

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

Prepared for:

Genesee Properties, Inc.
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Prepared by:

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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:

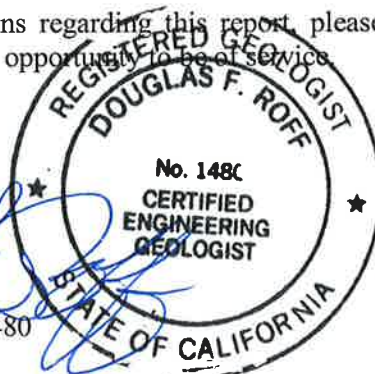
In accordance with your request, we have prepared this geologic reconnaissance report for Hoskings Ranch.


If you have any questions regarding this report, please contact our office. Earth Tech - AECOM appreciates this opportunity to be of service.

Very truly yours,

AECOM, Inc.


Douglas F. Roff, CEG 1480
Senior Geologist




Robert M. Schumann, PG 8354
Project Geologist



Distribution: (2) Addressee
(2) Mark Thompson – TRS Consultants

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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.

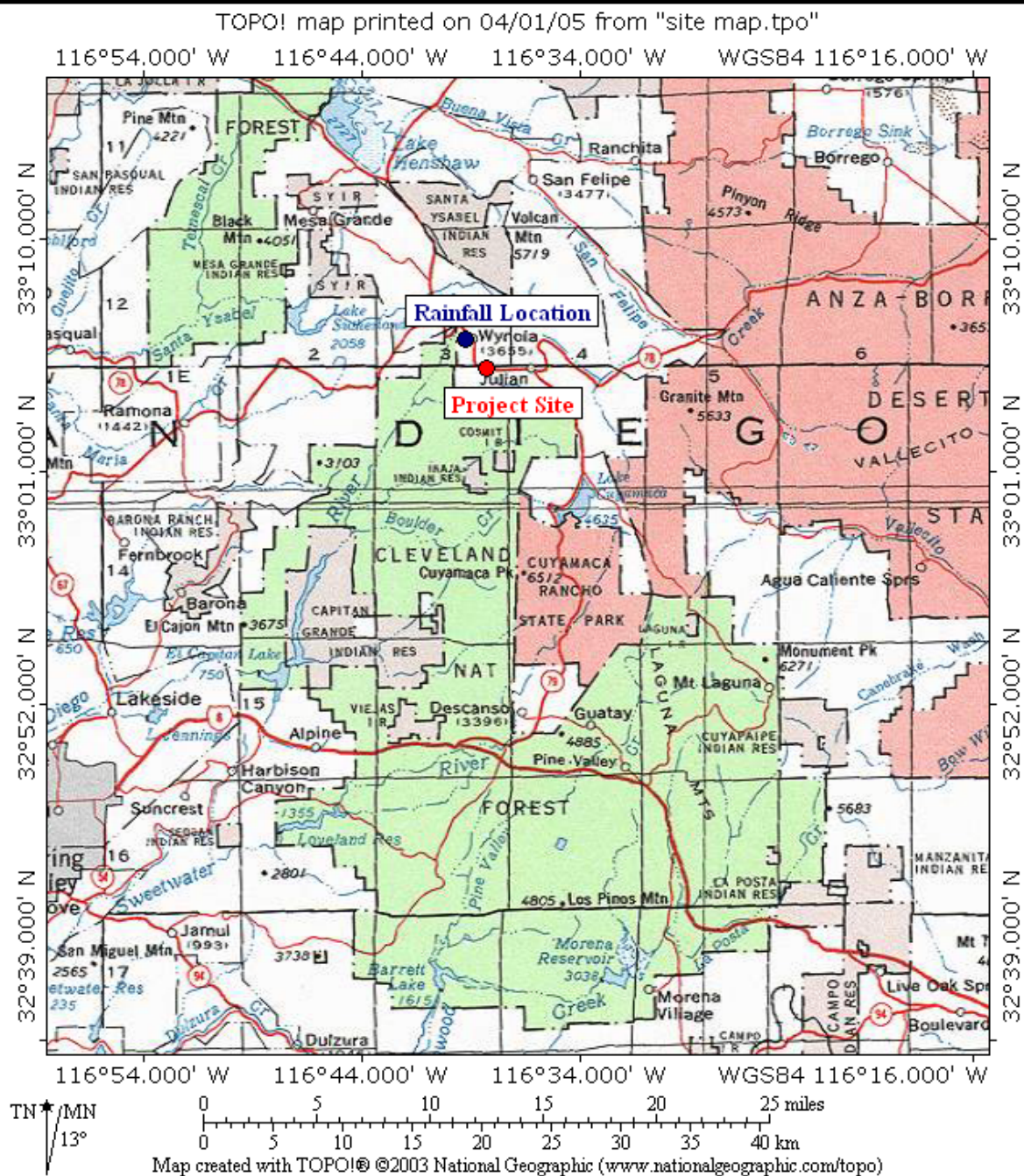
Surrounding properties are relatively undeveloped with a few widely-spaced single-family homes located on large parcels. Approximately 30 to 40 single-family homes are within ¼ mile of the property. Most of those homes are located on 10-acre or greater lots. Some of these have orchards or cattle grazing 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

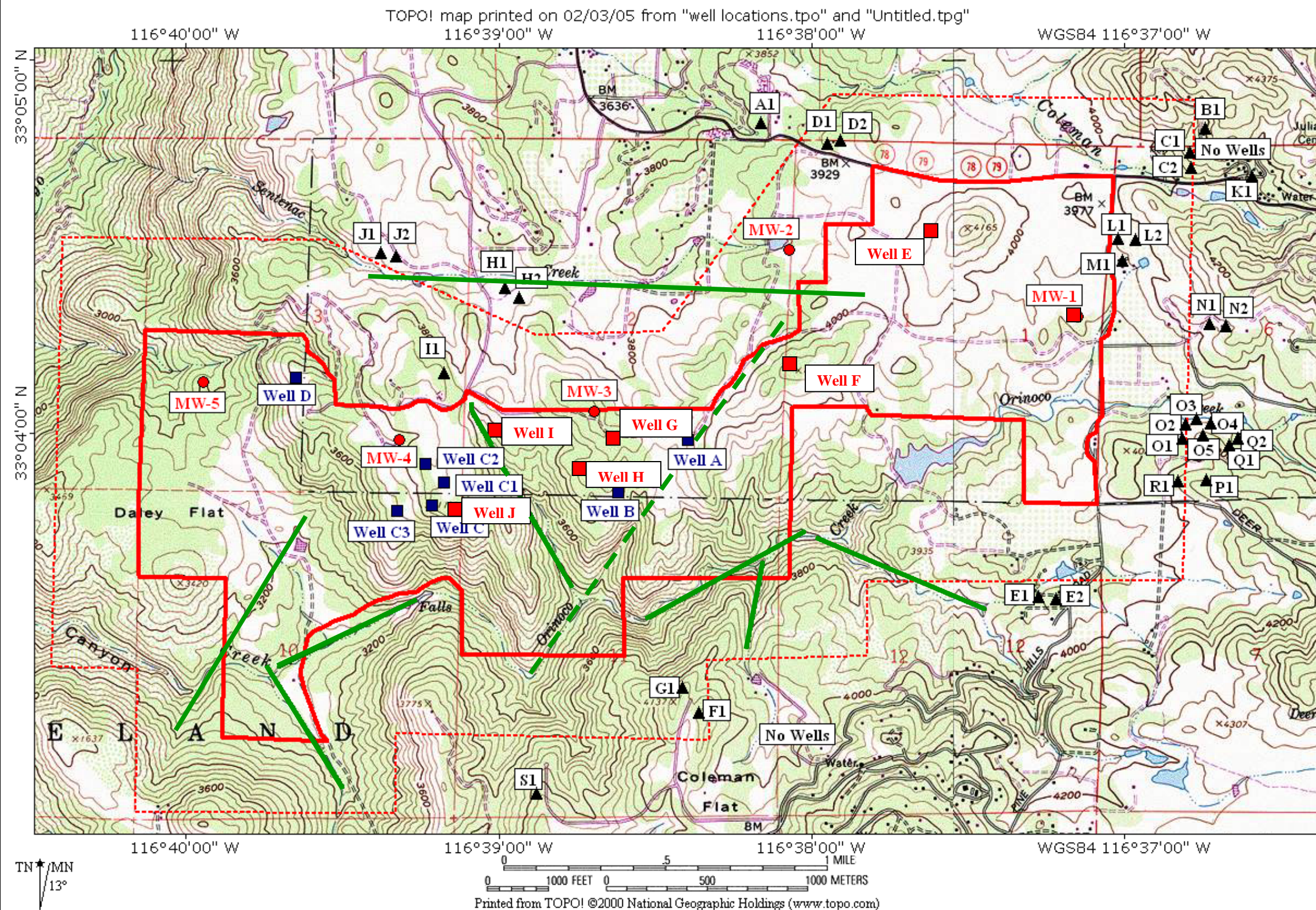
The purpose of this study was to identify the local and regional geology of the project site and to evaluate the following issues that were identified in the County's scoping letter dated June 11, 2003.

- 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



LEGEND:

- Property Boundary
- - - 1/4-Mile Study Area
- Aerial Photo Lineaments
- Recently Pump-Tested Well
- Previously Pump-Tested Well
- ▲ Offsite Well
- Onsite Monitoring Well

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Figure 2
SITE MAP
Hoskings Ranch, Julian,
San Diego County, California
February 1, 2011
Project No. 60144610

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 are 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.”² 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 Guidelines³, 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

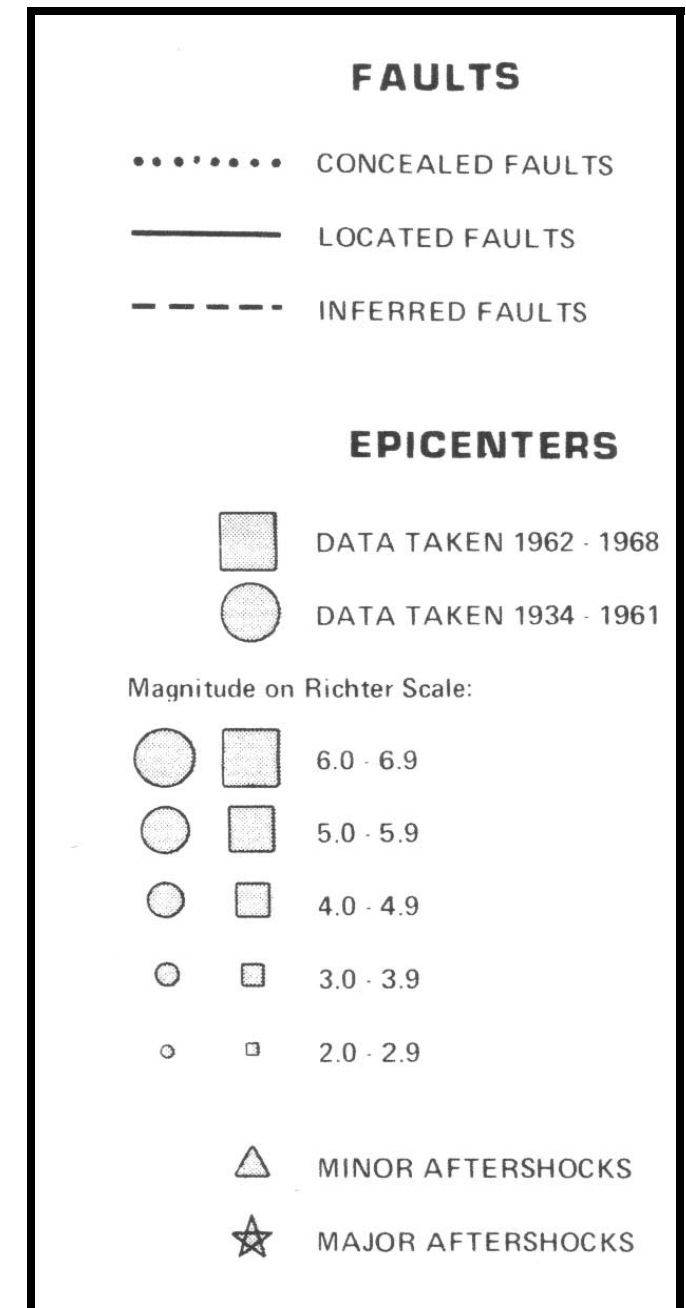
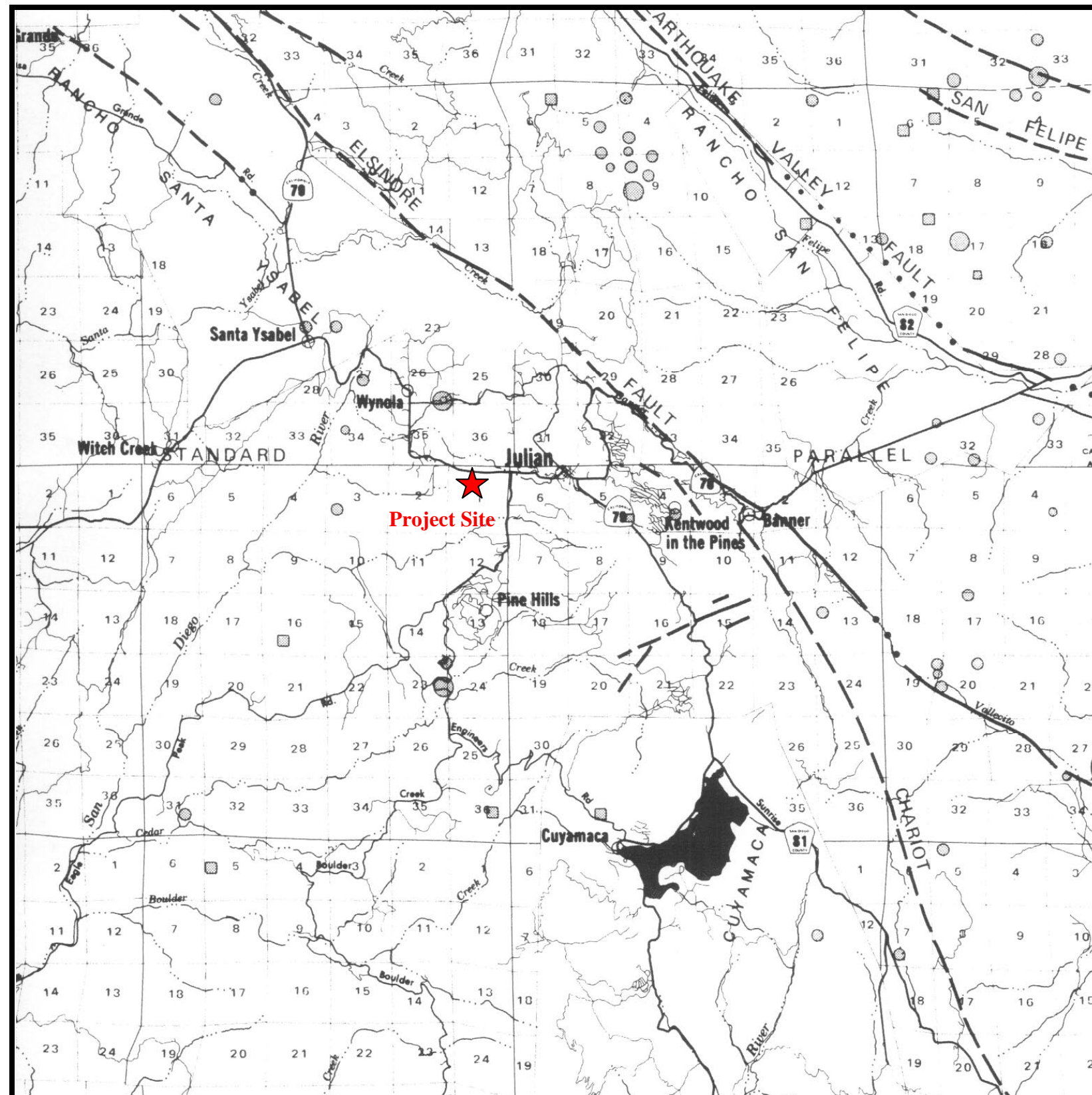
Regional Faulting

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

(from County of San Diego, Department of Public Works. 1994. Faults and Epicenters Map.)

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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Appendix A

Well Logs

Well A

DUPLICATE
Driller's CopyPage 1 of 1
Owner's Well No. 1

Date Work Began 11/05/03 Ended 11/07/03

Local Permit Agency San Diego County Dept. of Environmental Health

Permit No. LWEL 15611 Permit Date 10/9/03 approved

STATE OF CALIFORNIA
WELL COMPLETION REPORT

Refer to Instruction Pamphlet

No. 0903931

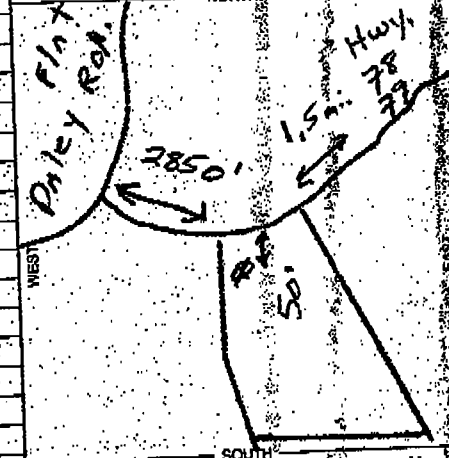
DWR USE ONLY - DO NOT FILL IN

STATE WELL NO./STATION NO.	
LATITUDE	LONGITUDE
APN/TS/OTHER	

GEOLOGIC LOG

ORIENTATION (°)	DEPTH FROM SURFACE (FL)	DEPTH TO (FL)	DESCRIPTION
XX VERTICAL			
HORIZONTAL			
DRILLING METHOD			air hammer FLUID
			Describe material, grain size, color, etc.
	0	4	Orange clay Decomposed Granite
	4	11	Brown Decomposed Granite
	11	17	Grey Decomposed Granite
	17	51	Grey, weathered Granite
	51	126	Hard, salt & pepper Granite
	126	127	Fracture in above
	127	129	Salt & pepper Granite
	129		Fracture
	129	155	Salt & pepper Granite
	155		Fracture w/ small amount WATER
	155	195	Salt & pepper Granite
	195	251	Altered Granite w/ several fractures & WATER
	251	293	Salt & pepper Granite
	293	311	Weathered Granite
	311	331	Salt & pepper Granite

Bottom hole bit gauge 6 1/2"

Name: Genesee Properties, Inc.
Mailing Address: 3550 General Atomics Court
San Diego, California 92121-1194WELL LOCATION
Address: Hastings Ranch Orinosa DriveCity: Julian, Ca.
County: San DiegoAPN Book 289 Page 062 Parcel 04
Township 13S Range 3E Section 11Long: 117° 05' 00" W
Lat: 32° 55' 00" NLOCATION SKETCH
NORTH

Illustrate or Describe Distance of Well from Roads, Buildings, Fences, etc. and attach a map. Use additional paper if necessary. PLEASE BE ACCURATE & COMPLETE.

ACTIVITY (X)

XX NEW WELL

MODIFICATION/REPAIR
Drill Open
Other (Spec)DESTROY (Desa)
Procedures and Under "GEOLOGIC"USES (X)
WATER SUPPLY
XX Domestic
XX IrrigationMONITORING
TEST WELL
CATHODIC PROTECTION
HEAT EXCHANGE
DIRECT FLOW
INJECTION
VAPOR EXTRACTION
SPARGING
REMEDIATION
OTHER (SPEC)

WATER LEVEL & YIELD OF COMPLETED WELL

DEPTH TO FIRST WATER 155 (FL) BELOW SURFACE

DEPTH OF STATIC WATER LEVEL 140+ (FL) & DATE MEASURED 11/7/03

ESTIMATED YIELD 4 (GPM) & TEST TYPE air lift

TEST LENGTH (Hrs.) TOTAL DRAWDOWN (FL)

* May not be representative of a well's long-term yield.

TOTAL DEPTH OF BORING 331 (Feet)
TOTAL DEPTH OF COMPLETED WELL 331 (Feet)

TOTAL DEPTH OF COMPLETED WELL										331		Feet		DEPTH FROM SURFACE			ANNULAR MATERIAL TYPE			
DEPTH FROM SURFACE		BORE-HOLE DIA. (Inches)	CASING (S)				MATERIAL GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)	FL	to	FL	CE- MENT (\leq)	BBS- TONITE (\leq)	FILL (\leq)	FILTER (TYPE)			
FL	to		TYPE (X)	SCREEN	COIL- TUBING	PIPE														
0	20	13"	X			Steel	8.249	.188			0	20	XXX				Type			
0	331	6.5"	X	X		PVC Liner	4.570	.160	1/8"		151	311								

CERTIFICATION STATEMENT

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.

NAME: Acme Drilling Co. Inc.
(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)
748 S. Vinewood St. - Ste. B-Escondido, Ca. 92-02ADDRESS: Robert Lundberg
CITY: 11/10/03 STATE: 5268
DATE SIGNED: C-57 UCMATTACHMENTS (X)
Geologic Log
Well Construction Diagram
Geophysical Log(s)
Soil/Water Chemical Analyses
Other

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

Well B

DUPLICATE
Driller's Copy

B

STATE OF CALIFORNIA
WELL COMPLETION REPORT

Refer to Instruction Pamphlet

No. 0903932

Page 1 of 1

Owner's Well No. 1 (this parcel)

Date Work Began 11/10/03 Ended 11/11/03

Local Permit Agency San Diego Co. Dept. of Environmental Health

Permit No. 1WRL 15610 Permit Date 10/8/03 approved

GEOLOGIC LOG

ORIENTATION (S) ☒ VERTICAL ☐ HORIZONTAL ☐ ANGLE (SPECIFY)
DRILLING METHOD ☒ air hammer ☐ FLUIDDEPTH FROM SURFACE
FL. to FL. DESCRIBE material, grain size, color, etc.

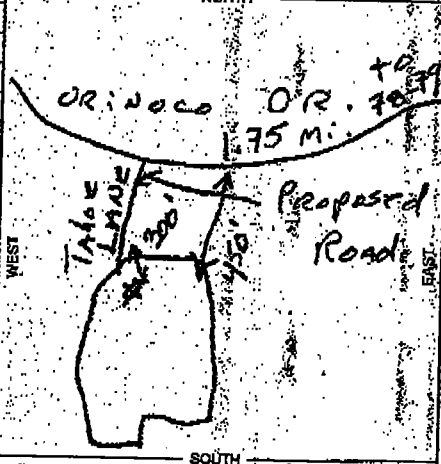
0	1	Brown Clay
1	8	Orange Clay
8	15	Light brown Decomposed Granite
15	31	Weathered Granite
31	48	Light grey Decomposed Granite
48	95	Hard, salt & pepper Granite
95	96	Fracture in above w/ small amount WATER
96	220	Salt & pepper Granite
220	221	Fracture in above w/ WATER
221	271	Salt & pepper Granite

Bottom hole air gauge 6 7/16"

WELL OWNER

Name Genesee Properties, Inc.
Mailing Address 3550 General Atomics Court
San Diego, Ca. 92121-1104
CITY STATE ZIP

WELL LOCATION

Address Orinoco Drive
City Julian, Ca.
County San Diego
APN Book 289 Page 120 Parcel 32
Township 13S Range 23E Section 11
LongLOCATION SKETCH
NORTH

ACTIVITY (S)

☒ NEW WELL
☐ MODIFICATION/REPAIR
☐ Deepen
☐ Other (Specify)

DESTROY (Describe Procedures and Materials Under "GEOLOGIC LOG")

USES (S)

☒ WATER SUPPLY
☒ Domestic ☐ Public
☒ Irrigation ☐ Industrial
☐ MONITORING
☐ TEST WELL
☐ CATHODIC PROTECTION
☐ HEAT EXCHANGE
☐ DIRECT PUSH
☐ INJECTION
☐ VAPOR EXTRACTION
☐ SPARGING
☐ REMEDIATION
☐ OTHER (SPECIFY)

WATER LEVEL & YIELD OF COMPLETED WELL

 DEPTH TO FIRST WATER 95 (FL) BELOW SURFACE
 DEPTH OF STATIC WATER LEVEL 94 (FL) & DATE MEASURED 11/13/03
 ESTIMATED YIELD 7 (GPM) & TEST TYPE air lift
 TEST LENGTH (ft.) TOTAL DRAWDOWN (FL)
 * May not be representative of a well's long-term yield

DEPTH FROM SURFACE		BORE-HOLE DIA. (Inches)	CASING (S)							
FL. to	FL.		TYPE (≤)				MATERIAL / GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)
			BLANK	SCREEN	COUPLER	FL. PIPE				
0	20	13"	X				Steel	8.249	.188	
0	271	6.437					Open hole			

ATTACHMENTS (S)

☐ Geologic Log
☐ Well Construction Diagram
☐ Geophysical Log(s)
☐ Soil/Water Chemical Analyses
☐ Other

ATTACH ADDITIONAL INFORMATION, IF IT EXISTS.

CERTIFICATION STATEMENT

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.

Acme Drilling Co. Inc.

(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)

748 S. Vinewood St. - Ste. B Escondido, Ca. 92029-1929

Address 748 S. Vinewood St. City 11/13/03 State CA ZIP 92029

Signed Robert Linnelberg DATE SIGNED 11/13/03 C-57 LICENSE NUMBER 526886

C-57 LICENSED WATER WELL CONTRACTOR

DATE SIGNED 11/13/03 C-57 LICENSE NUMBER 526886

Well C3

TRIPLICATE
Owner's Copy

Page 1 of 1

Owner's Well No. 3 (this parcel)

Date Work Began 3/26/04, Ended 4/6/04

Local Permit Agency San Diego County dept. of Environmental Health

Permit No. WEL 15893

Permit Date 3/30/04 approved

STATE OF CALIFORNIA
WELL COMPLETION REPORT

Refer to Instruction Pamphlet

No. **0903958**

DWR USE ONLY — DO NOT FILL IN

STATE WELL NO./STATION NO.

LATITUDE

LONGITUDE

APN/TRS/OTHER

GEOLOGIC LOG

ORIENTATION (✓) XX VERTICAL _____ HORIZONTAL _____ ANGLE _____ (SPECIFY) _____

DEPTH FROM SURFACE

Fl. to Fl.

DRILLING METHOD

air hammer

FLUID _____

DESCRIPTION

Describe material, grain size, color, etc.

WELL OWNER

Name Franklin Barnes Family Trust (BARNES)

Mailing Address 210 Bar 1570

CITY Julian, Ca 92036

STATE ZIP

WELL LOCATION

Address 210 Bar 1570 Daley Flat Road

CITY Julian

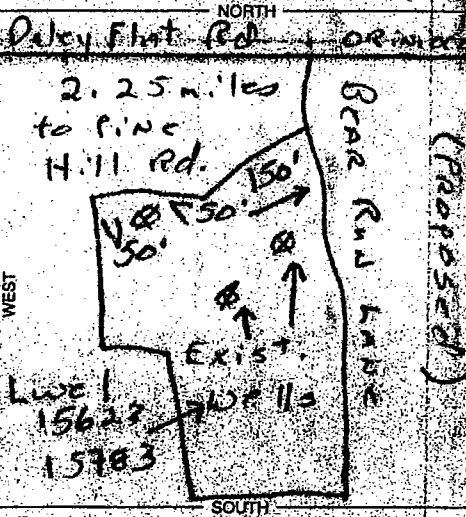
County San Diego

APN Book 282 Page 180 Parcel 04

Township 13S Range 3E Section 12

Lat. _____ Long. _____

LOCATION SKETCH



ACTIVITY (✓)

XX NEW WELL

MODIFICATION/REPAIR

Deepen _____

Other (Specify) _____

DESTROY (Describe Procedures and Materials Under "GEOLOGIC LOG")

USES (✓)

WATER SUPPLY

Domestic _____ Public _____

Irrigation _____ Industrial _____

MONITORING

TEST WELL

CATHODIC PROTECTION

HEAT EXCHANGE

DIRECT PUSH

INJECTION

VAPOR EXTRACTION

SPARGING

REMEDICATION

OTHER (SPECIFY) _____

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 78-80 (FL.) BELOW SURFACE

DEPTH OF STATIC WATER LEVEL 80 (FL.) & DATE MEASURED 4/6/2004

ESTIMATED YIELD 20 (GPM) & TEST TYPE air lift

TEST LENGTH _____ (Hrs.) TOTAL DRAWDOWN _____ (FL.)

* May not be representative of a well's long-term yield.

TOTAL DEPTH OF BORING 211 (Feet)

TOTAL DEPTH OF COMPLETED WELL 80 (Feet)

DEPTH FROM SURFACE	BORE-HOLE DIA. (Inches)	CASING (S)					DEPTH FROM SURFACE	ANNULAR MATERIAL			
		TYPE (✓)	MATERIAL / GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)		TYPE	CE-MENT (✓)	BEN-TONITE (✓)	FILL (✓)
Fl. to Fl.		BLANK SCREEN CON- DUCTOR FILL PIPE					Fl. to Fl.				
0 to 20	13"	X	Steel	8.249	.188		0 to 20	XXXX			Type I-II
0 to 80	8"	X	Steel	6.249	.188						
80 to 211	6.5"		open hole								

ATTACHMENTS (✓)

- Geologic Log
- Well Construction Diagram
- Geophysical Log(s)
- Soil/Water Chemical Analyses
- Other _____

ATTACH ADDITIONAL INFORMATION, IF IT EXISTS.

CERTIFICATION STATEMENT

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.

NAME Acme Drilling Co. Inc.

(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)

748 S. Vinewood Street-Suite B- Escondido, Ca. 92029-1929

ADDRESS

CITY

STATE

ZIP

Signed Robert Lundberg

C-57 LICENSED WATER WELL CONTRACTOR

DATE SIGNED 4/12/04

526886

C-57 LICENSE NUMBER

Well D

ORIGINAL

File with DWR

Page 1 of 1

Owner's Well No. 1 (this parcel)

Date Work Began 11/24/03, Ended 12/2/03

Local Permit Agency S.D. Co. Dept. of Environmental Health

Permit No. LWEL 15622

Permit Date 10/16/03-approved

STATE OF CALIFORNIA
WELL COMPLETION REPORT

Refer to Instruction Pamphlet

No. 0903937

DWR USE ONLY - DO NOT FILL IN

STATE WELL NO./STATION NO.

LATITUDE LONGITUDE

APN/TRS/OTHER

GEOLOGIC LOG

ORIENTATION () XX VERTICAL HORIZONTAL ANGLE (SPECIFY)

DRILLING METHOD air hammer FLUID

DEPTH FROM SURFACE

Describe material, grain size, color, etc.

0	11	Brown Decomposed Granite
11	16	Brown Decomposed Granite
16	48	Grey Decomposed Granite
48		Hard, salt & pepper Granite w/ seepage 1 GPM
48	140	Salt & pepper Granite
140	141	Small fracture
141	213	Salt & pepper Granite
213		Fracture
213	218	Salt & pepper Granite
218	219	Fracture
219	286	Salt & pepper Granite
286	290	Fractures
290	328	Salt & pepper Granite
328	329	Fracture
329	567	Salt & Pepper Granite
567	568	Fracture w/ water- 50 GPM
568	591	Salt & pepper Granite

Bottom hole bit gauge 6 1/4"

TOTAL DEPTH OF BORING: 591 (Feet)

TOTAL DEPTH OF COMPLETED WELL: 20 (Feet)

Name Genesee Properties, Inc.

Mailing Address 3550 General Atomics Court

San Diego, Ca. 92121-1194

CITY STATE ZIP

WELL LOCATION

Address Daley Flat Road

City Julian, Ca.

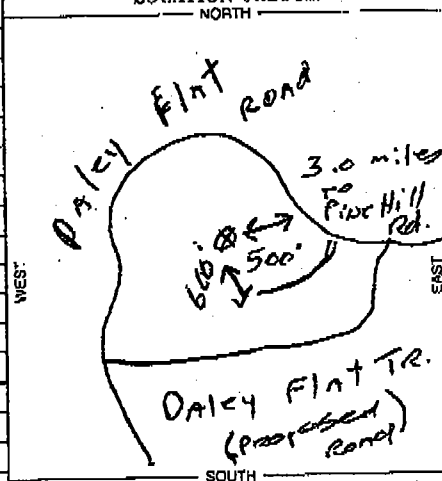
County San Diego

APN Book 289 Page 030 Parcel 07

Township 13S Range 3E Section 3

Lat DEG. MIN. SEC. N Long. DEG. MIN. SEC. W

LOCATION SKETCH



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.

ACTIVITY ()

XXX NEW WELL

MODIFICATION/REPAIR

Deepen

Other (Specify)

DESTROY (Describe Procedures and Materials Under "GEOLOGIC LOG")

USES ()

WATER SUPPLY

XX Domestic Public

XX Irrigation Industrial

MONITORING

TEST WELL

CATHODIC PROTECTION

HEAT EXCHANGE

DIRECT PUSH

INJECTION

VAPOR EXTRACTION

SPARGING

REMEDICATION

OTHER (SPECIFY)

WATER LEVEL & YIELD OF COMPLETED WELL

DEPTH TO FIRST WATER 48 (Ft.) BELOW SURFACE

DEPTH OF STATIC WATER LEVEL 50' (Ft.) & DATE MEASURED 12/2/2003

ESTIMATED YIELD 50 (GPM) & TEST TYPE air lift

TEST LENGTH (Hrs.) TOTAL DRAWDOWN (Ft.)

* May not be representative of a well's long-term yield.

DEPTH FROM SURFACE		BORE-HOLE DIA. (Inches)	CASING (S)						DEPTH FROM SURFACE	ANNULAR MATERIAL						
			TYPE ()				MATERIAL / GRADE	INTERNAL DIAMETER (Inches)		GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)	TYPE				
			BLANK	SCREEN	CON. LUTION	FILL PIPE						CE- MENT ()	BEN- TONITE ()	FILL ()	FILTER PACK (TYPE/SIZE)	
Ft.	to	FL								Ft.	to	Ft.				
0	20	13"	X				Steel	8.249	.188		0	20	XXXX			Type I-II
0	591	6.250					Open hole									

ATTACHMENTS ()

- Geologic Log
- Well Construction Diagram
- Geophysical Log(s)
- Soil/Water Chemical Analyses
- Other

ATTACH ADDITIONAL INFORMATION, IF IT EXISTS.

CERTIFICATION STATEMENT

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.

NAME Acme Drilling Co. Inc.

(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)

748 S. Vinewood Street-Suite B- Escondido, Ca. 92029-1929

ADDRESS CITY STATE ZIP

Signed DATE SIGNED 12/3/03 526886

C-57 LICENSE NUMB

OSP 03

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBRED FORM.

Well E

ORIGINAL
File with DWR

STATE OF CALIFORNIA
WELL COMPLETION REPORT

Refer to Instruction Pamphlet

Page 1 of 1

Owner's Well No. #4 Lot 10 WELL E

No. **0943631**

Date Work Began 11/12/10, Ended 11/15/10

Local Permit Agency San Diego Coun.

Permit No. LUWL 20719 Permit Date 10/14/10

DWR USE ONLY — DO NOT FILL IN	
STATE WELL NO./STATION NO.	
LATITUDE	LONGITUDE
APN/TRS/OTHER	

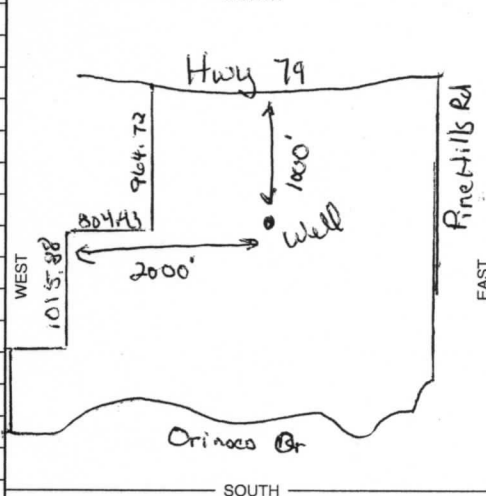
GEOLOGIC LOG

ORIENTATION ()	<input checked="" type="checkbox"/> VERTICAL	<input type="checkbox"/> HORIZONTAL	ANGLE	(SPECIFY)
DEPTH FROM SURFACE	DRILLING METHOD	FLUID	DESCRIPTION	
Ft. to Ft.	Describe material, grain size, color, etc.			
0	55		Brown D.G.	
55	150		B.W. Granite	
150	160		Slightly Fractured B.W. Granite	
			Water: 10 GPM	
160	170		B.W. Granite	
170	175		Slightly Fractured B.W. Granite	
			Water: 15 GPM Total	
175	200		B.W. Granite	
200	260		Fractured B.W. Granite	
			Water: 80 GPM Total	
260	285		B.W. Granite	
285	310		Fractured B.W. Granite	

WELL OWNER

Name Genessee Properties, Inc.
Mailing Address P.O. Box 63
Berthoud, CO 80513
CITY Berthoud STATE CO ZIP 80513
WELL LOCATION
Address SW corner of Hwy 79 & Pine Hills Rd.
City Julian, CA 92036
County San Diego County
APN Book 289 Page 060 Parcel 34
Township 13S Range 3E Section 1
Lat 33 DEG. 04 MIN. 29 SEC. N Long 116 DEG. 37 MIN. 35 SEC. W

LOCATION SKETCH
NORTH



ACTIVITY ()

- ☒ NEW WELL
☐ MODIFICATION/REPAIR
 ☐ Deepen
 ☐ Other (Specify)
☐ DESTROY (Describe Procedures and Materials Under "GEOLOGIC LOG")
USES ()
WATER SUPPLY
☒ Domestic ☐ Public
☐ Irrigation ☐ Industrial
MONITORING ☐
TEST WELL ☐
CATHODIC PROTECTION ☐
HEAT EXCHANGE ☐
DIRECT PUSH ☐
INJECTION ☐
VAPOR EXTRACTION ☐
SPARGING ☐
REMEDIATION ☐
OTHER (SPECIFY) ☐

WATER LEVEL & YIELD OF COMPLETED WELL

DEPTH TO FIRST WATER 150 (Ft.) BELOW SURFACE
DEPTH OF STATIC WATER LEVEL 62 (Ft.) & DATE MEASURED 11/15/10
ESTIMATED YIELD 80 (GPM) & TEST TYPE Air Lift
TEST LENGTH 4 (Hrs.) TOTAL DRAWDOWN (Ft.)
* May not be representative of a well's long-term yield.

TOTAL DEPTH OF BORING 310 (Feet)
TOTAL DEPTH OF COMPLETED WELL 310 (Feet)

DEPTH FROM SURFACE			BORE-HOLE DIA. (Inches)	CASING (S)					ANNULAR MATERIAL					
				TYPE (<input type="checkbox"/>)				MATERIAL / GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)	TYPE		
Ft.	to	Ft.	BLANK	SCREEN	CON- DUCTOR	FILL PIPE								
0	60	12	✓				Steel	8	.188		✓			
												✓		

ATTACHMENTS ()

- ☐ Geologic Log
☐ Well Construction Diagram
☐ Geophysical Log(s)
☐ Soil/Water Chemical Analyses
☐ Other

ATTACH ADDITIONAL INFORMATION, IF IT EXISTS.

CERTIFICATION STATEMENT

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.

NAME Stehly Brothers Drilling, Inc.
(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)
ADDRESS 13268 McNally Rd. Valley Center, CA 92082
CITY Valley Center STATE CA ZIP 92082
Signed Paul Stehly 11/30/10
C-57 LICENSED WATER WELL CONTRACTOR DATE SIGNED 1091686
C-57 LICENSE NUMBER

Well F

Well G

ORIGINAL
File with DWR

STATE OF CALIFORNIA
WELL COMPLETION REPORT

Page 1 of 1

Owner's Well No. #1 Lot 29 WELL G

No. 0943626

Date Work Began 10/21/10, Ended 10/29/10

Local Permit Agency County of San Diego

Permit No. WEL 207231 Permit Date 10/14/10

DWR USE ONLY — DO NOT FILL IN

STATE WELL NO./STATION NO.

LATITUDE

LONGITUDE

APN/TRS/OTHER

GEOLOGIC LOG

ORIENTATION (✓) <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> HORIZONTAL <input type="checkbox"/> ANGLE <input type="checkbox"/> (SPECIFY)		DRILLING METHOD <u>Air Rotary</u> FLUID <input type="checkbox"/>
DEPTH FROM SURFACE		DESCRIPTION
Ft.	to Ft.	Describe material, grain size, color, etc.
0	76	Brown D.G. Medium Soft
76	103	B+W Granite
103	110	Slight Fracture B+W + Brown Granite
110	305	B+W Granite
305	310	Fractured B+W Granite Big Rocks
		Bad Zone Water! 9 GPM (Water tapers off)
310	960	B+W Granite
960	974	Fractured B+W Granite
974	975	Fractured B+W Granite
		Water: 130 GPM Total

TOTAL DEPTH OF BORING 975' (Feet)

TOTAL DEPTH OF COMPLETED WELL 975' (Feet)

WELL OWNER

Name Genessee Properties, Inc.

Mailing Address P.O. Box 63

Berthoud Co. 80513

CITY STATE ZIP

WELL LOCATION

Address Daley Flat Rd.

City Julian

County San Diego

APN Book 289 Page 062 Parcel 07

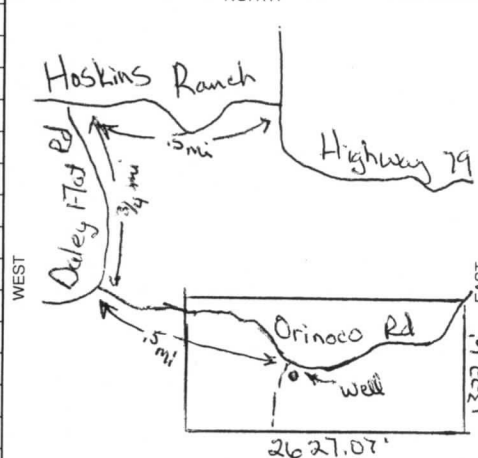
Township 13S Range 3E Section 2

Lat 33 03 59 N Long 116 38 37 W

DEG. MIN. SEC. DEG. MIN. SEC.

LOCATION SKETCH

NORTH



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.

ACTIVITY (✓)

☒ NEW WELL

MODIFICATION/REPAIR

☐ Deepen
☐ Other (Specify)

DESTROY (Describe Procedures and Materials Under "GEOLOGIC LOG")

USES (✓)

WATER SUPPLY

☒ Domestic ☐ Public
☐ Irrigation ☐ Industrial

MONITORING ☐

TEST WELL ☐

CATHODIC PROTECTION ☐

HEAT EXCHANGE ☐

DIRECT PUSH ☐

INJECTION ☐

VAPOR EXTRACTION ☐

SPARGING ☐

REMEDIATION ☐

OTHER (SPECIFY) ☐

WATER LEVEL & YIELD OF COMPLETED WELL

DEPTH TO FIRST WATER 103 (Ft.) BELOW SURFACE

DEPTH OF STATIC WATER LEVEL 103 (Ft.) & DATE MEASURED 10/29/10

ESTIMATED YIELD 130 (GPM) & TEST TYPE Air Lift

TEST LENGTH 4 (Hrs.) TOTAL DRAWDOWN (Ft.)

* May not be representative of a well's long-term yield.

DEPTH FROM SURFACE			BORE-HOLE DIA. (Inches)	CASING (S)						
				TYPE (<input type="checkbox"/>)				MATERIAL / GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS
Ft.	to	Ft.	BLANK	SCREEN	CON-DUCTOR	FILL PIPE				
0	80	12	<input checked="" type="checkbox"/>				Steel	8	1.88	

DEPTH FROM SURFACE			ANNULAR MATERIAL			
			TYPE			
Ft.	to	Ft.	CE- MENT (<input type="checkbox"/>)	BEN- TONITE (<input type="checkbox"/>)	FILL (<input type="checkbox"/>)	FILTER PACK (TYPE/SIZE)
0	76		<input checked="" type="checkbox"/>			
76	80			<input checked="" type="checkbox"/>		

ATTACHMENTS (✓)

- ☐ Geologic Log
- ☐ Well Construction Diagram
- ☐ Geophysical Log(s)
- ☐ Soil/Water Chemical Analyses
- ☐ Other

ATTACH ADDITIONAL INFORMATION, IF IT EXISTS.

CERTIFICATION STATEMENT

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.

NAME Stehly Brothers Drilling, Inc.

(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)

13268 McNally Rd. Valley Center, CA. 92082

ADDRESS CITY STATE ZIP

Signed Paul Stehly

C-57 LICENSED WATER WELL CONTRACTOR

11/30/10 709484

DATE SIGNED C-57 LICENSE NUMBER

Well H

ORIGINAL
File with DWR

STATE OF CALIFORNIA
WELL COMPLETION REPORT

Page 1 of 1

Owner's Well No. #2 Lot 30 WELL H

No. 0943628

Date Work Began 11/4/10 Ended 11/5/10

Local Permit Agency San Diego County

Permit No. LWER 20724 Permit Date 10/14/10

DWR USE ONLY — DO NOT FILL IN

STATE WELL NO./STATION NO.

LATITUDE

LONGITUDE

APN/TRS/OTHER

GEOLOGIC LOG

ORIENTATION (✓) ☒ VERTICAL ☐ HORIZONTAL ☐ ANGLE ☐ (SPECIFY)

DRILLING METHOD Air Rotary FLUID Water

DESCRIPTION

Describe material, grain size, color, etc.

DEPTH FROM SURFACE	Ft.	to	Ft.	DESCRIPTION
0	42			Brown D.G.
42	56			BtW Granite
56	79			Brown D.G. Medium Soft
79	125			BtW Granite
125	135			Slight Fracture BtW Granite
				Water: 20 GPM
135	225			BtW Granite
225	240			Slight Fracture BtW Granite
				Water: 40 GPM Total
240	310			BtW Granite

WELL OWNER

Name Genessee Properties, Inc.

Mailing Address P.O. Box 63

Berthoud Co. 80513

CITY STATE ZIP

WELL LOCATION

Address Daley Flat Rd.

City Julian

County San Diego

APN Book 289 Page 062 Parcel 07

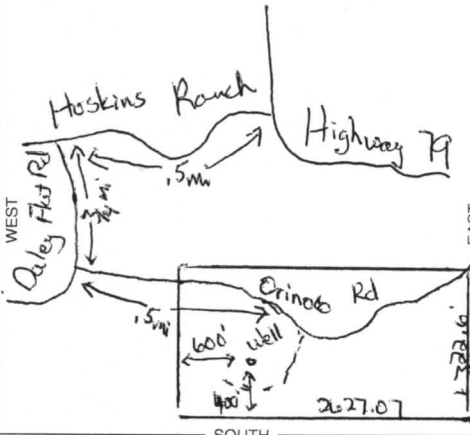
Township 13S Range 3E Section 2

Lat 33 03 54 N Long 116 38 44 W

DEG. MIN. SEC. DEG. MIN. SEC.

LOCATION SKETCH

NORTH



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.**

ACTIVITY (✓)

☒ NEW WELL

MODIFICATION/REPAIR

☐ Deepen

☐ Other (Specify)

☐ DESTROY (Describe Procedures and Materials Under "GEOLOGIC LOG")

USES (✓)

WATER SUPPLY

☒ Domestic ☐ Public

☐ Irrigation ☐ Industrial

MONITORING ☐

TEST WELL ☐

CATHODIC PROTECTION ☐

HEAT EXCHANGE ☐

DIRECT PUSH ☐

INJECTION ☐

VAPOR EXTRACTION ☐

SPARGING ☐

REMEDIATION ☐

OTHER (SPECIFY) ☐

WATER LEVEL & YIELD OF COMPLETED WELL

DEPTH TO FIRST WATER 125 (Ft.) BELOW SURFACE

DEPTH OF STATIC WATER LEVEL 84 (Ft.) & DATE MEASURED 11/5/10

ESTIMATED YIELD 40 (GPM) & TEST TYPE Art Lift

TEST LENGTH 4 (Hrs.) TOTAL DRAWDOWN (Ft.)

* May not be representative of a well's long-term yield.

TOTAL DEPTH OF BORING 310 (Feet)

TOTAL DEPTH OF COMPLETED WELL 310 (Feet)

DEPTH FROM SURFACE			BORE-HOLE DIA. (Inches)	CASING (S)						
				TYPE (<input type="checkbox"/>)			MATERIAL / GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)
Ft.	to	Ft.	BLANK	SCREEN	CON- DUCTOR	FILL PIPE				
0	84	12	<input checked="" type="checkbox"/>				Steel	8	.188	

DEPTH FROM SURFACE			ANNULAR MATERIAL			
			TYPE			
Ft.	to	Ft.	CE- MENT (<input type="checkbox"/>)	BEN- TONITE (<input type="checkbox"/>)	FILL (<input type="checkbox"/>)	FILTER PACK (TYPE/SIZE)
0	79		<input checked="" type="checkbox"/>			
79	84			<input checked="" type="checkbox"/>		

ATTACHMENTS (✓)

- ☐ Geologic Log
- ☐ Well Construction Diagram
- ☐ Geophysical Log(s)
- ☐ Soil/Water Chemical Analyses
- ☐ Other

ATTACH ADDITIONAL INFORMATION, IF IT EXISTS.

CERTIFICATION STATEMENT

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.

NAME Stehly Brothers Drilling, Inc.

ADDRESS 13268 McNally Rd. Valley Center, CA 92082

Signed Paul Stehly DATE SIGNED 11/30/10

C-57 LICENSED WATER WELL CONTRACTOR

C-57 LICENSE NUMBER 709686

Well I

Well J

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
ATTN: Sheryll Givens
438 Camino Del Rio South, #223
San Diego, CA 92108
619-299-2525

Well Site: Hoskings Ranch Project Well#6 Lot 32
APN: 289-060-34 Lot 32
SW Corner of Hwy 79 & Pine Hills Rd.
Julian, CA 92036
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:

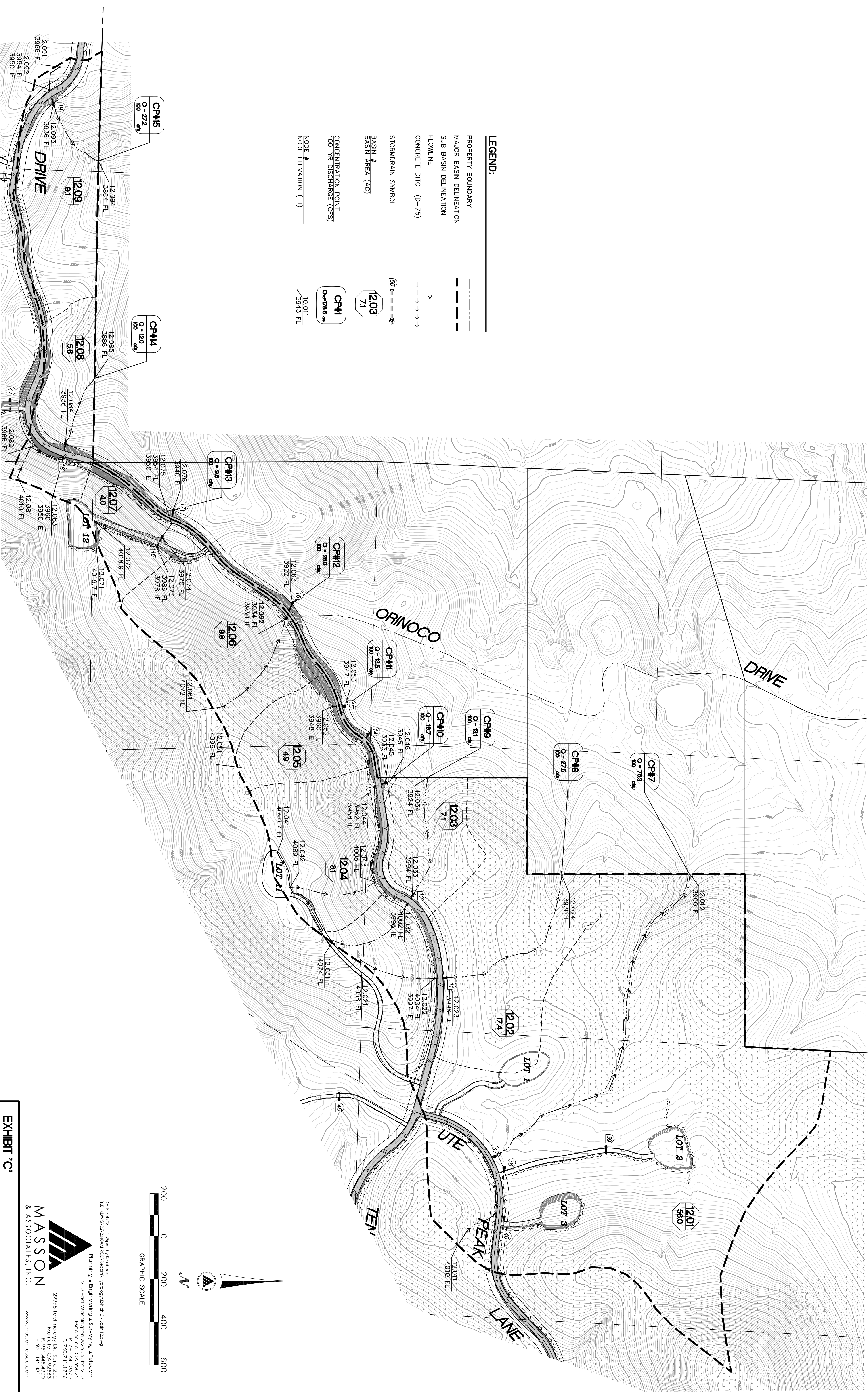
Total Well Depth:	1010'
Hole Diameter:	6 1/2" hole
Casing:	42' of 8 5/8" steel casing
Surface Seal:	Cement
Water:	3 GPM
Static Water Level:	96' 11/30/10

4 Hour Air Lift Test

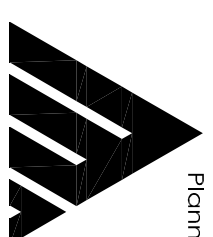
1 st Hour	10 GPM
2 nd Hour	4 GPM
3 rd Hour	3 GPM
4 th Hour	3 GPM

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

Appendix B
Drainage Map



DATE: Feb 03, 11 12:55pm by: kcs@masson.com
FILE: D:\WG\07\2010\A\FPCD\Report\Hydrology\Exhibit C - Basin 12.dwg
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