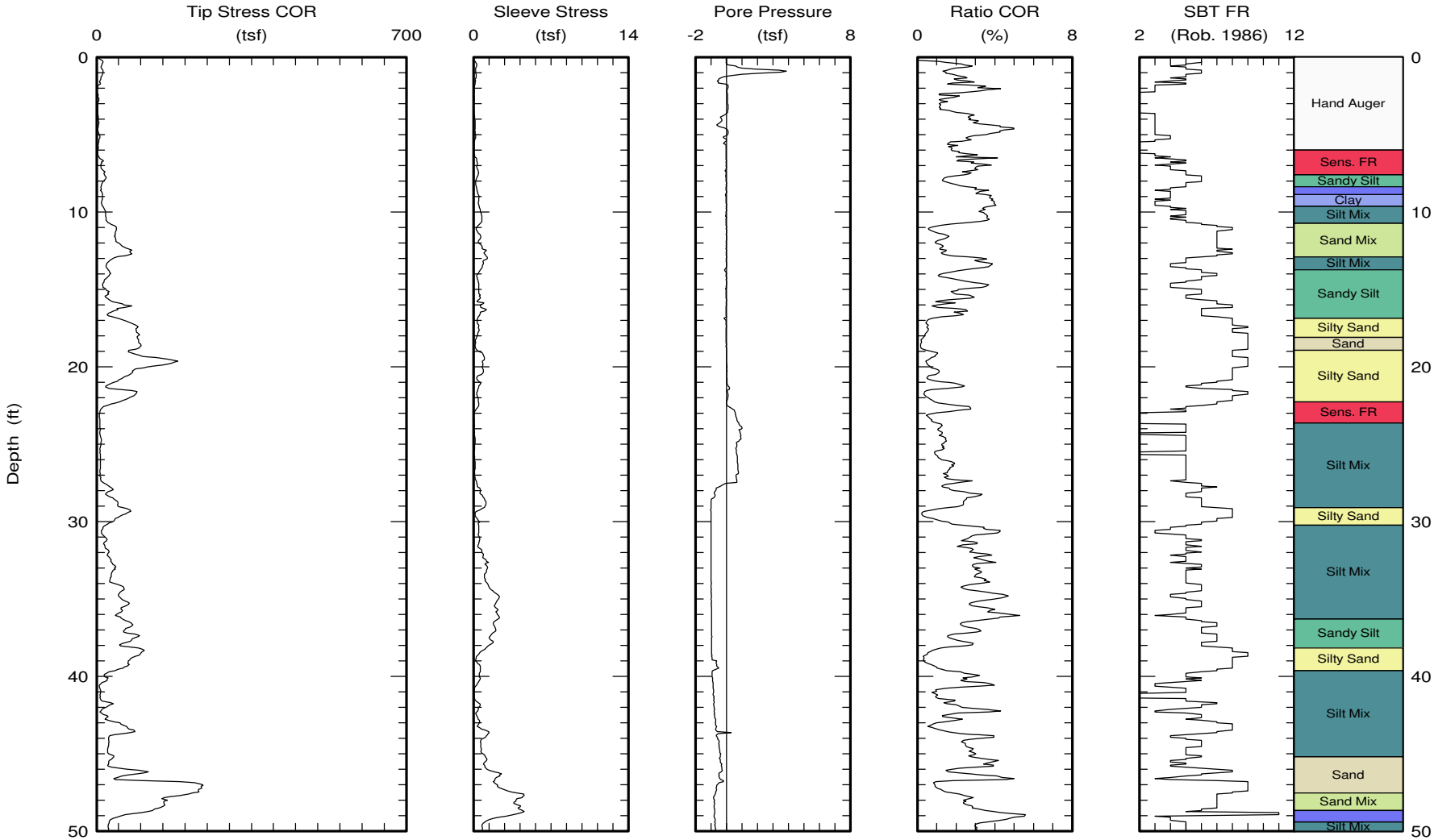
Maximum depth: 75.11 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 04/Mar/2011
Test ID: T1-C20
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension/Century Park



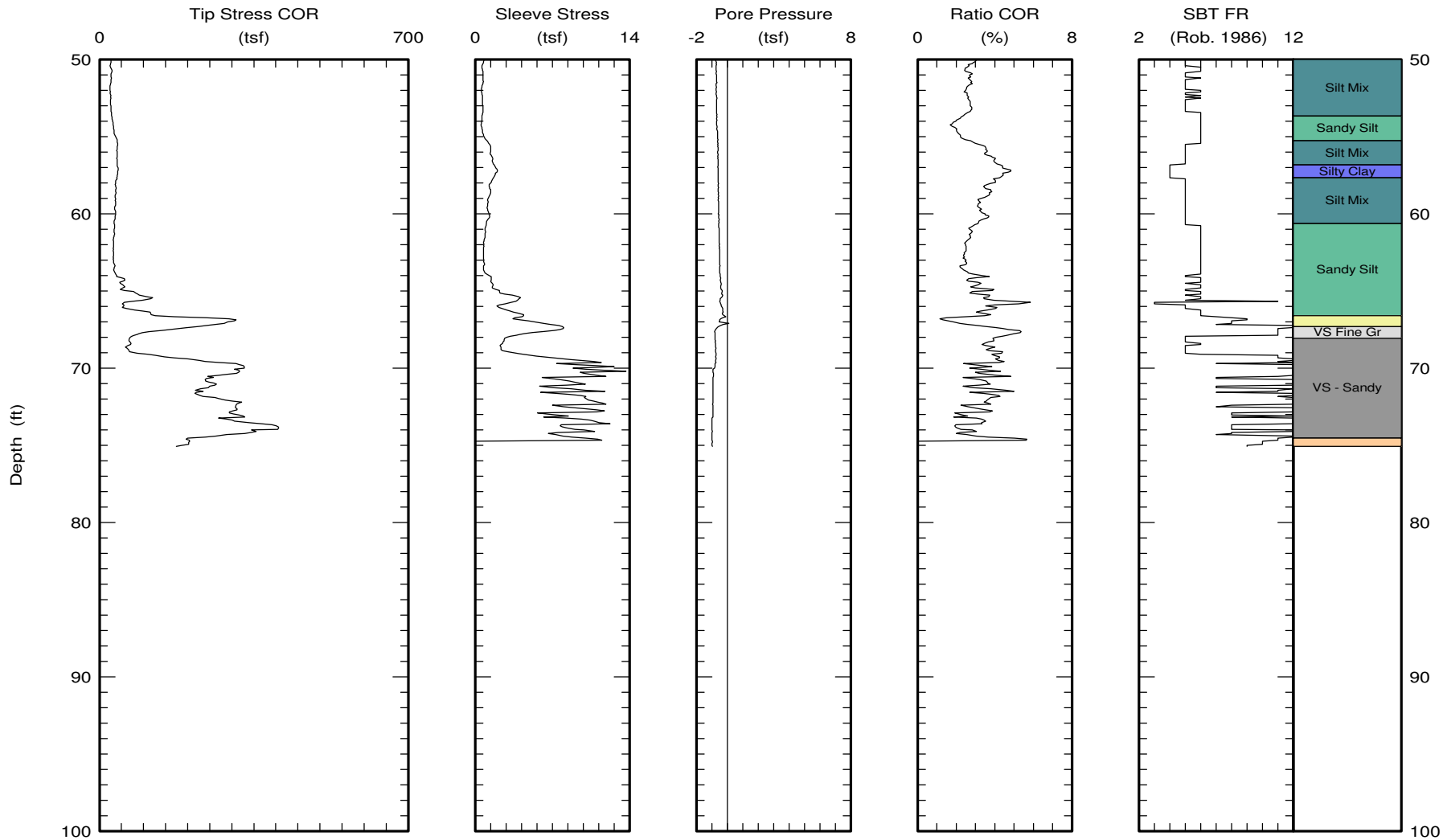
Maximum depth: 75.08 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 04/Mar/2011
Test ID: T1-C20
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension/Century Park



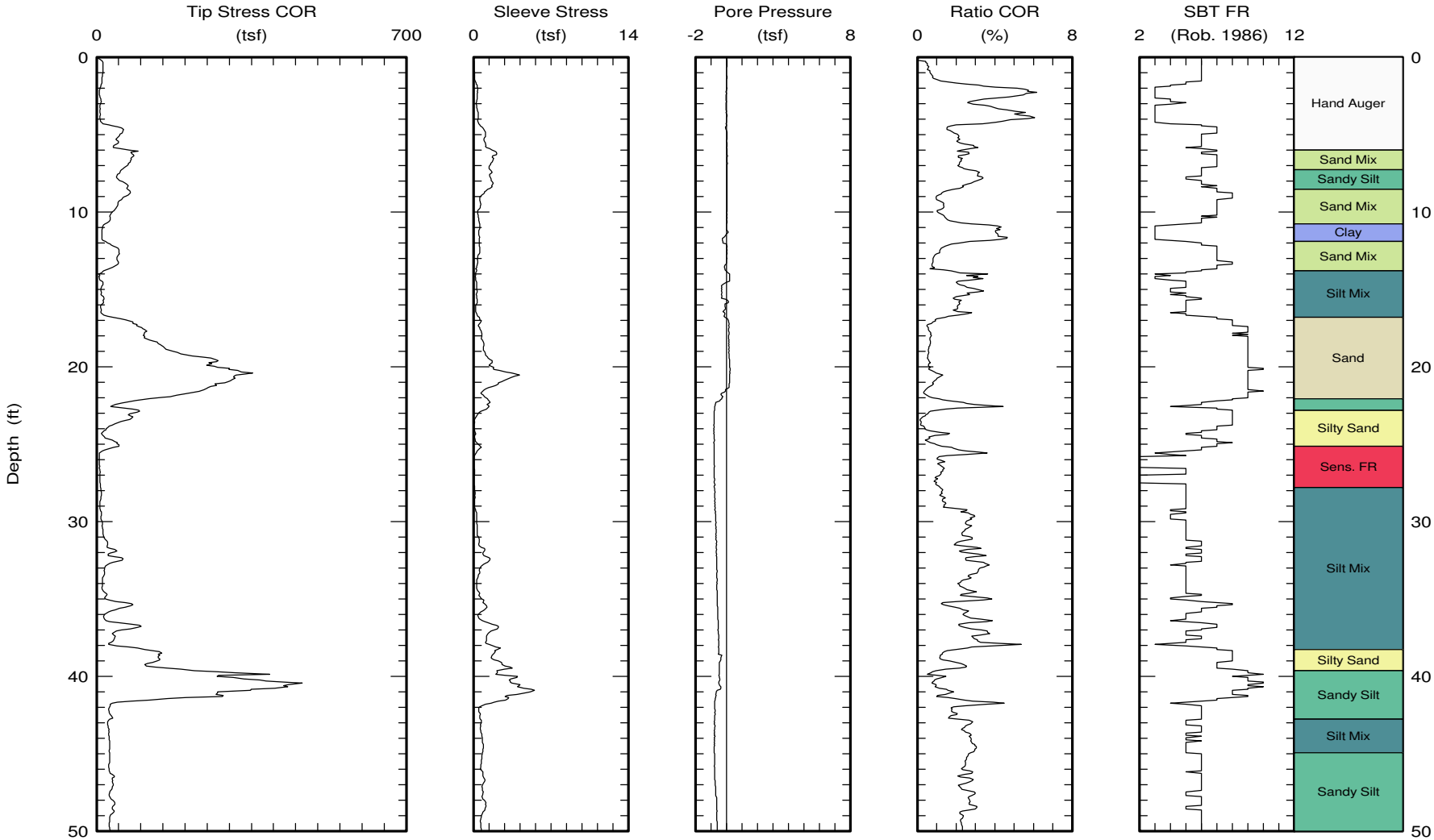
Maximum depth: 75.08 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 07/Apr/2011
Test ID: T1-C22
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension/Golf Course



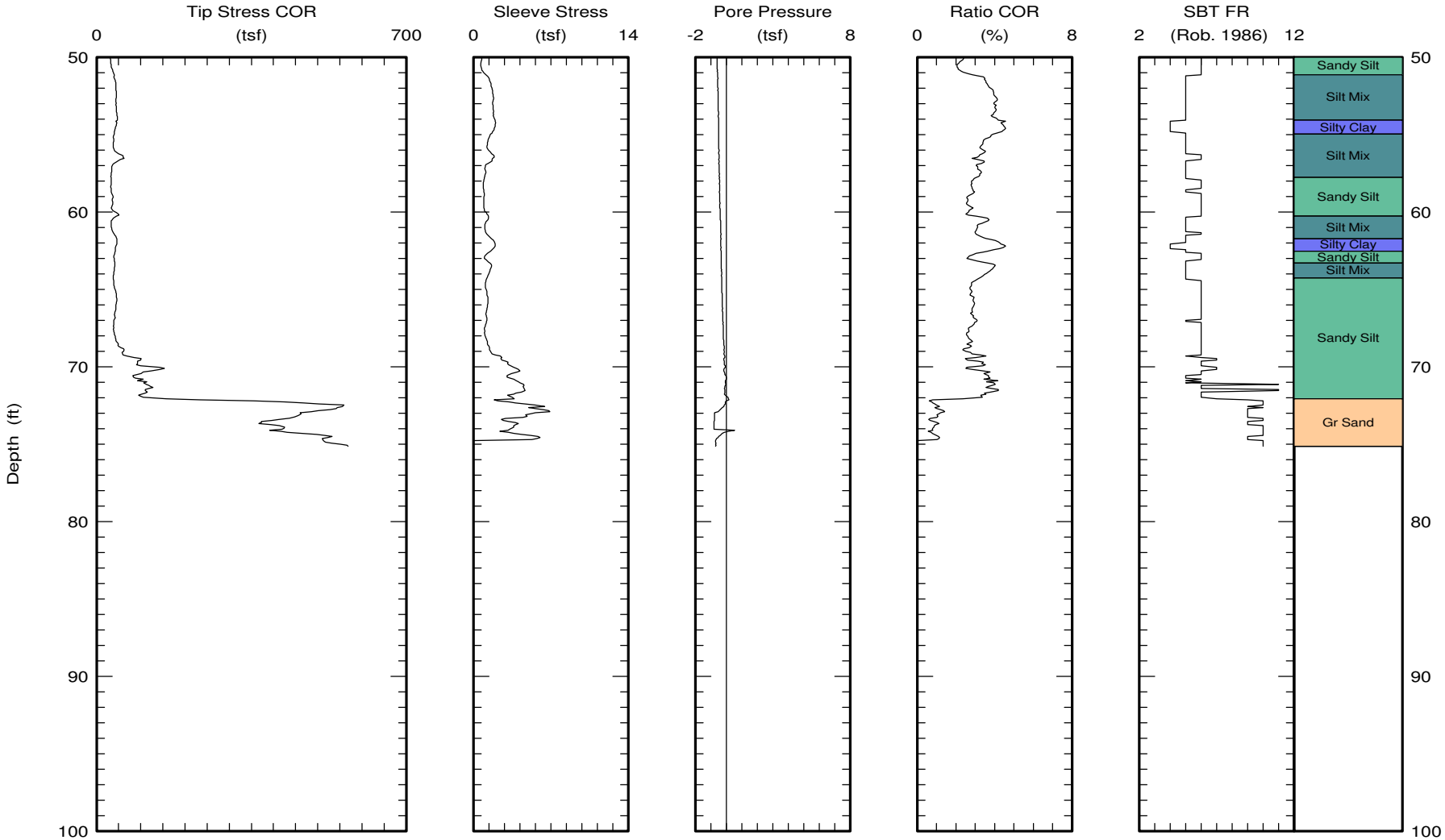
Maximum depth: 75.14 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 07/Apr/2011
Test ID: T1-C22
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension/Golf Course



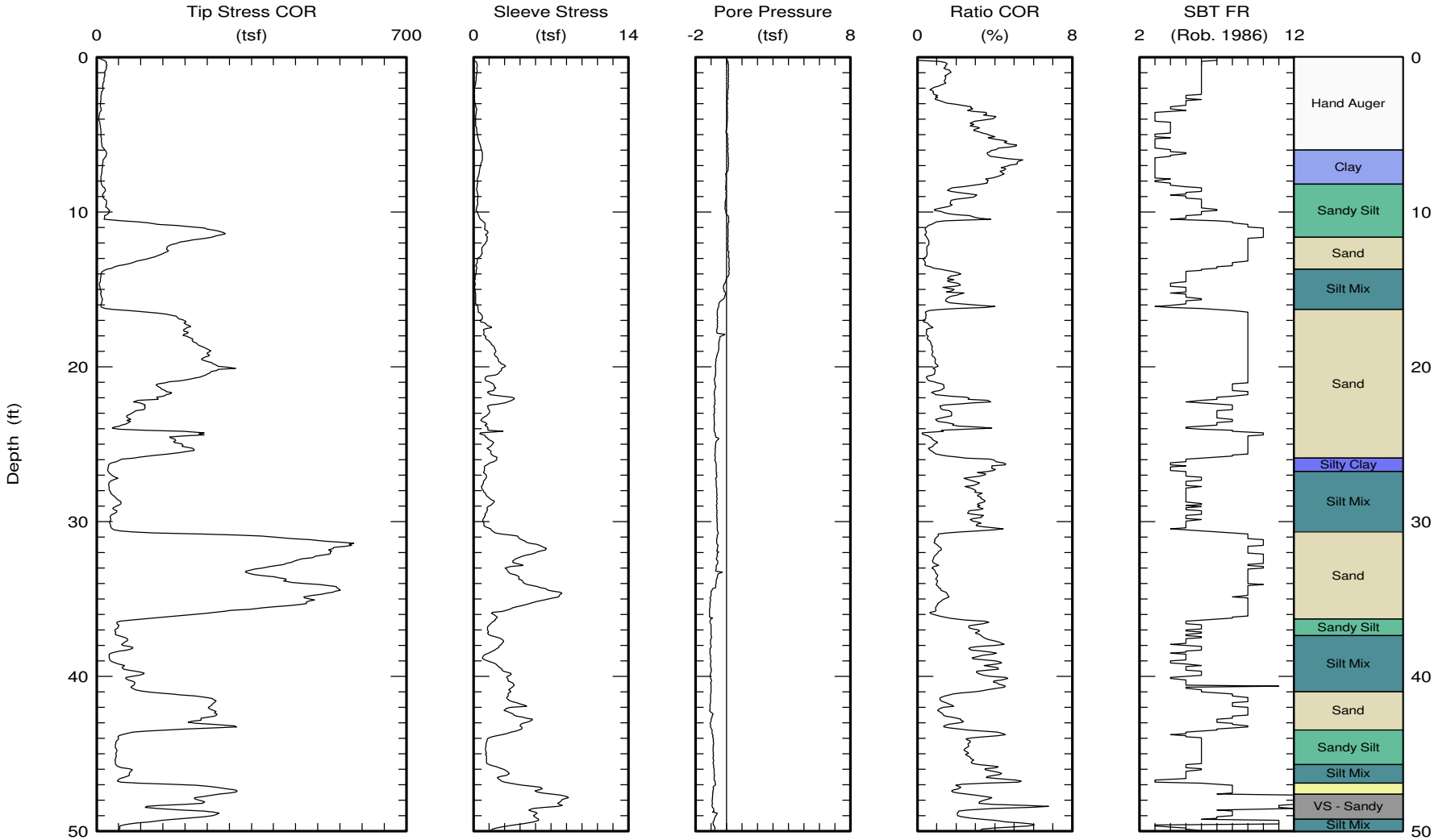
Maximum depth: 75.14 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 07/Apr/2011
Test ID: T1-C25
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension/Golf Course



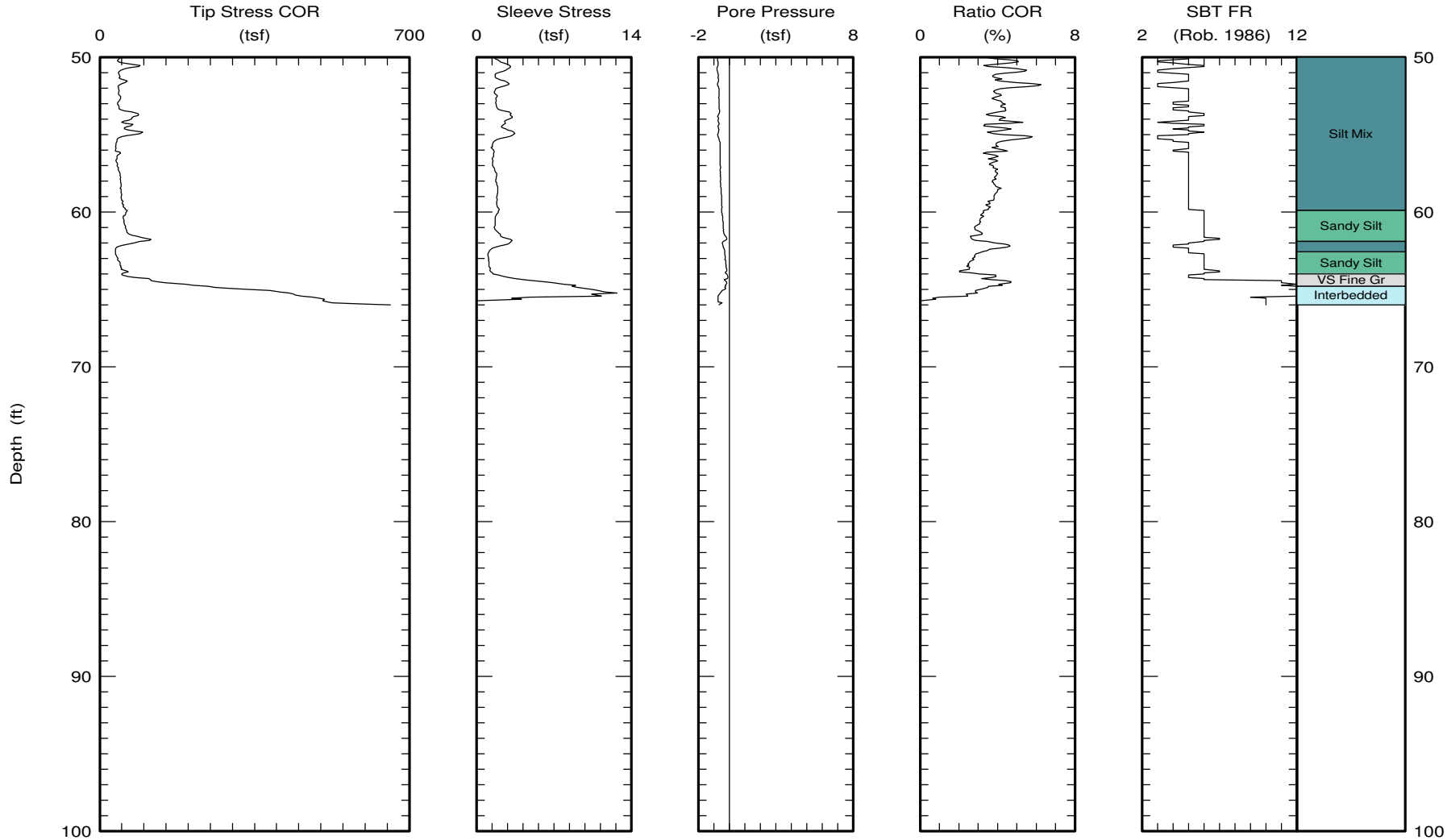
Maximum depth: 66.01 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 07/Apr/2011
Test ID: T1-C25
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension/Golf Course



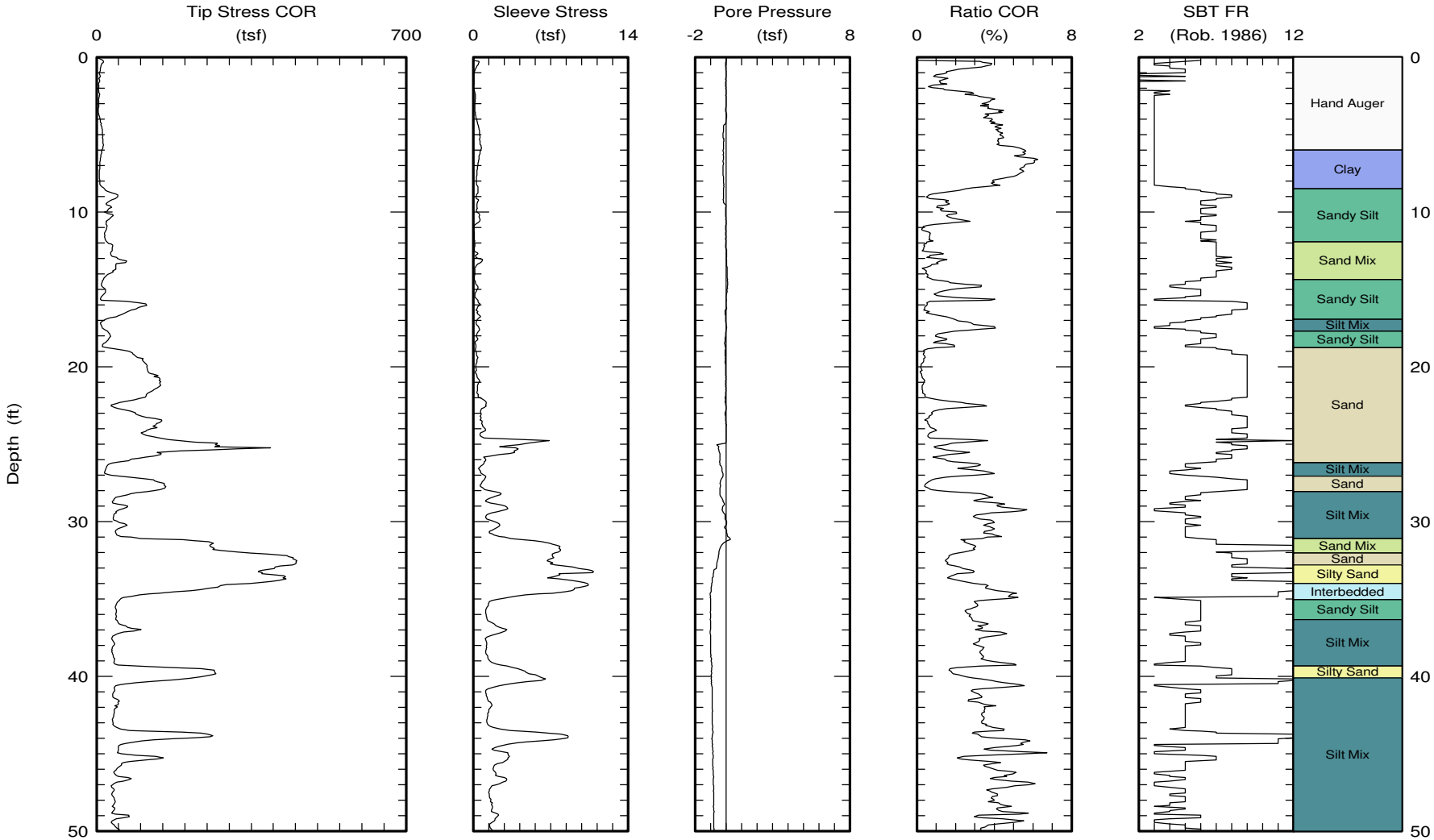
Maximum depth: 66.01 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 06/Apr/2011
Test ID: T1-C26
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension/Golf Course



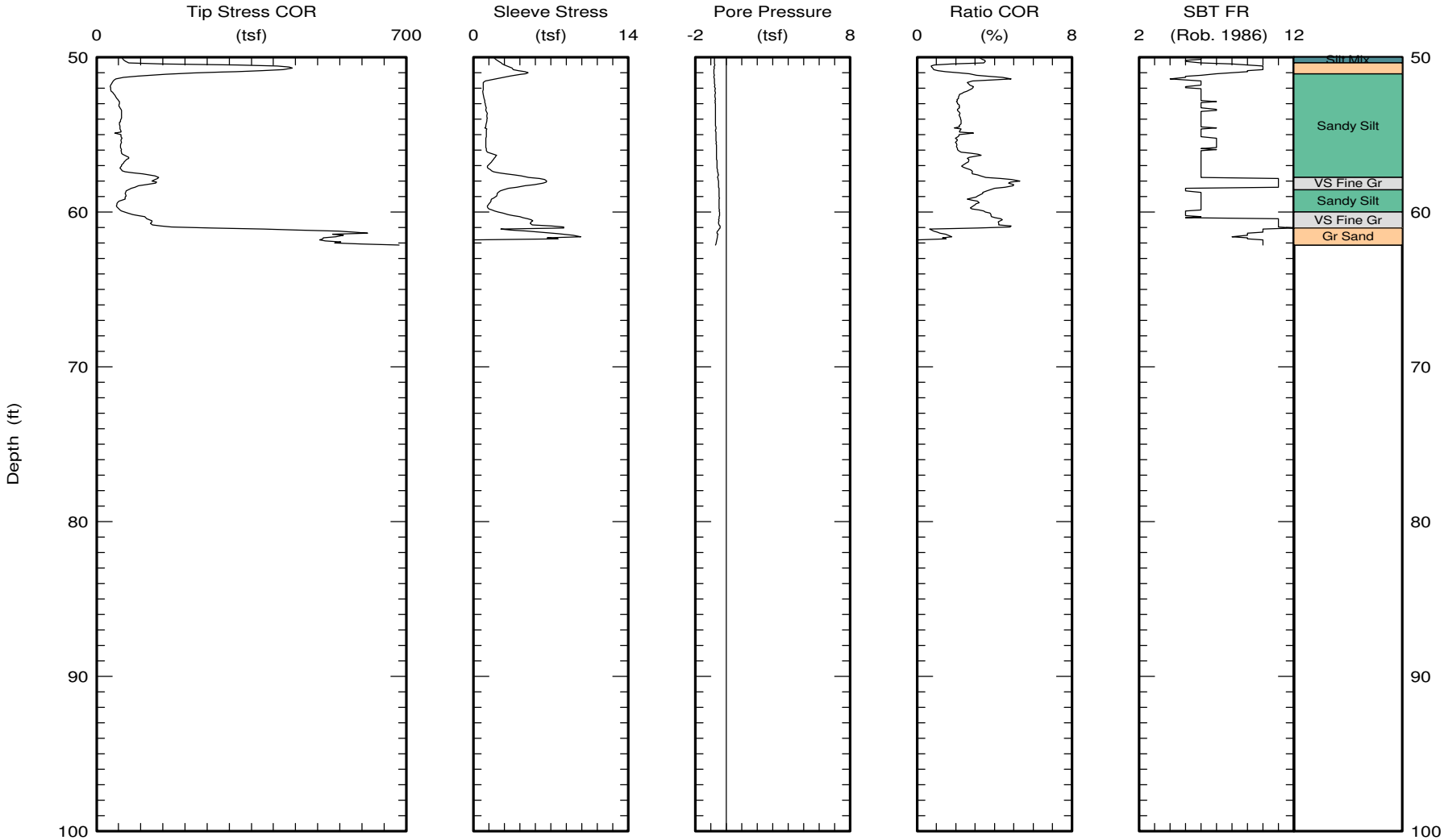
Maximum depth: 62.15 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 06/Apr/2011
Test ID: T1-C26
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension/Golf Course



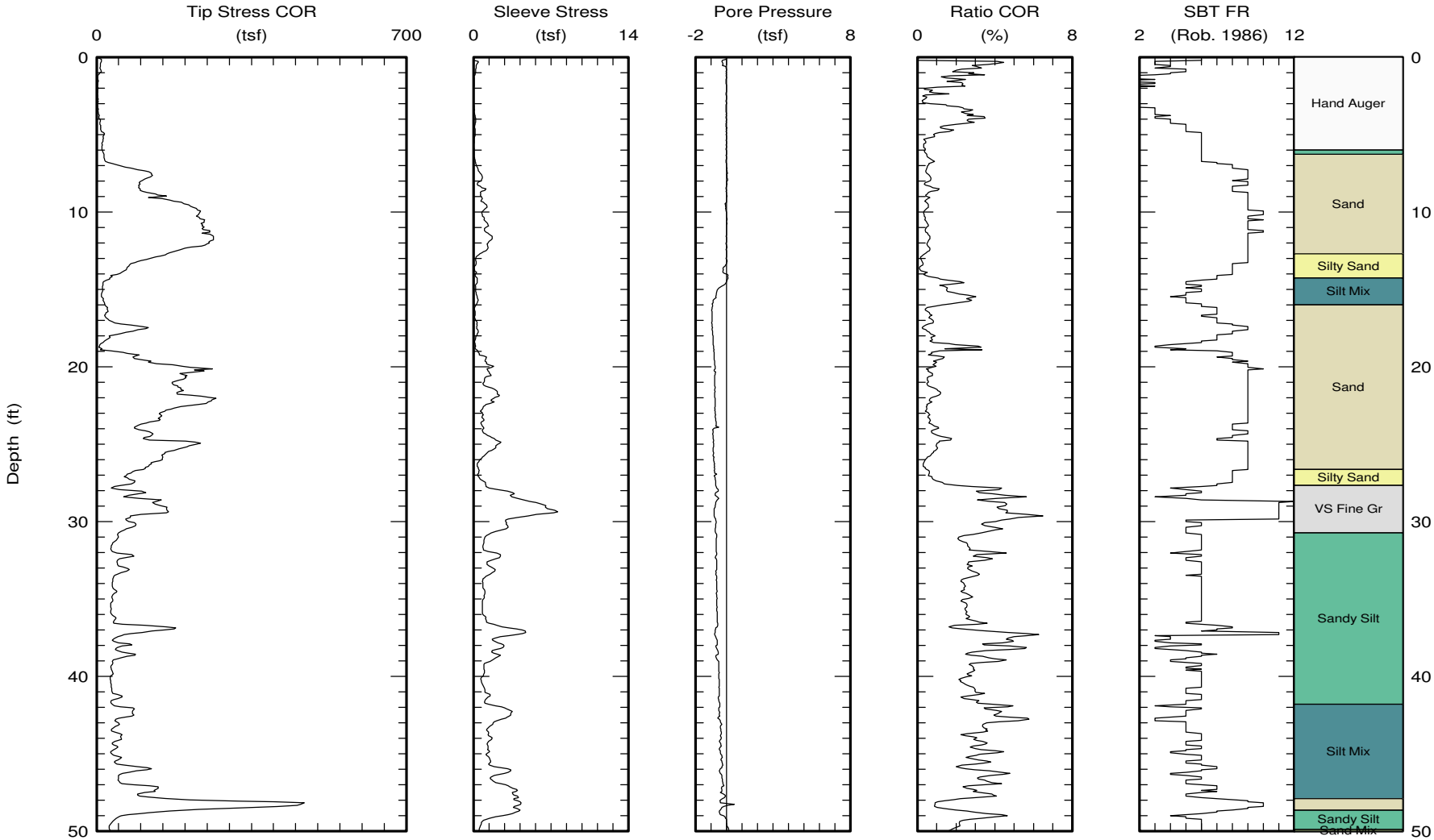
Maximum depth: 62.15 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 05/Apr/2011
Test ID: T1-C27
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension/Golf Course



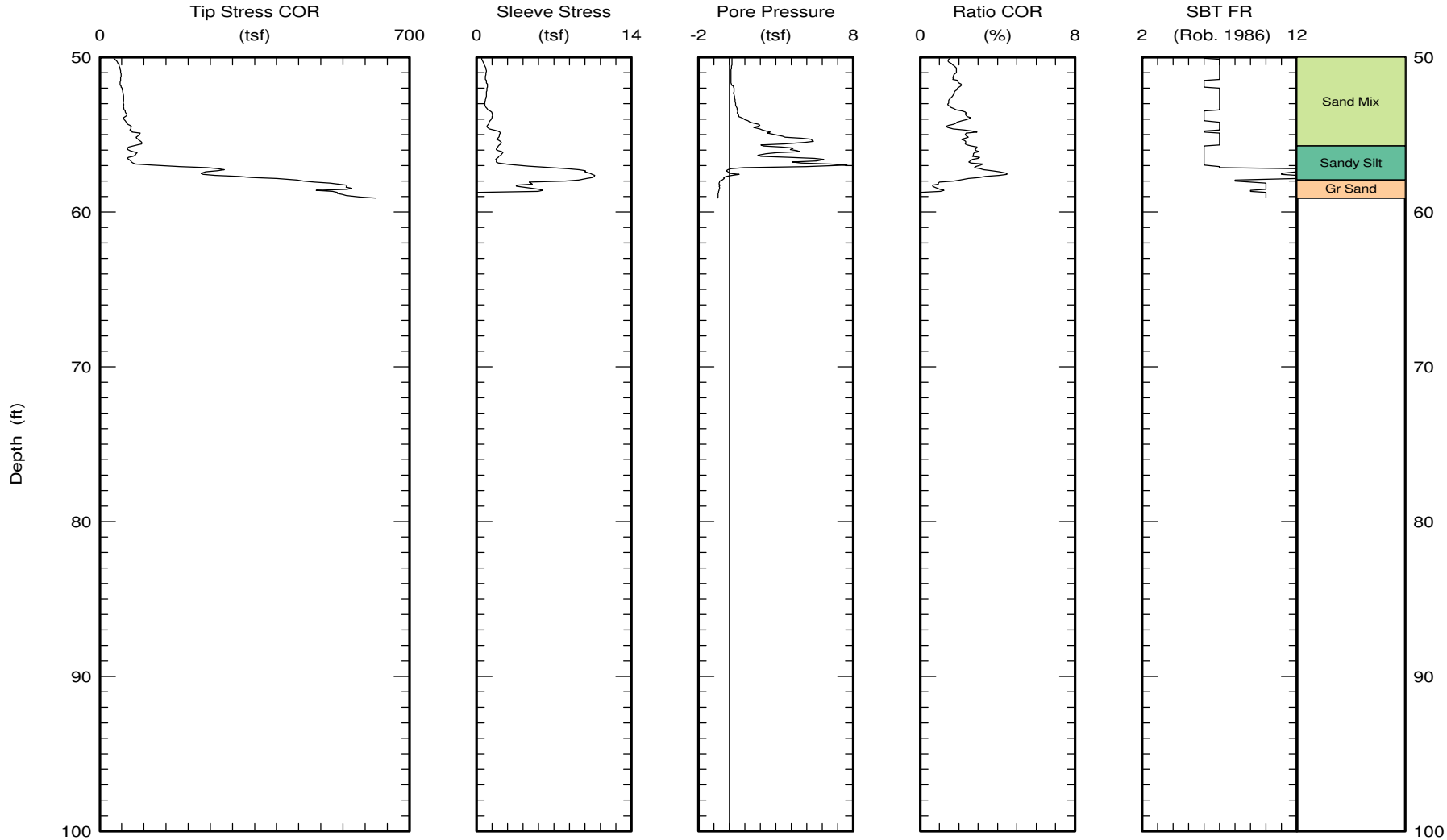
Maximum depth: 59.10 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 05/Apr/2011
Test ID: T1-C27
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension/Golf Course



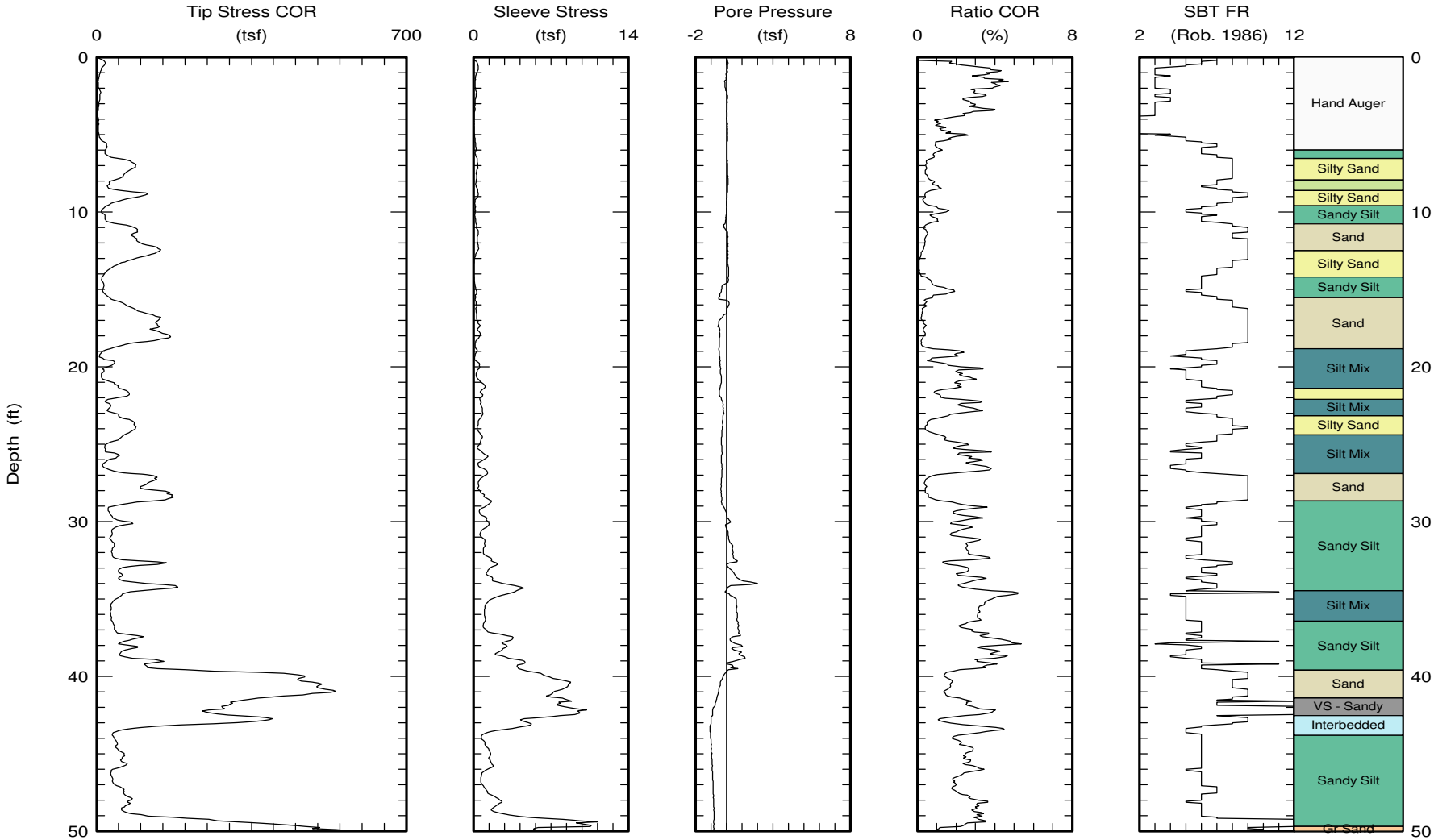
Maximum depth: 59.10 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 06/Apr/2011
Test ID: T1-C28
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension/Golf Course



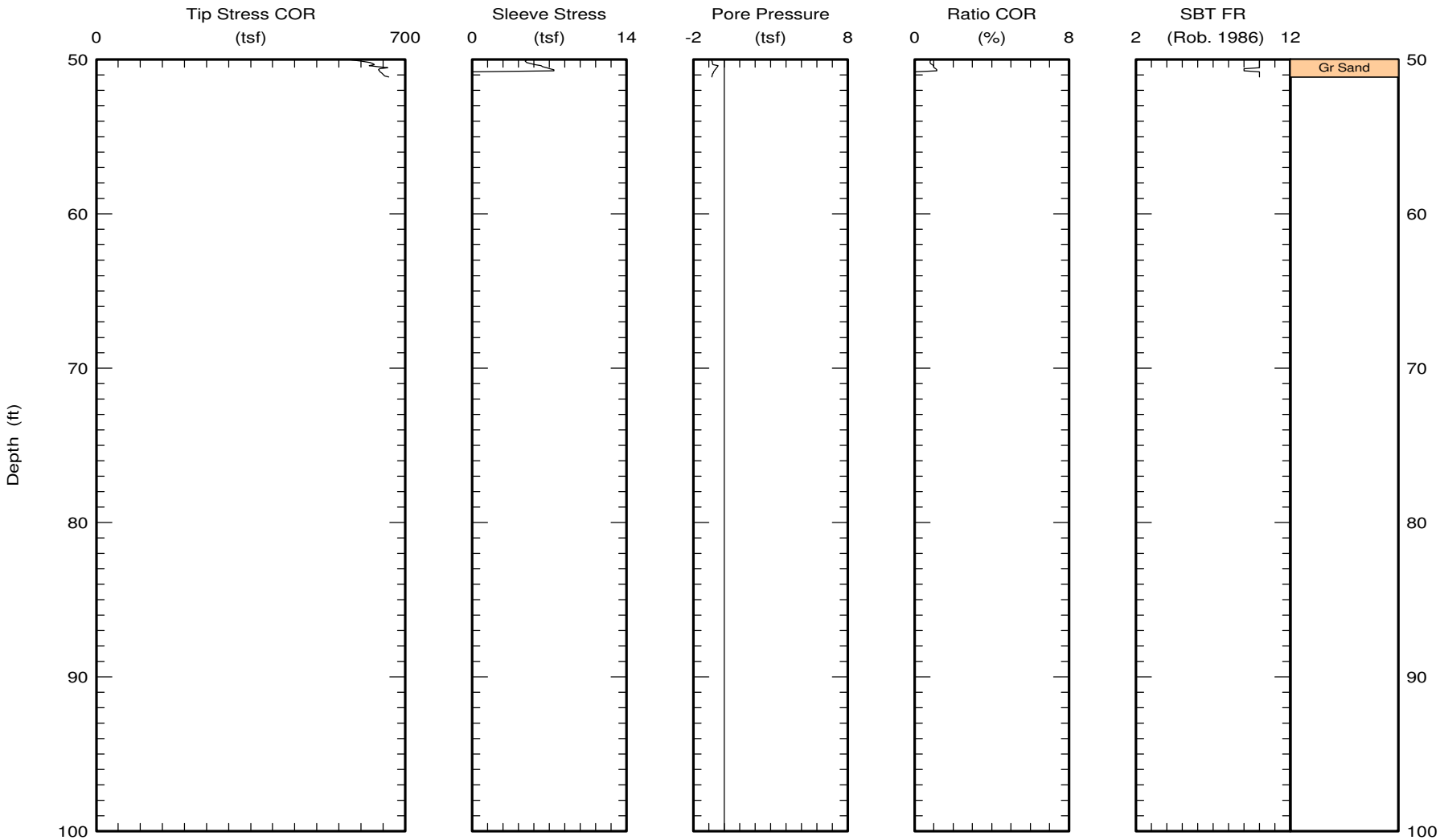
Maximum depth: 51.16 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 06/Apr/2011
Test ID: T1-C28
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension/Golf Course



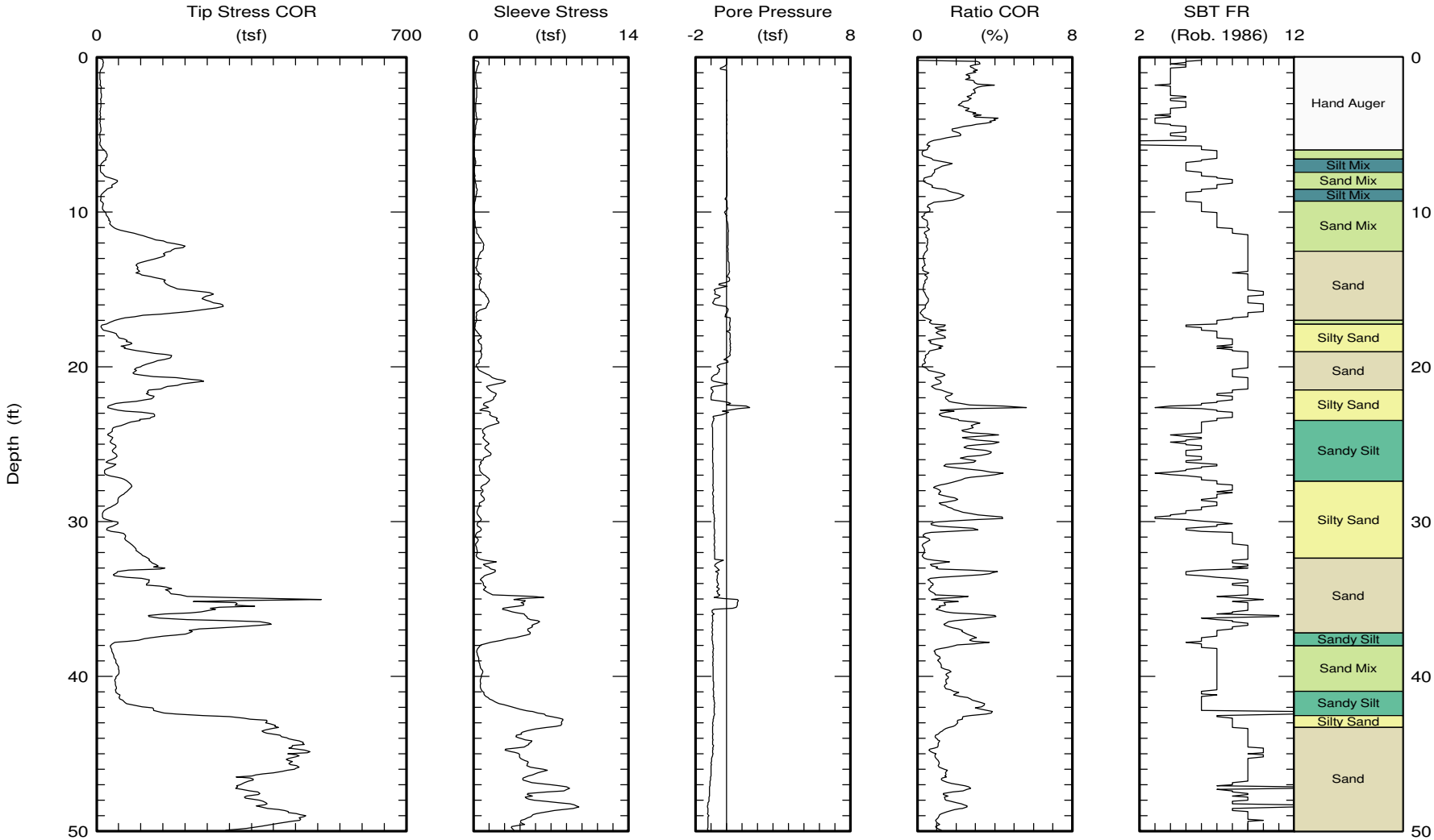
Maximum depth: 51.16 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 05/Apr/2011
Test ID: T1-C29
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension/Golf Course



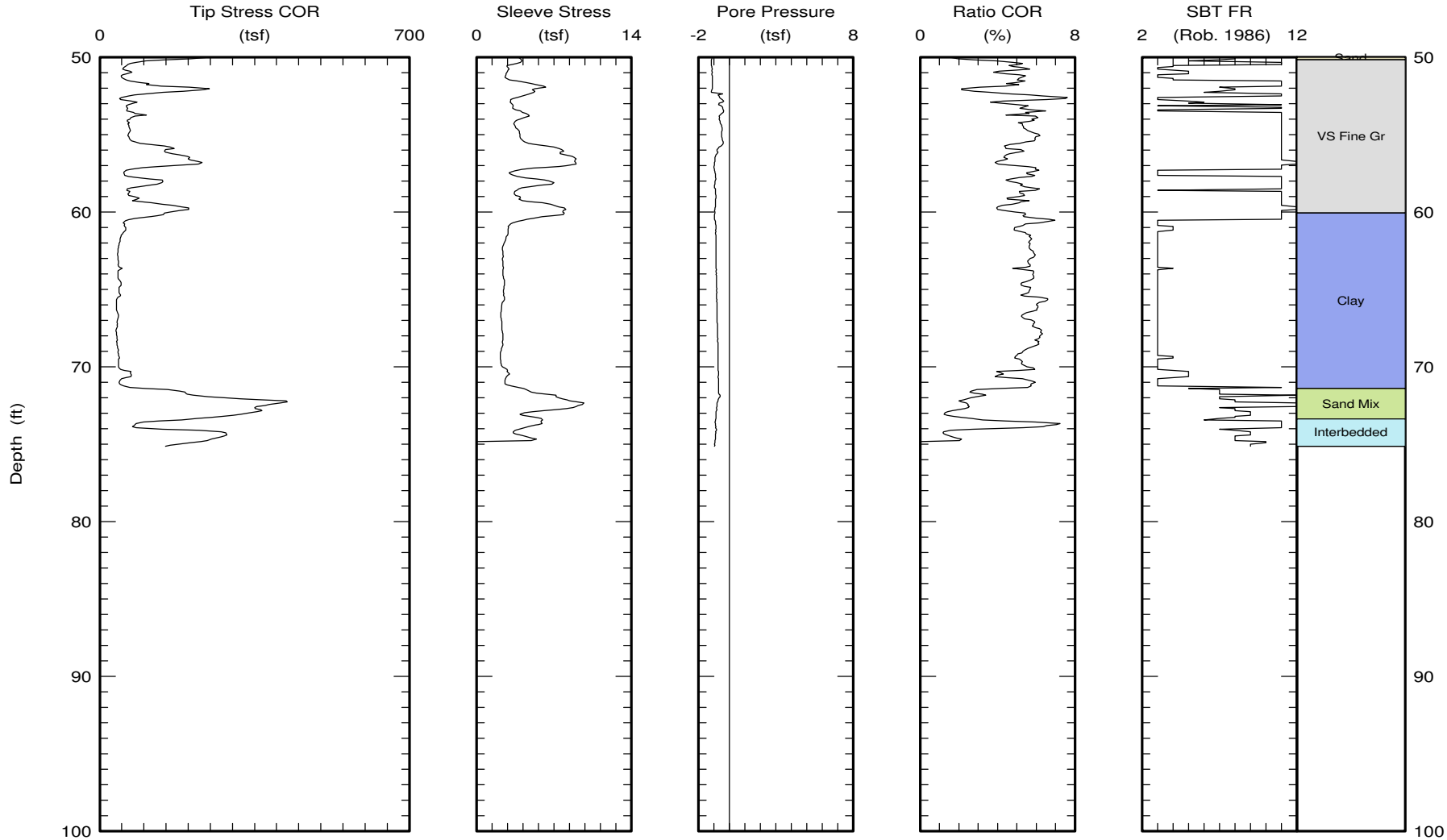
Maximum depth: 75.14 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 05/Apr/2011
Test ID: T1-C29
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension/Golf Course



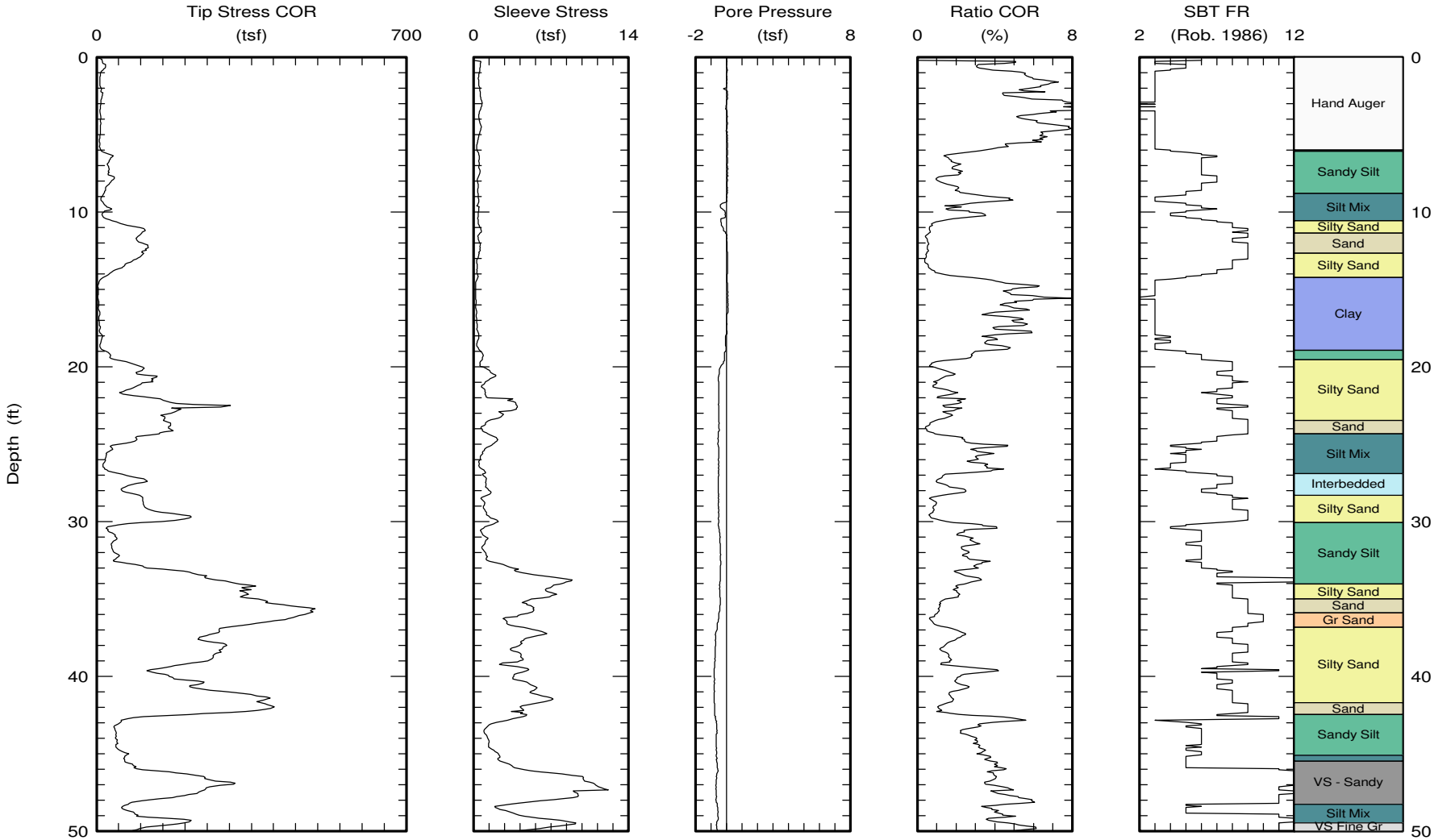
Maximum depth: 75.14 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 06/Apr/2011
Test ID: T1-C30
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension/Golf Course



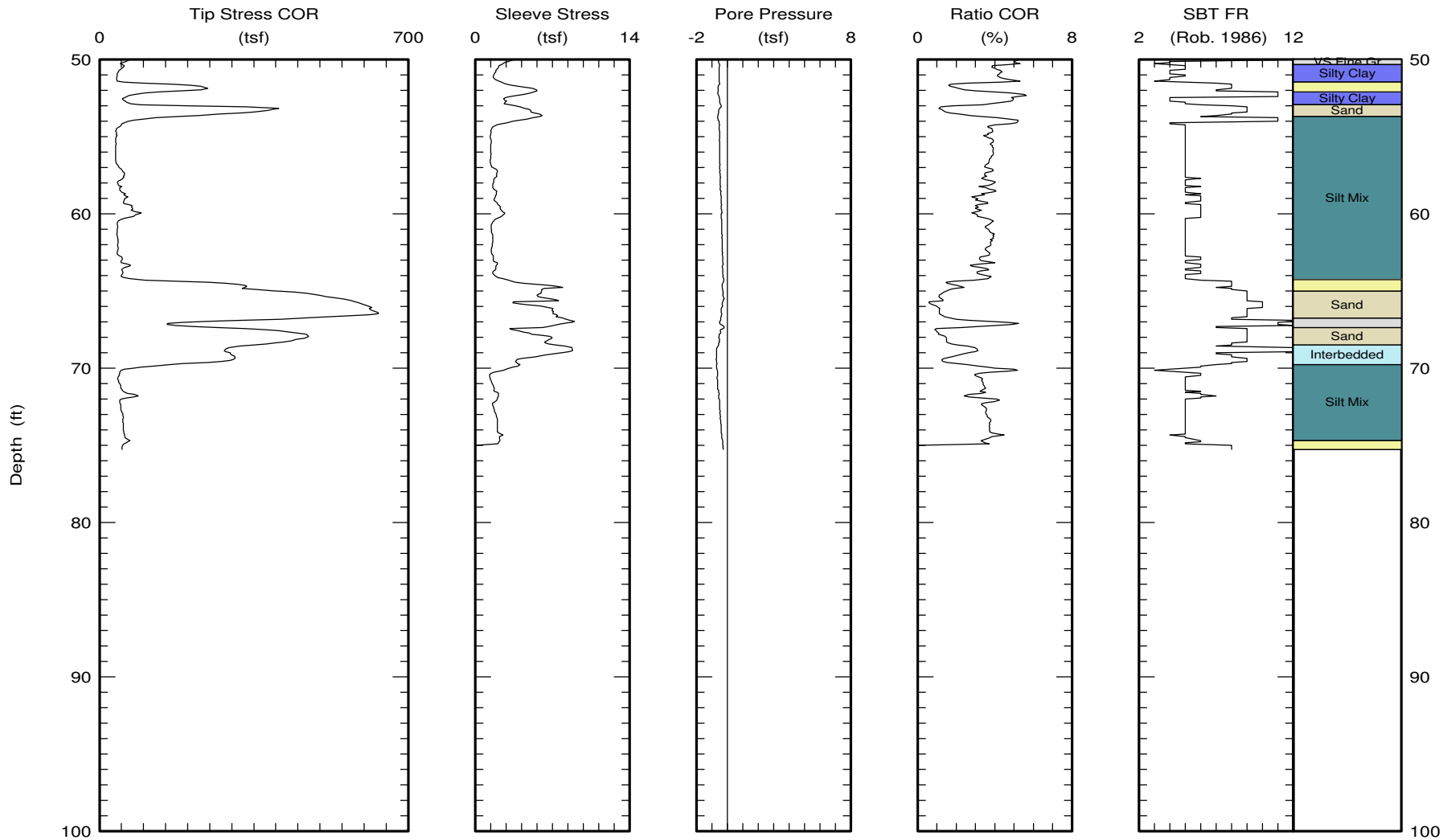
Maximum depth: 75.29 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 06/Apr/2011
Test ID: T1-C30
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension/Golf Course



Maximum depth: 75.29 (ft)

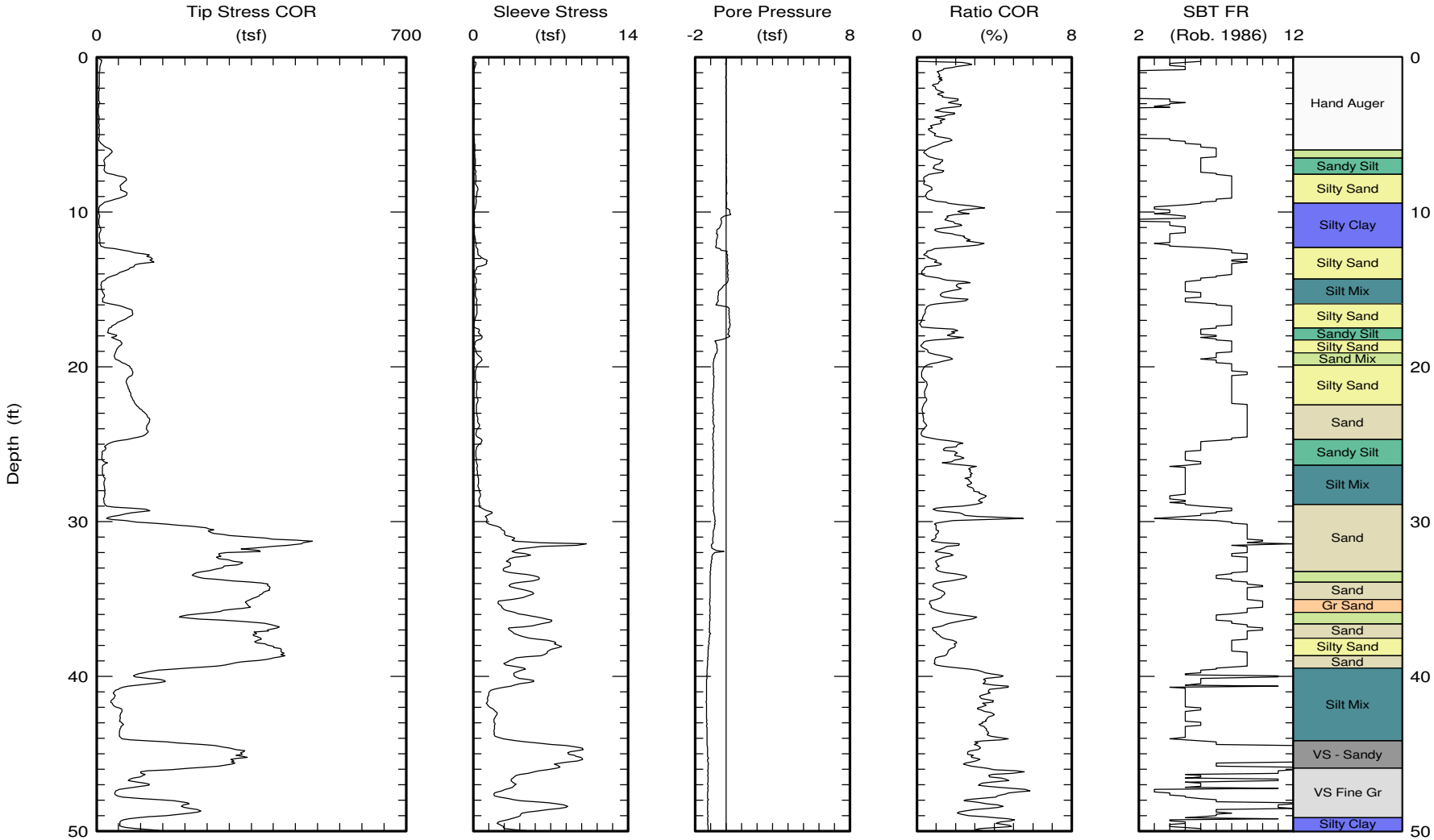
Test ID: T1-C30
File: Z06A1103C.ECP

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 06/Apr/2011
Test ID: T1-C31
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension/Golf Course



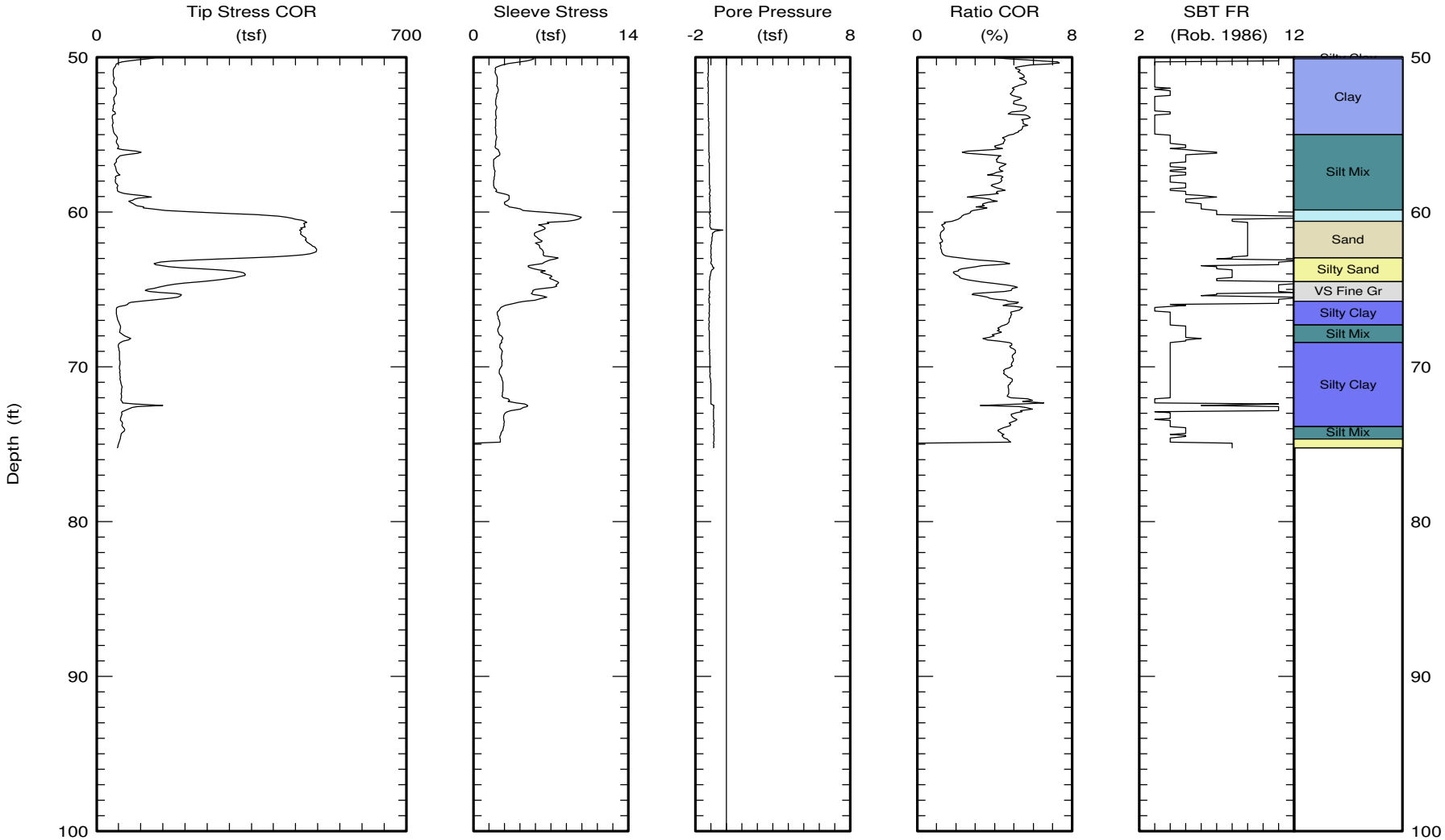
Maximum depth: 75.24 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

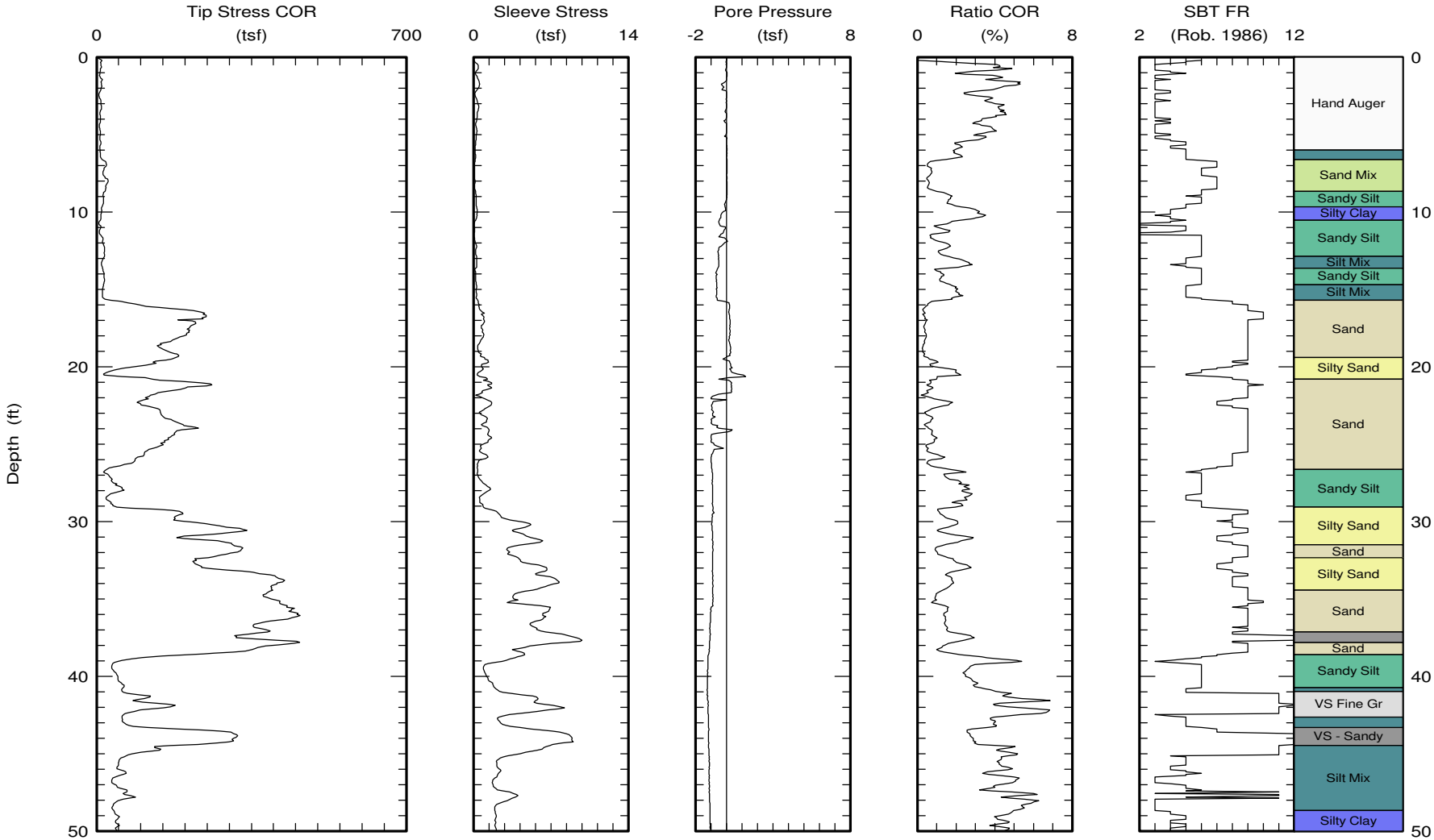
Date: 06/Apr/2011
Test ID: T1-C31
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension/Golf Course



Maximum depth: 75.24 (ft)

Kehoe Testing & Engineering Office: (714) 901-7270 Fax: (714) 901-7289 rich@kehoetesting.com www.kehoetesting.com	CPT Data 30 ton rig	Date: 05/Apr/2011 Test ID: T1-C32 Project: LosAngeles
	Customer: MACTEC Job Site: Westside Subway Extension/Golf Course	



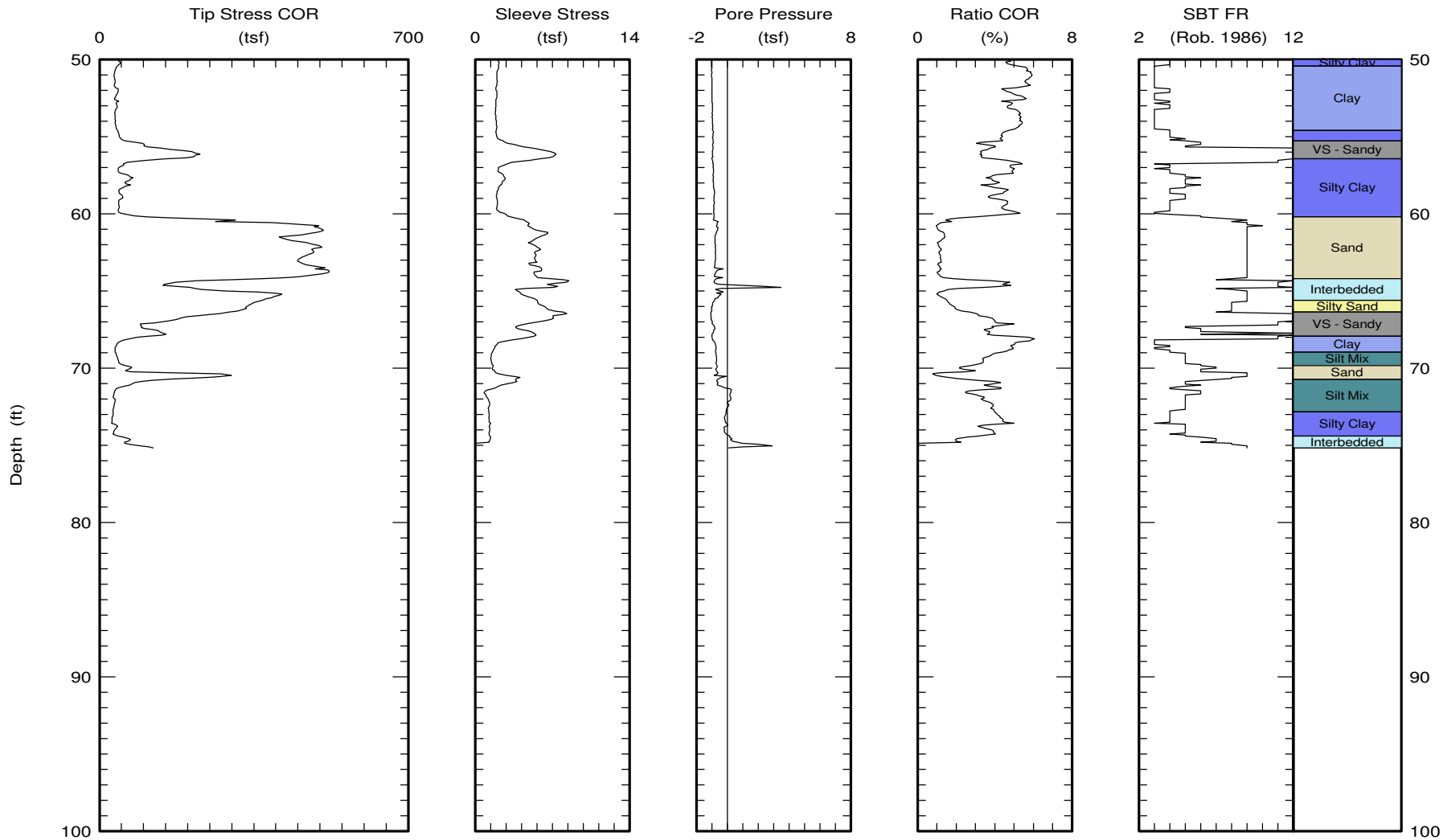
Maximum depth: 75.18 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 05/Apr/2011
Test ID: T1-C32
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension/Golf Course



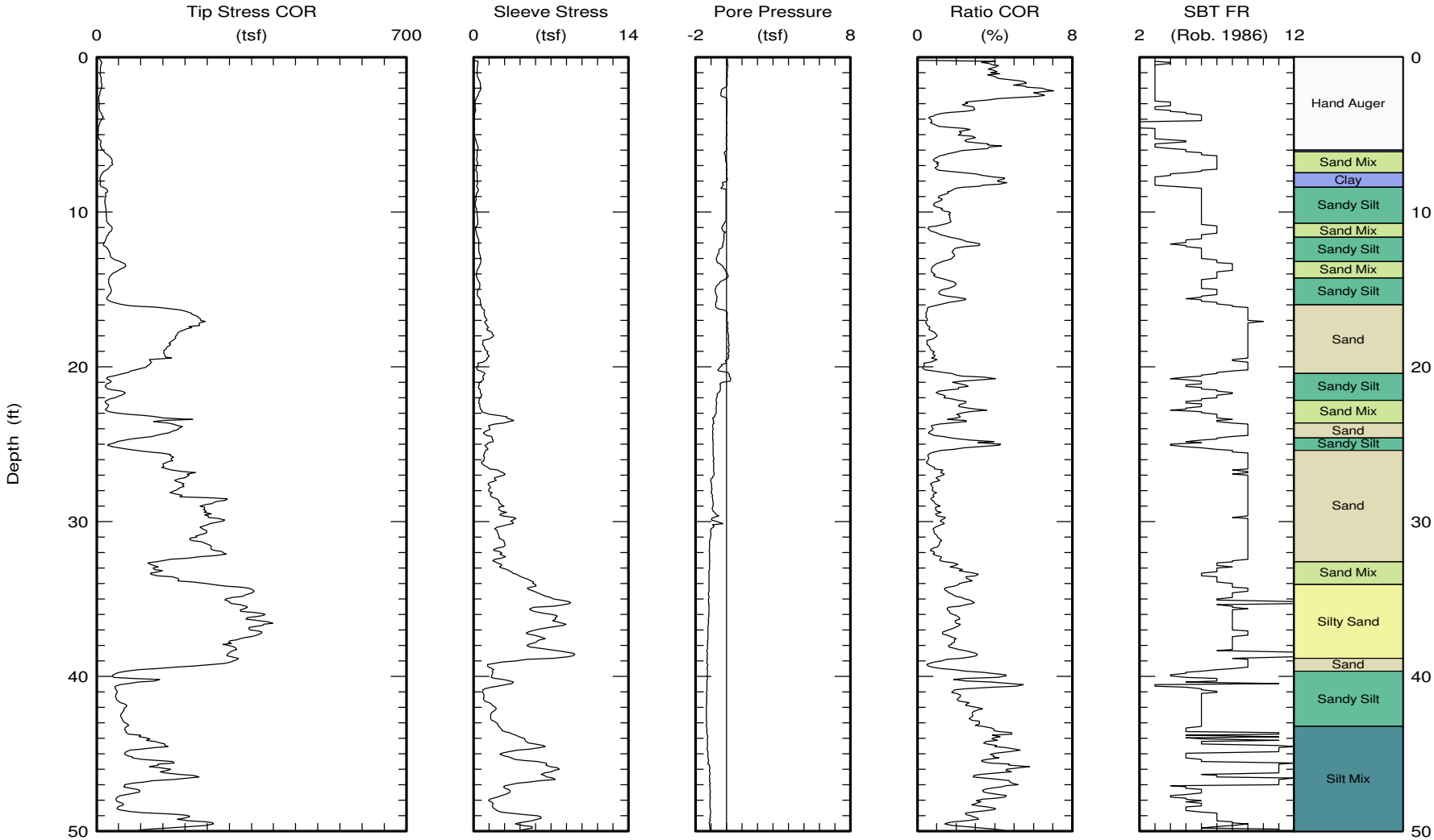
Maximum depth: 75.18 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 07/Apr/2011
Test ID: T1-C33
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension/Golf Course



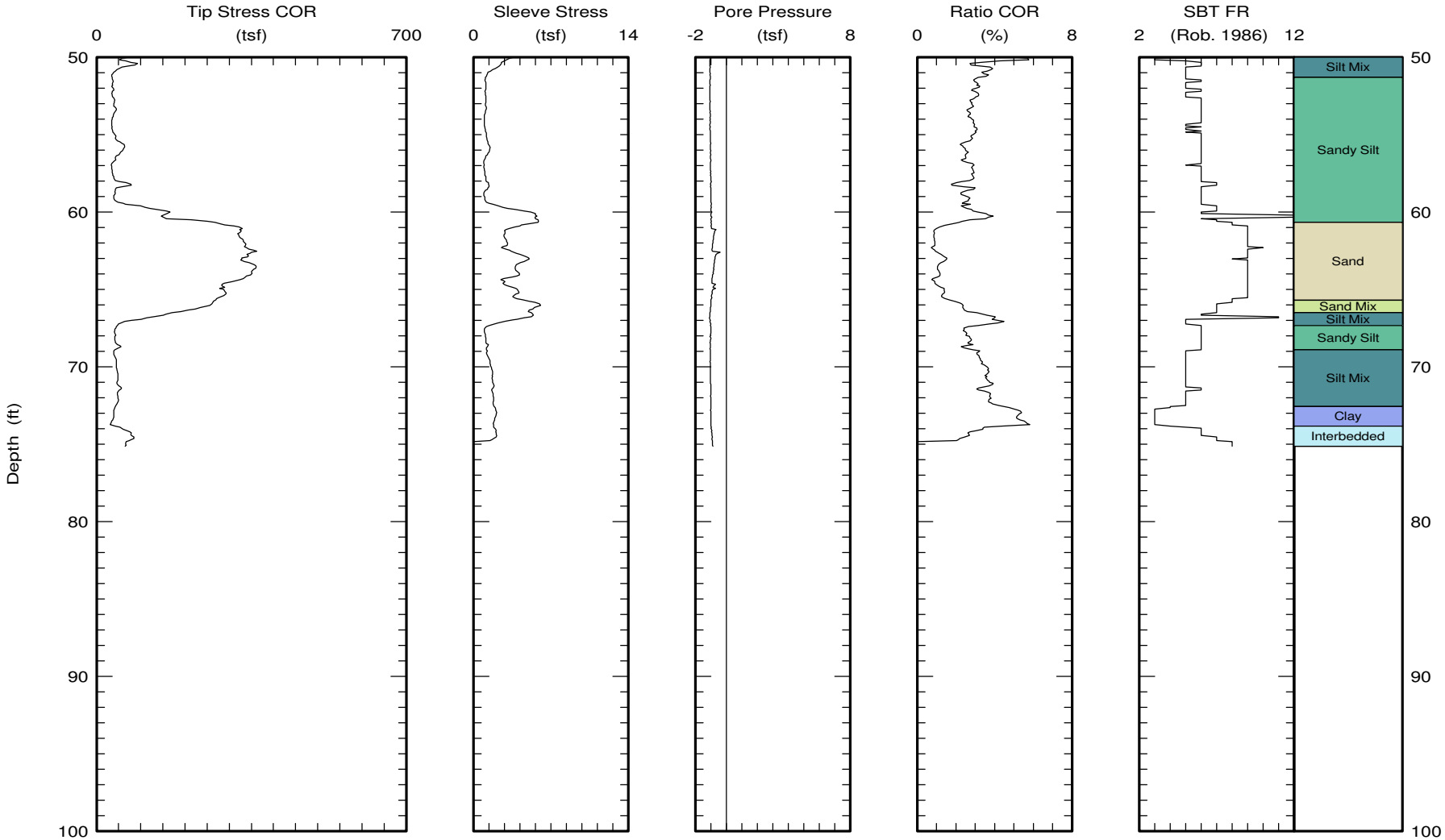
Maximum depth: 75.16 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

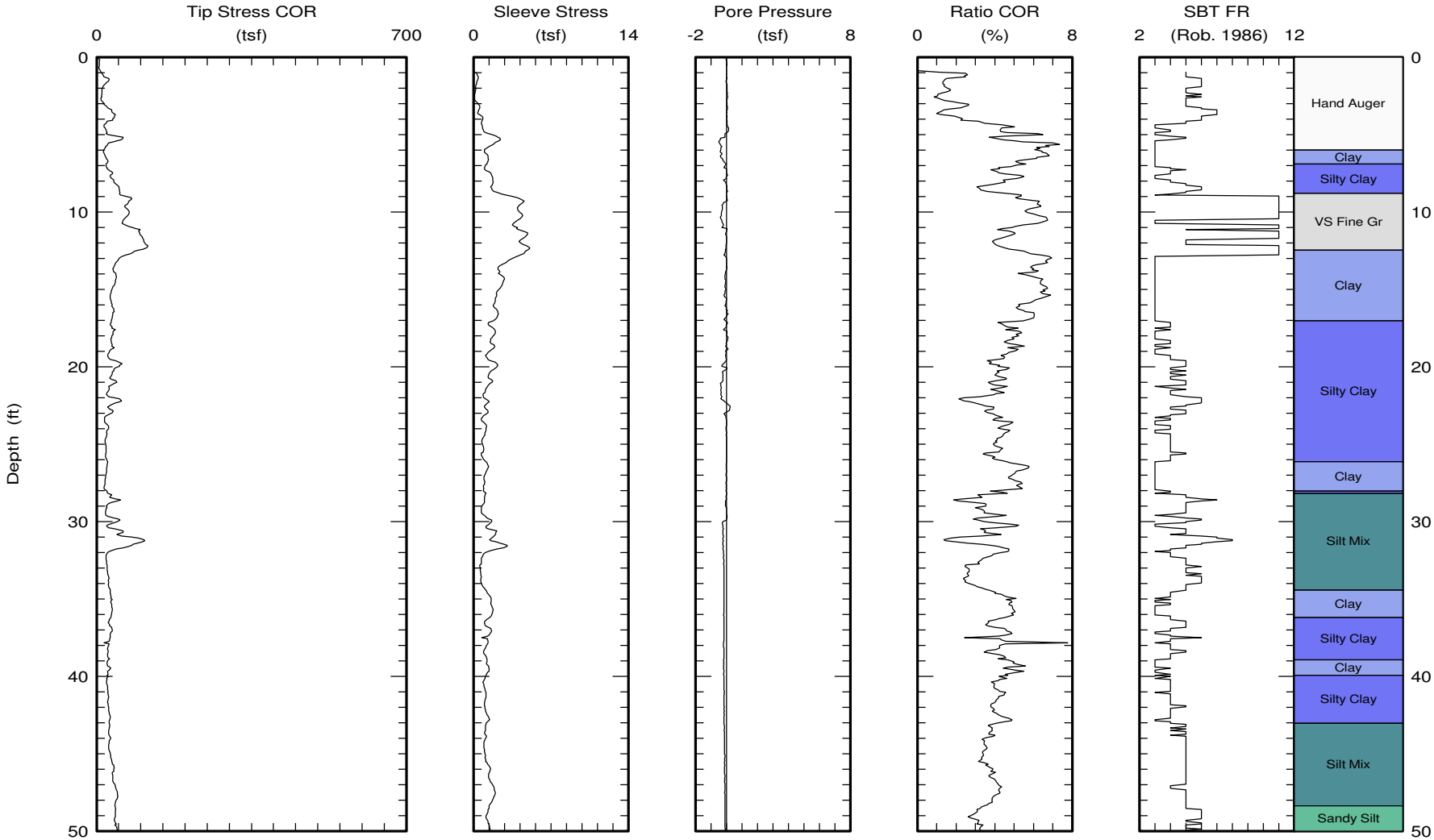
Date: 07/Apr/2011
Test ID: T1-C33
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension/Golf Course



Maximum depth: 75.16 (ft)

Kehoe Testing & Engineering Office: (714) 901-7270 Fax: (714) 901-7289 rich@kehoetesting.com www.kehoetesting.com	CPT Data 30 ton rig	Date: 17/May/2011 Test ID: T2-C1 Project: LosAngeles
	Customer: MACTEC Job Site: Westside Subway Extension	



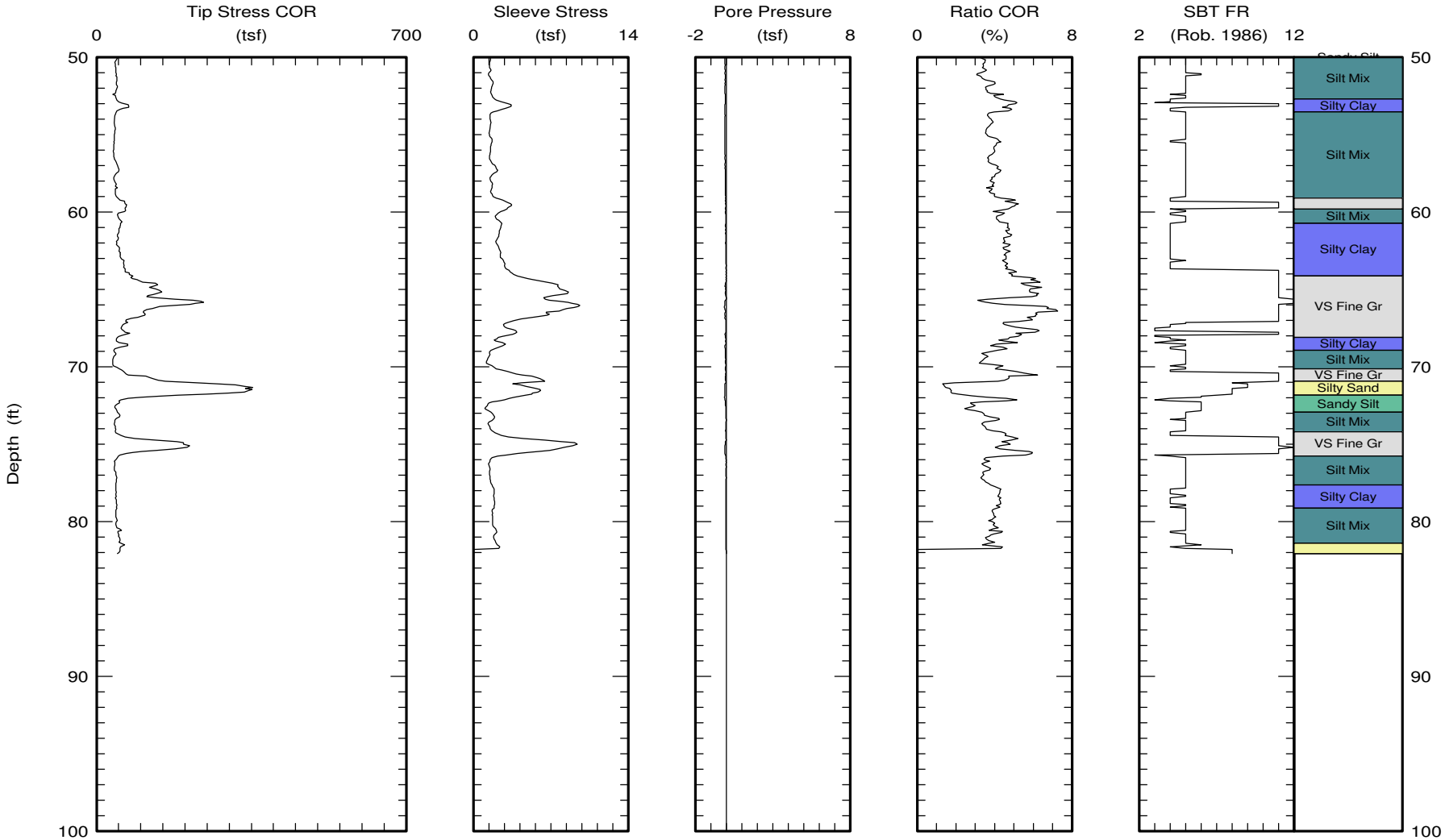
Maximum depth: 82.09 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

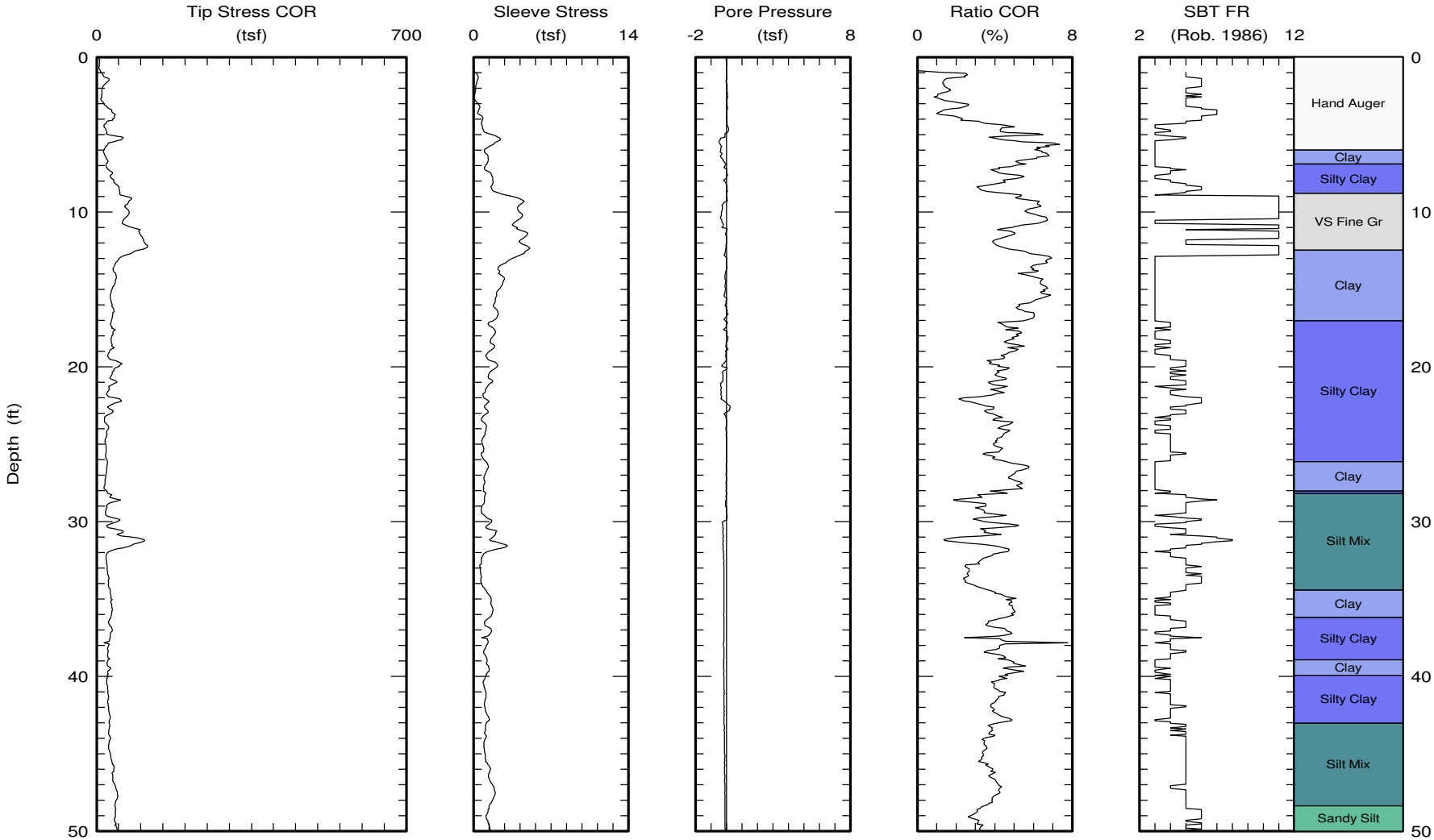
Date: 17/May/2011
Test ID: T2-C1
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



Maximum depth: 82.09 (ft)

Kehoe Testing & Engineering Office: (714) 901-7270 Fax: (714) 901-7289 rich@kehoetesting.com www.kehoetesting.com	CPT Data 30 ton rig	Date: 17/May/2011 Test ID: T2-C1 Project: LosAngeles
	Customer: MACTEC Job Site: Westside Subway Extension	



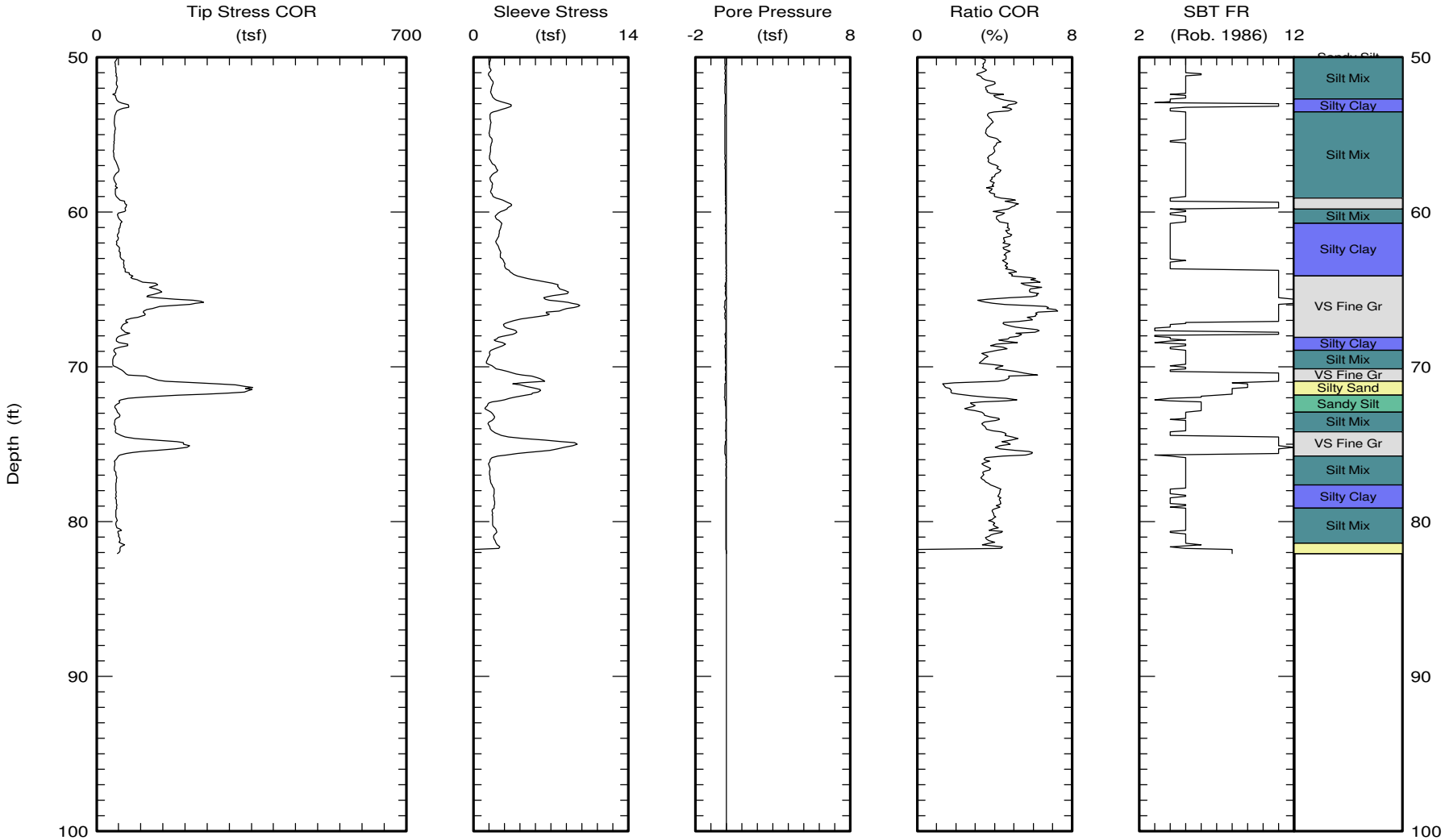
Maximum depth: 82.09 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 17/May/2011
Test ID: T2-C1
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



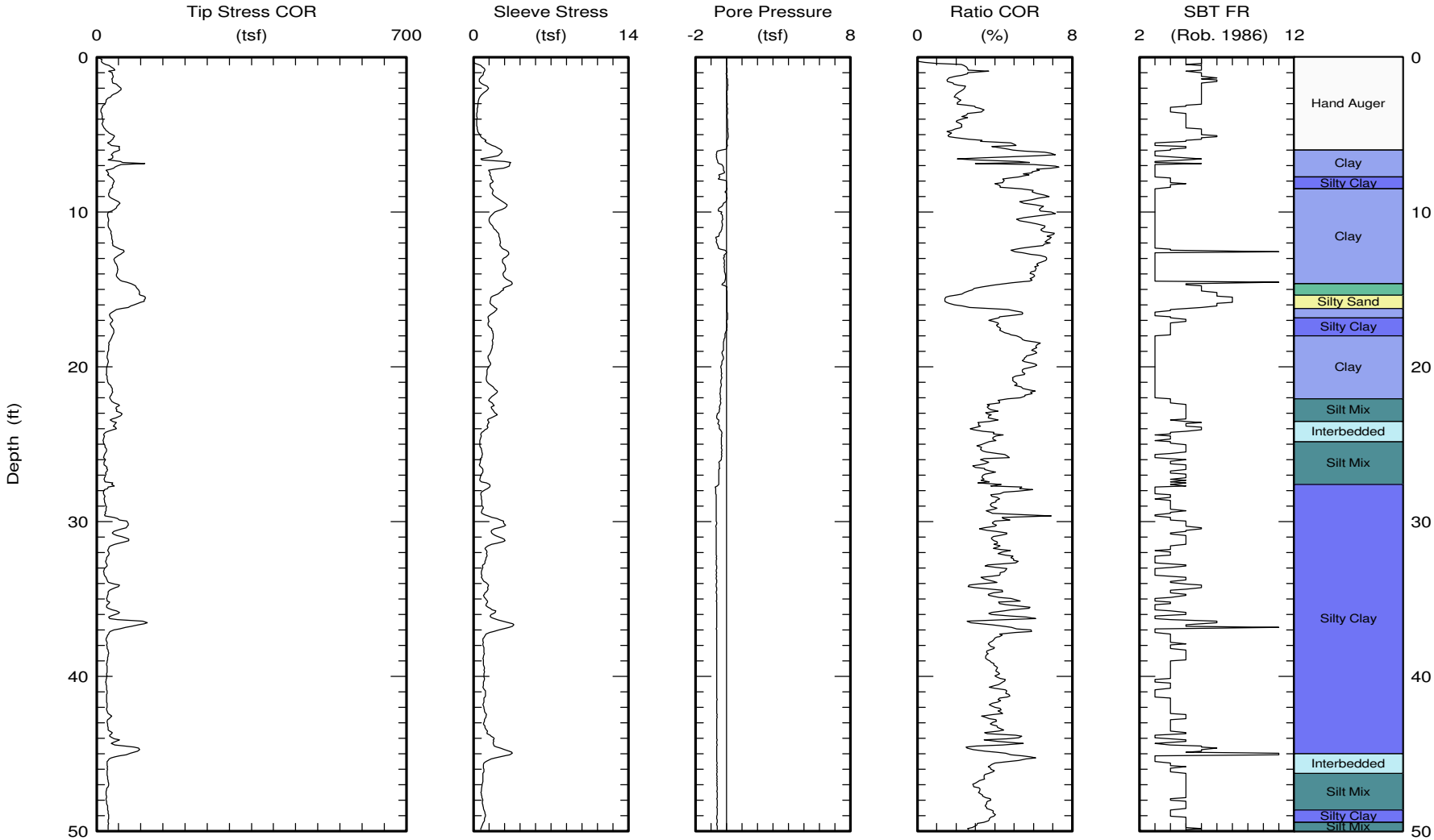
Maximum depth: 82.09 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 17/May/2011
Test ID: T2-C3
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



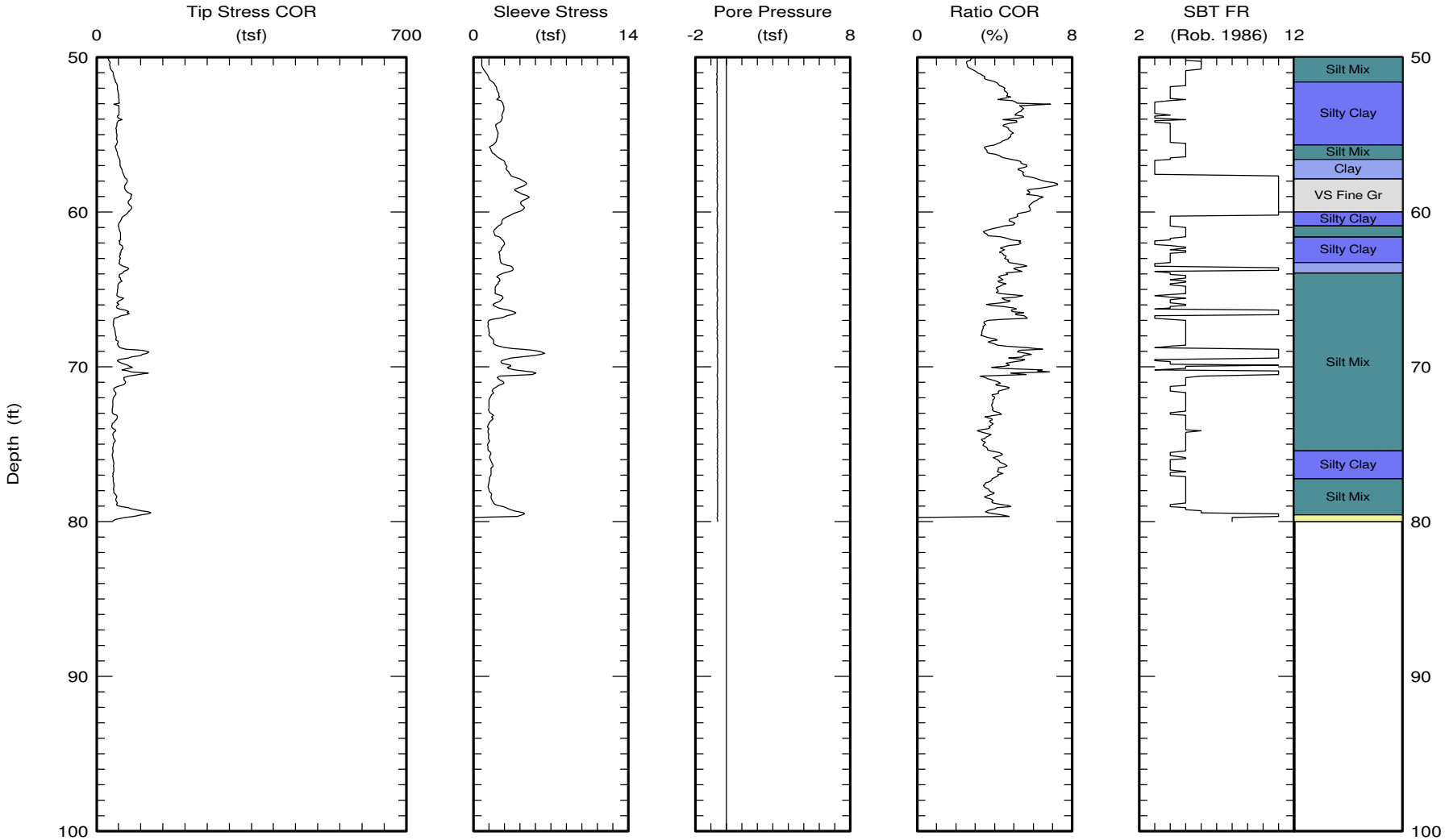
Maximum depth: 80.03 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 17/May/2011
Test ID: T2-C3
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



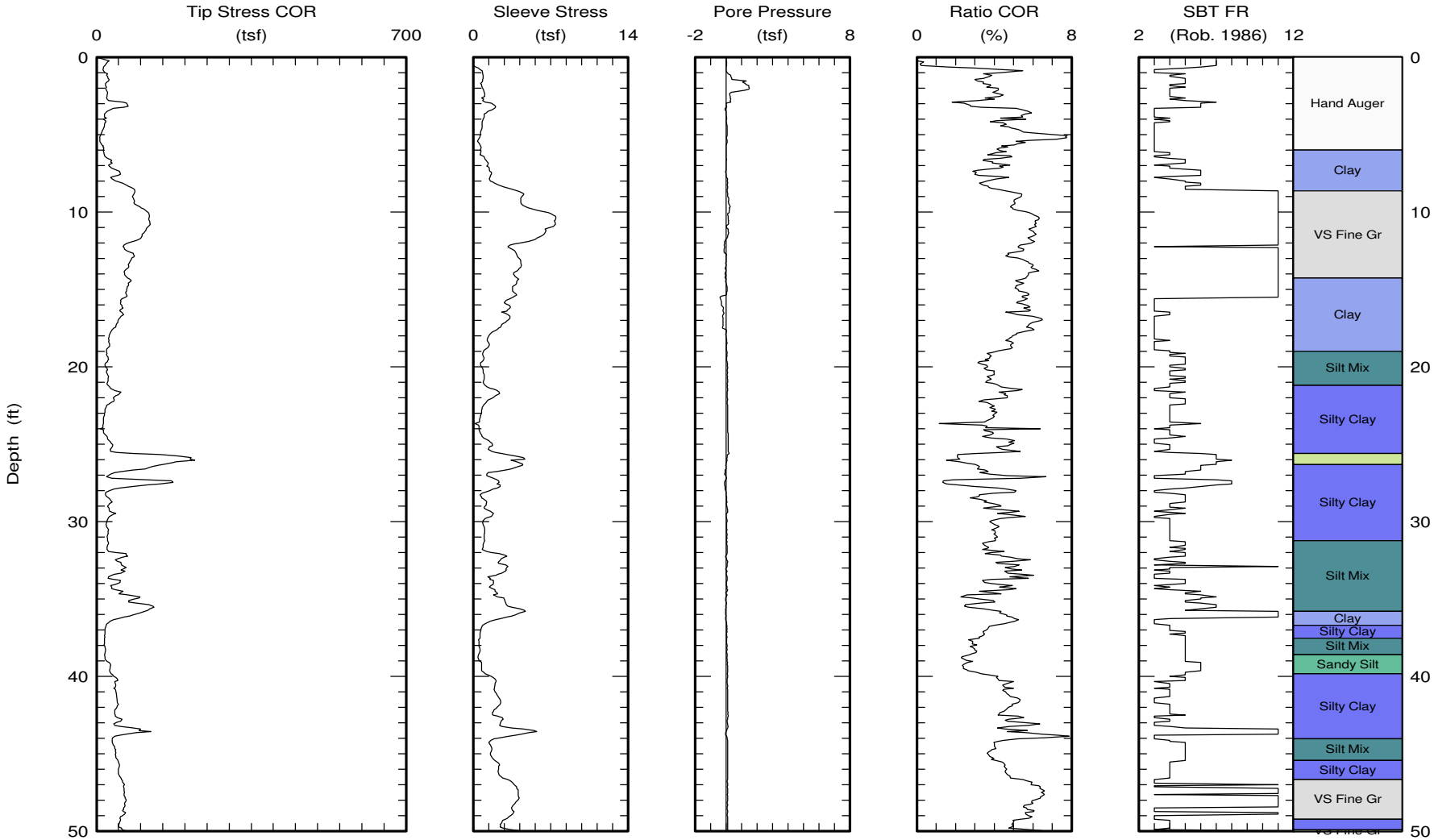
Maximum depth: 80.03 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 17/May/2011
Test ID: T2-C5
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



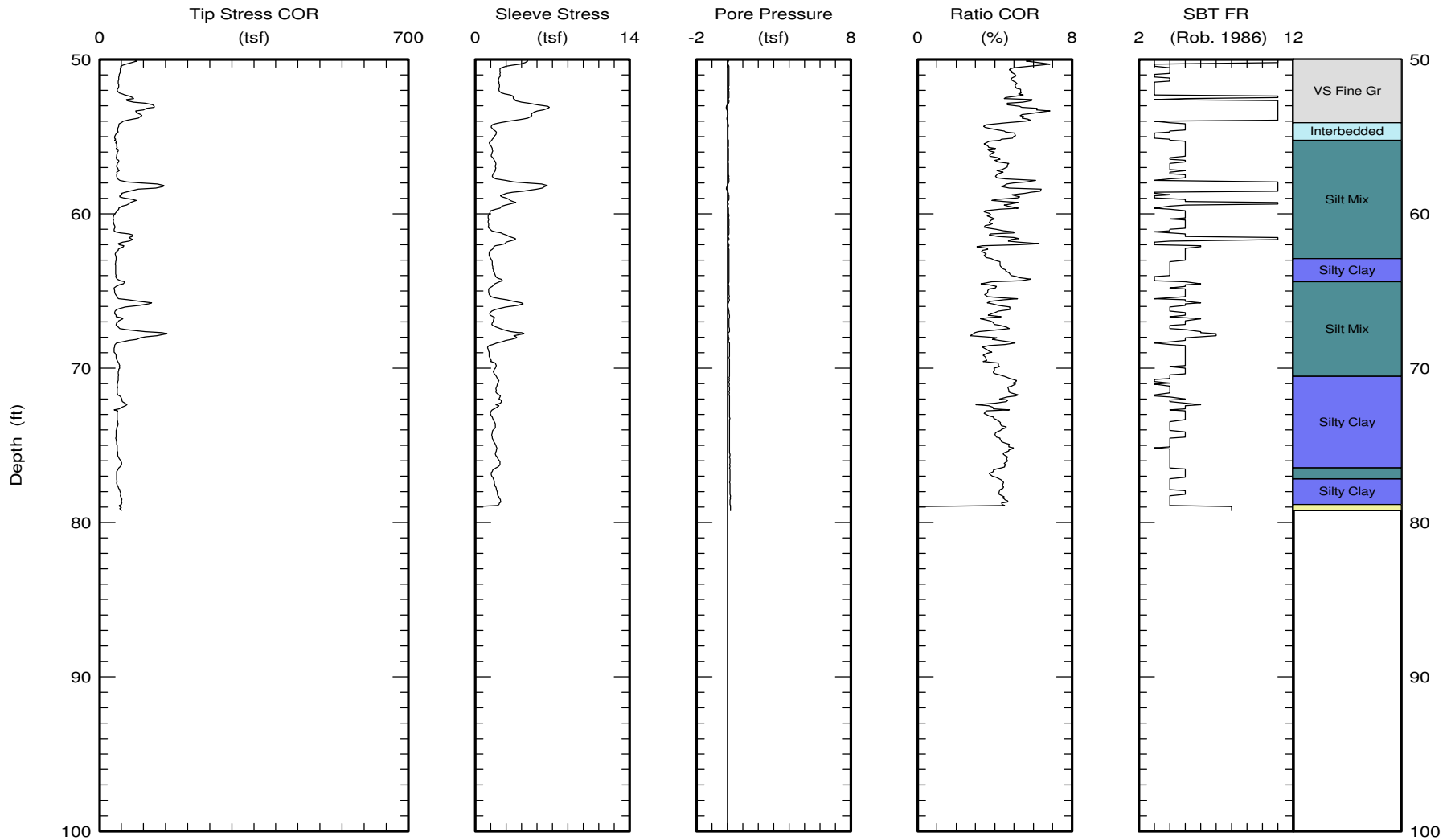
Maximum depth: 79.26 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 17/May/2011
Test ID: T2-C5
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



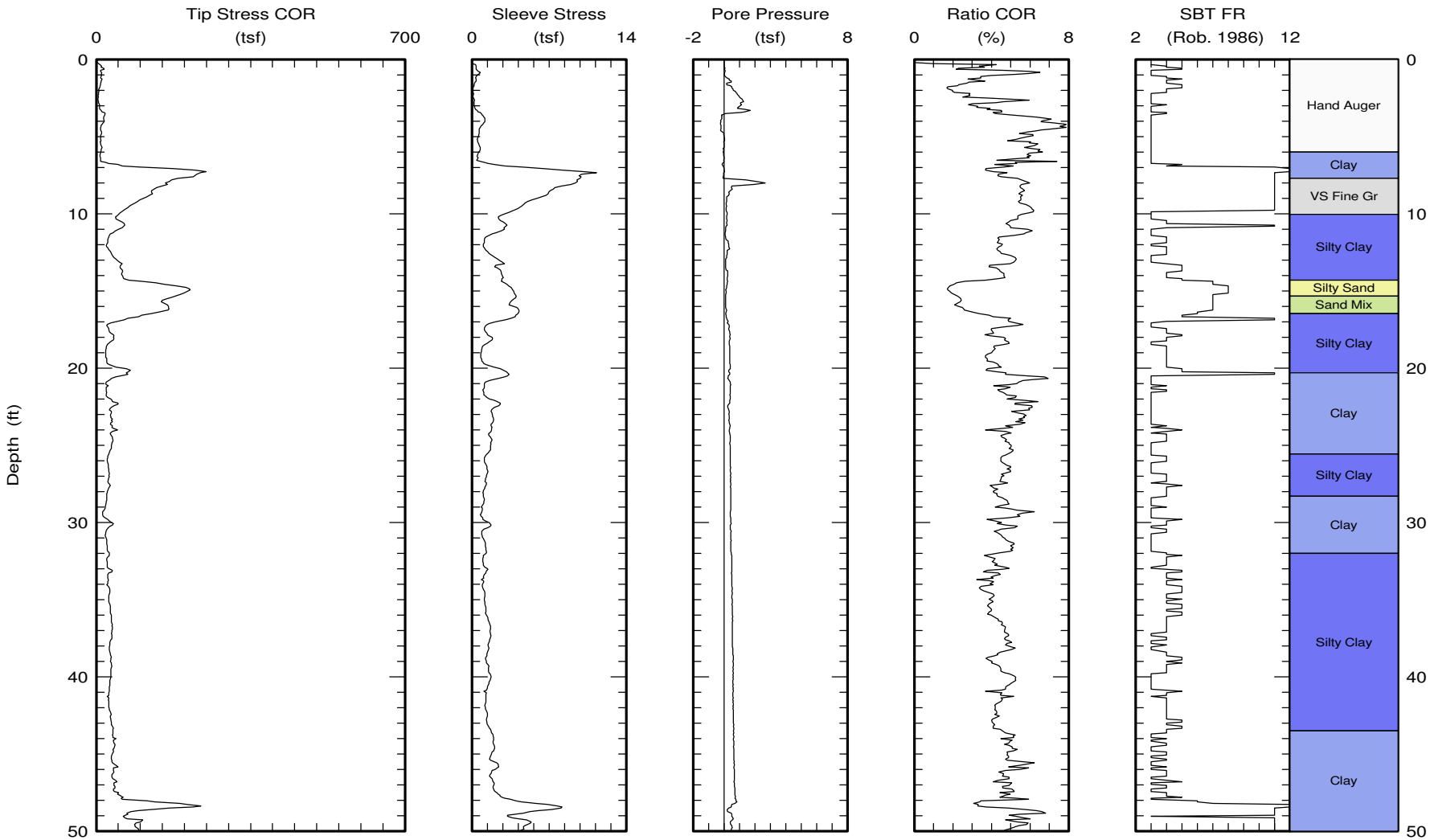
Maximum depth: 79.26 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 19/May/2011
Test ID: T2-C7
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



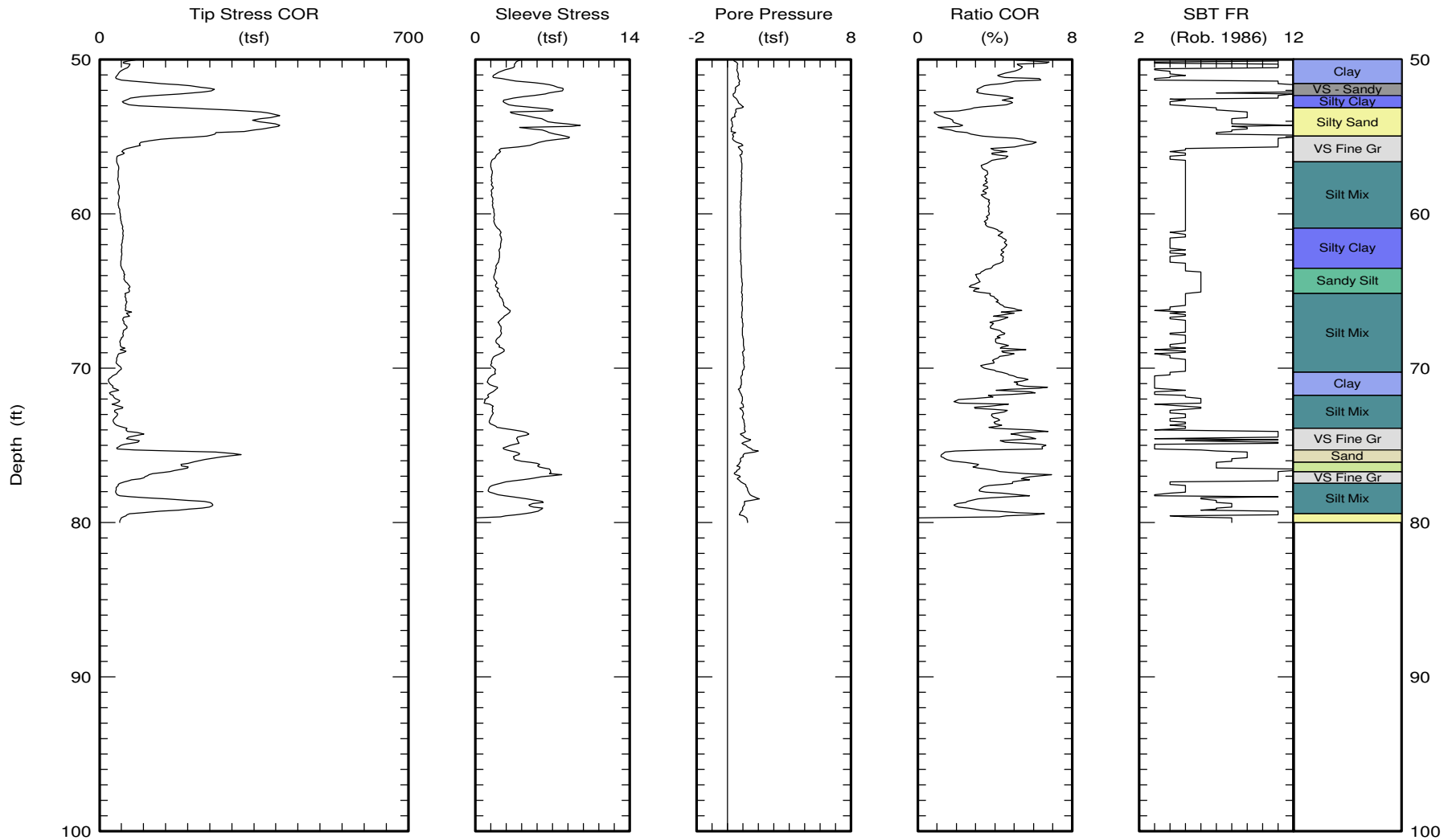
Maximum depth: 80.02 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 19/May/2011
Test ID: T2-C7
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



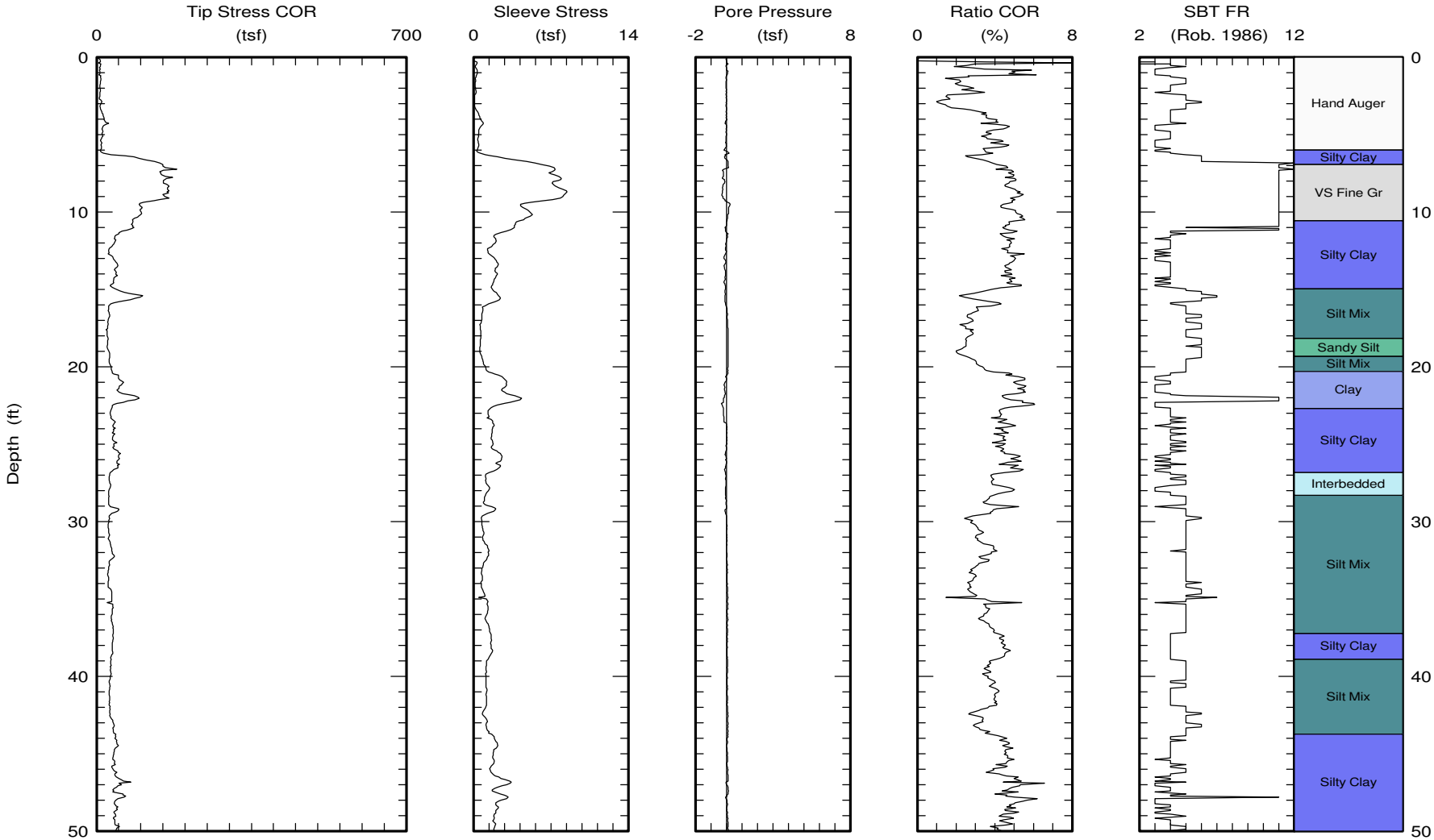
Maximum depth: 80.02 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 17/May/2011
Test ID: T2-C8
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



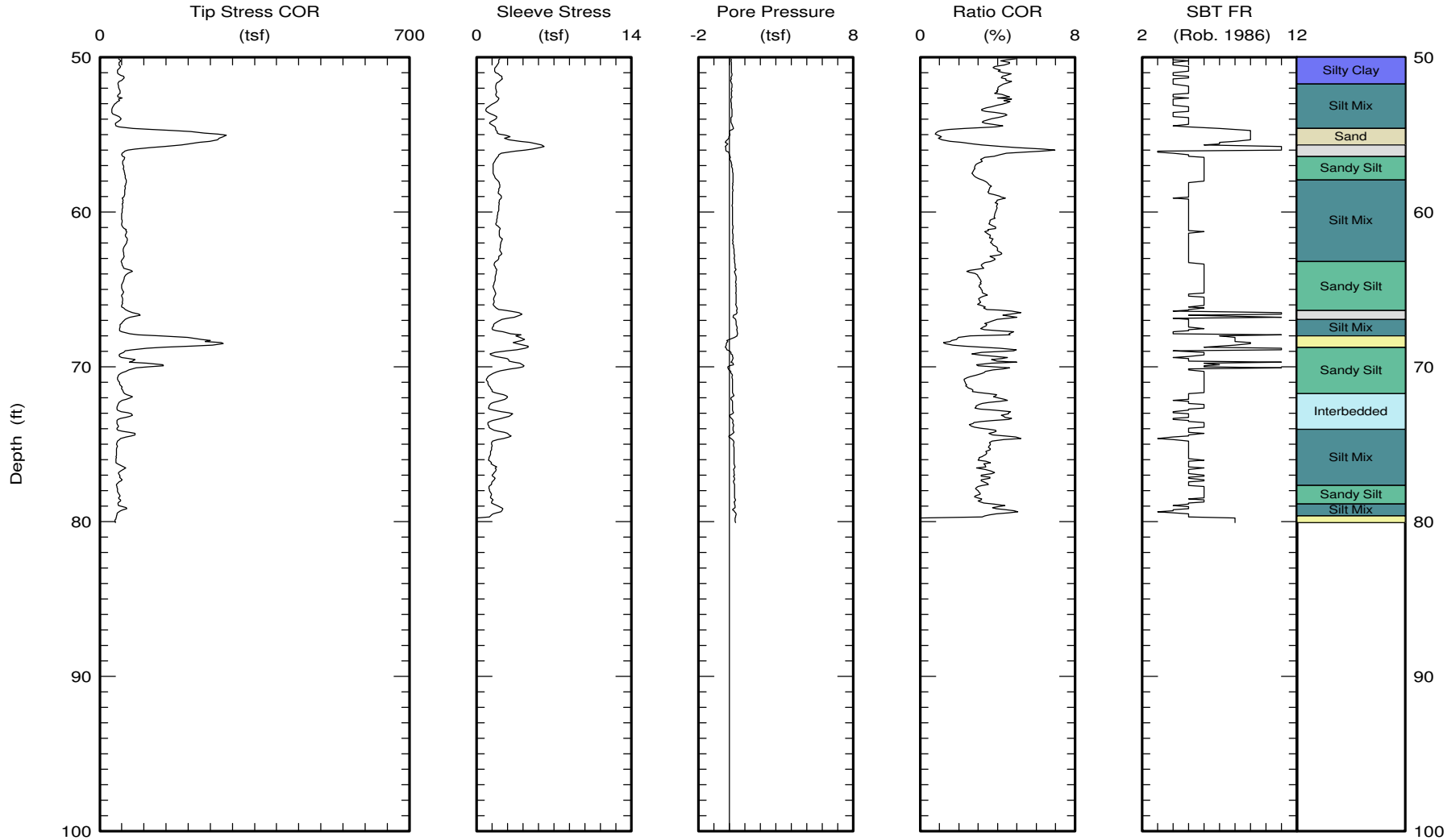
Maximum depth: 80.07 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 17/May/2011
Test ID: T2-C8
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



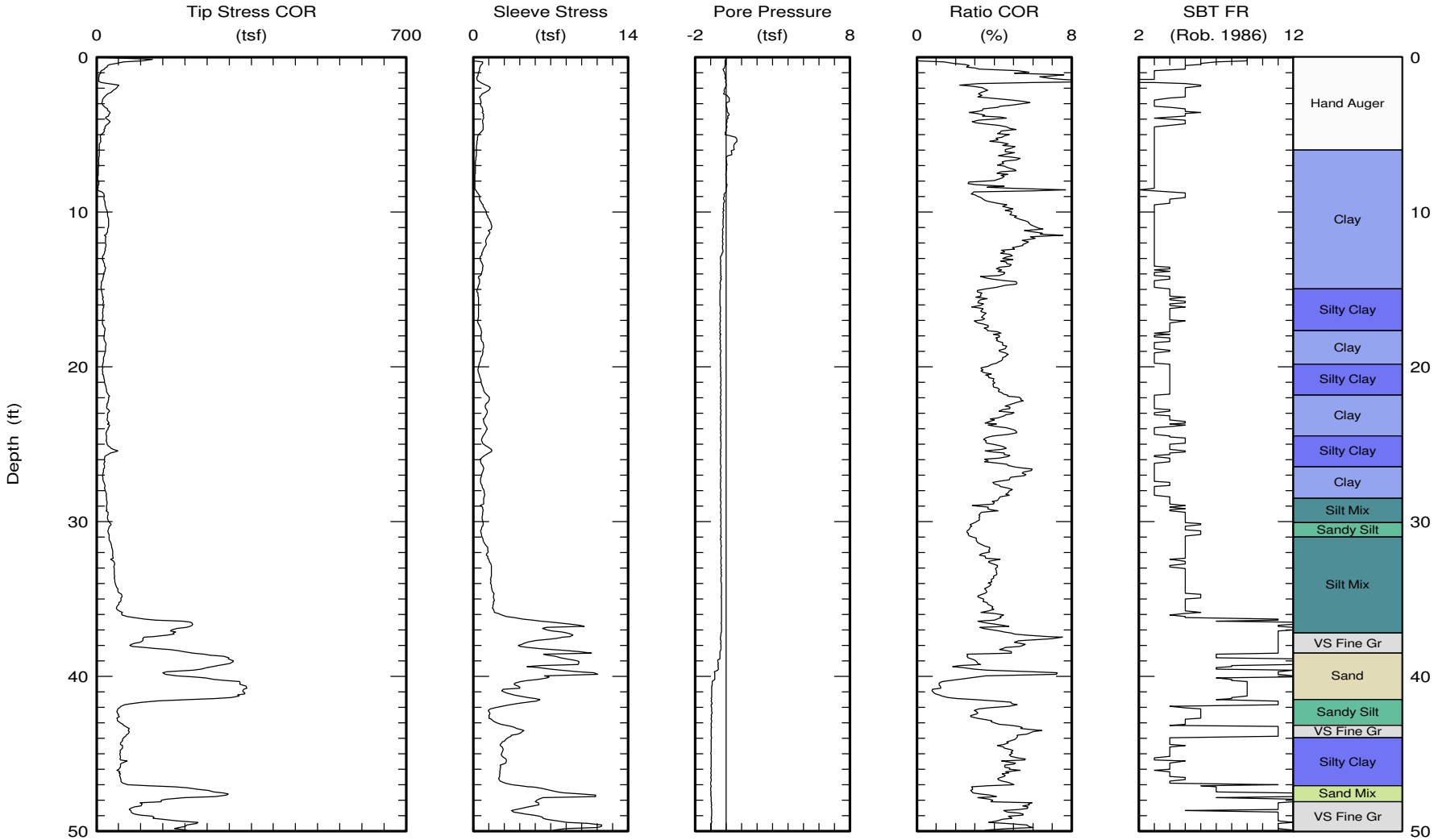
Maximum depth: 80.07 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 18/May/2011
Test ID: T2-C10
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



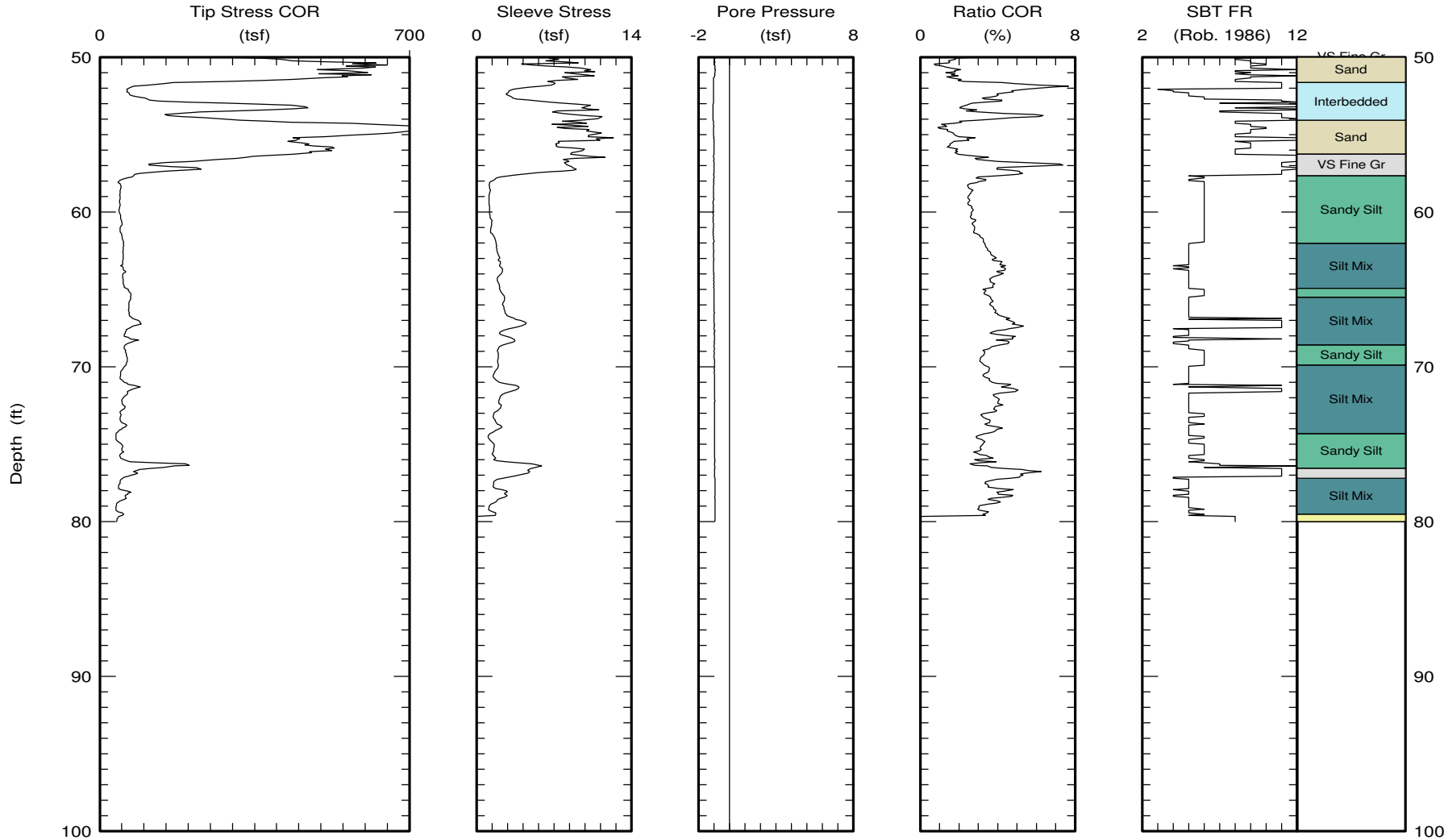
Maximum depth: 80.02 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 18/May/2011
Test ID: T2-C10
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



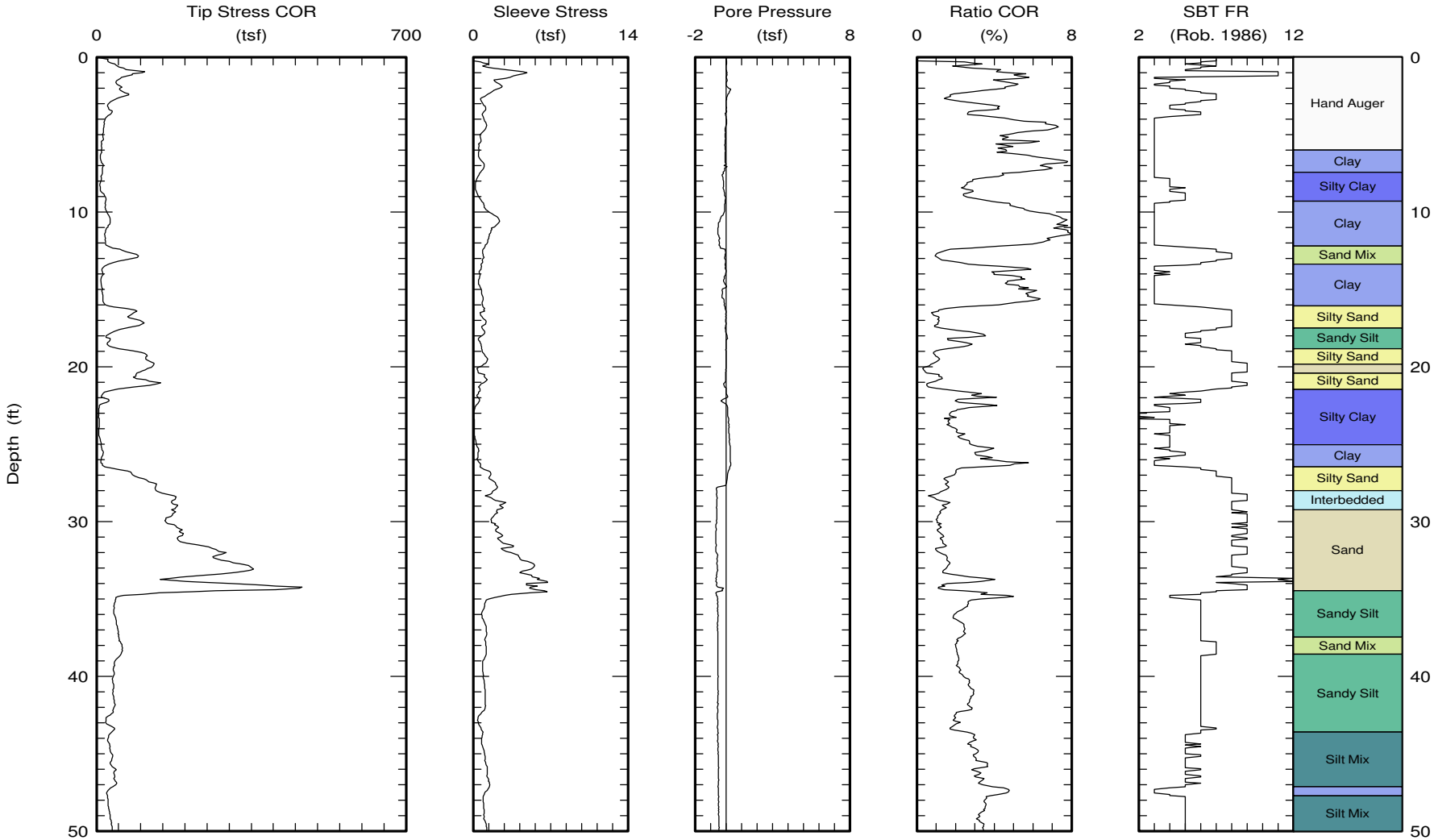
Maximum depth: 80.02 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 16/May/2011
Test ID: T2-C11
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



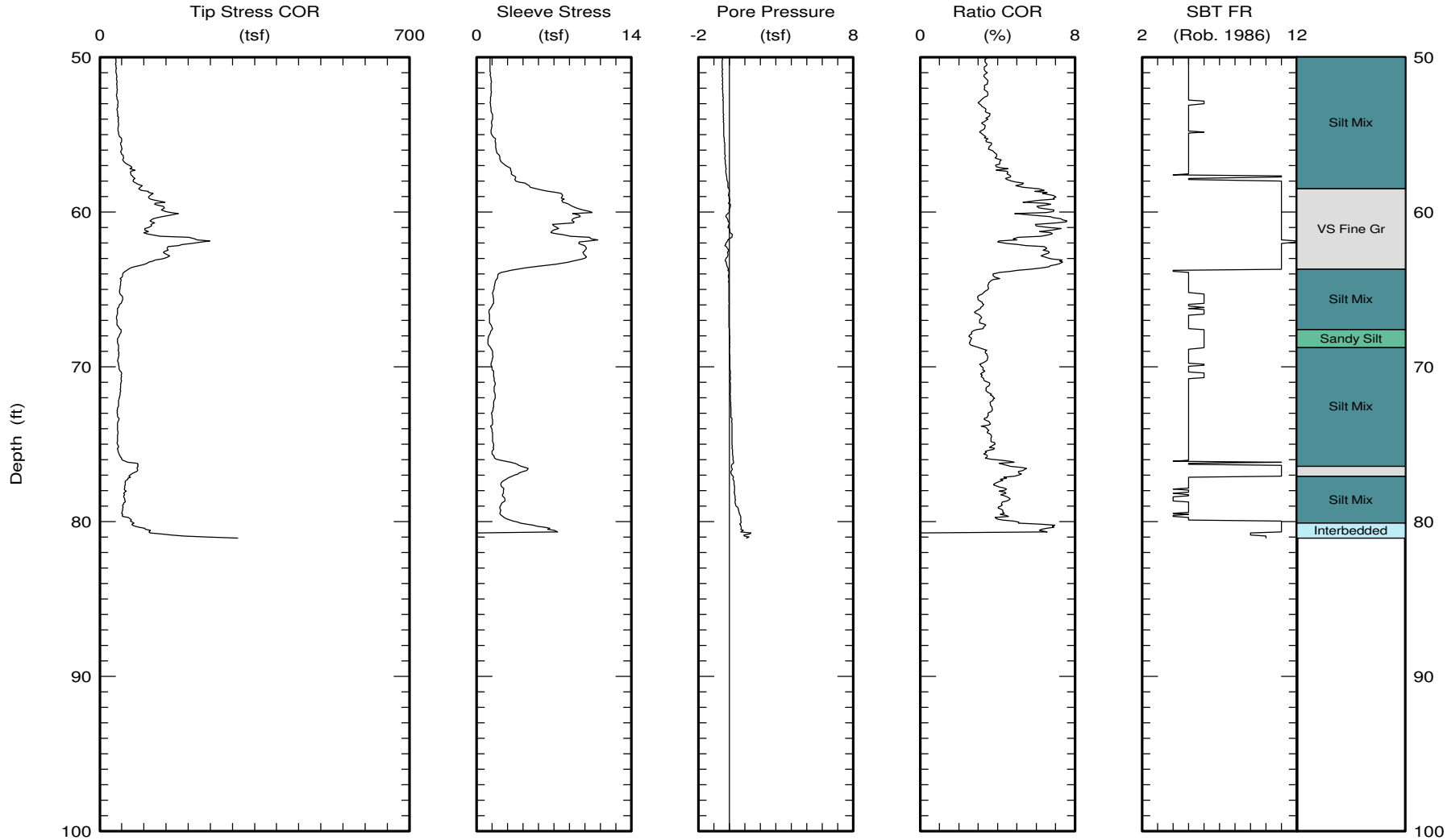
Maximum depth: 81.08 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 16/May/2011
Test ID: T2-C11
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



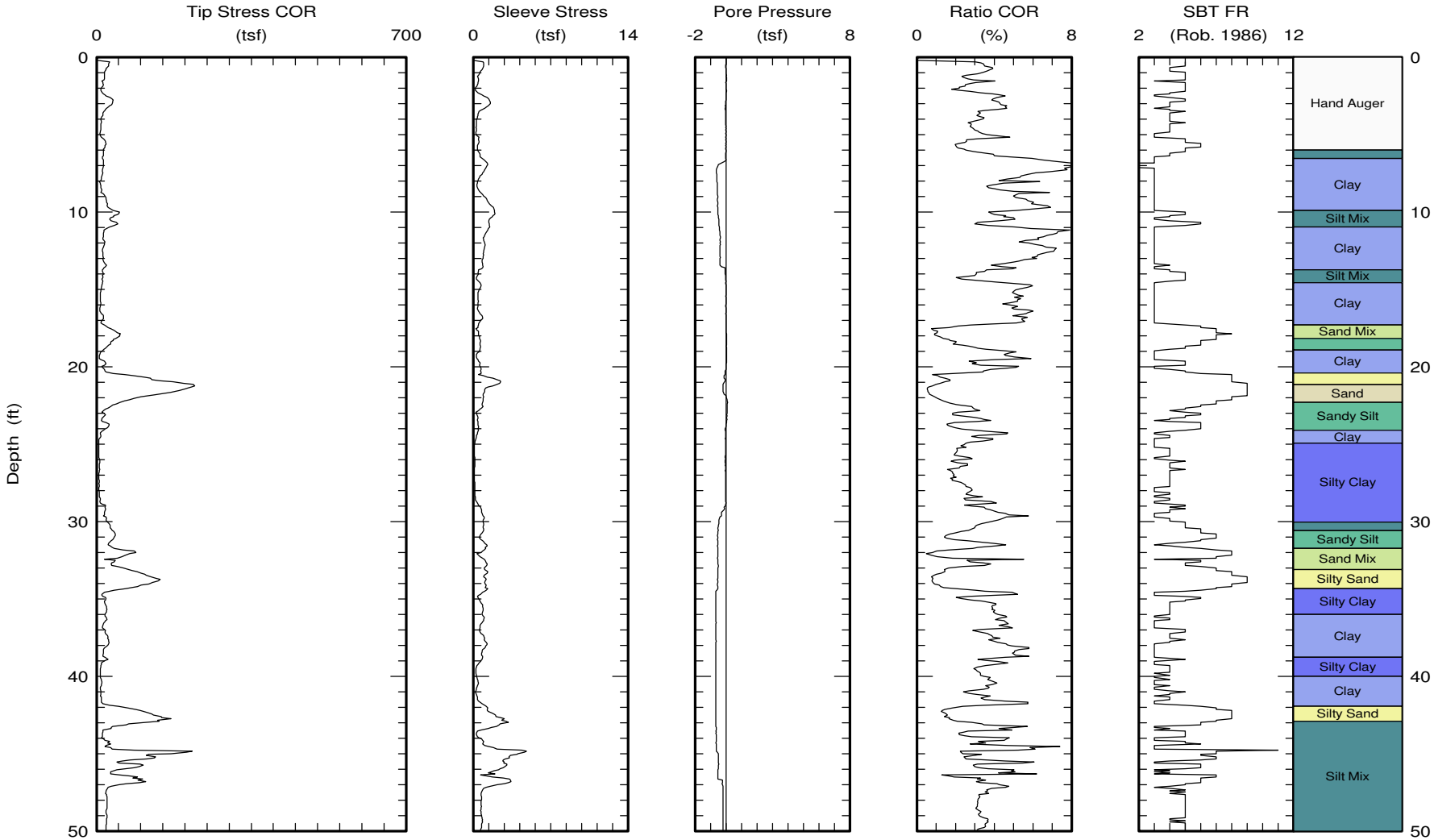
Maximum depth: 81.08 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 18/May/2011
Test ID: T2-C12
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



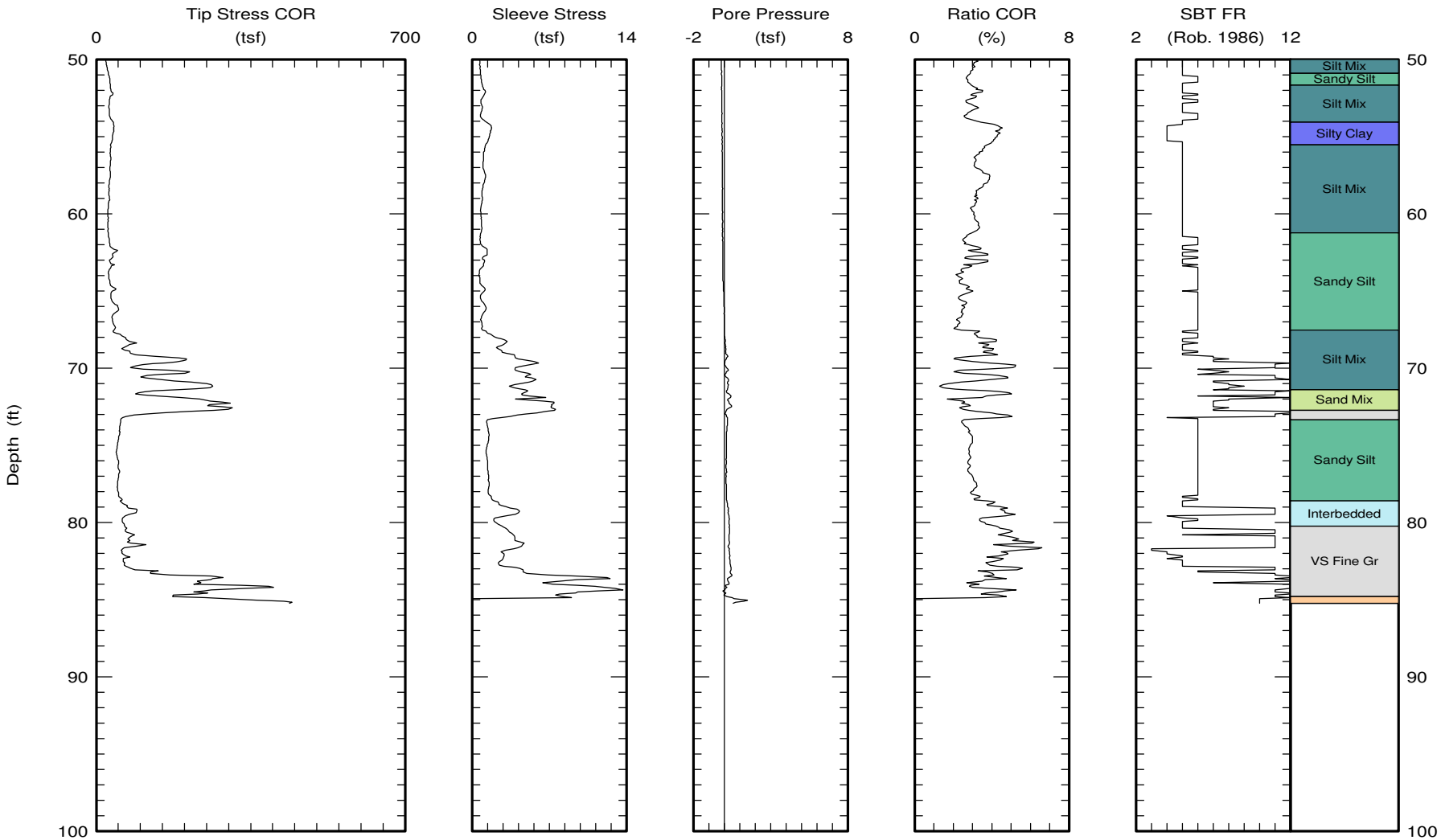
Maximum depth: 85.25 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

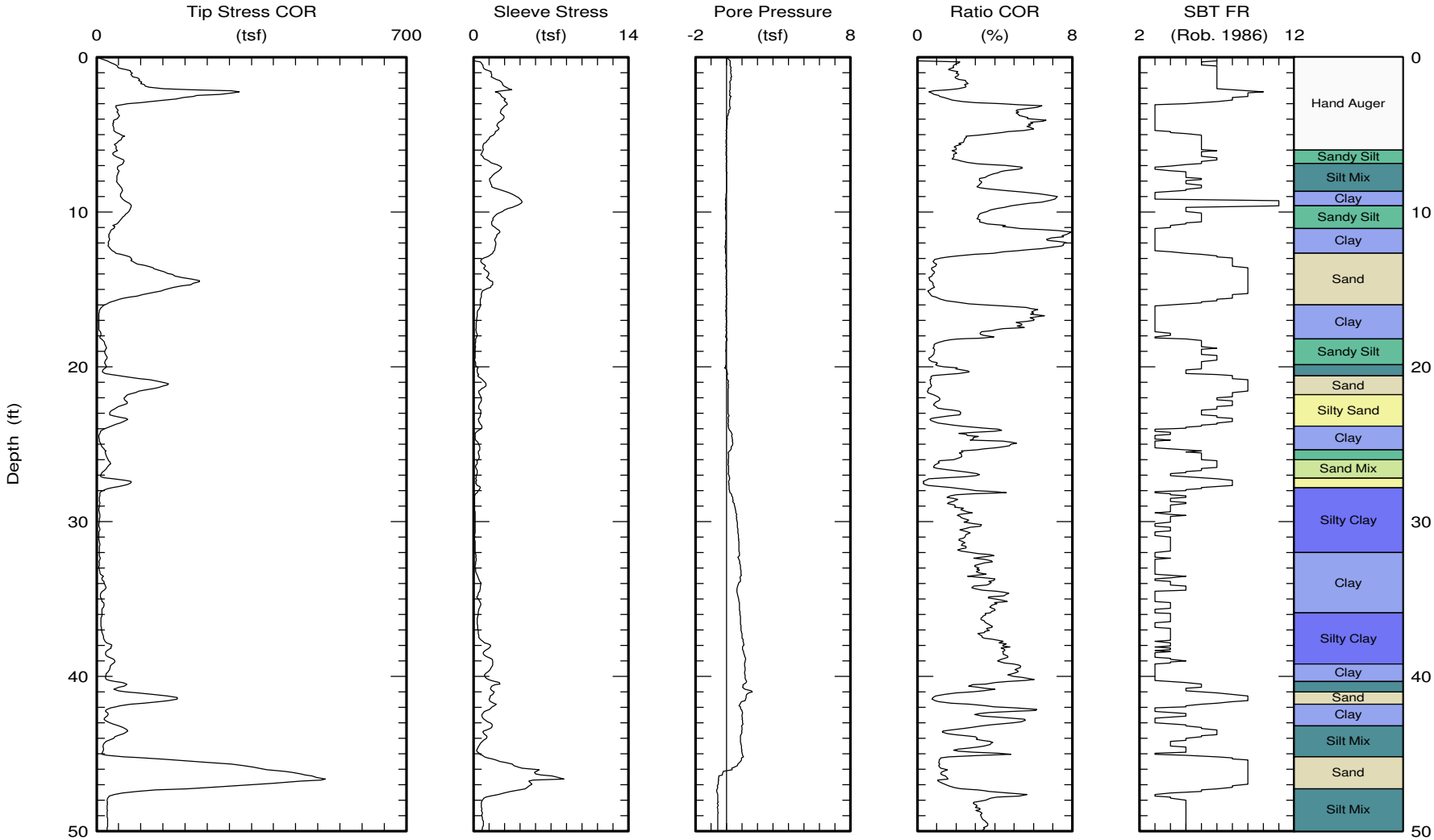
Date: 18/May/2011
Test ID: T2-C12
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



Maximum depth: 85.25 (ft)

Kehoe Testing & Engineering Office: (714) 901-7270 Fax: (714) 901-7289 rich@kehoetesting.com www.kehoetesting.com	CPT Data 30 ton rig	Date: 19/May/2011 Test ID: T2-C14 Project: LosAngeles
	Customer: MACTEC Job Site: Westside Subway Extension	



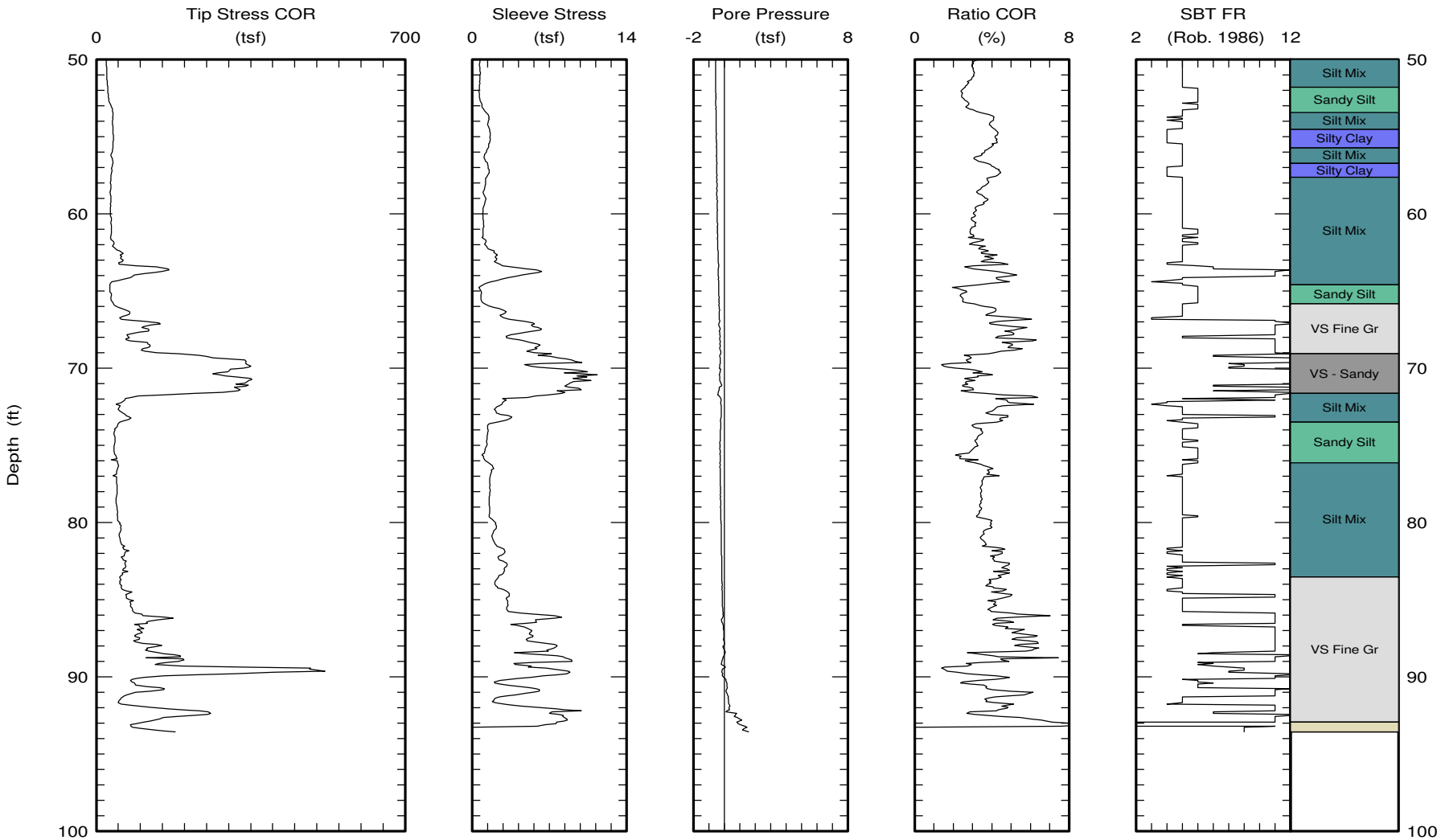
Maximum depth: 93.58 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 19/May/2011
Test ID: T2-C14
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



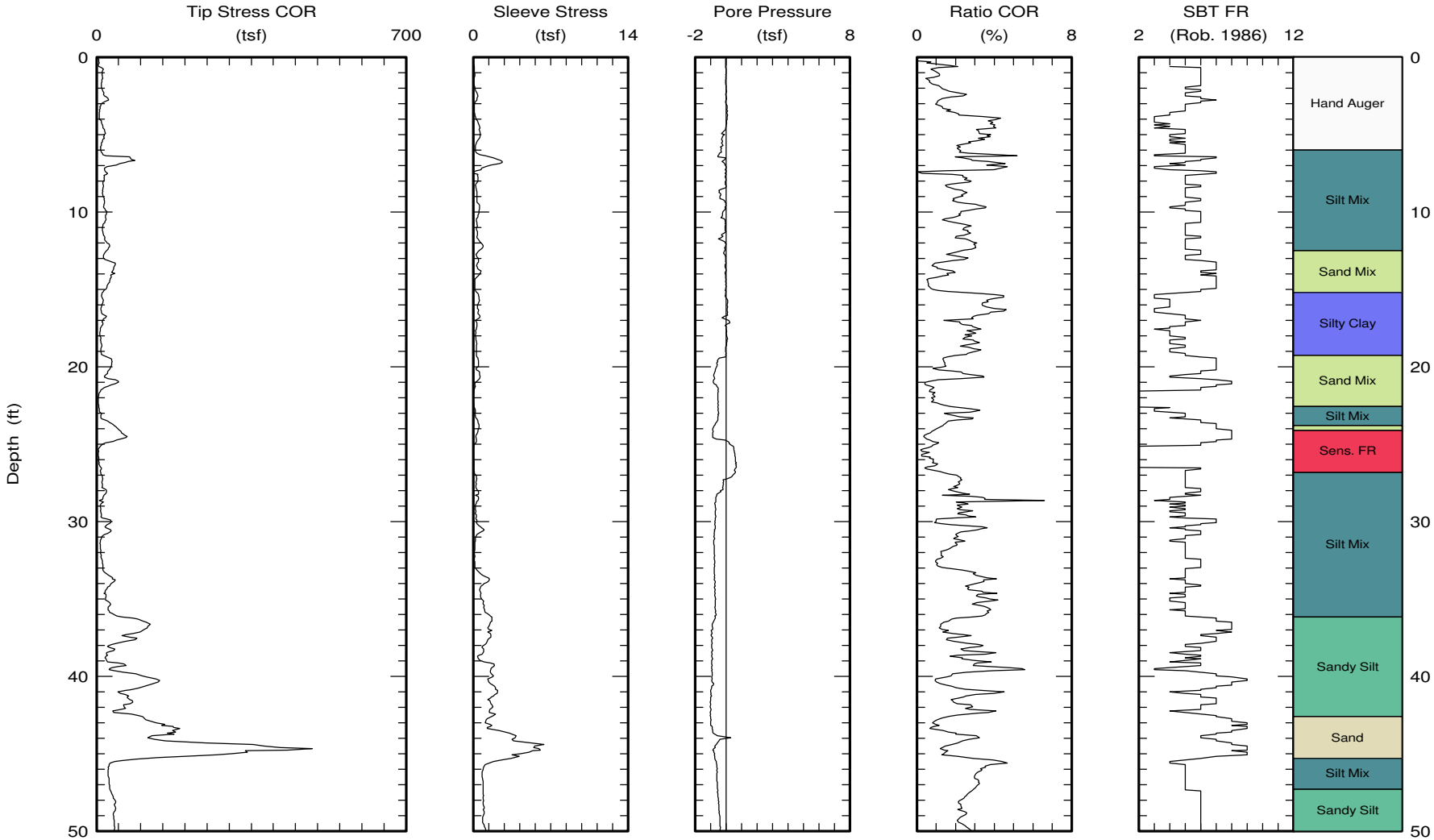
Maximum depth: 93.58 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 20/May/2011
Test ID: T2-C15
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



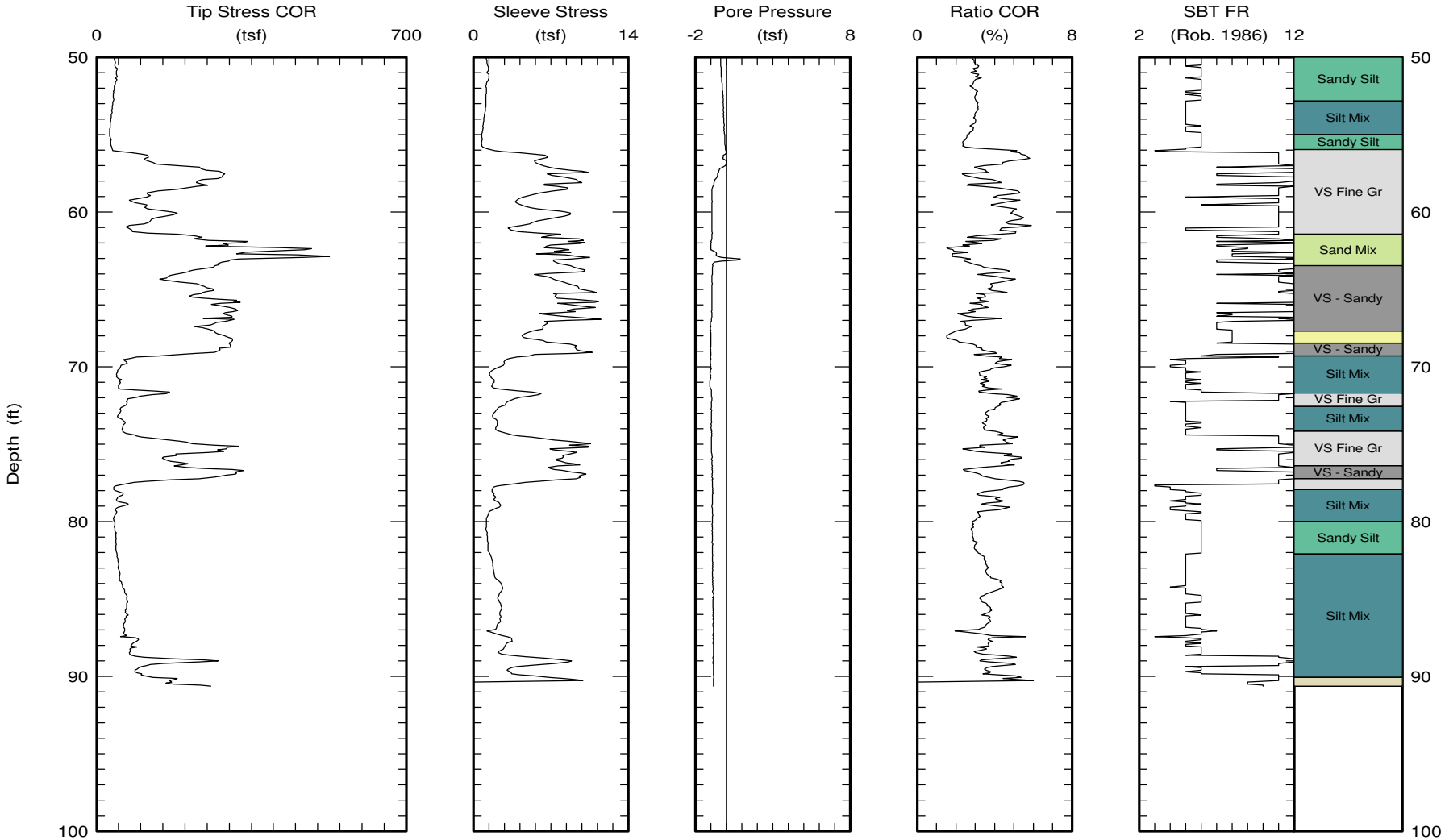
Maximum depth: 90.66 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 20/May/2011
Test ID: T2-C15
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



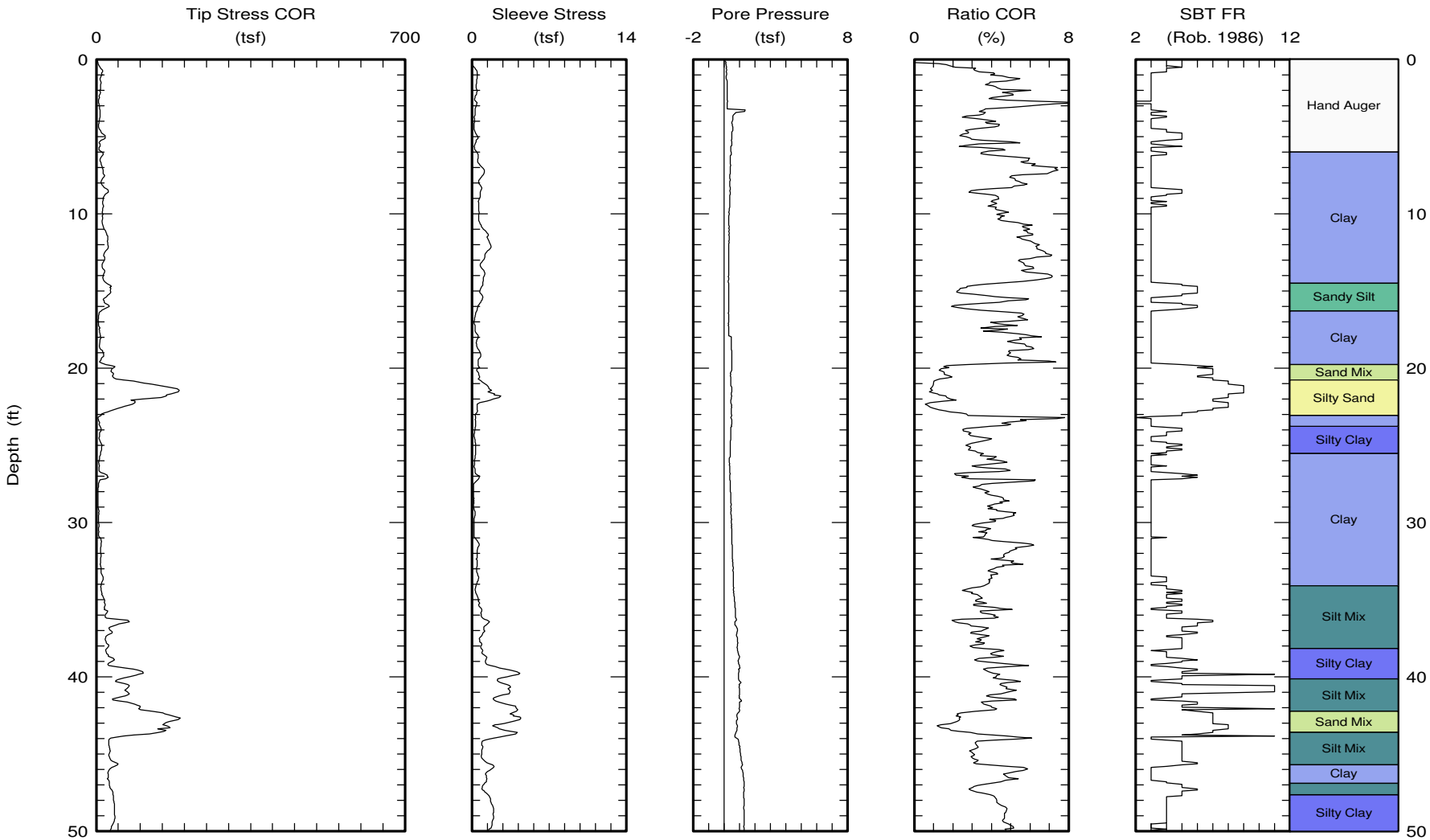
Maximum depth: 90.66 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 19/May/2011
Test ID: T2-C18
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



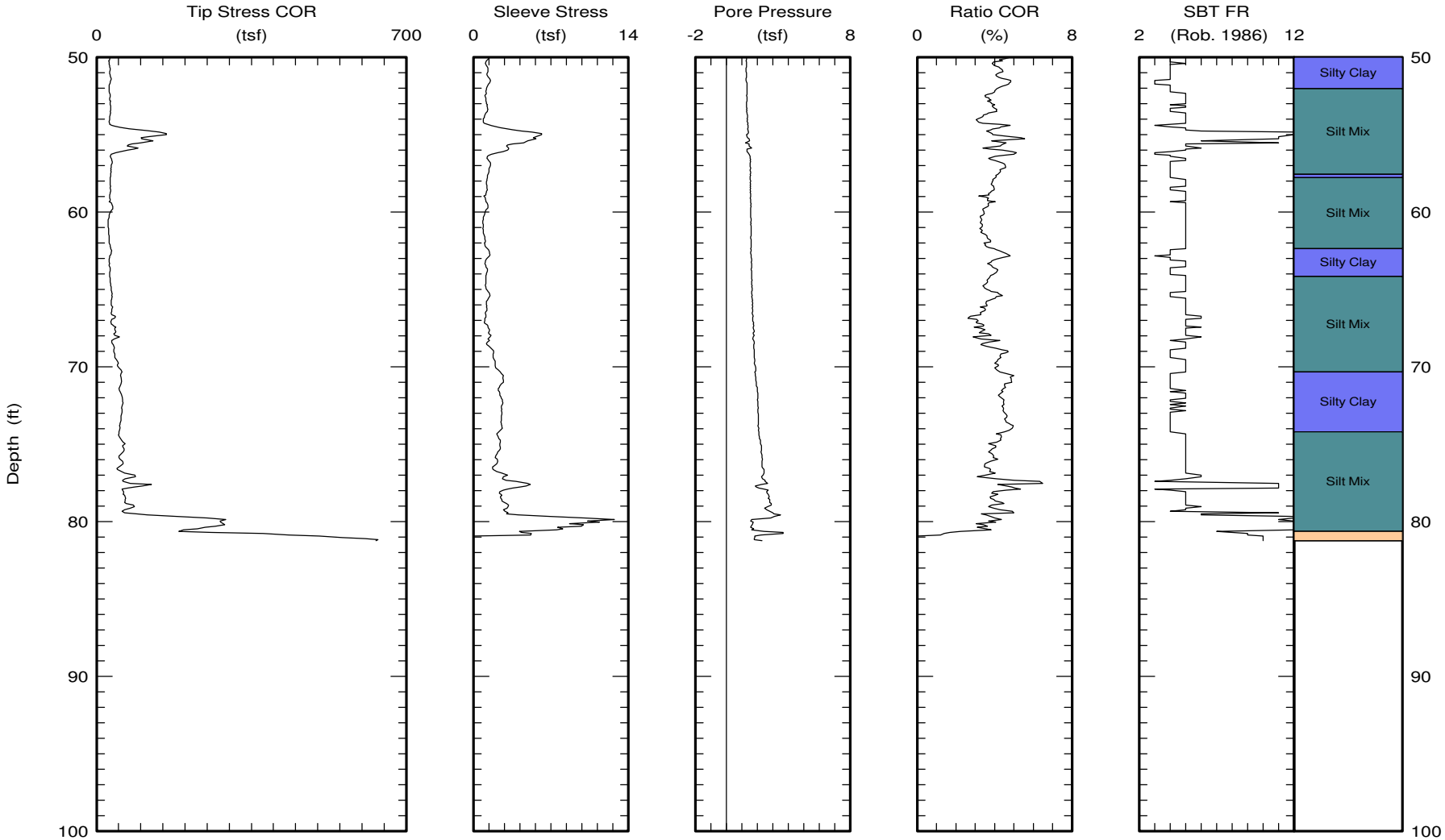
Maximum depth: 81.25 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 19/May/2011
Test ID: T2-C18
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



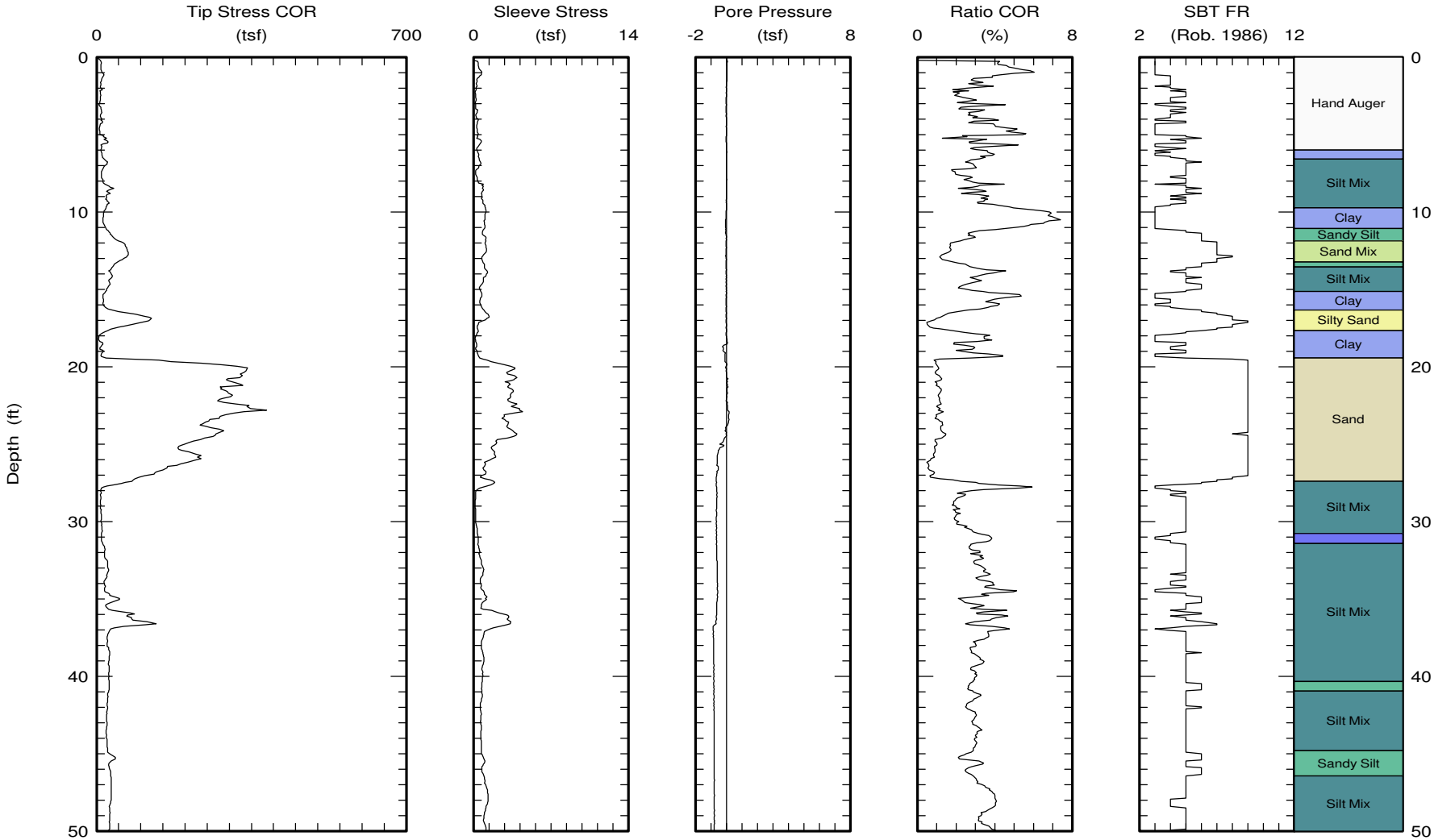
Maximum depth: 81.25 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 20/May/2011
Test ID: T2-C20
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



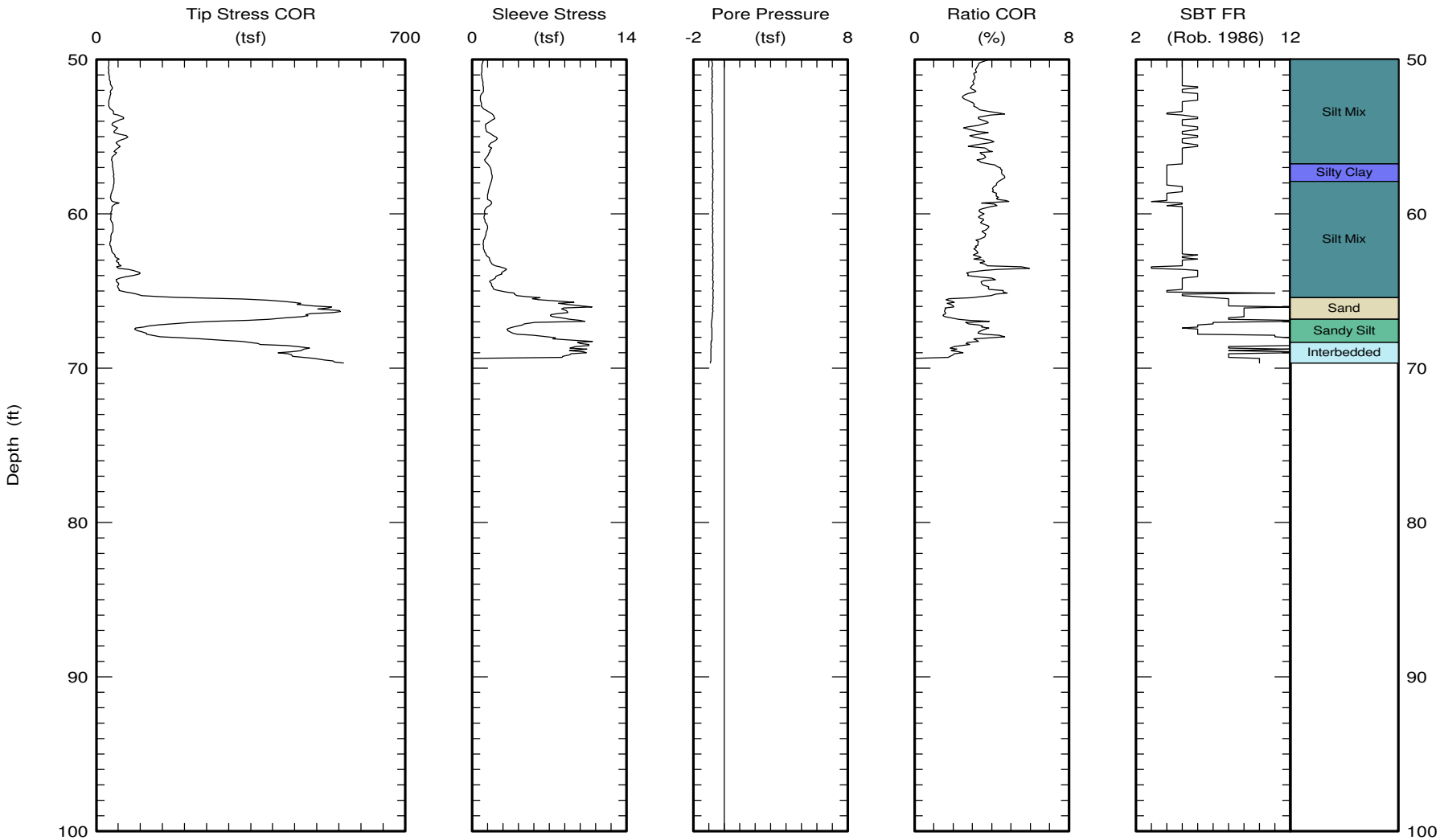
Maximum depth: 69.68 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 20/May/2011
Test ID: T2-C20
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



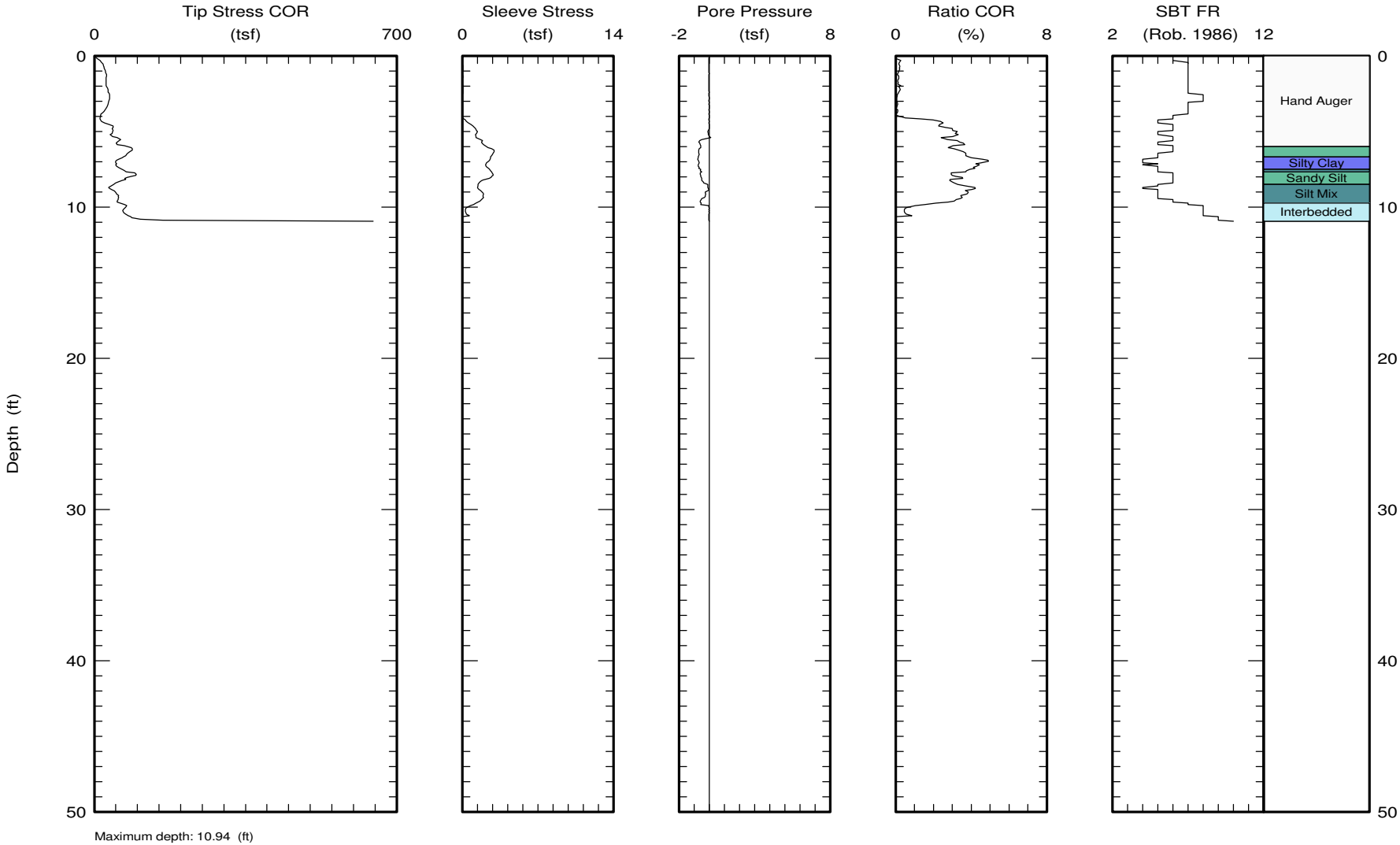
Maximum depth: 69.68 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 16/May/2011
Test ID: T2-C21
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



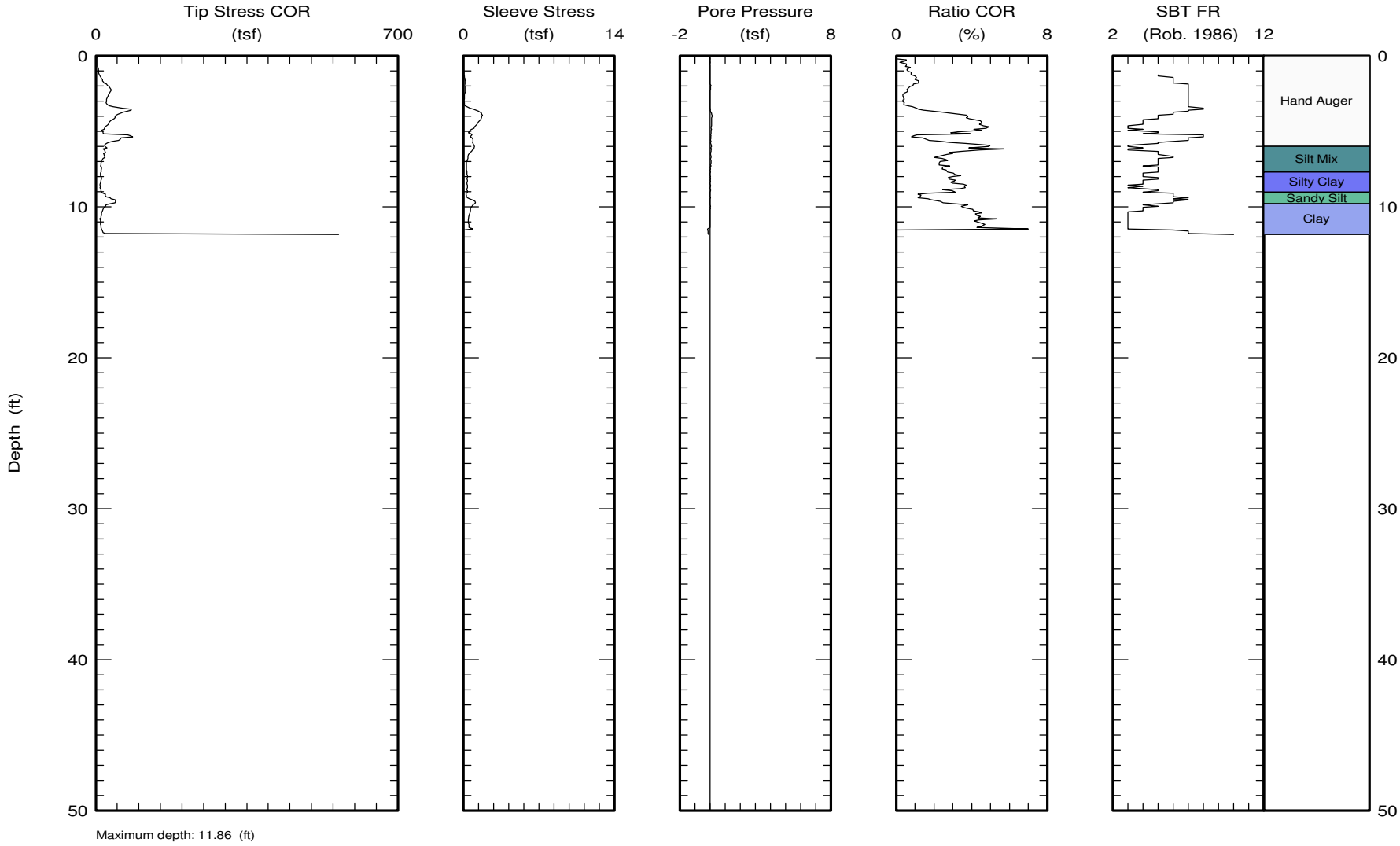
Maximum depth: 10.94 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 16/May/2011
Test ID: T2-C21A
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



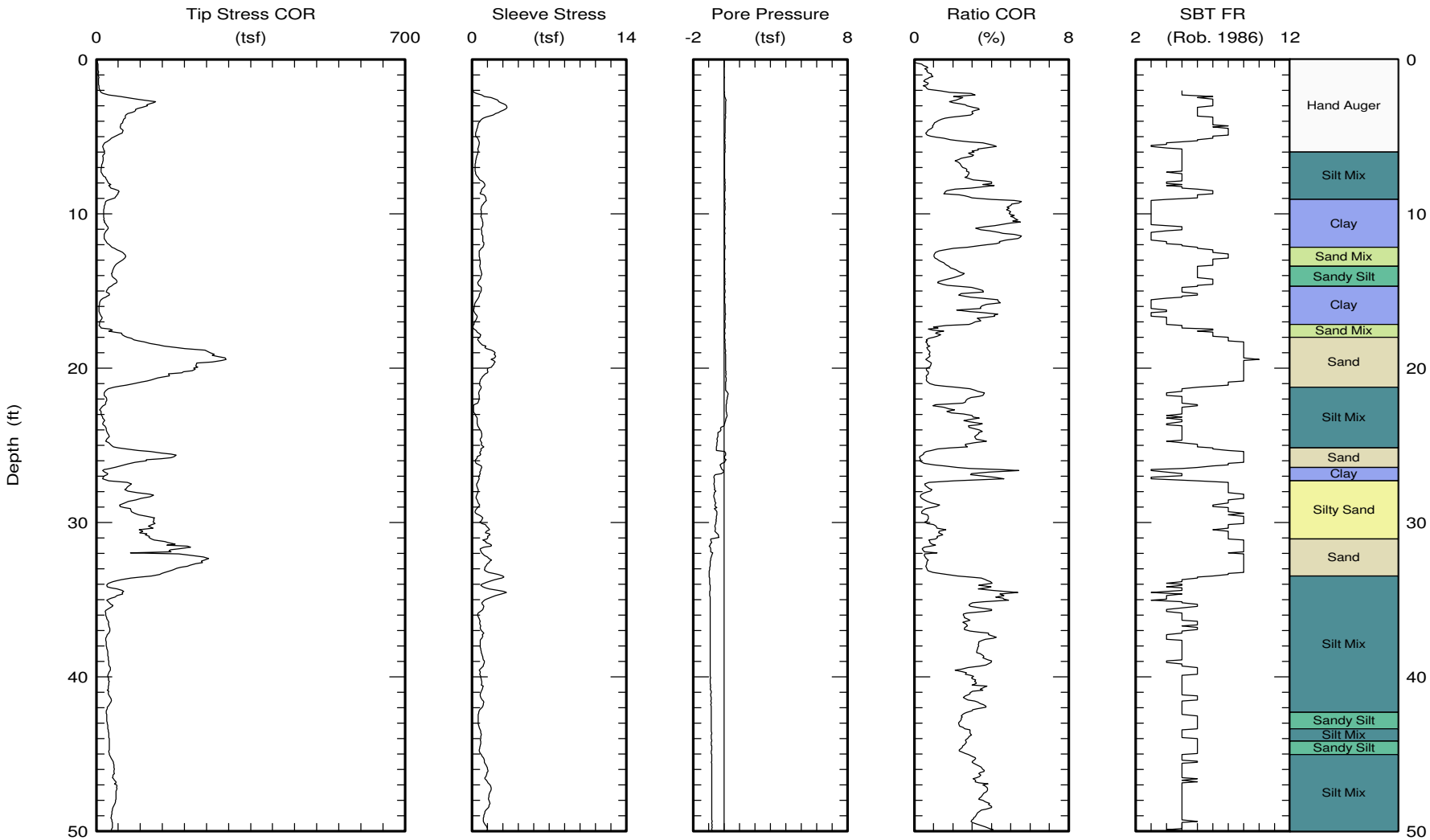
Maximum depth: 11.86 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 16/May/2011
Test ID: T2-C22
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



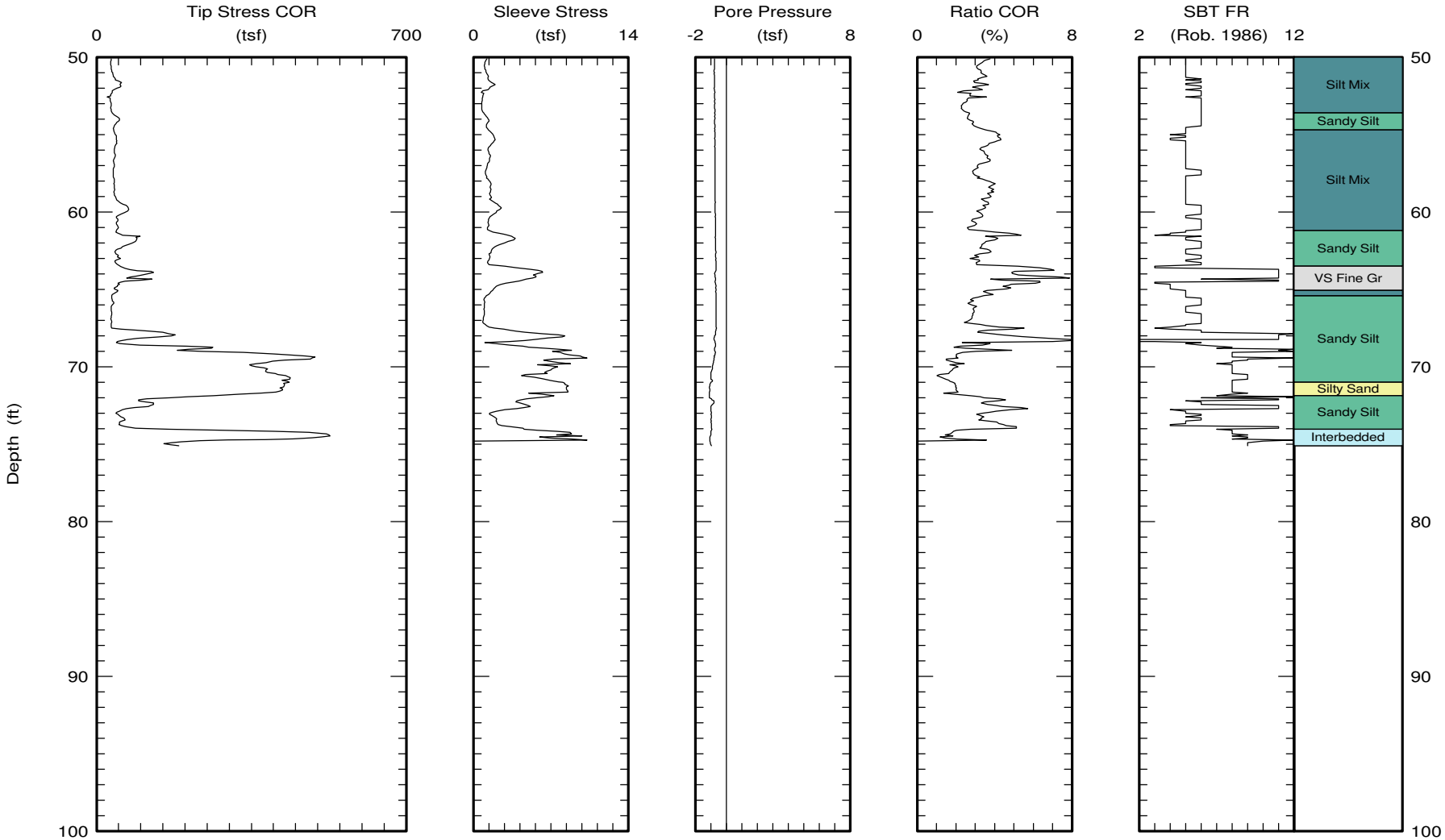
Maximum depth: 75.12 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 16/May/2011
Test ID: T2-C22
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



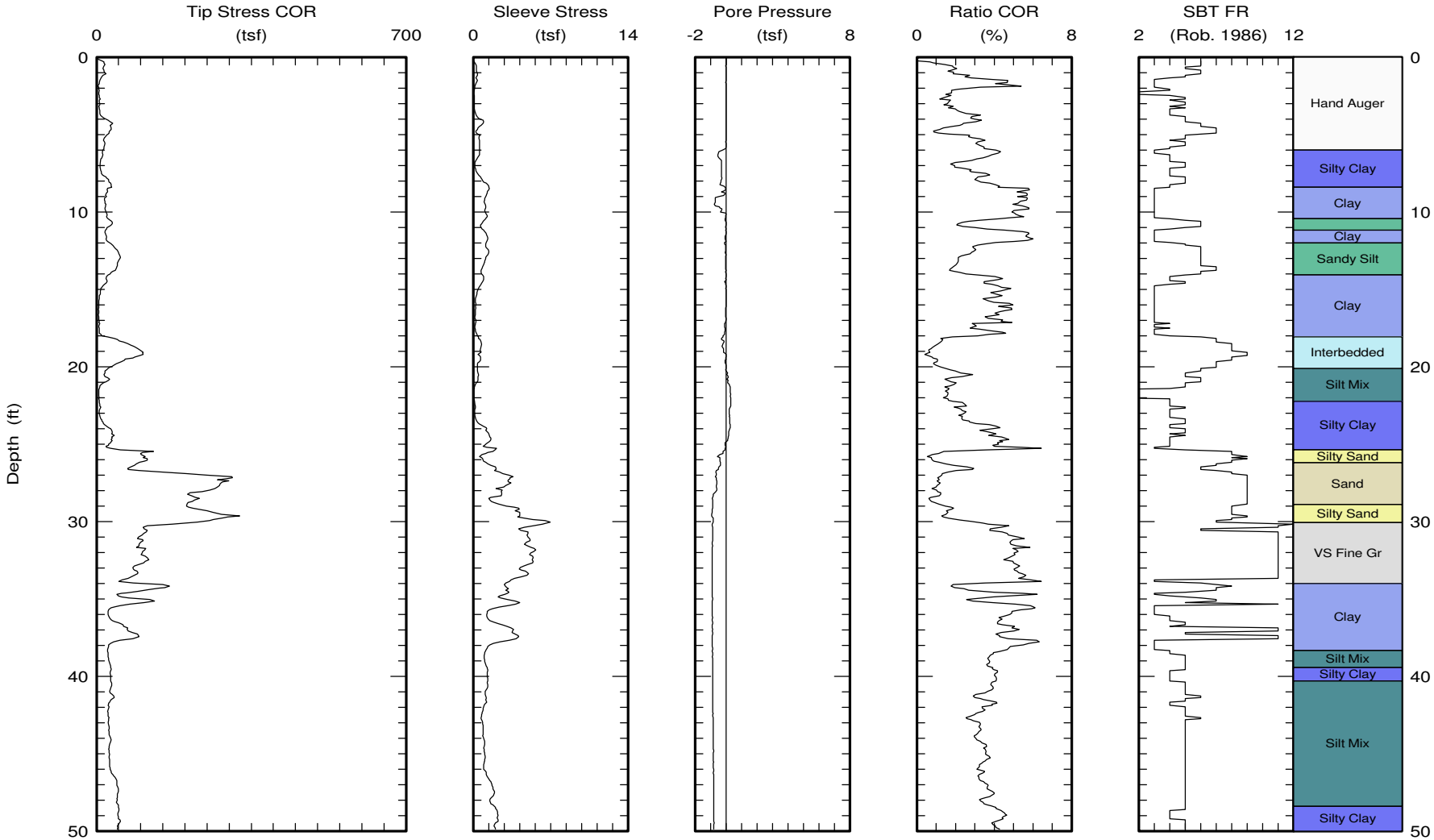
Maximum depth: 75.12 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 16/May/2011
Test ID: T2-C23
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



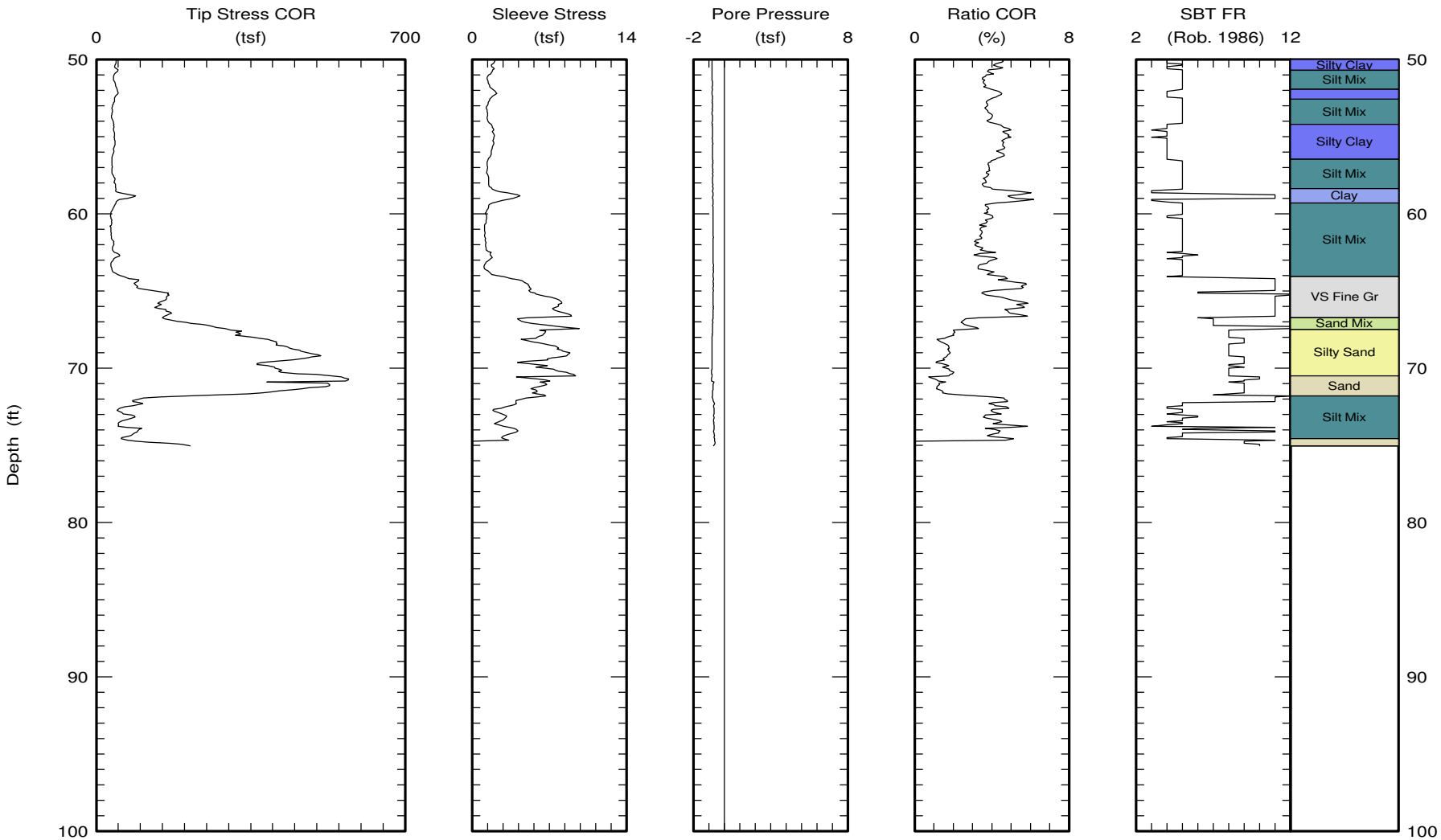
Maximum depth: 75.04 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

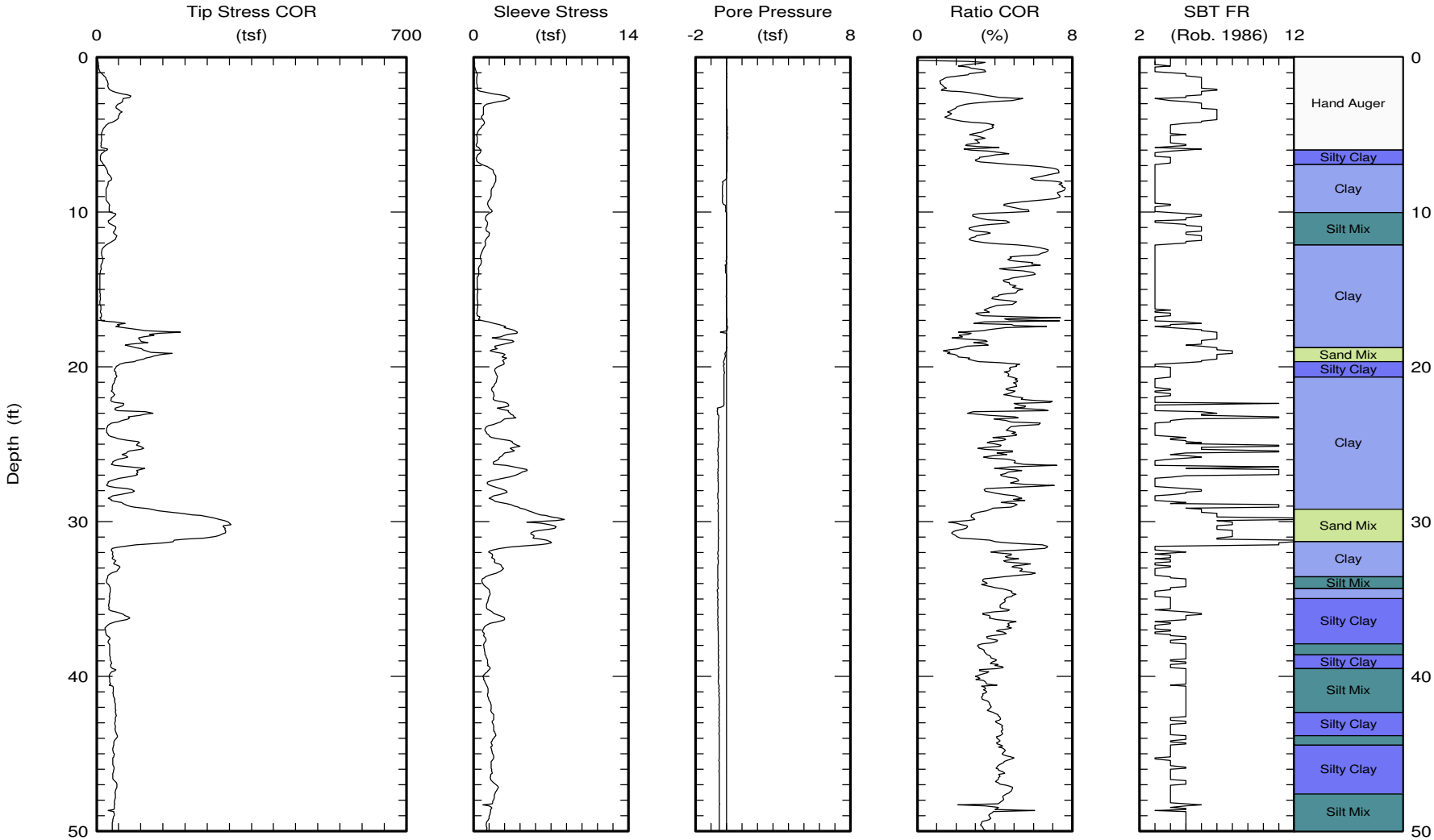
Date: 16/May/2011
Test ID: T2-C23
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



Maximum depth: 75.04 (ft)

Kehoe Testing & Engineering Office: (714) 901-7270 Fax: (714) 901-7289 rich@kehoetesting.com www.kehoetesting.com	CPT Data 30 ton rig	Date: 20/May/2011 Test ID: T2-C25 Project: LosAngeles
	Customer: MACTEC Job Site: Westside Subway Extension	



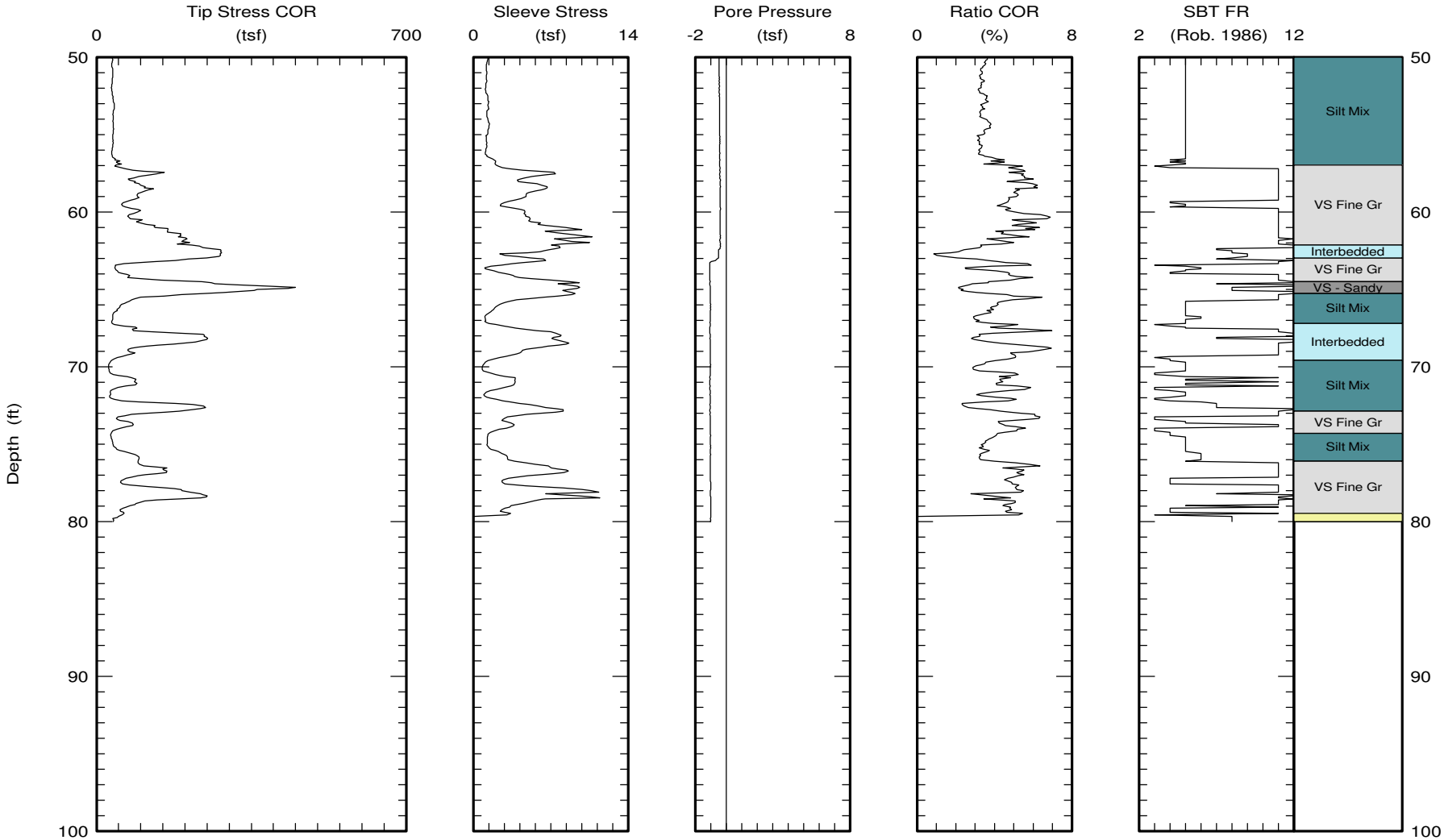
Maximum depth: 80.00 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 20/May/2011
Test ID: T2-C25
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



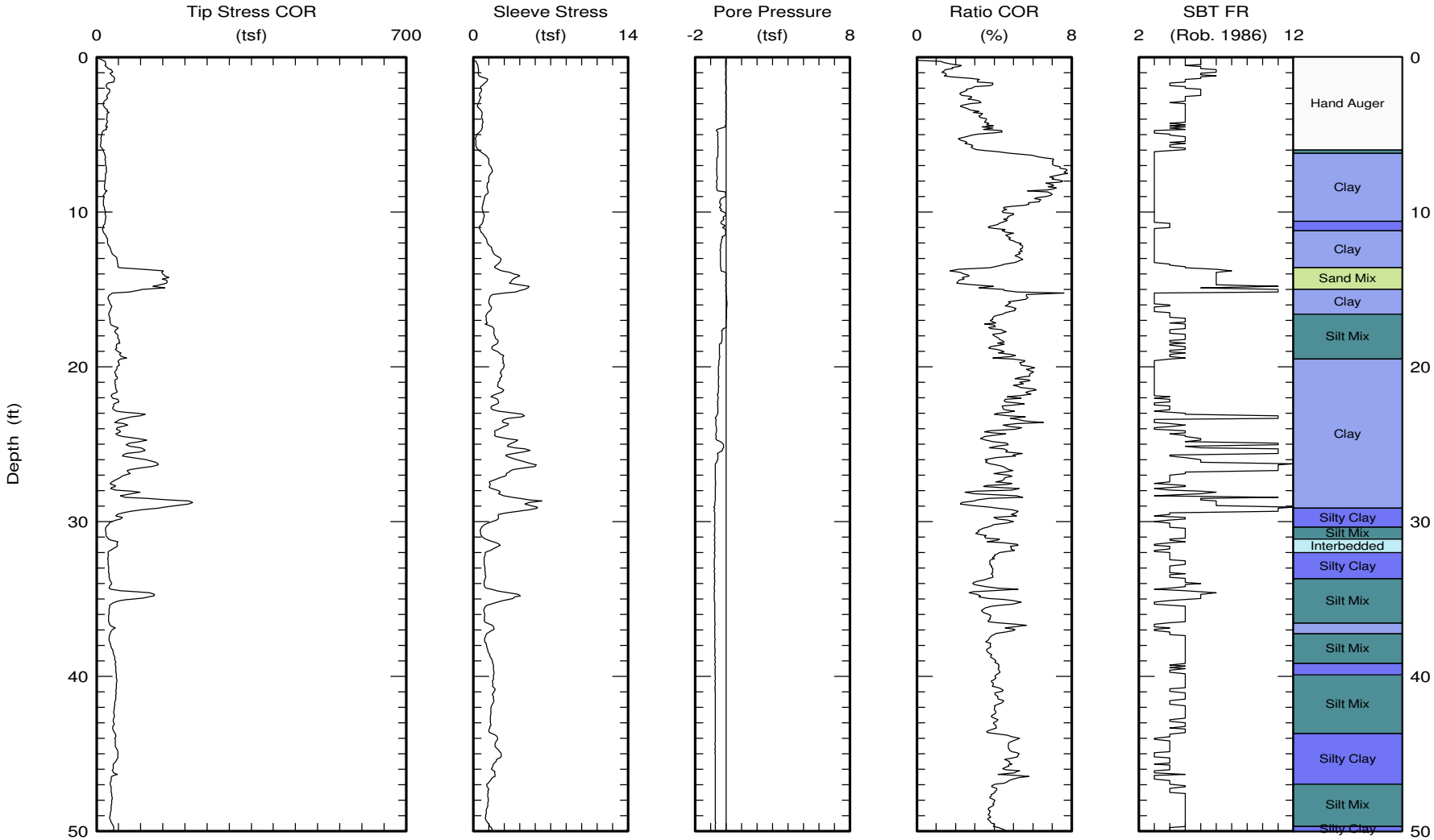
Maximum depth: 80.00 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 20/May/2011
Test ID: T2-C27
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



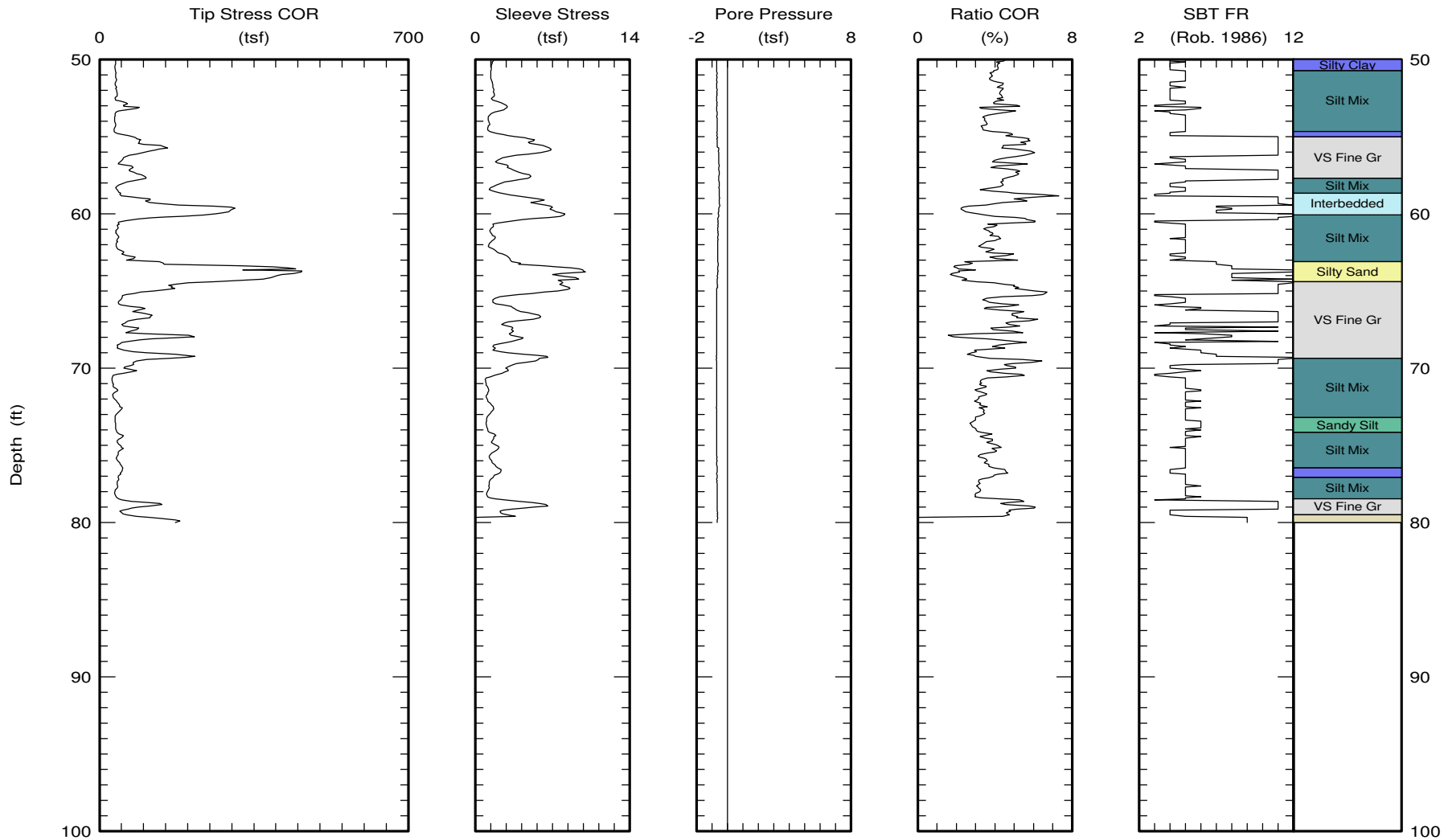
Maximum depth: 80.01 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 20/May/2011
Test ID: T2-C27
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



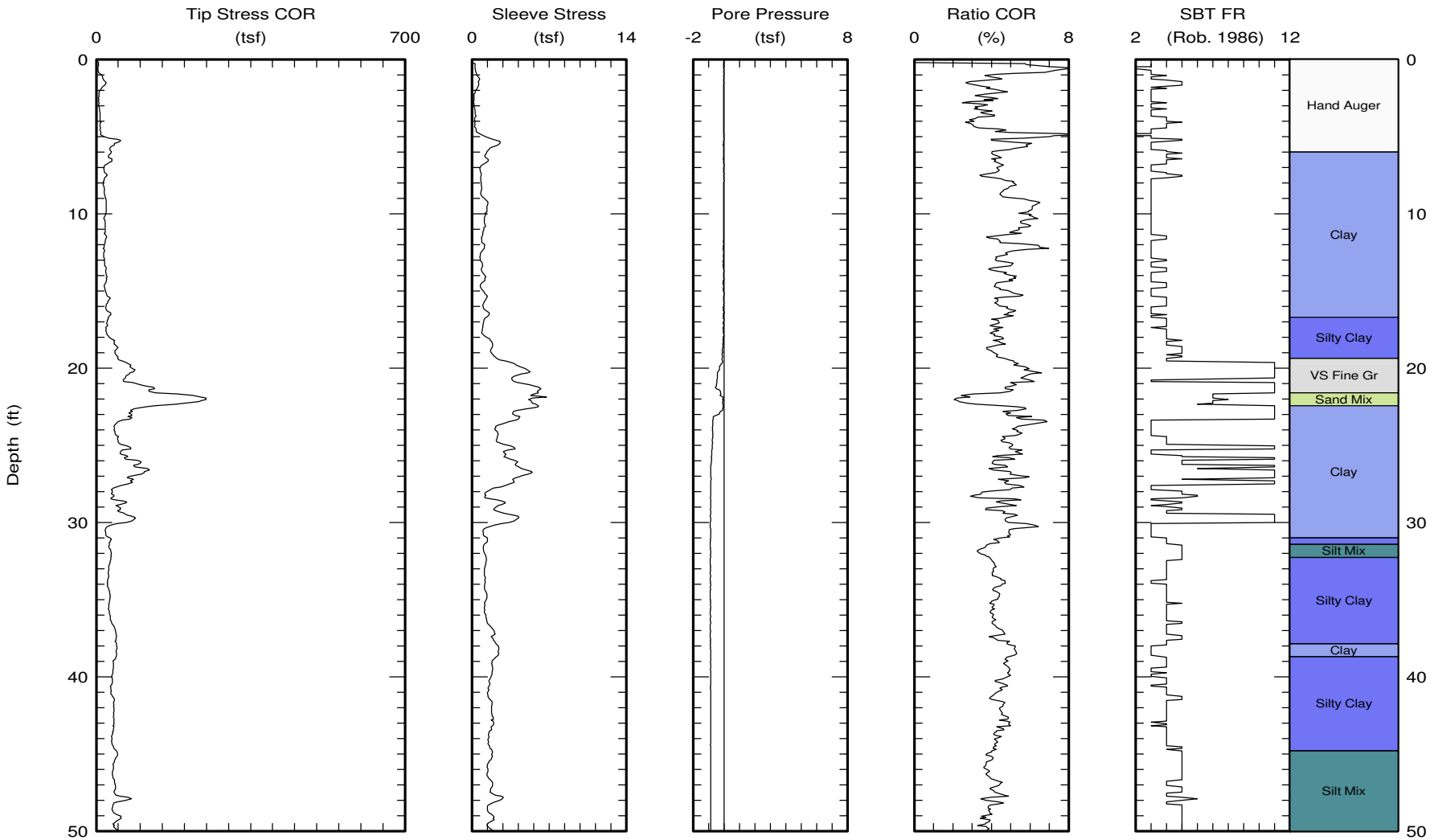
Maximum depth: 80.01 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 21/May/2011
Test ID: T2-C29
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



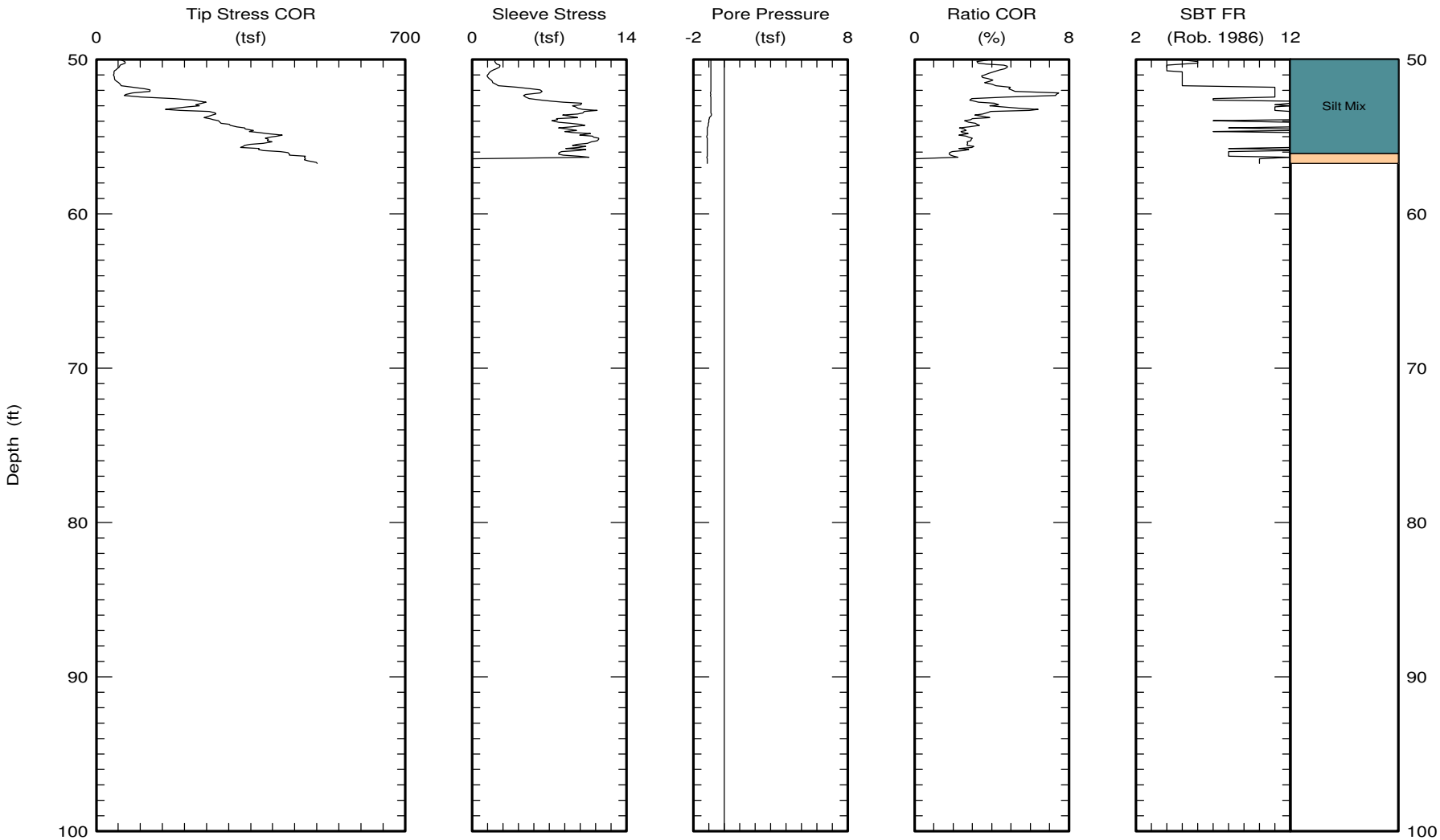
Maximum depth: 56.74 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 21/May/2011
Test ID: T2-C29
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



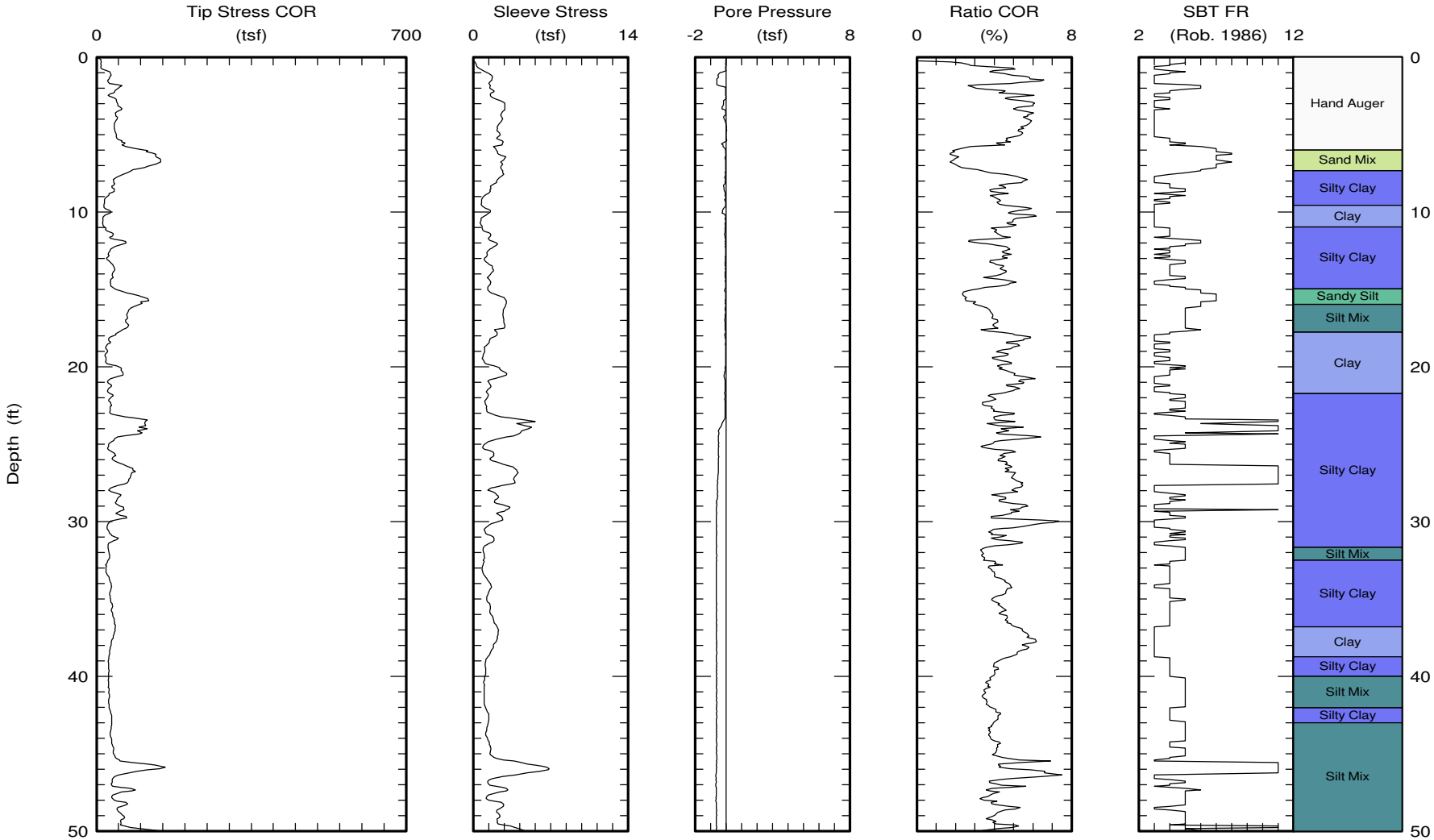
Maximum depth: 56.74 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 21/May/2011
Test ID: T2-C31
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



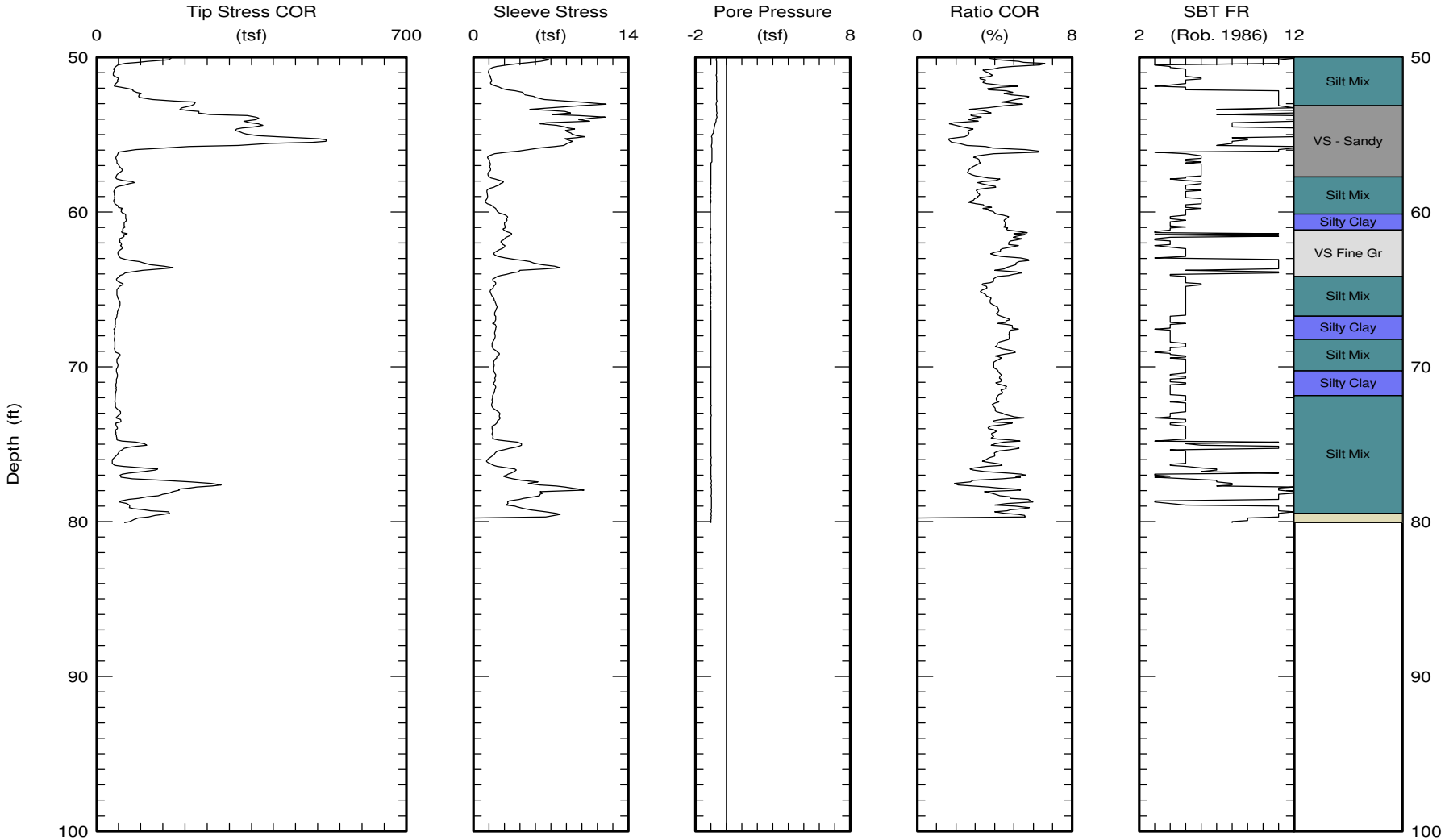
Maximum depth: 80.09 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 21/May/2011
Test ID: T2-C31
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



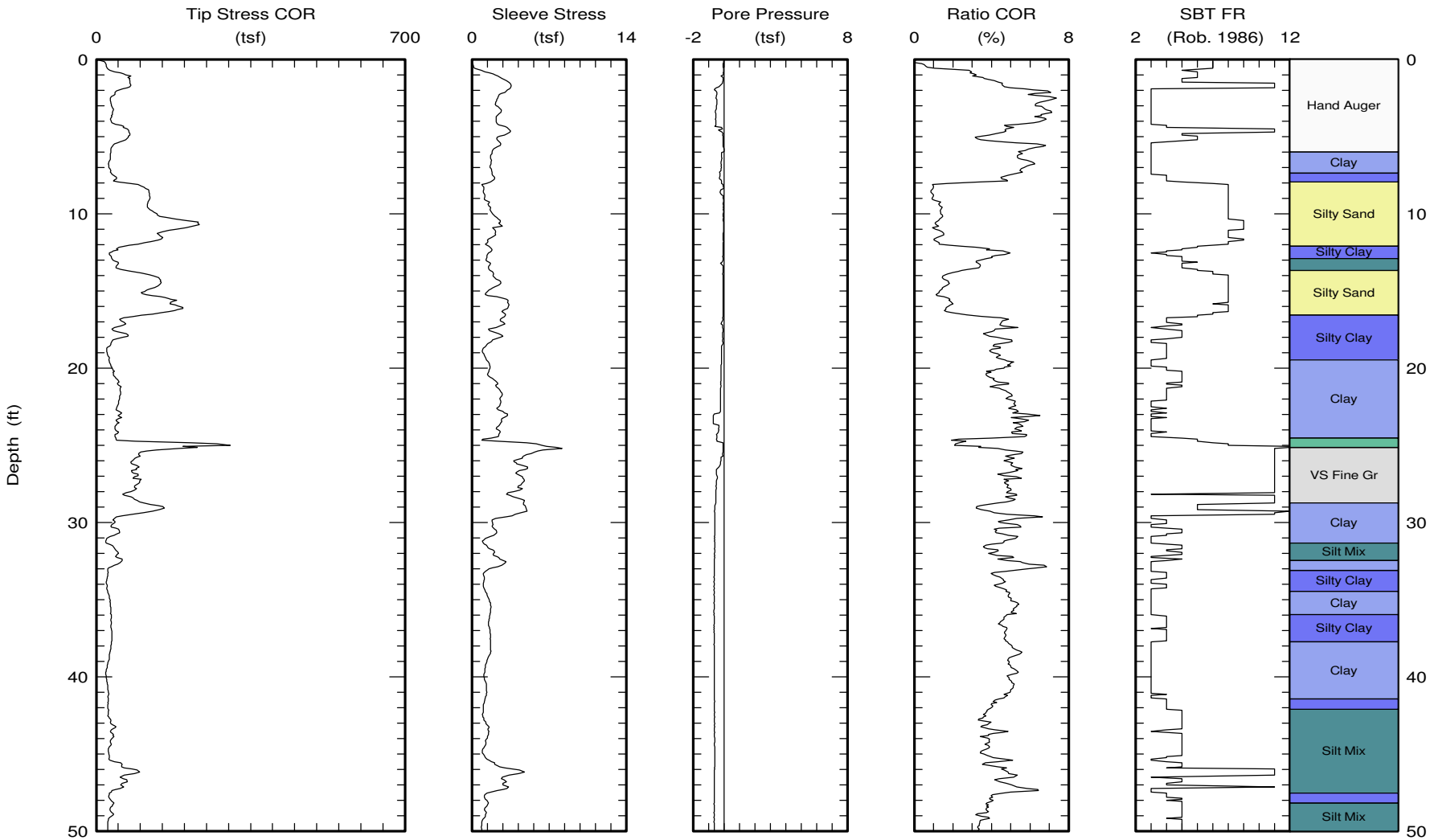
Maximum depth: 80.09 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 21/May/2011
Test ID: T2-C33
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



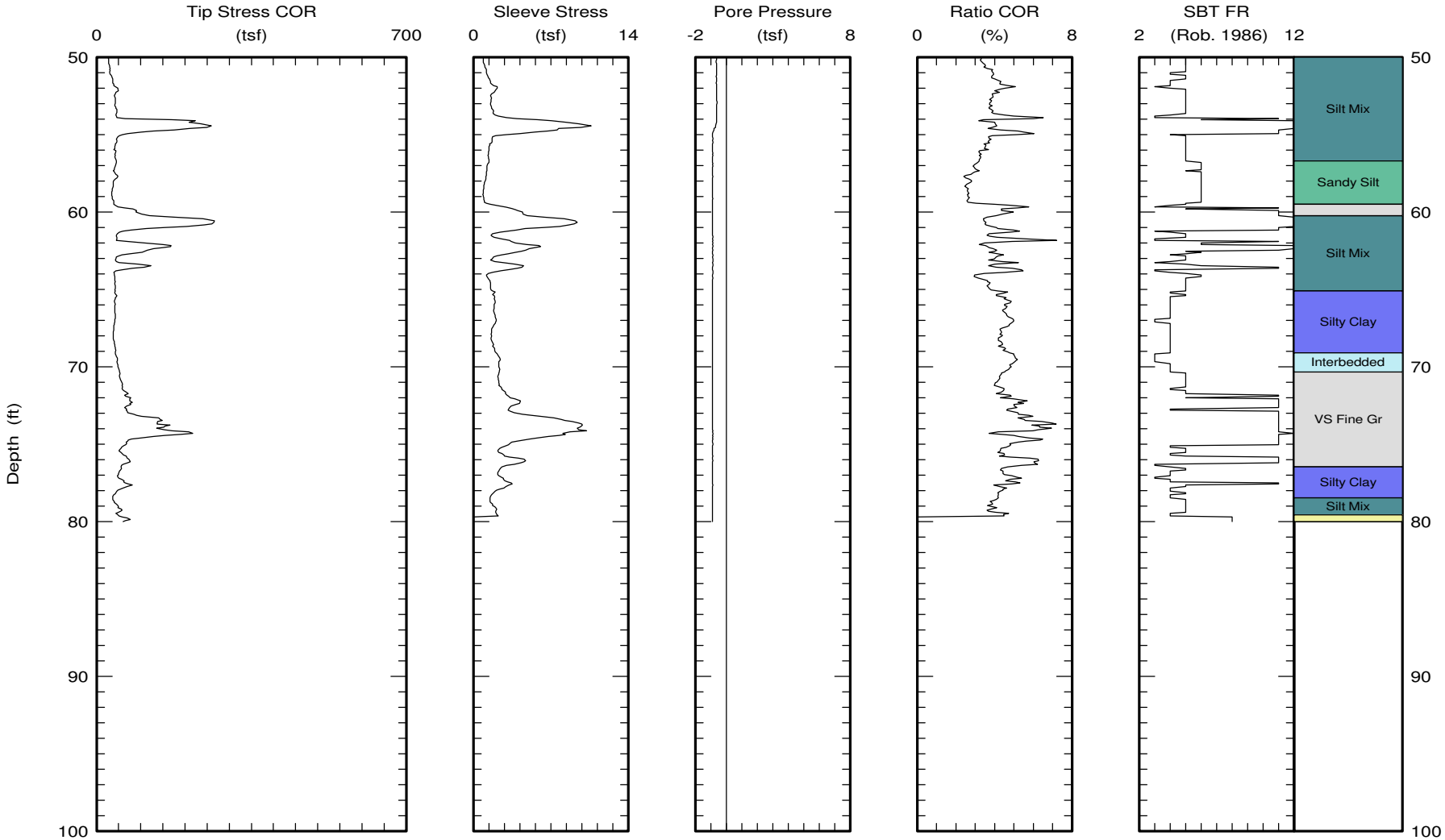
Maximum depth: 80.03 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 21/May/2011
Test ID: T2-C33
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



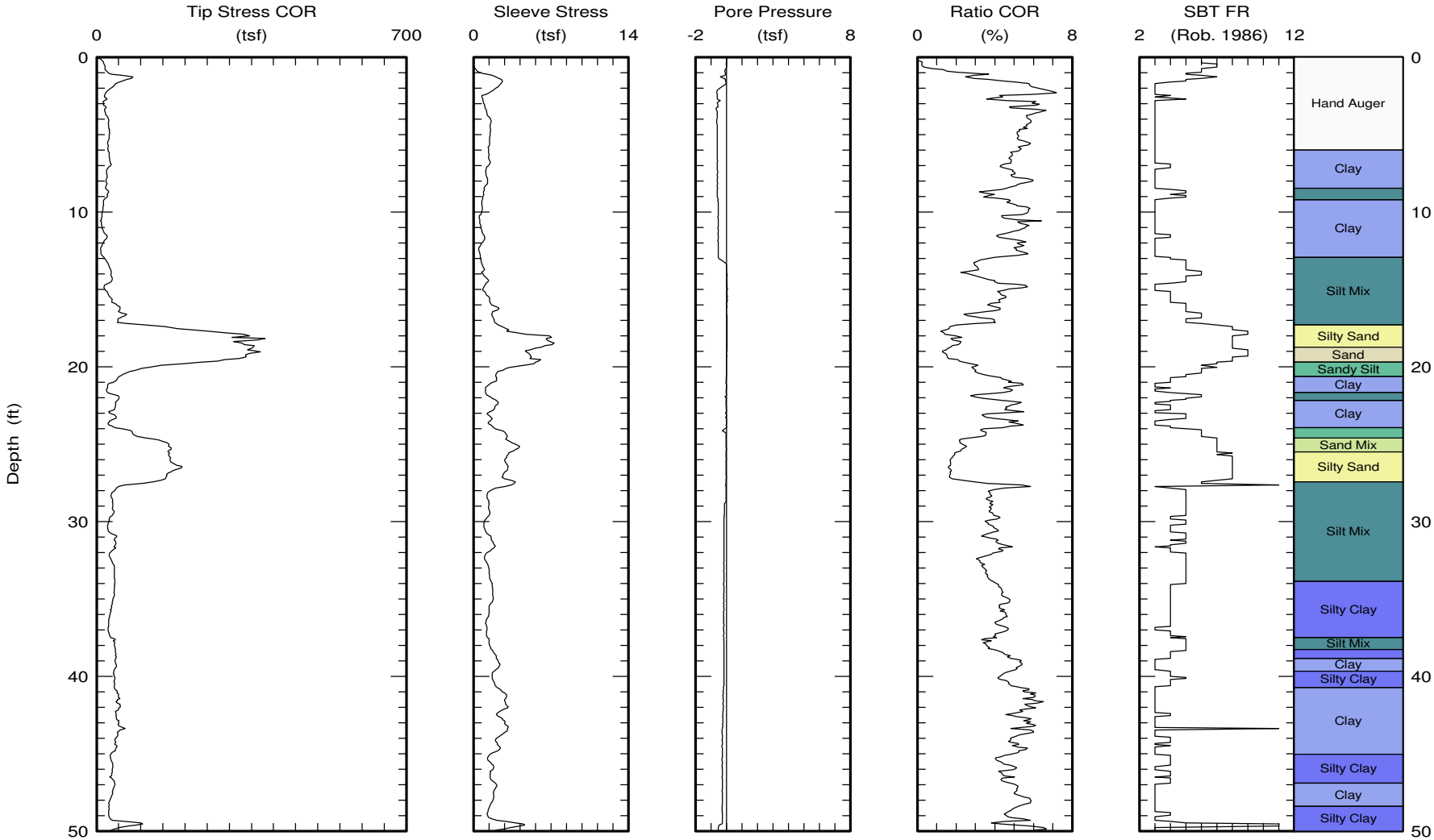
Maximum depth: 80.03 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 21/May/2011
Test ID: T2-C35
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



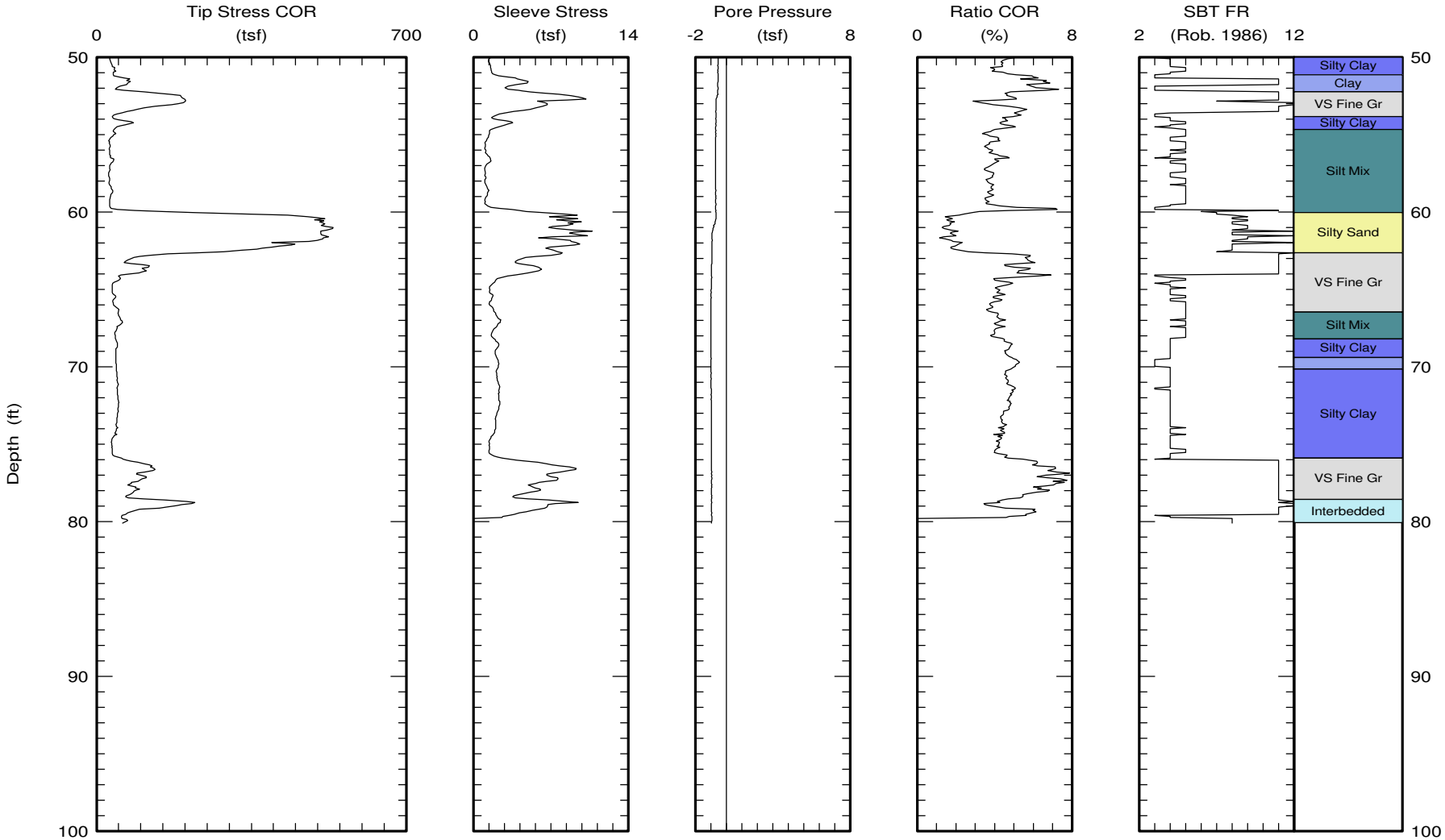
Maximum depth: 80.10 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 21/May/2011
Test ID: T2-C35
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



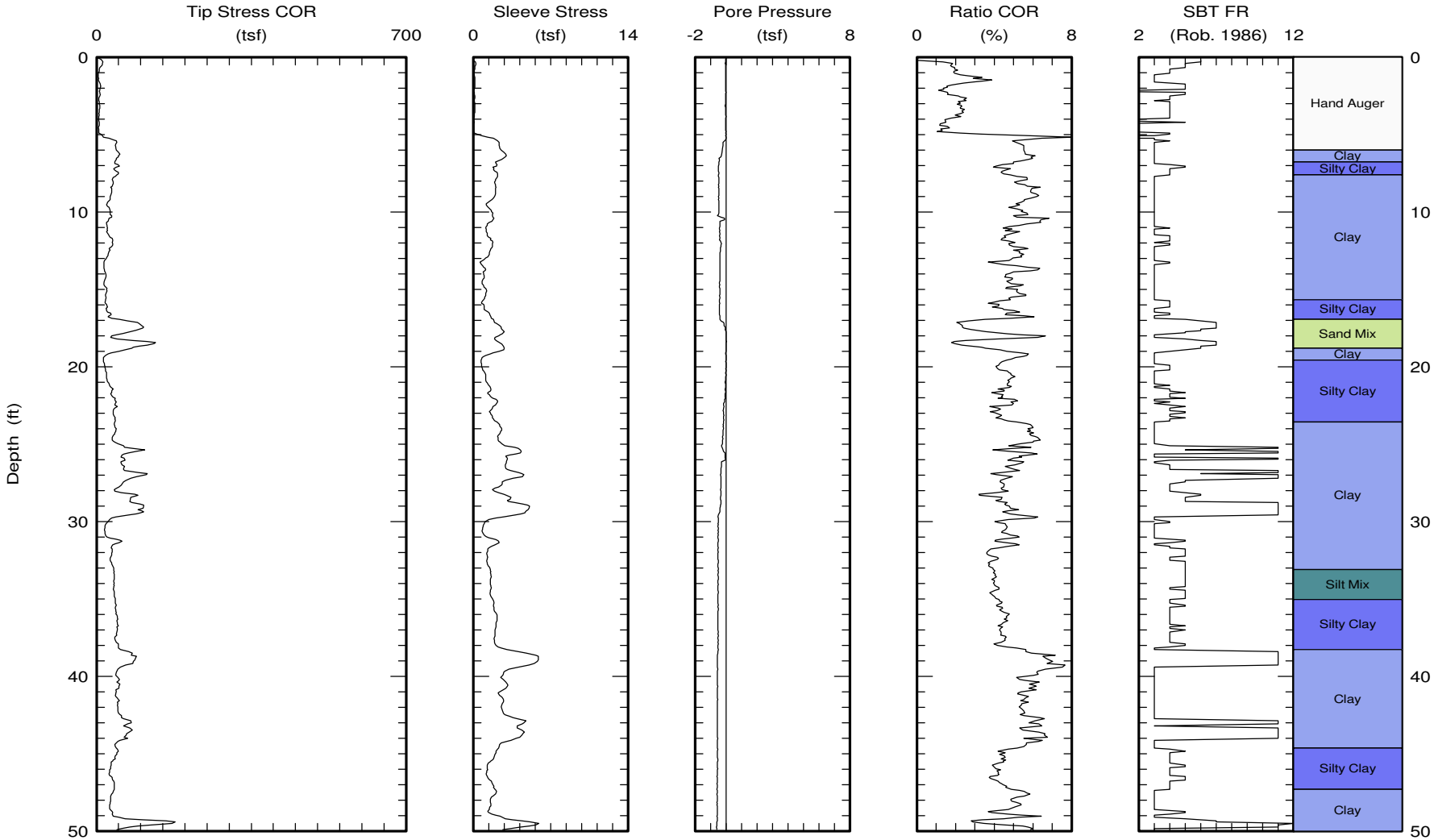
Maximum depth: 80.10 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 21/May/2011
Test ID: T2-C37
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



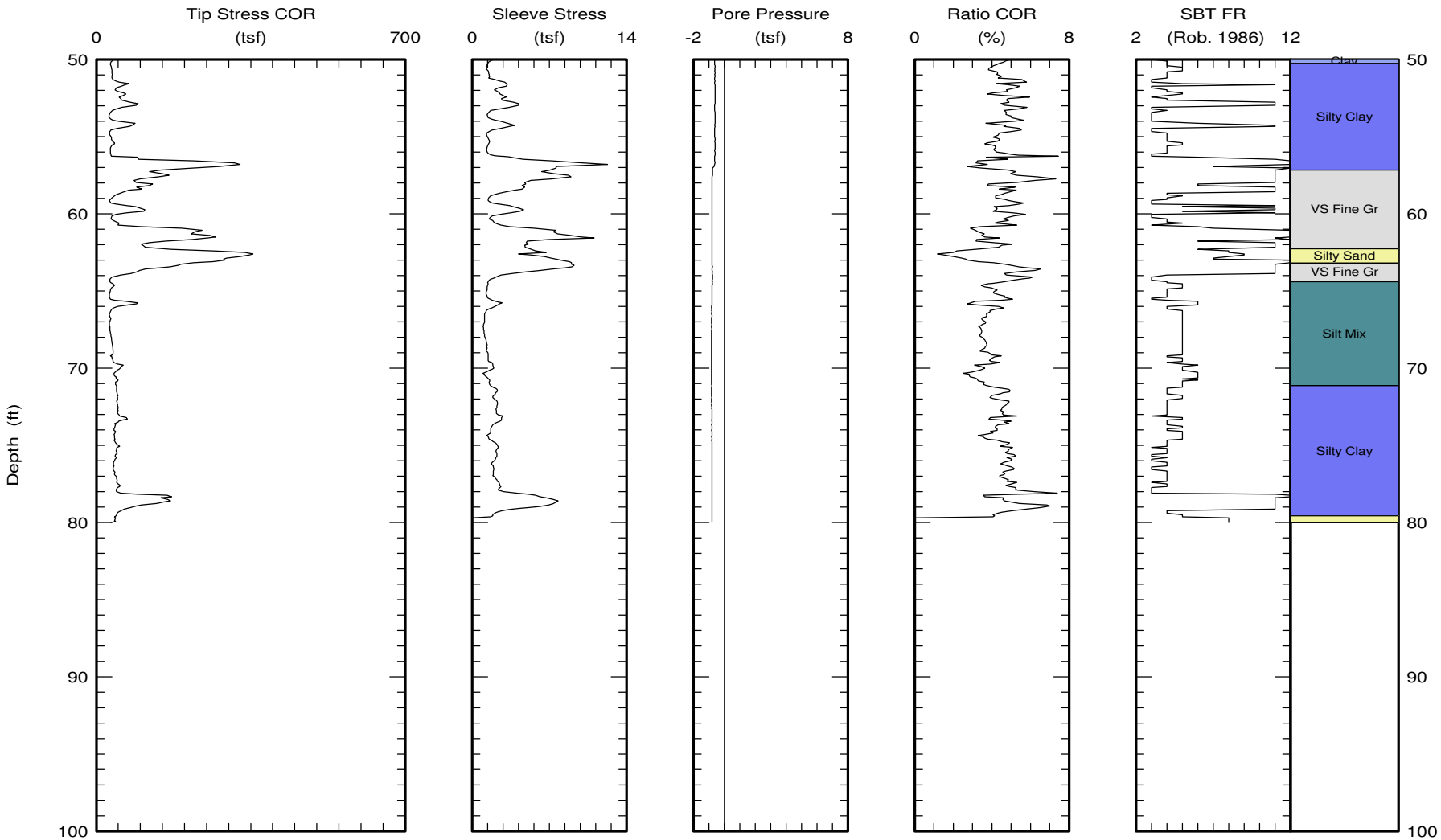
Maximum depth: 80.03 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 21/May/2011
Test ID: T2-C37
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



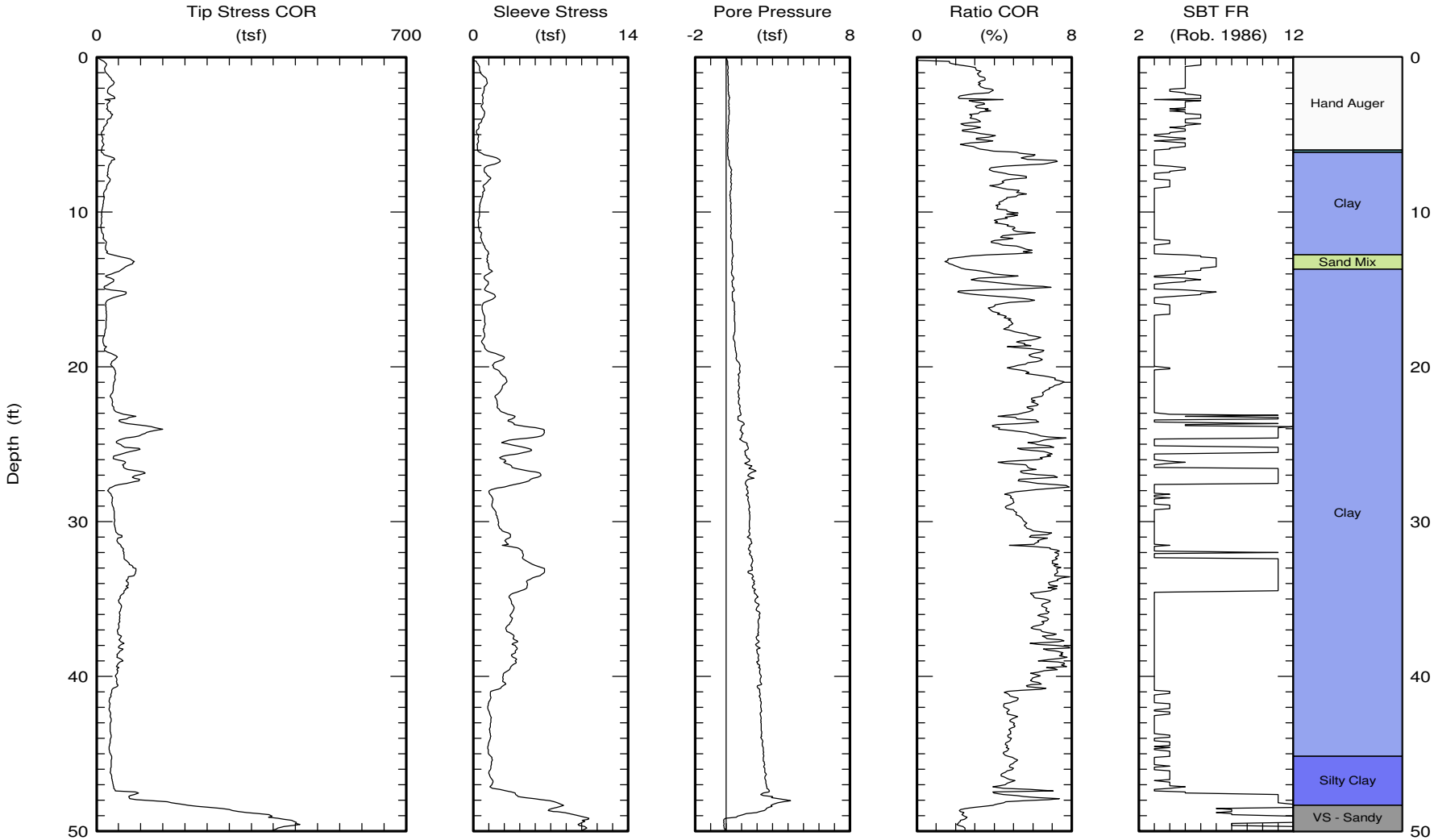
Maximum depth: 80.03 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 26/May/2011
Test ID: T2-C41
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



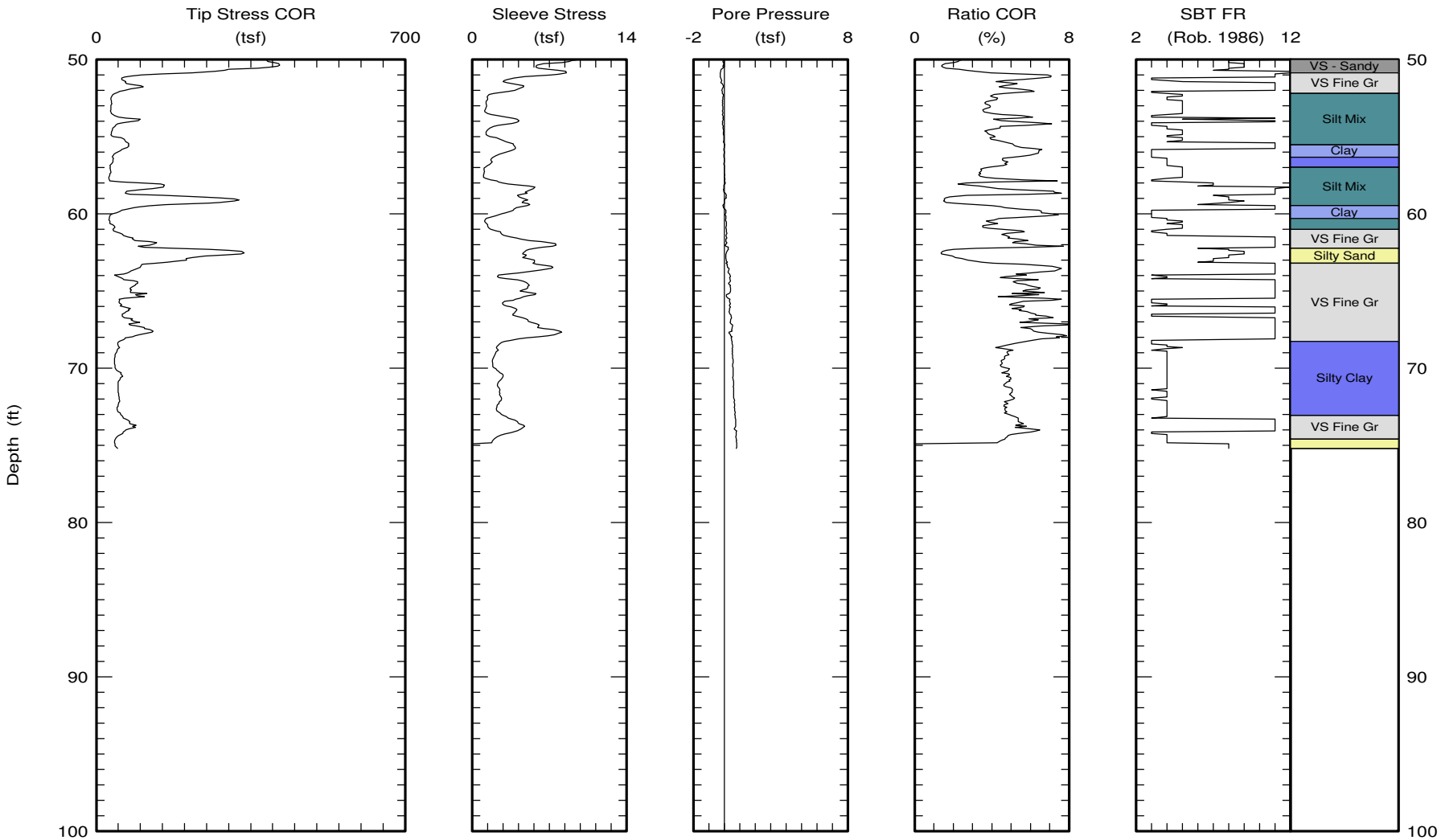
Maximum depth: 75.21 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 26/May/2011
Test ID: T2-C41
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



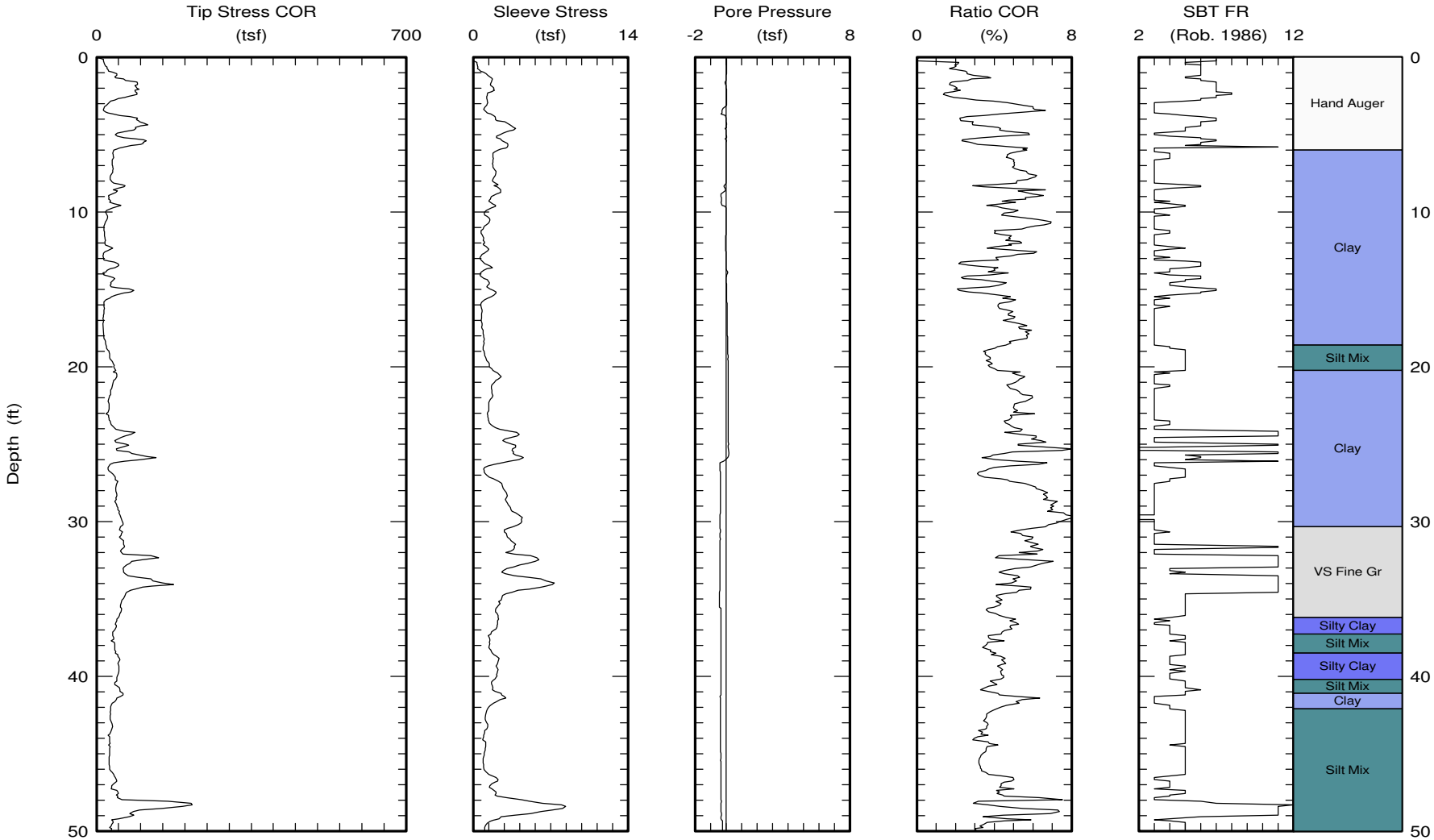
Maximum depth: 75.21 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 01/Jul/2011
Test ID: T2E-C1
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



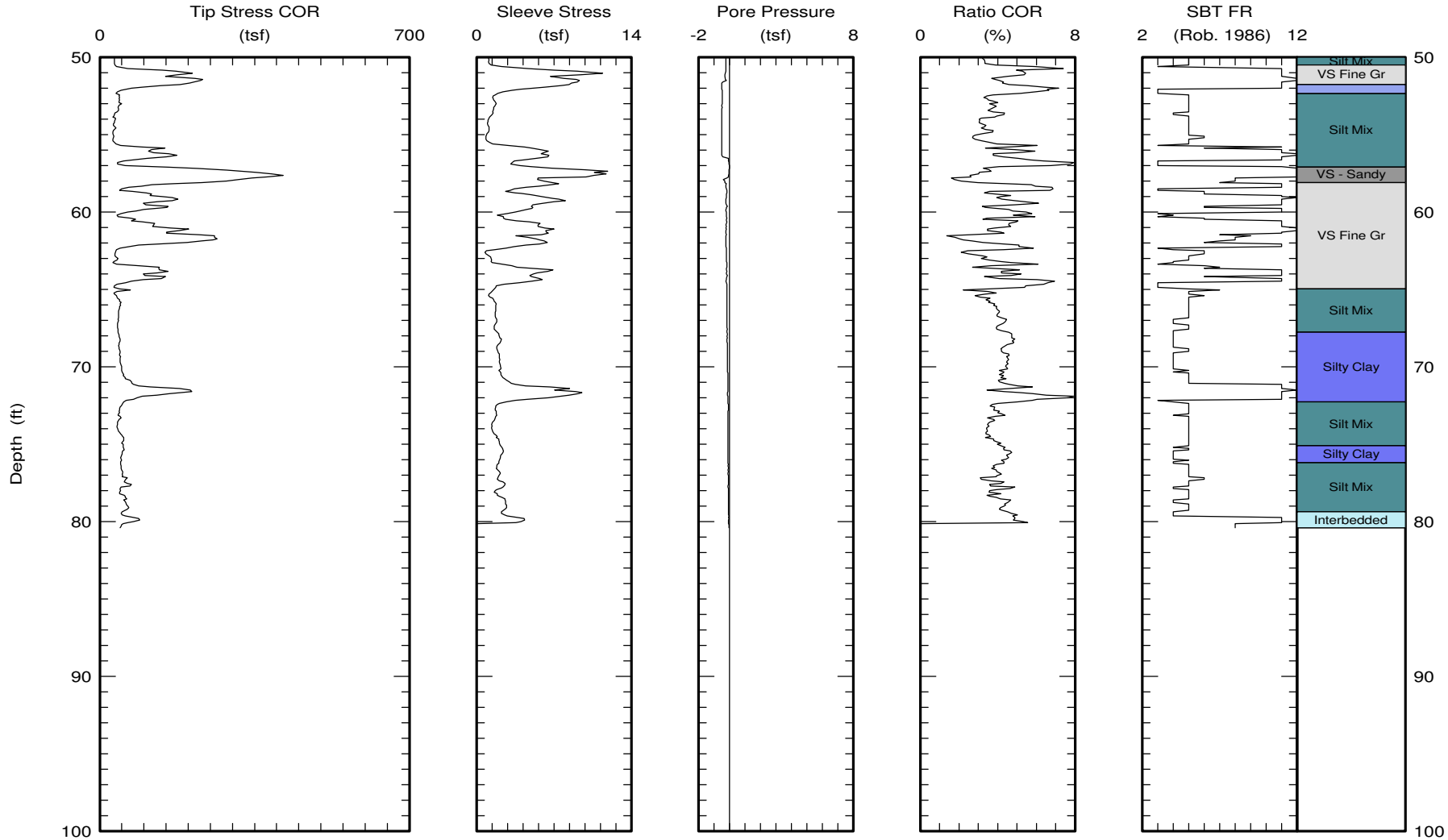
Maximum depth: 80.43 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 01/Jul/2011
Test ID: T2E-C1
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



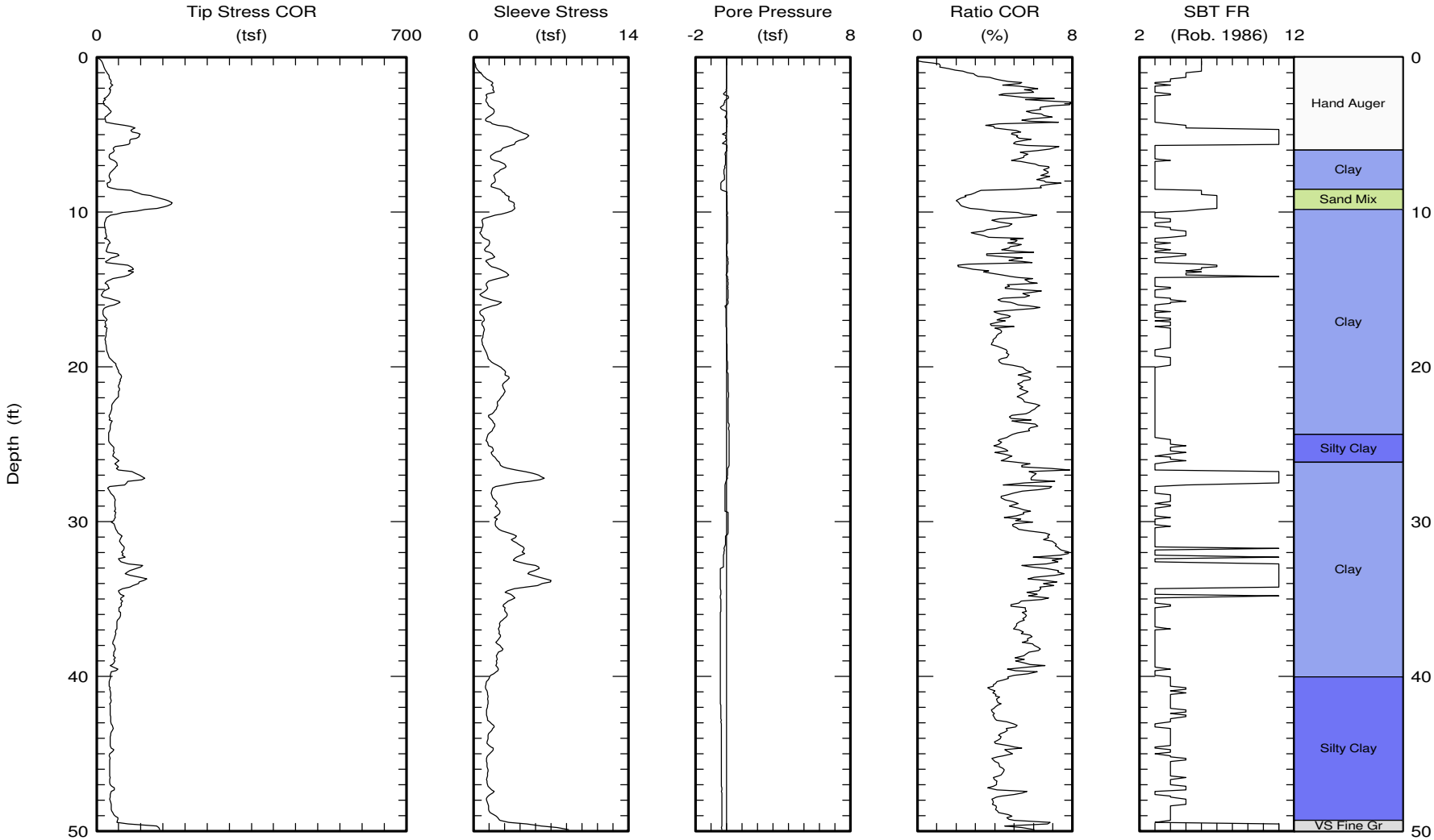
Maximum depth: 80.43 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 06/Jul/2011
Test ID: T2E-C2
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



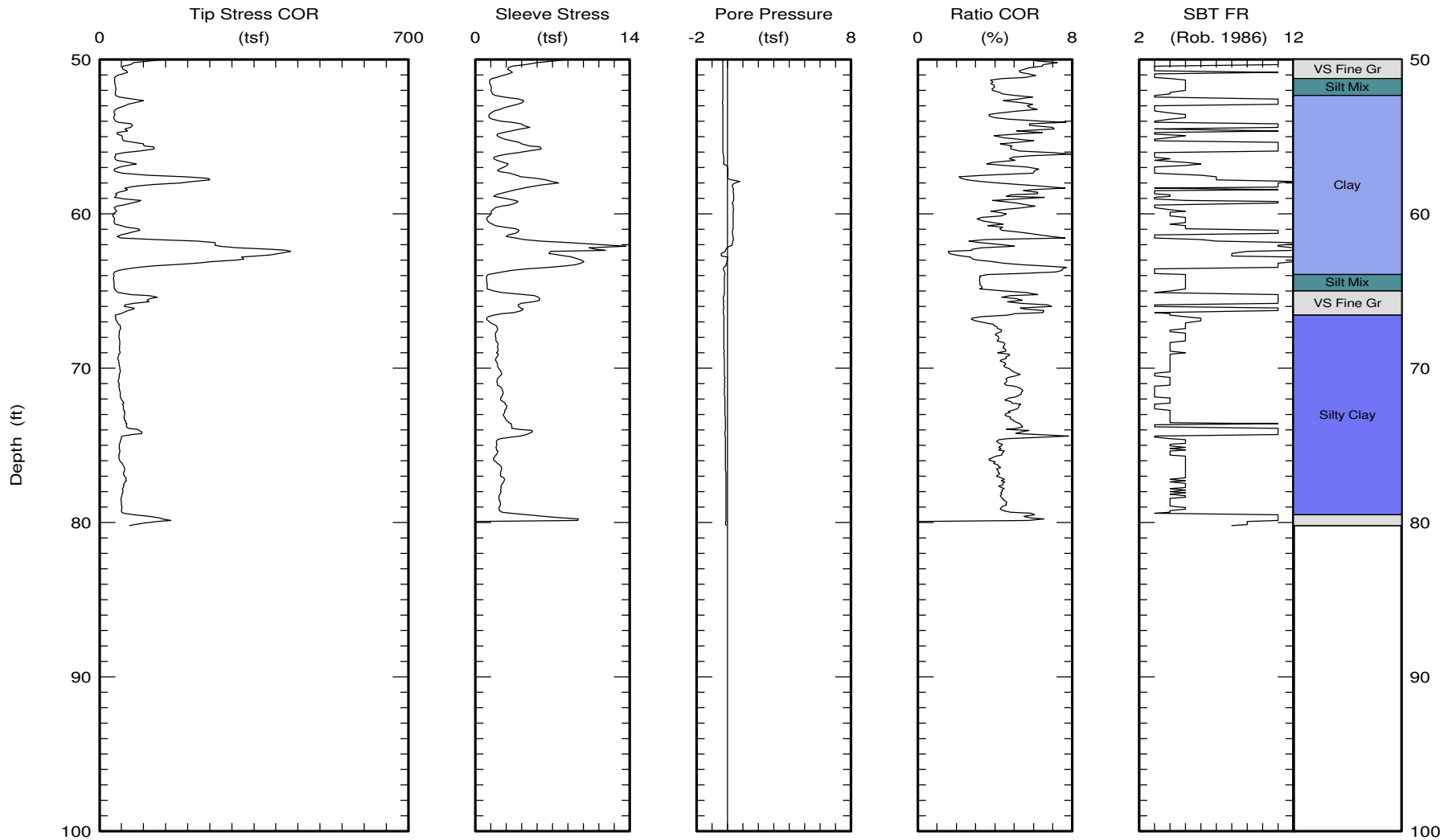
Maximum depth: 80.23 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 06/Jul/2011
Test ID: T2E-C2
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



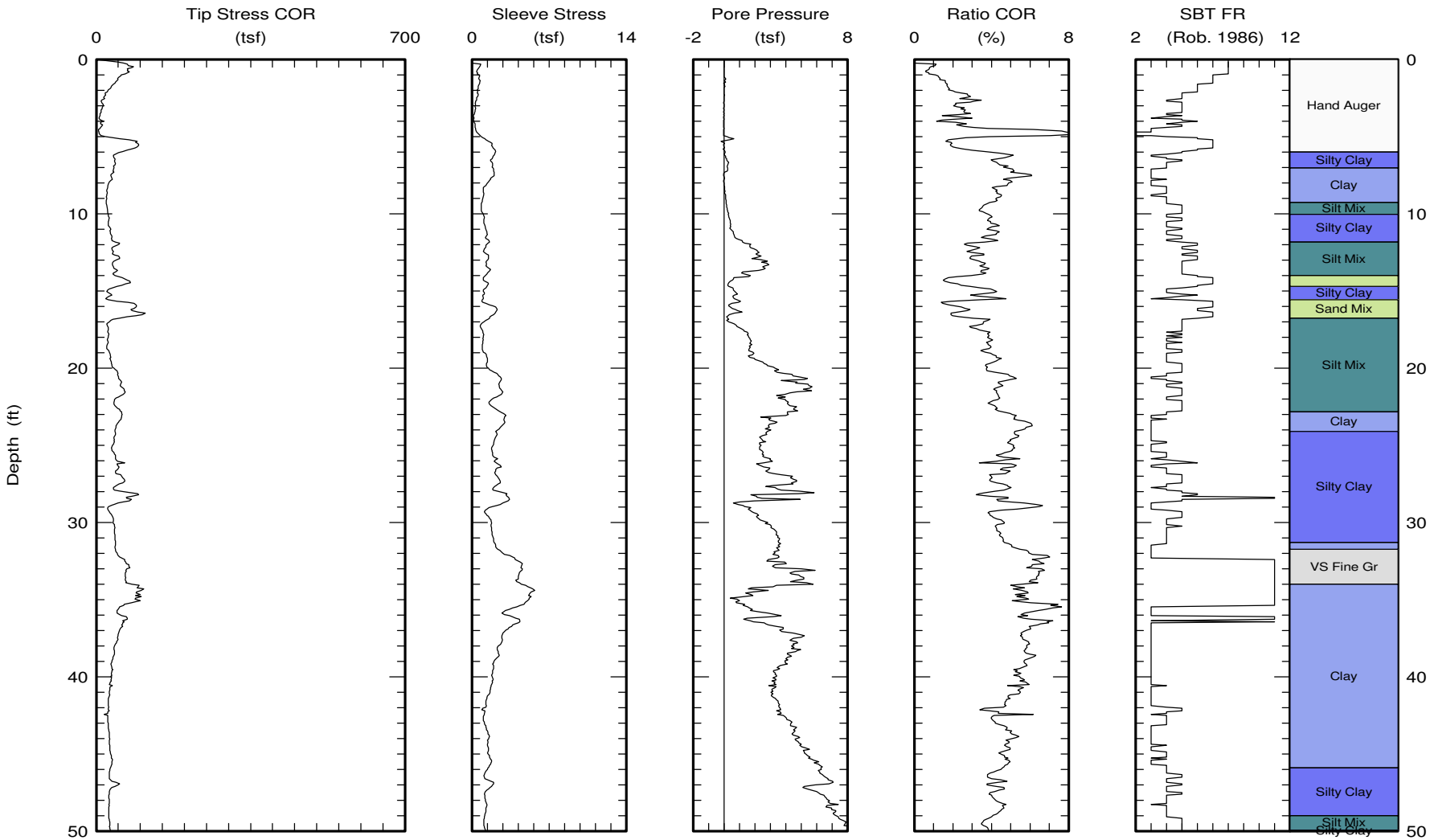
Maximum depth: 80.23 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 06/Jun/2011
Test ID: T2E-C3
Project: LosAngeles

Customer: Mactec
Job Site: West Side Subway Extention



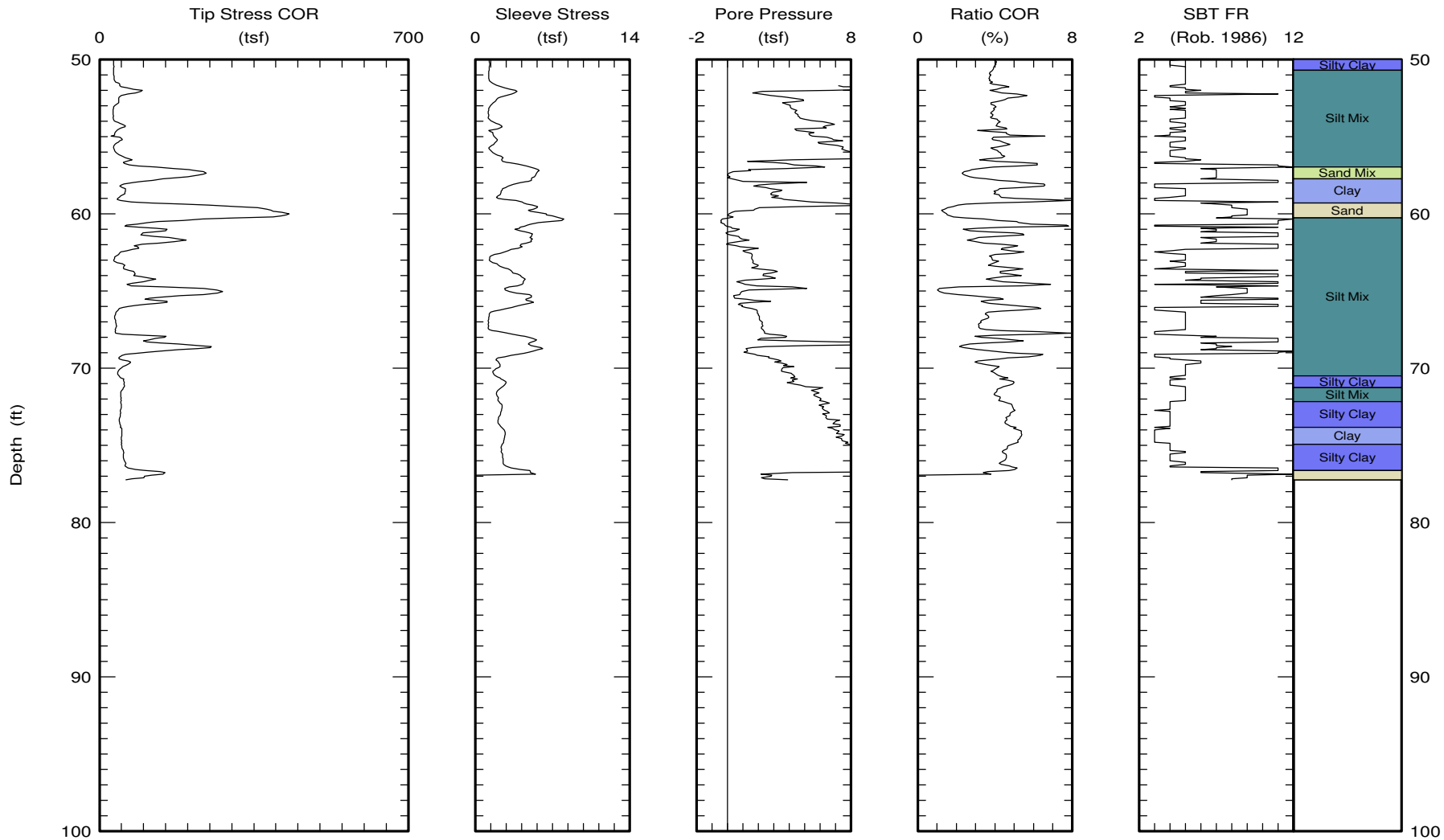
Maximum depth: 77.26 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

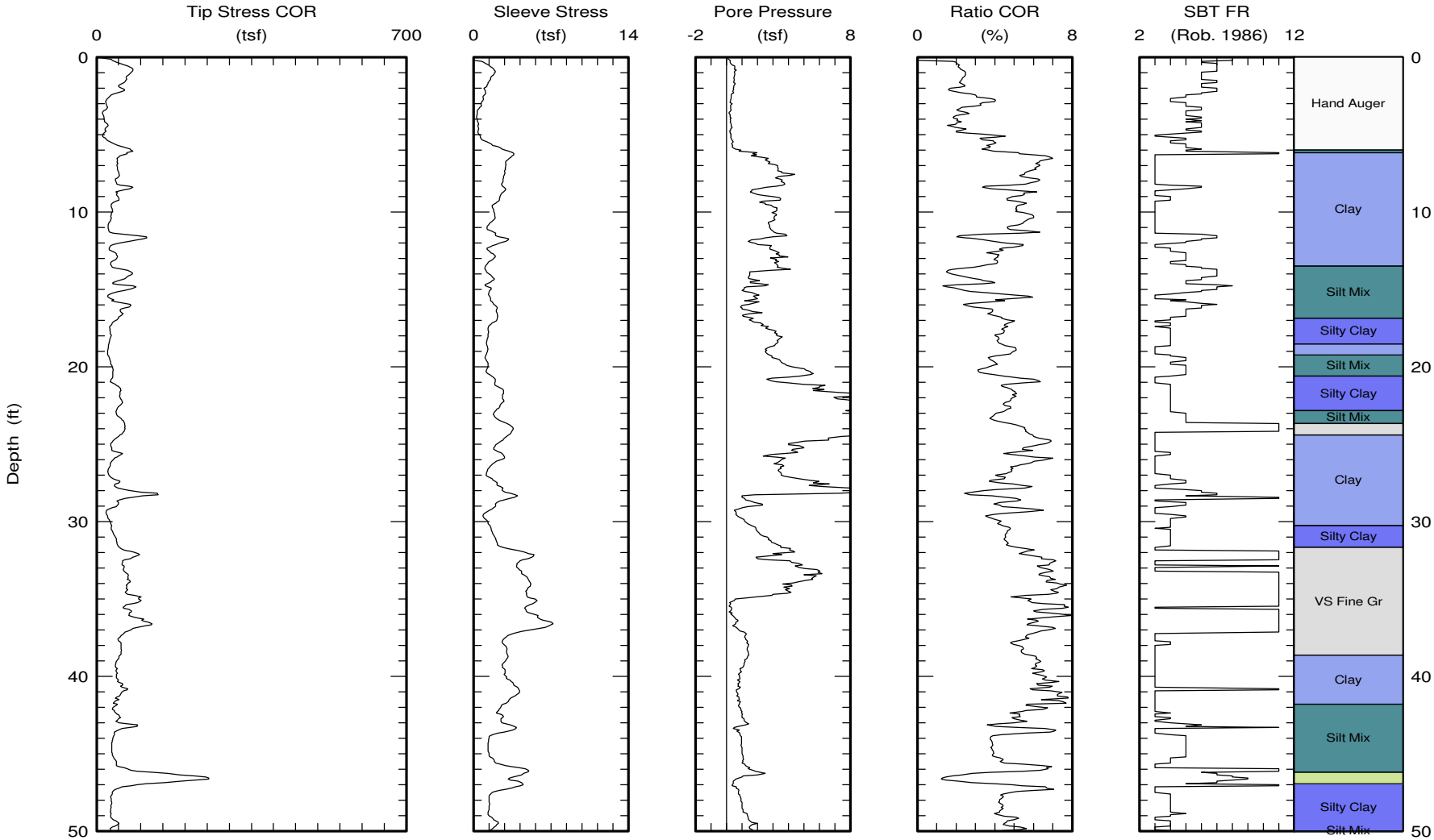
Date: 06/Jun/2011
Test ID: T2E-C3
Project: LosAngeles

Customer: Mactec
Job Site: West Side Subway Extention



Maximum depth: 77.26 (ft)

Kehoe Testing & Engineering Office: (714) 901-7270 Fax: (714) 901-7289 rich@kehoetesting.com www.kehoetesting.com	CPT Data 30 ton rig	Date: 06/Jun/2011 Test ID: T2E-C4 Project: LosAngeles
	Customer: Mactec Job Site: West Side Subway Extention	



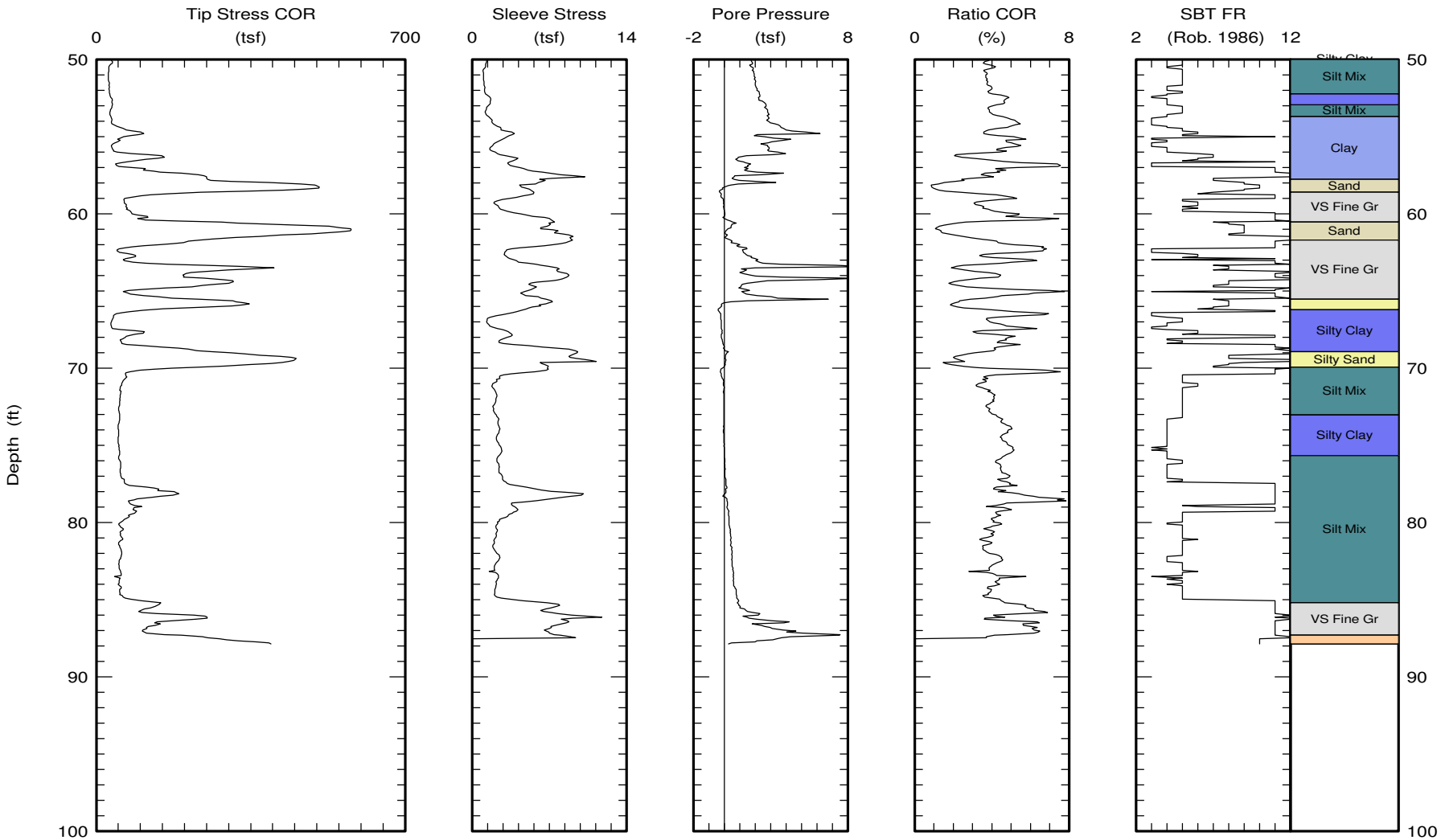
Maximum depth: 87.88 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 06/Jun/2011
Test ID: T2E-C4
Project: LosAngeles

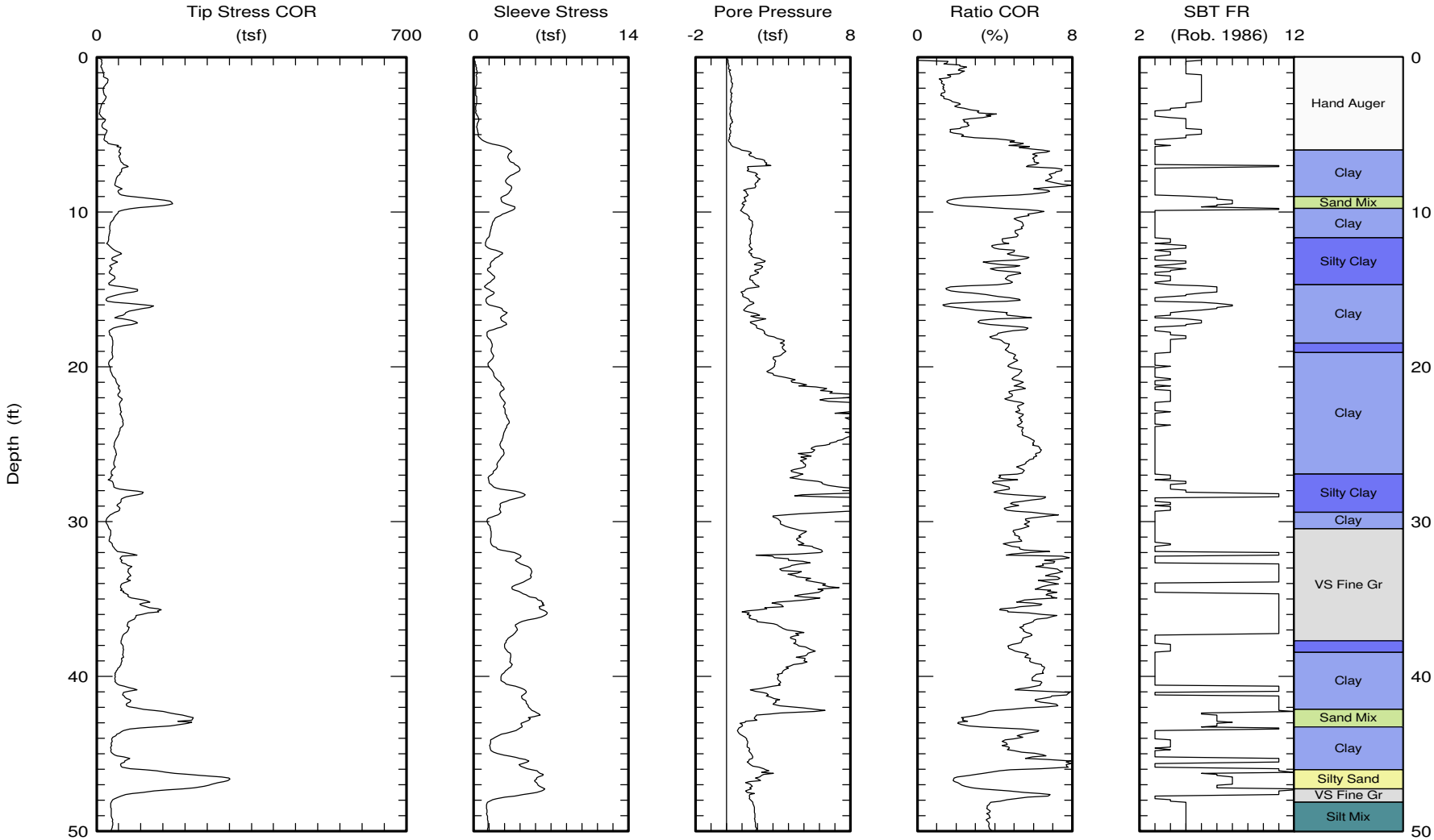
Customer: Mactec
Job Site: West Side Subway Extention



Maximum depth: 87.88 (ft)

Test ID: T2E-C4
File: Z06U1103C.ECP

Kehoe Testing & Engineering Office: (714) 901-7270 Fax: (714) 901-7289 rich@kehoetesting.com www.kehoetesting.com	CPT Data 30 ton rig	Date: 06/Jun/2011 Test ID: T2E-C5 Project: LosAngeles
	Customer: Mactec Job Site: West Side Subway Extention	



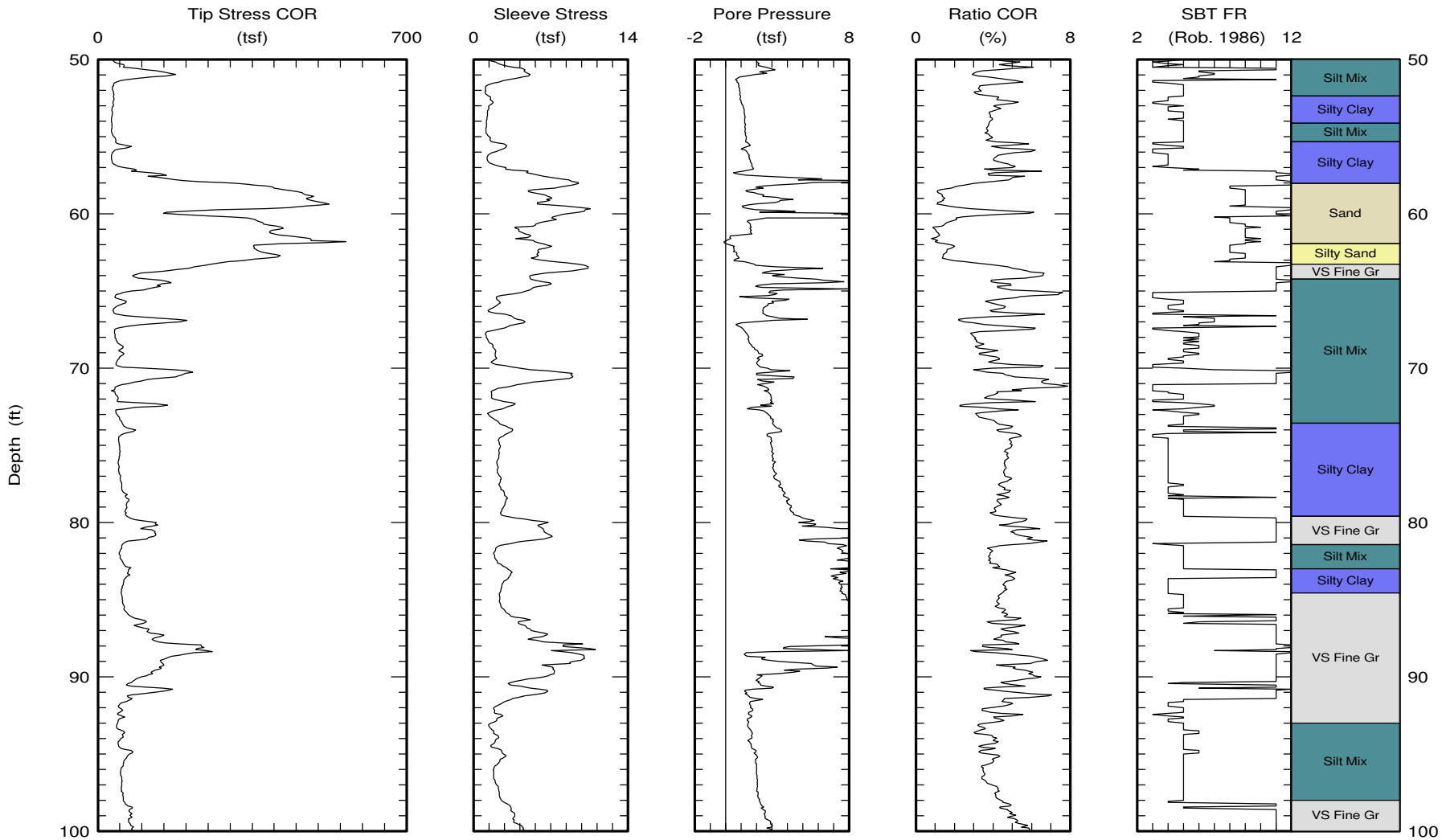
Maximum depth: 104.04 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

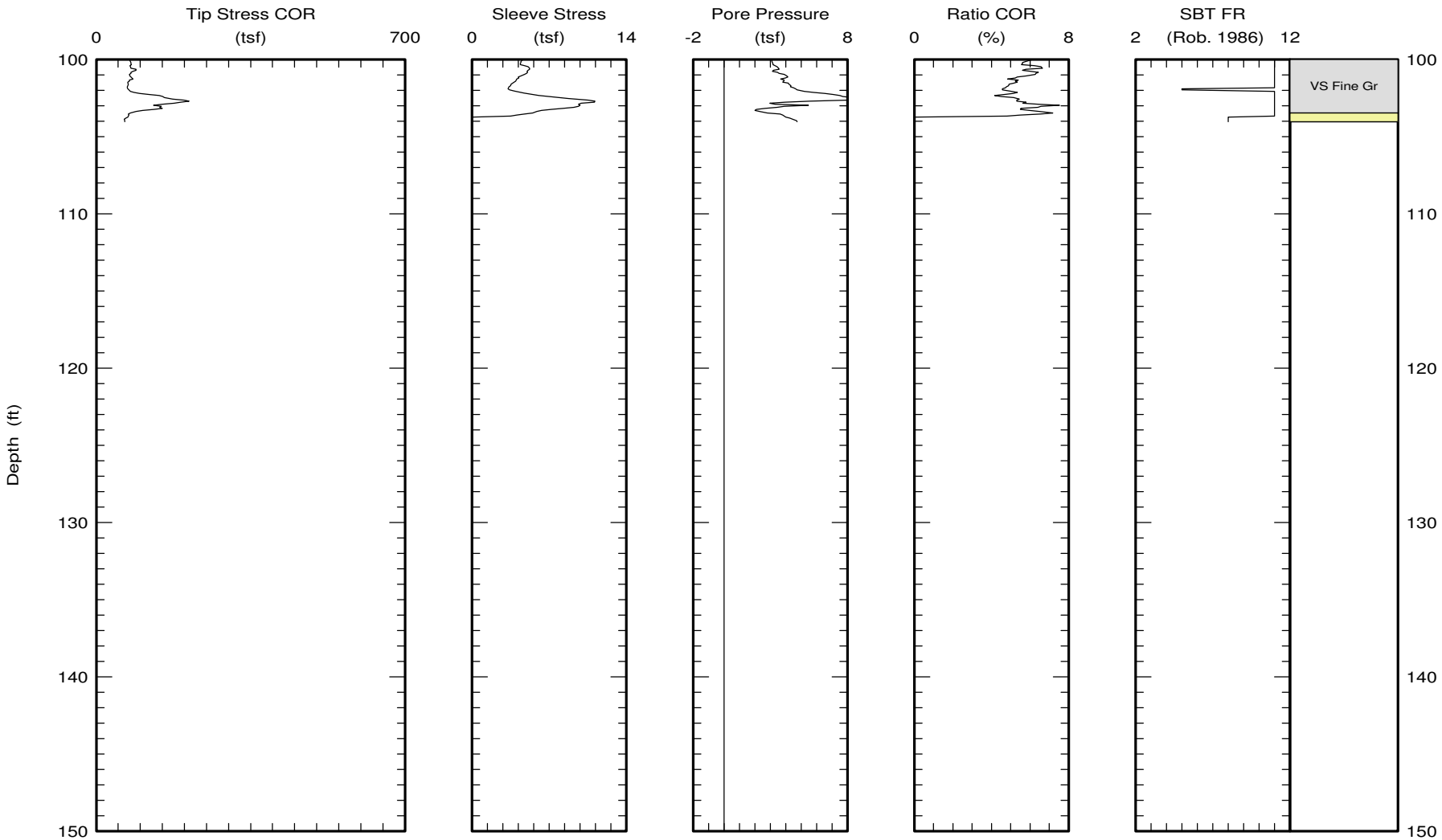
Date: 06/Jun/2011
Test ID: T2E-C5
Project: LosAngeles

Customer: Mactec
Job Site: West Side Subway Extention



Maximum depth: 104.04 (ft)

Kehoe Testing & Engineering Office: (714) 901-7270 Fax: (714) 901-7289 rich@kehoetesting.com www.kehoetesting.com	CPT Data 30 ton rig	Date: 06/Jun/2011 Test ID: T2E-C5 Project: LosAngeles
	Customer: Mactec Job Site: West Side Subway Extention	



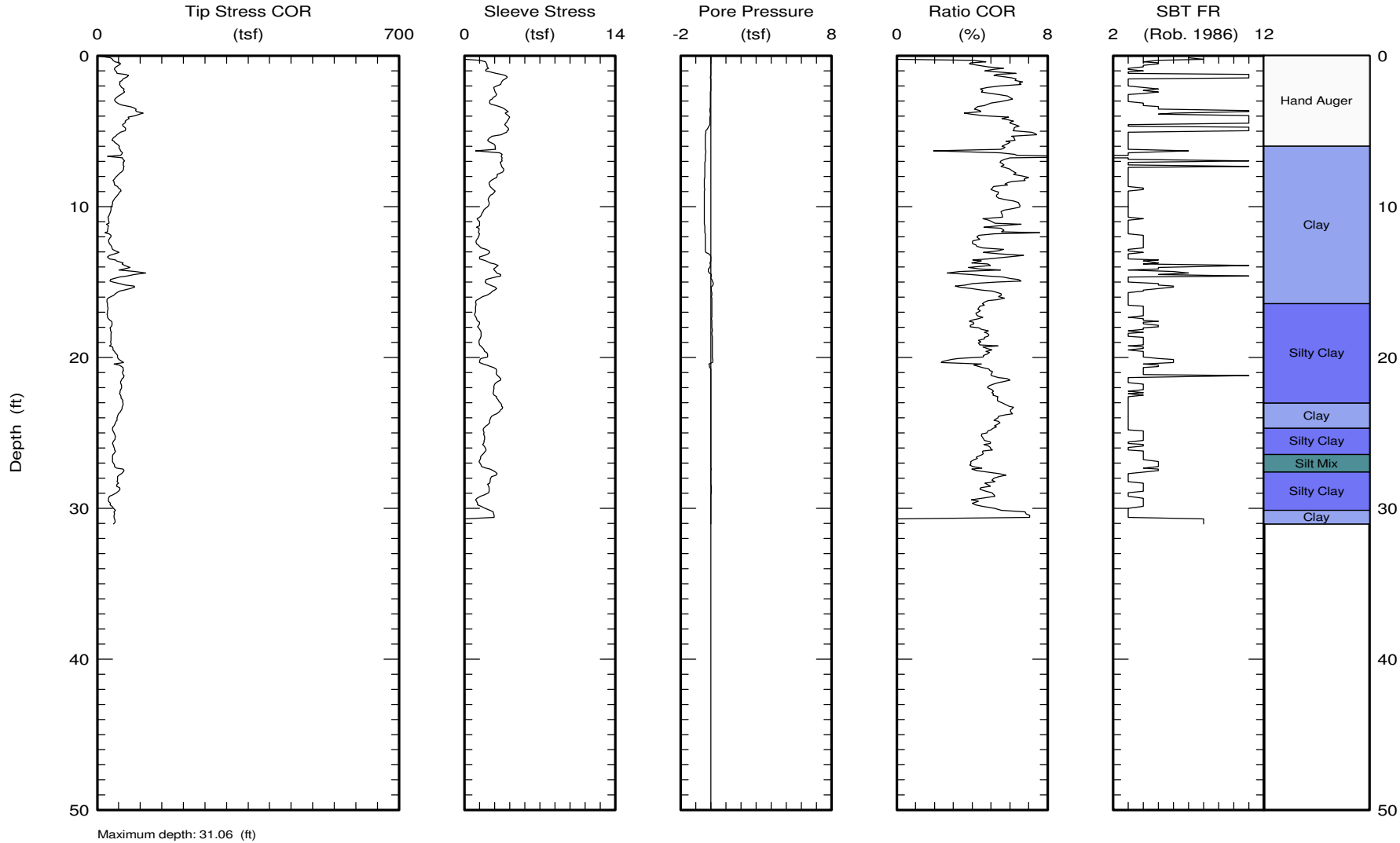
Maximum depth: 104.04 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 06/Jul/2011
Test ID: T2E-C6
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



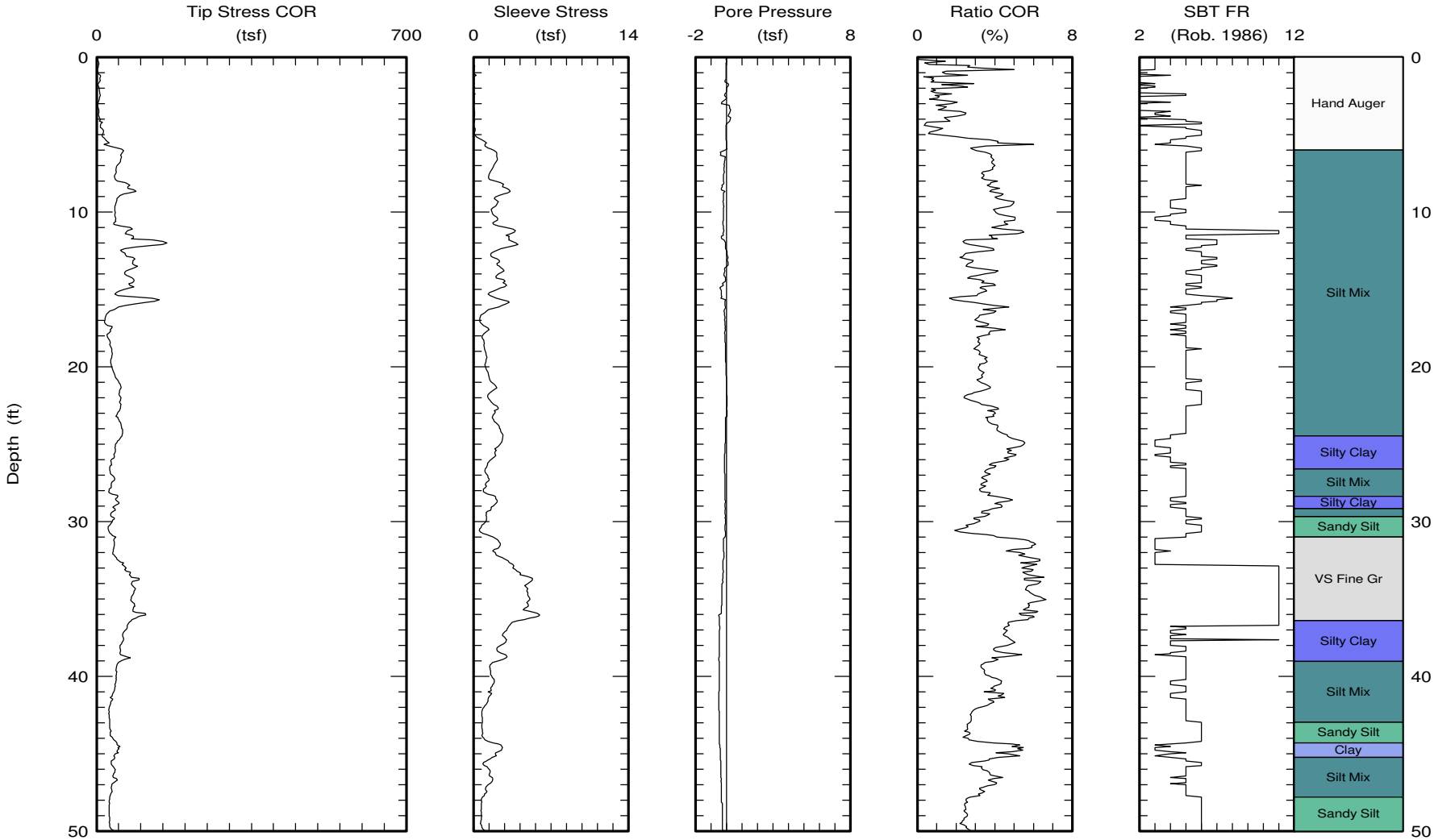
Maximum depth: 31.06 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 01/Jul/2011
Test ID: T2E-C7
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



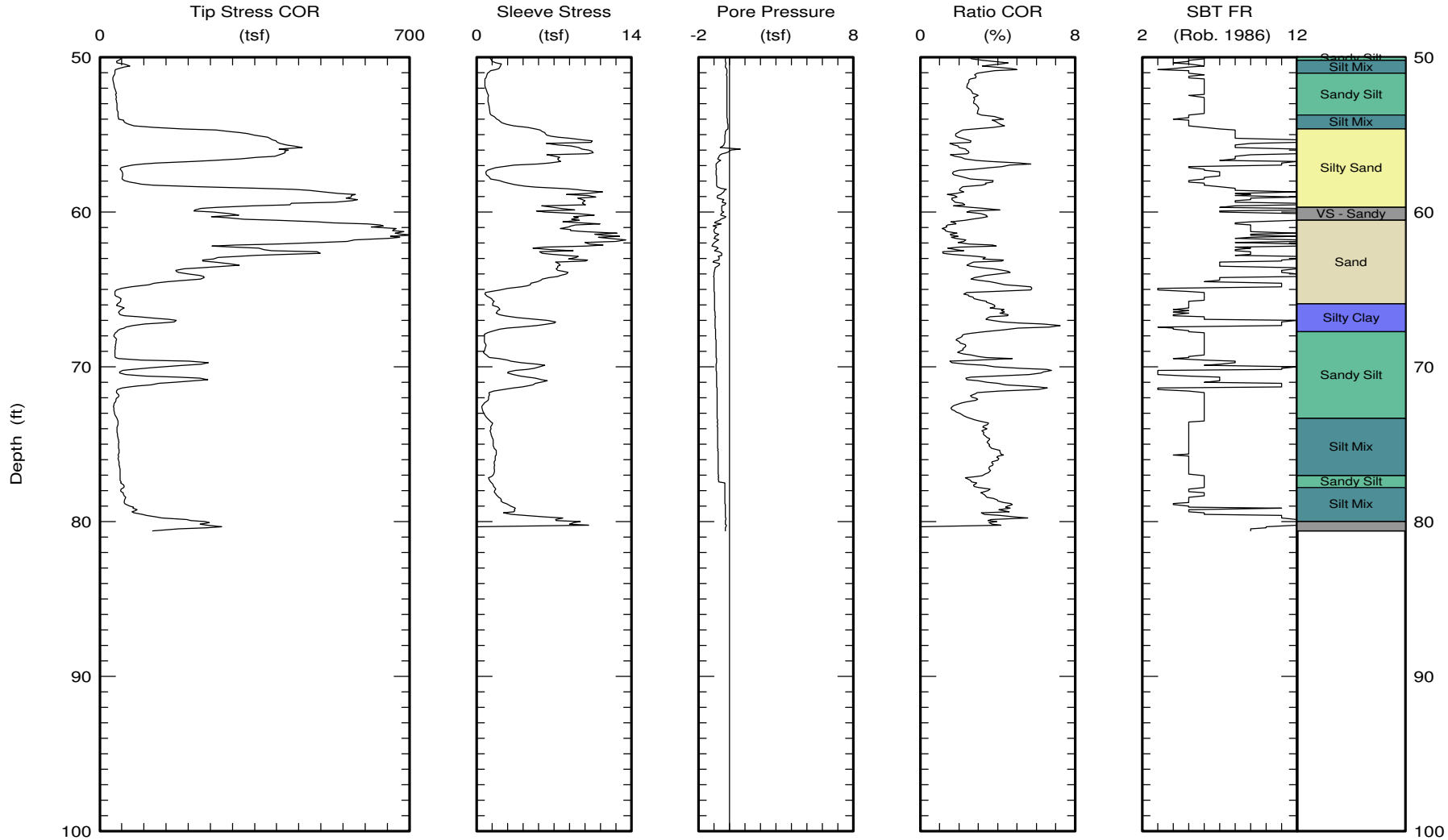
Maximum depth: 80.63 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

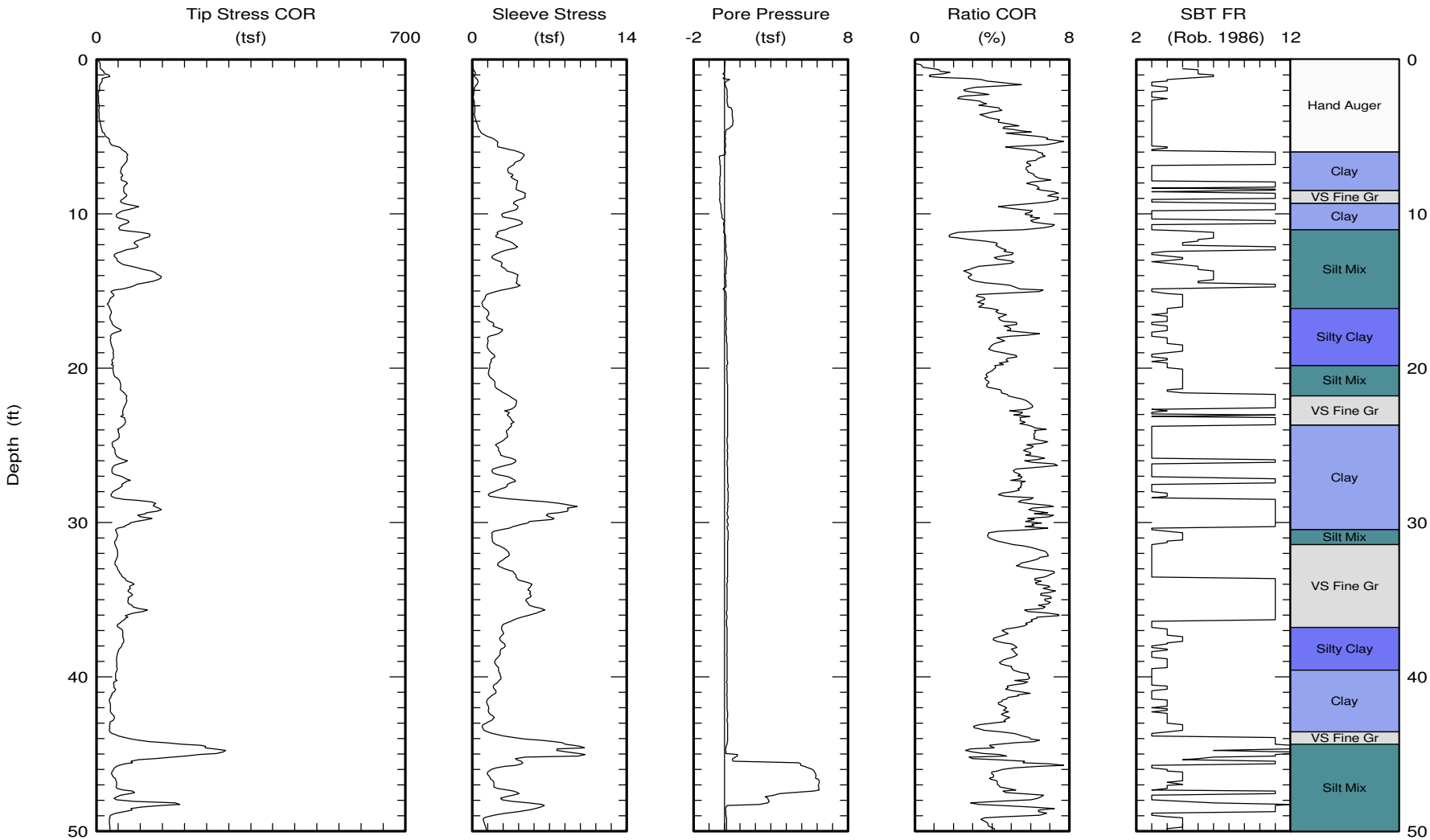
Date: 01/Jul/2011
Test ID: T2E-C7
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



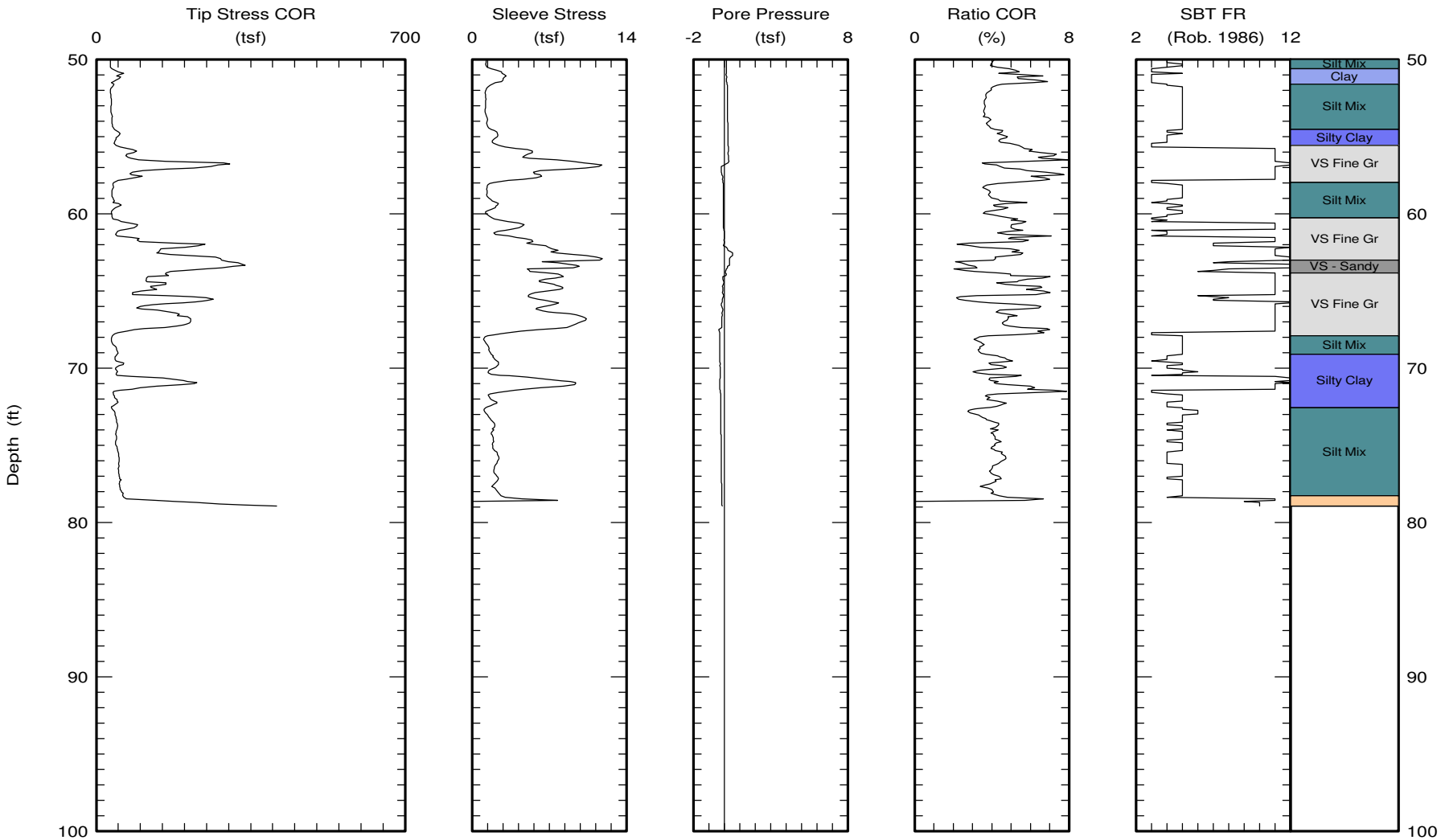
Maximum depth: 80.63 (ft)

Kehoe Testing & Engineering Office: (714) 901-7270 Fax: (714) 901-7289 rich@kehoetesting.com www.kehoetesting.com	CPT Data 30 ton rig	Date: 06/Jul/2011 Test ID: T2E-C8 Project: LosAngeles
	Customer: MACTEC Job Site: Westside Subway Extension	



Maximum depth: 78.96 (ft)

Kehoe Testing & Engineering Office: (714) 901-7270 Fax: (714) 901-7289 rich@kehoetesting.com www.kehoetesting.com	CPT Data 30 ton rig	Date: 06/Jul/2011 Test ID: T2E-C8 Project: LosAngeles
	Customer: MACTEC Job Site: Westside Subway Extension	



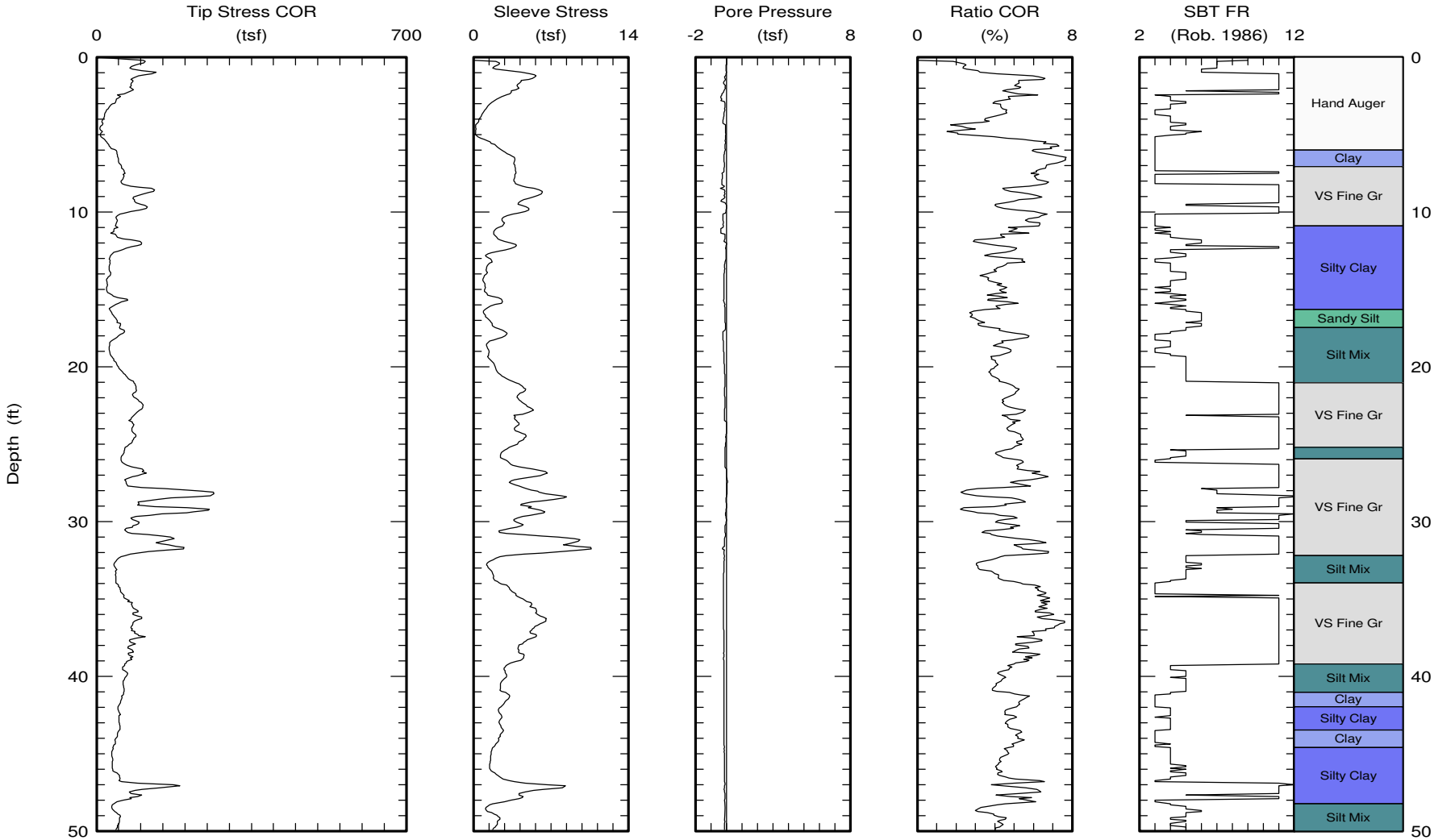
Maximum depth: 78.96 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 01/Jul/2011
Test ID: T2E-C9
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



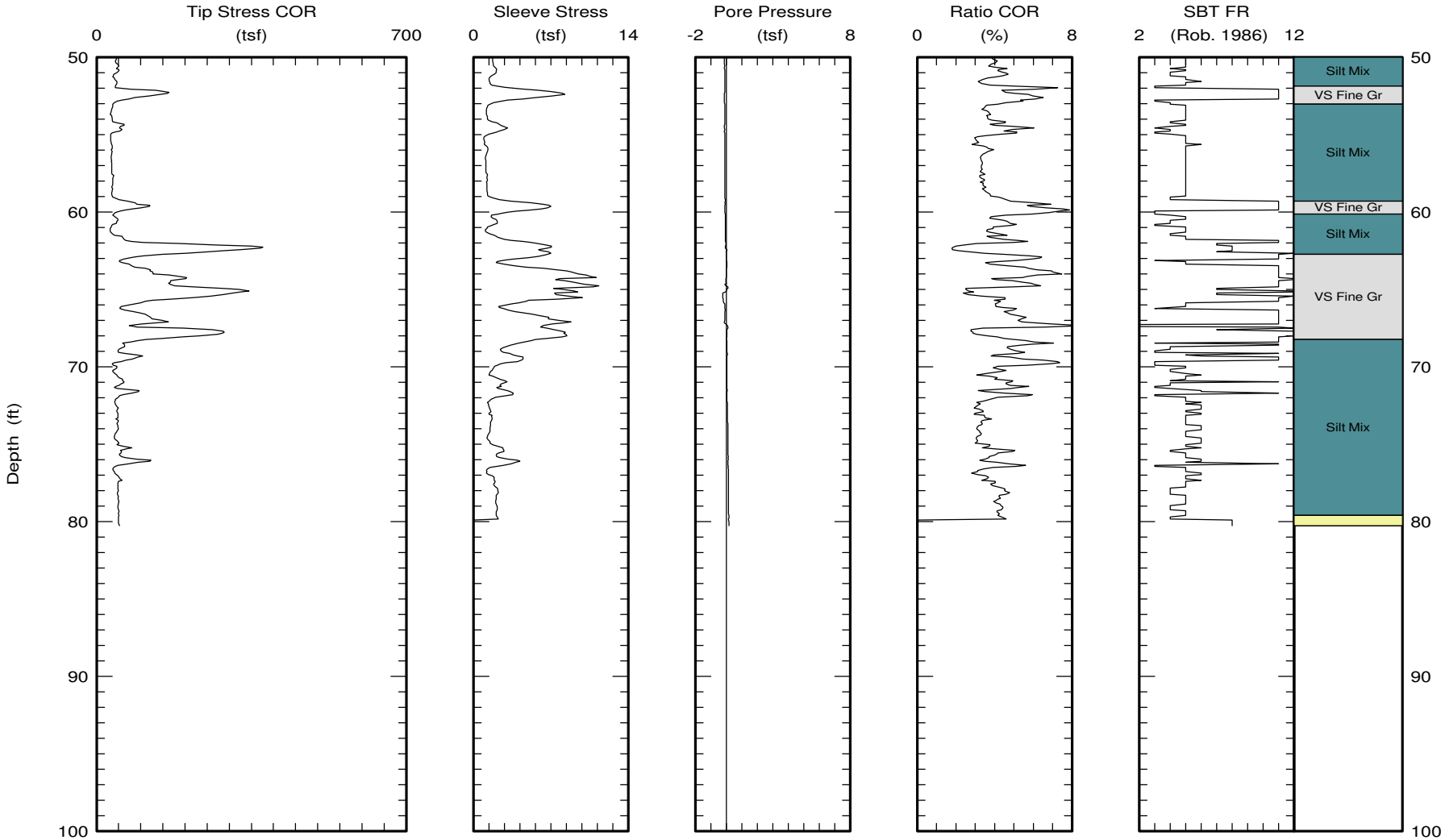
Maximum depth: 80.27 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 01/Jul/2011
Test ID: T2E-C9
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



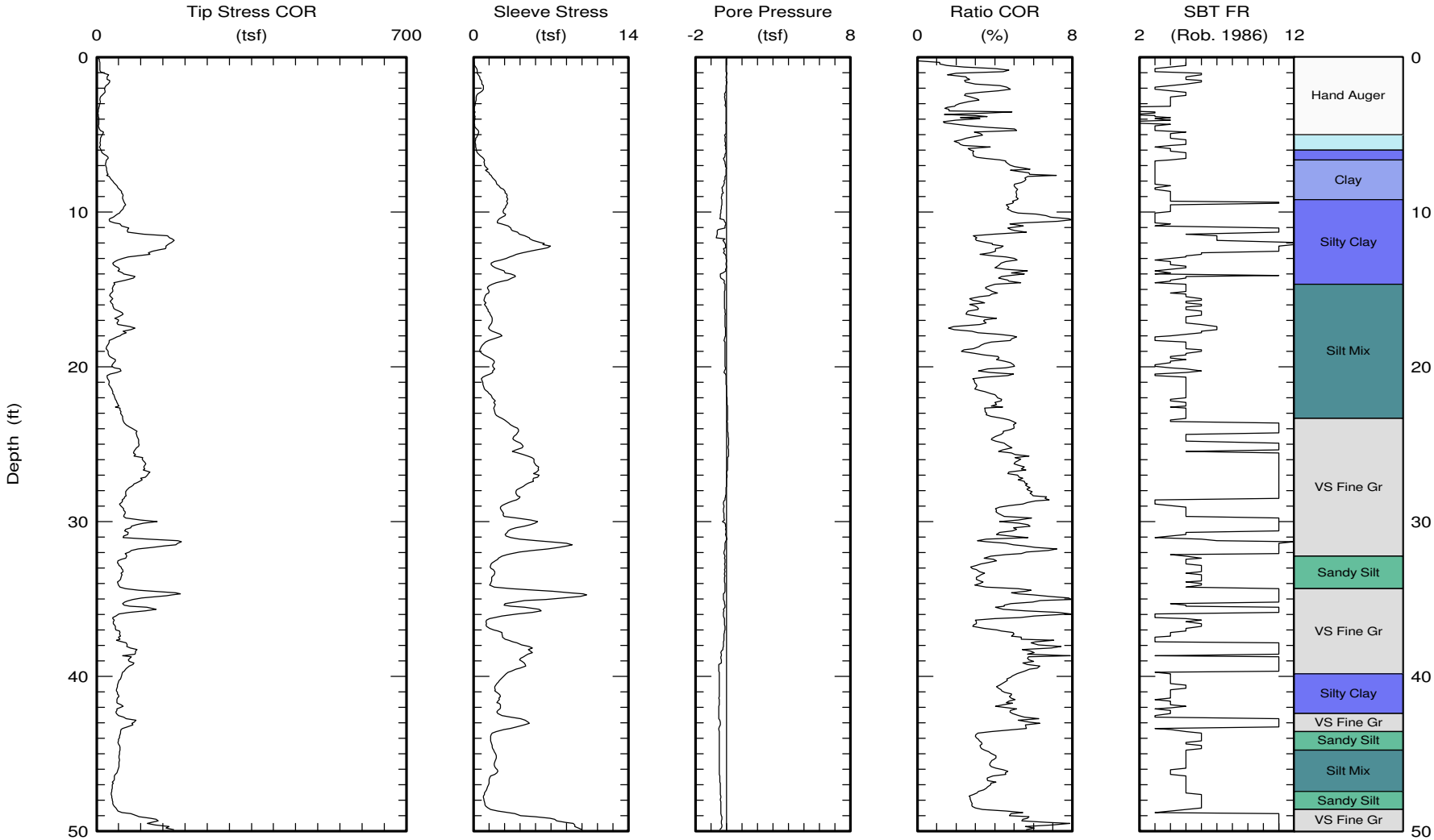
Maximum depth: 80.27 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 06/Jul/2011
Test ID: T2E-C10
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



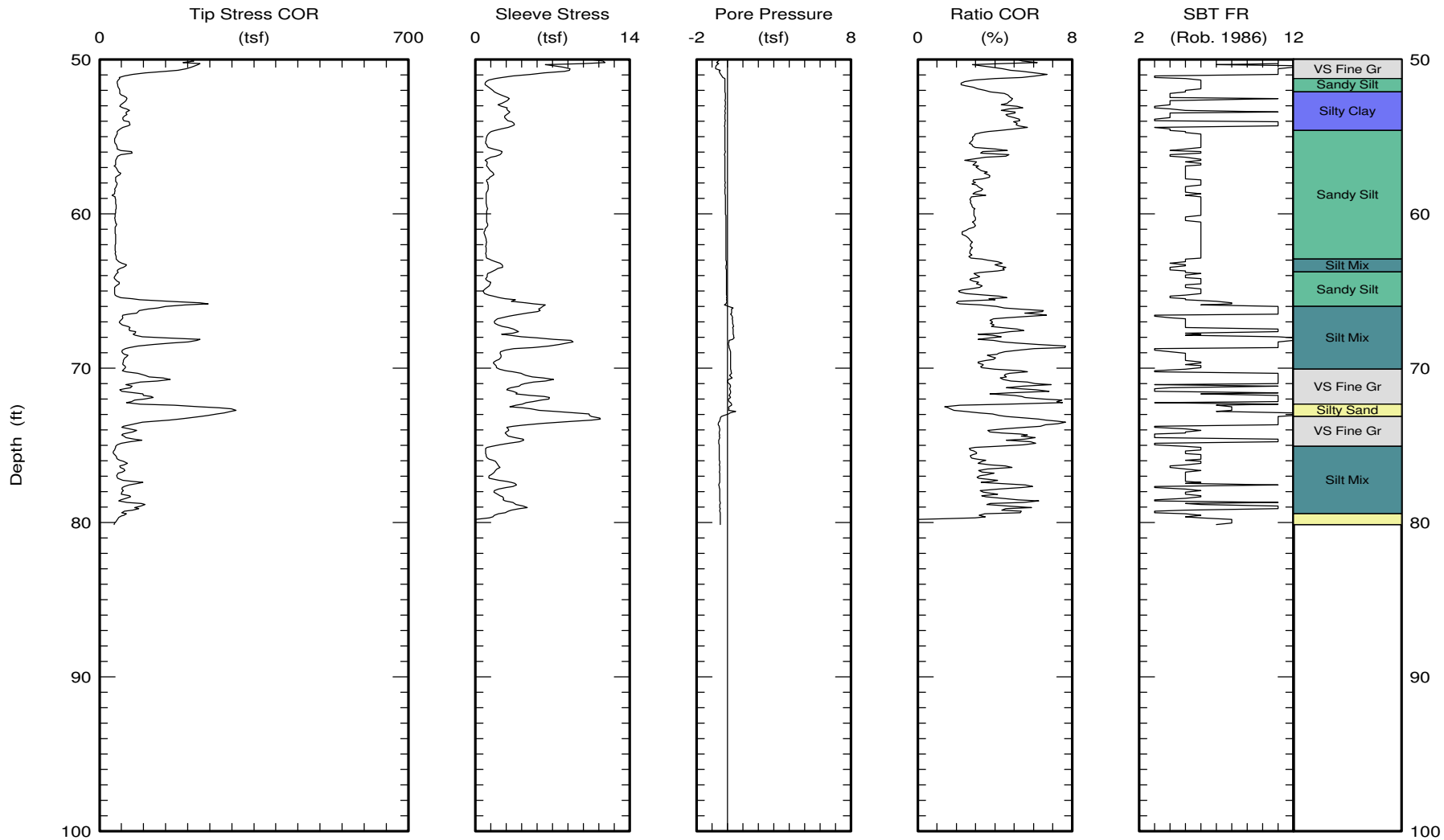
Maximum depth: 80.14 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 06/Jul/2011
Test ID: T2E-C10
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



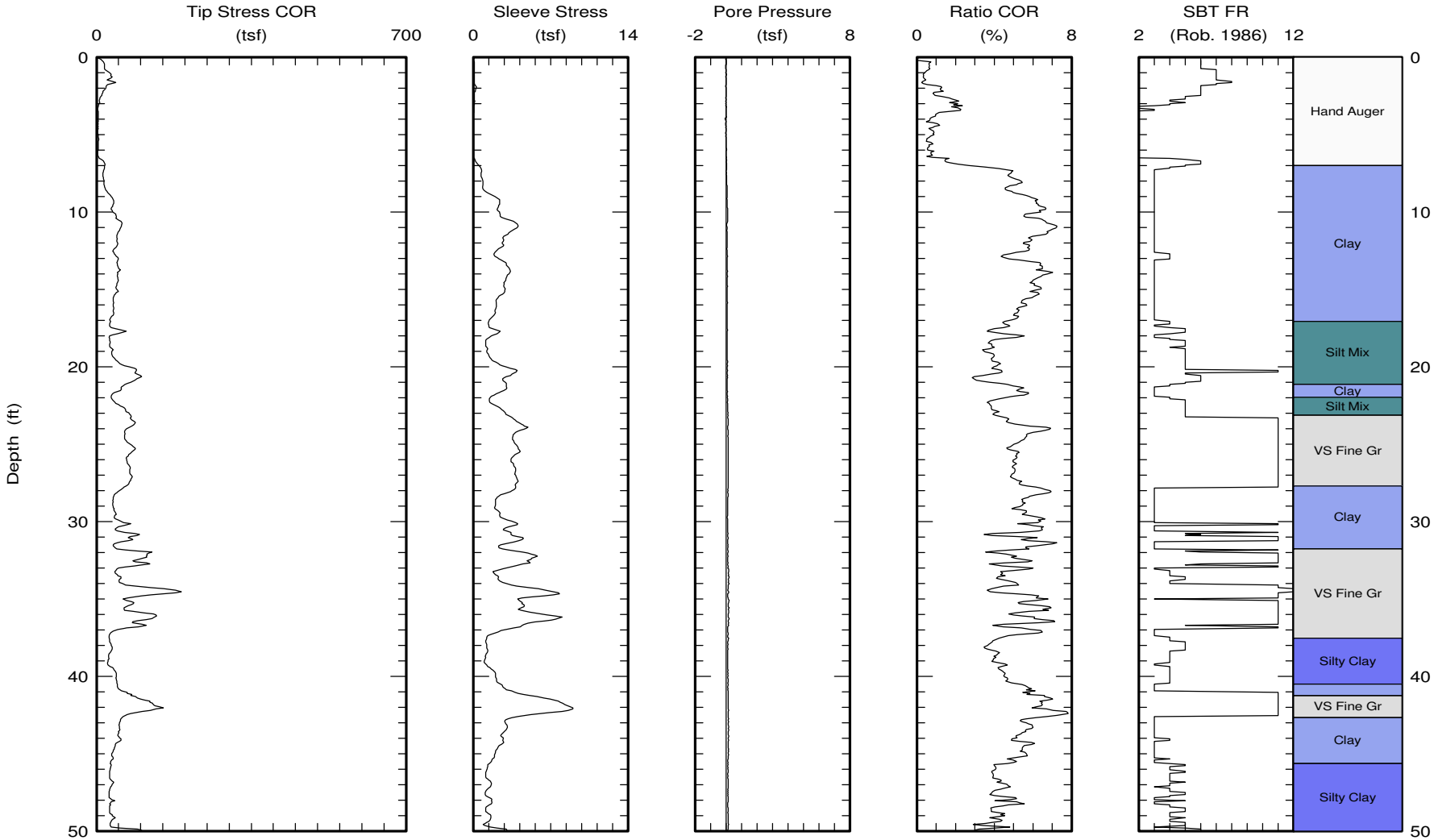
Maximum depth: 80.14 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 02/Jun/2011
Test ID: T2E-C11
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



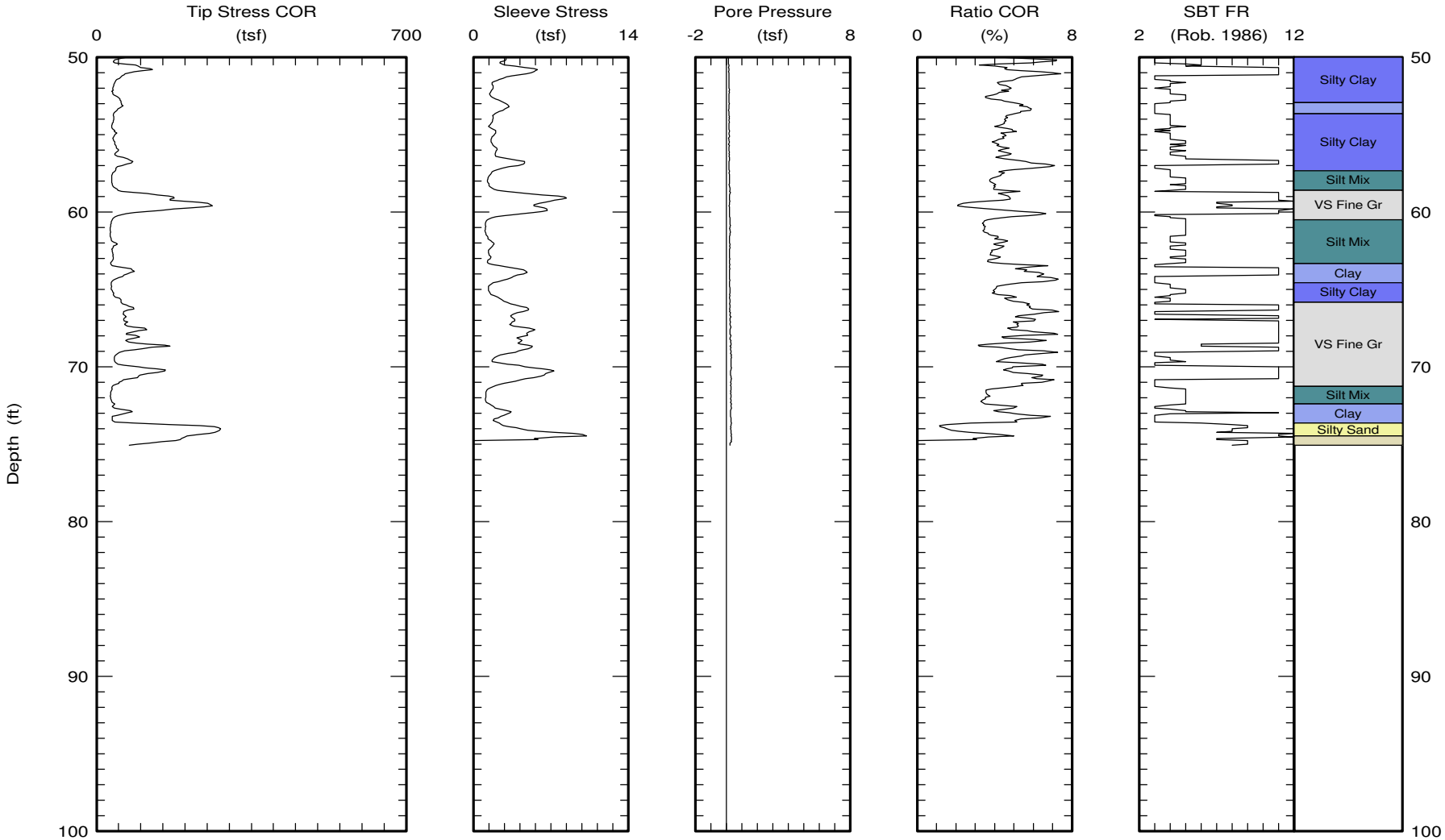
Maximum depth: 75.09 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

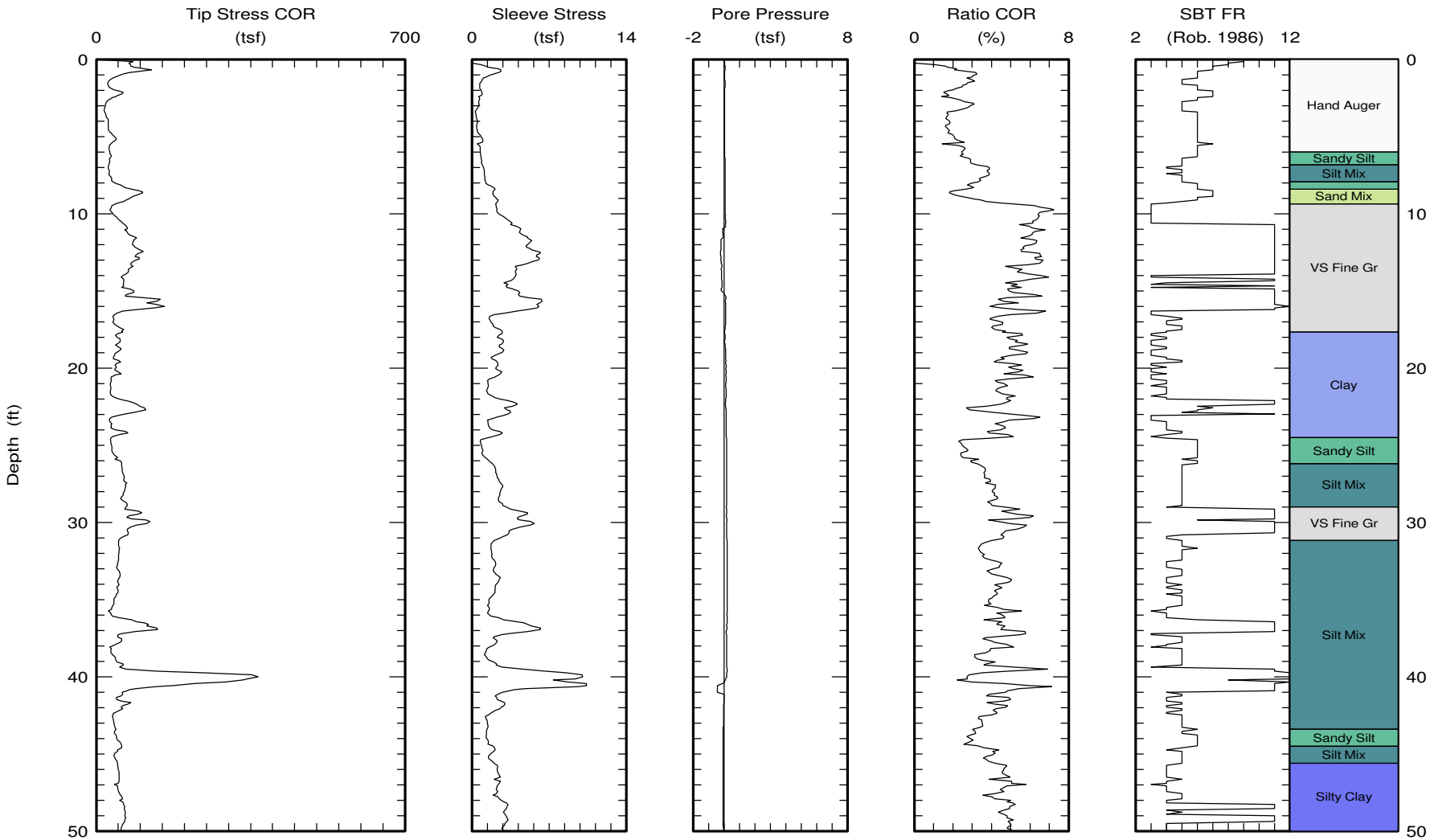
Date: 02/Jun/2011
Test ID: T2E-C11
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



Maximum depth: 75.09 (ft)

Kehoe Testing & Engineering Office: (714) 901-7270 Fax: (714) 901-7289 rich@kehoetesting.com www.kehoetesting.com	CPT Data 30 ton rig	Date: 29/Jun/2011 Test ID: T2E-C12 Project: LosAngeles
	Customer: MACTEC Job Site: Westside Subway Extension	



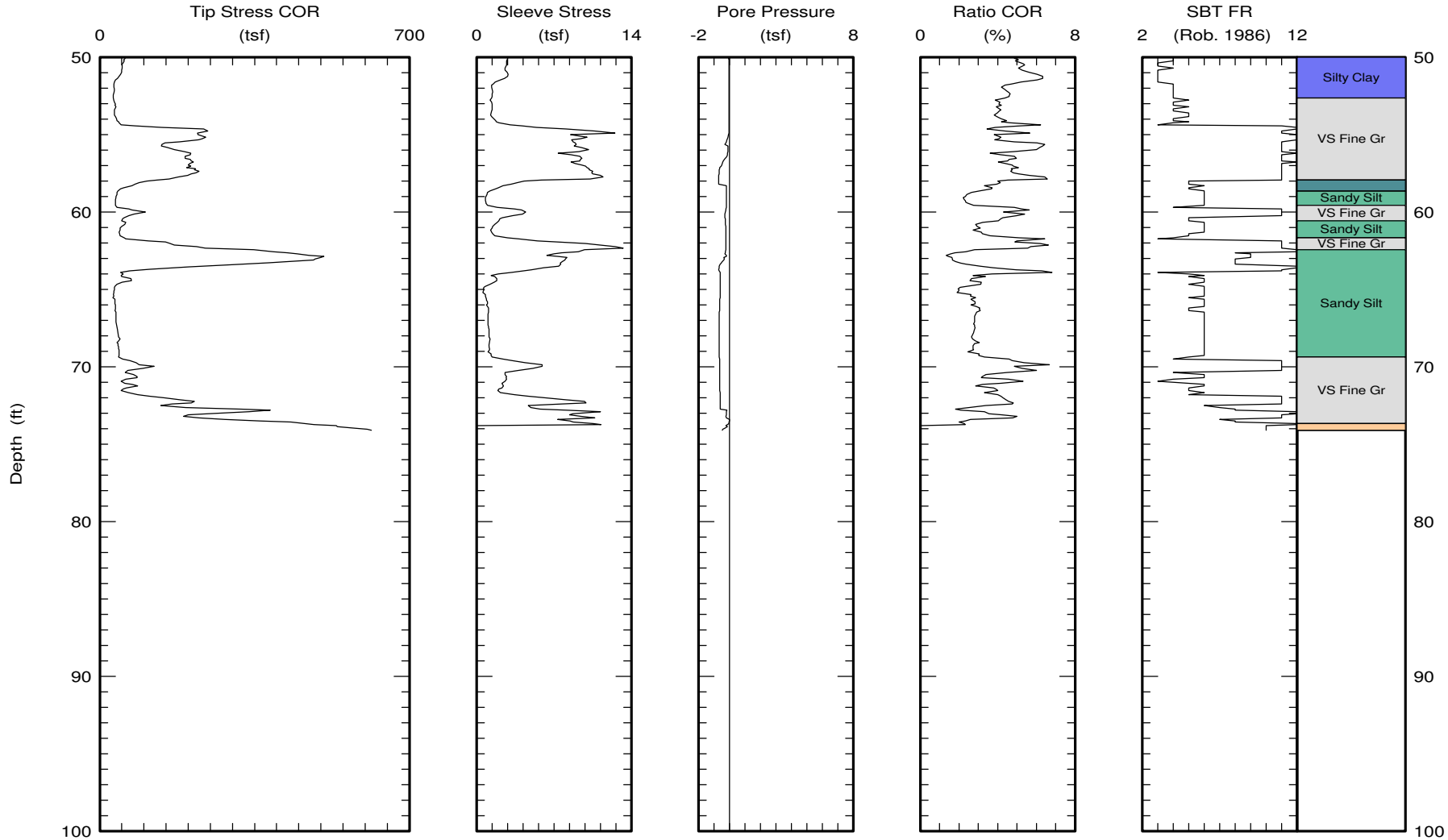
Maximum depth: 74.12 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 29/Jun/2011
Test ID: T2E-C12
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



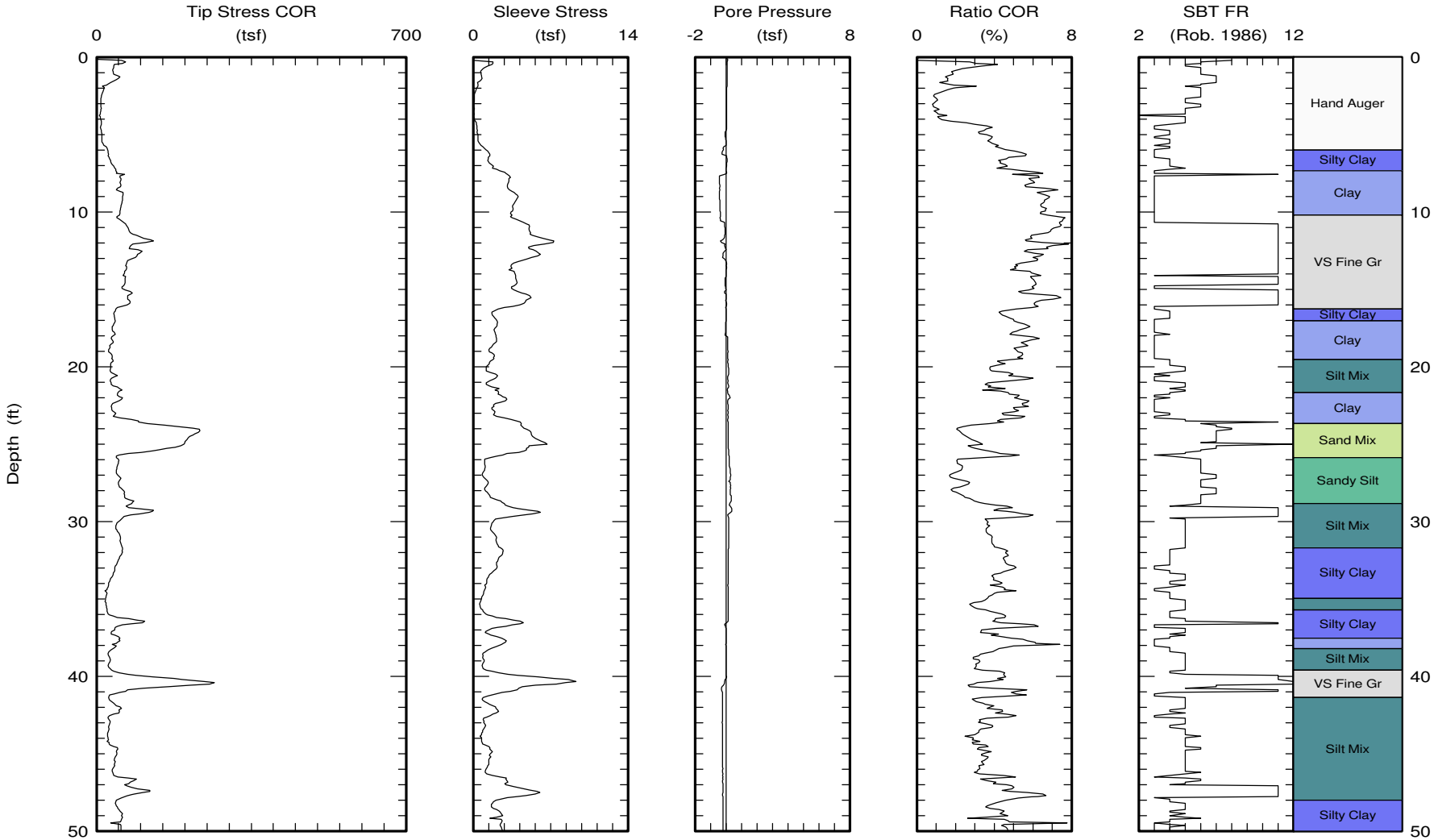
Maximum depth: 74.12 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

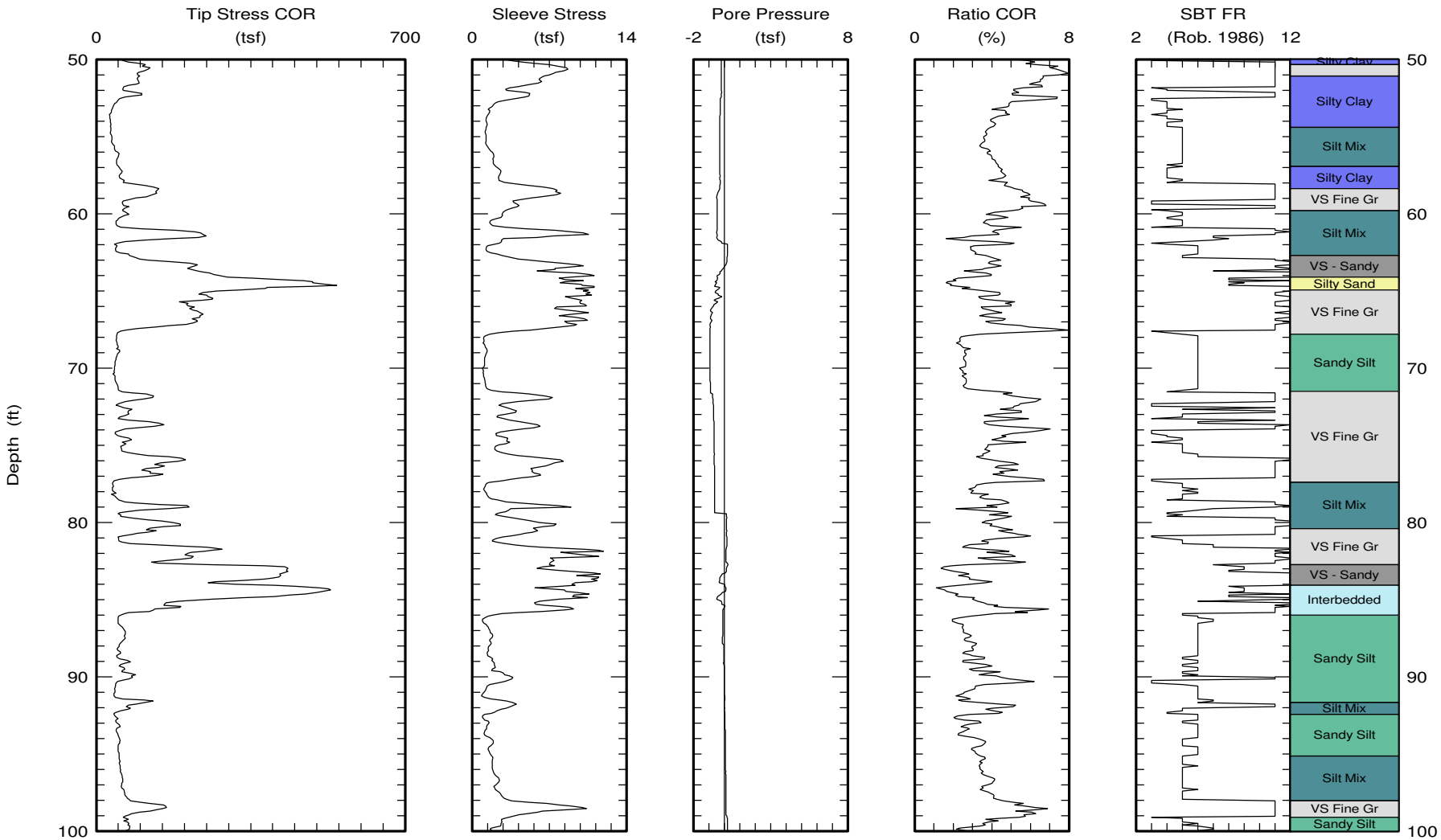
Date: 29/Jun/2011
Test ID: T2E-C13
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



Maximum depth: 105.79 (ft)

Kehoe Testing & Engineering Office: (714) 901-7270 Fax: (714) 901-7289 rich@kehoetesting.com www.kehoetesting.com	CPT Data 30 ton rig	Date: 29/Jun/2011 Test ID: T2E-C13 Project: LosAngeles
	Customer: MACTEC Job Site: Westside Subway Extension	



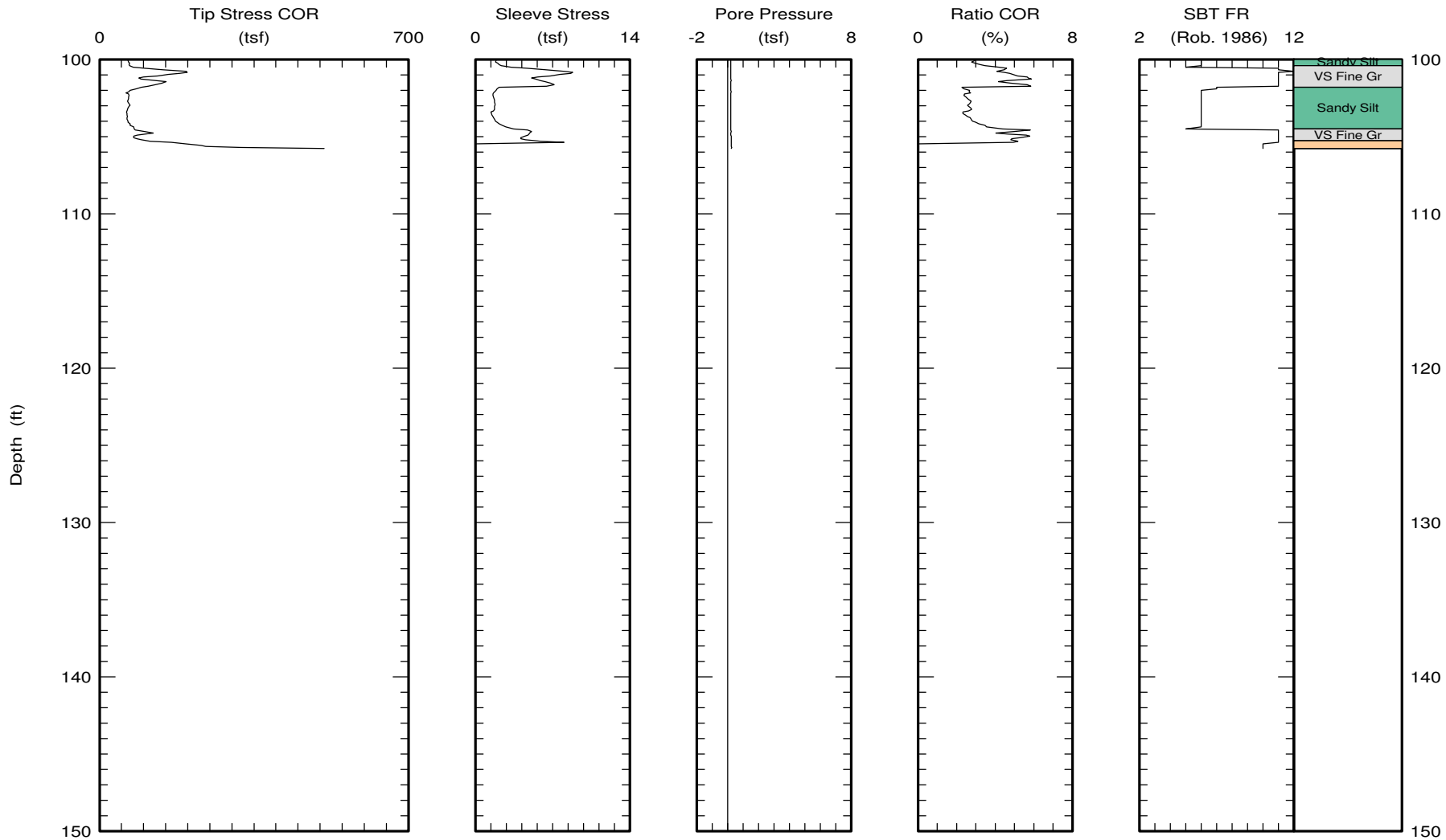
Maximum depth: 105.79 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 29/Jun/2011
Test ID: T2E-C13
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



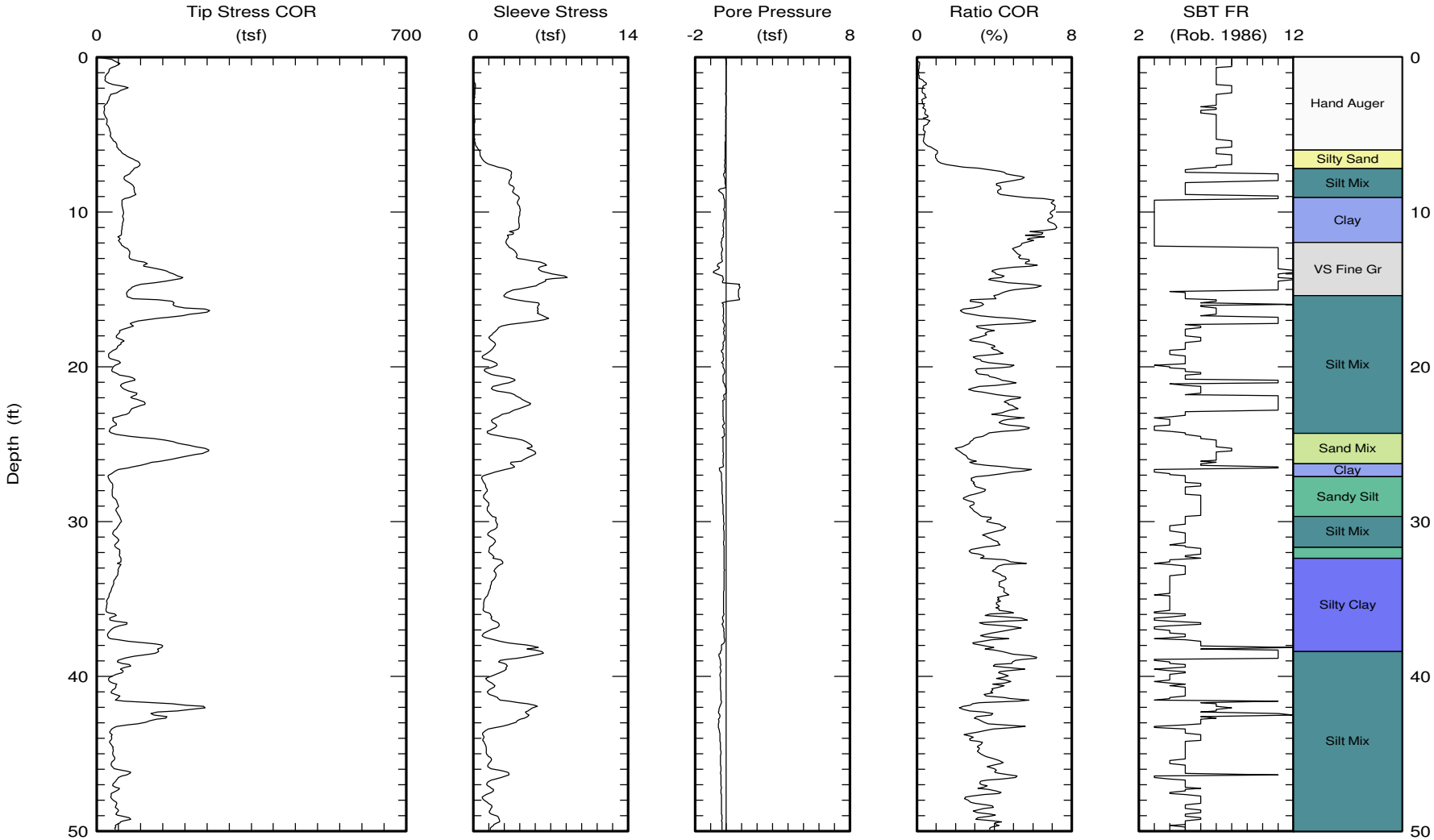
Maximum depth: 105.79 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

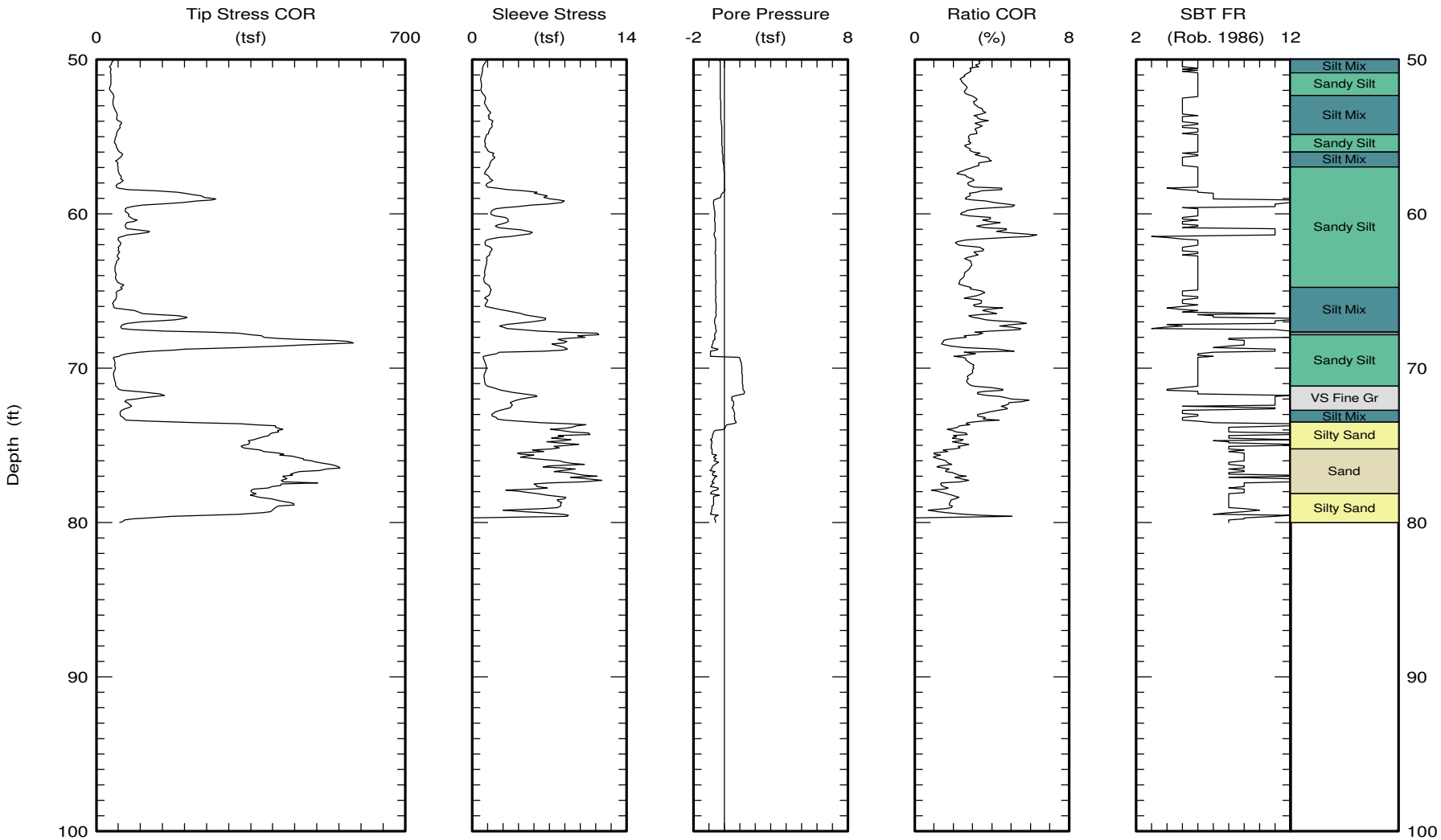
Date: 28/Jun/2011
Test ID: T2E-C14
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



Maximum depth: 80.01 (ft)

Kehoe Testing & Engineering Office: (714) 901-7270 Fax: (714) 901-7289 rich@kehoetesting.com www.kehoetesting.com	CPT Data 30 ton rig	Date: 28/Jun/2011 Test ID: T2E-C14 Project: LosAngeles
	Customer: MACTEC Job Site: Westside Subway Extension	



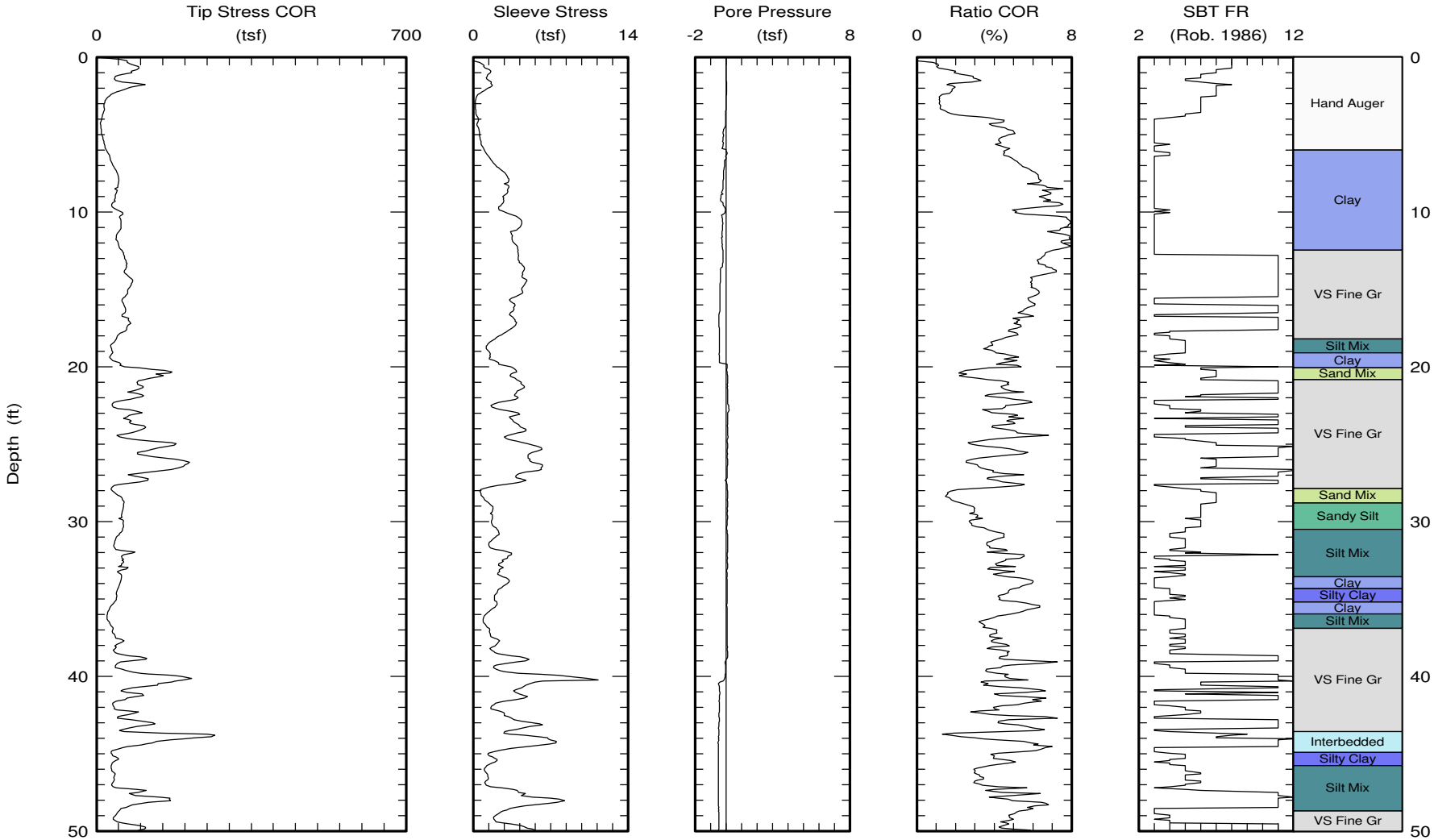
Maximum depth: 80.01 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 29/Jun/2011
Test ID: T2E-C15
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



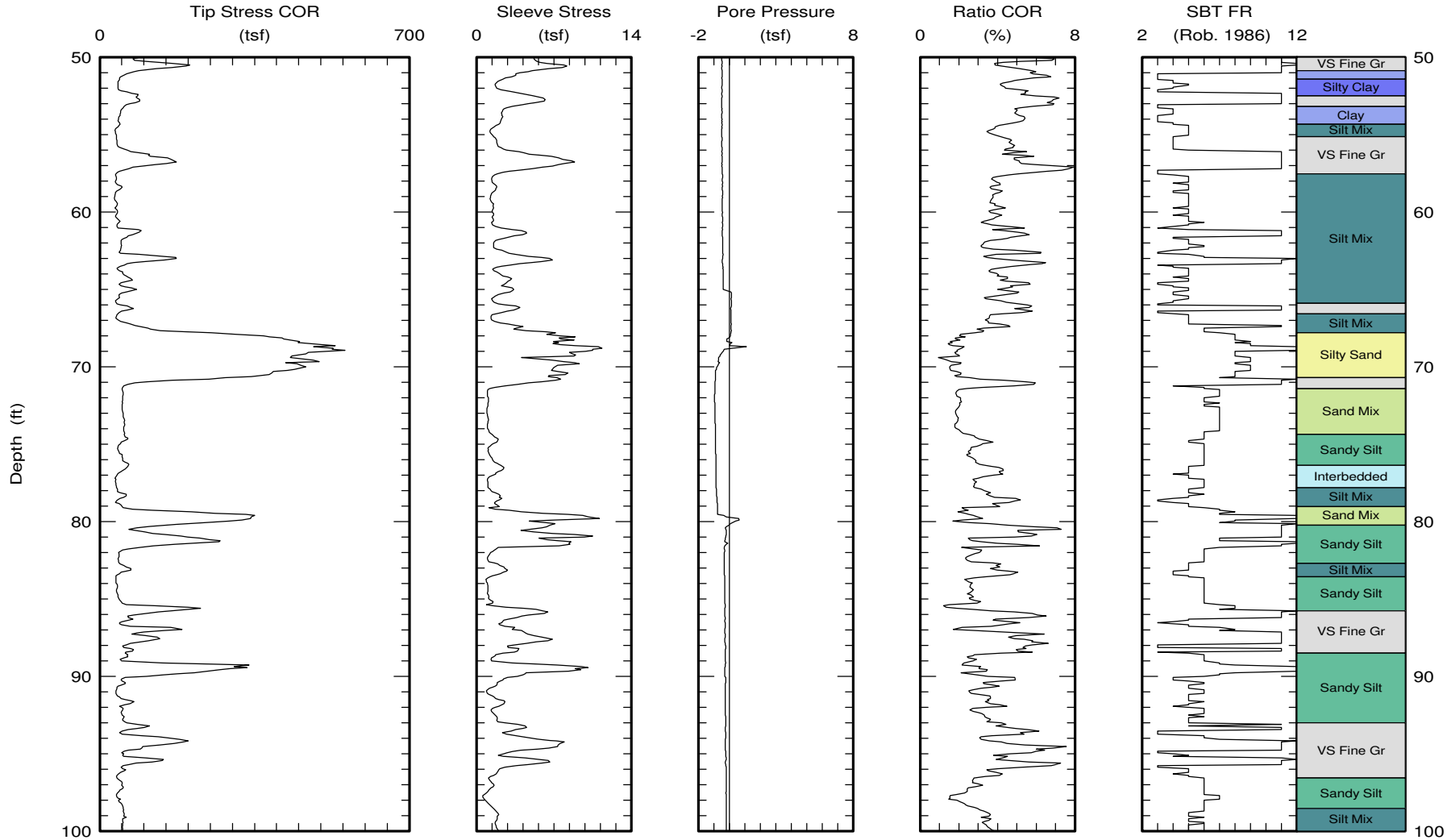
Maximum depth: 104.44 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 29/Jun/2011
Test ID: T2E-C15
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



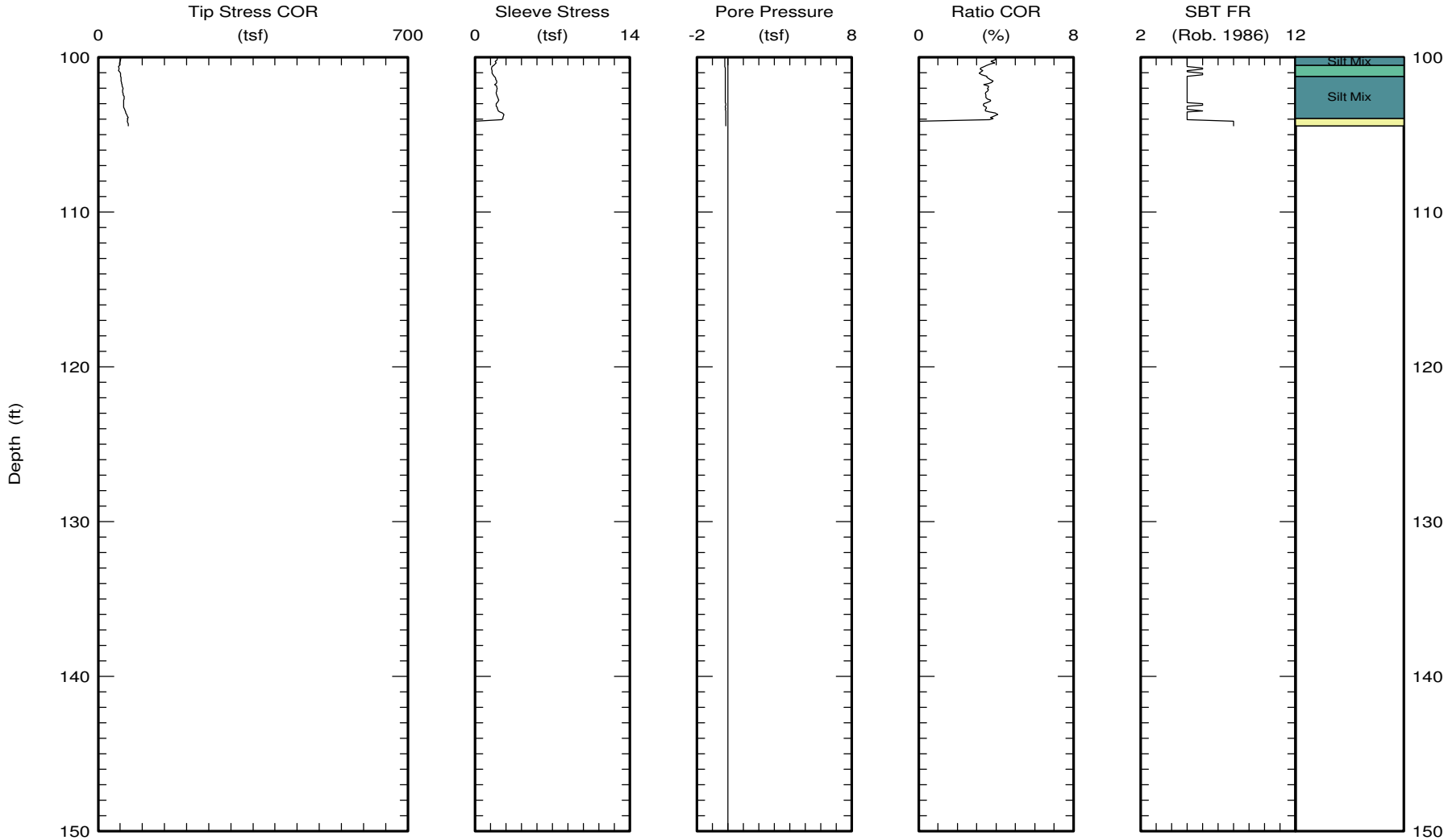
Maximum depth: 104.44 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 29/Jun/2011
Test ID: T2E-C15
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



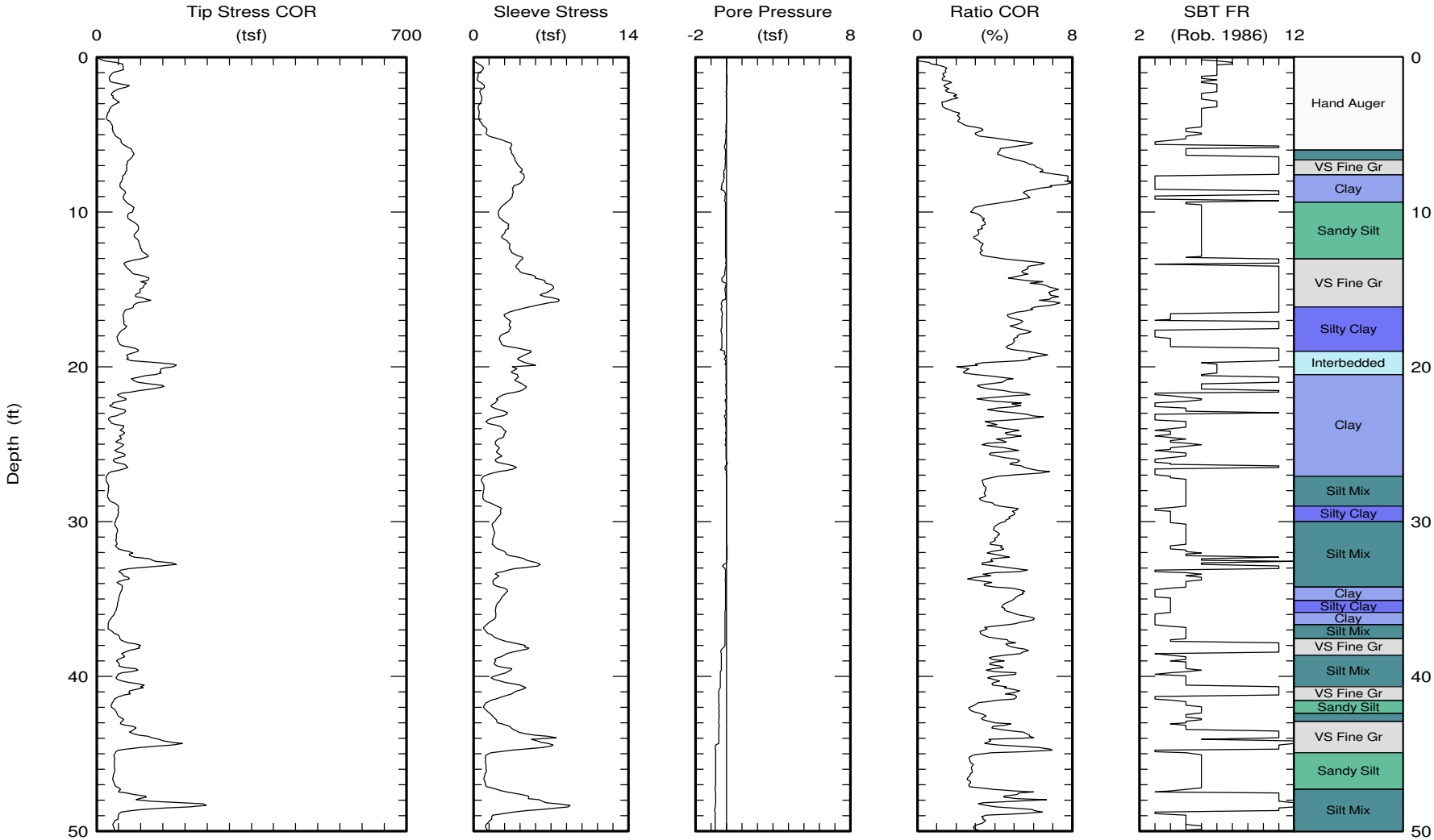
Maximum depth: 104.44 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

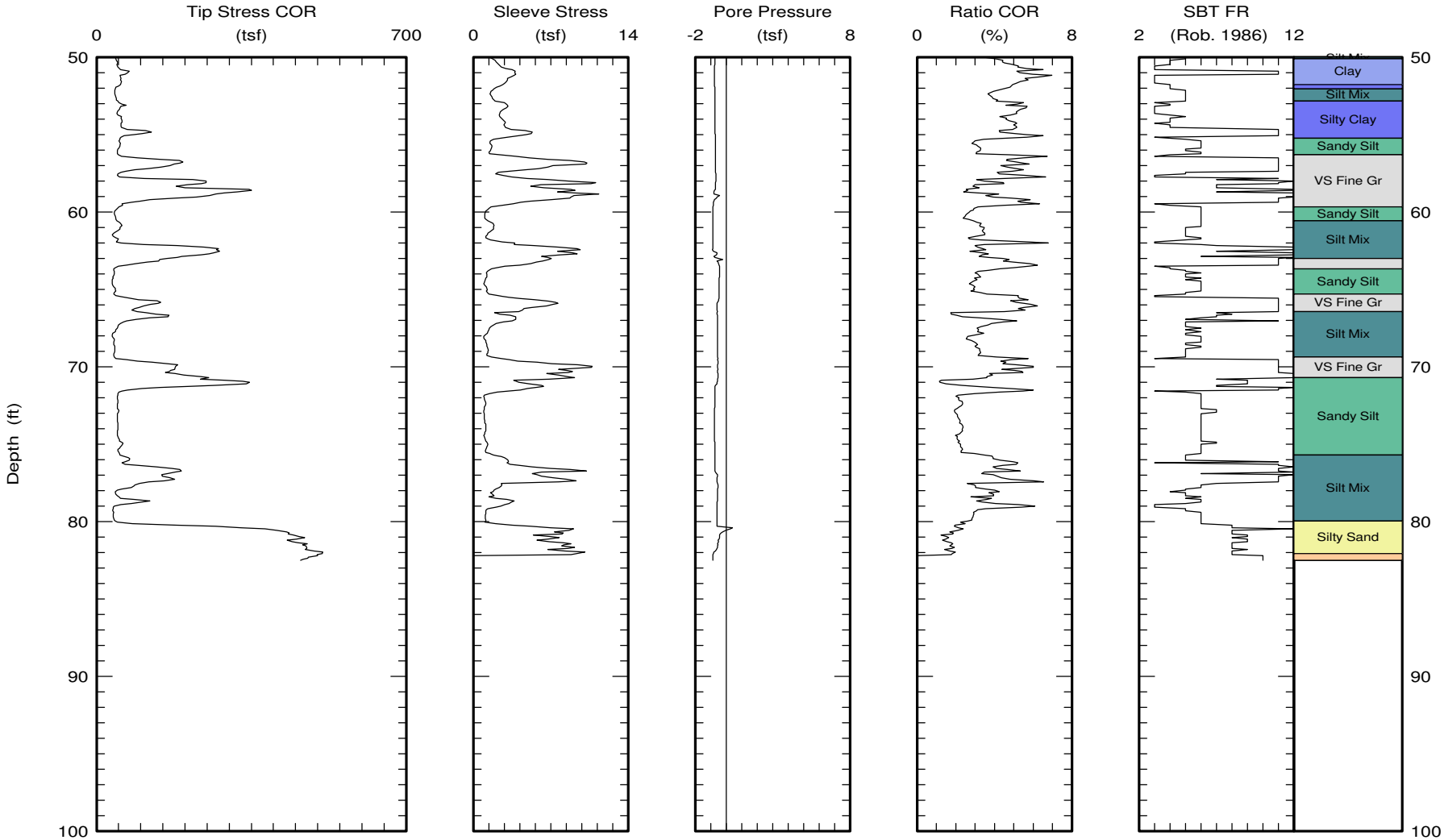
Date: 29/Jun/2011
Test ID: T2E-C16
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



Maximum depth: 82.53 (ft)

Kehoe Testing & Engineering Office: (714) 901-7270 Fax: (714) 901-7289 rich@kehoetesting.com www.kehoetesting.com	CPT Data 30 ton rig	Date: 29/Jun/2011 Test ID: T2E-C16 Project: LosAngeles
	Customer: MACTEC Job Site: Westside Subway Extension	



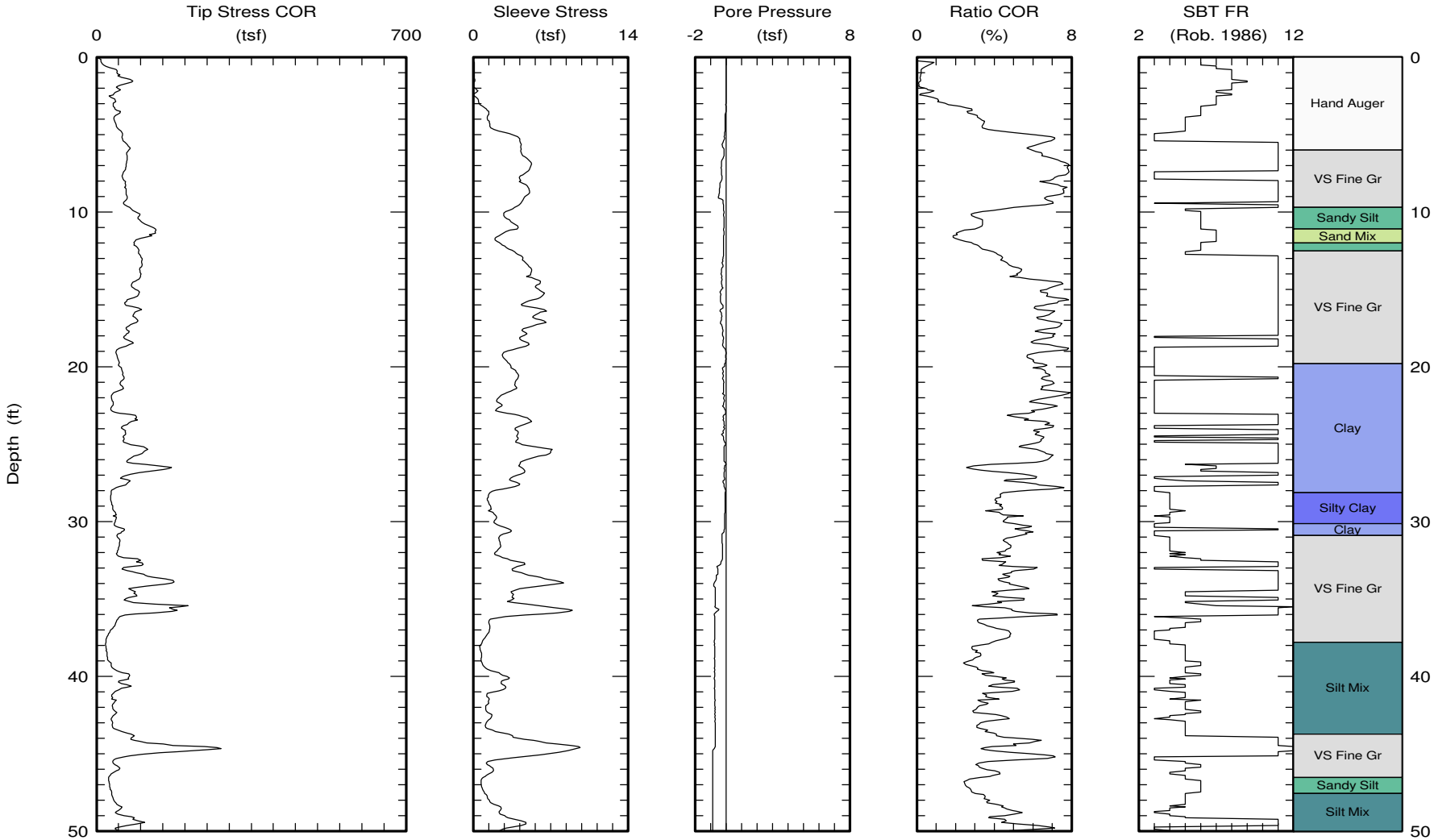
Maximum depth: 82.53 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 29/Jun/2011
Test ID: T2E-C17
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



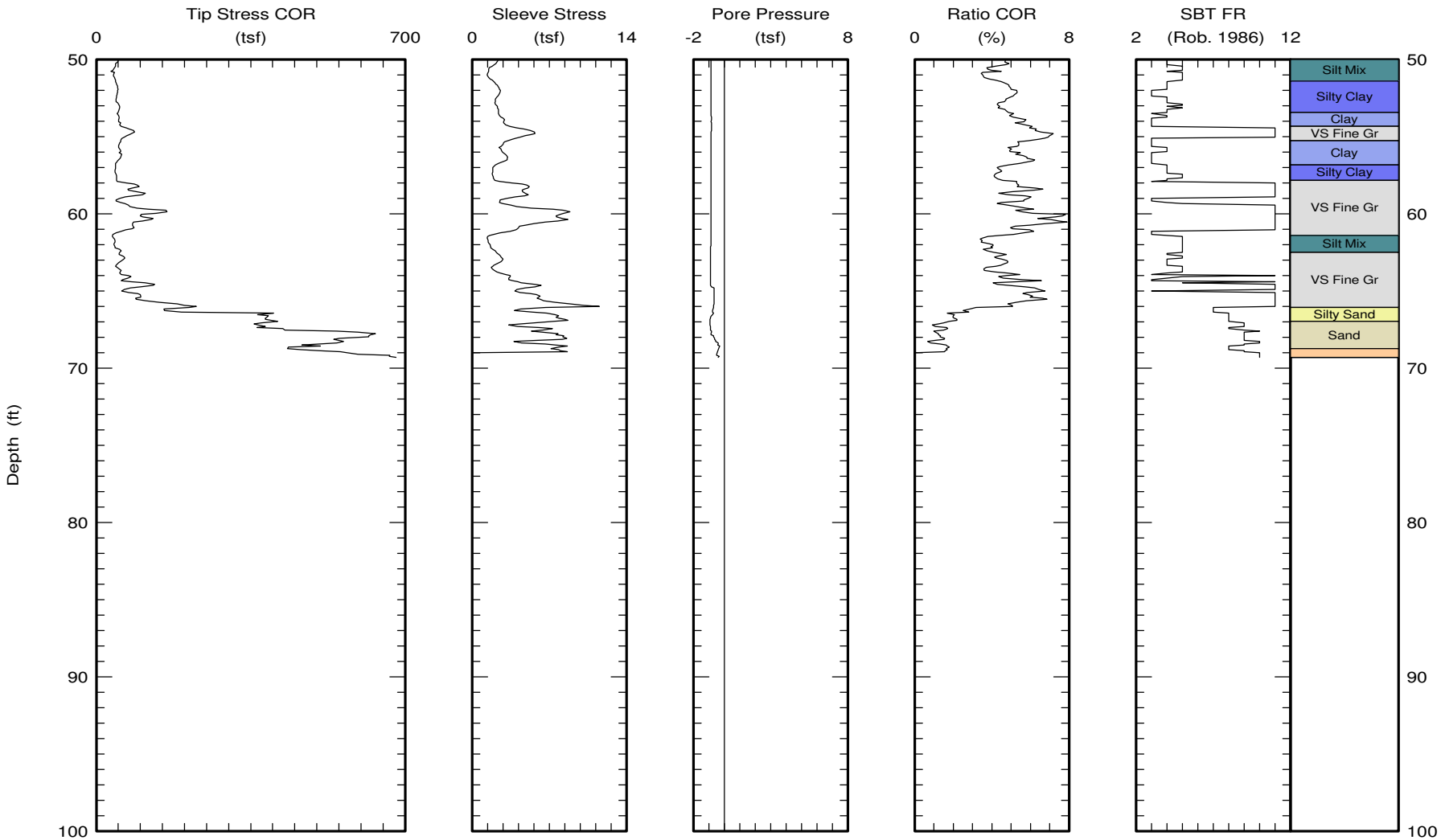
Maximum depth: 69.32 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 29/Jun/2011
Test ID: T2E-C17
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



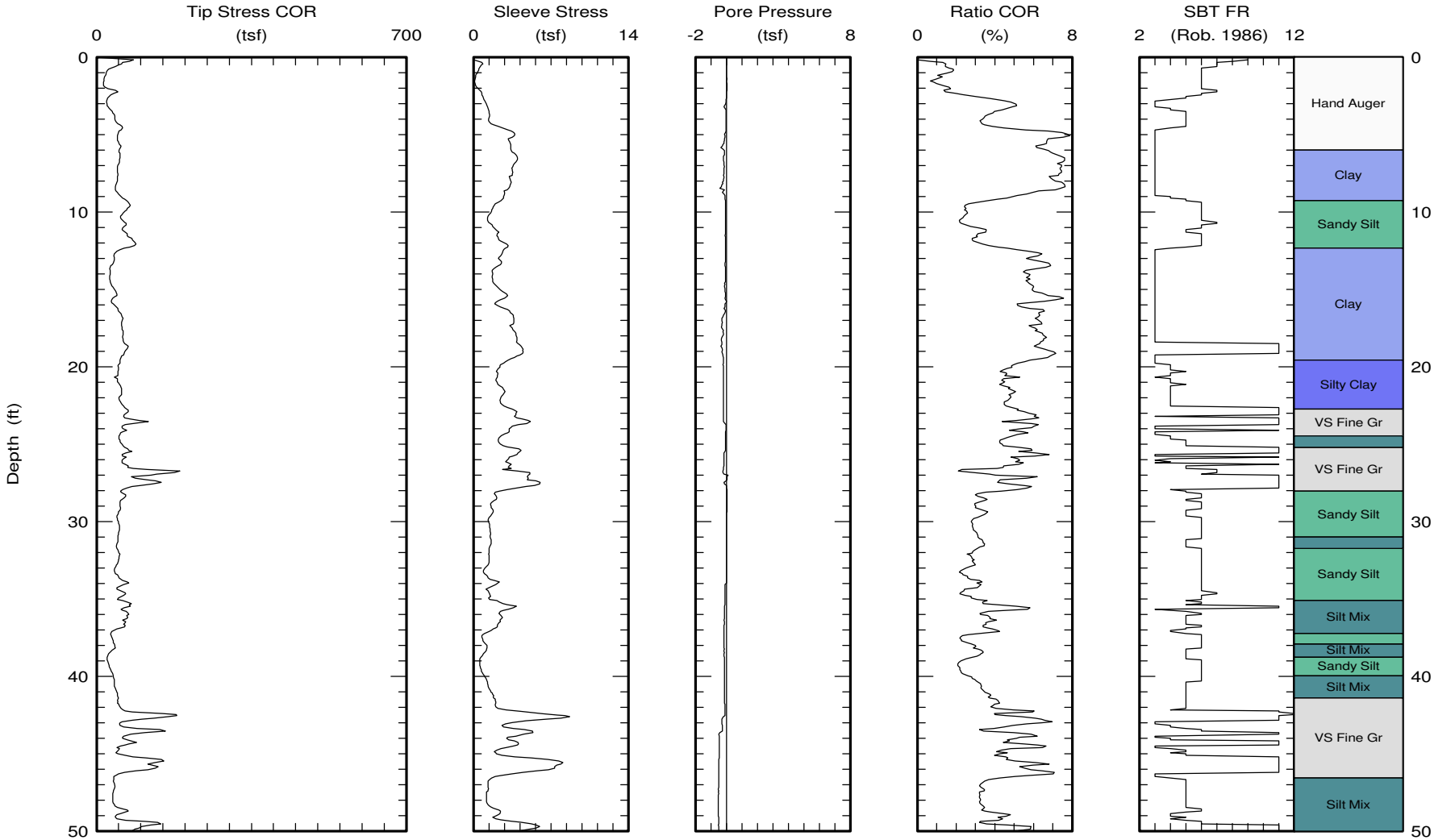
Maximum depth: 69.32 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 29/Jun/2011
Test ID: T2E-C18
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



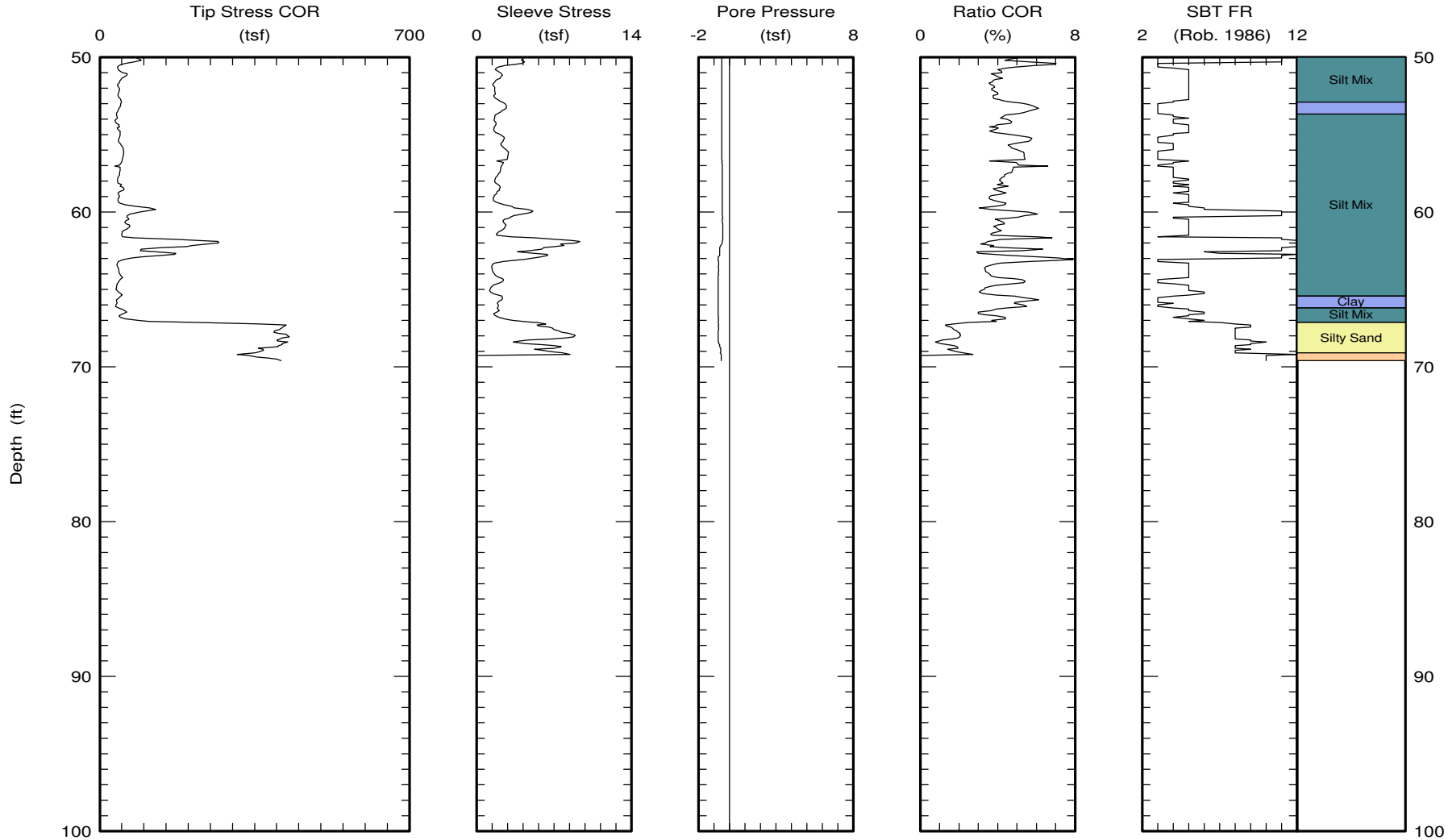
Maximum depth: 69.61 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 29/Jun/2011
Test ID: T2E-C18
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



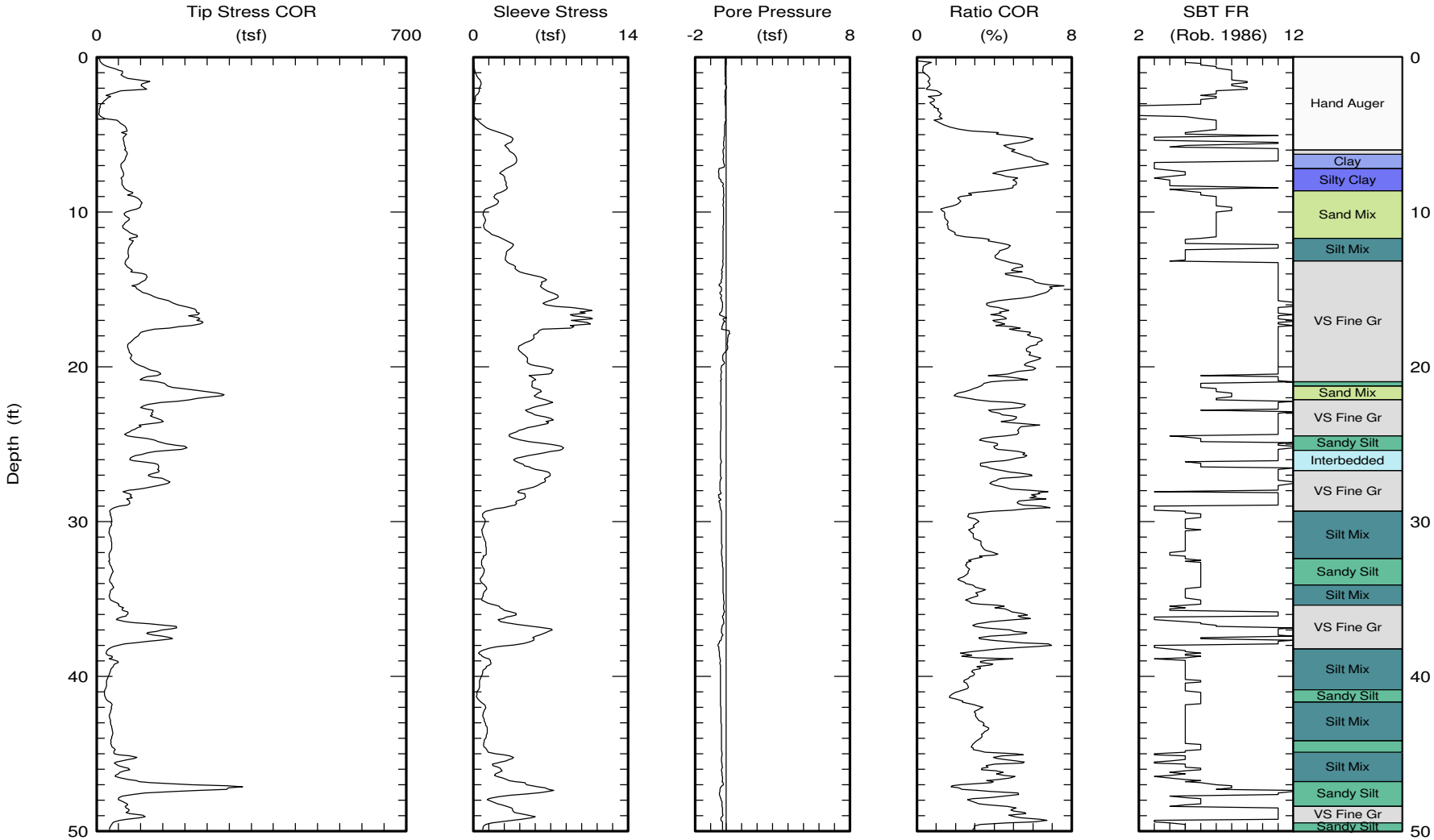
Maximum depth: 69.61 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 29/Jun/2011
Test ID: T2E-C19
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



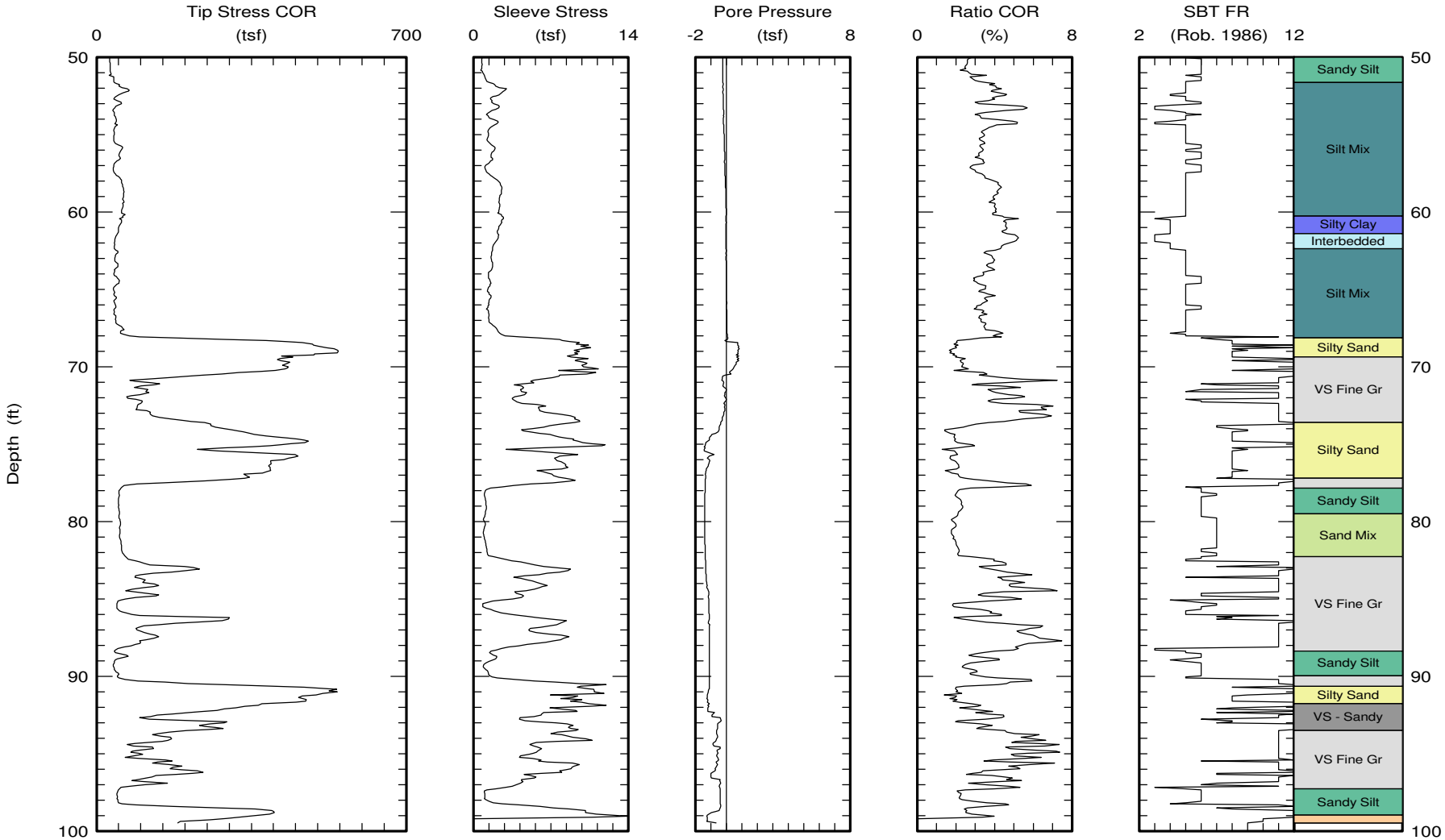
Maximum depth: 99.49 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 29/Jun/2011
Test ID: T2E-C19
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



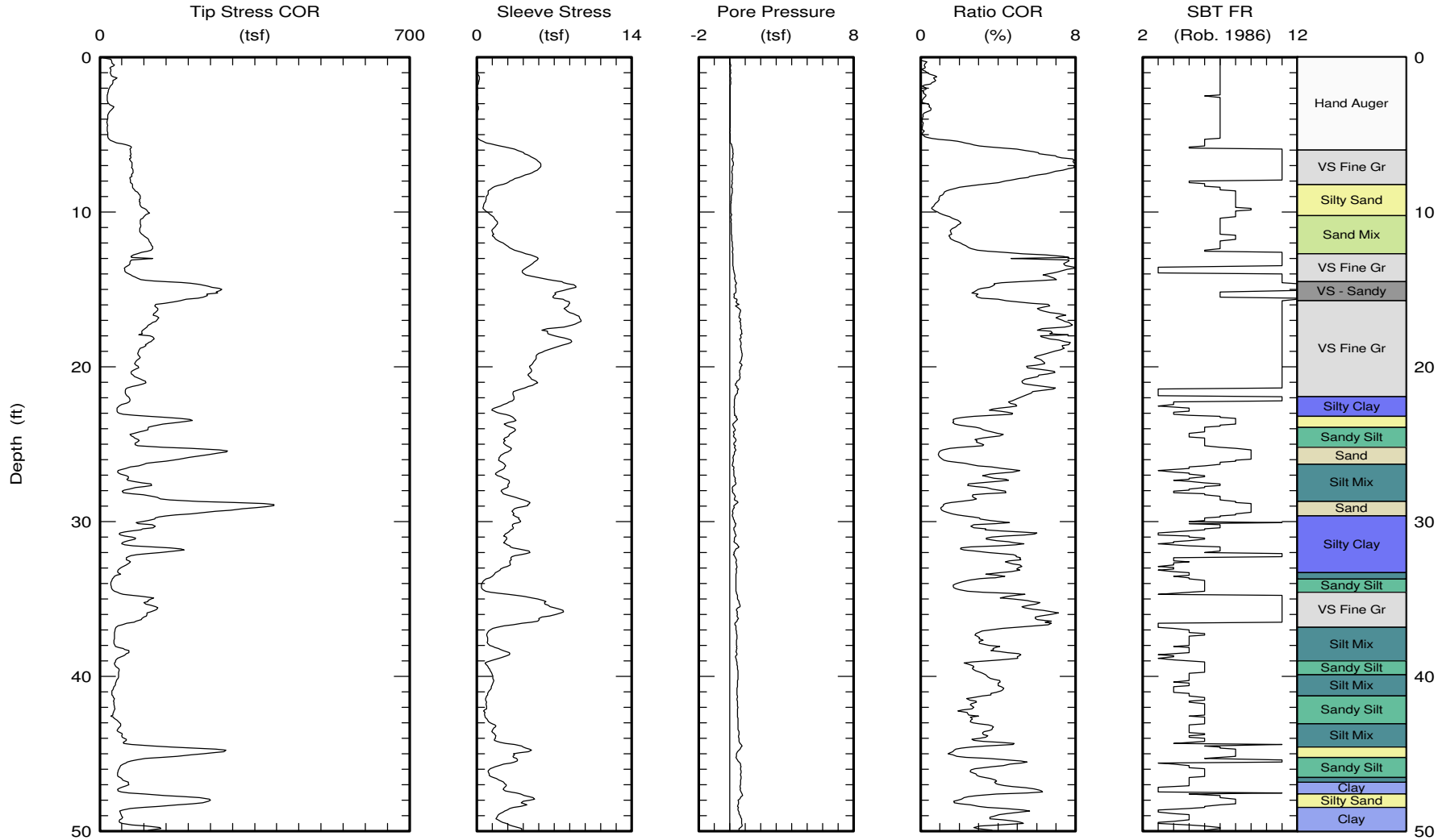
Maximum depth: 99.49 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 10/Jun/2011
Test ID: T2E-C20
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



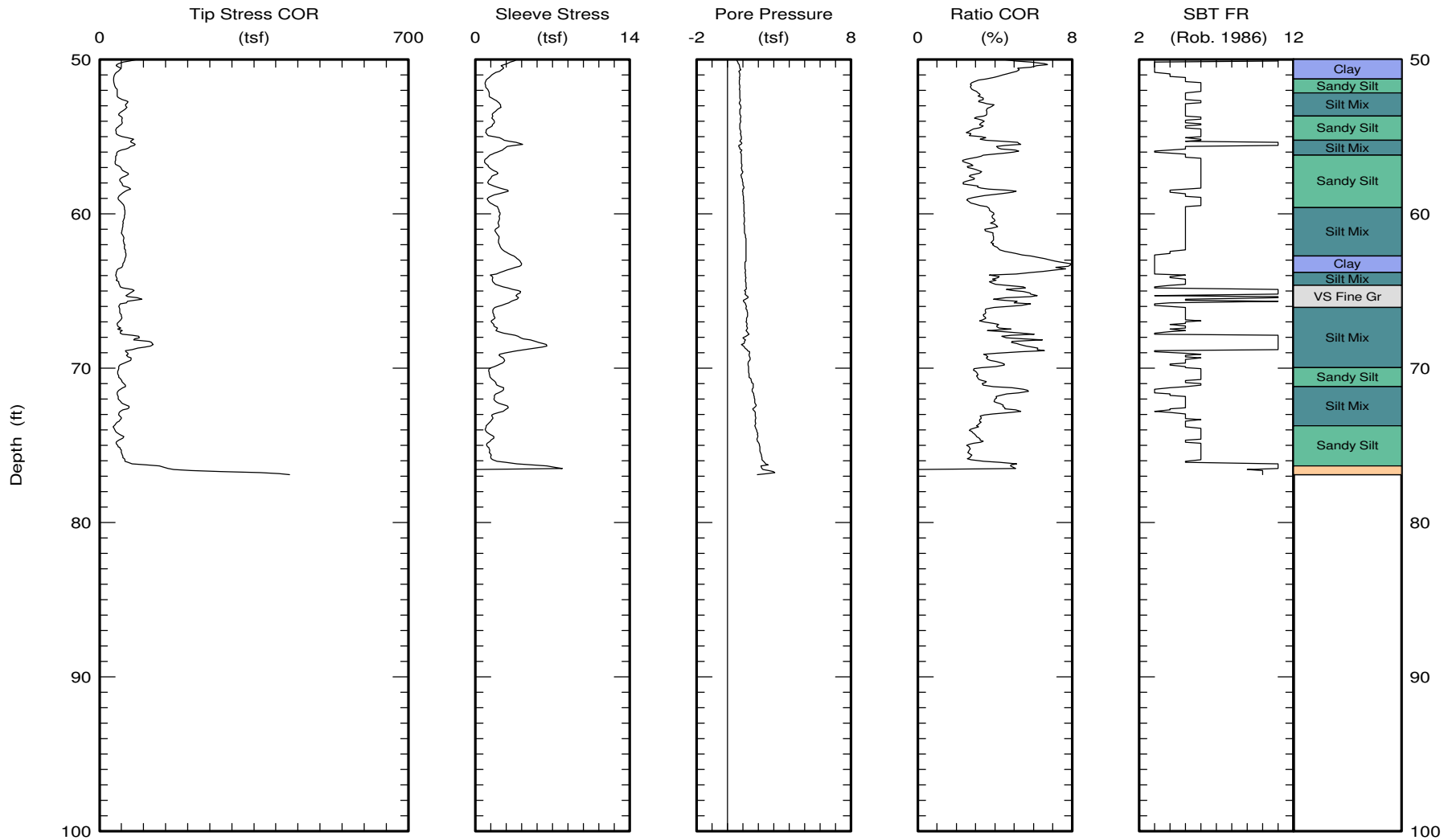
Maximum depth: 76.93 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 10/Jun/2011
Test ID: T2E-C20
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



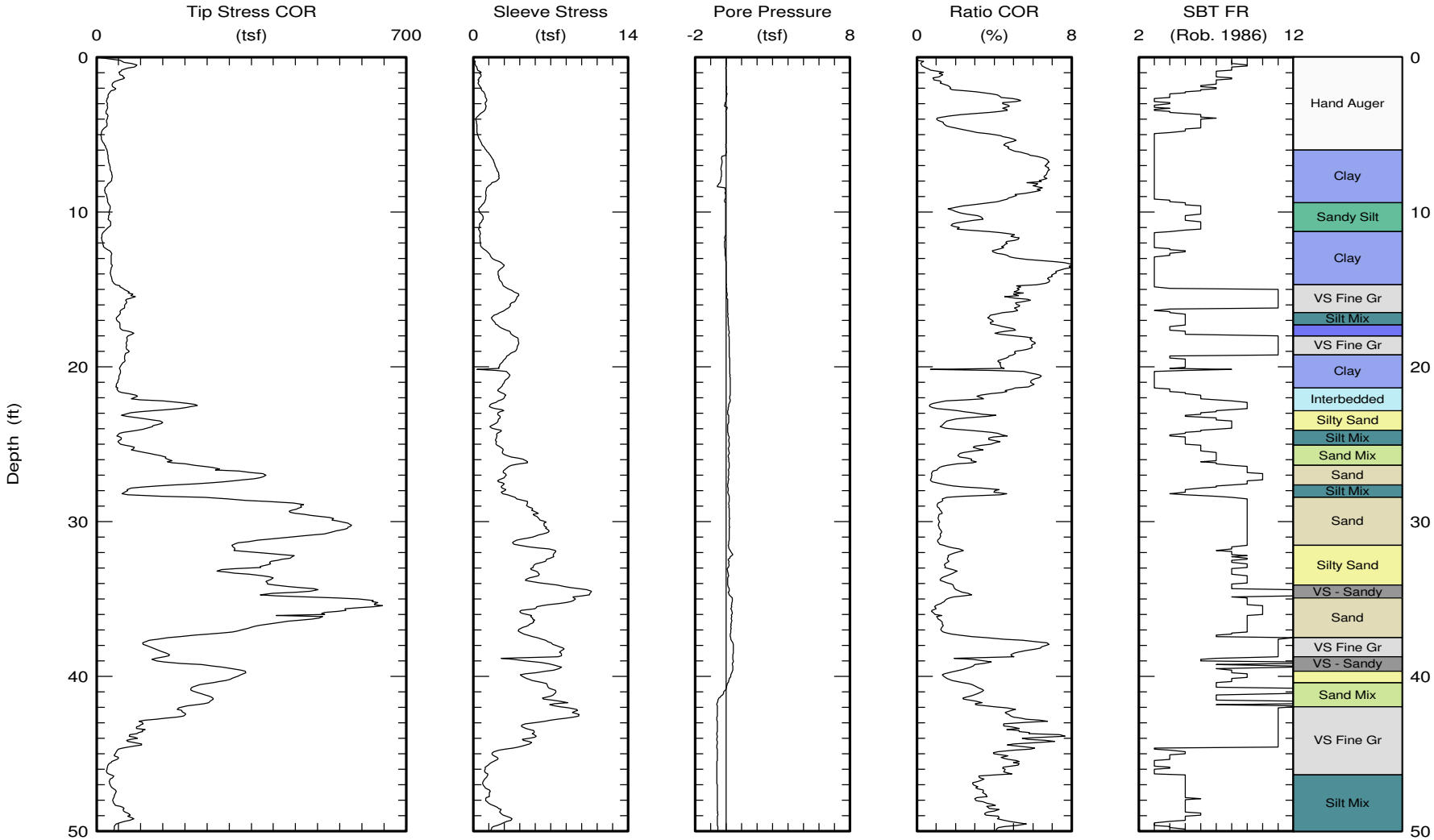
Maximum depth: 76.93 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 10/Jun/2011
Test ID: T2E-C21
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



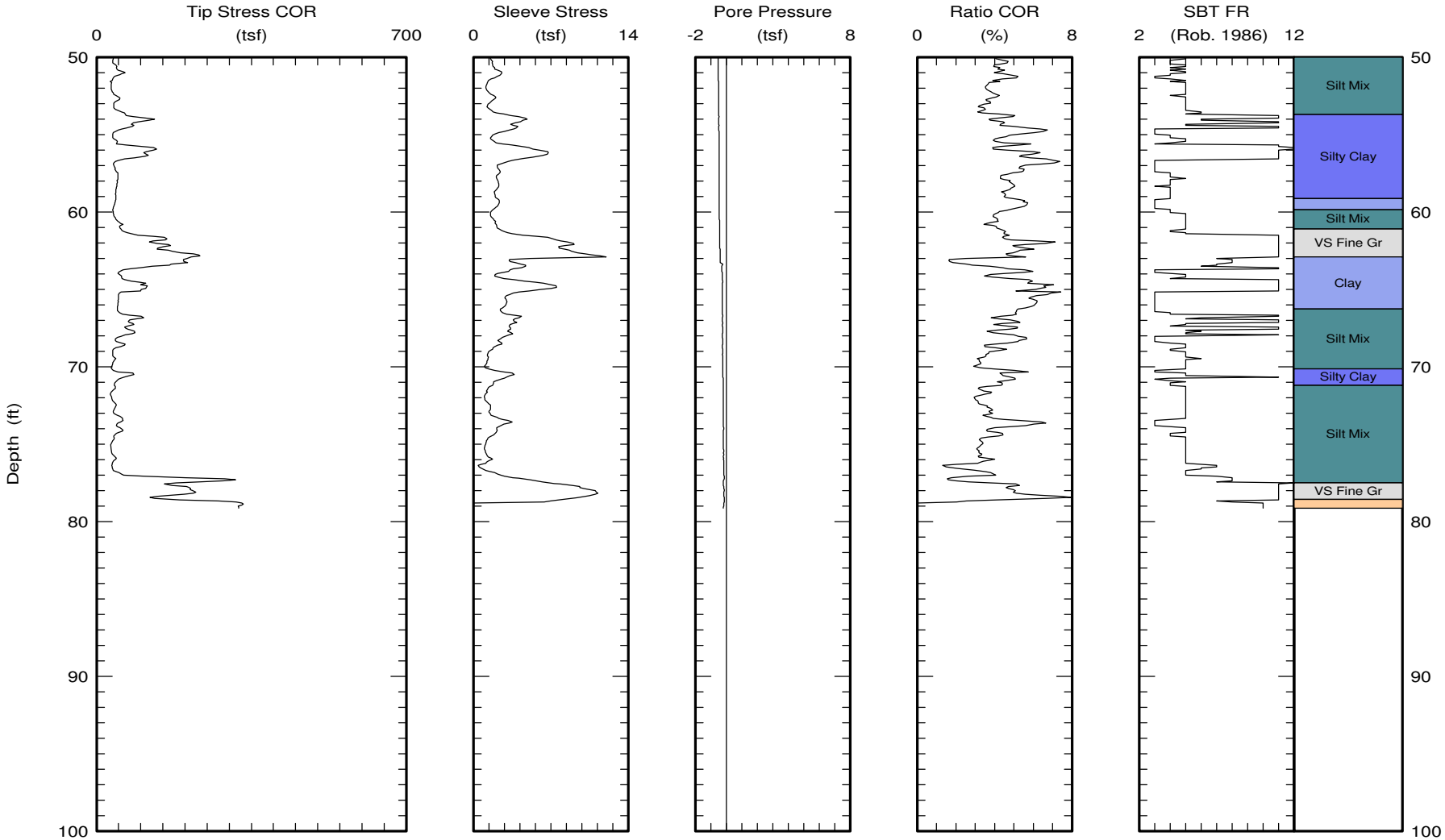
Maximum depth: 79.16 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 10/Jun/2011
Test ID: T2E-C21
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



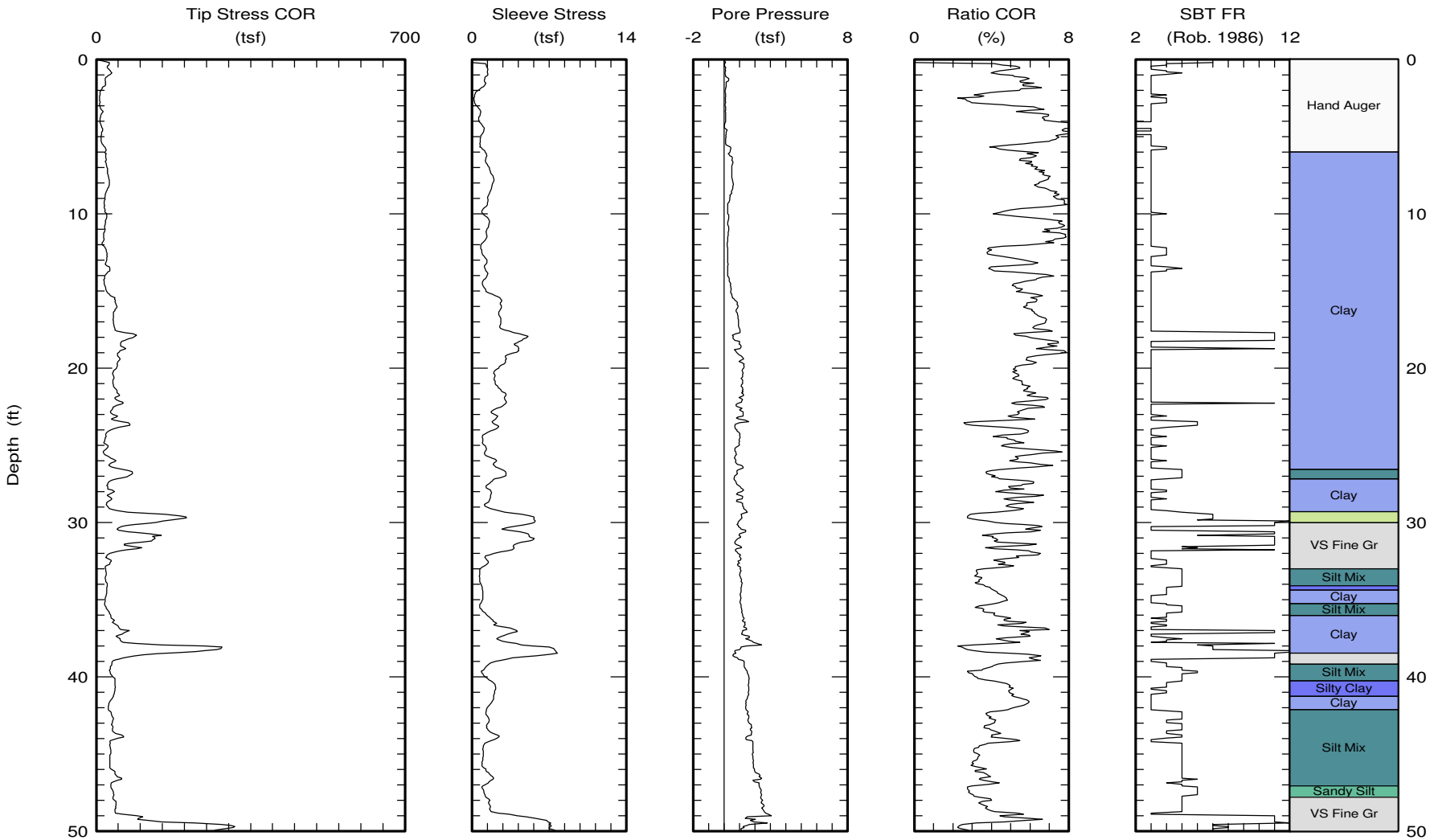
Maximum depth: 79.16 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 10/Jun/2011
Test ID: T2E-C22
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



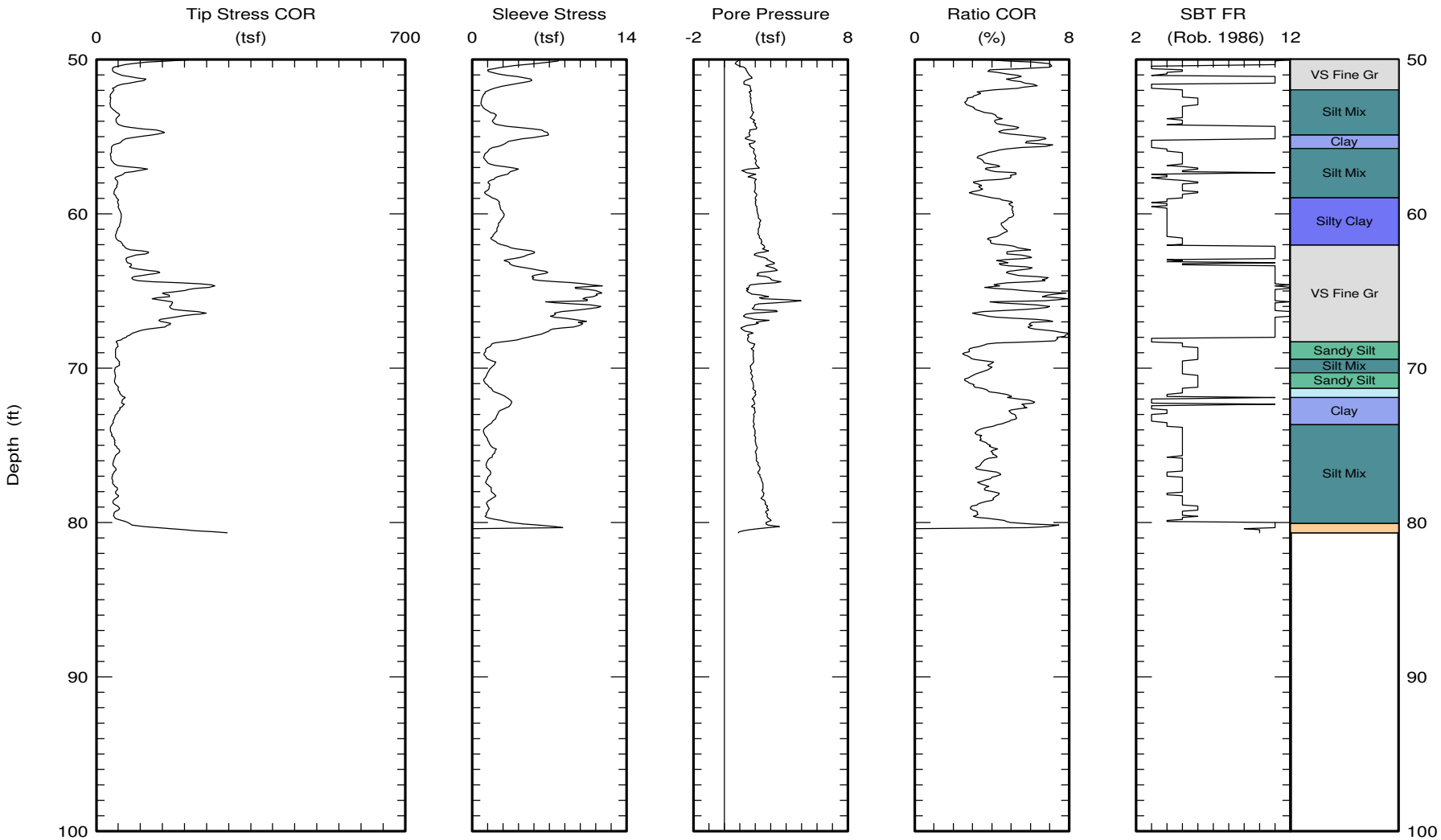
Maximum depth: 80.69 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 10/Jun/2011
Test ID: T2E-C22
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



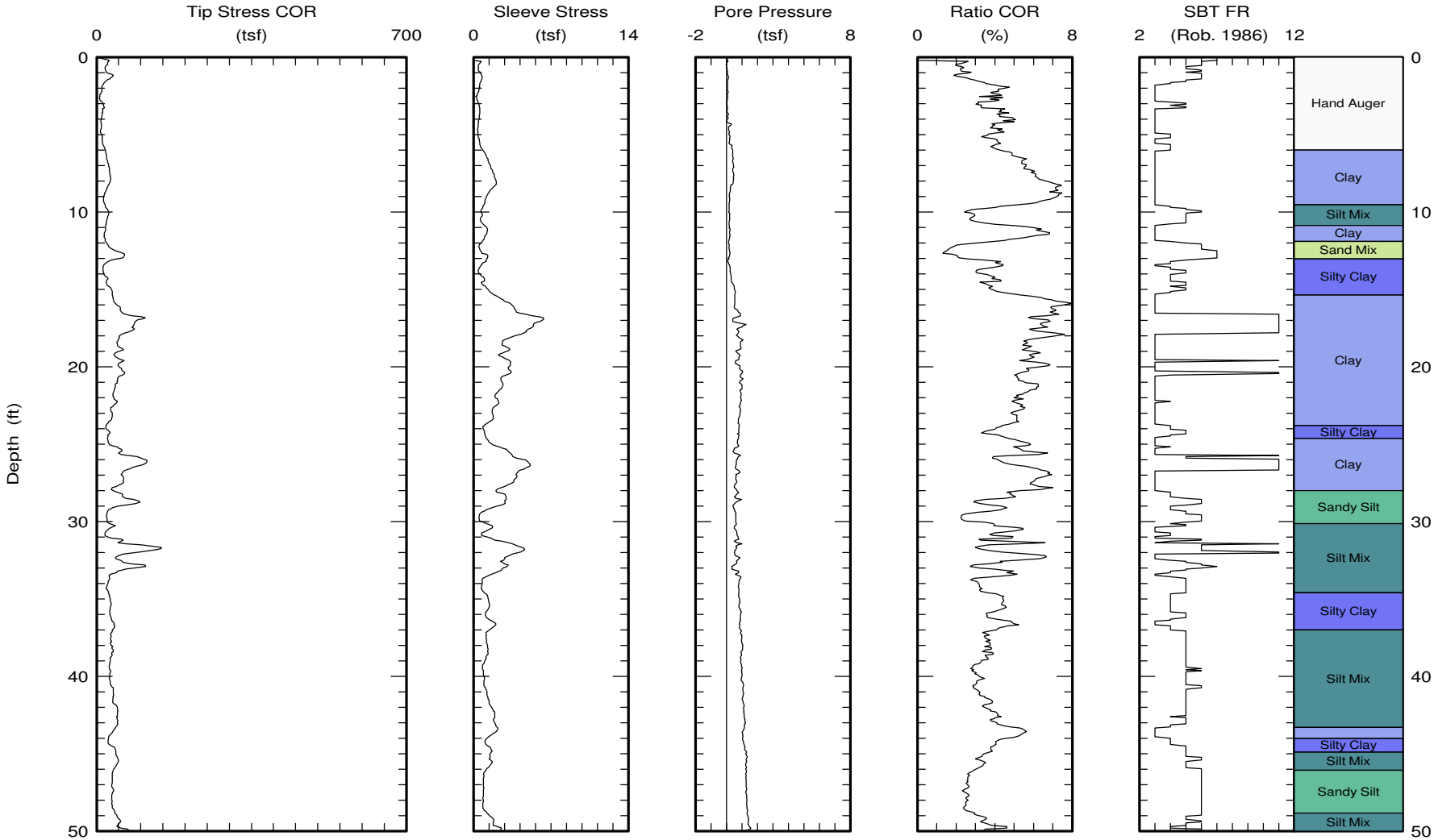
Maximum depth: 80.69 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 10/Jun/2011
Test ID: T2E-C23
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



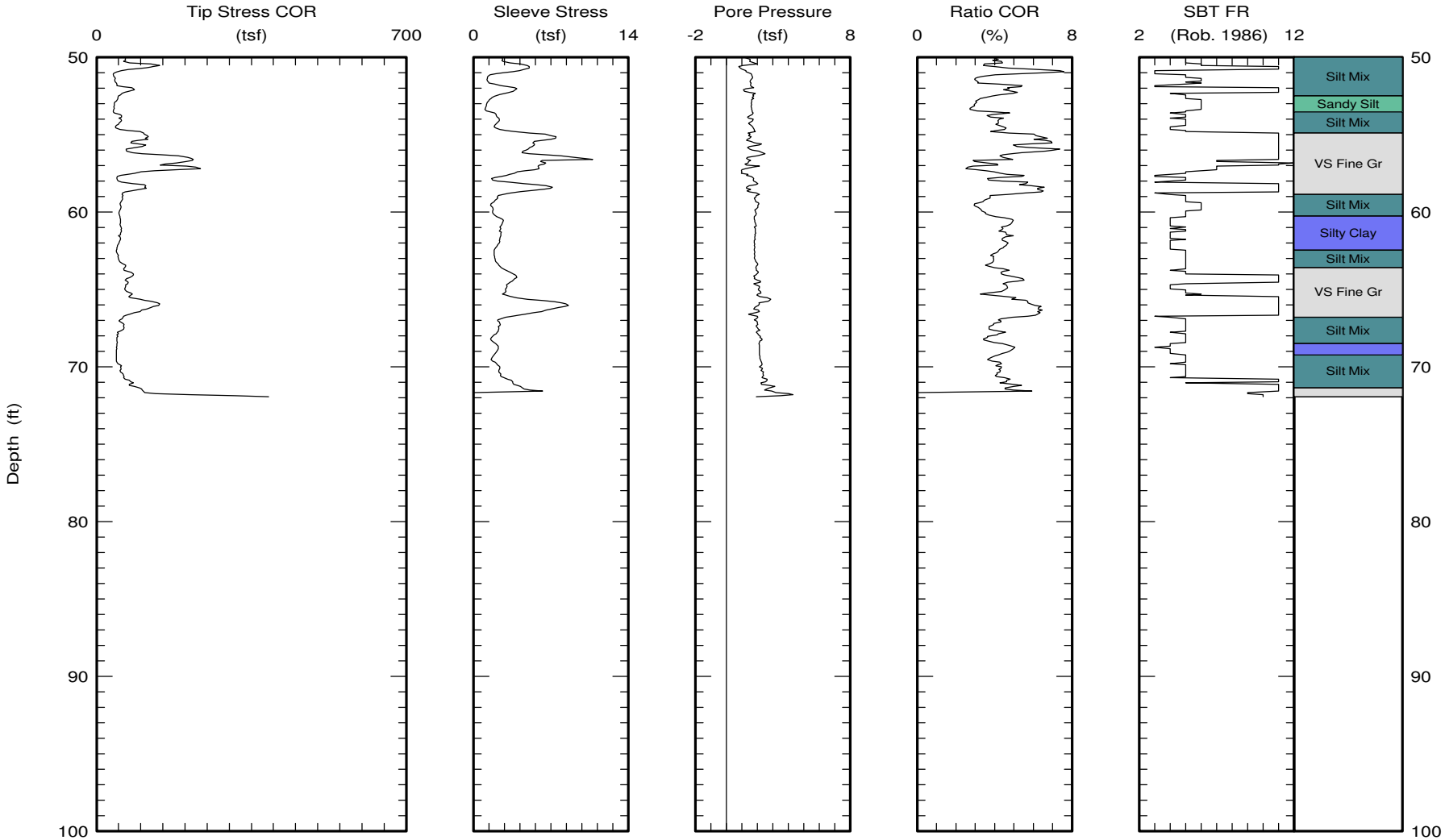
Maximum depth: 71.95 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

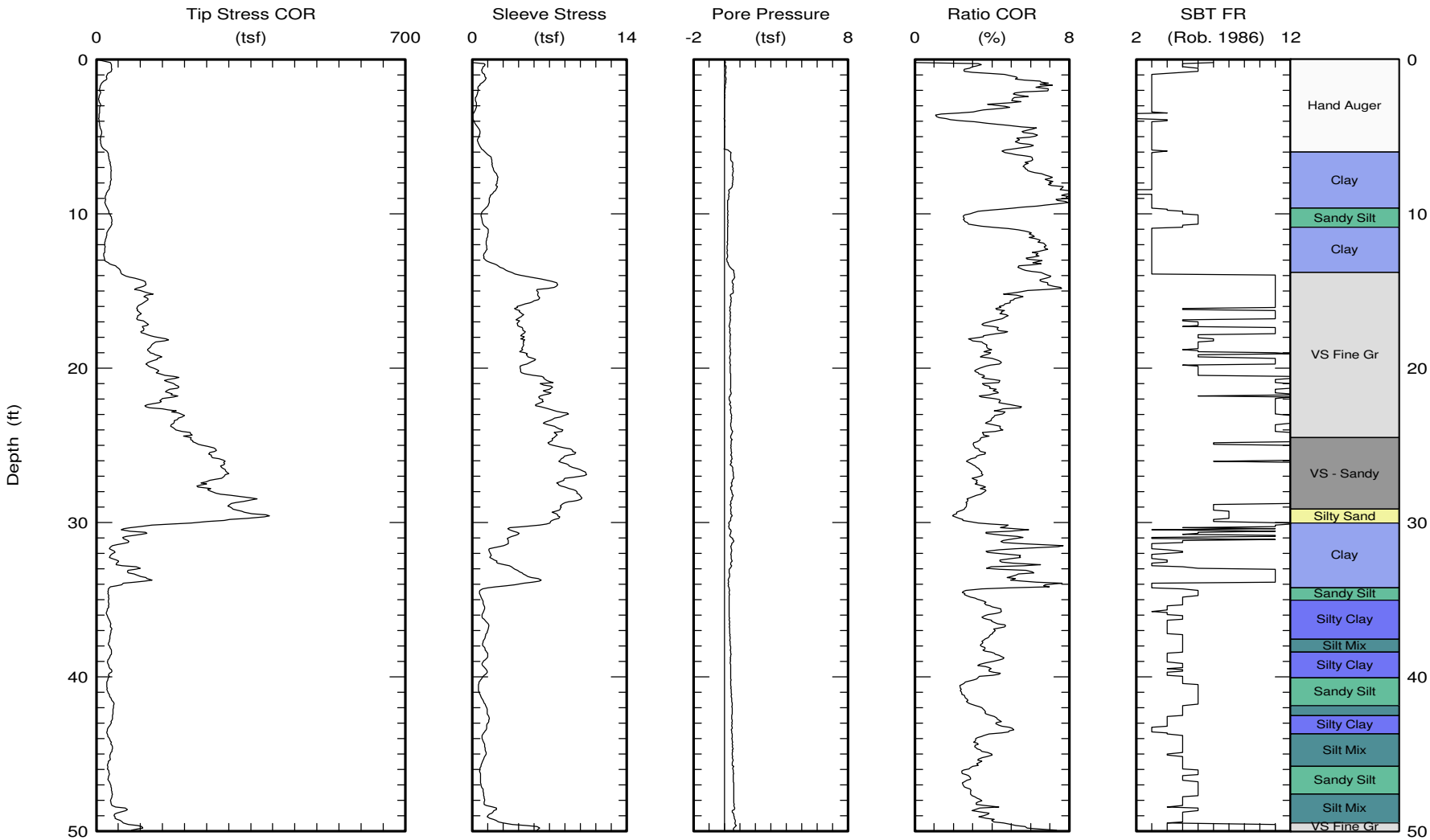
Date: 10/Jun/2011
Test ID: T2E-C23
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



Maximum depth: 71.95 (ft)

Kehoe Testing & Engineering Office: (714) 901-7270 Fax: (714) 901-7289 rich@kehoetesting.com www.kehoetesting.com	CPT Data 30 ton rig	Date: 10/Jun/2011 Test ID: T2E-C24 Project: LosAngeles
	Customer: MACTEC Job Site: Westside Subway Extension	



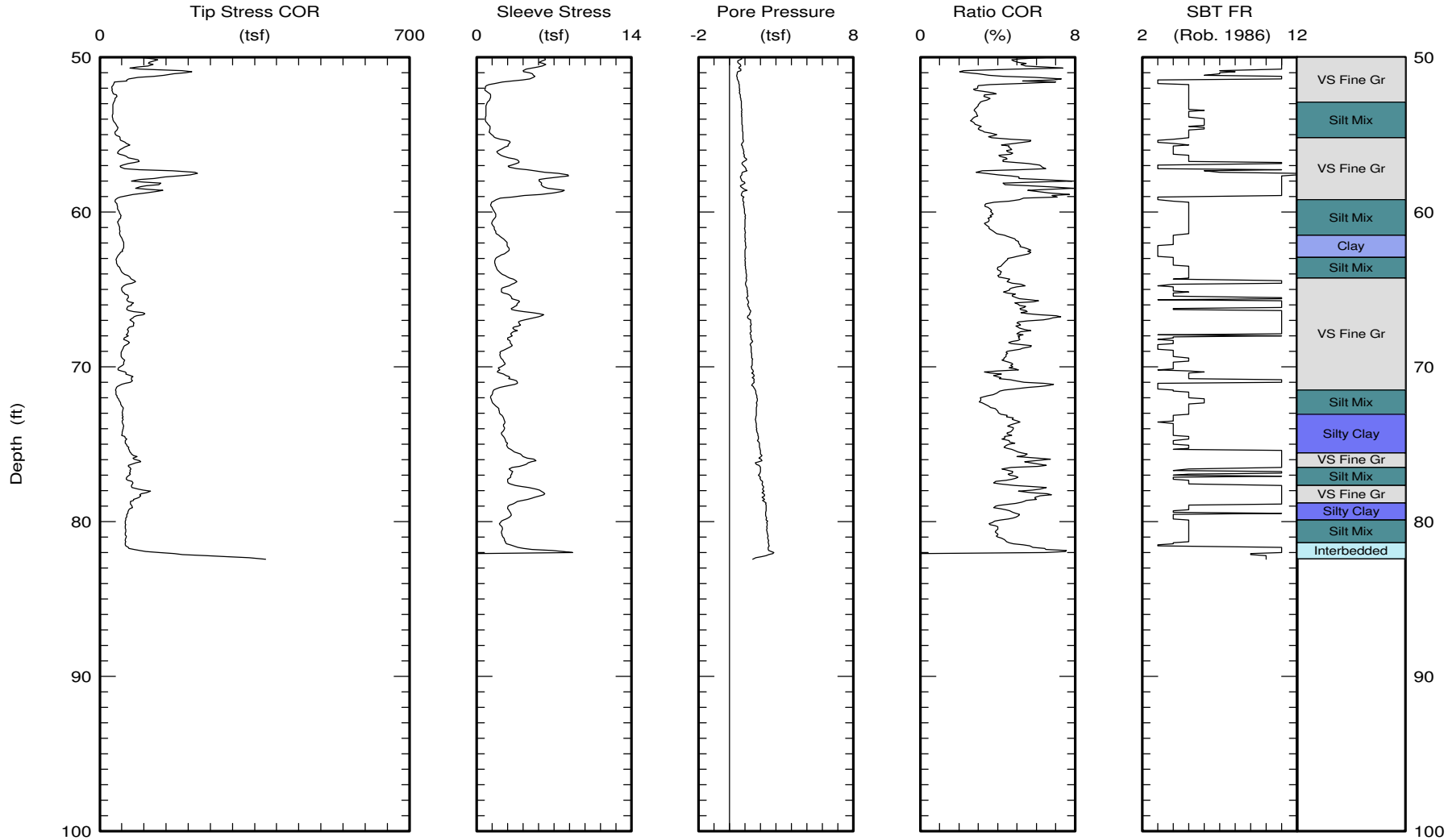
Maximum depth: 82.43 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 10/Jun/2011
Test ID: T2E-C24
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



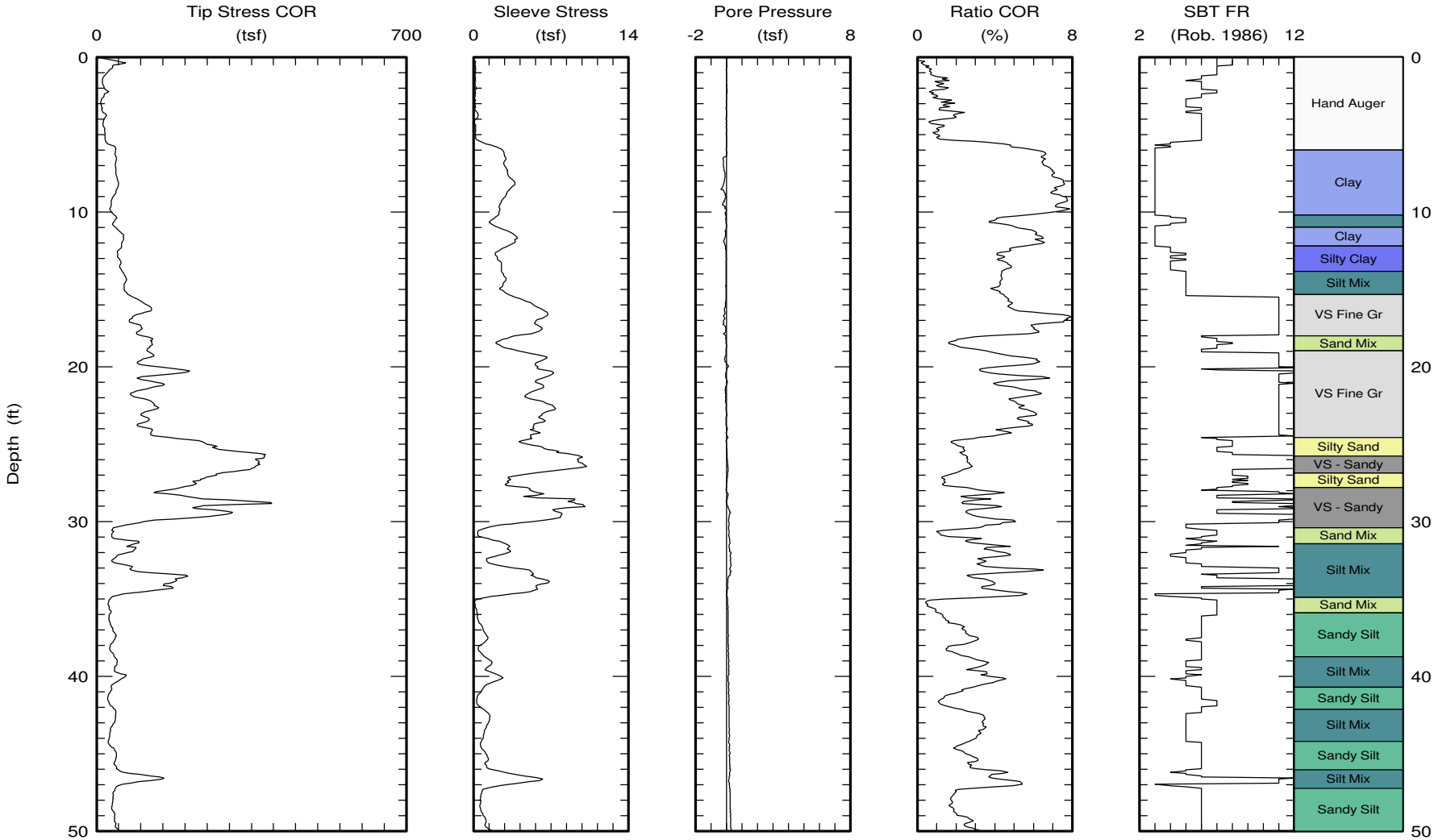
Maximum depth: 82.43 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 09/Jun/2011
Test ID: T2E-C25
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



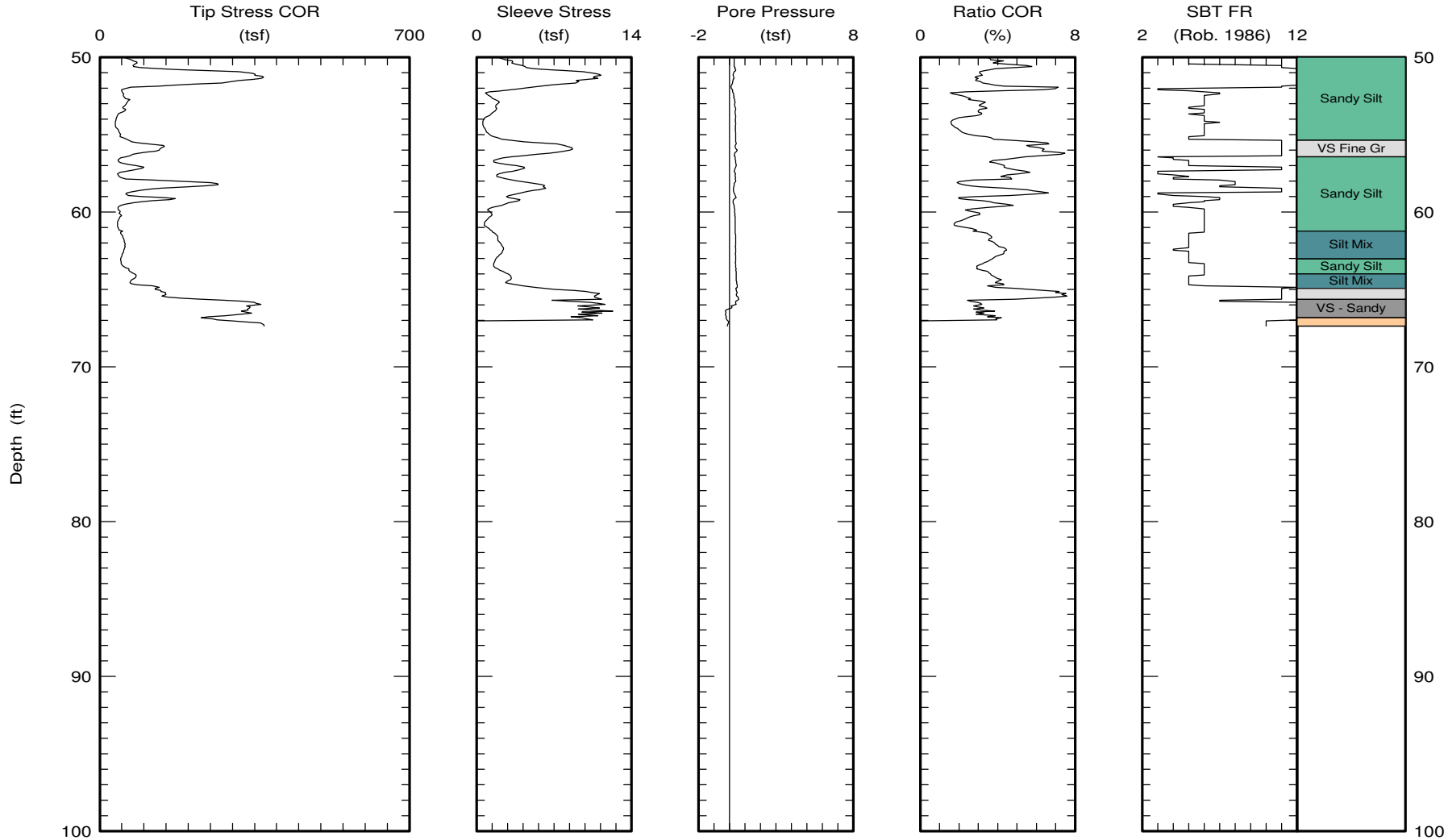
Maximum depth: 67.39 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 09/Jun/2011
Test ID: T2E-C25
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



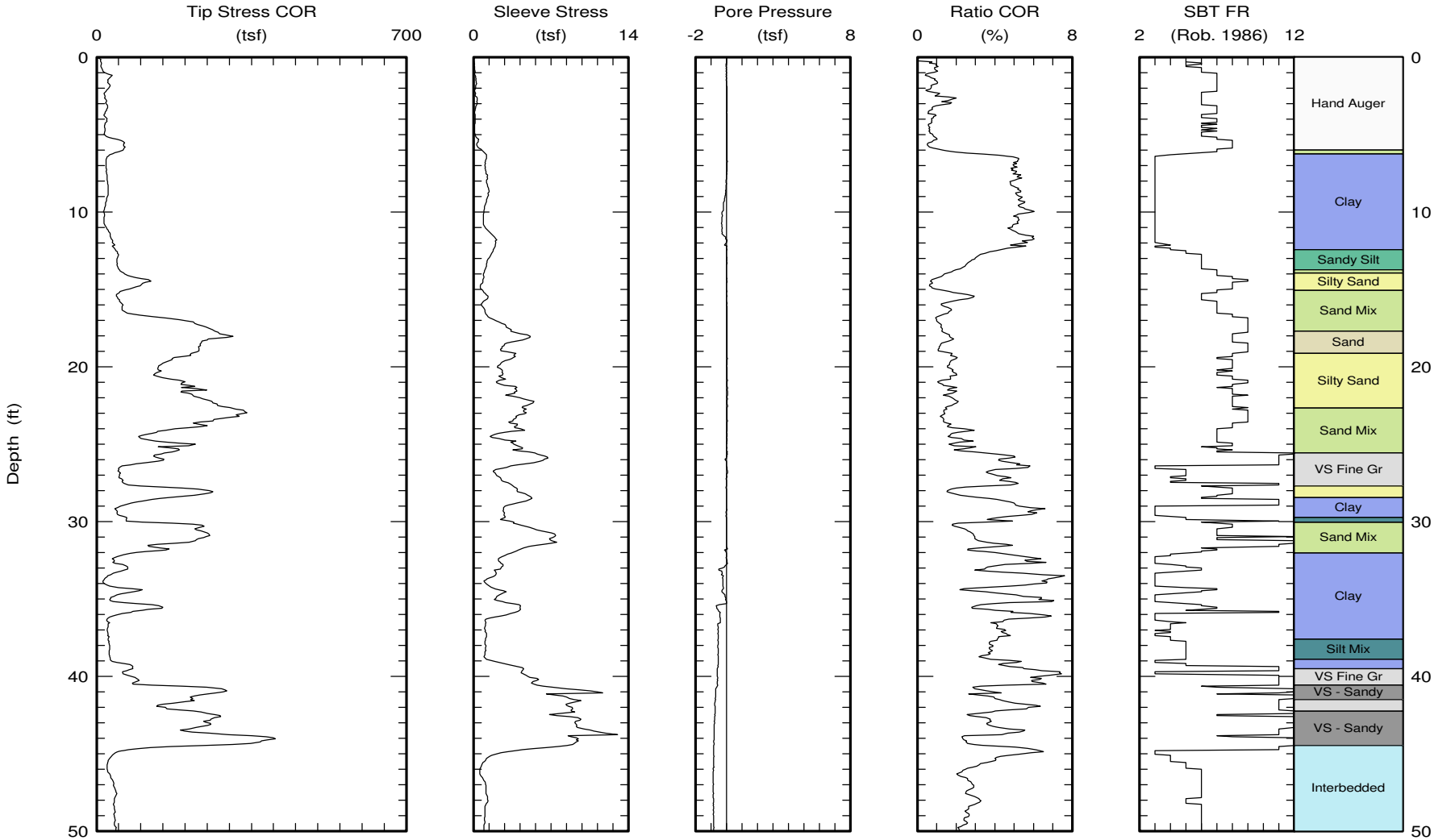
Maximum depth: 67.39 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 09/Jun/2011
Test ID: T2E-C26
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



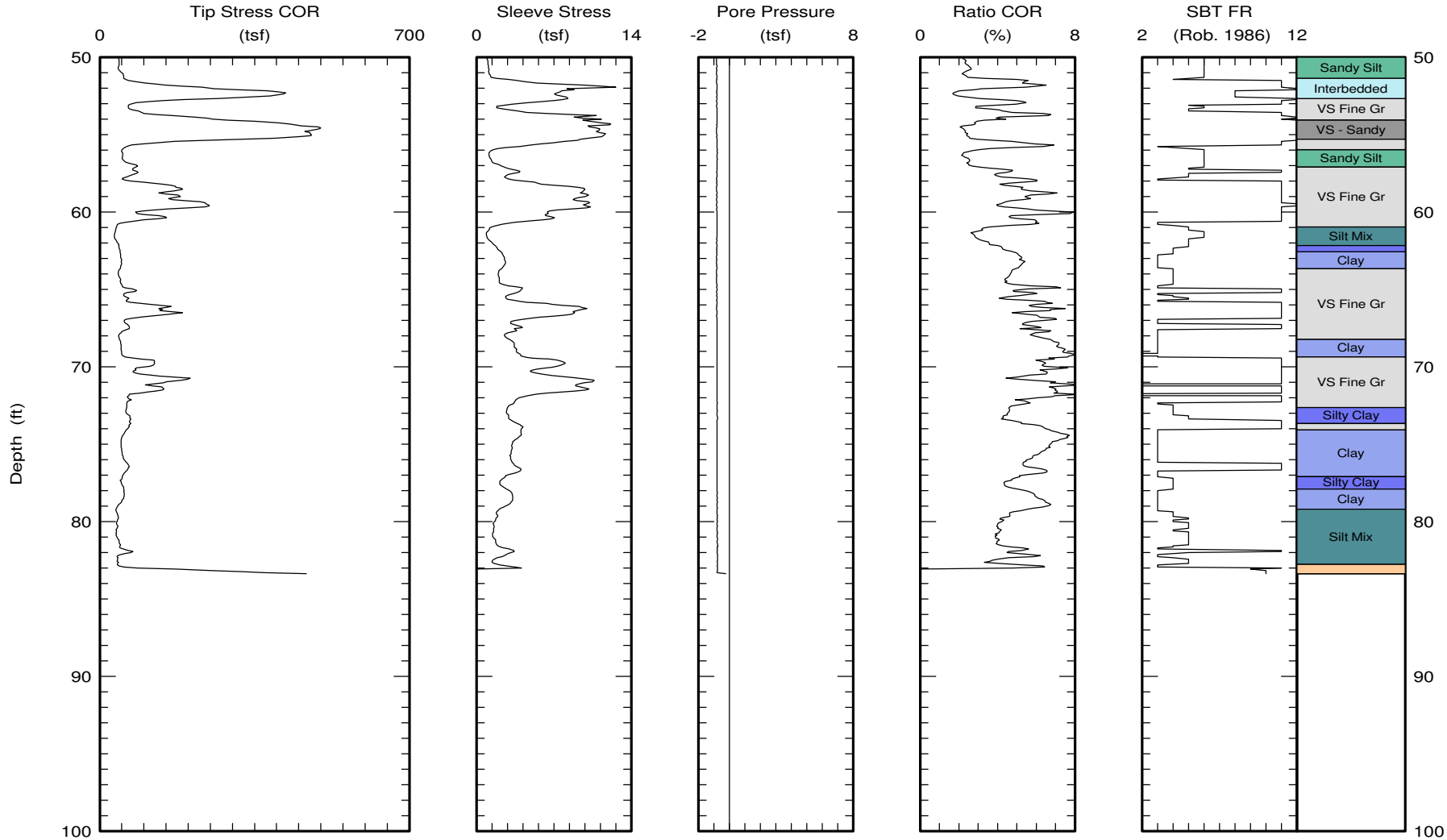
Maximum depth: 83.37 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 09/Jun/2011
Test ID: T2E-C26
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



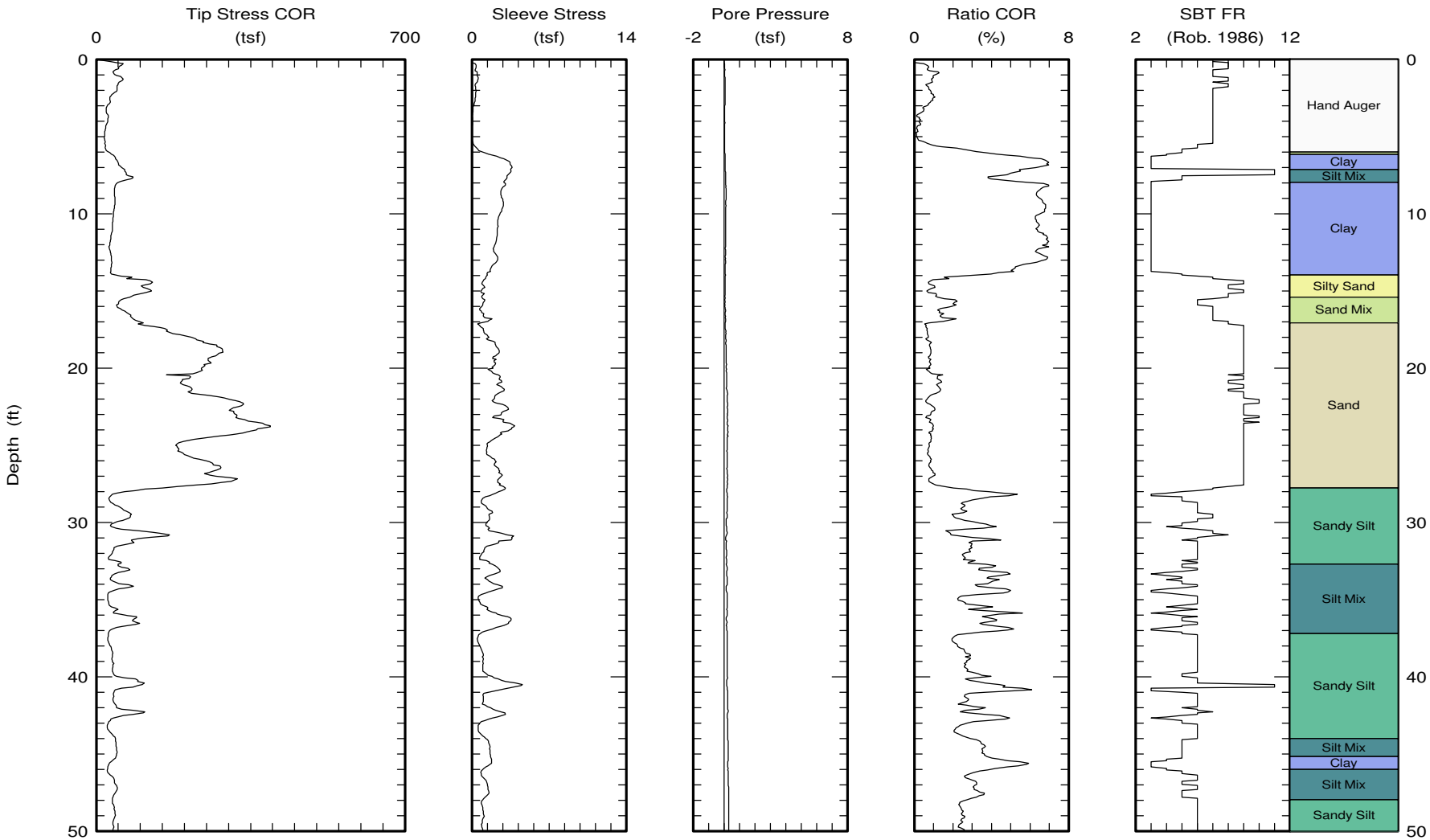
Maximum depth: 83.37 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 10/Jun/2011
Test ID: T2E-C27
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



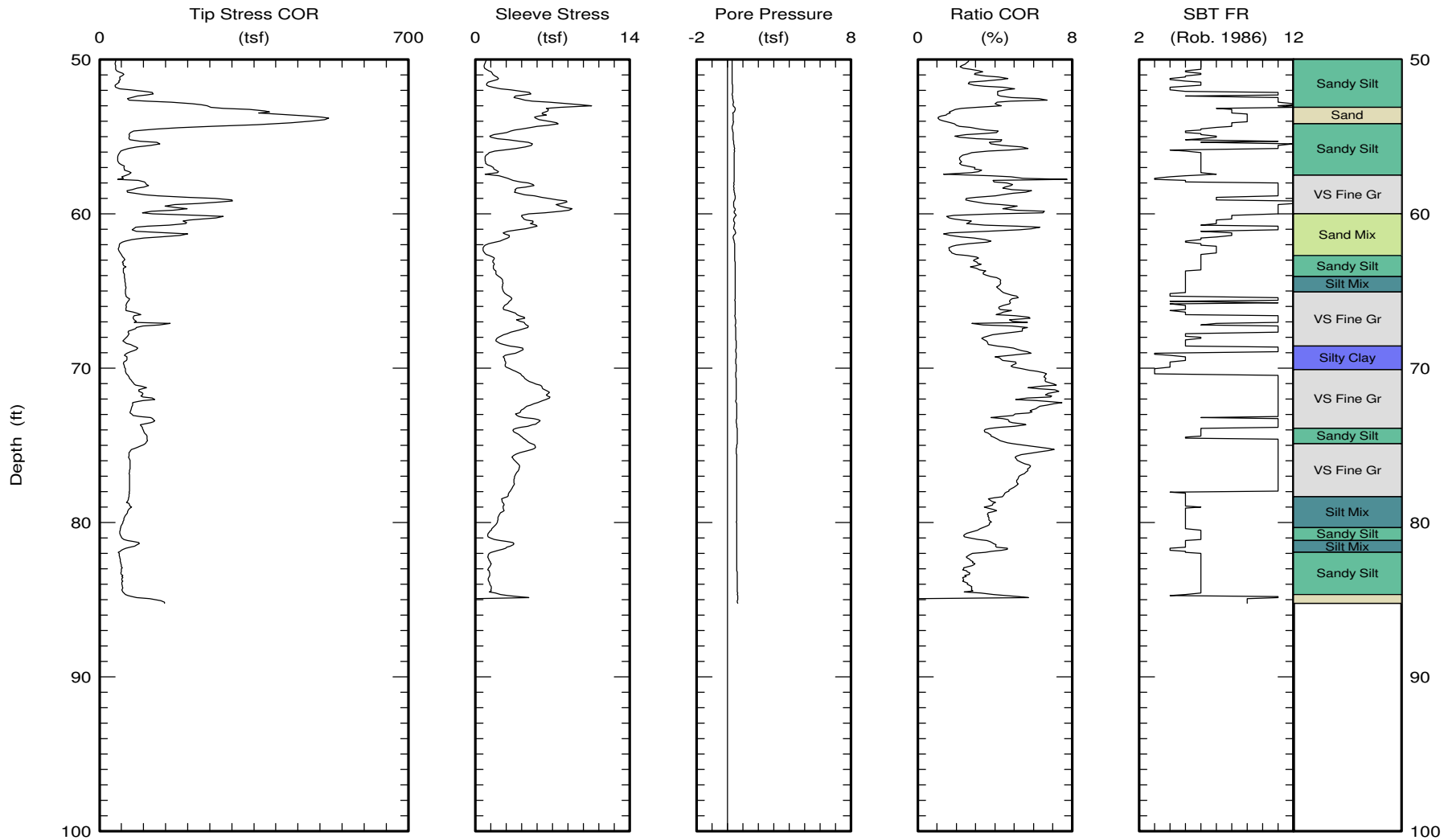
Maximum depth: 85.24 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 10/Jun/2011
Test ID: T2E-C27
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



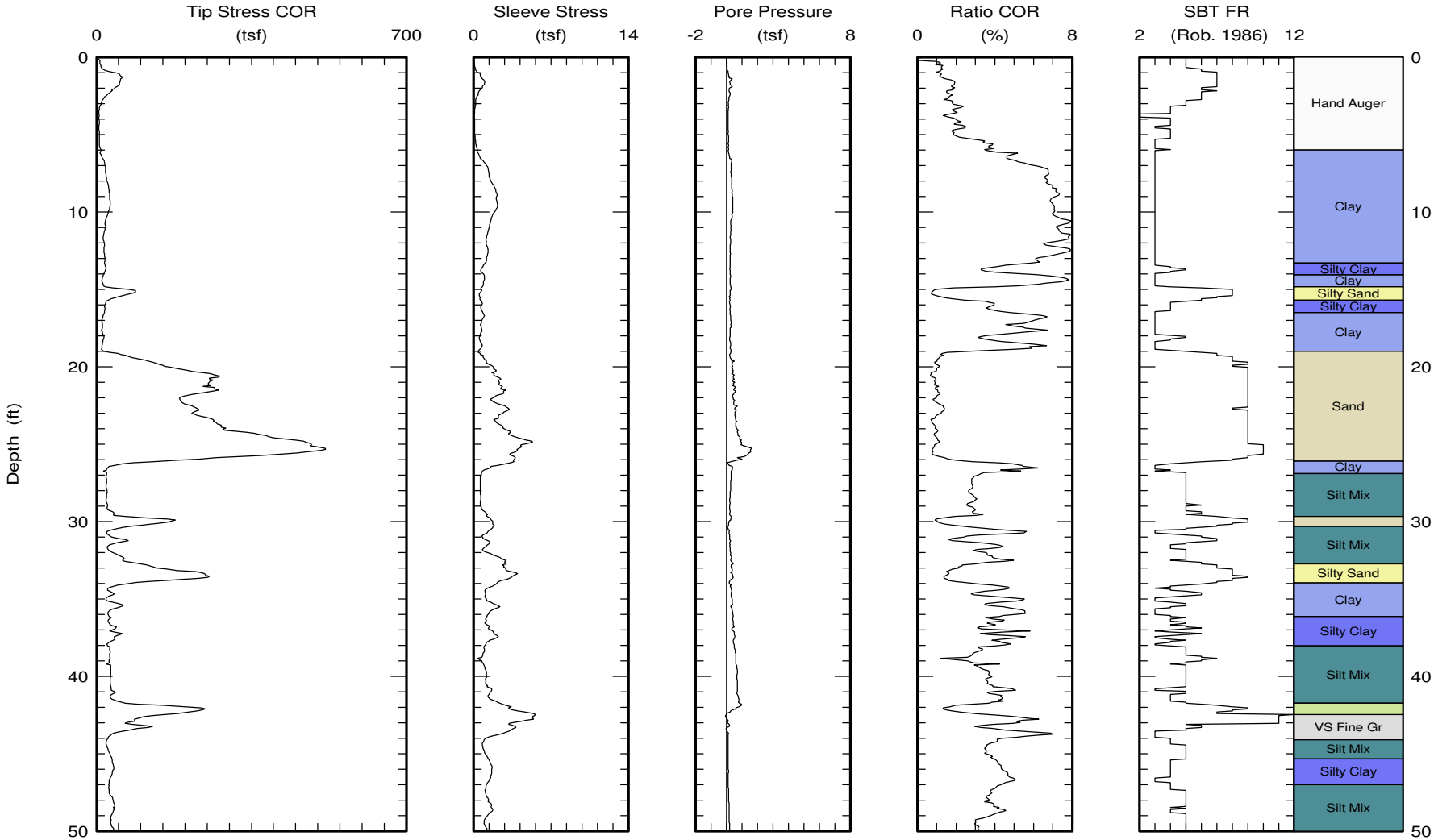
Maximum depth: 85.24 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 11/Jun/2011
Test ID: T2E-C28
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



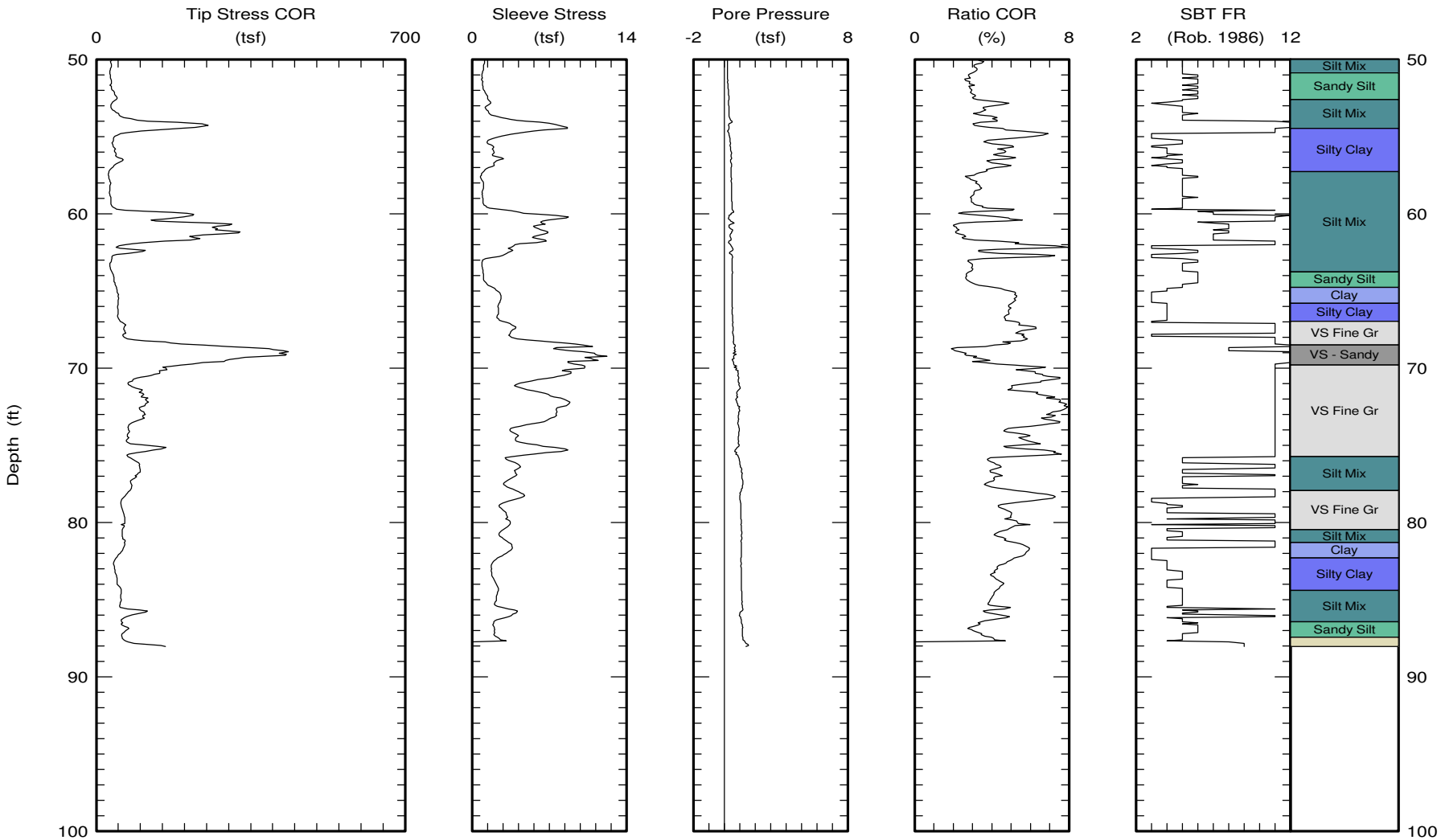
Maximum depth: 88.04 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 11/Jun/2011
Test ID: T2E-C28
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



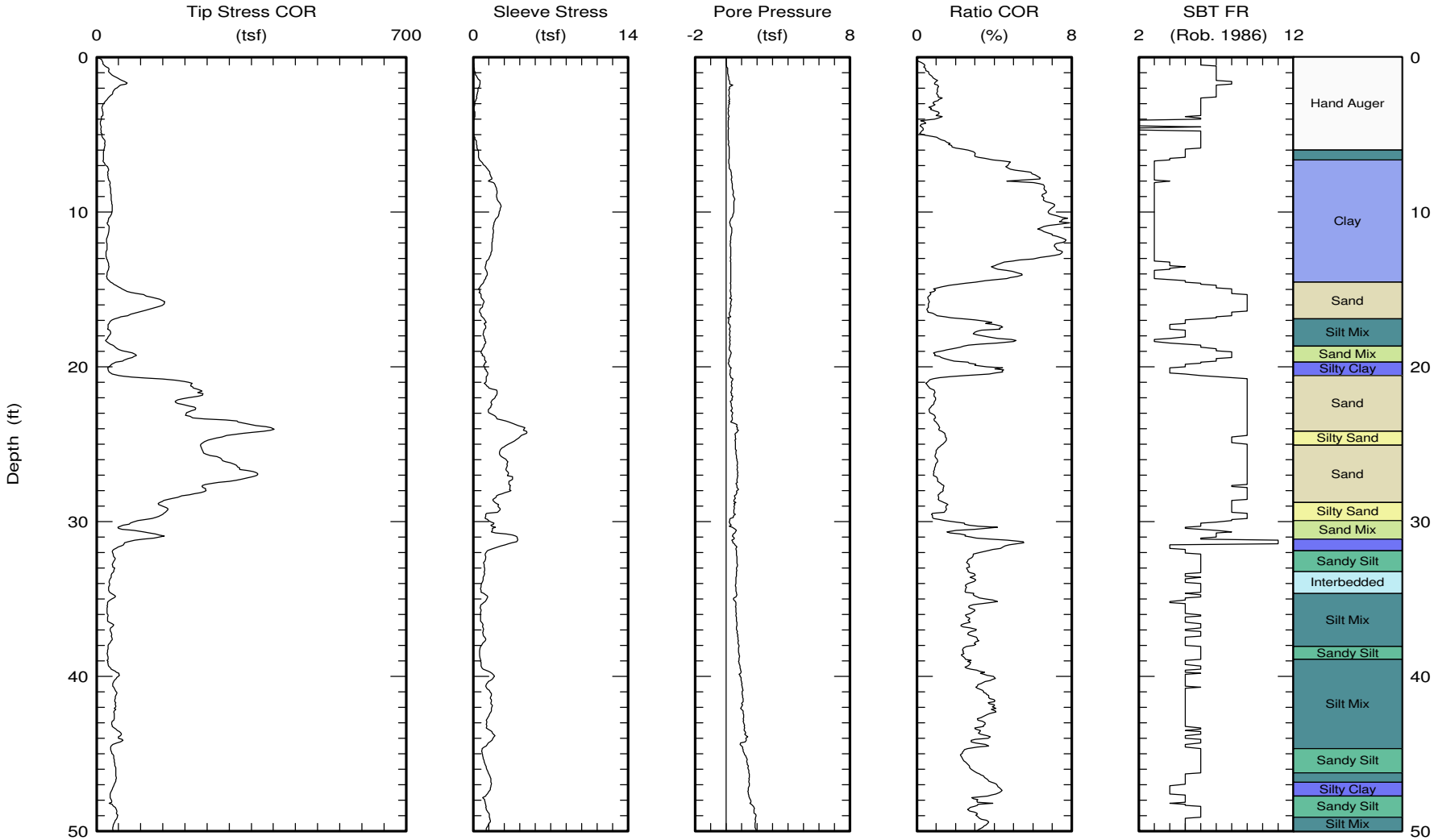
Maximum depth: 88.04 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 11/Jun/2011
Test ID: T2E-C29
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



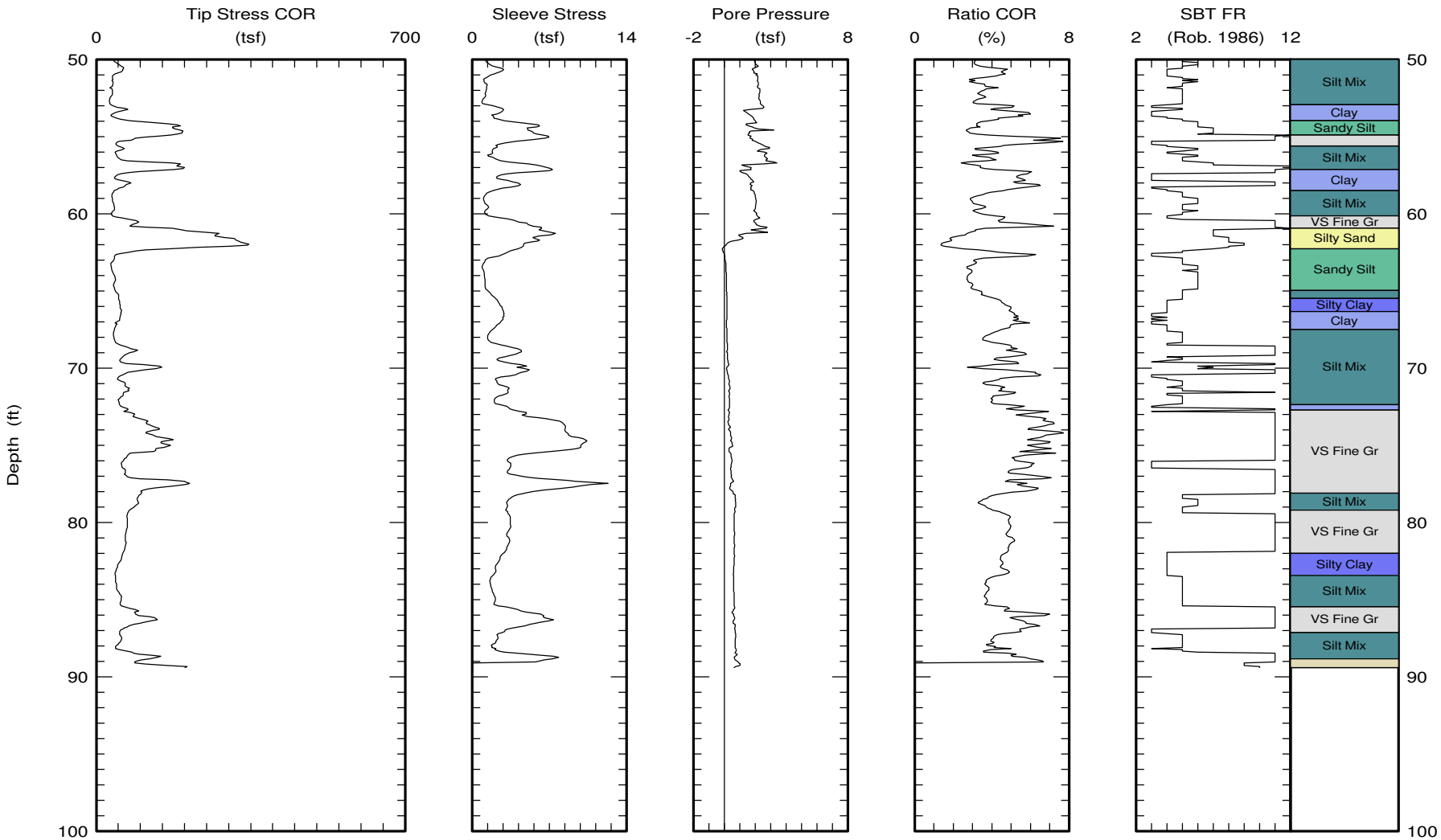
Maximum depth: 89.41 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 11/Jun/2011
Test ID: T2E-C29
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



Maximum depth: 89.41 (ft)

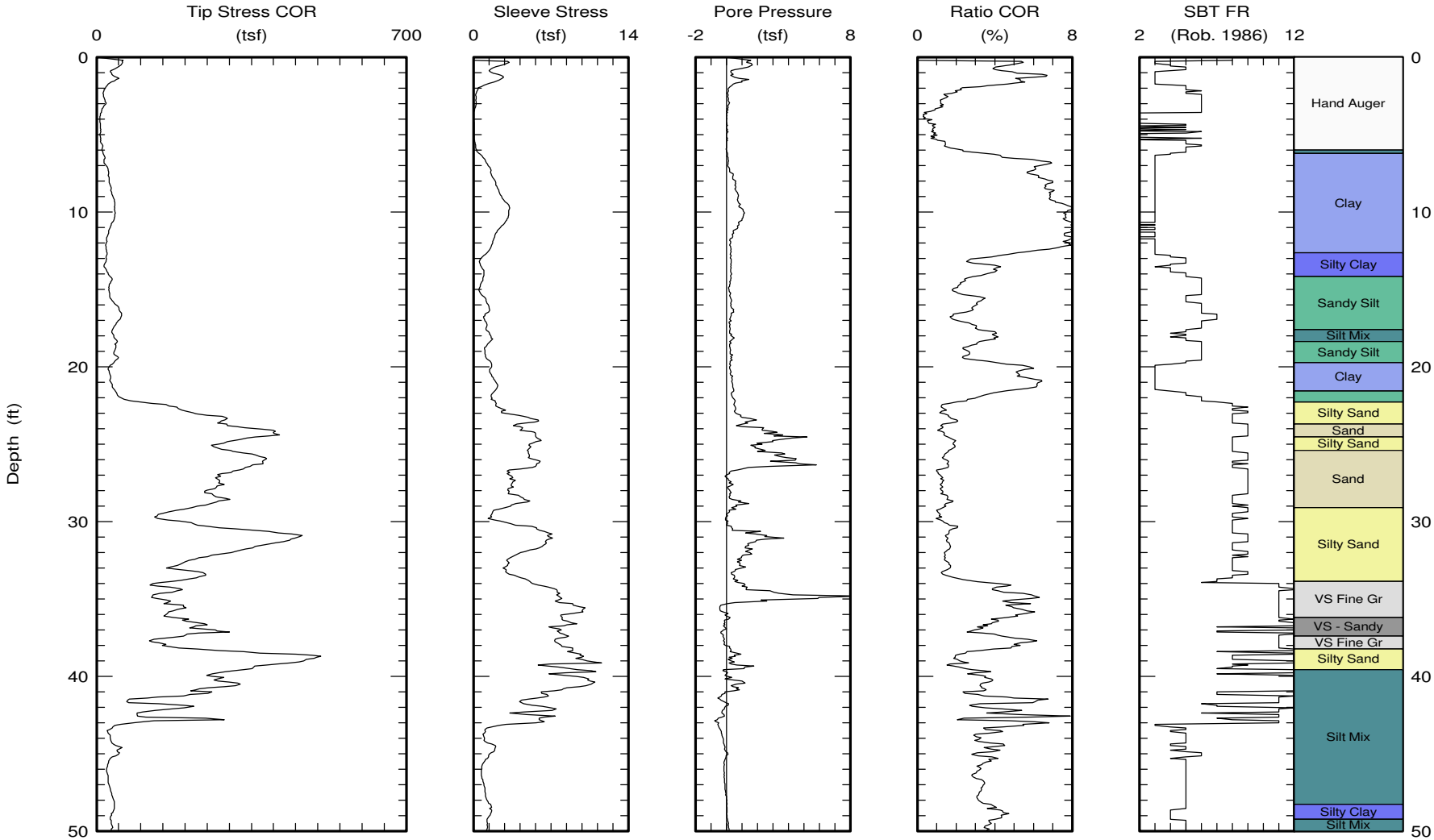
Test ID: T2E-C29
File: Z11U1102C.ECP

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 09/Jun/2011
Test ID: T2E-C30
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



Maximum depth: 88.44 (ft)

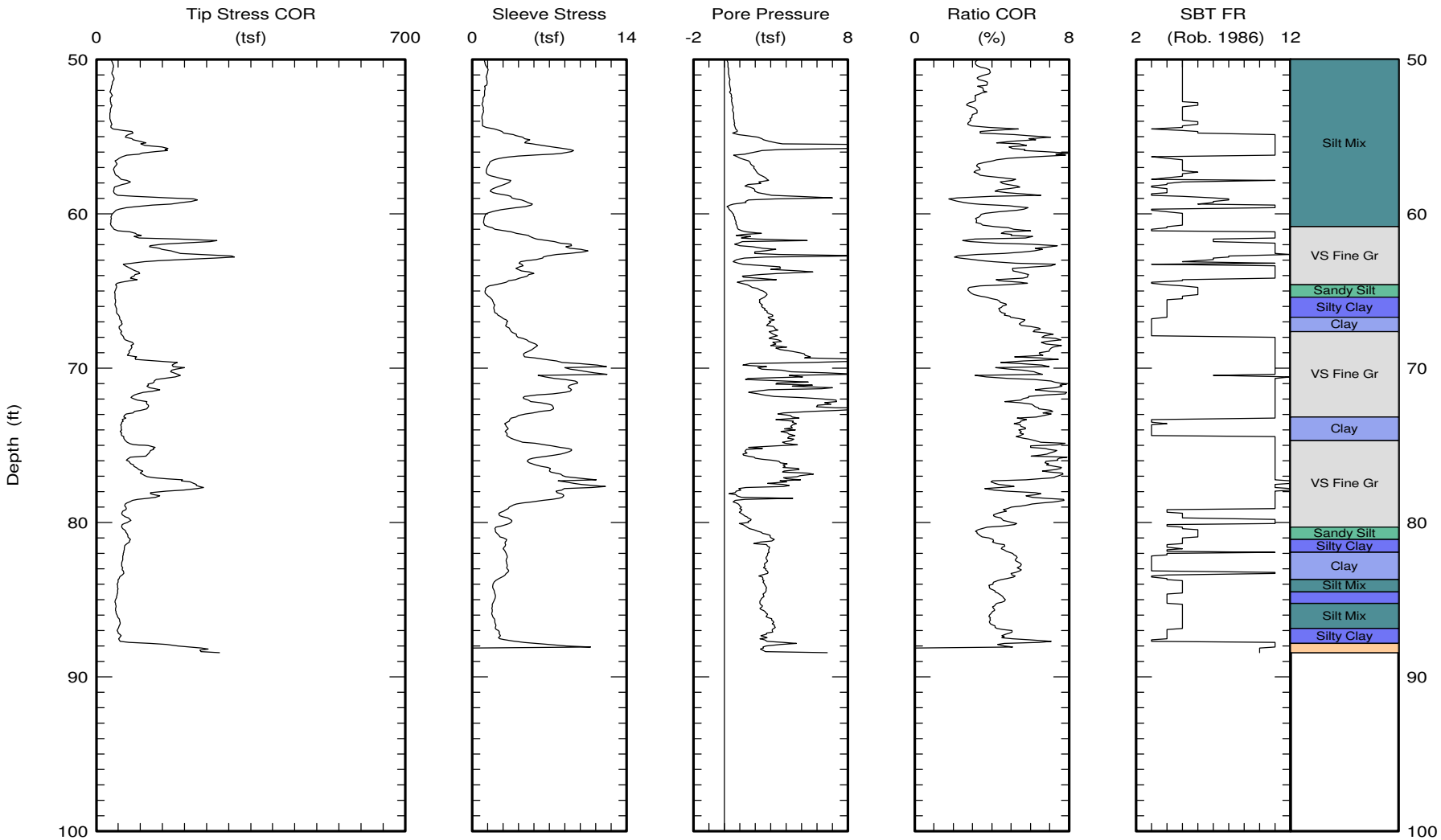
Test ID: T2E-C30
File: Z09U1103C.ECP

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 09/Jun/2011
Test ID: T2E-C30
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



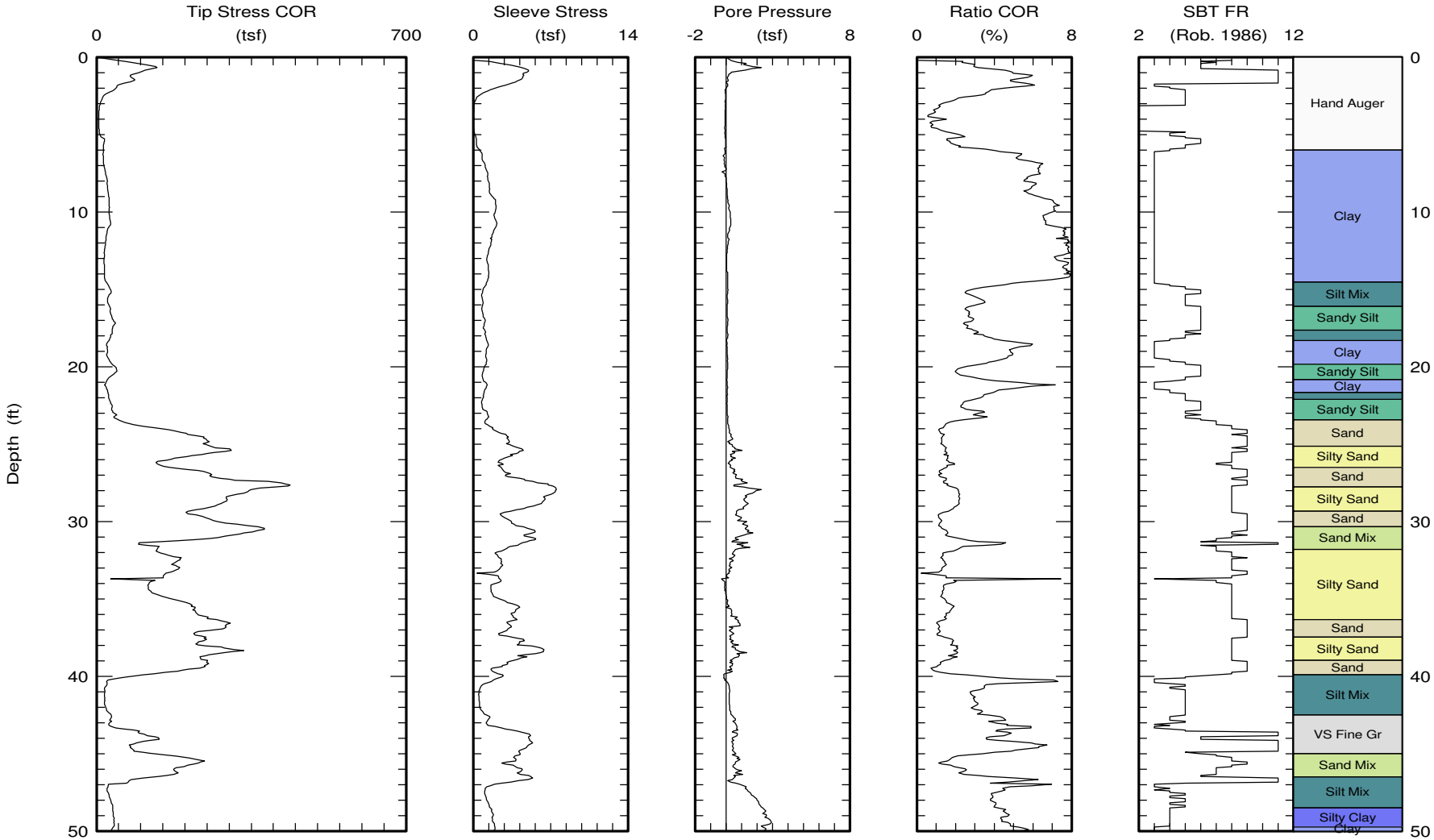
Maximum depth: 88.44 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 09/Jun/2011
Test ID: T2E-C31
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



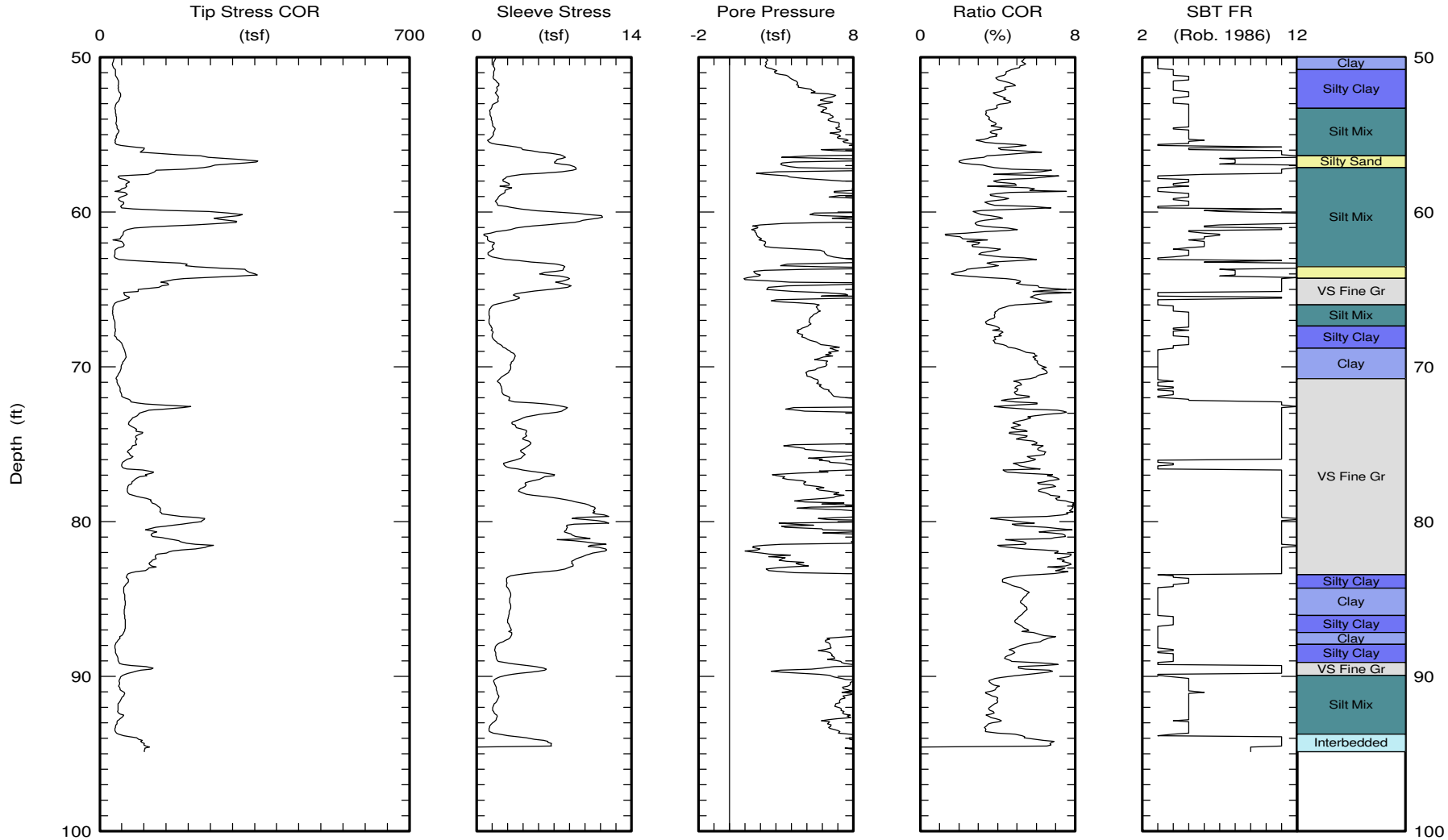
Maximum depth: 94.87 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

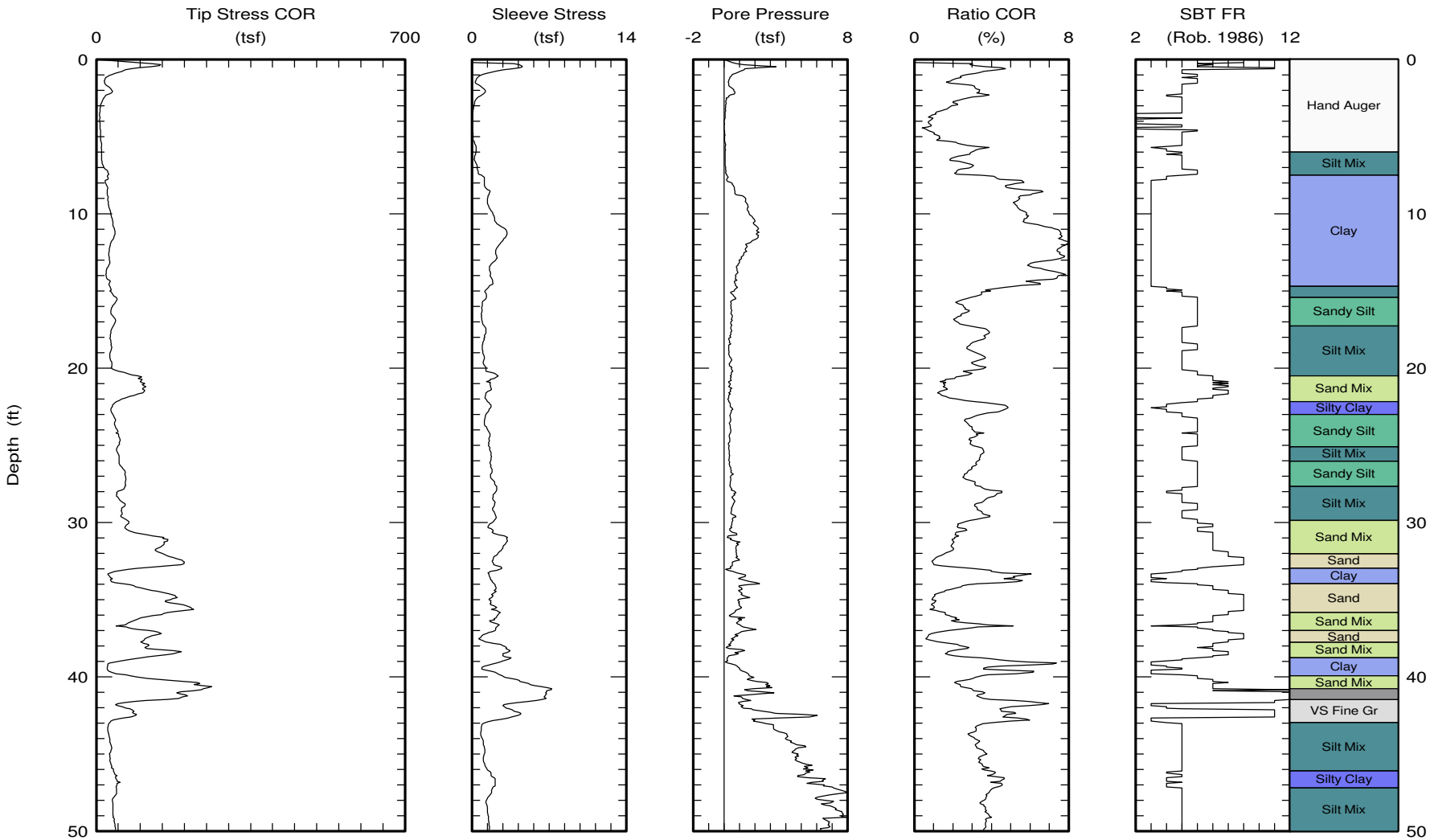
Date: 09/Jun/2011
Test ID: T2E-C31
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



Maximum depth: 94.87 (ft)

Kehoe Testing & Engineering Office: (714) 901-7270 Fax: (714) 901-7289 rich@kehoetesting.com www.kehoetesting.com	CPT Data 30 ton rig	Date: 09/Jun/2011 Test ID: T2E-C32 Project: LosAngeles
	Customer: MACTEC Job Site: Westside Subway Extension	



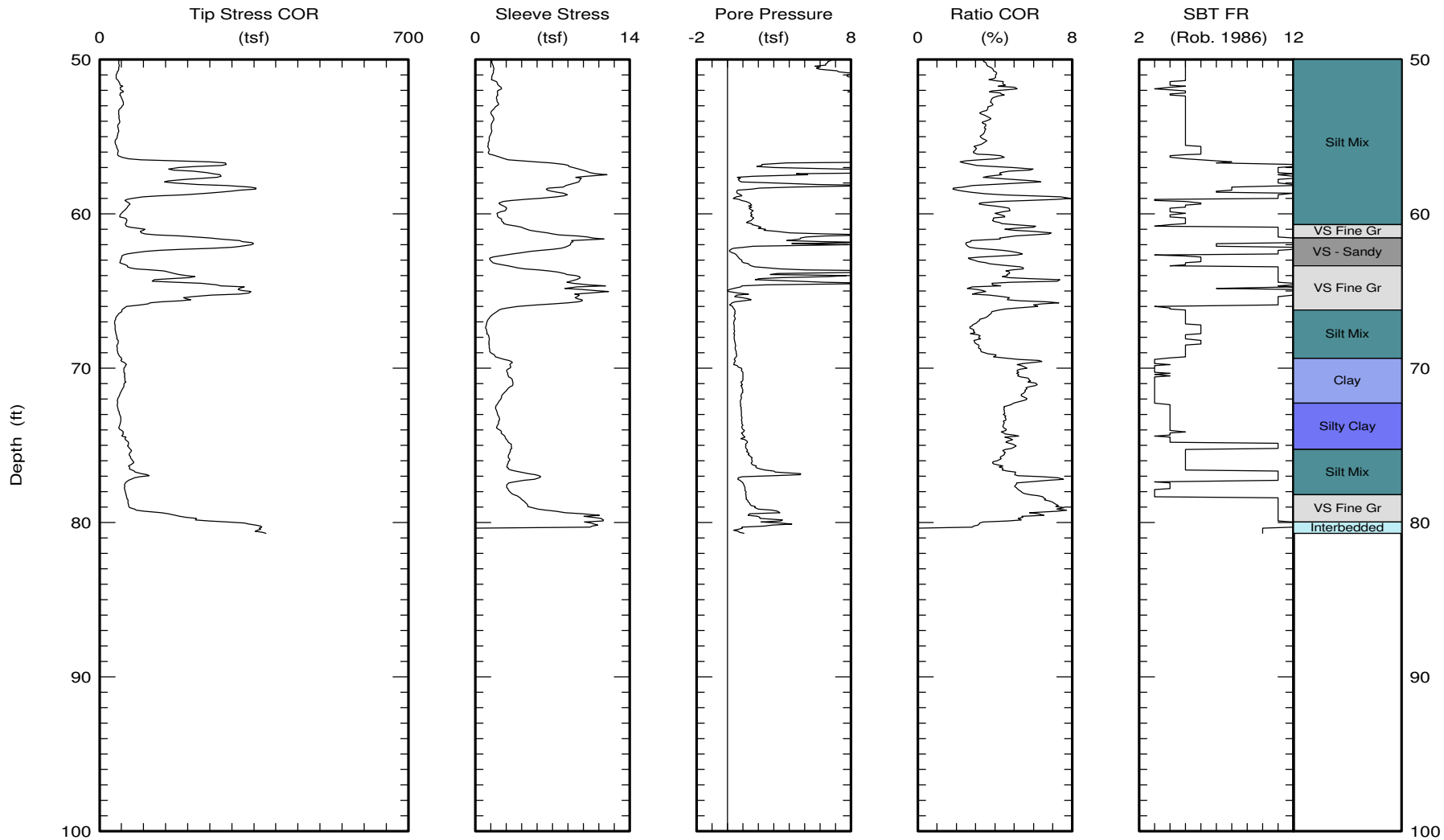
Maximum depth: 80.73 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 09/Jun/2011
Test ID: T2E-C32
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



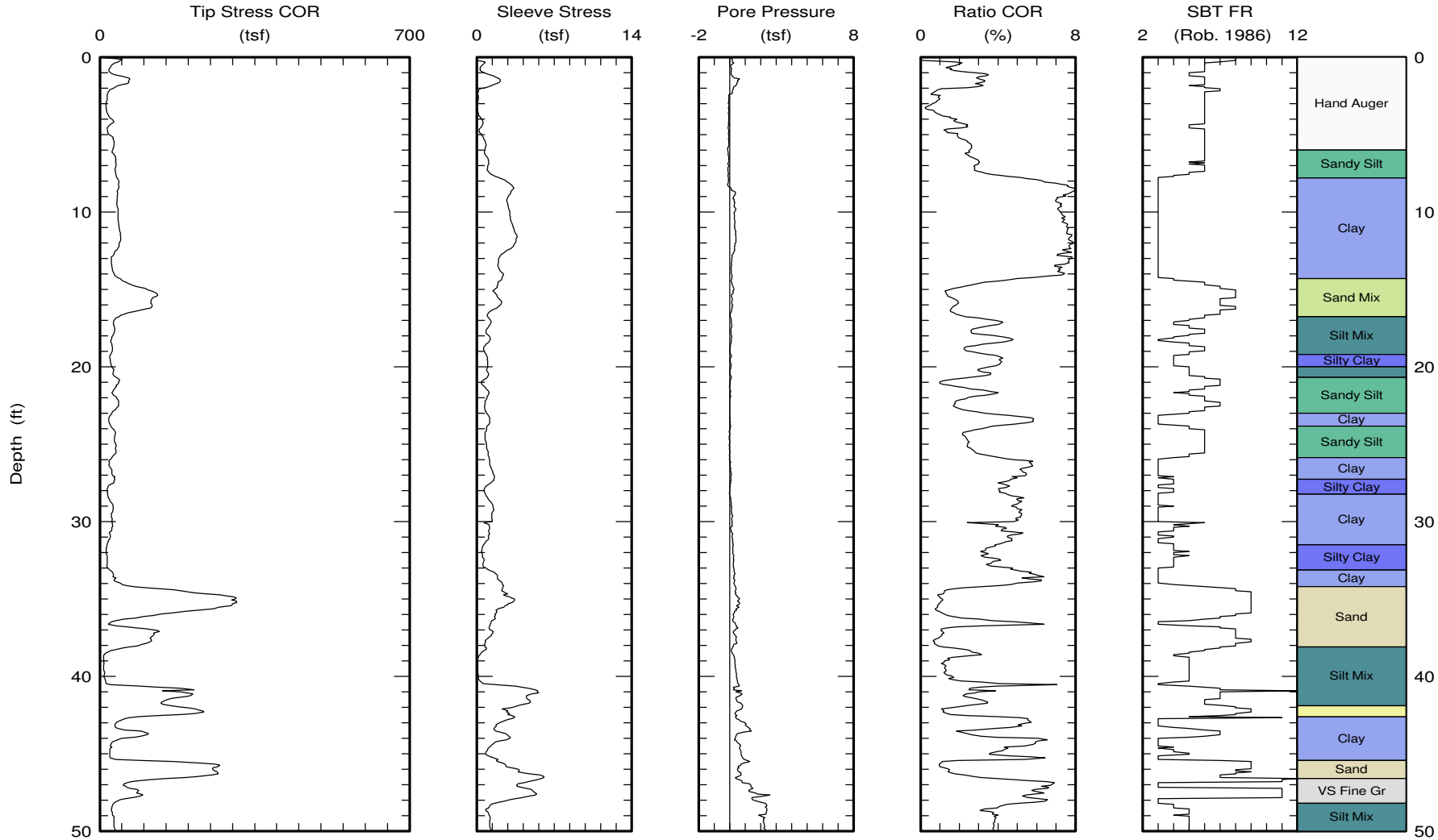
Maximum depth: 80.73 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 08/Jun/2011
Test ID: T2E-C33
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



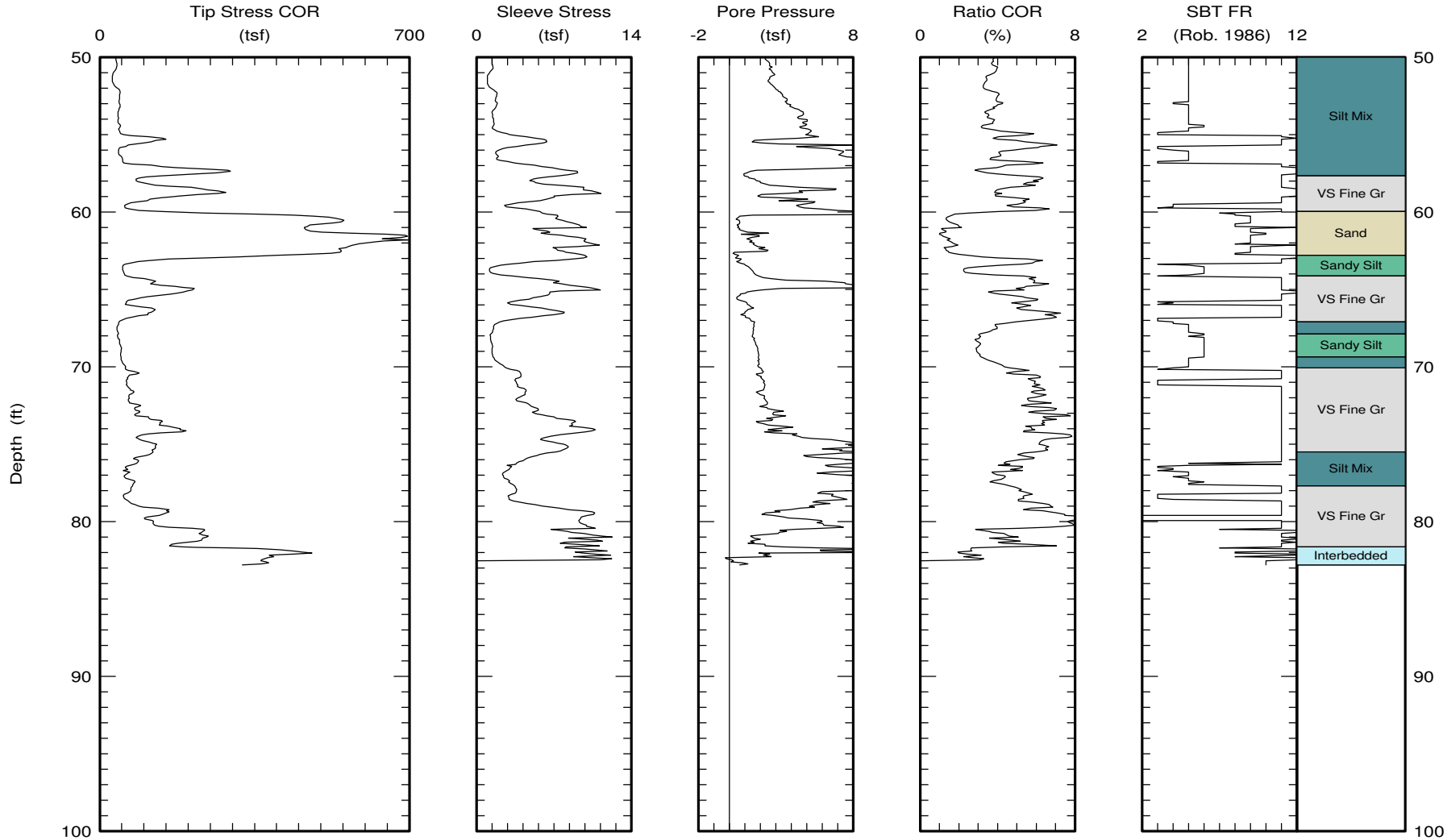
Maximum depth: 82.83 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 08/Jun/2011
Test ID: T2E-C33
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



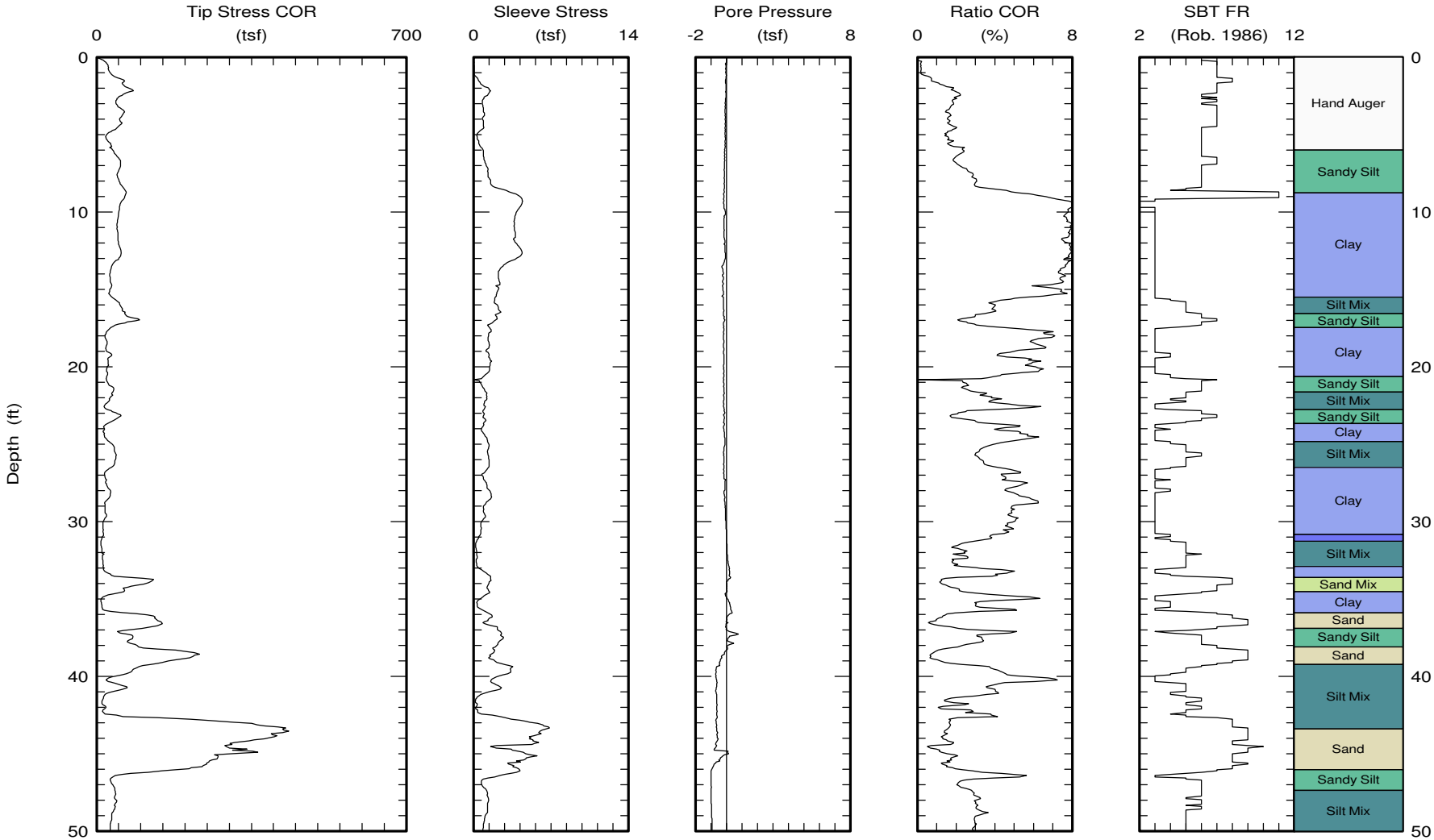
Maximum depth: 82.83 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 08/Jun/2011
Test ID: T2E-C34
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



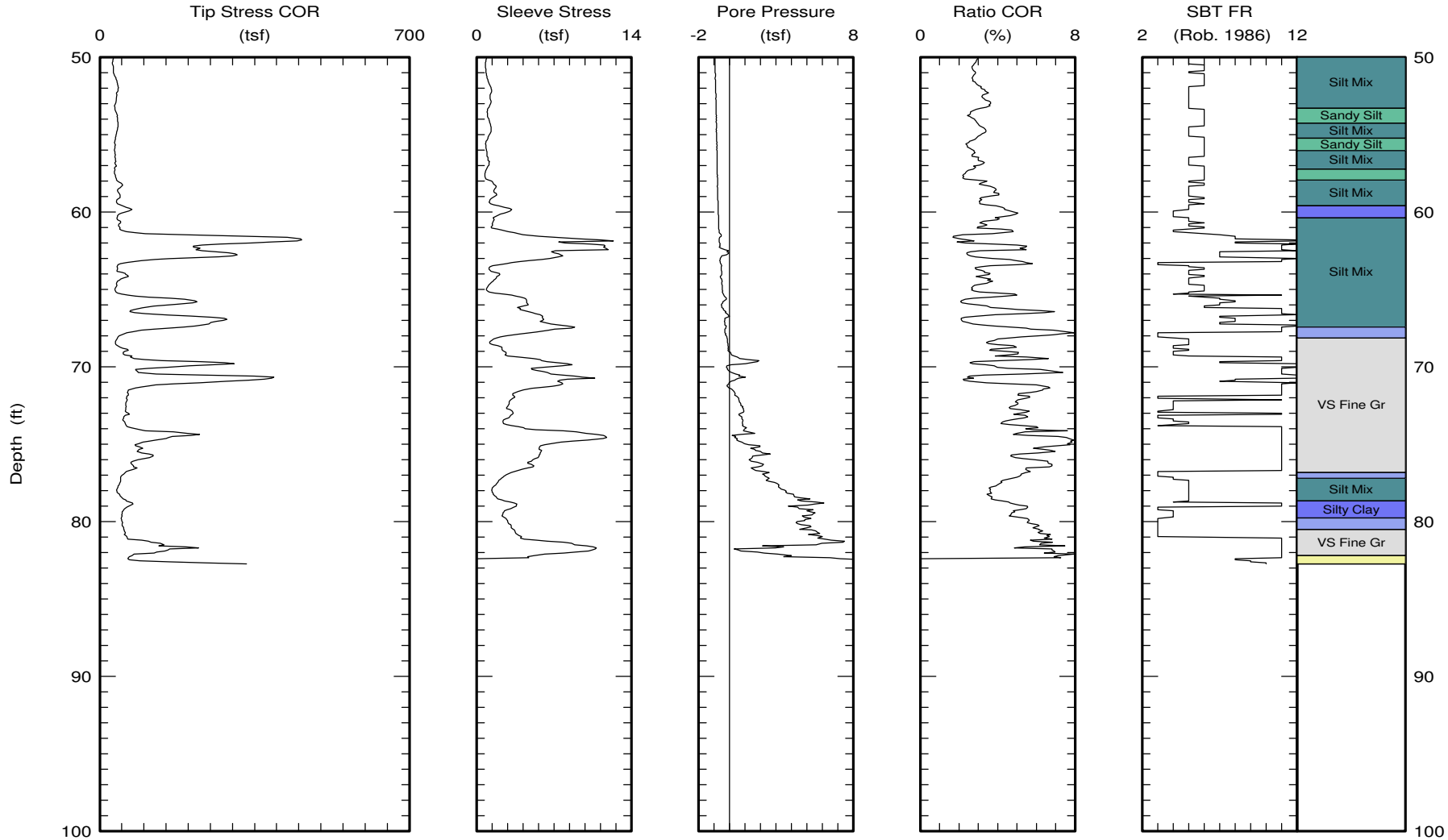
Maximum depth: 82.75 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 08/Jun/2011
Test ID: T2E-C34
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension



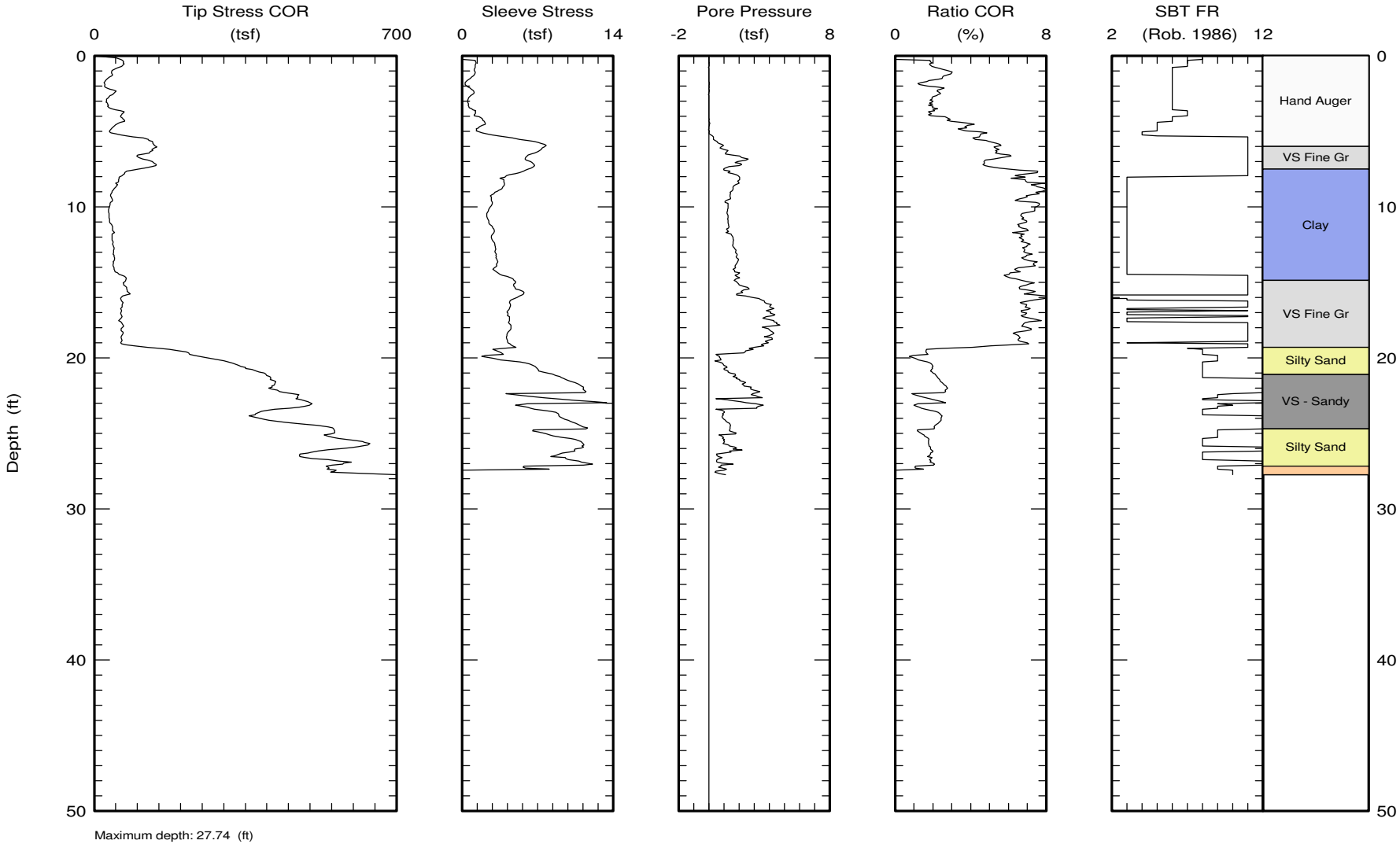
Maximum depth: 82.75 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 24/Feb/2011
Test ID: T3-C1
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension/Century Park



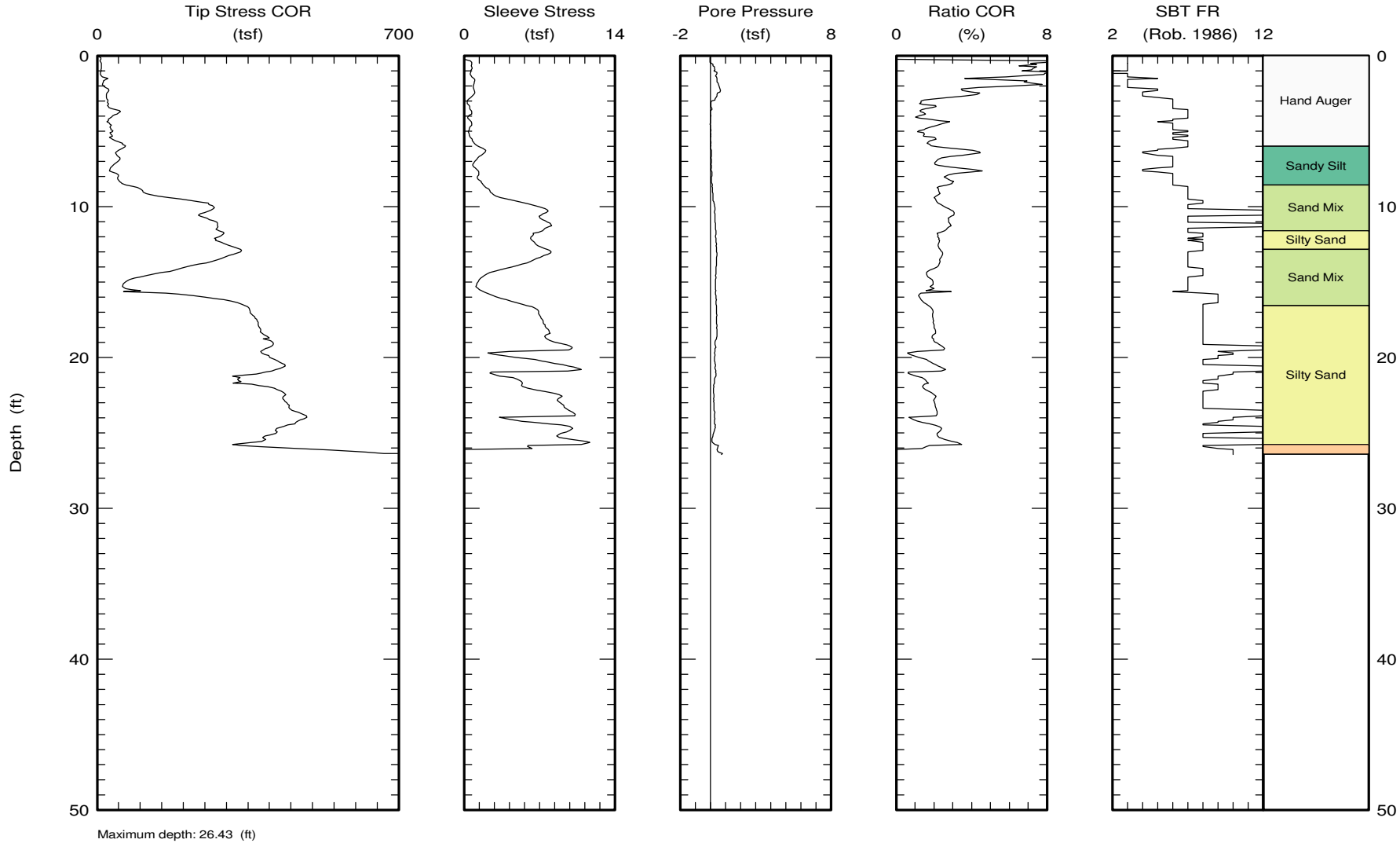
Maximum depth: 27.74 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 01/Mar/2011
Test ID: T3-C2
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension/Century Park



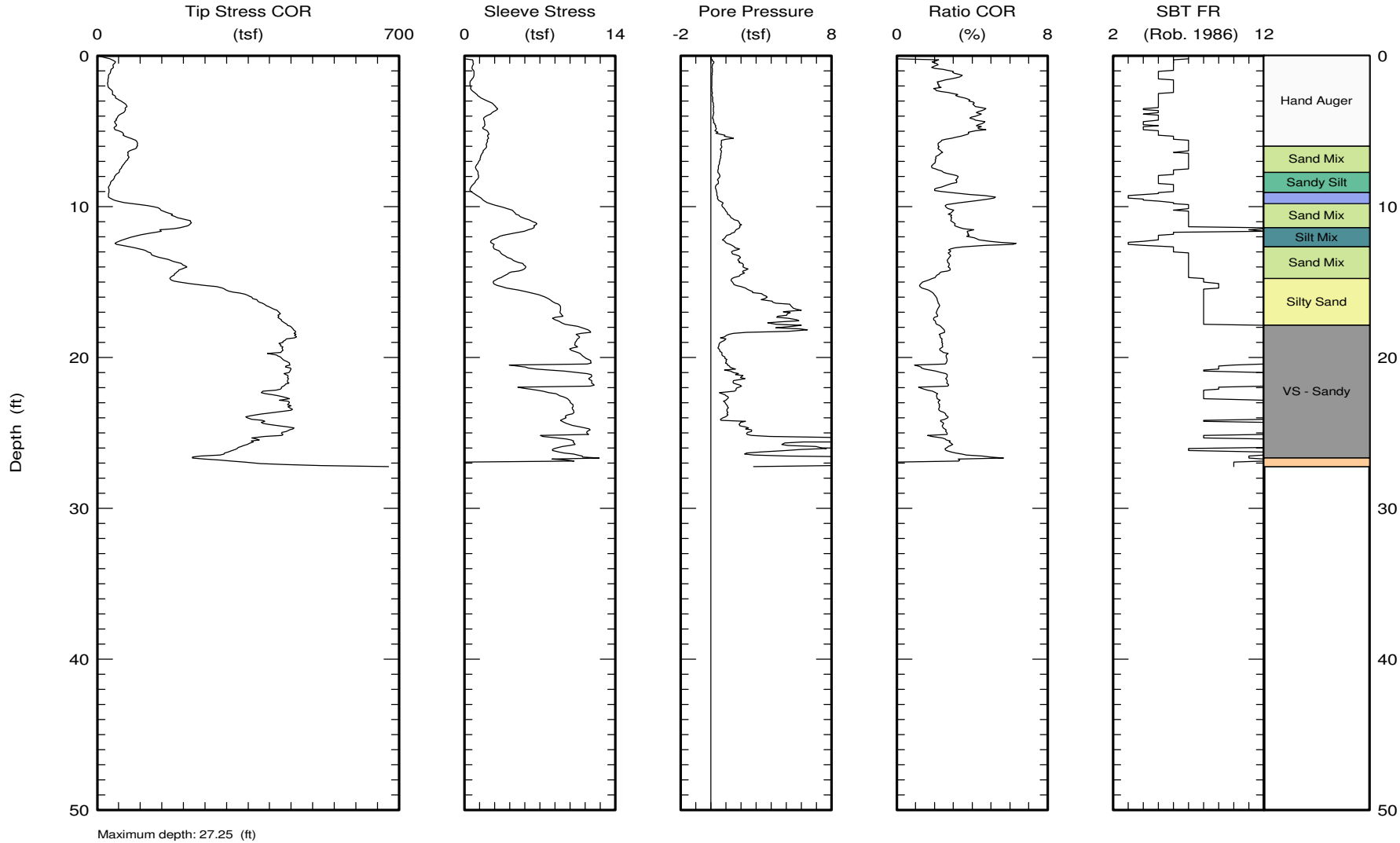
Maximum depth: 26.43 (ft)

Kehoe Testing & Engineering
Office: (714) 901-7270
Fax: (714) 901-7289
rich@kehoetesting.com
www.kehoetesting.com

CPT Data
30 ton rig

Date: 24/Feb/2011
Test ID: T3-C3
Project: LosAngeles

Customer: MACTEC
Job Site: Westside Subway Extension/Century Park



Maximum depth: 27.25 (ft)