



**SECOND REVISED  
SOILS/HYDROLOGIC  
SCOPING AND FINAL REPORT  
HOMEWOOD MOUNTAIN RESORT  
HOMEWOOD, CALIFORNIA**

**October 7, 2010**

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October 7, 2010

File: 98510.01

Ms. Heather Gustafson  
Tahoe Regional Planning Agency  
P. O. Box 5310  
Stateline, NV 89449

**SUBJECT: Second Revised Soils/Hydrologic Scoping and Final Report  
Homewood Mountain Resort  
5145 West Lake Boulevard  
Homewood, California 96141**

References: Revised Soils/Hydrologic Scoping and Final Report, Homewood Mountain Resort, 5145 West Lake Boulevard, Homewood, California 96141, by Kleinfelder, dated April 1, 2010.

Soils/Hydrologic Scoping and Final Report, Homewood Mountain Resort, Homewood, California, by Kleinfelder, Inc., dated February 18, 2010.

Updated Groundwater Evaluation Report, Homewood Mountain Resort, Homewood, California, by Kleinfelder, Inc., dated July 14, 2008.

Groundwater Evaluation Report, Homewood Mountain Resort, Homewood, California, by Kleinfelder, Inc., dated October 31, 2007.

Dear Heather:

Kleinfelder West, Inc. has prepared this second revised Soils/Hydrologic Scoping and Final Report for the Homewood Ski Area Master Plan to include updated building and groundwater sections, dated October 7, 2010. These updated sections indicate that the parking garages at the North and South Base Areas are projected to intercept the seasonal high groundwater surface.

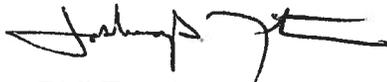
Work performed for the soils/hydrologic report included drilling soil borings, excavating test pits, soil sampling, installation of groundwater monitoring wells, measuring water levels during Spring 2007 and 2008, and estimating the seasonal high groundwater levels in the vicinity of the North and South Base Areas and at Mid-Mountain at Homewood Mountain Resort (HMR).

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Should you have any questions regarding this report or wish to discuss the conclusions and recommendations provided, please contact us at 775-689-7800.

Sincerely,

**KLEINFELDER WEST, INC.**



Phil Tousignant  
Environmental Scientist



David J. Herzog, RG, CEG  
Senior Hydrogeologist

cc: David Tirman, Homewood Mountain Resort  
Gary Midkiff- Midkiff and Associates, Inc  
Paul Pettersen, Nichols  
Alan Breuch, Placer County Planning Department

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## 1.0 INTRODUCTION

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### 1.1 PURPOSE AND OBJECTIVES

The purpose of this revised soils hydrologic scoping and final report is to assess seasonal high groundwater levels and seasonal fluctuation of groundwater levels in the area of the North Base, South Base, and Mid-Mountain area of the Homewood Mountain Resort (HMR) and the slopes above the base areas to an elevation of approximately 6,350 to 6,400 feet mean sea level (msl). This will allow an estimate of excavation depths for future development in accordance with Tahoe Regional Planning Agency (TRPA) regulations.

### 1.2 SITE DESCRIPTION

The HMR ski area is located on the west shore of Lake Tahoe in Placer County in the town of Homewood, California (Plate 1). The property is located approximately 19 miles north of South Lake Tahoe and 5 miles south of Tahoe City along Highway 89. The property lies within portions of Sections 1, 2, 10, 11, and 12 of Township 14 North and Range 16 East. Elevations on the property range from approximately 6,300 feet to 7,880 feet above msl. The surface of Lake Tahoe has an average elevation of about 6,225 feet msl. A Site Plan of the lower portion of the property, showing parcel boundaries and borings drilled, is presented in Plate 2.

The climate in the Lake Tahoe Basin is typically very dry with low humidity. The sun shines an average of 274 days each year, but snow can fall during any month. At lake level, the area receives an average of 125 inches of snow annually. Higher elevations can receive an average of 300 to 500 inches annually

The property is used as an active ski resort with unpaved access roads, four major chair lifts, two lodge areas, and paved parking lots. The majority of the property is forested with mixed conifer stands with a shrub understory. Areas along the creeks are vegetated with mountain alder, dogwood, various willows and other riparian species. The ski runs are vegetated with grasses, forbs and low growing shrubs.

### **1.3 GEOLOGIC SETTING**

The site is located on the west shore of Lake Tahoe, which occupies a down-faulted graben near the crest of the Sierra Nevada. The Lake Tahoe Basin was formed by faulting and volcanism approximately two million years ago. Rock of the Lake Tahoe basin can be divided into three categories: granitic, metamorphic, and volcanic. Cretaceous granodiorite of the Sierra Nevada batholith is the predominant basement bedrock in the basin. Pre-Cretaceous metamorphic rocks occur in localized areas as roof pendants in the granitic rocks. Most of the volcanic rocks are andesitic mudflows and lava, which extend from the top of Martis Peak to the northern and western lakeshore.

Much of the region has been affected by glaciation during the past 1.5 million years. This activity is responsible for many of the landforms surrounding Lake Tahoe. Geologic literature indicates that during glaciations, valley glaciers dammed the Truckee canyon, the lake's outlet, raising the lake level. During these periods of elevated lake levels, lacustrine sediments were deposited in many of the bays and canyons around the lake.

A geologic map of the HMR is presented as Plate 3. A small area of recent alluvium (Q) surrounds the northwest side of Quail Lake. The area along the shore of Lake Tahoe and extending to the base of the mountains has been mapped as Quaternary-age lake deposits (Ql). Glacial moraines of Tioga age (Qti) and glacial deposits, undivided (Qg) comprised of a heterogeneous mixture of rock fragments in a matrix of fine-grained sand, silt, and rock flour are located within Madden Creek valley and east of Quail Lake.

Pliocene-age volcanic rocks composed of andesite and basaltic andesite flows are located in the area of Ellis Peak. The majority of the HMR is underlain by Miocene age volcanic rocks consisting of andesitic and dacitic lahars, flows, breccias, and volcanoclastic sediments (Mva). This formation has been correlated with the Mehrten Formation that underlies Sacramento Valley. Pre-Cretaceous metamorphic roof pendants of the Ellis Peak Formation (Jlp and Jle) occur in localized areas along the Sierra Crest.

## **1.4 HYDROGEOLOGIC CONDITIONS**

Groundwater occurs within the lake sediments (Ql) and glacial deposits (Gti and Qg) within pores of the sand and gravel deposits. Groundwater also occurs within fractures in the volcanic rocks. Groundwater flow generally follows topography with a general eastward direction of flow towards Lake Tahoe.

## 2.0 DISCUSSION

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A summary of the measured depth to groundwater during Fall 2006, Spring 2007 and Spring 2008, and seasonal groundwater levels as estimated by soil mottling or historic groundwater measurements are presented in Tables 1 and 2. A summary of the seasonal high groundwater levels is presented in Table 3. Groundwater contour maps created using the seasonal high groundwater levels are shown in Plates 4 through 6.

Boring logs from 49 borings (GP-1 through GP-56) drilled by Kleinfelder are contained in the referenced Updated Groundwater Evaluation, dated July 14, 2008.

Boring and test pit logs from the North Base Area, drilled/excavated by Holdrege and Kull, are contained in Appendix A.

Test pit logs from the Mid-Mountain Area, excavated by Holdrege and Kull, are contained in Appendix B.

### 2.1 NORTH BASE AREA

#### 2.1.1 North Base Paved Parking Lot Area

Soils underlying the North Base paved parking lots (GP-1 through GP-8 and MW-1 through MW-4 N Base) generally consisted of dark yellowish brown silty sand and gravel with high groundwater measured at depths of 5.44 to 10.45 feet bgs in Spring 2007 and 2008. However, mottled soils indicative of seasonal groundwater were noted at depths ranging from 4.3 to 8.0 feet bgs and historic water levels in monitoring wells were as high as 4.65 feet bgs (Tables 1 and 2 and Plates 4 and 5). These soils are indicative of an interlayered colluvial and lake sediment depositional environment.

### 2.1.2 Slopes above North Base

Soils on the slopes above the North Base (GP-15 through GP-21, GP-25, -26, -27, -29, and -31) generally consisted of dark yellowish brown, brown, and pale brown silty sand, gravelly sand, gravel, cobbles, and boulders indicative of a colluvial depositional environment. Groundwater was measured at depths of 9 to 18 feet bgs in the slopes above the North Base area (GP-15, 17, -19, -20, -25, -26, and -31 (Tables 1 and 2 and Plates 4 and 5).

### 2.1.3 Gravel Parking Lot

Soils underlying the gravel parking lot located south of Sacramento Street (GP-9 through GP-14) consisted of black, olive gray, gray, and brown silty gravel, silty sand, clay, sandy clay, and sandy silt with high groundwater in 2007 and 2008 measured at depths of 0.89 to 5.95 feet bgs (Tables 1 and 2 and Plates 4 and 5). However, mottled soils indicative of seasonal groundwater were noted at depths ranging from 1.17 to 3.5 feet bgs (Tables 1 and 2 and Plates 4 and 5). These soils are indicative of a lake depositional environment and consistent with the mapped geologic unit (QI, Lake Sediments).

### 2.1.4 Proposed Construction

It is proposed to construct structures at the North Base Area associated with the Homewood Ski Area Master Plan at locations shown in Sheet C19, North Base Building and Groundwater Sections. Sheet C19 presents four cross sections showing existing grade, finished floor elevations, and the groundwater profile. The elevation, length, and depth of each retaining wall along with the depth of groundwater interception are shown in Table 4. These maximum depths assume a two-foot deep foundation below the finished floor elevation shown.

The maximum depth of proposed excavation at the North Base Area ranges from 29 to 32 feet. The maximum estimated depth of groundwater interception is 17 feet.

## 2.1.5 Groundwater Flow

As shown in Plates 4 and 5, groundwater flows across the North Base area to the north, northeast, and east towards Lake Tahoe.

Estimated groundwater flow rates intercepted by proposed retaining walls at the North Base Area range from 15 to 37 gallons per minute (gpm) as shown in Table 4. The estimated groundwater flow rates use the length and depth of wall, depth of groundwater interception, and groundwater gradient derived from Sheet C19. Two hydraulic conductivity values were used to estimate the range of flows,  $1 \times 10^{-3}$  centimeters per second (cm/sec) and  $4 \times 10^{-4}$  cm/sec. These values are typical for silty sand and silty sand with gravel materials that were logged in test pits by Holdrege and Kull Associates in the areas of the retaining walls (Appendix A).

## 2.2 SOUTH BASE AREA

Soils encountered within the South Base area and on the slopes above the South Base area consisted of dark yellowish brown, brown, and pale brown silty sand, gravelly sand, gravel, cobbles, and boulders. These soil types are indicative of a colluvial depositional environment. Shallow groundwater ranging between 1.75 and 3.72 feet bgs was measured at the north end of Tahoe Ski Bowl Way (GP-36) and above the South Base area in borings GP-39 and -41 (Tables 1 and 2 and Plates 4 and 6). Two other borings on the slopes above the South Base area (GP-43 and 56) contained high groundwater levels at depths of approximately 8 to 10 feet bgs. Borings in the parking areas of the South Base area did not encounter groundwater during Spring 2007 or 2008 to depths of 18 feet bgs.

Mottled soils possibly indicative of seasonal groundwater were noted at depths of 4.0 feet bgs in boring GP-51, and 5.0 feet bgs in borings GP-51 and GP-55. However, these wells did not contain measurable groundwater during Spring 2007 and 2008 to depths of approximately 19 feet bgs. Additionally, water levels measured in monitoring wells MW-1S through MW-5S from 1997 through 2001 recorded high groundwater levels at depths ranging from 15 to 17 feet bgs (Table 3 and Plates 4 and 6). Based on these data, the seasonal high groundwater levels presented in Table 3 are the measured groundwater levels in these wells.

### 2.2.1 Proposed Construction

It is proposed to construct structures at the South Base Area associated with the Homewood Ski Area Master Plan at locations shown in Sheet C20, South Base Building and Groundwater Sections. Sheet C20 presents three cross sections showing existing grade, finished floor elevations, and the groundwater profile. The elevation, length, and depth of each retaining wall along with the depth of groundwater interception are shown in Table 4. These maximum depths assume a two-foot deep foundation below the finished floor elevation shown.

The maximum depth of proposed excavation at the South Base Area ranges from 19 to 21 feet. The maximum estimated depth of groundwater interception ranges from 4 to 13 feet.

### 2.2.2 Groundwater Flow

As shown in Plates 4 and 6, groundwater flow is to the east towards Lake Tahoe.

Estimated groundwater flow rates intercepted by proposed retaining walls at the South Base Area range from 4 to 11 gpm as shown in Table 4. The estimated groundwater flow rates use the length and depth of wall, depth of groundwater interception, and groundwater gradient derived from Sheet C20. Two hydraulic conductivity values were used to estimate the range of flows,  $1 \times 10^{-3}$  cm/sec and  $4 \times 10^{-4}$  cm/sec. These values are typical for silty sand and silty sand with gravel materials that were logged in borings by Kleinfelder that are included in the referenced Updated Groundwater Evaluation, dated July 14, 2008.

## 2.3 MID-MOUNTAIN AREA

Soils encountered within the Mid-Mountain area consisted of light brown, brown, and yellowish brown silty sand, gravelly sand, gravel, cobbles, and boulders indicative of a colluvial depositional environment overlying gray volcanic lahar rock at depths ranging from 3.5 to 9.5 feet bgs. No groundwater was encountered in ten test pits (TP-1 through TP-10) at locations shown in Sheet C21, Mid-Mountain Building and Groundwater Sections. The test pit logs are presented in Appendix B.

### 2.3.1 Proposed Construction

It is proposed to construct structures at the Mid-Mountain Area associated with the Homewood Ski Area Master Plan at locations shown in Sheet C21. Sheet C21 presents three cross sections showing existing grade, finished floor elevations, and the groundwater profile. The elevation, length, and depth of each retaining wall are shown in Table 4. These maximum depths assume a two-foot deep foundation below the finished floor elevation shown.

The maximum depth of proposed excavation at the Mid-Mountain Area ranges from 8.0 to 20.5 feet. Based on the presence of shallow bedrock, groundwater should not be encountered to the proposed depths of the retaining walls.

### 3.0 LIMITATIONS

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Recommendations contained in this report are based on our field observations and subsurface explorations, limited laboratory tests, and our present knowledge of the proposed construction. It is possible that groundwater conditions could vary between or beyond the points explored. If groundwater conditions are encountered during construction, which differ from those described herein, we should be notified immediately in order that a review may be made and any supplemental recommendations provided.

We have prepared this report in substantial accordance with the generally accepted environmental practice, as it exists in the site area at the time of our study. No warranty, either express or implied, is made. Other standards or documents referenced in any given standard cited in this report, or otherwise relied upon by the author of this report, are only mentioned in the given standard; they are not incorporated into it or "included by reference", as that latter term is used relative to contracts or other matters of law.

This report may be used only by the client and only for the purposes stated within a reasonable time from its issuance, but in no event later than three years from the date of the report. Land or facility use, on and off-site conditions, regulations, or other factors may change over time, and additional work may be required with the passage of time. It is the Client's responsibility to see that all parties to the project including the designer, contractor, subcontractors, etc., are made aware of this report in its entirety. The use of information contained in this report for bidding purposes should be done at the Contractor's option and risk. Based on the intended use of the report, Kleinfelder may require that additional work be performed and that an updated report be issued. Non-compliance with any of these requirements by the client or anyone else will release Kleinfelder from any liability resulting from the use of this report by any unauthorized party and client agrees to defend, indemnify, and hold harmless Kleinfelder from any claim or liability associated with such unauthorized use or non-compliance.

# **TABLES**

**Table 1**  
**2006-2007 Groundwater Level Data**  
**Homewood Mountain Resort**

Boring ID	Well?	TD	Survey Elevation	DTW 10/17/06	ELEVATION 10/17/2006	DTW 11/9/06	ELEVATION 11/9/2006	DTW 3/14/07	ELEVATION 3/15/2007	DTW 3/20/07	ELEVATION 3/20/2007	DTW 3/29/07	ELEVATION 3/29/2007	DTW 4/4/07	ELEVATION 4/4/2007	DTW 4/13/07	ELEVATION 4/13/2007	DTW 4/19/07	ELEVATION 4/19/2007	DTW 4/27/07	ELEVATION 4/27/2007	DTW 5/3/07	ELEVATION 5/3/2007	DTW 5/10/07	ELEVATION 5/10/2007	DTW 5/16/07	ELEVATION 5/16/2007	DTW 5/25/07	ELEVATION 5/25/2007	Seasonal High GW Depth <sup>5</sup>	Seasonal High GW Elevation <sup>5</sup>	Transducer Serial No.	
GP-1	Y	14.25	6237.02	8.74	6228.28	8.78	6228.24	8.52	6228.50	8.20	6228.82	8.09	6228.93	8.07	6228.95	7.96	6229.06	8.06	6228.96	8.04	6228.98	7.72	6229.30	8.08	6228.94	8.16	6228.86	8.20	6228.82	5.00	6232.02		
GP-2	N	8.00	6236.20																											5.50	6230.70		
GP-3	N	12.00	NM																										4.50	NM			
GP-4	N	12.00	6237.85																										11.00	6226.85			
GP-5	N	6.50	6237.26																									6.50	6230.76				
GP-6	Y	13.90	6236.72	8.58	6228.14	8.41	6228.31	8.25	6228.47	8.05	6228.67	7.90	6228.82	7.86	6228.86	7.77	6228.95	7.83	6228.89	7.22	6229.50	7.58	6229.14	7.76	6228.96	7.95	6228.77	8.05	6228.67	8.41	6228.31		
GP-7	Y	9.07	6238.00	NM		>9.07	<6228.93	>9.07	<6228.93	>9.07	<6228.93	>9.07	<6228.93	>9.07	<6228.93	9.00	6229.00	>9.07	<6228.93	>9.07	<6228.93	>9.07	<6228.93	>9.07	<6228.93	>9.07	<6228.93	>9.07	<6228.93	8.00	6230.00		
GP-8	Y	9.30	6237.88	>9.30	<6228.58	>9.30	<6228.58													8.43	6229.45	8.37	6229.51	8.58	6229.30	8.64	6229.24	8.72	6229.16	4.30	6233.58		
GP-9	N	12.00	6236.14																										2.75	6233.39			
GP-10	N	2.00	6236.86																										>2.0	<6234.86			
GP-11	Y	8.35	6236.74	7.61	6229.13	7.65	6229.09							5.70	6231.04	5.60	6231.14	5.76	6230.98	5.35	6231.39	5.18	6231.56	5.64	6231.10	5.92	6230.82	6.27	6230.47	1.17	6235.57		
GP-12	Y	13.15	6238.18	9.67	6228.51	9.67	6228.51																										
GP-13	Y	10.95	6238.21	4.13	6234.08	4.41	6233.80							2.75	6235.46	2.68	6235.53	2.63	6235.58	2.23	6235.98	1.99	6236.22	2.2	6236.01	2.38	6235.83	2.55	6235.66	2.00	6236.21		
GP-14	Y	9.55	6238.49	5.45	6233.04	5.83	6232.66																										
GP-15	Y	18.75	6253.48	>18.75	<6234.73	>18.75	<6234.73																										
GP-16	N	3.00	NM																														
GP-17 <sup>1</sup>	Y	18.50	6241.52	12.95	6228.57	12.98	6228.54							11.92	6229.60	12.01	6229.51	12.14	6229.38	12.10	6229.42	12.01	6229.51	12.18	6229.34	12.25	6229.27						
GP-18	N	8.00	6243.01																														
GP-19	Y	18.30	6287.72	>18.30	<6269.42	>18.30	<6269.42																										
GP-20	Y	18.21	6285.40	>18.21	<6267.19	>18.21	<6267.19																										
GP-21	N	3.00	6312.65																														
GP-25 <sup>2</sup>	Y	19.10	6302.18	>19.10	<6283.08	>19.10	<6283.08							11.35	6290.83	11.93	6290.25	13.10	6289.08	14.01	6288.17	13.18	6289.00	14.02	6288.16	14.46	6287.72	15.04	6287.14	NA	NA	1059636	
GP-26	Y	19.05	6301.56	>19.05	<6282.51	>19.05	<6282.51							14.19	6287.37	12.11	6289.45	13.00	6288.56	14.33	6287.23	14.51	6287.05	14.94	6286.62	15.86	6285.70	17.92	6283.64	NA	NA	1059632	
GP-27	Y	19.50	6328.66	>19.50	<6309.16	>19.50	<6309.16																										
GP-29	Y	19.85	6342.53	>19.85	<6322.68	>19.85	<6322.68																										
GP-31	Y	19.25	6309.96	>19.25	<6290.71	19.02	6290.94																										
GP-32	Y	18.05	6294.56	>18.05	<6276.51	>18.05	<6276.51																										
GP-33	Y	11.50	6274.39	>11.50	<6262.89	>11.50	<6262.89																										
GP-34	N	2.00	NM																														
GP-35	N	8.00	6272.79																														
GP-36	Y	12.45	6264.18	>12.45	<6251.73	>12.45	<6251.73							9.97	6254.21	3.72	6260.46	6.68	6257.50	10.67	6253.51	8.04	6256.14	9.24	6254.94	>12.45	<6251.73	>12.45	<6251.73	13.58	6250.60		
GP-37	Y	19.60	6297.37	18.63	6278.74	18.92	6278.45							12.03	6285.34	12.02	6285.35	12.23	6285.14	12.25	6285.12	12.35	6285.02	12.54	6284.83	12.77	6284.60	13.12	6284.25	NA	NA		
GP-39	Y	19.30	6300.64	>19.30	<6281.34	>19.30	<6281.34																										
GP-41 <sup>3</sup>	Y	19.30	6302.24	>19.30	<6282.94	>19.30	<6282.94							3.34	6298.90	4.65	6297.59	5.20	6297.04	5.01	6297.23	5.52	6296.72	6.38	6295.86	8.14	6294.10	9.05	6293.19	NA	NA	1059631	
GP-43 <sup>4</sup>	Y	15.10	6298.44	13.75	6284.69	13.2	6285.24					9.25	6289.19	10.32	6288.12	10.08	6288.36	10.64	6287.80	10.72	6287.72	10.76	6287.68	10.97	6287.47	11.16	6287.28	12.53	6285.91	NA	NA	1059645	
GP-45	Y	18.95	6279.93	>18.95	<6260.98	>18.95	<6260.98	>18.95	<6260.98	>18.95	<6260.98	>18.95	<6260.98	>18.95	<6260.98	>18.95	<6260.98	>18.95	<6260.98	>18.80	<6261.13	>18.80	<6261.13	>18.80	<6261.13	>18.80	<6261.13	>18.80	<6261.13	NA	NA		
GP-46	N	10.00	6272.93																														
GP-47	N	12.00	NM																														
GP-48	N	2.00	NM																														
GP-51	Y	19.00	6276.61	>19.00	<6257.61	>19.00	<6257.61	>19.00	<6257.61	>19.00	<6257.61	>19.00	<6257.61	>19.00	<6257.61	>19.00	<6257.61	>19.00	<6257.61	>18.77	<6257.84	>18.77	<6257.84	>18.77	<6257.84	>18.77	<6257.84	>18.77	<6257.84	4.00	6272.61		
GP-52	Y	18.90	6285.48	>18.90	<6266.58	>18.90	<6266.58	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	
GP-55	Y	19.60	6285.56	>19.60	<6265.96	>19.60	<6265.96																										
GP-56	Y	18.80	6313.76	>18.80	<6294.96	>18.80	<6294.96																										
GP-58	N	10.50	NM																														
MW-2 N	Y	11.45	6235.19	6.20	6228.99			6.68	6228.51	6.40	6228.79	5.58	6229.61	5.52		5.44	6229.75	5.52	6229.67	6.28	6228.91	6.12	6229.07	6.22	6228.97	5.59	6229.60	6.28	6228.91	4.65	6230.54	*T.O.C.cut- 5-10-07	
MW-3 N	Y	13.55	6235.81	7.32	6228.49	7.36	6228.45	7.12	6228.69	6.85	6228.96	6.70	6229.11	6.68		6.59	6229.22	6.68	6229.13	6.75	6229.06	6.53	6229.28	6.7	6229.11	6.75	6229.06	6.81	6229.00	5.11	6230.70		

DTW= Depth to water in feet below top of casing  
 NM= Not Measured  
 1-Minimum depth to water in GP-17 on 4/11/07 from transducer data  
 2-Minimum depth to water in GP-25 on 4/10/07 from transducer data  
 3-Minimum depth to water in GP-41 on 4/7/07 from transducer data  
 4-Minimum depth to water in GP-43 on 4/9/07 from transducer data  
 5-Seasonal High Groundwater Depth and Elevation based on soil core samples for Geoprobe borings and measured groundwater level in MW-2N and MW-3N.

DTW or ELEVATION left blank indicate that the well could not be located or was inaccessible due to excessive snow  
 D = Destroyed



**Table 3**  
**Seasonal or Measured High Groundwater Levels**  
**Homewood Mountain Resort**



Well ID	Survey Elevation	Measured High Groundwater Depth <sup>1</sup>	Date of Occurrence <sup>2</sup>	Seasonal High Groundwater Depth <sup>3</sup>	Seasonal High or Measured High Groundwater Elevation <sup>4</sup>
GP-1	6237.02	7.72	5/3/07	5.00	6232.02
GP-2	6236.20	NA		5.50	6230.70
GP-3	NM	NA		4.50	NM
GP-4	6237.85	NA		11.00	6226.85*
GP-5	6237.26	NA		6.50	6230.76
GP-6	6236.72	7.22	4/27/07	8.41	6229.50
GP-7	6238.00	9.00	4/13/07	8.00	6230.00
GP-8	6237.88	8.37	5/3/07	4.30	6233.58
GP-9	6236.14	NA		2.75	6233.39
GP-10	6236.86	NA		> 2.0	<6234.86
GP-11	6236.74	5.18	5/3/07	1.17	6235.57
GP-12	6238.18	4.61	4/29/08	3.50	6234.68
GP-13	6238.21	1.99	5/3/07	2.00	6236.22
GP-14	6238.49	0.89	5/3/07	2.00	6237.60
GP-15	6253.48	17.42	4/28/08	NA	6236.06
GP-16	NM	NA		> 3.0	NM
GP-17	6241.52	11.92	4/11/07	NA	6229.60*
GP-18	6243.01	NA		>8.0	<6235.01
GP-19	6287.72	>18.30		NA	<6270.07
GP-20	6285.40	17.78	4/18/08	NA	6267.62
GP-21	6312.65	NA		> 3.0	<6309.65
GP-25	6302.18	10.90	5/1/08	NA	6291.28
GP-26	6301.56	10.84	5/5/08	NA	6290.72
GP-27	6328.66	17.67	1/4/08	NA	6310.99
GP-29	6342.53	>19.82		NA	<6322.71
GP-31	6309.96	9.18	5/5/08	NA	6300.78
GP-32	6294.56	13.39	5/12/08	NA	6281.17
GP-33	6274.39	>11.50		>7.5	<6262.89
GP-34	NM	NA		> 2.0	NM
GP-35	6272.79	NA		> 8.0	<6264.79
GP-36	6264.18	1.75	5/12/08	13.58	6262.43
GP-37	6297.37	11.75	4/29/08	NA	6285.62
GP-39	6300.64	0.97	4/14/08	NA	6299.67
GP-41	6302.24	3.17	4/28/08	NA	6299.07
GP-43	6298.44	6.83	1/4/08	NA	6291.61
GP-45	6279.93	>18.95		NA	<6260.98
GP-46	6272.93	NA		> 10.0	<6262.93
GP-47	NM	NA		>12.0	NM
GP-48	NM	NA		>2.0	NM
GP-51 <sup>5</sup>	6276.61	>19.00		4.00	6257.61 <sup>(6)</sup>
GP-52 <sup>5</sup>	6285.48	>18.90		5.00	6266.58 <sup>(6)</sup>
GP-55 <sup>5</sup>	6285.56	19.50	1/4/08	5.00	6266.06 <sup>(6)</sup>
GP-56	6313.76	8.09	5/12/08	NA	6305.67
GP-58	NM	NA		> 10.5	NM
MW-1 N	NM	NA	6/26/00	4.56	NM
MW-2-N	6235.19	5.44	6/7/99	4.65	6230.54
MW-3 N	6235.81	6.53	6/7/99	5.11	6230.70
MW-4 N	NM	NA	6/7/99	5.79	NM
MW-1 S	NM	NA	6/3/98	17.65	NM
MW-2 S	NM	NA	6/3/98	15.72	NM
MW-3 S	NM	NA	6/3/98	16.38	NM
MW-4 S	NM	NA	6/7/99	16.15	NM
MW-5 S	NM	NA	6/3/98	15.63	NM

- 1- Measured Spring 2007 and Spring 2008
- 2- Date of measured high groundwater depth measurement
- 3- Based on soil core samples from Geoprobe borings
- 4- Based on highest elevation from either measured groundwater or soil core samples
- 5- Soil oxidation at depths of 4 to 5 feet is inconsistent with measured groundwater levels greater than 19 feet
- 6- Measured high groundwater depth from 2007/2008 monitoring used
- \*- Elevation considered unreliable and not used for groundwater contours

**Table 4-Revised**  
**Retaining Wall Data**  
**Homewood Mountain Resort**  
**Homewood, California**

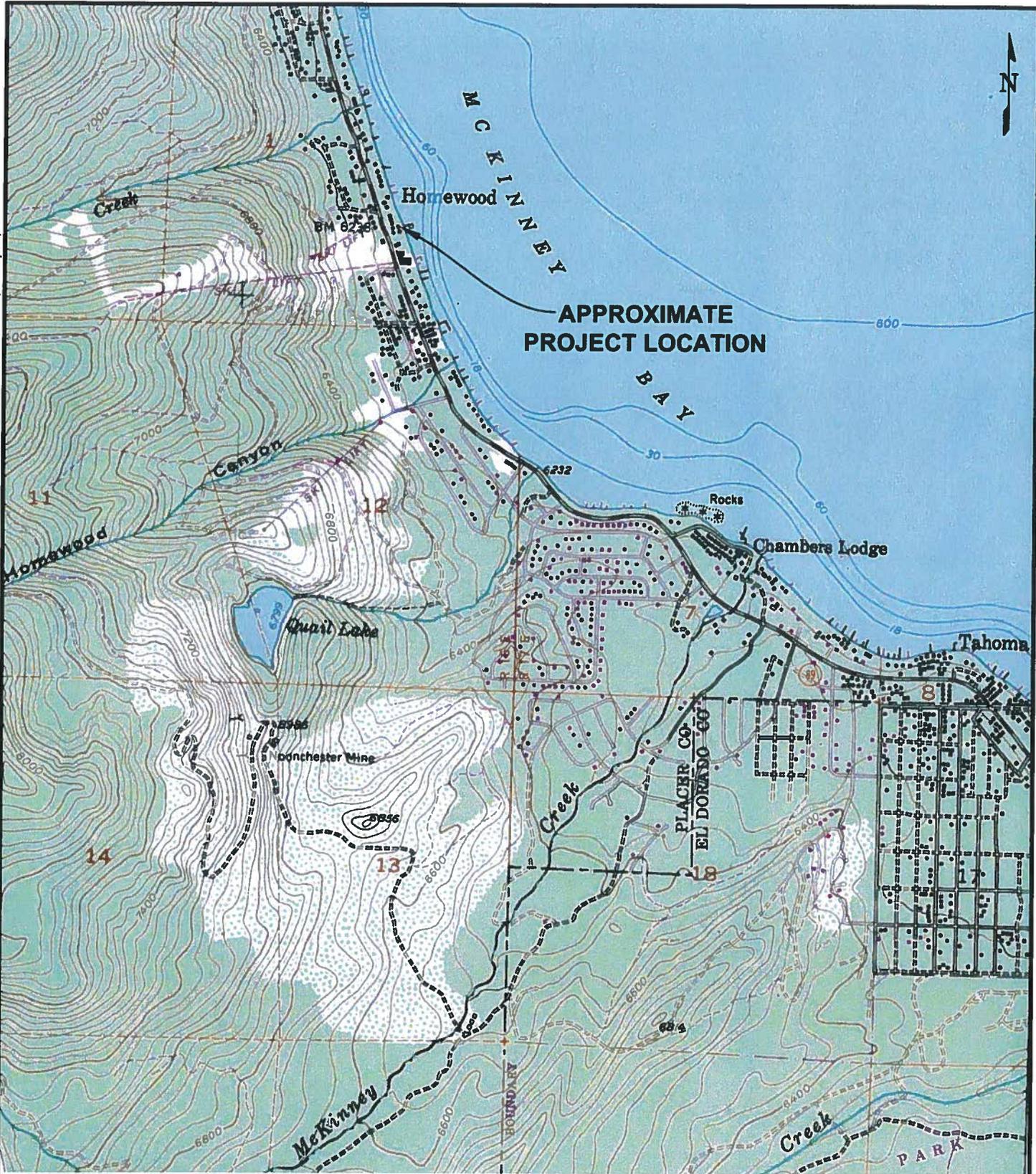
Location	Finished Floor Elevation feet, msl	Length of Wall feet	Depth of Wall feet	Groundwater Interception feet	Groundwater Gradient ft/ft	Flow Rate-k=0.0004 cm/sec gpm	Flow Rate-k=0.001 cm/sec gpm
<b>North Base</b>							
Parking Garage (Sections 1 through 4)	6,240	878	29 to 32	17	0.17	15	37
<b>North Base Total</b>						<b>15</b>	<b>37</b>
<b>South Base</b>							
North Building Parking (Section 5)	6,280	376	19	13	0.12	3	9
South Building Parking (Section 6)	6,270	100	19	4	0.2	0.5	1
South Building Parking-Section 7	6,270	110	21	4	0.2	1	1
<b>South Base Total</b>						<b>4</b>	<b>11</b>
<b>Mid-Mountain</b>							
Section 8 Walls	7,285 7,323 7,327		14 8 11.5				
Section 10 Cuts for Tanks	7,480		20.5				

Note: North Base Sections refer to Cross Sections 1 through 4 on Sheet C19 (Nichols Consulting Engineers, Chtd. 4/30/10)  
 Note: South Base Sections refer to Cross Sections 5 through 7 on Sheet C20 (Nichols Consulting Engineers, Chtd. 4/30/10)  
 k= hydraulic conductivity



# PLATES

images: VIC MAP.jpg  
 PLOTTED: 07 Oct 2010, 2:05pm, kcarter  
 CAD FILE: L:\2010\Project\98510\Drafting\ LAYOUT: Layout1



**APPROXIMATE PROJECT LOCATION**

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DRAWN BY:	K. CARTER
CHECKED BY:	D. HERZOG
FILE NAME:	
VIC MAP.dwg	

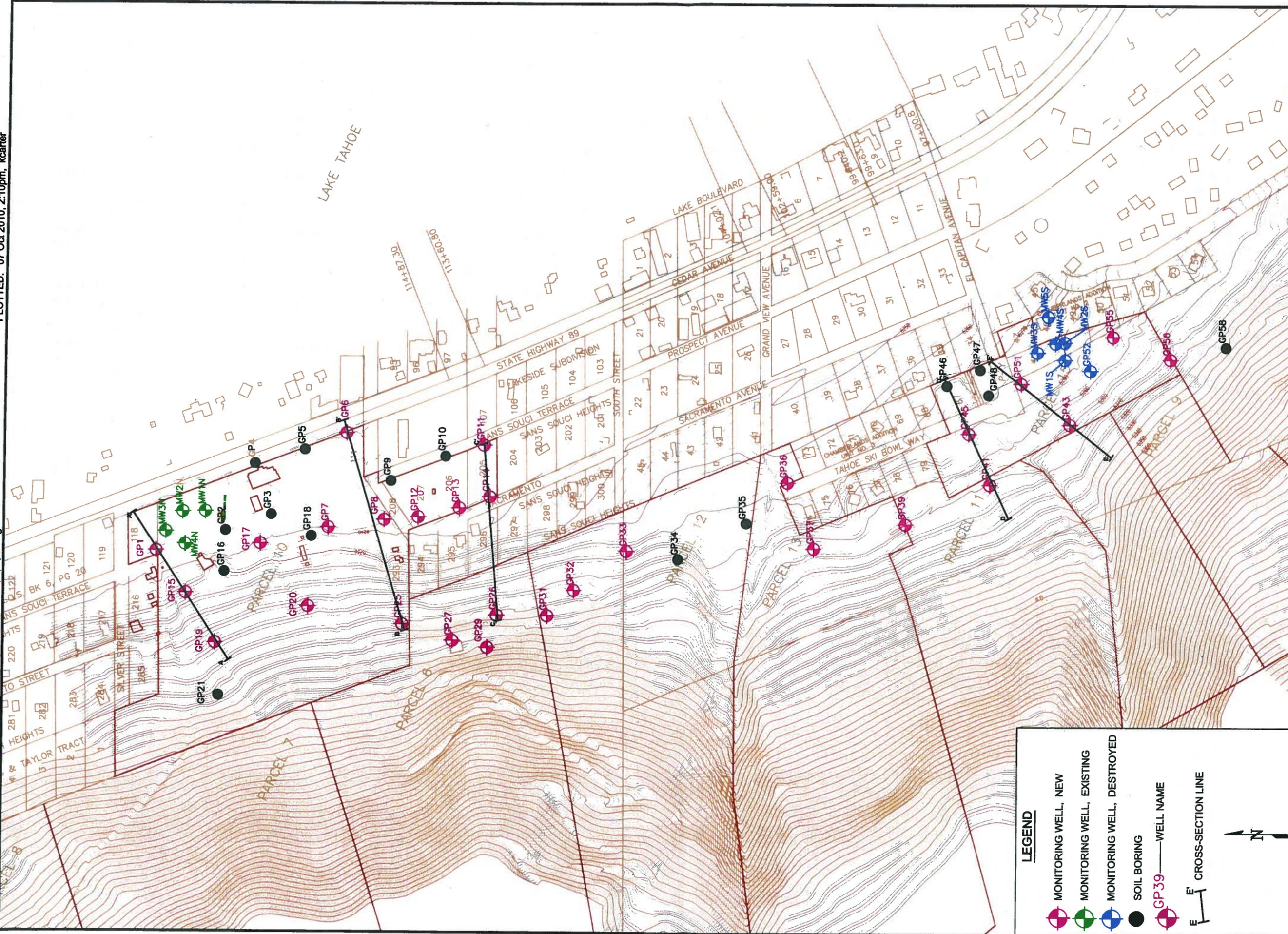
<b>VICINITY MAP</b>
HOMEWOOD MOUNTAIN RESORT HOMEWOOD, CALIFORNIA

PLATE
<b>1</b>

ATTACHED IMAGES:  
ATTACHED XREFS:  
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CAD FILE: L:\2008\Drafting\90280\Plates 2, 4, 5, 6.dwg

PLOTTED: 07 Oct 2010, 2:10pm, kcoarter



**LEGEND**

-  MONITORING WELL, NEW
-  MONITORING WELL, EXISTING
-  MONITORING WELL, DESTROYED
-  SOIL BORING
-  GP39 — WELL NAME
-  E-E' CROSS-SECTION LINE



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PROJECT NO.	90280.01
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CHECKED BY:	KW
FILE NAME:	DH
	PLATES 2, 4, 5, 6.DWG

**SITE PLAN**

PLATE

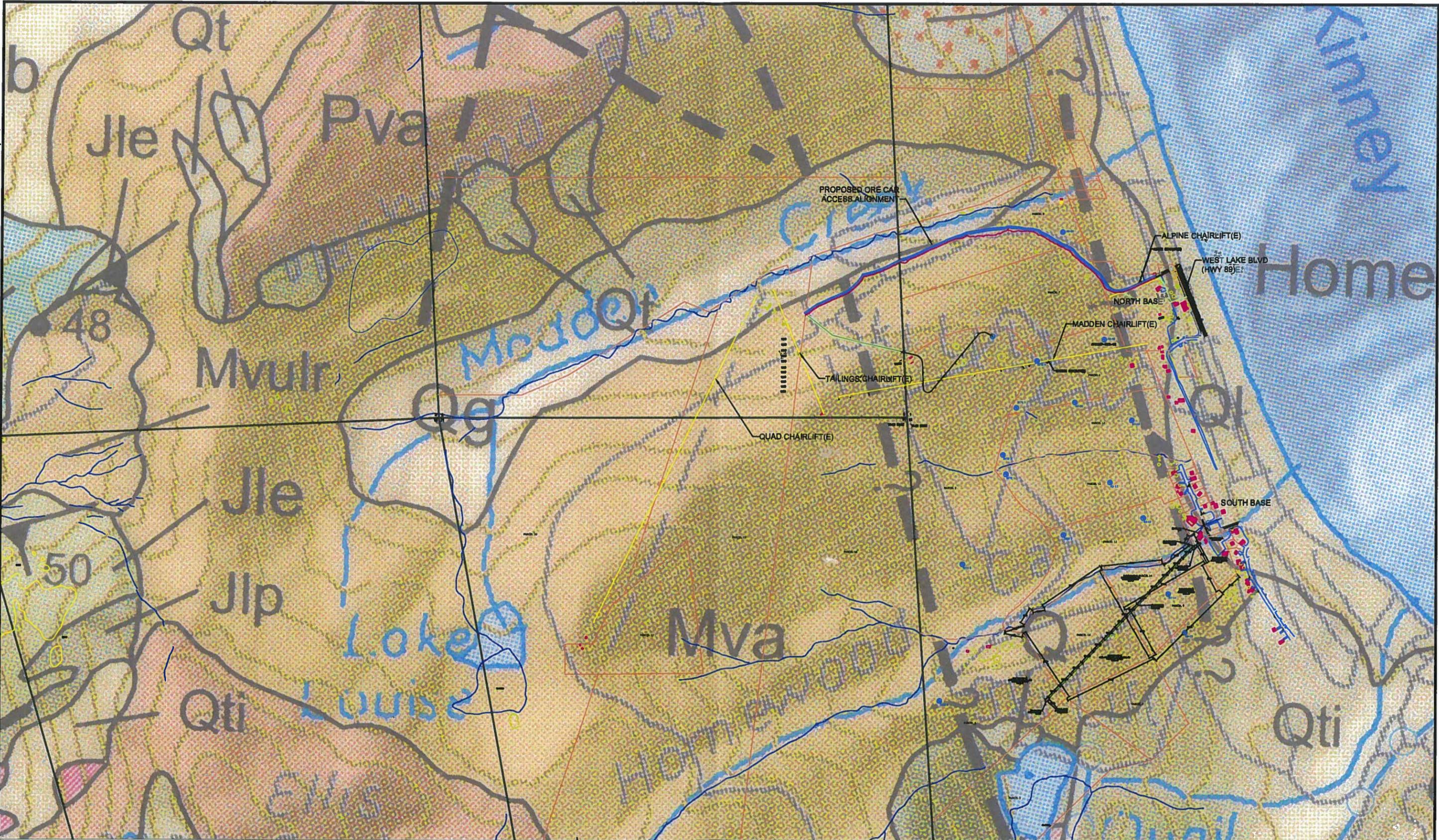


GROUNDWATER EVALUATION  
HOMEWOOD, CALIFORNIA

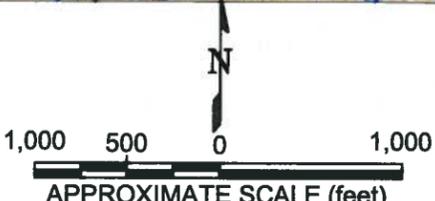
**2**

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ATTACHED IMAGES: GEO MAP 2005.jpg Images: Homewood Geology.tif  
ATTACHED XREFS: RENO, NV  
CAD FILE: R:\2008\IDRAFTING\90280\ LAYOUT: PLATE 3



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PLATE 3.DWG	

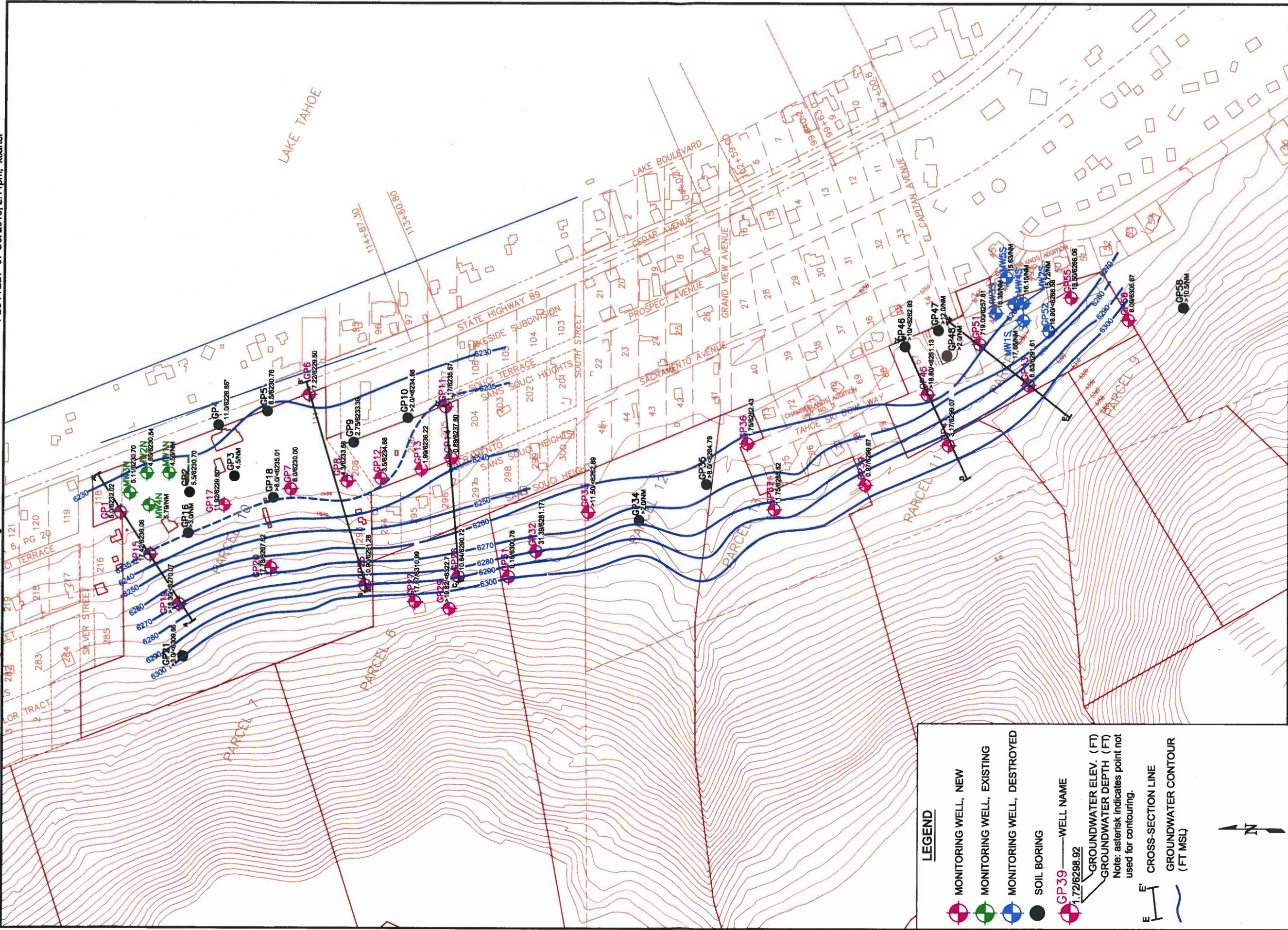
<b>GEOLOGIC MAP</b>	
GROUNDWATER EVALUATION	
HOMEWOOD, CALIFORNIA	

PLATE  
**3**

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PLOTTED: 07 Oct 2010, 2:11pm, kcarter



**LEGEND**

- MONITORING WELL, NEW
- MONITORING WELL, EXISTING
- MONITORING WELL, DESTROYED
- SOIL BORING
- GP39  
1.72/6298.92 — WELL NAME
- GROUNDWATER ELEV. (FT)
- GROUNDWATER DEPTH (FT)  
Note: asterisk indicates point not used for contouring.
- CROSS-SECTION LINE
- GROUNDWATER CONTOUR (FT MSL)



300 150 0 300  
APPROXIMATE SCALE (feet)

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FILE NAME:	PLATES 2, 4, 5, 6.DWG

**SEASONAL HIGH GROUNDWATER LEVELS**

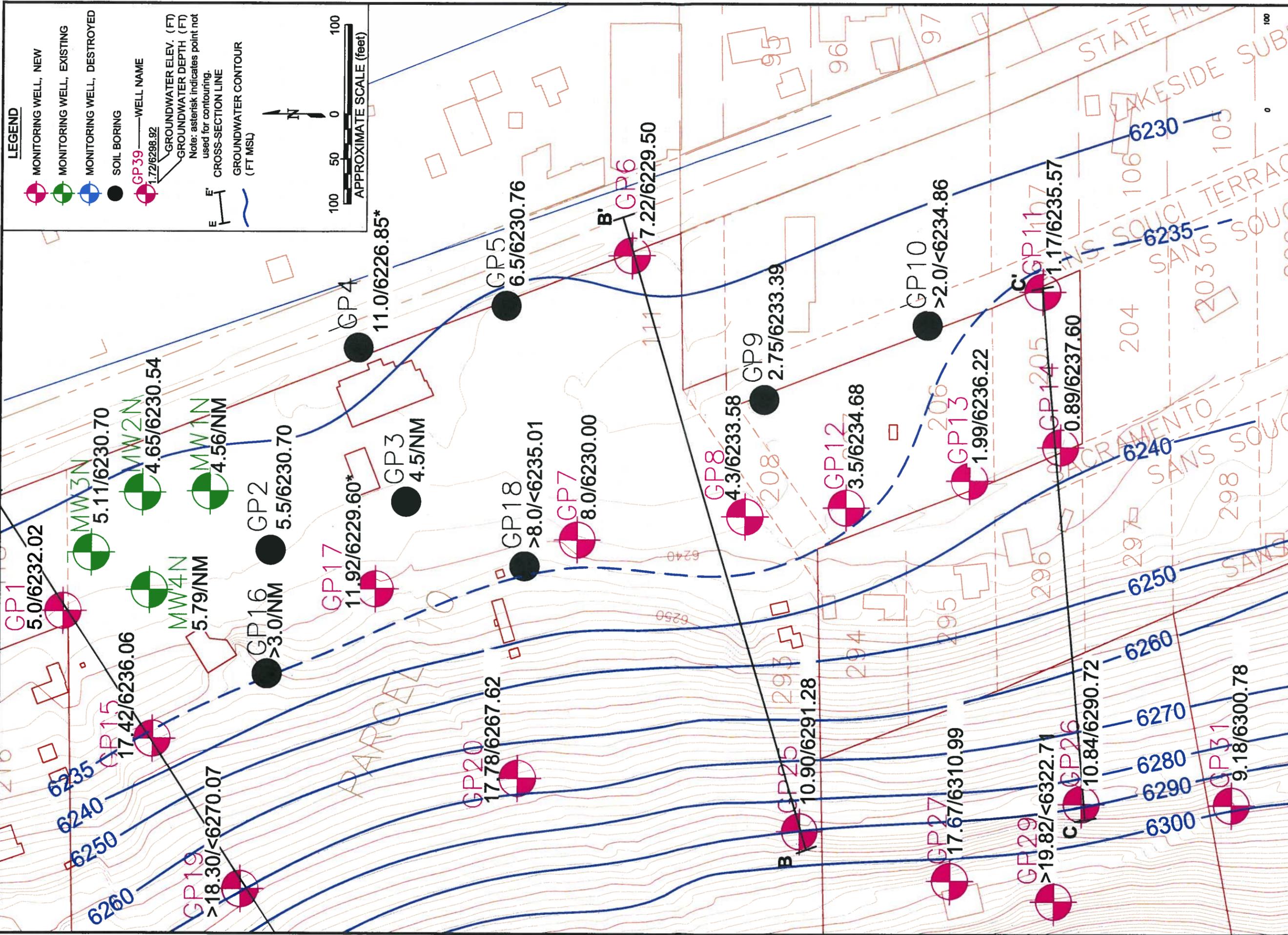
PLATE  
**4**  
GROUNDWATER EVALUATION  
HOMEWOOD, CALIFORNIA



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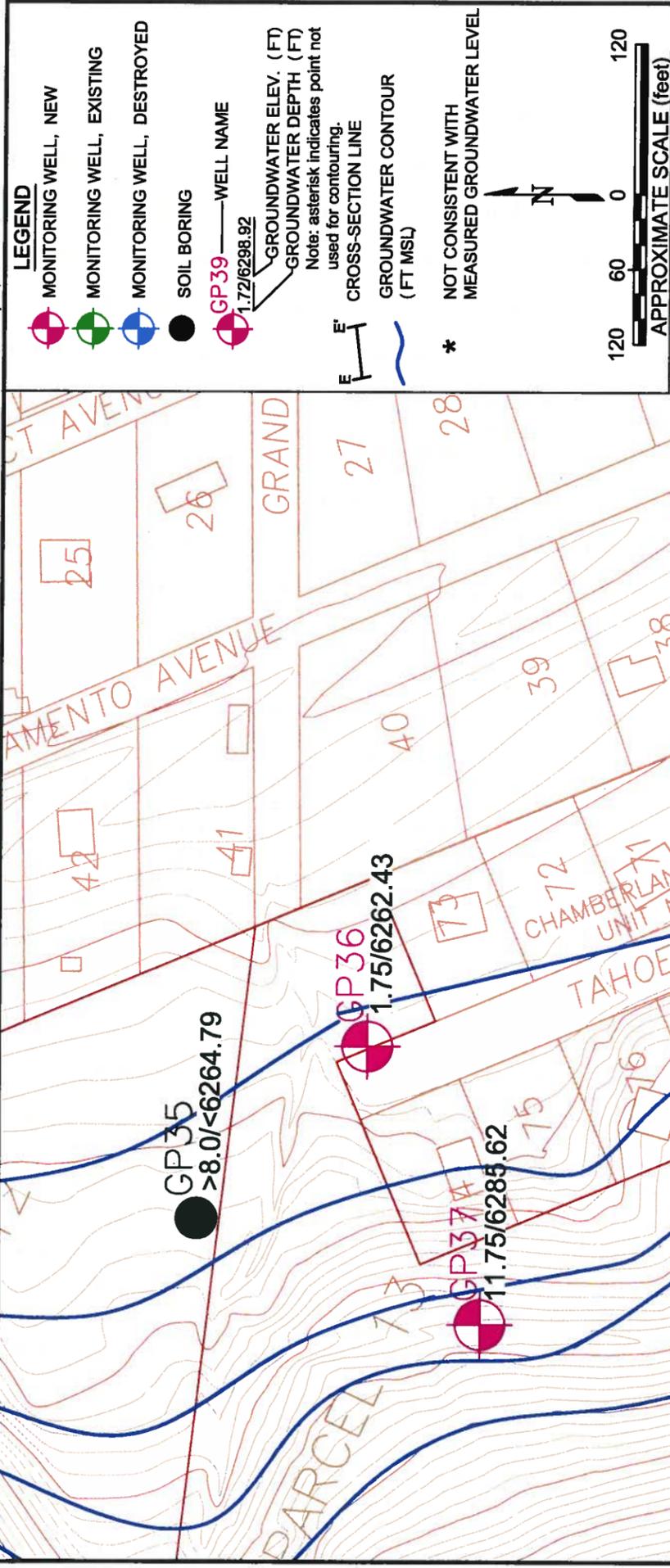
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<b>SEASONAL HIGH GROUNDWATER LEVELS</b>	
<b>NORTH BASE DETAIL</b>	
GROUNDWATER EVALUATION	PLATE
	<b>5</b>
HOMEWOOD, CALIFORNIA	

ATTACHED IMAGES:  
ATTACHED XREFS:  
RENO, NV

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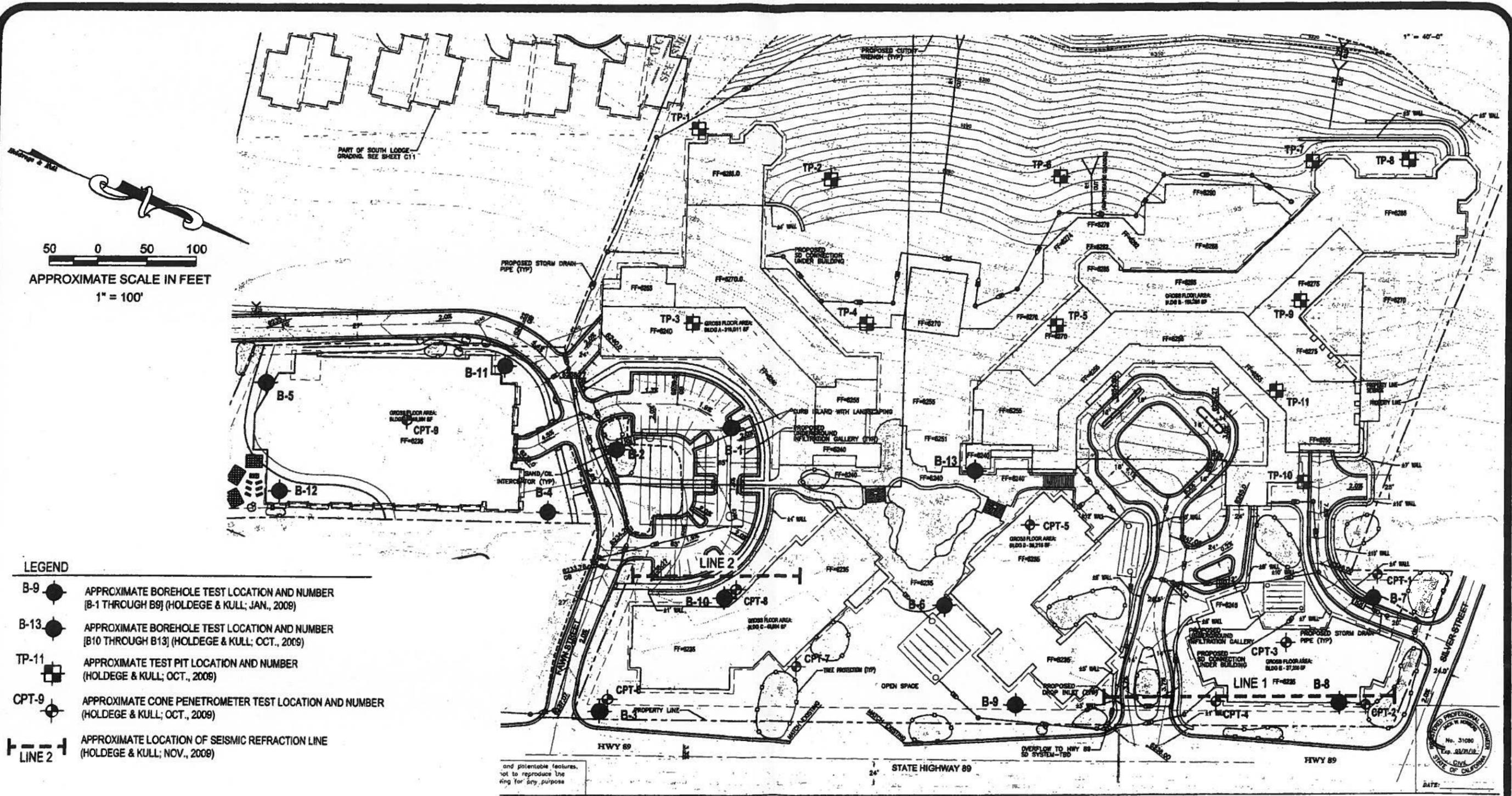


PROJECT NO.	90280.01
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DRAWN BY:	KW
CHECKED BY:	DH
FILE NAME:	PLATES 2, 4, 5, 6.DWG

<b>SEASONAL HIGH GROUNDWATER LEVELS SOUTH BASE DETAIL</b>	
PLATE	<b>6</b>
GROUNDWATER EVALUATION	
HOMEWOOD, CALIFORNIA	

# **APPENDIX A**

**Holdrege and Kull Boring and Test Pits Logs,  
North Base Area**



SITE LAYOUT PLAN WAS PREPARED BY NICHOLS CONSULTING ENGINEERS DATED MAY 22, 2009.

**HK HOLDREGE & KULL**  
 CONSULTING ENGINEERS • GEOLOGISTS  
 10775 PIONEER TRAIL SUITE 213  
 TRUCKEE, CA 96161  
 (530) 587-5156 FAX 587-5196

TEST PIT, BORING, CPT AND SEISMIC REFRACTION LOCATION PLAN  
 HOMEWOOD MOUNTAIN RESORT  
 PROPOSED NORTH BASE LODGE  
 HOMEWOOD/PLACER COUNTY, CALIFORNIA

**DRAWN BY:** MED    **CHECKED BY:** JKH  
**PROJECT NO.:** 41278-03  
**DATE:** JANUARY 2010  
**FIGURE NO.:** 2

# BORING B-1

PROJECT NO.		PROJECT NAME		ELEVATION (APPROX)		DATE		PAGE		BORING NO.	
41278-01		HOMEWOOD MOUNTAIN RESORT		6238 FT.		01/13/09		1 OF 2		B-1	
DRILLING METHOD CME 75				SAMPLING METHOD HOLLOW STEM AUGER MODIFIED CALIFORNIA (2.5" DIA.)				GROUNDWATER ENCOUNTERED YES		CAVED YES	
SAMPLE NO.	BLOW COUNTS (N) *	DRY DENSITY (PCF)	PERCENT MOISTURE	DEPTH (FT)	USCS	DESCRIPTIONS/REMARKS					
				1		PAVEMENT SECTION: 1 TO 2 INCHES OF ASPHALT CONCRETE; 2 TO 3 INCHES OF AGGREGATE BASE.					
				2	FILL (SM)	FILL: YELLOW BROWN SILTY SAND WITH GRAVEL (SM); MOIST, MEDIUM DENSE, ESTIMATED 30% PASSING NO. 200 SIEVE, FINE GRAVEL.					
				3	SM	YELLOW BROWN SILTY SAND WITH GRAVEL (SM); MOIST LOOSE, ESTIMATED 30% PASSING NO. 200 SIEVE, FINE ROUNDED GRAVEL.					
1-1-2	6	---	---	4							
1-1-1		---	---								
				5		GRADES TO MEDIUM DENSE, ESTIMATED 15 TO 20% PASSING NO. 200 SIEVE, ROUNDED GRAVEL.					
				6							
				7							
				8		GRADES TO: INCREASING GRAVEL IN CUTTINGS.					
1-2-2	21	---	---	9							
1-2-1		---	---								
				10		GRAY GRAVELLY SAND TO SANDY GRAVEL (SP/GP); MOIST, DENSE, MEDIUM TO COARSE SAND, ROUNDED TO SUBROUNDED GRAVEL, SCATTERED COBBLES.					
				11	SP/GP						
				12							
				13		GRADES TO: DENSE.					
1-3-2	40	---	---	14							
1-3-1		---	---								
				15		GRAY POORLY GRADED SAND (SP); WET, LOOSE, FINE TO MEDIUM SAND, CONSISTENCY OF MATERIAL IS REPRESENTATIVE OF THE DRILLING OBSERVATIONS AND FLOWING AND HEAVING SAND AND NOT THE BLOW COUNTS.					
				16	SP						
				17		GRADES TO: VERY DENSE, NO SAMPLE RECOVERY, 50 BLOWS PER 4 INCHES, HARDER DRILLING AT 20 FEET BGS.					
				18							
NO RECOVERY	64/4"	---	---	19							
				20							
						▽▽	RX				

\* BLOW COUNTS WERE CORRECTED FOR SAMPLER TYPE.

# BORING B-1

PROJECT NO.		PROJECT NAME		ELEVATION (APPROX)		DATE		PAGE		BORING NO.	
41278-01		HOMEWOOD MOUNTAIN RESORT		6238 FT.		01/13/09		2 OF 2		B-1	
DRILLING METHOD				SAMPLING METHOD				GROUNDWATER ENCOUNTERED		CAVED	
CME 75				HOLLOW STEM AUGER MODIFIED CALIFORNIA (2.5" DIA.)				YES		YES	
SAMPLE NO.	BLOW COUNTS (N) *	DRY DENSITY (PCF)	PERCENT MOISTURE	DEPTH (FT)		USCS	DESCRIPTIONS/REMARKS				
				21	▽▽▽	RX	GRAY ANDESITE (RX); SLIGHTLY WEATHERED, SLIGHTLY TO MODERATELY FRACTURED, STRONG TO VERY STRONG.				
				22	▽▽▽						
1-5-1	50/5"			22.5	▲		BEGAN CORING AT 22.5 FEET. RQD: 22.5 TO 25 FEET = 43% (POOR)				
CORE				23	▽▽▽						
				24	▽▽▽		RQD: 25 TO 30 FEET = 76% (GOOD)				
				25	▽▽▽						
				26	▽▽▽		BOREHOLE TERMINATED AT 30 FEET. CAVING WAS NOTED IN FLOWING SANDS.				
				27	▽▽▽						
				28	▽▽▽						
				29	▽▽▽						
				30	▽▽▽						
				31							
				32							
				33							
				34							
				35							
				36							
				37							
				38							
				39							
				40							

\* BLOW COUNTS WERE CORRECTED FOR SAMPLER TYPE.

# BORING B-2

PROJECT NO.		PROJECT NAME		ELEVATION (APPROX)		DATE		PAGE		BORING NO.	
41278-01		HOMWOOD MOUNTAIN RESORT		6236 FT		01/13/09		1 OF 2		B-2	
DRILLING METHOD				SAMPLING METHOD				GROUNDWATER ENCOUNTERED		CAVED	
CME 75				HOLLOW STEM AUGER MODIFIED CALIFORNIA (2.5" DIA.)				YES		YES	
SAMPLE NO.	BLOW COUNTS (N) *	DRY DENSITY (PCF)	PERCENT MOISTURE	DEPTH (FT)	USCS	DESCRIPTIONS/REMARKS					
				1		PAVEMENT SECTION: 5 TO 6 INCHES OF ASPHALT CONCRETE; 2 TO 3 INCHES OF AGGREGATE BASE.					
				2	FILL (SM)	FILL: DARK YELLOW BROWN SILTY SAND WITH GRAVEL (SM); MOIST, LOOSE TO MEDIUM DENSE, ESTIMATED 20-30% PASSING NO. 200 SIEVE, FINE ROUNDED GRAVEL.					
				3	SM	DARK YELLOW BROWN SILTY SAND WITH GRAVEL (SM); MOIST, LOOSE TO MEDIUM DENSE, ESTIMATED 20-30% PASSING NO. 200 SIEVE, ROUNDED GRAVEL.  ENCOUNTERED AT COBBLE LAYER BETWEEN 3 TO 4 FEET BGS.  GRADES WITH DECREASING FINES CONTENT.					
			4								
			5								
2-1-2	8	--	--	6							
2-1-1		--	--								
			7								
			8								
			9								
			10								
2-2-2	42	--	--	11	SP/GP	GRAY GRAVELLY SAND TO SANDY GRAVEL (SP/GP); MOIST, DENSE, MEDIUM TO COARSE SAND, ROUNDED TO SUBROUNDED GRAVEL, SCATTERED COBBLES.					
2-2-1		--	--								
			12								
			13								
			14								
			15								
2-3-2	42	--	--	16	SP	GRAY POORY GRADED SAND (SP); WET, LOOSE, FINE TO MEDIUM SAND, CONSISTENCY OF MATERIAL IS REPRESENTATIVE OF THE DRILLING OBSERVATIONS AND FLOWING AND HEAVING SAND AND NOT THE BLOW COUNTS.					
2-3-1		--	--								
			17								
			18								
			19								
			20								

\* BLOW COUNTS WERE CORRECTED FOR SAMPLER TYPE.



# BORING B-3

PROJECT NO.		PROJECT NAME		ELEVATION (APPROX)		DATE		PAGE		BORING NO.	
41278-01		HOMWOOD MOUNTAIN RESORT		6236 FT		01/14/09		1 OF 3		B-3	
DRILLING METHOD				SAMPLING METHOD		GROUNDWATER ENCOUNTERED		CAVED			
CME 75				HOLLOW STEM AUGER MODIFIED CALIFORNIA (2.5" DIA.)		YES		YES			
SAMPLE NO.	BLOW COUNTS (N) *	DRY DENSITY (PCF)	PERCENT MOISTURE	DEPTH (FT)	USCS	DESCRIPTIONS/REMARKS					
				1	--	PAVEMENT STRUCTURAL SECTION: 4 TO 5 INCHES OF ASPHALT CONCRETE; 3 INCHES OF AGGREGATE BASE.					
				2	FILL (SM)	FILL: DARK BROWN SILTY SAND WITH GRAVEL (SM); MOIST, LOOSE, ESTIMATED 15-20% PASSING NO. 200 SIEVE, FINE ROUNDED GRAVEL.					
				3	SM/SC	DARK YELLOW BROWN SILTY SAND TO CLAYEY SAND (SM/SC); MOIST, LOOSE TO MEDIUM DENSE, FINE SAND ESTIMATED 30-35% PASSING NO. 200 SIEVE, TRACE FINE ROUNDED GRAVEL, WATER OBSERVED IN CUTTINGS BUT NO FREE WATER.  GRADES TO: MEDIUM DENSE					
			4								
			5								
NO RECOVERY	14	--	--	6							
			7								
				8	GW	GRAY SANDY GRAVEL WITH CLAY (GW); WET, MEDIUM DENSE, FINE TO MEDIUM SAND, FINE SUBROUNDED TO ROUNDED GRAVEL WITH CALCAREOUS STAINING, ROUNDED GRAVEL.					
			9								
			10								
3-1-2	18	--	--	11	SP/GP	GRAY POORLY GRADED SAND WITH GRAVEL TO POORLY GRADED GRAVEL WITH SAND (SP/GP); MOIST, DENSE, MEDIUM TO COARSE SAND, ROUNDED TO SUBROUNDED GRAVEL, SCATTERED COBBLES.					
3-1-1		--	--	12							
			13								
				14	SP/GP	DARK BROWN POORLY GRADED SAND WITH GRAVEL TO POORLY GRADED GRAVEL WITH SAND (SP/GP); WET, DENSE, COARSE SAND, COARSE SUBROUNDED TO ROUNDED GRAVEL, FLOWING AND HEAVING SAND.  CONTAINS LENSES OF COARSE SAND					
3-2-2	36	--	--	15							
3-2-1		--	--	16							
				17							
				18							
				19							
3-3-2	+64	--	--	20		DRILLING SLOWED DOWN DUE TO PRESENCE OF COBBLES.					
3-3-1		--	--								

\* BLOW COUNTS WERE CORRECTED FOR SAMPLER TYPE.

# BORING B-3

PROJECT NO. 41278-01		PROJECT NAME HOMEWOOD MOUNTAIN RESORT			ELEVATION (APPROX) 6236 FT		DATE 01/14/09		PAGE 2 OF 3		BORING NO. B-3	
DRILLING METHOD CME 75				SAMPLING METHOD HOLLOW STEM AUGER MODIFIED CALIFORNIA (2.5" DIA.)				GROUNDWATER ENCOUNTERED YES		CAVED YES		
SAMPLE NO.	BLOW COUNTS (N) *	DRY DENSITY (PCF)	PERCENT MOISTURE	DEPTH (FT)				USCS	DESCRIPTIONS/REMARKS			
				21					DRILLING SLOWED DOWN DUE TO PRESENCE OF COBBLES.			
				22				SP	GRAY POORY GRADED SAND (SP); WET, LOOSE TO MEDIUM DENSE, FINE TO MEDIUM SAND. CONSISTENCY OF MATERIAL IS REPRESENTATIVE OF THE DRILLING OBSERVATIONS AND FLOWING AND HEAVING SAND AND NOT THE BLOW COUNTS.			
				23								
				24								
				25								
				26								
				27								
				28								
				29								
				30								
				31								
				32								
				33								
				34								
				35								
				36								
				37								
				38								
				39								
				40								

\* BLOW COUNTS WERE CORRECTED FOR SAMPLER TYPE.

# BORING B-3

PROJECT NO.		PROJECT NAME		ELEVATION (APPROX)		DATE		PAGE		BORING NO.	
41278-01		HOMEWOOD MOUNTAIN RESORT		6236 FT		01/14/09		3 OF 3		B-3	
DRILLING METHOD				SAMPLING METHOD				GROUNDWATER ENCOUNTERED		CAVED	
CME 75				HOLLOW STEM AUGER MODIFIED CALIFORNIA (2.5" DIA.)				YES		YES	
SAMPLE NO.	BLOW COUNTS (N) *	DRY DENSITY (PCF)	PERCENT MOISTURE	DEPTH (FT)		USCS	DESCRIPTIONS/REMARKS				
				41		SP	GRAY POORY GRADED SAND (SP); WET, LOOSE TO MEDIUM DENSE, FINE TO MEDIUM SAND, FEW SUBROUNDED TO ROUNDED COBBLES BETWEEN 40 TO 45 FEET BGS, CONSISTENCY OF MATERIAL IS REPRESENTATIVE OF THE DRILLING OBSERVATIONS AND FLOWING AND HEAVING SAND AND NOT THE BLOW COUNTS.				
				42							
				43							
				44							
				45							
				46							
				47							
				48							
				49							
				50							
				51			BOREHOLE TERMINATED AT 50 FEET. CAVING WAS NOTED IN FLOWING SANDS.				
				52							
				53							
				54							
				55							
				56							
				57							
				58							
				59							
				60							

\* BLOW COUNTS WERE CORRECTED FOR SAMPLER TYPE.

# BORING B-4

PROJECT NO.		PROJECT NAME		ELEVATION (APPROX)		DATE		PAGE		BORING NO.	
41278-01		HOMEWOOD MOUNTAIN RESORT		6236 FT		01/14/09		1 OF 2		B-4	
DRILLING METHOD				SAMPLING METHOD				GROUNDWATER ENCOUNTERED		CAVED	
CME 75				HOLLOW STEM AUGER MODIFIED CALIFORNIA (2.5" DIA.)				YES		YES	
SAMPLE NO.	BLOW COUNTS (N) *	DRY DENSITY (PCF)	PERCENT MOISTURE	DEPTH (FT)		USCS	DESCRIPTIONS/REMARKS				
				1		--	GRAVEL PARKING LOT SURFACE: 2 TO 4 INCHES OF COARSE GRAVEL.				
				2		SM	DARK BROWN SILTY SAND WITH GRAVEL (SM); MOIST, MEDIUM DENSE, FINE SAND, ESTIMATED 30-40% PASSING NO. 200 SIEVE, COARSE ROUNDED GRAVEL, TRACE COBBLES.				
				3							
NO RECOVERY	26	--	--	4		SM/ML	DARK BROWN SILTY SAND TO SANDY SILT (SM/ML); MOIST, MEDIUM DENSE, FINE SAND, ESTIMATED 45-55% PASSING NO. 200 SIEVE, TRACE GRAVEL.				
				5							
4-1-2	7	--	--	6		ML	LIGHT GRAY SANDY SILT (ML); MOIST, MEDIUM STIFF, FINE SAND, LOW PLASTIC FINES, TRACE ROOTLETS, TRACE FINE ROUNDED GRAVEL, MOTTLED WITH DARK YELLOW BROWN STREAKS, SAND AND GRAVEL LENSES.				
4-1-1		--	--	7							
				8							
4-2-2	27	--	--	9			GRADES TO: VERY STIFF.				
4-2-1		--	--	10							
				11							
				12							
				13		SP/GP	GRAY POORLY GRADED SAND WITH GRAVEL TO POORLY GRADED GRAVEL WITH SAND (SP/GP); WET, DENSE, COARSE SAND, FINE ROUNDED GRAVEL, FREE WATER IN SAMPLE BUT NOT IN BOREHOLE.				
4-3-2	39	--	--	14							
4-3-1		--	--	15							
				16							
				17			GRADES TO DENSE, MEDIUM TO COARSE SAND, COARSE ROUNDED GRAVEL, MOTTLED WITH RED BROWN TO YELLOW BROWN.				
				18							
				19							
4-4-2	58	--	--	20		SP	GRAY POORLY GRADED SAND (SP); WET, LOOSE TO MEDIUM DENSE, FINE TO MEDIUM SAND, CONSISTENCY OF MATERIAL IS REPRESENTATIVE OF THE DRILLING OBSERVATIONS AND FLOWING AND HEAVING SAND AND NOT THE BLOW COUNTS.				
4-4-1		--	--								

\* BLOW COUNTS WERE CORRECTED FOR SAMPLER TYPE.

# BORING B-4

PROJECT NO.		PROJECT NAME		ELEVATION (APPROX)		DATE	PAGE	BORING NO.		
41278-01		HOMEWOOD MOUNTAIN RESORT		6236 FT		01/14/09	2 OF 2	B-4		
DRILLING METHOD			SAMPLING METHOD			GROUNDWATER ENCOUNTERED		CAVED		
CME 75			HOLLOW STEM AUGER MODIFIED CALIFORNIA (2.5" DIA.)			YES		YES		
SAMPLE NO.	BLOW COUNTS (N) *	DRY DENSITY (PCF)	PERCENT MOISTURE	DEPTH (FT)		uscs	DESCRIPTIONS/REMARKS			
				21		SP	GRAY POORY GRADED SAND (SP); WET, LOOSE TO MEDIUM DENSE, FINE TO MEDIUM SAND, CONSISTENCY OF MATERIAL IS REPRESENTATIVE OF THE DRILLING OBSERVATIONS AND FLOWING AND HEAVING SAND AND NOT THE BLOW COUNTS.			
				22						
				23						
4-5-2	34	--	--	24					5 FT OF SAND HEAVED INTO AUGER	
4-5-1		--	--							
				25						
				26						
				27						
				28						
				29						
				30		5 FT OF SAND HEAVED INTO AUGER.				
NO RECOVERY	+64	--	--	31						
				32			BOREHOLE MET REFUSAL AT 34 FEET ON ROCK; SIMILAR SUBSURFACE CONDITIONS AS OBSERVED IN B-2; VERY HARD DRILLING AT 34 FEET; ANDESITIC COBBLE IN TIP OF SAMPLER.  CAVING WAS NOTED IN FLOWING SANDS.			
				33						
				34						
				35						
				36						
				37						
				38						
				39						
				40						

\* BLOW COUNTS WERE CORRECTED FOR SAMPLER TYPE.

# BORING B-5

PROJECT NO. 41278-01		PROJECT NAME HOMWOOD MOUNTAIN RESORT		ELEVATION (APPROX) 6239 FT	DATE 01/14/09	PAGE 1 OF 2	BORING NO. B-5
DRILLING METHOD CME 75			SAMPLING METHOD HOLLOW STEM AUGER MODIFIED CALIFORNIA (2.5" DIA.)		GROUNDWATER ENCOUNTERED YES	CAVED YES	
SAMPLE NO.	BLOW COUNTS (N) *	DRY DENSITY (PCF)	PERCENT MOISTURE	DEPTH (FT)	USCS	DESCRIPTIONS/REMARKS	
				1		SNOW AND GRAVEL AT SURFACE IN PARKING LOT: 2 TO 4 INCHES OF COARSE GRAVEL.	
				2	CL	DARK BROWN SILTY CLAY TO SANDY CLAY (CL); MOIST, MEDIUM STIFF, FINE SAND, LOW PLASTIC FINES, FINE ROUNDED GRAVEL, ORGANIC MATTER/ROOTS.	
				3	CL	LIGHT GRAY SANDY CLAY TO SILTY CLAY (CL); MOIST, MEDIUM STIFF, FINE SAND, LOW PLASTIC FINES, TRACE ROOTLETS, TRACE FINE ROUNDED GRAVEL, MOTTLED WITH DARK YELLOW BROWN STREAKS, SAND AND GRAVEL LENSES, FINE CHARCOAL FRAGMENTS.	
				4			
				5			
NO RECOVERY	34	---	---	6	ML	DARK YELLOW BROWN SILT WITH SAND (ML); MOIST, MEDIUM STIFF, FINE SAND, LOW PLASTIC FINES, TRACE ROOTLETS, TRACE FINE ROUNDED GRAVEL, MOTTLED WITH LIGTH GRAY, SAND AND GRAVEL LENSES, NO SAMPLE RECOVER AT 5-6.5 FT DUE TO COBBLE.	
				7			
5-1-2	6	---	---	8			
5-1-1							
				9			
				10			
5-2-2	10	---	---	11	SP/SM	GRAY POORLY GRADED SAND WITH SILT AND GRAVEL (SP/SM); MOIST TO WET, LOOSE TO MEDIUM DENSE, MEDIUM SAND, FINE ROUNDED GRAVEL, FREE WATER IN SAMPLE BUT NOT IN BOREHOLE, MOTTLED WITH DARK YELLOW BROWN.	
5-2-1							
				12			
				13			
				14			
				15	SP/GP	GRAY POORLY GRADED SAND WITH GRAVEL TO POORLY GRADED GRAVEL WITH SAND (SP/GP); WET, DENSE, MEDIUM TO COARSE SAND, COARSE ROUNDED TO SUBROUNDED GRAVEL, MOTTLED WITH YELLOW BROWN.	
5-3-2	33	---	---	16			
5-3-1							
				17			
				18			
				19			
				20		HARDER DRILLING AT 20 FT BGS.	

\* BLOW COUNTS WERE CORRECTED FOR SAMPLER TYPE.

# BORING B-5

PROJECT NO. 41278-01		PROJECT NAME HOMEWOOD MOUNTAIN RESORT		ELEVATION (APPROX) 6236 FT	DATE 01/14/09	PAGE 2 OF 2	BORING NO. B-5
DRILLING METHOD CME 75			SAMPLING METHOD HOLLOW STEM AUGER MODIFIED CALIFORNIA (2.5" DIA.)		GROUNDWATER ENCOUNTERED YES	CAVED YES	
SAMPLE NO.	BLOW COUNTS (N) *	DRY DENSITY (PCF)	PERCENT MOISTURE	DEPTH (FT)	USCS	DESCRIPTIONS/REMARKS	
5-4-2	50	--	--	21		SOFT DRILLING AT 21 FT BGS.	
5-4-1		--	--	22		SP GRAY POORLY GRADED SAND (SP); WET, LOOSE TO MEDIUM DENSE, FINE TO MEDIUM SAND, CONSISTENCY OF MATERIAL IS REPRESENTATIVE OF THE DRILLING OBSERVATIONS AND FLOWING AND HEAVING SAND AND NOT THE BLOW COUNTS.  COBBLES BETWEEN 23 TO 24 FT BGS.  SAND HEAVED INTO AUGER.	
				23			
				24			
				25			
				26			
5-5-2	35	--	--	26		GP GRAY POORLY GRADED GRAVEL WITH SAND (GP); WET, MEDIUM DENSE TO DENSE, FINE TO MEDIUM SAND, FINE TO COARSE SUBGROUNDED TO ROUNDED GRAVEL, DRILLING HARD BETWEEN 26 TO 27 FT AND VERY HARD AT 27 FEET BGS.	
5-5-1		--	--	27			
				28		BOREHOLE MET REFUSAL AT 27 FEET ON ROCK.  CAVING WAS NOTED IN FLOWING SANDS.	
				29			
				30			
				31			
				32			
				33			
				34			
				35			
				36			
				37			
				38			
				39			
				40			

\* BLOW COUNTS WERE CORRECTED FOR SAMPLER TYPE.

# BORING B-6

PROJECT NO. 41278-01		PROJECT NAME HOMWOOD MOUNTAIN RESORT		ELEVATION (APPROX) 6236 FT	DATE 01/15/09	PAGE 1 OF 2	BORING NO. B-6
DRILLING METHOD CME 75			SAMPLING METHOD HOLLOW STEM AUGER MODIFIED CALIFORNIA (2.5" DIA.)		GROUNDWATER ENCOUNTERED YES	CAVED YES	
SAMPLE NO.	BLOW COUNTS (N) *	DRY DENSITY (PCF)	PERCENT MOISTURE	DEPTH (FT)	USCS	DESCRIPTIONS/REMARKS	
				1		PAVEMENT STRUCTURAL SECTION: 4 INCHES OF ASPHALT CONCRETE; 2 TO 3 INCHES OF AGGREGATE BASE.	
				2	FILL (SM)	FILL; DARK BROWN SILTY SAND WITH GRAVEL (SM); MOIST, MEDIUM DENSE, FINE TO MEDIUM SAND, ESTIMATED 15-25% PASSING NO. 200 SIEVE, COARSE ROUNDED GRAVEL.	
6-1-2	6	--	--	3	SM	DARK YELLOW BROWN SILTY SAND TO SAND WITH SILT (SM/SP-SM); MOIST, LOOSE, FINE TO MEDIUM SAND, ESTIMATED 10-20% PASSING NO. 200 SIEVE, TRACE ROOTLETS.	
6-1-1		--	--	4	SM	DARK YELLOW BROWN SILTY SAND (SM); MOIST, MEDIUM DENSE, FINE TO MEDIUM SAND, LOW PLASTIC FINES, TRACE FINE ROUNDED GRAVEL, MOTTLED WITH LIGHT GRAY.	
				5			
6-2-2	14	--	--	6			
6-2-1		--	--	7			
				8			
				9			
				10			
6-3-2	20	--	--	11	SP/GP	GRAY POORLY GRADED SAND WITH GRAVEL TO POORLY GRADED GRAVEL WITH SAND (SP/GP); MOIST, LOOSE TO MEDIUM DENSE, MEDIUM SAND, FINE ROUNDED GRAVEL, CONTACT BASED ON SUBSURFACE DRILLING CONDITIONS.	
6-3-1		--	--	12			
				13		GRADES TO WET, DENSE, MEDIUM TO COARSE SAND, COARSE ROUNDED TO SUBROUNDED GRAVEL.	
				14			
				15			
6-4-2	41	--	--	16			
6-4-1		--	--	17	SP	GRAY POORLY GRADED SAND (SP); WET, LOOSE TO MEDIUM DENSE, FINE TO MEDIUM SAND, CONSISTENCY OF MATERIAL IS REPRESENTATIVE OF THE DRILLING OBSERVATIONS AND FLOWING AND HEAVING SAND AND NOT THE BLOW COUNTS.	
				18			
				19			
				20		HEAVING SAND UP THROUGH AUGERS AT 20 FT.	

\* BLOW COUNTS WERE CORRECTED FOR SAMPLER TYPE.

# BORING B-6

PROJECT NO. 41278-01		PROJECT NAME HOMEWOOD MOUNTAIN RESORT		ELEVATION (APPROX) 6236 FT		DATE 01/15/09		PAGE 2 OF 2		BORING NO. B-6	
DRILLING METHOD CME 75				SAMPLING METHOD HOLLOW STEM AUGER MODIFIED CALIFORNIA (2.5" DIA.)				GROUNDWATER ENCOUNTERED YES		CAVED YES	
SAMPLE NO.	BLOW COUNTS (N) *	DRY DENSITY (PCF)	PERCENT MOISTURE	DEPTH (FT)		USCS	DESCRIPTIONS/REMARKS				
				21		SP	<p>GRAY POORLY GRADED SAND (SP); WET, LOOSE TO MEDIUM DENSE, FINE TO MEDIUM SAND, CONSISTENCY OF MATERIAL IS REPRESENTATIVE OF THE DRILLING OBSERVATIONS AND FLOWING AND HEAVING SAND AND NOT THE BLOW COUNTS.</p> <p>AUGERS FELL RAPIDLY AT 0 PSI DRILLING DOWN PRESSURE.</p>				
				22							
				23							
				24							
				25							
				26							
				27							
				28							
				29							
				30							
				31							
				32							
				33							
				34							
				35							
				36		GP	<p>GRAY POORLY GRADED GRAVEL WITH SAND (GP); WET, MEDIUM DENSE TO DENSE, FINE TO MEDIUM SAND, FINE TO COARSE SUBGROUNDED TO ROUNDED GRAVEL, SOME COBBLES BETWEEN 35 TO 37 FT, AUGERS FELL FROM 37 TO 40 FT.</p>				
				37							
				38							
				39		RX	<p>GRAY ANDESITE (RX); SLIGHTLY TO MODERATELY WEATHERED, MODERATELY FRACTURED, STRONG TO VERY STRONG.</p>				
				40							

\* BLOW COUNTS WERE CORRECTED FOR SAMPLER TYPE.

# BORING B-7

PROJECT NO.		PROJECT NAME		ELEVATION (APPROX)		DATE		PAGE		BORING NO.	
41278-01		HOMEWOOD MOUNTAIN RESORT		6237 FT		01/15/09		1 OF 3		B-7	
DRILLING METHOD				SAMPLING METHOD				GROUNDWATER ENCOUNTERED		CAVED	
CME 75				HOLLOW STEM AUGER MODIFIED CALIFORNIA (2.5" DIA.)				YES		YES	
SAMPLE NO.	BLOW COUNTS (N) *	DRY DENSITY (PCF)	PERCENT MOISTURE	DEPTH (FT)		USCS	DESCRIPTIONS/REMARKS				
				1		---	PAVEMENT STRUCTURAL SECTION: 2 TO 3 INCHES OF ASPHALT CONCRETE; 2 TO 3 INCHES OF AGGREGATE BASE.				
7-1-1	14	---	---	2		FILL (SM)	FILL: DARK BROWN SILTY SAND WITH GRAVEL (SM); MOIST, MEDIUM DENSE, FINE TO COARSE SAND, ESTIMATED 15-20% FINES, FINE ROUNDED GRAVEL.				
				3		SM/SC	DARK YELLOW BROWN SILTY SAND TO CLAYEY SAND (SM/SC); DRY, MEDIUM DENSE, FINE TO MEDIUM SAND ESTIMATED 30-35% PASSING NO. 200 SIEVE, TRACE FINE ROUNDED GRAVEL.				
				4		SM	DARK YELLOW BROWN SILTY SAND (SM); MOIST, MEDIUM DENSE, FINE TO MEDIUM SAND, ESTIMATED 20-30% LOW PLASTIC FINES, TRACE FINE ROUNDED GRAVEL, MOTTLED WITH LIGHT GRAY, CEMENTED.				
7-2-2	56	---	---	5							
7-2-1		---	---	6							
				7			GRADES TO: VERY DENSE				
				8			HARD DRILLING, GRANULAR SOIL				
				9							
				10							
7-3-2	25	---	---	11		SP-SM	GRAY POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM); MOIST, MEDIUM DENSE, MEDIUM TO COARSE SAND, FINE ROUNDED TO SUBROUNDED GRAVEL.				
7-3-1		---	---	12							
				13							
				14		▽	EASIER DRILLING AT 14 FT BGS.				
				15			GRAY POORLY GRADED SAND (SP); WET, LOOSE TO MEDIUM DENSE, FINE TO MEDIUM SAND, CONSISTENCY OF MATERIAL IS REPRESENTATIVE OF THE DRILLING OBSERVATIONS AND FLOWING AND HEAVING SAND AND NOT THE BLOW COUNTS.  AUGER FELL RAPIDLY AT 0 PSI DRILLING PRESSURE.				
7-4-2	42	---	---	16		SP					
7-4-1		---	---	17							
				18							
				19							
				20			TRACE COBBLE LAYERS.				

\* BLOW COUNTS WERE CORRECTED FOR SAMPLER TYPE.

# BORING B-7

PROJECT NO. 41278-01		PROJECT NAME HOMEWOOD MOUNTAIN RESORT			ELEVATION (APPROX) 6237 FT		DATE 01/15/09		PAGE 2 OF 3		BORING NO. B-7	
DRILLING METHOD CME 75				SAMPLING METHOD HOLLOW STEM AUGER MODIFIED CALIFORNIA (2.5" DIA.)				GROUNDWATER ENCOUNTERED YES		CAVED YES		
SAMPLE NO.	BLOW COUNTS (N) *	DRY DENSITY (PCF)	PERCENT MOISTURE	DEPTH (FT)			USCS	DESCRIPTIONS/REMARKS				
				21			SP	<p>GRAY POORY GRADED SAND (SP); WET, LOOSE TO MEDIUM DENSE, FINE TO MEDIUM SAND, CONSISTENCY OF MATERIAL IS REPRESENTATIVE OF THE DRILLING OBSERVATIONS AND FLOWING AND HEAVING SAND AND NOT THE BLOW COUNTS.</p> <p>COBBLES BETWEEN 26 TO 27 FT.</p> <p>COBBLES BETWEEN 31 TO 33 FT.</p> <p>HARD DRILLING BETWEEN 33 TO 33.5 FT.</p> <p>SOFT DRILLING / FLOWING SAND.</p>				
				22								
				23								
				24								
				25								
				26								
				27								
				28								
				29								
				30								
				31								
				32								
				33								
				34								
				35								
				36								
				37								
				38								
				39								
				40								

\* BLOW COUNTS WERE CORRECTED FOR SAMPLER TYPE.



# BORING B-8

PROJECT NO.		PROJECT NAME		ELEVATION (APPROX)		DATE		PAGE		BORING NO.	
41278-01		HOMWOOD MOUNTAIN RESORT		6235 FT		01/15/09		1 OF 3		B-8	
DRILLING METHOD				SAMPLING METHOD				GROUNDWATER ENCOUNTERED		CAVED	
CME 75				HOLLOW STEM AUGER MODIFIED CALIFORNIA (2.5" DIA.)				YES		YES	
SAMPLE NO.	BLOW COUNTS (N) *	DRY DENSITY (PCF)	PERCENT MOISTURE	DEPTH (FT)	USCS	DESCRIPTIONS/REMARKS					
				1		PAVEMENT STRUCTURAL SECTION: 5 TO 6 INCHES OF ASPHALT CONCRETE; 2 TO 3 INCHES OF AGGREGATE BASE.					
				2	FILL (SM)	FILL; DARK BROWN SILTY SAND WITH GRAVEL (SM); MOIST, MEDIUM DENSE, FINE TO COARSE SAND, ESTIMATED 15-20% PASSING NO. 200 SIEVE, FINE ROUNDED GRAVEL.					
8-1-2	9	--	--	3	SM	DARK YELLOW BROWN SILTY SAND (SM); MOIST, MEDIUM DENSE, FINE TO MEDIUM SAND, ESTIMATED 30-35% PASSING NO. 200 SIEVE, TRACE FINE ROUNDED GRAVEL, TRACE ROOTLETS.					
8-1-1											
				4							
				5	SP-SM	GRAY TO OLIVE BROWN POORLY GRADED SAND WITH SILT (SP-SM); MOIST, MEDIUM DENSE, MEDIUM SAND, LOW PLASTIC FINES, TRACE FINE ROUNDED GRAVEL.					
8-2-2	49	--	--	6		GRADES TO: DENSE					
8-2-1											
				7							
				8							
				9							
				10							
8-3-2	29	--	--	11	SP	GRAY POORLY GRADED SAND WITH GRAVEL (SP); MOIST, MEDIUM DENSE, MEDIUM TO COARSE SAND, FINE ROUNDED TO ANGULAR GRAVEL, MOTTLED WITH RED BROWN.					
8-3-1											
				12							
				13							
				14		SOFT DRILLING AT 14.5 FT, FLOWING SAND HEAVING INTO AUGER.					
				15							
8-4-2	41	--	--	16	SP	DARK BROWN POORLY GRADED SAND (SP); WET, LOOSE TO MEDIUM DENSE, COARSE SAND, COARSE ROUNDED GRAVEL, FLOWING AND HEAVING SAND, CONSISTENCY OF MATERIAL IS REPRESENTATIVE OF THE DRILLING OBSERVATIONS AND FLOWING AND HEAVING SAND AND NOT THE BLOW COUNTS.					
8-4-1											
				17							
				18							
				19							
				20		DRILLING SLOWED DOWN DUE TO PRESENCE OF COBBLES.					

\* BLOW COUNTS WERE CORRECTED FOR SAMPLER TYPE.



# BORING B-8

PROJECT NO.		PROJECT NAME		ELEVATION (APPROX)		DATE	PAGE	BORING NO.
41278-01		HOMEWOOD MOUNTAIN RESORT		6235 FT		01/15/09	3 OF 3	B-8
DRILLING METHOD			SAMPLING METHOD			GROUNDWATER ENCOUNTERED		CAVED
CME 75			HOLLOW STEM AUGER MODIFIED CALIFORNIA (2.5" DIA.)			YES		YES
SAMPLE NO.	BLOW COUNTS (N) *	DRY DENSITY (PCF)	PERCENT MOISTURE	DEPTH (FT)		USCS	DESCRIPTIONS/REMARKS	
				41		SP	GRAY POORY GRADED SAND (SP); WET, LOOSE TO MEDIUM DENSE, FINE TO MEDIUM SAND, CONSISTENCY OF MATERIAL IS REPRESENTATIVE OF THE DRILLING OBSERVATIONS AND FLOWING AND HEAVING SAND AND NOT THE BLOW COUNTS.	
				42		DRILLED 5 FT PER MINUTE		
				43				
				44				
				45				
				46				
				47				
				48				
				49		COBBLES BETWEEN 49 AND 49.5 FT.		
				50				
				51		HARDER DRILLING AT 51 FT, STALLED DRILL RIG.		
				52		EASY DRILLING AT 52.5 FT.		
				53				
				54				
				55				
				56	SLOWER DRILLING AT 56 FT,			
				57	DRILLED 5 FT PER MINUTE LOWER 15 FEET OF AUGER FILLED WITH SAND/HEAVING			
				58				
				59				
				60	BOREHOLE TERMINATED AT 60 FEET. CAVING WAS NOTED IN FLOWING SANDS.			

\* BLOW COUNTS WERE CORRECTED FOR SAMPLER TYPE.

# BORING B-9

PROJECT NO.		PROJECT NAME		ELEVATION (APPROX)		DATE	PAGE	BORING NO.
41278-01		HOMEWOOD MOUNTAIN RESORT		6237 FT		01/15/09	1 OF 3	B-9
DRILLING METHOD			SAMPLING METHOD			GROUNDWATER ENCOUNTERED		CAVED
CME 75			HOLLOW STEM AUGER MODIFIED CALIFORNIA (2.5" DIA.)			YES		YES
SAMPLE NO.	BLOW COUNTS (N) *	DRY DENSITY (PCF)	PERCENT MOISTURE	DEPTH (FT)	USCS	DESCRIPTIONS/REMARKS		
				1		PAVEMENT STRUCTURAL SECTION: 4 TO 5 INCHES OF ASPHALT CONCRETE; 2 TO 3 INCHES OF AGGREGATE BASE.		
9-1-2	28	--	--	2	FILL (SM)	FILL: DARK BROWN SILTY SAND WITH GRAVEL (SM); MOIST, MEDIUM DENSE, FINE TO COARSE SAND, ESTIMATED 15-20% PASSING NO. 200 SIEVE, COARSE ROUNDED GRAVEL.		
9-1-1		--	--					
				3	SP	OLIVE BROWN POORLY GRADED SAND WITH GRAVEL (SP); MOIST, MEDIUM DENSE, FINE TO MEDIUM SAND ESTIMATED 30-35% PASSING NO. 200 SIEVE, COARSE SUBROUNDED GRAVEL.		
9-2-2	21	--	--					
9-2-1		--	--					
				4				
				5				
				6				
				7				
				8				
9-3-2	38	--	--	9	SP	YELLOW BROWN TO GRAY BROWN POORLY GRADED SAND WITH GRAVEL (SP); MOIST, DENSE, FINE TO MEDIUM SAND, COARSE ROUNDED GRAVEL.		
9-3-1		--	--					
				10				
				11				
				12				
				13				
9-4-2	27	--	--	14	SP/GP	SOFTER DRILLING AT 14 FT. GRAY POORLY GRADED SAND WITH GRAVEL TO POORLY GRADED GRAVEL WITH SAND (SP/GP); WET, LOOSE TO MEDIUM DENSE, MEDIUM TO COARSE SAND, COARSE ROUNDED GRAVEL.		
9-4-1		--	--					
				15				
				16				
				17				
				18	SP	GRAY POORLY GRADED SAND (SP); WET, LOOSE TO MEDIUM DENSE, FINE TO MEDIUM SAND, CONSISTENCY OF MATERIAL IS REPRESENTATIVE OF THE DRILLING OBSERVATIONS AND FLOWING AND HEAVING SAND AND NOT THE BLOW COUNTS. VARIOUS GRAVEL AND COBBLE LENSES, COBBLE IN DRILL BIT.		
9-4-2	+64	--	--					
9-4-1		--	--	19				
				20				

\* BLOW COUNTS WERE CORRECTED FOR SAMPLER TYPE.

# BORING B-9

PROJECT NO. 41278-01		PROJECT NAME HOMEWOOD MOUNTAIN RESORT		ELEVATION (APPROX) 6237 FT		DATE 01/15/09		PAGE 2 OF 3		BORING NO. B-9	
DRILLING METHOD CME 75				SAMPLING METHOD HOLLOW STEM AUGER MODIFIED CALIFORNIA (2.5" DIA.)				GROUNDWATER ENCOUNTERED YES		CAVED YES	
SAMPLE NO.	BLOW COUNTS (N) *	DRY DENSITY (PCF)	PERCENT MOISTURE	DEPTH (FT)			USCS	DESCRIPTIONS/REMARKS			
				21			SP	<p>GRAY POORY GRADED SAND (SP); WET, LOOSE TO MEDIUM DENSE, FINE TO MEDIUM SAND, CONSISTENCY OF MATERIAL IS REPRESENTATIVE OF THE DRILLING OBSERVATIONS AND FLOWING AND HEAVING SAND AND NOT THE BLOW COUNTS.</p> <p>DRILLED 5 FT PER 1 MINUTE</p>			
				22							
				23							
				24							
				25							
				26							
				27							
				28							
				29							
				30							
				31							
				32							
				33							
				34							
				35							
				36							
				37							
				38							
				39							
				40							

\* BLOW COUNTS WERE CORRECTED FOR SAMPLER TYPE.

# BORING B-9

PROJECT NO.		PROJECT NAME		ELEVATION (APPROX)		DATE	PAGE	BORING NO.
41278-01		HOMEWOOD MOUNTAIN RESORT		6237 FT		01/15/09	3 OF 3	B-9
DRILLING METHOD				SAMPLING METHOD		GROUNDWATER ENCOUNTERED		CAVED
CME 75				HOLLOW STEM AUGER MODIFIED CALIFORNIA (2.5" DIA.)		YES		YES
SAMPLE NO.	BLOW COUNTS (N) *	DRY DENSITY (PCF)	PERCENT MOISTURE	DEPTH (FT)		USCS	DESCRIPTIONS/REMARKS	
				41		SP	GRAY POORY GRADED SAND (SP); WET, LOOSE TO MEDIUM DENSE, FINE TO MEDIUM SAND, CONSISTENCY OF MATERIAL IS REPRESENTATIVE OF THE DRILLING OBSERVATIONS AND FLOWING AND HEAVING SAND AND NOT THE BLOW COUNTS.  DRILLED 5 FT PER 1 MINUTE          DRILLED 5 FT PER 1 MINUTE          COBBLY AT 53 FT.	
				42				
				43				
				44				
				45				
				46				
				47				
				48				
				49				
				50				
				51			BOREHOLE MET REFUSAL AT 54 FEET ON ROCK. CAVING WAS NOTED IN FLOWING SANDS.	
				52				
				53				
				54				
				55				
				56				
				57				
				58				
				59				
				60				

\* BLOW COUNTS WERE CORRECTED FOR SAMPLER TYPE.

# BORING B-10

PROJECT NO. 41278-03		PROJECT NAME HOMWOOD MOUNTAIN RESORT NORTH BASE LODGE		ELEVATION (APPROX) 6234 FT.		DATE 10/06/09		PAGE 1 OF 3		BORING NO. B-10	
DRILLING METHOD MOBILE B-61 HOLLOW STEM AUGER/MUD				SAMPLING METHOD 2" STANDARD PEN/ 3" MODIFIED CALIFORNIA				GROUNDWATER ENCOUNTERED YES		CAVED NO	
SAMPLE NO.	BLOW COUNTS (N) *	SAMPLER TYPE	PERCENT MOISTURE	DEPTH (FT)	USCS	DESCRIPTIONS/REMARKS					
				1		PAVEMENT SECTION: 2 TO 3 INCHES OF ASPHALT CONCRETE; 3 TO 4 INCHES OF AGGREGATE BASE.					
				2	FILL (SM)	FILL: DARK BROWN SILTY SAND WITH GRAVEL (SM); MOIST, MEDIUM DENSE, FINE SAND, ROUNDED GRAVEL, ESTIMATED 15 TO 20% PASSING NO. 200 SIEVE.					
10-1-1		MC		3	CL	GRAY SANDY LEAN CLAY (CL); MOIST, MEDIUM STIFF TO STIFF, FINE SAND, TRACE GRAVEL AND TREE ROOTS.					
10-1-2	14		32.5	4							
				5							
				6							
				7	MH	DARK YELLOW BROWN SANDY ELASTIC SILT (MH); MOIST, STIFF TO VERY STIFF.					
		MC		8							
10-2-1				9	SM	MOTTLED DARK YELLOW BROWN & GRAY SILTY SAND WITH GRAVEL (SM); MOIST, MEDIUM DENSE, COARSE SAND, SUBROUNDED GRAVEL.					
10-2-2	17		19.4	10		HARDER DRILLING @ 9'.					
				11							
				12		NO SAMPLE RECOVERY @ 12'. SAVED SAMPLE FROM SHOE.					
10-3-1	28			13							
				14							
				15							
				16	SM	GRAY BROWN SILTY SAND WITH GRAVEL (SM); MOIST TO WET, DENSE, FINE TO COARSE SAND, ESTIMATED 30 TO 40% PASSING NO. 200 SIEVE, GRAVEL LENSES.					
				17		NO SAMPLE RECOVERY @ 17 FOOT DRIVE. DRILLED TO 18 FEET AND RE-SAMPLED.					
		MC		18							
	35	MC		19	SW-SM	GRAY WELL-GRADED SAND WITH SILT AND GRAVEL (SW-SM); WET, DENSE, COARSE SAND, SUBROUNDED GRAVEL.					
10-4-1				20							
10-4-2	38					POORLY GRADED SAND WITH SILT (SP-SM).					

\* BLOW COUNTS WERE CORRECTED FOR SAMPLER TYPE.

HOLDREGE & KULL

# BORING B-10

PROJECT NO. 41278-03		PROJECT NAME HOMWOOD MOUNTAIN RESORT NORTH BASE LODGE		ELEVATION (APPROX) 6234 FT.		DATE 10/06/09 10/07/09		PAGE 2 OF 3		BORING NO. B-10	
DRILLING METHOD MOBILE B-61 HOLLOW STEM AUGER/MUD				SAMPLING METHOD 2" STANDARD PEN 3" MODIFIED CALIFORNIA				GROUNDWATER ENCOUNTERED YES		CAVED NO	
SAMPLE NO.	BLOW COUNTS (N) *	SAMPLER TYPE	PERCENT MOISTURE	DEPTH (FT)		USCS	DESCRIPTIONS/REMARKS				
				21		SP-SM	<p>GRAY POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM); WET, DENSE TO VERY DENSE, MEDIUM SAND, TRACE SUBROUNDED GRAVEL, SAND HEAVING INTO AUGERS.</p> <p>SWITCH FROM HOLLOW STEM AUGER TO MUD ROTARY @24'. CONTINUED DRILLING ON 10/7/09.</p> <p>GRAY WELL-GRADED GRAVEL WITH SILT AND SAND (GW-GM); WET, DENSE, MEDIUM TO COARSE SAND, COARSE SUBROUNDED TO ROUNDED GRAVEL.</p> <p>GRAY POORLY GRADED SAND WITH GRAVEL (SP); WET, MEDIUM DENSE, MEDIUM TO COARSE SAND, COARSE SUBROUNDED TO ROUNDED GRAVEL.</p> <p>GRAY WELL-GRADED GRAVEL WITH SAND (GP); WET, DENSE, MEDIUM TO COARSE SAND, COARSE SUBROUNDED TO ROUNDED GRAVEL.</p> <p>GRAY POORLY GRADED SAND WITH GRAVEL (SP); WET, MEDIUM DENSE, MEDIUM TO COARSE SAND, COARSE SUBROUNDED TO ROUNDED GRAVEL.</p> <p>HEAVING SANDS - UNABLE TO ADVANCE RODS. CONTINUED DRILLING WITH HOLLOW STEM AUGER WITHOUT SAMPLING. HARDER DRILLING BETWEEN 36 AND 38 FEET.</p> <p>COBBLES BETWEEN 38 AND 40 FEET.</p>				
				22							
				23							
		MC		24							
10-5-1	56		--	25							
				26							
				27							
		MC		28							
10-6-1			--	29							
10-6-2	40		--	30		GW-GM					
				31							
				32		SP					
10-7-1		MC	--	33							
10-7-2			--	34		GW					
	17			35							
				36		SP					
				37							
				38							
				39							
				40							

\* BLOW COUNTS WERE CORRECTED FOR SAMPLER TYPE.

# BORING B-10

PROJECT NO. 41278-03		PROJECT NAME HOMWOOD MOUNTAIN RESORT NORTH BASE LODGE		ELEVATION (APPROX) 6234 FT.		DATE 10/07/09		PAGE 3 OF 3		BORING NO. B-10	
DRILLING METHOD MOBILE B-61 HOLLOW STEM AUGERS/MUD				SAMPLING METHOD 2" STANDARD PEN 3" MODIFIED CALIFORNIA				GROUNDWATER ENCOUNTERED YES		CAVED NO	
SAMPLE NO.	BLOW COUNTS (N) *	SAMPLER TYPE	PERCENT MOISTURE	DEPTH (FT)		USCS	DESCRIPTIONS/REMARKS				
				41	●●●●● ●●●●● ●●●●● ●●●●● ●●●●●	SP	GRAY POORLY GRADED SAND WITH GRAVEL (SP); WET, MEDIUM DENSE, MEDIUM TO COARSE SAND, COARSE SUBROUNDED TO ROUNDED GRAVEL.  SLIGHTLY EASIER DRILLING @ 40 TO 42 FEET.  HARDER DRILLING (>1,000 PSI) @ 42 TO 44 FEET.  VERY HARD DRILLING @ 44 FEET.				
				42							
				43							
				44							
				45							
NO				46	▽▽▽▽ ▽▽▽▽ ▽▽▽▽	RX	DARK GRAY VOLCANIC LAHAR ROCK (RX); SLIGHTLY WEATHERED, WIDELY FRACTURED, STRONG TO VERY STRONG.				
RECOVERY	50/3"	SPT	--								
				47			REFUSAL ON VOLCANIC ROCK AT 46.2 FEET.				
				48							
				49							
				50							
				51							
				52							
				53							
				54							
				55							
				56							
				57							
				58							
				59							
				60							

\* BLOW COUNTS WERE CORRECTED FOR SAMPLER TYPE.

# BORING B-11

PROJECT NO. 41278-03		PROJECT NAME HOMEWOOD MOUNTAIN RESORT NORTH BASE LODGE		ELEVATION (APPROX) 6238 FT		DATE 10/06/09		PAGE 1 OF 2		BORING NO. B-11	
DRILLING METHOD MOBILE B-61 HOLLOW STEM AUGERS				SAMPLING METHOD 2" STANDARD PEN 3" MODIFIED CALIFORNIA				GROUNDWATER ENCOUNTERED YES		CAVED NO	
SAMPLE NO.	BLOW COUNTS (N) *	SAMPLER TYPE	PERCENT MOISTURE	DEPTH (FT)		USCS	DESCRIPTIONS/REMARKS				
						---	4" BALLAST ROCK AT SURFACE.				
				1		ML	DARK BROWN SILT WITH SAND (ML); MOIST, SOFT TO MEDIUM STIFF, FINE SAND, SCATTERED CHARCOAL FRAGMENTS.				
		MC		2							
11-1-1			--	3		ML-MH	GRAY MOTTLED WITH YELLOW BROWN SILT WITH SAND TO SANDY ELASTIC SILT (ML-MH); MOIST, MEDIUM STIFF, FINE TO MEDIUM SAND, WITH ORGANICS (ROOTLETS).				
11-1-2	6		--	4							
				5			SOIL COLLECTED IN BULK FROM SAMPLER.				
		MC		7							
11-2-1			--	8		SP	DARK YELLOW BROWN POORLY GRADED SAND WITH GRAVEL (SP); MOIST, MEDIUM DENSE, COARSE SAND, COARSE ROUNDED TO SUBROUNDED GRAVEL.				
11-2-2	17		--	9							
				10			HARDER DRILLING BETWEEN 10 TO 12 FEET.				
				11		GW	DARK YELLOW BROWN WELL-GRADED GRAVEL WITH SAND (GW); WET, DENSE, WITH COBBLES.				
		MC		12							
11-3-1			--	13		SW-SM	DARK YELLOW BROWN WELL-GRADED SAND WITH SILT AND GRAVEL (SW-SM); WET, MEDIUM DENSE, COARSE SAND, COARSE ROUNDED TO SUBROUNDED GRAVEL.				
11-3-2	28		--	14							
				15			EASIER DRILLING AT 15 FEET.				
				16		SP	DARK GRAY POORLY GRADED SAND WITH SILT (SP); WET, MEDIUM DENSE, MEDIUM SAND.				
		MC		17							
11-4-1			--	18		GW-GM	DARK BROWN TO GRAY BROWN WELL-GRADED GRAVEL WITH SAND AND SILT (GW-GM); WET, DENSE, COARSE SAND, COARSE SUBROUNDED GRAVEL.				
11-4-2	44		--	19							
				20							

\* BLOW COUNTS WERE CORRECTED FOR SAMPLER TYPE.



# BORING B-12

PROJECT NO. 41278-03		PROJECT NAME HOMWOOD MOUNTAIN RESORT NORTH BASE LODGE		ELEVATION (APPROX) 6237 FT		DATE 10/06/09		PAGE 1 OF 3		BORING NO. B-12	
DRILLING METHOD MOBILE B-61 HOLLOW STEM AUGERS				SAMPLING METHOD 2" STANDARD PEN 3" MODIFIED CALIFORNIA				GROUNDWATER ENCOUNTERED YES		CAVED NO	
SAMPLE NO.	BLOW COUNTS (N) *	SAMPLER TYPE	PERCENT MOISTURE	DEPTH (FT)		USCS	DESCRIPTIONS/REMARKS				
				1		--	4" BALLAST ROCK AT SURFACE.				
				2		ML	DARK YELLOW BROWN SANDY SILT WITH GRAVEL (ML); MOIST, SOFT TO MEDIUM STIFF, FINE SAND, COARSE GRAVEL, SCATTERED CHARCOAL FRAGMENTS, ROOTLETS.				
				3		MC					
12-1-1			26.1	4							
12-1-2	15		26.7	5		CL-ML	GRAY WITH YELLOW BROWN SILTY CLAY (CL-ML); MOIST, STIFF, FINE TO MEDIUM SAND, TRACE GRAVEL.				
				6							
				7		ML					
				8		MC	GRAY WITH YELLOW BROWN SANDY SILT WITH GRAVEL (ML); MOIST, VERY STIFF TO HARD, MEDIUM SAND, COARSE SUBROUNDED TO ROUNDED GRAVEL, TRACE CHARCOAL FRAGMENTS.				
12-2-1			--	9							
12-2-2	31		--	10							
				11			<div style="text-align: center;">▽</div> LIGHT GRAY SILTY SAND WITH GRAVEL (SM); WET, MEDIUM DENSE, COARSE SAND AND GRAVEL, ESTIMATED 10 TO 15% PASSING NO. 200 SIEVE.				
				12		SM					
				13		MC					
12-3-1			--	14			BETWEEN 16 TO 18 FEET; INTERMITTENT GRAVEL/COBBLE LAYERS BASED ON DRILLING CONDITIONS.				
12-3-2	18		15.8	15							
				16							
				17			BROWN SILTY GRAVEL WITH SAND (GM); WET, DENSE TO VERY DENSE, COARSE SAND, COARSE SUBROUNDED TO ROUNDED GRAVEL.				
				18		MC					
12-4-1			11.2	19		GM					
12-4-2	61		--	20							

\* BLOW COUNTS WERE CORRECTED FOR SAMPLER TYPE.

# BORING B-12

PROJECT NO. 41278-03		PROJECT NAME HOMEWOOD MOUNTAIN RESORT NORTH BASE LODGE		ELEVATION (APPROX) 6237 FT		DATE 10/06/09	PAGE 2 OF 3	BORING NO. B-12
DRILLING METHOD MOBILE B-61 HOLLOW STEM AUGERS			SAMPLING METHOD 2" STANDARD PEN 3" MODIFIED CALIFORNIA			GROUNDWATER ENCOUNTERED YES		CAVED NO
SAMPLE NO.	BLOW COUNTS (N) *	SAMPLER TYPE	PERCENT MOISTURE	DEPTH (FT)		USCS	DESCRIPTIONS/REMARKS	
				21		GM	BROWN SILTY GRAVEL WITH SAND (GM); WET, DENSE TO VERY DENSE, COARSE SAND, COARSE SUBROUNDED TO ROUNDED GRAVEL.	
				22				
12-5-1		MC	--	23			INTERMITTENT COBBLE LAYERS BASED ON DRILLING CONDITIONS.	
12-5-2	53		--	24				
				25			NO CHANGES IN DRILLING CONDITIONS.	
				26				
				27			HARDER DRILLING AT 37.5 FEET.	
				28				
12-6-1		MC	--	29			BROWN SILTY SAND WITH GRAVEL (SM); MOIST, DENSE TO VERY DENSE, FINE SAND, COARSE GRAVEL.	
12-6-2	26		--	30				
				31				
				32				
NO				33				
RECOVERY	+64	MC	--	34				
				35				
				36				
				37				
				38				
	50/4"	SPT	--	39		SM		
				40				

\* BLOW COUNTS WERE CORRECTED FOR SAMPLER TYPE.

# BORING B-12

PROJECT NO. 41278-03		PROJECT NAME HOMEWOOD MOUNTAIN RESORT NORTH BASE LODGE		ELEVATION (APPROX) 6237 FT		DATE 10/06/09	PAGE 3 OF 3	BORING NO. B-12
DRILLING METHOD B-61			SAMPLING METHOD HOLLOW STEM AUGER MODIFIED CALIFORNIA (2.5" DIA.)			GROUNDWATER ENCOUNTERED YES		CAVED NO
SAMPLE NO.	BLOW COUNTS (N) *	SAMPLER TYPE	PERCENT MOISTURE	DEPTH (FT)	USCS	DESCRIPTIONS/REMARKS		
				41	SM	BROWN SILTY SAND WITH GRAVEL (SM); MOIST, DENSE TO VERY DENSE, FINE SAND, COARSE GRAVEL. HARDER DRILLING @ 40 TO 42 FEET.  EASIER DRILLING @ 42 FEET.     HARDER DRILLING @ 45 TO 46 FEET.  EASIER DRILLING 46 TO 50 FEET.     SAMPLER BOUNCING OFF BOTTOM.		
				42				
				43				
				44				
				45				
				46				
				47				
				48				
				49				
				50				
NO								
RECOVERY	50/0.5"	SPT	---	50		BORING TERMINATED AT 50 FEET.		
				51				
				52				
				53				
				54				
				55				
				56				
				57				
				58				
				59				
				60				

\* BLOW COUNTS WERE CORRECTED FOR SAMPLER TYPE.

# BORING B-13

PROJECT NO. 41278-03		PROJECT NAME HOMEWOOD MOUNTAIN RESORT NORTH BASE LODGE		ELEVATION (APPROX) 6242 FT		DATE 10/07/09		PAGE 1 OF 2		BORING NO. B-13	
DRILLING METHOD MOBILE B-61 HOLLOW STEM AUGERS				SAMPLING METHOD 2" STANDARD PEN 3" MODIFIED CALIFORNIA				GROUNDWATER ENCOUNTERED YES		CAVED NO	
SAMPLE NO.	BLOW COUNTS (N) *	SAMPLER TYPE	PERCENT MOISTURE	DEPTH (FT)		USCS	DESCRIPTIONS/REMARKS				
				1		SM	DARK BROWN SILTY SAND WITH GRAVEL (SM); MOIST, LOOSE, WITH ORGANICS.				
				2							
		MC		3							
13-1-1			--	4							
13-1-2	3		--	4		SM-SP	DARK YELLOW BROWN SILTY SAND TO POORLY GRADED SAND WITH SILT (SM-SP); MOIST, LOOSE TO MEDIUM DENSE, FINE SAND, TRACE ROUNDED GRAVEL, TRACE ROOTS. HARDER DRILLING @ 6 FEET.				
				5							
				6		SM-ML	YELLOW BROWN SILTY SAND TO SANDY SILT WITH GRAVEL (SM-ML); MOIST, MEDIUM DENSE/VERY STIFF, FINE SAND.				
				7							
		MC		8							
13-2-1			--	9							
13-2-2	28		--	9							
				10			DARK BROWN TO GRAY POORLY GRADED SAND WITH GRAVEL (SP); MOIST, DENSE, MEDIUM TO COARSE SAND, ROUNDED TO SUBROUNDED GRAVEL.				
				11		SP					
				12							
		MC		13							
13-3-1			--	14							
13-3-2	44		--	14							
				15			GRAY POORLY GRADED SAND WITH GRAVEL (SP); WET, DENSE, COARSE SAND, COARSE SUBROUNDED TO ROUNDED GRAVEL.				
				16							
				17							
		MC		18		SP					
13-4-1	48		--	19							
				20							

\* BLOW COUNTS WERE CORRECTED FOR SAMPLER TYPE.

# BORING B-13

PROJECT NO. 41278-03		PROJECT NAME HOMEWOOD MOUNTAIN RESORT NORTH BASE LODGE		ELEVATION (APPROX) 6242 FT		DATE 10/07/09		PAGE 2 OF 2		BORING NO. B-13	
DRILLING METHOD B-61				SAMPLING METHOD HOLLOW STEM AUGER MODIFIED CALIFORNIA (2.5" DIA.)				GROUNDWATER ENCOUNTERED YES		CAVED NO	
SAMPLE NO.	BLOW COUNTS (N) *	SAMPLER TYPE	PERCENT MOISTURE	DEPTH (FT)		USCS	DESCRIPTIONS/REMARKS				
				21		SP	⊙ 20 FEET; VERY HARD DRILLING.				
		SPT		22			GRAY POORLY GRADED SAND WITH GRAVEL (SP); WET, DENSE TO VERY DENSE, COARSE SAND, COARSE SUBROUNDED TO ROUNDED GRAVEL.				
13-5-1	63		--	22			EXTREMELY HARD DRILLING CONDITIONS AT 23 FEET.				
	50/1"	SPT	--	23		RX	DARK GRAY VOLCANIC LAHAR ROCK (RX); SLIGHTLY WEATHERED, WIDELY FRACTURED, STRONG TO VERY STRONG.				
				24			REFUSAL ON VOLCANIC ROCK AT 23.1 FEET.				
				25							
				26							
				27							
				28							
				29							
				30							
				31							
				32							
				33							
				34							
				35							
				36							
				37							
				38							
				39							
				40							

\* BLOW COUNTS WERE CORRECTED FOR SAMPLER TYPE.

# TEST PIT NO. 1

PROJECT NO.		PROJECT NAME		APPROX. ELEVATION	DATE	PAGE
41278-03		HOMEWOOD MOUNTAIN RESORT NORTH BASE LODGE		6293 FEET	10/02/2009	1 OF 1
EXCAVATING METHOD			SAMPLING METHOD		GROUNDWATER ENCOUNTERED	CAVED
JOHN DEERE 200C EXCAVATOR			BULK		NO	NO
SAMPLE NO.	PERCENT PASSING NO. 200	PLASTICITY INDEX	DEPTH (FT)	USCS	DESCRIPTIONS/REMARKS	
			1	SM	BROWN SILTY SAND (SM): SLIGHTLY MOIST; LOOSE TO MEDIUM DENSE, FINE TO COARSE SAND AND GRAVEL; SURFACE APPEARED PREVIOUSLY GRADED.	
1-1	--	--	2	SM	LIGHT BROWN SILTY SAND WITH GRAVEL (SM): SLIGHTLY MOIST; DENSE; FINE TO COARSE SAND AND GRAVEL; SOME COBBLES AND BOULDERS UP TO 36 INCHES IN DIA.	
			3	GM	LIGHT BROWN SILTY GRAVEL WITH SAND (GM): SLIGHTLY MOIST; DENSE; FINE SAND; FINE TO COARSE GRAVEL; NUMEROUS COBBLES UP TO 5 INCHES DIA.	
			4	SM	LIGHT BROWN SILTY SAND WITH GRAVEL (SM): SLIGHTLY MOIST; DENSE; FINE TO COARSE SAND AND GRAVEL; SOME COBBLES AND BOULDERS UP TO 36 INCHES IN DIA.	
1-2	--	--	5	SM	LIGHT BROWN SILTY SAND WITH GRAVEL (SM): SLIGHTLY MOIST; DENSE; FINE TO COARSE SAND AND GRAVEL; SOME COBBLES AND BOULDERS UP TO 36 INCHES IN DIA.	
			6			
			7	SM	GRAY BROWN TO YELLOW BROWN SILTY SAND WITH GRAVEL (SM): MOIST; VERY DENSE; FINE TO COARSE SAND AND GRAVEL; MODERATELY TO STRONGLY CEMENTED; HIGHLY WEATHERED CLASTS.	
			8			
			9			
			10			
			11			
			12			
			13			
			14			
			15			
1-3	--	--	16	RX	REFUSAL AT 16 FEET ON GRAY VOLCANIC LAHAR ROCK (RX); HIGHLY WEATHERED, WIDELY FRACTURED, WEAK TO MODERATELY STRONG	
			17			
			18			
			19			
			20			

# TEST PIT NO. 2

PROJECT NO.		PROJECT NAME		APPROX. ELEVATION		DATE		PAGE						
41278-03		HOMWOOD MOUNTAIN RESORT NORTH BASE LODGE		6287 FEET		10/02/2009		1 OF 1						
EXCAVATING METHOD			SAMPLING METHOD			GROUNDWATER ENCOUNTERED		CAVED						
JOHN DEERE 200C EXCAVATOR			BULK			NO		NO						
SAMPLE NO.	PERCENT PASSING NO. 200	PLASTICITY INDEX	DEPTH (FT)	USCS	DESCRIPTIONS/REMARKS									
			1	SM	BROWN SILTY SAND (SM); SLIGHTLY MOIST; LOOSE TO MEDIUM DENSE, FINE TO COARSE SAND AND GRAVEL.									
			2	SM	LIGHT BROWN SILTY SAND WITH GRAVEL (SM); SLIGHTLY MOIST; DENSE; FINE TO COARSE SAND AND GRAVEL; SOME COBBLES AND BOULDERS UP TO 36 INCHES IN DIA.									
2-1	--	--	3											
			4											
			5											
			6											
2-2	--	--	7	SM	GRAY BROWN TO YELLOW BROWN SILTY SAND WITH GRAVEL (SM); MOIST; VERY DENSE; FINE TO COARSE SAND AND GRAVEL; MODERATELY TO STRONGLY CEMENTED; SOME ROUNDED AND ANGULAR BOULDER SUP TO 24 INCHES IN DIA.; HIGHLY WEATHERED CLASTS.									
			8											
			9											
			10											
			11											
			12	RX						REFUSAL AT 11 FEET ON GRAY VOLCANIC LAHAR ROCK (RX); HIGHLY WEATHERED, MODERATELY FRACTURED, WEAK TO MODERATELY STRONG.				
			13											
			14											
			15											
			16											
			17											
			18											
			19											
			20											

# TEST PIT NO. 3

PROJECT NO. 41278-03		PROJECT NAME HOMWOOD MOUNTAIN RESORT NORTH BASE LODGE		APPROX. ELEVATION 6245 FEET		DATE 10/02/2009		PAGE 1 OF 1	
EXCAVATING METHOD JOHN DEERE 200C EXCAVATOR			SAMPLING METHOD BULK			GROUNDWATER ENCOUNTERED NO		CAVED NO	
SAMPLE NO.	PERCENT PASSING NO. 200	PLASTICITY INDEX	DEPTH (FT)		USCS	DESCRIPTIONS/REMARKS			
			1		SM	BROWN TO LIGHT BROWN SILTY SAND (SM); MOIST; MEDIUM DENSE, FINE SAND, WITH SOME GRAVEL, COBBLES, AND BOULDERS TO 48 INCHES IN DIA.			
3-1	--	--	2	X					
			3		GP/ GW	GRAY TO YELLOW BROWN POORLY TO WELL-GRADED GRAVEL WITH SAND (GP/GW); MOIST; VERY DENSE; FINE TO COARSE SAND AND GRAVEL; WELL ROUNDED COBBLES UP TO 12 INCHES DIA.  WEAKLY TO MODERATELY CEMENTED @ 6 FEET.  INCREASE IN COBBLES AND BOULDERS UP TO ABOUT 24 INCHES DIA.			
3-2	--	--	4	X					
			5						
			6						
			7						
			8						
			9						
			10						
			11		REFUSAL ON VERY DENSE, MODERATELY CEMENTED SOIL AT 8 FEET.				
			12						
			13						
			14						
			15						
			16						
			17						
			18						
			19						
			20						

# TEST PIT NO. 4

PROJECT NO. 41278-03		PROJECT NAME HOMWOOD MOUNTAIN RESORT NORTH BASE LODGE		APPROX. ELEVATION 6261 FEET	DATE 10/02/2009	PAGE 1 OF 1
EXCAVATING METHOD JOHN DEERE 200C EXCAVATOR			SAMPLING METHOD BULK		GROUNDWATER ENCOUNTERED NO	CAVED NO
SAMPLE NO.	PERCENT PASSING NO. 200	PLASTICITY INDEX	DEPTH (FT)	USCS	DESCRIPTIONS/REMARKS	
			1	SM	BROWN SILTY SAND WITH GRAVEL (SM); SLIGHTLY MOIST; MEDIUM DENSE, FINE TO COARSE SAND AND GRAVEL.	
			2			
4-1	3.6	--	3	GP-GW	LIGHT BROWN POORLY TO WELL-GRADED GRAVEL WITH SAND (GP-GM); SLIGHTLY MOIST; VERY DENSE; FINE TO COARSE SAND AND GRAVEL; NUMEROUS COBBLES AND BOULDERS UP TO 24 INCHES DIA.; WEAKLY CEMENTED.	
			4			
4-2	1.1	--	5			
			6			
			7		REFUSAL AT 8.5 FEET ON BOULDERS.	
			8			
			9			
			10			
			11			
			12			
			13			
			14			
			15			
			16			
			17			
			18			
			19			
			20			

# TEST PIT NO. 5

PROJECT NO. 41278-03		PROJECT NAME HOMWOOD MOUNTAIN RESORT NORTH BASE LODGE		APPROX. ELEVATION 6268 FEET	DATE 10/02/2009	PAGE 1 OF 1
EXCAVATING METHOD JOHN DEERE 200C EXCAVATOR			SAMPLING METHOD BULK		GROUNDWATER ENCOUNTERED NO	CAVED NO
SAMPLE NO.	PERCENT PASSING NO. 200	PLASTICITY INDEX	DEPTH (FT)	USCS	DESCRIPTIONS/REMARKS	
			1	SM	BROWN SILTY SAND WITH GRAVEL (SM); SLIGHTLY MOIST; MEDIUM DENSE, FINE TO COARSE SAND AND GRAVEL.	
			2			
5-1	--	--	3	GM	LIGHT BROWN SILTY GRAVEL (GM); SLIGHTLY MOIST; DENSE; FINE TO COARSE SAND AND GRAVEL; NUMEROUS COBBLES; BOULDERS UP TO 24 INCHES DIA.; SUBANGULAR CLASTS.	
			4			
5-2	5.0	--	5	SW-SM	GRAY BROWN WELL-GRADED SAND WITH SILT AND GRAVEL (SW-SM); MOIST; VERY DENSE; FINE TO COARSE SAND AND GRAVEL; SOME COBBLES; WEAKLY TO MODERATELY CEMENTED.	
			6			
			7			
5-3	--	--	8	GP/GW	GRAY BROWN POORLY TO WELL GRADED GRAVEL WITH SAND (GP/GW); WET; VERY DENSE; FINE TO COARSE SAND AND GRAVEL; SOME COBBLES AND BOULDERS; NO OBVIOUS GROUNDWATER SEEPAGE OBSERVED, BUT SOIL WET AT SURFACE.	
			9			
			10		REFUSAL AT 9.5 FEET ON BOULDERS.	
			11			
			12			
			13			
			14			
			15			
			16			
			17			
			18			
			19			
			20			

# TEST PIT NO. 6

PROJECT NO. 41278-03		PROJECT NAME HOMWOOD MOUNTAIN RESORT NORTH BASE LODGE		APPROX. ELEVATION 6301 FEET	DATE 10/02/2009	PAGE 1 OF 1
EXCAVATING METHOD JOHN DEERE 200C EXCAVATOR			SAMPLING METHOD BULK		GROUNDWATER ENCOUNTERED NO	CAVED NO
SAMPLE NO.	PERCENT PASSING NO. 200	PLASTICITY INDEX	DEPTH (FT)	USCS	DESCRIPTIONS/REMARKS	
			1	SM	BROWN SILTY SAND WITH GRAVEL (SM); SLIGHTLY MOIST; MEDIUM DENSE, FINE TO COARSE SAND AND GRAVEL.	
			2			
			3	GM/SM	LIGHT BROWN SILTY GRAVEL WITH SAND TO SILTY SAND WITH GRAVEL (GM/SM); SLIGHTLY MOIST; VERY DENSE; FINE TO COARSE SAND AND GRAVEL; NUMEROUS COBBLES AND BOULDERS; WEAKLY CEMENTED.	
			4			
			5			
			6			
			7			
			8	SM	GRAY BROWN SILTY SAND WITH GRAVEL (SM); MOIST; VERY DENSE; FINE TO COARSE SAND AND GRAVEL; TRACE COBBLES.	
			9			
			10			
			11			
			12			
			13			
			14	REFUSAL AT 13.5 FEET ON BOULDERS.		
			15			
			16			
			17			
			18			
			19			
			20			

# TEST PIT NO. 7

PROJECT NO.		PROJECT NAME		APPROX. ELEVATION	DATE	PAGE
41278-03		HOMEWOOD MOUNTAIN RESORT NORTH BASE LODGE		6302 FEET	10/02/2009	1 OF 1
EXCAVATING METHOD			SAMPLING METHOD		GROUNDWATER ENCOUNTERED	CAVED
JOHN DEERE 200C EXCAVATOR			BULK		NO	NO
SAMPLE NO.	PERCENT PASSING NO. 200	PLASTICITY INDEX	DEPTH (FT)	USCS	DESCRIPTIONS/REMARKS	
			1	FILL (SM)	FILL: BROWN SILTY SAND WITH GRAVEL (SM): SLIGHTLY MOIST; LOOSE TO MEDIUM DENSE, FINE TO COARSE SAND AND GRAVEL.	
			2			
			3			
			4	GM	LIGHT BROWN SILTY GRAVEL (GM): SLIGHTLY MOIST; MEDIUM DENSE TO DENSE; FINE TO COARSE SAND AND GRAVEL.	
7-1	--	--	5			
			6	SM	GRAY BROWN SILTY SAND (SM): MOIST; DENSE TO VERY DENSE; FINE TO COARSE SAND; SOME FINE TO COARSE GRAVEL.	
7-2	--	--	7			
			8			
			9	GP/GW	GRAY BROWN POORLY TO WELL GRADED GRAVEL WITH SAND (GP/GW): WET; VERY DENSE; FINE TO COARSE SAND AND GRAVEL; SOME COBBLES AND BOULDERS.	
			10	SM	GRAY BROWN SILTY SAND WITH GRAVEL (SM): MOIST; VERY DENSE; FINE TO COARSE SAND; SOME FINE TO COARSE GRAVEL; TRACE COBBLES.	
			11			
7-3	--	--	12			
			13		REFUSAL AT 13 FEET ON BOULDERS.	
			14			
			15			
			16			
			17			
			18			
			19			
			20			

# TEST PIT NO. 8

PROJECT NO. 41278-03		PROJECT NAME HOMEWOOD MOUNTAIN RESORT NORTH BASE LODGE			APPROX. ELEVATION 6298 FEET		DATE 10/02/2009		PAGE 1 OF 1	
EXCAVATING METHOD JOHN DEERE 200C EXCAVATOR				SAMPLING METHOD BULK			GROUNDWATER ENCOUNTERED NO		CAVED NO	
SAMPLE NO.	PERCENT PASSING NO. 200	PLASTICITY INDEX	DEPTH (FT)	USCS	DESCRIPTIONS/REMARKS					
			1	SM	LIGHT BROWN SILTY SAND WITH GRAVEL (SM); SLIGHTLY MOIST; LOOSE TO MEDIUM DENSE, FINE TO COARSE SAND AND GRAVEL.					
			2							
			3	SM	LIGHT BROWN SILTY SAND WITH GRAVEL (SM); SLIGHTLY MOIST; DENSE; FINE TO COARSE SAND AND GRAVEL; SOME COBBLES.					
			4							
8-1	--	--	5		REFUSAL AT 7 FEET ON BOULDERS.					
			6	SM						
			7		REFUSAL AT 7 FEET ON BOULDERS.					
			8							
			9							
			10							
			11							
			12							
			13							
			14							
			15							
			16							
			17							
			18							
			19							
			20							

# TEST PIT NO. 9

PROJECT NO. 41278-03		PROJECT NAME HOMWOOD MOUNTAIN RESORT NORTH BASE LODGE		APPROX. ELEVATION 6276 FEET	DATE 10/02/2009	PAGE 1 OF 1
EXCAVATING METHOD JOHN DEERE 200C EXCAVATOR			SAMPLING METHOD BULK		GROUNDWATER ENCOUNTERED NO	CAVED NO
SAMPLE NO.	PERCENT PASSING NO. 200	PLASTICITY INDEX	DEPTH (FT)	USCS	DESCRIPTIONS/REMARKS	
			1	SM	LIGHT BROWN SILTY SAND (SM); SLIGHTLY MOIST; LOOSE TO MEDIUM DENSE, FINE TO COARSE SAND; SOME FINE TO COARSE GRAVEL.	
			2			
			3	SM	LIGHT BROWN SILTY SAND WITH GRAVEL (SM); SLIGHTLY MOIST; MEDIUM DENSE; FINE TO COARSE SAND AND GRAVEL; COLLUVIUM.	
			4	GM	LIGHT BROWN SILTY GRAVEL WITH SAND (GM); SLIGHTLY MOIST; MEDIUM DENSE TO DENSE; FINE TO COARSE SAND AND GRAVEL; COBBLES UP TO 5 INCHES DIA.	
			5	SM	LIGHT BROWN SILTY SAND WITH GRAVEL (SM); SLIGHTLY MOIST TO MOIST; MEDIUM DENSE TO DENSE; FINE TO COARSE SAND AND GRAVEL.	
			6			
			7	GM	GRAY BROWN SILTY GRAVEL WITH SAND (GM); MOIST; VERY DENSE; FINE TO COARSE SAND AND GRAVEL; SOME COBBLES UP TO 12 INCHES DIA.; WEAKLY CEMENTED.	
			8			
			9	GP/GW	GRAY POORLY TO WELL GRADED GRAVEL WITH SAND (GP/GW); WET; VERY DENSE; FINE TO COARSE SAND AND GRAVEL.	
			10			
			11			
			12			
			13			
9-1	--	--	14			
			15			
			16		INCREASING WELL ROUNDED COBBLES UP TO 6 INCHES DIA. WITH DEPTH	
9-2	--	--	17			
			18		REFUSAL AT 18 FEET ON BOULDERS.	
			19			
			20			

# TEST PIT NO. 10

PROJECT NO. 41278-03		PROJECT NAME HOMWOOD MOUNTAIN RESORT NORTH BASE LODGE			APPROX. ELEVATION 6245 FEET		DATE 10/02/2009		PAGE 1 OF 1	
EXCAVATING METHOD JOHN DEERE 200C EXCAVATOR				SAMPLING METHOD BULK			GROUNDWATER ENCOUNTERED NO		CAVED YES	
SAMPLE NO.	PERCENT PASSING NO. 200	PLASTICITY INDEX	DEPTH (FT)		USCS	DESCRIPTIONS/REMARKS				
			1		FILL (SM)	LIGHT BROWN SILTY SAND WITH GRAVEL (SM): SLIGHTLY MOIST; LOOSE, FINE TO COARSE SAND AND GRAVEL; NUMEROUS BOULDERS.  CAVING @ 3.5 FEET; APPARENT BOULDER DISPOSAL PIT				
			2							
			3							
			4							
			5							
			6							
			7							
			8							
			9							
			10							
			11			TEST PIT TERMINATED AT 10 FEET.				
			12							
			13							
			14							
			15							
			16							
			17							
			18							
			19							
			20							

# TEST PIT NO. 11

PROJECT NO.		PROJECT NAME		APPROX. ELEVATION		DATE		PAGE	
41278-03		HOMWOOD MOUNTAIN RESORT NORTH BASE LODGE		6265 FEET		10/02/2009		1 OF 1	
EXCAVATING METHOD			SAMPLING METHOD			GROUNDWATER ENCOUNTERED		CAVED	
JOHN DEERE 200C EXCAVATOR			BULK			NO		NO	
SAMPLE NO.	PERCENT PASSING NO. 200	PLASTICITY INDEX	DEPTH (FT)		USCS	DESCRIPTIONS/REMARKS			
			1		SM	LIGHT BROWN SILTY SAND WITH GRAVEL (SM): SLIGHTLY MOIST; LOOSE TO MEDIUM DENSE, FINE TO COARSE SAND; FINE TO COARSE GRAVEL; SOME COBBLES AND BOULDERS.			
			2		SM	LIGHT BROWN SILTY SAND WITH GRAVEL (SM): SLIGHTLY MOIST; DENSE; FINE TO COARSE SAND AND GRAVEL.			
			3						
			4		GM	LIGHT BROWN SILTY GRAVEL (GM): SLIGHTLY MOIST; VERY DENSE; FINE TO COARSE SAND AND GRAVEL; SOME BOULDERS UP TO 48 INCHES DIA.			
11-1	--	--	5		GP	GRAY BROWN POORLY GRADED GRAVEL WITH SAND (GM): MOIST; VERY DENSE; FINE TO COARSE SAND AND GRAVEL; WEAKLY CEMENTED SOIL.			
			6						
			7						
			8						
			9						
			10						
			11		REFUSAL ON BOULDERS AT 10 FEET.				
			12						
			13						
			14						
			15						
			16						
			17						
			18						
			19						
			20						

## **APPENDIX B**

**Holdrege and Kull Boring and Test Pits Logs,  
Mid-Mountain Area**



# TEST PIT NO. 1

PROJECT NO.		PROJECT NAME		APPROX. ELEVATION	DATE	PAGE
41278-02		HOMEWOOD MOUNTAIN RESORT MID MOUNTAIN LODGE		7280 FEET	10/01/2009	1 OF 1
EXCAVATING METHOD			SAMPLING METHOD		GROUNDWATER ENCOUNTERED	CAVED
JOHN DEERE 200C EXCAVATOR			BULK		NO	NO
SAMPLE NO.	PERCENT PASSING NO. 200	PLASTICITY INDEX	DEPTH (FT)	USCS	DESCRIPTIONS/REMARKS	
			1	SM	BROWN SILTY SAND (SM); SLIGHTLY MOIST; LOOSE, FINE TO COARSE SAND; SOME GRAVEL; TRACE COBBLES; OCCASIONAL BOULDERS.	
1-1	13.4	NP	2	SM	LIGHT BROWN SILTY SAND WITH GRAVEL (SM); SLIGHTLY MOIST TO MOIST; MEDIUM DENSE TO DENSE; FINE TO COARSE GRAVEL.	
			3			
			4			
			5			
1-2	15.9	NP	6	GM	GRAY BROWN SILTY GRAVEL WITH SAND (GM); MOIST; DENSE TO VERY DENSE; FINE TO COARSE SAND; WITH BOULDERS UP TO 3 FT DIA.	
			7			
1-3	--	--	8	RX	GRAY VOLCANIC LAHAR ROCK (RX); HIGHLY WEATHERED; WIDELY FRACTURED; WEAK TO MODERATELY STRONG.	
			9		REFUSAL ON VOLCANIC ROCK AT 8 FEET.	
			10			
			11			
			12			
			13			
			14			
			15			
			16			
			17			
			18			
			19			
			20			

# TEST PIT NO. 2

PROJECT NO.		PROJECT NAME		APPROX. ELEVATION		DATE	PAGE
41278-02		HOMEWOOD MOUNTAIN RESORT MID MOUNTAIN LODGE		7270 FEET		10/01/2009	1 OF 1
EXCAVATING METHOD			SAMPLING METHOD		GROUNDWATER ENCOUNTERED		CAVED
JOHN DEERE 200C EXCAVATOR			BULK		NO		NO
SAMPLE NO.	PERCENT PASSING NO. 200	PLASTICITY INDEX	DEPTH (FT)		USCS	DESCRIPTIONS/REMARKS	
2-1	--	--	1	X	SM	LIGHT BROWN SILTY SAND (SM); SLIGHTLY MOIST; LOOSE TO MEDIUM DENSE; FINE TO COARSE SAND.	
			2	O	GM	LIGHT BROWN SILTY GRAVEL (GM); SLIGHTLY MOIST TO MOIST; MEDIUM DENSE TO DENSE; FINE TO COARSE SAND AND GRAVEL; COBBLES UP TO 8 INCHES DIA.; ESTIMATED 20% OF COBBLES GREATER THAN 4 INCH DIA.; NUMEROUS ROOTS 2 TO 3 FEET.	
2-2	--	--	3	X			
			4	O			
			5	O			
			6	O			
			7	O			
			8	V	RX	GRAY VOLCANIC LAHAR ROCK (RX); HIGHLY WEATHERED; WIDELY FRACTURED; MODERATELY STRONG.	
			9	V			
			10	V		REFUSAL ON VOLCANIC ROCK AT 9.5 FEET.	
			11	V			
			12	V			
			13	V			
			14	V			
			15	V			
			16	V			
			17	V			
			18	V			
			19	V			
			20	V			

# TEST PIT NO. 3

PROJECT NO.		PROJECT NAME		APPROX. ELEVATION	DATE	PAGE
41278-02		HOMewood MOUNTAIN RESORT MID MOUNTAIN LODGE		7305 FEET	10/01/2009	1 OF 1
EXCAVATING METHOD			SAMPLING METHOD		GROUNDWATER ENCOUNTERED	CAVED
JOHN DEERE 200C EXCAVATOR			BULK		NO	NO
SAMPLE NO.	PERCENT PASSING NO. 200	PLASTICITY INDEX	DEPTH (FT)	USCS	DESCRIPTIONS/REMARKS	
3-1	--	--	1	SM	LIGHT BROWN SILTY SAND (SM): SLIGHTLY MOIST TO MOIST; LOOSE; FINE TO COARSE SAND; TRACE TO SOME FINE TO COARSE GRAVEL.	
			2			
3-2	--	--	3	SM		
			3		LIGHT BROWN SILTY SAND (SM): MOIST; DENSE; FINE TO COARSE SAND AND GRAVEL.	
			4			
3-3	--	--	4	SM	YELLOW-BROWN SILTY SAND (SM): MOIST; VERY DENSE; FINE TO COARSE SAND AND GRAVEL; RESIDUAL ROCK TEXTURE AND COLOR.	
			5			
			6			
			7			
			8			
3-4	--	--	9		GRAY TO RED-GRAY VOLCANIC LAHAR ROCK (RX): HIGHLY WEATHERED; WIDELY FRACTURED; MODERATELY STRONG.	
			10	RX		
			11		REFUSAL ON VOLCANIC ROCK AT 13 FEET.	
			12			
			13			
			14			
			15			
			16			
			17			
			18			
			19			
			20			

# TEST PIT NO. 4

PROJECT NO.		PROJECT NAME		APPROX. ELEVATION	DATE	PAGE
41278-02		HOMEWOOD MOUNTAIN RESORT MID MOUNTAIN LODGE		7302 FEET	10/01/2009	1 OF 1
EXCAVATING METHOD			SAMPLING METHOD		GROUNDWATER ENCOUNTERED	CAVED
JOHN DEERE 200C EXCAVATOR			BULK		NO	NO
SAMPLE NO.	PERCENT PASSING NO. 200	PLASTICITY INDEX	DEPTH (FT)	USCS	DESCRIPTIONS/REMARKS	
			1	SM	LIGHT BROWN SILTY SAND WITH GRAVEL (SM): SLIGHTLY MOIST TO MOIST; LOOSE TO MEDIUM DENSE; FINE TO COARSE SAND AND GRAVEL.	
			2			
			3			
4-1	4.7	--	4	GP	LIGHT BROWN POORLY GRADED GRAVEL WITH SAND (GP): SLIGHTLY MOIST TO MOIST; MEDIUM DENSE TO DENSE; FINE TO COARSE SAND AND GRAVEL; COBBLES UP TO 12 INCHES DIA.	
			5			
			6	RX	GRAY VOLCANIC LAHAR ROCK (RX): HIGHLY WEATHERED; WIDELY FRACTURED; MODERATELY STRONG.	
4-2	--	--	7			
			8		REFUSAL ON VOLCANIC ROCK AT 7.5 FEET.	
			9			
			10			
			11			
			12			
			13			
			14			
			15			
			16			
			17			
			18			
			19			
			20			

# TEST PIT NO. 5

PROJECT NO. 41278-02		PROJECT NAME HOMWOOD MOUNTAIN RESORT MID MOUNTAIN LODGE		APPROX. ELEVATION 7331 FEET	DATE 10/01/2009	PAGE 1 OF 1
EXCAVATING METHOD JOHN DEERE 200C EXCAVATOR			SAMPLING METHOD BULK		GROUNDWATER ENCOUNTERED NO	CAVED NO
SAMPLE NO.	PERCENT PASSING NO. 200	PLASTICITY INDEX	DEPTH (FT)	USCS	DESCRIPTIONS/REMARKS	
			1	SM	LIGHT BROWN SILTY SAND WITH GRAVEL (SM): SLIGHTLY MOIST TO MOIST; LOOSE TO MEDIUM DENSE; FINE TO COARSE SAND AND GRAVEL; TRACE COBBLES.	
5-1	--	--	2			
			3	GM	LIGHT BROWN SILTY GRAVEL WITH SAND (GM): SLIGHTLY MOIST TO MOIST; MEDIUM DENSE TO DENSE; FINE TO COARSE SAND AND GRAVEL; COBBLES UP TO 12 INCHES DIA.	
5-2	--	--	4			
			5			
			6	RX	GRAY VOLCANIC LAHAR ROCK (RX): HIGHLY WEATHERED; WIDELY FRACTURED; MODERATELY STRONG.	
			7			
			8			
			9			
			10	REFUSAL ON VOLCANIC ROCK AT 9 FEET.		
			11			
			12			
			13			
			14			
			15			
			16			
			17			
			18			
			19			
			20			

# TEST PIT NO. 6

PROJECT NO.		PROJECT NAME		APPROX. ELEVATION	DATE	PAGE
41278-02		HOMWOOD MOUNTAIN RESORT MID MOUNTAIN LODGE		7330 FEET	10/01/2009	1 OF 1
EXCAVATING METHOD			SAMPLING METHOD		GROUNDWATER ENCOUNTERED	CAVED
JOHN DEERE 200C EXCAVATOR			BULK		NO	NO
SAMPLE NO.	PERCENT PASSING NO. 200	PLASTICITY INDEX	DEPTH (FT)	USCS	DESCRIPTIONS/REMARKS	
			1	SM	LIGHT BROWN SILTY SAND WITH GRAVEL (SM); SLIGHTLY MOIST; LOOSE TO MEDIUM DENSE; FINE TO COARSE SAND AND GRAVEL; SOME COBBLES AND BOULDERS UP TO 24 INCHES DIA.	
			2			
6-1	--	--	3	GM	LIGHT BROWN SILTY GRAVEL WITH SAND (GM); SLIGHTLY MOIST TO MOIST; MEDIUM DENSE TO DENSE; FINE TO COARSE SAND AND GRAVEL; COBBLES UP TO 12 INCHES DIA.	
			4			
			5	RX	GRAY VOLCANIC LAHAR ROCK (RX); HIGHLY WEATHERED; WIDELY FRACTURED; MODERATELY STRONG.	
			6		REFUSAL ON VOLCANIC ROCK AT 5 FEET.	
			7			
			8			
			9			
			10			
			11			
			12			
			13			
			14			
			15			
			16			
			17			
			18			
			19			
			20			

# TEST PIT NO. 7

PROJECT NO.		PROJECT NAME		APPROX. ELEVATION	DATE	PAGE
41278-02		HOMWOOD MOUNTAIN RESORT MID MOUNTAIN LODGE		7490 FEET	10/01/2009	1 OF 1
EXCAVATING METHOD			SAMPLING METHOD		GROUNDWATER ENCOUNTERED	CAVED
JOHN DEERE 200C EXCAVATOR			BULK		NO	NO
SAMPLE NO.	PERCENT PASSING NO. 200	PLASTICITY INDEX	DEPTH (FT)	USCS	DESCRIPTIONS/REMARKS	
			1	SM	LIGHT BROWN SILTY SAND WITH GRAVEL (SM); SLIGHTLY MOIST; LOOSE TO MEDIUM DENSE; FINE TO COARSE SAND AND GRAVEL.	
			2			
			3			
			4	GM	LIGHT BROWN SILTY GRAVEL WITH SAND (GM); SLIGHTLY MOIST TO MOIST; DENSE; FINE TO COARSE SAND AND GRAVEL; WITH COBBLES UP TO 12 INCHES DIA.	
			5			
7-1	--	--	6	RX	GRAY VOLCANIC LAHAR ROCK (RX); HIGHLY TO COMPLETELY WEATHERED; WIDELY FRACTURED; WEAK.  GRADES TO: MODERATELY STRONG TO STRONG AT 9 FEET.	
			7			
			8			
			9			
			10			
7-2	--	--	10		REFUSAL ON VOLCANIC ROCK AT 11 FEET.	
			11			
			12			
			13			
			14			
			15			
			16			
			17			
			18			
			19			
			20			

# TEST PIT NO. 8

PROJECT NO.		PROJECT NAME		APPROX. ELEVATION	DATE	PAGE
41278-02		HOMWOOD MOUNTAIN RESORT MID MOUNTAIN LODGE		7470 FEET	10/01/2009	1 OF 1
EXCAVATING METHOD			SAMPLING METHOD		GROUNDWATER ENCOUNTERED	CAVED
JOHN DEERE 200C EXCAVATOR			BULK		NO	NO
SAMPLE NO.	PERCENT PASSING NO. 200	PLASTICITY INDEX	DEPTH (FT)	USCS	DESCRIPTIONS/REMARKS	
8-1	7.9	--	1	GP-GM	LIGHT BROWN POORLY GRADED GRAVEL WITH SILT AND SAND (GP-GM): SLIGHTLY MOIST; LOOSE TO MEDIUM DENSE; FINE TO COARSE SAND AND GRAVEL.	
8-2	--	--	3	GM	LIGHT BROWN SILTY GRAVEL (GM): SLIGHTLY MOIST; DENSE; FINE TO COARSE SAND AND GRAVEL; SOME COBBLES UP TO 8 INCHES DIA.	
			4	RX	GRAY VOLCANIC LAHAR ROCK (RX): HIGHLY WEATHERED; WIDELY FRACTURED; MODERATELY STRONG.	
			5		REFUSAL ON VOLCANIC ROCK AT 4.5 FEET.	
			6			
			7			
			8			
			9			
			10			
			11			
			12			
			13			
			14			
			15			
			16			
			17			
			18			
			19			
			20			

# TEST PIT NO. 9

PROJECT NO. 41278-02		PROJECT NAME HOMWOOD MOUNTAIN RESORT MID MOUNTAIN LODGE		APPROX. ELEVATION 7309 FEET	DATE 10/01/2009	PAGE 1 OF 1
EXCAVATING METHOD JOHN DEERE 200C EXCAVATOR			SAMPLING METHOD BULK		GROUNDWATER ENCOUNTERED NO	CAVED NO
SAMPLE NO.	PERCENT PASSING NO. 200	PLASTICITY INDEX	DEPTH (FT)	USCS	DESCRIPTIONS/REMARKS	
			1	SM	LIGHT BROWN SILTY SAND (SM); MOIST; DENSE; FINE TO COARSE SAND; SOME FINE TO COARSE GRAVEL.	
			2	GM	LIGHT BROWN SILTY GRAVEL WITH SAND (GM); MOIST; VERY DENSE; FINE TO COARSE SAND AND GRAVEL; SOME COBBLES UP TO 12 INCHES DIA.	
			3			
			4			
			5	RX	GRAY VOLCANIC LAHAR ROCK (RX); HIGHLY WEATHERED; WIDELY FRACTURED; MODERATELY STRONG.	
			6			
			7			
			8			
			9			
			10			
			11	REFUSAL ON VOLCANIC ROCK AT 10 FEET.		
			12			
			13			
			14			
			15			
			16			
			17			
			18			
			19			
			20			

# TEST PIT NO. 10

PROJECT NO. 41278-02		PROJECT NAME HOMWOOD MOUNTAIN RESORT MID MOUNTAIN LODGE		APPROX. ELEVATION 7341 FEET		DATE 10/01/2009		PAGE 1 OF 1	
EXCAVATING METHOD JOHN DEERE 200C EXCAVATOR			SAMPLING METHOD BULK			GROUNDWATER ENCOUNTERED NO		CAVED NO	
SAMPLE NO.	PERCENT PASSING NO. 200	PLASTICITY INDEX	DEPTH (FT)		USCS	DESCRIPTIONS/REMARKS			
			1	●●●●●●●●●●	SM	LIGHT BROWN SILTY SAND (SM): MOIST; DENSE; FINE TO COARSE SAND; SOME FINE TO COARSE GRAVEL.			
			2	●●●●●●●●●●	GM	LIGHT BROWN SILTY GRAVEL WITH SAND (GM): MOIST; VERY DENSE; FINE TO COARSE SAND AND GRAVEL; SOME COBBLES UP TO 12 INCHES DIA.			
			3	●●●●●●●●●●					
			4	▼▼▼▼▼▼▼▼▼▼	RX	GRAY VOLCANIC LAHAR ROCK (RX): HIGHLY WEATHERED; WIDELY FRACTURED; MODERATELY STRONG.			
			5	▼▼▼▼▼▼▼▼▼▼		REFUSAL ON VOLCANIC ROCK AT 5 FEET.			
			6						
			7						
			8						
			9						
			10						
			11						
			12						
			13						
			14						
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			18						
			19						
			20						

**APPENDIX C      *Laboratory Test Results***

# Particle Size Distribution

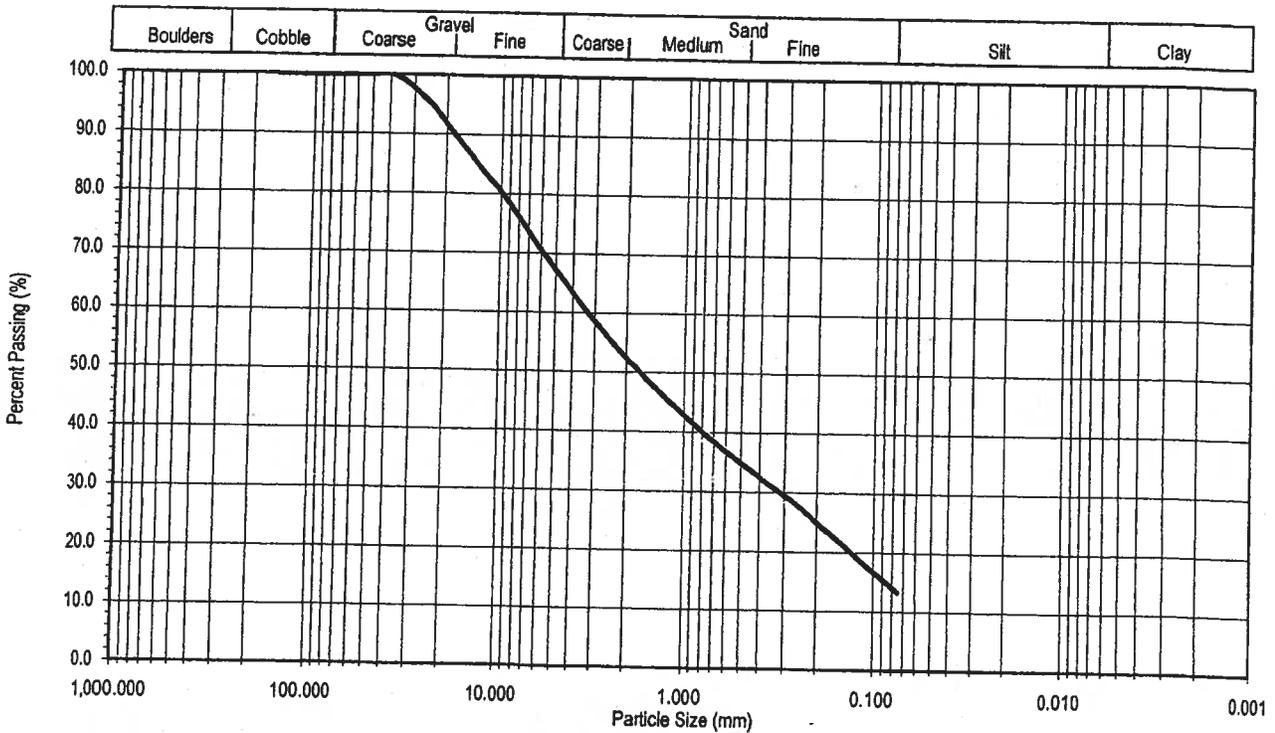
ASTM D422

Project No.: **41278-02**      Project Name: **Homewood Mt. Resort Mid-Mt. Lodge**  
 Sample No.: **1-1**      Boring/Trench: **TP-1**      Depth, (ft.): **2**  
 Description: **Dark Brown (7.5YR 3/4) Silty Sand with Gravel (SM)**  
 Sample Location: \_\_\_\_\_

Date: **11/9/2009**  
 Tested By: **BLK/MLHF**  
 Checked By: **PJR**  
 Lab. No.: **15-09-428**

Sieve Size  (U.S. Standard)	Particle Diameter		Dry Weight on Sieve			Percent Passing  (%)
	Inches  (In.)	Millimeter  (mm)	Retained On Sieve (gm)	Accumulated On Sieve (gm)	Passing Sieve (gm)	
6 Inch	6.0000	152.4	0.00	0.0	2,386.4	100.0
3 Inch	3.0000	76.2	0.00	0.0	2,386.4	100.0
2 Inch	2.0000	50.8	0.00	0.0	2,386.4	100.0
1.5 Inch	1.5000	38.1	0.00	0.0	2,386.4	100.0
1.0 Inch	1.0000	25.4	102.09	102.1	2,284.3	95.7
3/4 Inch	0.7500	19.1	115.97	218.1	2,168.3	90.9
1/2 Inch	0.5000	12.7	160.72	378.8	2,007.6	84.1
3/8 Inch	0.3750	9.5	109.72	488.5	1,897.9	79.5
#4	0.1875	4.7500	315.51	804.0	1,582.4	66.3
#10	0.0750	2.0000	332.88	1,136.9	1,249.5	52.4
#20	0.0335	0.8500	274.91	1,411.8	974.6	40.8
#40	0.0167	0.4250	182.79	1,594.6	791.8	33.2
#60	0.0098	0.2500	133.30	1,727.9	658.5	27.6
#100	0.0059	0.1500	142.90	1,870.8	515.6	21.6
#200	0.0030	0.0750	196.68	2,067.5	318.9	13.4

Particle Size Gradation



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# Atterberg Indices

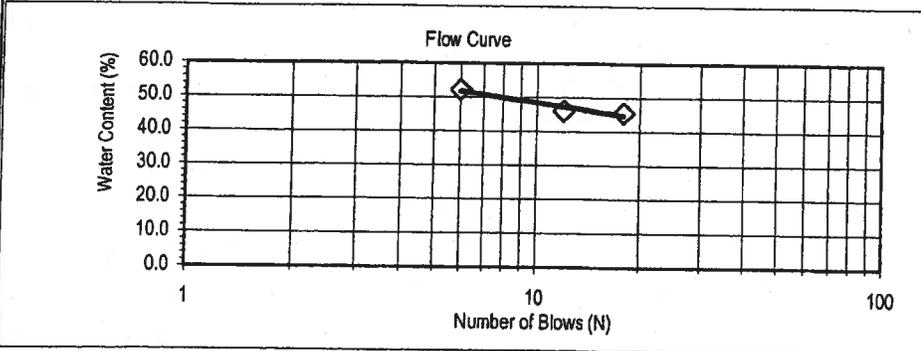
ASTM D4318

Project No.:	<b>41278-02</b>	Project Name: <b>Homewood Mt. Resort Mid-Mt. Lodge</b>	Date: <b>11/9/2009</b>
Sample No.:	<b>1-1</b>	Boring/Trench: <b>TP-1</b>	Depth, (ft.): <b>2</b>
Description:	<b>Dark Brown (7.5YR 3/4) Silty Sand with Gravel (SM)</b>		Tested By: <b>BLK/MLHF</b>
Sample Location:			Checked By: <b>PJR</b>
			Lab. No.: <b>15-09-428</b>

Estimated % of Sample Retained on No. 40 Sieve: \_\_\_\_\_ Sample Air Dried: yes

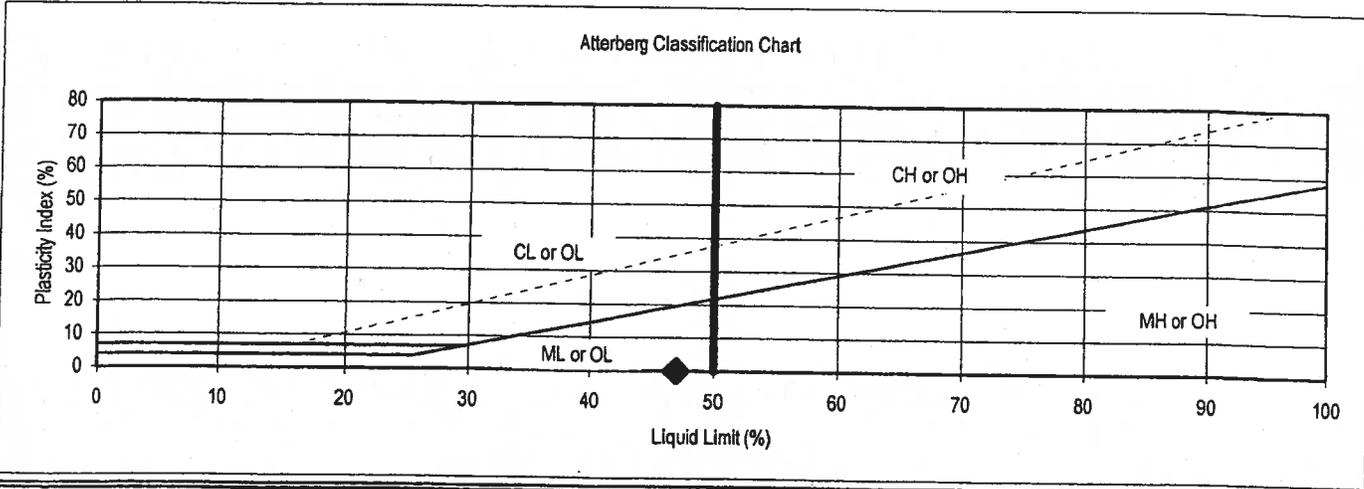
Test Method A or B: A

Sample No.:	LIQUID LIMIT:					PLASTIC LIMIT:			
	1	2	3	4	5	1	2	3	
Pan ID:	LD	Z5	AT			N/P	N/P		
Wt. Pan (gr)	15.28	15.32	15.30						
Wt. Wet Soil + Pan (gr)	25.75	31.45	29.09						
Wt. Dry Soil + Pan (gr)	22.16	26.36	24.78						
Wt. Water (gr)	3.59	5.09	4.31						
Wt. Dry Soil (gr)	6.88	11.04	9.48						
Water Content (%)	52.2	46.1	45.5						
Number of Blows, N	6	12	18						
LIQUID LIMIT =					<b>47</b>	PLASTIC LIMIT =			<b>N/P</b>



Plasticity Index = N/P

Group Symbol = ML



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# Particle Size Distribution

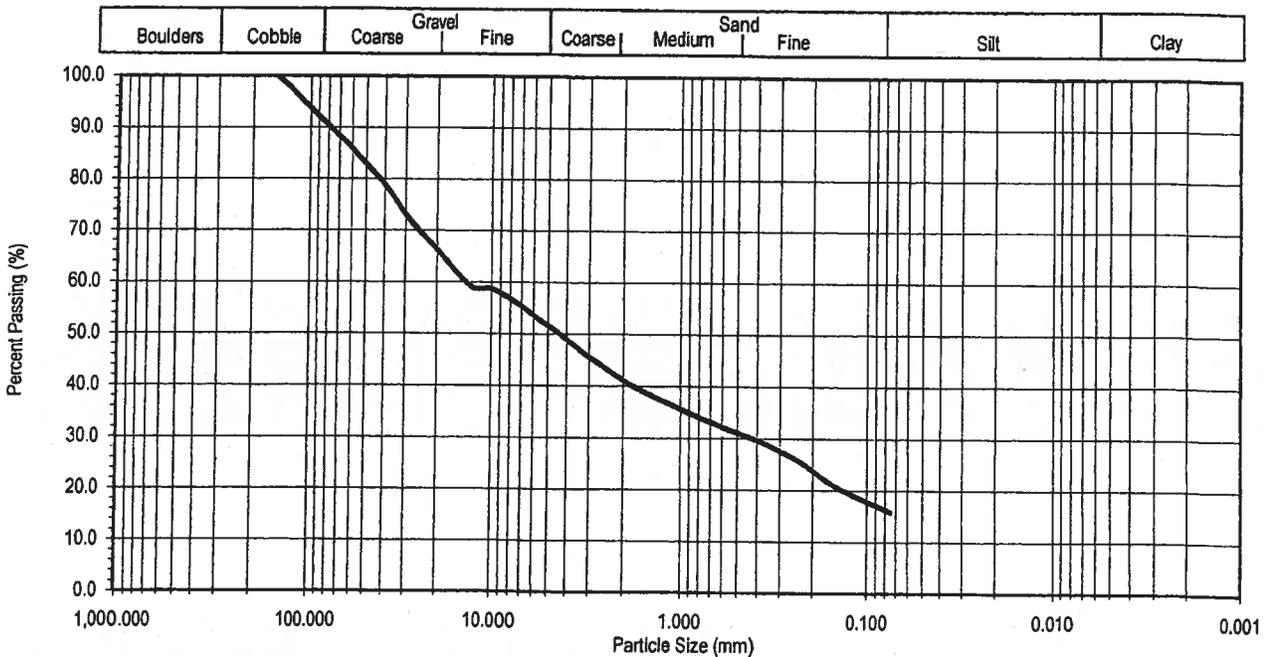
ASTM D422

Project No.: 41278-02 Project Name: Homewood Mt. Resort Mid-Mt. Lodge  
 Sample No.: 1-2 Boring/Trench: TP-1 Depth, (ft.): 5.5  
 Description: Dark Brown (7.5YR 3/4) Silty Gravel with Sand (GM)  
 Sample Location: \_\_\_\_\_

Date: 11/9/2009  
 Tested By: BLK/MLHF  
 Checked By: PJR  
 Lab. No.: 15-09-428

Sieve Size  (U.S. Standard)	Particle Diameter		Dry Weight on Sieve			Percent Passing  (%)
	Inches  (in.)	Millimeter  (mm)	Retained On Sieve (gm)	Accumulated On Sieve (gm)	Passing Sieve (gm)	
6 Inch	6.0000	152.4	0.00	0.0	2,605.3	100.0
3 Inch	3.0000	76.2	268.52	268.5	2,336.7	89.7
2 Inch	2.0000	50.8	168.65	437.2	2,168.1	83.2
1.5 Inch	1.5000	38.1	135.11	572.3	2,033.0	78.0
1.0 Inch	1.0000	25.4	211.06	783.3	1,821.9	69.9
3/4 Inch	0.7500	19.1	114.84	898.2	1,707.1	65.5
1/2 Inch	0.5000	12.7	170.00	1,068.2	1,537.1	59.0
3/8 Inch	0.3750	9.5	13.75	1,081.9	1,523.3	58.5
#4	0.1875	4.7500	193.82	1,275.8	1,329.5	51.0
#10	0.0787	2.0000	257.66	1,533.4	1,071.8	41.1
#20	0.0335	0.8500	174.17	1,707.6	897.7	34.5
#40	0.0167	0.4250	115.77	1,823.4	781.9	30.0
#60	0.0098	0.2500	100.88	1,924.2	681.0	26.1
#100	0.0059	0.1500	137.28	2,061.5	543.7	20.9
#200	0.0030	0.0750	130.66	2,192.2	413.1	15.9

Particle Size Gradation



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# Atterberg Indices

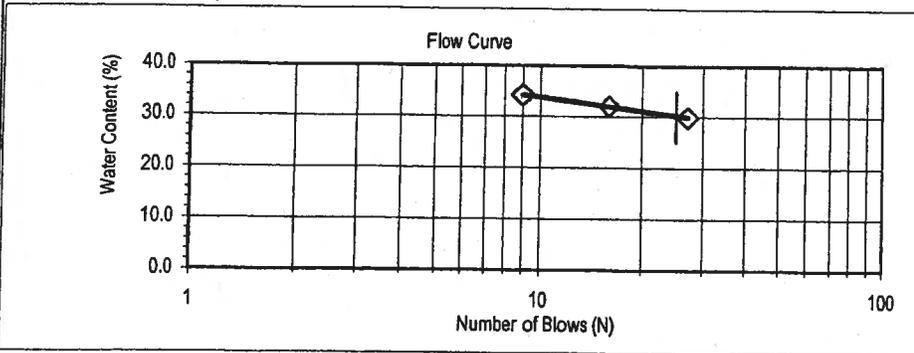
ASTM D4318

Project No.:	<b>41278-02</b>	Project Name: <b>Homewood Mt. Resort Mid-Mt. Lodge</b>	Date: <b>11/9/2009</b>
Sample No.:	<b>1-2</b>	Boring/Trench: <b>TP-1</b>	Depth, (ft.): <b>5.5</b>
Description:	<b>Dark Brown (7.5YR 3/4) Silty Gravel with Sand (GM)</b>		Tested By: <b>BLK/MLHF</b>
Sample Location:			Checked By: <b>PJR</b>
			Lab. No.: <b>15-09-428</b>

Estimated % of Sample Retained on No. 40 Sieve: \_\_\_\_\_ Sample Air Dried: yes

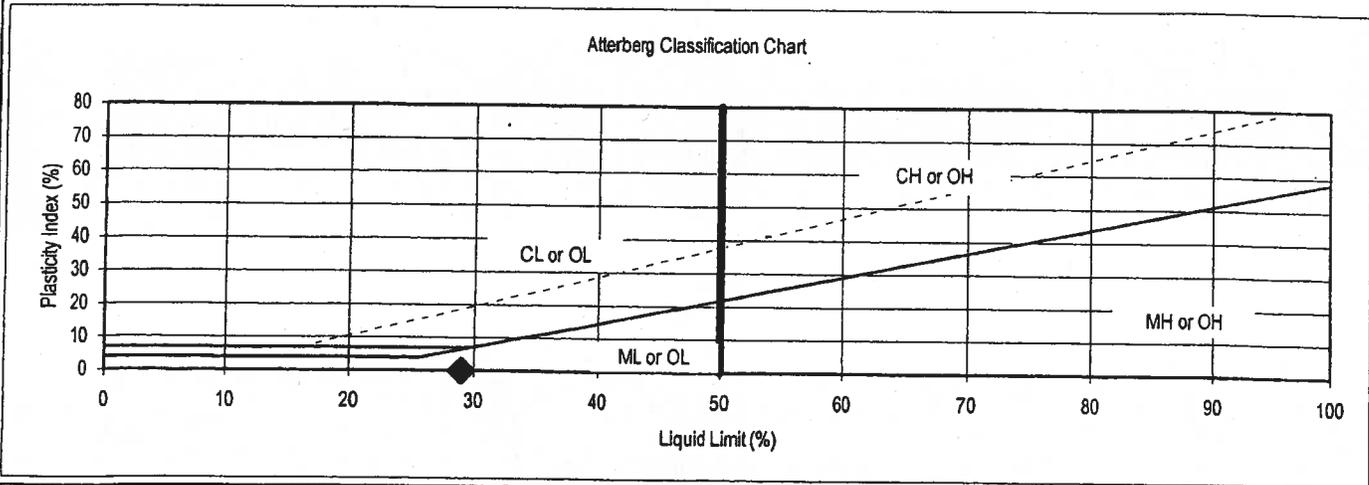
Test Method A or B: A

Sample No.:	LIQUID LIMIT:					PLASTIC LIMIT:			
	1	2	3	4	5	1	2	3	
Pan ID:	LE	AI	MBE			N/P	N/P		
Wt. Pan (gr)	15.31	15.09	15.24						
Wt. Wet Soil + Pan (gr)	31.87	28.19	30.06						
Wt. Dry Soil + Pan (gr)	27.65	25.01	26.65						
Wt. Water (gr)	4.22	3.18	3.41						
Wt. Dry Soil (gr)	12.34	9.92	11.41						
Water Content (%)	34.2	32.1	29.9						
Number of Blows, N	9	16	27						
LIQUID LIMIT =					29	PLASTIC LIMIT =			N/P



Plasticity Index = N/P

Group Symbol = ML



## HOLDREG & KULL

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**Laboratory Report**  
**Report ID: 102395**

**Sierra  
 Environmental  
 Monitoring, Inc.**

Holdrege & Kull  
 Attn: Pam Raynak  
 10775 Pioneer Trail, Suite 213  
 Truckee, CA 96161

Date: 12/1/2009  
 Client: HDK-90714  
 Taken by: P. Raynak  
 PO #: 41278-02

**Analysis Report**

Sample ID:	Customer Sample ID	Date Sampled	Time Sampled	Date Received			
S200911-1119	TP-3 @ 8.5'	10/1/2009		11/23/2009			
Parameter	Method	Result	Units	Reporting Limit	Analyst	Date Analyzed	Data Flag
Chloride - Ion Chromatography	EPA 300.0	<10	mg/Kg	10	Faulstich	11/23/2009	
pH - Saturated Paste	SW-846 9045A	5.80	pH Units		Van Ry	11/23/2009	
pH - Temperature	SW-846 9045A	18.5	°C		Van Ry	11/23/2009	
Resistivity	EPA 120.1	29000	ohm cm		Van Ry	11/23/2009	
Sample Preparation - Aqueous Extrac	SEM - SOP	Completed			Faulstich	11/23/2009	
Sulfate - Ion Chromatography	EPA 300.0	<2	mg/Kg	2	Faulstich	11/23/2009	

Sample ID:	Customer Sample ID	Date Sampled	Time Sampled	Date Received			
S200911-1120	TP-8 @ 3'	10/1/2009		11/23/2009			
Parameter	Method	Result	Units	Reporting Limit	Analyst	Date Analyzed	Data Flag
Chloride - Ion Chromatography	EPA 300.0	<10	mg/Kg	10	Faulstich	11/23/2009	
pH - Saturated Paste	SW-846 9045A	5.66	pH Units		Van Ry	11/23/2009	
pH - Temperature	SW-846 9045A	18.7	°C		Van Ry	11/23/2009	
Resistivity	EPA 120.1	34000	ohm cm		Van Ry	11/23/2009	
Sample Preparation - Aqueous Extrac	SEM - SOP	Completed			Faulstich	11/23/2009	
Sulfate - Ion Chromatography	EPA 300.0	<2	mg/Kg	2	Faulstich	11/23/2009	

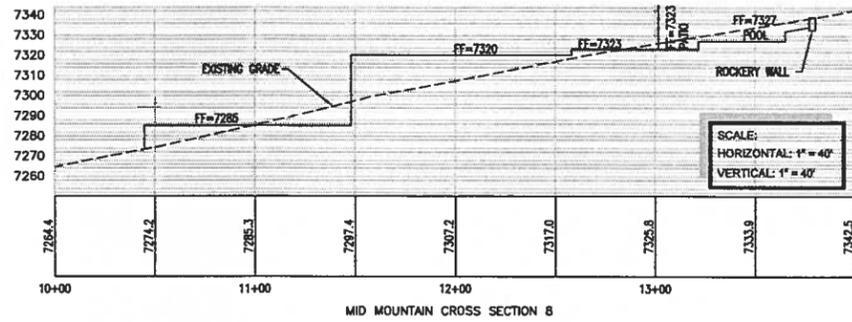
**Data Flag Legend:**

# **APPENDIX C**

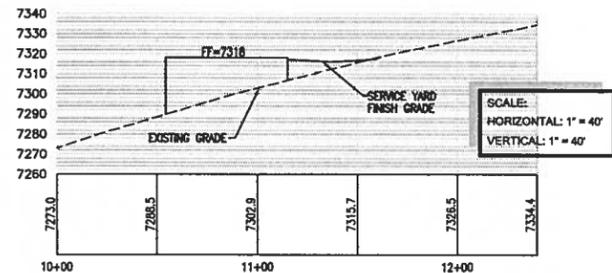
**Nichols Consulting Engineers  
Sheets C19, C20, and C21  
Building and Groundwater Sections**



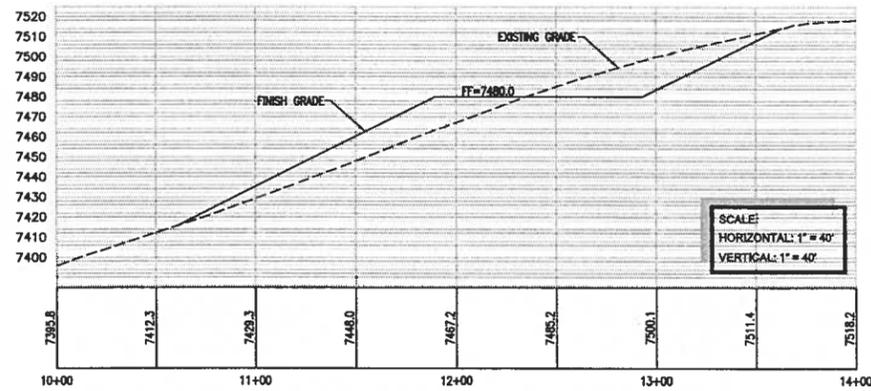




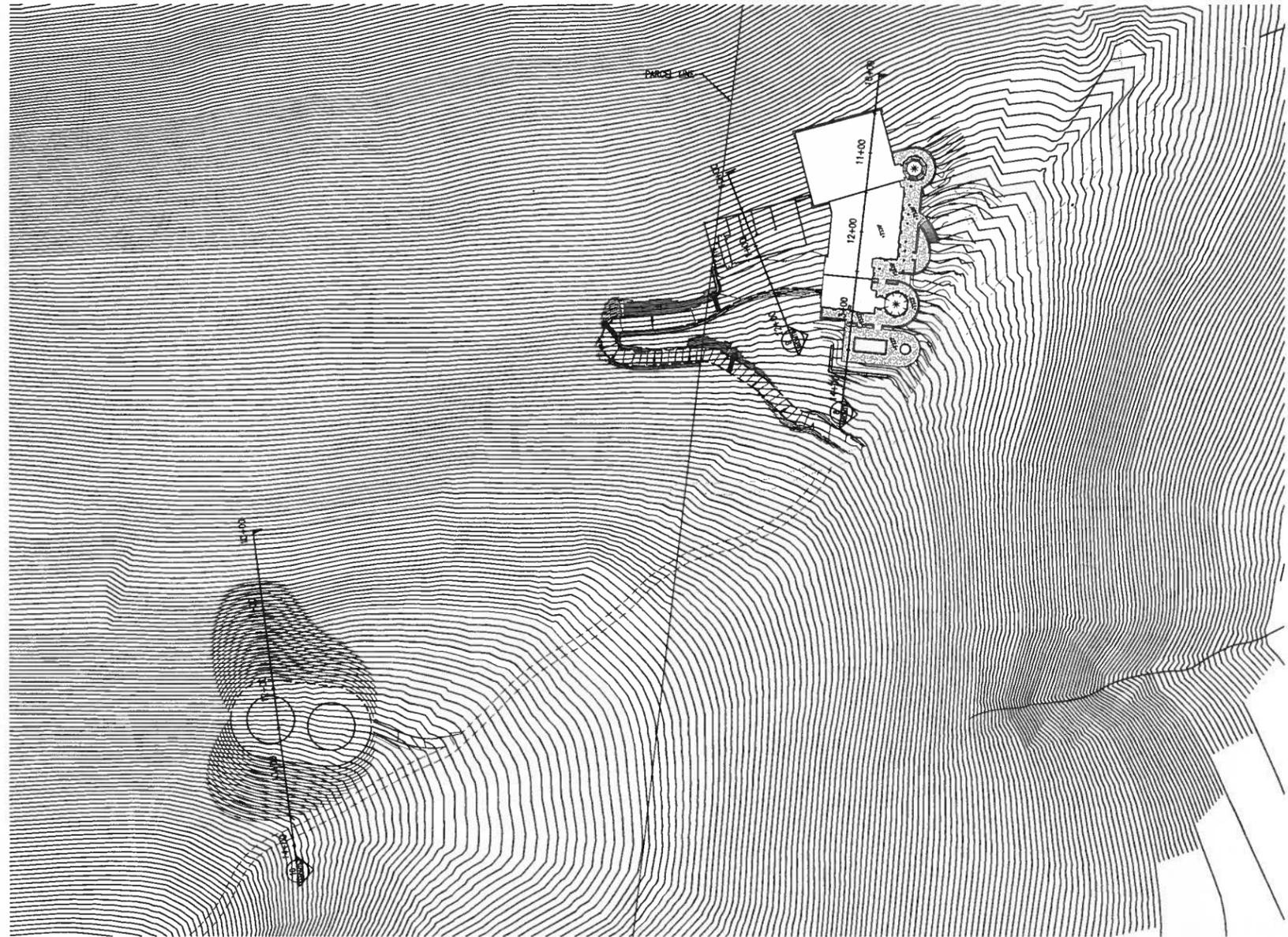
MID MOUNTAIN CROSS SECTION 8



MID MOUNTAIN CROSS SECTION 9

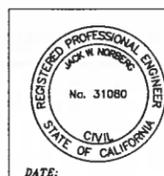


MID MOUNTAIN TANK CROSS SECTION 10



NOTE:  
GROUNDWATER NOT OBSERVED DURING GEOTECHNICAL  
EXPLORATION OF MID-MOUNTAIN AREA. (REFERENCE "GEOTECHNICAL  
ENGINEERING REPORT FOR MID-MOUNTAIN LODGE, HOMEWOOD MOUNTAIN  
RESORT" PREPARED BY HOLDREGE & KULL, JANUARY 12, 2010).

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HOMWOOD VILLAGE RESORTS, LLC

HOMWOOD VILLAGE RESORTS, LLC  
P.O. BOX 3938  
TRUCKEE, CALIFORNIA 96160

MID-MOUNTAIN  
BUILDING & GROUNDWATER  
SECTIONS

SHEET  
C21 OF 29

REVISIONS

No.	Date	CHK	APPD
1		CAC	
2		CAC	
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Engineering & Environmental Services  
1885 S. Arlington Ave., Suite #111  
Reno, NV 89509  
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Fax: (775) 328-5098

DESIGNED: CAC  
DRAWN: CAC  
CHECKED: CAC  
JOB No.: 4514.02.14  
SCALE: NTS  
DATE: 10/07/2010