Geologic Reconnaissance Study, 1,416.5-Acre Hoskings Ranch, Julian, San Diego County, California

Prepared for: Genesee Properties, Inc. 3550 General Atomics Court San Diego, CA 92121

Prepared by: AECOM 7807 Convoy Ct, Suite 200 San Diego, CA 92111

Project No.: 60144610

February 2011

February 1, 2011 60144610

Lettie Flower Genesee Properties, Inc. 3550 General Atomics Court San Diego, CA 92121

Subject: Geologic Reconnaissance Study, Hoskings Ranch, Julian, San Diego County, California.

Dear Lettie:

In accordance with your request, we have prepared this geologic reconnaissance report for Hoskings Ranch.

If you have any questions regarding this report please contact our office. Earth AECOM appreciates this opportunity to be all sovices.

No. 1480

Very truly yours,

AECOM, Inc.

Douglas F. Roff, CEG 1480

Senior Geologist

CERTIFIED *

Robert M. Schumann, PG 8354

Project Geologist

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1 PROJECT DESCRIPTION

AECOM conducted a geologic reconnaissance investigation of the 1,416.5-acre Hoskings Ranch at the request of Genesee Properties. The project proposes to subdivide the property into 28 lots with a minimum of 40 acres per lot to be used for agricultural / residential purposes. An alternative plan proposes 35 lots (called the consolidated alternative). The subject property is located adjacent to the Cleveland National Forest, near the town of Julian, in central San Diego County, California (Figure 1). The property is situated approximately one mile southwest of Julian, beginning at the intersection of Highway 78/79 and Pine Hills Road and extending southwest approximately 3 miles towards Daley Flat. Approximately 680 acres of the southern and western portions of the property are located in the Cleveland National Forest. Orinoco/Temescal Creek, which carries the runoff from Hoskings Ranch, passes through the site, flowing from east to west and ultimately drains into the San Diego River. The site comprises both moderately steep, rocky slopes and rolling hills vegetated with oak, sagebrush and grasses. Figure 2 is a topographic map of the area showing the location of the Hoskings Ranch property.

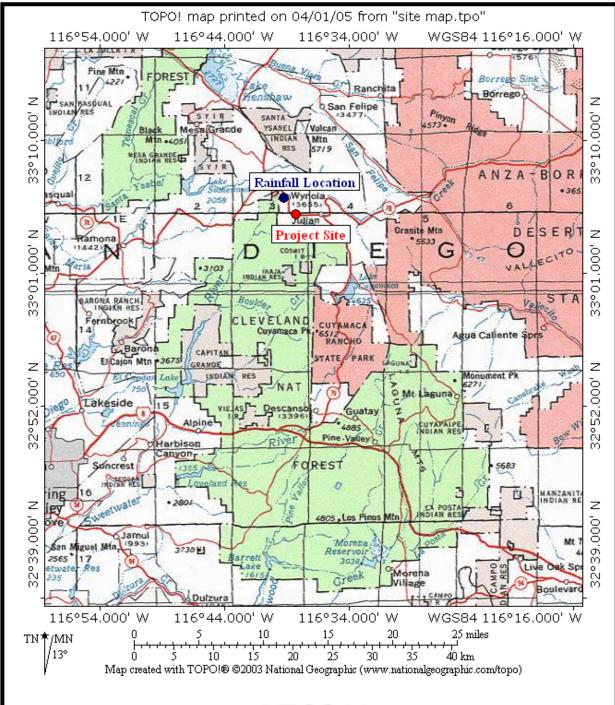
Surrounding properties are relatively undeveloped with a few widely-spaced single-family homes located on large parcels. Approximately 30 to 40 single-family homes are within ½ mile of the property. Most of those homes are located on 10-acre or greater lots. Some of these have orchards or cattle grazing on the property. Some of the nearby homes are on smaller lots and are part of a housing development to the southeast of the project site.

2 BACKGROUND

2.1 Purpose

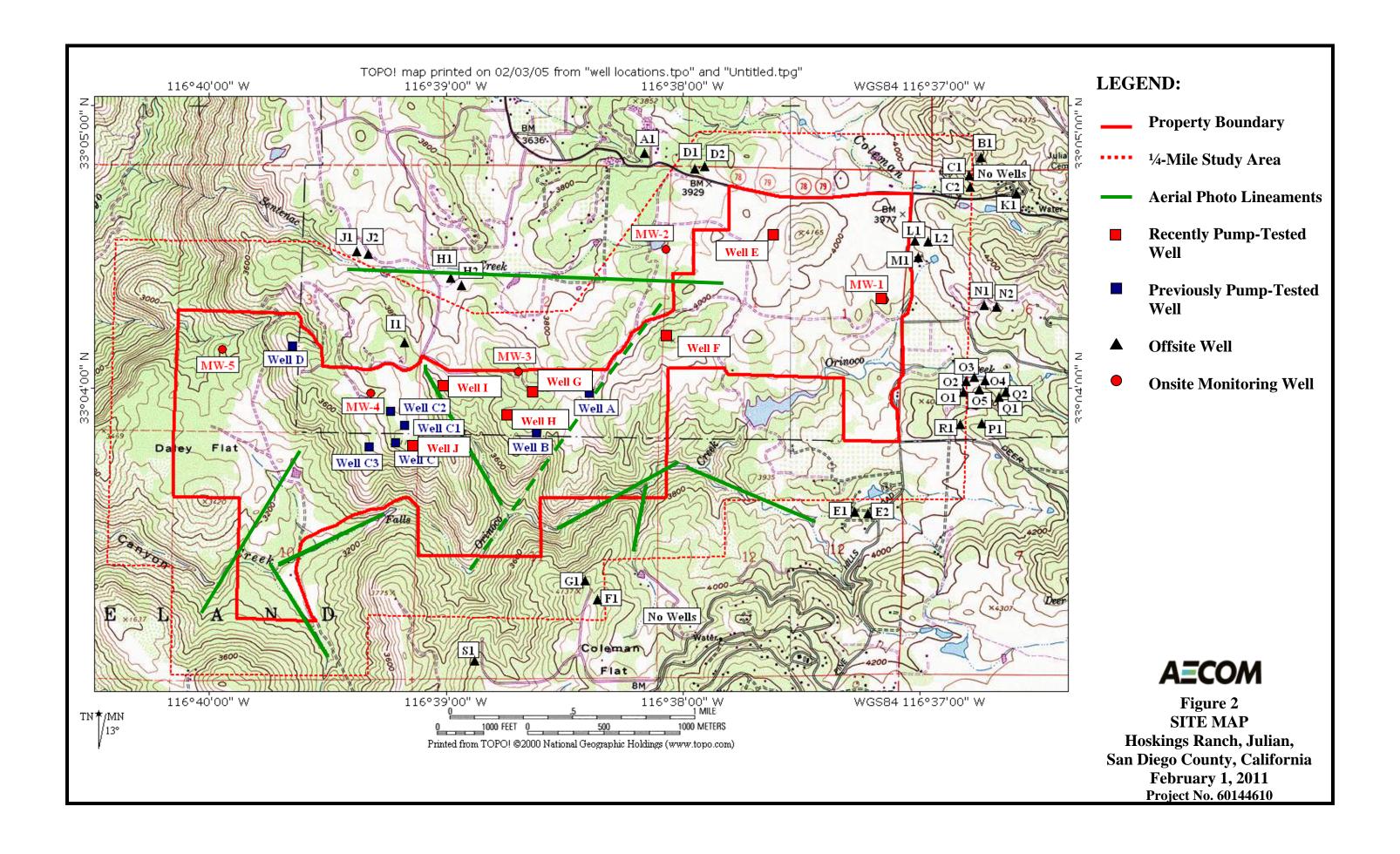
The purpose of this study was to identify the local and regional geology of the project site and to evaluate the following issues that were identified in the County's scoping letter dated June 11, 2003.

- Increases in erosion as a result of the proposed development;
- Impacts of proposed rock blasting in a seismically active zone;
- Compliance with the San Diego County Zoning and Land Use sections regarding drainage, planting, and excavation and grading; and
- Unique geologic outcroppings.



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Figure 1 VICINITY MAP Hoskings Ranch, Julian, San Diego County, California February 1, 2011 Project No. 69947



2.2 Scope of Services

The scope of services for the geologic reconnaissance investigation included the following:

- Discussions with a San Diego County Geologist to define the scope of this study;
- Site reconnaissance;
- Review of geologic maps and literature, topographic maps, and aerial photographs of the area;
- Geological evaluation; and
- Preparation of this report.

3 GEOLOGY

3.1 General

The 1,416.5-acre site is located in the Julian region of the Peninsular Ranges Province, a 300-mile long California geomorphic province with a long and active geologic history. This portion of the province lies near the geographic center of San Diego County and is predominantly composed of rocks of the Southern California Batholith. Figure 2 shows a small number of lineaments (potential fractures) within the project site. Three predominant rock types underlie the site. The first is the pre-Cretaceous metasedimentary Julian Schist, which is an interbedded quartz-mica schist and quartzite, local amphibolite schist and quartz-biotite gneiss. The second and most predominant rock type is a combination of pre-Cenozoic rocks consisting of strongly foliated migmatites, which is a mixture of igneous and metamorphic rocks. The metamorphic component is the Julian Schist and the igneous component is the Stonewall quartz diorite. The third rock type is a Mesozoic basic intrusive rock called the San Marcos Gabbro, which is a highly variable assemblage of rocks that weathers to deep reddish-brown residual clay (California Division of Mines and Geology 1992). Granitic rocks typically have a mantle of highly weathered rock known as residuum or "decomposed granite". Residuum is formed from the in-place chemical weathering of rock and can vary from non-existent on steep mountainsides to several tens of feet thick in the gentler terrain. According to driller's logs for the onsite wells, up to 50 feet of residuum overlie the fractured bedrock in some areas. In other places fresh bedrock extends to the surface with no residuum overburden. Differential weathering of bedrock due to non-uniform fracturing and differences in mineralogy produces an undulating contact at varying depths between the unweathered bedrock and residuum.

On-site elevations range from approximately 3,100 to 4,200 feet above mean sea level (msl) with gradients ranging from nearly level pasture areas along the northeastern portion of the property to steep cliffs along the southwestern side of the property. Residuum, organic-rich topsoil, and minor amounts of alluvium, (which were derived by weathering and erosion of bed rock, exist in the on-site drainages) are found on site.

3.2 Hydrogeology

Thirteen new onsite wells have been drilled as part of the hydrogeologic investigation. Driller logs indicate that eleven of the wells were capable of producing from 3 to 130 gallons per minute (gpm) while the other two wells were not capable of producing the required 3 gpm. Since groundwater levels in upland areas are deeper than the alluvium and/or residuum contact with bedrock, fractured bedrock represents the significant water-bearing unit throughout the basin. Various fractures within this aquifer may be only partially interconnected, thereby restricting the hydraulic connection and groundwater flow. A review of aerial photographs indicates a few lineaments (potential fault and/or fracture zones) within and around the property. These lineaments are centrally located and likely result from faulting along the Elsinore fault zone located approximately three miles to the east. A review of driller's logs for this area indicates the presence of fractured and/or weathered zones occurring at various depths in each well. Some wells have as many as 4 to 5 zones in each well, with individual zones averaging one to two feet thick. Because water can only occupy the fractures in the unweathered rock, specific yields (essentially equivalent to the interconnected [or effective] porosity) in this rock are generally lower than in residuum and alluvium. Onsite wells range from 271 to 851 feet deep and are completed in fractured bedrock. Available driller's logs are provided in Appendix A. Refer to the Hydrogeologic Investigation (AECOM 2010) for additional groundwater information.

3.3 Soils

According to the driller's logs for the new wells, the near surface geology primarily consists of decomposed granite. In many areas bedrock is exposed at the surface. Elsewhere the decomposed granite has a thin mantle of topsoil and/or fill. One of the logs reported 8 feet of clay overlying the decomposed granite. Based on the San Diego Area Soil Survey (United States Department of Agriculture 1973), soils series that make up the majority of the site are classified as follows:

• The Sheephead series, which consists of well-drained, shallow fine sandy loams that formed in material weathered from micaceous schist and gneiss. These soils comprise the surface soils in the steeper areas throughout much of the western and central part of

the site. These soils occur in mountainous areas with 30 to 65 percent slopes. Typically, rock outcrops cover about 10 percent of the area. The erosion hazard for these soils is high to very high with moderate sheet erosion potential.

- The Holland series, which consists of well-drained, moderately deep and deep fine sandy loams that formed in material weathered from micaceous schist. These soils are on mountainous uplands with slopes ranging from 5 to 60 percent and comprise the surface soils primarily in the central part of the project site. The erosion hazard for these soils ranges from slight to very high.
- The Crouch series, which consists of well-drained, deep to moderately deep coarse sandy loams that formed in material weathered from acid igneous rock and micaceous schist. These soils comprise the eastern portion of the project site. These slopes are in mountainous uplands and have slopes of 5 to 70 percent. The erosion hazard for these soils range from moderate to very high.

The principal soil types of the subject site with their respective slopes and erosion potential are noted in Table 1. Minor amounts of other soil types are not listed on these tables. The project will not cause a significant loss of topsoil because of careful design measures (see Section 4.0).

Table 1. Dominant Soil Types

Name	Slopes (percentage)	Erosion Potential	Approximate Area within 1,416.5-Acre Site (acres)				
Sheephead Rocky Fine Sandy Loam	30 – 65	High to Very High	400				
Holland Stony Fine Sandy Loam	5 – 60	Moderate to Very High	300				
Crouch Coarse Sandy Loam	30 – 50	High	300				
Holland Fine Sandy Loam	5 – 15	Slight to Moderate	200				
Crouch Rocky Coarse Sandy Loam	5 – 70	High to Very High	150				
Total	1,350						

3.4 Unique Geology

According to the County Guidelines¹, a geologic feature would be considered unique if it will materially impair a unique feature by destroying or altering those physical characteristics that

¹ County of San Diego, 2007b.

convey the uniqueness of the resource. A geologic feature is unique if it meets one of the following criteria:

- Is the best example of its kind locally or regionally;
- Embodies the distinctive characteristics of a geologic principle that is exclusive locally or regionally;
- Provides a key piece of geologic information important in geology or geologic history;
- Is a "type locality" of a geologic feature;
- Is a geologic formation that is exclusive locally or regionally;
- Contains a mineral that is not known to occur elsewhere in the County; or
- Is used repeatedly as a teaching tool.

Field investigations and a review of aerial photographs indicate that there no locations on the Hoskings Ranch property that could be categorized as unique rock outcrops since they do not match the criteria outlined above.. Although there are rock formations and geologic structures that are exposed in the Julian area that are both distinctive and interesting, they are not found within the proposed project boundaries and will therefore not be impacted by the proposed development.

3.5 Landslides

"The term landslide includes a wide range of ground movement, such as rock falls, deep-seated failure of slopes, and shallow debris flow." There are several factors that contribute to landslides including, in part, over-steepened slopes, stream erosion, rock and soil slopes weakened through saturation, and seismic ground shaking greater than a magnitude 4.0. According to the U.S. Geological Survey (USGS), areas that will likely experience landslides are composed of very weak or fractured materials resting on a steep slope. According to the County Guidelines, landslides would be considered a significant impact to the project if any of the following criteria are met.

- The project site would expose people or structures to substantial adverse effects, including the risk of loss, injury, or death involving landslides.
- The project is located on a geologic unit or soil that is unstable, or would become unstable as a result of the project, potentially resulting in an on- or off-site landslide.
- The project site lies directly below or on a known area subject to rockfall which could result in collapse of structures.

In addition, areas that are typically considered safe from landslides are located:

- On hard, non-jointed bedrock that has not moved in the past.
- On relatively flat-lying areas away from sudden changes in slope angle.
- At the top or along the nose of ridges, set back from the tops of slopes.

Although much of the bedrock is jointed, it does not significantly increase instability as evidenced by the stability against mass wasting in the very steep slopes along the main drainage adjacent to the southern portion of the property. A review of landslide maps from the County of San Diego in addition to the fact that the property is largely underlain by metamorphic and igneous rock (which is hard and does not readily slide), suggests that the project site is not located in an area of significant landslide danger. Although soil types indicate high soil erosion potential and some rock falls were evident on site, the soil profiles are relatively shallow and there are no deep-seated landslides mapped in this area. Significant slides are unlikely and landslides should not be a constraint on project development. Although there is a risk from "pop-outs" (jointed

² From USGS, 2004.

³ County of San Diego, 2007a.

pieces of bedrock which may become dislodged due to gravity, seismic shaking, or heavy run-off) in areas with steep slopes, the areas most likely to be affected are uninhabited canyons and are not areas of proposed project build out. Based on our review, the project is not anticipated to violate any of the above criteria, which are detailed in the County's Guidelines.

3.6 Faulting

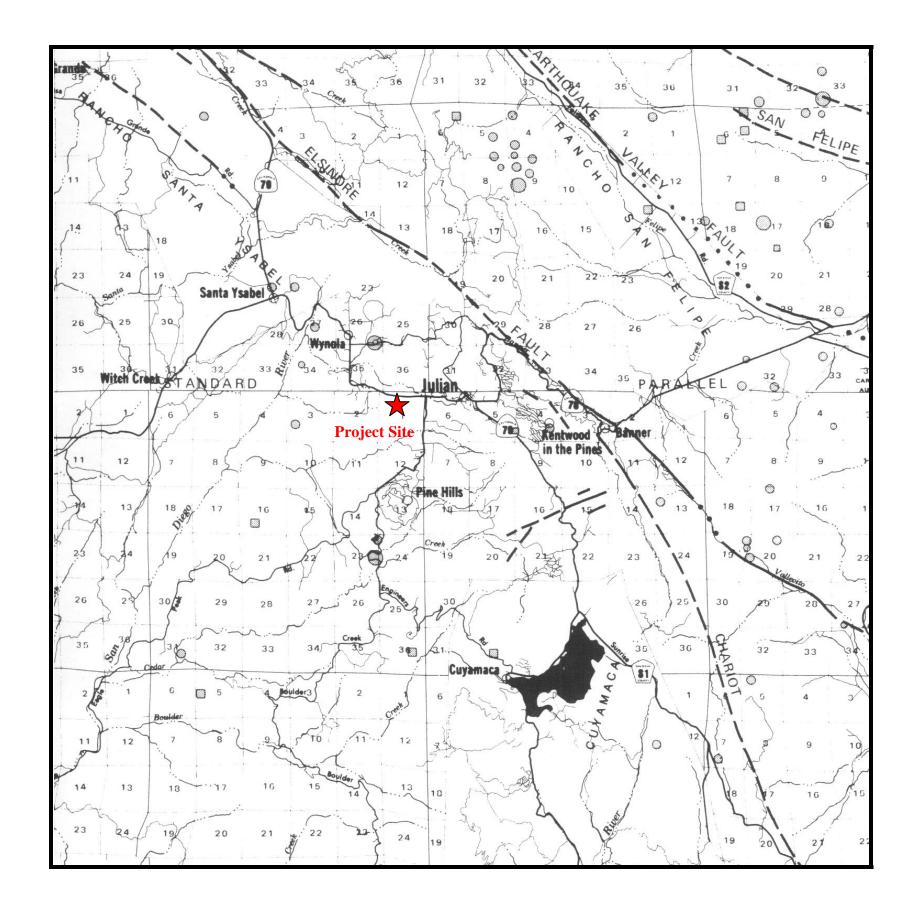
Regional Faulting

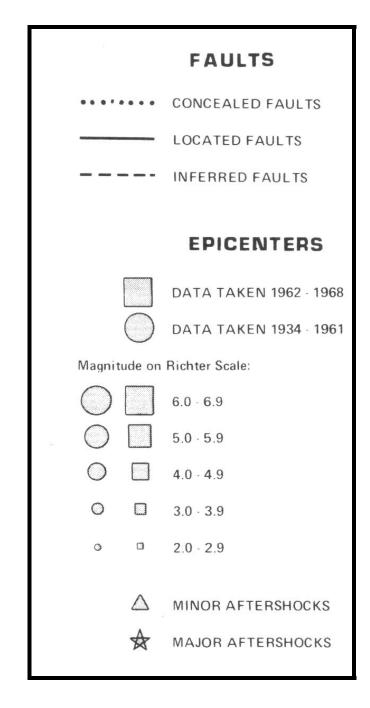
The San Diego area lies within a region that is traversed by several major active faults. These faults generally trend northwesterly and are associated with the contact between the North American and Pacific tectonic plates. The major tectonic activity appears to be a result of the right lateral movement on faults associated with the San Andreas Fault system. Faults and epicenters located in and around the Julian area are provided on Figure 3.

Local Faulting

The project site is located approximately three miles west of the Elsinore Fault zone, which is one of the largest in southern California but historically one of the quietest. The Elsinore Fault zone passes through the Julian area in Banner Canyon. Like the San Andreas Fault, the Elsinore Fault is a right-lateral strike-slip fault. It measures approximately 110 miles long (Jennings 1994). The last major event of the Elsinore Fault occurred in 1910 about 15 miles south of Riverside and measured a magnitude 6 (Townley 1939). No other earthquakes as large as or greater than magnitude 6 have been recorded along the Elsinore Fault. In order to mitigate the hazard of surface faulting to structures for human occupancy, the Alquist-Priolo Earthquake Fault Zoning Act was passed in 1972. Since that time, the State of California began delineating Special Studies Zones around active and potentially active faults in the State. These zones extend approximately 660 feet on either side of identified faults (University of California 2002). The Act's main purpose is to prevent the construction of buildings used for human occupancy on the surface trace of active faults. Based upon the criteria set forth by the California Geological Survey⁴, the Elsinore Fault is classified as active or potentially active, which is defined as having ruptured within the past 11,000 years (California Geological Survey 2003). Since the project site is

⁴ Formerly California Division of Mines and Geology





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Figure 3
FAULTS AND EPICENTERS
Hoskings Ranch, Julian, San Diego County,
California
February 1, 2011
Project No. 69947

outside of the Special Study Area, seismicity should not be considered a significant constraint to the proposed development. However, as is the case for developments throughout southern California, structures should be designed with seismic safety in mind.

Blasting

As a component of the Hoskings Ranch development, blasting will likely be required to open new areas for onsite roads and other construction. Although vibrations from surface blasting do occur and can sometimes resemble "mini-earthquakes", few dwellings are located around the project area. In addition, since earthquakes originate several kilometers beneath the surface, and construction blasting typically only affects the upper few hundred feet, blasting is not believed to cause earthquakes (USGS and SCEC 1999). Activities such as construction, mining, and blasting to open new areas of development are daily occurrences throughout southern California and none have caused earthquakes. Likewise, the blasting proposed for this project is not expected to produce seismic shaking.

3.7 Ground Shaking

Ground shaking is the earthquake effect that results in the vast majority of damage. Several factors control how ground motion interacts with structures, making the hazard of ground shaking difficult to predict. Seismic waves propagating through the earth's crust are responsible for the ground vibrations normally felt during an earthquake. Seismic waves can vibrate in any direction and at different frequencies, depending on the frequency content of the earthquake, its rupture mechanism, the distance from the earthquake source, or epicenter, to an affected site, and the path and material through which the waves are moving. All of San Diego County is located within Seismic Zone 4 (Sec. 1629.4.1 of the CBC), which is the highest Seismic Zone, and like most of Southern California, is subject to ground shaking. The subject property is located within the 10 km buffer zone of the Elsinore fault zone and hazards associated with ground shaking are mitigated through following the Universal Building Codes Seismic Hazards Standards for construction within a County Near-Source Seismic Shaking zone.

3.8 Liquefaction

Liquefaction occurs primarily in saturated, loose, fine to medium-grained soils in areas where the groundwater table is generally 50-feet or less below the surface. When these sediments are shaken during an earthquake, a sudden increase in pore water pressure causes the soils to lose strength and behave as a liquid. According to the County Geologic Hazards Guidelines (2007) liquefaction is not known to have occurred in San Diego County. Since the project site is located

outside of the County's mapped potential liquefaction areas and the soil types on site (as shown on Table 1 in Section 3.4) are not consistent with potentially liquefiable soils., liquefaction should not be considered a significant constraint to the proposed development.

3.9 Expansive Soil

Certain types of clay soils expand when they are saturated and shrink when dried. These are called expansive soils, and can pose a threat to the integrity of improvements that are built on them without proper engineering. The project site is not underlain by clay soils and is not considered a significant constraint to the proposed development.

4 DRAINAGE⁵

The drainage shed is approximately 9.6 square miles and divided into 12 major drainage basins [A through L] (Appendix B). Orinoco/Temescal Creek, which carries the runoff from Hoskings Ranch, passes through the site, flowing from east to west and ultimately drains into the San Diego River west of the project site. According to the Preliminary Drainage Study and the Stormwater Management Plan prepared for the Hoskings Ranch property (Masson 2003), overall existing drainage patterns and natural drainage basins will be maintained with this project and there will be no increase in peak runoff from the site. The existing topography of much of the site will remain undisturbed while proposed roads and building sites have been designed to follow the existing terrain to minimize cuts and fills. The impermeable surfaces on proposed roads and building sites will be offset by the increased time in concentration for runoff on the flatter surfaces. In other words, the increase in water flow, which normally results from development (i.e., an increased runoff coefficient), will be offset by the decreased velocity that results from the flatter surfaces such as roadways and building pads. In addition, since drainage basins are relatively large compared with the size of the proposed roadways, the percent of impermeable surfaces for pre- and post-project conditions varies only slightly. Refer to the Preliminary Drainage Study prepared by Masson & Associates (2003) for further information.

4.1 Erosion Prevention

Several factors contribute to soil erosion including, among others, increased flow velocities and a decrease in vegetal cover. Increased water velocities, resulting from a change in the runoff coefficient, often result from increasing the amount of paved surfaces on a project site. In order to prevent downstream erosion, natural onsite discharge locations will be maintained and energy

⁵ Drainage information was obtained from the Stormwater Management Plan and the Preliminary Drainage Study for the Hoskings Ranch property, which was prepared by Masson & Associates, 2003.

dissipaters will be utilized at outfall locations to reduce flow velocities in addition to limiting the amount of paved surfaces on the project site. Slopes and open areas will be permanently stabilized with landscaping to reduce sediment discharge. In addition, temporary best management practices (e.g., fiber rolls) will be utilized throughout construction to control sediment discharge. For these reasons, there is not expected to be a significant increase in erosion due to the project. A more detailed description of best management practices proposed to reduce sediment contamination is provided in the Stormwater Management Plan for Hoskings Ranch (Masson 2003).

5 CONCLUSIONS AND RECOMMENDATIONS

Based on the results of our preliminary study, we provide the following conclusions and recommendations:

- Field investigations and a review of aerial photographs indicate that there are several locations on the Hoskings Ranch property that could be categorized as culturally significant rock outcrops since they may be the best example of its kind locally and are specific to the Julian area, although not necessarily specific to the project site. In order to maintain the geologic character of the Julian community, selected major rock outcroppings on the project site should be left intact to the maximum extent practicable.
- Since the project roads and proposed building locations have been designed to follow the existing terrain and avoid culturally significant rock outcrops as much as possible, the project will not have a significant impact on unique geologic features in the area.
- The site is underlain by gabbroic, granitic, and metasedimentary rock and mantled by small amounts of residuum. The majority of groundwater is located in fractures within unweathered bedrock at depths ranging from 50 to over 200 feet below ground surface.
- Much of the project site has slopes greater than 30 percent and high erosion potential.
 However, since soil profiles are relatively shallow and there are no deep-seated landslides mapped in this area, significant sliding or slumping is unlikely.
- The project is not anticipated to violate any of the criteria for determining significance of landslides as detailed in the County Guidelines for Determining Significance, Geologic Hazards.
- Since the project site is largely underlain by hard bedrock, and groundwater is generally greater than 50 feet below ground surface, it is typically considered safe from landslides,

liquefaction, and expansive soils. However, localized areas of adverse jointing may cause "pop-outs". These should be evaluated by the geotechnical engineer and engineering geologist during site development.

- Although there is a risk from "pop-outs" in areas with steep slopes, the areas most likely to be affected are uninhabited canyons.
- The project site is located about three miles west of the Elsinore Fault zone, a right-lateral strike-slip fault that measures 110 miles long. The last major event occurred in 1910.
 Ground shaking from the Elsinore Fault is not considered a constraint to the proposed development, but design for seismic shaking should be included.
- Since few dwellings are located around the project area, vibrations resulting from surface blasting should not be a constraint on proposed development. Additionally, because earthquakes originate several kilometers beneath the surface and blasting only affects the upper few hundred feet, blasting does not cause earthquakes.
- The drainage shed is approximately 9.6 square miles and divided into 12 major drainage basins with minimal impervious surfaces. Overall existing drainage patterns and natural drainage basins will be maintained with this project and there will be no increase in peak runoff from the site.
- Best management practices detailed in the Stormwater Management Plan for Hoskings Ranch will be implemented to reduce or eliminate sediment contamination.

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PER 23 -		BORING 331	(Fect)		* May not be repr	esentative of a well's lon	g-term yield
	STATE OF THE STATE OF THE STATE		o propagation (C	ASING (S)		DEPTH FROM SURFACE	ANNULAR MATERIA TYPE CE 688 FILTER
	DEPTH FROM SURFACE	BORE TYPE()	MATERIAL / GRADE	DIAMETER . OF	AUGE SLOT SIZE (WALL IF ANY (Inches)	FL to Fla	MENT TOWNE FILL (TYPE
	0 20	₹ 3° × X	Steel	B.249 -1	88 160 1/8"	0 20 ³	XXX Type
	331	6.5" X X	PVC liner				
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	man of the second	ACHMENTS (×)	I the un	dersigned, certify	that this report is compl	ete and accurate to th	T e best of myknowledge and b
	Go	ologic Log II Construction Diagram	第二十八年 中国共主义人共产党	· YUME: DI	11ing Co. I		
	Ge	ophysical Log(s). Wygrer Chemical Analyses	748	1 (-	DIM ABOL	d	11/10/35/268
	ATTACH ADDITION	here:	EXISTS. Signed	J. UCHRED WATER	NEXT CONSECUTIVE	NUMBERED FOR	DATE SIGNED
	- 100 DOWN INC	48	ADDITIONAL SPACE	- 12 MEEDED! O			

DUPLICATE Driller's Copy	R	STATE OF CAL	IFORNIA	DWR I	USE ONLY	O NOT FILL IN
Faget of 1		ELL COMPLET Refer to Instruction	n Pamphlet		STATE WELL NO/S	TATION NO
Owner's Well No Date Work Began 1	(this parcel) No. 09	03932	LATITU	1 1 1	क्षा । वर्ष
Local Permit Agen	cy San Diego Co.]	ept. of Environs	ental Health			LONGITUDE
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Section 18 Control of the Control of	ight brown Decom eathered Granife	osed Granite	County San Die	30	4.5	
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Well Construction		Acme Drilling Co		en e		
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ATTACH ADDITIONAL INFORM		CSTUCENSES WATER WELL CHIRA	****		SIGNED :	C-57 LICENSE NUMBER
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Page / of /				WELL		Instruction				STATE	WELL N	O./STA	TION NO.	
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Date Work Began_	-3/26/0	<i>74</i>		, Ended	16/04				LATITUE	E			LONGITUDE	
Local Permit Age		Sar	r Dis				ntal Health —	_		1 1	APN/TBS	/OTHE	B A A A A	
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12 17	Medium	har		composed Gran	ite		County Son	Diego	Ŋ.	4	1			
17 78 *	Weather	ed.	GACT	ite			APN Book 292		e_/ <i>8</i> 0	Parc	26,	04_		
 78 82 	Fractur	e i	n ob	ove ut braker	kock if	1	Township 1/3	Rar	ığe _ 3	Secti		2		
82 /68 3 4	GREU GA	A.				/	1/-/7	MIN,	SEC.	Long) DE	G.	MIN SEC	
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							Illustrate or Describe Fences, Rivers, etc., an	Distance of	Well from Roa	ds, Buil onal va	dings,		REMEDIATION: OTHER (SPECIFY)	
					<u> </u>		necessary. PLEASE BE ACCURATE & COMPLETE.							
	1, 4, 5, 1,						WATER LEVEL & YIELD OF COMPLETED WELL							
				· · · · · · · · · · · · · · · · · · ·			DEPTH TO FIRST WATER 78-60 (FL) BELOW SURFACE							
							WATER LEVEL							
TOTAL DEPTH OF BO	DRING 2	2//		Feet)			ESTIMATED YIELD						ft.	
TOTAL DEPTH OF CO					1. 1.4		TEST LENGTH	(Hrs.) esentative	of a well's lon	g-terni	yield.	- (Er)		
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	DIA. (Inches)	SCHEEN	DUCTOR FILE PIPE	MATERIAL / GRADE	INTERNAL DIAMETER	GAUGE OF WALL	SLOT SIZE	 		CE- MENT	BEN- TONITE		FILTER PACK	
Ft. to Ft.		క్ర	88 =	' Grabe	(Inches)	THICKNES	S (Inches)	Ft.	to Ft.	¥	(∠)	(<u>∠</u>)	(TYPE/SIZE)	
0 20	13" X			Steel	8.249	./88		0_	20	XXXX			Type I-II	
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Geologic Lo	T		· ·	A	lome Dril					-71. 7 1			, sonoi.	
	(PERSON, FIRM, OR CORPORATION)								<u></u>		8 *.			
	i Log(s) Chemical Ana	lyses			Vinewood	l Street-	Suite B- Esc	ondido,	La. 921	129-1	929	· .		
Other				ADDRESS (100	+ 4	11. 11. 116	1 60	CITY	Link		STATE	ZIP	
ATTACH ADDITIONAL INFO	ORMATION, I	FIT	EXISTS	Signed C-57	LIGENSED WATE	R WELL CONTR.	ACTOR	سهر	ام DATI	SIGNED	H	_52 <u>/</u>	-57 LICENSE NUMBER	

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ORIGINAL File with DWR					1	WELL CO	TATE OF	ETIO	1	v repo	RT		DWR USF	ONLY L TE WELL		1 1	
Page _1_of _1_						-	er to Instr	$\bigcap_{i\in I(0)} \bigcap_{j\in I} C_j$	·m	3937			1 , 1		Γ_{T}	1	
Owner's Well No.	1_ (t	hi	ş-j	paı	EG.	(1) 10/0/	/O2	UJU	•)) 			LAYITUDE			LONG	ITUDE
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DEPTH FROM SURFACE			.,	Ι	E	CRIPTION	ulor ate	- 1	San Diego, Ca. 92121-1194								
Ft. to Ft.				_		al, grain size, co			Address Daley Flat Well, LOCATION Address Daley Flat Road								
0 11						<u>ed Granite</u>		-	City Julian, Ca.								
11 16	Brown	Le	CO	npc	عجر	<u>ed Cranite</u> d Cranite			County San Diego								
16 48	Grey Decomposed Granite Hard, salt & pepper Granite w/								A	PN Book 2	<u>89 </u>	_ Page _	<u>030</u> i	arcel_	_07	- —	·
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	! !	_							DEPTH TO FIRST WATER 48 (Ft.) BELOW SURFACE								
	·							· ·	DEPTH OF STATIC 501 12/2/2003								
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		=0	1						1	TEST LENGTH	fm	(Hrs.)	TOTAL DRAW	DOWN_		(FL)	
TOTAL DEPTH OF	BORING 2	<u> </u>	ل احتدا		۴e) ار					* May not be	repre	entative (of a well's los	ıg-terni	yield.		
TOTAL DEPTH OF	COMPLETE	עוג	**E		_				-		_			Т		JLAR	MATERIAL
DEPTH	BORE-					C/	SING (S)						EPTH SURFACE			ΤY	
FROM SURFACE	HOLE	ĵ	YPE	<u>(</u>	끪	MATERIAL /	INTERNAL	GAUG		SLOT SIZ				CE- MENT	BEN- TONITE	FILL	FILTER PACK
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Ft. to FL	<u> </u>		8	"리				.188			\dashv	0	20	XXXX			Type I-I]
0 20	13"	X	\vdash	-+	\dashv		8.249	*100			$\neg \neg$						
0 591	6,250	-	-	-+	\dashv	<u>Open hole</u>	-							<u> </u>	<u> </u>	<u> </u>	
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	onstruction D	jagr	êM			NAME AC	ON, FIRM, OR	CORPORATION	É.	CO. INC.	ED)	, <u></u> .					
Geoph	ysical Log(s)					748 9	s. Vine	Moog	S	street-Si	<u> </u>	9 18- I	scondi	do, (a	<u>9202</u>	<u>9-1929</u>
Soil/W	ater Chemica	i An	alyse	5		ADDRESS		1	٠,	1/20	1		CITY	12/3	/03	52	6886
Other						Signed((n		4	TRACTOR		<u> </u>		ATE SIGNI			C-57 LICENSE NUMBER
ATTACH ADDITIONA	L INFORMATI	ΟŅ.	IF []	EXI	5./8	, 11 - C-C2	HCENSED WA	FR WELL CO	/NI	A PURELLIN	river '	V NUMBE	RED FORM				1 E0 12O
			1	⊏ ΔΓ	nnt	TIONAL SPACE I	S NEEDED	, USE N	الت				=				

ORIGINAL STATE OF CAL File with DWR WELL COMPLET	FORNIA DWR USE ONLY — DO NOT FILL IN —						
Page of Refer to Instruction	Pamphlet STATE WELL NO./STATION NO.						
Owner's Well No. #4 Lot 10 WELLE	43631						
Date Work Began 1112 10 Ended 11 15 10	LATITUDE LONGITUDE						
Permit No. LUEL 20719 Permit Date 1014	APN/TRS/OTHER						
Permit No. LUEL 20719 Permit Date 10 14	WELL OWNER						
ORIENTATION () X_ VERTICAL HORIZONTAL ANGLE (SPECIF							
DEPTH FROM DEPTH FROM METHOD Are Robert FLUID	Mailing Address. P.O. Res 13						
SURFACE Ft. to Ft. DESCRIPTION Describe material, grain size, color, etc.	CITY STATE ZIP						
0:55 Brown D.G.	Address Sw come of the 71 Pin Hill RJ						
55 150 BIW Gail, ON	16im Jalian CA 192036						
150 160 Slighty Fractural Bild Granita	County San Diego Cons						
160 170 BILL GROW	APN Book 289 Page 060 Parcel 34						
170 175 Shatty Fractural Brid Grante	Township 135 Range 2E Section 1 Eat 33 104 29 N Long 116 37 35 W						
Wake: 15 GRM Total	DEG. MIN. SEC. DEG. MIN. SEC.						
175 200 Bru Granish	LOCATION SKETCH ACTIVITY (\(\times\))						
200 200 Factured By W Granite	MODIFICATION/REPAIR						
260 285 BW Garit 80 GRM Tob)	Hwy 79 Deepen Other (Specify)						
285 318 Facher B. Gant	2 1 DESTROY COUNTY						
	DESTROY (Describe Procedures and Materials Under "GEOLOGIC LOG") USES (\(\sigma \) WATER SUPPLY Describe Procedures and Materials Under "GEOLOGIC LOG") OF WATER SUPPLY Demostic Public						
	J 8 USES (∠)						
	Irrigation Industrial Monitoring —						
1 1	MONITORING						
	CATHODIC PROTECTION						
	HEAT EXCHANGE DIRECT PUSH						
1 1	INJECTION						
	Oringes Or VAPOR EXTRACTION						
	SPARGING SOUTH REMEDIATION						
	Illustrate or Describe Distance of Well from Roads, Buildings, Fences, Rivers, etc. and attach a map. Use additional paper if necessary. PLEASE BE ACCURATE & COMPLETE.						
	WATER LEVEL & YIELD OF COMPLETED WELL						
	DEPTH TO FIRST WATER						
	DEPTH OF STATIC 1-3						
	ESTIMATED VIELD 80 (GPM) & TEST TYPE AIT LIFT						
TOTAL DEPTH OF BORING 310 (Feet)	TEST LENGTH (Hrs.) TOTAL DRAWDOWN (Ft.)						
TOTAL DEPTH OF COMPLETED WELL _316(Feet)	* May not be representative of a well's long-term yield.						
DEPTH ROPE CASING (S)	DEPTH ANNULAR MATERIAL						
FROM SURFACE BORE- TYPE (DIA. Z Z M MATERIAL INTERNAL GAU	FROM SURFACE TYPE						
(Inches) 본 교 GRADE DIAMETER OR W	ALL IF ANY MENT TONITE FILL FILTER PACK						
	(z)(z)(z)						
0 60 12 V Steel 8 ,188							
	-22 60 V						
ATTACHMENTS (±)	CENTRAL CONTRACTOR CON						
I the undersigned certify that	CERTIFICATION STATEMENT this report is complete and accurate to the best of my knowledge and belief.						
decloyic Log							
Geophysical Log(s) (PERSON, FIRM, OR CORPORATIO	(TYPED OR PRINTED)						
Soil/Water Chemical Analyses \ \ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \	Jally Rd Valley Centy CA 92082						
Other ADDRESS P Str	CITY) 11/30/10 STATE ZIP						
ATTACH ADDITIONAL INFORMATION, IF IT EXISTS. Signed C-57 LICENSED WATER WELL CO	11/30/10 70/866 DATE SIGNED C-57 LICENSE NUMBER						

ORIGINAL File with DWR	,		F CALIFO		DWR US	— DWR USE ONLY — DO NOT FILL IN —					
Page of		WELL COMP. Refer to In		ON REPORT	STATE WELL NO./STATION NO.						
Owner's Well No.	#3 Let 26			13629			1 1	1 1 1			
Date Work Began		nded 11/10/10		10020	LATITUDE	 E	LONG	GITUDE			
Local Permit Age	ency San Die	naca				1 1 1 1	1 1	1 1 1 1			
Permit No L	UEL 20720		10/14/	ID		APN/TRS	OTHER				
Termit ivo.	GEOLOGIC L		1. 11		WELL O	OWNER -					
ORIENTATION (∠)	/	ZONTAL ANGLE	(SDECIEV)	Name Genes		perte	< . T	nc.			
	DRILLING A . DI	OVY FLUID	(SPECIFT)	Mailing Address	OBOX	63	_ -				
DEPTH FROM SURFACE		SCRIPTION	710	Ber-thoud		0	.0 <	80513			
Ft. to Ft.	Describe materia	ıl, grain size, color, etc	111. 12		V		STATE	ZIP			
0 33	Brown Di		5)	Address Daley Flat Rd.							
32 34		B+W Granife	es)\	Gir Tulian							
34 37	Brown D.G	. 0		County San Diego							
37 320	B+W Granit		1	APN Book 289 Page OG2 Parcel OG							
320 355	B+W Grani			Township 135 Range 3E Section 1							
355 365	Fractured BH		V.	Bat 33 104 10 N Long 116 38 105							
61 - 275	Water: 10		NE		SEC. ION SKETCH -	DE		N. SEC. IVITY (∠) —			
365 375	Btw Granit	8	3/1/2		NORTH -		. /	W WELL			
315 407	Fractived B	+W Granite	<i>yy</i> *	1			MODIFICA	ATION/REPAIR			
407 410		OGPM Total			79			Deepen Other (Specify)			
701 110	BHW Grani	ITES -		I helenson of High	NUSO J						
1	Y \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	(5)		Hostins Road High				STROY (Describe sedures and Materials			
1	1 and			pr. 5 mi			Unde	er "GEOLOGIC LOG"			
	JULY DA			12	d Libert) (USES (
	1111				1			estic Public			
					1	7 5	Irriga	ation Industria			
				Or The Original	700	EAST		MONITORING			
1 1				19/ 1		7 7	CATHODIC	PROTECTION			
1 1				L'	121	7.3		AT EXCHANGE			
1 1				ر ا	1			DIRECT PUSH			
1 1				, जिल्ला			VAROR	INJECTION			
1 1				VAPOR EXTRACTION SPARGING							
1 1				SOUTH ————————————————————————————————————							
				Illustrate or Describe Distance of Well from Roads, Buildings, Fences, Rivers, etc. and attach a map. Use additional paper if necessary. PLEASE BE ACCURATE & COMPLETE.							
1 1											
1 1				WATER LEVEL & YIELD OF COMPLETED WELL DEPTH TO FIRST WATER 355 (Ft.) BELOW SURFACE							
1 1				DEDTIL OF STATIS			1				
1 1				DEPTH OF STATIC 2	(Ft.) & DATE	MEASURED _	11/10	0 10			
1 1	110			ESTIMATED YIELD *	00 (GPM) & T	EST TYPE	Air Lis	Fi			
TOTAL DEPTH OF B	ORING(Feet)	ID'(Feet)		TEST LENGTH (Hrs.) TOTAL DRAW	DOWN	(Ft.)				
TOTAL DEPTH OF C	OMPLETED WELL	(Feet)		* May not be representa	tive of a well's lon	g-term yield.					
DEPTH		CASING (S)				ANNI	III AD M	ATERIAL			
FROM SURFACE	BORE- HOLE TYPE ()			FF	DEPTH ROM SURFACE	ANIN	TYPE				
	DIA. (Inches) SCREEN SCREEN CON- DUCTOR FILL PIPE	MATERIAL / INTERNAL DIAMETER	GAUGE OR WALL	SLOT SIZE		CE- BEN-		FILTER PACK			
Ft. to Ft.	OON- CON- DUCTOR FILL PIPE	GRADE DIAMETER (Inches)	THICKNES		Ft. to Ft.	MENT TONITE	FILL (∠)	(TYPE/SIZE)			
0 42		Hee 8	.188		5 37	V -1	(=)				
1	1	7, -0,	.,,,,		37 42	V					
					1 70						
- 1					1						
i					i						
i					i						
ATTACH	MENTS (∠)	I die a condensation of		 CERTIFICATION 	N STATEMENT						
Geologic L	.og	1000 M		s report is complete and				and belief.			
Well Cons	truction Diagram	NAME Sten!	y Br	Typed OR PRINTED)	rilling	Inc	_ ,				
Geophysic	al Log(s)										
	Chemical Analyses	15268	MCN	ally Rd. Va	alleycen	ter, (A °	12082			
Other		(Pa. ()	Sta A. A.	1	CITY	/					
ATTACH ADDITIONAL IN	FORMATION, IF IT EXISTS.	Signed C-57 LICENSED WATER	WELL CONTRO	ACTOR		30 10	_ 70	09686			
DWR 188 REV 05-03	IF ADDITION	IAI SPACE IS NEEDED I	LICE NEVE	J	DATE	. SIGNED I	C-57	LICENSE NUMBER			

ORIGINAL File with DWR	WELL	STATE OF CALIF	ON REPORT		E ONLY —	DO NOT FILL IN
Page of	Refer to Instruction Pamphlet				TATE WELL NO	D./STATION NO.
Owner's Well No	#1 LOTAT	No. US	43626	LATITUDE		LONGITUDE
Date Work Began		0/29/10		LATITODE		LONGITUDE
Local Permit Ag Permit No.		it Date 10/14/	10		APN/TRS/	OTHER
Termit No. 1	GEOLOGIC LOG	it Date		WELL O	WNER -	
ORIENTATION (∠)	VERTICAL HORIZONTAL	ANGLE (SPECIFY)	Name Gene			rès Inc.
DEPTH FROM	METHOD Air Rotary	FLUID	Mailing Address	P. O. BOX 1	03	
SURFACE	DESCRIPTION Describe material, grain si	N Service of Service S	Berthou	19	(6, 80513
O 176		um Soft	Address Dal	ey Plat	CATION —	STATE ZIF
76 103	B+W Granite	000	Address Dalla	Part of the second	K Cl+	
103 110	Slight Fracture B+	W+Brown	100	n Diego		
110 100		nite	APN Book 289			
305 310		ALL DO PON	Township 13.5	Range 3F	Section	
505 510	Fractured B+WGra Bad Zone Water 1968	MILE BIGKUKS	Lat 33 103	SEC.	Long	G. MIN. SEC.
I	tapers		LOCA	TION SKETCH -		NEW WELL
310 960	B+W Granites			i		MODIFICATION/REPAIR
960 974	Fractured B+WG		11. chas D	1		Deepen Other (Specify)
914 915	Fractured BrwGr		Hoskins Ro	men		Other (Specify)
	Water: 130G	PM Total	3/A 3	- N His		DESTROY (Describe Procedures and Materials
	J) an labour		3/13	right	My 79	Under "GEOLOGIC LOG" USES (∠)
	- Man		T 100/2			WAŢER SUPPLY
1			Caley Flot		-	Domestic Public Irrigation Industrial
			WEST TO THE ST		EAST	MONITORING
			5	Orinoco	PA / - 0	TEST WELL CATHODIC PROTECTION
			71/	7	322.6	HEAT EXCHANGE
				well	55	DIRECT PUSH
			ļ .	2627.07		VAPOR EXTRACTION
				- SOUTH		SPARGING
			Illustrate or Describe Dis Fences, Rivers, etc. and a necessary. PLEASE BE 1	tance of Well from Road ttach a map. Use additio	s, Buildings, nal paper if	REMEDIATION
1 1						
i			WATER I DEPTH TO FIRST WAT	LEVEL & YIELD (
1						
			DEPTH OF STATIC 10	(Ft.) & DATE	MEASURED _	10/29/10
TOTAL DEPTH OF I	BORING 915 (Feet)		ESTIMATED YIELD *			
TOTAL DEPTH OF (COMPLETED WELL 975 (Feet))	* May not be represent			(Ft.)
		CLOTIC (0)				
DEPTH FROM SURFACE	BORE- HOLE TYPE (∠)	CASING (S)		DEPTH FROM SURFACE	ANNU	JLAR MATERIAL TYPE
	DIA. (Inches) SCHEEN MATERIAL / GRADE	INTERNAL GAUGE DIAMETER OR WAL	SLOT SIZE		CE- BEN-	511 TED D1014
Ft. to Ft.	SCR	(Inches) THICKNES		Ft. to Ft.	MENT TONITE	(YPE/SIZE)
0 80	12 V Steel	881, 8		0 76	V	
				76 80	V	
		-				1
1				i		
ATTACH	MENTS (∠)	dereigned costif that it	CERTIFICATIO	ON STATEMENT		
Geologic		dersigned, certify that the				owledge and belief.
	struction Diagram NAME (PEI	Stehly BI	(TYPED OR PRINTED)	prining, -	MC.	
Geophysical Log(s) Soil/Water Chemical Analyses 13268 MCNally Rd, Valley Center, CA. 92082				92082		
Other STATE ZIP						
	IFORMATION, IF IT EXISTS. Signed	Taul Ste	hly	11	30/10	709 686
DU7D 100 DEW 0E 00	IT ADDITIONAL CDACE	7 LICENSED WATER WELL CONTI	KACTOR / /	DATE	SIGNED	C-57 LICENSE NUMBER

ORIGINAL File with DWR			F CALIF			E ONLY -	DO NOT FILL IN
Page of	WELL COMPLETION I Refer to Instruction Pamphle					TATE WELL NO	/STATION NO.
Owner's Well No.	#2 Lot 30	WELL H No	. 094	43628			
Date Work Began	11/4/10	Ended 11/5/10			LATITUDE	Ξ	LONGITUDE
Local Permit Age		lego County	£	7		ADM/TRO/	THE B
Permit No	WEL 20724		10/14	10		APN/TRS/0	JIHER
	GEOLOGIC			200	WELL	OWNER —	Lac too
ORIENTATION (∠)	DDILLING A '	RIZONTAL ANGLE	(SPECIFY)	Name Address _	80 Ban (1	soper.	ties, Inc.
DEPTH FROM SURFACE		ESCRIPTION	00	Berthou	70513000	<i>V</i> 3	10 OD513
Ft. to Ft.	Describe mater	ial, grain size, color, etc	11. 17:	CITY			STATE ZIP
0 42	Brown Dic	9.	200	Address Da	ley Flat	CATION—	
42 56	B+w Grani		1	City July	an O	•	
56 79	Brown D.G.	medium Soi	(1)	County Sa	n Diego		
125 135	B+W Gran	ite BrwGrai	290	APN Book 289	Page 062	Parcel O	<u></u>
103 133		20 GRM	NE	Township 135		Section	
135 225	B+W Grani	te	_	DEG. MIN	SEC.	Long IIC	
225 240	Slight Frac	ture BrwGn	anite	LOCA	TION SKETCH -		MIN. SEC. METIVITY (\(\perceq\))
	Water	40GPM TO+	al				MODIFICATION/REPAIR
240 310	Brw Gran	rite		=	1		<pre>Deepen Other (Specify)</pre>
	11111	30					other (opecity)
	~	2 (E) (C)		v	h		DESTROY (Describe Procedures and Materials
	J) no	7		Hoskins R	11:1		Under "GEOLOGIC LOG",
				1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			WATER SUPPLY
	73			HEST HEST AND NO. 25'	٧,	<u></u>	Domestic Public Irrigation Industrial
1 1				WEST THE		EAST	MONITORING
1 1				0 T			TEST WELL
					Prince R	\\	CATHODIC PROTECTION
				15,00	bod well	र वृह	DIRECT PUSH
1 1				*	70/	7	INJECTION VAPOR EXTRACTION
				_	400° J 2627	.07	SPARGING
				Illustrate or Describe Di	– SOUTH – stance of Well from Road	ds. Buildings.	REMEDIATION
				Fences, Rivers, etc. and a necessary. PLEASE BE	attach a map. Use additi	onal paper if	OTHER (SPECIFY)
				WATER	LEVEL & YIELD	OF COMPLE	ETED WELL
1				DEPTH TO FIRST WAT	TER 125 (Ft.) BE	LOW SURFACE	
				DEPTH OF STATIC	84 (Ft.) & DATE		11/5/10
1				WATER LEVEL ESTIMATED YIELD * _	(, ti) a Ditti		Air Lift
TOTAL DEPTH OF E	BORING 31D (Fee	t)		TEST LENGTH 4			
TOTAL DEPTH OF C	COMPLETED WELL _3	(Feet)		* May not be represen			_ (,
DEPTH		CASING (S)				ANNI	ULAR MATERIAL
FROM SURFACE	BORE- HOLE TYPE (∠)				DEPTH FROM SURFACE	ANTIC	TYPE
	BLANK SCREEN CON: DUCTOR FILL PIPE	MATERIAL / INTERNAL DIAMETER	GAUGE OR WAL			CE- BEN- MENT TONITE	FILL FILTER PACK
Ft. to Ft.	B S S DOO	(Inches)	THICKNES		Ft. to Ft.	(<u></u> <u> </u>	(∠) (TYPE/SIZE)
0 54	12 /	steel 8	188		0 79	V	
- 1					79 84	V	
1							
ATTACHMENTS (\(\perceq\)) CERTIFICATION STATEMENT							
Geologic Log I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.					owledge and belief.		
Well Construction Diagram NAME Stehly Brothers Driling, Inc.							
— Geophysical Log(s) — Soil/Water Chemical Analyses — Soil/Water Chemical Analyses (PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED) 13268 MCNally Rd. Valley				Vallance	on low	20 0000	
				vally kd.	ValleyCe	THEV, C	7 42082
				1/30/10	7091201		
ATTACH ADDITIONAL INFORMATION, IF IT EXISTS. Signed C-57 LICENSED WATER WELL CONTRACTOR DATE SIGNED C-57 LICENSE NUMBER				C-57 LICENSE NUMBER			
DUID 100 DEU AE AO							

ORIGINAL File with DWR	w	ELL COMPI	F CALIFO	ON DEBOR	T DWR USE	ONLY —	DO NOT FILL IN	
Page of	Refer to Instruction Paninhlet					ATE WELL NO	/STATION NO.	
Owner's Well No. Well S Lot 31 No. U94				1363/				
Date Work Began	11[17110 , End	ded 11/19/10			LATITUDE		LONGITUDE	
Local Permit Age	ncy San Diego		2-7-1	<u> </u>		APN/TRS/0	OTHER	
Permit No.	GEOLOGIC LOC		2-1-1		WELL O	WNER —		
ORIENTATION (∠)	VERTICAL HORIZON		(SPECIEY)	Name Gen		perties	SIENC	
	DRILLING Air Rota		(6) 2011 17	Mailing Address	PIO BOX	03		
DEPTH FROM SURFACE	DESC	RIPTION	700	Berthoud Co. 80513				
Ft. to Ft.	Describe material,	grain size, color, etc.	11/20	CITY	EY FIAT R	CATION	STATE ZIP	
28 34	Chall Fail	1 Bown WI.	I.G.C.	Address Val		d. L	0+31	
34 59	Bar Jo G	A DAWN WY	Oran	County San	Diego			
59 195	BIN Ganite		7/	APN Book 289 Page 470 Parcel 38				
195 205	Slight Fracture	BiW Ganit	1	Township 35 Range 3 E Section 2				
205 235	Brw Granit	2		Lat 33 04 00 N Long 16 38 59 W				
235 255	Slight tacture	Brw Ganit	(8)	LOC	ATION SKETCH 2	Purele Sc	— ACTIVITY (≤) —	
255 280	B.W Granit	Chil	3)\\		(48K)	Hwy	NEW WELL	
280 295	Slight Fracture	B. W Gan	ite	MODIFICATION/REPAIR Deepen Other (Specify) DESTROY (Describe				
	Water: 1	0 6PM Total		^	ley XX	w.	Other (Specify)	
295 400	BIN Granit	8/20		- /-	/		DESTROY (Describe	
400 435	B. W Granite	Loose			\$1		Procedures and Materials Under "GEOLOGIC LOG")	
432 460	tractured Bin	60 GPM Tota	1	~)	<u>600</u>	USES (∠) WATER SUPPLY	
460 510	BIW Ganite	60 GPM Tota	u		Soliso mi		✓ Domestic Public	
400 310	VI CO DIANITE			WEST		AST	Irrigation Industrial MONITORING	
1 1				>	0	F _{EAST}	TEST WELL	
					اق	80	CATHODIC PROTECTION	
					7	3	DIRECT PUSH	
i					18		INJECTION	
					1294.	09	VAPOR EXTRACTION	
					— SOUTH ———		SPARGING	
				Illustrate or Describe I Fences, Rivers, etc. and	Distance of Well from Road l attach a map. Use addition E ACCURATE & COMPI	ls, Buildings, onal paper if	OTHER (SPECIFY)	
i		-		necessary. PLEASE BI	E ACCURATE & COMPI	LETE.		
					LEVEL & YIELD			
	DEPTH TO FIRST WATER			ATER 235 (Ft.) BE	LOW SURFACE			
i i				DEPTH OF STATIC WATER LEVEL	131 (Ft.) & DATE	MEASURED _		
1 1	710				(GPM) & T		Air Lift	
TOTAL DEPTH OF BORING(Feet) TOTAL DEPTH OF COMPLETED WELL(Feet)			TEST LENGTH (Hrs.) TOTAL DRAWDOWN (Ft.)					
TOTAL DEPTH OF C	COMPLETED WELL _3 ((Feet)		* May not be repres	entative of a well's lon	g-term yield.		
DEPTH	BORE-	CASING (S)			DEPTH	ANNU	ULAR MATERIAL	
FROM SURFACE	HOLE TYPE (∠)	MATERIAL / INTERNAL	GAUGE	SLOT SIZE	FROM SURFACE	OF 5-11	TYPE	
Ft. to Ft.	DIA. (Inches) SCREEN SCREEN MM	GRADE DIAMETER	OR WAL	L IF ANY	Ft. to Ft.	CE- BEN- MENT TONITE	FILL FILTER PACK	
		(Inches)	THICKNES	SS (Inches)		(<u>~</u>) (<u>~</u>)	(∠) (TYPE/SIZE)	
0 63	12 V S	teel 8	. 188		0 57	/		
					57 63	V		
i								
1								
1					1			
ATTACH	IMENTS (∠)	I the undersianed	rtifu, that the	CERTIFICAT	TION STATEMENT		audadaa aad balka	
Geologic Log								
Well Construction Diagram NAME Stehly Brothers Drilling, Inc.								
— Geophysical Log(s)				A 92082				
Soil/Wate Other	r Chemical Analyses	ADDRESS	(July Ra:	CITY	THE !	STATE ZIP	
	NEORMATION IS IT EVICTO	Signed Faul	Jeh	L _i	1	1/30/10		
ATTACH ADDITIONAL INFORMATION, IF IT EXISTS. Signed C-57 LICENSED WATER WELL CONTRACTOR DATE SIGNED C-57 LICENSE NUMBER								

WELL J

STEHLY BROTHERS DRILLING, INC.

License: C-57 #709686 13268 McNally Road Valley Center, California 92082 760-742-3668 / 760-742-4564 Fax

11/30/10

TRS Consultants

Well Site:

Hoskings Ranch Project Well#6 Lot 32

ATTN: Sheryll Givens

APN: 289-060-34 Lot 32

438 Camino Del Rio South, #223

SW Corner of Hwy 79 & Pine Hills Rd.

San Diego, CA 92108

Julian, CA 92036

619-299-2525

Permit #LWEL

Well #6 Lot 32 Drilled for Hoskings Ranch Project at South West Corner of Hwy 79 and Pine Hills Road in Julian. Started Drilling 11/23/10 and Finished Well 11/29/10. APN: 289-060-34 Permit #LWEL

0 - 28

Brown D.G.

28-34

Slightly Fractured B&W & Brown Granite

34-100

B&W Granite

100-110

Slight Fracture B&W Granite Water: 3 GPM

110-810

B&W Granite

810-860

B&W Granite Loose

860-1010

B&W Granite

Comments:

Total Well Depth:

1010'

Hole Diameter:

6 1/2" hole

Casing:

42' of 8 5/8" steel casing

Surface Seal:

Cement

Water:

3 GPM

Static Water Level: 96' 11/30/10

4 Hour Air Lift Test

· IIOUI IIII DIII IOO	
1 st Hour	10 GPM
2 nd Hour	4 GPM
3 rd Hour	3 GPM
4 th Hour	3 GPM

CAUTION!! Stehly Brothers Drilling, Inc. recommends installing liner and gravel pack in Well#6 Lot 32 before installing pump system.

