

ATTACHMENT 5: WATER LEVEL MEASUREMENTS

This attachment contains water level measurements for the JPL relatively shallow standpipe monitoring wells (MW-1, MW-5 through MW-10, MW-13, MW-15, and MW-16) and the Westbay™ multiport wells (MW-3, MW-4, MW-11, MW-12, MW-14, and MW-17 through MW-26) obtained during the second quarter 2021. Water level measurements were recorded before the sampling event on May 17, 2021, for the relatively shallow standpipe monitoring wells and May 17, 18, 19, 24, 25, and 26, 2021 for the Westbay™ multiport wells. Water level measurements were recorded after the sampling event on June 3 and 4, 2021, for the relatively shallow standpipe monitoring wells and the Westbay™ multiport wells. Water levels for the shallow wells were measured using a Solinst™ water level meter. In the deep multiport wells, the hydraulic head at each sampling port was measured with a Westbay™ MOSDAX sampling probe. Water level measurements were conducted by Blaine Tech Services, Inc.

WELL GAUGING DATA

Project # 210S17HS-1 Date 05/17/21 Client Tidewater

Site JPL Pasadena CA

Well ID	Well Size (in.)	Time Gauged	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC
MW-1	4	1445					24.96	Ded. Pump	
MW-5	4	0940					134.19	135.55	
MW-6	4	1020					DRY	238.19	
MW-7	4	1040					DRY	268.08	
MW-8	4	1115					DRY	202.10	
MW-9	4	1500					19.22	Ded. Pump	
MW-10	4	1000					DRY	153.33	
MW-13	4	0840					DRY	234.86	
MW-15	4	0855					30.84	Ded. Pump	
MW-16	4	0920					284.50	285.36	(E)

**WESTBAY™ GROUNDWATER MONITORING WELL
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-3
 DATE: 5/17/21
 LOCATION: JPL
 ELEV. TOP OF WESTBAY CASING: 1100.34
 WEATHER: Cloudy

PROBE TYPE: Westbay Sampler 0-500psi
 SERIAL NO.: EMS 2502
 PROJECT: JPL Pasadena
 OPERATOR(S): L. Henderson
 ATM. PRESSURE (Palm): (start) 14.09 (finish) 14.11
 Temp: 18.38°C 17.67°C

DTW - 196.10

Port No.	Depth to Meas. Port Valve (ft)		Pressure Readings (psi)				Pressure Head Outside Port (ft) <small>P(ft)=[P2-Palm]*2.307 ft/psi</small>	Depth to Water Outside Port (ft) <small>DTW = Dp-P(ft)</small>	True Port Depth (Dp) (ft)	Time
	From Log (Dp)	From Cable	psi Inside Casing	kg/cm ² Outside Casing P2	mH ₂ O Inside Casing	Trans. Temp. (oC)				
5	653	651	213.97	216.60	213.97	19.25	467.19	185.81	653	1442
4	558	556	172.60	176.10	172.60	19.42	373.76	184.24	558	1445
3	346	344	80.18	84.43	80.18	18.94	162.27	183.73	346	1450
2	252	250	37.02	44.83	37.02	18.54	70.92	181.08	252	1453
1	172	170	14.20	16.30	14.20	18.12	5.10	166.90	172	1456

Comments: Collar Detect is 2' above sample port

**WESTBAY™ GROUNDWATER MONITORING WELL
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-4
 DATE: 5/19/21
 LOCATION: JPL
 ELEV. TOP OF WESTBAY CASING 1082.84
 WEATHER: cloudy
 DTU - 165.18

PROBE TYPE Westbay Sampler 0-500psi
 SERIAL NO. EMS 2502
 PROJECT JPL Pasadena
 OPERATOR(S) L. Henderson
 ATM. PRESSURE (Patm): (start) 14.06 (finish) 14.07
 Temp: 20.33 19.44°C

Port No.	Depth to Meas. Port Valve (ft)		Pressure Readings (psi)				Pressure Head Outside Port (ft) P(ft)=(P2-Patm)*2.307 ft/psi	Depth to Water Outside Port (ft) DTW = Dp-P(ft)	True Port Depth (Dp) (ft)	Time
	From Log (Dp)	From Cable	psi Inside Casing	kg/cm ² Outside Casing P2	mH ₂ O Inside Casing	Trans. Temp. (°C)				
5	513	511	166.22	166.35	166.22	22.09	351.33	161.67	513	0810
4	392	390	113.44	114.09	113.44	21.76	230.77	161.23	392	0818
3	322	320	82.88	83.87	82.88	21.42	161.05	160.95	322	0821
2	240	238	47.06	48.89	47.06	20.97	80.35	159.65	240	0823
1	150	148	14.15	14.14	14.15	20.02	0.18	149.82	150	0826

Comments: Collar Detect is 2' above sample port

**WESTBAY™ GROUNDWATER MONITORING WELL
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-11
 DATE: 5/18/21
 LOCATION: JPL
 ELEV. TOP OF WESTBAY CASING: 1139.3
 WEATHER: cloudy

PROBE TYPE: Westbay Sampler 0-500psi
 SERIAL NO.: EMS 2502
 PROJECT: JPL Pasadena
 OPERATOR(S): L. Henderson
 ATM. PRESSURE (Palm): (start) 14.08 (finish) 14.06
 Temp: 17.18°C 18.62

DTU = 210.51

Port No.	Depth to Meas. Port Valve (ft)		Pressure Readings (psi)				Pressure Head Outside Port (ft) <small>P(ft)=(P2-Patm)*2.307 ft/psi</small>	Depth to Water Outside Port (ft) <small>DTW = Dp-P(ft)</small>	True Port Depth (Dp) (ft)	Time
	From Log (Dp)	From Cable	psi Inside Casing	kg/cm ² Outside Casing P2	mH ₂ O Inside Casing	Trans. Temp. (oC)				
5	639	637	199.75	175.64	199.75	19.69	372.72	266.28	639	0856
4	524	522	150.17	150.10	150.17	20.35	313.80	210.20	524	0858
3	429	427	109.21	108.24	109.21	20.31	217.23	211.77	429	0900
2	259	257	35.42	40.30	35.42	19.63	60.49	198.51	259	0903
1	149	147	14.15	23.16	14.15	18.89	20.95	128.05	149	0905

Comments: Collar Detect is 6" above sample port

**WESTBAY™ GROUNDWATER MONITORING WELL
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-12
 DATE: 5/18/21
 LOCATION: JPL
 ELEV. TOP OF WESTBAY CASING: 1102.14
 WEATHER: cloudy
 DTW - 144.10

PROBE TYPE: Westbay Sampler 0-500psi
 SERIAL NO.: EMS 2502
 PROJECT: JPL Pasadena
 OPERATOR(S): L. Henderson
 ATM. PRESSURE (P_{atm}): (start) 14.07 (finish) 14.06
 Temp: 18.44°C 18.26°C

Port No.	Depth to Meas. Port Valve (ft)		Pressure Readings (psi)				Pressure Head Outside Port (ft) P(f)=(P2-Patm)*2.307 ft/psi)	Depth to Water Outside Port (ft) DTW = Dp-P(f)	True Port Depth (Dp) (ft)	Time
	From Log (Dp)	From Cable	psi Inside Casing	kg/cm ² Outside Casing P2	mH ₂ O Inside Casing	Trans. Temp. (oC)				
5	548	546	190.86	152.11	190.86	19.89	318.46	229.54	548	0816
4	436	435	142.10	122.08	142.10	20.38	249.18	186.82	436	0819
3	323	322	92.87	76.47	92.87	19.94	143.96	179.04	323	0821
2	243	242	57.99	42.82	57.99	19.30	66.33	176.67	243	0823
1	140	139	14.16	14.18	14.16	18.67	0.25	139.75	140	0826

Comments: Collar Detect is 6" above sample port

**WESTBAY™ GROUNDWATER MONITORING WELL
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-14

DATE: 5/18/21

LOCATION: JPL

ELEV. TOP OF WASTBAY CASING 1173.47

WEATHER: cloudy

DTW - 196.33

PROBE TYPE Westbay Sampler 0-500psi

SERIAL NO. EMS 2502

PROJECT JPL Pasadena

OPERATOR(S) L. Henderson

ATM. PRESSURE (Patm): (start) 14.07 (finish) 14.01

Temp: 18.41°C 19.66°C

Port No.	Depth to Meas. Port Valve (ft)		Pressure Readings (psi)				Pressure Head Outside Port (ft) $P(f) = (P2 - Patm) * 2.307 \text{ ft/psi}$	Depth to Water Outside Port (ft) $DTW = Dp - P(f)$	True Port Depth (Dp) (ft)	Time
	From Log (Dp)	From Cable	psi Inside Casing	kg/cm ² Outside Casing P2	mH ₂ O Inside Casing	Trans. Temp. (°C)				
5	540	538	164.83	147.69	164.83	20.23	308.26	231.74	540	0955
4	456	454	128.15	111.44	128.15	20.60	224.63	231.37	456	0959
3	382	381	95.87	79.38	95.87	20.49	150.67	231.33	382	1000
2	277	275	50.09	33.68	50.09	20.06	45.24	231.76	277	1004
1	207	206	19.48	14.22	19.48	19.89	0.35	206.65	207	1006

Comments: Collar Detect is 6" above sample port

**WESTBAY™ GROUNDWATER MONITORING WELL
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-17
 DATE: 5/26/21
 LOCATION: JPL
 ELEV. TOP OF WASTBAY CASING 1191.21
 WEATHER: clear, Sunny
 DTW - 209.66

PROBE TYPE Westbay Sampler 0-500psi
 SERIAL NO. EMS 2502
 PROJECT JPL Pasadena
 OPERATOR(S) L. Henderson
 ATM. PRESSURE (Palm): (start) 14.01 (finish) 14.05
 Temp: 21.19°C 17.28°C

Port No.	Depth to Meas. Port Valve (ft)		Pressure Readings (psi)				Pressure Head Outside Port (ft) P(ft)=(P2-Patm)*2.307 ft/psi)	Depth to Water Outside Port (ft) DTW = Dp-P(ft)	True Port Depth (Dp) (ft)	Time
	From Log (Dp)	From Cable	psi Inside Casing	kg/cm ² Outside Casing P2	mH ₂ O Inside Casing	Trans. Temp. (oC)				
5	726	725	238.81	176.25	238.81	19.80	374.29	351.71	726	0819
4	582	581	176.45	124.53	176.45	19.81	254.97	327.03	582	0823
3	468	467	126.96	92.43	126.96	19.12	180.91	287.09	468	0825
2	370	369	84.41	54.32	84.41	18.04	93.00	277.00	370	0828
1	250	250	32.17	14.16	32.17	17.48	0.35	249.65	250	0830

Comments: Collar Detect is 6" above sample port

**WESTBAY™ GROUNDWATER MONITORING WELL
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-18
 DATE: 5/17/21
 LOCATION: JPL
 ELEV. TOP OF WESTBAY CASING: 1225.41
 WEATHER: cloudy

PROBE TYPE: Westbay Sampler 0-500psi
 SERIAL NO.: EMS 2502
 PROJECT: JPL Pasadena
 OPERATOR(S): L. Henderson
 ATM. PRESSURE (Patm): (start) 14.04 (finish) 14.06
 Temp: 17.56°C 18.00°C

DTW = 294.92

Port No.	Depth to Meas. Port Valve (ft)		Pressure Readings (psi)				Pressure Head Outside Port (ft) $P(H) = (P2 - Patm) * 2.307 \text{ ft/psi}$	Depth to Water Outside Port (ft) $DTW = Dp - P(ft)$	True Port Depth (Dp) (ft)	Time
	From Log (Dp)	From Cable	psi Inside Casing	kg/cm ² Outside Casing P2	mH ₂ O Inside Casing	Trans. Temp. (oC)				
5	684	682	184.21	158.81	184.21	19.54	333.98	350.02	684	1351
4	564	562	131.99	112.20	131.99	20.21	226.46	337.54	564	1355
3	424	422	71.00	62.89	71.00	19.62	112.70	311.30	424	1358
2	330	328	29.99	23.94	29.99	18.53	22.84	307.16	330	1401
1	270	268	14.20	14.19	14.20	18.24	0.35	269.65	270	1403

Comments: Collar Detect is 6" above sample port

**WESTBAY™ GROUNDWATER MONITORING WELL
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-19
 DATE: 5/19/21
 LOCATION: JPL
 ELEV. TOP OF WASTBAY CASING: 1142.94
 WEATHER: clear, sunny
 DTW -141.80

PROBE TYPE: Westbay Sampler 0-500psi
 SERIAL NO.: EMS 2502
 PROJECT: JPL Pasadena
 OPERATOR(S): L. Henderson
 ATM. PRESSURE (Patm): (start) 13.96 (finish) 14.00
 Temp: 19.85°C 18.64°C

Port No.	Depth to Meas. Port Valve (ft)		Pressure Readings (psi)				Pressure Head Outside Port (ft) $P(f) = (P2 - Patm) * 2.307 \text{ ft/psi}$	Depth to Water Outside Port (ft) $DTW = Dp - P(f)$	True Port Depth (Dp) (ft)	Time
	From Log (Dp)	From Cable	psi Inside Casing	kg/cm ² Outside Casing P2	mH ₂ O Inside Casing	Trans. Temp. (oC)				
5	498	496	168.75	113.67	168.75	20.67	230.03	267.97	498	1336
4	444	442	145.32	90.50	145.32	20.48	176.58	267.42	444	1338
3	392	390	122.73	84.16	122.73	20.27	161.95	230.05	392	1340
2	314	312	88.82	50.81	88.82	20.10	85.01	228.99	314	1342
1	242	240	57.57	21.75	57.57	19.71	17.97	224.03	242	1345

Comments: Collar Detect is 6" above sample port

**WESTBAY™ GROUNDWATER MONITORING WELL
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-20
 DATE: 5/17/21
 LOCATION: JPL
 ELEV. TOP OF WASTBAY CASING: 1165.05
 WEATHER: cloudy
 DTH - 243.51

PROBE TYPE: Westbay Sampler 0-500psi
 SERIAL NO.: EMS 2502
 PROJECT: JPL Pasadena
 OPERATOR(S): L. Henderson
 ATM. PRESSURE (Patm): (start) 14.10 (finish) 14.10
 Temp: 19.21°C 18.06°C

Port No.	Depth to Meas. Port Valve (ft)		Pressure Readings (psi)				Pressure Head Outside Port (ft) $P(f) = (P2 - Patm) * 2.307 \text{ ft/psi}$	Depth to Water Outside Port (ft) $DTW = Dp - P(f)$	True Port Depth (Dp) (ft)	Time
	From Log (Dp)	From Cable	psi Inside Casing	kg/cm ² Outside Casing P2	mH ₂ O Inside Casing	Trans. Temp. (oC)				
5	900	897	300.60	293.64	300.60	22.72	644.90	255.10	900	1308
4	700	697	213.57	194.21	213.57	22.79	415.51	284.49	700	1312
3	562	561	153.49	140.59	153.49	21.90	291.81	270.19	562	1315
2	392	390	79.47	70.19	79.47	20.20	129.40	262.60	392	1318
1	230	229	14.21	14.24	14.21	18.71	0.32	229.68	230	1320

Comments: Collar Detect is 6" above sample port

**WESTBAY™ GROUNDWATER MONITORING WELL
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-21
 DATE: 5/17/21
 LOCATION: JPL
 ELEV. TOP OF WESTBAY CASING 1059.10
 WEATHER: cloudy

PROBE TYPE Westbay Sampler 0-500psi
 SERIAL NO. EMS 2502
 PROJECT JPL Pasadena
 OPERATOR(S) C. Henderson
 ATM. PRESSURE (Palm): (start) 14.08 (finish) 14.16
 Temp: 17.25°C 19.10°C

DTW - 117.72

Port No.	Depth to Meas. Port Valve (ft)		Pressure Readings (psi)				Pressure Head Outside Port (ft) $P(f) = (P2 - Patm) * 2.307 \text{ ft/psi}$	Depth to Water Outside Port (ft) $DTW = Dp - P(R)$	True Port Depth (Dp) (ft)	Time
	From Log (Dp)	From Cable	psi Inside Casing	kg/cm ² Outside Casing P2	mH ² O Inside Casing	Trans. Temp. (oC)				
5	372	371	125.84	122.07	125.84	18.49	249.13	122.87	372	12/13
4	310	309	98.82	95.23	98.82	19.13	187.21	122.79	310	12/15
3	240	240	68.72	65.37	68.72	19.26	118.33	121.67	240	12/17
2	161	160	34.22	31.22	34.22	19.18	39.54	121.46	161	12/19
1	90	89	14.19	14.18	14.19	19.13	0.23	89.77	90	12/21

Comments: Collar Detect is 2' above sample port

**WESTBAY™ GROUNDWATER MONITORING WELL
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-22
 DATE: 5/24/21
 LOCATION: JPL
 ELEV. TOP OF WESTBAY CASING 1176.98
 WEATHER: clear, sunny
 DTW - 228.64'

PROBE TYPE Westbay Sampler 0-500psi
 SERIAL NO. EMS 250Z
 PROJECT JPL Pasadena
 OPERATOR(S) L. Henderson
 ATM. PRESSURE (Patm): (start) 14.02 (finish) 14.05
 Temp: 21.10 20.17

Port No.	Depth to Meas. Port Valve (ft)		Pressure Readings (psi)				Pressure Head Outside Port (ft) P(ft)=(P2-Patm)*2.307 ft/psi	Depth to Water Outside Port (ft) DTW = Dp-P(ft)	True Port Depth (Dp) (ft)	Time
	From Log (Dp)	From Cable	psi Inside Casing	kg/cm ² Outside Casing P2	mH ₂ O Inside Casing	Trans. Temp. (oC)				
5	588	586	171.74	154.47	171.74	21.68	324.02	263.98	588	0846
4	467	466	119.09	105.48	119.09	21.89	211.00	256.00	467	0849
3	389	387	85.11	77.35	85.11	21.76	146.10	242.90	389	0851
2	329	327	58.95	51.84	58.95	21.46	85.87	243.13	329	0853
1	245	243	21.80	15.20	21.80	21.02	2.72	242.28	245	0855

Comments: Collar Detect is 1' above sample port

**WESTBAY™ GROUNDWATER MONITORING WELL
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-23
 DATE: 5/18/21
 LOCATION: JPL
 ELEV. TOP OF WESTBAY CASING 1108.84
 WEATHER: Clear, Sunny
 DTU - 142.10

PROBE TYPE Westbay Sampler 0-500psi
 SERIAL NO. CMS 2502
 PROJECT JPL Pasadena
 OPERATOR(S) L. Henderson
 ATM. PRESSURE (Patm): (start) 14.07 (finish) 14.07
 Temp: 18.85 20.05

Port No.	Depth to Meas. Port Valve (ft)		Pressure Readings (psi)				Pressure Head Outside Port (ft) <small>P(ft)=(P2-Patm)*2.307 ft/psi)</small>	Depth to Water Outside Port (ft) <small>DTW = Dp-P(ft)</small>	True Port Depth (Dp) (ft)	Time
	From Log (Dp)	From Cable	psi Inside Casing	kg/cm ² Outside Casing P2	mH ₂ O Inside Casing	Trans. Temp. (oC)				
5	542	540	188.00	165.04	188.00	21.27	348.29	193.71	542	1042
4	445	444	145.97	123.13	145.97	21.45	251.60	193.40	445	1045
3	319	318	91.32	76.16	91.32	21.29	140.93	178.07	319	1047
2	254	253	63.11	47.00	63.11	20.32	75.97	178.03	254	1053
1	174	173	28.32	14.19	28.32	20.12	0.28	173.72	174	1056

Comments: Collar Detect is 1' above sample port

**WESTBAY™ GROUNDWATER MONITORING WELL
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-25
 DATE: 5/17/21
 LOCATION: JPL
 ELEV. TOP OF WASTBAY CASING: 934.53
 WEATHER: cloudy

PROBE TYPE: Westbay Sampler 0-500psi
 SERIAL NO.: EMS 2502
 PROJECT: JPL Pasadena
 OPERATOR(S): L. Henderson
 ATM. PRESSURE (Palm): (start) 14.17 (finish) 14.18
 Temp.: 19.93°C 20.39°C

DTW - 248.88

Port No.	Depth to Meas. Port Valve (ft)		Pressure Readings (psi)				Pressure Head Outside Port (ft) $P(f) = (P2 - P_{atm}) * 2.307 \text{ ft/psi}$	Depth to Water Outside Port (ft) $DTW = Dp - P(f)$	True Port Depth (Dp) (ft)	Time
	From Log (Dp)	From Cable	psi Inside Casing	kg/cm ² Outside Casing P2	mt ² O Inside Casing	Trans. Temp. (oC)				
5	713	711	216.48	215.70	216.48	21.12	464.93	248.07	713	1538
4	633	631	181.95	181.70	181.95	21.49	386.49	246.51	633	1540
3	503	502	125.61	125.00	125.61	21.22	257.99	245.01	503	1543
2	423	421	90.81	91.39	90.81	20.78	178.15	244.85	423	1547
1	358	356	62.48	63.05	62.48	20.65	112.77	245.23	358	1550

Comments: Collar Detect is 2' below sample port

**WESTBAY™ GROUNDWATER MONITORING WELL
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-26
 DATE: 5/25/21
 LOCATION: JPL
 ELEV. TOP OF WESTBAY CASING: 1059.08
 WEATHER: Clear, Sunny
 DTU - 59.46

PROBE TYPE: Westbay Sampler 0-500psi
 SERIAL NO. EMS 2502
 PROJECT: JPL Pasadena
 OPERATOR(S): L. Henderson
 ATM. PRESSURE (P_{atm}): (start) 14.08 (finish) 14.09
 Temp: 31.14°C 22.91°C

Port No.	Depth to Meas. Port Valve (ft)		Pressure Readings (psi)				Pressure Head Outside Port (ft) P(ft)=(P2-Patm)*2.307 ft/psi	Depth to Water Outside Port (ft) DTW = Dp-P(ft)	True Port Depth (Dp) (ft)	Time
	From Log (Dp)	From Cable	psi Inside Casing	kg/cm ² Outside Casing P2	mH ₂ O Inside Casing	Trans. Temp. (°C)				
2	215	213	81.44	45.16	81.44	25.75	71.70	143.30	215	1312
1	135	132	46.56	14.18	46.56	23.67	0.23	134.77	135	1315

Comments: Collar Detect is 2' below sample port

WELL GAUGING DATA

Project # 210517HS-1 Date 6/3/21/6/11/21 Client Tidelwater

Site JPL

Well ID	Well Size (in.)	Time Gauged	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC
MW-1	4	1005					26.21	Ded. Pump	
MW-5	4	1355				133.71	135.80		
MW-6	4	0850				DRY	238.37		
MW-7	4	1200				DRY	Ded. Pump		
MW-8	4	0955				DRY	201.82		
MW-9	4	1015				20.14	Ded. Pump		
MW-10	4	1320				DRY	153.84		
MW-13	4	0830				DRY	234.78		
MW-14 MW-16	4	1150				DRY	284.57		
MW-15 MW-16	4	1025				32.05	Ded. Pump		

**WESTBAY™ GROUNDWATER MONITORING WELL
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-3
 DATE: 6/3/21
 LOCATION: JPL
 ELEV. TOP OF WESTBAY CASING 1100.34
 WEATHER: clear, sunny

PROBE TYPE Westbay Sampler 0-500psi
 SERIAL NO. EMS 2502
 PROJECT JPL Pasadena
 OPERATOR(S) L. Henderson
 ATM. PRESSURE (Patm): (start) 14.00 (finish) 14.04
 Temp: 22.17°C 17.20°C

DTU - 196.57

Port No.	Depth to Meas. Port Valve (ft)		Pressure Readings (psi)				Pressure Head Outside Port (ft) P(ft)=(P2-Patm)*2.307 ft/psi)	Depth to Water Outside Port (ft) DTW = Dp-P(ft)	True Port Depth (Dp) (ft)	Time
	From Log (Dp)	From Cable	psi Inside Casing	kg/cm ² Outside Casing P2	mm ² O Inside Casing	Trans. Temp. (oC)				
5	653	653	213.32	216.47	213.32	19.89	467.10	185.90	653	1017
4	558	556	171.95	175.75	171.95	20.14	373.16	184.84	558	1021
3	346	344	79.50	84.00	79.50	18.63	161.49	184.51	346	1028
2	252	250	38.50	43.96	38.50	18.12	69.12	182.88	252	1033
1	172	171	14.11	15.55	14.11	17.49	3.58	168.42	172	1036

Comments: Collar Detect is 2' above sample port

**WESTBAY™ GROUNDWATER MONITORING WELL
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-4
 DATE: 6/3/21
 LOCATION: JPL
 ELEV. TOP OF WESTBAY CASING 1082.84
 WEATHER: clear, sunny
 DTW - 168.45

PROBE TYPE Westbay Sampler 0-500psi
 SERIAL NO. EMS 2502
 PROJECT JPL Pasadena
 OPERATOR(S) C. Henderson
 ATM. PRESSURE (Patm): (start) 14.03 (finish) 14.01
 Temp: 22.91°C 19.34°C

Port No.	Depth to Meas. Port Valve (ft)		Pressure Readings (psi)				Pressure Head Outside Port (ft) P(ft)=(P2-Patm)*2.307 ft/psi	Depth to Water Outside Port (ft) DTW = Dp-P(ft)	True Port Depth (Dp) (ft)	Time
	From Log (Dp)	From Cable	psi Inside Casing	kg/cm ² Outside Casing P2	mH ₂ O Inside Casing	Trans. Temp. (°C)				
5	513	511	164.86	166.21	164.86	22.14	351.08	161.92	513	1355
4	392	390	112.07	113.95	112.07	22.10	230.28	161.72	392	1358
3	322	320	81.51	83.59	81.51	21.41	160.47	161.53	322	1403
2	240	238	45.64	48.62	45.64	21.07	79.80	160.20	240	1405
1	150	148	14.11	14.13	14.11	20.24	0.23	149.77	150	1407

Comments: Collar Detect is 2' above sample port

**WESTBAY™ GROUNDWATER MONITORING WELL
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-11
 DATE: 6/4/21
 LOCATION: JPL
 ELEV. TOP OF WESTBAY CASING 1139.3
 WEATHER: clear, sunny
 DTW -211.20

PROBE TYPE Westbay Sampler 0-500psi
 SERIAL NO. GMS 2502
 PROJECT JPL Pasadena
 OPERATOR(S) L Henderson
 ATM. PRESSURE (Patm): (start) 14.04 (finish) 14.02
 Temp: 23.06°C 19.10°C

Port No.	Depth to Meas. Port Valve (ft)		Pressure Readings (psi)				Pressure Head Outside Port (ft) P(ft)=(P2-Patm)*2.307 ft/psi	Depth to Water Outside Port (ft) DTW = Dp-P(ft)	True Port Depth (Dp) (ft)	Time
	From Leg (Dp)	From Cable	psi Inside Casing	kg/cm ² Outside Casing P2	mH ₂ O Inside Casing	Trans. Temp. (oC)				
5	639	637	199.42	176.21	199.42	21.93	374.13	264.87	639	0953
4	524	522	149.79	149.62	149.79	21.87	312.78	211.22	524	0955
3	429	427	108.86	107.86	108.86	21.40	216.44	212.56	429	0957
2	259	257	35.06	40.09	35.06	20.29	60.10	198.90	259	1000
1	149	147	14.11	23.16	14.11	19.63	21.04	127.96	149	1002

Comments: Collar Detect is 6" above sample port

**WESTBAY™ GROUNDWATER MONITORING WELL
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-12
 DATE: 6/4/21
 LOCATION: JPL
 ELEV. TOP OF WASTBAY CASING: 1102.14
 WEATHER: clear

PROBE TYPE: Westbay Sampler 0-500psi
 SERIAL NO. CMS 2502
 PROJECT: JPL Pasadena
 OPERATOR(S): L. Henderson
 ATM. PRESSURE (Patm): (start) 14.03 (finish) 14.08

DTW ~~144.77~~ 144.77

Temp: 24.87°C 18.82°C

Port No.	Depth to Meas. Port Valve (ft)		Pressure Readings (psi)				Pressure Head Outside Port (ft) P(ft)=(P2-Patm)*2.307 ft/psi)	Depth to Water Outside Port (ft) DTW = Dp-P(ft)	True Port Depth (Dp) (ft)	Time
	From Log (Dp)	From Cable	psi Inside Casing	kg/cm ² Outside Casing P2	mH ₂ O Inside Casing	Trans. Temp. (oC)				
5	548	546	190.57	152.94	190.57	22.25	320.47	227.53	548	1045
4	436	435	141.83	121.90	141.83	21.93	248.86	187.14	436	1047
3	323	322	92.61	76.20	92.61	20.93	143.43	179.57	323	1049
2	243	242	57.67	42.54	57.67	20.13	65.77	177.23	243	1051
1	140	139	14.16	14.21	14.16	19.25	0.42	139.58	140	1053

Comments: Collar Detect is 6" above sample port

**WESTBAY™ GROUNDWATER MONITORING WELL
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-14
 DATE: 6/4/21
 LOCATION: JPL
 ELEV. TOP OF WESTBAY CASING 1173.47
 WEATHER: clear, sunny

PROBE TYPE Westbay Sampler 0-500psi
 SERIAL NO. EMS 2502
 PROJECT JPL Pasadena
 OPERATOR(S) L. Henderson
 ATM. PRESSURE (Palm): (start) 13.96 (finish) 13.98
 Temp: 20.11°C 19.97°C

DTU - ~~196.41~~ 196.41

Port No.	Depth to Meas. Port Valve (ft)		Pressure Readings (psi)				Pressure Head Outside Port (ft) P(ft)=(P2-Patm)*2.307 ft/psi	Depth to Water Outside Port (ft) DTW = Dp-P(ft)	True Port Depth (Dp) (ft)	Time
	From Log (Dp)	From Cable	psi Inside Casing	kg/cm ² Outside Casing P2	mH ₂ O Inside Casing	Trans. Temp. (oC)				
5	540	538	164.55	146.19	164.55	20.91	305.05	234.95	540	0916
4	456	454	127.98	110.02	127.98	21.04	221.61	234.39	456	0918
3	382	381	95.70	77.97	95.70	20.85	147.67	234.33	382	0920
2	277	275	49.85	32.45	49.85	20.47	42.66	234.34	277	0922
1	207	206	19.27	14.11	19.27	20.19	0.35	206.65	207	0924

Comments: Collar Detect is 6" above sample port

**WESTBAY™ GROUNDWATER MONITORING WELL
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-17
 DATE: 6/3/21 / 6/4/21
 LOCATION: JPL
 ELEV. TOP OF WESTBAY CASING: 1191.21
 WEATHER: clear, sunny

PROBE TYPE: Westbay Sampler 0-500psi
 SERIAL NO. EMS 2502
 PROJECT: JPL Pasadena
 OPERATOR(S): L. Henderson
 ATM. PRESSURE (Palm): (start) _____ (finish) _____
 Temp: _____

~~DATE: 6/3/21~~

Port No.	Depth to Meas. Port Valve (ft)		Pressure Readings (psi)				Pressure Head Outside Port (ft) $P(f) = (P2 - Patm) * 2.307 \text{ ft/psi}$	Depth to Water Outside Port (ft) $DTW = Dp - P(f)$	True Port Depth (Dp) (ft)	Time
	From Log (Dp)	From Cable	psi Inside Casing	kg/cm ² Outside Casing P2	mH ₂ O Inside Casing	Trans. Temp. (oC)				
5	726									
4	582									
3	468									
2	370									
1	250									
- PARK OVER -										
SENT PUT NO Parking Signs up on 6/3 - 6/4.										
- Neighbors did NOT recognize car -										

Comments: Collar Detect is 6" above sample port

**WESTBAY™ GROUNDWATER MONITORING WELL
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-18

DATE: 6/3/21

LOCATION: JPL

ELEV. TOP OF WESTBAY CASING 1225.41

WEATHER: Clear, Sunny

DTW -295.18

PROBE TYPE Westbay Sampler 0-500psi

SERIAL NO. EMS 2502

PROJECT JPL Pasadena

OPERATOR(S) L. Henderson

ATM. PRESSURE (Patm): (start) 14.00 (finish) 13.96

Temp: 19.04°C 18.17

Port No.	Depth to Meas. Port Valve (ft)		Pressure Readings (psi)				Pressure Head Outside Port (ft) $P(ft) = (P2 - Patm) * 2.307 \text{ ft/psi}$	Depth to Water Outside Port (ft) $DTW = Dp - P(ft)$	True Port Depth (Dp) (ft)	Time
	From Log (Dp)	From Cable	psi Inside Casing	kg/cm ² Outside Casing P2	mH ₂ O Inside Casing	Trans. Temp. (oC)				
5	684	682	184.00	158.40	184.00	20.11	333.13	350.87	684	0928
4	564	562	131.82	112.18	132.82	20.47	226.50	337.50	564	0930
3	424	422	70.84	62.59	70.84	19.99	112.10	311.90	424	0933
2	330	328	29.84	23.61	29.84	19.00	22.17	307.83	330	0936
1	270	268	14.10	14.12	14.10	18.44	0.28	269.72	270	0938

Comments: Collar Detect is 6" above sample port

**WESTBAY™ GROUNDWATER MONITORING WELL
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-1R
 DATE: 6/3/21
 LOCATION: JPL
 ELEV. TOP OF WESTBAY CASING: 1142.94
 WEATHER: clear, sunny

PROBE TYPE: Westbay Sampler 0-500psi
 SERIAL NO.: EMS 250Z
 PROJECT: JPL Pasadena
 OPERATOR(S): L. Henderson
 ATM. PRESSURE (Patm): (start) 14.01 (finish) 14.02

DTW - 142.10
 Temp: 22.17 19.13°C

Port No.	Depth to Meas. Port Valve (ft)		Pressure Readings (psi)				Pressure Head Outside Port (ft) $P(R) = (P2 - Patm) * 2.307 \text{ ft/psi}$	Depth to Water Outside Port (ft) $DTW = Dp - P(R)$	True Port Depth (Dp) (ft)	Time
	From Log (Dp)	From Cable	psi Inside Casing	kg/cm ² Outside Casing P2	mH ₂ O Inside Casing	Trans. Temp. (°C)				
5	498	496	168.58	114.73	168.58	21.21	232.36	265.64	498	1103
4	444	442	145.17	91.51	145.17	20.89	178.79	265.21	444	1105
3	392	390	122.60	84.26	122.60	20.63	161.93	230.07	392	1107
2	314	312	88.72	50.80	88.72	20.40	84.87	229.13	314	1109
1	242	240	57.44	21.42	57.44	19.99	17.09	224.91	242	1111

Comments: Collar Detect is 6" above sample port

**WESTBAY™ GROUNDWATER MONITORING WELL
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-20
 DATE: 6/3/21
 LOCATION: JPL
 ELEV. TOP OF WESTBAY CASING: 1165.05
 WEATHER: Clear, Sunny

PROBE TYPE: Westbay Sampler 0-500psi
 SERIAL NO.: EMS 2507
 PROJECT: JPL Pasadena
 OPERATOR(S): L. Henderson
 ATM. PRESSURE (Patm): (start) 14.01 (finish) 14.02
 Temp: 20.92°C 17.58°C

DTW - 243.78'

Port No.	Depth to Meas. Port Valve (ft)		Pressure Readings (psi)				Pressure Head Outside Port (ft) P(ft)=(P2-Patm)*2.307 ft/psi	Depth to Water Outside Port (ft) DTW = Dp-P(ft)	True Port Depth (Dp) (ft)	Time
	From Log (Dp)	From Cable	psi Inside Casing	kg/cm ² Outside Casing P2	mH ₂ O Inside Casing	Trans. Temp. (oC)				
5	900	897	300.48	293.21	300.48	21.62	644.11	255.89	900	0844
4	700	697	213.48	193.29	213.48	22.19	413.60	286.40	700	0848
3	562	561	153.47	140.81	153.47	21.70	292.53	269.47	562	0851
2	392	390	79.36	70.52	79.36	19.01	130.37	261.63	392	0856
1	230	229	14.13	14.12	14.13	17.99	0.25	229.75	230	0859

Comments: Collar Detect is 6" above sample port

**WESTBAY™ GROUNDWATER MONITORING WELL
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-21
 DATE: 6/3/21
 LOCATION: JPL
 ELEV. TOP OF WESTBAY CASING: 1059.10
 WEATHER: clear sunny

PROBE TYPE: Westbay Sampler 0-500psi
 SERIAL NO.: EMS 2502
 PROJECT: JPL Pasadena
 OPERATOR(S): L. Henderson
 ATM. PRESSURE (Patm): (start) 14.04 (finish) 14.06
 Temp: 26.22°C 19.93

DTW - 117.97

Port No.	Depth to Meas. Port Valve (ft)		Pressure Readings (psi)				Pressure Head Outside Port (ft) $P(f) = (P2 - Patm) * 2.307 \text{ ft/psi}$	Depth to Water Outside Port (ft) $DTW = Dp - P(f)$	True Port Depth (Dp) (ft)	Time
	From Log (Dp)	From Cable	psi Inside Casing	kg/cm ² Outside Casing P2	mH ₂ O Inside Casing	Trans. Temp. (oC)				
5	372	371	125.70	121.20	125.70	23.24	247.22	124.78	372	1231
4	310	309	98.66	94.32	98.66	22.48	185.21	124.79	310	1233
3	240	240	68.53	64.50	68.53	21.74	116.41	123.59	240	1235
2	161	161	34.07	30.39	34.07	20.48	37.72	123.28	161	1238
1	90	89	14.10	14.11	14.10	20.11	0.16	89.84	90	1240

Comments: Collar Detect is 2' above sample port

**WESTBAY™ GROUNDWATER MONITORING WELL
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-22
 DATE: 6/4/21
 LOCATION: JPL
 ELEV. TOP OF WESTBAY CASING 1176.98
 WEATHER: clear, sunny
 DTW 228.86

PROBE TYPE Westbay Sampler 0-500psi
 SERIAL NO. EMS 2502
 PROJECT JPL Pasadena
 OPERATOR(S) L. Henderson
 ATM. PRESSURE (Patm): (start) 14.00 (finish) 14.02
 Temp: 21.45 °C 20.71 °C

Port No.	Depth to Meas. Port Valve (ft)		Pressure Readings (psi)				Pressure Head Outside Port (ft) P(ft)=(P2-Patm)*2.307 ft/psi	Depth to Water Outside Port (ft) DTW = Dp-P(ft)	True Port Depth (Dp) (ft)	Time
	From Log (Dp)	From Cable	psi Inside Casing	kg/cm ² Outside Casing P2	mH ₂ O Inside Casing	Trans. Temp. (oC)				
5	588	586	171.58	154.67	171.58	21.88	324.53	263.47	588	0815
4	467	466	118.93	105.49	118.93	22.06	211.07	255.93	467	0818
3	389	387	84.97	77.08	84.97	21.90	145.53	243.47	389	0820
2	329	327	58.82	50.95	58.82	21.61	85.24	243.76	329	0822
1	245	243	21.69	14.72	21.69	21.71	1.66	243.34	245	0824

Comments: Collar Detect is 1' above sample port

**WESTBAY™ GROUNDWATER MONITORING WELL
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-23
 DATE: 6/3/21
 LOCATION: JPL
 ELEV. TOP OF WASTBAY CASING: 1108.84
 WEATHER: Clear, Sunny

PROBE TYPE: Westbay Sampler 0-500psi
 SERIAL NO.: EMS 2502
 PROJECT: JPL Pasadena
 OPERATOR(S): L. Henderson
 ATM. PRESSURE (P_{atm}): (start) 14.03 (finish) 14.02

DTU - 142.10

Temp: 25.22°C 20.69°C

Port No.	Depth to Meas. Port Valve (ft)		Pressure Readings (psi)				Pressure Head Outside Port (ft) $P(ft) = (P_2 - P_{atm}) * 2.307 \text{ ft/psi}$	Depth to Water Outside Port (ft) $DTW = Dp - P(ft)$	True Port Depth (Dp) (ft)	Time
	From Log (Dp)	From Cable	psi Inside Casing	kg/cm ² Outside Casing P2	mH ₂ O Inside Casing	Trans. Temp. (oC)				
5	542	540	187.92	164.44	187.92	23.09	347.00	195.00	542	1320
4	445	444	145.88	122.57	145.88	22.70	250.40	194.60	445	1322
3	319	318	91.25	77.42	91.25	22.12	139.32	179.68	319	1324
2	254	253	63.04	46.32	63.04	21.62	74.49	179.51	254	1326
1	174	173	28.26	14.16	28.26	20.98	0.30	173.70	174	1328

Comments: Collar Detect is 1' above sample port

**WESTBAY™ GROUNDWATER MONITORING WELL
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-24
 DATE: 6/4/21
 LOCATION: JPL
 ELEV. TOP OF WESTBAY CASING 1200.94
 WEATHER: clear, sunny
 DTU - 248.57

PROBE TYPE Westbay Sampler 0-500psi
 SERIAL NO. CMS 2502
 PROJECT JPL Pasadena
 OPERATOR(S) L. Henderson
 ATM. PRESSURE (Patm): (start) 14.04 (finish) 14.01
 Temp: 20.65°C 22.84°C

Port No.	Depth to Meas. Port Valve (ft)		Pressure Readings (psi)				Pressure Head Outside Port (ft) $P(ft) = (P2 - Patm) * 2.307 \text{ ft/psi}$	Depth to Water Outside Port (ft) $DTW = Dp - P(ft)$	True Port Depth (Dp) (ft)	Time
	From Log (Dp)	From Cable	psi Inside Casing	kg/cm ² Outside Casing P2	mH ₂ O Inside Casing	Trans. Temp. (°C)				
5	678	676	200.56	175.28	200.56	22.18	371.98	306.02	678	11:22
4	554	552	146.81	128.26	146.81	22.24	263.51	290.49	554	11:24
3	435	433	95.24	83.63	95.24	22.14	160.54	274.46	435	11:26
2	373	371	68.35	57.57	68.35	22.13	100.42	272.58	373	11:27
1	279	277	27.50	19.27	27.50	22.55	12.07	266.93	279	11:30

Comments: Collar Detect is 1' above sample port

**WESTBAY™ GROUNDWATER MONITORING WELL
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-25
 DATE: 6/3/21
 LOCATION: JPL
 ELEV. TOP OF WESTBAY CASING 934.53
 WEATHER: Clear, Sunny
 DTW - 248.91

PROBE TYPE Westbay Sampler 0-500psi
 SERIAL NO. EMS 2502
 PROJECT JPL Pasadena
 OPERATOR(S) L Henderson
 ATM. PRESSURE (Patm): (start) 14.10 (finish) 14.13
 Temp: 22.57°C 20.66

Port No.	Depth to Meas. Port Valve (ft)		Pressure Readings (psi)				Pressure Head Outside Port (ft) P(ft)=(P2-Patm)*2.307 ft/psi	Depth to Water Outside Port (ft) DTW = Dp-P(ft)	True Port Depth (Dp) (ft)	Time
	From Log (Dp)	From Cable	psi Inside Casing	kg/cm ² Outside Casing P2	mH ₂ O Inside Casing	Trans. Temp. (oC)				
5	713	711	216.48	215.79	216.48	22.02	465.30	247.70	713	0753
4	633	631	181.93	181.78	181.93	22.10	386.84	246.16	633	0757
3	503	502	125.61	126.08	125.61	21.70	258.34	244.66	503	0800
2	423	421	90.81	91.45	90.81	21.37	178.45	244.55	423	0802
1	358	356	62.48	63.10	62.48	21.11	113.04	244.96	358	0804

Comments: Collar Detect is 2' below sample port

**WESTBAY™ GROUNDWATER MONITORING WELL
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-26
 DATE: 6/3/21
 LOCATION: JPL
 ELEV. TOP OF WESTBAY CASING: 1059.08
 WEATHER: Clear, Sunny

PROBE TYPE: Westbay Sampler 0-500psi
 SERIAL NO.: EMS 2502
 PROJECT: JPL Pasadena
 OPERATOR(S): L. Henderson
 ATM. PRESSURE (Patm): (start) 14.02 (finish) 14.05
 Temp: 24.02°C 21.38°C

DTW - 59.86

Port No.	Depth to Meas. Port Valve (ft)		Pressure Readings (psi)				Pressure Head Outside Port (ft) P(ft)=(P2-Patm)*2.307 ft/psi	Depth to Water Outside Port (ft) DTW = Dp-P(ft)	True Port Depth (Dp) (ft)	Time
	From Log (Dp)	From Cable	psi Inside Casing	kg/cm ² Outside Casing P2	mH ₂ O Inside Casing	Trans. Temp. (oC)				
2	215	212	81.27	45.05	81.27	22.53	71.59	143.41	215	1136
1	135	132	46.39	14.15	46.39	21.73	0.30	134.70	135	1138

Comments: Collar Detect is 2' below sample port