Appendix B
Soils Data Tables and Maps

TABLE B-1: SOIL DESCRIPTIONS, MORROW COUNTY

SHANNON & WILSON, INC.

Soil Map Unit Symbol	NSCS Map Unit Key	Soil Name	Percent Slope			Group Name/Parent Source	Erosion Hazard	Component	Drainage Class	Geomorph	Shrink Swell	Water pH		Rock Depth	
			Low	High	Direction							Low	High	Low	High
4D	61345	Bakeoven-Valby complex	2	20		loess mixed with residuum weathered from basalt	Moderate	Bakeoven	Well drained	plateaus, plateaus	1.5	6.1	7.8	10	25
8B	61400	Burbank loamy fine sand	2	5		eolian sands over very cobbly, sandy alluvium	Slight	Burbank	Excessively drained	terraces	0.0	0.0	0.0	0	0
8C	61401	Burbank loamy fine sand	5	12		eolian sands over very cobbly, sandy alluvium	Moderate	Burbank	Excessively drained	terraces	0.0	0.0	0.0	0	0
9	61402	Dune land				eolian sands	Very Severe	Dune land	Well drained	dunes	0.0	0.0	0.0	0	0
10B	61279	Ellum fine sandy loam	2	5		gravelly mixed alluvium	Moderate	Ellum	Well drained	strath terraces, valleys	1.5	7.4	7.8	51	102
10C	61280	Ellum fine sandy loam	5	12		gravelly mixed alluvium	Severe	Ellum	Well drained	strath terraces, valleys	1.5	7.4	7.8	51	102
12	61282	Esquatzel silt loam				silty alluvium	Slight	Esquatzel	Well drained	flood plains	0.0	0.0	0.0	0	0
13D	61283	Gravden very gravelly loam	5	20		gravelly alluvium and colluvium	Moderate	Gravden	Well drained	hills, hillslopes	1.5	7.9	8.4	25	51
13E	61284	Gravden very gravelly loam	20	40		gravelly alluvium and colluvium	Severe	Gravden	Well drained	hills, hillslopes	1.5	7.9	8.4	25	51
21B	61295	Irrigon fine sandy loam	2	5		alluvium derived from basalt and quartzite	Moderate	Irrigon	Well drained	strath terraces, valleys	1.5	6.6	7.3	51	102
21C	61296	Irrigon fine sandy loam	5	12		alluvium derived from basalt and quartzite	Severe	Irrigon	Well drained	strath terraces, valleys	1.5	6.6	7.3	51	102
22	61297	Kimberly fine sandy loam				mixed alluvium	Slight	Kimberly	Well drained	flood plains, river valleys	0.0	0.0	0.0	0	0
28E	61306	Lickskillet very stony loam	7	40		loess mixed with colluvium from basalt	Severe	Lickskillet	Well drained	hills, hillslopes	1.5	6.1	7.3	30	51
29F	61307	Lickskillet-Rock outcrop complex	40	70		loess mixed with colluvium from basalt	Severe	Lickskillet	Well drained	hills, hillslopes	1.5	6.1	7.3	30	51
36	61320	Pedigo silt loam				silty alluvium mixed with volcanic ash	Slight	Pedigo	Somewhat poorly drained	flood plains	0.0	0.0	0.0	0	0
39C	61324	Quincy fine sand	2	12		eolian sands	Moderate	Quincy	Excessively drained	strath terraces, valleys	0.0	0.0	0.0	0	0
40C	61326	Quincy loamy fine sand	2	12		eolian sands	Moderate	Quincy	Excessively drained	strath terraces, valleys	0.0	0.0	0.0	0	0
43B	61329	Rhea silt loam	1	7		loess mixed with small amounts of volcanic ash	Moderate	Rhea	Well drained	plateaus, plateaus	0.0	0.0	0.0	0	0
43C	61330	Rhea silt loam	7	12		loess mixed with small amounts of volcanic ash	Severe	Rhea	Well drained	plateaus, plateaus	0.0	0.0	0.0	0	0
43D	61331	Rhea silt loam	12	20		loess mixed with small amounts of volcanic ash	Severe	Rhea	Well drained	plateaus, plateaus	0.0	0.0	0.0	0	0
43E	61332	Rhea silt loam	20	35		loess mixed with small amounts of volcanic ash	Severe	Rhea	Well drained	plateaus, plateaus	0.0	0.0	0.0	0	0
44B	61334	Ritzville very fine sandy loam	2	7		loess mixed with small amounts of volcanic ash	Moderate	Ritzville	Well drained	plateaus, plateaus	0.0	0.0	0.0	0	0
44C	61335	Ritzville very fine sandy loam	7	12		loess mixed with small amounts of volcanic ash	Severe	Ritzville	Well drained	plateaus, plateaus	0.0	0.0	0.0	0	0
44D	61336	Ritzville very fine sandy loam	12	25		loess mixed with small amounts of volcanic ash	Severe	Ritzville	Well drained	plateaus, plateaus	0.0	0.0	0.0	0	0
45A	61337	Ritzville silt loam	0	2		loess mixed with small amounts of volcanic ash	Slight	Ritzville	Well drained	plateaus, plateaus	0.0	0.0	0.0	0	0
45B	61338	Ritzville silt loam	2	7		loess mixed with small amounts of volcanic ash	Moderate	Ritzville	Well drained	plateaus, plateaus	0.0	0.0	0.0	0	0
45C	61339	Ritzville silt loam	7	12		loess mixed with small amounts of volcanic ash	Severe	Ritzville	Well drained	plateaus, plateaus	0.0	0.0	0.0	0	0
45D	61340	Ritzville silt loam	12	20		loess mixed with small amounts of volcanic ash	Severe	Ritzville	Well drained	plateaus, plateaus	0.0	0.0	0.0	0	0
46E	61341	Ritzville silt loam	20	40	north	loess mixed with small amounts of volcanic ash	Severe	Ritzville	Well drained	hills, hillslopes	0.0	0.0	0.0	0	0
49F	61344	Rock outcrop-Rubble land complex	very steep				Very Severe	Rock outcrop		hills, hillslopes	0.0	0.0	0.0	0	0
51B	61347	Royal loamy fine sand	2	5		alluvium and glaciofluvial deposits reworked by wind	Moderate	Royal	Well drained	strath terraces, valleys	0.0	0.0	0.0	0	0
51C	61348	Royal loamy fine sand	5	12		alluvium and glaciofluvial deposits reworked by wind	Severe	Royal	Well drained	strath terraces, valleys	0.0	0.0	0.0	0	0
52B	61349	Royal fine sandy loam	2	5		alluvium and glaciofluvial deposits reworked by wind	Moderate	Royal	Well drained	strath terraces, valleys	0.0	0.0	0.0	0	0
52C	61350	Royal fine sandy loam	5	12		alluvium and glaciofluvial deposits reworked by wind	Severe	Royal	Well drained	strath terraces, valleys	0.0	0.0	0.0	0	0
53A	61352	Royal silt loam	0	3		alluvium and glaciofluvial deposits reworked by wind	Slight	Royal	Well drained	flood plains, river valleys	0.0	0.0	0.0	0	0
54B	61353	Sagehill fine sandy loam	2	5		sandy eolian deposits and loess over lacustrine deposits	Moderate	Sagehill	Well drained	strath terraces, valleys	0.0	0.0	0.0	0	0
54C	61354	Sagehill fine sandy loam	5	12		sandy eolian deposits and loess over lacustrine deposits	Severe	Sagehill	Well drained	strath terraces, valleys	0.0	0.0	0.0	0	0
54D	61355	Sagehill fine sandy loam	12	20		sandy eolian deposits and loess over lacustrine deposits	Severe	Sagehill	Well drained	strath terraces, valleys	0.0	0.0	0.0	0	0
55B	61356	Sagehill fine sandy loam, hummocky	2	5		sandy eolian deposits and loess over lacustrine deposits	Moderate	Sagehill	Well drained	strath terraces, valleys	0.0	0.0	0.0	0	0
55C	61357	Sagehill fine sandy loam, hummocky	5	12		sandy eolian deposits and loess over lacustrine deposits	Severe	Sagehill	Well drained	strath terraces, valleys	0.0	0.0	0.0	0	0
58B	61361	Taunton fine sandy loam	2	5		eolian sands over strongly cemented alluvium	Moderate	Taunton	Well drained	strath terraces, valleys	1.5	6.6	7.3	51	102
58C	61362	Taunton fine sandy loam	5	12		eolian sands over strongly cemented alluvium	Severe	Taunton	Well drained	strath terraces, valleys	1.5	6.6	7.3	51	102
59B	61363	Taunton fine sandy loam, hummocky	0	5		eolian sands over strongly cemented alluvium	Moderate	Taunton	Well drained	strath terraces, valleys	1.5	6.6	7.3	51	102
63B	61370	Valby silt loam	1	7		loess over basalt	Moderate	Valby	Well drained	plateaus, plateaus	1.5	6.6	7.8	51	102
63C	61371	Valby silt loam	7	12		loess over basalt	Severe	Valby	Well drained	plateaus, plateaus	1.5	6.6	7.8	51	102
64D	61372	Valby silt loam	12	20	north	loess over basalt	Severe	Valby	Well drained	hills, hillslopes	1.5	6.6	7.8	51	102
65D	61373	Valby silt loam	12	20	south	loess over basalt	Severe	Valby	Well drained	hills, hillslopes	1.5	6.6	7.8	51	102
70B	61381	Warden very fine sandy loam	2	5		loess over calcareous lacustrine deposits	Moderate	Warden	Well drained	strath terraces, valleys	0.0	0.0	0.0	0	0
70C	61382	Warden very fine sandy loam	5	12		loess over calcareous lacustrine deposits	Severe	Warden	Well drained	strath terraces, valleys	0.0	0.0	0.0	0	0
70D	61383	Warden very fine sandy loam	12	20		loess over calcareous lacustrine deposits	Severe	Warden	Well drained	strath terraces, valleys	0.0	0.0	0.0	0	0
71A	61384	Warden silt loam	0	2		loess over calcareous lacustrine deposits	Slight	Warden	Well drained	strath terraces, valleys	0.0	0.0	0.0	0	0
71B	61385	Warden silt loam	2	5		loess over calcareous lacustrine deposits	Moderate	Warden	Well drained	strath terraces, valleys	0.0	0.0	0.0	0	0
71C	61386	Warden silt loam	5	12		loess over calcareous lacustrine deposits	Severe	Warden	Well drained	strath terraces, valleys	0.0	0.0	0.0	0	0
71D	61387	Warden silt loam	12	20		loess over calcareous lacustrine deposits	Severe	Warden	Well drained	strath terraces, valleys	0.0	0.0	0.0	0	0

TABLE B-1: SOIL DESCRIPTIONS, MORROW COUNTY

71E	61388	Warden silt loam	20	40		loess over calcareous lacustrine deposits	Severe	Warden	Well drained	strath terraces, valleys	0.0	0.0	0.0	0	0
72C	61389	Warden silt loam	3	12	eroded	loess over calcareous lacustrine deposits	Moderate	Warden	Well drained	strath terraces, valleys	0.0	0.0	0.0	0	0
75B	61393	Willis silt loam	2	5		loess over cemented alluvium	Moderate	Willis	Well drained	plateaus, plateaus	1.5	6.6	7.8	51	102
75C	61394	Willis silt loam	5	12		loess over cemented alluvium	Severe	Willis	Well drained	plateaus, plateaus	1.5	6.6	7.8	51	102
75D	61395	Willis silt loam	12	20		loess over cemented alluvium	Severe	Willis	Well drained	plateaus, plateaus	1.5	6.6	7.8	51	102
77F	61397	Wrentham-Rock outcrop complex	35	70		loess mixed with colluvium derived from basalt	Severe	Wrentham	Well drained	hills, hillslopes	1.5	6.1	7.3	51	102
78	61398	Xeric Torriorthents	nearly level			eolian sands and alluvium	Slight	Xeric Torriorthents	Somewhat excessively drained	flood plains, river valleys	0.0	0.0	0.0	0	0
82B	61415	Condon silt loam	1	7		loess	Moderate	Condon	Well drained	hills, hills on plateaus	1.5	6.1	7.3	51	102
83D	61414	Condon silt loam	12	20	north	loess	Severe	Condon	Well drained	hillslopes, hills on plateaus	1.5	6.1	7.3	51	102
85C	61412	Condon silt loam	7	12		loess	Severe	Condon	Well drained	hills, hills on plateaus	1.5	6.1	7.3	51	102

TABLE B-2: SOIL DESCRIPTIONS, UMATILLA COUNTY

Soil Map Unit Symbol	NSCS Map Unit Key	Soil Name	Percent Slope			Group Name/Parent Source	Erosion Hazard	Component	Drainage Class	Geomorph	Shrink Swell	Water pH		Rock Depth	
			Low	High	Direction							Low	High	Low	High
5C	64526	Albee-Bocker-Anatone complex	2	15		loess and volcanic ash mixed with colluvium derived from basalt	Severe	Albee	Well drained	plateaus, patterned ground on plateaus	1.5	5.6	7.3	51	102
13F	64452	Buckcreek-Gwin association	45	70		small amount of volcanic ash mixed with loess and colluvium from basalt	Severe	Buckcreek	Well drained	hillslopes, mountains	1.5	6.1	7.3	51	102
15B	64454	Burke silt loam	1	7		loess over strongly cemented alluvium	Moderate	Burke	Well drained	terraces, valleys	1.5	7.4	8.4	51	102
15C	64455	Burke silt loam	7	12		loess over strongly cemented alluvium	Severe	Burke	Well drained	terraces, valleys	1.5	7.4	8.4	51	102
15E	64456	Burke silt loam	12	30		loess over strongly cemented alluvium	Severe	Burke	Well drained	terraces, valleys	1.5	7.4	8.4	51	102
16B	64457	Cantala silt loam	1	7		loess over calcareous, old alluvium	Moderate	Cantala	Well drained	hills, hills	1.5	6.6	7.3	0	0
16C	64458	Cantala silt loam	7	12		loess over calcareous, old alluvium	Severe	Cantala	Well drained	hills, hills	1.5	6.6	7.3	0	0
16D	64459	Cantala silt loam	12	20		loess over calcareous, old alluvium	Severe	Cantala	Well drained	hills, hillslopes	1.5	6.6	7.3	0	0
16E	64460	Cantala silt loam	20	35		loess over calcareous, old alluvium	Severe	Cantala	Well drained	hills, hillslopes	1.5	6.6	7.3	0	0
17A	64461	Catherine variant-Catherine silt loams	0	3		mixed alluvium	Slight	Catherine variant	Poorly drained	flood plains, valleys	1.5	6.6	7.8	0	0
18B	64462	Condon silt loam	1	7		loess	Moderate	Condon	Well drained	hills, hills on plateaus	1.5	6.1	7.3	51	102
18C	64463	Condon silt loam	7	12		loess	Severe	Condon	Well drained	hills, hills on plateaus	1.5	6.1	7.3	51	102
19D	64465	Condon silt loam	12	20	north	loess	Severe	Condon	Well drained	hillslopes, hills on plateaus	1.5	6.1	7.8	51	102
20D	64468	Condon silt loam	12	20	south	loess	Severe	Condon	Well drained	hillslopes, hills on plateaus	1.5	6.1	7.3	51	102
21D	64469	Condon-Bakeoven complex	2	20		loess	Severe	Condon	Well drained	patterned ground on hills, hills on hills, patterned ground on plateaus, hills on plateaus	1.5	6.1	7.3	51	102
26E	64476	Entic Durochrepts	20	40		loess over cemented alluvium	Severe	Entic Durochrepts	Well drained	terraces, valleys	1.5	6.1	7.3	25	102
29A	64479	Freewater very cobbly loam	0	3		mixed, very gravelly alluvium	Slight	Freewater	Somewhat excessively drained	flood plains, valleys	1.5	6.6	7.3	0	0
31B	64483	Gurdane silty clay loam	0	7		loess mixed with a small amount of volcanic ash over residuum weathered from basalt	Slight	Gurdane	Well drained	hills, mountains	4.5	6.1	7.3	51	102
31D	64484	Gurdane silty clay loam	7	25		loess mixed with a small amount of volcanic ash over residuum weathered from basalt	Severe	Gurdane	Well drained	hills, mountains	4.5	6.1	7.3	51	102
31E	64485	Gurdane silty clay loam	25	45		loess mixed with a small amount of volcanic ash over residuum weathered from basalt	Severe	Gurdane	Well drained	hillslopes, mountains	4.5	6.1	7.3	51	102
32E	64486	Gurdane-Gwinly association	20	40		loess mixed with a small amount of volcanic ash over residuum weathered from basalt	Severe	Gurdane	Well drained	hillslopes, mountains	4.5	6.1	7.3	51	102
33D	64487	Gurdane-Rockly complex	2	20		loess mixed with a small amount of volcanic ash over residuum weathered from basalt	Moderate	Gurdane	Well drained	mountains, patterned ground on plateaus	4.5	6.1	7.3	51	102
35F	64489	Gwin-Rock outcrop complex	40	70		loess mixed with residuum and colluvium from basalt	Severe	Gwin	Well drained	hillslopes, mountains	0.0	0.0	0.0	25	51
36E	64490	Gwinly very cobbly silt loam	7	40		loess mixed with residuum and colluvium from basalt	Severe	Gwinly	Well drained	hillslopes, mountains	1.5	6.6	7.8	25	51
39A	64495	Hermiston silt loam	0	3		silty alluvium	Slight	Hermiston	Well drained	flood plains, valleys	1.5	6.6	8.4	0	0
43A	64502	Kimberly silt loam	0	3		mixed alluvium	Slight	Kimberly	Well drained	flood plains, valleys	1.5	6.6	7.8	0	0
44D	64503	Klicker silt loam	2	20		loess and volcanic ash mixed with colluvium from basalt	Moderate	Klicker	Well drained	mountains, plateaus	0.0	4.5	5.5	51	102
46C	64505	Klicker-Anatone-Bocker complex	2	15		loess and volcanic ash mixed with colluvium from basalt	Moderate	Klicker	Well drained	mountains, plateaus	0.0	4.5	5.5	51	102
48E	64508	Lickskillet very stony loam	7	40		loess mixed with colluvium from basalt	Severe	Lickskillet	Well drained	hillslopes, hills on plateaus	1.5	6.1	7.3	30	51
50F	64511	Lickskillet-Rock outcrop complex	40	70		loess mixed with colluvium from basalt	Severe	Lickskillet	Well drained	hillslopes, hills on plateaus	1.5	6.1	7.3	30	51
52D	64513	McKay silt loam	7	25	north	loess over calcareous, old silty alluvium	Severe	McKay	Well drained	hills, hillslopes	1.5	5.6	7.8	0	0
56B	64520	Morrow silt loam	1	7		loess	Moderate	Morrow	Well drained	hills, hills on plateaus	1.5	6.6	7.3	51	102
56C	64521	Morrow silt loam	7	12		loess	Severe	Morrow	Well drained	hills, hills on plateaus	1.5	6.6	7.3	51	102
56E	64522	Morrow silt loam	20	35		loess	Severe	Morrow	Well drained	hillslopes, hills on plateaus	1.5	6.6	7.3	51	102
57D	64523	Morrow silt loam	12	20	north	loess	Severe	Morrow	Well drained	hillslopes, hills on plateaus	1.5	6.6	7.3	51	102
58D	64524	Morrow silt loam	12	20	south	loess	Severe	Morrow	Well drained	hillslopes, hills on plateaus	1.5	6.6	7.3	51	102
59D	64525	Morrow-Bakeoven complex	2	20		loess	Severe	Morrow	Well drained	patterned ground on hills, hills	1.5	6.6	7.3	51	102
63A	64531	Onyx silt loam	0	3		silty alluvium	Slight	Onyx	Well drained	flood plains, valleys	1.5	6.6	7.8	0	0
66A	64537	Pedigo silt loam	0	3		silty alluvium mixed with volcanic ash	Slight	Pedigo	Somewhat poorly drained	flood plains, valleys	1.5	8.5	9.0	0	0
67B	64538	Pilot Rock silt loam	1	7		loess over cemented alluvium	Moderate	Pilot Rock	Well drained	terraces, valleys	1.5	6.6	7.3	51	102
67C	64539	Pilot Rock silt loam	7	12		loess over cemented alluvium	Severe	Pilot Rock	Well drained	terraces, valleys	1.5	6.6	7.3	51	102
68D	64540	Pilot Rock silt loam	12	20	north	loess over cemented alluvium	Severe	Pilot Rock	Well drained	terraces, valleys	1.5	6.6	7.3	51	102
69D	64542	Pilot Rock silt loam	12	20	south	loess over cemented alluvium	Severe	Pilot Rock	Well drained	terraces, valleys	1.5	6.6	7.3	51	102
80B	64564	Ritzville silt loam	2	7		loess mixed with small amounts of volcanic ash	Moderate	Ritzville	Well drained	hills, hills	1.5	6.6	7.8	0	0
80C	64565	Ritzville silt loam	7	12		loess mixed with small amounts of volcanic ash	Severe	Ritzville	Well drained	hills, hills	1.5	6.6	7.8	0	0
80D	64566	Ritzville silt loam	12	25		loess mixed with small amounts of volcanic ash	Severe	Ritzville	Well drained	hills, hillslopes	1.5	6.6	7.8	0	0
86D	64572	Rockly very cobbly loam	2	20		loess and volcanic ash mixed with residuum and colluvium from basalt	Moderate	Rockly	Well drained	ridges on hillslopes, foothills, mountains	1.5	6.1	7.3	13	30
89C	64579	Shano silt loam	7	12		loess over calcareous, lacustrine deposits	Severe	Shano	Well drained	terraces, valleys	1.5	6.6	8.4	0	0
97C	64592	Tolo silt loam	3	15		volcanic ash over mixed loess and colluvium derived from basalt	Severe	Tolo	Well drained	mountains, plateaus	0.0	4.5	5.5	0	0
97E	64593	Tolo silt loam	15	35		volcanic ash over mixed loess and colluvium derived from basalt	Severe	Tolo	Well drained	hillslopes, mountains	0.0	4.5	5.5	0	0
100C	64410	Tolo-Klicker association	3	15		volcanic ash over mixed loess and colluvium derived from basalt	Severe	Tolo	Well drained	mountains, plateaus	0.0	4.5	5.5	0	0
100E	64411	Tolo-Klicker association	15	35		volcanic ash over mixed loess and colluvium derived from basalt	Severe	Tolo	Well drained	hillslopes, mountains	0.0	4.5	5.5	0	0
107E	64418	Umatilla-Kahler association	15	35		loess and volcanic ash over colluvium from basalt	Severe	Umatilla	Well drained	hillslopes, mountains	0.0	4.5	5.5	0	0
107F	64419	Umatilla-Kahler association	35	70		loess and volcanic ash over colluvium from basalt	Severe	Umatilla	Well drained	hillslopes, mountains	0.0	4.5	5.5	0	0
108F	64420	Umatilla-Kahler-Gwin association	35	70		loess and volcanic ash over colluvium from basalt	Severe	Umatilla	Well drained	hillslopes, mountains	0.0	4.5	5.5	0	0
112B	64425	Waha silty clay loam	1	12		loess over colluvium and residuum derived from basalt	Moderate	Waha	Well drained	hills, mountains	4.5	6.1	6.5	51	102
113D	64428	Waha-Rockly complex	2	20		loess over colluvium and residuum derived from basalt	Moderate	Waha	Well drained	patterned ground on plateaus, mountains	4.5	6.1	6.5	51	102
121B	64439	Willis silt loam	2	7		loess over cemented alluvium	Moderate	Willis	Well drained	terraces, valleys	1.5	6.6	7.8	51	102
121C	64440	Willis silt loam	7	12		loess over cemented alluvium	Severe	Willis	Well drained	terraces, valleys	1.5	6.6	7.8	51	102
125F	64445	Wrentham-Rock outcrop complex	35	70		loess mixed with colluvium derived from basalt	Severe	Wrentham	Well drained	hills, hillslopes	1.5	6.1	7.3	51	102
126A	64446	Xerofluvents	0	3		mixed alluvium	Slight	Xerofluvents	Somewhat poorly drained	flood plains, valleys	1.5	6.6	7.3	0	0
128A	64448	Yakima silt loam	0	3		mixed alluvium	Slight	Yakima	Well drained	flood plains, valleys	1.5	6.1	7.8	0	0

TABLE B-3: SOIL DESCRIPTIONS, UNION COUNTY

SHANNON & WILSON, INC.

Soil Map Unit Symbol	NSCS Map Unit Key	Soil Name	Percent Slope			Group Name/Parent Source	Erosion Hazard	Component	Drainage Class	Geomorph	Shrink Swell	Water pH		Rock Depth	
			Low	High	Direction							Low	High	Low	High
4E	63988	Anatone extremely stony loam	2	35		colluvium and residuum from basalt with loess and volcanic ash in the surface layer	Severe	Anatone	Well drained	hillslopes	1.5	6.1	7.3	25	51
5E	64004	Anatone-Bocker complex	2	35		colluvium and residuum from basalt with loess and volcanic ash in the surface layer	Severe	Anatone	Well drained	hillslopes	1.5	6.1	7.3	25	51
6F	64015	Anatone-Klicker complex	40	65		colluvium and residuum from basalt with loess and volcanic ash in the surface layer	Severe	Anatone	Well drained	mountain slopes	1.5	6.1	7.3	25	51
7	64016	Catherine silt loam				mixed alluvium	Slight	Catherine	Somewhat poorly drained	flood plains, stream terraces	1.5	6.1	7.3	0	0
8	64020	Catherine silty clay loam				mixed alluvium	Slight	Catherine	Somewhat poorly drained	flood plains, stream terraces	4.5	6.1	7.3	0	0
9A	64021	Conley silty clay loam	0	2		mixed alluvium and lacustrine deposits	Slight	Conley	Somewhat poorly drained	alluvial fans, lake plains	4.5	6.6	7.3	25	76
10B	63931	Coughanour silt loam	2	7		mixed alluvium derived mainly from loess and volcanic ash	Moderate	Coughanour	Well drained	fans, terraces	1.5	6.6	7.8	51	102
10C	63932	Coughanour silt loam	7	12		mixed alluvium derived mainly from loess and volcanic ash	Severe	Coughanour	Well drained	fans, terraces	1.5	6.6	7.8	51	102
11C	63933	Cowsly silt loam	2	12		colluvium and residuum derived from basalt and tuff with a mantle of loess and volcanic ash	Moderate	Cowsly	Moderately well drained	mountain slopes	1.5	6.1	7.3	30	102
11D	63934	Cowsly silt loam	12	20		colluvium and residuum derived from basalt and tuff with a mantle of loess and volcanic ash	Severe	Cowsly	Moderately well drained	mountain slopes	1.5	6.1	7.3	30	102
12D	63935	Cowsly very stony silt loam	2	20		colluvium and residuum derived from basalt and tuff with a mantle of loess and volcanic ash	Severe	Cowsly	Moderately well drained	mountain slopes	1.5	6.1	7.3	30	102
15C	63938	Encina silt loam	2	12		loess and lacustrine deposits	Moderate	Encina	Well drained	terraces	1.5	6.6	7.3	0	0
16E	63940	Encina silt loam	12	45	south	loess and lacustrine deposits	Severe	Encina	Well drained	terraces	1.5	6.6	7.3	0	0
17D	63941	Gwinly very cobbly silt loam	12	20		loess and colluvium derived from basalt and tuff	Severe	Gwinly	Well drained	hillslopes	1.5	6.6	7.8	25	51
17E	63942	Gwinly very cobbly silt loam	20	40		loess and colluvium derived from basalt and tuff	Severe	Gwinly	Well drained	hillslopes	1.5	6.6	7.8	25	51
18E	63943	Gwinly-Rockly complex	5	40		loess and colluvium derived from basalt and tuff	Severe	Gwinly	Well drained	hillslopes	1.5	6.6	7.8	25	51
18F	63944	Gwinly-Rockly complex	40	70		loess and colluvium derived from basalt and tuff	Severe	Gwinly	Well drained	hillslopes	1.5	6.6	7.8	25	51
19E	63945	Hall Ranch stony loam	2	35		colluvium derived from andesite and rhyolite mixed with loess and volcanic ash	Severe	Hall Ranch	Well drained	mountain slopes	0.0	4.5	5.5	51	102
19F	63946	Hall Ranch stony loam	35	65	north	colluvium derived from andesite and rhyolite mixed with loess and volcanic ash	Severe	Hall Ranch	Well drained	mountain slopes	0.0	4.5	5.5	51	102
26B	63955	Hutchinson silt loam	2	7		loess, volcanic ash, colluvium, and mixed alluvium	Moderate	Hutchinson	Well drained	terraces	1.5	6.6	7.8	51	102
26C	63956	Hutchinson silt loam	7	12		loess, volcanic ash, colluvium, and mixed alluvium	Moderate	Hutchinson	Well drained	terraces	1.5	6.6	7.8	51	102
27D	63957	Hutchinson gravelly silt loam	1	20		loess, volcanic ash, colluvium, and mixed alluvium	Moderate	Hutchinson	Well drained	terraces	1.5	6.6	7.8	51	102
28C	63958	Hutchinson variant silt loam	2	12		mixed alluvium with loess and volcanic ash in the surface layer	Moderate	Hutchinson variant	Well drained	alluvial fans, terraces	1.5	6.6	7.3	51	102
31	63963	Jett silt loam				mixed alluvium with an influence of volcanic ash	Slight	Jett	Well drained	flood plains	1.5	7.4	8.4	0	0
32E	63964	Kamela very stony silt loam	2	35		colluvium and residuum derived from basalt with loess and volcanic ash	Severe	Kamela	Well drained	mountain slopes	0.0	4.5	5.5	51	102
33E	63965	Klicker stony silt loam	2	40		colluvium and residuum from basalt with loess and volcanic ash in the surface layer	Severe	Klicker	Well drained	mountain slopes	0.0	4.5	5.5	51	102
33F	63966	Klicker stony silt loam	40	65	north	colluvium and residuum from basalt with loess and volcanic ash in the surface layer	Severe	Klicker	Well drained	mountain slopes	0.0	4.5	5.5	51	102
34F	63967	Klicker stony silt loam	40	65	south	colluvium and residuum from basalt with loess and volcanic ash in the surface layer	Severe	Klicker	Well drained	mountain slopes	0.0	4.5	5.5	51	102
35E	63968	Klicker-Anatone complex	5	40		colluvium and residuum from basalt with loess and volcanic ash in the surface layer	Severe	Klicker	Well drained	mountain slopes	0.0	4.5	5.5	51	102
36	63969	La Grande silt loam				mixed alluvium	Slight	La Grande	Moderately well drained	alluvial fans, stream terraces	1.5	7.9	8.4	0	0
38E	63971	Loneridge stony silt loam	12	40		colluvium and residuum from andesite and basalt with a mantle of loess and volcanic ash	Severe	Loneridge	Well drained	mountain slopes	0.0	4.5	5.5	0	0
39C	63972	Lookingglass silt loam	2	12		colluvium and residuum from basalt and tuff with a mantle of loess and volcanic ash	Moderate	Lookingglass	Moderately well drained	hillslopes	1.5	6.1	7.3	30	76
40C	63974	Lookingglass very stony silt loam	2	20		colluvium and residuum from basalt and tuff with a mantle of loess and volcanic ash	Severe	Lookingglass	Moderately well drained	hillslopes	1.5	6.1	7.3	30	76
41D	63975	Lookout very stony silt loam	2	20		colluvium from basalt and tuff with loess and volcanic ash in the surface layer	Severe	Lookout	Well drained	hillslopes	1.5	6.6	7.3	102	152
43C	63978	North Powder loam	2	15		colluvium derived from granite with loess and volcanic ash in the surface layer	Moderate	North Powder	Well drained	hillslopes	1.5	6.1	7.3	51	102
44C	63979	Olot silt loam	2	12		colluvium and residuum derived from basalt with a mantle of volcanic ash	Moderate	Olot	Well drained	mountain slopes	0.0	4.5	5.5	51	102
45E	63980	Olot stony silt loam	12	35		colluvium and residuum derived from basalt with a mantle of volcanic ash	Severe	Olot	Well drained	mountain slopes	0.0	4.5	5.5	51	102
45F	63981	Olot stony silt loam	35	65		colluvium and residuum derived from basalt with a mantle of volcanic ash	Severe	Olot	Well drained	mountain slopes	0.0	4.5	5.5	51	102
46D	63983	Palouse silt loam	5	20		loess	Severe	Palouse	Well drained	hillslopes	1.5	6.6	7.3	0	0
48B	63986	Phys gravelly silt loam	1	5		mixed alluvium	Slight	Phys	Well drained	alluvial fans	1.5	6.1	6.5	0	0
49	63987	Pits, gravel					Not rated	Pits			0.0	0.0	0.0	0	0
50C	63989	Ramo silty clay loam	2	15		mixed alluvium and colluvium from basalt	Severe	Ramo	Well drained	hillslopes	4.5	6.1	7.3	0	0
50D	63990	Ramo silty clay loam	15	35		mixed alluvium and colluvium from basalt	Severe	Ramo	Well drained	hillslopes	4.5	6.1	7.3	0	0
51D	63991	Ramo very stony silty clay loam	2	20		mixed alluvium and colluvium from basalt	Moderate	Ramo	Well drained	hillslopes	1.5	6.1	7.3	0	0
55D	63995	Rockly extremely stony loam	2	20		colluvium and residuum from basalt with loess and volcanic ash in the surface layer	Moderate	Rockly	Well drained	hillslopes	1.5	6.1	7.3	13	30
56E	63996	Royst very stony silt loam	7	35		colluvium and residuum from basalt and tuff with loess and volcanic ash in the surface layer	Severe	Royst	Well drained	hillslopes	1.5	6.1	7.3	51	102
56F	63997	Royst very stony silt loam	35	70		colluvium and residuum from basalt and tuff with loess and volcanic ash in the surface layer	Severe	Royst	Well drained	hillslopes	1.5	6.1	7.3	51	102
57C	63998	Ruckles very stony clay loam	1	12		colluvium and residuum from basalt and tuff with loess and volcanic ash in the surface layer	Moderate	Ruckles	Well drained	hillslopes	4.5	6.6	7.8	25	51
57E	63999	Ruckles very stony clay loam	12	45		colluvium and residuum from basalt and tuff with loess and volcanic ash in the surface layer	Severe	Ruckles	Well drained	hillslopes	4.5	6.6	7.8	25	51
57F	64000	Ruckles very stony clay loam	45	65		colluvium and residuum from basalt and tuff with loess and volcanic ash in the surface layer	Severe	Ruckles	Well drained	hillslopes	4.5	6.6	7.8	25	51
58E	64001	Starkey very stony silt loam	2	35		colluvium and residuum from basalt and tuff with loess in the surface layer	Severe	Starkey	Well drained	hillslopes	1.5	6.6	7.3	25	51
59E	64002	Tolo silt loam	12	35		loess and colluvium from basalt with a mantle of volcanic ash	Severe	Tolo	Well drained	mountain slopes	0.0	4.5	5.5	0	0
59F	64003	Tolo silt loam	35	65		loess and colluvium from basalt with a mantle of volcanic ash	Severe	Tolo	Well drained	mountain slopes	0.0	4.5	5.5	0	0
60D	64005	Ukiah silty clay loam	2	20		colluvium and residuum from tuff with loess in the surface layer	Severe	Ukiah	Well drained	hillslopes	4.5	6.1	7.3	51	102
61E	64006	Ukiah-Starkey complex	5	40		colluvium and residuum from tuff with loess in the surface layer	Severe	Ukiah	Well drained	hillslopes	4.5	6.1	7.3	51	102
62	64007	Umapine silt loam				mixed alluvium	Slight	Umapine	Somewhat poorly drained	stream terraces	1.5	8.4	9.6	0	0
66	64011	Veazie-Voats complex				mixed alluvium	Slight	Veazie	Well drained	stream terraces	1.5	6.1	7.3	51	102
68C	64013	Watama silt loam, moist	2	12		colluvium and residuum from basalt mixed with loess and volcanic ash	Moderate	Watama	Well drained	hillslopes	1.5	6.6	7.3	51	102
69C	64014	Watama-Gwinly complex	2	12		colluvium and residuum from basalt mixed with loess and volcanic ash	Moderate	Watama	Well drained	hillslopes	1.5	6.6	7.3	51	102

TABLE B-3: SOIL DESCRIPTIONS, UNION COUNTY

70B	64017	Wilkins silt loam	1	5		alluvium with a mantle of loess and volcanic ash	Moderate	Wilkins	Somewhat poorly drained	terraces	1.5	5.6	7.3	38	76
71	64018	Wingville silt loam				alluvium	Slight	Wingville	Somewhat poorly drained	alluvial fans, flood plains	1.5	7.4	8.4	0	0
72C	64019	Wolot silt loam	2	12		colluvium from basalt with a mantle of volcanic ash	Moderate	Wolot	Well drained	hillslopes	0.0	4.5	5.5	0	0
75A	64026	Cumulic Haploxerolls	0	2		mixed alluvium	Slight	Cumulic Haploxerolls	Moderately well drained	flood plains	1.5	6.6	7.8	0	0
76D	64027	Gwinly-Immig very cobbly silt loams	12	35	south	colluvium derived from basalt with loess in the surface layer	Severe	Gwinly	Well drained	hillslopes	1.5	6.6	7.8	25	51
W	64023	Water					Not rated	Water			0.0	0.0	0.0	0	0

TABLE B-4: SOIL DESCRIPTIONS, BAKER COUNTY

SHANNON & WILSON, INC.

Soil Map Unit Symbol	NSCS Map Unit Key	Soil Name	Percent Slope			Group Name/Parent Source	Erosion Hazard	Component	Drainage Class	Geomorph	Shrink Swell	Water pH		Rock Depth	
			Low	High	Direction							Low	High	Low	High
5C	62238	Aridic Haploxerolls	2	12		mixed alluvium and colluvium	Moderate	Aridic Haploxerolls	Well drained	fans	1.5	6.6	7.3	0	0
6C	62251	Ateron very stony loam	2	12		colluvium derived from basalt	Moderate	Ateron	Well drained	hillslopes	1.5	6.6	7.3	25	51
7D	62265	Ateron very stony loam	12	35	south	colluvium derived from basalt	Severe	Ateron	Well drained	hillslopes	1.5	6.6	7.3	25	51
7E	62266	Ateron very stony loam	35	60	south	colluvium derived from basalt	Severe	Ateron	Well drained	hillslopes	1.5	6.6	7.3	25	51
9D	62295	Ateron-Roostercomb extremely gravelly clay loams	12	35	south	colluvium derived from greenstone	Moderate	Ateron	Well drained	hillslopes	4.5	6.6	7.3	25	51
9E	62296	Ateron-Roostercomb extremely gravelly clay loams	35	60	south	colluvium derived from greenstone	Severe	Ateron	Well drained	hillslopes	4.5	6.6	7.3	25	51
10C	62070	Bakeoven-Ruckles complex	2	12		loess and colluvium derived from basalt	Moderate	Bakeoven	Well drained	hillslopes	1.5	6.6	7.8	10	25
11A	62083	Baker silt loam	0	2		old alluvium mixed with volcanic ash and loess	Slight	Baker	Well drained	terraces	1.5	6.6	7.8	51	102
11B	62084	Baker silt loam	2	7		old alluvium mixed with volcanic ash and loess	Moderate	Baker	Well drained	terraces	1.5	6.6	7.8	51	102
13A	62109	Baldock silt loam	0	2		mixed alluvium	Slight	Baldock	Poorly drained	flood plains	1.5	7.9	8.4	0	0
15A	62146	Balm loam	0	3		mixed alluvium	Slight	Balm	Somewhat poorly drained	flood plains	1.5	7.9	8.4	0	0
16C	62163	Barnard silt loam	7	12		alluvium mixed with volcanic ash in the surface layer	Severe	Barnard	Well drained	terraces	1.5	6.1	7.3	51	102
20D	62181	Bouldrock loam	12	35	south	colluvium and residuum derived from quartz diorite and related rocks	Severe	Bouldrock	Well drained	hillslopes	1.5	6.6	7.3	51	102
21E	62182	Bouldrock complex	35	60	south	colluvium and residuum derived from quartz diorite and related rocks	Severe	Bouldrock	Well drained	hillslopes	1.5	6.6	7.3	51	102
25C	62189	Brownlee-Shangland loams	2	12		residuum derived from granodiorite and related rocks	Moderate	Brownlee	Well drained	hillslopes	1.5	5.6	7.3	102	152
26D	62190	Brownlee-Shangland loams	12	35	south	residuum derived from granodiorite and related rocks	Severe	Brownlee	Well drained	hillslopes	1.5	5.6	7.3	102	152
30E	62196	Brownscombe-Rock outcrop complex	35	60	north	colluvium and residuum derived from diorite with volcanic ash in the surface layer	Severe	Brownscombe	Well drained	hillslopes	1.5	6.1	7.3	51	102
32A	62198	Burntriver silt loam	0	2		mixed alluvium influenced by volcanic ash and loess in the surface layer	Slight	Burntriver	Well drained	fans, terraces	1.5	6.6	7.8	0	0
33C	62199	Burntriver gravelly silt loam	2	12		mixed alluvium influenced by volcanic ash and loess in the surface layer	Moderate	Burntriver	Well drained	fans, terraces	1.5	6.6	7.8	0	0
34D	62200	Campcreek-Skullgulch association	12	35		mixed alluvium	Severe	Campcreek	Well drained	terraces	1.5	6.6	7.3	25	51
34E	62201	Campcreek-Skullgulch association	35	60		mixed alluvium	Severe	Campcreek	Well drained	terraces	1.5	6.6	7.3	25	51
36C	62203	Clovercreek-Keating complex	2	12		colluvium derived from greenstone	Moderate	Clovercreek	Well drained	hillslopes	1.5	6.6	7.3	36	51
37D	62204	Clovercreek-Keating complex	12	35	south	colluvium derived from greenstone	Severe	Clovercreek	Well drained	hillslopes	1.5	6.6	7.3	36	51
40A	62210	Cumulic Haploxerolls	0	2		mixed alluvium	Slight	Cumulic Haploxerolls	Moderately well drained	flood plains	1.5	6.6	7.8	0	0
43E	62213	Dogtown complex	35	55	north	colluvium and residuum from quartz diorite and related rocks with volcanic ash in the surface layer	Severe	Dogtown	Well drained	mountain slopes	0.0	4.5	5.5	102	183
45C	62215	Durkee gravelly silt loam	2	12		colluvium derived from argillite with loess and volcanic ash in the upper part	Moderate	Durkee	Well drained	hillslopes	1.5	6.6	7.3	51	102
46D	62216	Durkee gravelly silt loam	12	35	north	colluvium derived from argillite with loess and volcanic ash in the upper part	Severe	Durkee	Well drained	hillslopes	1.5	6.6	7.3	51	102
46E	62217	Durkee gravelly silt loam	35	60	north	colluvium derived from argillite with loess and volcanic ash in the upper part	Severe	Durkee	Well drained	hillslopes	1.5	6.6	7.3	51	102
47D	62218	Durkee gravelly silt loam	12	35	south	colluvium derived from argillite with loess and volcanic ash in the upper part	Severe	Durkee	Well drained	hillslopes	1.5	6.6	7.3	51	102
47E	62219	Durkee gravelly silt loam	35	60	south	colluvium derived from argillite with loess and volcanic ash in the upper part	Severe	Durkee	Well drained	hillslopes	1.5	6.6	7.3	51	102
50C	62225	Encina gravelly silt loam	2	12		mixed lacustrine deposits influenced by volcanic ash	Moderate	Encina	Well drained	terraces	1.5	6.6	7.3	102	152
51D	62226	Encina gravelly silt loam	12	35	south	mixed lacustrine deposits influenced by volcanic ash	Severe	Encina	Well drained	terraces	1.5	6.6	7.3	102	152
51E	62227	Encina gravelly silt loam	35	50	south	mixed lacustrine deposits influenced by volcanic ash	Severe	Encina	Well drained	terraces	1.5	6.6	7.3	102	152
54B	62230	Goodrich gravelly loam	0	7		mixed alluvium	Slight	Goodrich	Well drained	fans	1.5	6.6	7.8	0	0
56C	62232	Greenscombe loam	2	12		colluvium derived from quartz diorite and related granitic rocks	Moderate	Greenscombe	Well drained	hillslopes	1.5	6.6	7.8	51	102
57D	62233	Greenscombe loam	12	35	north	colluvium derived from quartz diorite and related granitic rocks	Severe	Greenscombe	Well drained	hillslopes	1.5	6.6	7.8	51	102
58D	62234	Greenscombe loam	12	35	south	colluvium derived from quartz diorite and related granitic rocks	Severe	Greenscombe	Well drained	hillslopes	1.5	6.6	7.8	51	102
59D	62235	Gwinly-Immig very cobbly silt loams	12	35	south	colluvium derived from basalt with loess in the surface layer	Severe	Gwinly	Well drained	hillslopes	1.5	6.6	7.8	25	51
60D	62239	Gwinly-Immig-Snell very cobbly silt loams	12	35		colluvium derived from basalt with loess in the surface layer	Severe	Gwinly	Well drained	hillslopes	1.5	6.6	7.8	25	51
60E	62240	Gwinly-Immig-Snell very cobbly silt loams	35	50		colluvium derived from basalt with loess in the surface layer	Severe	Gwinly	Well drained	hillslopes	1.5	6.6	7.8	25	51
62A	62243	Haines silt loam	0	2		mixed alluvium with loess and volcanic ash in the surface layer	Slight	Haines	Poorly drained	flood plains	1.5	9.1	11.0	0	0
72C	62255	Hibbard gravelly silty clay loam	2	12		mixed alluvium	Moderate	Hibbard	Well drained	terraces	4.5	6.6	7.3	51	102
73B	62256	Hibbard-Rockly complex	2	7		mixed alluvium	Moderate	Hibbard	Well drained	terraces	4.5	6.6	7.3	51	102
79D	62264	Hyall-Simas association	12	35		mixed alluvium	Moderate	Hyall	Well drained	terraces	4.5	6.6	7.3	52	102
80E	62267	Hyall-Simas association	35	60		mixed alluvium	Severe	Hyall	Well drained	terraces	4.5	6.6	7.3	52	102
83E	62271	Inkler very gravelly loam	35	50	north	colluvium derived from rhyolite and andesite with volcanic ash in the surface layer	Severe	Inkler	Well drained	mountain slopes	0.0	4.5	5.5	0	0
84D	62273	Jett silt loam	0	3		mixed alluvium with an influence of volcanic ash	Slight	Jett	Well drained	flood plains	1.5	7.4	8.4	0	0
85D	62274	Keating silt loam	12	35	north	colluvium derived from greenstone with loess and volcanic ash in the surface layer	Severe	Keating	Well drained	hillslopes	1.5	6.6	7.3	51	102
86D	62275	Kilmerque loam	12	35	south	colluvium derived from quartz diorite with volcanic ash in the surface layer	Severe	Kilmerque	Well drained	mountain slopes	0.0	4.5	5.5	51	102
88D	62279	Klicker-Anatone complex	12	35	south	colluvium derived from andesite and basalt with volcanic ash in the surface layer	Severe	Klicker	Well drained	mountain slopes	0.0	4.5	5.5	51	102
94C	62288	Legler silt loam	2	8		alluvium with loess and volcanic ash in the surface layer	Moderate	Legler	Well drained	fans, flood plains	1.5	6.6	7.3	0	0
95C	62289	Legler gravelly loam	8	20		alluvium with loess and volcanic ash in the surface layer	Severe	Legler	Well drained	fans, terraces	1.5	6.6	7.3	0	0
96E	62290	Lickskillet very gravelly sandy loam	30	50	south	colluvium derived from basalt and metavolcanics	Severe	Lickskillet	Well drained	hillslopes	1.5	6.6	8.4	25	51
96F	62291	Lickskillet very gravelly sandy loam	50	70	south	colluvium derived from basalt and metavolcanics	Severe	Lickskillet	Well drained	hillslopes	1.5	6.6	8.4	25	51
97E	62292	Lickskillet-Rock outcrop complex	35	60	south	colluvium derived from basalt and metavolcanics	Severe	Lickskillet	Well drained	hillslopes	1.5	6.1	7.3	30	51
98C	62293	Lookout silt loam	2	12		colluvium derived from basalt with loess and volcanic ash in the surface layer	Moderate	Lookout	Well drained	hillslopes	1.5	6.6	7.3	76	127
99C	62294	Lookout very cobbly silt loam	2	12		colluvium derived from basalt with loess and volcanic ash in the surface layer	Moderate	Lookout	Well drained	hillslopes	1.5	6.6	7.3	76	127
100D	62058	Lostbasin very channery loam	12	35	south	colluvium derived from graywacke and schist	Severe	Lostbasin	Well drained	hillslopes	1.5	6.6	7.3	51	102
101E	62059	Lostbasin-Xerorthents-Rock outcrop complex	35	50	south	colluvium derived from graywacke and schist	Severe	Lostbasin	Well drained	hillslopes	1.5	6.6	7.3	51	102
102C	62060	Lovline channery loam	2	12		colluvium derived from schist	Moderate	Lovline	Well drained	hillslopes	1.5	6.6	7.3	51	102
103D	62061	Lovline channery loam	12	30	north	colluvium derived from schist	Severe	Lovline	Well drained	hillslopes	1.5	6.6	7.3	51	102
103E	62062	Lovline channery loam	30	50	north	colluvium derived from schist	Severe	Lovline	Well drained	hillslopes	1.5	6.6	7.3	51	102
103F	62063	Lovline channery loam	50	70	north	colluvium derived from schist	Severe	Lovline	Well drained	hillslopes	1.5	6.6	7.3	51	102
104D	62064	Marack silt loam	12	35	north	lacustrine deposits	Severe	Marack	Well drained	terraces	1.5	6.6	7.3	102	152
105C	62065	Marack gravelly silty clay loam	2	12		lacustrine deposits	Moderate	Marack	Well drained	terraces	4.5	6.6	7.3	102	152

106D	62066	Marack very gravelly silty clay loam	12	35	south	lacustrine deposits	Severe	Marack	Well drained	terraces	4.5	6.6	7.3	102	152
108D	62068	Marack-Badland complex	8	40		lacustrine deposits	Severe	Marack	Well drained	terraces	4.5	6.6	7.3	102	152
113D	62075	Nagle silt loam	12	35	north	mixed alluvium with loess and volcanic ash in the surface layer	Severe	Nagle	Well drained	terraces	1.5	6.6	7.8	0	0
113E	62076	Nagle silt loam	35	50	north	mixed alluvium with loess and volcanic ash in the surface layer	Severe	Nagle	Well drained	terraces	1.5	6.6	7.8	0	0
114C	62077	North Powder loam	2	12		colluvium derived from quartz diorite and related rocks	Moderate	North Powder	Well drained	hillslopes	1.5	6.1	7.3	51	102
117D	62080	North Powder-Rock outcrop complex	12	35	south	colluvium derived from quartz diorite and related rocks	Severe	North Powder	Well drained	hillslopes	1.5	6.1	7.3	51	102
118C	62081	Oxman silt loam	2	12		lacustrine deposits	Moderate	Oxman	Well drained	terraces	1.5	7.4	8.4	51	102
119D	62082	Oxman silt loam	12	35	south	lacustrine deposits	Severe	Oxman	Well drained	terraces	1.5	7.4	8.4	51	102
120D	62085	Oxman-Xeric Torriorthents silt loams	12	35	south	lacustrine deposits	Severe	Oxman	Well drained	terraces	1.5	7.4	8.4	51	102
121E	62086	Piersonte very channery loam	35	50	north	colluvium derived from schist	Severe	Piersonte	Well drained	mountain slopes	0.0	4.5	5.5	0	0
122C	62088	Poall very fine sandy loam	2	12		lacustrine deposits	Moderate	Poall	Well drained	hillslopes	1.5	7.4	8.4	23	38
123D	62089	Poall very fine sandy loam	12	40	north	lacustrine deposits	Severe	Poall	Well drained	hillslopes	1.5	7.4	8.4	23	38
124D	62090	Poall very fine sandy loam	12	40	south	lacustrine deposits	Severe	Poall	Well drained	hillslopes	1.5	7.4	8.4	23	38
125D	62091	Poall-Xeric Torriorthents complex	12	40	south	lacustrine deposits	Severe	Poall	Well drained	hillslopes	1.5	7.4	8.4	23	38
126A	62092	Powval silt loam	0	3		mixed alluvium	Slight	Powval	Well drained	terraces	1.5	7.4	8.4	0	0
127A	62093	Powval silt loam	0	3		mixed alluvium	Slight	Powval	Well drained	terraces	1.5	7.4	8.4	0	0
129B	62095	Rastus very gravelly loam	1	7		mixed alluvium	Slight	Rastus	Well drained	terraces	1.5	6.6	7.3	51	76
130E	62098	Redcliff gravelly loam	30	50	north	colluvium derived from metavolcanics	Severe	Redcliff	Well drained	hillslopes	1.5	7.4	7.8	51	102
130F	62099	Redcliff gravelly loam	50	75	north	colluvium derived from metavolcanics	Severe	Redcliff	Well drained	hillslopes	1.5	7.4	7.8	51	102
131C	62100	Ridley-Keating silt loams	2	12		colluvium derived from greenstone with loess and volcanic ash in the surface layer	Moderate	Ridley	Well drained	hillslopes	1.5	6.6	7.3	0	0
132A	62101	Riverwash	0	2			Very Severe	Riverwash	Poorly drained	flood plains	0.0	0.0	0.0	0	0
133C	62102	Robinette-Gwinly complex	2	12		colluvium derived from basalt with loess in the surface layer	Moderate	Robinette	Well drained	hillslopes	1.5	6.6	7.3	102	152
134F	62103	Rock outcrop-Lostbasin-Xerorthents complex	50	80	south		Very Severe	Rock outcrop			0.0	0.0	0.0	0	0
136F	62105	Rock outcrop-Ruclick complex	50	70	north		Very Severe	Rock outcrop			0.0	0.0	0.0	0	0
139F	62108	Rock outcrop-Xeric Torriorthents-Darkcanyon complex	50	80	south		Very Severe	Rock outcrop			0.0	0.0	0.0	0	0
140C	62110	Rockly-Gwinly complex	2	12		colluvium derived from basalt and loess	Moderate	Rockly	Well drained	hillslopes	1.5	6.1	7.3	13	30
141D	62111	Roostercomb-Longbranch complex	12	35	north	colluvium derived from greenstone	Severe	Roostercomb	Well drained	hillslopes	4.5	6.6	7.3	51	102
141E	62112	Roostercomb-Longbranch complex	35	50	north	colluvium derived from greenstone	Severe	Roostercomb	Well drained	hillslopes	4.5	6.6	7.3	51	102
142C	62113	Ruckles-Ruclick complex	2	12		colluvium derived from basalt with loess and volcanic ash in the surface layer	Moderate	Ruckles	Well drained	hillslopes	4.5	6.6	7.8	25	51
143D	62114	Ruckles-Ruclick complex	12	35	south	colluvium derived from basalt with loess and volcanic ash in the surface layer	Severe	Ruckles	Well drained	hillslopes	4.5	6.6	7.8	25	51
143E	62115	Ruckles-Ruclick complex	35	50	south	colluvium derived from basalt with loess and volcanic ash in the surface layer	Severe	Ruckles	Well drained	hillslopes	4.5	6.6	7.8	25	51
143F	62116	Ruckles-Ruclick complex	50	70	south	colluvium derived from basalt with loess and volcanic ash in the surface layer	Severe	Ruckles	Well drained	hillslopes	4.5	6.6	7.8	25	51
144E	62117	Ruckles-Ruclick-Snellby complex	35	50		colluvium derived from basalt with loess and volcanic ash in the surface layer	Severe	Ruckles	Well drained	hillslopes	4.5	6.6	7.8	25	51
144F	62118	Ruckles-Ruclick-Snellby complex	50	70		colluvium derived from basalt with loess and volcanic ash in the surface layer	Severe	Ruckles	Well drained	hillslopes	4.5	6.6	7.8	25	51
145D	62119	Ruclick very cobbly silt loam	12	35	north	colluvium derived from basalt with loess and volcanic ash in the surface layer	Severe	Ruclick	Well drained	hillslopes	1.5	6.6	7.3	51	102
145E	62120	Ruclick very cobbly silt loam	35	50	north	colluvium derived from basalt with loess and volcanic ash in the surface layer	Severe	Ruclick	Well drained	hillslopes	1.5	6.6	7.3	51	102
146D	62121	Sag-Snell complex	12	35	north	colluvium derived from basalt with loess and volcanic ash in the surface layer	Severe	Sag	Well drained	hillslopes	1.5	6.1	7.3	102	152
146E	62122	Sag-Snell complex	35	50	north	colluvium derived from basalt with loess and volcanic ash in the surface layer	Severe	Sag	Well drained	hillslopes	1.5	6.1	7.3	102	152
148F	62126	Sinker very channery loam	50	80	north	colluvium derived from schist and graywacke	Severe	Sinker	Well drained	hillslopes	1.5	6.6	7.3	51	102
149D	62127	Sinker and Chambeam soils	12	35	north	colluvium derived from schist and graywacke	Severe	Sinker	Well drained	hillslopes	1.5	6.6	7.3	51	102
149E	62128	Sinker and Chambeam soils	35	50	north	colluvium derived from schist and graywacke	Severe	Sinker	Well drained	hillslopes	1.5	6.6	7.3	51	102
152F	62136	Snaker channery loam	50	80	south	colluvium derived from schist	Severe	Snaker	Well drained	hillslopes	1.5	6.6	7.3	25	51
153E	62137	Snaker-Darkcanyon complex	30	50	south	colluvium derived from schist	Severe	Snaker	Well drained	hillslopes	1.5	6.6	7.3	25	51
154E	62138	Snaker-Darkcanyon-Xeric Torriorthents complex	30	50	south	colluvium derived from schist	Severe	Snaker	Well drained	hillslopes	1.5	6.6	7.3	25	51
155D	62139	Snell-Ateron complex	12	35	north	colluvium derived from basalt and loess	Severe	Snell	Well drained	hillslopes	1.5	5.6	7.3	51	102
155E	62140	Snell-Ateron complex	35	60	north	colluvium derived from basalt and loess	Severe	Snell	Well drained	hillslopes	1.5	5.6	7.3	51	102
158D	62143	Snellby stony silt loam	12	35	north	colluvium derived from basalt with loess and volcanic ash in the surface layer	Severe	Snellby	Well drained	hillslopes	1.5	6.6	7.8	51	102
158E	62144	Snellby stony silt loam	35	50	north	colluvium derived from basalt with loess and volcanic ash in the surface layer	Severe	Snellby	Well drained	hillslopes	1.5	6.6	7.8	51	102
159A	62145	Stanflow-Umapine silt loams	0	2		mixed alluvium with volcanic ash in the surface layer	Slight	Stanflow	Moderately well drained	terraces	1.5	9.1	11.0	0	0
163D	62151	Taterpa loam	12	35	north	colluvium and residuum weathered from quartz diorite and related rocks	Severe	Taterpa	Well drained	hillslopes, mountain slopes	1.5	6.6	7.3	102	152
163E	62152	Taterpa loam	35	60	north	colluvium and residuum weathered from quartz diorite and related rocks	Severe	Taterpa	Well drained	hillslopes, mountain slopes	1.5	6.6	7.3	102	152
165D	62154	Tolo-Dogtown complex	12	35	north	volcanic ash over mixed alluvium	Severe	Tolo	Well drained	mountain slopes	0.0	4.5	5.5	0	0
167D	62157	Top-McGarr complex	12	35	north	colluvium derived from basalt and loess	Severe	Top	Well drained	mountain slopes	0.0	4.5	5.5	102	152
167E	62158	Top-McGarr complex	35	65	north	colluvium derived from basalt and loess	Severe	Top	Well drained	mountain slopes	1.5	6.1	7.3	102	152
168C	62159	Typic Xerorthents, cobbly	2	12		mixed alluvium	Moderate	Typic Xerorthents	Moderately well drained	terraces	1.5	6.6	7.8	0	0
171B	62166	Virtue silt loam	2	7		alluvium and lacustrine deposits with loess and volcanic ash in the surface layer	Moderate	Virtue	Well drained	fans, terraces	1.5	6.6	7.3	51	102
171C	62167	Virtue silt loam	7	12		alluvium and lacustrine deposits with loess and volcanic ash in the surface layer	Severe	Virtue	Well drained	fans, terraces	1.5	6.6	7.3	51	102
172B	62168	Virtue very gravelly silt loam	2	7		alluvium and lacustrine deposits with loess and volcanic ash in the surface layer	Moderate	Virtue	Well drained	fans, terraces	1.5	6.6	7.3	51	102
172C	62169	Virtue very gravelly silt loam	7	12		alluvium and lacustrine deposits with loess and volcanic ash in the surface layer	Severe	Virtue	Well drained	fans, terraces	1.5	6.6	7.3	51	102
173C	62170	Wahstal very cobbly loam	2	12		mixed alluvium	Slight	Wahstal	Well drained	fans, terraces	1.5	6.1	7.3	25	51
177E	62174	Xeric Torriorthents	35	60	south	colluvium and residuum derived from volcanic rocks and lacustrine deposits	Severe	Xeric Torriorthents	Well drained	terraces	1.5	6.6	7.8	8	51
178F	62175	Xeric Torriorthents-Rock outcrop complex	50	80		colluvium and residuum derived from volcanic rocks and lacustrine deposits	Severe	Xeric Torriorthents	Excessively drained	canyons	1.5	6.6	7.8	25	152
W	62297	Water					Not rated	Water			0.0	0.0	0.0	0	0

TABLE B-5: SOIL DESCRIPTIONS, MALHEUR COUNTY

SHANNON & WILSON, INC.

Soil Map Unit Symbol	NSCS Map Unit Key	Soil Name	Percent Slope			Group Name/Parent Source	Erosion Hazard	Component	Drainage Class	Geomorph	Shrink Swell	Water pH		Rock Depth	
			Low	High	Direction							Low	High	Low	High
9B	62860	Feltham sandy loam	2	5		alluvium	Moderate	Feltham	Somewhat excessively drained	fans, terraces	1.5	6.6	8.4	0	0
11A	62787	Frohman silt loam	0	2		alluvium and lacustrine deposits	Slight	Frohman	Well drained	terraces	1.5	7.4	8.4	25	51
11B	62788	Frohman silt loam	2	5		alluvium and lacustrine deposits	Moderate	Frohman	Well drained	terraces	1.5	7.4	8.4	51	102
11C	62789	Frohman silt loam	5	8		alluvium and lacustrine deposits	Moderate	Frohman	Well drained	terraces	1.5	7.4	8.4	25	51
11D	62790	Frohman silt loam	8	12		alluvium and lacustrine deposits	Severe	Frohman	Well drained	terraces	1.5	7.4	8.4	25	51
11E	62791	Frohman silt loam	12	20		alluvium and lacustrine deposits	Severe	Frohman	Well drained	terraces	1.5	7.4	8.4	25	51
12A	62792	Garbutt silt loam	0	2		alluvium and loess	Slight	Garbutt	Well drained	fans, terraces	1.5	7.9	9.0	0	0
14	62796	Harana silt loam				alluvium	Slight	Harana	Moderately well drained	terraces	4.5	7.4	8.4	0	0
15	62797	Harana silty clay loam				alluvium	Slight	Harana	Moderately well drained	terraces	4.5	7.4	8.4	0	0
16	62798	Harana silty clay loam, alkali				alluvium	Slight	Harana	Somewhat poorly drained	terraces	4.5	8.5	9.0	0	0
18	62800	Kimberly fine sandy loam				alluvium	Slight	Kimberly	Well drained	fans, terraces	1.5	6.6	7.8	0	0
19A	62801	McLoughlin silt loam	0	2		alluvium	Slight	McLoughlin	Well drained	fans	1.5	7.9	9.0	0	0
19B	62802	McLoughlin silt loam	2	5		alluvium	Moderate	McLoughlin	Well drained	fans	1.5	7.9	9.0	0	0
19C	62803	McLoughlin silt loam	5	8		alluvium	Moderate	McLoughlin	Well drained	fans	1.5	7.9	9.0	0	0
20	62805	Notus-Falk variant complex				alluvium	Slight	Notus	Somewhat poorly drained	terraces	1.5	6.1	8.4	25	51
21B	62807	Nyssa silt loam	2	5		lacustrine deposits	Moderate	Nyssa	Well drained	terraces	1.5	7.4	8.4	51	102
21C	62808	Nyssa silt loam	5	8		lacustrine deposits	Moderate	Nyssa	Well drained	terraces	1.5	7.4	8.4	51	102
27	62826	Powder silt loam				alluvium	Slight	Powder	Well drained	fans, terraces	1.5	6.6	8.4	0	0
29	62829	Riverwash					Very Severe	Riverwash	Poorly drained	flood plains	0.0	0.0	0.0	0	0
31	62835	Stanfield silt loam				alluvium	Slight	Stanfield	Moderately well drained	terraces	1.5	7.9	9.6	51	102
33A	62840	Turbyfill fine sandy loam	0	2		alluvium	Slight	Turbyfill	Well drained	fans, terraces	1.5	6.6	8.4	0	0
34	62842	Umapine silt loam				alluvium	Slight	Umapine	Somewhat poorly drained	terraces	1.5	8.5	9.0	0	0
35A	62843	Virtue silt loam	0	2		alluvium	Slight	Virtue	Well drained	terraces	1.5	6.6	7.3	51	102
35B	62844	Virtue silt loam	2	5		alluvium	Moderate	Virtue	Well drained	terraces	1.5	6.6	7.3	51	102
35C	62845	Virtue silt loam	5	8		alluvium	Moderate	Virtue	Well drained	terraces	1.5	6.6	7.3	51	102
35D	62846	Virtue silt loam	8	12		alluvium	Severe	Virtue	Well drained	terraces	1.5	6.6	7.3	51	102
36E	62848	Xeric Torriorthents	moderately steep			lacustrine deposits	Severe	Xeric Torriorthents	Well drained	terraces	0.0	0.0	0.0	0	0
36F	62849	Xeric Torriorthents	very steep			lacustrine deposits	Severe	Xeric Torriorthents	Well drained	terraces	0.0	0.0	0.0	0	0
0001EW	2436951	Gulliford-Collegecreek-Bullroar complex	0	5		volcanic ash overlying colluvium and alluvium derived from basalt	Slight	Collegecreek	Well drained	mountain valleys, mountains, plateaus, plateaus	1.5	6.1	7.3	0	0
0011AW	2436956	Doublecreek-Phys-Collegecreek complex	2	15		volcanic ash over colluvial and alluvial material derived primarily from basalt	Severe	Collegecreek	Well drained	mountain slopes, mountains, plateaus, plateaus	1.5	7.4	8.4	0	0
0906AO	2437047	Forshey-Spartabutte-Sixdollar complex	0	15		mixed volcanic ash mantle over colluvium derived from granite	Moderate	Forshey	Well drained	mountain slopes, mountains	0.0	4.5	5.5	0	0
0906BO	2437048	Forshey-Spartabutte-Sixdollar complex	15	30		mixed volcanic ash mantle over colluvium derived from granite	Severe	Forshey	Well drained	mountain slopes, mountains	0.0	4.5	5.5	0	0
0907CO	2437049	Sixdollar-Spartabutte-Powderriver complex	30	60		colluvium derived from granite with an influence of volcanic ash	Severe	Powderriver	Well drained	mountain slopes, mountains	0.0	4.5	5.5	25	51
0910BO	2437050	Sixdollar-Spartabutte-Golfer complex	15	30		volcanic ash over colluvium and/or residuum weathered from granite	Severe	Sixdollar	Well drained	mountain slopes, mountains	0.0	4.5	5.5	102	152
0911CO	2437051	Sixdollar-Golfer-Forshey complex	30	60		volcanic ash over colluvium and/or residuum weathered from granite	Severe	Sixdollar	Well drained	mountain slopes, mountains	0.0	4.5	5.5	102	152
0962CO	2437068	Golfer-Powderriver complex	30	60		colluvium and/or residuum weathered from granite with an influence of volcanic ash	Severe	Golfer	Well drained	mountain slopes, mountains	0.0	4.5	5.5	51	102
0974DH	2437069	Golfer-Powderriver-Rock Outcrop complex	60	90			Severe	Rock Outcrop			0.0	0.0	0.0	0	0
1307BO	2437074	Hondu-Analulu complex	15	30		volcanic ash over colluvium and/or residuum weathered from metavolcanics and/or metasedimentary rock and/or igneous rock	Severe	Hondu	Well drained	mountain slopes, mountains	0.0	4.5	5.5	0	0
1721AO	2437078	Kamela-Crackercreek-Fivebeaver complex	0	15		volcanic ash over colluvium derived from basalt	Moderate	Crackercreek	Well drained	mountain slopes, mountains, plateaus, plateaus	0.0	4.5	5.5	102	152
3336NO	2437106	Gwinly-Rockly complex	5	40		loess and colluvium derived from basalt with an influence of volcanic ash	Severe	Gwinly	Well drained	mountain slopes, mountains, plateaus, plateaus	1.5	6.6	7.8	25	51
3337AO	2437107	Ramo ashy silty clay loam	2	15		mixed volcanic ash and loess and slope alluvium over fine-textured residuum and colluvium derived from basalt and/or tuff	Moderate	Ramo	Well drained	mountain slopes, mountains, plateaus, plateaus	4.5	6.1	7.3	0	0
3337BO	2437108	Ramo ashy silty clay loam	15	35		mixed volcanic ash and loess and slope alluvium over fine-textured residuum and colluvium derived from basalt and/or tuff	Severe	Ramo	Well drained	mountain slopes, mountains, plateaus, plateaus	4.5	6.1	7.3	0	0
3338NO	2437109	Ramo ashy silty clay loam	2	20		mixed volcanic ash and loess and slope alluvium over fine-textured residuum and colluvium derived from basalt and/or tuff	Moderate	Ramo	Well drained	mountain slopes, mountains, plateaus, plateaus	4.5	6.1	7.3	0	0
3339NO	2437110	Starkey ashy very stony silt loam	2	35		colluvium and residuum from basalt and tuff with loess in the surface layer	Severe	Starkey	Well drained	mountain slopes, mountains	1.5	6.6	7.3	25	51
3340NO	2437111	Ukiah silty clay loam	2	35		colluvium and/or residuum weathered from basalt and/or basic tuff with an influence of volcanic ash in surface horizons	Moderate	Ukiah	Well drained	mountain slopes, mountains	4.5	6.1	7.3	51	102
3341NO	2437112	Ukiah-Starkey complex	5	40		colluvium and residuum from basalt and tuff with loess and volcanic ash in the surface layer	Moderate	Starkey	Well drained	mountain slopes, mountains	1.5	6.6	7.3	25	51
3483IO	2437124	Gwinly very cobbly silt loam	12	20		loess and colluvium derived from basalt with an influence of volcanic ash	Severe	Gwinly	Well drained	mountain slopes, mountains, plateaus, plateaus	1.5	6.6	7.8	25	51
3483PO	2437125	Gwinly very cobbly silt loam	20	40		loess and colluvium derived from basalt with an influence of volcanic ash	Severe	Gwinly	Well drained	mountain slopes, mountains, plateaus, plateaus	1.5	6.6	7.8	25	51
4031BO	2437151	Brownlee-Shangland loams	12	35	south	residuum derived from granodiorite and related rocks	Severe	Brownlee	Well drained	hillslopes	1.5	5.6	7.3	102	152
4033AO	2437153	Brownlee-Shangland loams	2	12		residuum derived from granodiorite and related rocks	Moderate	Brownlee	Well drained	hillslopes	1.5	5.6	7.3	102	152
4107AO	2437163	Rebarrow-Syrupcreek complex	0	15		volcanic ash over colluvium and/or residuum weathered from basalt and/or andesite	Moderate	Rebarrow	Well drained	mountain slopes, mountains, plateaus, plateaus	0.0	4.5	5.5	0	0
4107BO	2437164	Rebarrow-Deardorf complex	15	30		volcanic ash over colluvium derived from basalt and/or andesite	Severe	Deardorf	Well drained	mountain slopes, mountains, plateaus, plateaus	0.0	4.5	5.5	51	102
4107CO	2437165	Rebarrow-Deardorf complex	30	60		volcanic ash over colluvium derived from basalt and/or andesite	Severe	Deardorf	Well drained	mountain slopes, mountains, plateaus, plateaus	0.0	4.5	5.5	51	102
4119BO	2437170	Wonder-McWillis complex	15	30		volcanic ash over colluvium and/or residuum weathered from basalt and/or andesite	Severe	McWillis	Well drained	mountain slopes, mountains, plateaus, plateaus	0.0	4.5	5.5	0	0
4126AO	2437174	Bunchpoint-Fivebeaver complex	0	15		mixed volcanic ash and loess and colluvium over colluvium derived from basalt	Moderate	Bunchpoint	Well drained	mountain slopes, mountains, plateaus, plateaus	0.0	4.5	5.5	51	102
4127BO	2437175	Bunchpoint-Fivebeaver-Rock Outcrop complex	15	30			Severe	Rock Outcrop			0.0	0.0	0.0	0	0
4127CO	2437176	Bunchpoint-Fivebeaver-Rock Outcrop complex	30	60		mixed volcanic ash and loess and colluvium over colluvium derived from basalt	Severe	Bunchpoint	Well drained	mountain slopes, mountains, plateaus, plateaus	0.0	4.5	5.5	51	102
4128AO	2437177	Bunchpoint-Anatone complex	0	15		mixed volcanic ash and loess and colluvium over colluvium derived from basalt	Moderate	Bunchpoint	Well drained	mountain slopes, mountains, plateaus, plateaus	0.0	4.5	5.5	51	102
4128BO	2437178	Bunchpoint-Anatone complex	15	30		mixed volcanic ash and loess and colluvium over colluvium derived from basalt	Severe	Bunchpoint	Well drained	mountain slopes, mountains, plateaus, plateaus	0.0	4.5	5.5	51	102
4128CO	2437179	Bunchpoint-Anatone complex	30	60		mixed volcanic ash and loess and colluvium over colluvium derived from basalt	Severe	Bunchpoint	Well drained	mountain slopes, mountains, plateaus, plateaus	0.0	4.5	5.5	51	102
4129BO	2437180	Syrupcreek-Fivebeaver-Rock Outcrop complex	15	30			Severe	Rock Outcrop			0.0	0.0	0.0	0	0
4132AO	2437181	McWillis-Fivebeaver complex	0	15		colluvium and residuum derived from basalt with an influence of volcanic ash	Moderate	Fivebeaver	Well drained	mountain slopes, mountains, plateaus, plateaus	0.0	4.5	5.5	25	51
4134CO	2437182	Wonder-McWillis complex	30	60		volcanic ash over colluvium and/or residuum weathered from basalt and/or andesite	Severe	McWillis	Well drained	mountain slopes, mountains, plateaus, plateaus	0.0	4.5	5.5	0	0
4135AO	2437183	Olot-Fivebeaver complex	0	15		volcanic ash over colluvium and/or residuum weathered from basalt	Moderate	Olot	Well drained	mountain slopes, mountains, plateaus, plateaus	0.0	4.5	5.5	51	102
4136BO	2437185	Olot-Fivebeaver-Rock Outcrop complex	15	30			Severe	Rock Outcrop			0.0	0.0	0.0	0	0
4137BR	2437186	Fivebeaver-Rock Outcrop complex	15	30		colluvium and residuum derived from basalt with an influence of volcanic ash	Severe	Fivebeaver	Well drained	mountain slopes, mountains, plateaus, plateaus	0.0	4.5	5.5	25	51
4139AO	2437188	Anatone-McCartycreek-Rock Outcrop complex	0	15			Moderate	Rock Outcrop			0.0	0.0	0.0	0	0
4139BO	2437189	Anatone-McCartycreek-Rock Outcrop complex	15	30			Severe	Rock Outcrop			0.0	0.0	0.0	0	0
4139CO	2437190	Anatone-McCartycreek-Rock Outcrop complex	30	60			Severe	Rock Outcrop			0.0	0.0	0.0	0	0
4142BO	2437191	Anatone-Wonder-Rock Outcrop complex	15	30		volcanic ash over colluvium derived from basalt and/or andesite	Severe	Wonder	Well drained	mountain slopes, mountains, plateaus, plateaus	0.0	4.5	5.5	51	102
4142CO	2437192	Anatone-Wonder-Rock Outcrop complex	30	60		volcanic ash and loess mixed colluvium and/or residuum weathered from basalt and/or andesite and/or welded tuff	Severe	Anatone	Well drained	mountain slopes, mountains, plateaus, plateaus	1.5	6.1	7.3	25	51
4159AO	2437207	Larabee-Klickson-Rock Outcrop complex	0	15			Moderate	Rock Outcrop			0.0	0.0	0.0	0	0
4159CO	2437208	Larabee-Klickson complex	30	60		colluvium derived from basalt with a mixture of loess over volcanic ash in the upper part	Severe	Klickson	Well drained	mountain slopes, mountains, plateaus, plateaus	0.0	4.5	5.5	0	0

4160BO	2437210	Klickson-Larabee-Bunchpoint complex	15	30		mixed volcanic ash and loess and colluvium over colluvium derived from basalt	Severe	Bunchpoint	Well drained	mountain slopes, mountains, plateaus, plateaus	0.0	4.5	5.5	51	102
4163AO	2437212	Syrupcreek-Fivebeaver complex	0	15		volcanic ash and loess over colluvium and/or residuum weathered from basalt and/or andesite	Moderate	Syrupcreek	Well drained	mountain slopes, mountains, plateaus, plateaus	1.5	5.6	7.3	51	102
4163BO	2437213	Syrupcreek-Fivebeaver complex	15	30		colluvium and residuum derived from basalt with an influence of volcanic ash	Severe	Fivebeaver	Well drained	mountain slopes, mountains, plateaus, plateaus	0.0	4.5	5.5	25	51
4166NO	2437215	Hall Ranch stony ashy loam	2	35		volcanic ash and loess mixed with colluvium derived from andesite and rhyolite	Moderate	Hall Ranch	Well drained	mountain slopes, mountains, plateaus, plateaus	1.5	6.1	7.3	51	102
5701BO	2437240	Anatone-Bocker-Kamela complex	15	30		An influence of volcanic ash or loess mixed with colluvium or residuum from basalt or andesite	Severe	Bocker	Well drained	mountain slopes, mountains, plateaus, plateaus	1.5	6.1	7.3	10	25
5704AO	2437242	Bocker extremely cobbly ashy silt loam	0	15		An influence of volcanic ash or loess mixed with colluvium or residuum from basalt or andesite	Moderate	Bocker	Well drained	mountain slopes, mountains, plateaus, plateaus	1.5	6.1	7.3	10	25
5709AO	2437245	Syrupcreek ashy silt loam	0	15		volcanic ash and loess over colluvium and residuum derived from basalt and andesitic tuff breccia	Moderate	Syrupcreek	Well drained	mountain slopes, mountains, plateaus, plateaus	1.5	5.6	7.3	36	61
5711BO	2437248	Klickson-Olot-Fivebeaver complex	15	30		colluvium derived from basalt with a mixture of loess over volcanic ash in the upper part	Severe	Klickson	Well drained	mountain slopes, mountains, plateaus, plateaus	0.0	4.5	5.5	0	0
5712CO	2437249	Klickson-Crackercreek-Kamela complex	30	60		volcanic ash over colluvium derived from basalt	Severe	Crackercreek	Well drained	mountain slopes, mountains, plateaus, plateaus	0.0	4.5	5.5	102	152
5713AO	2437250	Kamela-Fivebeaver-Klickson complex	0	15		colluvium and/or residuum weathered from basalt with and influence of volcanic ash	Moderate	Kamela	Well drained	mountain slopes, mountains, plateaus, plateaus	1.5	5.6	7.3	51	102
5713BO	2437251	Kamela-Fivebeaver-Klickson complex	15	30		colluvium and/or residuum weathered from basalt with and influence of volcanic ash	Moderate	Kamela	Well drained	mountain slopes, mountains, plateaus, plateaus	1.5	5.6	7.3	51	102
5741BO	2437278	Hunsaker-Kamela complex	15	30		colluvium and/or residuum weathered from basalt with and influence of volcanic ash	Severe	Kamela	Well drained	mountain slopes, mountains, plateaus, plateaus	1.5	5.6	7.3	51	102
5766BO	2437292	Melhorn-Klicker-Fivebeaver complex	15	30		volcanic ash and loess over colluvium derived from basalt	Severe	Melhorn	Well drained	mountain slopes, mountains, plateaus, plateaus	0.0	4.5	5.5	0	0
5767CO	2437293	Klicker-Melhorn-Fivebeaver complex	30	60		volcanic ash and loess over colluvium derived from basalt	Severe	Melhorn	Well drained	mountain slopes, mountains, plateaus, plateaus	0.0	4.5	5.5	0	0
5775AO	2437298	Syrupcreek-Limberjim complex	0	15		volcanic ash and loess over colluvium and/or residuum weathered from basalt and/or andesite	Moderate	Syrupcreek	Well drained	mountain slopes, mountains, plateaus, plateaus	1.5	5.6	7.3	51	102
5776CN	2437303	Limberjim-Syrupcreek complex	30	60	north	volcanic ash over colluvium and residuum derived from basalt or andesitic tuff breccia	Severe	Limberjim	Well drained	mountain slopes, mountains, plateaus, plateaus	0.0	4.5	5.5	102	152
5802AO	2437327	Bocker-Melhorn-Klicker complex	0	15		An influence of volcanic ash or loess mixed with colluvium or residuum from basalt or andesite	Moderate	Bocker	Well drained	mountain slopes, mountains, plateaus, plateaus	1.5	6.1	7.3	10	25
5804CO	2437329	Anatone-Klicker-McCartycreek complex	30	60		volcanic ash mixed with loess and colluvium in surface horizons over colluvium derived from basalt	Severe	Klicker	Well drained	mountain slopes, mountains, plateaus, plateaus	1.5	6.1	7.3	51	102
5816AO	2437339	Bocker-Anatone-Kamela complex	0	15		An influence of volcanic ash or loess mixed with colluvium or residuum from basalt or andesite	Moderate	Bocker	Well drained	mountain slopes, mountains, plateaus, plateaus	1.5	6.1	7.3	10	25
5830CO	2437345	Klicker-Fivebeaver-Anatone complex	30	60		loess and colluvium derived from basalt	Severe	Klicker	Well drained	mountain slopes, mountains, plateaus, plateaus	1.5	6.1	7.3	51	102
5862CO	2437380	Kamela-Fivebeaver-Anatone complex	30	60		colluvium and residuum derived from basalt with an influence of volcanic ash	Severe	Fivebeaver	Well drained	mountain slopes, mountains, plateaus, plateaus	0.0	4.5	5.5	25	51
5922CO	2437420	Kamela-Pinuscreek-Fivebeaver complex	30	60		volcanic ash over colluvium derived from andesite and/or basalt	Severe	Pinuscreek	Well drained	mountain slopes, mountains, plateaus, plateaus	0.0	4.5	5.5	102	152
5930AO	2437422	Fivebeaver-Bocker complex	0	15		An influence of volcanic ash or loess mixed with colluvium or residuum from basalt or andesite	Moderate	Bocker	Well drained	mountain slopes, mountains, plateaus, plateaus	1.5	6.1	7.3	10	25
6014BS	2437433	Klicker-Anatone complex	15	30	south	loess and colluvium derived from basalt	Severe	Klicker	Well drained	mountain slopes, mountains, plateaus, plateaus	1.5	6.1	7.3	51	102
6014CS	2437434	Klicker-Anatone complex	30	60	south	loess and colluvium derived from basalt	Severe	Klicker	Well drained	mountain slopes, mountains, plateaus, plateaus	1.5	6.1	7.3	51	102
6120BO	2437467	Fivebit-Bocker-Kamela complex	15	30		An influence of volcanic ash or loess mixed with colluvium or residuum from basalt or andesite	Moderate	Bocker	Well drained	mountain slopes, mountains, plateaus, plateaus	1.5	6.1	7.3	10	25
7709BO	2437476	Bluecanyon-Ironside complex	15	30		colluvium and/or residuum weathered from metasedimentary rock and/or metavolcanics with an influence of volcanic ash	Severe	Bluecanyon	Well drained	mountain slopes, mountains	1.5	6.1	7.3	25	51
7712BS	2437478	Analulu-Vogel-Kingbolt complex	15	30	south	volcanic ash over colluvium and/or residuum weathered from metasedimentary rock and/or metavolcanics and/or rhyolite	Severe	Kingbolt	Well drained	mountain slopes, mountains	0.0	4.5	5.5	51	102
7717CN	2437481	Gutridge-Pasturecreek complex	30	60	north	volcanic ash over colluvium derived from metasedimentary rock	Severe	Gutridge	Well drained	mountain slopes, mountains	0.0	4.5	5.5	102	152
7722BO	2437483	Hondu-Eastpine complex	15	30		colluvium and/or residuum weathered from metasedimentary rock with an influence of volcanic ash	Severe	Eastpine	Well drained	mountain slopes, mountains	1.5	6.1	7.3	51	102
7731BO	2437487	Vogel-Ironside-Bluecanyon complex	15	30		colluvium derived from metasedimentary rock with an influence of volcanic ash	Severe	Vogel	Well drained	mountain slopes, mountains	0.0	4.5	5.5	25	51
7743CO	2437497	Eastpine-Vogel-Kettlecreek complex	30	60		colluvium derived from metasedimentary rock with an influence of volcanic ash	Severe	Kettlecreek	Well drained	mountain slopes, mountains	0.0	4.5	5.5	102	152
7745CO	2437499	Humarel-Porch complex	30	60		colluvium with an influence of volcanic ash over residuum weathered from tuff breccia and/or igneous rock	Severe	Humarel	Well drained	mountain slopes, mountains	0.0	4.5	5.5	51	102
7746CO	2437500	McWillar gravelly ashy silt loam	30	60		volcanic ash over colluvium derived from metasedimentary rock	Severe	McWillar	Well drained	mountain slopes, mountains	0.0	4.5	5.5	102	152
7750CO	2437502	Hondu-Analulu complex	30	60		volcanic ash over colluvium and/or residuum weathered from metavolcanics and/or metasedimentary rock and/or igneous rock	Severe	Hondu	Well drained	mountain slopes, mountains	0.0	4.5	5.5	0	0
7755CO	2437503	Hondu-Analulu-Vogel complex	30	60		volcanic ash over colluvium and/or residuum weathered from metavolcanics and/or metasedimentary rock and/or igneous rock	Severe	Hondu	Well drained	mountain slopes, mountains	0.0	4.5	5.5	0	0
3336CO	2437557	Gwinly-Rockly complex	40	70		loess and colluvium derived from basalt with an influence of volcanic ash	Severe	Gwinly	Well drained	mountain slopes, mountains, plateaus, plateaus	1.5	6.6	7.8	25	51
5822AO	2437568	Bocker-McCartycreek-Rock Outcrop complex	0	15			Moderate	Rock Outcrop			0.0	0.0	0.0	0	0
5822BO	2437569	Bocker-McCartycreek-Rock Outcrop complex	15	30			Severe	Rock Outcrop			0.0	0.0	0.0	0	0
NOTCOM	2437577	Not Complete					Not rated	Not Complete			0.0	0.0	0.0	0	0
W	62864	Water					Not rated	Water			0.0	0.0	0.0	0	0

TABLE B-6: SOIL DESCRIPTIONS, OWHYEE COUNTY

Soil Map Unit Symbol	NSCS Map Unit Key	Soil Name	Percent Slope		Group Name/Parent Source	Erosion Hazard	Component	Drainage Class	Geomorph	Shrink Swell	Water pH		Rock Depth	
			Low	High							Low	High	Low	High
13	485950	Badland-Typic Torriorthents-Xeric Torriorthents complex	very steep			Severe	Badland			0.0	0.0	0.0	0	0
55	486220	Escalante-Tindahay-Ornea complex	1	12	mixed alluvium and/or lacustrine deposits and/or eolian sands	Moderate	Escalante	Well drained	fan remnants, valleys	0.0	0.0	0.0	0	0
65	486242	Graveya-Ratsnest-Rock outcrop association	3	35	volcanic ash and/or loamy colluvium derived from welded tuff over lacustrine deposits	Severe	Graveya	Well drained	foothills, hillslopes	0.0	0.0	0.0	0	0
69	486250	Hardtrigger-Briabbit-Tindahay complex	1	15	loess and loamy alluvium	Moderate	Hardtrigger	Well drained	fan remnants, pillow lava flows, valleys	0.0	0.0	0.0	0	0
73	486259	Hardtrigger-Goose Creek loams	1	5	loess and loamy alluvium	Moderate	Hardtrigger	Well drained	basins, stream terraces, valleys	0.0	0.0	0.0	0	0
100	485889	McKeeth-Veta gravelly loams	2	15	volcanic ash and/or mixed alluvium	Slight	McKeeth	Well drained	fan remnants, valleys	0.0	0.0	0.0	0	0
134	485960	Plush-Rubble land-Rock outcrop association	25	50	colluvium and slope alluvium over bedrock derived from welded tuff	Severe	Plush	Well drained	hills, hillslopes	1.5	6.6	7.3	102	152
141	485975	Ratsnest-Ornea complex	1	12	mixed alluvium over consolidated lacustrine deposits over residuum weathered from tuff	Moderate	Ratsnest	Well drained	fan remnants, piedmont slopes	1.5	6.6	7.8	76	102
143	485979	Rock outcrop-Xerollic Haplargids complex	very steep			Severe	Rock outcrop			0.0	0.0	0.0	0	0
178	486057	Tindahay-Royal-Badland complex	1	90	mixed alluvium and/or eolian deposits	Moderate	Tindahay	Somewhat excessively drained	fan remnants, valleys	0.0	0.0	0.0	0	0
185	486072	Typic Torripsamments-Typic Torrifluvents complex	gently sloping		sandy alluvium and/or eolian sands	Moderate	Typic Torripsamments	Excessively drained	stream terraces, valleys	1.5	7.4	8.4	51	51
210	486129	Willhill-Cottle association	3	35	alluvium and/or colluvium over bedrock derived from volcanic rock	Moderate	Cottle	Well drained	lava plateaus, proclastic flows	1.5	6.6	7.8	25	51
211	486131	Willhill-Cottle-Longcreek complex	3	35	alluvium and/or slope alluvium over bedrock derived from welded tuff and/or rhyolit	Moderate	Willhill	Well drained	foothills, hillslopes	1.5	6.6	7.8	53	102

TABLE B-7: SOIL DESCRIPTIONS, CANYON COUNTY

Soil Map Unit Symbol	NSCS Map Unit Key	Soil Name	Percent Slope		Group Name/Parent Source	Erosion Hazard	Component	Drainage Class	Geomorph	Shrink Swell	Water pH		Rock Depth	
			Low	High							Low	High	Low	High
BrA	80728	Bram silt loam	0	1	mixed alluvium and/or lacustrine deposits	Slight	Bram	Somewhat poorly drained	fan remnants, flood plains, lakebeds, river valleys, valleys	1.5	7.9	8.4	0	0
BrB	80729	Bram silt loam	1	3	mixed alluvium and/or lacustrine deposits	Slight	Bram	Somewhat poorly drained	drainageways, terraces, valleys	1.5	7.9	8.4	0	0
CcB	80734	Cencove fine sandy loam	1	3	mixed alluvium	Slight	Cencove	Well drained	fan remnants, terraces, valleys	1.5	7.4	8.4	51	102
CcD	80736	Cencove fine sandy loam	7	12	mixed alluvium	Moderate	Cencove	Well drained	fan remnants, terraces, valleys	1.5	7.4	8.4	51	102
FeC	80755	Feltham loamy fine sand	3	7	mixed alluvium	Moderate	Feltham	Somewhat excessively drained	drainageways, terraces, valleys	1.5	6.6	8.4	0	0
GaB	80760	Garbutt silt loam	1	3	silty alluvium and/or lacustrine deposits and/or loess	Slight	Garbutt	Well drained	fan remnants, terraces, valleys	1.5	7.9	9.0	0	0
Ha	80775	Harpt loam			mixed alluvium and/or lacustrine deposits and/or loess	Slight	Harpt	Well drained	fan remnants, terraces, valleys	1.5	6.1	7.3	0	0
MgA	80798	Marsing loam	0	1	mixed alluvium	Slight	Marsing	Well drained	terraces, valleys	1.5	7.9	8.4	51	102
MgB	80799	Marsing loam	1	3	mixed alluvium	Slight	Marsing	Well drained	fans, terraces, valleys	1.5	7.9	8.4	51	102
MgE	80802	Marsing loam	12	20	mixed alluvium	Severe	Marsing	Well drained	fan remnants, terraces, valleys	1.5	7.9	8.4	51	102
NaB	80813	Nannyton fine gravelly sandy loam	1	3	alluvium derived from rhyolite	Slight	Nannyton	Well drained	fan remnants, terraces, valleys	1.5	7.9	8.4	36	122
NaC	80814	Nannyton fine gravelly sandy loam	3	7	alluvium derived from rhyolite	Moderate	Nannyton	Well drained	fan remnants, terraces, valleys	1.5	7.9	8.4	36	122
No	80815	Notus soils			mixed alluvium	Slight	Notus	Somewhat poorly drained	fan remnants, terraces, valleys	1.5	6.1	8.4	10	71
OgB	80822	Oliaga loam	1	3	alluvium derived from granite and/or igneous rock	Slight	Oliaga	Somewhat poorly drained	drainageways, terraces, valleys	1.5	7.4	8.4	51	102
QcD	80849	Quincy fine sand	3	12	mixed eolian sands and/or alluvium	Moderate	Quincy	Excessively drained	dunes, sand plains, terraces, valleys	1.5	6.1	8.4	0	0
QcE	80850	Quincy fine sand	12	30	mixed eolian sands and/or alluvium	Severe	Quincy	Excessively drained	dunes, sand plains, terraces, valleys	1.5	6.1	8.4	0	0
Tc	80863	Terrace escarpments				Severe	Terrace escarpments	Well drained		1.5	7.4	9.0	0	0
TuB	80876	Turbyfill fine sandy loam	1	3	mixed alluvium and/or eolian deposits and/or lacustrine deposits	Slight	Turbyfill	Well drained	terraces, valleys	1.5	6.6	8.4	0	0
TuC	80877	Turbyfill fine sandy loam	3	7	mixed alluvium and/or eolian deposits and/or lacustrine deposits	Moderate	Turbyfill	Well drained	fan remnants, terraces, valleys	1.5	6.6	8.4	0	0
VaB	80883	Vanderhoff loam	1	3	alluvium and/or loess and/or colluvium over residuum weathered from siltstone and/or mudstone and/or tuff	Slight	Vanderhoff	Well drained	terraces, valleys	1.5	7.4	9.0	51	102
VaC	80884	Vanderhoff loam	3	7	alluvium and/or loess and/or colluvium over residuum weathered from siltstone and/or mudstone and/or tuff	Moderate	Vanderhoff	Well drained	terraces, valleys	1.5	7.4	9.0	51	102
VaD	80885	Vanderhoff loam	7	12	alluvium and/or loess and/or colluvium over residuum weathered from siltstone and/or mudstone and/or tuff	Severe	Vanderhoff	Well drained	drainageways, terraces, valleys	1.5	7.4	9.0	51	102
VaE	80886	Vanderhoff loam	12	30	alluvium and/or loess and/or colluvium over residuum weathered from siltstone and/or mudstone and/or tuff	Severe	Vanderhoff	Well drained	terraces, valleys	1.5	7.4	9.0	51	102

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LEGEND

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Boardman - Hemingway
500kV Transmission Line
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**SOIL
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SHANNON & WILSON, INC.
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

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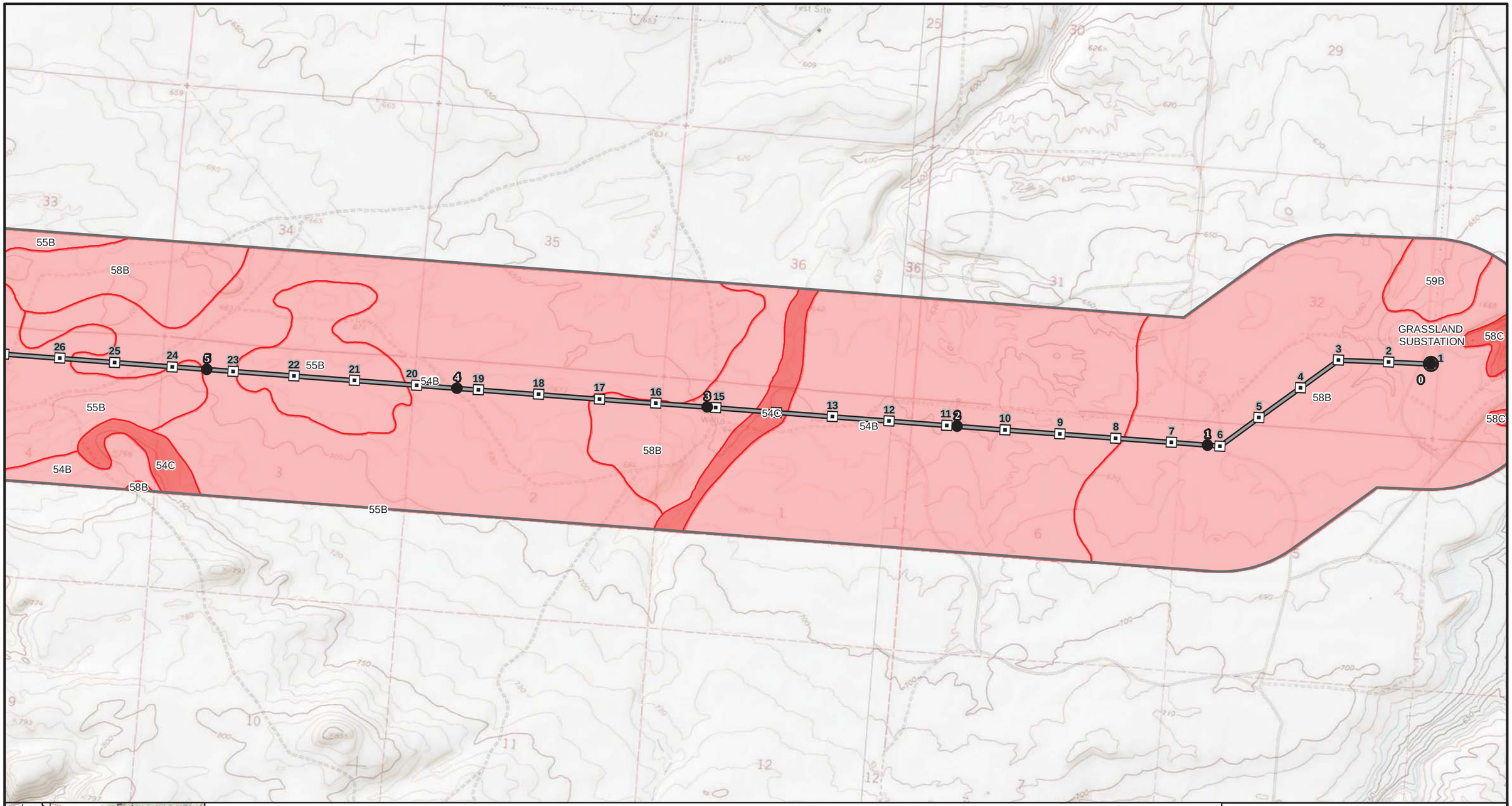

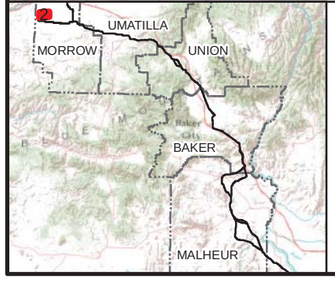

LEGEND

TRANSMISSION FEATURES

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- IPC Alternative
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- Proposed Substation
- Alternate Substation
- 543 Mileposts

SSURGO SOIL MAP UNIT EROSION HAZARD

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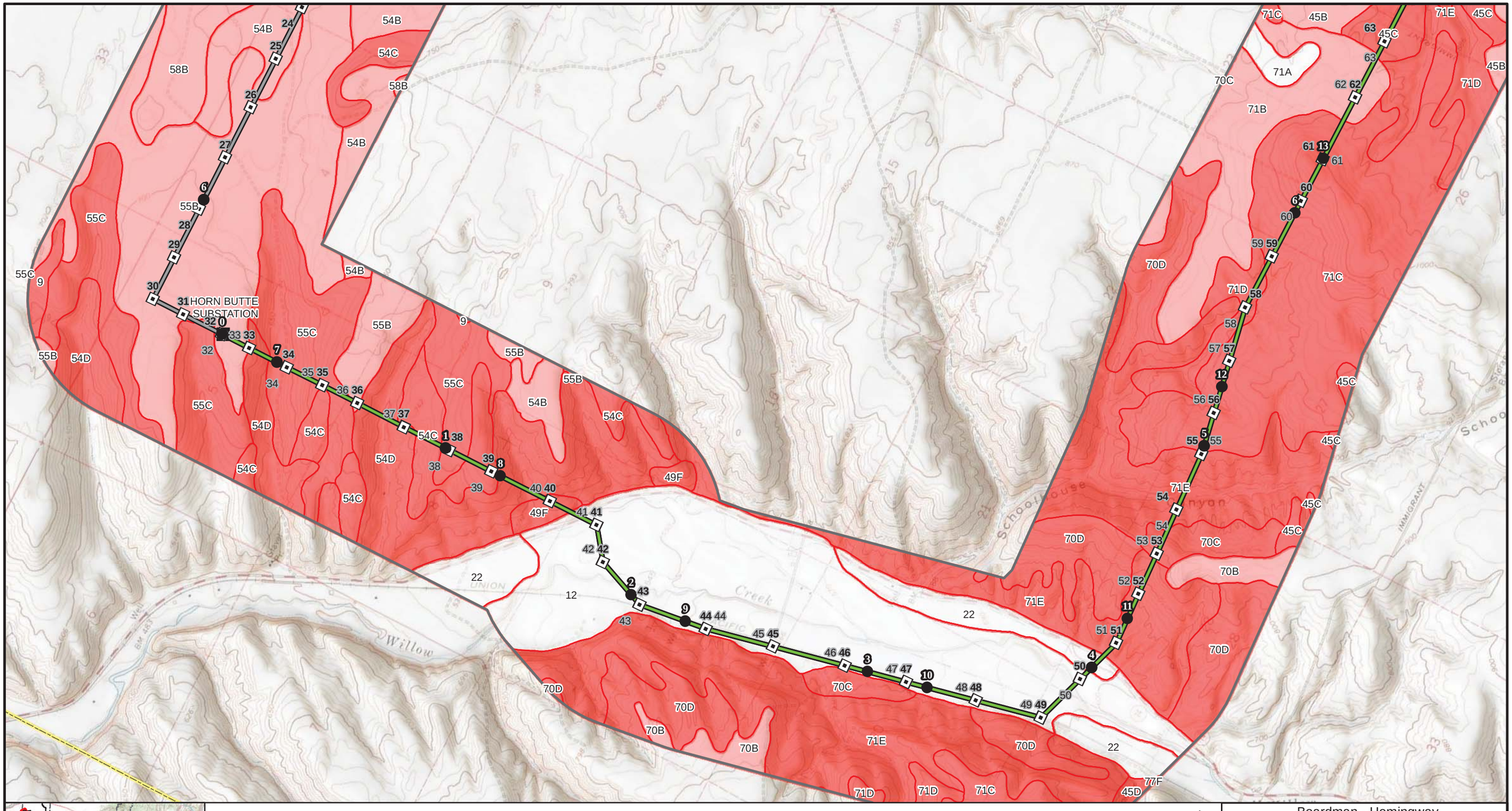
0 2,000 4,000 Feet

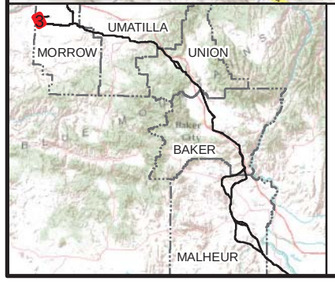
Boardman - Hemingway
500kV Transmission Line
Oregon - Idaho

SOILS

August 2012 22-1-02947-200

SHANNON & WILSON, INC.
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS





LEGEND

TRANSMISSION FEATURES

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Boardman - Hemingway
500kV Transmission Line
Oregon - Idaho

SOILS

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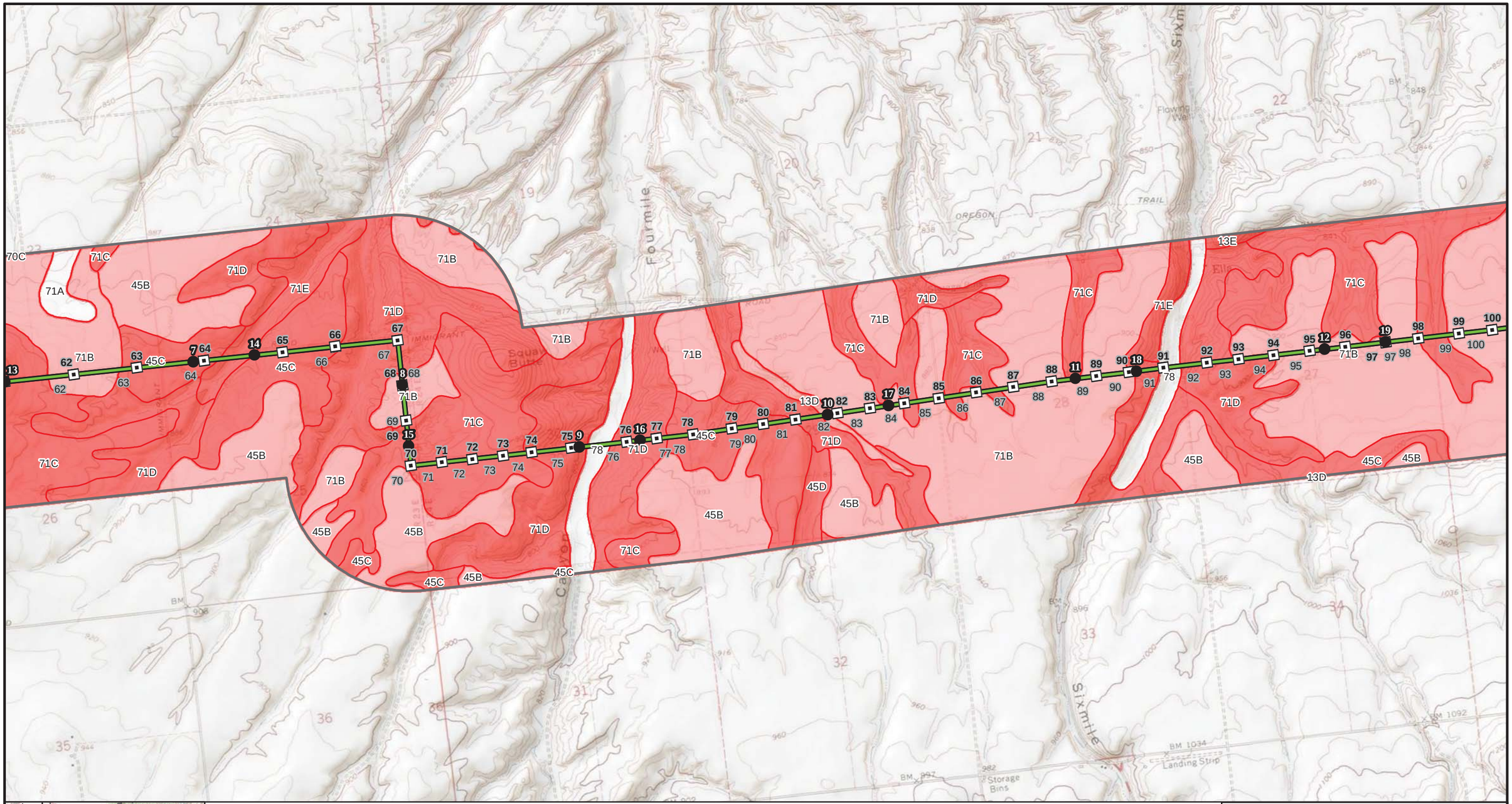

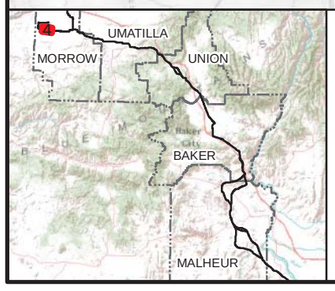

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Boardman - Hemingway
500kV Transmission Line
Oregon - Idaho

SOILS

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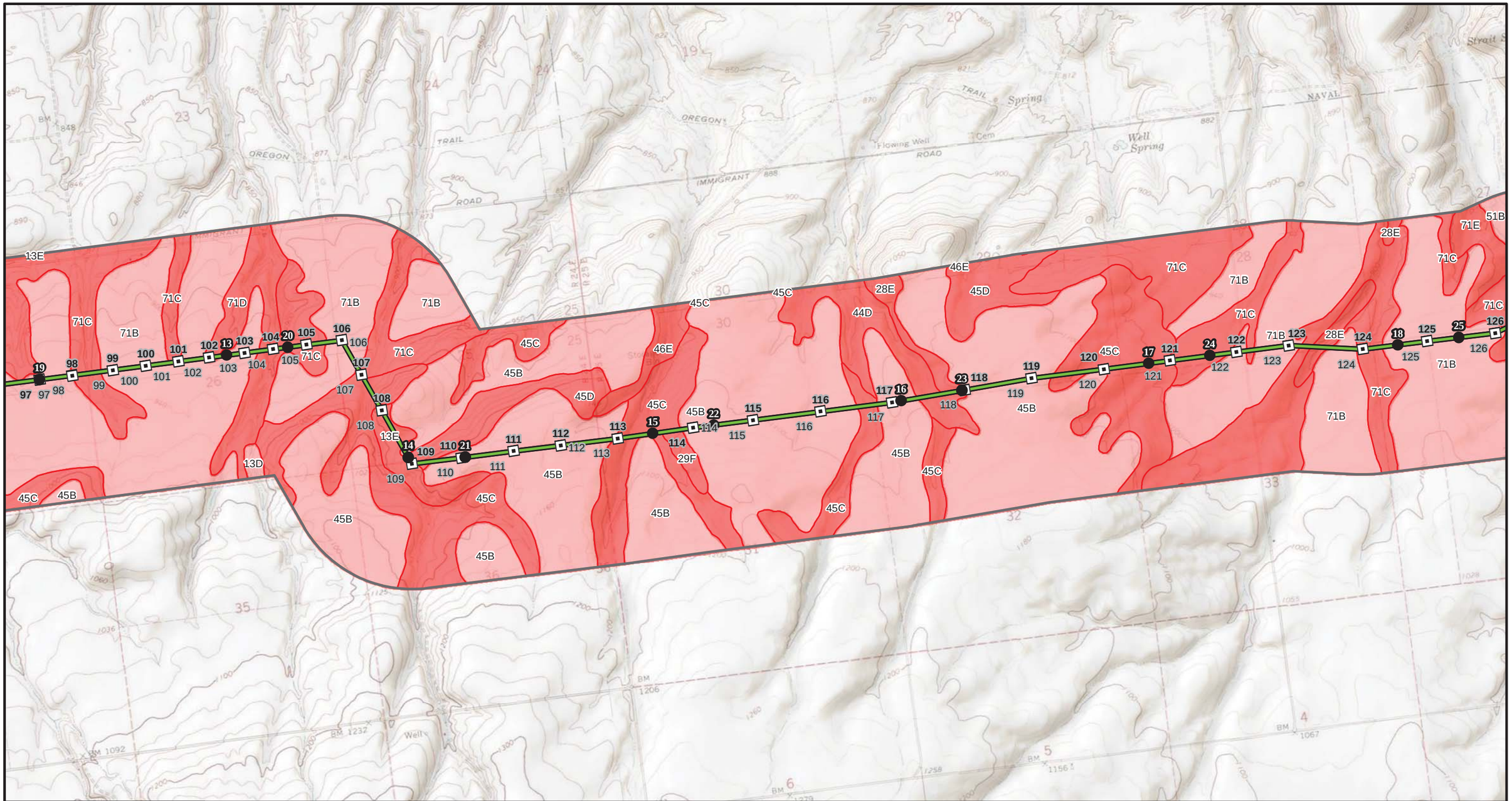

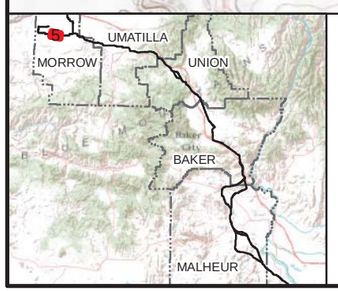

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TRANSMISSION FEATURES

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Oregon - Idaho

SOILS

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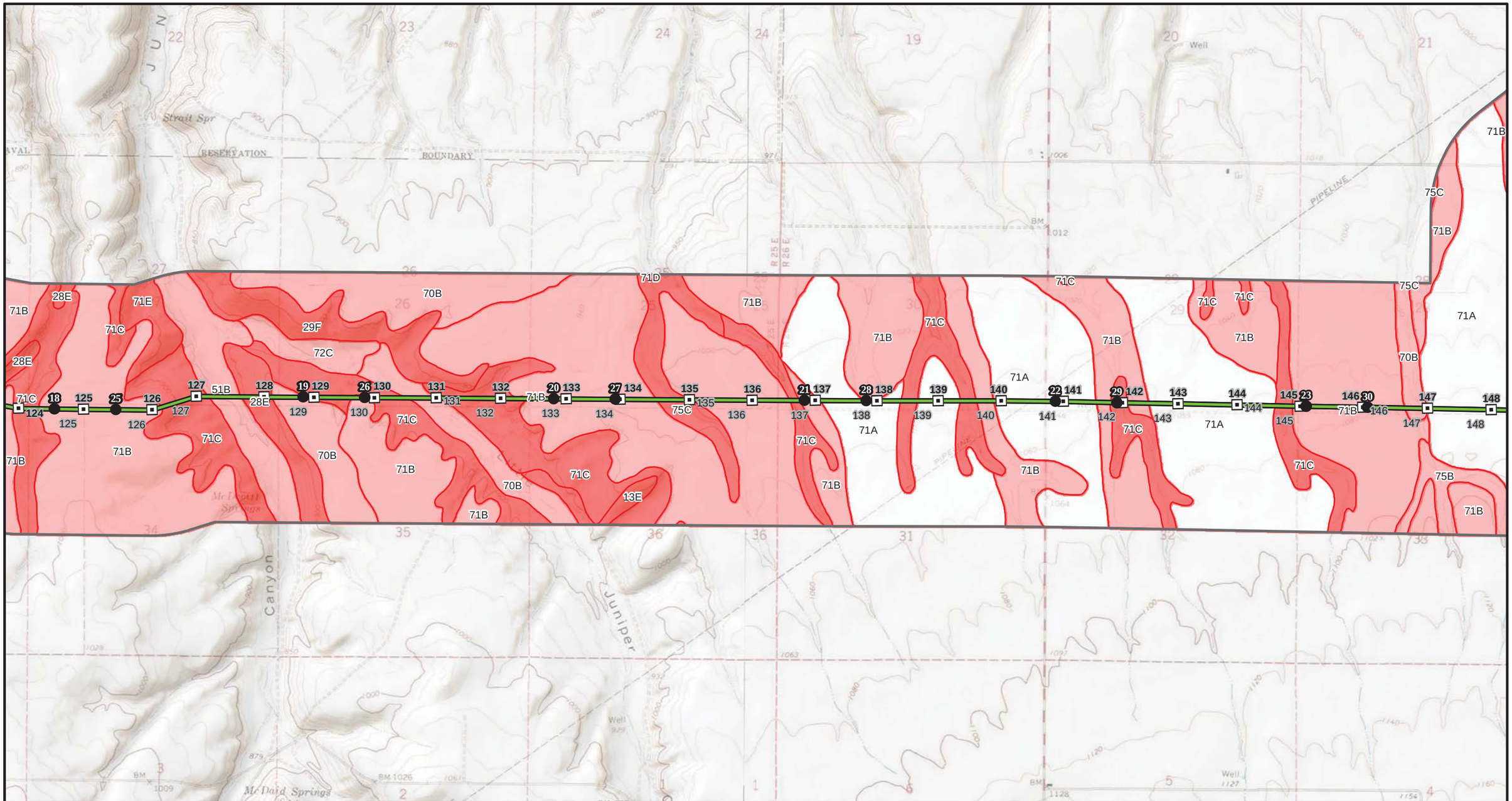

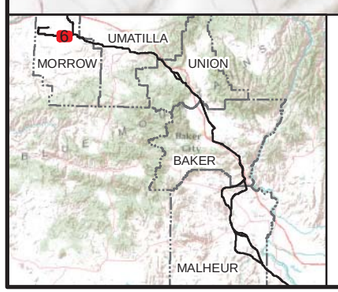

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N W E S

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500kV Transmission Line
Oregon - Idaho

SOILS

August 2012 22-1-02947-200

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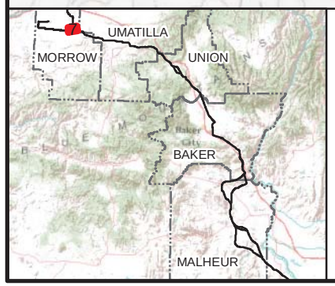

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Oregon - Idaho

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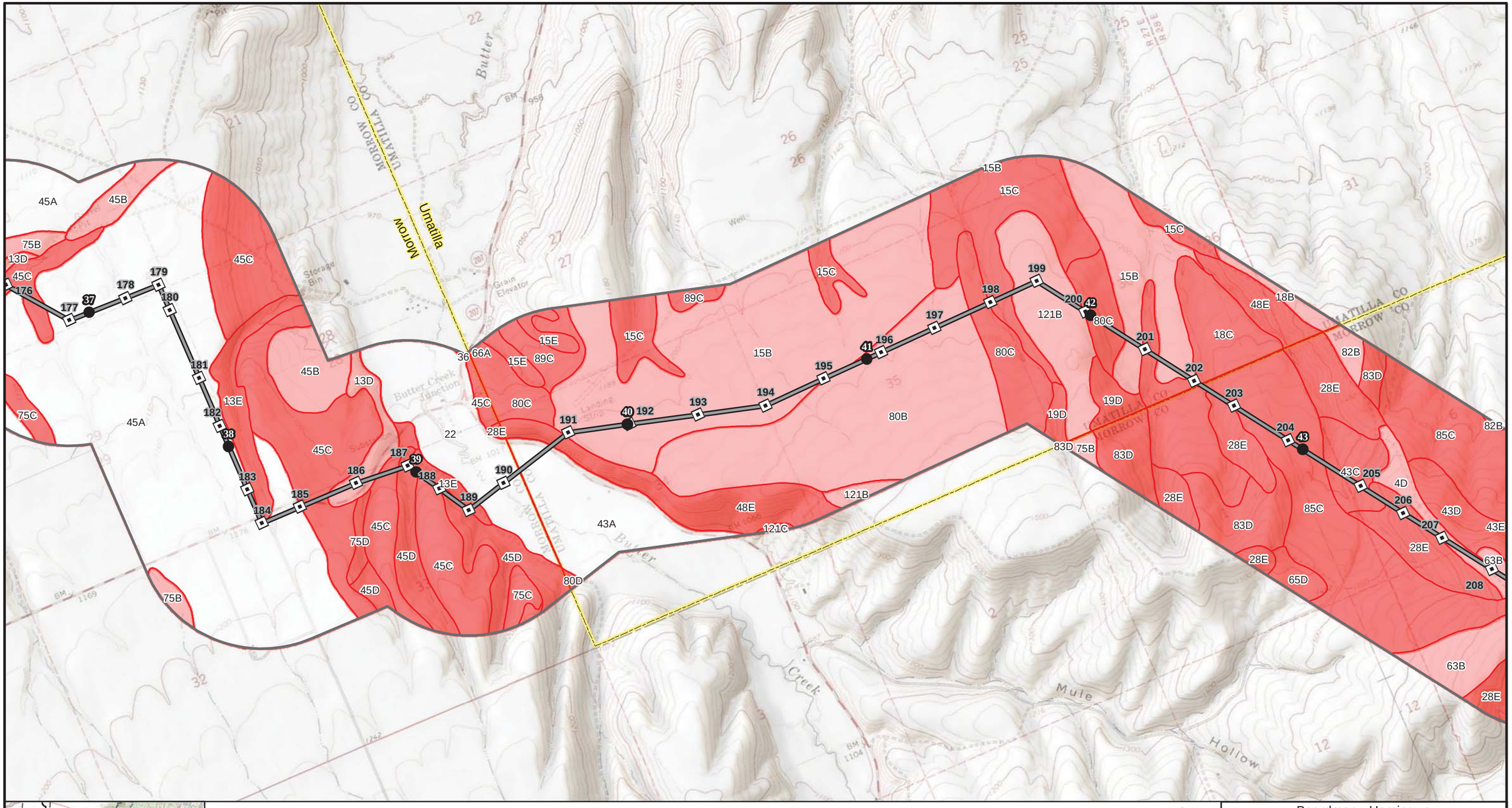

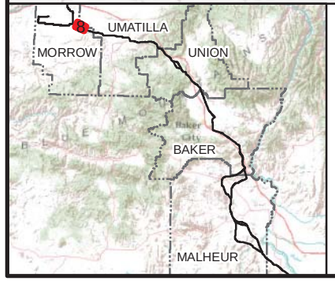

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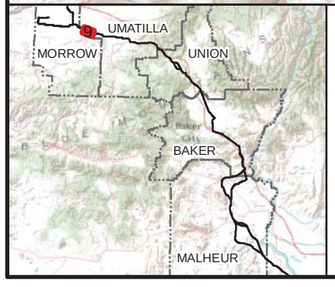

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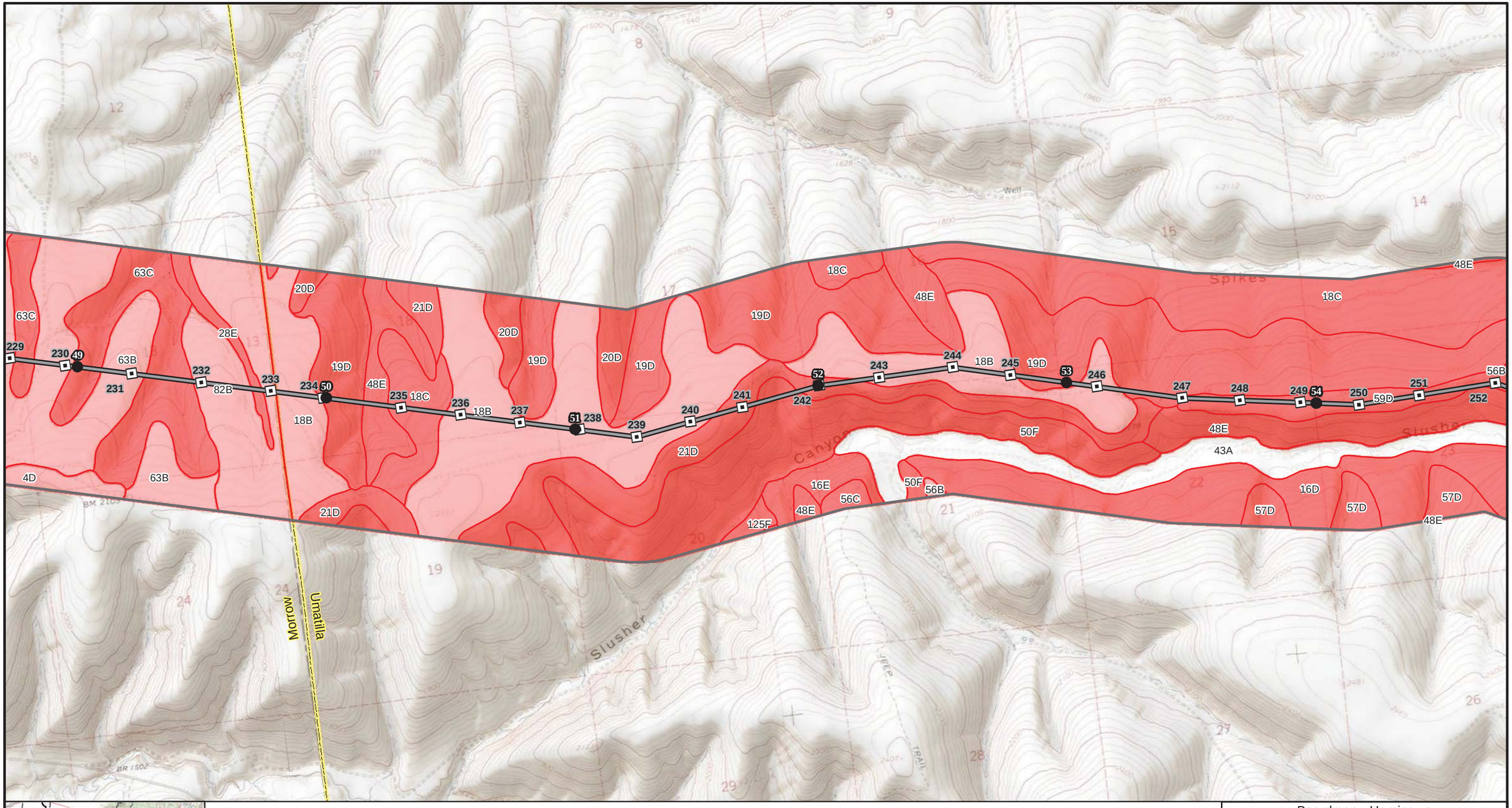

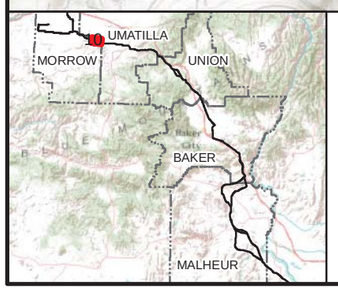

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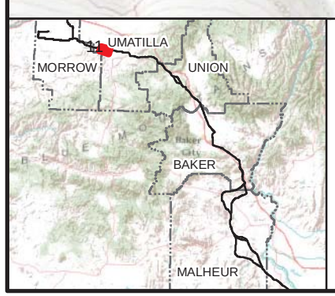

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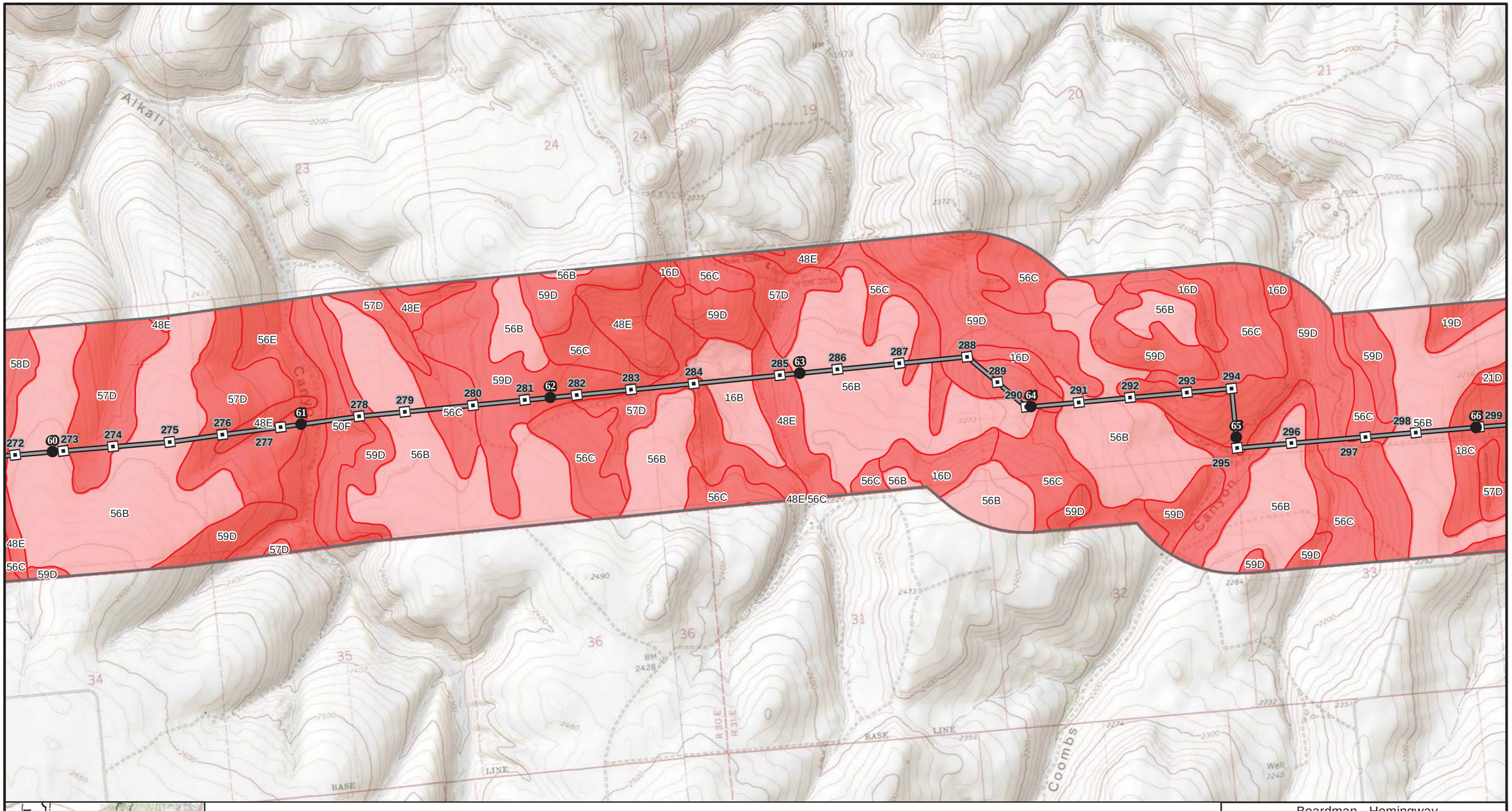

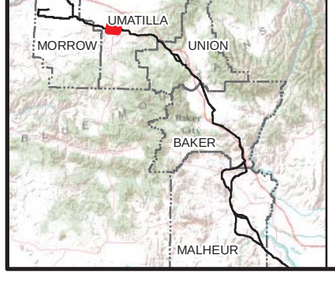

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500kV Transmission Line
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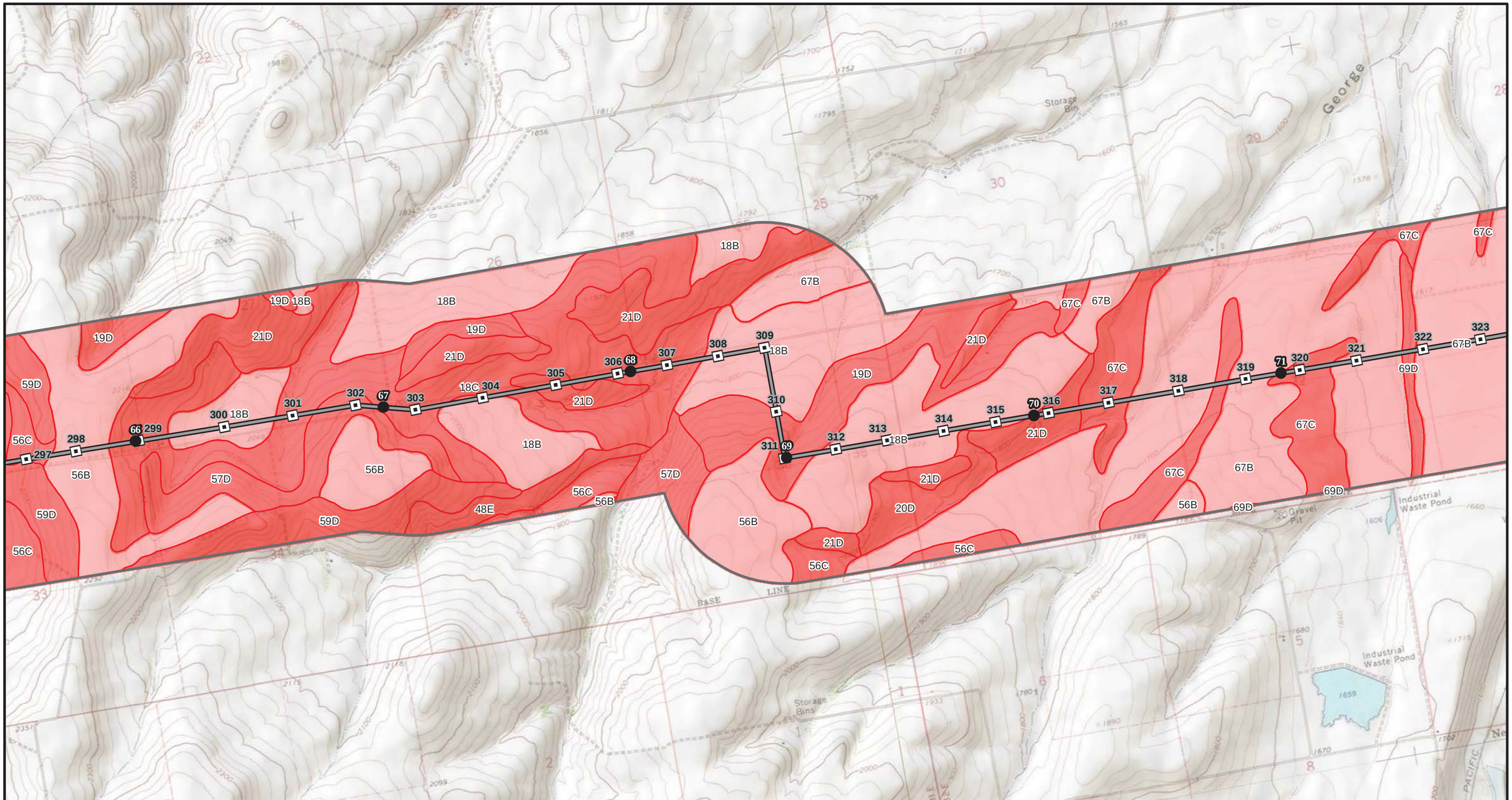

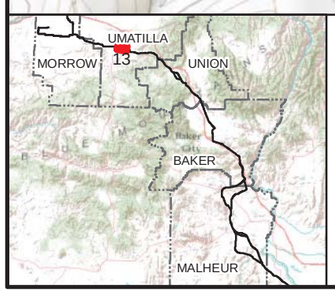

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Oregon - Idaho

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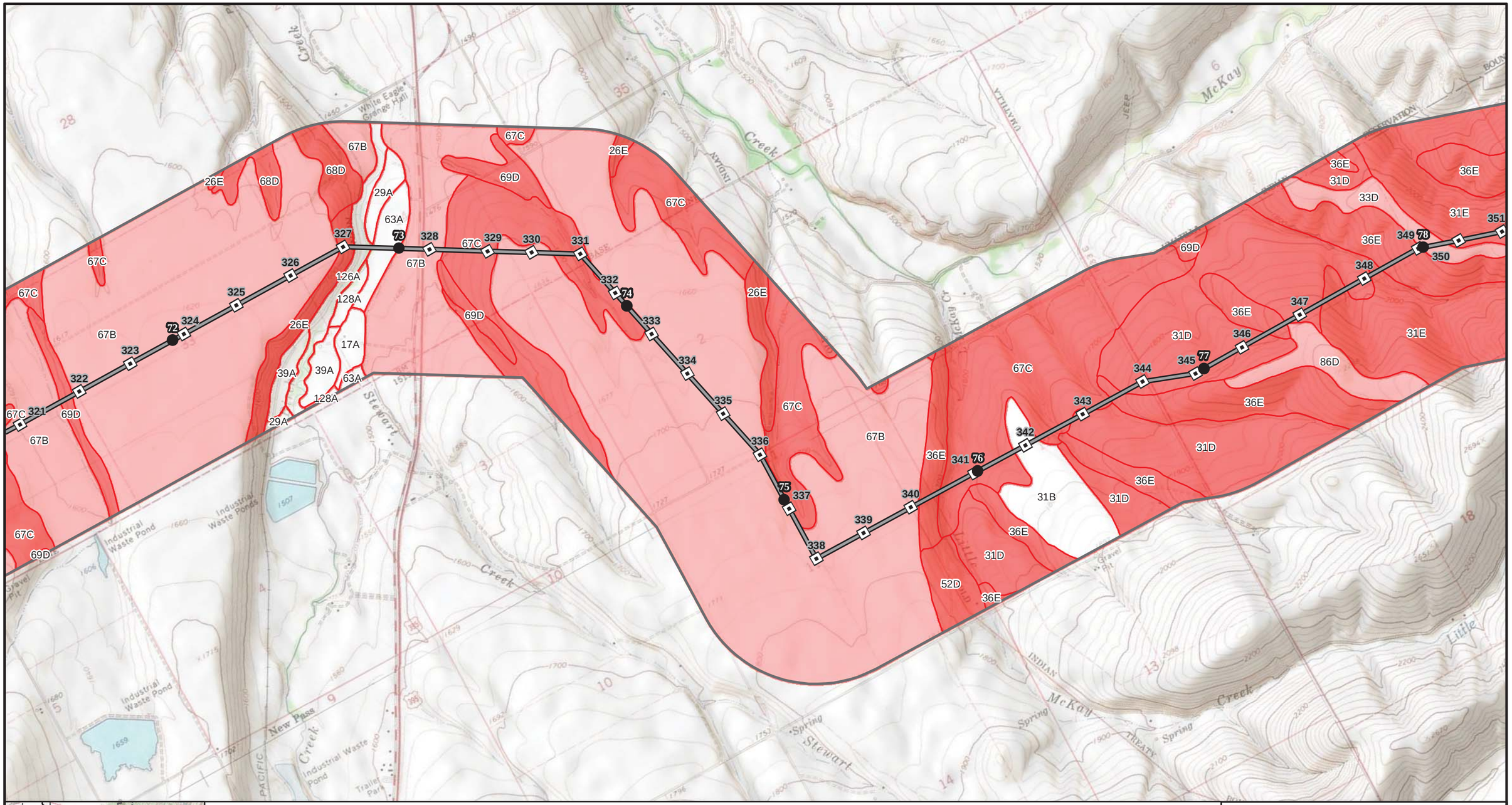

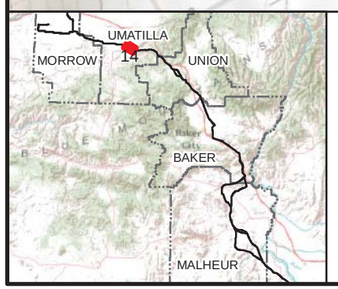

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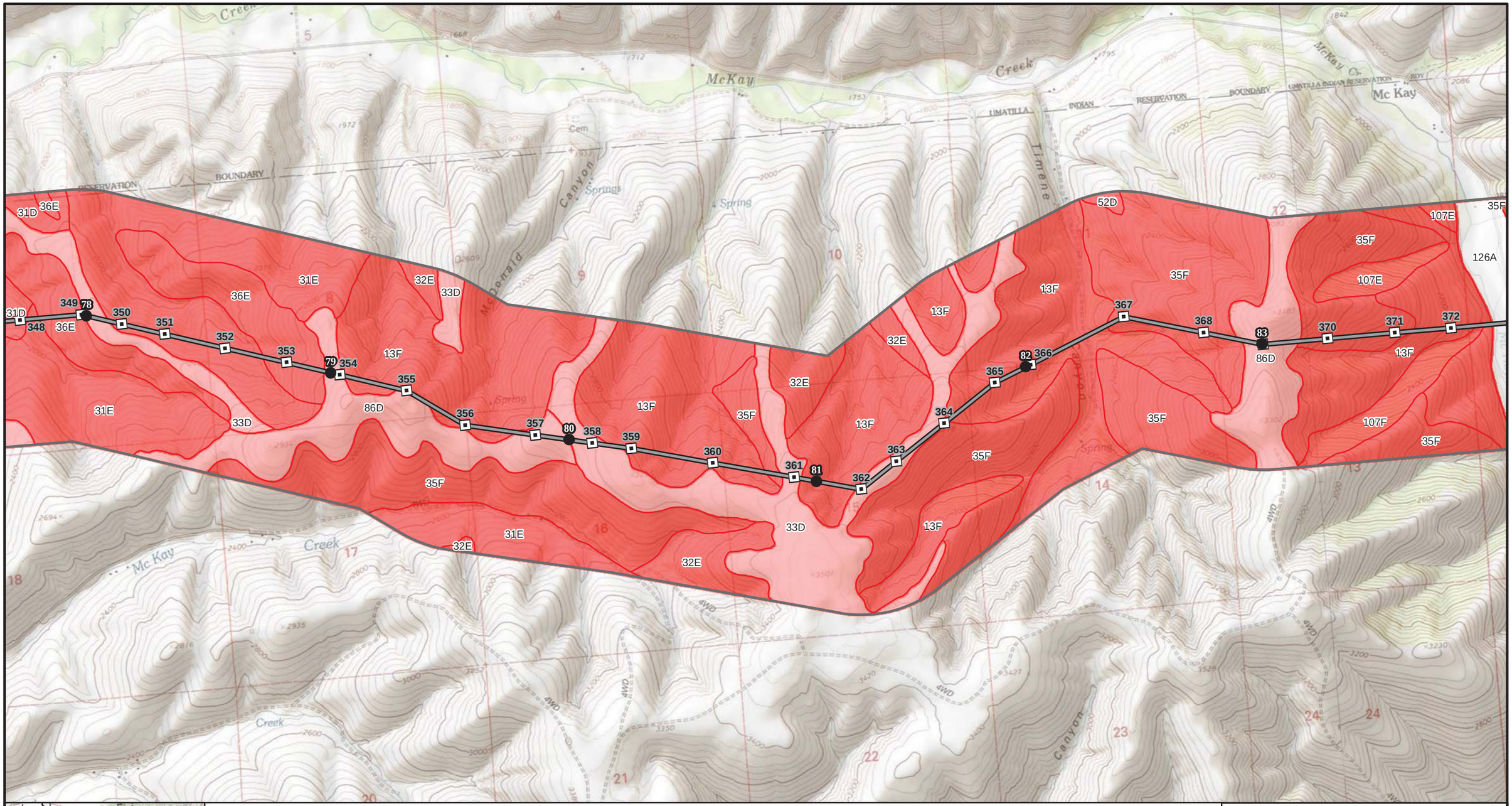

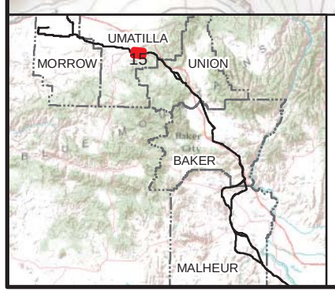

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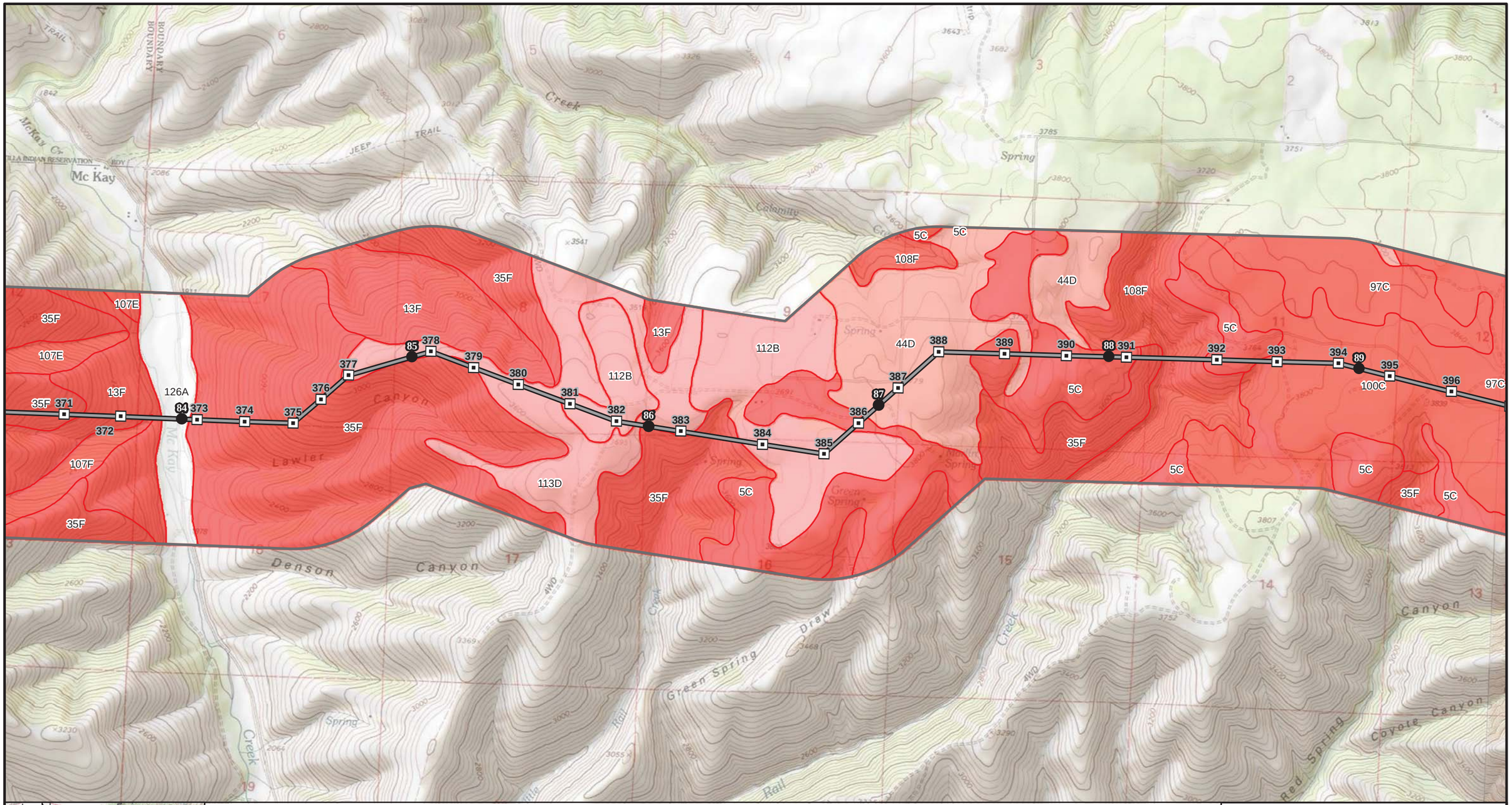

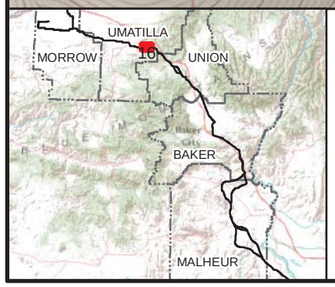

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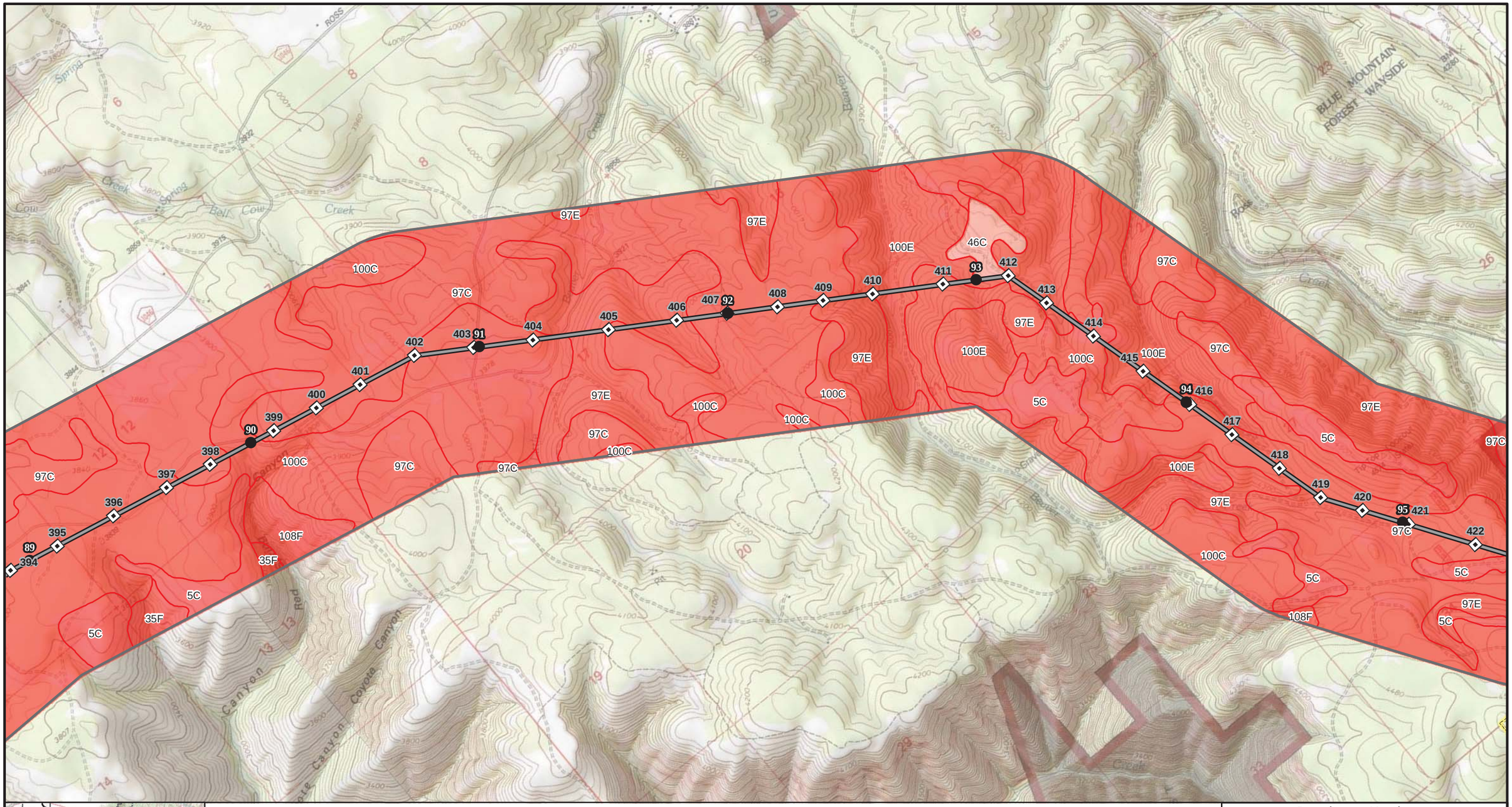

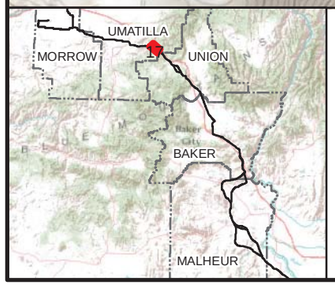

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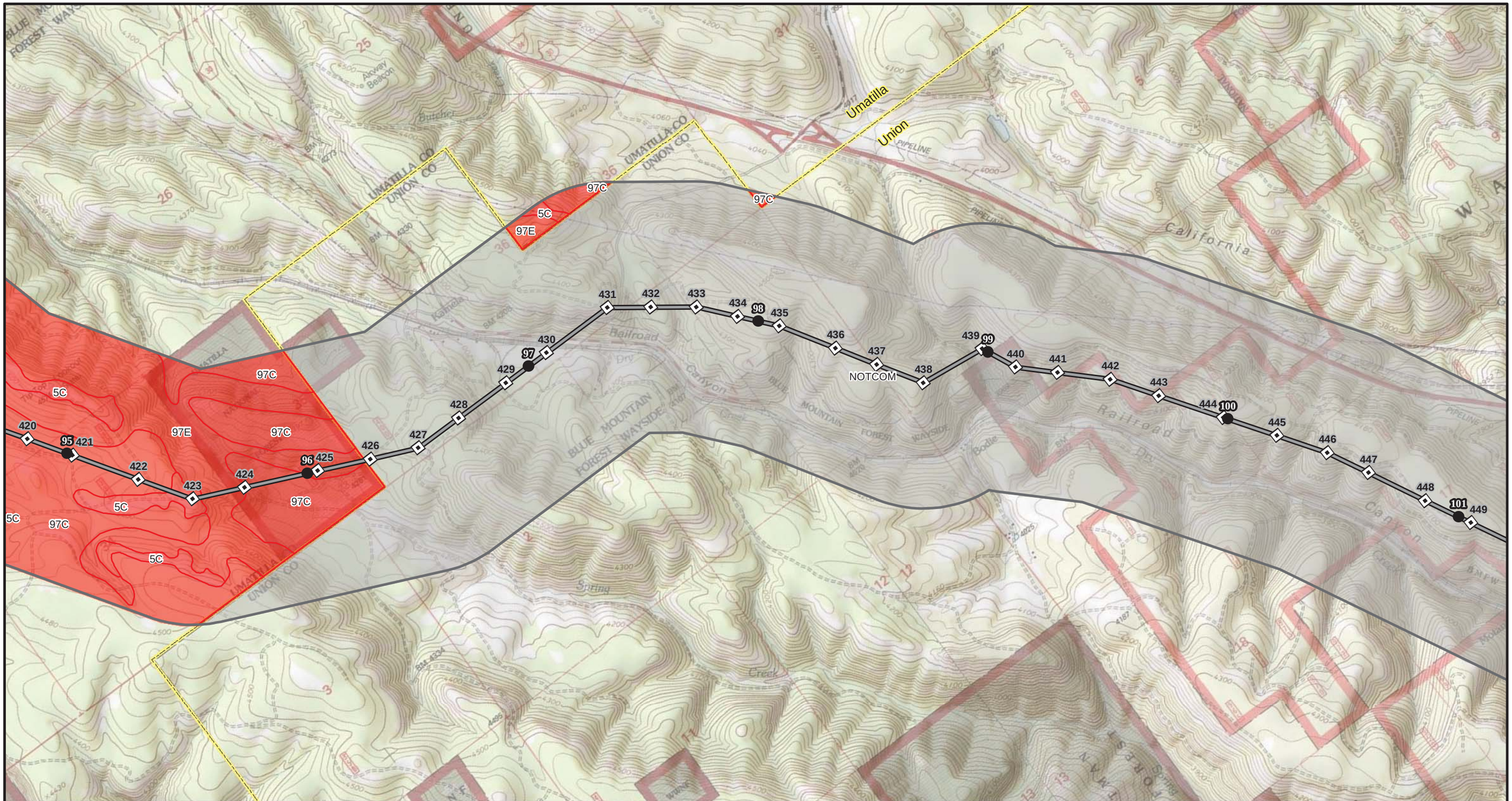

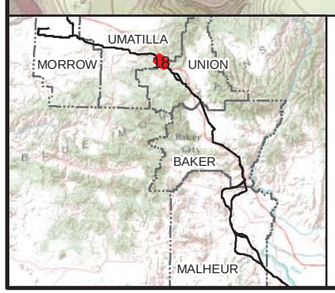

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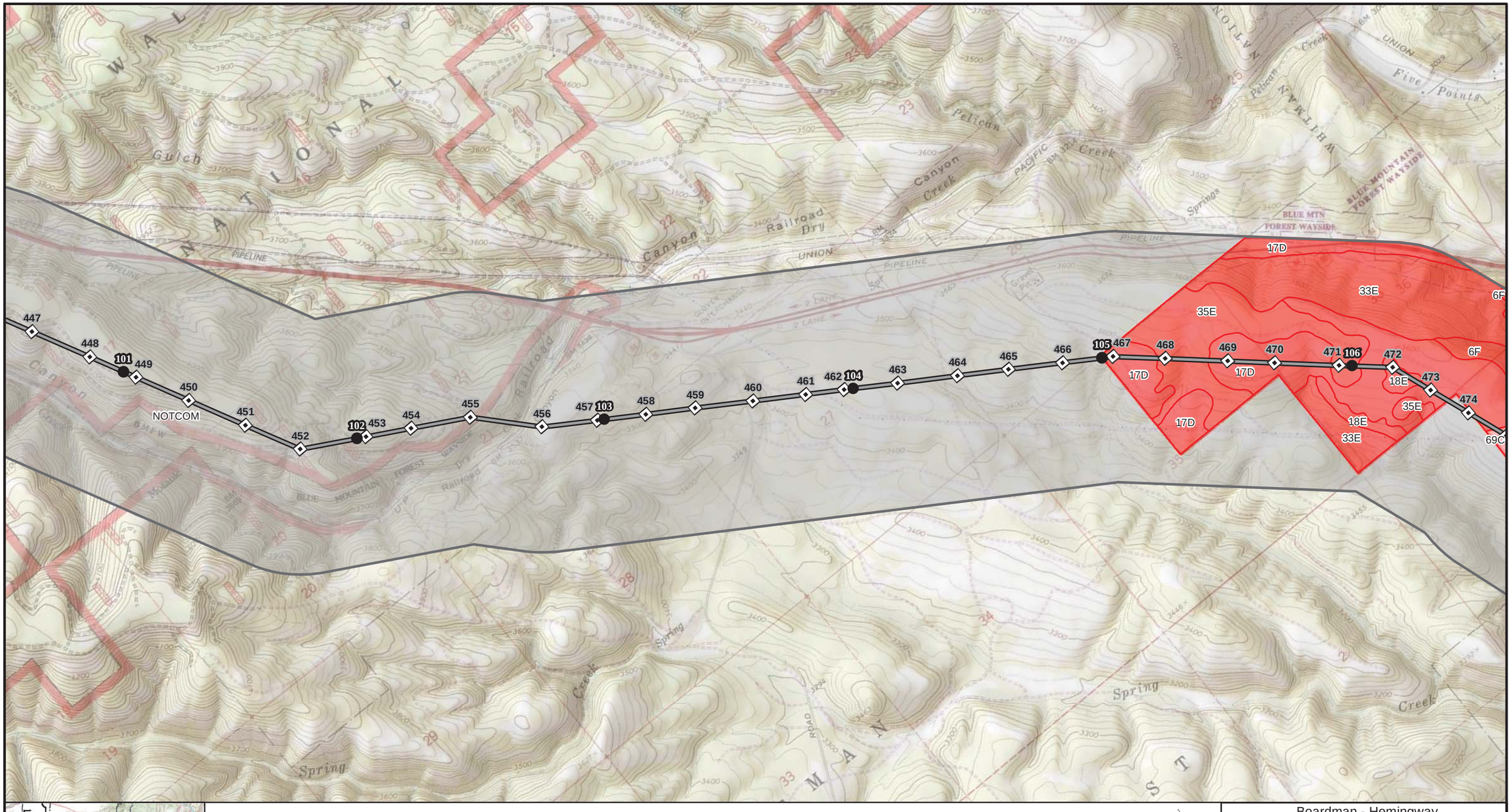

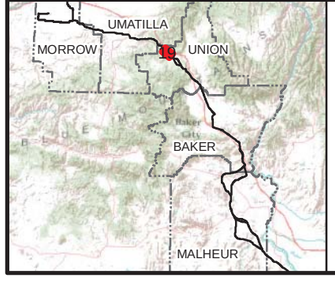

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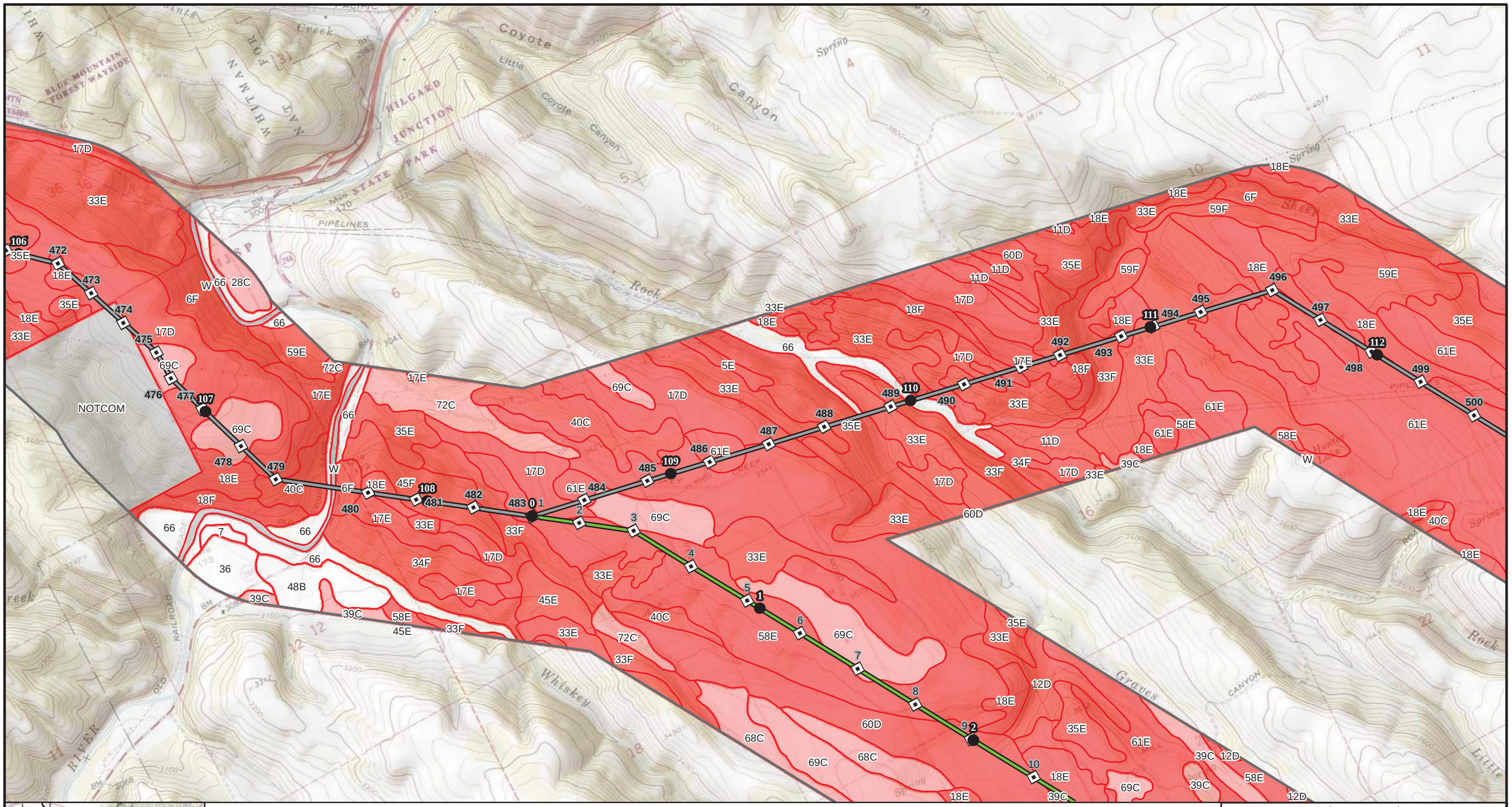

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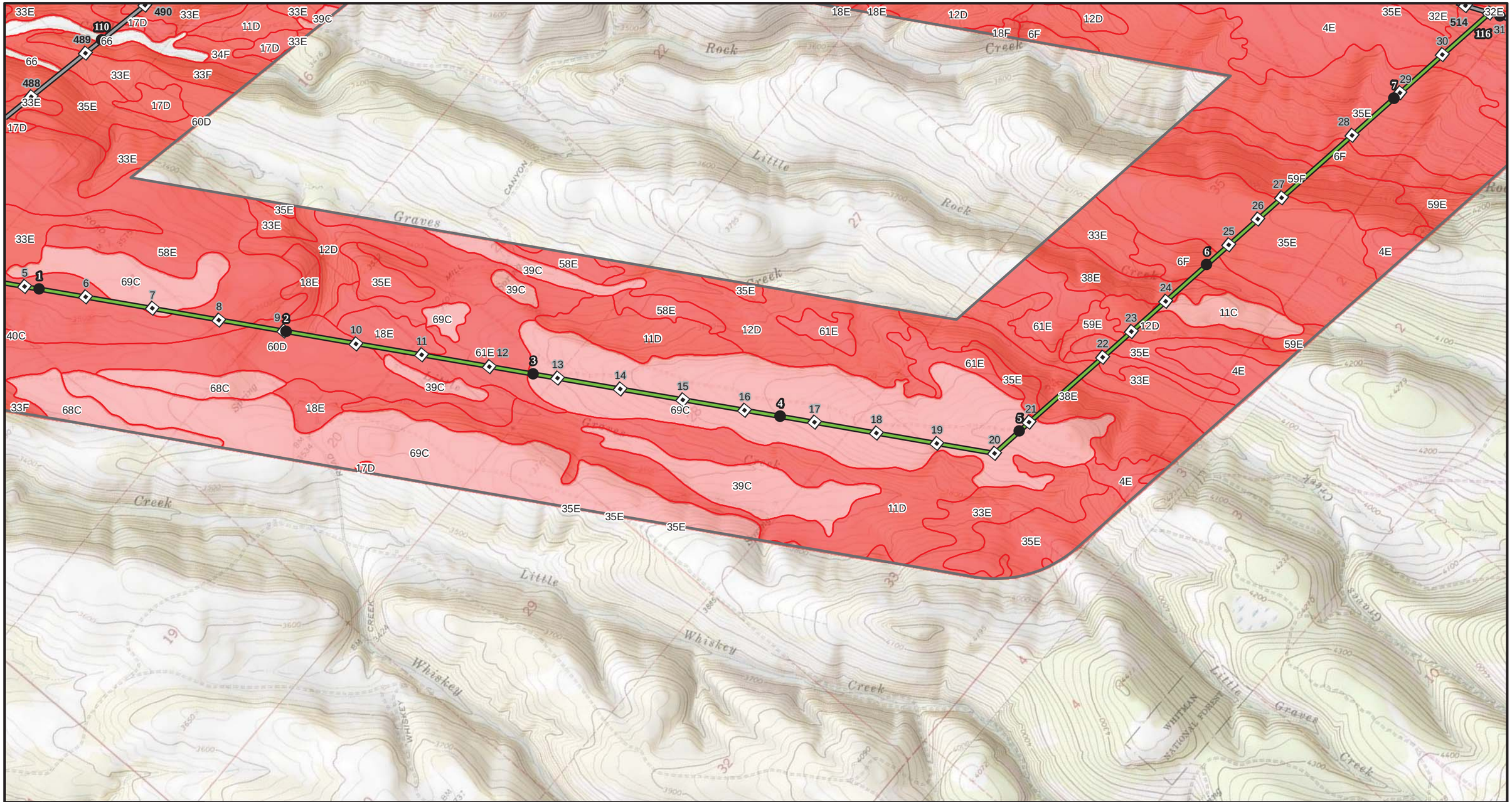
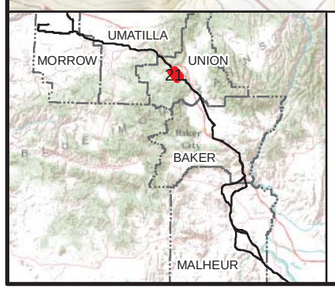
Boardman - Hemingway
500kV Transmission Line
Oregon - Idaho

SOILS

August 2012 22-1-02947-200

SHANNON & WILSON, INC.
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS





LEGEND

TRANSMISSION FEATURES

- IPC Proposed Route
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SSURGO SOIL MAP UNIT EROSION HAZARD

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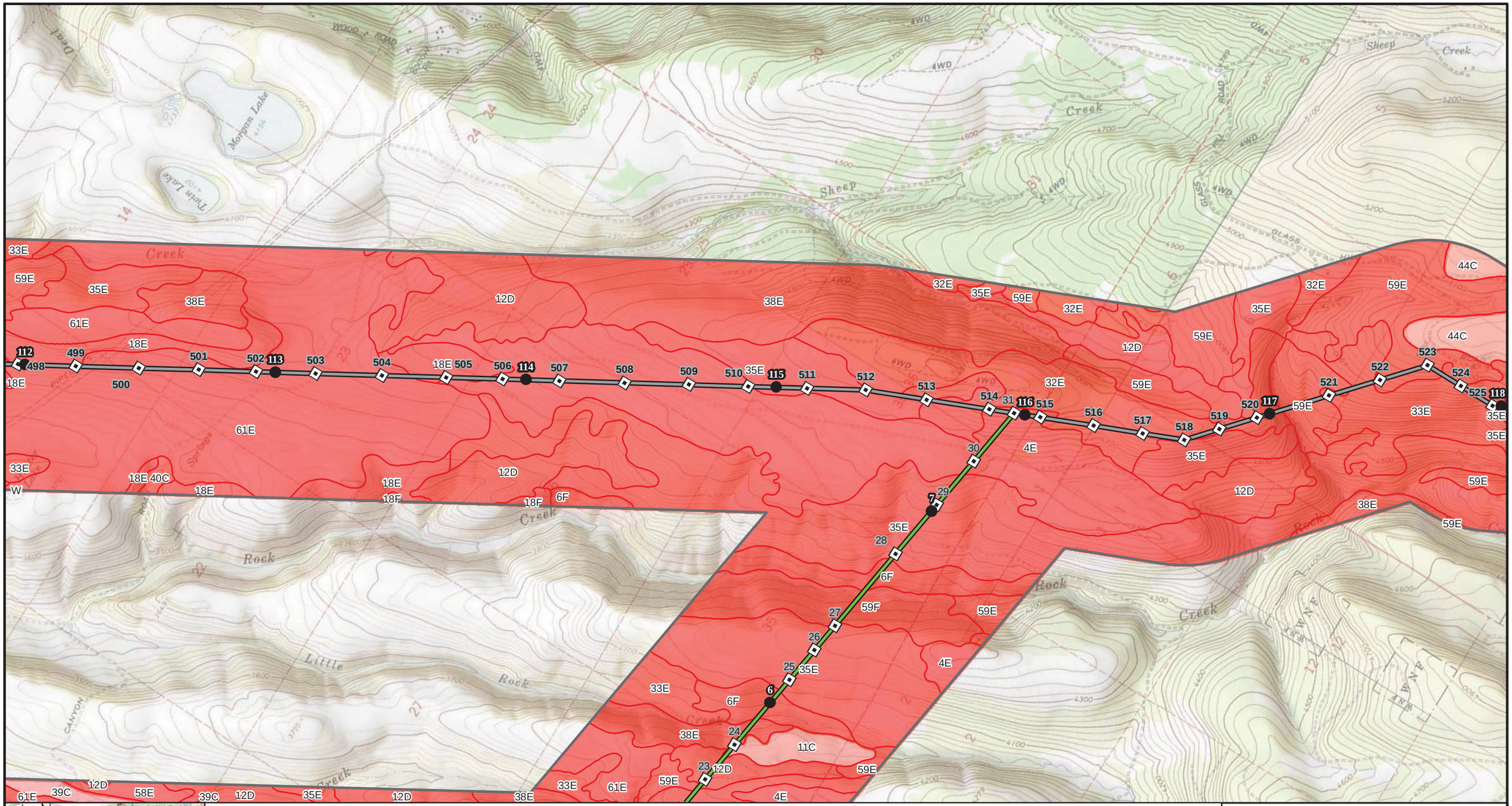

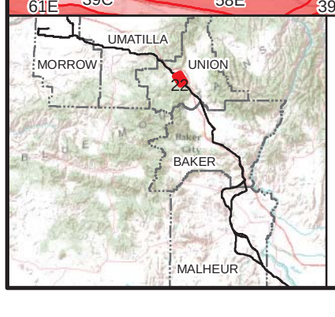

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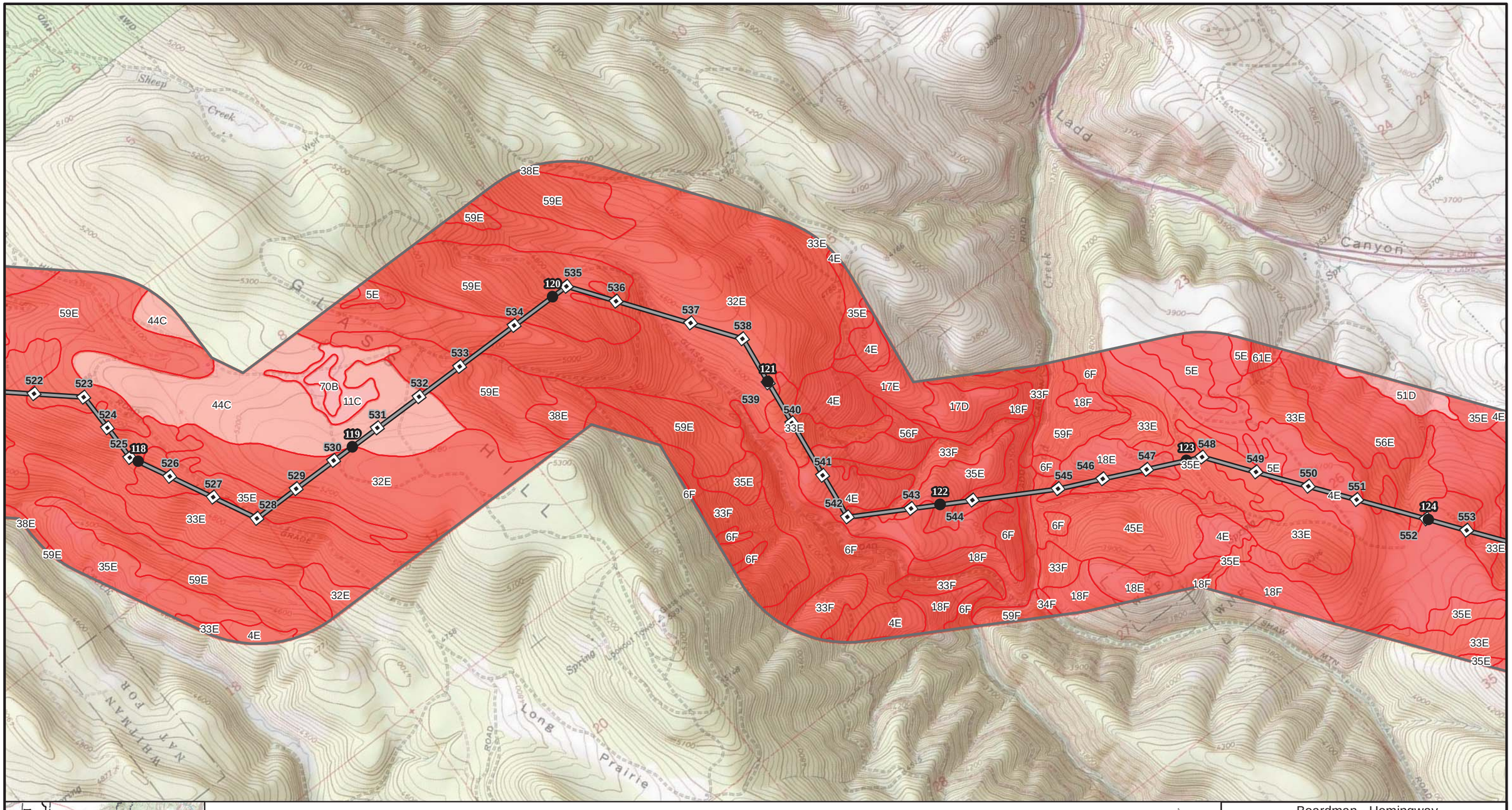

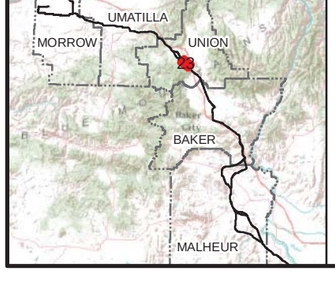

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Oregon - Idaho

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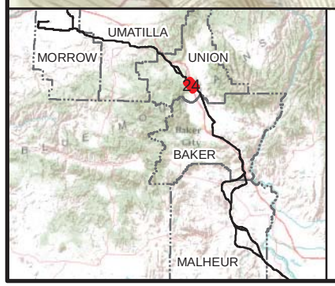

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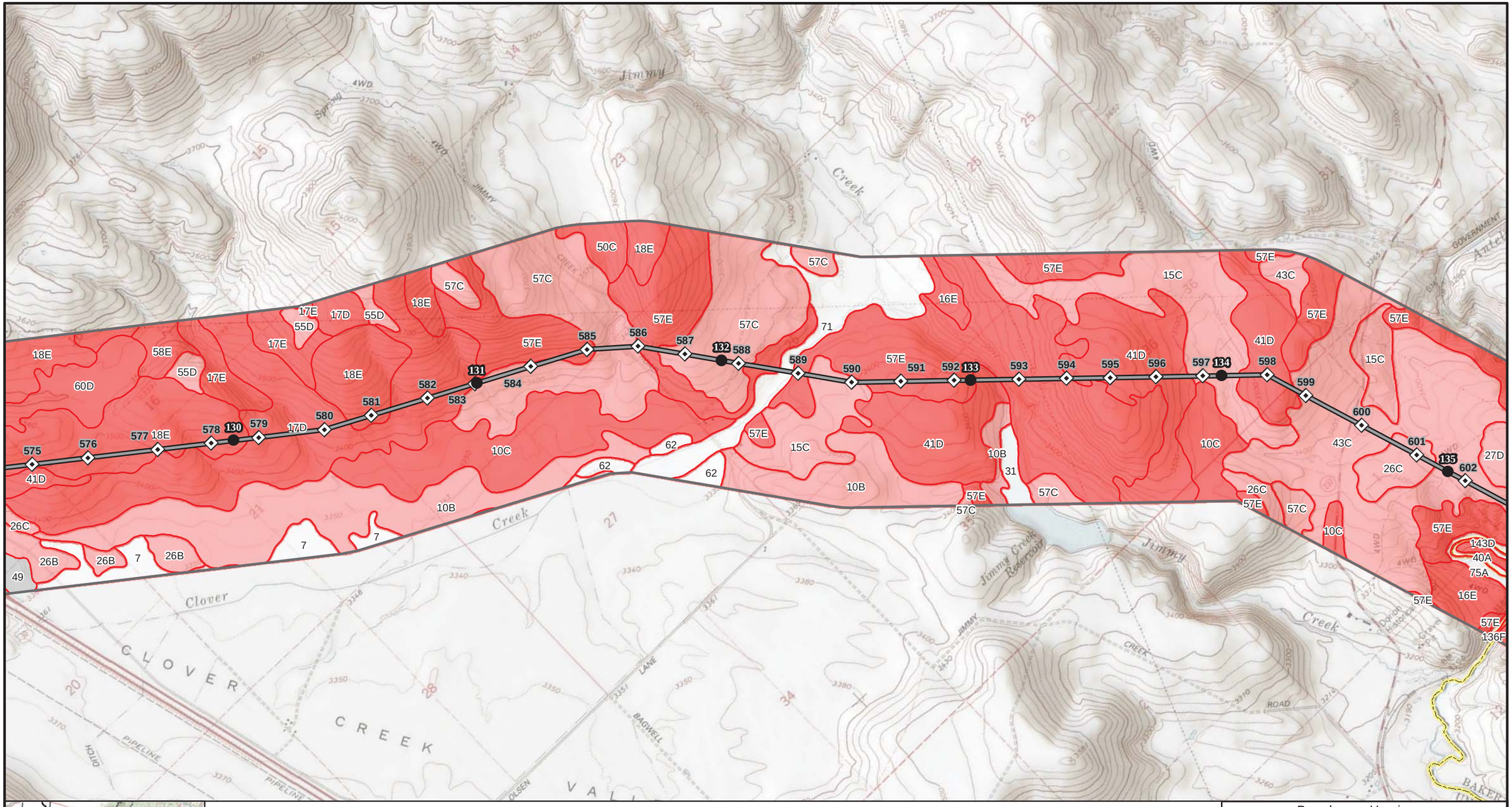

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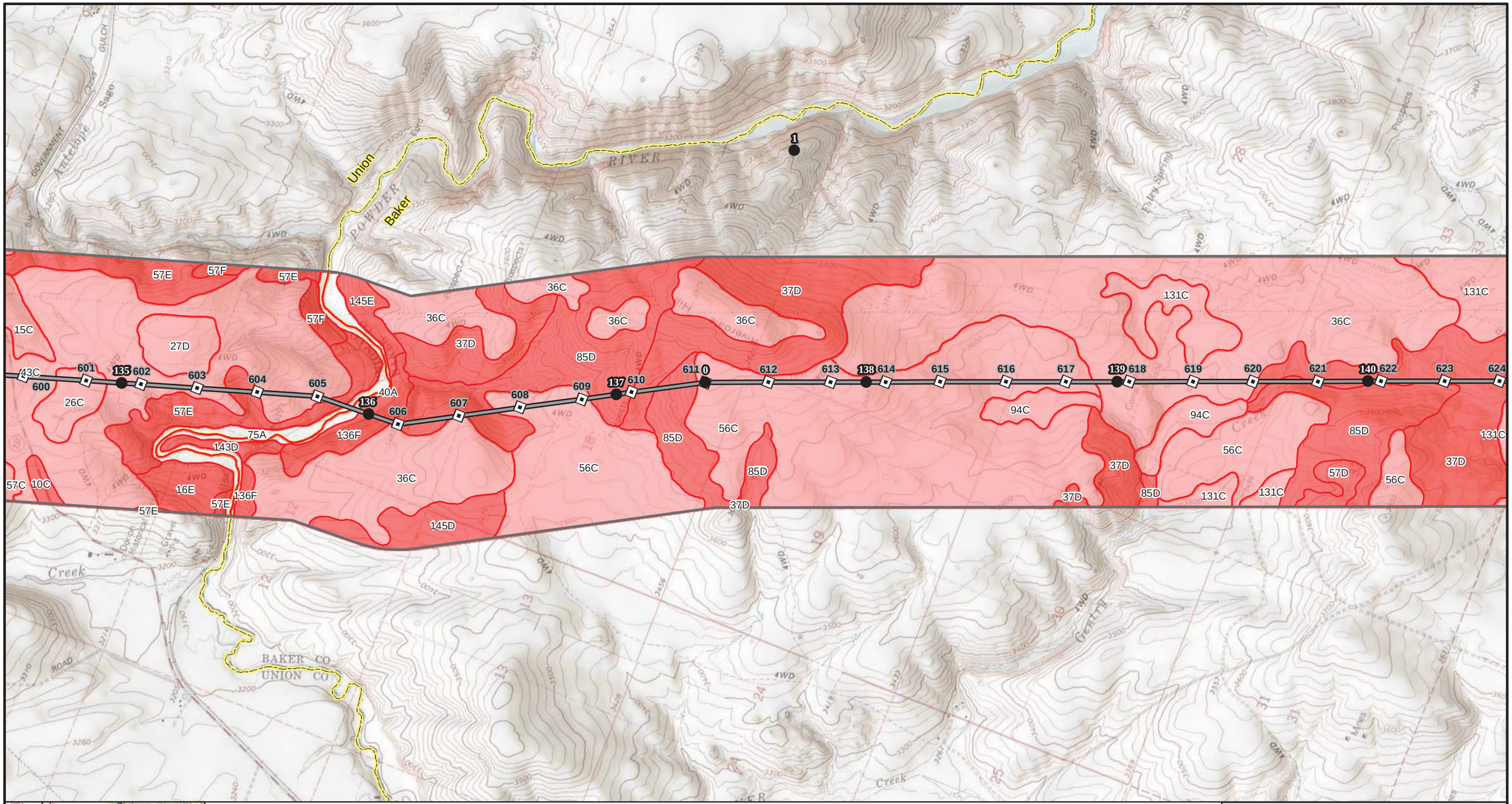

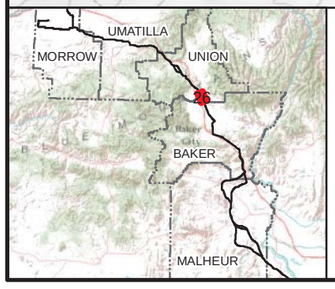

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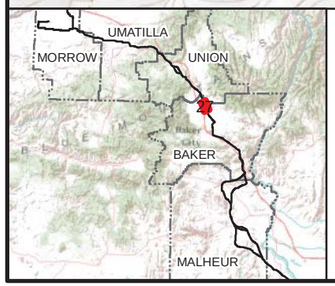

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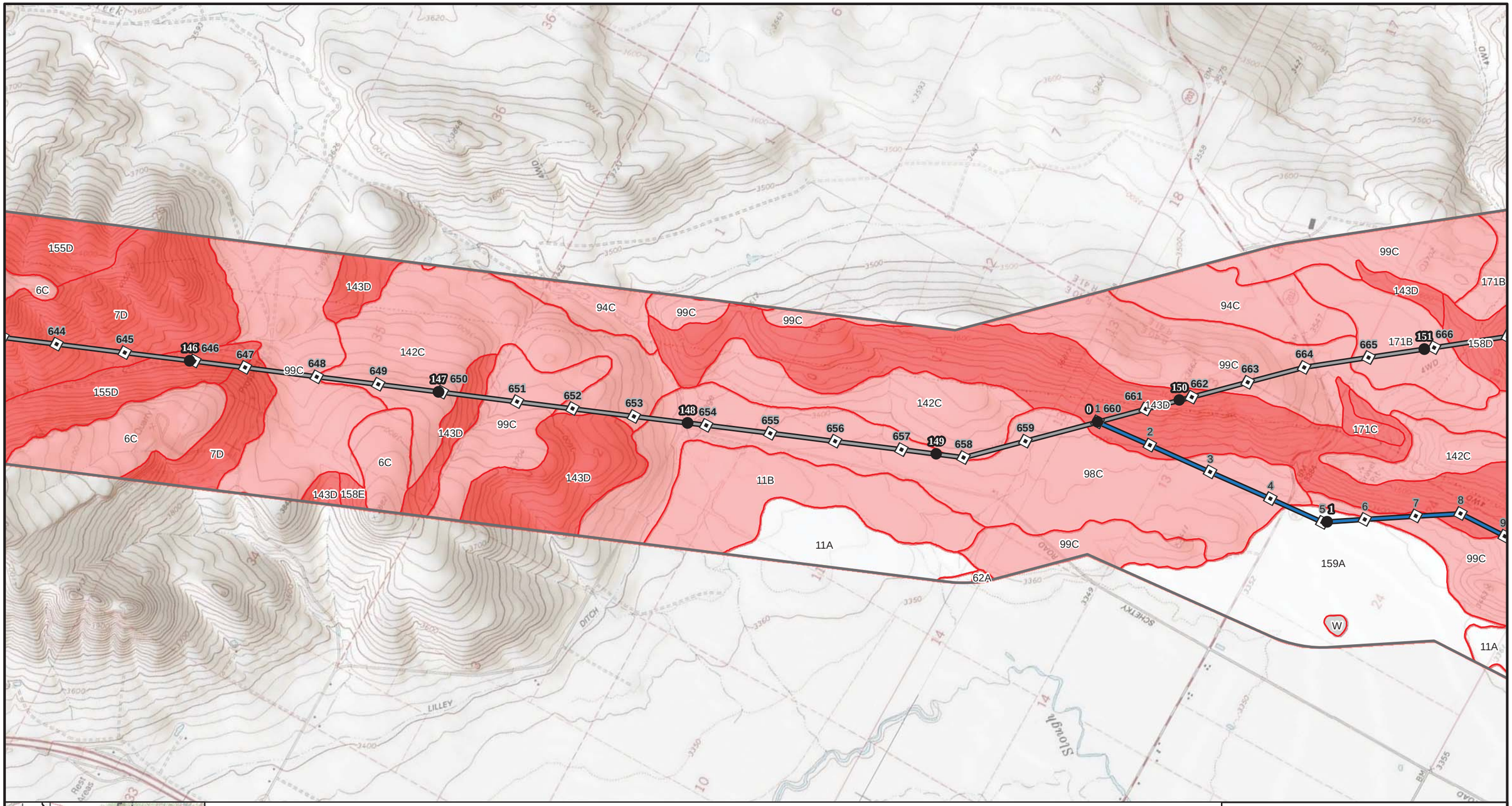

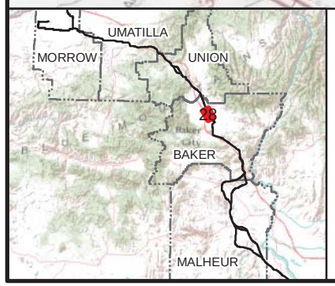

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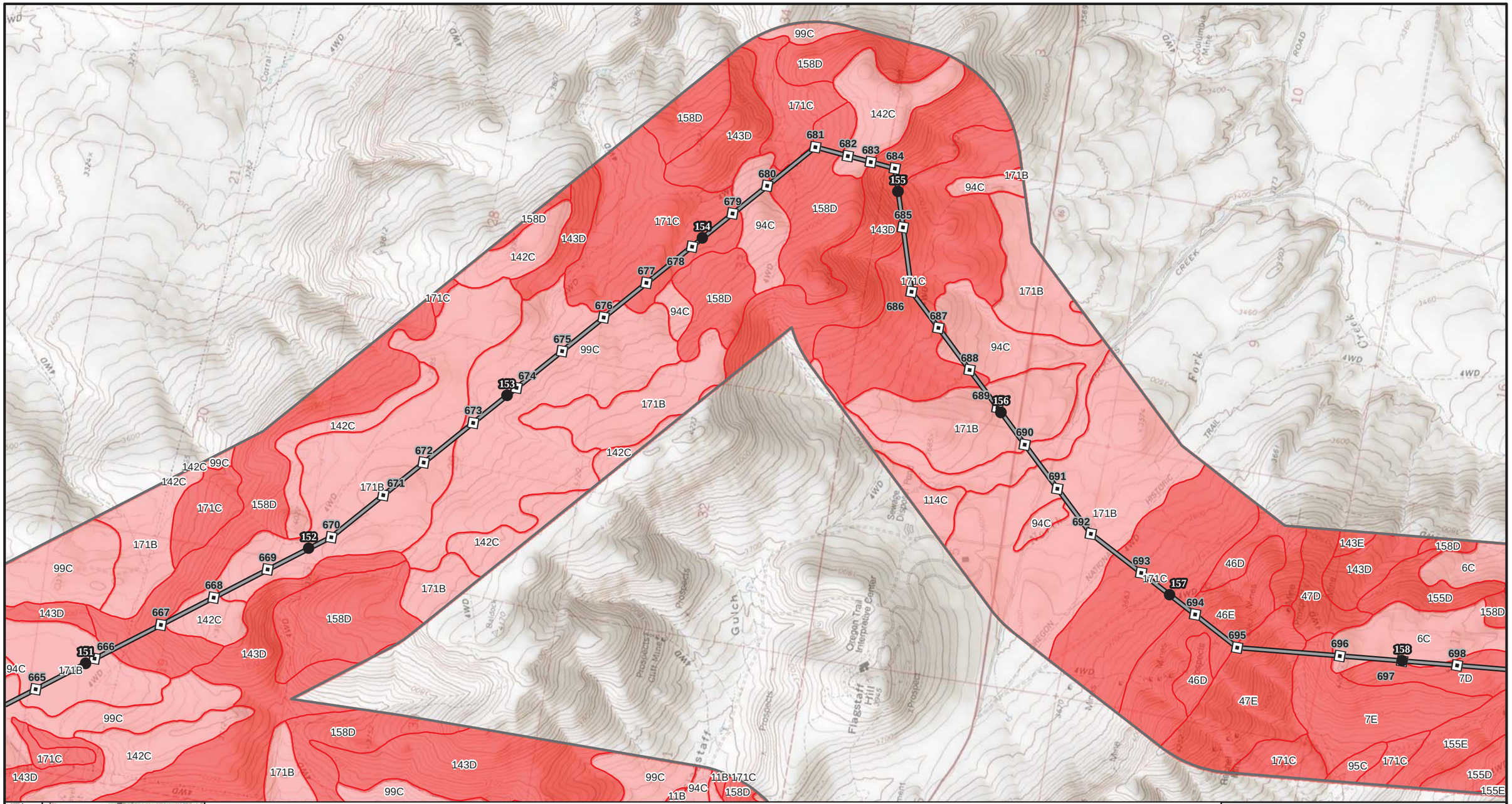

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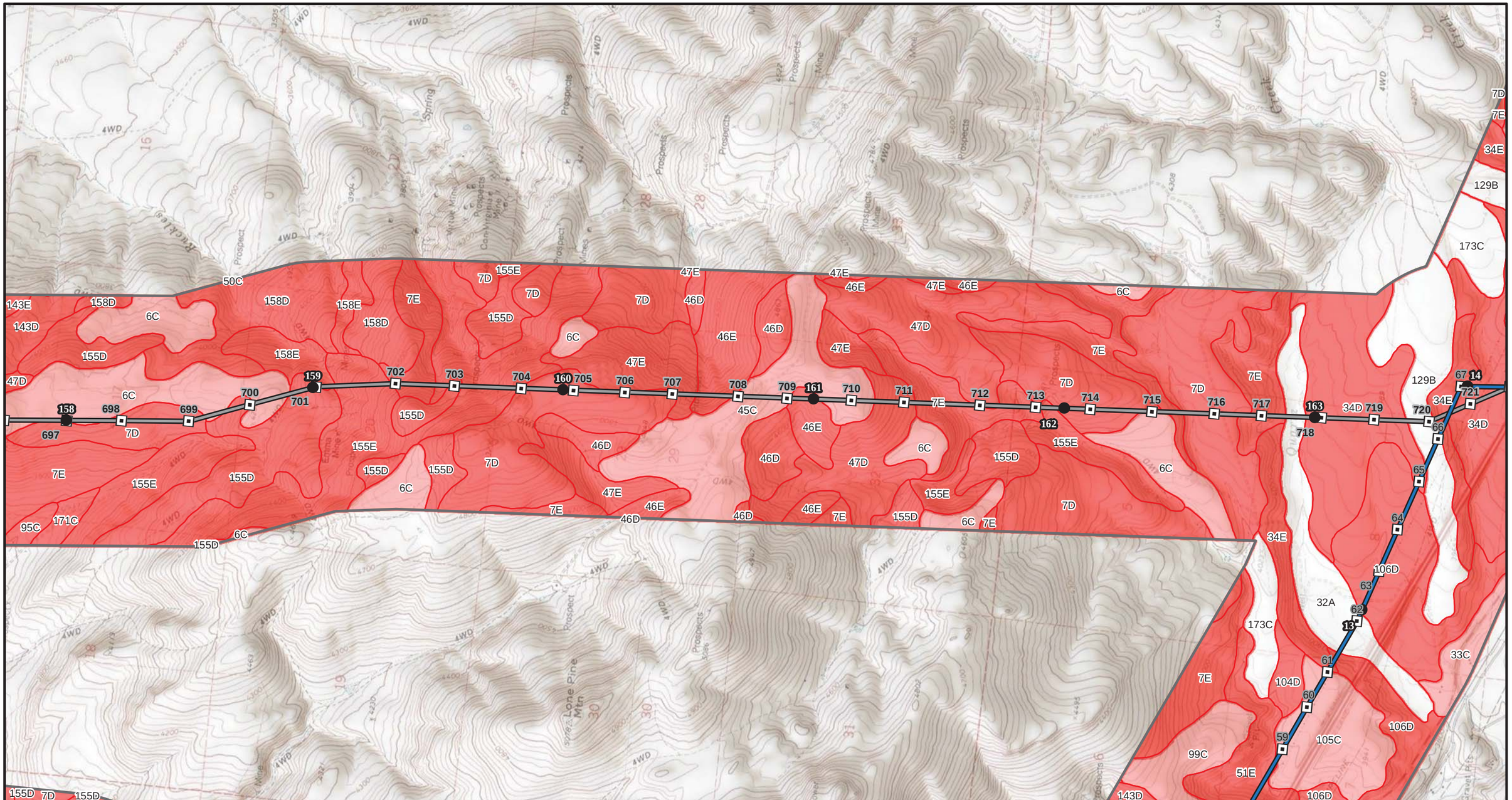

Boardman - Hemingway
500kV Transmission Line
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22-1-02947-200

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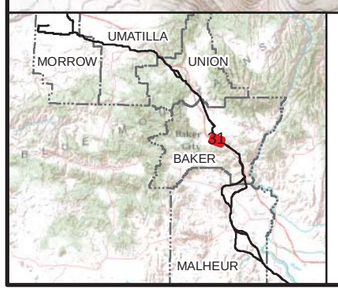

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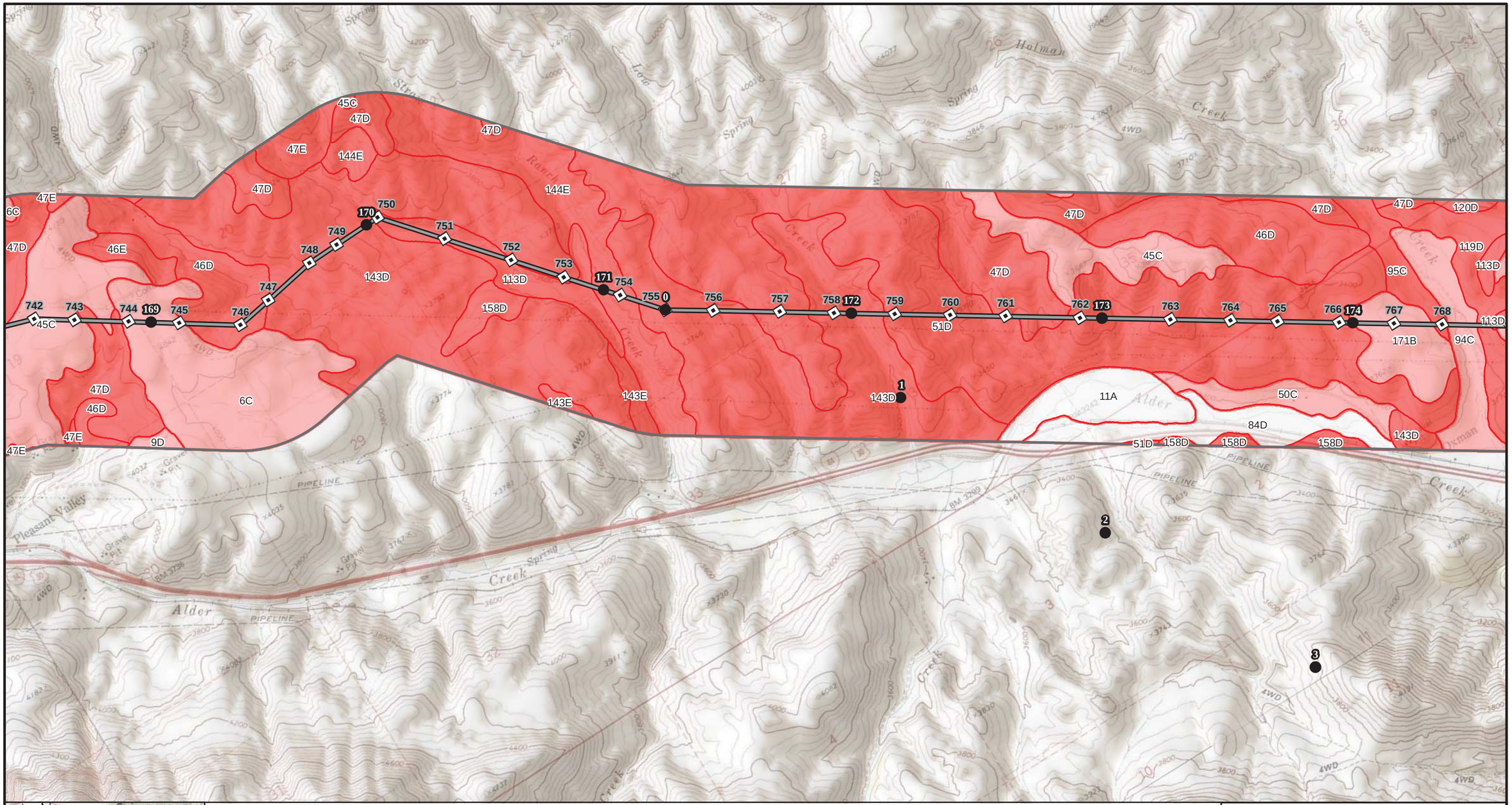

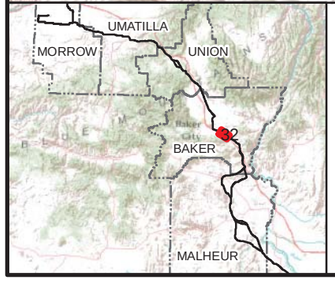

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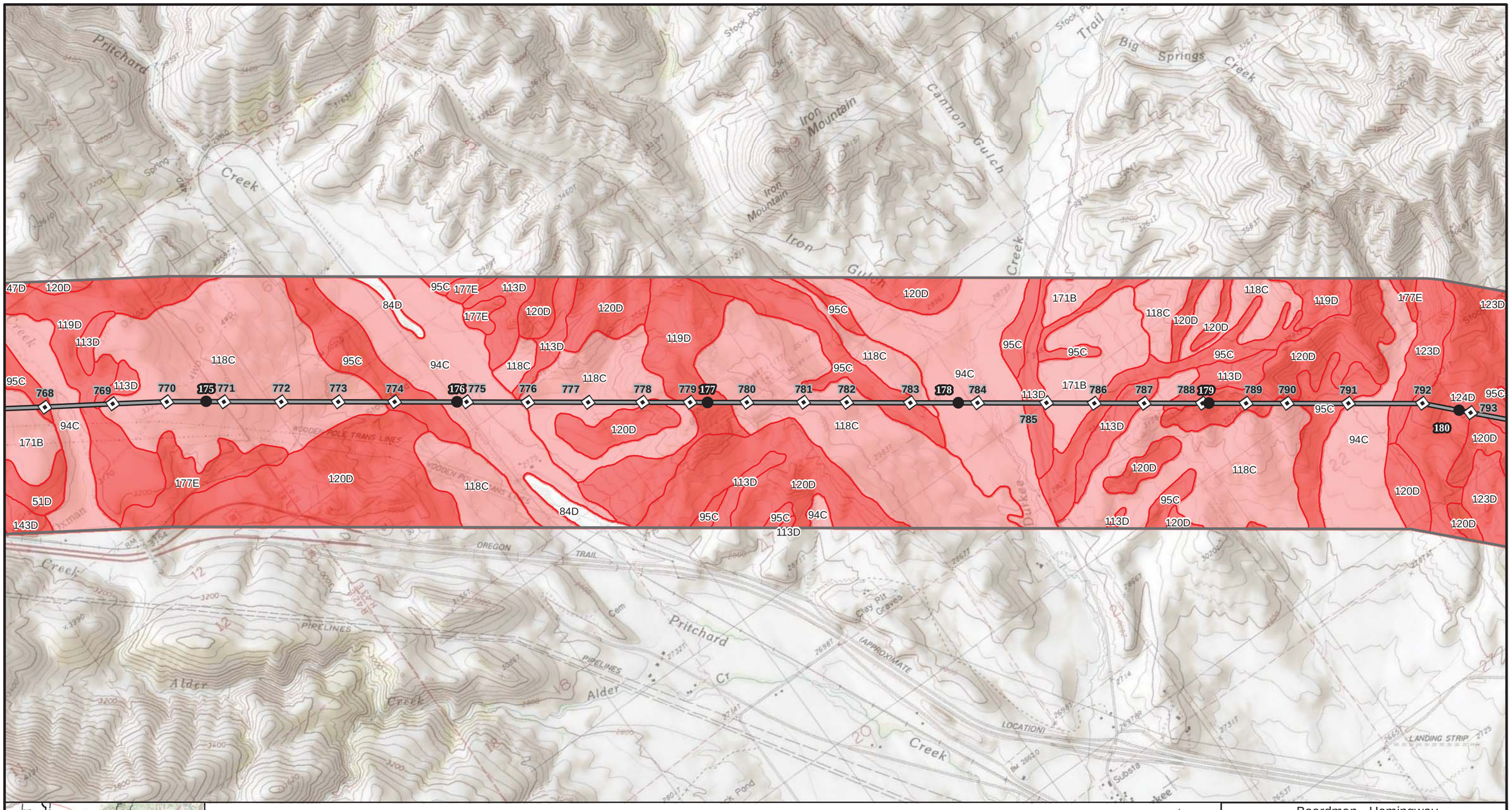

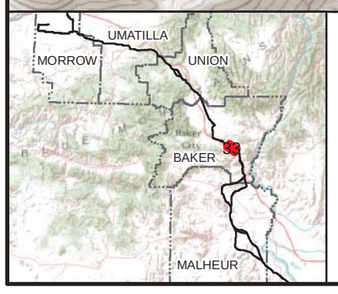

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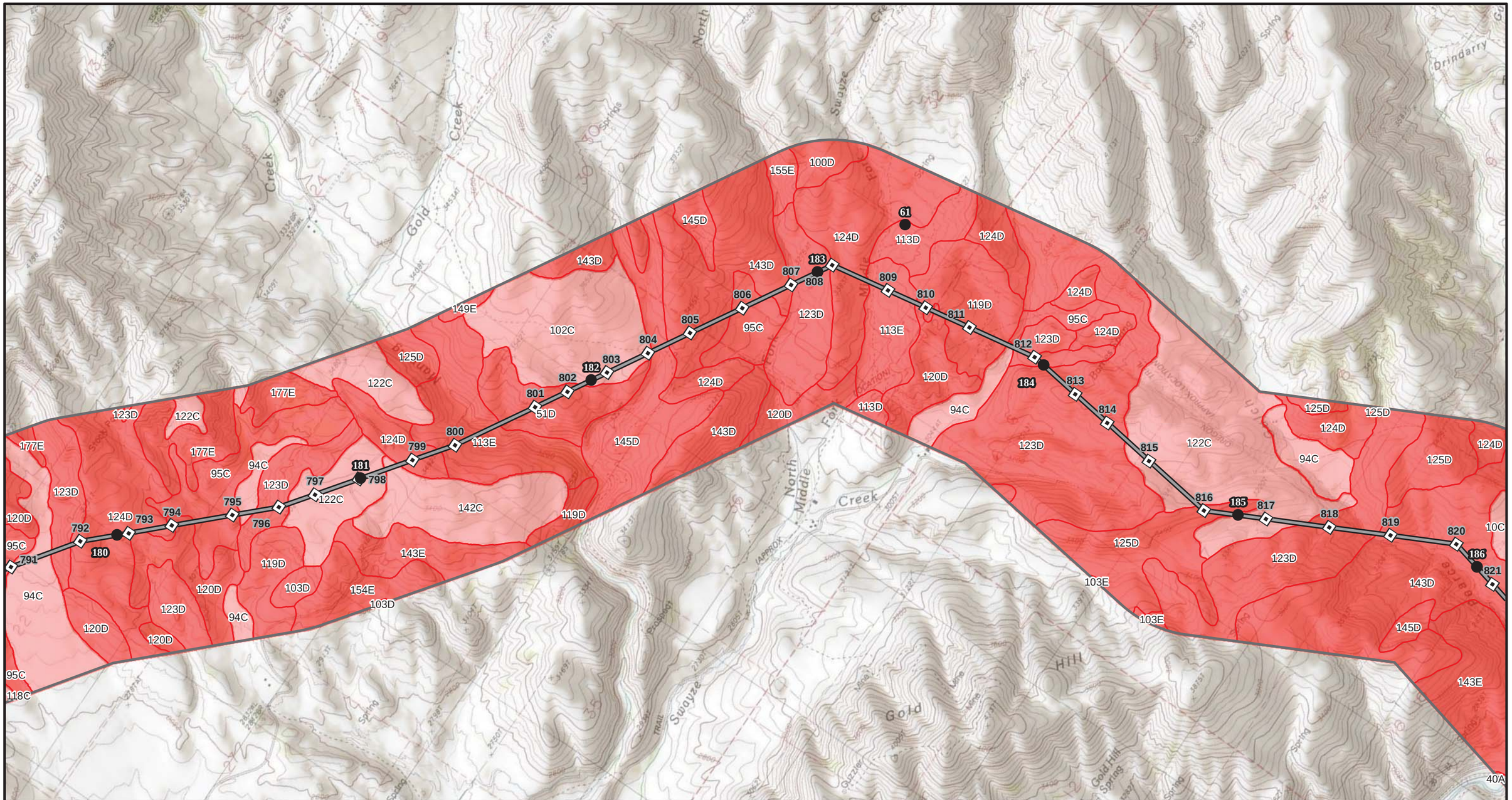

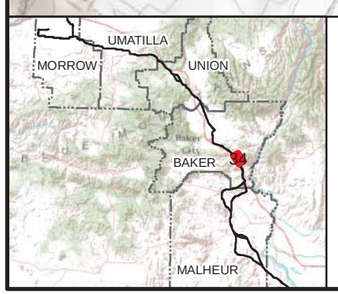

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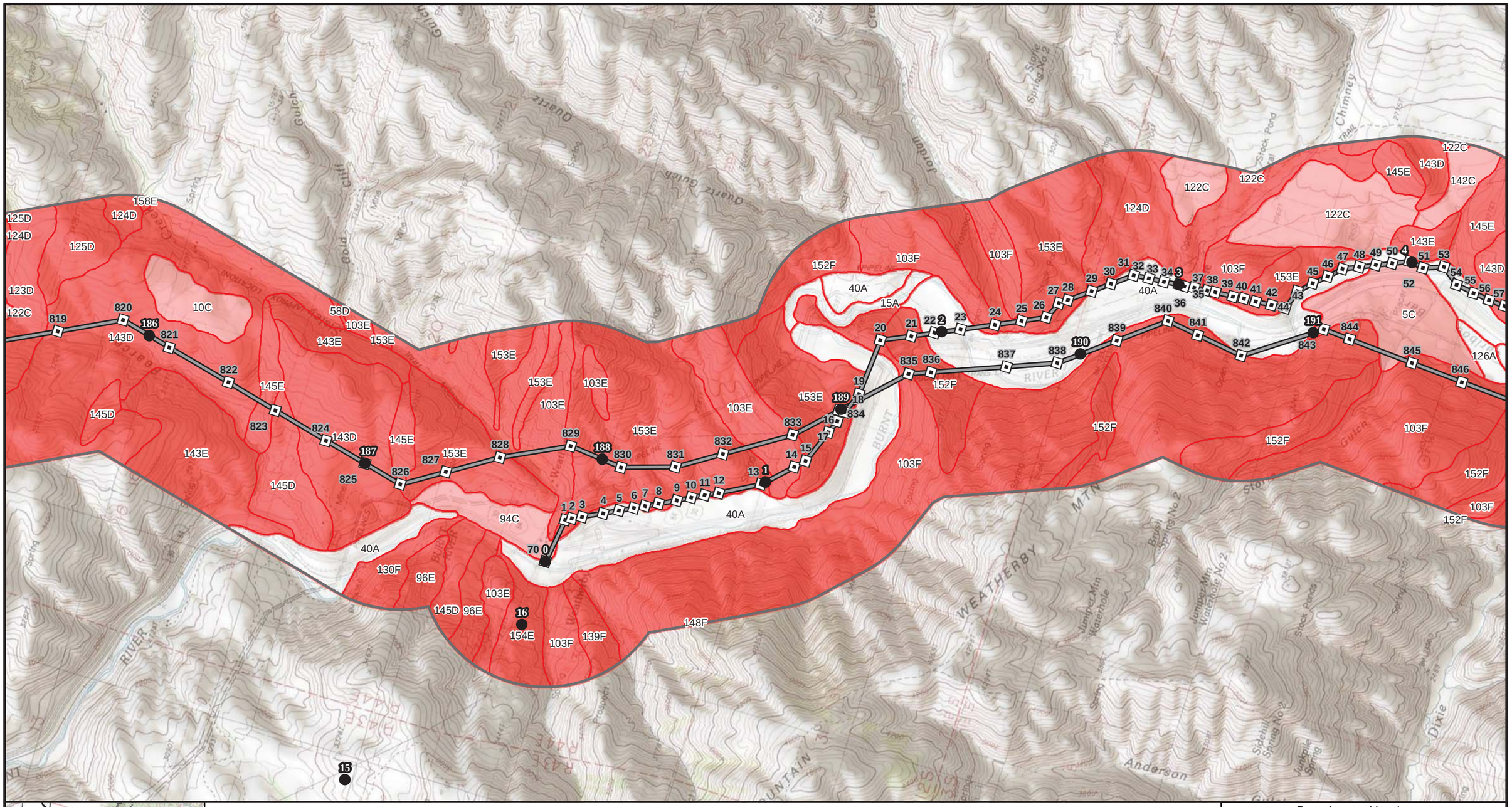

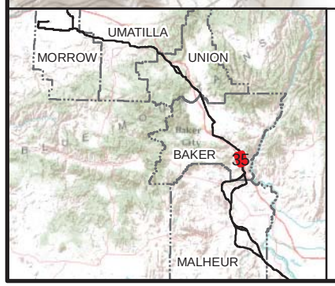

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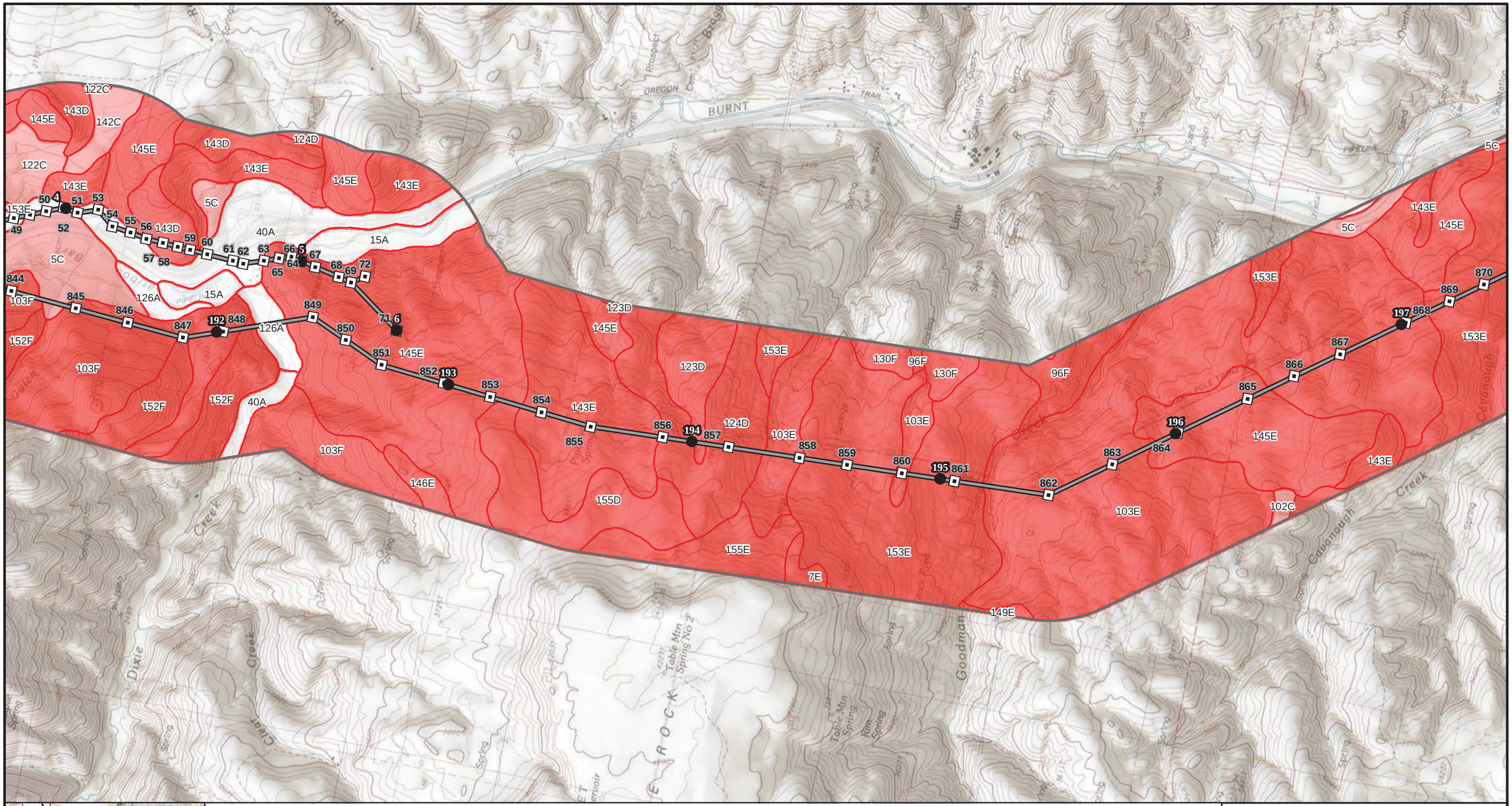

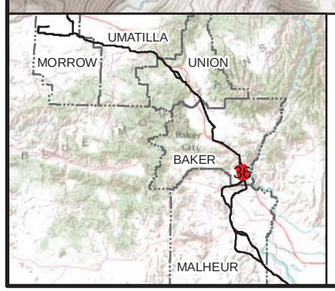

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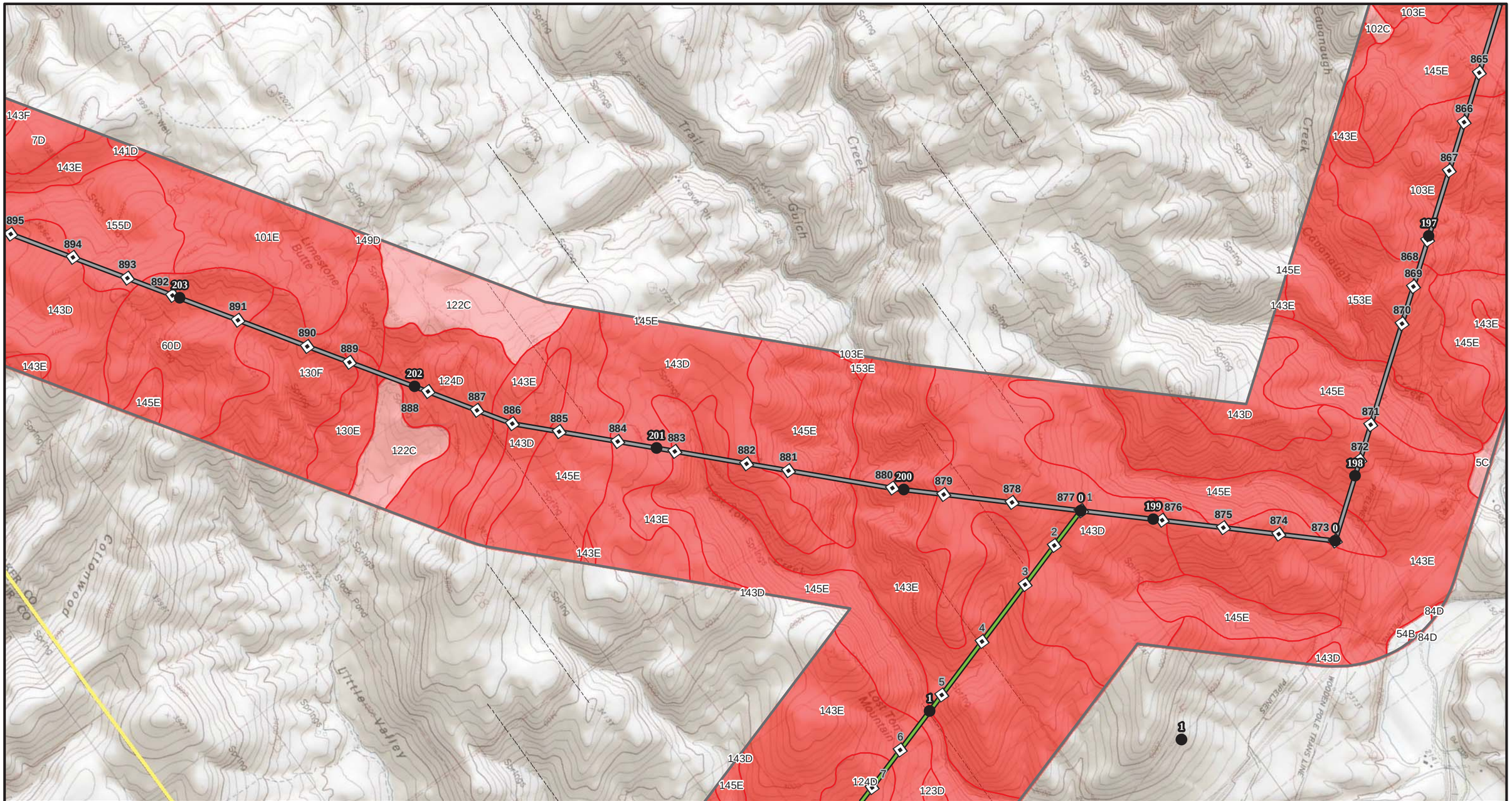

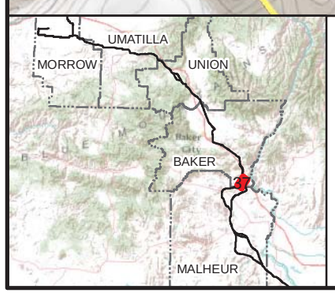

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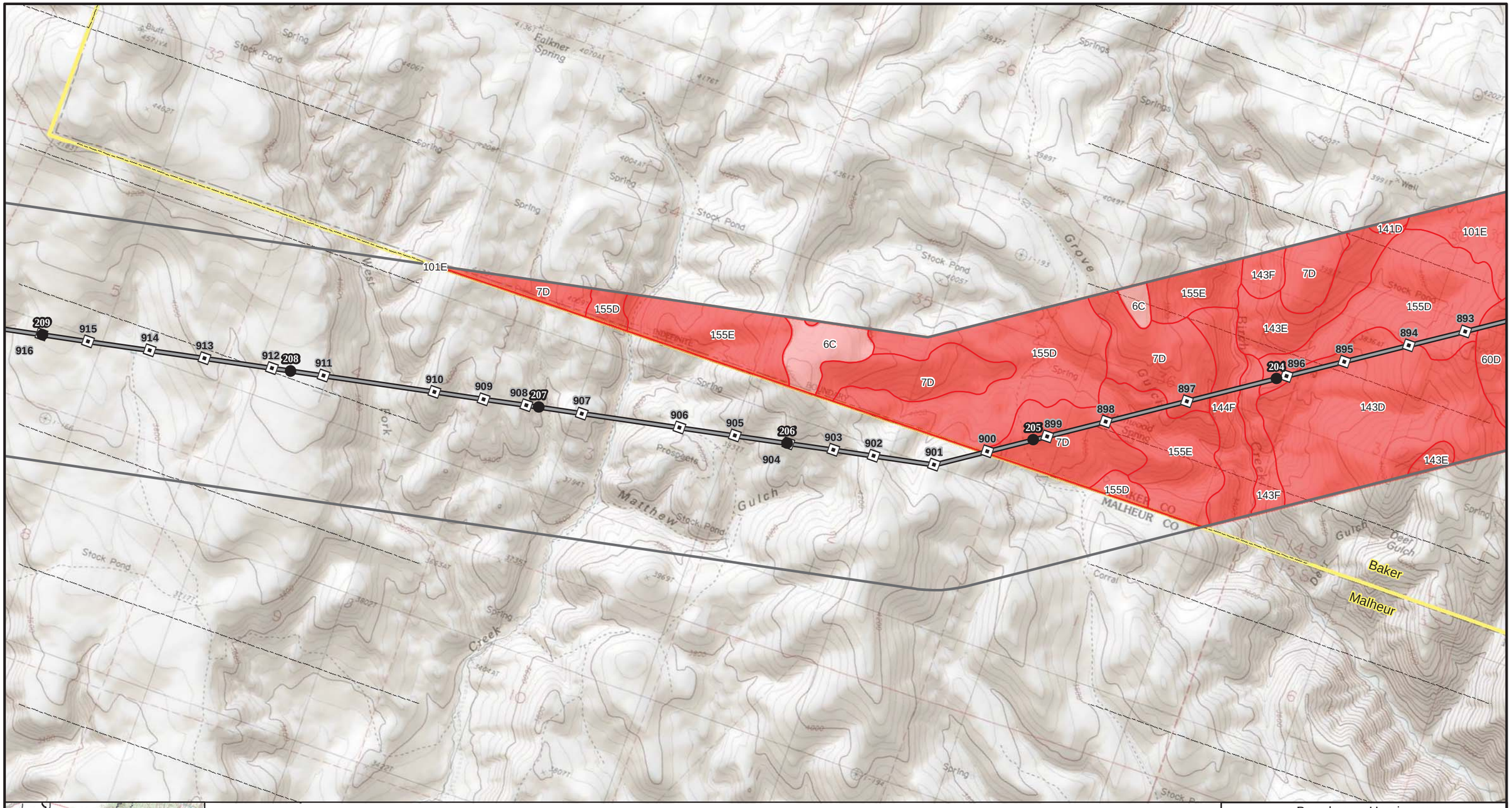

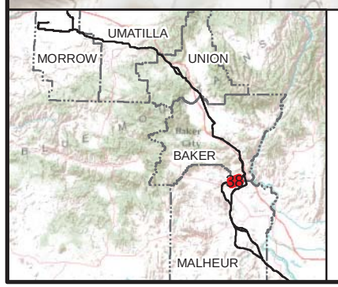

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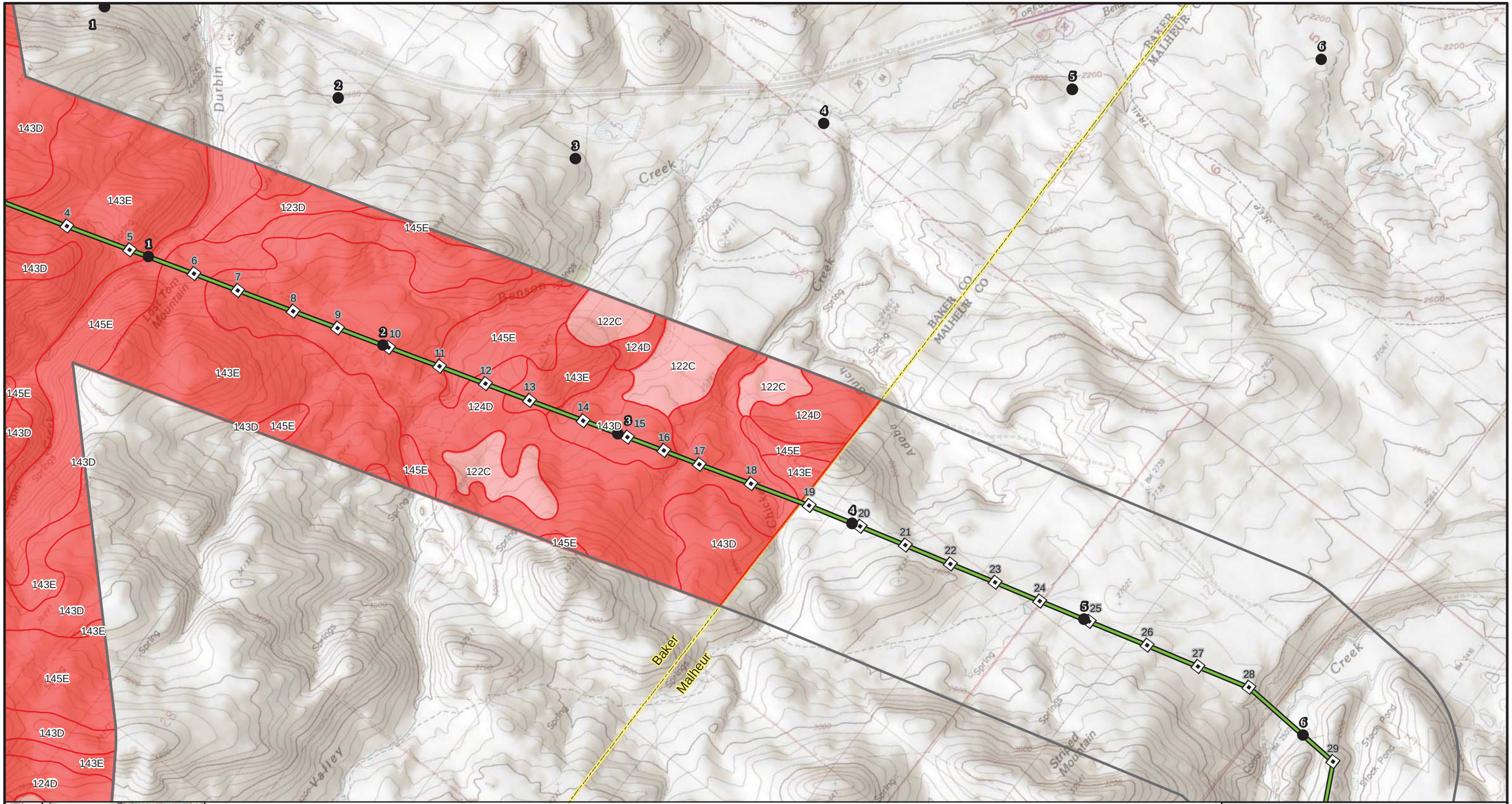

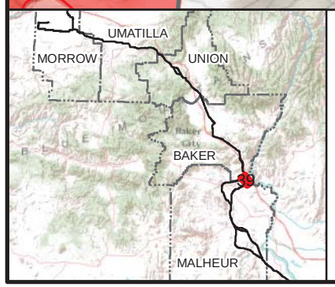

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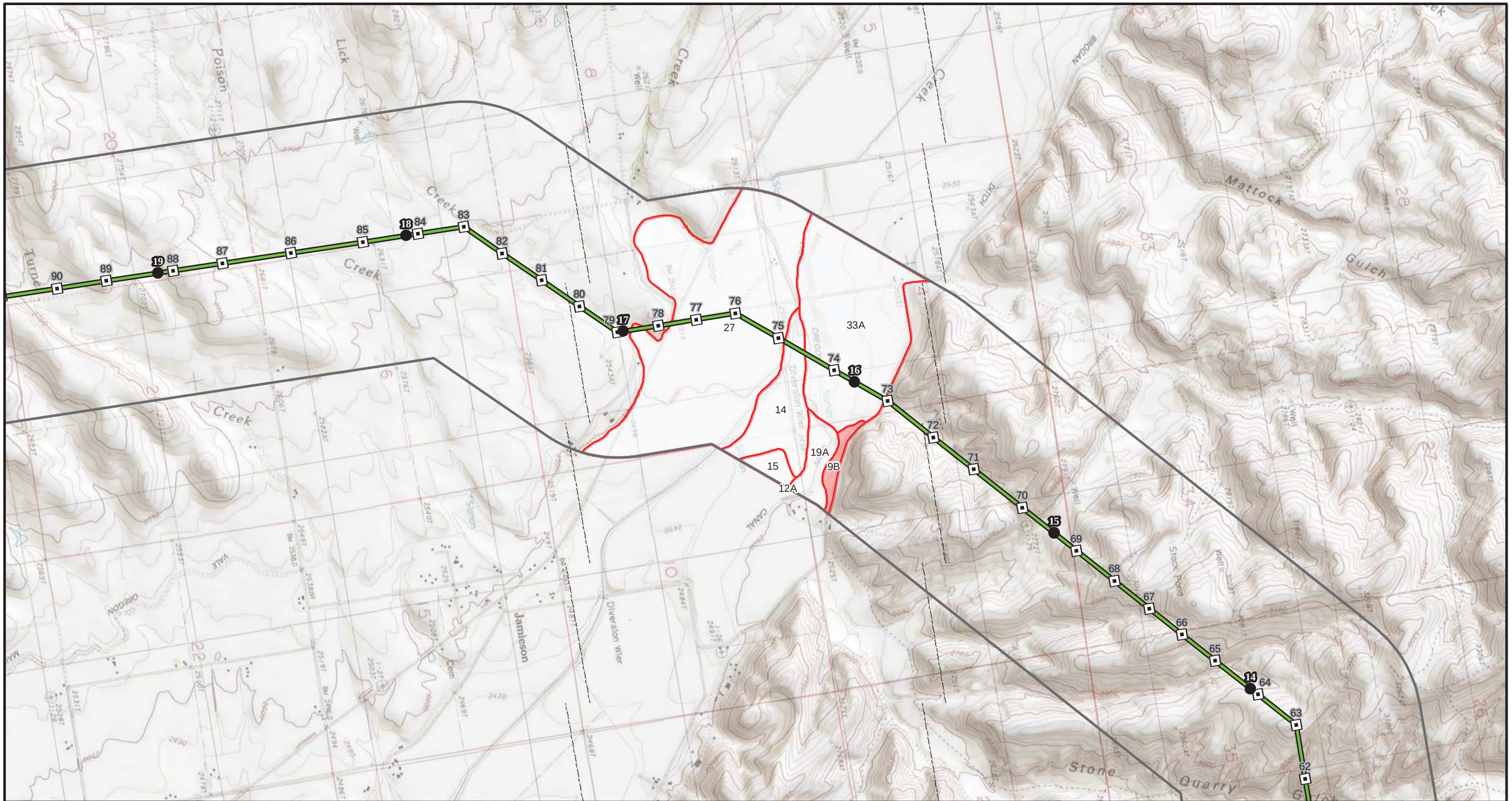
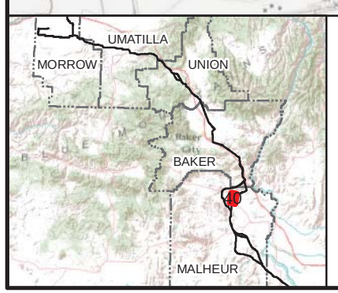
Boardman - Hemingway
500kV Transmission Line
Oregon - Idaho

SOILS

August 2012 22-1-02947-200

SHANNON & WILSON, INC.
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS





LEGEND

TRANSMISSION FEATURES

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- Alternate Substation
- 543 Mileposts

SSURGO SOIL MAP UNIT EROSION HAZARD

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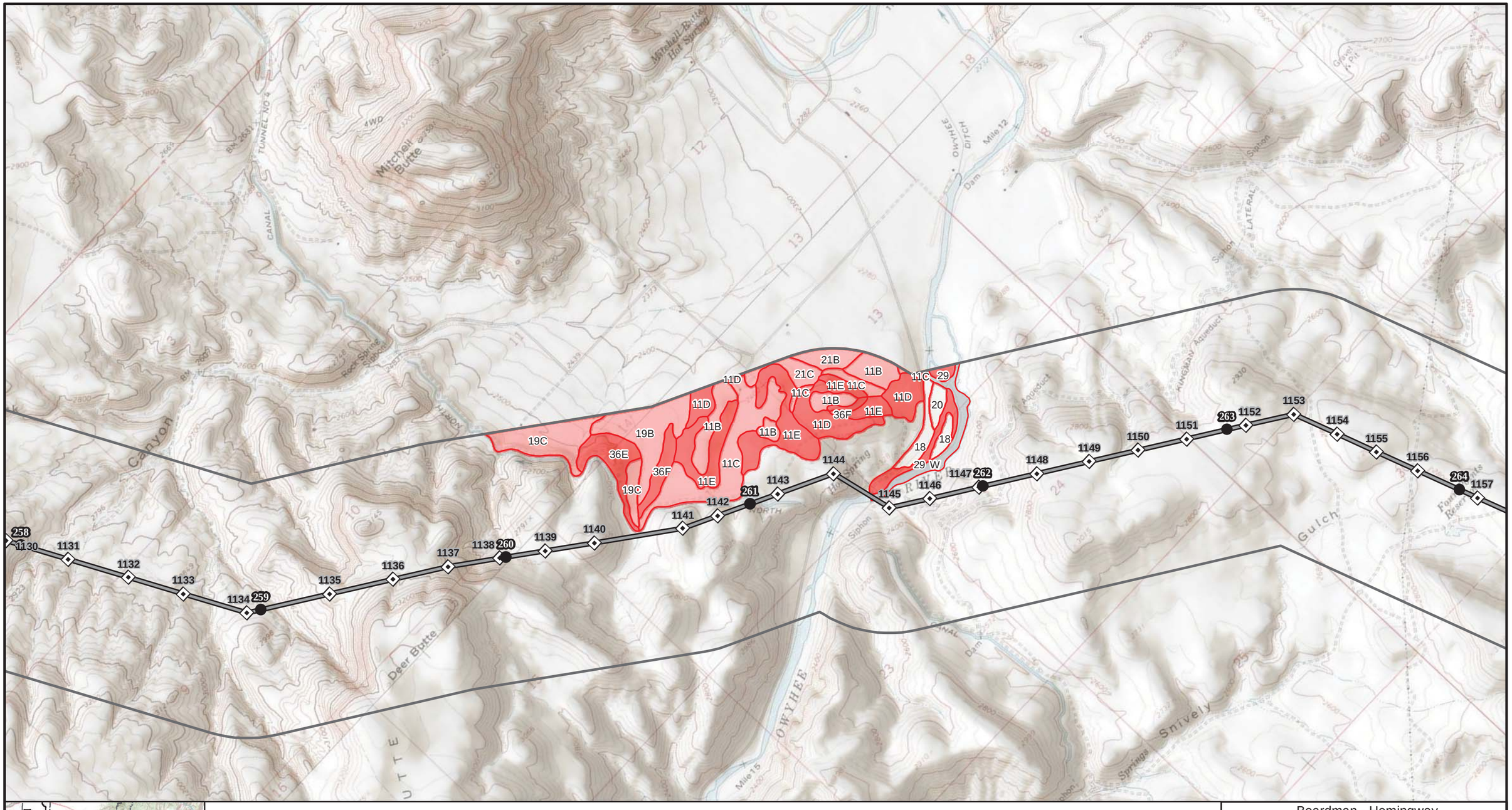

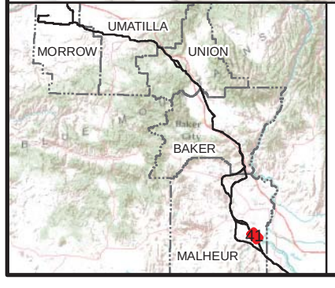

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Oregon - Idaho

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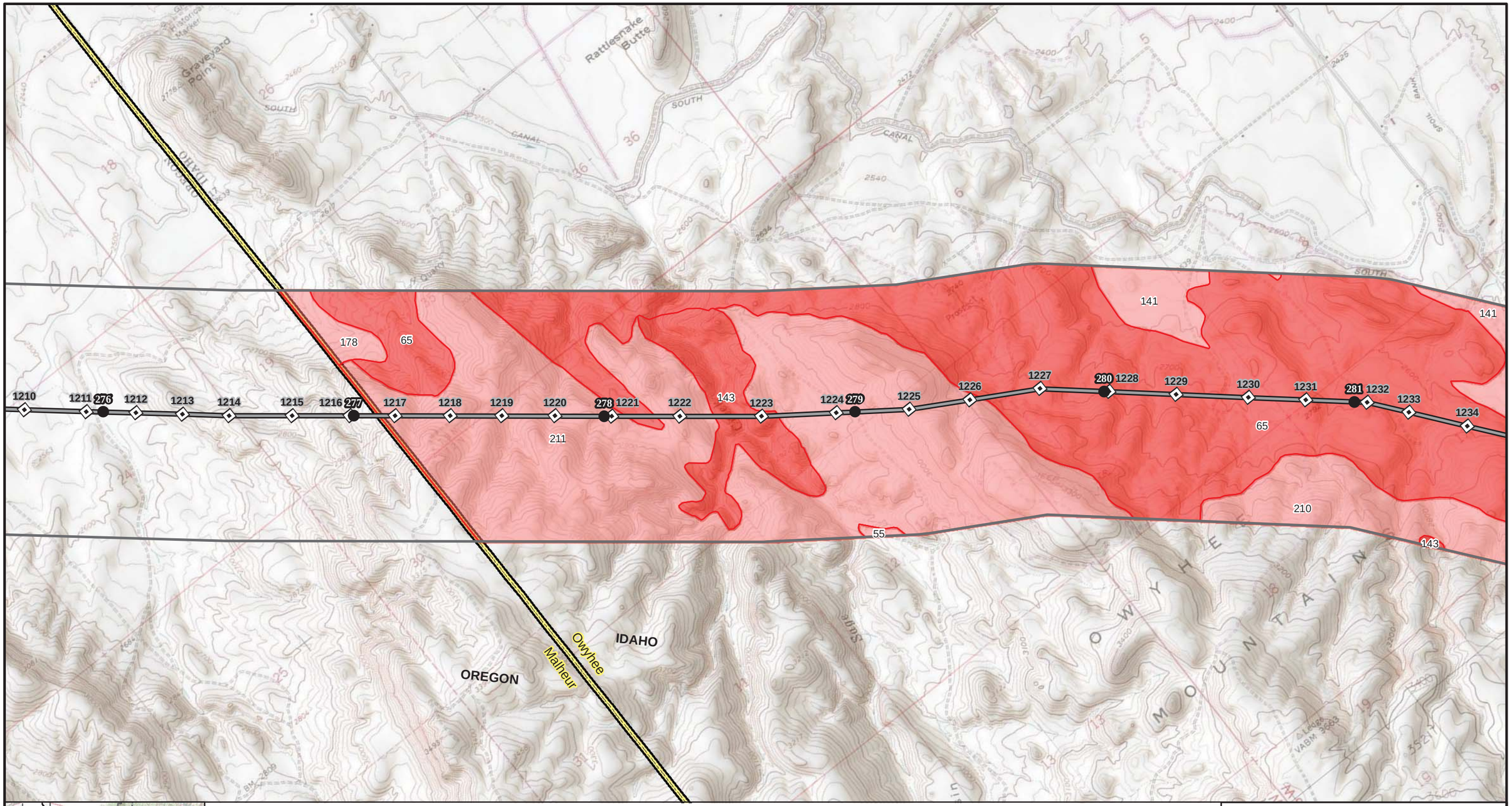

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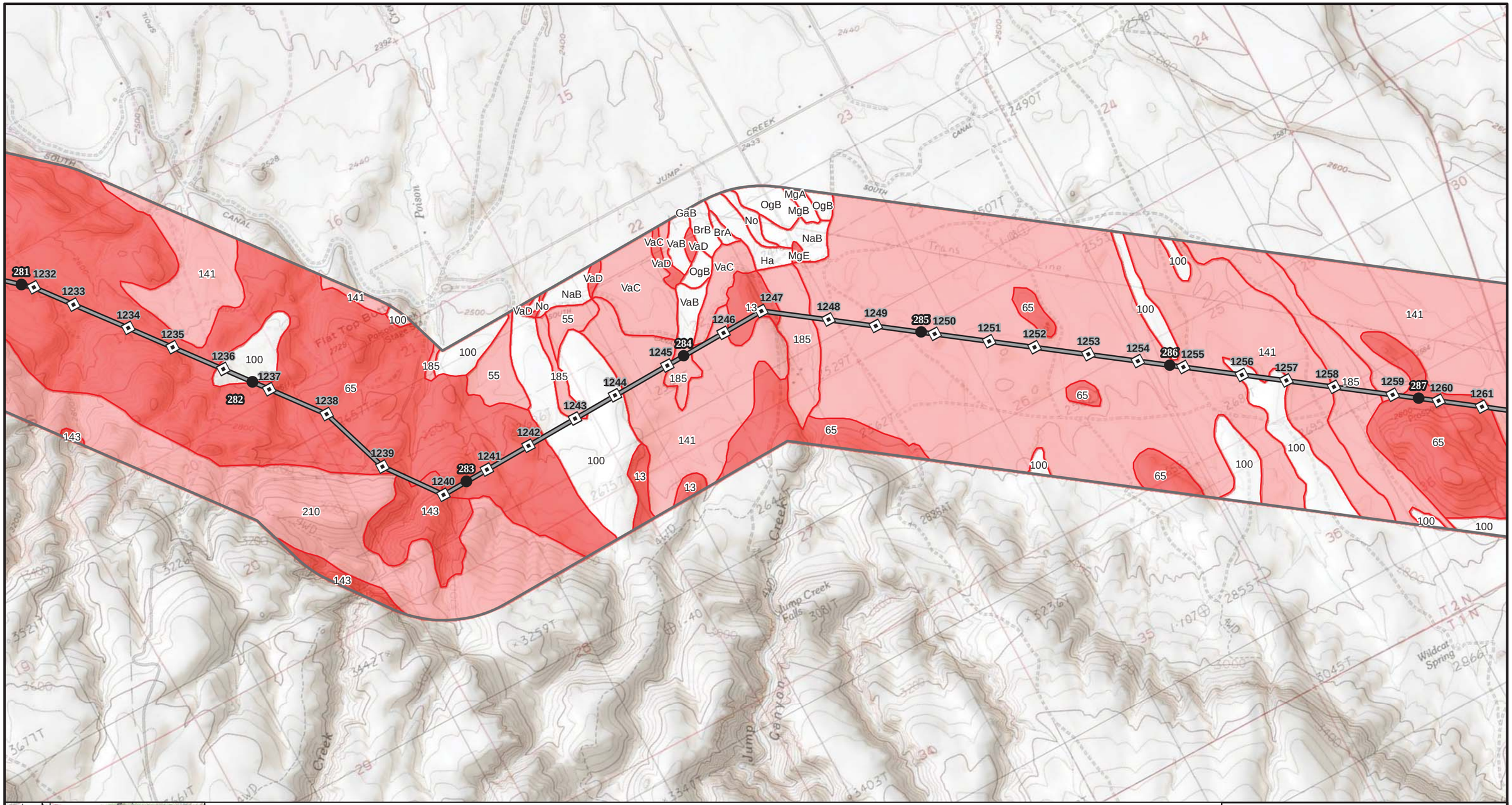

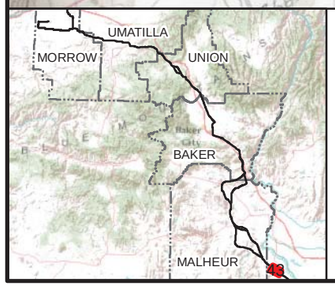

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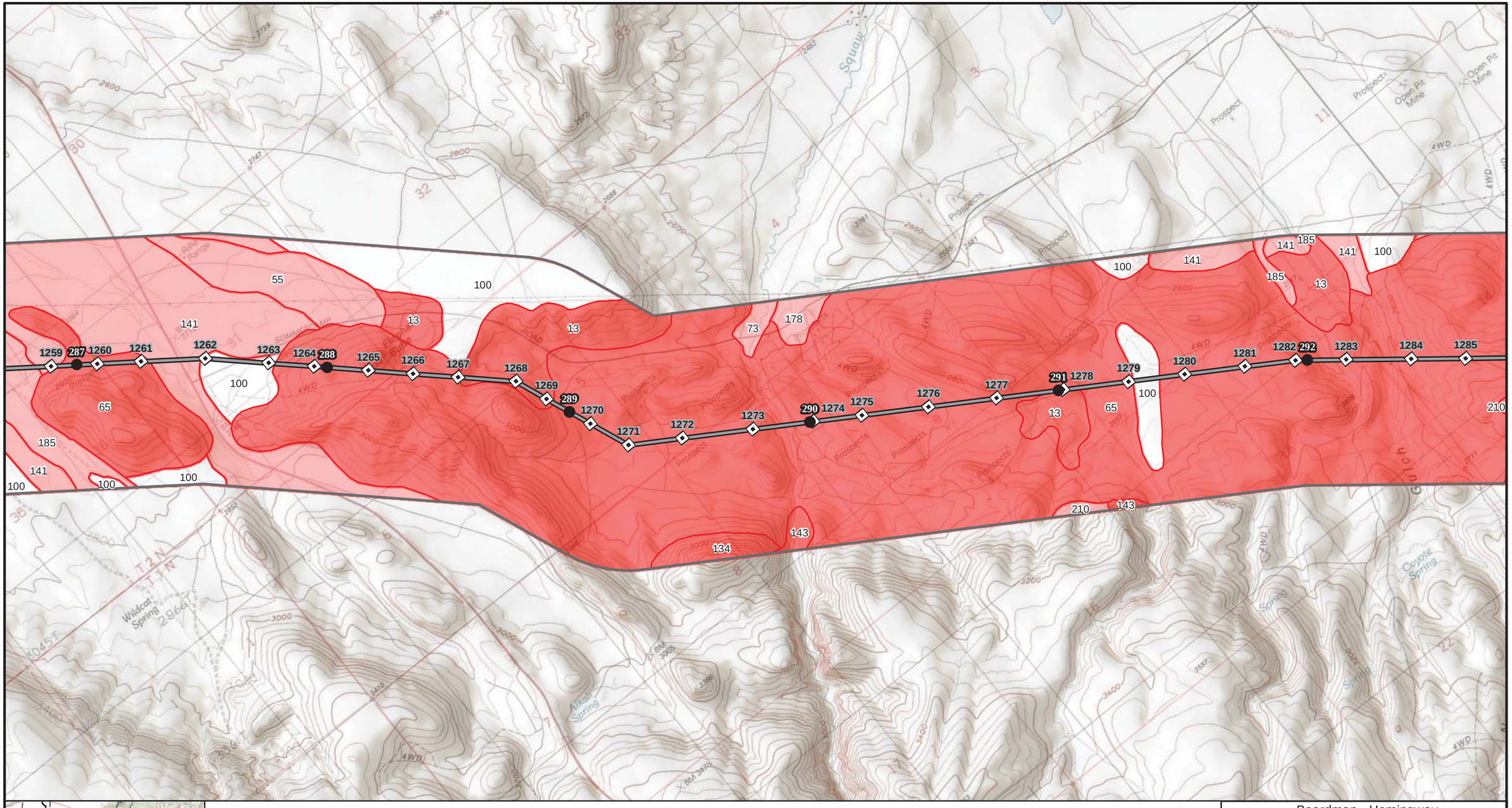

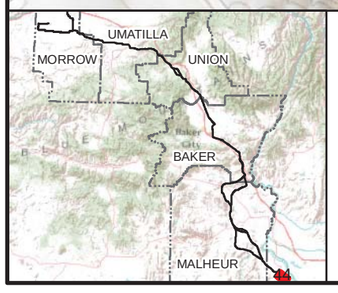

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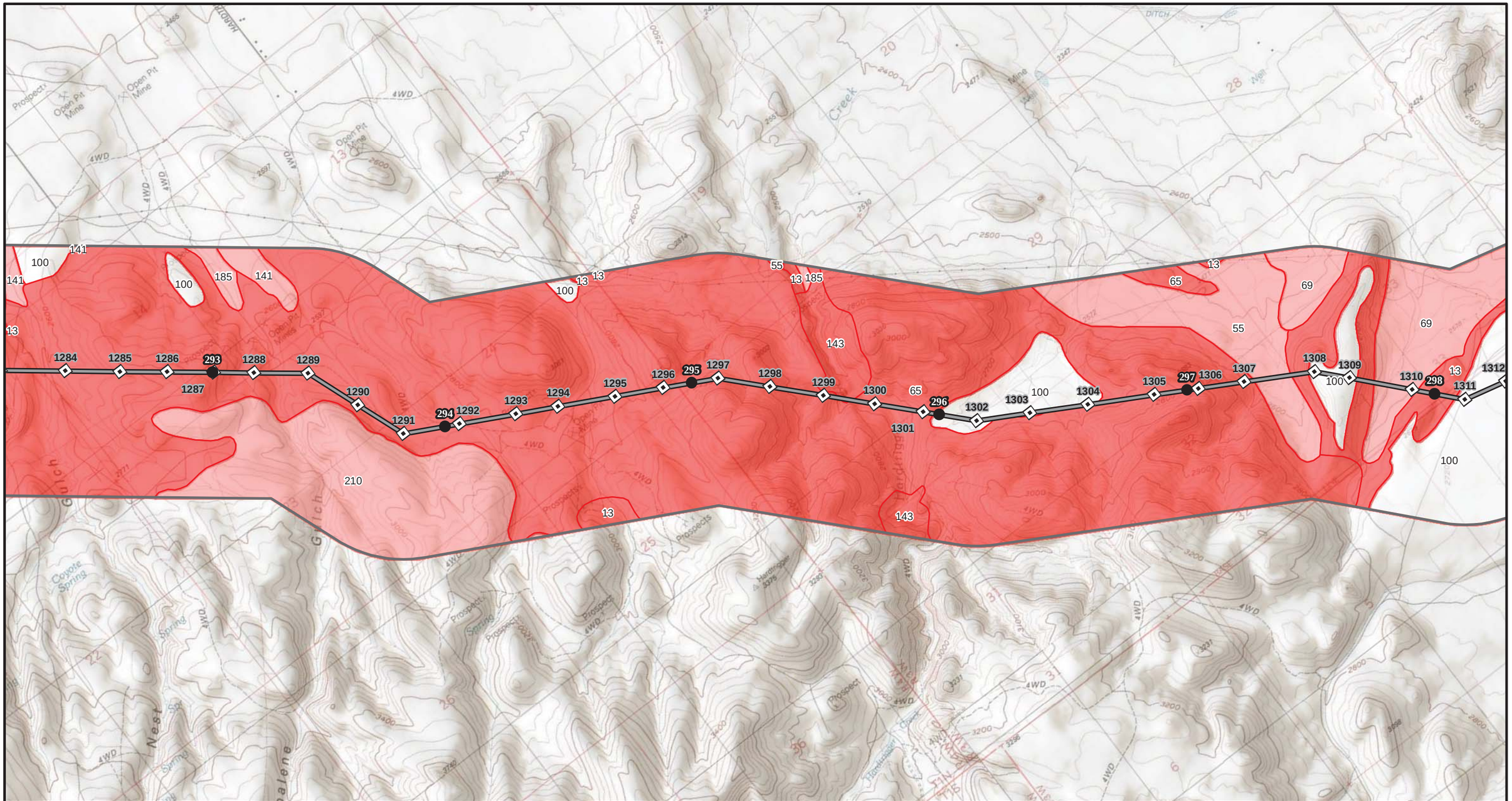

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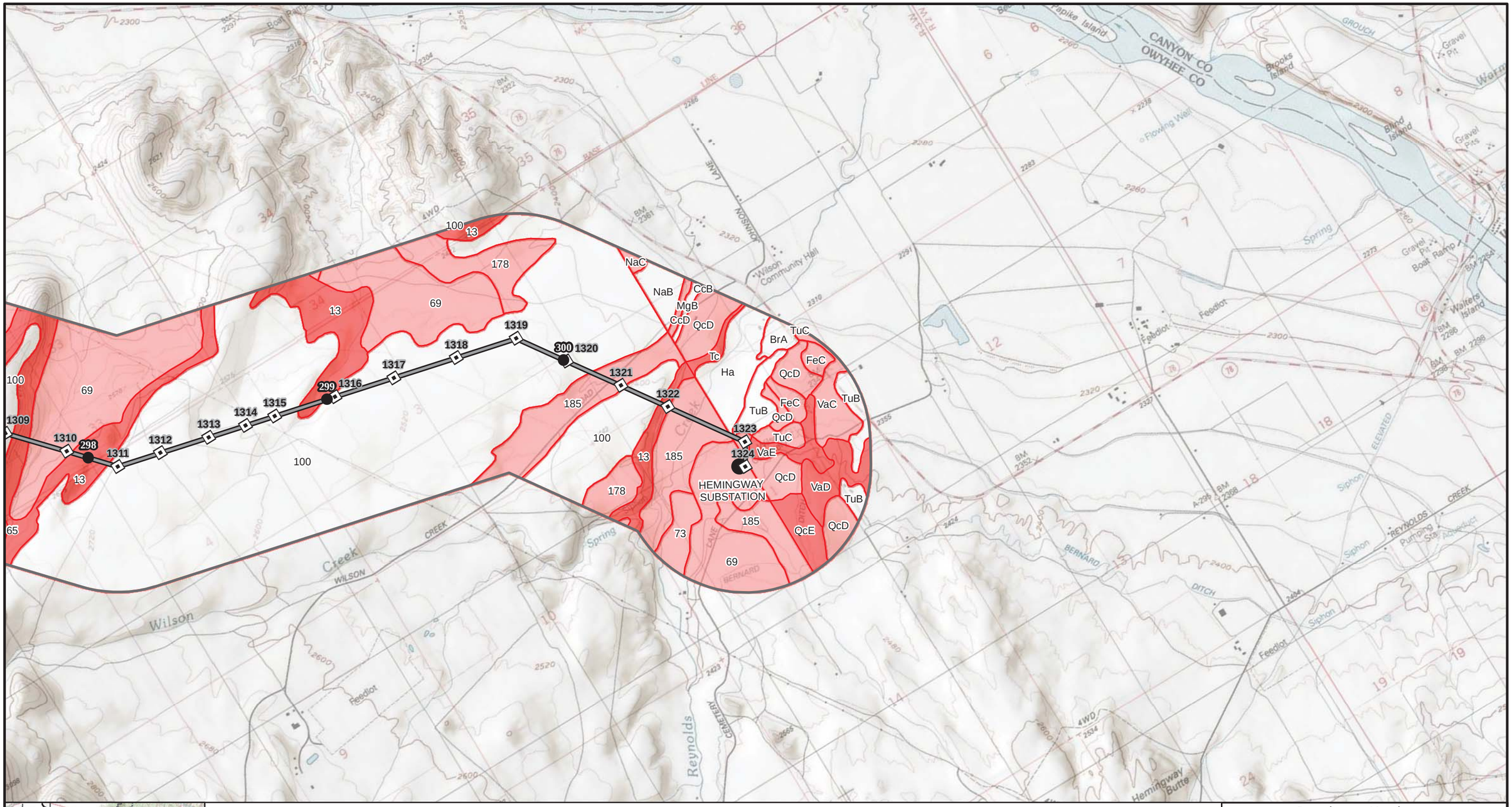

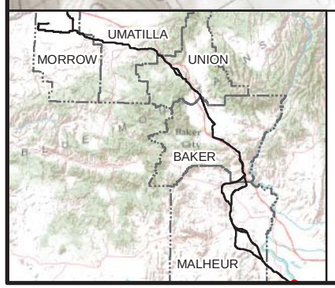

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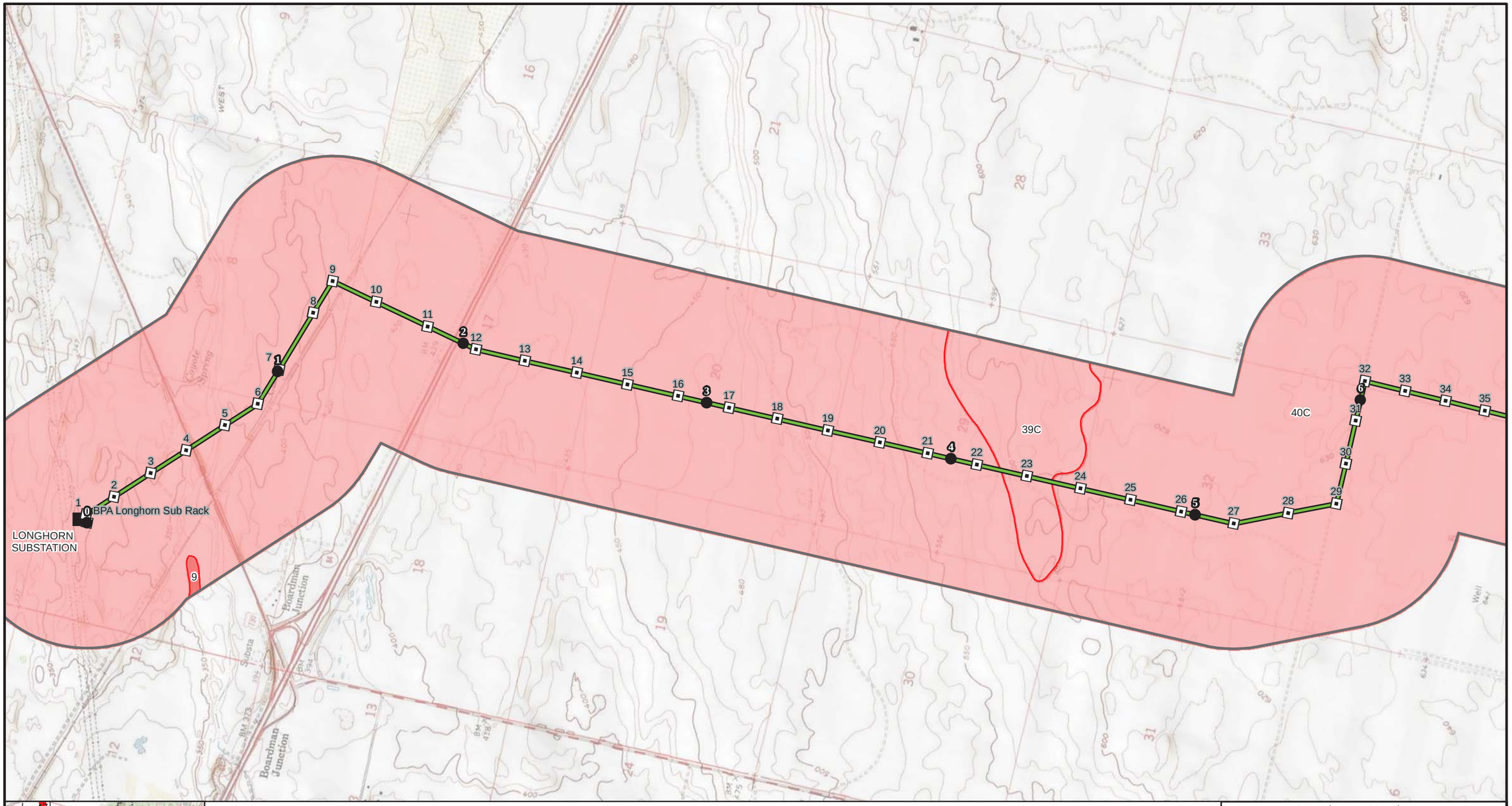

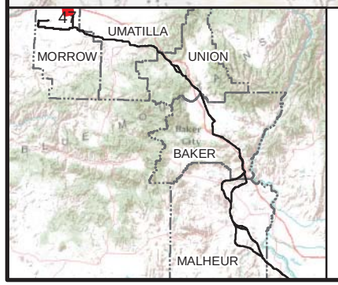

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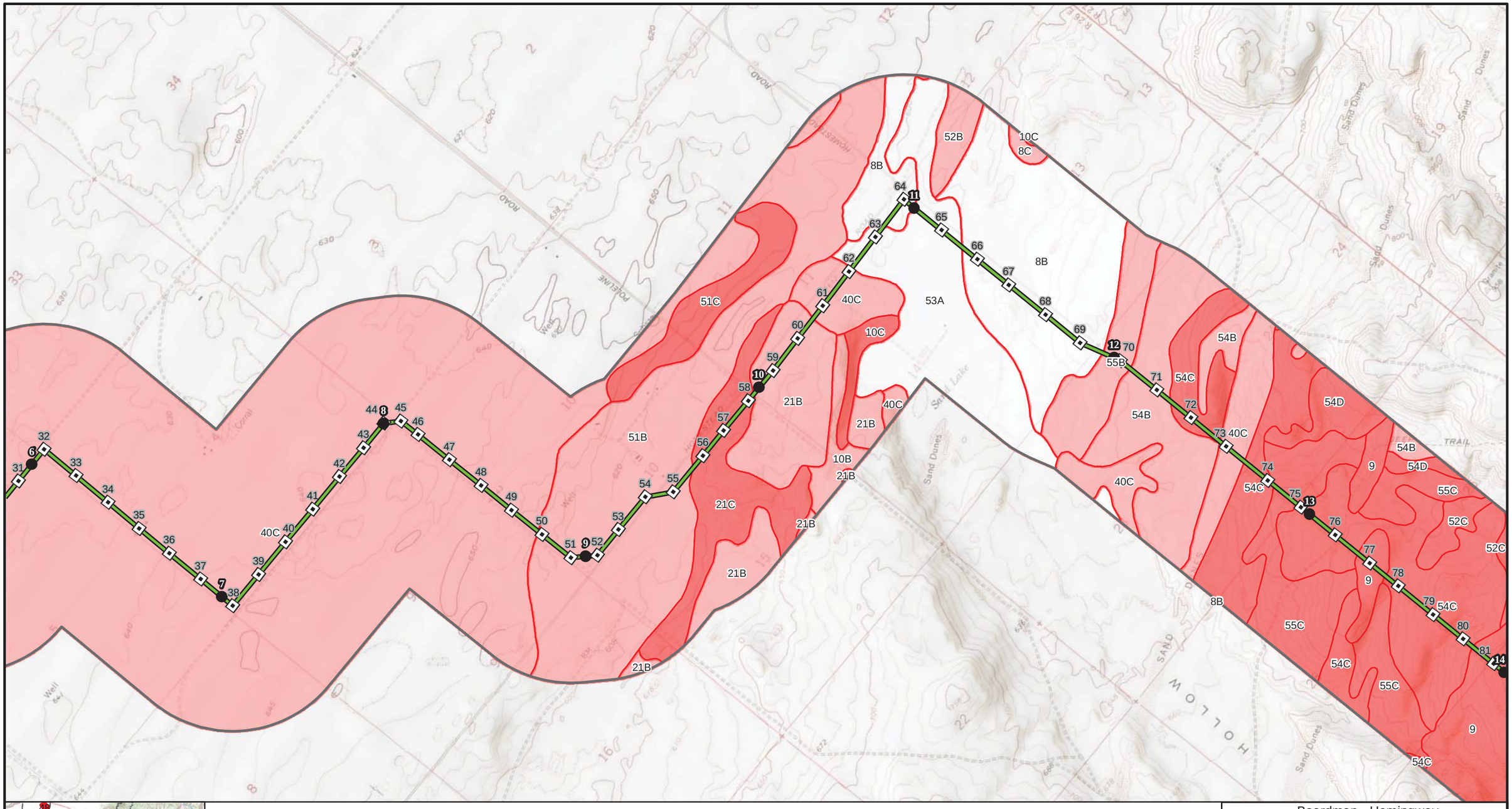

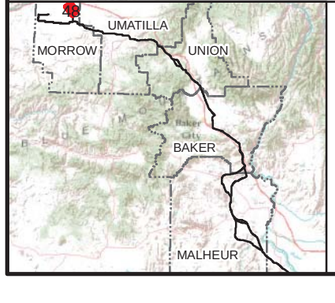

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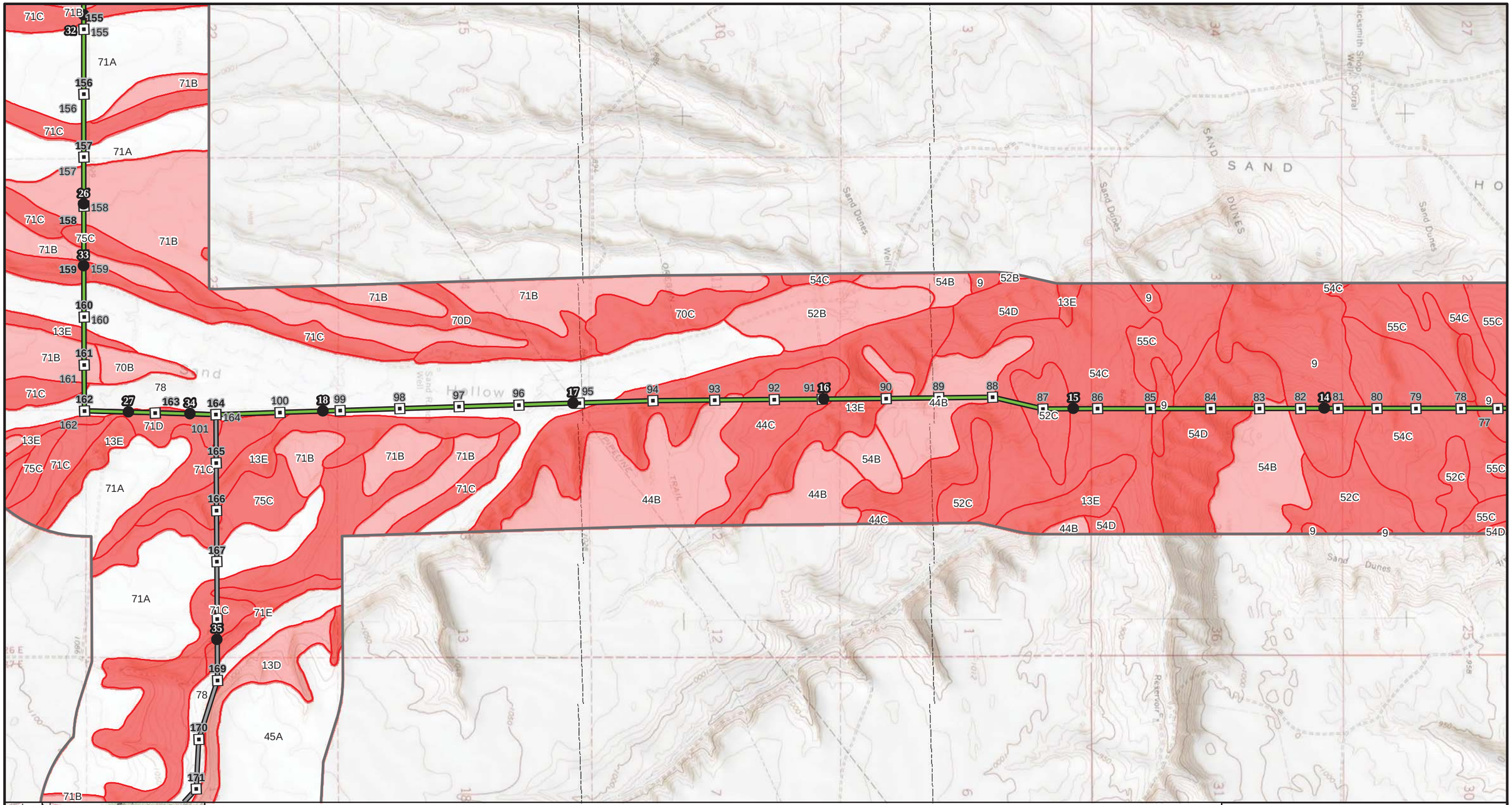

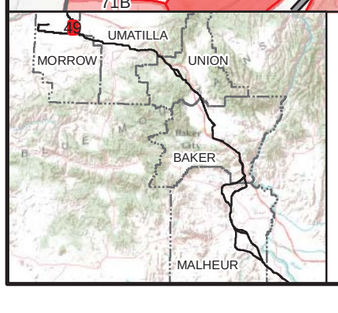

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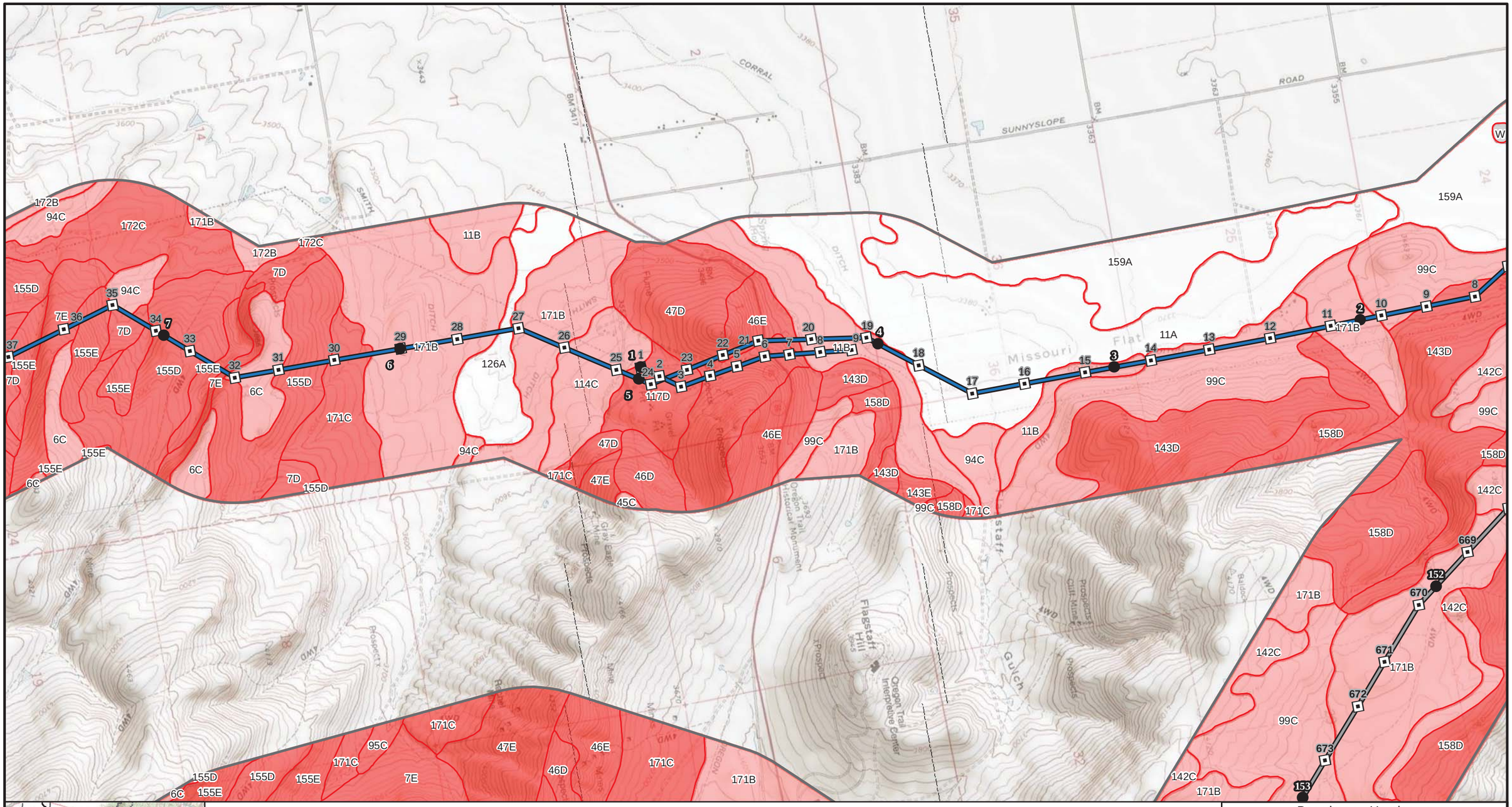

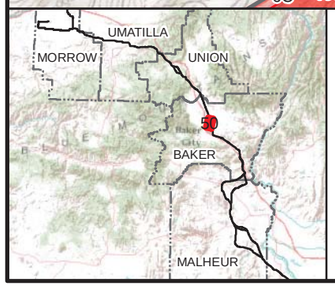

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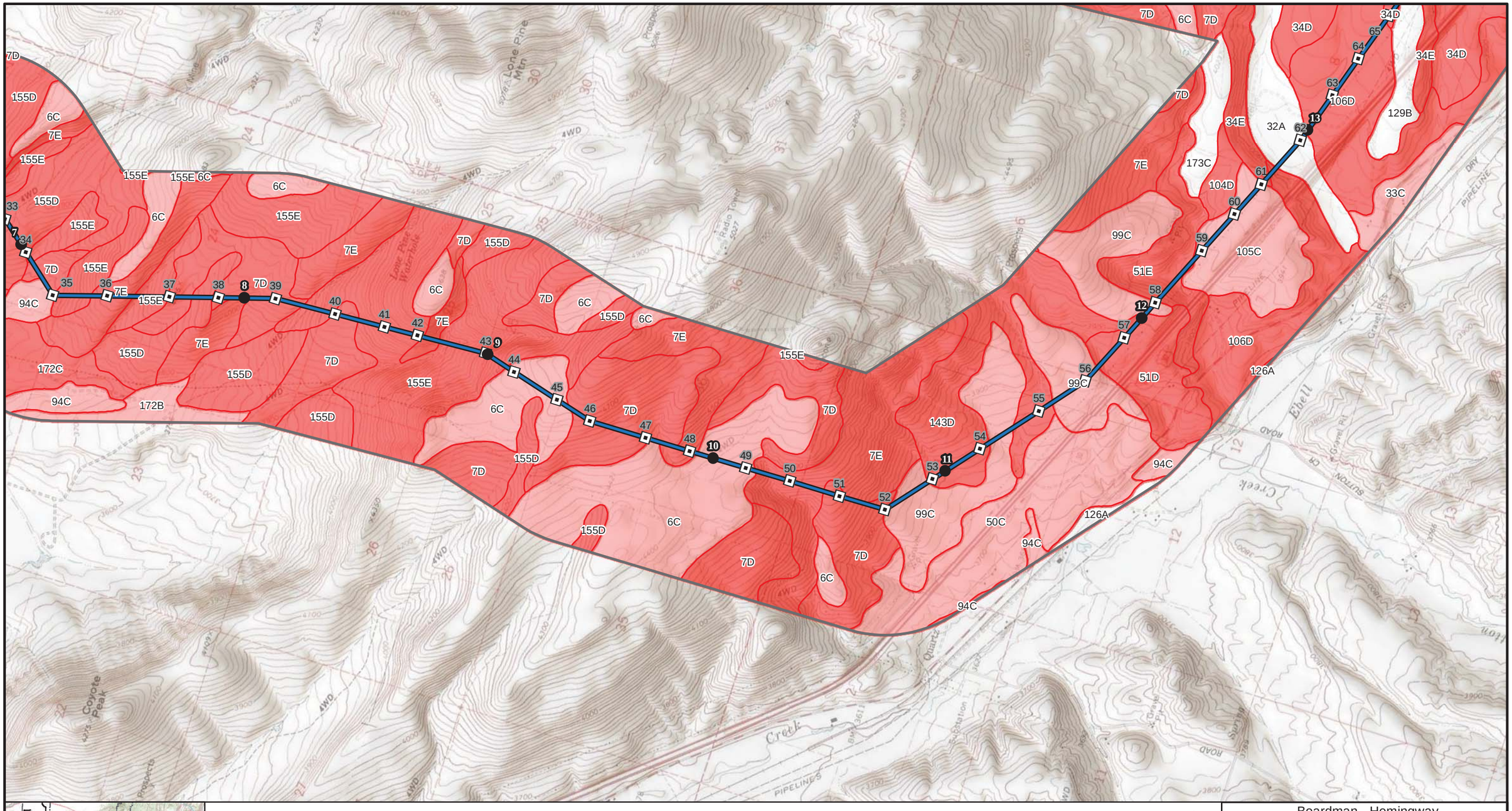

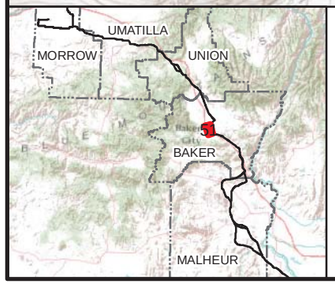

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