OHM Remediation Services Corp.
A Member of The IT Group

February 18, 1999

Ms. Bozier H. Demaree, Code 02R.BD
Contracting Officer
Naval Facilities Engineering Command
Southwest Division
1213 Pacific Highway
San Diego, CA 91332-5187

Attention: Ms. Lynn Hornecker, 56MC.LMH

Subject: ***Soil Vapor Extraction (SVE) Geologic Boring Logs and Well Construction Logs for IRP Site 24 at Marine Corps Air Station, El Toro, California. Contract N68711-93-D-1459, Delivery Order 065, DCN SW 6361***

Dear Ms. Hornecker:

Attached are the Geologic Boring Logs for the Soil Vapor Extraction (SVE) wells that were constructed by OHM and its subcontractor at IRP Site 24 of MCAS El Toro, California.

Following boring logs are attached.

1. 24SVE - 54
2. 24SVE - 104B
3. 24SVE - 107
4. 24SVE - 116
5. 24SVE - 161

Should you have any questions or comments, please feel free to call the undersigned at (949)-660-5446.

Sincerely,
OHM Remediation Services Corporation

William Sedlak, P.E.
Sr. Project Manager

Attachments:
SVE Boring Logs

Copies to: Dave DeMars, SW DIV (2 Copies)
Crispin Wanyoike, Earth Tech (1 Copy)
Project File, (1 Copy)

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To: Teresa Estudillo
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Date: 2/18/99

Submitted by: D. Raval

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Building 131
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San Diego, California 92132-5101

Date: 19-Feb-99

D.O.: 65

Location: MCAS EL TORO

FROM: James Franklin FOR
Stewart Bornhoft, Program Manager

Edwin G. Bond, Contracts Manager

DESCRIPTION OF ENCLOSURE: ***Soil Vapor Extraction (SVE) Geologic Boring Logs and Well Construction Logs for IRP Site 24, dated February 18, 1999***

TYPE: Contract Deliverable ( ) ($) D. O. Deliverable (X) (Tech) Request for Change ( ) Other ( )

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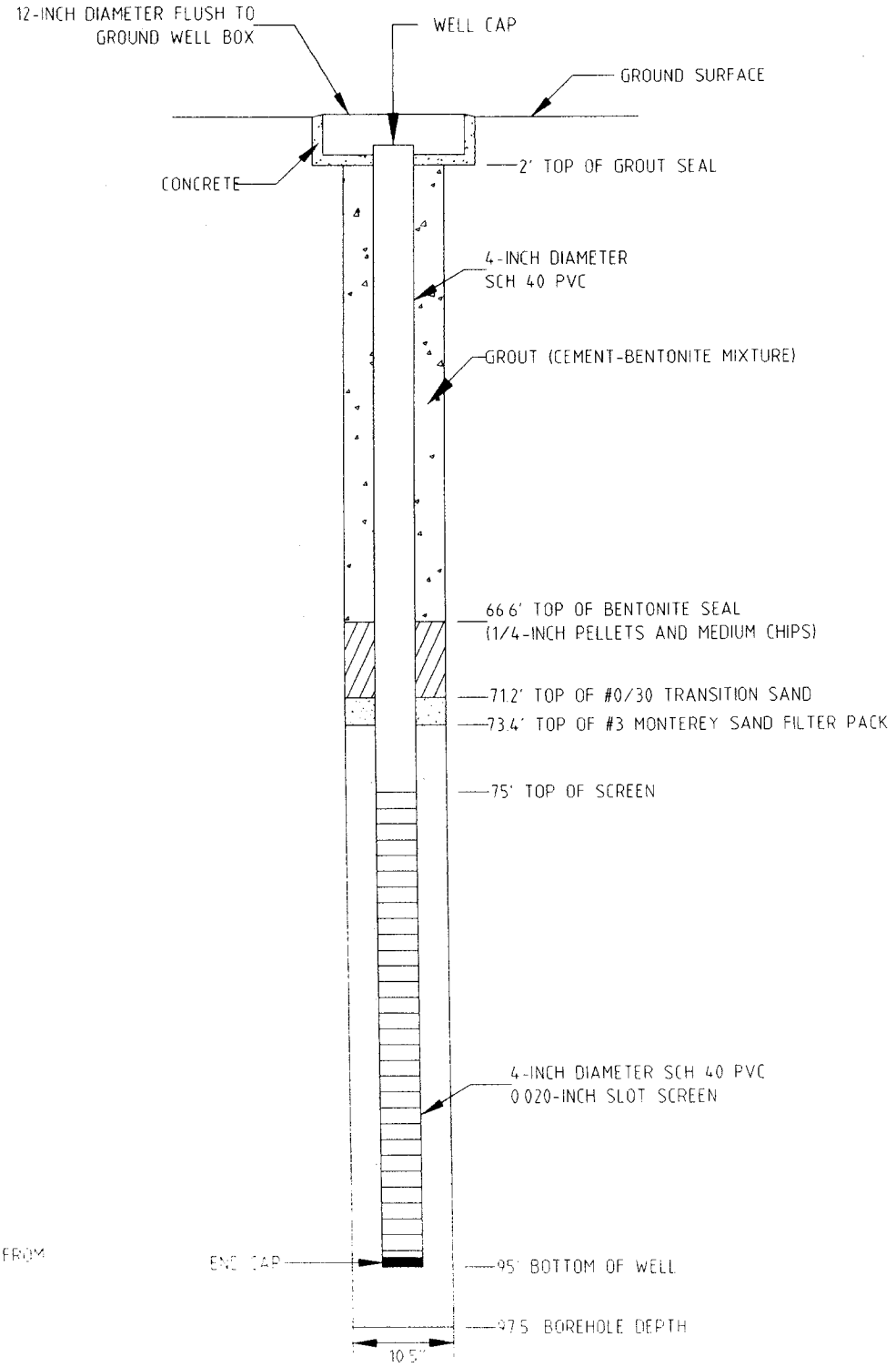
Well Construction 24SVE-54

Project MCAS/EL TORO	Northing 2188707.5952	Drilling Company BC² ENVIRONMENTAL CORP			
Project Number 918708	Easting 6109896.0173	Drill Rig CME 85		Begin Drilling 12/17/98	
Client SWDIV	TOC Elevation 284.5	Driller STEVE M.		End Drilling 12/17/98	
Location SITE 24	GS Elevation 284.92	Drill Method HOLLOW STEM AUGER		Well Completion Date 12/17/98	
Geologist A. SIDDIQUI	DIAGRAM NOT TO SCALE				



NOTES

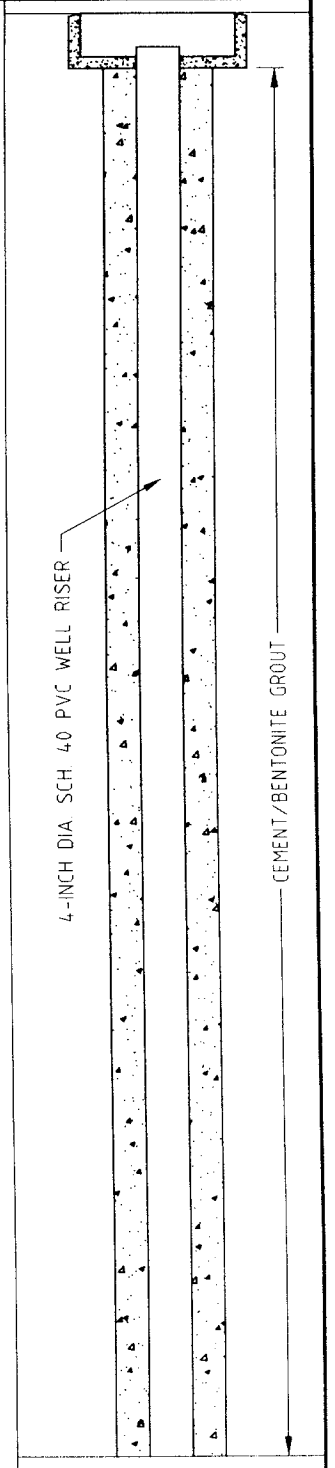
DEPTHS ARE REFERENCED FROM
0 FEET GROUND SURFACE
TOC-TOP OF CASING
GS-GROUND SURFACE
SS-STAINLESS STEEL

Geologic Log of Boring 24SVE-54

Project **MCAS/EL TORO**	Northing 2188707.5952	Drilling Company BC² ENVIRONMENTAL CORP			
Project Number **918708**	Easting 6109896.0173	Drill Rig CME-85		Begin Drilling 12/17/98	
Client SWDIV	TOC Elevation 284.50	Driller STEVE M.		End Drilling 12/17/98	
Location **SITE 24**	TOR Elevation 284.92	Drill Method HOLLOW STEM AUGER		Well Completion Date 12/17/98	
Geologist A. SIDDIQUI	DIAGRAM NOT TO SCALE				
Borehole Diameter 8 TO 10.5 INCHES	Total Depth of Borehole 97.5 FEET	Depth to Water NOT ENCOUNTERED			

DESCRIPTION	Depth (feet)	Soil Group	Graphic Log	Samples	PID/FID (ppm)	Blows/6 in.	Recovery (inches)
12" thick concrete at surface Top 16' hand augured. Soil in the top 16 feet consists predominantly of Silty Sand with lenses of poorly graded sand and silt at places	0	SM					
	2						
	4						
	6						
	8						
	10						
	12						
	14						
	16						
	18						
Poorly Graded Sand (SP). Light yellowish brown (10YR 6/4), 95% fine sand, 5% fines, slightly moist, medium dense	20	SP			0.0	9 11 12	6 6 6
	22						
	24						
	26						
	28						
Silty Sand (SM). Dark yellowish brown (10YR 3/6), 70% fine sand, 30% non plastic fines, slightly moist, medium dense	30	SM			0.0	10 13 14	6 6 6
	32						
	34						
	36						
Sandy Silt (ML). Brown (7.5 YR 4/4), 80% non to low plastic fine, 20% very fine sand, slightly moist, very stiff	38	ML					
	40				0.0	11 14	6 6

BORING DETAIL



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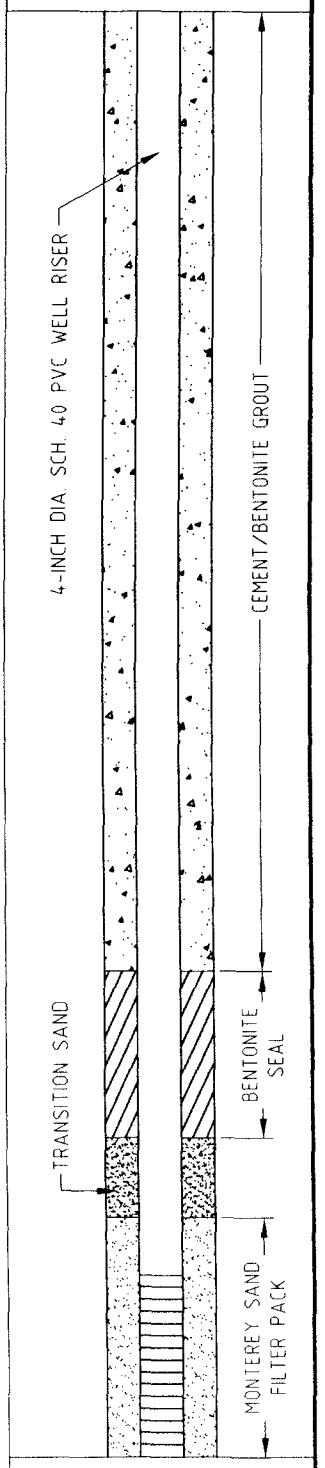
Geologic Log of Well 24SVE-54

Project: MCAS/EL TORO Project No. 918708

DESCRIPTION	Depth (feet)	Soil Group	Graphic Log	Samples	PID/FID (ppm)	Blows/6 In.	Recovery (6 inches)
Sandy Silt (ML) Brown (7.5 YR 4/4) 80% non to low plastic fine, 20% very fine sand, slightly moist, very stiff	40	ML			0.0	17	6
	42						
	44						
	46	SP/SM					
	48						
Poorly Graded Sand with Silt (SP-SM) Dark yellowish brown (10YR 4/6), 92% fine sand, 8% fines, slightly moist, dense	50				0.0	17 25 30	6 6 6
	52	SM					
	54						
	56						
	58						
Silty Sand (SM) Yellowish brown (10YR 5/4), 70% fine sand, 30% non plastic fines, slightly moist, dense	60				0.0	18 32 32	6 6 6
	62						
Silty Sand (SM) Yellowish brown (10YR 5/4), 85% fine Sand, 15% non plastic fines, slightly moist, dense	64				0.0	25 34 40	6 6 6
	66						
	68						
Silty Sand (SM) Dark yellowish brown (10YR 4/6), 75% fine sand, 25% non plastic fines, slightly moist, dense to very dense	70				0.0	29 40 50	6 6 6
	72						
Silty Sand (SM) Same as above, dense	74				0.0	25 33 37	6 6 6
Silt (ML) Dark brown (10YR 3/3) 90% low plastic fines, 10% fine sand, slightly moist, hard	76	ML					
Silty Sand (SM) Dark yellowish brown (10YR 4/6), 75% fine sand, 25% low plastic fine, slightly moist, dense interbedded with sandy silt at places	78	SM			0.0	23 26 35	6 6 6
Silty Sand (SM) Dark yellowish brown (10YR 4/6), 75% fine sand 25% non to low plastic fine, dense	80				0.0	23 30	6 6

WELL DETAIL



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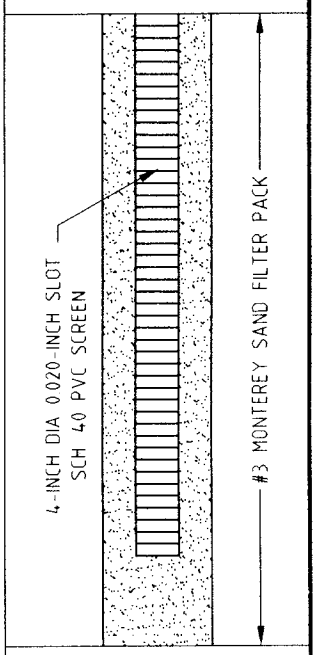
Geologic Log of Well 24SVE-54

Project **MCAS/EL TORO** Project No. **918708**

DESCRIPTION	Depth (feet)	Soil Group	Graphic Log	Samples	PID/FID (ppm)	Blows/6 In.	Recovery (6 inches)
Silty Sand (SM) Dark yellowish brown (10YR 4/6), 75% fine sand, 25% non to low plastic fine, dense	80	SM				35	6
Poorly Graded Sand with Silts (SP-SM). Yellowish brown (10YR 5/4), 85% fine to medium to coarse sand (mostly fine), 10% fine to coarse (mostly fine) sub angular to sub rounded gravel, 5% fines, slightly moist, dense, (max 15" gravel)	82	SP/ SM			0.0	22 33 37	6 6 6
Poorly Graded Sand (SP). Light yellowish brown (2.5Y 6/4), 100% fine sand, slightly moist, dense, very well sorted	84	SP			0.0	19 26 34	6 6 6
Poorly Graded Sand (SP): Same as above. Very well sorted	86				0.0	24 31 37	6 6 6
Attempted sampling b/w 89'-90.5', but no recovery	88						
	90						
Silty Sand (SM). Dark yellowish brown (10YR 5/4), 70% vert fine sand, 30% low plastic fines, slightly moist to moist, dense.	92	SM			0.0	19 24 29	6 6 6
	94						
Silt (ML). Brown (10YR 4/3), 90% medium plastic fine, 10% very fine sand, slightly moist to moist, dense TD=97.5 ft	96	ML			0.0	17 26 32	6 6 6
	98						
	100						
	102						
	104						
	106						
	108						
	110						
	112						
	114						
	116						
	118						
	120						

WELL DETAIL



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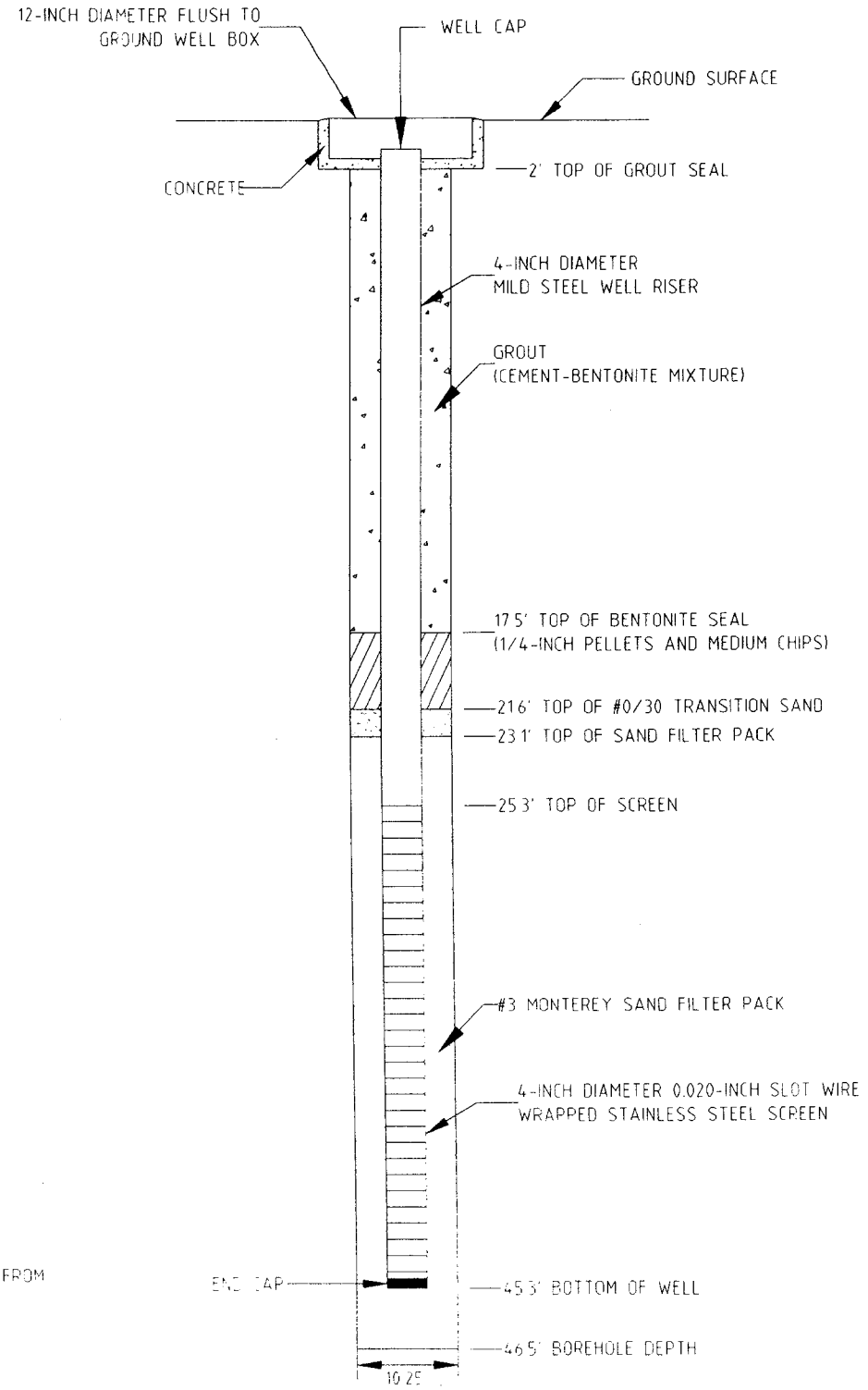
Well Construction 24SVE-104B

Project	MCAS/EL TORO	Northing	2188294.7032	Drilling Company	BC² ENVIRONMENTAL CORP
Project Number	918708	Easting	6110309.4236	Drill Rig	CME 85
Begin Drilling	11/16/98	Client	SWDIV	TOC Elevation	289.56
Driller	STEVE M.	End Drilling	11/16/98	Location	SITE 24
TOR Elevation	289.92	Drill Method	HOLLOW STEM AUGER	Well Completion Date	11/16/98
Geologist	A. SIDDIQUI	DIAGRAM NOT TO SCALE			



NOTES

DEPTHS ARE REFERENCED FROM
0 FEET GROUND SURFACE
TOC=TOP OF CASING
GS=GROUND SURFACE
SS=STAINLESS STEEL

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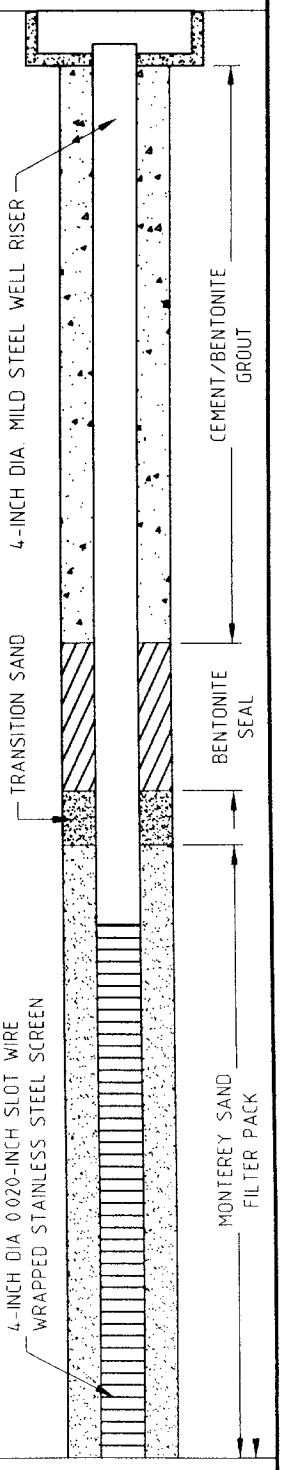
OHM Remediation Services Corp.

Geologic Log of Boring 24SVE-104B

Project: MCAS/EL TORO	Northing: 2188294.7032	Drilling Company: BC² ENVIRONMENTAL CORP			
Project Number: 918708	Easting: 6110309.4236	Drill Rig: CME-85		Begin Drilling: 11/16/98	
Client: SWDIV	TOC Elevation: 289.56	Driller: STEVE M.		End Drilling: 11/16/98	
Location: SITE 24	GS Elevation: 289.92	Drill Method: HOLLOW STEM AUGER		Well Completion Date: 11/16/98	
Geologist: A. SIDDIQUI	DIAGRAM NOT TO SCALE				
Borehole Diameter: 8 TO 10.25 INCHES	Total Depth of Borehole: 46.5 FEET	Depth to Water: -			

DESCRIPTION	Depth (feet)	Soil Group	Graphic Log	Samples	PID/FID (ppm)	Blows/6 in.	Recovery (inches)
12" concrete at surface Top 16' hand augured, soil in the top 16 ft consists generally of Silty Sand, with lenses of poorly graded Sand and Sandy Silt.	0 2 4 6 8 10 12 14 16 18	SM					
Silty Sand (SM) Dark yellowish brown (10YR 4/4), 70% fine sand, 30% low plastic fines, medium dense, slightly moist, no odor	20 22				0.0	11 13 14	6 6 6
Poorly Graded Sand (SP) Yellowish brown (10YR 5/4), 95% fine to medium sand little coarse sand, <5% fines, trace fine to coarse subrounded gravel (max 1-inch), medium dense, slightly moist	24 26	SP			0.0	11 13 21	6 6 6
Poorly Graded Sand (SP) Light yellowish brown (10YR 6/4), 95% fine to medium sand 5% fines, medium dense, slightly moist	28 30 32				0.0	12 17 20	6 6 6
Poorly Graded Sand (SP) Yellowish brown (10YR 5/4) 95% fine to medium sand trace fines trace fine subrounded gravel (1/4-inch max) dense slightly moist Auger chatter at 37 ft possible 1 to 2 ft thick gravel layer	34 36				0.0	15 22 30	6 6 6
Gravelly Sand (SP) Yellowish brown (10YR 5/4), 80% fine to medium to coarse sand, 20% fine to coarse subrounded gravel, occasional cobble, dense, slightly moist	38 40					16 24	

BORING DETAIL



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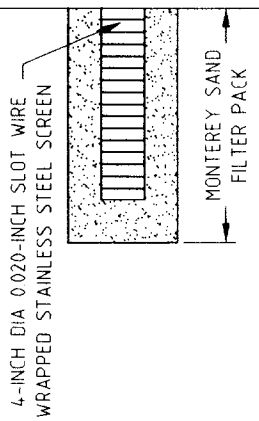
Geologic Log of Well 24SVE-104B

Project **MCAS/EL TORO** Project No. **918708**

DESCRIPTION	Depth (feet)	Soil Group	Graphic Log	Samples	PID/FID (ppm)	Blows/6 In.	Recovery (6 inches)	WELL DETAIL
Gravelly Sand (SP): Yellowish brown (10YR 5/4), 80% fine to medium to coarse sand, 20% fine to coarse subrounded gravel, occasional cobble, dense, slightly moist	40	SP				29		
	42							
Gravelly Sand (SP): Yellowish brown (10YR 5/4), 75% fine to medium to coarse sand, 20% fine to coarse subrounded to subangular gravel, 5% fines, very dense, slightly moist	44							
	46					25 50		
Total Depth=45 ft Borehole reamed with 10.25-inch augers to 46.5 bgs for well installation	48							
	50							
	52							
	54							
	56							
	58							
	60							
	62							
	64							
	66							
	68							
	70							
	72							
	74							
	76							
	78							
	80							



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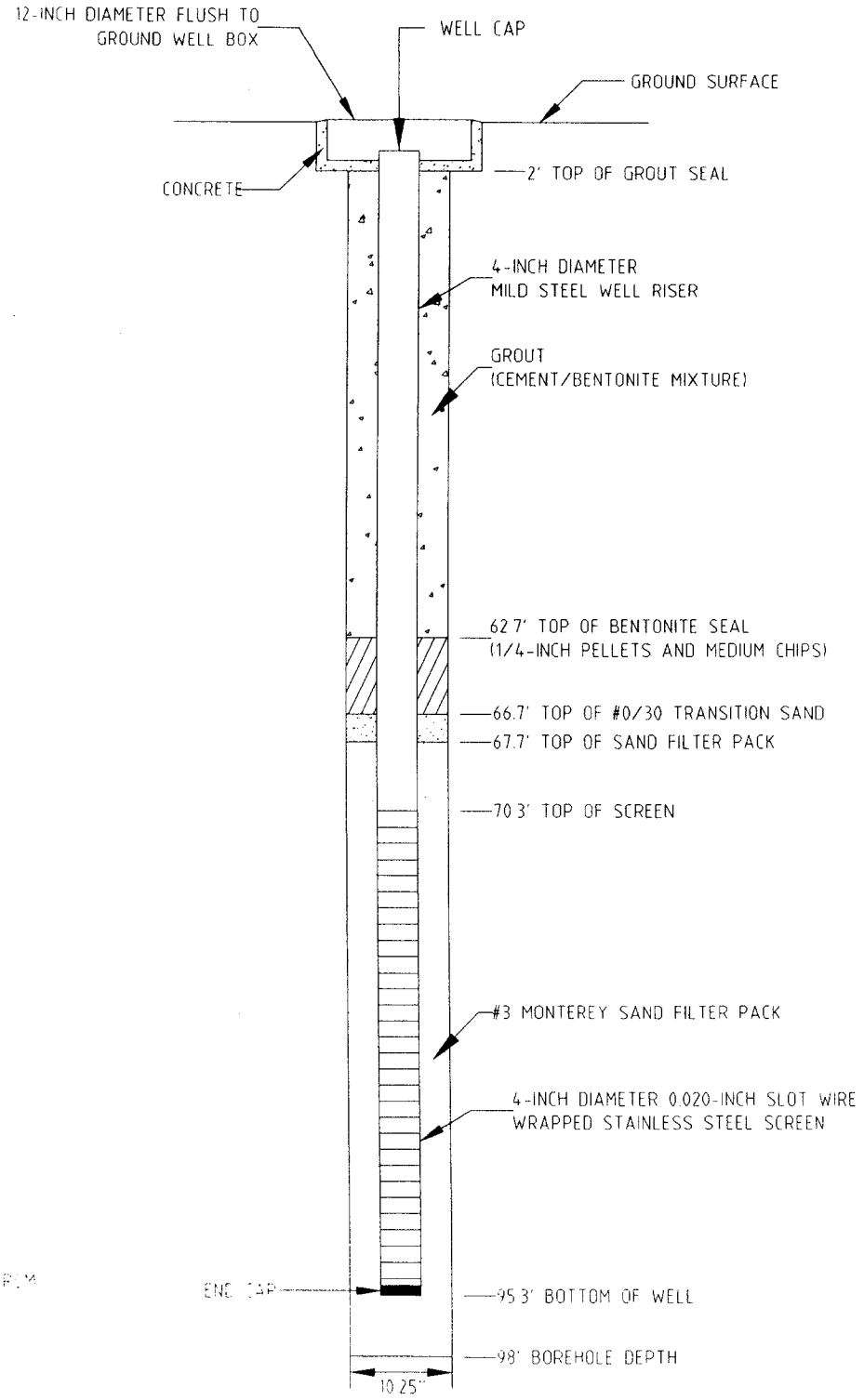
Well Construction 24SVE-107

Project MCAS/EL TORO	Northing 2'38323.8935	Drilling Company BC² ENVIRONMENTAL CORP			
Project Number 918708	Easting 6110123.4814	Drill Rig CME 85		Begin Drilling	11/17/98
Client SWDIV	TOC Elevation 289.95	Driller STEVE M.		End Drilling	11/17/98
Location SITE 24	TOR Elevation 290.07	Drill Method HOLLOW STEM AUGER		Well Completion Date	11/17/98
Geologist A. SIDDIQUI	DIAGRAM NOT TO SCALE				



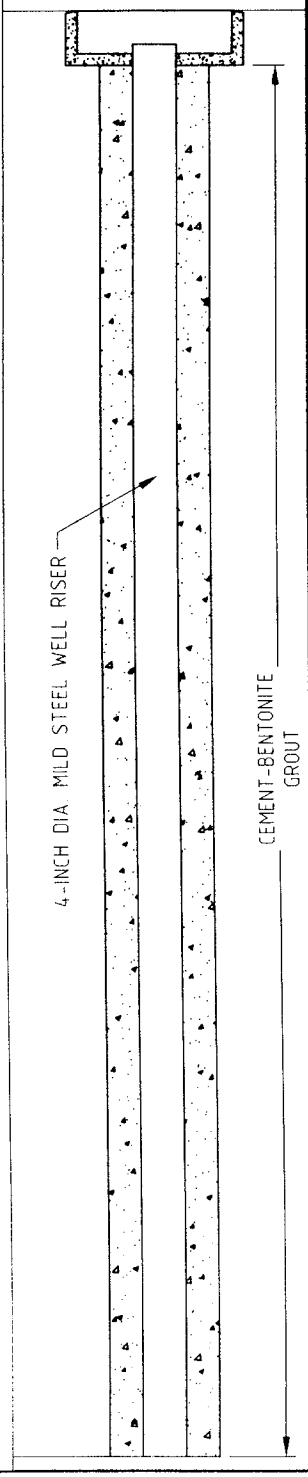
NOTES

DEPTHS ARE REFERENCED FROM
0 FEET GROUND SURFACE
TOC=TOP OF CASING
GS=GROUND SURFACE
SS=STAINLESS STEEL

Geologic Log of Boring 24SVE-107

Project: MCAS/EL TORO	Northing: 2188323.8935	Drilling Company: BC² ENVIRONMENTAL CORP	
Project Number: 918708	Easting: 6110123.4814	Drill Rig: CME-85	Begin Drilling: 11/17/98
Client: SWDIV	TOC Elevation: 289.95	Driller: STEVE M.	End Drilling: 11/17/98
Location: SITE 24	TOR Elevation: 290.07	Drill Method: HOLLOW STEM AUGER	Well Completion Date: 11/17/98
Geologist: A. SIDDIQUI	DIAGRAM NOT TO SCALE		
Borehole Diameter: 10.25 INCHES	Total Depth of Borehole: 100.5 FEET	Depth to Water: NOT ENCOUNTERED	

DESCRIPTION	Depth (feet)	Soil Group	Graphic Log	Samples	PID/FID (ppm)	Blows/6 in.	Recovery (inches)
12" concrete at surface Top 16' hand augured. Soil within top 16 feet predominantly consists of silty sand with minor amount of poorly graded sand and sandy silt.	0	SM					
Silty Sand (SM) Dark yellowish brown (10YR 4/4), 70% fine sand, 30% low plastic fines, medium dense, slightly moist	16						
Sandy Silt (ML) Dark yellowish brown (10YR 3/3), 80% medium plastic fines, 20% fine sand, very stiff, slightly moist	18–20	ML			0.0	7 10 11	6 6 6
Sandy Silt (ML) Strong brown (7.5YR 4/6), 80% medium plastic fines, 20% fine sand, very stiff, slightly moist. Interbeded with thin lenses of sand	28–30				0.0	10 13 15	6 6 6
Sandy Silt (ML) Dark yellowish brown (10YR 4/6), 85% medium plastic fines, 15% fine sand, very stiff, slightly moist	40				0.0	14 17	6 6



BORING DETAIL

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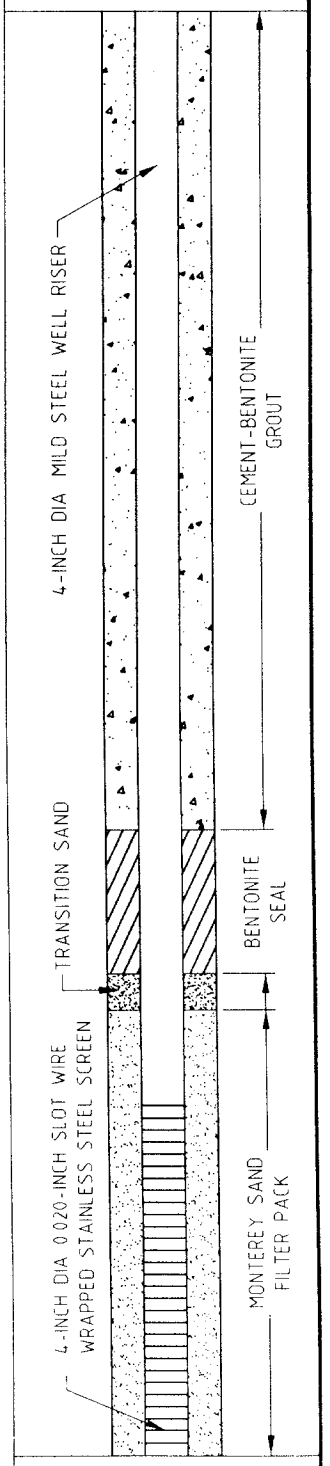
Geologic Log of Well 24SVE-107

Project **MCAS/EL TORO** Project No. **918708**

DESCRIPTION	Depth (feet)	Soil Group	Graphic Log	Samples	PID/FID (ppm)	Blows/6 In.	Recovery (6 inches)
Silty Sand (SM) Dark yellowish brown (10YR 4/6), 75% fine sand, 25% low plastic fines, medium dense, slightly moist, well sorted, at places grades into poorly graded sand (SP)	40	SP			0.0	21	6
	42						
	44						
	46						
	48						
Poorly graded Sand (SP) Yellowish brown (10YR 5/4), 95% fine to medium sand <5% fines, medium dense, slightly moist	50				0.0	19 20 23	6 6 6
	52						
	54						
At 56 feet auger grind and chatter, gravel up to 2-inch diameter, came out of soil cuttings	56						
Sandy Silt (ML) Dark yellowish brown (10YR 4/6), 80% low plastic fines, 20% very fine sand, slightly moist hard	58	ML			0.0	16 24 31	6 6 6
Silty Sand (SM) Yellowish brown (10YR 5/4), 70% fine to medium sand, 20% fines, 10% fine to coarse subrounded gravel, dense, slightly moist Interfingering silts and sands	60	SM					
	62						
Silty Sand (SM) Yellowish brown (10YR 5/6), 70% fine sand, 30% low plastic fines, dense, slightly moist	64				0.0	19 23 32	6 6 6
Silt (ML) Dark yellowish brown (10YR 4/4) 90% medium plastic fines, 10% fine sand hard slightly moist Interfingering silts and sands	66	ML					
	68						
Sandy Silt (ML) Dark yellowish brown (10YR 4/4), 80% low to medium plastic fines, 20% fine sand, hard slightly moist	70				0.0	20 27 35	6 6 6
Silty Sand (SM) Yellowish brown (10YR 4/4) 85% fine sand 15% fines, dense slightly moist Interfingering silts and sands	72	SM					
Silty Sand (SM) Dark yellowish brown (10YR 4/6), 70% fine to medium sand, 30% low plastic fines dense slightly moist	74					21 29 37	6 6 6
Sandy Silt (ML) Dark yellowish brown (10YR 4/4), 80% low plastic fines, 20% fine sand hard slightly moist Very slow drilling from 76 ft to 78 ft	76	ML					
Poorly Graded Sand (SP) Yellowish brown (10YR 5/4) 95% fine to medium sand <5% fines, trace fine subrounded gravel (1/2-inch max), dense to very dense, slightly moist	78	SP			0.0	28 39	6 6
	80						

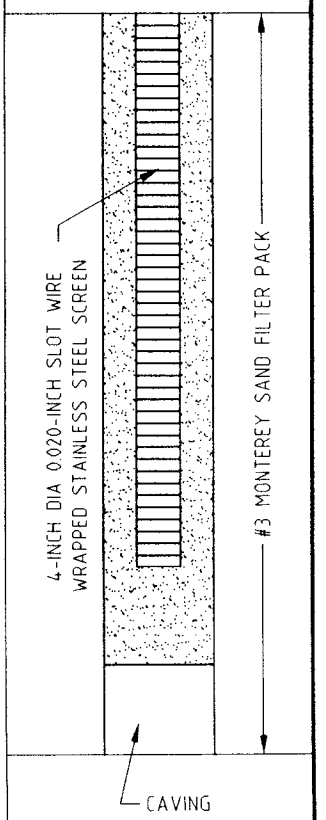


Geologic Log of Well 24SVE-107

Project **MCAS/EL TORO** Project No. **918708**

DESCRIPTION	Depth (feet)	Soil Group	Graphic Log	Samples	PID/FID (ppm)	Blows/6 In.	Recovery (6 inches)
Poorly graded Sand (SP) Yellowish brown (10YR 5/4), 95% fine to medium sand <5% fines, trace fine subrounded gravel (1/2-inch max), dense to very dense, slightly moist	80	SP			0.0	50	6
	82						
Silty Sand (SM)- Dark yellowish brown (10YR 4/6), 75% very fine sand, 25% low plastic fines, dense, slightly moist Interbeded with silt at places.	84	SM			0.0	25 31 44	6 6 6
	86						
	88						
Silty Sand (SM) Yellowish brown (10YR 5/4), 80% fine to medium sand, 20% non to low plastic fines, medium dense, slightly moist	90				0.0	17 22 24	6 6 6
	92						
Silty Sand (SM): Yellowish brown (10YR 5/4), 80% fine sand, 20% low plastic fine, dense, slightly moist to moist, very well sorted	94				0.0	14 22 28	6 6 6
	96						
Sandy Silt (ML)- Yellowish brown (10YR 3/4), 75% low to medium plastic fines, 25% fines, very stiff, moist. Totall depth=100.5 feet	98	ML			0.0	10 15 21	6 6 6
	100						
	102						
	104						
	106						
	108						
	110						
	112						
	114						
	116						
	118						
	120						

WELL DETAIL



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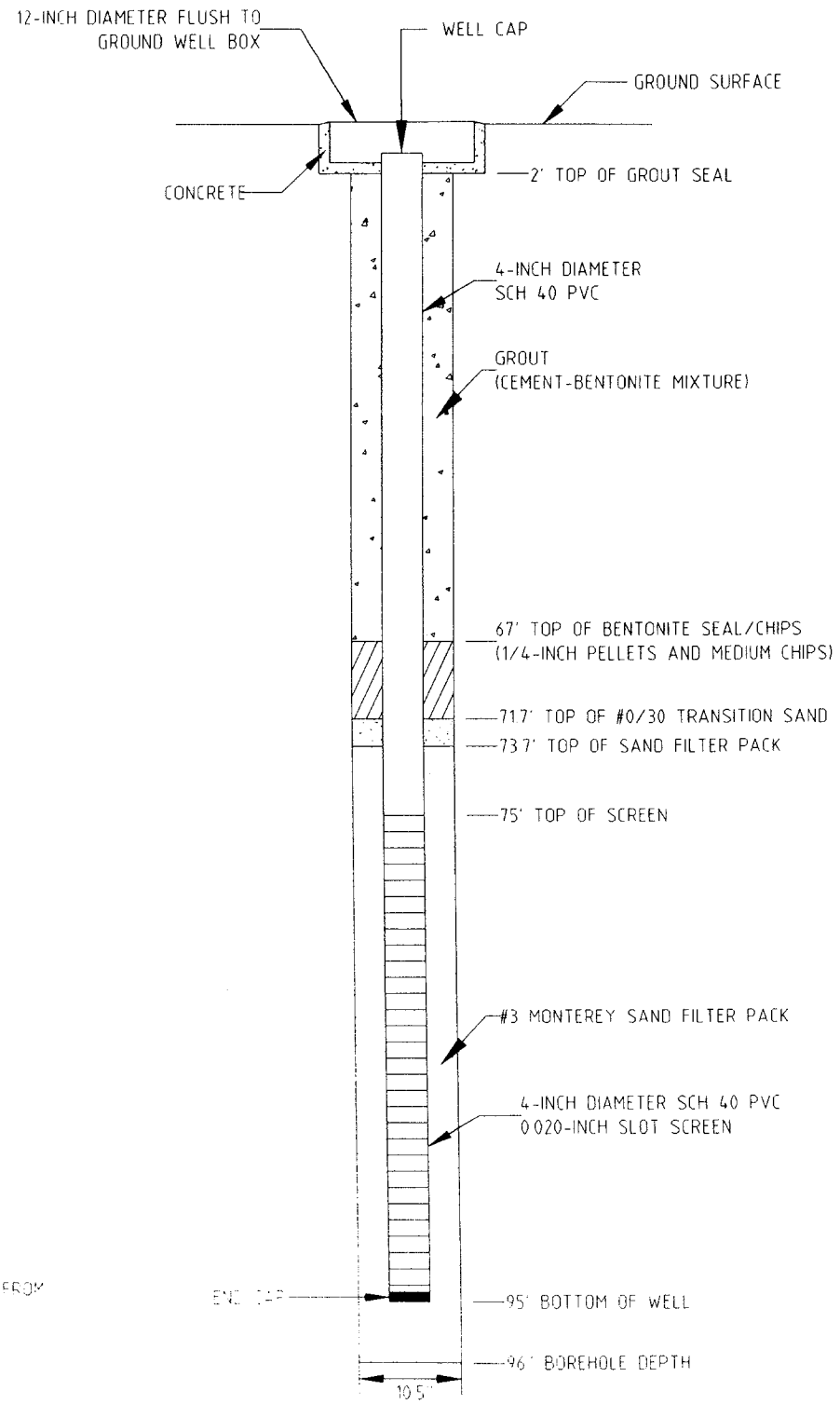
Well Construction 24SVE-116

Project	MCAS/EL TORO	Northing	2188008.2047	Drilling Company	BC² ENVIRONMENTAL CORP
Project Number	918708	Easting	6110203.5634	Drill Rig	CME 85	Begin Drilling	12/16/98
Client	SWDIV	TOC Elevation	286.37	Driller	STEVE M.	End Drilling	12/16/98
Location	SITE 24	TOR Elevation	286.91	Drill Method	HOLLOW STEM AUGER	Well Completion Date	12/16/98
Geologist	A. SIDDIQUI	DIAGRAM NOT TO SCALE			



NOTES

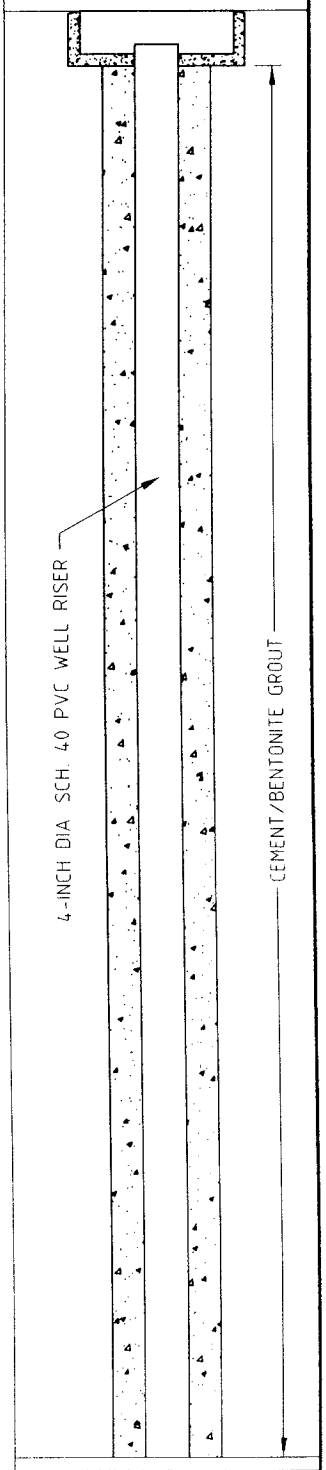
DEPTHS ARE REFERENCED FROM
0 FEET GROUND SURFACE
TOC=TOP OF CASING
GS=GROUND SURFACE
S.S.=STAINLESS STEEL

Geologic Log of Boring 24SVE-116

Project: MCAS/EL TORO	Northing: 2188008.2047	Drilling Company: BC² ENVIRONMENTAL CORP			
Project Number: 918708	Easting: 6110203.5634	Drill Rig: CME-85		Begin Drilling: 12/16/98	
Client: SWDIV	TOC Elevation: 286.37	Driller: STEVE M.		End Drilling: 12/16/98	
Location: SITE 24	TOR Elevation: 286.91	Drill Method: HOLLOW STEM AUGER		Well Completion Date: 12/16/98	
Geologist: A. SIDDIQUI	DIAGRAM NOT TO SCALE				
Borehole Diameter: 8 TO 10.5 INCHES	Total Depth of Borehole: 99 FEET		Depth to Water: NOT ENCOUNTERED		

DESCRIPTION	Depth (feet)	Soil Group	Graphic Log	Samples	PID/FID (ppm)	Blows/6 in.	Recovery (inches)
12" thick concrete at surface Top 16' hand augured. Soil in top 16 feet consists predominantly of Silty Sands with minor amount of poorly graded sand and silt	0	SM					
	2						
	4						
	6						
	8						
	10						
	12						
	14	SP/SM					
	16						
	18						
Poorly graded sand with silt (SP-SM). Yellowish brown (10YR 5/4). 90% fine sand, 10% fines, medium dense, slightly moist	20				0.0	11	6
	22						
	24						
	26						
	28						
Sandy Silt (ML). Brown (7.5YR 4/4). 85% low plastic fines, 15% very fine sand (interbeded), slightly moist, very stiff	30	ML			0.0	9	6
	32						
	34						
	36						
Sandy Silt (ML). Dark yellowish brown (10YR 4/4). 80% low plastic fines, 20% fine sand, slightly moist, very stiff, interbeded with silty sand and sand	38						
	40				0.0	15	6

BORING DETAIL



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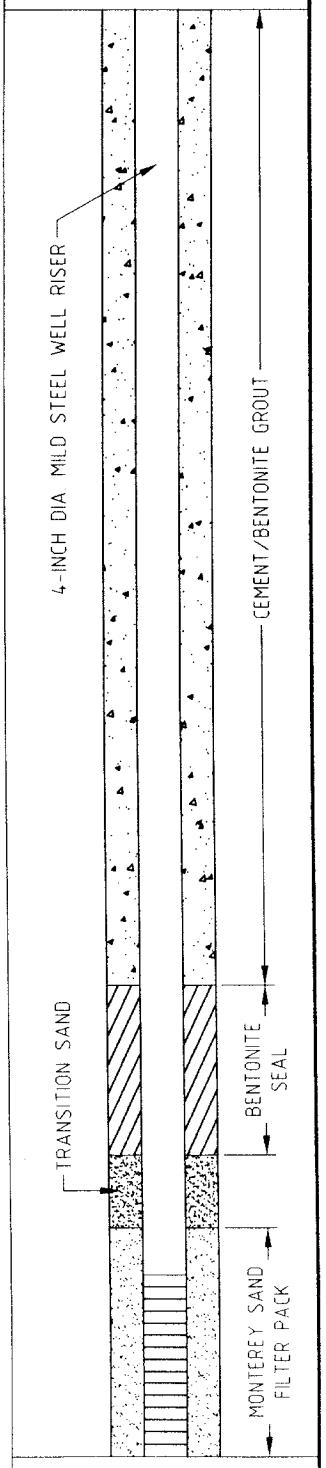
Geologic Log of Well 24SVE-116

Project **MCAS/EL TORO** Project No. **918708**

DESCRIPTION	Depth (feet)	Soil Group	Graphic Log	Samples	PID/FID (ppm)	Blows/6 In.	Recovery (6 inches)
Sandy Silt (ML) Dark yellowish brown (10YR 4/4). 80% low plastic fines, 20% fine sand, slightly moist, very stiff. Interbeded with silty sand and sand	40	ML			0.0	22	6
	42						
	44						
	46						
	48						
Sandy Silt Same as above	50				0.0	15 22 27	0 6 6
Gravelly Sand (SP) Light yellowish brown (10YR 6/4). 75% fine to medium sand, 25% fine to coarse subangular to subrounded gravel (1.5-inch max), dry, dense. Auger chattered at ~50 to 52 ft. Gravel ends at 52 ft.	52	SP					
	54						
	56						
	58						
Silt (ML) Dark yellowish brown (10YR 4/4). 90% low plastic fines, 10% very fine sand, slightly moist, hard	60	ML			0.0	17 26 35	6 6 6
	62						
Silt (ML) Brown (10YR 4/3). 95% low to medium plastic fines, 5% very fine sand, slightly moist, hard	64				0.0	21 29 40	6 6 6
	66						
	68						
Sandy Silt (ML) Dark yellowish brown (10YR 4/4). 85% low plastic fines, 15% very fine sand, slightly moist, hard	70				0.0	18 27 34	6 6 6
	72						
Silty Sand (SM) Light yellowish brown (10YR 6/4). 80% very fine sand, 20% low plastic fines, slightly moist, dense, well sorted.	74				0.0	20 29 38	6 6 6
	76	SM					
Silty Sand (SM) Light yellowish brown (10YR 6/4). 75% very fine sand, 25% low plastic fines, slightly moist, dense.	78						
	80				0.0	19 28	6 6

WELL DETAIL

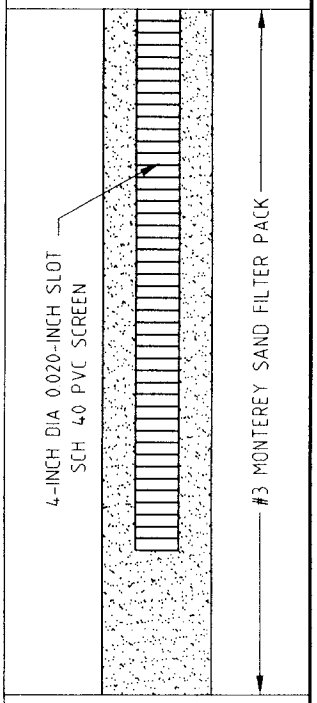


Geologic Log of Well 24SVE-116

Project **MCAS/EL TORO** Project No. **918708**

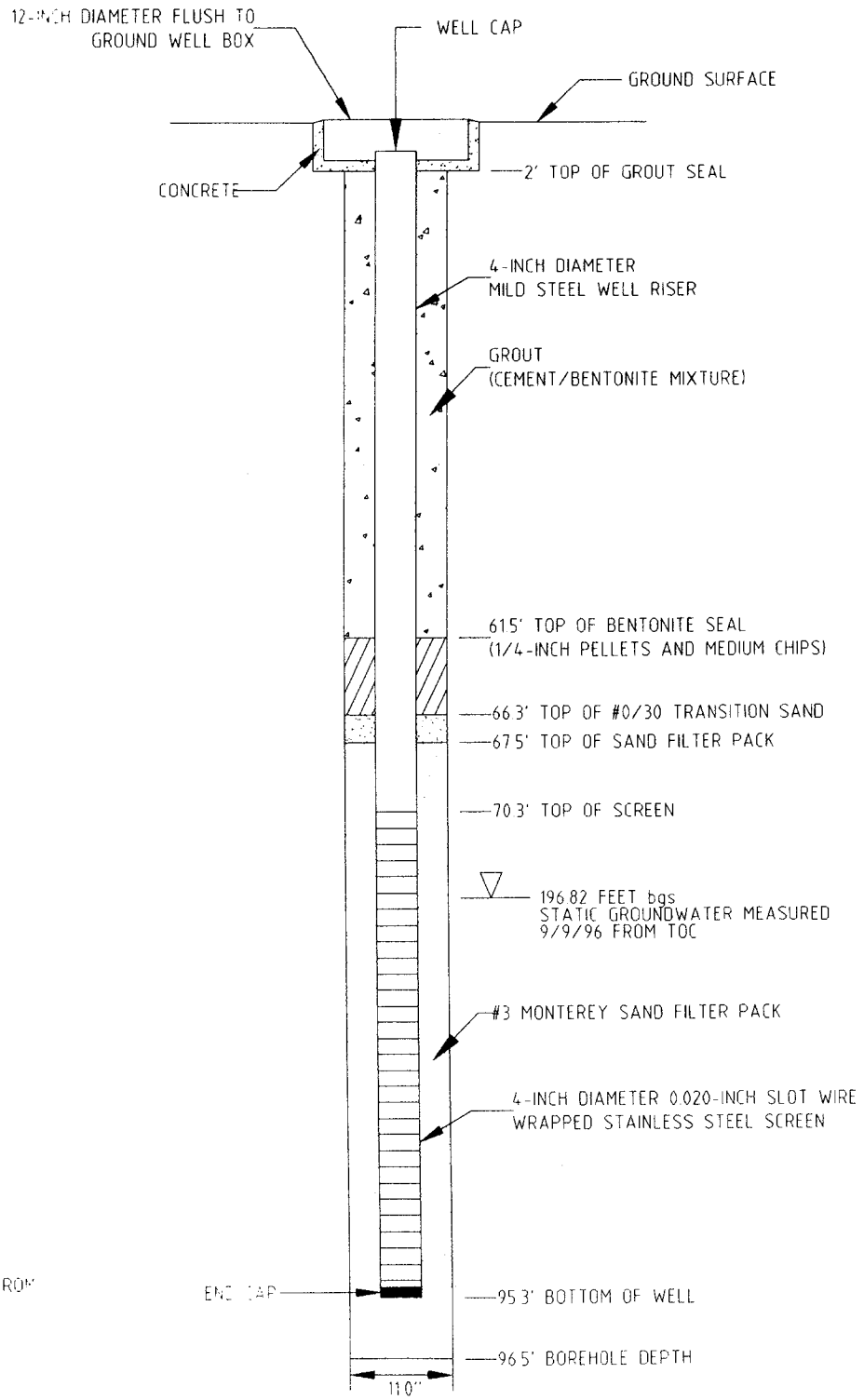
DESCRIPTION	Depth (feet)	Soil Group	Graphic Log	Samples	PID/FID (ppm)	Blows/6 In.	Recovery (6 inches)
Silty Sand (SM) light yellowish brown (10YR 6/4), 75% very fine sand, 25% low plastic fines, slightly moist, dense	80	SM				38	6
	82						
Silty Sand (SM): Yellowish brown (10YR 5/4), 80% fine sand, 20% low plastic fines, slightly moist, dense	84				0.0	21 29 37	6 6 6
Poorly Graded Sand (SP) Very pale brown (10YR 7/3), 100% fine sand, trace fines, slightly moist, dense, well sorted	86				0.0	23 33 38	6 6 6
	88	SP					
Silty Sand (SM): Dark yellowish brown (10YR 4/4), 65% fine sand, 35% low plastic fines, slightly moist, dense	90	SM			0.0	25 34 40	6 6 6
Silty Sand (SM): Dark yellowish brown (10YR 4/4), 70% fine sand, 30% low plastic fines, slightly moist, dense	92				0.0	18 26 36	6 6 6
Silty Sand (SM): Yellowish brown (10YR 5/6), 75% fine sand, 25% low plastic fines, slightly moist, dense	94				0.0	17 28 35	6 6 6
	96	SP					
Poorly Graded Sand (SP) Light yellowish brown (10YR 6/4), 100% fine (mostly) to medium sand, trace fines, slightly moist, dense. Total Depth=99 feet	98				0.0	25 34 40	6 6 6
	100						
	102						
	104						
	106						
	108						
	110						
	112						
	114						
	116						
	118						
	120						

WELL DETAIL



Well Construction 24SVE-161

Project	MCAS/EL TORO	Northing	2'38608.9354	Drilling Company	BC² ENVIRONMENTAL CORP
Project Number	918708	Easting	6'10147.4834	Drill Rig	CME 85	Begin Drilling	11/19/98
Client	SWDIV	TOC Elevation	289.91	Driller	STEVE M.	End Drilling	11/19/98
Location	SITE 24	TOR Elevation	290.19	Drill Method	HOLLOW STEM AUGER	Well Completion Date	11/19/98
Geologist	A. SIDDIQUI	DIAGRAM NOT TO SCALE			



NOTES

DEPTHS ARE REFERENCED FROM
0 FEET GROUND SURFACE
TOC=TOP OF CASING
GS=GROUND SURFACE
S.S.=STAINLESS STEEL

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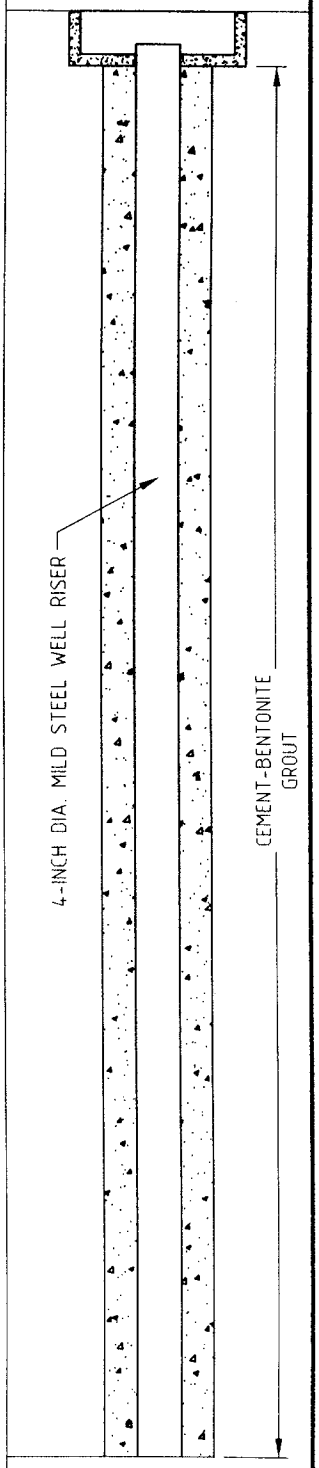
Geologic Log of Boring 24SVE-161

Project MCAS/EL TORO	Northing 2188608.9354	Drilling Company BC² ENVIRONMENTAL CORP	
Project Number 918708	Easting 6110147.4834	Drill Rig CME-85	Begin Drilling 11/18/98
Client SWDIV	TOC Elevation 289.91	Driller STEVE M.	End Drilling 11/18/98
Location SITE 24	TOR Elevation 290.19	Drill Method HOLLOW STEM AUGER	Well Completion Date 11/19/98
Geologist A. SIDDIQUI	DIAGRAM NOT TO SCALE		
Borehole Diameter 8 /10.25 INCHES	Total Depth of Borehole 100.5 FEET	Depth to Water NOT ENCOUNTERED	

DESCRIPTION	Depth (feet)	Soil Group	Graphic Log	Samples	PID/FID (ppm)	Blows/6 in.	Recovery (inches)
12" concrete at surface. Top 16' hand augured. Soil within top 16 feet predominantly consists of poorly graded sand with silt and minor amounts of silty sand.	0	SP/SM					
Poorly graded sand with silt (SP-SM) Yellowish brown (10YR 5/4), 90% fine to medium sand, 10% fines, medium dense, slightly moist.	18–20				0.0	6 8 12	6 6 6
Poorly Graded Sand (SP) Yellowish brown (10YR 5/4), 95% fine to medium sand, <5% fines, trace fine subrounded gravel, medium dense, slightly moist	28–30	SP			0.0	9 16 22	6 6 6
Poorly Graded Sand (SP) Same as above but no gravel	38–40				0.0	9 11	6 6

BORING DETAIL



OHM Remediation Services Corp.

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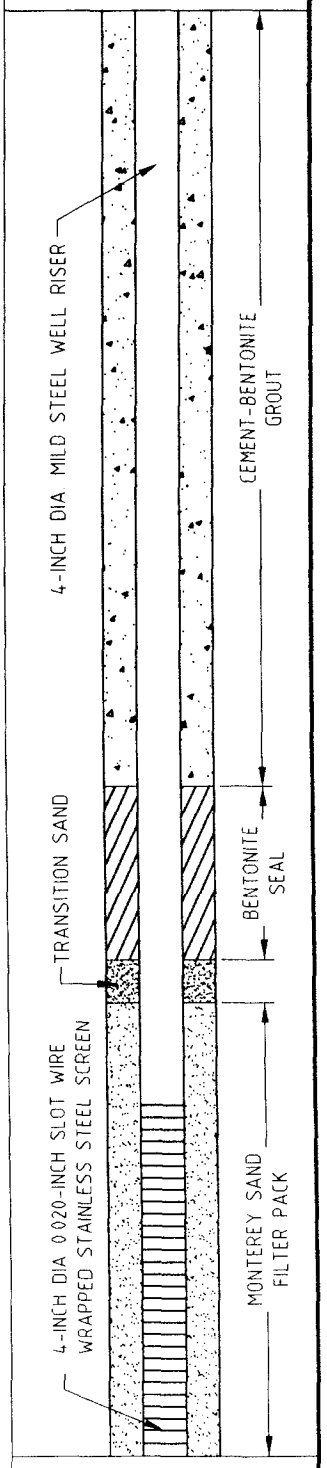
Geologic Log of Well 24SVE-161

Project **MCAS/EL TORO** Project No. **918708**

DESCRIPTION	Depth (feet)	Soil Group	Graphic Log	Samples	PID/FID (ppm)	Blows/6 In.	Recovery (6 inches)
Poorly Graded Sand (SP). Yellowish brown (10YR 5/4), 95% fine to medium sand, <5% fines trace fine subrounded gravel, medium dense, slightly moist.	40	SP			0.0	15	6
	42						
	44	ML					
	46						
	48						
Sandy Silt (ML): Dark yellowish brown (10YR 4/6), 70% low plastic fines, 30% fine sand, very stiff, slightly moist.	50				0.0	13 17 25	6 6 6
	52						
	54						
Poorly Graded Sand with Silt (SP-SM). Yellowish brown (10YR 5/4), 90% fine sand, 10% fine medium dense, slightly moist Interbedded with sitly sand.	56	SP/ SM					
	58						
Silty Sand (SM): Dark Yellowish brown (10YR 4/4), 70% fine sand, 30% low plastic fine medium dense, slightly moist. Interbedded with silt.	60	SM			0.0	13 [illegible] 8	6 6 6
	62						
Silty Sand (SM). Yellowish brown (10YR 5/6), 70% fine sand, 30% low plastic fines, medium dense, slightly moist	64				0.0	8 [illegible] [illegible]	6 6 6
Sandy Silt (ML) Dark yellowish brown (10YR 3/4), 85% low to medium plastic fines, 15% fine sand, very stiff, slightyl moist	66	ML					
	68						
Sandy Silt (ML) Dark yellowish brown (10YR 4/6), 70% low plastic fines, 30% fine sand, very stiff, slightly moist	70				0.0	10 15 23	6 6 6
	72						
Sandy Silt (ML) Dark yellowish brown (10YR 4/6), 75% low plastic fines, 25% fine sand very stiff, slightly moist Interbedded with silty sand	74					11 15 20	6 6 6
	76						
Silty Sand (SM) Dark yellowish brown (10YR 4/4), 80% fine sand, 20% low plastic fines medium dense, slightly moist	78	SM					
	80					10 12	6 6

WELL DETAIL



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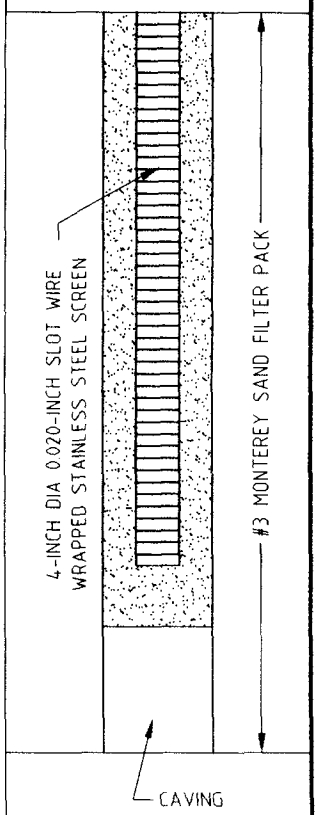
Geologic Log of Well 24SVE-161

Project **MCAS/EL TORO** Project No. **918708**

DESCRIPTION	Depth (feet)	Soil Group	Graphic Log	Samples	PID/FID (ppm)	Blows/6 In.	Recovery (6 inches)
Silt (ML): Dark yellowish brown (10YR 4/6), 90% medium plastic fines, 10% fine sand, very stiff, slightly moist.	80	ML				15	6
	82						
Sandy Silt (ML): Dark yellowish brown (10YR 4/6), 60% low plastic fine, 40% fine sand, slightly moist, very stiff to hard grade into Silty Sand.	84					15 20 23	6 6 6
	86						
	88	SP					
Poorly Graded Sand (SP): Light yellowish brown (10YR 6/4), 95% fine to medium sand, <5% fine, medium dense, slightly moist.	90				0.0	9 16 22	6 6 6
Silt (ML): Yellowish brown (10YR 5/4), 90% low plastic fines, 10% fine sand, very stiff, slightly moist.	92	ML					
Silty Sand (SM): Yellow brown (10YR 5/4), 85% very fine sand, 15% fines, medium dense, slightly moist.	94	SM			0.0	8 11 12	6 6 6
Silt (ML): Dark Yellowish Brown (10YR 3/4), 90% medium plastic fines, 10% fine sand, very stiff, slightly moist.	96	ML					
	98	SM					
Silty Sand (SM): Yellowish brown (10YR 5/4), 80% fine to medium sand, low plastic fines, medium dense, slightly moist. Totall depth=100.5 feet	100				0.0	9 14 19	6 6 6
	102						
NOTE: Prior to reaming bottom of borehole tagged at 97 feet bgs indicating ~3 feet of caving	104						
	106						
	108						
	110						
	112						
	114						
	116						
	118						
	120						

WELL DETAIL



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