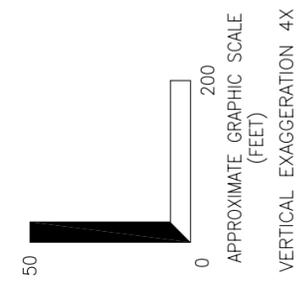
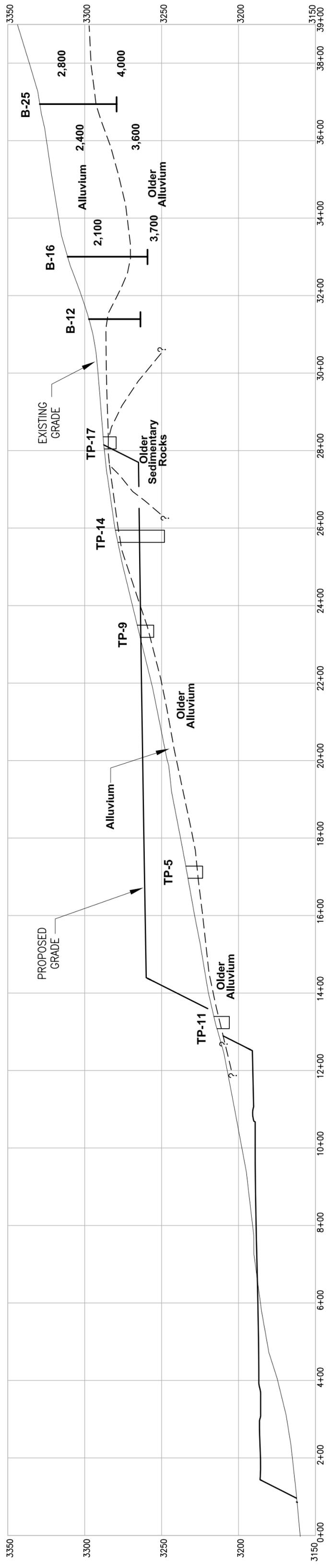


RS08-02

RS08-4

WEST

EAST



LEGEND

- GENERALIZED GEOLOGIC CONTACT
 - PROPOSED GRADE
 - REFRACTION SEISMIC SURVEY APPROXIMATELY PARALLEL TO SECTION RS08-01
 - REFRACTION SEISMIC SURVEY APPROXIMATELY PERPENDICULAR TO SECTION RS08-02
- NOTE:
VELOCITIES SHOWN IN
CROSS SECTION ARE FEET
PER SECOND (f/s)

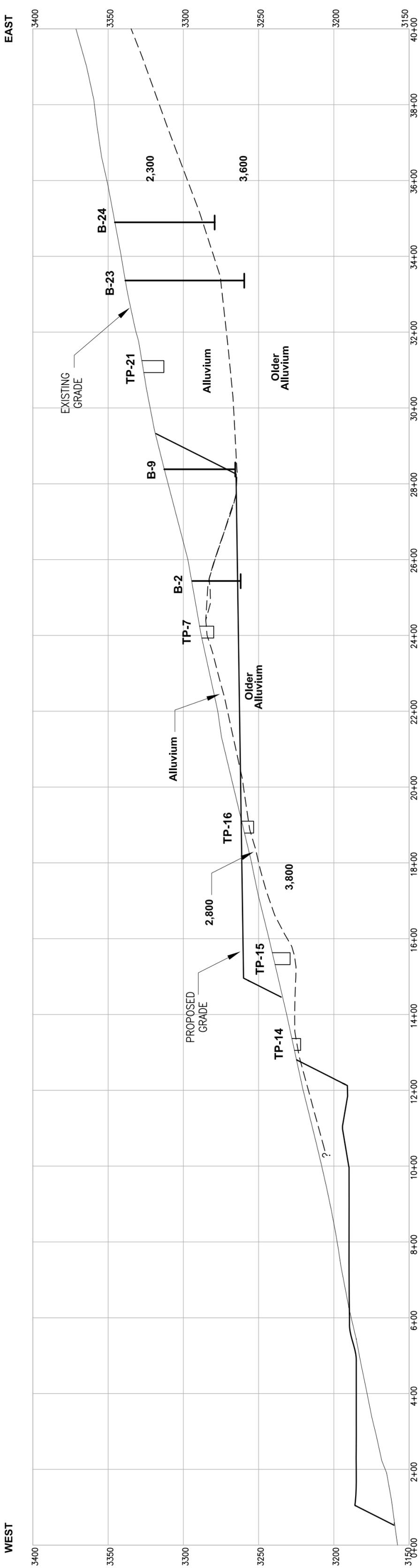
GEOLOGIC CROSS SECTION A-A'
EAST COUNTY SUBSTATION
SAN DIEGO GAS & ELECTRIC
JACUMBA, CALIFORNIA



CHECKED BY: DR DATE: 06-10-08 FIG. NO:
 PM: MEH PROJ. NO: 27667021.00030 **6**

RS08-06

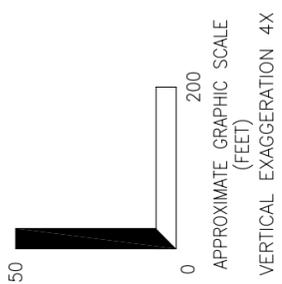
RS08-02



LEGEND

- GENERALIZED GEOLOGIC CONTACT
- PROPOSED GRADE
- REFRACTION SEISMIC SURVEY APPROXIMATELY PARALLEL TO SECTION RS08-01
- REFRACTION SEISMIC SURVEY APPROXIMATELY PERPENDICULAR TO SECTION RS08-02

NOTE:
VELOCITIES SHOWN IN
CROSS SECTION ARE FEET
PER SECOND (f/s)

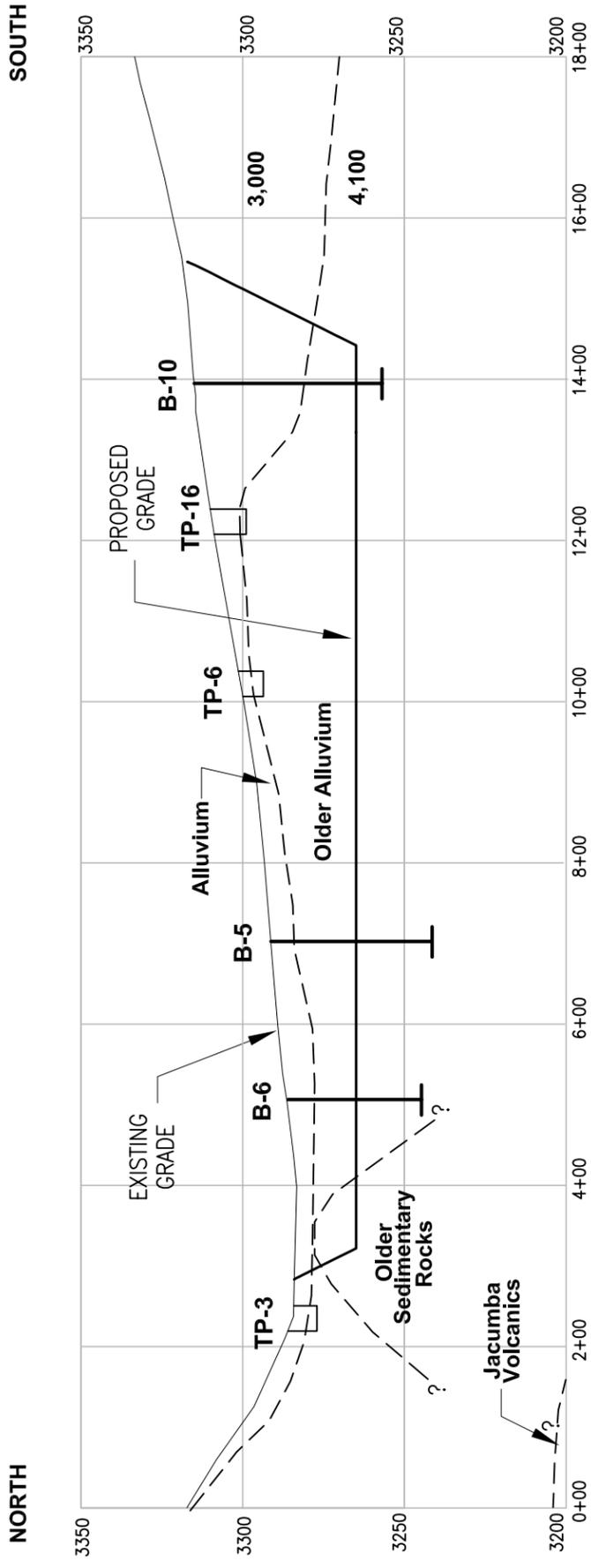


GEOLOGIC CROSS SECTION B-B'
EAST COUNTY SUBSTATION
SAN DIEGO GAS & ELECTRIC
JACUMBA, CALIFORNIA



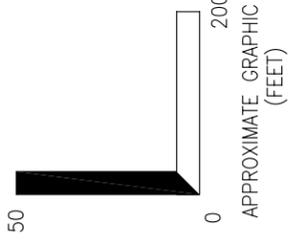
CHECKED BY: DR DATE: 06-10-08 FIG. NO: 7
PM: MEH PROJ. NO: 27667021.00030

RS08-06



LEGEND

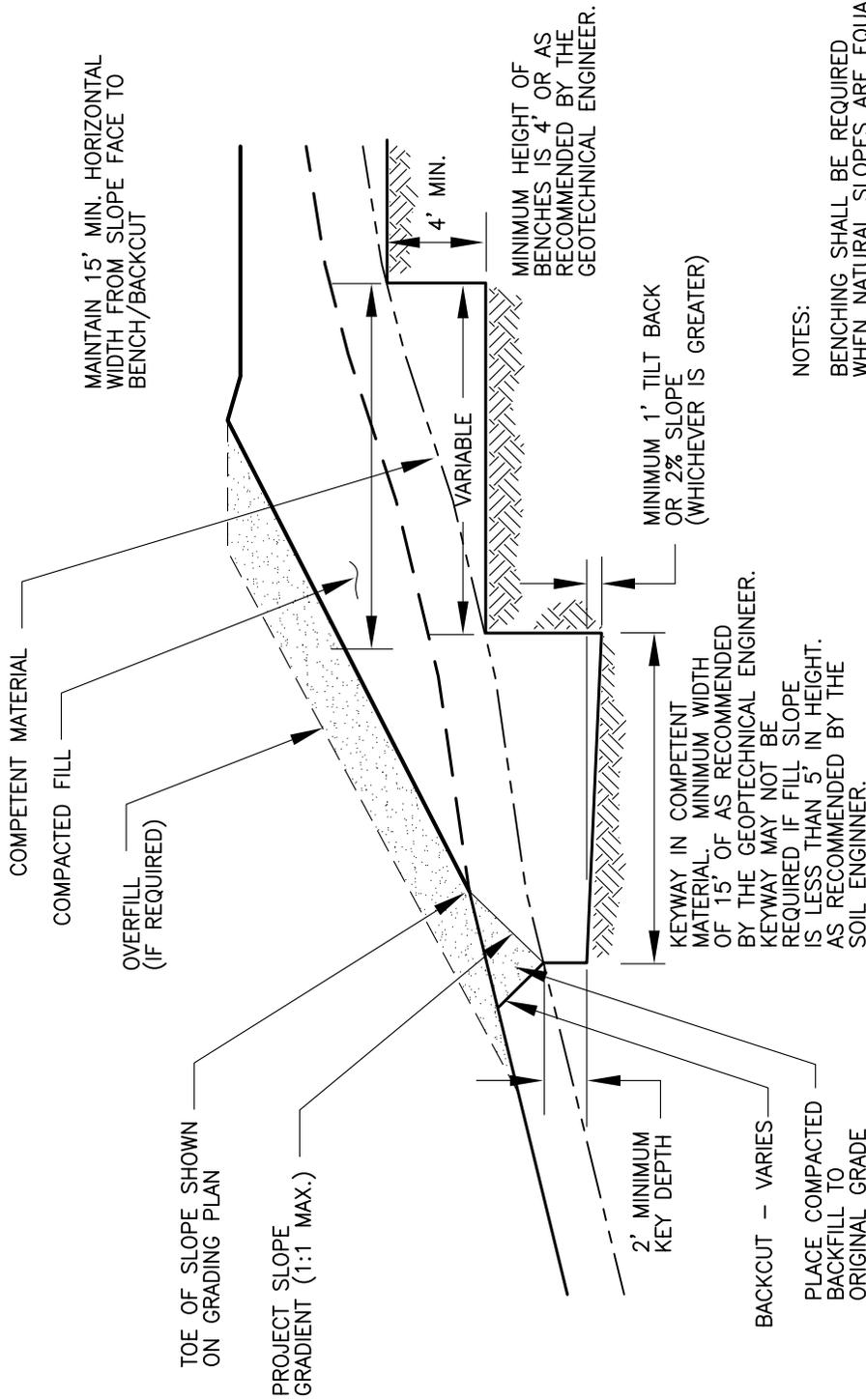
- GENERALIZED GEOLOGIC CONTACT
- PROPOSED GRADE



GEOLOGIC CROSS SECTION D-D'
EAST COUNTY SUBSTATION
SAN DIEGO GAS & ELECTRIC
JACUMBA, CALIFORNIA

CHECKED BY: DR DATE: 06-10-08 FIG. NO:
 PM: MEH PROJ. NO: 27667021.00030 **9**





NOTES:

BENCHING SHALL BE REQUIRED WHEN NATURAL SLOPES ARE EQUAL TO OR STEEPER THAN 5:1 OR WHEN RECOMMENDED BY THE GEOTECHNICAL ENGINEER.

WHERE THE NATURAL SLOPE APPROACHES OR EXCEEDS THE DESIGN SLOPE RATIO, SPECIAL RECOMMENDATIONS WILL BE PROVIDED BY THE GEOTECHNICAL ENGINEERS.

**TYPICAL FILL ABOVE NATURAL SLOPE
EAST COUNTY SUBSTATION
SAN DIEGO GAS & ELECTRIC
JACUMBA, CALIFORNIA**

URS	NOT TO SCALE		CHECKED BY: PB	DATE: 06-10-08	FIG. NO:
			PM: MEH	PROJ. NO: 27667021.00030	10

Twenty seven small-diameter borings (designated B-1 through B-27) were performed between March 27 and April 11, 2008 to depths ranging from about 25 to 85 feet below existing grade. The borings were advanced by Pacific Drilling of San Diego, California with a Unimog Marl M5 all terrain truck mounted drill rig that utilized 6-inch or 8-inch diameter hollow stem augers. The borings were backfilled according to County of San Diego Department of Environmental Health (DEH) requirements. URS obtained approval for alternate backfill materials consisting of a 3-foot bentonite seal at the bottom of the boring followed by native soil cuttings with 2-foot bentonite seal placed every 10 feet and a surface seal placed from 1 to 3 feet below the ground surface.

Relatively intact samples were obtained from the borings with a modified California sampler lined with four-inch-long brass tubes and driven using a 140-pound hammer dropping 30 inches. Disturbed samples were obtained from the borings using Standard Penetration Test (SPT) samplers driven with a 140-pound hammer dropping 30 inches. The number of blows shown on the logs is the field blow count for the last 12 inches of penetration (or less for blowcounts greater than 50). The reported field blowcounts have not been corrected for sampler size. Bulk samples were collected in 5-gallon buckets and sealed with lids and smaller grab samples were placed in sealed plastic bags prior to transport to our laboratory.

Twenty-three test pits (designated TP-1 through TP-23) were excavated between April 15 and 18, 2008 to depths ranging from about 4 to 10 feet below existing grade. The test pits were excavated by San Diego Concrete Cutting of San Diego, California with a rubber tired, four wheel drive Komatsu WB140 backhoe with a 24 inch bucket. The upper 1.5 to 2 feet of material was removed and placed to the side of the excavation for observation by the environmental monitors on site. This upper material was then replaced on the surface of the nominally compacted backfilled excavation. Bulk and grab samples were collected by hand from the spoils pile or from the sidewalls of the trench no deeper than 5 feet below the surface. Deeper bulk and grab samples were collected using the backhoe bucket. All samples were preserved in the same manner previously described.

The materials encountered in the borings and test pits were classified in accordance with the Unified Soil Classification System. Samples were typically collected at five-foot depth intervals or changes in stratigraphy, removed from the sampler, classified in the field, sealed to preserve the natural moisture content, and returned to our laboratory for further examination and testing.

The locations of all explorations were recorded on a hand-held Global Positioning System (GPS) unit and plotted on the site plan using the topography on the conceptual grading plan provided by SDG&E. The ground surface elevation at each exploration was obtained from the plotted locations on the electronic topographic layer.

The Key to Logs is presented on Figure A-1. Logs of the borings are presented on Figures A-2 through A-28; test pit logs are presented on Figures A-29 through A-51.

Project: East County Substation
Project Location: Jacumba, California
Project Number: 27667021.00030

Key to Logs

Sheet 1 of 1

Elevation, feet	Depth, feet	SAMPLES		Blows per foot	Graphic Log	MATERIAL DESCRIPTION	Well Detail	Water Content, %	Dry Density,pcf	REMARKS AND OTHER TESTS
		Type	Number							
1	2	3	4	5	6	7	8	9	10	11

COLUMN DESCRIPTIONS

- | | |
|---|--|
| <p>1 Elevation: Elevation in feet referenced to mean sea level (MSL) or site datum.</p> <p>2 Depth: Depth in feet below the ground surface.</p> <p>3 Sample Type: Type of soil sample collected at depth interval shown; sampler symbols are explained below.</p> <p>4 Sample Number: Sample identification number.</p> <p>5 Sampling Resistance: Number of blows required to advance driven sampler each 6-inch drive interval, or distance noted, using a 140-lb hammer with a 30-inch drop.</p> <p>6 Graphic Log: Graphic depiction of subsurface material encountered; typical symbols are explained below.</p> <p>7 Material Description: Description of material encountered; may include relative density / consistency, moisture, color, and grain size.</p> | <p>8 Well Detail: Graphic depiction of piezometer or well installation; materials are listed in header block; graphic symbols are explained below.</p> <p>9 Water Content: Water content of soil sample measured in laboratory, expressed as percentage of dry weight of specimen.</p> <p>10 Dry Unit Weight: Dry density of soil sample measured in laboratory, in pounds per cubic foot.</p> <p>11 Remarks and Other Tests: Comments and observations regarding drilling or sampling made by driller or field personnel. Other field and laboratory test results, using the following abbreviations:</p> <p>SA Sieve analysis (%<#200 sieve)
 WA Wash analysis (%<#200 sieve)
 LL Liquid limit (from Atterberg limits test), %
 PI Plasticity Index (LL-PL), %; NP=nonplastic
 EI Expansion Index
 CORR Corrosivity Test
 COMP Compaction Test
 R-Value R-Value Test</p> |
|---|--|

TYPICAL SOIL GRAPHIC SYMBOLS

Silty SAND (SM)	SAND (SP)	SAND with silt (SP-SM)	Well graded SAND (SW)
Clayey, silty SAND (SC-SM)	Well graded SAND with silt (SW-SM)	Clayey SAND (SC)	SILT (ML)
Lean CLAY (CL)	GRAVEL (GM)		

TYPICAL WELL GRAPHIC SYMBOLS

Blank screen in concrete	Blank casing in bentonite seal
Blank screen in sand filter pack	0.020" dia. PVC slotted screen in sand filter pack
End cap	

TYPICAL SAMPLER GRAPHIC SYMBOLS

Bulk Sample (Bag)	Bulk Sample (Bucket)
Modified California sampler	Standard Penetration Test sampler

OTHER GRAPHIC SYMBOLS

- First water encountered at time of drilling and sampling (ATD)
- Water level measured at specified time after completion of drilling and sampling
- Minor change in material properties within a stratum
- Inferred or gradational contact between strata

GENERAL NOTES

- Soil classifications are based on the Unified Soil Classification System. Descriptions and stratum lines are interpretive; actual lithologic changes may be gradual. Field descriptions may have been modified to reflect results of lab tests.
- Descriptions on these logs apply only at the specific boring locations and at the time the borings were advanced. They are not warranted to be representative of subsurface conditions at other locations or times.

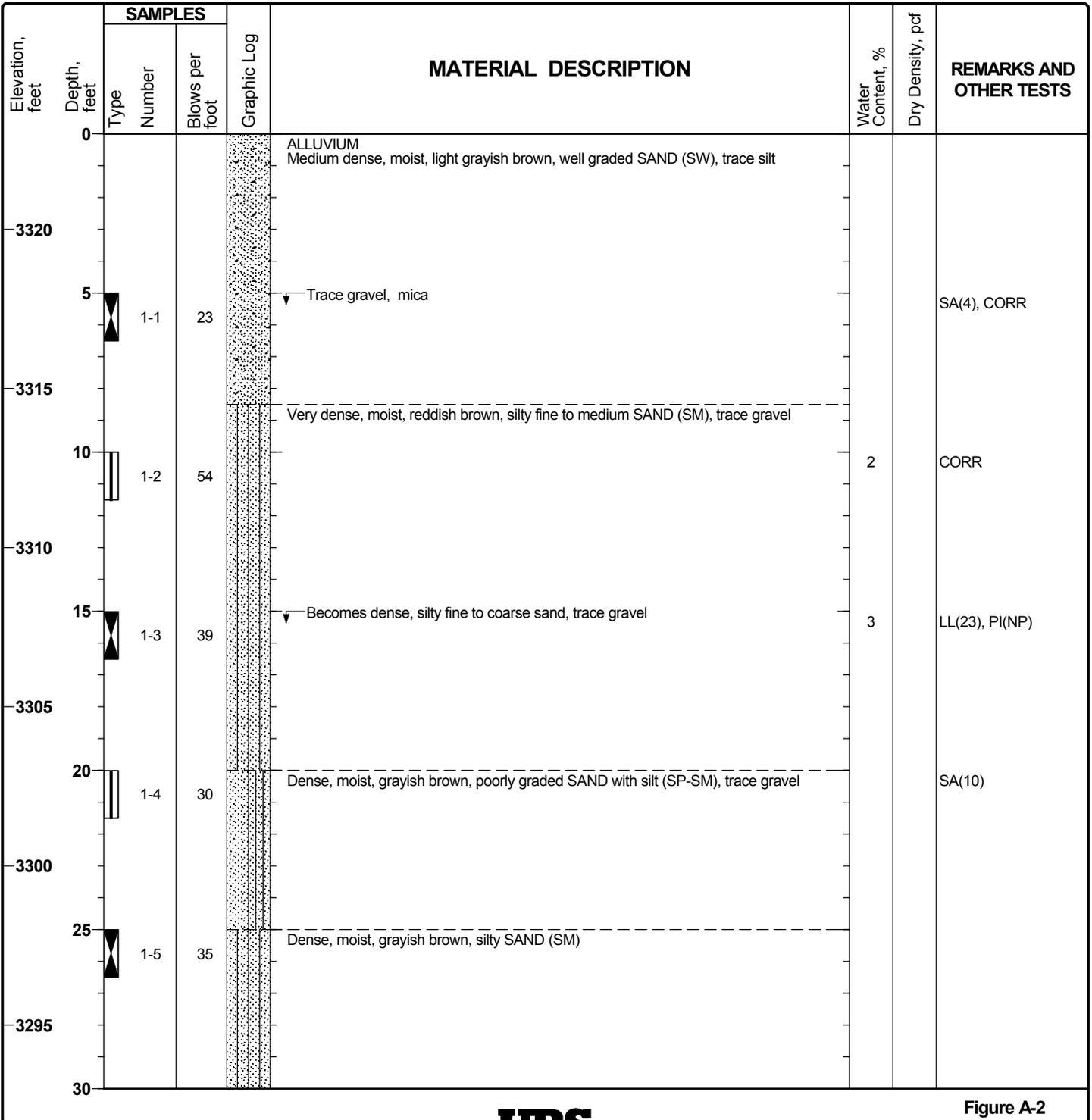
Report: GEO_SOIL_WELL_KEY; File: 27667021.GPJ; 6/5/2008 keyhsa

Project: East County Substation
 Project Location: Jacumba, California
 Project Number: 27667021.00030

Log of Boring B-1

Sheet 1 of 2

Date(s) Drilled	03/27/08	Logged By	A. Podwiltz	Checked By	P. Balasubramanyam
Drilling Method	Hollow Stem Auger	Drill Bit Size/Type	6 inch finger bit	Total Depth of Borehole	51.5 feet
Drill Rig Type	Unimog Marl M5 All Terrain	Drilling Contractor	Pacific Drilling	Approximate Surface Elevation	3,323 Feet
Water Level Depth (Feet)	Not encountered	Sampling Method(s)	ModCal/SPT	Hammer Data	140 lbs/30" drop
Borehole Backfill	Soil cuttings/bentonite chips	Location	N 1809050 E 6603908		



Report: GEO_10_SNA; File: 27667021.GPJ; 6/5/2008 B-1



Figure A-2

Project: East County Substation
 Project Location: Jacumba, California
 Project Number: 27667021.00030

Log of Boring B-1

Sheet 2 of 2

Elevation, feet	Depth, feet	SAMPLES			MATERIAL DESCRIPTION	Water Content, %	Dry Density, pcf	REMARKS AND OTHER TESTS
		Type	Number	Blows per foot				
30		1-6	58		↓ Becomes very dense	5	WA(14)	
3290								
35		1-7	44		↓ Becomes dense			
3285								
40		1-8	55		↓ Becomes very dense, brown			
3280								
45		1-9	50/5"			5	WA(15)	
3275								
50		1-10	50/2"		Very dense, moist, dark brown, clayey silty SAND (SC-SM)	8	LL(27), PI(6), WA(33)	
					Bottom of boring at 51.5 feet			
3270								
55								
3265								
60								
3260								
65								

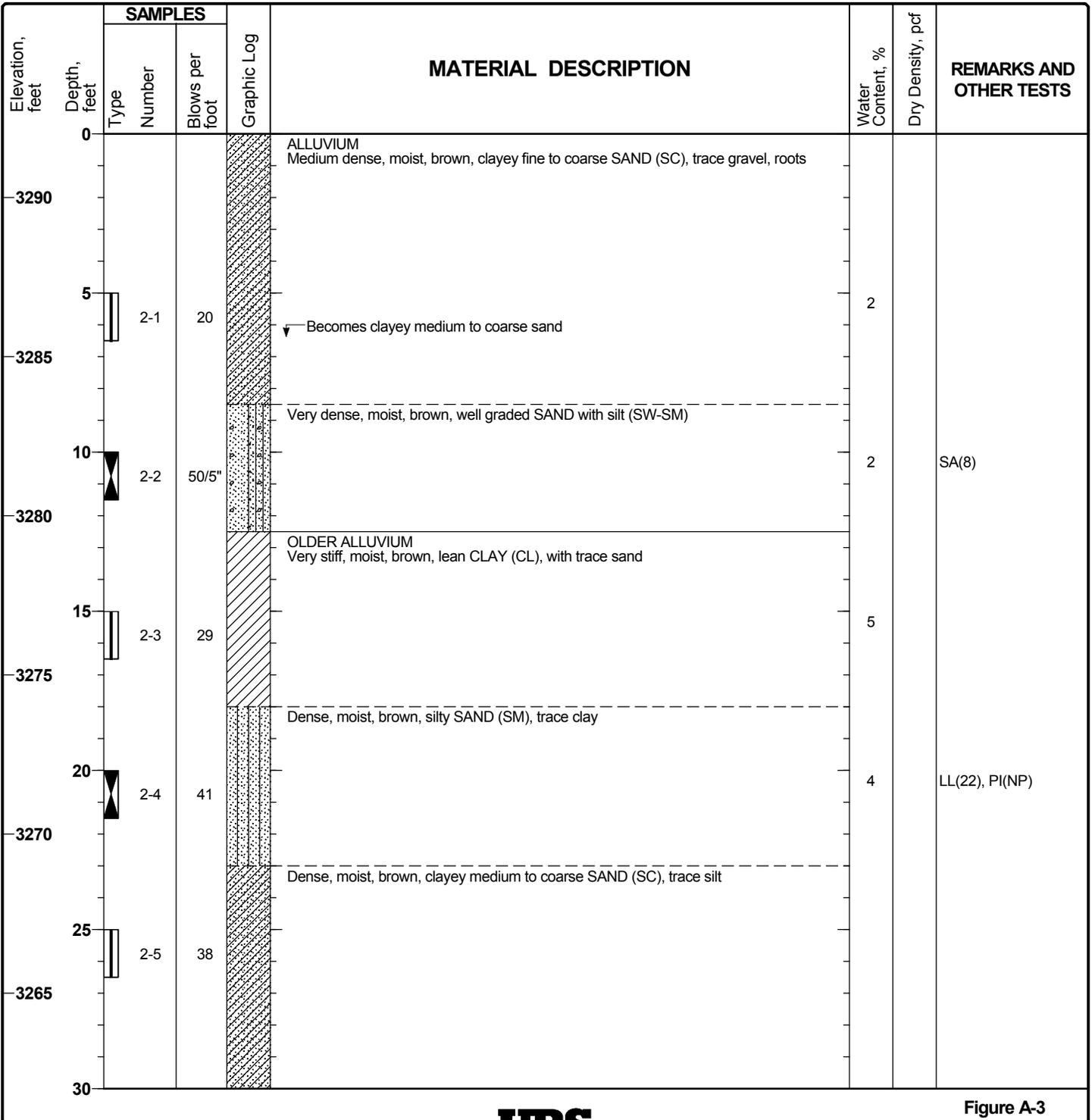
Report: GEO_10_SNA; File: 27667021.GPJ; 6/5/2008 B-1

Project: East County Substation
Project Location: Jacumba, California
Project Number: 27667021.00030

Log of Boring B-2

Sheet 1 of 2

Date(s) Drilled	03/27/08	Logged By	A. Podwiltz	Checked By	P. Balasubramanyam
Drilling Method	Hollow Stem Auger	Drill Bit Size/Type	6 inch finger bit	Total Depth of Borehole	31.5 feet
Drill Rig Type	Unimog Marl M5 All Terrain	Drilling Contractor	Pacific Drilling	Approximate Surface Elevation	3,292 Feet
Water Level Depth (Feet)	Not encountered	Sampling Method(s)	ModCal/SPT	Hammer Data	140 lbs/30" drop
Borehole Backfill	Soil cuttings/bentonite chips	Location	N 1807782 E 6602682		



Report: GEO_10_SNA; File: 27667021.GPJ; 6/5/2008 B-2



Figure A-3

Project: East County Substation
 Project Location: Jacumba, California
 Project Number: 27667021.00030

Log of Boring B-2

Sheet 2 of 2

Elevation, feet	Depth, feet	SAMPLES			MATERIAL DESCRIPTION	Water Content, %	Dry Density, pcf	REMARKS AND OTHER TESTS
		Type	Number	Blows per foot				
30		2-6	37				WA(28)	
3260					Bottom of boring at 31.5 feet			
35								
3255								
40								
3250								
45								
3245								
50								
3240								
55								
3235								
60								
3230								
65								

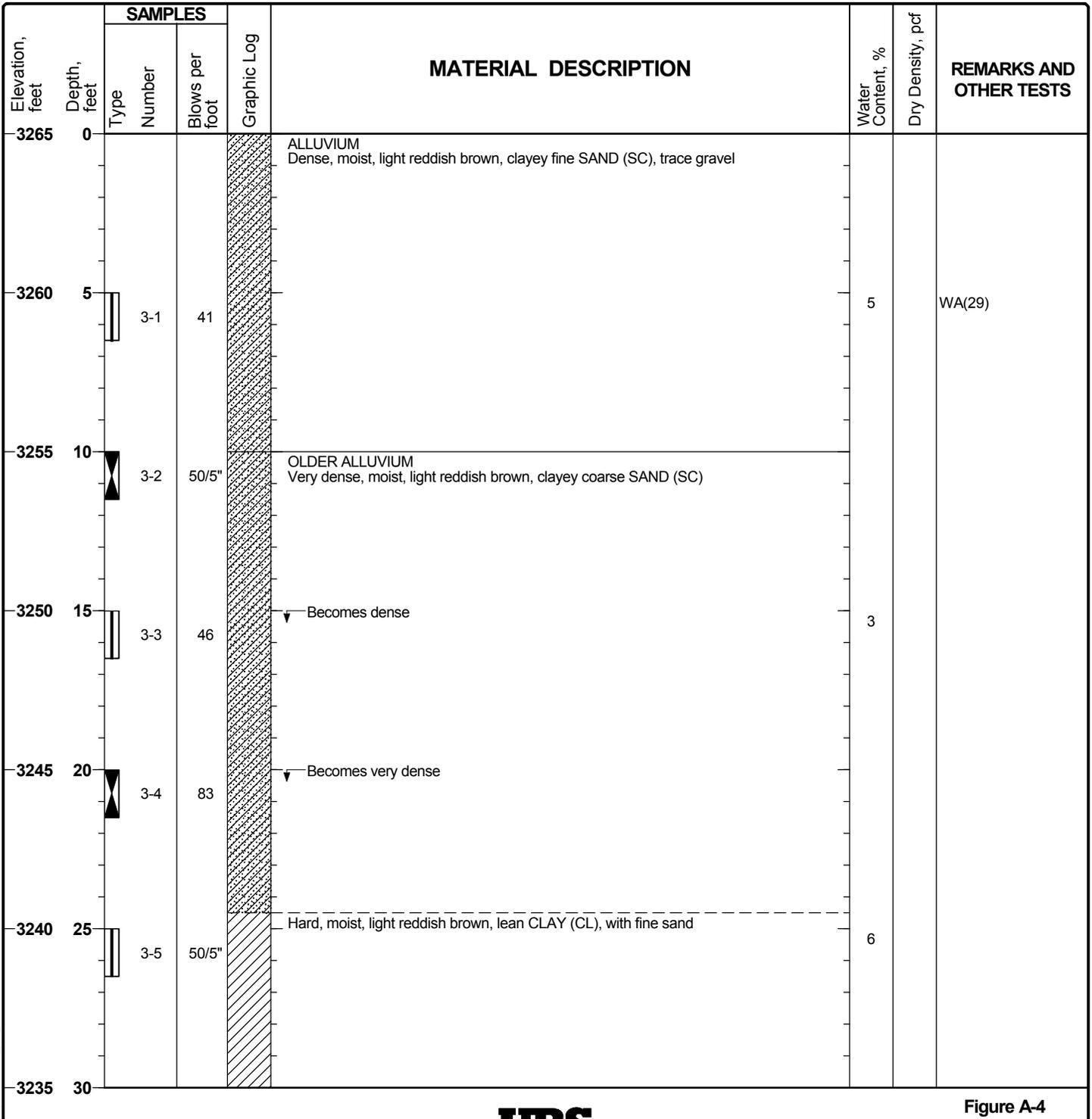
Report: GEO_10_SNA; File: 27667021.GPJ; 6/5/2008 B-2

Project: East County Substation
 Project Location: Jacumba, California
 Project Number: 27667021.00030

Log of Boring B-3

Sheet 1 of 2

Date(s) Drilled	03/28/08	Logged By	A. Podwiltz	Checked By	P. Balasubramanyam
Drilling Method	Hollow Stem Auger	Drill Bit Size/Type	6 inch finger bit	Total Depth of Borehole	36.5 feet
Drill Rig Type	Unimog Marl M5 All Terrain	Drilling Contractor	Pacific Drilling	Approximate Surface Elevation	3,265 Feet
Water Level Depth (Feet)	Not encountered	Sampling Method(s)	ModCal/SPT	Hammer Data	140 lbs/30" drop
Borehole Backfill	Soil cuttings/bentonite chips	Location	N 1807936 E 6602260		



Report: GEO_10_SNA; File: 27667021.GPJ; 6/5/2008 B-3

Project: East County Substation
 Project Location: Jacumba, California
 Project Number: 27667021.00030

Log of Boring B-3

Sheet 2 of 2

Elevation, feet	Depth, feet	SAMPLES			MATERIAL DESCRIPTION	Water Content, %	Dry Density, pcf	REMARKS AND OTHER TESTS
		Type	Number	Blows per foot				
3235	30	3-6	50/5"		Very dense, moist, light grayish red, clayey SAND (SC)	7		
3230	35	3-7	50/5"					
					Bottom of boring at 36.5 feet			
3225	40							
3220	45							
3215	50							
3210	55							
3205	60							
3200	65							

Report: GEO_10_SNA; File: 27667021.GPJ; 6/5/2008 B-3

Project: East County Substation
Project Location: Jacumba, California
Project Number: 27667021.00030

Log of Boring B-4

Sheet 1 of 1

Date(s) Drilled	03/28/08	Logged By	A. Podwiltz	Checked By	P. Balasubramanyam
Drilling Method	Hollow Stem Auger	Drill Bit Size/Type	6 inch finger bit	Total Depth of Borehole	26.5 feet
Drill Rig Type	Unimog Marl M5 All Terrain	Drilling Contractor	Pacific Drilling	Approximate Surface Elevation	3,230 Feet
Water Level Depth (Feet)	Not encountered	Sampling Method(s)	ModCal/SPT	Hammer Data	140 lbs/30" drop
Borehole Backfill	Soil cuttings/bentonite chips	Location	N 1808221 E 6601799		

Elevation, feet	Depth, feet	SAMPLES		Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Density, pcf	REMARKS AND OTHER TESTS
		Type	Number					
3230	0				ALLUVIUM Hard, moist, brown, sandy lean CLAY (CL) with gravels			
			4-1	32				WA(55)
3225	5		4-2	46	↓ Becomes light grayish brown	8		
					OLDER ALLUVIUM Very dense, moist, brown, silty fine to coarse SAND (SM), trace gravel and clay			
3220	10		4-3	50/4"		3		
					Very dense, moist, light grayish brown, clayey fine to coarse SAND (SC)			
3215	15		4-4	60		6		LL(31), PI(10), SA(43), CORR
3210	20		4-5	50/3"				
3205	25		4-6	50/3"				
					Bottom of boring at 26.5 feet			
3200	30							

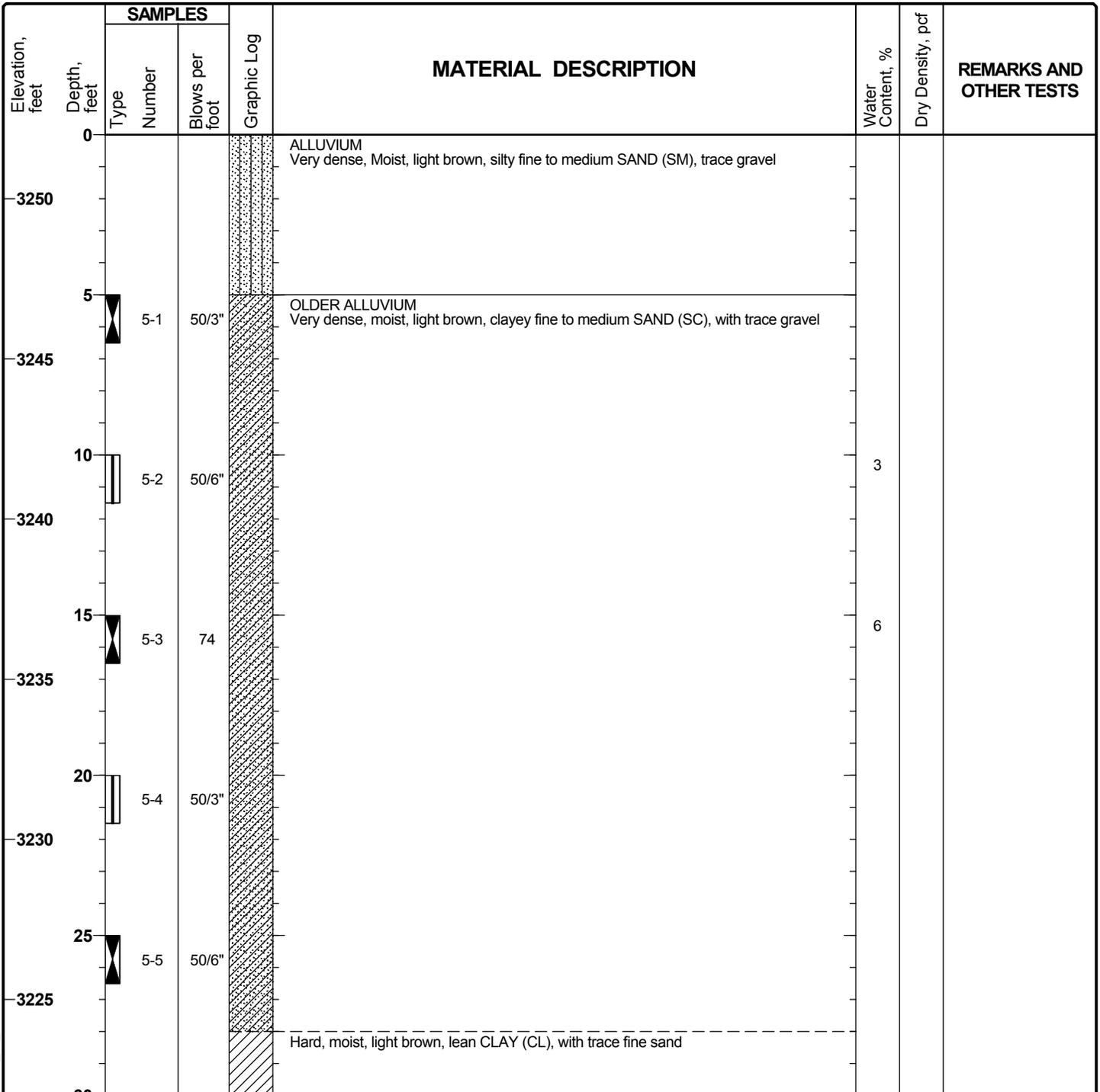
Report: GEO_10_SNA; File: 27667021.GPJ; 6/5/2008 B-4

Project: East County Substation
Project Location: Jacumba, California
Project Number: 27667021.00030

Log of Boring B-5

Sheet 1 of 2

Date(s) Drilled	03/31/08	Logged By	A. Podwiltz	Checked By	P. Balasubramanyam
Drilling Method	Hollow Stem Auger	Drill Bit Size/Type	6 inch finger bit	Total Depth of Borehole	48.5 feet
Drill Rig Type	Unimog Marl M5 All Terrain	Drilling Contractor	Pacific Drilling	Approximate Surface Elevation	3,252 Feet
Water Level Depth (Feet)	Not encountered	Sampling Method(s)	ModCal/SPT	Hammer Data	140 lbs/30" drop
Borehole Backfill	Soil cuttings/bentonite chips	Location	N 1808278 E 6602157		



Report: GEO_10_SNA; File: 27667021.GPJ; 6/5/2008 B-5



Figure A-6

Project: East County Substation
 Project Location: Jacumba, California
 Project Number: 27667021.00030

Log of Boring B-5

Sheet 2 of 2

Elevation, feet	Depth, feet	SAMPLES			MATERIAL DESCRIPTION	Water Content, %	Dry Density, pcf	REMARKS AND OTHER TESTS
		Type	Number	Blows per foot				
3220	30	5-6	50/6"			10		
3215	35	5-7	50/6"	Very dense, light brown, silty fine to medium SAND (SM), with trace clay	5		LL(22), PI(NP)	
3210	40	5-8	50/4"	Hard, moist, light brown, lean CLAY (CL), with trace fine sand				
3205	45	5-9	50					
		5-10	50/3"		9		WA(51)	
				Bottom of boring at 48.5 feet				
3200	50							
3195	55							
3190	60							
65	65							

Report: GEO_10_SNA; File: 27667021.GPJ; 6/5/2008 B-5

Project: East County Substation
 Project Location: Jacumba, California
 Project Number: 27667021.00030

Log of Boring B-6

Sheet 1 of 2

Date(s) Drilled	03/31/08	Logged By	A. Podwiltz	Checked By	P. Balasubramanyam
Drilling Method	Hollow Stem Auger	Drill Bit Size/Type	6 inch finger bit	Total Depth of Borehole	41.5 feet
Drill Rig Type	Unimog Marl M5 All Terrain	Drilling Contractor	Pacific Drilling	Approximate Surface Elevation	3,249 Feet
Water Level Depth (Feet)	Not encountered	Sampling Method(s)	ModCal/SPT	Hammer Data	140 lbs/30" drop
Borehole Backfill	Soil cuttings/bentonite chips	Location	N 1808511 E 6602136		

Elevation, feet	Depth, feet	SAMPLES		Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Density, pcf	REMARKS AND OTHER TESTS
		Type	Number					
0					ALLUVIUM Very stiff, moist, light brown, SILT (ML), with fine sand and trace clay			
3245	5	6-1	25					LL(23), PI(3)
3240	10	6-2	50/6"		OLDER ALLUVIUM Hard, moist, light brown, lean CLAY (CL), with silt and fine sand	3		
3235	15	6-3	50/3"					
3230	20	6-4	50/6"					
3225	25	6-5	50/6"					
3220	30							

Report: GEO_10_SNA; File: 27667021.GPJ; 6/5/2008 B-6



Figure A-7

Project: East County Substation
 Project Location: Jacumba, California
 Project Number: 27667021.00030

Log of Boring B-6

Sheet 2 of 2

Elevation, feet	Depth, feet	SAMPLES		Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Density, pcf	REMARKS AND OTHER TESTS
		Type	Number					
30		6-6	84			6		
3215	35	6-7	50/5"				4	
3210	40	6-8	50/2"					
		Bottom of boring at 41.5 feet						
3205	45							
3200	50							
3195	55							
3190	60							
3185	65							

Report: GEO_10_SNA; File: 27667021.GPJ; 6/5/2008 B-6

Project: East County Substation
 Project Location: Jacumba, California
 Project Number: 27667021.00030

Log of Boring B-7

Sheet 1 of 2

Date(s) Drilled	04/01/08	Logged By	A. Podwiltz	Checked By	P. Balasubramanyam
Drilling Method	Hollow Stem Auger	Drill Bit Size/Type	6 inch finger bit	Total Depth of Borehole	51.5 feet
Drill Rig Type	Unimog Marl M5 All Terrain	Drilling Contractor	Pacific Drilling	Approximate Surface Elevation	3,370 Feet
Water Level Depth (Feet)	Not encountered	Sampling Method(s)	ModCal/SPT	Hammer Data	140 lbs/30" drop
Borehole Backfill	Soil cuttings/bentonite chips	Location	N 1807856 E 6604182		

Elevation, feet	Depth, feet	SAMPLES		Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Density, pcf	REMARKS AND OTHER TESTS
		Type	Number					
3370	0				ALLUVIUM Dense, moist, light brown, silty fine to medium SAND (SM) with gravel			
3365	5	7-1	48			2	107	
3360	10	7-2	70					
					Very dense, moist, light brown, well graded SAND with silt (SW-SM), with trace gravel			
3355	15	7-3	39		↓ Becomes dense	2	115	SA(5)
3350	20	7-4	54		↓ Becomes very dense			CORR
					Very dense, light brown, poorly graded SAND (SP)			
3345	25	7-5	32		↓ Becomes dense	1		CORR
3340	30							

Report: GEO_10_SNA; File: 27667021.GPJ; 6/5/2008 B-7

Project: East County Substation
 Project Location: Jacumba, California
 Project Number: 27667021.00030

Log of Boring B-7

Sheet 2 of 2

Elevation, feet	Depth, feet	SAMPLES		Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Density, pcf	REMARKS AND OTHER TESTS
		Type	Number					
3340	30		7-6	44	With silt	2	98	
3335	35		7-7	40	With trace gravel			
3330	40		7-8	39	Very dense, moist, light grayish yellow, silty medium to coarse SAND (SM), with trace gravel			
3325	45		7-9	54	Becomes very dense	3		
3320	50		7-10	66	With gravel			
					Bottom of boring at 51.5 feet			
3315	55							
3310	60							
3305	65							

Report: GEO_10_SNA; File: 27667021.GPJ; 6/5/2008 B-7

Project: East County Substation
Project Location: Jacumba, California
Project Number: 27667021.00030

Log of Boring B-8

Sheet 1 of 2

Date(s) Drilled	04/01/08	Logged By	A. Podwiltz	Checked By	P. Balasubramanyam
Drilling Method	Hollow Stem Auger	Drill Bit Size/Type	6 inch finger bit	Total Depth of Borehole	51.5 feet
Drill Rig Type	Unimog Marl M5 All Terrain	Drilling Contractor	Pacific Drilling	Approximate Surface Elevation	3,357 Feet
Water Level Depth (Feet)	Not encountered	Sampling Method(s)	ModCal/SPT	Hammer Data	140 lbs/30" drop
Borehole Backfill	Soil cuttings/bentonite chips	Location	N 1808068 E 6603977		

Elevation, feet	SAMPLES			Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Density, pcf	REMARKS AND OTHER TESTS
	Depth, feet	Type	Blows per foot					
0					ALLUVIUM Dense, moist, light yellowish brown, silty fine to medium SAND (SM), with trace gravel			
3355								
5		8-1	30		Medium dense, moist, light yellowish brown, poorly graded SAND (SP)			
3350								
10		8-2	20					WA(3)
3345								
15		8-3	24		Medium dense, moist, light yellowish brown, silty fine to coarse SAND (SM)	3		
3340								
20		8-4	38		Medium dense, moist, light yellowish gray, well graded SAND (SW), with trace silt			CORR
3335								
25		8-5	38					CORR
3330								
30								

Report: GEO_10_SNA; File: 27667021.GPJ; 6/5/2008 B-8



Figure A-9

Project: East County Substation
 Project Location: Jacumba, California
 Project Number: 27667021.00030

Log of Boring B-8

Sheet 2 of 2

Elevation, feet	Depth, feet	SAMPLES		Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Density, pcf	REMARKS AND OTHER TESTS
		Type	Number					
30		8-6	48			3	101	SA(5)
3325								
					Medium dense, moist, light yellowish brown, silty fine to coarse SAND (SM) with gravel			
35		8-7	30					WA(14)
3320								
40		8-8	37					
3315								
45		8-9	38		Trace gravel			
3310								
50		8-10	40			3	100	
3305					Bottom of boring at 51.5 feet			
55								
3300								
60								
3295								
65								

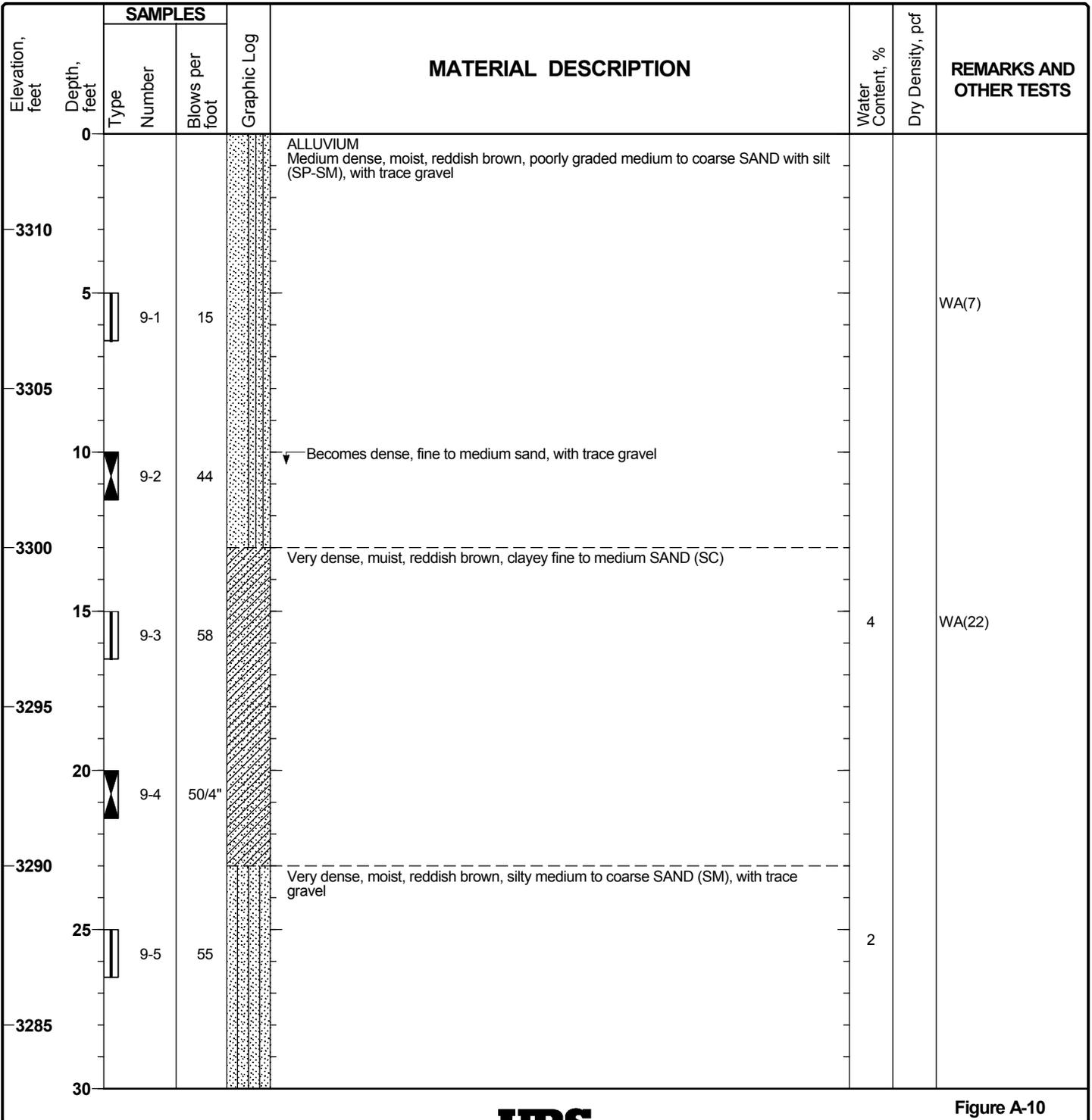
Report: GEO_10_SNA; File: 27667021.GPJ; 6/5/2008 B-8

Project: East County Substation
 Project Location: Jacumba, California
 Project Number: 27667021.00030

Log of Boring B-9

Sheet 1 of 2

Date(s) Drilled	04/01/08	Logged By	A. Podwiltz	Checked By	P. Balasubramanyam
Drilling Method	Hollow Stem Auger	Drill Bit Size/Type	6 inch finger bit	Total Depth of Borehole	46.5 feet
Drill Rig Type	Unimog Marl M5 All Terrain	Drilling Contractor	Pacific Drilling	Approximate Surface Elevation	3,313 Feet
Water Level Depth (Feet)	Not encountered	Sampling Method(s)	ModCal/SPT	Hammer Data	140 lbs/30" drop
Borehole Backfill	Soil cuttings/bentonite chips	Location	N 1807888 E 6603017		



Report: GEO_10_SNA; File: 27667021.GPJ; 6/5/2008 B-9



Figure A-10

Project: East County Substation
 Project Location: Jacumba, California
 Project Number: 27667021.00030

Log of Boring B-9

Sheet 2 of 2

Elevation, feet	Depth, feet	SAMPLES			MATERIAL DESCRIPTION	Water Content, %	Dry Density, pcf	REMARKS AND OTHER TESTS
		Type	Number	Blows per foot				
30		▲	9-6	50/6"				
3280								
35		▭	9-7	52		1		
3275								
40		▲	9-8	70	Very dense, moist, reddish brown, poorly graded fine to coarse SAND (SP), with trace gravel		WA(4)	
3270								
45		▭	9-9	37	↓ Becomes dense			
3265					Bottom of boring at 46.5 feet			
50								
3260								
55								
3255								
60								
3250								
65								

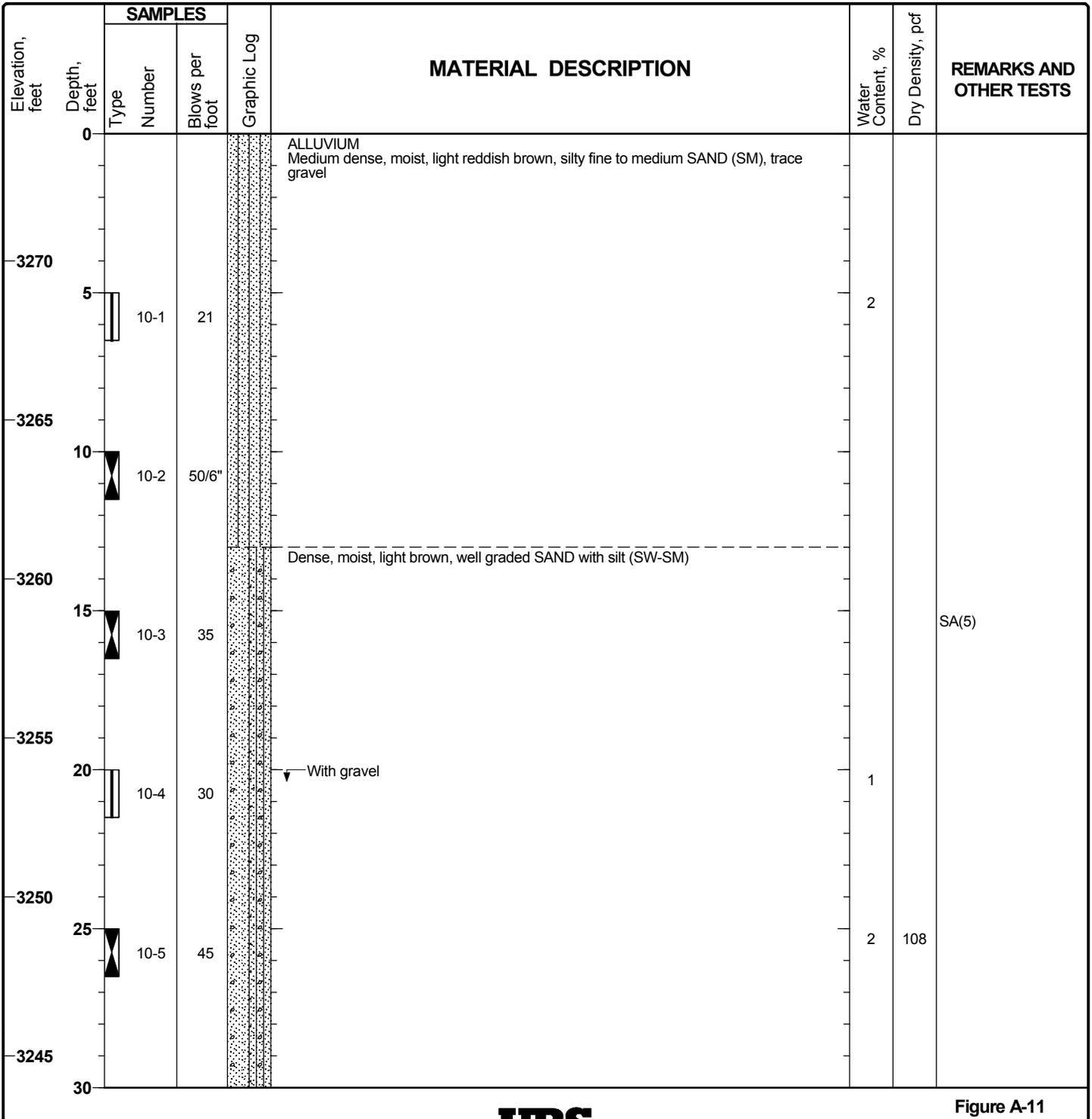
Report: GEO_10_SNA; File: 27667021.GPJ; 6/5/2008 B-9

Project: East County Substation
 Project Location: Jacumba, California
 Project Number: 27667021.00030

Log of Boring B-10

Sheet 1 of 2

Date(s) Drilled	04/02/08	Logged By	A. Podwiltz	Checked By	P. Balasubramanyam
Drilling Method	Hollow Stem Auger	Drill Bit Size/Type	6 inch finger bit	Total Depth of Borehole	56.5 feet
Drill Rig Type	Unimog Marl M5 All Terrain	Drilling Contractor	Pacific Drilling	Approximate Surface Elevation	3,274 Feet
Water Level Depth (Feet)	Not encountered	Sampling Method(s)	ModCal/SPT	Hammer Data	140 lbs/30" drop
Borehole Backfill	Soil cuttings/bentonite chips	Location	N 1807650 E 6602290		



Report: GEO_10_SNA; File: 27667021.GPJ; 6/5/2008 B-10

Project: East County Substation
 Project Location: Jacumba, California
 Project Number: 27667021.00030

Log of Boring B-10

Sheet 2 of 2

Elevation, feet	Depth, feet	SAMPLES		Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Density, pcf	REMARKS AND OTHER TESTS
		Type	Number					
30			10-6	37				
3240								
35			10-7	54	OLDER ALLUVIUM Very dense, moist, light brown, clayey SAND (SC)			
3235								
40			10-8	21	↓ Becomes medium dense	7		SA(31)
3230								
45			10-9	57	↓ Becomes very dense			
3225								
50			10-10	50/4"				
3220								
55			10-11	75				
					Refusal at 56.5 feet			
3215								
60								
3210								
65								

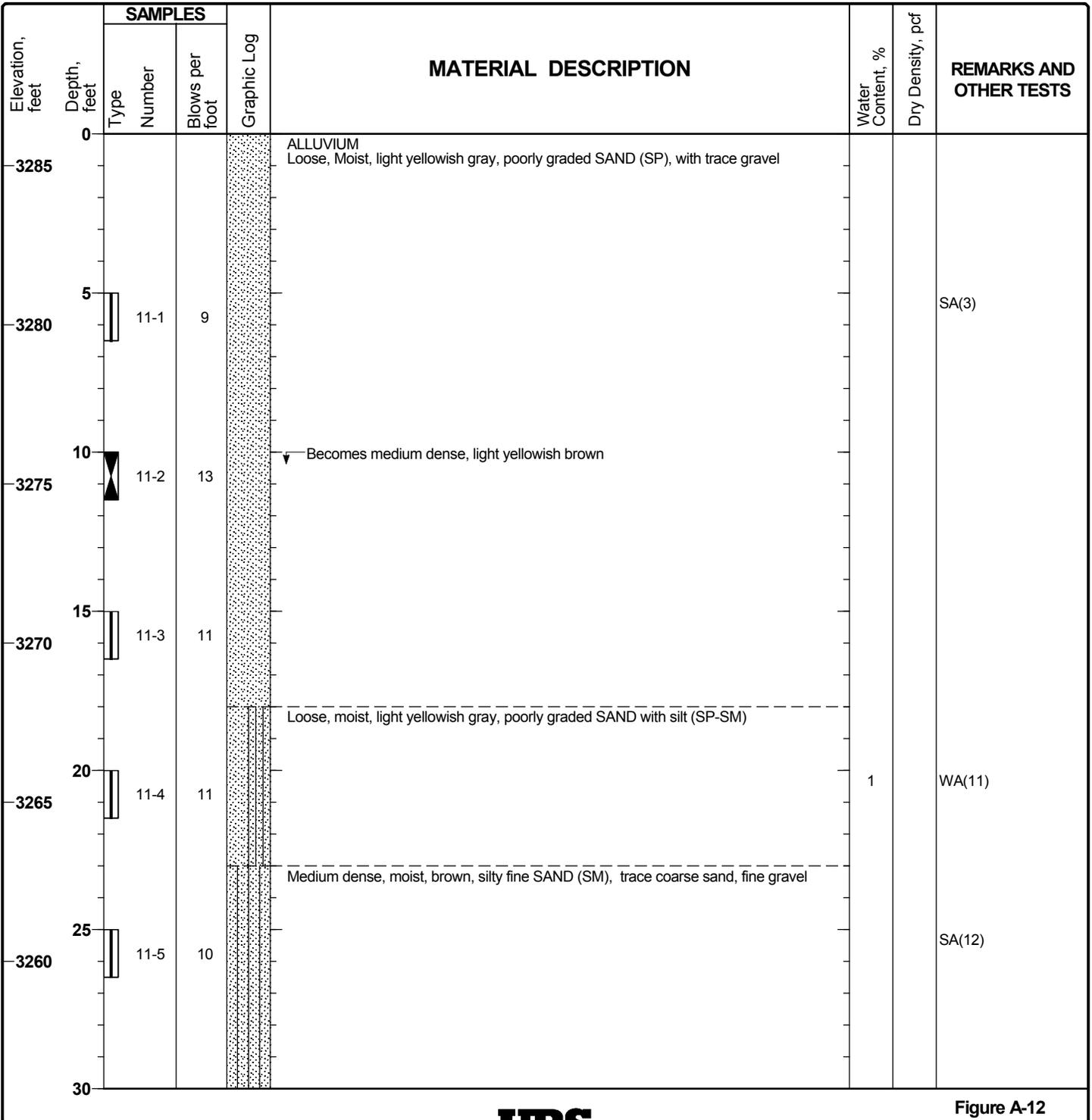
Report: GEO_10_SNA; File: 27667021.GPJ; 6/5/2008 B-10

Project: East County Substation
 Project Location: Jacumba, California
 Project Number: 27667021.00030

Log of Boring B-11

Sheet 1 of 2

Date(s) Drilled	04/02/08	Logged By	A. Podwiltz	Checked By	P. Balasubramanyam
Drilling Method	Hollow Stem Auger	Drill Bit Size/Type	6 inch finger bit	Total Depth of Borehole	51.5 feet
Drill Rig Type	Unimog Marl M5 All Terrain	Drilling Contractor	Pacific Drilling	Approximate Surface Elevation	3,286 Feet
Water Level Depth (Feet)	Not encountered	Sampling Method(s)	ModCal/SPT	Hammer Data	140 lbs/30" drop
Borehole Backfill	Soil cuttings/bentonite chips	Location	N 1807381 E 6602302		



Report: GEO_10_SNA; File: 27667021.GPJ; 6/5/2008 B-11



Figure A-12

Project: East County Substation
 Project Location: Jacumba, California
 Project Number: 27667021.00030

Log of Boring B-11

Sheet 2 of 2

Elevation, feet	Depth, feet	SAMPLES		Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Density, pcf	REMARKS AND OTHER TESTS
		Type	Number					
30								
3255		11-6	22		↓ Becomes silty fine to medium sand	5	100	
35								
3250		11-7	20					
40								
3245		11-8	79		Very dense, moist, light yellowish brown, silty fine to coarse SAND (SM)			
45								
3240		11-9	42					
50								
3235		11-10	63		Very dense, moist, white, clayey fine SAND (SC) with gravel	4		SA(38)
					Bottom of boring at 51.5 feet			
55								
3230								
60								
3225								
65								

Report: GEO_10_SNA; File: 27667021.GPJ; 6/5/2008 B-11