

***Appendix B***  
*Field Monitoring Records*

# Daily Log



RUBICON  
Engineering Corporation

Project Number: 1073.01

Project Name: Rancho Malibu

Project Location: Malibu, CA

Date: 3-31-14

Field Personnel: DR/PL

Notes: 0515 - Report for site.

0640 - Arrived on site

0650 - J&H drillers arrived on site, waiting on Peter Lee.

0704 - Peter Lee arrives on site, move and set up  
at RM-2. Conducted Health and safety meeting.  
Hand auger to 5'.

0745 - Mohsen Mehran arrives on site, discuss days  
well installation

0820 - Hand auger complete, begin drilling.

0900 - Collected sample RM-2-20

0935 - Melvin Larson arrived onsite, from LACPH.

1000 - collected sample RM-2-50

1240 - collected sample RM-2-95

1300 - Drillers take lunch, at 96' bgs. no water yet  
spoke with P.M. Mohsen Mehran. He said to drill till  
we hit water, then drill 15 more feet.

1325 - Continue drilling from 96'.

1350 - Encountered water at 100' bgs.

1445 - at 110' drilling is slow.

1450 - collected RM-2-110, cleaning out borehole and  
begin well install.

1510 - Borehole too hot. Waiting till it cools.

1700 - Borehole cool enough to begin building well.

Will place 2" PVC, sand, and Bentonite, cover and  
grout in am. Peter Lee reports site

1815 - PVC, sand, and Bentonite in. Depart site.

DR 13 hrs

# Daily Log



RUBICON  
Engineering & Construction

Project Number: 1073.01 Project Name: Rancho Malibu Project Location: Malibu  
Date: 4-1-14 Field Personnel: DR/PL

- Notes: 0630 - Depart for site.
- 0648 - Arrive on site, Met drillers. Conducted Health and safety briefing, Begin grouting up boring.
- 0700 - Peter Lee arrives on site.
- 0830 - Rm-3 is grouted up. Moved to Rm-3. Hand auger to 5'.
- 0900 - Hand auger complete. Begin drilling.
- 0930 - Collected sample Rm-3-20
- 1050 - Collected sample Rm-3-50
- 1230 - Drillers Break for lunch. at 85' bgs.
- 1255 - Drillers finished lunch Break.
- 1715 - Drilled to 199' bgs. No water. Called Mahsen left message. will return 0700 4-2-14 and continue drilling until we hit water.
- 1745 - cleaned up and Depart site

DR 11 hrs

4-2-14

- 0630 - Depart for site
- 0645 - Arrived at site, met drillers and Peter Lee. conducted health and safety briefing.
- 0700 - Begin pulling auger. more auger is delivered.
- 1030 - at 150' bgs. soil came up dry but water is inside auger. bailing out water, will see if we get recharge.
- 1345 - Removed approximately 150 gallons of water. Not sure if we are in aquifer or if perched water is leaking downward. waiting to see if water recharges.

# Daily Log



RUBICON  
SURFACE EXPLORATION

Project Number: 1073001 Project Name: Rancho Malibu Project Location: Malibu

Date: 4-2-14 Field Personnel: PL/DR

Notes: (cont.) notified Mohsen of our plan.

1355 - Drillers break for lunch. waiting to see if borehole Recharges.

1430 - Borehole did not yet measurably recharge, called Mohsen, discussed situation, decided to place temporary well at 155. let it sit overnight.

1445 - Begin setting temp. well. 30ft of screen 155-125. Peter Lee is staying.

4-3-13

DR 8.5 hrs

0630 - Depart for site

0655 - Arrive on site. met J&H drillers.

conducted health and safety briefing.

checked water levels in RM-3.

Water is at 102.65. Called Mohsen.

Discussed options. decided to build well

as 15. Screen is 155-125. No geotechnical sample in water bearing zone collected for RM-3 due to difficulty in defining water bearing zone.

0930 - well grout complete. setting well box.

0945 - moved to RM-1, set up and hand angering to 5'.

1115 - collect sample RM-1-20

1245 - collected sample RM-1-50. Drillers took lunch.

1310 - Drillers finished lunch. continue drilling from 50' bgs.

1555 - Rig transmission broken. waiting for drillers to decide what to do. Pounding last sample of the day at 85' bgs. Pilled auger out to 70'. will let sit overnight to see if any water in borehole tomorrow morning. Clean up.

1645 Depart site

DR 10.5 hrs

# Daily Log



RUBICON  
Consulting Corporation

Project Number: 1073.01 Project Name: Rancho Mahbu Project Location: Mahbu.

Date: 4-4-14 Field Personnel: DR/PL

Notes: 0630 - Depart for site  
0650 - Arrive on site, met drillers, met Peter Lee.  
Checked RM-1 borehole for water.  
0725 - No water in borehole, emailed mohsen.  
pulling auger, covering borehole with steel plate.  
0830 - Auger pulled. Borehole covered.

DR = 3.5 hrs

Monday March 7

0520 - Depart for site  
0620 - Arrive on site waiting for J&H drillers.  
0644 - J&H chase truck arrives on site.  
0655 - J&H drill rig arrives on site, conducted  
health and safety meeting and set up a  
boring RM-1, checked to see if any  
water in boring, water at 76.5. Saturated  
zone less than 4' thick. called mohsen,  
He said to drill to 91' and call him back.  
0730 - City of Mahbu public works came by, said  
we have to move our vehicles off shoulder  
behind telephone poles to stay on property.  
Said we could get an encroachment permit if  
needed. Travis Hart was the inspector.  
0930 - at 91.5' called mohsen, discussed options.  
Decided to set well at 91' bgs.  
1150 - Well set. Loading equipment, washing augers,  
moving to RM-4.

# Daily Log



RUBICON  
Engineering Corporation

Project Number: 1073.01

Project Name: Ranch Malibu

Project Location: Malibu

Date: 4-7-14

Field Personnel: DR

Notes: (cont)

1245 - set up at RM-4, begin hand auger to 5' bgs.

1320 - Peter Lee arrived on site, drillers to lunch.

1400 - collected RM-4-20

1510 - collected RM-4-50

1640 - Drilled to 80', cleaned up and

1710 - Depart site

8 APRIL 14

DR 12 hrs

0630 - report for site

0645 - Arrive on site, waiting for drillers and Peter Lee.

0700 - drillers arrive on site, conduct health and safety meeting, moved to RM-4, began drilling from 80' bgs.

1325 - Hit a saturated layer with water at 127'-128' bgs called mohsen. He said to stop continuous sampling and go to 135'. Then pull up and wait till tomorrow am.

1345 - Hit saturated layer at 135'. Called mohsen back. Decided to drill 15' into saturated layer, then set well.

1500 - Drilled to 145' bgs, no longer saturated, borehole too hot to set well, pulling up auger and return am to set well.

DR 9 hrs

# Daily Log



RUBICON  
ENGINEERING CORPORATION

Project Number: 1073.01

Project Name: Rancho Malibu

Project Location: Malibu CA

Date: 4-9-14

Field Personnel: PL/DR

Notes: 0630 - Depart for site

0650 - Arrive on site, meet drillers and Peter Lee, moved to RM-4.

0710 - Water level in Borehole at 141.5, cleaning out borehole and setting well.

0945 - RM-4 well set, cleaning up and moving to RM-5.

1025 - Arrived at RM-5. Preping site and hand augering to 5'.

1125 - Collected sample RM-5-20

1155 - Encountered large Rock in RM-5 at 40' bgs. Trying to drill through.

1240 - Drillers Break for lunch, collected RM-5-50

1305 - Break over, drilling from 50'.

1430 - at 75' bgs. Now sampling continuously in search of saturated zone.

1630 - at 90' bgs. No water yet, stopped drilling for the day and pulled up to 75' bgs to see if any water flows in overnight.

Depart site.

DR 10.5 hrs

10 April 14

0640 - Depart for site

0710 - Arrive on site, met J&W drillers and Peter Lee. Conducted Health and Safety meeting. Continued drilling continuously from 90' bgs.

1245 - Drillers break for lunch, at 120' pulled up to 100' to see if any water entered borehole.

1320 - No water in borehole after 30 minutes. Decided to drill down to 130' <sup>Sampling</sup> continuously, then check again.

# Daily Log



RUBICON  
Engineering Corporation

Project Number: 1073.01

Project Name: Rancho Mahon

Project Location: Malibu

Date: 4-10-14

Field Personnel: DR/PL

Notes: 1505 - Thought we may have hit water at 127' bgs.

but 129 sample was dry. called Mohsen.

Decided to drill to 140' bgs, let borehole sit overnight, and check in am. Drilling to 140, sampling changed to every 5'.

1630 - AT 137. Driller says he will not be able to get to 140. collecting sample. pulling up auger to 110'.

1645 - DR reports site.

DR 10.5 hrs

4-11-14

0630 - Report for site

0650 - Arrive on site, meet drillers, conducted health and safety meeting, checking water level in RM-5. 2' of water in borehole.

0715 will attempt to drill to 140' bgs, for 2 hrs

0812 - collected RM-5-140 sample.

will begin building well.

1120 - well is in, set at 140' bgs. Peter Lee staying for clean up.

1130 - Depart site for home

1330 - Arrived Westminster

DR 7 hrs

Daily Log

Project Name: Green Acres, LLC  
Project Location: Malibu, CA

Date: 4/14/14 ~ 4/15/14  
Project Number: 1073.01A

4/14/15

0700 arrived on site, conducted HASP  
0730 began developing RM-2  
1000 began pumping with submersible pump  
1015 end development  
1040 began developing RM-3  
1240 pumped with submersible pump  
1250 end development  
1350 began developing RM-1  
1505 end development

4/15/14

0700 arrived on site, conduct HASP  
0730 began developing RM-5  
0850 end development  
1020 began developing RM-4  
1215 end development

# FIELD GROUND WATER MONITORING FORM

Project Name: Green Acres, LLC  
 Project Location: Malibu, CA

Date: 4/14/14  
 Project #: 1073.01A

Well No: RM-1

TD: 91.0  
 DTW: 72.22  
 1 volume: 3 gallons  
 3 volumes: 9 gallons

Notes:

Purge Volume (Gal.)	0	1	2	3	4	5			
Time	13:58	14:20	14:27	14:36	14:52	15:01			
pH	8.33	8.64	8.78	8.63	8.65	8.63			
ec (umhos/cm)	2556	2274	2327	2350	2514	2596			
Temperature (°F/°C)	74.0	73.1	70.5	71.6	70.9	70.2			
TDS (ppm)	1275	1139	1163	1177	1256	1298			
Turbidity (NTUs)	>999	>999	>999	>999	>999	>999			
Dissolved O <sub>2</sub> (mg/l)									
ORP									

Comments:

# FIELD GROUND WATER MONITORING FORM

Project Name: Green Acres, LLC  
 Project Location: Malibu, CA

Date: 4/14/14  
 Project #: 1073.01A

Well No: RM-2

Notes:

TD: 114.85  
 DTW: 48.86

1 volume: 2.69 gallons  
 3 volumes: 7.9 gallons

Purge Volume (Gal.)	0	1	4	7	10	12	14	16	18
Time	0736	0809	0900	0946	1005	1006	1008	1009	1011
pH	6.25	6.86	6.70	6.38	6.74	6.32	6.33	6.31	6.33
ec (umhos/cm)	3336	3002	2996	3327	3249	3233	3227	3218	3226
Temperature (°F/°C)	68.8	70.4	72.1	73.8	76.5	74.8	73.9	73.5	73.2
TDS (ppm)	1668	1501	1498	1665	1626	1620	1615	1611	1613
Turbidity (NTUs)	>999	>999	>999	>999	>999	>999	>999	>999	910
Dissolved O <sub>2</sub> (mg/l)									
ORP									

Comments:

# FIELD GROUND WATER MONITORING FORM

Project Name: Green Acres, LLC  
Project Location: Malibu, CA

Date: 4/14/14  
Project #: 1073.01A

Well No: RM-2 (continued)

Notes: \_\_\_\_\_  
TD: \_\_\_\_\_  
DTW: \_\_\_\_\_  
1 volume: \_\_\_\_\_  
3 volumes: \_\_\_\_\_

Purge Volume (Gal.)	19	20	21						
Time	1012	1013	1014						
pH	6.38	6.41	6.35						
ec (umhos/cm)	3212	3231	3206						
Temperature (°F/°C)	73.1	73.0	72.8						
TDS (ppm)	1605	1615	1602						
Turbidity (NTUs)	922	901	912						
Dissolved O <sub>2</sub> (mg/l)									
ORP									

Comments: \_\_\_\_\_

# FIELD GROUND WATER MONITORING FORM

Project Name: Green Acres, LLC  
 Project Location: Malibu, CA

Date: 4/14/14  
 Project #: 1073.01A

Well No: RM-3

TD: 153.60  
 DTW: 70.37  
 1 volume: 13.3 gallons  
 3 volumes: 40 gallons

Notes:

Purge Volume (Gal.)	0	1	2	3	4	5			
Time	10:45	11:17	11:46	12:32	12:45	12:50			
pH	7.37	7.63	7.37	7.91	7.69	7.74			
ec (umhos/cm)	3092	2780	2746	2858	3060	2988			
Temperature (°F/°C)	73.2	67.2	68.6	68.3	71.8	70.2			
TDS (ppm)	1545	1392	1383	1430	1526	1495			
Turbidity (NTUs)	>999	>999	>999	>999	>999	>999			
Dissolved O <sub>2</sub> (mg/l)									
ORP									

Comments: purged until well went dry  
pump

# FIELD GROUND WATER MONITORING FORM

Project Name: Green Acres, LLC  
 Project Location: Malibu, CA

Date: 4/15/14  
 Project #: 1073.01A

Well No: RM-4

TD: 144.5  
 DTW: 95.21

1 volume: 7.9 gallons  
 3 volumes: 23.9 gallons

Notes:

Purge Volume (Gal.)	0	1	2	3	4				
Time	10:28	11:08	11:32	11:56	12:14				
pH	8.26	8.16	8.18	8.26	8.13				
ec (umhos/cm)	3008	2969	2954	3011	3148				
Temperature (°F/°C)	72.8	71.2	71.7	73.8	74.9				
TDS (ppm)	1563	1484	1474	1505	1574				
Turbidity (NTUs)	>999	>999	>999	>999	>999				
Dissolved O <sub>2</sub> (mg/l)									
ORP									

Comments:

# FIELD GROUND WATER MONITORING FORM

Project Name: Green Acres, LLC  
 Project Location: Malibu, CA

Date: 4/15/14  
 Project #: 1073.01A

Well No: RM-5

TD: 140.1  
 DTW: 123.32  
 1 volume: 2.7 gallons  
 3 volumes: 8.1 gallons

Notes:

Purge Volume (Gal.)	0	1	2	3	4	5			
Time	0732	0741	0748	0804	0825	0845			
pH	7.14	7.04	7.11	7.15	7.10	7.15			
ec (umhos/cm)	1968	1962	1954	2030	1968	1998			
Temperature (°F/°C)	66.7	66.9	70.5	68.9	69.2	70.9			
TDS (ppm)	984	981	997	1015	984	998			
Turbidity (NTUs)	>999	>999	>999	>999	>999	>999			
Dissolved O <sub>2</sub> (mg/l)									
ORP									

Comments:

## Daily Log

Project Name: Green Acres, LLCDate: 4/23/14Project Location: Malibu, CAProject Number: 1073.01A

0630 Arrived on Site  
Conduct HASP

0645 Begin GW Level measurements - RM-1 to RM-5

0740 Begin purging at RM-1

0832 complete purging 3 volumes

0900 Move to RM-2 and begin purging

0943 complete purging 3 volumes

1006 Move to RM-3 and begin purging

1036 Well went dry after  $\approx 1.5$  purge volume (22 gallons)

11:50 collect GW sample RM-1

12:25 " " " RM-2

12:58 " " " RM-3

14:39 Sample delivered to Calscience.

## Daily Log

4/24/14

Project Name: Green Acres, LLC  
Project Location: Malibu, CADate: \_\_\_\_\_  
Project Number: 1073.01A

0700 Arrived on Site  
Conduct HASP

0730 Begin purging at RM-4

0826 Well went dry after 18 gallons  $\approx$  2.5 purge volume

0845 Move to RM-5 and begin purging

1002 purged 3 volumes

1020 collected GW sample RM-5

1055 " " " RM-4

1310 Samples delivered to Calscence.



# FIELD GROUND WATER MONITORING FORM

Project Name: Green Acres, LLC  
 Project Location: Malibu, CA

Date: 4/23/14  
 Project Number: 1073.01A

Well No: RM-1

TD: 91.3  
 DTW: 75.21 > 16.1

Notes:   
 1 volume: 2.6  
 3 volumes:

Purge Volume (Gal.)	0	1	2	3			
Time	0754	0809	0819	0832			
pH	8.17	8.08	8.19	8.27			
ec (umhos/cm)	2360	2355	2345	2412			
Temperature (°F/°C)	69.1	69.2	68.8	69.8			
TDS (ppm)	1180	1176	1172	1206			
Turbidity (NTUs)	>999	>999	>999	>999			
Dissolved O <sub>2</sub> (mg/l)							
ORP							

Comments:

# FIELD GROUND WATER MONITORING FORM

Project Name: Green Acres, LLC  
 Project Location: Malibu, CA

Date: 4/23/14  
 Project Number: 1073.01A

Well No: RM-2

Notes:

TD: 115.1  
 DTW: 98.86 > 16.24  
 1 volume: 2.6  
 3 volumes:

Purge Volume (Gal.)	0	1	2	3		
Time	0931	0935	0939	0943		
pH	6.43	6.33	6.30	6.28		
ec (umhos/cm)	3393	3318	3320	3300		
Temperature (°F/°C)	70.8	72.3	73.5	74.1		
TDS (ppm)	1696	1659	1656	1656		
Turbidity (NTUs)	>999	955	784	449		
Dissolved O <sub>2</sub> (mg/l)						
ORP						

Comments:

# FIELD GROUND WATER MONITORING FORM

Project Name: Green Acres, LLC  
 Project Location: Malibu, CA

Date: 4/23/14  
 Project Number: 1073.01A

Well No: RM-3

Notes:

TD: 154.4      1 volume: 14.1  
 DTW: 66.43 > 88      3 volumes:

Purge Volume (Gal.)	0	1	2	3			
Time	10:24	10:36					
pH	7.18	7.16					
ec (umhos/cm)	3188	3100					
Temperature (°F/°C)	70.0	72.8					
TDS (ppm)	1594	1549					
Turbidity (NTUs)	>999	>999					
Dissolved O <sub>2</sub> (mg/l)							
ORP							

Comments: went dry @ 10:44 purged 22 gallons ≈ 1.5 volume

# FIELD GROUND WATER MONITORING FORM

Project Name: Green Acres, LLC  
 Project Location: Malibu, CA

Date: 4/24/14  
 Project Number: 1073.01A

Well No: RM-4

Notes:

TD: 144.5  
 DTW: 95.11  
 1 volume: 7.9  
 3 volumes: > 49.4

Purge Volume (Gal.)	0	1	2	3			
Time	0755	0805	0822				
pH	7.74	7.73	7.73				
ec (umhos/cm)	3271	3092	3177				
Temperature (°F/°C)	69.1	73.7	74.8				
TDS (ppm)	1635	1546	1589				
Turbidity (NTUs)	>999	>999	>999				
Dissolved O <sub>2</sub> (mg/l)							
ORP							

Comments:

# FIELD GROUND WATER MONITORING FORM

Project Name: Green Acres, LLC  
 Project Location: Malibu, CA

Date: 4/24/14  
 Project Number: 1073.01A

Well No: RM-5

Notes:

TD: 140.1      1 volume: 2.68  
 DTW: 123.38 > 16.72      3 volumes:

Purge Volume (Gal.)	0	1	2	3			
Time	0900	0916	0940	1002			
pH	6.88	6.79	6.65	6.68			
ec (umhos/cm)	2051	2054	2033	2059			
Temperature (°F/°C)	71.8	72.0	72.3	72.0			
TDS (ppm)	1025	1027	1016	1029			
Turbidity (NTUs)	>999	>999	>999	>999			
Dissolved O <sub>2</sub> (mg/l)							
ORP							

Comments:

# Daily Log

Project Name: Green Acres, LLC  
Project Location: Malibu, CA

Date: 7/15/14  
Project Number: 1073.01A

- 0700 Arrived on site and conduct HASP
- 0715 Begin GW level measurements - all 5 wells
- 0850 set up and begin purging at RM-1
- 0919 RM-1 went dry after 21 gallons ( $\approx 2.3$  purge volumes)
- 0950 moved to RM-3 and begin purging
- 1008 RM-3 went dry after 20 gallons ( $\approx 1.4$  purge volumes)
- 1038 moved to RM-2 and begin purge
- 1058 completed purging 3 volumes and collected GW sample RM-2
- 1141 went back to RM-3 and collected sample RM-3
- 1158 collected GW sample RM-1
- 1406 samples delivered to Calscience

Daily Log

7/16/14

Project Name: Green Acres, LLC

Date:

Project Location: Malibu, CA

Project Number: 1073.01A

- 0630 Arrived on Site conducted HASP
- 0710 begin purging at RM-4
- 0732 the well went dry after 22 gallons ( $\approx 2.6$  purge volumes)
- 0830 moved to RM-5 and began purging
- 0850 well went dry after 6 gallons ( $\approx 2.2$  purge volumes)  
wait for recharge
  
- 0938 collected GW sample RM-4
- 1010 " " " RM-5
  
- 1234 GW samples delivered to Calscience.



# FIELD GROUND WATER MONITORING FORM

Project Name: Green Acres, LLC  
 Project Location: Malibu, CA

Date: 7/15/14  
 Project Number: 1073.01A

Well No: RM-1

TD: ~~35.28~~ 91.3 1 volume: 9 gallons  
 DTW: ~~91.3~~ 35.28 3 volumes: 27 "

Notes:

Purge Volume (Gal.)	0	1	2	3			
Time	0900	0908	0917				
pH	8.11	8.14	8.19				
ec (umhos/cm)	2248	2249	2390				
Temperature (°F/°C)	72.2	72.1	73.8				
TDS (ppm)	1149	1124	1192				
Turbidity (NTUs)	390	240	480				
Dissolved O <sub>2</sub> (mg/l)	7.85	8.23	2.5				
ORP mV	69	121	4				

Comments: well went dry @ 0919 after 21 gallons

sampled at 1158

# FIELD GROUND WATER MONITORING FORM

Project Name: Green Acres, LLC  
 Project Location: Malibu, CA

Date: 9/15/14  
 Project Number: 1073.01A

Well No: RM-2

TD: 115.1  
 DTW: 99.45

1 volume: 2.5  
 3 volumes: 7.5

Notes:

Purge Volume (Gal.)	0	1	2	3		
Time	10:41	10:43	10:45	10:47		
pH	6.59	6.37	6.37	6.38		
ec (umhos/cm)	3359	3289	3273	3280		
Temperature (°F/°C)	76.3	74.5	74.2	74.1		
TDS (ppm)	1676	1644	1636	1640		
Turbidity (NTUs)	>999	>999	500	270		
Dissolved O <sub>2</sub> (mg/l)	8.52	4.19	2.98	8.56		
ORP mV	10	26	4	155		

Comments:

sampled @ 10:58