

Well Type	Well ID	Elev. (m)	Elev. (ft)	From Depth (ft)	To Depth (ft)	From Depth (m)	To Depth (m)	Top Elev. (m)	Bottom Elev. (m)	HGUID	HGU Code	Lithology	Log Type	Comments
35	25614	1311	4301	0	95	0	29	1311	1282	10	UNK	[unknown]	D	
35	25614	1311	4301	95	96	29	29	1282	1282	1	PC	Sand	D	
35	25614	1311	4301	96	265	29	81	1282	1230	3	CL	Clay	D	
35	25614	1311	4301	265	275	81	84	1230	1227	1	PC	Good sand	D	
35	25614	1311	4301	275	333	84	101	1227	1210	3	CL	Clay	D	
35	25614	1311	4301	333	335	101	102	1210	1209	1	PC	Sand	D	
35	25614	1311	4301	335	530	102	162	1209	1149	3	CL	Clay	D	
35	25614	1311	4301	530	535	162	163	1149	1148	1	PC	Gravel	D	
35	25614	1311	4301	535	552	163	168	1148	1143	3	CL	Clay	D	
35	25614	1311	4301	552	555	168	169	1143	1142	1	PC	Sand	D	
35	25614	1311	4301	555	790	169	241	1142	1070	3	CL	Clay	D	
35	25614	1311	4301	790	800	241	244	1070	1067	1	PC	Sand	D	
35	25614	1311	4301	800	880	244	268	1067	1043	2	PF	Clay and sand	D	
35	25614	1311	4301	880	980	268	299	1043	1012	1	PC	Sand and clay	D	
35	25614	1311	4301	980	990	299	302	1012	1009	1	PC	Good sand	D	
35	25614	1311	4301	990	995	302	303	1009	1008	3	CL	Clay	D	
35	25614	1311	4301	995	1000	303	305	1008	1006	1	PC	Fine sand	D	
35	25614	1311	4301	1000	1130	305	344	1006	967	1	PC	Shell sand	D	
35	25614	1311	4301	1130	1135	344	346	967	965	4	LM	Hard lime	D	
35	25614	1311	4301	1135	1165	346	355	965	956	4	LM	Shell	D	
35	25614	1311	4301	1165	1170	355	357	956	954	3	CL	Clay	D	
35	25614	1311	4301	1170	1175	357	358	954	953	1	PC	Sand and shell	D	
35	25614	1311	4301	1175	1190	358	363	953	948	3	CL	Clay	D	
35	25614	1311	4301	1190	1202	363	366	948	945	4	LM	Lime and shell	D	
35	25614	1311	4301	1202	1210	366	369	945	942	4	LM	Lime and shell	D	
35	25614	1311	4301	1210	1215	369	370	942	941	4	LM	Hard shell	D	
35	25614	1311	4301	1215	1245	370	379	941	932	4	LM	Lime and shell	D	
35	25614	1311	4301	1245	1265	379	386	932	925	1	PC	Sand and shell	D	
35	25614	1311	4301	1265	1280	386	390	925	921	3	CL	Clay	D	
35	25614	1311	4301	1280	1295	390	395	921	916	3	CL	Clay and shell	D	
35	25614	1311	4301	1295	1300	395	396	916	915	3	CL	Clay	D	
35	25614	1311	4301	1300	1305	396	398	915	913	4	LM	Hard shell	D	
35	25614	1311	4301	1305	1325	398	404	913	907	1	PC	Sand and gravel	D	
35	25614	1311	4301	1325	1354	404	413	907	898	3	CL	Clay	D	
35	25614	1311	4301	1354	1410	413	430	898	881	1	PC	Sand and clay	D	
35	25614	1311	4301	1410	1465	430	447	881	864	3	CL	Clay and little sand	D	
35	25614	1311	4301	1465	1468	447	447	864	864	4	LM	Hard lime	D	
35	25614	1311	4301	1468	1475	447	450	864	861	3	CL	Clay	D	
35	25614	1311	4301	1475	1477	450	450	861	861	4	LM	Hard lime	D	
35	25614	1311	4301	1477	1510	450	460	861	851	3	CL	Clay	D	
35	25692	1296	4252	0	10	0	3	1296	1293	3	CL	top soil	D	
35	25692	1296	4252	10	400	3	122	1293	1174	3	CL	clay	D	
35	25692	1296	4252	100	1100	30	335	1266	961	3	CL	clay	D	
35	25692	1296	4252	400	600	122	183	1174	1113	2	PF	streaks of sand and clay	D	
35	25692	1296	4252	600	900	183	274	1113	1022	3	CL	clay	D	
35	25692	1296	4252	900	1000	274	305	1022	991	2	PF	sandy clay	D	
35	25692	1296	4252	1100	1300	335	396	961	900	1	PC	boulders	D	
35	25692	1296	4252	1300	1500	396	457	900	839	3	CL	clay	D	
35	25692	1296	4252	1500	2730	457	832	839	464	9	ROCK	rock (water in rock)	D	
35	25699	1294	4245	0	10	0	3	1294	1291	3	CL	top soil	D	could not pump off- not enough H.P. on engine
35	25699	1294	4245	10	400	3	122	1291	1172	3	CL	clay	D	
35	25699	1294	4245	400	600	122	183	1172	1111	2	PF	streaks of sand and clay	D	
35	25699	1294	4245	600	900	183	274	1111	1020	3	CL	clay	D	

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35	25699	1294	4245	900	1000	274	305	1020	989	2	PF	sandy clay	D	
35	25699	1294	4245	1000	1100	305	335	989	959	3	CL	clay	D	
35	25699	1294	4245	1100	1300	335	396	959	898	1	PC	boulders	D	
35	25699	1294	4245	1300	1500	396	457	898	837	3	CL	clay	D	
35	25699	1294	4245	1500	2180	457	664	837	630	9	ROCK	rock (water in rock)	D	
35	26904	1280	4199	0	116	0	35	1280	1245	1	PC	water - sand	D	
35	26904	1280	4199	116	126	35	38	1245	1242	1	PC	blue sand	D	
35	26904	1280	4199	126	145	38	44	1242	1236	3	CL	clay	D	
35	26904	1280	4199	145	155	44	47	1236	1233	1	PC	sand	D	
35	26904	1280	4199	155	200	47	61	1233	1219	2	PF	clay and sand	D	
35	26904	1280	4199	200	215	61	66	1219	1214	1	PC	sand	D	
35	26904	1280	4199	215	300	66	91	1214	1189	1	PC	gravel and clay mix	D	
35	26904	1280	4199	300	700	91	213	1189	1067	1	PC	conglomerate	D	
35	26904	1280	4199	700	875	213	267	1067	1013	8	LAVA FLOW	red malapai rock	D	
35	26904	1280	4199	875	890	267	271	1013	1009	8	LAVA FLOW	was hard, did not bale anything out for 15 feet, this is where water is	D	
35	26904	1280	4199	890	925	271	282	1009	998	8	LAVA FLOW	malapai rock	D	
35	28198	1273	4176	0	250	0	76	1273	1197	1	PC	sand and gravel water	D	
35	28198	1273	4176	250	680	76	207	1197	1066	7	SALT	salt beds at 553 but small flows of artesian hot water	D	discharge measurement "wind mill stream". Discharge "hot water small flow at 553". No pump. [original to-depth 350 feet, changed to 680 based on comment, BFG]
35	28198	1273	4176	680	714	207	218	1066	1055	3	CL	clay beds	D	
35	28234	1263	4144	0	55	0	17	1263	1246	2	PF	Yellow clay, sand	D	This well was drilled for oil. I am submitting this log because of the heavy flow of artesian water they struck at 1460 ft.
35	28234	1263	4144	55	68	17	21	1246	1242	1	PC	Salt water, sand	D	
35	28234	1263	4144	68	350	21	107	1242	1156	3	CL	Blue clay	D	
35	28234	1263	4144	350	485	107	148	1156	1115	2	PF	Sticky shale	D	
35	28234	1263	4144	485	615	148	187	1115	1076	1	PC	Conglomerate	D	
35	28234	1263	4144	615	645	187	197	1076	1066	2	PF	Sandy shale	D	
35	28234	1263	4144	645	745	197	227	1066	1036	1	PC	Conglomerate	D	
35	28234	1263	4144	745	760	227	232	1036	1031	1	PC	Fresh water sand	D	
35	28234	1263	4144	760	860	232	262	1031	1001	1	PC	Cement, Gravel	D	
35	28234	1263	4144	860	910	262	277	1001	986	8	LAVA FLOW	Red bed	D	
35	28234	1263	4144	910	1025	277	312	986	951	1	PC	Conglomerate	D	
35	28234	1263	4144	1025	1115	312	340	951	923	1	PC	Sand and gravel	D	
35	28234	1263	4144	1115	1200	340	366	923	897	1	PC	Conglomerate	D	
35	28234	1263	4144	1200	1238	366	377	897	886	4	LM	Sandy lime	D	
35	28234	1263	4144	1238	1310	377	399	886	864	1	PC	Conglomerate	D	
35	28234	1263	4144	1310	1360	399	415	864	848	2	PF	Yellow clay, gravel	D	
35	28234	1263	4144	1360	1390	415	424	848	839	1	PC	Red sandstone	D	
35	28234	1263	4144	1390	1410	424	430	839	833	1	PC	Hard coarse sand	D	
35	28234	1263	4144	1410	1445	430	440	833	823	1	PC	Conglomerate	D	
35	28234	1263	4144	1445	1460	440	445	823	818	1	PC	Quick sand, gravel, large flow of hot water	D	
35	28234	1263	4144	1460	1905	445	581	818	682	1	PC	Red sand water	D	
35	28234	1263	4144	1905	2360	581	719	682	544	10	UNK	Bottom of well, no water below 1905	D	
35	29235	1326	4350	0	315	0	96	1326	1230	2	PF	gravelly clay	D	
35	29235	1326	4350	315	320	96	98	1230	1228	1	PC	sand and gravel	D	
35	29235	1326	4350	320	385	98	117	1228	1209	1	PC	conglomerate	D	
35	29235	1326	4350	385	390	117	119	1209	1207	1	PC	gravel	D	
35	29235	1326	4350	390	485	119	148	1207	1178	1	PC	conglomerate	D	

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35	29235	1326	4350	485	495	148	151	1178	1175	1	PC	gravel	D	
35	29235	1326	4350	495	500	151	152	1175	1174	1	PC	conglomerate	D	
35	29235	1326	4350	500	510	152	155	1174	1171	1	PC	gravel	D	
35	29235	1326	4350	510	580	155	177	1171	1149	1	PC	conglomerate	D	
35	29235	1326	4350	580	585	177	178	1149	1148	1	PC	gravel	D	
35	29235	1326	4350	585	745	178	227	1148	1099	1	PC	conglomerate	D	
35	29235	1326	4350	745	755	227	230	1099	1096	1	PC	gravel and boulders	D	
35	29235	1326	4350	755	1010	230	308	1096	1018	1	PC	conglomerate	D	
35	29235	1326	4350	1010	1680	308	512	1018	814	2	PF	heavy sticky shale	D	
35	29235	1326	4350	1680	1765	512	538	814	788	1	PC	conglomerate	D	
35	29235	1326	4350	1765	1820	538	555	788	771	1	PC	conglomerate	D	
35	29235	1326	4350	1820	1830	555	558	771	768	9	ROCK	rock layers	D	
35	29235	1326	4350	1830	1925	558	587	768	739	1	PC	conglomerate	D	
35	29915	1273	4176	0	20	0	6	1273	1267	1	PC	surface sand	D	measurement taken from ground level
35	29915	1273	4176	20	60	6	18	1267	1255	1	PC	sand	D	
35	29915	1273	4176	60	125	18	38	1255	1235	1	PC	pea gravel	D	
35	29915	1273	4176	125	190	38	58	1235	1215	3	CL	bentonite	D	
35	29915	1273	4176	190	360	58	110	1215	1163	2	PF	bentonite with streaks of gravel	D	
35	29915	1273	4176	360	470	110	143	1163	1130	1	PC	well rounded gravel with sand streaks	D	
35	29915	1273	4176	470	540	143	165	1130	1108	2	PF	clay & gravel streaks	D	
35	29915	1273	4176	540	565	165	172	1108	1101	1	PC	gravel	D	
35	29915	1273	4176	565	610	172	186	1101	1087	1	PC	gravel with clay streaks	D	
35	29915	1273	4176	610	650	186	198	1087	1075	1	PC	gravel & sand	D	
35	29915	1273	4176	650	840	198	256	1075	1017	1	PC	gravel with clay streaks	D	
35	29915	1273	4176	840	900	256	274	1017	999	1	PC	well rounded gravel	D	
35	29915	1273	4176	900	1055	274	322	999	951	1	PC	gravel & sand	D	
35	29915	1273	4176	1055	1210	322	369	951	904	1	PC	gravel with clay streaks	D	
35	29915	1273	4176	1210	1355	369	413	904	860	2	PF	clay with gravel streaks	D	
35	29915	1273	4176	1355	1415	413	431	860	842	3	CL	very hard clay	D	
35	29915	1273	4176	1415	1500	431	457	842	816	2	PF	clay with thin streaks of sand	D	
35	30169	1311	4301	0	15	0	5	1311	1306	6	GYP	soil & gypsum	D	
35	30169	1311	4301	15	161	5	49	1306	1262	2	PF	clay & sandy clay	D	
35	30169	1311	4301	161	190	49	58	1262	1253	1	PC	sand & gravel	D	
35	30169	1311	4301	190	210	58	64	1253	1247	1	PC	boulders & gravel	D	
35	30169	1311	4301	210	270	64	82	1247	1229	1	PC	gravel & clay-streaks	D	
35	30169	1311	4301	270	280	82	85	1229	1226	1	PC	boulders	D	
35	30169	1311	4301	280	385	85	117	1226	1194	1	PC	sand, gravel & clay	D	
35	30169	1311	4301	385	520	117	158	1194	1153	1	PC	sand & gravel	D	
35	30169	1311	4301	520	550	158	168	1153	1143	1	PC	boulders	D	
35	30169	1311	4301	550	645	168	197	1143	1114	8	LAVA FLOW	malapai	D	
35	30169	1311	4301	645	710	197	216	1114	1095	2	PF	clay & gravel	D	
35	30240	1336	4383	0	240	0	73	1336	1263	1	PC	sand, gravel & water	D	
35	30240	1336	4383	240	400	73	122	1263	1214	1	PC	sand, gravel, clay & water	D	
35	30240	1336	4383	400	1000	122	305	1214	1031	1	PC	sand, boulders, clay & water	D	
35	30240	1336	4383	1000	1400	305	427	1031	909	2	PF	clay & boulders	D	
35	30240	1336	4383	1400	2074	427	632	909	704	1	PC	basal conglomerate (water @ 1500')	D	
35	30299	1341	4400	0	3	0	1	1341	1340	1	PC	soil	D	
35	30299	1341	4400	3	6	1	2	1340	1339	1	PC	gravel	D	
35	30299	1341	4400	6	12	2	4	1339	1337	1	PC	clay	D	
35	30299	1341	4400	12	70	4	21	1337	1320	1	PC	gravel with clay streaks	D	
35	30299	1341	4400	70	140	21	43	1320	1298	1	PC	sand, gravel & clay streaks	D	
35	30299	1341	4400	140	185	43	56	1298	1285	1	PC	medium hard brown sand	D	
35	30299	1341	4400	185	275	56	84	1285	1257	1	PC	brown sand & gravel (water @ 265')	D	

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35	30299	1341	4400	275	365	84	111	1257	1230	1	PC	black gravel	D	
35	30299	1341	4400	365	405	111	123	1230	1218	1	PC	brown sand	D	
35	30299	1341	4400	405	485	123	148	1218	1193	1	PC	brown sand, gravel & boulders	D	
35	30299	1341	4400	485	535	148	163	1193	1178	1	PC	brown sand, gravel & malapai	D	
35	30299	1341	4400	535	545	163	166	1178	1175	8	LAVA FLOW	black malapai	D	
35	30299	1341	4400	545	560	166	171	1175	1170	1	PC	black boulders	D	
35	30299	1341	4400	560	590	171	180	1170	1161	1	PC	gray sand & gravel with clay stringers	D	
35	30299	1341	4400	590	610	180	186	1161	1155	1	PC	brown sand & gravel	D	
35	30299	1341	4400	610	620	186	189	1155	1152	1	PC	hard, black malapai gravel	D	
35	31276	1293	4242	0	6	0	2	1293	1291	3	CL	top soil	D	
35	31276	1293	4242	6	21	2	6	1291	1287	3	CL	red clay	D	
35	31276	1293	4242	21	60	6	18	1287	1275	3	CL	brown clay	D	
35	31276	1293	4242	60	102	18	31	1275	1262	2	PF	clay & boulders	D	
35	31276	1293	4242	102	171	31	52	1262	1241	2	PF	white shale with sandy streaks	D	
35	31276	1293	4242	171	200	52	61	1241	1232	2	PF	red clay shale with sandy streaks	D	
35	31276	1293	4242	200	226	61	69	1232	1224	1	PC	clay boulders with sandy streaks	D	
35	31276	1293	4242	226	237	69	72	1224	1221	2	PF	clay with sand streaks	D	
35	31276	1293	4242	237	475	72	145	1221	1148	8	LAVA FLOW	malapai	D	
35	32141	1322	4337	0	100	0	30	1322	1292	1	PC	surface soil, sand and gravel	D	
35	32141	1322	4337	100	160	30	49	1292	1273	1	PC	sand and gravel (water at 100)	D	
35	32141	1322	4337	160	510	49	155	1273	1167	1	PC	sand and gravel	D	
35	32141	1322	4337	510	580	155	177	1167	1145	1	PC	coarse gravel	D	
35	32141	1322	4337	580	690	177	210	1145	1112	8	LAVA FLOW	basalt or andesite	D	
35	32141	1322	4337	690	760	210	232	1112	1090	1	PC	coarse sand and fine gravel	D	
35	32141	1322	4337	760	880	232	268	1090	1054	1	PC	conglomerate	D	
35	32141	1322	4337	880	1000	268	305	1054	1017	1	PC	conglomerate with pea gravel	D	
35	32141	1322	4337	1000	1100	305	335	1017	987	10	UNK	[unknown]	D	
35	32270	1347	4419	0	100	0	30	1347	1317	10	UNK	overburden	D	
35	32270	1347	4419	100	460	30	140	1317	1207	1	PC	med fine sand, 1/4" gravel, sandy clay	D	
35	32270	1347	4419	460	500	140	152	1207	1195	1	PC	coarse sand 1/4" gravel	D	
35	32270	1347	4419	500	540	152	165	1195	1182	8	LAVA FLOW	solid hard andesite	D	
35	32270	1347	4419	540	600	165	183	1182	1164	8	LAVA FLOW	fractures and hard andesite	D	
35	32270	1347	4419	600	700	183	213	1164	1134	5	EVAP	ss, med fine sand, gypsum	D	
35	32270	1347	4419	700	805	213	245	1134	1102	1	PC	angular rock chips, rounded gravel, coarse sand - all cemented	D	
55	201632	1313	4308	0	100	0	30	1313	1283	3	CL	red clay	D	
55	201632	1313	4308	100	600	30	183	1283	1130	1	PC	clay conglomerate	D	
55	201632	1313	4308	600	1225	183	373	1130	940	1	PC	conglomerate	D	
55	201632	1313	4308	1225	1295	373	395	940	918	8	LAVA FLOW	malapai rock	D	
55	202150	1303	4274	0	50	0	15	1303	1288	3	CL	clay	D	
55	202150	1303	4274	50	70	15	21	1288	1281	1	PC	clay with gravel	D	
55	202150	1303	4274	70	80	21	24	1281	1278	1	PC	sand and gravel	D	
55	202150	1303	4274	80	110	24	34	1278	1269	2	PF	clay some gravel	D	
55	202150	1303	4274	110	120	34	37	1269	1266	2	PF	clay some sand	D	
55	202150	1303	4274	120	130	37	40	1266	1263	3	CL	clay	D	
55	202150	1303	4274	130	180	40	55	1263	1248	1	PC	clay sand gravel	D	
55	202150	1303	4274	180	190	55	58	1248	1245	1	PC	sand gravel	D	
55	202150	1303	4274	190	230	58	70	1245	1233	2	PF	clay sand gravel	D	
55	202150	1303	4274	230	240	70	73	1233	1230	2	PF	clay sand some gravel	D	
55	202150	1303	4274	240	250	73	76	1230	1227	2	PF	clay sand gravel	D	
55	202150	1303	4274	250	280	76	85	1227	1217	2	PF	clay sand some gravel	D	

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55	202150	1303	4274	280	290	85	88	1217	1214	2	PF	clay with slight gravel	D	
55	202150	1303	4274	290	300	88	91	1214	1211	2	PF	clay sand some gravel	D	
55	202150	1303	4274	300	310	91	94	1211	1208	2	PF	clay some gravel	D	
55	202150	1303	4274	310	320	94	98	1208	1205	2	PF	clay gravel and sand	D	
55	202150	1303	4274	320	340	98	104	1205	1199	2	PF	clay sand and gravel	D	
55	202150	1303	4274	340	350	104	107	1199	1196	2	PF	clay, gravel and rock	D	
55	202150	1303	4274	350	360	107	110	1196	1193	2	PF	clay, sand and gravel	D	
55	202150	1303	4274	360	380	110	116	1193	1187	1	PC	sand, clay and gravel	D	
55	202150	1303	4274	380	400	116	122	1187	1181	1	PC	sand, clay and gravel	D	
55	202150	1303	4274	400	540	122	165	1181	1138	1	PC	sand and gravel	D	
55	202150	1303	4274	540	580	165	177	1138	1126	1	PC	sand, gravel, and some clay	D	
55	202150	1303	4274	580	620	177	189	1126	1114	1	PC	sand gravel clay	D	
55	202150	1303	4274	620	630	189	192	1114	1111	2	PF	clay, sand and gravel	D	
55	202150	1303	4274	630	760	192	232	1111	1071	2	PF	clay and sand	D	
55	202150	1303	4274	760	800	232	244	1071	1059	2	PF	clay, some sand	D	
55	202150	1303	4274	800	900	244	274	1059	1028	2	PF	clay, sand and gravel	D	
55	202150	1303	4274	900	940	274	287	1028	1016	1	PC	sand, gravel, and some clay	D	
55	202150	1303	4274	940	950	287	290	1016	1013	1	PC	sand, gravel, and some clay	D	
55	202150	1303	4274	950	960	290	293	1013	1010	1	PC	sand, gravel, and clay	D	
55	202150	1303	4274	960	970	293	296	1010	1007	1	PC	sand, gravel, and some clay	D	
55	202150	1303	4274	970	980	296	299	1007	1004	1	PC	sand and gravel	D	
55	202150	1303	4274	980	990	299	302	1004	1001	1	PC	sand, gravel, and clay	D	
55	202150	1303	4274	990	1000	302	305	1001	998	1	PC	sand, and some clay	D	
55	202150	1303	4274	1000	1010	305	308	998	995	1	PC	sand Lt. and some clay	D	
55	202150	1303	4274	1010	1050	308	320	995	983	1	PC	sand some clay	D	
55	202150	1303	4274	1050	1080	320	329	983	974	1	PC	sand, gravel, and some clay	D	
55	202150	1303	4274	1080	1090	329	332	974	971	1	PC	sand, and clay	D	
55	202150	1303	4274	1090	1100	332	335	971	968	1	PC	sand, gravel, and clay	D	
55	202150	1303	4274	1100	1120	335	341	968	961	1	PC	sand, gravel, and some clay	D	
55	202150	1303	4274	1120	1190	341	363	961	940	1	PC	sand, gravel, and clay	D	
55	202150	1303	4274	1190	1200	363	366	940	937	1	PC	sand and gravel	D	
55	202150	1303	4274	1200	1220	366	372	937	931	1	PC	sand, gravel, and some clay	D	
55	202150	1303	4274	1220	1230	372	375	931	928	1	PC	sand and gravel	D	
55	202150	1303	4274	1230	1240	375	378	928	925	1	PC	sand, gravel, and some clay	D	
55	202150	1303	4274	1240	1250	378	381	925	922	1	PC	sand and gravel	D	
55	203605	1320	4331	1	10	0	3	1320	1317	3	CL	top soil	D	
55	203605	1320	4331	10	30	3	9	1317	1311	3	CL	clay	D	
55	203605	1320	4331	30	870	9	265	1311	1055	2	PF	streaks of clay and fine sand	D	
55	203605	1320	4331	870	1465	265	447	1055	874	2	PF	clay and streaks of fine to coarse sand	D	
55	205103	1324	4344	0	140	0	43	1324	1281	1	PC	sands and gravels with clay	D	
55	205103	1324	4344	140	420	43	128	1281	1196	1	PC	sands and gravels	D	
55	205103	1324	4344	420	500	128	152	1196	1172	8	LAVA FLOW	sands and gravels, hard basalt	D	
55	205268	1307	4289	0	190	0	58	1307	1249	10	UNK	overburden	D	
55	205268	1307	4289	190	200	58	61	1249	1246	1	PC	sand	D	
55	205268	1307	4289	200	240	61	73	1246	1234	3	CL	clay	D	
55	205268	1307	4289	240	245	73	75	1234	1233	1	PC	gravel	D	
55	205268	1307	4289	245	430	75	131	1233	1176	3	CL	clay	D	
55	205268	1307	4289	430	440	131	134	1176	1173	1	PC	sand	D	
55	205268	1307	4289	440	700	134	213	1173	1094	3	CL	clay	D	
55	205268	1307	4289	700	710	213	216	1094	1091	1	PC	sand	D	
55	205268	1307	4289	710	1000	216	305	1091	1003	3	CL	clay	D	
55	206115	1307	4288	0	5	0	2	1307	1306	2	PF	top soil	D	
55	206115	1307	4288	5	130	2	40	1306	1267	1	PC	streaks of clay and gravel	D	

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55	206115	1307	4288	130	150	40	46	1267	1261	1	PC	gravel	D	
55	206115	1307	4288	150	500	46	152	1261	1155	1	PC	streaks of clay and gravel	D	
55	206115	1307	4288	500	750	152	229	1155	1078	1	PC	conglomerate	D	
55	206115	1307	4288	750	890	229	271	1078	1036	8	LAVA FLOW	rock - Malapai	D	
55	206115	1307	4288	890	950	271	290	1036	1017	1	PC	conglomerate	D	
55	206115	1307	4288	950	1050	290	320	1017	987	4	LM	limestone	D	
55	206584	1329	4360	0	150	0	46	1329	1283	2	PF	clay and sand	D	
55	206584	1329	4360	150	350	46	107	1283	1222	1	PC	clay with streaks of conglomerate	D	
55	206584	1329	4360	350	950	107	290	1222	1039	1	PC	conglomerate with streaks of clay (10' - 20' in depth)	D	
55	206584	1329	4360	950	1200	290	366	1039	963	1	PC	harder conglomerate - broken formation with thin streaks of clay	D	
55	206584	1329	4360	1200	1325	366	404	963	925	1	PC	very hard conglomerate - broken formation	D	
55	210952	1341	4400	0	20	0	6	1341	1335	3	CL	dirt and clay	D	
55	210952	1341	4400	20	340	6	104	1335	1237	3	CL	clay	D	
55	210952	1341	4400	340	360	104	110	1237	1231	1	PC	clay conglomerate	D	
55	210952	1341	4400	360	480	110	146	1231	1195	8	LAVA FLOW	malapai rock	D	
55	210973	1330	4364	0	100	0	30	1330	1300	3	CL	adobe clay - red	D	
55	210973	1330	4364	100	110	30	34	1300	1297	1	PC	gravel	D	
55	210973	1330	4364	110	650	34	198	1297	1132	1	PC	conglomerate	D	
55	210973	1330	4364	650	680	198	207	1132	1123	1	PC	rock with traces of sand	D	
55	210973	1330	4364	680	706	207	215	1123	1115	1	PC	conglomerate	D	
55	210973	1330	4364	706	711	215	217	1115	1113	1	PC	rock with traces of sand	D	
55	210973	1330	4364	711	948	217	289	1113	1041	1	PC	conglomerate	D	
55	210973	1330	4364	948	962	289	293	1041	1037	1	PC	rock with traces of sand	D	
55	210973	1330	4364	962	1065	293	325	1037	1006	1	PC	conglomerate	D	
55	210973	1330	4364	1065	1072	325	327	1006	1003	1	PC	rock with traces of sand	D	
55	210973	1330	4364	1072	1293	327	394	1003	936	1	PC	conglomerate	D	
55	210973	1330	4364	1293	1301	394	397	936	934	2	PF	white and brown rock	D	
55	210973	1330	4364	1301	1306	397	398	934	932	3	CL	clay	D	
55	210973	1330	4364	1306	1314	398	401	932	930	1	PC	rock and sand	D	
55	210973	1330	4364	1314	1342	401	409	930	921	3	CL	clay (very sticky - water saturated)	D	
55	210973	1330	4364	1342	1425	409	434	921	896	3	CL	clay with 1 to 2' streaks of rock	D	
55	500122	1305	4283	0	5	0	2	1305	1304	3	CL	top soil	D	
55	500122	1305	4283	5	60	2	18	1304	1287	3	CL	clay	D	
55	500122	1305	4283	60	70	18	21	1287	1284	1	PC	sand	D	
55	500122	1305	4283	70	120	21	37	1284	1269	3	CL	clay	D	
55	500122	1305	4283	120	180	37	55	1269	1251	2	PF	sandy clay	D	
55	500122	1305	4283	180	188	55	57	1251	1248	1	PC	sand	D	
55	500122	1305	4283	188	260	57	79	1248	1226	3	CL	clay	D	
55	500122	1305	4283	260	330	79	101	1226	1205	1	PC	sand and clay	D	
55	500122	1305	4283	330	345	101	105	1205	1200	1	PC	sand	D	
55	500122	1305	4283	345	375	105	114	1200	1191	3	CL	joint clay	D	
55	500122	1305	4283	375	405	114	123	1191	1182	2	PF	sandy clay	D	
55	500122	1305	4283	405	420	123	128	1182	1177	1	PC	sand	D	
55	500122	1305	4283	420	460	128	140	1177	1165	3	CL	clay	D	
55	500122	1305	4283	460	468	140	143	1165	1163	1	PC	sand	D	
55	500122	1305	4283	468	528	143	161	1163	1144	2	PF	sandy clay	D	
55	500122	1305	4283	528	578	161	176	1144	1129	3	CL	clay	D	
55	500122	1305	4283	578	585	176	178	1129	1127	1	PC	sand	D	
55	500122	1305	4283	585	648	178	198	1127	1108	3	CL	clay	D	
55	500122	1305	4283	648	656	198	200	1108	1105	1	PC	sand	D	
55	500122	1305	4283	656	728	200	222	1105	1083	2	PF	sandy clay	D	
55	500122	1305	4283	728	778	222	237	1083	1068	3	CL	hard clay	D	
55	500122	1305	4283	778	784	237	239	1068	1066	1	PC	sand	D	

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55	500122	1305	4283	784	890	239	271	1066	1034	3	CL	clay	D	
55	500122	1305	4283	890	919	271	280	1034	1025	2	PF	sandy clay	D	
55	500122	1305	4283	919	928	280	283	1025	1023	1	PC	sand	D	
55	500122	1305	4283	928	970	283	296	1023	1010	2	PF	sandy clay	D	
55	500122	1305	4283	970	978	296	298	1010	1007	3	CL	clay	D	
55	500122	1305	4283	978	1000	298	305	1007	1001	3	CL	clay	D	
55	505800	1286	4219	0	32	0	10	1286	1276	3	CL	top soil red clay	D	
55	505800	1286	4219	32	43	10	13	1276	1273	1	PC	dry sand and gravel	D	
55	505800	1286	4219	43	132	13	40	1273	1246	3	CL	red clay	D	
55	505800	1286	4219	132	138	40	42	1246	1244	1	PC	sand and gravel; water at 110'	D	
55	505800	1286	4219	138	178	42	54	1244	1232	3	CL	red clay	D	
55	505800	1286	4219	178	184	54	56	1232	1230	1	PC	sand and gravel	D	
55	505800	1286	4219	184	210	56	64	1230	1222	3	CL	red clay	D	
55	505800	1286	4219	210	216	64	66	1222	1220	1	PC	sand and gravel	D	
55	505800	1286	4219	216	285	66	87	1220	1199	3	CL	Brown clay	D	
55	505800	1286	4219	285	287	87	87	1199	1198	1	PC	sand and gravel	D	
55	505800	1286	4219	287	345	87	105	1198	1181	3	CL	Brown clay	D	
55	505800	1286	4219	345	352	105	107	1181	1179	1	PC	sand and gravel	D	
55	505800	1286	4219	352	408	107	124	1179	1162	3	CL	Brown clay	D	
55	505800	1286	4219	408	413	124	126	1162	1160	1	PC	sand and gravel	D	
55	505800	1286	4219	413	447	126	136	1160	1150	3	CL	Brown clay	D	
55	505800	1286	4219	447	462	136	141	1150	1145	1	PC	sand and gravel	D	
55	505800	1286	4219	462	487	141	148	1145	1137	3	CL	Brown clay	D	
55	505800	1286	4219	487	492	148	150	1137	1136	1	PC	sand and gravel	D	
55	505800	1286	4219	492	512	150	156	1136	1130	3	CL	Brown clay	D	
55	505800	1286	4219	512	532	156	162	1130	1124	3	CL	red clay	D	
55	505800	1286	4219	532	547	162	167	1124	1119	1	PC	sand and gravel	D	
55	505800	1286	4219	547	596	167	182	1119	1104	3	CL	Brown clay	D	
55	505800	1286	4219	596	637	182	194	1104	1092	3	CL	red clay	D	
55	505800	1286	4219	637	648	194	198	1092	1088	1	PC	sand and gravel	D	
55	505800	1286	4219	648	940	198	287	1088	999	3	CL	red clay	D	
55	505800	1286	4219	940	1092	287	333	999	953	3	CL	red and barn clay layer to close to check	D	
55	505800	1286	4219	1092	1350	333	411	953	874	3	CL	red clay with white charl layers	D	
55	515771	1302	4272	0	600	0	183	1302	1119	10	UNK	[unknown]	D	
55	515771	1302	4272	600	625	183	191	1119	1112	3	CL	clay	D	
55	515771	1302	4272	625	630	191	192	1112	1110	1	PC	sand	D	
55	515771	1302	4272	630	645	192	197	1110	1106	3	CL	clay	D	
55	515771	1302	4272	645	650	197	198	1106	1104	1	PC	sand	D	
55	515771	1302	4272	650	830	198	253	1104	1049	3	CL	clay	D	
55	515771	1302	4272	830	845	253	258	1049	1045	1	PC	sand	D	
55	515771	1302	4272	845	920	258	280	1045	1022	3	CL	clay	D	
55	515771	1302	4272	920	1020	280	311	1022	991	2	PF	sand and clay streaks	D	
55	515771	1302	4272	1020	1053	311	321	991	981	3	CL	clay	D	
55	551624	1310	4299	0	25	0	8	1310	1303	1	PC	top soil	D	
55	551624	1310	4299	25	35	8	11	1303	1300	1	PC	gravel	D	
55	551624	1310	4299	35	177	11	54	1300	1256	2	PF	clay with some sandstone	D	
55	551624	1310	4299	177	220	54	67	1256	1243	3	CL	clay	D	
55	551624	1310	4299	220	232	67	71	1243	1240	1	PC	gravel	D	
55	551624	1310	4299	232	350	71	107	1240	1204	1	PC	sand (some clay)	D	
55	551624	1310	4299	350	440	107	134	1204	1176	2	PF	clay with sand streaks	D	
55	551624	1310	4299	440	460	134	140	1176	1170	1	PC	sand	D	
55	551624	1310	4299	460	540	140	165	1170	1146	2	PF	clay with sand streaks	D	
55	551624	1310	4299	540	970	165	296	1146	1015	8	LAVA FLOW	hard rock with streaks of clay	D	

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55	551624	1310	4299	970	1020	296	311	1015	999	1	PC	gravel and sand	D	
55	551624	1310	4299	1020	1203	311	367	999	944	8	LAVA FLOW	hard rock (60,000 lb - drilled - 10 to 15 min / ft)	D	
55	559752	1477	4845	0	1025	0	312	1477	1164	2	PF	alluvial	D	
55	563647	1341	4401	0	285	0	87	1341	1254	10	UNK	overburden	D	
55	563647	1341	4401	285	320	87	98	1254	1244	1	PC	sand	D	
55	563647	1341	4401	320	330	98	101	1244	1241	3	CL	clay	D	
55	563647	1341	4401	330	390	101	119	1241	1222	1	PC	sand	D	
55	563647	1341	4401	390	400	119	122	1222	1219	3	CL	clay	D	
55	563647	1341	4401	400	455	122	139	1219	1203	1	PC	sand	D	
55	563647	1341	4401	455	475	139	145	1203	1197	3	CL	clay	D	
55	563647	1341	4401	475	540	145	165	1197	1177	1	PC	sand	D	
55	563647	1341	4401	540	640	165	195	1177	1146	2	PF	sand and clay	D	
55	563647	1341	4401	640	690	195	210	1146	1131	1	PC	sand	D	
55	563647	1341	4401	690	1000	210	305	1131	1037	2	PF	clay with sand streaks	D	
55	566135	1397	4583	0	419	0	128	1397	1269	8	LAVA FLOW	brown andesite, 1st water 340', static 255'	D	
55	577269	1299	4262	0	210	0	64	1299	1235	10	UNK	overburden	D	
55	577269	1299	4262	210	225	64	69	1235	1231	1	PC	sand	D	
55	577269	1299	4262	225	345	69	105	1231	1194	3	CL	clay	D	
55	577269	1299	4262	345	355	105	108	1194	1191	1	PC	sand	D	
55	577269	1299	4262	355	520	108	158	1191	1141	3	CL	clay	D	
55	577269	1299	4262	520	530	158	162	1141	1138	1	PC	sand	D	
55	577269	1299	4262	530	550	162	168	1138	1132	3	CL	clay	D	
55	577269	1299	4262	550	565	168	172	1132	1127	1	PC	sand	D	
55	577269	1299	4262	565	610	172	186	1127	1113	3	CL	clay	D	
55	577269	1299	4262	610	630	186	192	1113	1107	1	PC	sand	D	
55	577269	1299	4262	630	765	192	233	1107	1066	3	CL	clay	D	
55	577269	1299	4262	765	780	233	238	1066	1061	1	PC	sand	D	
55	577269	1299	4262	780	810	238	247	1061	1052	3	CL	clay	D	
55	577269	1299	4262	810	820	247	250	1052	1049	1	PC	sand	D	
55	577269	1299	4262	820	830	250	253	1049	1046	3	CL	clay	D	
55	577269	1299	4262	830	1022	253	312	1046	988	1	PC	conglomerate	D	
55	577619	1317	4322	0	20	0	6	1317	1311	3	CL	clay and clay	D	
55	577619	1317	4322	20	420	6	128	1311	1189	3	CL	clay	D	
55	577619	1317	4322	420	880	128	268	1189	1049	1	PC	clay conglomerate	D	
55	577619	1317	4322	880	1200	268	366	1049	952	1	PC	hard conglomerate	D	
55	577619	1317	4322	1200	1300	366	396	952	921	1	PC	conglomerate	D	
55	578921	1315	4313	0	20	0	6	1315	1309	3	CL	clay and clay	D	
55	578921	1315	4313	20	460	6	140	1309	1174	3	CL	clay	D	
55	578921	1315	4313	460	880	140	268	1174	1046	1	PC	clay conglomerate	D	
55	578921	1315	4313	880	1200	268	366	1046	949	1	PC	hard conglomerate	D	
55	578921	1315	4313	1200	1300	366	396	949	918	1	PC	conglomerate	D	
55	582197	1443	4734	0	10	0	3	1443	1440	2	PF	top soil	D	
55	582197	1443	4734	10	80	3	24	1440	1419	8	LAVA FLOW	malapai	D	
55	582197	1443	4734	80	100	24	30	1419	1413	8	LAVA FLOW	cinder	D	
55	582197	1443	4734	100	140	30	43	1413	1400	8	LAVA FLOW	malapai	D	
55	582197	1443	4734	140	150	43	46	1400	1397	8	LAVA FLOW	cinder	D	
55	582197	1443	4734	150	490	46	149	1397	1294	8	LAVA FLOW	malapai	D	
55	582197	1443	4734	490	525	149	160	1294	1283	8	LAVA FLOW	broken and fractured malapai	D	
55	583333	1318	4324	0	265	0	81	1318	1237	10	UNK	overburden	D	

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55	583333	1318	4324	265	345	81	105	1237	1213	2	PF	clay and sand	D	
55	583333	1318	4324	345	375	105	114	1213	1204	1	PC	sand	D	
55	583333	1318	4324	375	405	114	123	1204	1194	3	CL	clay	D	
55	583333	1318	4324	405	495	123	151	1194	1167	1	PC	sand and clay	D	
55	583333	1318	4324	495	510	151	155	1167	1162	1	PC	gravel and sand	D	
55	583333	1318	4324	510	650	155	198	1162	1120	2	PF	clay and sand	D	
55	583333	1318	4324	650	670	198	204	1120	1114	1	PC	gravel	D	
55	583333	1318	4324	670	750	204	229	1114	1089	3	CL	clay	D	
55	583333	1318	4324	750	760	229	232	1089	1086	1	PC	sand	D	
55	583333	1318	4324	760	1105	232	337	1086	981	1	PC	conglomerate	D	
55	585871	1345	4413	0	330	0	101	1345	1244	1	PC	volcanic conglomerate	D	
55	585871	1345	4413	330	471	101	144	1244	1201	8	LAVA FLOW	andesite, 1st water 370', static 320'	D	
55	586012	1309	4295	0	320	0	98	1309	1212	3	CL	clay	D	
55	586012	1309	4295	320	540	98	165	1212	1145	1	PC	clay conglomerate	D	
55	586012	1309	4295	540	850	165	259	1145	1050	1	PC	conglomerate	D	
55	586012	1309	4295	850	1280	259	390	1050	919	1	PC	hard conglomerate	D	
55	591753	1327	4354	0	395	0	120	1327	1207	10	UNK	overburden	D	
55	591753	1327	4354	395	420	120	128	1207	1199	1	PC	gravel	D	
55	591753	1327	4354	420	450	128	137	1199	1190	1	PC	gravel and clay	D	
55	591753	1327	4354	450	465	137	142	1190	1185	1	PC	gravel	D	
55	591753	1327	4354	465	590	142	180	1185	1147	3	CL	clay	D	
55	591753	1327	4354	590	605	180	184	1147	1143	1	PC	sand	D	
55	591753	1327	4354	605	740	184	226	1143	1102	2	PF	clay and gravel	D	
55	591753	1327	4354	740	755	226	230	1102	1097	1	PC	gravel	D	
55	591753	1327	4354	755	865	230	264	1097	1063	2	PF	clay and gravel	D	
55	591753	1327	4354	865	915	264	279	1063	1048	1	PC	conglomerate	D	
55	591753	1327	4354	915	925	279	282	1048	1045	8	LAVA FLOW	hard rock	D	
55	591753	1327	4354	925	1010	282	308	1045	1019	1	PC	conglomerate	D	
55	594688	1301	4269	0	230	0	70	1301	1231	10	UNK	overburden	D	
55	594688	1301	4269	230	235	70	72	1231	1229	1	PC	sand	D	
55	594688	1301	4269	235	275	72	84	1229	1217	3	CL	clay	D	
55	594688	1301	4269	275	285	84	87	1217	1214	1	PC	sand	D	
55	594688	1301	4269	285	340	87	104	1214	1197	3	CL	clay	D	
55	594688	1301	4269	340	375	104	114	1197	1187	1	PC	sand	D	
55	594688	1301	4269	375	405	114	123	1187	1178	3	CL	clay	D	
55	594688	1301	4269	405	525	123	160	1178	1141	1	PC	sand and clay	D	
55	594688	1301	4269	525	570	160	174	1141	1127	3	CL	clay	D	
55	594688	1301	4269	570	585	174	178	1127	1123	1	PC	sand	D	
55	594688	1301	4269	585	845	178	258	1123	1044	1	PC	sand and clay	D	
55	594688	1301	4269	845	855	258	261	1044	1040	1	PC	sand	D	
55	594688	1301	4269	855	1005	261	306	1040	995	2	PF	clay and sand streaks	D	
55	613592	1336	4382	500	530	152	162	1183	1174	3	CL	clay	D	
55	613592	1336	4382	530	545	162	166	1174	1170	1	PC	sand	D	
55	613592	1336	4382	545	610	166	186	1170	1150	3	CL	clay	D	
55	613592	1336	4382	610	620	186	189	1150	1147	1	PC	gravel	D	
55	613592	1336	4382	620	710	189	216	1147	1119	1	PC	sand and clay	D	
55	613592	1336	4382	710	870	216	265	1119	1071	3	CL	clay	D	
55	613592	1336	4382	870	1165	265	355	1071	981	1	PC	sand and clay	D	
55	613707	1302	4272	502	525	153	160	1149	1142	3	CL	clay	D	
55	613707	1302	4272	525	535	160	163	1142	1139	1	PC	conglomerate	D	
55	613707	1302	4272	535	550	163	168	1139	1134	8	LAVA FLOW	basalt	D	
55	613707	1302	4272	550	556	168	169	1134	1133	8	LAVA FLOW	fractured basalt	D	

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55	613707	1302	4272	556	562	169	171	1133	1131	3	CL	clay	D	
55	613707	1302	4272	562	582	171	177	1131	1125	8	LAVA FLOW	basalt	D	
55	613707	1302	4272	582	590	177	180	1125	1122	8	LAVA FLOW	fractured basalt	D	
55	613707	1302	4272	590	650	180	198	1122	1104	1	PC	sand with streaks of clay	D	
55	613707	1302	4272	650	675	198	206	1104	1096	1	PC	conglomerate	D	
55	808157	1322	4337	600	660	183	201	1139	1121	1	PC	sand	D	
55	808157	1322	4337	660	805	201	245	1121	1077	3	CL	clay	D	
55	808157	1322	4337	805	820	245	250	1077	1072	1	PC	sand	D	
55	808157	1322	4337	820	910	250	277	1072	1045	3	CL	clay	D	
55	808157	1322	4337	910	920	277	280	1045	1042	1	PC	sand	D	
55	808157	1322	4337	920	965	280	294	1042	1028	3	CL	clay	D	
55	808157	1322	4337	965	975	294	297	1028	1025	1	PC	sand	D	
55	808157	1322	4337	975	1025	297	312	1025	1010	3	CL	clay	D	
55	808157	1322	4337	1025	1035	312	315	1010	1006	1	PC	sand	D	
55	808157	1322	4337	1035	1060	315	323	1006	999	3	CL	clay	D	
55	808157	1322	4337	1060	1085	323	331	999	991	1	PC	sand	D	
55	808157	1322	4337	1085	1100	331	335	991	987	3	CL	clay	D	
OG	103	1300	4265	0	6	0	2	1300	1298	2	PF	sandy loam	D	Cenozoic at TD
OG	103	1300	4265	6	50	2	15	1298	1285	1	PC	clutch(sp)	D	
OG	103	1300	4265	50	105	15	32	1285	1268	1	PC	clay and boulders red	D	
OG	103	1300	4265	105	135	32	41	1268	1259	3	CL	red clay	D	
OG	103	1300	4265	135	146	41	45	1259	1255	1	PC	sand and gravel water	D	
OG	103	1300	4265	146	205	45	62	1255	1238	2	PF	grey shale	D	
OG	103	1300	4265	205	280	62	85	1238	1215	2	PF	red clay and boulders	D	
OG	103	1300	4265	280	305	85	93	1215	1207	1	PC	sand and gravel water	D	
OG	103	1300	4265	305	508	93	155	1207	1145	8	LAVA FLOW	chirk (sp.) a pretty red and dam hard	D	
OG	103	1300	4265	508	658	155	201	1145	1099	2	PF	grey shale	D	
OG	103	1300	4265	658	668	201	204	1099	1096	4	LM	lime grey	D	
OG	203	1280	4201	0	210	0	64	1280	1216	10	UNK	no log	G	
OG	203	1280	4201	210	250	64	76	1216	1204	1	PC	Tan to gray loose arkosic sand, fine to coarse gravel	G	
OG	203	1280	4201	250	280	76	85	1204	1195	3	CL	Blue gray clay with incl'd reddened quartz gravel	G	
OG	203	1280	4201	280	300	85	91	1195	1189	1	PC	Gray loose arkosic sand fine gravel angular to sub rounded	G	
OG	203	1280	4201	300	320	91	98	1189	1183	1	PC	Gray muddy loose sand	G	
OG	203	1280	4201	320	375	98	114	1183	1166	1	PC	Gray loose arkosic sand, with chert and pyrite	G	
OG	203	1280	4201	375	400	114	122	1166	1159	3	CL	gray green clay, in part sandy	G	
OG	203	1280	4201	400	500	122	152	1159	1128	3	CL	Gray clay, consolidated in part with incl'd. Sandy gravel	G	
OG	203	1280	4201	500	540	152	165	1128	1116	10	UNK	Samples missing	G	
OG	203	1280	4201	540	550	165	168	1116	1113	3	CL	Gray clay with lime stringers	G	
OG	203	1280	4201	550	600	168	183	1113	1098	3	CL	Gray clay w/ incl'd qtz., Gr.	G	
OG	203	1280	4201	600	650	183	198	1098	1082	1	PC	Gray sand with clay cement.	G	
OG	203	1280	4201	650	680	198	207	1082	1073	1	PC	Gray loose arkosic sand. Fine to pebble size.	G	
OG	203	1280	4201	680	750	207	229	1073	1052	1	PC	Gray to tan loose gravel. Mainly quartz.	G	
OG	203	1280	4201	750	800	229	244	1052	1037	1	PC	Gray fine to medium quartz sand becoming arkosic	G	
OG	203	1280	4201	800	890	244	271	1037	1009	1	PC	Very fine to very coarse loose sand angular to sub rounded	G	
OG	203	1280	4201	890	900	271	274	1009	1006	3	CL	Gray to pink clay	G	
OG	203	1280	4201	900	950	274	290	1006	991	1	PC	tan to brown fine very loose sand with gray clay cement	G	
OG	203	1280	4201	950	1000	290	305	991	976	1	PC	Dark red brown arkosic. High % of granitic material.	G	
OG	203	1280	4201	1000	1400	305	427	976	854	1	PC	Same with limestone pebbles, clay cementing	G	
OG	203	1280	4201	1400	1705	427	520	854	761	1	PC	Dark red brown to purplish granitic sand. Loose.	G	
OG	203	1280	4201	1705	1805	520	550	761	730	10	UNK	Samples missing	G	
OG	203	1280	4201	1805	2020	550	616	730	665	1	PC	Dark red brown granitic sand, loose; fine to coarse.	G	
OG	203	1280	4201	2020	2400	616	732	665	549	1	PC	Same but becoming lighter with gray cast.	G	

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OG	203	1280	4201	2400	2700	732	823	549	458	1	PC	Composed mainly of quartzite, feldspar, with minor amounts of clay, ls. Pebbles and igneous rocks.	G	
OG	203	1280	4201	2700	2800	823	853	458	427	1	PC	Dark purple brown quartzitic, angular fragments, medium to coarse grained. Somewhat arkosic and with red brown clay and shale in small amounts.	G	
OG	203	1280	4201	2800	3420	853	1042	427	238	1	PC	Appears to be reworked older sediments with abundant copper mineralization.	G	
OG	203	1280	4201	3420	3670	1042	1119	238	162	1	PC	Dark blue gray calc. quartzite fragments.	G	
OG	203	1280	4201	3670	3900	1119	1189	162	92	1	PC	Dark gray reworked quartzitic material; some arkosic material and with red brown shale and clay. Abundant copper minerals. Asphaltic globules. Secondary calc. material.	G	
OG	203	1280	4201	3900	4000	1189	1219	92	61	10	UNK	Samples missing	G	
OG	203	1280	4201	4000	4200	1219	1280	61	0	1	PC	[appears to be same symbology used to represent 3670-3900]	G	
OG	203	1280	4201	4200	4300	1280	1311	0	-30	1	PC	Gray quartzitic sand with loose sand in asphaltic globules.	G	
OG	203	1280	4201	4300	4950	1311	1509	-30	-228	1	PC	Reworked older rock. Chiefly quartzite with arkosic material. Some red brown clay.	G	
OG	203	1280	4201	4950	5010	1509	1527	-228	-247	2	PF	Lignite or highly carbon. Black shale seams in above quartzitic material.	G	
OG	203	1280	4201	5010	5030	1527	1533	-247	-253	2	PF	Same with tar globules or balls.	G	
OG	203	1280	4201	5030	5100	1533	1554	-253	-274	2	PF	[appears to be same symbology used to represent 4950-5010]	G	
OG	203	1280	4201	5100	5250	1554	1600	-274	-320	1	PC	Arkosic sandstone, fine to coarse, conglomerate texture. Dark yellow brown color, from limonite. Arkosic sandstone, conglomerate with thin black carbon. S. and graphitic shale.	G	
OG	203	1280	4201	5250	5330	1600	1625	-320	-344	2	PF	Black graphitic shale with thin seams of arkosic sandstone, conglomerate.	G	
OG	203	1280	4201	5330	5410	1625	1649	-344	-369	1	PC	Dark brown very fine sandstone. Arkosic material. Dark purplish brown very fine sandstone.	G	
OG	203	1280	4201	5410	5450	1649	1661	-369	-381	1	PC	Same as above becoming coarser grained, higher porosity.	G	
OG	203	1280	4201	5450	5800	1661	1768	-381	-487	1	PC	Same. Very fine grained with variegated colors, gray, purplish brown and cream.	G	
OG	203	1280	4201	5800	5840	1768	1780	-487	-500	2	PF	Black carbonaceous shale. Dark gray to black and green very fine grained quartzitic sandstone with thin bl. Carbon shale.	G	
OG	203	1280	4201	5840	5900	1780	1798	-500	-518	1	PC	Dark gray to black very fine grained sandstone, argillic.	G	
OG	203	1280	4201	5900	5970	1798	1820	-518	-539	1	PC	Dark gray to black arenac.. Shale, calc. in part.	G	
OG	203	1280	4201	5970	6100	1820	1859	-539	-579	1	PC	Dark gray green very fine sandstone, argillic.	G	
OG	203	1280	4201	6100	6260	1859	1908	-579	-628	1	PC	Dark gray to black arenac.. Shale, calc. in part.	G	
OG	203	1280	4201	6260	6300	1908	1920	-628	-640	1	PC	with thin fine grained light sandstone.	G	
OG	203	1280	4201	6300	6400	1920	1951	-640	-670	2	PF	Dark gray to black highly calc. shale	G	
OG	203	1280	4201	6400	6430	1951	1960	-670	-679	4	LM	becoming argillic limestone	G	
OG	203	1280	4201	6430	6450	1960	1966	-679	-686	1	PC	Green fine grained sandstone	G	
OG	203	1280	4201	6450	6460	1966	1969	-686	-689	4	LM	Black argillic limestone	G	
OG	203	1280	4201	6460	6500	1969	1981	-689	-701	1	PC	Light to dark var. sandstone, fine grained.	G	
OG	203	1280	4201	6500	6520	1981	1987	-701	-707	1	PC	Light gray calc. sandstone fine gr.	G	
OG	203	1280	4201	6520	6560	1987	2000	-707	-719	1	PC	Dark fine grained sandstone, argillic. Abundant limonite.	G	
OG	203	1280	4201	6560	6590	2000	2009	-719	-728	4	LM	Dark gray sandy limestone	G	
OG	203	1280	4201	6590	6600	2009	2012	-728	-731	1	PC	Dark red brown arkosic sandstone, conglomerate	G	
OG	203	1280	4201	6600	6650	2012	2027	-731	-746	1	PC	Purple brown arkosic sandstone with calc. streaks	G	
OG	203	1280	4201	6650	6690	2027	2039	-746	-759	4	LM	Cream fine grained loose sand dark gray to black sandy dolo..	G	
OG	203	1280	4201	6690	6700	2039	2042	-759	-762	1	PC	Cream fine gr. Loose sand	G	
OG	203	1280	4201	6700	6775	2042	2065	-762	-785	4	LM	Dark gray to purplish, sandy dolo.. With thin seams of gray with purple mottling, bentonite or tuff.	G	
OG	203	1280	4201	6775	6810	2065	2076	-785	-795	1	PC	Dark red brown sandy shale with thin tan fine grained sandstone. Loose.	G	
OG	203	1280	4201	6810	6865	2076	2092	-795	-812	1	PC	Cu. Minerals. Dark green fine grained sandstone, arkosic and finely conglomerate with red brown mottling (olivine, epidote chief minerals).	G, RES, SP, CAL, GAM, CN, T	Cretaceous (?) at TD

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OG	208	1276	4185	0	100	0	30	1276	1246	10	UNK	unknown	G	Partial log - summarized from 'Analysis by Okis Couleen, May 1949'. See detailed descriptions for depths between 100 and 3,340 feet in AZGS files. No log below 3,340 ft.
OG	208	1276	4185	100	2465	30	751	1246	525	1	PC	Alluvium, apparently predominantly coarse-clastic sands and gravel, from volcanic, granitic and sedimentary-metamorphic sources.	G	
OG	208	1276	4185	2465	2585	751	788	525	488	10	UNK	unknown	G	
OG	208	1276	4185	2585	2590	788	789	488	487	1	PC	Alluvium, angular to rounded, 60% under 2mm clast size. Quartz pebbles rounded. Quartzite dark to pink in color. Rhyolite light tan ground mass. Fe staining on quartzite.	G	
OG	208	1276	4185	2590	2613	789	796	487	480	10	UNK	unknown	G	
OG	208	1276	4185	2613	2617	796	798	480	478	1	PC	Alluvium similar to 2585 to 2590 interval	G	
OG	208	1276	4185	2617	2634	798	803	478	473	10	UNK	unknown	G	
OG	208	1276	4185	2634	2636	803	803	473	473	1	PC	Alluvium, angular to rounded, 50% over 2mm, 50% under, of clasts predominantly from quartzite sources, some rhyolite. Grains of magnetite, limonite, and epidote(?).	G	
OG	208	1276	4185	2636	2640	803	805	473	471	10	UNK	unknown	G	
OG	208	1276	4185	2640	2650	805	808	471	468	1	PC	Alluvium, angular to rounded of approximately equal percentages of grains over and under 2mm size. Predominantly quartzite sources with some volcanic, "spring deposit", travertine, and sandstone. Limonite, magnetite, quartz, epidote and chlorite alteration noted.	G	
OG	208	1276	4185	2650	2680	808	817	468	459	10	UNK	unknown	G	
OG	208	1276	4185	2680	2800	817	853	459	423	8	LAVA FLOW	Rhyolite(?). Nearly aphanitic matrix, few scattered feldspar grains and pyroxene phenocrysts, fine-grained to glassy and light brown. Some pumice. Quartz-lined vugs.	G	
OG	208	1276	4185	2800	2860	853	872	423	404	1	PC	Alluvium, very angular to very well-rounded, light brown. Clasts of predominantly volcanic rocks, tuff, and quartzite(?). Silt has a calcite cement. Sand weakly consolidated. No fines under 2mm present near contact with underlying tuff.	G	
OG	208	1276	4185	2860	2880	872	878	404	398	8	LAVA FLOW	Tuff. Fine-grained and glassy with abundant quartz and pyroxenes, gray in color.	G	
OG	208	1276	4185	2880	3080	878	939	398	337	1	PC	Alluvium, angular to well-rounded with fragments consisting of mainly volcanic rocks. Some quartzite, sandstone and intrusive rocks noted, including weathered dike material. Material under 2mm has slight lime cement.	G	
OG	208	1276	4185	3080	3090	939	942	337	334	8	LAVA FLOW	Fine-grained intrusive rock(?) and fragments, few volcanic fragments. Some lime cement.	G	
OG	208	1276	4185	3090	3140	942	957	334	319	1	PC	Alluvium, predominantly sand-size particles, angular to well-rounded. Clasts predominantly volcanic, reddish-gray color.	G	
OG	208	1276	4185	3140	3340	957	1018	319	258	1	PC	Alluvium, predominantly pink volcanic rock fragments below 2mm size. Fragments of tuff, quartzite, siltstone (?), and serpentine (?) noted. Aphanitic and glassy texture with pink, red, white and brown colors. Most clasts angular with some sub-rounded. Some large fragments at 3,310 to 3,320 ft have rounded surfaces, indicating rounded gravels.	G	
OG	208	1276	4185	3340	4605	1018	1404	258	-128	10	UNK	unknown	G	Tertiary volcanic rock at TD reported.
OG	209	1273	4175	0	349	0	106	1273	1167	10	UNK	No samples	S	Partial log taken from analysis of random samples from 350 to 2702 feet.
OG	209	1273	4175	350	351	107	107	1166	1166	3	CL	pale green bentonitic clay, some gypsum quartz and volcanic fragments 10%.	S	
OG	209	1273	4175	351	480	107	146	1166	1127	10	UNK	unknown	S	
OG	209	1273	4175	480	481	146	147	1127	1126	6	GYP	flesh pink gypsum, some clay 10%.	S	
OG	209	1273	4175	481	660	147	201	1126	1072	10	UNK	unknown	S	
OG	209	1273	4175	660	661	201	201	1072	1072	3	CL	light gray clay 60%, gypsum 10%, schist, gneiss volcanics 30%	S	
OG	209	1273	4175	661	680	201	207	1072	1066	10	UNK	unknown	S	
OG	209	1273	4175	680	681	207	208	1066	1065	1	PC	grayish brown, green schist and gneiss 60%, volcanics 35%, trace of clay and gypsum.	S	
OG	209	1273	4175	681	785	208	239	1065	1034	10	UNK	unknown	S	
OG	209	1273	4175	785	786	239	240	1034	1033	1	PC	grayish brown volcanics and graywacke 40%, gypsum 15%, schist and gneiss 20%.	S	percentages unknown
OG	209	1273	4175	786	885	240	270	1033	1003	10	UNK	unknown	S	

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OG	209	1273	4175	885	886	270	270	1003	1003	2	PF	Brownish gray graywacke 80%, volcanics 15%, gypsum 5%.	S	
OG	209	1273	4175	886	980	270	299	1003	974	10	UNK	unknown	S	
OG	209	1273	4175	980	981	299	299	974	974	2	PF	Brownish gray graywacke 70%, volcanics 15%, schist and gneiss 10%, gypsum 5%.	S	
OG	209	1273	4175	981	1080	299	329	974	944	10	UNK	unknown	S	
OG	209	1273	4175	1080	2702	329	824	944	449	2	PF	brownish gray graywacke varying from 85% to 100% Remainder of cuttings consisting of "clay or volcanics and trace amounts of gypsum, quartz, gneiss, schist, shale and iron fragments"	S	Taken from 17 sample-point intervals between 1080 and 2702 (TD) feet (AZGS OG files).
OG	210	1271	4170	0	1	0	0	1271	1271	1	PC	sand	D	
OG	210	1271	4170	1	4	0	1	1271	1270	1	PC	sandstone	D	
OG	210	1271	4170	4	4.5	1	1	1270	1270	2	PF	brown coarse clay and sand	D	
OG	210	1271	4170	4.5	5	1	2	1270	1270	2	PF	light blue clay and sand	D	
OG	210	1271	4170	5	8	2	2	1270	1269	3	CL	dark brown clay, little sand	D	
OG	210	1271	4170	8	12	2	4	1269	1267	2	PF	light brown clay, some sand and water	D	
OG	210	1271	4170	12	14	4	4	1267	1267	1	PC	quicksand	D	
OG	210	1271	4170	14	15	4	5	1267	1266	1	PC	coarse gravel -water	D	
OG	210	1271	4170	15	52	5	16	1266	1255	1	PC	quicksand - water	D	
OG	210	1271	4170	52	176	16	54	1255	1217	3	CL	light blue clay	D	
OG	210	1271	4170	176	221	54	67	1217	1204	2	PF	blue sticky shale, oil colors	D	
OG	210	1271	4170	221	363	67	111	1204	1160	3	CL	light gray clay	D	
OG	210	1271	4170	363	431	111	131	1160	1140	3	CL	shale and clay	D	
OG	210	1271	4170	431	433	131	132	1140	1139	4	LM	limestone and quartz	D	
OG	210	1271	4170	433	469	132	143	1139	1128	4	LM	limestone	D	
OG	210	1271	4170	469	471	143	144	1128	1127	4	LM	soft lime	D	
OG	210	1271	4170	471	494	144	151	1127	1120	4	LM	limestone	D	
OG	210	1271	4170	494	497	151	151	1120	1120	4	LM	hard rock	D	
OG	210	1271	4170	497	510	151	155	1120	1116	4	LM	soft white lime rock	D	
OG	210	1271	4170	510	548	155	167	1116	1104	3	CL	brown clay and shale	D	
OG	210	1271	4170	548	586	167	179	1104	1092	2	PF	shale, oil colors	D	
OG	210	1271	4170	586	645	179	197	1092	1074	3	CL	brown clay or shale	D	
OG	210	1271	4170	645	650	197	198	1074	1073	2	PF	shale showing oil	D	
OG	210	1271	4170	650	655	198	200	1073	1071	2	PF	variegated colored shale	D	
OG	210	1271	4170	655	700	200	213	1071	1058	2	PF	yellow to tan shale	D	
OG	210	1271	4170	700	735	213	224	1058	1047	1	PC	sand	D	
OG	210	1271	4170	735	740	224	226	1047	1045	1	PC	gravel -water	D	
OG	210	1271	4170	740	767	226	234	1045	1037	3	CL	yellowish clay	D	
OG	210	1271	4170	767	770	234	235	1037	1036	1	PC	hard rock conglomerate; artesian water 100 gpm, temp=98 deg.	D	Quaternary/Tertiary at TD
OG	211	1271	4170	0	11	0	3	1271	1268	2	PF	blue shale, sand	D	
OG	211	1271	4170	11	18	3	5	1268	1266	2	PF	blue shale and oil	D	
OG	211	1271	4170	18	22	5	7	1266	1264	3	CL	yellow clay	D	
OG	211	1271	4170	22	42	7	13	1264	1258	1	PC	coarse gravel and water	D	
OG	211	1271	4170	42	51	13	16	1258	1255	3	CL	yellow clay	D	
OG	211	1271	4170	51	66	16	20	1255	1251	2	PF	blue shale and oil	D	
OG	211	1271	4170	66	73	20	22	1251	1249	1	PC	sand water and oil	D	
OG	211	1271	4170	73	78	22	24	1249	1247	2	PF	blue shale and oil	D	
OG	211	1271	4170	78	93	24	28	1247	1243	2	PF	light blue shale and sand	D	
OG	211	1271	4170	93	100	28	30	1243	1241	1	PC	sandstone	D	
OG	211	1271	4170	100	102	30	31	1241	1240	2	PF	blue shale	D	
OG	211	1271	4170	102	225	31	69	1240	1202	2	PF	dark blue shale	D	
OG	211	1271	4170	225	270	69	82	1202	1189	2	PF	light blue shale	D	
OG	211	1271	4170	270	330	82	101	1189	1170	4	LM	Penn lime - shells 2750278	D	
OG	211	1271	4170	330	340	101	104	1170	1167	2	PF	brown shale	D	
OG	211	1271	4170	340	350	104	107	1167	1164	4	LM	Penn limestone	D	
OG	211	1271	4170	350	392	107	119	1164	1152	2	PF	dark brown shale	D	
OG	211	1271	4170	392	425	119	130	1152	1141	10	UNK	formation change to dark blue or green with gas and oil	D	

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OG	211	1271	4170	425	428	130	130	1141	1141	1	PC	sand - oil	D	Quaternary at TD
OG	212	1273	4175	0	55	0	17	1273	1256	2	PF	yellow clay and sand	D	
OG	212	1273	4175	55	68	17	21	1256	1252	1	PC	salt water and water sand	D	
OG	212	1273	4175	68	85	21	26	1252	1247	3	CL	yellow clay	D	
OG	212	1273	4175	85	90	26	27	1247	1245	1	PC	water sand	D	
OG	212	1273	4175	90	350	27	107	1245	1166	3	CL	blue clay	D	
OG	212	1273	4175	350	450	107	137	1166	1135	2	PF	sticky shale	D	
OG	212	1273	4175	450	454	137	138	1135	1134	4	LM	lime shell	D	
OG	212	1273	4175	454	485	138	148	1134	1125	2	PF	sticky shale	D	
OG	212	1273	4175	485	510	148	155	1125	1117	1	PC	conglomerate	D	
OG	212	1273	4175	510	515	155	157	1117	1116	2	PF	yellow shale	D	
OG	212	1273	4175	515	519	157	158	1116	1114	4	LM	lime shell	D	
OG	212	1273	4175	519	560	158	171	1114	1102	1	PC	red bed and gravel	D	
OG	212	1273	4175	560	568	171	173	1102	1099	4	LM	sandy lime	D	
OG	212	1273	4175	568	576	173	176	1099	1097	2	PF	red mud	D	
OG	212	1273	4175	576	580	176	177	1097	1096	4	LM	lime shell: showing oil	D	
OG	212	1273	4175	580	613	177	187	1096	1086	10	UNK	red bed	D	
OG	212	1273	4175	613	618	187	188	1086	1084	2	PF	sandy shale	D	
OG	212	1273	4175	618	621	188	189	1084	1083	4	LM	lime shell	D	
OG	212	1273	4175	621	630	189	192	1083	1081	2	PF	sandy shale	D	
OG	212	1273	4175	630	635	192	194	1081	1079	1	PC	hard sand	D	
OG	212	1273	4175	635	645	194	197	1079	1076	1	PC	red bed and gravel	D	
OG	212	1273	4175	645	745	197	227	1076	1045	1	PC	conglomerate	D	
OG	212	1273	4175	745	760	227	232	1045	1041	1	PC	fresh water sand	D	
OG	212	1273	4175	760	860	232	262	1041	1010	1	PC	cement gravel	D	
OG	212	1273	4175	860	870	262	265	1010	1007	10	UNK	red bed	D	
OG	212	1273	4175	870	896	265	273	1007	999	1	PC	cement gravel	D	
OG	212	1273	4175	896	906	273	276	999	996	10	UNK	red bed	D	
OG	212	1273	4175	906	916	276	279	996	993	1	PC	sandy gravel	D	
OG	212	1273	4175	916	1025	279	312	993	960	1	PC	conglomerate	D	
OG	212	1273	4175	1025	1062	312	324	960	949	4	LM	red chalk	D	
OG	212	1273	4175	1062	1115	324	340	949	933	1	PC	sand and gravel	D	
OG	212	1273	4175	1115	1125	340	343	933	930	1	PC	water sand	D	
OG	212	1273	4175	1125	1130	343	344	930	928	4	LM	lime shell; showing oil	D	
OG	212	1273	4175	1130	1145	344	349	928	924	1	PC	sandstone	D	
OG	212	1273	4175	1145	1200	349	366	924	907	1	PC	conglomerate	D	
OG	212	1273	4175	1200	1210	366	369	907	904	3	CL	yellow clay	D	
OG	212	1273	4175	1210	1220	369	372	904	901	1	PC	sandstone	D	
OG	212	1273	4175	1220	1231	372	375	901	897	4	LM	sandy lime	D	
OG	212	1273	4175	1231	1238	375	377	897	895	1	PC	sandstone	D	
OG	212	1273	4175	1238	1273	377	388	895	885	1	PC	conglomerate	D	
OG	212	1273	4175	1273	1282	388	391	885	882	1	PC	sandstone	D	
OG	212	1273	4175	1282	1290	391	393	882	879	4	LM	sandy lime	D	
OG	212	1273	4175	1290	1295	393	395	879	878	1	PC	sandstone	D	
OG	212	1273	4175	1295	1310	395	399	878	873	1	PC	water sand	D	
OG	212	1273	4175	1310	1335	399	407	873	866	1	PC	conglomerate	D	
OG	212	1273	4175	1335	1340	407	408	866	864	2	PF	yellow clay and gravel	D	
OG	212	1273	4175	1340	1350	408	411	864	861	4	LM	lime shell	D	
OG	212	1273	4175	1350	1360	411	415	861	858	2	PF	yellow clay and gravel	D	
OG	212	1273	4175	1360	1390	415	424	858	849	1	PC	red sandstone and clay	D	
OG	212	1273	4175	1390	1410	424	430	849	843	1	PC	hard coarse sand; show of oil	D	
OG	212	1273	4175	1410	1445	430	440	843	832	1	PC	conglomerate	D	
OG	212	1273	4175	1445	1460	440	445	832	828	1	PC	quicksand and gravel. Flowing hot water; oil show	D	
OG	212	1273	4175	1460	1475	445	450	828	823	1	PC	brown sand rock	D	

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OG	212	1273	4175	1475	1520	450	463	823	809	2	PF	yellow clay and gravel	D	
OG	212	1273	4175	1520	1530	463	466	809	806	1	PC	hard, sharp sandstone	D	
OG	212	1273	4175	1530	1560	466	475	806	797	2	PF	yellow clay and gravel	D	
OG	212	1273	4175	1560	1575	475	480	797	792	1	PC	hard brown sand	D	
OG	212	1273	4175	1575	1630	480	497	792	776	1	PC	yellow conglomerate	D	
OG	212	1273	4175	1630	1645	497	501	776	771	1	PC	pink sand	D	
OG	212	1273	4175	1645	1650	501	503	771	770	2	PF	yellow clay and gravel	D	
OG	212	1273	4175	1650	1660	503	506	770	767	1	PC	hard red sand	D	
OG	212	1273	4175	1660	1665	506	507	767	765	2	PF	yellow clay and gravel	D	
OG	212	1273	4175	1665	1680	507	512	765	760	1	PC	pink sandstone	D	
OG	212	1273	4175	1680	1785	512	544	760	728	1	PC	red sand rock	D	
OG	212	1273	4175	1785	1810	544	552	728	721	2	PF	brown shale and sand	D	
OG	212	1273	4175	1810	1830	552	558	721	715	1	PC	red sand	D	
OG	212	1273	4175	1830	1840	558	561	715	712	2	PF	blue and brown shale	D	
OG	212	1273	4175	1840	1885	561	575	712	698	1	PC	blood-red sandstone	D	
OG	212	1273	4175	1885	1905	575	581	698	692	1	PC	red water sand	D	
OG	212	1273	4175	1905	2010	581	613	692	660	1	PC	brown sand	D	
OG	212	1273	4175	2010	2065	613	629	660	643	1	PC	yellow sand	D	
OG	212	1273	4175	2065	2070	629	631	643	642	1	PC	red sand	D	
OG	212	1273	4175	2070	2170	631	661	642	611	1	PC	brown sandstone	D	
OG	212	1273	4175	2170	2173	661	662	611	610	10	UNK	water seepage	D	
OG	212	1273	4175	2173	2235	662	681	610	591	1	PC	brown sandstone	D	
OG	212	1273	4175	2235	2250	681	686	591	587	1	PC	sand, gravel and water	D	
OG	212	1273	4175	2250	2300	686	701	587	572	1	PC	red and brown sandstone	D	
OG	212	1273	4175	2300	2340	701	713	572	559	1	PC	sand and shale	D	
OG	212	1273	4175	2340	2360	713	719	559	553	1	PC	red sand and gravel; showing of oil	D	Cenozoic at TD
OG	215	1295	4250	0	40	0	12	1295	1283	3	CL	yellow clay	D	
OG	215	1295	4250	40	83	12	25	1283	1270	2	PF	white shale	D	
OG	215	1295	4250	83	103	25	31	1270	1264	1	PC	water sand	D	
OG	215	1295	4250	103	105	31	32	1264	1263	3	CL	yellow clay	D	
OG	215	1295	4250	105	110	32	34	1263	1262	3	CL	clay	D	
OG	215	1295	4250	110	125	34	38	1262	1257	1	PC	gravel -water	D	
OG	215	1295	4250	125	150	38	46	1257	1250	3	CL	white and yellow clay	D	
OG	215	1295	4250	150	165	46	50	1250	1245	2	PF	red shale, sandy	D	
OG	215	1295	4250	165	180	50	55	1245	1241	2	PF	soft red shale	D	
OG	215	1295	4250	180	250	55	76	1241	1219	5	EVAP	red shale and gyp	D	
OG	215	1295	4250	250	255	76	78	1219	1218	2	PF	red shale	D	
OG	215	1295	4250	255	260	78	79	1218	1216	4	LM	hard shells	D	
OG	215	1295	4250	260	265	79	81	1216	1215	2	PF	red shale	D	
OG	215	1295	4250	265	283	81	86	1215	1209	5	EVAP	hard shells and gyp	D	
OG	215	1295	4250	283	287	86	87	1209	1208	2	PF	red shale	D	
OG	215	1295	4250	287	295	87	90	1208	1205	6	GYP	gyp	D	
OG	215	1295	4250	295	305	90	93	1205	1202	2	PF	red shale and sand, not sure about water - 20" broke in	D	
OG	215	1295	4250	305	355	93	108	1202	1187	5	EVAP	gyp, shells and red shale	D	
OG	215	1295	4250	355	360	108	110	1187	1186	1	PC	gravel	D	
OG	215	1295	4250	360	398	110	121	1186	1174	1	PC	red sand and gravel	D	
OG	215	1295	4250	398	400	121	122	1174	1173	1	PC	gravel	D	
OG	215	1295	4250	400	408	122	124	1173	1171	1	PC	red sand and gravel	D	
OG	215	1295	4250	408	412	124	126	1171	1170	4	LM	hard shell, very sharp	D	
OG	215	1295	4250	412	419	126	128	1170	1168	1	PC	gravel and boulders	D	
OG	215	1295	4250	419	585	128	178	1168	1117	1	PC	sand and gravel, very hard	D	
OG	215	1295	4250	585	590	178	180	1117	1116	3	CL	sandy shale, very sticky	D	
OG	215	1295	4250	590	615	180	187	1116	1108	2	PF	pink sandy shale	D	
OG	215	1295	4250	615	635	187	194	1108	1102	2	PF	red sandy shale	D	

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OG	215	1295	4250	635	665	194	203	1102	1093	2	PF	pink sandy shale and gravel	D	
OG	215	1295	4250	665	695	203	212	1093	1084	2	PF	red and pink sandy shale with streaks of gravel	D	
OG	215	1295	4250	695	700	212	213	1084	1082	2	PF	pink sandy shale and gravel	D	
OG	215	1295	4250	700	715	213	218	1082	1077	1	PC	sandy gravel with pink shale breaks.	D	
OG	215	1295	4250	715	755	218	230	1077	1065	2	PF	pink shale and sandy gravel	D	
OG	215	1295	4250	755	805	230	245	1065	1050	2	PF	pink shale and gravel	D	
OG	215	1295	4250	805	840	245	256	1050	1039	3	CL	pink shale very sticky	D	
OG	215	1295	4250	840	856	256	261	1039	1035	2	PF	pink shale	D	
OG	215	1295	4250	856	880	261	268	1035	1027	2	PF	pink shale, sand and gravel, soft	D	
OG	215	1295	4250	880	940	268	287	1027	1009	2	PF	pink shale and sand	D	
OG	215	1295	4250	940	955	287	291	1009	1004	2	PF	pink shale	D	
OG	215	1295	4250	955	1015	291	309	1004	986	3	CL	pink shale very sticky	D	
OG	215	1295	4250	1015	1045	309	319	986	977	2	PF	pink shale	D	
OG	215	1295	4250	1045	1065	319	325	977	971	3	CL	pink shale, sticky	D	
OG	215	1295	4250	1065	1100	325	335	971	960	2	PF	pink shale, sandy	D	
OG	215	1295	4250	1100	1125	335	343	960	953	1	PC	red sand	D	
OG	215	1295	4250	1125	1140	343	347	953	948	1	PC	very hard brown gravel	D	
OG	215	1295	4250	1140	1230	347	375	948	921	1	PC	brown sand and gravel	D	
OG	215	1295	4250	1230	1245	375	379	921	916	1	PC	shale, sand and gravel	D	
OG	215	1295	4250	1245	1250	379	381	916	914	1	PC	hard brown gravel	D	
OG	215	1295	4250	1250	1260	381	384	914	911	1	PC	sand and gravel	D	
OG	215	1295	4250	1260	1300	384	396	911	899	1	PC	brown sand and gravel	D	
OG	215	1295	4250	1300	1310	396	399	899	896	1	PC	brown sand, carries water	D	
OG	215	1295	4250	1310	1325	399	404	896	892	1	PC	brown sand	D	
OG	215	1295	4250	1325	1340	404	408	892	887	1	PC	brown sand, hard	D	
OG	215	1295	4250	1340	1365	408	416	887	879	1	PC	brown sand with hard shells through it	D	
OG	215	1295	4250	1365	1385	416	422	879	873	1	PC	brown sand and shale	D	
OG	215	1295	4250	1385	1395	422	425	873	870	1	PC	sand, gravel, and shale	D	
OG	215	1295	4250	1395	1408	425	429	870	866	2	PF	shale, red	D	
OG	215	1295	4250	1408	1410	429	430	866	866	3	CL	sticky red shale	D	
OG	215	1295	4250	1410	1415	430	431	866	864	2	PF	red shale	D	
OG	215	1295	4250	1415	1430	431	436	864	860	1	PC	sand and shale	D	
OG	215	1295	4250	1430	1435	436	437	860	858	2	PF	red shale	D	
OG	215	1295	4250	1435	1460	437	445	858	850	6	GYP	gyp	D	
OG	215	1295	4250	1460	1465	445	447	850	849	2	PF	red shale	D	
OG	215	1295	4250	1465	1540	447	469	849	826	6	GYP	gyp	D	
OG	215	1295	4250	1540	1588	469	484	826	811	6	GYP	gyp with gray shale	D	
OG	215	1295	4250	1588	1592	484	485	811	810	1	PC	quick sand, dark brown-water	D	
OG	215	1295	4250	1592	1598	485	487	810	808	5	EVAP	gyp and gray shale	D	
OG	215	1295	4250	1598	1620	487	494	808	802	1	PC	red sand	D	
OG	215	1295	4250	1620	1680	494	512	802	783	2	PF	white shale	D	
OG	215	1295	4250	1680	1690	512	515	783	780	1	PC	conglomerate	D	
OG	215	1295	4250	1690	1750	515	533	780	762	1	PC	yellow conglomerate	D	
OG	215	1295	4250	1750	1775	533	541	762	754	1	PC	red conglomerate	D	
OG	215	1295	4250	1775	1788	541	545	754	750	1	PC	gray conglomerate and sandy	D	
OG	215	1295	4250	1788	1798	545	548	750	747	1	PC	red conglomerate	D	
OG	215	1295	4250	1798	1843	548	562	747	734	1	PC	gray conglomerate, hard	D	
OG	215	1295	4250	1843	1875	562	572	734	724	1	PC	dark gray water sand	D	
OG	215	1295	4250	1875	1905	572	581	724	715	1	PC	dark gray grit with small bits of bentonite	D	
OG	215	1295	4250	1905	1975	581	602	715	693	1	PC	gray grit with gray shale streaks	D	
OG	215	1295	4250	1975	1980	602	604	693	692	1	PC	gray sand -hole full water	D	
OG	215	1295	4250	1980	1995	604	608	692	687	2	PF	gray shale with streaks of sand	D	
OG	215	1295	4250	1995	2000	608	610	687	686	1	PC	dark gray sand	D	
OG	215	1295	4250	2000	2006	610	611	686	684	1	PC	gray sand and shale	D	

Well Type	Well ID	Elev. (m)	Elev. (ft)	From Depth (ft)	To Depth (ft)	From Depth (m)	To Depth (m)	Top Elev. (m)	Bottom Elev. (m)	HGUID	HGU Code	Lithology	Log Type	Comments
OG	215	1295	4250	2006	2010	611	613	684	683	1	PC	gray sand	D	
OG	215	1295	4250	2010	2018	613	615	683	680	2	PF	gray shale with sand	D	
OG	215	1295	4250	2018	2060	615	628	680	668	1	PC	gray sand	D	
OG	215	1295	4250	2060	2080	628	634	668	661	1	PC	sand water	D	
OG	215	1295	4250	2080	2100	634	640	661	655	1	PC	gray sand, very fine	D	
OG	215	1295	4250	2100	2105	640	642	655	654	1	PC	water sand	D	
OG	215	1295	4250	2105	2115	642	645	654	651	1	PC	water sand gray, hard and very fine	D	
OG	215	1295	4250	2115	2150	645	655	651	640	1	PC	gray sand, soft	D	
OG	215	1295	4250	2150	2190	655	668	640	628	1	PC	dark gray sand	D	
OG	215	1295	4250	2190	2200	668	671	628	625	1	PC	gray sand	D	
OG	215	1295	4250	2200	2215	671	675	625	620	2	PF	pink shale and sand	D	
OG	215	1295	4250	2215	2225	675	678	620	617	1	PC	shale streaks in gray sand	D	
OG	215	1295	4250	2225	2290	678	698	617	597	1	PC	gray sand, hard water 2285 to 2290	D	
OG	215	1295	4250	2290	2320	698	707	597	588	1	PC	gray sand	D	
OG	215	1295	4250	2320	2325	707	709	588	587	1	PC	gray sand and red shale, drill very slow	D	
OG	215	1295	4250	2325	2348	709	716	587	580	1	PC	gray sand	D	
OG	215	1295	4250	2348	2360	716	719	580	576	1	PC	dark brown sand, very hard	D	
OG	215	1295	4250	2360	2380	719	725	576	570	1	PC	dark brown sand with brown shale streaks	D	
OG	215	1295	4250	2380	2395	725	730	570	565	1	PC	dark brown sand, very hard	D	
OG	215	1295	4250	2395	2415	730	736	565	559	1	PC	brown sand	D	
OG	215	1295	4250	2415	2425	736	739	559	556	4	LM	red sandy lime	D	
OG	215	1295	4250	2425	2450	739	747	556	549	4	LM	brown sandy lime, very hard at bottom	D	
OG	215	1295	4250	2450	2475	747	754	549	541	4	LM	brown sandy lime	D	
OG	215	1295	4250	2475	2520	754	768	541	527	8	LAVA FLOW	red volcanic mud and cinders	D	
OG	215	1295	4250	2520	2545	768	776	527	520	8	LAVA FLOW	red volcanic mud	D	
OG	215	1295	4250	2545	2568	776	783	520	513	1	PC	red sand and shale	D	
OG	215	1295	4250	2568	2620	783	799	513	497	4	LM	gray sand with small showing of lime	D	
OG	215	1295	4250	2620	2640	799	805	497	491	1	PC	brown sand	D	
OG	215	1295	4250	2640	2655	805	809	491	486	1	PC	gray sand	D	
OG	215	1295	4250	2655	2680	809	817	486	479	4	LM	red shale with sand shells	D	
OG	215	1295	4250	2680	2700	817	823	479	472	4	LM	red sandy shale and shells	D	
OG	215	1295	4250	2700	2720	823	829	472	466	4	LM	red sandy lime, hard	D	
OG	215	1295	4250	2720	2735	829	834	466	462	4	LM	red sandy lime, very hard	D	
OG	215	1295	4250	2735	2755	834	840	462	456	4	LM	red sandy lime, hard	D	
OG	215	1295	4250	2755	2770	840	844	456	451	4	LM	brown shale and very hard shells	D	
OG	215	1295	4250	2770	2780	844	847	451	448	4	LM	red shale and shells	D	
OG	215	1295	4250	2780	2810	847	856	448	439	4	LM	red mud with very thin hard shells	D	
OG	215	1295	4250	2810	2830	856	863	439	433	4	LM	red mud and brown hard shells	D	
OG	215	1295	4250	2830	2855	863	870	433	425	4	LM	red mud with thin hard shells	D	
OG	215	1295	4250	2855	2945	870	898	425	398	4	LM	red mud with hard brown shells	D	
OG	215	1295	4250	2945	2955	898	901	398	395	1	PC	6 BPH water in brown grit	D	
OG	215	1295	4250	2955	2965	901	904	395	392	1	PC	brown grit	D	
OG	215	1295	4250	2965	2985	904	910	392	386	4	LM	brown sand and shells	D	
OG	215	1295	4250	2985	2990	910	911	386	384	4	LM	brown shale and shells	D	
OG	215	1295	4250	2990	3015	911	919	384	376	4	LM	brown sandy lime, hard shells	D	
OG	215	1295	4250	3015	3030	919	924	376	372	2	PF	brown shale	D	
OG	215	1295	4250	3030	3035	924	925	372	370	1	PC	hard brown sand	D	
OG	215	1295	4250	3035	3045	925	928	370	367	2	PF	brown shale	D	
OG	215	1295	4250	3045	3075	928	937	367	358	4	LM	brown sandy lime	D	
OG	215	1295	4250	3075	3100	937	945	358	351	4	LM	brown shale with thin hard shells	D	
OG	215	1295	4250	3100	3125	945	953	351	343	4	LM	brown sandy lime	D	
OG	215	1295	4250	3125	3150	953	960	343	335	4	LM	brown shale and thin hard shells	D	
OG	215	1295	4250	3150	3165	960	965	335	331	4	LM	brown sandy lime	D	

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OG	215	1295	4250	3165	3180	965	969	331	326	2	PF	red limy shale	D	
OG	215	1295	4250	3180	3215	969	980	326	315	1	PC	red shale with lime covered brown boulders	D	
OG	215	1295	4250	3215	3230	980	985	315	311	1	PC	red gravel - water 7 boilers, water temp is 110	D	
OG	215	1295	4250	3230	3250	985	991	311	305	2	PF	red shale	D	
OG	215	1295	4250	3250	3255	991	992	305	303	2	PF	red shale and gravel	D	
OG	215	1295	4250	3255	3270	992	997	303	299	2	PF	red shale and gravel mixed with brown shale	D	
OG	215	1295	4250	3270	3275	997	998	299	297	2	PF	red shale and gravel	D	
OG	215	1295	4250	3275	3285	998	1001	297	294	4	LM	red lime, ran into crevice at 3285	D	Cenozoic at TD
OG	217	1283	4210	0	1350	0	411	1283	872	10	UNK	fill	D	
OG	217	1283	4210	1350	1470	411	448	872	835	8	LAVA FLOW	hard red rock	D	
OG	217	1283	4210	1470	1510	448	460	835	823	4	LM	lime and shale	D	Cretaceous at TD
OG	249	1349	4425	0	23	0	7	1349	1342	2	PF	soft brown clay and cobbles	D	
OG	249	1349	4425	23	45	7	14	1342	1335	2	PF	brown clay and volcanics	D	
OG	249	1349	4425	45	55	14	17	1335	1332	2	PF	soft brown clay and cobbles	D	
OG	249	1349	4425	55	80	17	24	1332	1324	2	PF	brown clay with hard shells	D	
OG	249	1349	4425	80	90	24	27	1324	1321	1	PC	brown conglomerate	D	
OG	249	1349	4425	90	140	27	43	1321	1306	2	PF	brown clay and cobbles	D	
OG	249	1349	4425	140	161	43	49	1306	1300	2	PF	brown clay and cobbles and heavy gravel	D	
OG	249	1349	4425	161	220	49	67	1300	1282	2	PF	brown clay with gravel streaks	D	
OG	249	1349	4425	220	224	67	68	1282	1280	1	PC	brown gravel and cobbles	D	
OG	249	1349	4425	224	231	68	70	1280	1278	10	UNK	gray rock	D	
OG	249	1349	4425	231	251	70	77	1278	1272	2	PF	gray to brown clay and mostly rock	D	
OG	249	1349	4425	251	255	77	78	1272	1271	8	LAVA FLOW	hard black basalt	D	
OG	249	1349	4425	255	265	78	81	1271	1268	1	PC	broken basalt and gravel	D	
OG	249	1349	4425	265	272	81	83	1268	1266	1	PC	black basalt gravel, heavy	D	
OG	249	1349	4425	272	315	83	96	1266	1253	2	PF	brown clay and gravel streaks	D	
OG	249	1349	4425	315	336	96	102	1253	1246	1	PC	black gravel with thin brown clay streaks	D	
OG	249	1349	4425	336	387	102	118	1246	1231	1	PC	gray to black conglomerate, poorly cemented	D	
OG	249	1349	4425	387	410	118	125	1231	1224	1	PC	gray to black gravel	D	
OG	249	1349	4425	410	431	125	131	1224	1217	1	PC	gravel with gray clay streaks	D	
OG	249	1349	4425	431	440	131	134	1217	1215	1	PC	white gravel with dirty lime	D	
OG	249	1349	4425	440	455	134	139	1215	1210	4	LM	dirty lime with trace basalt	D	
OG	249	1349	4425	455	469	139	143	1210	1206	4	LM	reddish dirty lime	D	
OG	249	1349	4425	469	510	143	155	1206	1193	4	LM	white lime(?) with trace of basalt	D	
OG	249	1349	4425	510	572	155	174	1193	1174	4	LM	white rock with trace of black basalt, trace of calcite and shale	D	
OG	249	1349	4425	572	630	174	192	1174	1157	4	LM	white rock with traces of shale and calcite, porous, soft	D	
OG	249	1349	4425	630	707	192	215	1157	1133	4	LM	with rock, hard and soft zones, more red rock with depth. (all of this rock is porous and contains solution cavities)	D	
OG	249	1349	4425	707	715	215	218	1133	1131	4	LM	limestone and chalcedony, and sand, very hard rock at 714'	D	
OG	249	1349	4425	715	728	218	222	1131	1127	4	LM	very hard gray limestone	D	
OG	249	1349	4425	728	732	222	223	1127	1126	10	UNK	hard brown rock	D	
OG	249	1349	4425	732	735	223	224	1126	1125	10	UNK	hard red rock	D	
OG	249	1349	4425	735	741	224	226	1125	1123	10	UNK	hard brown rock	D	
OG	249	1349	4425	741	754	226	230	1123	1119	2	PF	hard brown shale	D	
OG	249	1349	4425	754	764	230	233	1119	1116	10	UNK	hard gray, white, and brown rock	D	
OG	249	1349	4425	764	772	233	235	1116	1113	10	UNK	mostly brown rock	D	
OG	249	1349	4425	772	784	235	239	1113	1110	1	PC	water sand and trace basalt, limestone and fish scale @ 780	D	
OG	249	1349	4425	784	811	239	247	1110	1102	10	UNK	brown and red rock	D	
OG	249	1349	4425	811	823	247	251	1102	1098	8	LAVA FLOW	hard, gray to black basalt	D	
OG	249	1349	4425	823	827	251	252	1098	1097	10	UNK	black to red rock of medium hardness	D	
OG	249	1349	4425	827	842	252	257	1097	1092	8	LAVA FLOW	black basalt	D	
OG	249	1349	4425	842	848	257	258	1092	1090	10	UNK	very hard gray rock	D	

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OG	249	1349	4425	848	876	258	267	1090	1082	8	LAVA FLOW	very hard black rock	D	
OG	249	1349	4425	876	894	267	272	1082	1076	1	PC	brown rock and sand layers of medium hardness	D	
OG	249	1349	4425	894	906	272	276	1076	1073	10	UNK	brown to black rock of medium hardness	D	
OG	249	1349	4425	906	911	276	278	1073	1071	10	UNK	very hard, black to brown rock layers	D	
OG	249	1349	4425	911	915	278	279	1071	1070	10	UNK	hard, red rock (black rock prob. Shale, red rock prob. Sandstone)	D	
OG	249	1349	4425	915	927	279	283	1070	1066	10	UNK	hard, black and brown rock with medium hardness	D	
OG	249	1349	4425	927	932	283	284	1066	1065	1	PC	soft, brown clayey sand	D	
OG	249	1349	4425	932	934	284	285	1065	1064	10	UNK	hard black rock	D	
OG	249	1349	4425	934	946	285	288	1064	1060	1	PC	brown rock and sand layers of medium hardness, some clay	D	
OG	249	1349	4425	946	971	288	296	1060	1053	1	PC	brown sandstone of medium hardness	D	
OG	249	1349	4425	971	1008	296	307	1053	1042	2	PF	hard black shale	D	
OG	249	1349	4425	1008	1015	307	309	1042	1039	10	UNK	hard black rock	D	
OG	249	1349	4425	1015	1036	309	316	1039	1033	10	UNK	very hard gray to black rock, inclusions of red rock and claystone	D	
OG	249	1349	4425	1036	1062	316	324	1033	1025	10	UNK	hard grayish black rock	D	
OG	249	1349	4425	1062	1071	324	326	1025	1022	10	UNK	a reddish gray rock different than before	D	
OG	249	1349	4425	1071	1075	326	328	1022	1021	10	UNK	red rock	D	
OG	249	1349	4425	1075	1125	328	343	1021	1006	2	PF	brick red shale with streaks of red rock	D	
OG	249	1349	4425	1125	1138	343	347	1006	1002	1	PC	hard, sharp, red rock with quartzitic sand	D	
OG	249	1349	4425	1138	1150	347	351	1002	998	10	UNK	hard black and red rock	D	
OG	249	1349	4425	1150	1170	351	357	998	992	10	UNK	hard red rock	D	
OG	249	1349	4425	1170	1179	357	359	992	989	1	PC	conglomerate rock, shale and sand	D	
OG	249	1349	4425	1179	1182	359	360	989	988	1	PC	red caving sand	D	
OG	249	1349	4425	1182	1195	360	364	988	985	1	PC	red conglomerate, medium hardness	D	
OG	249	1349	4425	1195	1207	364	368	985	981	1	PC	reddish rock and sand with yellowish clay streaks	D	
OG	249	1349	4425	1207	1245	368	379	981	969	1	PC	red, medium, sandy conglomerate	D	
OG	249	1349	4425	1245	1258	379	383	969	965	1	PC	gray, hard, rocky conglomerate	D	
OG	249	1349	4425	1258	1350	383	411	965	937	3	CL	light brown medium clay with streaks of conglomerate	D	
OG	249	1349	4425	1350	1364	411	416	937	933	1	PC	hard red conglomerate	D	
OG	249	1349	4425	1364	1369	416	417	933	931	3	CL	red clay and conglomerate streaks, medium hardness	D	
OG	249	1349	4425	1369	1380	417	421	931	928	3	CL	very sticky red clay, medium	D	
OG	249	1349	4425	1380	1388	421	423	928	926	10	UNK	gray rock hard	D	
OG	249	1349	4425	1388	1393	423	425	926	924	10	UNK	black rock, hard, with streaks of red clay, medium	D	
OG	249	1349	4425	1393	1400	425	427	924	922	10	UNK	red and gray rock conglomerate, hard	D	
OG	249	1349	4425	1400	1407	427	429	922	920	3	CL	very sticky red clay, medium hardness	D	
OG	249	1349	4425	1407	1410	429	430	920	919	3	CL	sticky red clay, medium hardness	D	
OG	249	1349	4425	1410	1422	430	433	919	915	10	UNK	red rock, medium to hard	D	
OG	249	1349	4425	1422	1465	433	447	915	902	1	PC	red conglomerate, rock, shale, medium hardness	D	
OG	249	1349	4425	1465	1485	447	453	902	896	1	PC	brown sandy conglomerate, medium hardness	D	
OG	249	1349	4425	1485	1510	453	460	896	889	1	PC	red conglomerate, medium hardness (hole caving badly)	D	
OG	249	1349	4425	1510	1540	460	469	889	879	1	PC	brown conglomerate, medium hardness	D	
OG	249	1349	4425	1540	1580	469	482	879	867	1	PC	brown and red conglomerate with streaks of yellow clay, medium (slight show of oil @ 1560-62)	D	
OG	249	1349	4425	1580	1620	482	494	867	855	1	PC	red conglomerate, medium hardness	D	
OG	249	1349	4425	1620	1645	494	501	855	847	1	PC	conglomerate, red and dark gray streaks, medium hardness	D	
OG	249	1349	4425	1645	1665	501	507	847	841	1	PC	red conglomerate, medium hardness	D	
OG	249	1349	4425	1665	1730	507	527	841	821	1	PC	red and brown rock conglomerate, medium hardness	D	
OG	249	1349	4425	1730	1748	527	533	821	816	1	PC	red sandy conglomerate, medium hardness	D	
OG	249	1349	4425	1748	1785	533	544	816	805	1	PC	brown sandy conglomerate (slight show of oil 1780-85)	D	
OG	249	1349	4425	1785	1795	544	547	805	802	1	PC	red conglomerate, sharp and hard	D	
OG	249	1349	4425	1795	1823	547	556	802	793	1	PC	red sand rock and sharp conglomerate	D	Cenozoic at TD. Duplicate with 35-24980.
OG	512	1337	4385	0	40	0	12	1337	1324	3	CL	soil and clay	D	
OG	512	1337	4385	40	60	12	18	1324	1318	1	PC	water and gravel	D	
OG	512	1337	4385	60	160	18	49	1318	1288	3	CL	red clay	D	

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OG	512	1337	4385	160	180	49	55	1288	1282	1	PC	water gravel	D	
OG	512	1337	4385	180	240	55	73	1282	1263	3	CL	red clay	D	
OG	512	1337	4385	240	260	73	79	1263	1257	1	PC	water gravel	D	
OG	512	1337	4385	260	290	79	88	1257	1248	2	PF	red mud	D	
OG	512	1337	4385	290	300	88	91	1248	1245	1	PC	sand and gravel	D	
OG	512	1337	4385	300	330	91	101	1245	1236	2	PF	red mud	D	
OG	512	1337	4385	330	420	101	128	1236	1209	1	PC	water gravel	D	
OG	512	1337	4385	420	600	128	183	1209	1154	3	CL	red clay with some water	D	
OG	512	1337	4385	600	630	183	192	1154	1145	1	PC	quick sand (160 ft to water)	D	
OG	512	1337	4385	630	650	192	198	1145	1138	1	PC	red rock	D	
OG	512	1337	4385	650	665	198	203	1138	1134	1	PC	cavy sand	D	
OG	512	1337	4385	665	675	203	206	1134	1131	1	PC	red rock	D	
OG	512	1337	4385	675	690	206	210	1131	1126	1	PC	cavy sand	D	
OG	512	1337	4385	690	1010	210	308	1126	1029	1	PC	red rock	D	
OG	512	1337	4385	1010	1090	308	332	1029	1004	3	CL	yellow clay	D	
OG	512	1337	4385	1090	1100	332	335	1004	1001	1	PC	red rock	D	

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OG	512	1337	4385	1100	1120	335	341	1001	995	3	CL	yellow clay	D	
OG	512	1337	4385	1120	1180	341	360	995	977	1	PC	red rock	D	
OG	512	1337	4385	1180	1200	360	366	977	971	3	CL	yellow clay	D	
OG	512	1337	4385	1200	1285	366	392	971	945	1	PC	red rock	D	
OG	512	1337	4385	1285	1335	392	407	945	930	1	PC	brown sand	D	
OG	512	1337	4385	1335	1380	407	421	930	916	2	PF	gray sandy shale and clay	D	
OG	512	1337	4385	1380	1420	421	433	916	904	1	PC	red sand	D	
OG	512	1337	4385	1420	1470	433	448	904	889	1	PC	hard red rock	D	
OG	512	1337	4385	1470	1490	448	454	889	882	3	CL	sand yellow clay	D	
OG	512	1337	4385	1490	1510	454	460	882	876	2	PF	grey shale	D	
OG	512	1337	4385	1510	1610	460	491	876	846	2	PF	brown sandy shale	D	
OG	512	1337	4385	1610	1985	491	605	846	732	1	PC	brown sand	D	Cenozoic at TD. Duplicate with 35-25003.
OG	514	1280	4200	0	27	0	8	1280	1272	1	PC	sand and gravel	D	
OG	514	1280	4200	27	29	8	9	1272	1271	3	CL	clay	D	
OG	514	1280	4200	29	44	9	13	1271	1267	1	PC	gravel	D	
OG	514	1280	4200	44	228	13	69	1267	1211	3	CL	clay	D	
OG	514	1280	4200	228	232	69	71	1211	1209	3	CL	clay and gravel	D	
OG	514	1280	4200	232	236	71	72	1209	1208	3	CL	clay	D	
OG	514	1280	4200	236	244	72	74	1208	1206	2	PF	sand and clay	D	
OG	514	1280	4200	244	280	74	85	1206	1195	3	CL	sticky red clay	D	
OG	514	1280	4200	280	360	85	110	1195	1170	3	CL	clay	D	
OG	514	1280	4200	360	380	110	116	1170	1164	3	CL	red clay	D	
OG	514	1280	4200	380	488	116	149	1164	1131	3	CL	clay	D	
OG	514	1280	4200	488	520	149	158	1131	1122	3	CL	clay and gravel	D	
OG	514	1280	4200	520	730	158	223	1122	1058	3	CL	clay	D	
OG	514	1280	4200	730	750	223	229	1058	1052	3	CL	clay and gravel	D	
OG	514	1280	4200	750	852	229	260	1052	1020	3	CL	clay	D	
OG	514	1280	4200	852	876	260	267	1020	1013	1	PC	cemented sand and gravel	D	
OG	514	1280	4200	876	1000	267	305	1013	975	1	PC	cemented sand	D	
OG	514	1280	4200	1000	1036	305	316	975	964	3	CL	sticky red clay	D	
OG	514	1280	4200	1036	1040	316	317	964	963	3	CL	hard red cemented clay	D	
OG	514	1280	4200	1040	1046	317	319	963	961	3	CL	sandy cemented clay	D	
OG	514	1280	4200	1046	1058	319	322	961	958	3	CL	sticky clay	D	
OG	514	1280	4200	1058	1071	322	326	958	954	3	CL	medium hard clay	D	
OG	514	1280	4200	1071	1079	326	329	954	951	3	CL	sticky red clay	D	
OG	514	1280	4200	1079	1085	329	331	951	949	3	CL	hard red clay with burned gravel	D	
OG	514	1280	4200	1085	1134	331	346	949	935	1	PC	Mt. conglomerate, hard	D	
OG	514	1280	4200	1134	1138	346	347	935	933	3	CL	hard cemented clay	D	
OG	514	1280	4200	1138	1155	347	352	933	928	3	CL	sticky clay	D	
OG	514	1280	4200	1155	1175	352	358	928	922	1	PC	Mt. conglomerate, hard	D	
OG	514	1280	4200	1175	1182	358	360	922	920	3	CL	hard blue clay	D	
OG	514	1280	4200	1182	1190	360	363	920	917	3	CL	sticky brown clay	D	
OG	514	1280	4200	1190	1196	363	365	917	916	3	CL	sticky clay	D	
OG	514	1280	4200	1196	1201	365	366	916	914	3	CL	medium hard clay	D	
OG	514	1280	4200	1201	1208	366	368	914	912	3	CL	sticky clay	D	
OG	514	1280	4200	1208	1213	368	370	912	910	3	CL	medium hard clay	D	
OG	514	1280	4200	1213	1220	370	372	910	908	3	CL	hard cemented clay	D	
OG	514	1280	4200	1220	1227	372	374	908	906	3	CL	hard clay	D	
OG	514	1280	4200	1227	1233	374	376	906	904	3	CL	sticky clay	D	
OG	514	1280	4200	1233	1240	376	378	904	902	3	CL	medium hard brown clay	D	
OG	514	1280	4200	1240	1246	378	380	902	900	3	CL	hard brown clay	D	
OG	514	1280	4200	1246	1253	380	382	900	898	3	CL	sticky clay	D	
OG	514	1280	4200	1253	1278	382	390	898	891	3	CL	hard red clay	D	

Well Type	Well ID	Elev. (m)	Elev. (ft)	From Depth (ft)	To Depth (ft)	From Depth (m)	To Depth (m)	Top Elev. (m)	Bottom Elev. (m)	HGUID	HGU Code	Lithology	Log Type	Comments
OG	514	1280	4200	1278	1284	390	391	891	889	3	CL	sticky clay	D	
OG	514	1280	4200	1284	1290	391	393	889	887	3	CL	medium hard clay	D	
OG	514	1280	4200	1290	1293	393	394	887	886	3	CL	hard clay	D	
OG	514	1280	4200	1293	1297	394	395	886	885	3	CL	hard ledge rock	D	
OG	514	1280	4200	1297	1300	395	396	885	884	3	CL	very hard clay	D	
OG	514	1280	4200	1300	1303	396	397	884	883	3	CL	hard clay	D	
OG	514	1280	4200	1303	1315	397	401	883	879	3	CL	medium hard and sticky clay	D	
OG	514	1280	4200	1315	1368	401	417	879	863	3	CL	sticky clay	D	
OG	514	1280	4200	1368	1381	417	421	863	859	3	CL	medium hard clay	D	
OG	514	1280	4200	1381	1401	421	427	859	853	3	CL	sticky clay	D	
OG	514	1280	4200	1401	1405	427	428	853	852	3	CL	very hard clay	D	
OG	514	1280	4200	1405	1411	428	430	852	850	3	CL	hard clay	D	
OG	514	1280	4200	1411	1423	430	434	850	846	3	CL	sticky clay	D	
OG	514	1280	4200	1423	1437	434	438	846	842	3	CL	hard clay	D	
OG	514	1280	4200	1437	1441	438	439	842	841	3	CL	sticky clay	D	
OG	514	1280	4200	1441	1461	439	445	841	835	3	CL	hard clay	D	
OG	514	1280	4200	1461	1473	445	449	835	831	3	CL	sticky clay	D	
OG	514	1280	4200	1473	1485	449	453	831	828	3	CL	very hard clay	D	
OG	514	1280	4200	1485	1489	453	454	828	826	3	CL	hard clay	D	
OG	514	1280	4200	1489	1501	454	458	826	823	3	CL	sticky clay	D	

HGUID HGU Code

- 1 PC = Predominantly coarse-grained sediments
- 2 PF = Predominantly fine-grained sediments
- 3 CL = predominantly clay
- 4 LM = Limestone and calcareous deposits undifferentiated
- 5 EVAP = evaporite deposits undifferentiated
- 6 GYP = gypsum and predominantly gypsiferous deposits
- 7 SALT = salt deposits
- 8 LAVA FLOW = lava flows undifferentiated
- 9 ROCK = unknown "rock" type
- 10 UNK = unknown lithology type