



First Quarter 2020 Lee Ranch Groundwater Analytical

 Lee Ranch 2020	Location	Four Corner in Well	PDL-5	PDL-4	PDL-3	PDL-2	Dr. Springs	Pit 8 Wells
	Work Order							
	Lab ID	2003785	PDL-5	PDL-5	PDL-5	PDL-5	PDL-5	PDL-5
	Date Sampled	3/16/2020	PDL-5	PDL-5	PDL-5	PDL-5	PDL-5	PDL-5
	Date Received	3/17/2020	PDL-5	PDL-5	PDL-5	PDL-5	PDL-5	PDL-5
Units	SampleID	Four Corner in Well	PDL-5	PDL-4	PDL-3	PDL-2	Dr. Springs	Pit 8 Wells
s.u.	Analyte	Result	Result	Result	Result	Result	Result	Result
µmhos/cm	pH	7.95	8.03	8.06	8.56	8.38	9.24	9.25
mg/L	Electrical Conductivity	880	840	460	460	460	1200	1200
mg/L	Total Dissolved Solids (180)	565	543	280	277	282	710	710
mg/L	Total Alkalinity (as CaCO3)	272.1	236	237.8	224.8	223	605	600.4
mg/L	Total Cyanide	ND	ND	ND	ND	ND	ND	ND
mg/L	Total Recoverable Phenolics	ND	ND	ND	ND	ND	ND	2.7
	Sodium Adsorption Ratio	3.8	2.3	13	14	2.3	32	34
mg/L	Bicarbonate as HCO3	272.1	236	237.8	217.9	223.9	495.7	484.5
mg/L	Carbonate as CO3	ND	ND	ND	6.96	2.08	109.3	
mg/L	Chloride	8	5.6	0.97	0.94	0.98	4.3	4.3
mg/L	Fluoride	1	0.57	0.77	0.77	0.77	1.7	1.7
mg/L	Nitrate-Nitrite Nitrogen (as N)	ND	ND	ND	ND	ND	ND	ND
mg/L	Sulfate	170	220	16	16	15	17	17
mg/L	Calcium	41	52	3.5	3.6	3.5	3.2	3.2
mg/L	Magnesium	24	33	ND	ND	ND	1.4	0.013
mg/L	Potassium	2.3	2.2	ND	ND	1	3.9	3.9
mg/L	Sodium	120	93	110	ND	110	207	290
mg/L	Dissolved Aluminum	ND	ND	ND	ND	ND	0.025	0.024
mg/L	Dissolved Arsenic	ND	ND	ND	ND	ND	ND	ND
mg/L	Dissolved Barium	0.048	ND	0.16	0.17	0.17	0.15	0.15
mg/L	Dissolved Boron	0.18	0.12	0.11	0.11	0.11	0.26	0.25
mg/L	Dissolved Cadmium	ND	ND	ND	ND	ND	ND	ND
mg/L	Dissolved Chromium	ND	ND	ND	ND	ND	ND	ND
mg/L	Dissolved Cobalt	ND	ND	ND	ND	ND	ND	ND
mg/L	Dissolved Copper	0.028	ND	ND	ND	ND	0.016	0.016
mg/L	Dissolved Iron	0.49	1	ND	ND	ND	0.031	0.059
mg/L	Dissolved Lead	ND	ND	ND	ND	ND	ND	ND
mg/L	Dissolved Manganese	24	0.018	0.0061	0.0059	0.0062	0.012	0.012
mg/L	Dissolved Molybdenum	ND	ND	ND	ND	ND	ND	ND
mg/L	Dissolved Nickel	ND	ND	ND	ND	ND	ND	ND
mg/L	Dissolved Selenium	ND	ND	ND	ND	ND	ND	0.067
mg/L	Dissolved Silver	ND	ND	ND	ND	ND	ND	ND

mg/L	Dissolved Vanadium	ND	ND	ND	ND	ND	ND	ND
mg/L	Dissolved Zinc	0.083	ND	ND	ND	ND	ND	ND
mg/L	Total Iron	0.48	1	ND	ND	ND	0.055	0.033
mg/L	Total Manganese	0.0068	0.02	0.0061	0.0064	0.0062	0.012	0.013
mg/L	Total Mercury	0.00033	0.00034	ND	ND	ND	ND	ND


Second Quarter 2020 Lee Ranch Groundwater Analytical

 Lee Ranch 2020	Location	Four Corner in Well	PDL-5	PDL-4	PDL-3	PDL-2	Dr. Springs	Pit 8 Wells
	Work Order							
	LabID	2005254	2005254	2005254	2005254	2005254	2005254	2005254
	Date Sampled	5/5/20	5/5/20	5/5/20	5/5/20	5/5/20	5/5/20	5/5/20
	Date Received	5/7/20	5/7/20	5/7/20	5/7/20	5/7/20	5/7/20	5/7/20

Units	SampleID	Four Corner in Well	PDL-5	PDL-4	PDL-3	PDL-2	Dr. Springs	Pit 8 Wells
s.u.	Analyte	Result	Result	Result	Result	Result	Result	Result
µmhos/cm	pH	8.18	8.17	8.6	8.7	9.27	8.49	9.38
mg/L	Electrical Conductivity	920	870	470	550	570	410	1600
mg/L	Total Dissolved Solids (180)	567	535	262	307	305	208	876
mg/L	Total Alkalinity (as CaCO3)	279.4	236.6	231.7	266.4	290.6	204	878.1
mg/L	Nitrate Nitrogen (As N)	ND	ND	ND	ND	ND	0.11	ND
mg/L	Total Cyanide	ND	ND	ND	ND	ND	ND	ND
	Total Recoverable Phenolics	ND	ND	ND	ND	ND	ND	ND
mg/L	Sodium Adsorption Ratio	3.9	2.6	14	20	20	13	38
mg/L	Bicarbonate as HCO3	279.4	236.6	223.2	253.3	236.3	200.4	623.1
mg/L	Carbonate as CO3	ND	ND	8.48	13.12	54.32	3.6	205
mg/L	Chloride	7.4	5.4	1.1	1.5	1.3	1.1	5.4
mg/L	Fluoride	1	0.39	0.76	0.6	0.83	0.52	2.1
mg/L	Sulfate	170	200	16	20	3	11	23
mg/L	Calcium	38	48	3.3	2	2.3	2.8	4.1
mg/L	Magnesium	23	32	ND	ND	ND	ND	1.8
mg/L	Potassium	2.3	2.3	ND	ND	ND	ND	5.3
mg/L	Sodium	120	94	100	120	130	91	370
mg/L	Dissolved Aluminum	ND	ND	ND	ND	ND	ND	0.026
mg/L	Dissolved Arsenic	ND	ND	ND	ND	ND	ND	0.002
mg/L	Dissolved Barium	0.048	0.019	0.16	0.1	0.11	0.16	0.21
mg/L	Dissolved Boron	0.18	0.12	0.11	0.1	0.11	0.086	0.35
mg/L	Dissolved Cadmium	ND	48	ND	2	ND	ND	ND
mg/L	Dissolved Chromium	ND	ND	ND	ND	ND	ND	ND
mg/L	Dissolved Cobalt	ND	ND	ND	ND	ND	ND	ND
mg/L	Dissolved Copper	ND	ND	ND	ND	ND	ND	ND
mg/L	Dissolved Iron	0.49	0.56	ND	ND	ND	ND	ND
mg/L	Dissolved Lead	ND	ND	ND	ND	ND	ND	ND


mg/L	Dissolved Manganese	0.0062	0.019	0.00058	0.0005	0.0037	0.0044	0.0054
mg/L	Dissolved Molybdenum	ND	ND	ND	ND	ND	ND	0.0082
mg/L	Dissolved Nickel	ND	ND	ND	ND	ND	ND	ND
mg/L	Dissolved Selenium	ND	ND	ND	ND	ND	ND	ND
mg/L	Dissolved Silver	ND	ND	ND	ND	ND	ND	ND
mg/L	Dissolved Vanadium	ND	ND	ND	ND	ND	ND	ND
mg/L	Dissolved Zinc	0.019	0.013	ND	0.021	0.072	0.011	0.024
mg/L	Total Iron	0.41	1.5	ND	ND	ND	ND	ND
mg/L	Total Manganese	0.0063	0.019	0.0056	0.005	0.0037	0.01	0.0054
mg/L	Total Mercury	ND	ND	ND	ND	ND	ND	ND

Third Quarter 2020 Lee Ranch Groundwater Analytical

		Location	Four Corner in Well	PDL-5	PDL-4	PDL-3	PDL-2	Dr. Springs	Pit 8 Wells
Lee Ranch 2019		Work Order	2007A56	2007A56	2007A56	2007A56	2007A56	2007A56	2007A56
		LabID	2007A56-001	2007A56-001	2007A56-001	2007A56-001	2007A56-001	2007A56-001	2007A56-001
		Date Sampled	7/21/20	7/21/20	7/21/20	7/21/20	7/21/20	7/21/20	7/21/20
		Date Received	7/21/20	7/21/20	7/21/20	7/21/20	7/21/20	7/21/20	7/21/20
Units	SampleID	Four Corner in Well	PDL-5	PDL-4	PDL-3	PDL-2	Dr. Springs	Pit 8 Wells	
s.u.	Analyte	Result	Result	Result	Result	Result	Result	Result	
µmhos/cm	pH	8.5	8.06	8.63	8.32	9.71	8.63	9.58	
mg/L	Electrical Conductivity	910	860	460	530	640	390	680	
mg/L	Total Dissolved Solids (180)	571	557	278	320	382	228	436	
mg/L	Total Alkalinity (as CaCO3)	268.6	226.6	222.5	252.8	313.4	191.3	322	
mg/L	Nitrate Nitrogen (As N)	ND	ND	ND	ND	ND	ND	ND	
mg/L	Total Cyanide	ND	ND	ND	ND	ND	ND	ND	
mg/L	Total Recoverable Phenolics	ND	ND	ND	ND	ND	ND	ND	
mg/L	Sodium Adsorption Ratio	4	2.5	14	21	18	12	19	
mg/L	Bicarbonate as HCO3	268.6	226.6	214.1	251.8	194.6	184.4	218	
mg/L	Carbonate as CO3	ND	ND	8.4	ND	118.8	6.88	104	
mg/L	Chloride	7	5.2	0.98	1.4	ND	0.94	2.9	
mg/L	Fluoride	1	ND	0.76	0.6	0.87	0.49	0.86	
mg/L	Sulfate	170	210	15	20	6.2	11	18	
mg/L	Calcium	39	47	3.3	2	2.6	2.8	3.7	
mg/L	Magnesium	23	30	ND	ND	ND	ND	ND	
mg/L	Potassium	2.1	2.1	ND	ND	ND	ND	2.2	
mg/L	Sodium	130	89	ND	120	120	87	160	
mg/L	Dissolved Aluminum	ND	ND	ND	ND	ND	ND	0.16	
mg/L	Dissolved Arsenic	ND	ND	ND	ND	ND	ND	ND	
mg/L	Dissolved Barium	0.0043	0.017	0.16	0.092	0.12	0.15	ND	
mg/L	Dissolved Boron	0.17	0.12	0.11	0.097	0.097	0.08	0.14	
mg/L	Dissolved Cadmium	ND	ND	ND	ND	ND	ND	ND	

mg/L	Dissolved Chromium	ND	ND	ND	ND	ND	ND	ND
mg/L	Dissolved Cobalt	ND	ND	ND	ND	ND	ND	ND
mg/L	Dissolved Copper	ND	0.0031	ND	ND	ND	ND	0.0063
mg/L	Dissolved Iron	0.34	0.55	ND	ND	ND	ND	0.13
mg/L	Dissolved Lead	ND	ND	ND	ND	ND	ND	0.44
mg/L	Dissolved Manganese	0.0066	0.018	0.0055	0.0042	0.0049	0.0045	0.018
mg/L	Dissolved Molybdenum	ND	ND	ND	ND	ND	ND	ND
mg/L	Dissolved Nickel	ND	ND	ND	ND	ND	ND	ND
mg/L	Dissolved Selenium	ND	ND	ND	ND	ND	ND	ND
mg/L	Dissolved Silver	130	ND	ND	ND	ND	ND	ND
mg/L	Dissolved Vanadium	ND	ND	ND	ND	ND	ND	ND
mg/L	Dissolved Zinc	0.019	0.017	0.012	0.014	0.089	0.015	0.016
mg/L	Total Iron	0.35	3.1	ND	0.062	ND	ND	0.44
mg/L	Total Manganese	0.0056	0.031	0.0057	0.0046	0.0057	0.0055	0.018
mg/L	Total Mercury	ND	ND	ND	ND	ND	ND	ND

Fourth Quarter 2020 Lee Ranch Groundwater Analytical

	Location	Four Corner in Well	PDL-5	PDL-4	PDL-3	PDL-2	Dr. Springs	Pit 8 Wells
	Work Order							
	LabID							
	Date Sampled							
Lee Ranch 2019	Date Received							
Units	SampleID	Four Corner in Well	PDL-5	PDL-4	PDL-3	PDL-2	Dr. Springs	Pit 8 Wells
s.u.	Analyte	Result	Result	Result	Result	Result	Result	Result
mg/L	Total Dissolved Solids	568	534	270	317	293	229	543
pH units	pH	8.00	8.04	8.60	8.77	9.19	8.50	9.37
mg/L CaCO3	Bicarbonate (As CaCO3)	270.7	230.4	215.0	240.3	216.8	189.4	319.0
mg/L CaCO3	Carbonate (As CaCO3)	< 2.000	< 2.000	8.080	15.36	39.04	4.240	102.4
mg/L CaCO3	Total Alkalinity (as CaCO3)	270.7	230.4	223.1	255.6	255.8	193.6	421.4
µmhos/cm	Specific Conductance	880	840	450	530	500	390	850
mg/L	Chloride	7.0	5.3	< 2.5	< 2.5	< 2.5	< 2.5	3.5
mg/L	Fluoride	1.2	0.54	0.89	0.72	0.86	0.61	1.2
mg/L	Sulfate	200	220	15	18	7.6	11	21
mg/L	Nitrate+Nitrite as N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
mg/L	Arsenic	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	0.0011
mg/L	Copper	0.0029	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	0.0082
mg/L	Lead	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050
mg/L	Selenium	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
mg/L	Aluminum	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	0.095
mg/L	Barium	0.047	0.018	0.16	0.099	0.13	0.15	0.13
mg/L	Boron	0.17	0.12	0.11	0.099	0.10	< 0.0020	< 0.0020

mg/L	Calcium	39	47	3.3	1.9	2.9	2.7	3.2
mg/L	Chromium	< 0.0060	< 0.0060	< 0.0060	< 0.0060	< 0.0060	< 0.0060	< 0.0060
mg/L	Cobalt	< 0.0060	< 0.0060	< 0.0060	< 0.0060	< 0.0060	< 0.0060	< 0.0060
mg/L	Iron	0.33	0.55	0.024	< 0.020	< 0.020	< 0.020	0.14
mg/L	Magnesium	23	31	< 1.0	< 1.0	< 1.0	< 1.0	1.0
mg/L	Manganese	0.0069	0.018	0.0055	0.0046	0.0058	0.0033	0.0089
mg/L	Molybdenum	< 0.0080	< 0.0080	< 0.0080	< 0.0080	< 0.0080	< 0.0080	< 0.0080
mg/L	Nickel	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
mg/L	Potassium	2.3	2.3	1.0	< 1.0	< 1.0	< 1.0	3.1
mg/L	Silver	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
mg/L	Vanadium	< 0.050	90	< 0.050	< 0.050	< 0.050	85	0.015
mg/L	Zinc	0.019	< 0.050	< 0.010	0.050	0.12	< 0.010	210
mg/L	Cadmium	< 0.0020	0.017	< 0.0020	< 0.0020	< 0.0020	0.086	0.19
mg/L	Sodium	120	< 0.0020	110	130	140	< 0.050	< 0.050
	Sodium Absorption Ratio	3.9	2.5	14	22	19	12	26
mg/L	Mercury	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020
mg/L	Iron	0.59	3.5	0.051	< 0.050	0.058	< 0.050	0.45
mg/L	Manganese	0.0092	0.032	0.0055	0.0042	0.0032	0.0040	0.019
mg/L	Cyanide	ND	ND	ND	ND	ND	ND	ND
mg/L	Total Phenol by 4AAP	ND	ND	ND	ND	ND	ND	ND