

SAN MATEO - EXHIBIT O

Sample Description			XRD Results																			Description
Measured Depth	Sample Type	Hole Section	Carbonates			Minerals						Clays		Group								
Feet			Brittleness	Calcite	Dolomite	Siderite	Quartz	K-Spar	Plag.	Pyrite	Gypsum	Halite	Total Clay	Chlorite	Kaolinite	I/M	I/S	Q+F	Carbonates	Others	Clays	
1" from Top	Core	Top Core 1	96.7	92	1	Tr	4	1	Tr	Tr	0	0	2					5	93	0	2	Limestone
6" from Bottom	Core	Bottom Core 1	87.6	49	Tr	Tr	39	3	1	Tr	0	0	8					43	49	0	8	Well rounded river rock with some smaller sand
3" from Top	Core	Core 2	95.8	92	Tr	Tr	3	1	Tr	Tr	0	3	1					4	92	3	1	Limestone
4.5" from Bottom	Core	Bottom Core 2	96.7	90	2	Tr	5	1	Tr	Tr	0	0	2					6	92	0	2	Limestone
1" from Top	Core	Top Core 3	77.6	52	Tr	Tr	29	3	1	Tr	0	0	15					33	52	0	15	Limestone with silicates (no discernable grain size)
4" from Bottom	Core	Bottom Core 3	96.7	91	2	Tr	4	1	Tr	Tr	0	0	2					5	93	0	2	Limestone (smaller grain size)
12" from Bottom	Core	Core 4	81.1	36	4	Tr	41	5	1	Tr	1	0	12					47	40	1	12	Soil with some plant material (roots)
5" from Bottom	Core	Core 5	96.7	87	2	Tr	8	1	Tr	Tr	0	0	2					9	89	0	2	Limestone (smaller grain size)

Core 1



Core 2



Core 3



Core 4



Core 5



SAN MATEO - EXHIBIT O

			Company: Matador Resources		Contact: Clark Collier		Well Name:																														
Sample Description			Major Elements													Trace Elements																					
Measured Depth	Sample Type	Hole Selection	SiO2	TiO2	Al2O3	Fe2O3	MnO	MgO	CaO	Na2O	K2O	P2O5	SO3	Cl	Total	V	Cr	Co	Ni	Cu	Zn	Ga	As	Br	Rb	Sr	Y	Zr	Nb	Mo	Ba	Hf	Pb	Th	U	Elemental Gamma Ray	
Feet			%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	API
1	Core	Top Core 1	16.8	0.148	0.546	1.041	0.00	0.944	76.57	0.279	0.744	0.43352	0.221	0.1849	97.91	3.415	6.78	2.92	143.9	16.572	24.38	10.967	0	72.0707	8.06	782.7	15.15	122.1	3.342	0	0	0	16.85	0	1.148	19.37	
2	Core	Bottom Core 1	43.97	0.453	8.005	2.293	0.00	1.704	36.46	0.574	1.739	0.2539	0.229	0.1983	95.88	29.15	16.92	9.889	23.2	17.301	47.01	13.207	0.196	21.7873	45.8	361.4	21.94	331.5	12.37	28.09	0	0.226	17.57	0	0.911	30.926	
3	Core	Core 2	14.86	0.132	0.368	0.932	0.00	0.439	89.27	4.657	0.735	0.40045	1.078	4.8996	117.78	0	3.969	2.443	155	18.197	25.88	9.9108	0	43.8876	5.858	519.9	11.65	61.45	2.454	0	0	0	16.05	0	1.472	21.863	
4	Core	Bottom Core 2	19.31	0.174	1.186	1.12	0.00	1.49	74.97	0.402	0.758	0.46259	0.267	0.2505	100.40	0	5.089	3.227	133.2	16.918	25.41	8.2619	0	84.2627	8.512	745.6	14.63	110.3	3.006	0	0	0	17.01	0	1.224	20.177	
5	Core	Top Core 3	41.25	0.444	7.832	2.855	0.00	1.913	43.84	0.819	1.484	0.26031	0.23	0.2363	101.16	40.86	28.04	13.94	33.5	19.761	43.82	12.837	1.325	26.6687	31.35	362.5	19.74	253.5	10.71	3.901	0	0	18.5	0	1.229	30.046	
6	Core	Bottom Core 3	17.4	0.142	0.634	1.086	0.00	1.176	74.84	0.459	0.72	0.43351	0.256	0.2357	97.38	0	9.01	3.076	139.3	14.03	36.46	9.4889	0	93.9132	7.871	822.7	14.68	126.2	3.463	0.922	0	0	16.86	0	1.206	19.511	
7	Core	Core 4	40.36	0.518	7.953	2.861	0.00	3.238	37.73	0.723	1.758	0.2923	1.838	1.3214	98.59	45.1	23.62	13.92	27.38	17.049	52.14	13.812	1.783	180.951	42.36	711.1	21.73	312.1	10.42	21.77	0	0	18.86	0	0.813	30.397	
8	Core	Core 5	18.42	0.138	0.571	0.997	0.00	1.085	75.49	0.273	0.71	0.4198	0.266	0.173	98.54	0	5.643	2.646	135.9	15.377	24.76	8.9585	0	74.8034	7.761	810.1	15.43	122.2	4.319	0	0	0	16.81	0	1.247	19.708	
			Cautionary Data (Possible Rerun)										Sample is contaminated with Ba										Sample is contaminated with LCM														