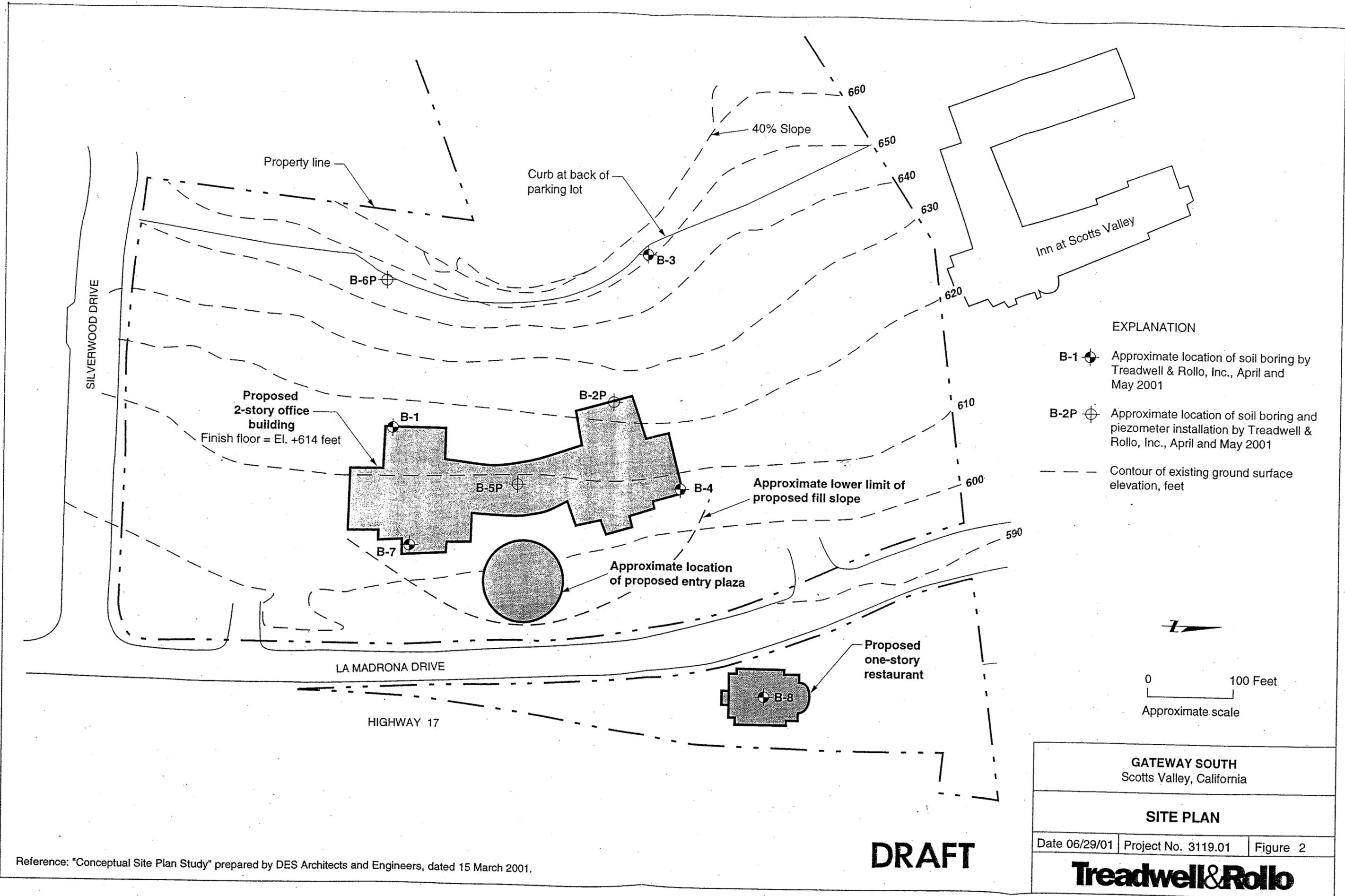
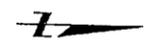


TREADWELL & ROLLO SITE PLAN



EXPLANATION

- B-1  Approximate location of soil boring by Treadwell & Rollo, Inc., April and May 2001
- B-2P  Approximate location of soil boring and piezometer installation by Treadwell & Rollo, Inc., April and May 2001
-  Contour of existing ground surface elevation, feet



0 100 Feet
Approximate scale

GATEWAY SOUTH Scotts Valley, California		
SITE PLAN		
Date 06/29/01	Project No. 3119.01	Figure 2
Treadwell & Rollo		

DRAFT

Reference: "Conceptual Site Plan Study" prepared by DES Architects and Engineers, dated 15 March 2001.

TREADWELL & ROLLO BORING LOGS

PROJECT: GATEWAY SOUTH Scotts Valley, California	Log of Boring B-1
PAGE 1 OF 1	

Boring location: See Site Plan, Figure 2	Logged by: T. Rubeo
Date started: 4/30/01	Date finished: 4/30/01
Drilling method: 6-inch-O.D. hollow-stem augers	
Hammer weight/drop: 140 lbs./30 inches	Hammer type: Safety

Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT).	LABORATORY TEST DATA
--	-----------------------------

DEPTH (feet)	SAMPLES			LITHOLOGY	MATERIAL DESCRIPTION	Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
	Sampler Type	Sample	SPT N-Value ¹								
Surface Elevation: +617 feet ²											
1				SC	CLAYEY SAND (SC) dark brown, loose, moist, with organics grades olive -gray, wet Particle Size Analysis, see Figure B-1 (5/01/01, 9:00 a.m.) medium dense				38.9	16.7	
2	S&H		9								
3											
4	S&H		4								
5											
6	SPT		16						36.0	22.4	
7											
8				SP	SAND (SP) yellow-brown, very dense, wet, medium-grained, trace clay brown, dense, wet						
9	SPT		74								
10											
11											
12											
13											
14	SPT		48								
15											
16					DIORITE orange, black and white, strong, hard, moderately weathered						
17											
18											
19	SPT		50/ 1"								
20											
21											
22											
23											
24											
25											
26											
27											
28											
29											
30											

COLLUVIUM

TEST GEOTECH LOG 311901.GPJ T&R.GDT 6/29/01

Boring terminated at a depth of 18.6 feet.
 Boring backfilled with grout.
 Groundwater encountered at a depth of 5.0 feet.

¹ S&H blow counts converted using a factor of 0.6.
² Elevation based on Mean Sea Level (MSL).

Treadwell & Rollo	
Project No.: 3119.01	Figure: A-1

PROJECT: GATEWAY SOUTH
 Scotts Valley, California

Log of Boring B-2P

PAGE 1 OF 1

Boring location: See Site Plan, Figure 2

Date started: 4/30/01 Date finished: 4/30/01

Drilling method: 6-inch-O.D. hollow-stem augers

Logged by: T. Rubeo

Hammer weight/drop: 140 lbs./30 inches Hammer type: Safety

Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT).

DEPTH (feet)	SAMPLES			LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA					
	Sampler Type	Sample	SPT N-Value ¹			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
Surface Elevation: +624 feet ²											
1					SAND with CLAY (SP-SC) dark brown, loose to medium dense, moist, with organics						
2	S&H		10	SP-SC							
3											
4	S&H		10								
5					▼ brown, wet, medium grained (05/01/01, 11:40 a.m.) ▼ (04/30/01, 12:45 p.m.)						
6	SPT		61		SAND with SILT (SP-SM) light brown, very dense, wet						
7											
8											
9	SPT		50/4"								
10				SP-SM	Particle Size Analysis, see Figure B-1			7.5	12.9		
11											
12											
13											
14	SPT		50/3"								
15											
16											
17					DIORITE orange-black and white, moderately strong, highly weathered, moderately hard						
18											
19	SPT		50/3"								
20											
21											
22											
23					white and black, slightly weathered, hard						
24	SPT		50/2"								
25											
26											
27											
28											
29											
30											

COLLUVIUM

TEST GEOTECH LOG 311901.GPJ T&R.GDT 6/29/01

Boring terminated at a depth of 23.6 feet.
 Boring backfilled converted to piezometer.
 Water encountered at a depth of 4.5 feet.

¹ S&H blow counts converted using a factor of 0.6.
² Elevation based on Mean Sea Level (MSL).

Treadwell & Rollo

Project No.: 3119.01 Figure: A-2

PROJECT: GATEWAY SOUTH Scotts Valley, California	<h2 style="margin: 0;">Log of Boring B-3</h2>
PAGE 1 OF 1	

Boring location: See Site Plan, Figure 2	Logged by: T. Rubeo
Date started: 4/30/01	Date finished: 4/30/01
Drilling method: 6-inch-O.D. hollow-stem augers	
Hammer weight/drop: 140 lbs./30 inches	Hammer type: Safety

Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT).	LABORATORY TEST DATA
--	-----------------------------

DEPTH (feet)	SAMPLES			LITHOLOGY	MATERIAL DESCRIPTION	Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft	
	Sampler Type	Sample	SPT N-Value ¹									
Surface Elevation: +650 feet ²												
1					SAND (SP) dark brown with orange mottling, medium dense, moist, medium-grained, trace organics light brown, no organics, medium dense, to dense very dense, fine- to medium-grained gray-brown, medium-grained SP trace clay orange mottling, wet yellow-brown, wet							
2	S&H	█	11									
3												
4	S&H	█	28									
5												
6	SPT	▲	54								7.4	
7												
8												
9	SPT	▲	67									
10												
11												
12												
13												
14	SPT	▲	50/ 5"									
15												
16												
17												
18												
19	SPT	▲	50/ 5"									
20												
21												
22												
23												
24	SPT	▲	50/ 6"									
25												
26												
27												
28												
29												
30												

TEST GEOTECH LOG 311901.GPJ T&R.GDT 6/25/01

Boring terminated at a depth of 24.0 feet.
 Boring backfilled with grout.
 Groundwater not encountered at time of drilling.

¹ S&H blow counts converted using a factor of 0.6.
² Elevation based on Mean Sea Level (MSL).

Treadwell & Rollo	
Project No.: 3119.01	Figure: A-3

PROJECT: **GATEWAY SOUTH**
Scotts Valley, California

Log of Boring B-4

Boring location: See Site Plan, Figure 2

Logged by: T. Rubeo

Date started: 4/30/01

Date finished: 4/30/01

Drilling method: 6-inch-O.D. hollow-stem augers

Hammer weight/drop: 140 lbs./30 inches

Hammer type: Safety

Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT).

LABORATORY TEST DATA

DEPTH (feet)	SAMPLES			LITHOLOGY	MATERIAL DESCRIPTION	Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
	Sampler Type	Sample	SPT N-Value ¹								
Surface Elevation: +608 feet ²											
1				SC- CL	CLAYEY SAND/SANDY CLAY (SC/CL) dark brown, medium dense and stiff, moist						
2	S&H		16								
3				SP	SAND (SP) gray-brown, dense, moist, trace silt						
4	S&H		35								
5				SP	light brown, very dense						
6	SPT		62								
7											
8											
9	SPT		50/ 1"		drilling refusal (bedrock?)						
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
24											
25											
26											
27											
28											
29											
30											

COLLUVIUM

Boring terminated at a depth of 9.0 feet.
Boring backfilled with grout.
Groundwater not encountered at time of drilling.

¹ S&H blow counts converted using a factor of 0.6.
² Elevation based on Mean Sea Level (MSL).

Treadwell & Rollo

Project No.:

3119.01

Figure:

A-4

PROJECT: GATEWAY SOUTH Scotts Valley, California	<h2 style="margin: 0;">Log of Boring B-5P</h2>
PAGE 1 OF 1	

Boring location: See Site Plan, Figure 2	Logged by: T. Rubeo
Date started: 4/30/01	Date finished: 4/30/01
Drilling method: 6-inch-O.D. hollow-stem augers	
Hammer weight/drop: 140 lbs./30 inches	Hammer type: Safety
Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT).	

DEPTH (feet)	SAMPLES			LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA					
	Sampler Type	Sample	SPT N-Value ¹			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
Surface Elevation: +610 feet ²											
1				CL	SANDY CLAY (CL) dark brown with orange spots, very stiff, moist, with some angular gravel	COLLUVIUM					
2	S&H		28		LL = 36, PI = 15; see Figure B-2						
3				SC	CLAYEY SAND with GRAVEL (SC) gray-brown, dense, moist						
4	S&H		33								
5				SC	very dense						
6	SPT		50/6"								
7				SP	SAND (SP) brown, very dense, wet, coarse-grained						
8											
9	SPT		80								
10				DIORITE	orange and black, hard, moderately strong to strong, deeply weathered (05/01/01, 10:15 a.m.) ▽ (05/01/01, 11:30 a.m.) ▽						
11											
12				ANDESITE	gray, very fine-grained, with mica inclusions, moderately strong to strong, hard, little weathering						
13											
14	SPT		50/3"								
15				ANDESITE	gray, very fine-grained, with mica inclusions, moderately strong to strong, hard, little weathering						
16											
17				ANDESITE	gray, very fine-grained, with mica inclusions, moderately strong to strong, hard, little weathering						
18											
19	SPT		50/0.5"								
20											
21											
22											
23											
24											
25											
26											
27											
28											
29											
30											

TEST GEOTECH LOG 311901.GPJ T&R.GDT 6/25/01

 Boring terminated at a depth of 20.0 feet.
 Boring backfilled converted to piezometer.
 Water encountered at a depth of 5.0 feet.

¹ S&H blow counts converted using a factor of 0.6.
² Elevation based on Mean Sea Level (MSL).

Treadwell & Rollo	
Project No.: 3119.01	Figure: A-5

PROJECT: **GATEWAY SOUTH**
 Scotts Valley, California

Log of Boring B-6P

PAGE 1 OF 1

Boring location: See Site Plan, Figure 2

Date started: 5/1/01 Date finished: 5/1/01

Drilling method: 6-inch-O.D. hollow-stem augers

Hammer weight/drop: 140 lbs./30 inches Hammer type: Safety

Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT).

Logged by: T. Rubeo

LABORATORY TEST DATA

DEPTH (feet)	SAMPLES			LITHOLOGY	MATERIAL DESCRIPTION	Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
	Sampler Type	Sample	SPT N-Value								
Surface Elevation: +645 feet ²											
1				SM	SILTY SAND (SM) dark brown, loose, moist, some organics	COLLUVIUM ↑					
2	S&H		5								
3				SP	SAND (SP) brown, medium dense, moist light brown, dense brown, very dense brown with black seams wet						
4	S&H		16								
5											
6	SPT		48								
7											
8											
9	SPT		92/ 11"								
10											
11											
12											
13											
14	SPT		83/ 10"								
15											
16											
17											
18											
19	SPT		50/ 6"								
20											
21											
22											
23											
24	SPT		50/ 3"								
25											
26											
27											
28											
29											
30											

Boring terminated at a depth of 24.25 feet.
 Boring backfilled converted to piezometer.
 Groundwater not encountered at time of drilling..

¹ S&H blow counts converted using a factor of 0.6.
² Elevation based on Mean Sea Level (MSL).

Treadwell & Rollo

Project No.: 3119.01 Figure: A-6

TEST GEOTECH LOG 311901.GPJ T&R.GDT. 6/29/01

PROJECT: GATEWAY SOUTH
Scotts Valley, California

Log of Boring B-7

Boring location: See Site Plan, Figure 2

Logged by: T. Rubeo

Date started: 5/1/01

Date finished: 5/1/01

Drilling method: 6-inch-O.D. hollow-stem augers

Hammer weight/drop: 140 lbs./30 inches

Hammer type: Safety

LABORATORY TEST DATA

Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT).

DEPTH (feet)	SAMPLES			LITHOLOGY	MATERIAL DESCRIPTION	Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft	
	Sampler Type	Sample	SPT N-value ¹									
Surface Elevation: +603 feet ²												
1				SP-SM	SAND with SILT (SP-SM) gray-brown, medium dense, wet							
2	S&H		14									
3												
4	S&H		40		dense, moist, iron-oxide staining, trace clay							
5												
6	SPT		47		with gravel [weathered sandstone]							
7												
8				ANDESITE	gray, with mica inclusions, moderately weathered, weak to moderately strong							
9	SPT		50/ 2"									
10												
11												
12												
13												
14	SPT		50/ 1"									
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												

Boring terminated at a depth of 14.0 feet.
Boring backfilled with grout.
Groundwater not encountered at time of drilling.

¹ S&H blow counts converted using a factor of 0.6.
² Elevation based on Mean Sea Level (MSL).

Treadwell & Rollo

Project No.: 3119.01

Figure:

A-7

PROJECT: GATEWAY SOUTH Scotts Valley, California	<h2 style="margin: 0;">Log of Boring B-8</h2>
--	---

Boring location: See Site Plan, Figure 2	Logged by: T. Rubeo
Date started: 5/1/01	Date finished: 5/1/01
Drilling method: 6-inch-O.D. hollow-stem augers	
Hammer weight/drop: 140 lbs./30 inches	Hammer type: Safety
Sampler: Sprague & Henwood (S&H), Standard Penetration Test (SPT).	

DEPTH (feet)	SAMPLES			LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA							
	Sampler Type	Sample	SPT N-Value ¹			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft		
Surface Elevation: +595 feet ²													
1				SM	SILTY SAND with GRAVEL (SM) gray and orange, dense, dry to moist medium dense dense CRUSHED SANDSTONE FILL (indicated by vertical arrow)								
2	S&H		34										
3													
4	S&H		24									36.1	78
5													
6	S&H		31									36.9	77
7													
8				SM	SILTY SAND (SM) dark brown, very dense, moist, trace organics, partially cemented gray-brown grading to brown, medium dense to dense, wet with gravel, dense								
9	S&H		50/ 5"										
10													
11													
12													
13													
14	S&H		29										
15													
16													
17													
18													
19	SPT		36										
20													
21													
22													
23													
24	SPT		31										
25													
26													
27													
28													
29													
30													

Boring terminated at a depth of 25.0 feet.
 Boring backfilled with grout.
 Groundwater not encountered at time of drilling.

¹ S&H blow counts converted using a factor of 0.6.
² Elevation based on Mean Sea Level (MSL).

Treadwell & Rollo	
Project No.: 3119.01	Figure: A-8

TEST GEOTECH LOG 311901.GPJ T&R.LGDT 6/25/01

UNIFIED SOIL CLASSIFICATION SYSTEM

Major Divisions		Symbols	Typical Names
Coarse-Grained Soils (more than half of soil > no. 200 sieve size)	Gravels (More than half of coarse fraction > no. 4 sieve size)	GW	Well-graded gravels or gravel-sand mixtures, little or no fines
		GP	Poorly-graded gravels or gravel-sand mixtures, little or no fines
		GM	Silty gravels, gravel-sand-silt mixtures
		GC	Clayey gravels, gravel-sand-clay mixtures
	Sands (More than half of coarse fraction < no. 4 sieve size)	SW	Well-graded sands or gravelly sands, little or no fines
		SP	Poorly-graded sands or gravelly sands, little or no fines
		SM	Silty sands, sand-silt mixtures
		SC	Clayey sands, sand-clay mixtures
Fine-Grained Soils (more than half of soil < no. 200 sieve size)	Silts and Clays LL = < 50	ML	Inorganic silts and clayey silts of low plasticity, sandy silts, gravelly silts
		CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, lean clays
		OL	Organic silts and organic silt-clays of low plasticity
	Silts and Clays LL = > 50	MH	Inorganic silts of high plasticity
		CH	Inorganic clays of high plasticity, fat clays
		OH	Organic silts and clays of high plasticity
Highly Organic Soils		PT	Peat and other highly organic soils

SAMPLE DESIGNATIONS/SYMBOLS

GRAIN SIZE CHART		
Classification	Range of Grain Sizes	
	U.S. Standard Sieve Size	Grain Size in Millimeters
Boulders	Above 12"	Above 305
Cobbles	12" to 3"	305 to 76.2
Gravel coarse fine	3" to No. 4	76.2 to 4.76
	3" to 3/4"	76.2 to 19.1
	3/4" to No. 4	19.1 to 4.76
Sand coarse medium fine	No. 4 to No. 200	4.76 to 0.074
	No. 4 to No. 10	4.76 to 2.00
	No. 10 to No. 40	2.00 to 0.420
No. 40 to No. 200	0.420 to 0.074	
Silt and Clay	Below No. 200	Below 0.074

-  Sample taken with split-barrel sampler other than Standard Penetration Test sampler. Darkened area indicates soil recovered
-  Classification sample taken with Standard Penetration Test sampler
-  Undisturbed sample taken with thin-walled tube
-  Disturbed sample
-  Sampling attempted with no recovery
-  Core sample
-  Analytical laboratory sample
-  Sample taken with Direct Push sampler

 Unstabilized groundwater level

 Stabilized groundwater level

SAMPLER TYPE

- | | |
|--|---|
| <p>C Core barrel</p> <p>CA California split-barrel sampler with 2.5-inch outside diameter and a 1.93-inch inside diameter</p> <p>D&M Dames & Moore piston sampler using 2.5-inch outside diameter, thin-walled tube</p> <p>O Osterberg piston sampler using 3.0-inch outside diameter, thin-walled Shelby tube</p> | <p>PT Pitcher tube sampler using 3.0-inch outside diameter, thin-walled Shelby tube</p> <p>S&H Sprague & Henwood split-barrel sampler with a 3.0-inch outside diameter and a 2.43-inch inside diameter</p> <p>SPT Standard Penetration Test (SPT) split-barrel sampler with a 2.0-inch outside diameter and a 1.5-inch inside diameter</p> <p>ST Shelby Tube (3.0-inch outside diameter, thin-walled tube) advanced with hydraulic pressure</p> |
|--|---|

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GATEWAY SOUTH
Scotts Valley, California

CLASSIFICATION CHART

Treadwell & Rollo

Date 05/11/01

Project No. 3119.01

Figure A-9

I FRACTURING

Intensity	Size of Pieces in Feet
Very little fractured	Greater than 4.0
Occasionally fractured	1.0 to 4.0
Moderately fractured	0.5 to 1.0
Closely fractured	0.1 to 0.5
Intensely fractured	0.05 to 0.1
Crushed	Less than 0.05

II HARDNESS

1. **Soft** - reserved for plastic material alone.
2. **Low hardness** - can be gouged deeply or carved easily with a knife blade.
3. **Moderately hard** - can be readily scratched by a knife blade; scratch leaves a heavy trace of dust and is readily visibly after the powder has been blown away.
4. **Hard** - can be scratched with difficulty; scratch produced a little powder and is often faintly visible.
5. **Very hard** - cannot be scratched with knife blade; leaves a metallic streak.

III STRENGTH

1. **Plastic** or very low strength.
2. **Friable** - crumbles easily by rubbing with fingers.
3. **Weak** - an unfractured specimen of such material will crumble under light hammer blows.
4. **Moderately strong** - specimen will withstand a few heavy hammer blows before breaking.
5. **Strong** - specimen will withstand a few heavy ringing hammer blows and will yield with difficulty only dust and small flying fragments.
6. **Very strong** - specimen will resist heavy ringing hammer blows and will yield with difficulty only dust and small flying fragments.

IV WEATHERING - The physical and chemical disintegration and decomposition of rocks and minerals by natural processes such as oxidation, reduction, hydration, solution, carbonation, and freezing and thawing.

- D. Deep** - moderate to complete mineral decomposition; extensive disintegration; deep and thorough discoloration; many fractures, all extensively coated or filled with oxides, carbonates and/or clay or silt.
- M. Moderate** - slight change or partial decomposition of minerals; little disintegration; cementation little to unaffected. Moderate to occasionally intense discoloration. Moderately coated fractures.
- L. Little** - no megascopic decomposition of minerals; little of no effect on normal cementation. Slight and intermittent, or localized discoloration. Few stains on fracture surfaces.
- F. Fresh** - unaffected by weathering agents. No disintegration of discoloration. Fractures usually less numerous than joints.

ADDITIONAL COMMENTS:

V CONSOLIDATION OF SEDIMENTARY ROCKS: usually determined from unweathered samples. Largely dependent on cementation.

- U = unconsolidated
- P = poorly consolidated
- M = moderately consolidated
- W = well consolidated

VI BEDDING OF SEDIMENTARY ROCKS

Splitting Property	Thickness	Stratification
Massive	Greater than 4.0 ft.	very thick-bedded
Blocky	2.0 to 4.0 ft.	thick bedded
Slabby	0.2 to 2.0 ft.	thin bedded
Flaggy	0.05 to 0.2 ft.	very thin-bedded
Shaly or platy	0.01 to 0.05 ft.	laminated
Papery	less than 0.01	thinly laminated

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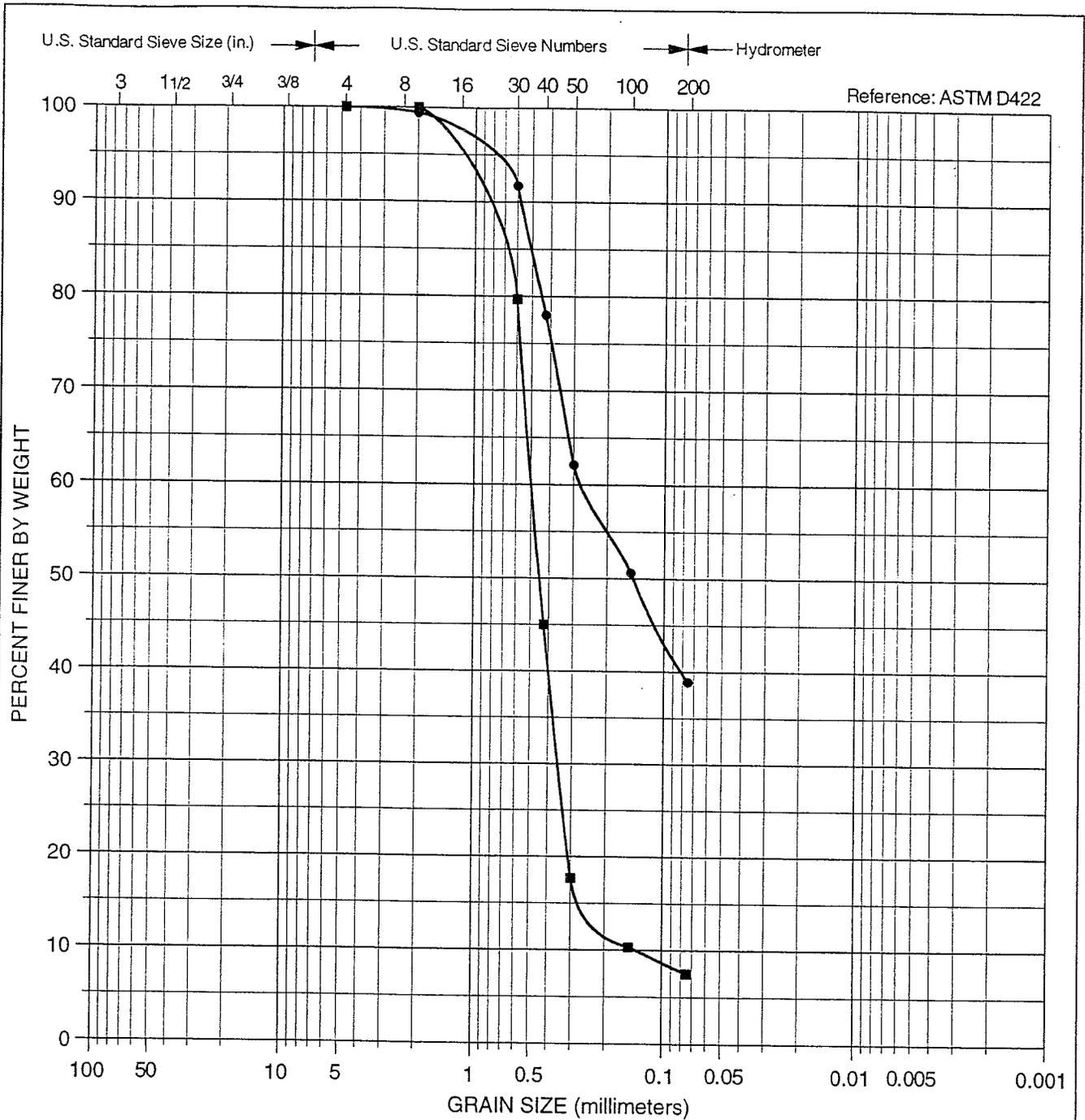
GATEWAY SOUTH
Scotts Valley, California

**PHYSICAL PROPERTIES CRITERIA
FOR ROCK DESCRIPTIONS**

Treadwell & Rollo

TREADWELL & ROLLO GEOTECH REPORT (APPENDIX B)

APPENDIX B
Results of Laboratory Testing



Cobbles	Coarse	Fine	Coarse	Medium	Fine	Silt or Clay
	Gravel		Sand			

Symbol	Sample Source	Classification
●	B-1 at 3.5 feet	CLAYEY SAND (SC), olive-gray
■	B-2 at 8.5 feet	SAND with SILT (SP-SM), light brown

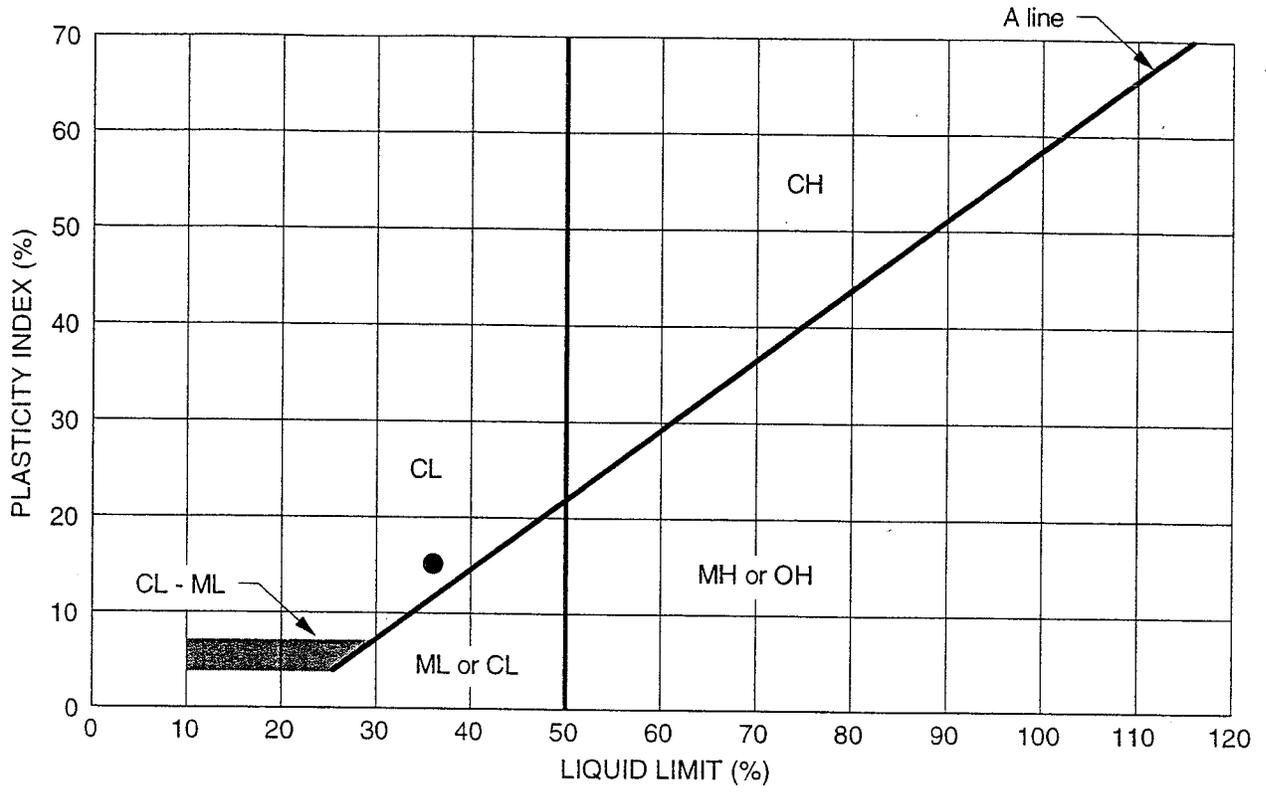
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GATEWAY SOUTH
Scotts Valley, California

PARTICLE SIZE ANALYSIS

Treadwell & Rollo

Date 06/22/01 Project No. 3119.01 Figure B-1



Symbol	Source	Description and Classification	Natural M.C. (%)	Liquid Limit (%)	Plasticity Index (%)	% Passing #200 Sieve
●	B-5 at 1.5 feet	SANDY CLAY (CL), dark brown	25.2	36	15	---

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GATEWAY SOUTH
Scotts Valley, California

PLASTICITY CHART

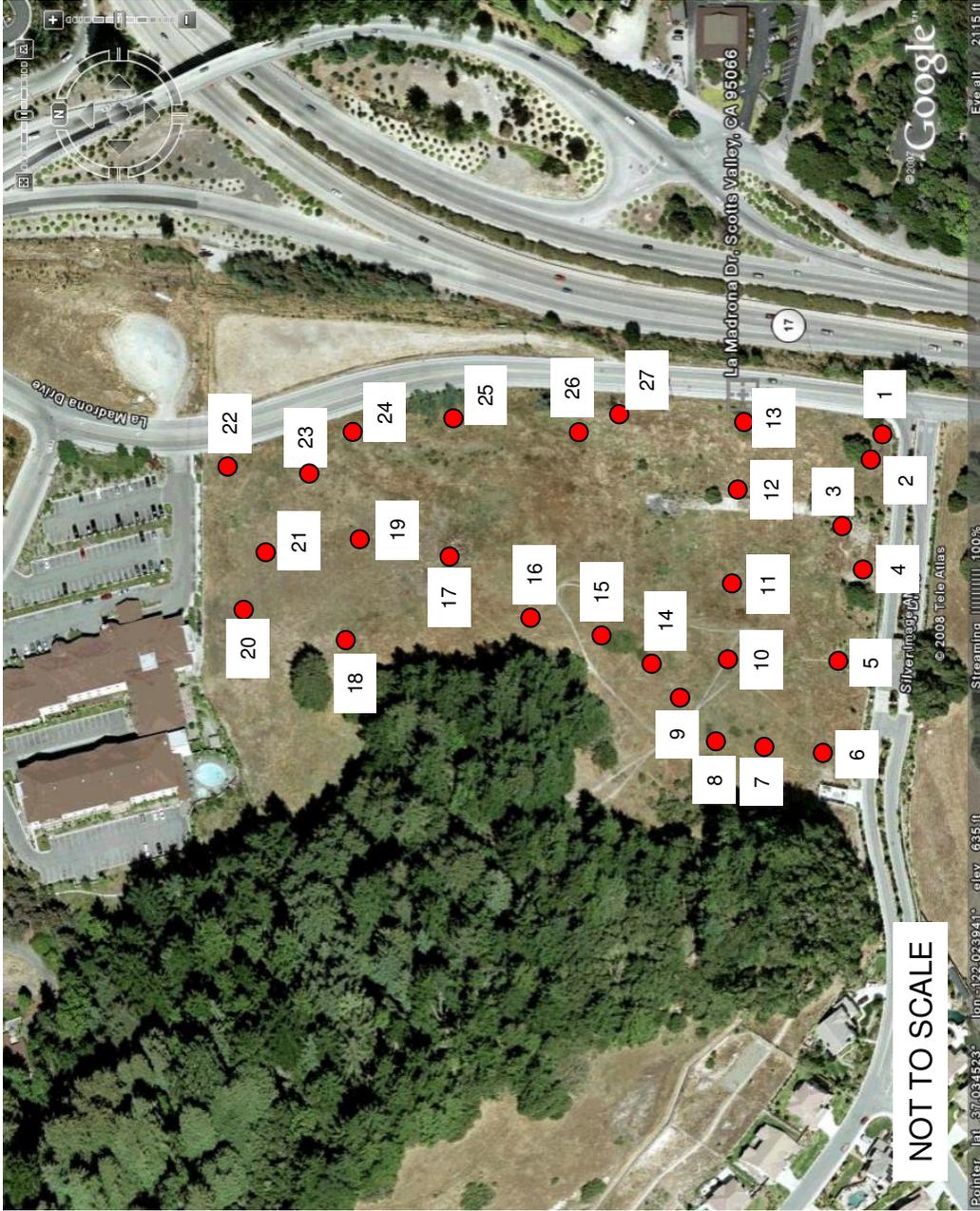
Treadwell & Rollb

Date 06/22/01

Project No. 3119.01

Figure B-1

KLEINFELDER DRAFT EXPLORATION LOCATION MAP



EXPLANATION

- Boring Location (27 Total)
- 1 Locations are Approximate

**KLEINFELDER
 DRAFT EXPLORATION LOCATION MAP
 LA MADRONA DR. AND SILVERWOOD DRIVE
 JULY 22, 2008**

DRAFT LOGS

Date Completed: 6/9/08 Drilling method: 4" Solid Stem Auger

Logged By: R. Roatch

Total Depth: Approximately 19.0 ft Hammer Wt: 140 lbs., 30" drop
Notes: _____

Depth, ft	FIELD		LABORATORY				Pen, tsf	DESCRIPTION
	Sample	Blows/ft	Dry Density pcf	Moisture Content %	Compress. Strength tsf	Other Tests		
								Surface Elevation: Estimated 593 feet (MSL)
	38			8.3		LL=31; PI=12 Passing #200=34%	>4.5	CLAYEY SAND (SC) -light olive-brown, dry to moist, dense, fine to coarse sand, trace subangular fine gravel (Colluvial Soil)
5	22		107	17.8	2.48 @ 14.9%	Passing #200=21%	>4.5	Quartz Diorite -very light gray with iron oxide staining, moderately weathered, weak to moderately strong
	28						>4.5	-slightly to moderately weathered, moderately strong to strong
10	44						>4.5	
	50/3.5"							
15								
	50/1"							
20								Bottom of boring at 19 feet (refusal) Groundwater not encountered Boring backfilled with grout
25								
30								

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PROJECT NO. 94335/ field

LOG OF BORING NO. B- 1

Target Scotts Valley - DRAFT
Scotts Valley, California

PLATE

B-2

7/22/2008 11:38:58 AM

Date Completed: **6/9/08**

Drilling method: **4" Solid Stem Auger**

Logged By: **R. Roatch**

Hammer Wt: **140 lbs., 30" drop**

Total Depth: **Approximately 14.0 ft**

Notes:

Depth, ft	FIELD		LABORATORY				Pen, tsf	DESCRIPTION
	Sample	Blows/ft	Dry Density pcf	Moisture Content %	Compress. Strength tsf	Other Tests		
								Surface Elevation: Estimated 595 feet (MSL)
38				7.2		LL=31; PI=11 Passing #200=40%	>4.5	CLAYEY SAND (SC) - dark brown, moist, dense, low plasticity, fine sand, some medium to coarse sand (Colluvial Soil)
46			121	8.5		LL=0; PI=0		QUARTZ DIORITE -light gray with yellow-brown staining, slightly to moderately weathered, moderately strong to strong
89						Passing #200=13%		-strong to very strong
72								
50/0.5"								
15								Bottom of boring at 14 feet (refusal) Groundwater not encountered Boring backfilled with grout
20								
25								
30								

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PROJECT NO. 94335/ field

LOG OF BORING NO. B- 2

Target Scotts Valley - DRAFT
Scotts Valley, California

PLATE

B-3

7/22/2008 11:39:06 AM

Date Completed: 6/9/08 Drilling method: 4" Solid Stem Auger

Logged By: R. Roatch

Total Depth: Approximately 19.0 ft Hammer Wt: 140 lbs., 30" drop

Notes: _____

Depth, ft	FIELD		LABORATORY				Pen, tsf	DESCRIPTION
	Sample	Blows/ft	Dry Density pcf	Moisture Content %	Compress. Strength tsf	Other Tests		
								Surface Elevation: Estimated 604 feet (MSL)
12			111	8.8			3.5	SANDY LEAN CLAY (CL) - dark brown, moist, firm, low to medium plasticity, fine sand (Colluvial Soil)
5	41		120	9.3				Quartz Diorite - light gray to gray, slightly to moderately weathered, moderately strong to strong
66			116	12.9	2.83 @ 5.2%			
10								
15	50/4"							-iron-oxide staining
20	50/1.5"							Bottom of boring at 19 feet Groundwater not encountered Boring backfilled with grout
25								
30								

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PROJECT NO. 94335/ field

LOG OF BORING NO. B- 3

Target Scotts Valley - DRAFT
Scotts Valley, California

PLATE

B-4

7/22/2008 11:39:14 AM

Date Completed: **6/9/08**

Drilling method: **4" Solid Stem Auger**

Logged By: **R. Roatch**

Hammer Wt: **140 lbs., 30" drop**

Total Depth: **Approximately 11.0 ft**

Notes:

Depth, ft	FIELD		LABORATORY				Pen, tsf	DESCRIPTION
	Sample	Blows/ft	Dry Density pcf	Moisture Content %	Compress. Strength tsf	Other Tests		
								Surface Elevation: Estimated 606 feet (MSL)
29						Passing #200=22%	>4.5	CLAYEY SAND WITH GRAVEL (SC) -dark brown, dry to moist, dense, low plasticity, fine to coarse sand, angular gravel up to 1" (Colluvial Soil)
42								QUARTZ DIORITE - light gray, slightly to moderately weathered, moderately strong to strong
59								
50/3"								
10								
15								Boring terminated at 11 feet due to refusal Groundwater not encountered Boring backfilled with grout
20								
25								
30								

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PROJECT NO. 94335/ field

LOG OF BORING NO. B- 4

Target Scotts Valley - DRAFT
Scotts Valley, California

PLATE

B-5

7/22/2008 11:39:21 AM

Date Completed: **6/9/08**

Drilling method: **4" Solid Stem Auger**

Logged By: **R. Roatch**

Hammer Wt: **140 lbs., 30" drop**

Total Depth: **Approximately 18.0 ft**

Notes:

Depth, ft	FIELD		LABORATORY				Pen, tsf	DESCRIPTION
	Sample	Blows/ft	Dry Density pcf	Moisture Content %	Compress. Strength tsf	Other Tests		
								Surface Elevation: Estimated 617 feet (MSL)
17			96	24.2			3.0	LEAN CLAY (CL) - very dark gray, moist, firm, some fine sand, trace angular mudstone clasts from coarse sand to fine gravel (Slopewash)
5	40					Passing #200=15%		CLAYEY SAND (SC) - light gray with iron oxide staining, moist, dense, fine to medium sand (Santa Margarita Sandstone)
15	15							
10	39							QUARTZ DIORITE - light gray, moderately to highly weathered, weak to moderately strong
15	50/1.5"							-strong
15	50/4"							
20								Bottom of boring at 18 feet (refusal) Groundwater not encountered Boring backfilled with grout
25								
30								

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PROJECT NO. 94335/ field

LOG OF BORING NO. B- 5

Target Scotts Valley - DRAFT
Scotts Valley, California

PLATE

B-6

7/22/2008 11:39:29 AM

Date Completed: **6/9/08**

Drilling method: **4" Solid Stem Auger**

Logged By: **R. Roatch**

Hammer Wt: **140 lbs., 30" drop**

Total Depth: **Approximately 19.8 ft**

Notes:

Depth, ft	FIELD		LABORATORY				Pen, tsf	DESCRIPTION
	Sample	Blows/ft	Dry Density pcf	Moisture Content %	Compress. Strength tsf	Other Tests		
								Surface Elevation: Estimated 638 feet (MSL)
32							>4.5	CLAYEY SAND/ SANDY LEAN CLAY (SC/CL) dark brown, moist, hard, low to medium plasticity, fine to medium sand (Slopewash)
37			106	18.8			>4.5	SANDY LEAN CLAY (CL) - very dark brown, moist, hard, fine to coarse sand, some angular gravel up to 1/2 inch
70								POORLY GRADED SAND WITH CLAY (SP-SC) - olive-brown, moist, very dense, fine to medium sand (Santa Margarita Sandstone)
55								
50/3.5"								
15								
50/1"				4.3				Quartz Diotrite (?) - drilling became difficult
20								Bottom of boring at 19.8 feet (refusal) Groundwater not encountered Boring backfilled with grout
25								
30								

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PROJECT NO. 94335/ field

LOG OF BORING NO. B- 6

Target Scotts Valley - DRAFT
Scotts Valley, California

PLATE

B-7

7/22/2008 11:39:36 AM

Date Completed: **6/9/08**

Drilling method: **4" Solid Stem Auger**

Logged By: **R. Roatch**

Hammer Wt: **140 lbs., 30" drop**

Total Depth: **Approximately 28.6 ft**

Notes:

Depth, ft	FIELD		LABORATORY				Pen, tsf	DESCRIPTION
	Sample	Blows/ft	Dry Density pcf	Moisture Content %	Compress. Strength tsf	Other Tests		
								Surface Elevation: Estimated 644 feet (MSL)
16						LL=23; PI=6	>4.5	SANDY SILTY LEAN CLAY (CL-ML) - dark brown, dry, very low plasticity, very hard, rootlets (Slopewash)
32							>4.5	-coarse sand, angular gravel up to 3/4"
12								CLAYEY SAND (SC) -grey-brown and olive-brown, moist, loose, fine to medium sand (Santa Margarita Sandstone)
13								
50/5"			11.9			Passing #200=14%		SILTY SAND (SM) - light yellow-brown, moist, very dense
50/5"			16.5					
74						Passing #200=11%		-wet
50/0.5"								Quartz Diorite (?) - drilling became difficult



LOG OF BORING NO. B- 7

PLATE

Target Scotts Valley - DRAFT
Scotts Valley, California

B-8

PROJECT NO. 94335/ field

Depth, ft	FIELD		LABORATORY				Pen, tsf	DESCRIPTION
	Sample	Blows/ft	Dry Density pcf	Moisture Content %	Compress. Strength tsf	Other Tests		
35								(Continued from previous plate)
40								Bottom of boring at 28.6 feet (refusal) Groundwater encountered at 21 feet Boring backfilled with grout
45								
50								
55								
60								

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PROJECT NO. 94335/ field

LOG OF BORING NO. B- 7

Target Scotts Valley - DRAFT
Scotts Valley, California

PLATE

B-8
(cont'd)

7/22/2008 11:39:44 AM

Date Completed: **6/10/08**

Drilling method: **4" Solid Stem Auger**

Logged By: **R. Roatch**

Hammer Wt: **140 lbs., 30" drop**

Total Depth: **Approximately 27.0 ft**

Notes:

Depth, ft	FIELD		LABORATORY				Pen, tsf	DESCRIPTION
	Sample	Blows/ft	Dry Density pcf	Moisture Content %	Compress. Strength tsf	Other Tests		
								Surface Elevation: Estimated 641 feet (MSL)
5	28		105	14.6		Passing #200=65%	>4.5	SANDY LEAN CLAY WITH GRAVEL (CL) - dark brown, moist, very hard, low to medium plasticity, fine to coarse sand, fine angular mudstone gravel (Slopewash)
	24						>4.5	-brown, grades more sand
	33						>4.5	
10	40							CLAYEY SAND (SC) - brown, moist, medium dense, low plasticity, iron oxide staining, fine to medium sand, angular red-yellow and pale brown mudstone clasts (Slopewash)
15	28							POORLY GRADED SAND (SP) - olive-brown, moist, medium dense to dense, fine to medium sand (Santa Margarita Sandstone)
20	50/5.5"							
25	50/2"					Passing #200=14%		-iron oxide staining -wet
								QUARTZ DIORITE (?) - drilling became difficult
30								Bottom of boring at 27 feet (refusal) Groundwater encountered at 25.5 feet Boring backfilled with grout



LOG OF BORING NO. B- 8

PLATE

Target Scotts Valley - DRAFT
Scotts Valley, California

B-9

PROJECT NO. 94335/ field

Date Completed: 6/10/08 Drilling method: 4" Solid Stem Auger
 Logged By: R. Roatch
 Total Depth: Approximately 26.0 ft Hammer Wt: 140 lbs., 30" drop
 Notes: _____

Depth, ft	FIELD		LABORATORY				Pen, tsf	DESCRIPTION
	Sample	Blows/ft	Dry Density pcf	Moisture Content %	Compress. Strength tsf	Other Tests		
								Surface Elevation: Estimated 633 feet (MSL)
23							>4.5	CLAYEY SAND (SC) -dark brown, moist, dense, fine to medium sand, trace coarse sand (Slopewash)
64								CLAYEY SAND WITH GRAVEL (SC) -light gray and brown, moist, very dense, fine to medium sand (Santa Margarita Sandstone)
71								
82								
10								POORLY GRADED SAND WITH CLAY (SP-SC) - light gray to pale brown, moist, very dense, fine to medium sand
56				10.2		Passing #200=11%		
76				18.4				-wet
20								
50/4"								
25								QUARTZ DIORITE - moderately weathered
								Bottom of boring at 26 feet (refusal) Groundwater encountered at 25 feet Boring backfilled with grout
30								



LOG OF BORING NO. B-9

Target Scotts Valley - DRAFT
 Scotts Valley, California

PLATE

B-10

PROJECT NO. 94335/ field

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7/22/2008 11:40:00 AM

Date Completed: 6/10/08 Drilling method: 4" Solid Stem Auger
 Logged By: R. Roatch
 Total Depth: Approximately 18.1 ft Hammer Wt: 140 lbs., 30" drop
 Notes: _____

Depth, ft	FIELD		LABORATORY				Pen, tsf	DESCRIPTION
	Sample	Blows/ft	Dry Density pcf	Moisture Content %	Compress. Strength tsf	Other Tests		
								Surface Elevation: Estimated 624 feet (MSL)
5	37					LL=25; PI=12	>4.5	CLAYEY SAND WITH GRAVEL (SC) - brown, moist, very dense, light brown angular mudstone gravel up to 1/2" (Slopewash)
	50/6"		110	8.8			>4.5	POORLY GRADED SAND WITH CLAY (SP-SC) -light brown, moist, dense, fine to medium sand (Santa Margarita Sanstone)
	50/5"					Passing #200=9%		-grades less clay
10	51							
15	55							-wet
20	50/1"		1242					Bottom of boring at 18.1 feet (refusal) Groundwater encountered at 18 feet Boring backfilled with grout
			6/10/2008					
25								
30								

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PROJECT NO. 94335/field

LOG OF BORING NO. B-10

Target Scotts Valley - DRAFT
Scotts Valley, California

PLATE

B-11

7/22/2008 11:40:07 AM

Date Completed: **6/10/08**

Drilling method: **4" Solid Stem Auger**

Logged By: **R. Roatch**

Hammer Wt: **140 lbs., 30" drop**

Total Depth: **Approximately 12.6 ft**

Notes:

Depth, ft	FIELD		LABORATORY				Pen, tsf	DESCRIPTION
	Sample	Blows/ft	Dry Density pcf	Moisture Content %	Compress. Strength tsf	Other Tests		
				6.0				Surface Elevation: Estimated 612 feet (MSL)
	21							CLAYEY SAND (SC) -brown, moist, medium dense, fine to medium sand (Colluvial Soil)
5	69							POORLY GRADED SAND WITH CLAY (SP-SC) -light brown, moist, dense, fine to medium staining (Santa Margarita Sandstone)
	49							-medium dense
10	46							QUARTZ DIORITE (?) - drilling became difficult
	50/5"							Bottom of boring at 12.6 feet (refusal) Groundwater not encountered Boring backfilled with grout
15								
20								
25								
30								

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PROJECT NO. 94335/ field

LOG OF BORING NO. B-11

Target Scotts Valley - DRAFT
Scotts Valley, California

PLATE

B-12

7/22/2008 11:40:15 AM

Date Completed: 6/10/08 Drilling method: 4" Solid Stem Auger

Logged By: R. Roatch

Total Depth: Approximately 10.2 ft Hammer Wt: 140 lbs., 30" drop
 Notes: _____

Depth, ft	FIELD		LABORATORY				Pen, tsf	DESCRIPTION
	Sample	Blows/ft	Dry Density pcf	Moisture Content %	Compress. Strength tsf	Other Tests		
								Surface Elevation: Estimated 604 feet (MSL)
44								QUARTZ DIORITE -light gray with iron oxide staining, moderately weathered, moderately strong
31								
42								
50/2.5"								
10								Bottom of boring at 10.2 feet (refusal) Groundwater not encountered Boring backfilled with grout
15								
20								
25								
30								

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PROJECT NO. 94335/ field

LOG OF BORING NO. B-12

Target Scotts Valley - DRAFT
 Scotts Valley, California

PLATE

B-13

7/22/2008 11:40:22 AM

Date Completed: 6/10/08 Drilling method: 4" Solid Stem Auger

Logged By: R. Roatch

Total Depth: Approximately 13.6 ft Hammer Wt: 140 lbs., 30" drop

Notes: _____

Depth, ft	FIELD		LABORATORY				Pen, tsf	DESCRIPTION
	Sample	Blows/ft	Dry Density pcf	Moisture Content %	Compress. Strength tsf	Other Tests		
								Surface Elevation: Estimated 600 feet (MSL)
22							4.0	SANDY LEAN CLAY (CL) -dark brown, moist, low plasticity, firm to hard, trace gravel (Colluvial Soil)
34								QUARTZ DIORITE -light gray with iron oxide staining, moderately weathered, moderately strong
50/6"								-becomes stronger
50/4.5"								
50/1"								Bottom of boring at 13.6 feet (refusal) Groundwater not encountered Boring backfilled with grout

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PROJECT NO. 94335/ field

LOG OF BORING NO. B-13

Target Scotts Valley - DRAFT
Scotts Valley, California

PLATE

B-14

7/22/2008 11:40:30 AM

Date Completed: 6/11/08 Drilling method: 4" Solid Stem Auger
 Logged By: R. Roatch
 Total Depth: Approximately 20.0 ft Hammer Wt: 140 lbs., 30" drop
 Notes: _____

Depth, ft	FIELD		LABORATORY				Pen, tsf	DESCRIPTION
	Sample	Blows/ft	Dry Density pcf	Moisture Content %	Compress. Strength tsf	Other Tests		
								Surface Elevation: Estimated 628 feet (MSL)
19							>4.5	SANDY LEAN CLAY/ CLAYEY SAND (CL/SC) - brown, moist, low plasticity, hard/ medium dense, fine to medium sand (Slopewash)
40				35.8			>4.5	
59						LL=62; PI=21		GRAVELLY LEAN CLAY WITH SAND (CL) -light brown, moist, hard to very hard, medium plasticity, angular mudstone clasts up to 1.5 inch (Slopewash)
78								
50/5"								POORLY GRADED SAND WITH CLAY (SP-SC) -light brown, moist, very dense, fine to medium sand (Santa Margarita Sandstone)
								QUARTZ DIORITE -highly weathered to moderately weathered, moderately strong to strong
								Bottom of boring at 20 feet (refusal) Groundwater encountered at 16 feet Boring backfilled with grout



LOG OF BORING NO. B-14

PLATE

Target Scotts Valley - DRAFT
Scotts Valley, California

B-15

PROJECT NO. 94335/ field

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7/22/2008 11:40:37 AM

Date Completed: **6/11/08**

Drilling method: **4" Solid Stem Auger**

Logged By: **R. Roatch**

Hammer Wt: **140 lbs., 30" drop**

Total Depth: **Approximately 23.6 ft**

Notes:

Depth, ft	FIELD		LABORATORY				Pen, tsf	DESCRIPTION
	Sample	Blows/ft	Dry Density pcf	Moisture Content %	Compress. Strength tsf	Other Tests		
								Surface Elevation: Estimated 627 feet (MSL)
20						LL=34; PI=18	>4.5	SANDY LEAN CLAY (CL) - dark brown, dry to moist, hard, fine to medium sand, trace angular gravel up to 1/4", medium plasticity, rootlets (Slopewash)
41							>4.5	POORLY GRADED GRAVEL WITH CLAY (GP-GC) - brown and olive, moist, medium dense, angular gravel up to 1.5" (Slopewash)
82								POORLY GRADED SAND WITH CLAY (SP-SC) - brown, moist, dense, fine to medium sand (Santa Margarita Sandstone)
51								-grades less clay
15								-wet
52								
50/6"								
82								
20								
50/1"								QUARTZ DIORITE -light gray, slightly weathered
25								Bottom of boring at 23.6 feet (refusal) Groundwater encountered at 23.6 feet Boring backfilled with grout
30								



LOG OF BORING NO. B-15

PLATE

Target Scotts Valley - DRAFT
Scotts Valley, California

B-16

PROJECT NO. 94335/ field

Date Completed: 6/11/08 Drilling method: 4" Solid Stem Auger

Logged By: R. Roatch

Total Depth: Approximately 31.0 ft Hammer Wt: 140 lbs., 30" drop

Notes: _____

Depth, ft	FIELD		LABORATORY				Pen, tsf	DESCRIPTION
	Sample	Blows/ft	Dry Density pcf	Moisture Content %	Compress. Strength tsf	Other Tests		
								Surface Elevation: Estimated 640 feet (MSL)
32						LL=54; PI=33	>4.5	SANDY FAT CLAY (CH) -dark brown, moist, hard, high plasticity, fine to medium sand, some coarse sand, fine gravel, gravel angular mudstone (Slopewash)
56								POORLY GRADED SAND WITH CLAY (SP-SC) -brown and light brown, moist, dense, angular mudstone gravel up to 3/4" (Santa Margarita Sanstone)
50/6"						Passing #200=7%		POORLY GRADED SAND (SP) -light brown, moist, very dense, fine to medium sand
86								
50/4.5"				12.2				
15								
50/5"								-wet
20								
50/5"								-iron oxide staining
25								
30								



LOG OF BORING NO. B-16

Target Scotts Valley - DRAFT
Scotts Valley, California

PLATE

B-17

PROJECT NO. 94335/ field

Depth, ft	FIELD		LABORATORY				Pen, tsf	DESCRIPTION
	Sample	Blows/ft	Dry Density pcf	Moisture Content %	Compress. Strength tsf	Other Tests		
	50/4.5"							(Continued from previous plate)
35								<p>QUARTZ DIORITE -light gray with iron oxide staining, moderately weathered</p> <p>Bottom of boring at 31 feet (refusal)</p> <p>Groundwater encountered at 18 feet</p> <p>Boring backfilled with grout</p>
40								
45								
50								
55								
60								

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PROJECT NO. 94335/ field

LOG OF BORING NO. B-16

Target Scotts Valley - DRAFT
 Scotts Valley, California

PLATE

B-17
 (cont'd)

7/22/2008 11:40:52 AM

Date Completed: 6/11/08 Drilling method: 4" Solid Stem Auger

Logged By: C. Buzzone

Total Depth: Approximately 18.6 ft Hammer Wt: 140 lbs., 30" drop
Notes: _____

Depth, ft	FIELD		LABORATORY				Pen, tsf	DESCRIPTION
	Sample	Blows/ft	Dry Density pcf	Moisture Content %	Compress. Strength tsf	Other Tests		
								Surface Elevation: Estimated 628 feet (MSL)
		38						SANDY LEAN CLAY (CL) -mottled red-brown and dark brown, dry, very hard, fine to coarse sand, medium plasticity (Slopewash)
5		39						POORLY GRADED SAND (SP) -yellow-brown, moist, medium dense, fine to coarse sand (Santa Margarita Sandstone)
		50/4.5"						QUARTZ DIORITE -light gray with iron oxide staining, moderately weathered, moderately strong to strong
10		54						
15		50/6"				Passing #200=15%		
20		50/1"						Bottom of boring at 18.6 feet Groundwater not encountered Boring backfilled with grout
25								
30								

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PROJECT NO. 94335/ field

LOG OF BORING NO. B-17

Target Scotts Valley - DRAFT
Scotts Valley, California

PLATE

B-18

7/22/2008 11:41:00 AM

Date Completed: 6/11/08

Drilling method: 4" Solid Stem Auger

Logged By: C. Buzzone

Hammer Wt: 140 lbs., 30" drop

Total Depth: Approximately 13.6 ft

Notes: _____

Depth, ft	FIELD		LABORATORY					Pen, tsf	DESCRIPTION
	Sample	Blows/ft	Dry Density pcf	Moisture Content %	Compress. Strength tsf	Other Tests			
								Surface Elevation: Estimated 635 feet (MSL)	
	42							SILTY SAND (SM) -light brown, dry, loose, fine sand (Slopewash)	
5	43					LL=23; PI=9 Passing #200=29%		SANDY LEAN CLAY (CL) -mottled red and dark brown, dry, very hard, low plasticity, fine to coarse sand -mottled gray and yellow, trace fine gravel	
	57							POORLY GRADED SAND WITH CLAY (SP-SC) -mottled light brown and yellow-brown, dry, dense, fine to medium sand	
10	52							POORLY GRADED SAND WITH CLAY (SP-SC) -mottled gray and yellow-brown, moist, dense, fine to coarse sand, fine gravel composed of angular mudstone clasts, coarse gravel and cobble quartz diorite clasts (Slopewash)	
								QUARTZ DIORITE -light gray with iron oxide staining, moderately to slightly weathered, moderately strong to strong	
15	50/0.5"							Bottom of boring at 13.6 feet (refusal) Groundwater not encountered Boring backfilled with grout	
20									
25									
30									

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PROJECT NO. 94335/ field

LOG OF BORING NO. B-18

Target Scotts Valley - DRAFT
Scotts Valley, California

PLATE

B-19

7/22/2008 11:41:08 AM

Date Completed: 6/11/08

Drilling method: 4" Solid Stem Auger

Logged By: C. Buzzone

Hammer Wt: 140 lbs., 30" drop

Total Depth: Approximately 29.0 ft

Notes: _____

Depth, ft	FIELD		LABORATORY				Pen, tsf	DESCRIPTION
	Sample	Blows/ft	Dry Density pcf	Moisture Content %	Compress. Strength tsf	Other Tests		
								Surface Elevation: Estimated 613 feet (MSL)
17								SILTY LEAN CLAY WITH SAND (CL-ML) -light brown, dry, hard, fine sand
34								SANDY LEAN CLAY (CL) -red-brown, dry, hard, fine to medium sand, fine gravel composed of angular mudstone (Slopewash)
5			116	13.7				
62								CLAYEY SAND (SC) -light brown, moist, dense, fine to medium sand (Santa Margarita Sandstone)
						Passing #200=25%		
10			113	10.8				POORLY GRADED SAND (SP) -light brown, moist, dense, fine to medium sand
56								-yellow-brown to light brown, very dense
15								
50/6"								-light brown, grades more coarse sand
20								
								-wet
63								
25								
50/6"								QUARTZ DIORITE -light gray, moderately weathered
30								



LOG OF BORING NO. B-19

Target Scotts Valley - DRAFT
Scotts Valley, California

PLATE

B-20

PROJECT NO. 94335/ field

Depth, ft	FIELD		LABORATORY				Pen, tsf	DESCRIPTION
	Sample	Blows/ft	Dry Density pcf	Moisture Content %	Compress. Strength tsf	Other Tests		
35								(Continued from previous plate)
40								Bottom of boring at 29 feet Grounwater encountered at 21 feet Boring backfilled with grout
45								
50								
55								
60								

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PROJECT NO. 94335/ field

LOG OF BORING NO. B-19

Target Scotts Valley - DRAFT
Scotts Valley, California

PLATE

B-20
(cont'd)

7/22/2008 11:41:15 AM

Date Completed: 6/11/08

Drilling method: 4" Solid Stem Auger

Logged By: C. Buzzone

Hammer Wt: 140 lbs., 30" drop

Total Depth: Approximately 19.5 ft

Notes: _____

Depth, ft	FIELD		LABORATORY				Pen, tsf	DESCRIPTION
	Sample	Blows/ft	Dry Density pcf	Moisture Content %	Compress. Strength tsf	Other Tests		
								Surface Elevation: Estimated 622 feet (MSL)
								SILTY SAND WITH GRAVEL (SM) - light brown, dry, medium dense, fine to coarse sand, fine gravel (Slopewash)
								CLAYEY SAND (SC) -dark brown, moist, medium dense, fine to coarse sand
5								POORLY GRADED SAND WITH CLAY (SP-SC) - mottled gray and brown, moist, medium dense, fine to coarse sand, trace fine gravel composed of angular mudstone clasts (Slopewash)
								POORLY GRADED SAND (SP) -yellow-brown, moist, very dense, fine to coarse sand (Santa Margarita Sandstone)
10				12.2		Passing #200=10%		
								-gray, trace clay content
15								
20								POORLY GRADED SAND WITH CLAY (SP-SC) - red-brown, wet, very dense, fine to medium sand
								Bottom of boring at 19.5 feet Groundwater encountered at 17 feet Boring backfilled with grout
25								
30								



LOG OF BORING NO. B-20

PLATE

Target Scotts Valley - DRAFT
Scotts Valley, California

B-21

PROJECT NO. 94335/ field

Date Completed: 6/12/08 Drilling method: 4" Solid Stem Auger

Logged By: R. Roatch

Total Depth: Approximately 17.0 ft Hammer Wt: 140 lbs., 30" drop
Notes: _____

Depth, ft	FIELD		LABORATORY				Pen, tsf	DESCRIPTION
	Sample	Blows/ft	Dry Density pcf	Moisture Content %	Compress. Strength tsf	Other Tests		
								Surface Elevation: Estimated 614 feet (MSL)
9			90	21.8	0.72 @ 5.0%		3.3	SANDY LEAN CLAY/ CLAYEY SAND (CL/SC) -black, moist, firm/ loose, low to medium plasticity, rootlets (Topsoil)
10						Passing #200=23%	2.0	CLAYEY SAND (SC) -yellow-brown, moist, firm, fine to medium sand, trace angular fine gravel composed of mudstone (Slopewash)
31								POORLY GRADED SAND WITH CLAY (SP-SC) - brown, moist, loose, trace iron oxide staining (Santa Margarita Sandstone) -light brown, dense
30								-red-brown, iron oxide staining
15								Bottom of boring at 14 feet (refusal) Groundwater not encountered Boring backfilled with grout
20								
25								
30								

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PROJECT NO. 94335/ field

LOG OF BORING NO. B-21

Target Scotts Valley - DRAFT
Scotts Valley, California

PLATE

B-22

7/22/2008 11:41:31 AM

Date Completed: 6/12/08 Drilling method: 4" Solid Stem Auger

Logged By: R. Roatch

Total Depth: Approximately 8.6 ft Hammer Wt: 140 lbs., 30" drop
 Notes: _____

Depth, ft	FIELD		LABORATORY				Pen, tsf	DESCRIPTION
	Sample	Blows/ft	Dry Density pcf	Moisture Content %	Compress. Strength tsf	Other Tests		
								Surface Elevation: Estimated 599 feet (MSL)
22			106	14.7			>4.5	SANDY LEAN CLAY (CL) - black moist, hard, low plasticity, rootlets (Colluvial Soil)
83								POORLY GRADED SAND WITH CLAY (SP-SC) - light brown, moist, medium sand, very dense, iron oxide staining (Santa Margarita Sandstone)
58								-red-brown
50/1"								Bottom of boring at 8.6 feet (refusal) Groundwater not encountered Boring backfilled with grout
10								
15								
20								
25								
30								

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PROJECT NO. 94335/ field

LOG OF BORING NO. B-22

Target Scotts Valley - DRAFT
Scotts Valley, California

PLATE

B-23

7/22/2008 11:41:38 AM

Date Completed: 6/12/08 Drilling method: 4" Solid Stem Auger

Logged By: R. Roatch

Total Depth: Approximately 9.8 ft Hammer Wt: 140 lbs., 30" drop
Notes: _____

Depth, ft	FIELD		LABORATORY				Pen, tsf	DESCRIPTION
	Sample	Blows/ft	Dry Density pcf	Moisture Content %	Compress. Strength tsf	Other Tests		
								Surface Elevation: Estimated 602 feet (MSL)
25							>4.5	SANDY LEAN CLAY (CL) - dark brown, moist, hard, low plasticity, rootlets (Colluvial Soil)
29								POORLY GRADED SAND WITH CLAY (SP-SC) - brown, moist, dense, fine to coarse sand (Santa Margarita Sandstone)
46								-gray -red-brown, iron oxide staining
50/3"								QUARTZ DIORITE - light gray with iron oxide staining, moderately weathered
								Bottom of boring at 9.8 feet (refusal) Groundwater not encountered Boring backfilled with grout
10								
15								
20								
25								
30								

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PROJECT NO. 94335/ field

LOG OF BORING NO. B-23

Target Scotts Valley - DRAFT
Scotts Valley, California

PLATE

B-24

7/22/2008 11:41:46 AM

Date Completed: 6/12/08 Drilling method: 4" Solid Stem Auger

Logged By: R. Roatch

Total Depth: Approximately 4.3 ft Hammer Wt: 140 lbs., 30" drop
Notes: _____

Depth, ft	FIELD		LABORATORY				Pen, tsf	DESCRIPTION
	Sample	Blows/ft	Dry Density pcf	Moisture Content %	Compress. Strength tsf	Other Tests		
								Surface Elevation: Estimated 593 feet (MSL)
15							>4.5	SANDY LEAN CLAY/ CLAYEY SAND (CL/SC) - dark brown, moist, firm to hard/ loose to medium dense, low plasticity, rootlets (Colluvial Soil)
50/3"								QUARTZ DIORITE - light gray with iron oxide staining, moderately weathered
5								Bottom of boring at 4.3 feet (refusal) Groundwater not encountered Boring backfilled with grout
10								
15								
20								
25								
30								

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PROJECT NO. 94335/ field

LOG OF BORING NO. B-24

Target Scotts Valley - DRAFT
Scotts Valley, California

PLATE

B-25

7/22/2008 11:41:53 AM

Date Completed: 6/12/08 Drilling method: 4" Solid Stem Auger

Logged By: R. Roatch

Total Depth: Approximately 4.7 ft Hammer Wt: 140 lbs., 30" drop
 Notes: _____

Depth, ft	FIELD		LABORATORY				Pen, tsf	DESCRIPTION
	Sample	Blows/ft	Dry Density pcf	Moisture Content %	Compress. Strength tsf	Other Tests		
								Surface Elevation: Estimated 592 feet (MSL)
37						LL=22; PI=9	>4.5	SANDY LEAN CLAY (CL) - dark brown to black, dry to moist, very hard, low plasticity, rootlets (Colluvial Soil)
50/2"								QUARTZ DIORITE - gray with iron oxide staining, moderately weathered Bottom of boring at 4.7 feet (refusal) Groundwater not encountered Boring backfilled with grout
10								
15								
20								
25								
30								

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PROJECT NO. 94335/ field

LOG OF BORING NO. B-25

Target Scotts Valley - DRAFT
 Scotts Valley, California

PLATE

B-26

7/22/2008 11:42:03 AM

Date Completed: 6/12/08 Drilling method: 4" Solid Stem Auger

Logged By: R. Roatch

Total Depth: Approximately 5.5 ft Hammer Wt: 140 lbs., 30" drop
 Notes: _____

Depth, ft	FIELD		LABORATORY				Pen, tsf	DESCRIPTION
	Sample	Blows/ft	Dry Density pcf	Moisture Content %	Compress. Strength tsf	Other Tests		
								Surface Elevation: Estimated 596 feet (MSL)
21							>4.5	 SANDY LEAN CLAY/ CLAYEY SAND (CL/SC) - black, moist, very hard/ medium dense, low plasticity, rootlets (Colluvial Soil)
50/5"								 QUARTZ DIORITE - light gray, moderately weathered, moderately strong
								Bottom of boring at 5.5 feet (refusal) Groundwater not encountered Boring backfilled with grout
10								
15								
20								
25								
30								

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PROJECT NO. 94335/ field

LOG OF BORING NO. B-26

Target Scotts Valley - DRAFT
 Scotts Valley, California

PLATE

B-27

7/22/2008 11:42:21 AM

Date Completed: 6/12/08 Drilling method: 4" Solid Stem Auger

Logged By: R. Roatch

Total Depth: Approximately 7.0 ft Hammer Wt: 140 lbs., 30" drop

Notes: _____

Depth, ft	FIELD		LABORATORY				Pen, tsf	DESCRIPTION
	Sample	Blows/ft	Dry Density pcf	Moisture Content %	Compress. Strength tsf	Other Tests		
								Surface Elevation: Estimated 595 feet (MSL)
31							>4.5	SANDY LEAN CLAY (CL) - black, dry to moist, low to medium plasticity, very hard, rootlets (Colluvial Soil)
47								QUARTZ DIORITE - light gray with iron oxide staining, moderately to slightly weathered, moderately strong to strong
50/5"								
10								Bottom of boring at 7 feet (refusal) Groundwater not encountered Boring backfilled with grout
15								
20								
25								
30								

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PROJECT NO. 94335/ field

LOG OF BORING NO. B-27

Target Scotts Valley - DRAFT
Scotts Valley, California

PLATE

B-28

7/22/2008 11:42:34 AM

Date Completed: _____ Drilling method: _____

Logged By: _____

Total Depth: **Approximately 50.0 ft** Hammer Wt: _____
 Notes: _____

Depth, ft	FIELD		LABORATORY				Pen, tsf	DESCRIPTION
	Sample	Blows/ft	Dry Density pcf	Moisture Content %	Compress. Strength tsf	Other Tests		
								Surface Elevation: Estimated feet (MSL)
5						Passing -#200=17%		
10				14.6				
15			107	13.7				
20								
25								
30								

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PROJECT NO. 94335/ field

LOG OF BORING NO. BA-1

Target Scotts Valley - DRAFT
 Scotts Valley, California

PLATE

B-

7/22/2008 11:42:36 AM

Date Completed: _____ Drilling method: _____

Logged By: _____

Total Depth: **Approximately 0.0 ft** Hammer Wt: _____
 Notes: _____

Depth, ft	FIELD		LABORATORY				Pen, tsf	DESCRIPTION
	Sample	Blows/ft	Dry Density pcf	Moisture Content %	Compress. Strength tsf	Other Tests		
			107	8.6				Surface Elevation: Estimated feet (MSL)
5								
10								
15								
20								
25								
30								

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PROJECT NO. 94335/ field

LOG OF BORING NO. PL12485-Bulk #3

Target Scotts Valley - DRAFT
 Scotts Valley, California

PLATE

B-

7/22/2008 11:42:39 AM