

**Table S1**

Isolate information and VNTR-10 profiles for 371 *B. abortus* isolates included in the analysis.

NVSL Accession	NVSL Case #	Animal species	State	Bacterial ID	Hoof 1	Hoof 3	Hoof 4	Hoof 8	VNTR 16	VNTR 17	VNTR 2	VNTR 21	VNTR 5A	VNTR 5B
78-1413			FL	B. abortus bv. 1	8	3	4	2	3	1	6	2	7	4
86-2288		cattle	ID	B. abortus bv. 1	3	3	7	2	3	1	5	2	6	7
370006	05-0900	bison	WY	B. abortus bv. 1	3	3	8	2	4	1	6	2	5	9
09-032080	B10-0118	elk	MT	B. abortus bv. 1	6	3	7	2	4	1	6	2	5	9
553663	08-0386	bison	MT	B. abortus bv. 1	7	3	6	2	4	1	6	2	5	10
560172	08-0860	bison	WY	B. abortus bv. 1	9	3	6	2	4	1	6	2	5	10
561953	08-0926	bison	MT	B. abortus bv. 1	6	3	6	2	4	1	6	2	5	12
560167	08-0833	bison	WY	B. abortus bv. 1	8	3	11	2	4	1	6	2	5	5
560760	08-0871	bison	WY	B. abortus bv. 1	13	3	11	2	4	1	6	2	5	5
563917	08-1143	bison	WY	B. abortus bv. 1	13	3	9	2	4	1	6	2	5	5
557006	08-0659	bison	WY	B. abortus bv. 1	14	3	13	2	4	1	6	2	5	5
561953	08-0934	bison	MT	B. abortus bv. 1	11	3	12	2	4	1	6	2	5	7
561953	08-0932	bison	MT	B. abortus bv. 1	7	3	4	2	4	1	5	2	5	13
565748	08-1189	bison	WY	B. abortus bv. 1	7	3	5	2	4	1	5	2	5	11
553707	08-0404	bison	MT	B. abortus bv. 1	7	3	4	2	4	1	6	2	5	11
553707	08-0406	bison	MT	B. abortus bv. 1	7	3	4	2	4	1	6	2	5	11
561953	08-0922	bison	MT	B. abortus bv. 1	7	3	4	2	4	1	6	2	5	11
561953	08-0925	bison	MT	B. abortus bv. 1	7	3	4	2	4	1	6	2	5	11
561953	08-0925	bison	MT	B. abortus bv. 1	7	3	4	2	4	1	6	2	5	11
561953	08-0925	bison	MT	B. abortus bv. 1	7	3	4	2	4	1	6	2	5	11
561953	08-0931	bison	MT	B. abortus bv. 1	7	3	4	2	4	1	6	2	5	11
561953	08-0933	bison	WY	B. abortus bv. 1	7	3	4	2	4	1	6	2	5	11
563110	08-1080	bison	MT	B. abortus bv. 1	7	3	4	2	4	1	6	2	5	11
563912	08-1120	bison	MT	B. abortus bv. 1	7	3	4	2	4	1	6	2	5	11
567486	08-1220	bison	WY	B. abortus bv. 1	7	3	4	2	4	1	6	2	5	11
559510	08-0783	bison	MT	B. abortus bv. 1	7	3	4	2	4	1	7	2	5	11
559510	08-0795	bison	MT	B. abortus bv. 1	7	3	4	2	4	1	5	2	5	11
562880	08-0969	bison	WY	B. abortus bv. 1	8	3	7	2	4	1	6	2	5	11
562880	08-0970	bison	WY	B. abortus bv. 1	8	3	7	2	4	1	6	2	5	11
561953	08-0922	bison	MT	B. abortus bv. 1	8	3	4	2	4	1	6	2	5	11
563912	08-1122	bison	MT	B. abortus bv. 1	8	3	4	2	4	1	6	2	5	11
170815	02-0201	bison	MT	B. abortus bv. 1	2	3	7	2	4	1	6	2	5	6
382426	05-1143	bison	MT	B. abortus bv. 1	2	3	3	2	4	1	6	2	5	11
563907	08-1108	bison	WY	B. abortus bv. 1	14	3	9	2	4	1	5	2	5	8
563912	08-1119	bison	MT	B. abortus bv. 1	14	3	9	2	4	1	5	2	5	8
563912	08-1121	bison	MT	B. abortus bv. 1	14	3	9	2	4	1	5	2	5	8
557001	08-0638	bison	WY	B. abortus bv. 1	9	3	9	2	4	1	5	2	5	8
11-045811	B11-0604	cattle	MT	B. abortus bv. 1	6	3	9	2	4	1	5	2	5	5
372194	05-0999	bison	WY	B. abortus bv. 1	11	3	9	2	4	1	5	2	5	6
555145	08-041651	cattle	MT	B. abortus bv. 1	7	3	9	2	4	1	5	2	5	7
10-001635	B10-0529	elk	MT	B. abortus bv. 1	7	3	9	2	4	1	6	2	5	7
557002	08-0647	bison	WY	B. abortus bv. 1	12	3	8	2	4	1	5	2	5	7
09-033525	B10-0273	elk	MT	B. abortus bv. 1	9	3	8	2	4	1	5	2	5	7
560760	08-0869	bison	WY	B. abortus bv. 1	11	3	6	2	4	1	5	2	5	5
563917	08-1142	bison	WY	B. abortus bv. 1	13	3	6	2	4	1	5	2	5	5
560166	08-0829	bison	WY	B. abortus bv. 1	8	3	6	2	4	1	5	2	5	12
561953	08-0921	bison	WY	B. abortus bv. 1	8	3	6	2	4	1	5	2	5	12
556686	08-0482	bison	WY	B. abortus bv. 1	8	3	6	2	4	1	5	2	5	11
565740	08-1167	bison	WY	B. abortus bv. 1	8	3	6	2	4	1	5	2	5	11
553674	08-0392	bison	MT	B. abortus bv. 1	8	3	6	2	4	1	5	2	5	5
10-023707	B10-0973	bison	MT	B. abortus bv. 1	7	3	6	2	4	1	5	2	5	4

10-023707	B10-0975	bison	MT	B. abortus bv. 1	7	3	6	2	4	1	5	2	5	4
553656	08-0382	bison	MT	B. abortus bv. 1	5	3	6	2	4	1	5	2	5	9
563918	08-1147	bison	WY	B. abortus bv. 1	5	3	6	2	4	1	5	2	5	9
565747	08-1188	bison	WY	B. abortus bv. 1	5	3	4	2	4	1	5	2	5	9
562882	08-0977	bison	WY	B. abortus bv. 1	13	3	6	2	4	1	5	2	5	9
563910	08-1116	bison	WY	B. abortus bv. 1	11	3	6	2	4	1	5	2	5	8
567484	08-1212	bison	WY	B. abortus bv. 1	11	3	6	2	4	1	5	2	5	8
557002	08-0645	bison	WY	B. abortus bv. 1	5	3	6	2	4	1	5	2	5	8
563110	08-1019	bison	MT	B. abortus bv. 1	5	3	6	2	4	1	5	2	5	8
563905	08-1101	bison	MT	B. abortus bv. 1	5	3	6	2	4	1	5	2	5	8
563912	08-1124	bison	MT	B. abortus bv. 1	5	3	6	2	4	1	5	2	5	8
563916	08-1138	bison	WY	B. abortus bv. 1	5	3	6	2	4	1	5	2	5	8
560761	08-0876	bison	WY	B. abortus bv. 1	5	3	6	2	4	1	5	2	5	11
562877	08-0951 S2	bison	WY	B. abortus bv. 1	12	3	6	2	4	1	5	2	5	11
562877	08-0952 S2	bison	WY	B. abortus bv. 1	12	3	6	2	4	1	5	2	5	10
562880	08-0966	bison	WY	B. abortus bv. 1	12	3	7	2	4	1	5	2	5	11
496198	07-0266	cattle	MT	B. abortus bv. 1	5	3	7	2	4	1	5	2	5	5
11-020659	B11-0480	bison	MT	B. abortus bv. 1	8	3	7	2	4	1	5	2	5	5
560164	08-0817	bison	WY	B. abortus bv. 1	8	3	7	2	4	1	5	2	5	10
560170	08-0848	bison	WY	B. abortus bv. 1	8	3	7	2	4	1	5	2	5	10
560172	08-0857	bison	WY	B. abortus bv. 1	8	3	7	2	4	1	5	2	5	10
560172	08-0861	bison	WY	B. abortus bv. 1	8	3	7	2	4	1	5	2	5	10
562880	08-0966	bison	WY	B. abortus bv. 1	12	3	7	2	4	1	5	2	5	10
562877	08-0953	bison	WY	B. abortus bv. 1	11	3	7	2	4	1	5	2	5	9
567492	08-1241	bison	WY	B. abortus bv. 1	11	3	7	2	4	1	5	2	5	3
555997	08-0447	bison	WY	B. abortus bv. 1	12	3	11	2	4	1	5	2	5	5
567490	08-1234	bison	WY	B. abortus bv. 1	4	3	10	2	4	1	5	2	5	5
565751	08-1205	bison	WY	B. abortus bv. 1	14	3	10	2	4	1	5	2	5	9
557004	08-0656	bison	WY	B. abortus bv. 1	8	3	5	2	4	1	4	2	5	8
588409	09-0286	elk	MT	B. abortus bv. 1	8	3	8	2	4	1	4	2	5	5
561953	08-0930	bison	MT	B. abortus bv. 1	8	3	6	2	4	1	4	2	5	7
561953	08-0930	bison	MT	B. abortus bv. 1	7	3	6	2	4	1	4	2	5	7
561953	08-0928	bison	MT	B. abortus bv. 1	12	3	3	2	4	1	4	2	5	9
553670	08-0389	bison	MT	B. abortus bv. 1	10	3	7	2	4	1	4	2	5	11
588409	09-0286	elk	MT	B. abortus bv. 1	9	3	7	2	4	1	4	2	5	5
11-019422	B11-0469	bison	MT	B. abortus bv. 1	9	3	7	2	4	1	4	2	3	10
371106	05-0911	bison	MT	B. abortus bv. 1	8	3	7	2	4	1	4	1	5	7
372442	05-1008	bison	WY	B. abortus bv. 1	9	3	7	2	4	1	4	1	5	6
165620	02-0137	bison	MT	B. abortus bv. 1	7	3	7	2	4	1	7	2	5	12
85-26315		bison	MT	B. abortus bv. 1	13	3	7	2	4	1	7	2	5	10
588409	09-0276	elk	MT	B. abortus bv. 1	10	4	7	2	4	1	7	2	5	10
432543	06-0402	bison	WY	B. abortus bv. 1	8	3	9	2	4	1	7	2	5	11
565744	08-1182	bison	WY	B. abortus bv. 1	8	3	5	2	4	1	7	2	6	11
368292	05-0822	bison	WY	B. abortus bv. 1	7	3	8	2	4	2	5	2	5	9
372194	05-1001	bison	WY	B. abortus bv. 1	7	4	6	2	4	1	4	2	5	9
560170	08-0849	bison	WY	B. abortus bv. 1	10	4	6	2	4	1	7	2	5	9
567494	08-1247	bison	WY	B. abortus bv. 1	10	4	6	2	4	1	4	2	5	3
567490	08-1232	bison	WY	B. abortus bv. 1	9	4	6	2	4	1	7	2	5	11
567490	08-1232	bison	WY	B. abortus bv. 1	9	4	6	2	4	1	6	2	5	11
553675	08-0393	bison	MT	B. abortus bv. 1	14	4	6	2	4	1	5	2	5	10
560169	08-0843	bison	WY	B. abortus bv. 1	4	4	11	2	4	1	5	2	5	10
562881	08-0973	bison	WY	B. abortus bv. 1	9	4	7	2	4	1	5	2	5	10
565739	08-1160	bison	WY	B. abortus bv. 1	9	4	7	2	4	1	5	2	5	10
539969	08-0151	elk	MT	B. abortus bv. 1	9	4	8	2	4	1	5	2	5	10
554884	08-0410	bison	MT	B. abortus bv. 1	9	4	8	2	4	1	6	2	5	10
391747	05-1282	bison	MT	B. abortus bv. 1	9	4	5	2	4	1	5	1	5	10
563908	08-1113	bison	WY	B. abortus bv. 1	12	4	7	2	4	1	6	2	5	11
602350	09-0553	bison	MT	B. abortus bv. 1	12	6	7	2	4	1	6	2	5	4
560769	08-0913	bison	WY	B. abortus bv. 1	10	5	7	2	4	1	6	2	5	5

562878	08-0960	bison	WY	B. abortus bv. 1	10	5	7	2	4	1	6	2	5	5
556000	08-0459	bison	WY	B. abortus bv. 1	10	5	7	2	4	1	3	2	5	5
556001	08-0463	bison	WY	B. abortus bv. 1	10	5	7	2	4	1	2	2	5	5
560769	08-0913	bison	WY	B. abortus bv. 1	9	5	7	2	4	1	6	2	5	5
553658	08-0383	bison	MT	B. abortus bv. 1	11	5	6	2	4	1	6	2	5	8
555997	08-0445	bison	WY	B. abortus bv. 1	7	5	8	2	4	1	7	2	6	4
243201		bison	FL	B. abortus bv. 1	5	5	8	2	4	1	7	2	6	4
561953	08-0924	bison	MT	B. abortus bv. 1	12	5	8	2	4	1	6	2	6	4
567486	08-1221	bison	WY	B. abortus bv. 1	12	5	8	2	4	1	6	2	6	4
563908	08-1111	bison	WY	B. abortus bv. 1	13	5	8	2	4	1	6	2	6	4
378788	05-1132	bison	MT	B. abortus bv. 1	6	6	8	2	4	1	8	2	6	4
539969	08-0187	elk	MT	B. abortus bv. 1	7	5	8	2	4	1	8	2	7	5
562887	08-0996	bison	WY	B. abortus bv. 1	7	3	8	2	4	1	5	2	6	11
567488	08-1229	bison	WY	B. abortus bv. 1	4	3	8	2	4	1	5	2	6	11
561953	08-0929	bison	MT	B. abortus bv. 1	4	3	8	2	4	1	5	2	6	10
567488	08-1229	bison	WY	B. abortus bv. 1	4	3	8	2	4	1	5	2	6	10
555415	08-0423	bison	MT	B. abortus bv. 1	5	3	8	2	4	1	5	2	6	10
553671	08-0390	bison	MT	B. abortus bv. 1	6	3	8	2	4	1	5	2	6	12
557002	08-0644	bison	WY	B. abortus bv. 1	6	4	8	2	4	1	5	2	6	13
562885	08-0988	bison	WY	B. abortus bv. 1	10	3	8	2	4	1	7	2	6	8
553707	08-0405	bison	MT	B. abortus bv. 1	8	3	8	2	4	1	6	2	6	12
563908	08-1112	bison	WY	B. abortus bv. 1	8	3	8	2	4	1	6	2	6	12
567648	08-1256	bison	MT	B. abortus bv. 1	8	3	9	2	4	1	6	2	6	12
565739	08-1161	bison	WY	B. abortus bv. 1	7	3	9	2	4	1	6	2	6	12
560167	08-0832	bison	WY	B. abortus bv. 1	10	3	5	2	4	1	6	2	6	12
560166	08-0830	bison	WY	B. abortus bv. 1	8	3	8	2	4	1	8	2	6	14
560166	08-0831	bison	WY	B. abortus bv. 1	9	3	4	2	4	1	6	2	4	3
560765	08-0893	bison	WY	B. abortus bv. 1	9	3	4	2	4	1	6	2	4	3
561953	08-0923	bison	MT	B. abortus bv. 1	9	3	4	2	4	1	6	2	4	3
563907	08-1107	bison	WY	B. abortus bv. 1	9	3	4	2	4	1	6	2	4	3
567492	08-1240	bison	WY	B. abortus bv. 1	9	3	4	2	4	1	6	2	4	3
556000	08-0462	bison	WY	B. abortus bv. 1	10	3	4	2	4	1	6	2	4	3
560164	08-0820	bison	WY	B. abortus bv. 1	10	3	4	2	4	1	6	2	4	3
560165	08-0822	bison	WY	B. abortus bv. 1	10	3	4	2	4	1	6	2	4	3
560165	08-0824	bison	WY	B. abortus bv. 1	10	3	4	2	4	1	6	2	4	3
560165	08-0826	bison	WY	B. abortus bv. 1	10	3	4	2	4	1	6	2	4	3
560167	08-0834	bison	WY	B. abortus bv. 1	10	3	4	2	4	1	6	2	4	3
560167	08-0835	bison	WY	B. abortus bv. 1	10	3	4	2	4	1	6	2	4	3
560168	08-0837	bison	WY	B. abortus bv. 1	10	3	4	2	4	1	6	2	4	3
560171	08-0853	bison	WY	B. abortus bv. 1	10	3	4	2	4	1	6	2	4	3
560173	08-0863	bison	WY	B. abortus bv. 1	10	3	4	2	4	1	6	2	4	3
560173	08-0864	bison	WY	B. abortus bv. 1	10	3	4	2	4	1	6	2	4	3
560173	08-0865	bison	WY	B. abortus bv. 1	10	3	4	2	4	1	6	2	4	3
561953	08-0923	bison	MT	B. abortus bv. 1	10	3	4	2	4	1	6	2	4	3
563902	08-1095	bison	WY	B. abortus bv. 1	10	3	4	2	4	1	6	2	4	3
571693	08-1354	bison	MT	B. abortus bv. 1	10	3	4	2	4	1	6	2	4	3
563912	08-1123	bison	MT	B. abortus bv. 1	9	3	4	2	4	1	5	2	4	3
11-018123	B11-0442	bison	MT	B. abortus bv. 1	7	3	5	2	4	1	6	2	4	3
11-018123	B11-0442	bison	MT	B. abortus bv. 1	7	3	5	2	4	1	6	2	4	3
10-008689	B10-0584	elk	MT	B. abortus bv. 1	10	3	5	2	4	1	5	2	4	7
563910	08-1115	bison	WY	B. abortus bv. 1	9	3	12	2	4	1	4	2	4	8
567488	08-1228	bison	WY	B. abortus bv. 1	9	3	12	2	4	1	4	2	4	8
10-008689	B10-0584	elk	MT	B. abortus bv. 1	9	3	5	2	4	1	5	2	4	8
90-16432		cattle	MS	B. abortus bv. 1	3	8	3	2	4	1	4	2	4	4
90-23369		human		B. abortus bv. 2	2	8	3	2	4	1	4	2	5	4
562879	08-0962	bison	WY	B. abortus bv. 1	7	3	3	2	4	1	6	2	4	4
562879	08-0962	bison	WY	B. abortus bv. 1	4	3	3	2	4	1	6	2	4	4
426555	06-0281	bison	MT	B. abortus bv. 1	6	3	3	2	4	1	5	2	4	4
436720	06-0429	bison	MT	B. abortus bv. 1	6	3	3	2	4	1	5	2	4	4

453922	06-0887	bison	MT	B. abortus bv. 1	6	3	3	2	4	1	5	2	4	4
419836	06-0168	bison	MT	B. abortus bv. 1	7	3	3	2	4	1	5	2	4	4
426558	06-0279	bison	MT	B. abortus bv. 1	7	3	3	2	4	1	5	2	4	4
555999	08-0456	bison	WY	B. abortus bv. 1	7	3	3	2	4	1	5	2	4	4
392810	05-1285	cattle	TX	B. abortus bv. 1	4	5	4	2	4	1	7	2	4	5
392810	05-1286	cattle	TX	B. abortus bv. 1	4	5	4	2	4	1	9	2	4	5
557690	08-0665	cattle	WY	B. abortus bv. 4	2	7	3	2	4	1	3	2	4	9
557690	08-0666	cattle	WY	B. abortus bv. 4	2	7	3	2	4	1	3	2	4	9
575556	09-0009	cattle	WY	B. abortus bv.4	2	7	3	2	4	1	3	2	4	9
	00-0670	elk	ID	B. abortus bv. 1	2	7	3	2	4	1	3	2	4	7
	00-0671	elk	ID	B. abortus bv. 4	2	7	3	2	4	1	3	2	4	7
	00-0672	elk	ID	B. abortus bv. 4	2	7	3	2	4	1	3	2	4	7
	00-0673	elk	ID	B. abortus bv. 4	2	7	3	2	4	1	3	2	4	7
	00-0674	elk	ID	B. abortus bv. 4	2	7	3	2	4	1	3	2	4	7
	00-0675	elk	ID	B. abortus bv. 4	2	7	3	2	4	1	3	2	4	7
	00-0676	elk	ID	B. abortus bv. 4	2	7	3	2	4	1	3	2	4	7
51837	00-0677	elk	ID	B. abortus bv. 4	2	7	3	2	4	1	3	2	4	7
	00-0678	elk	ID	B. abortus bv. 4	2	7	3	2	4	1	3	2	4	7
	00-0679	elk	ID	B. abortus bv. 4	2	7	3	2	4	1	3	2	4	7
300438	04-0196	elk	ID	B. abortus bv. 4	2	7	3	2	4	1	3	2	4	7
	00-0669	elk	ID	B. abortus bv. 1	2	7	3	2	4	1	3	2	4	8
575556	09-0005	elk	WY	B. abortus bv. 4	2	7	3	2	4	1	3	2	4	8
10-061994	B11-0144	elk	WY	B. abortus bv. 1	2	7	3	2	4	1	3	2	4	8
10-061994	B11-0146	elk	WY	B. abortus bv. 4	2	7	3	2	4	1	3	2	4	8
10-061994	B11-0159	elk	WY	B. abortus bv. 1	2	7	3	2	4	1	3	2	4	4
51837	00-0668	elk	ID	B. abortus bv. 1	2	8	3	2	4	1	3	2	4	7
180373	02-0246	elk	ID	B. abortus bv. 4	2	7	3	2	4	1	3	2	3	7
10-061994	B11-0150	elk	WY	B. abortus bv. 1	2	6	3	2	4	1	3	2	4	7
10-061994	B11-0161	elk	WY	B. abortus bv. 4	2	6	3	2	4	1	3	2	4	7
342040	05-0022	cattle	WY	B. abortus bv. 4	2	6	3	2	4	1	3	2	4	6
365387	05-0756	elk	ID	B. abortus bv. 4	2	6	3	2	4	1	3	2	4	6
365387	05-0757	elk	ID	B. abortus bv. 4	2	6	3	2	4	1	3	2	4	6
575555	09-0004	elk	WY	B. abortus bv. 4	2	6	3	2	4	1	3	2	4	6
575556	09-0006	elk	WY	B. abortus bv. 1	2	6	3	2	4	1	3	2	4	6
348993	05-0338	cattle	WY	B. abortus bv. 4	2	7	3	2	4	1	3	0	4	6
10-061994	B11-0153	elk	WY	B. abortus bv. 1 / bv 4 ?	2	7	3	2	4	1	4	2	4	3
10-061994	B11-0154	elk	WY	B. abortus bv. 1	2	7	3	2	4	1	4	2	4	5
10-061994	B11-0148	elk	WY	B. abortus bv. 1, bv 4 ?	2	7	3	2	4	1	4	2	5	6
562885	08-0986	bison	WY	B. abortus bv. 1	2	7	5	2	4	1	3	2	4	3
22062	98-0616	cattle	TX	B. abortus bv. 1	2	4	5	2	4	1	3	2	4	3
563910	08-1118	bison	WY	B. abortus bv. 1	2	8	5	2	4	1	3	2	4	3
562877	08-0955	bison	WY	B. abortus bv. 1	2	8	4	2	4	1	3	2	4	3
563905	08-1103	bison	MT	B. abortus bv. 1	2	8	4	2	4	1	3	2	4	3
565740	08-1165	bison	WY	B. abortus bv. 1	2	8	4	2	4	1	3	2	4	3
565744	08-1180	bison	WY	B. abortus bv. 1	2	8	4	2	4	1	3	2	4	3
555996	08-0440	bison	WY	B. abortus bv. 1	2	7	4	2	4	1	3	2	4	3
560172	08-0859	bison	WY	B. abortus bv. 1	2	7	4	2	4	1	3	2	4	3
561953	08-0927	bison	MT	B. abortus bv. 1	2	7	4	2	4	1	3	2	4	3
563907	08-1106	bison	WY	B. abortus bv. 1	2	7	4	2	4	1	3	2	4	3
563907	08-1106	bison	WY	B. abortus bv. 1	2	6	4	2	4	1	3	2	4	3
22062	98-0613	cattle	TX	B. abortus bv. 1	2	5	6	2	4	1	3	2	4	3
22062	98-0618	cattle	TX	B. abortus bv. 1	2	5	6	2	4	1	3	2	4	3
22062	98-0612	cattle	TX	B. abortus bv. 1	2	3	6	2	4	1	3	2	4	3
22062	98-0614	cattle	TX	B. abortus bv. 1	2	6	6	2	4	1	3	2	4	3
22062	98-0615	cattle	TX	B. abortus bv. 1	2	8	6	2	4	1	3	2	4	3
22062	98-0617	cattle	TX	B. abortus bv. 1	2	3	7	2	4	1	3	2	4	2
354997	05-0444	cattle	TX	B. abortus bv. 1	2	6	4	2	4	1	5	2	4	11
355805	05-0447	cattle	TX	B. abortus bv. 1	2	6	4	2	4	1	5	2	4	5
557004	08-0657	bison	WY	B. abortus bv. 1	2	6	4	2	4	1	3	2	4	4

20370	98-0559	cattle	TX	B. abortus bv. 1	10	3	5	2	3	1	3	2	4	8
20370	98-0562	cattle	TX	B. abortus bv. 1	12	3	5	2	3	1	3	2	4	8
20370	98-0560	cattle	TX	B. abortus bv. 1	12	3	5	2	3	1	3	2	4	6
20370	98-0564	cattle	TX	B. abortus bv. 1	12	3	5	2	3	1	3	2	4	6
20370	98-0561	cattle	TX	B. abortus bv. 1	13	3	5	2	3	1	3	2	4	6
20370	98-0563	cattle	TX	B. abortus bv. 1	11	3	6	2	3	1	3	2	4	6
561953	08-0924	bison	MT	B. abortus bv. 1	12	5	8	2	3	1	3	2	4	3
30291	99-0984	cattle	TX	B. abortus bv. 1	8	5	5	2	3	1	3	2	5	7
80-10090		bison	WI	B. abortus bv. 1 atypical	6	5	2	2	4	1	2	2	6	3
90-14734		cattle	NE	B. abortus bv. 1 atypical	5	5	2	2	4	1	2	2	6	3
89-12292		cattle	TX	B. abortus bv. 1	4	5	2	2	4	1	2	2	6	3
11-012117	B11-0280	bison	MT	B. abortus RB51	5	4	2	2	4	1	2	2	6	3
	RB51			B. abortus RB51	5	4	2	2	4	1	2	2	6	3
243781	03-0072	elk	ID	B. abortus bv. 1, strain 2308	6	4	2	2	4	1	2	2	6	3
586532	09-0269	cattle	TX	B. abortus RB51	7	4	4	2	4	1	2	2	6	3
471330	07-0062	cattle	TX	B. abortus Strain 19	6	4	2	2	4	1	2	2	5	7
82-15556		reindeer	AK	B. abortus bv. 1	6	7	2	2	4	1	2	2	5	3
436983	06-0513	cattle	TX	B. abortus Strain 19	5	4	2	2	4	1	2	2	4	6
10-029872	B10-1032	cattle	TX	B. abortus Strain 19	5	4	2	2	4	1	2	2	4	6
11-000244	B11-0194	cattle	TX	B. abortus Strain 19	5	4	2	2	4	1	2	2	4	6
451292	06-0861 A	cattle	TX	B. abortus strain 19	7	4	2	2	4	1	2	2	4	9
512872	07-0503	cattle	TX	B. abortus Strain 19	7	4	2	2	4	1	2	2	4	9
441658	06-0537	cattle	TX	B. abortus Strain 19	8	4	2	2	4	1	2	2	4	9
451292	06-0861 B	cattle	TX	B. abortus strain 19	8	4	2	2	4	1	2	2	4	9
338938	05-0012	cattle	TX	B. abortus Strain 19	6	4	2	2	4	1	2	2	4	5
396213	05-1317	cattle	TX	B. abortus Strain 19	6	4	2	2	4	1	2	2	4	5
405615	06-0025	cattle	TX	B. abortus Strain 19	6	7	2	2	4	1	2	2	4	5
449219	06-0763	cattle	TX	B. abortus Strain 19	9	4	2	2	4	1	2	2	4	5
428657	06-0287	cattle	TX	B. abortus Strain 19	4	4	2	2	4	1	2	2	4	5
87-47722		cattle	SD	B. abortus bv. 1	4	8	2	2	4	1	2	2	4	5
11-004685	B11-0204	cattle	TX	B. abortus bv. 1	8	5	2	2	5	1	2	2	4	6
11-008856	B11-0239	cattle	TX	B. abortus bv. 1	8	5	2	2	5	1	2	2	4	6
11-008856	B11-0240	cattle	TX	B. abortus bv. 1	8	5	2	2	5	1	2	2	4	6
11-003420	B11-0202	cattle	TX	B. abortus bv. 1	8	5	2	2	5	1	2	2	4	7
11-006383	B11-0206	cattle	TX	B. abortus bv. 1	8	5	2	2	5	1	2	2	4	4
11-023571	B11-0492	pig	TX	B. abortus bv. 1	10	5	2	2	5	1	2	2	4	4
589401	09-0328	elk	MT	B. abortus bv. 1	2	4	5	2	3	1	5	2	3	10
11-020278	B11-0473	bison	MT	B. abortus bv. 1	2	4	5	2	3	1	4	2	3	10
10-061623	B11-0140	elk	WY	B. abortus bv. 1	2	4	5	2	3	1	4	2	3	9
11-011567	B11-0264	elk	WY	B. abortus bv. 1	2	4	6	2	3	1	4	2	3	5
09-032078	B10-0091	elk	MT	B. abortus bv. 1	2	4	4	2	3	1	4	2	3	11
10-053081	B11-0011	bison	MT	B. abortus bv. 1	2	4	4	2	3	1	4	2	3	11
596921	09-0443	elk	MT	B. abortus bv. 1	2	4	4	2	3	1	4	2	3	4
10-001635	B10-0514	elk	MT	B. abortus bv. 1	2	4	4	2	3	1	4	2	3	9
10-061994	B11-0143	elk	WY	B. abortus bv. 1, bv 4 ?	2	4	4	2	3	1	4	2	4	4
370796	05-0908	elk	MT	B. abortus bv. 1	2	4	4	2	3	1	5	2	3	8
09-033523	B10-0252	elk	MT	B. abortus bv. 1	2	4	4	2	3	1	7	2	3	8
10-008688	B10-0566	elk	MT	B. abortus bv. 1	2	4	4	2	3	1	7	2	3	13
90-14725		cattle	OK	B. abortus bv. 2	2	4	4	2	3	2	5	2	3	4
11-011567	B11-0275	elk	WY	B. abortus bv. 1	2	4	4	2	3	1	3	2	4	6
11-011567	B11-0276	elk	WY	B. abortus bv. 1	2	4	4	2	3	1	3	2	4	6
324739	04-0418	cattle	SD	B. abortus bv. 1	2	4	6	2	3	1	5	2	4	4
163343	02-0123	elk	ID	B. abortus bv. 1	2	3	13	2	3	1	5	2	3	8
163343	02-0124	elk	ID	B. abortus bv. 1	2	3	13	2	3	1	5	2	3	8
179599	02-0237	cattle	ID	B. abortus bv. 1	2	3	10	2	3	1	5	2	3	8
179599	02-0239	cattle	ID	B. abortus bv. 1	2	3	9	2	3	1	5	2	3	8
179599	02-0236	cattle	ID	B. abortus bv. 1	2	3	10	2	3	1	5	2	3	9
179599	02-0242	cattle	ID	B. abortus bv. 1	2	3	10	2	3	1	5	2	3	9
179599	02-0235	cattle	ID	B. abortus bv. 1	2	3	4	2	3	1	5	2	3	9

179599	02-0241	cattle	ID	B. abortus bv. 1	2	3	6	2	3	1	5	2	3	9
84-24646	84-24646	bison	SD	B. abortus bv. 1	2	8	2	2	3	1	5	2	3	3
94-33777	94-1313	llama		B. abortus bv. 1	2	8	2	2	3	1	5	2	3	3
09-033518	B10-0203	elk	MT	B. abortus bv. 1	2	4	3	2	3	1	3	2	4	3
09-033531	B10-0325	elk	MT	B. abortus bv. 1	2	4	3	2	3	1	3	2	4	3
588409	09-0298	elk	MT	B. abortus bv. 1	2	9	3	2	3	1	3	2	4	3
10-061994	B11-0142	elk	WY	B. abortus bv. 1, bv 4 ?	2	9	3	2	3	1	3	2	4	3
339944	05-0014	elk	WY	B. abortus bv. 4	2	8	3	2	3	1	3	2	4	3
11-011567	B11-0261	bison	WY	B. abortus bv. 1	2	3	3	2	3	1	3	2	4	3
11-011567	B11-0252	bison	WY	B. abortus bv. 1	2	3	3	2	3	1	4	2	4	3
11-011567	B11-0258	bison	WY	B. abortus bv. 1	2	3	3	2	3	1	4	2	4	3
11-011567	B11-0262	bison	WY	B. abortus bv. 1	2	3	3	2	3	1	4	2	4	3
10-061994	B11-0145	elk	WY	B. abortus bv. 1, bv 4 ?	2	4	3	2	3	1	4	2	4	3
11-011567	B11-0250	bison	WY	B. abortus bv. 1	2	4	3	2	3	1	4	2	4	3
11-011567	B11-0251	bison	WY	B. abortus bv. 1	2	4	3	2	3	1	4	2	4	3
11-011567	B11-0253	bison	WY	B. abortus bv. 1	2	4	3	2	3	1	4	2	4	3
11-011567	B11-0254	bison	WY	B. abortus bv. 1	2	4	3	2	3	1	4	2	4	3
11-011567	B11-0255	bison	WY	B. abortus bv. 1	2	4	3	2	3	1	4	2	4	3
11-011567	B11-0259	bison	WY	B. abortus bv. 1	2	4	3	2	3	1	4	2	4	3
11-011567	B11-0260	bison	WY	B. abortus bv. 1	2	4	3	2	3	1	4	2	4	3
575556	09-0008	elk	WY	B. abortus bv. 1	2	4	3	2	5	1	5	2	4	3
575556	09-0007	elk	WY	B. abortus bv. 1	2	5	3	2	5	1	4	2	5	3
10-061994	B11-0160	elk	WY	B. abortus bv. 1	2	4	3	2	4	1	4	2	5	3
09-033482	B10-0173	cattle	ID	B. abortus bv. 1	2	3	3	2	3	1	3	2	3	5
09-034681	B10-0474	cattle	ID	B. abortus bv. 1	2	3	3	2	3	1	3	2	3	5
09-029070	B10-0018	cattle	ID	B. abortus bv. 1	2	4	3	2	3	1	3	2	3	4
09-030933	B10-0035	cattle	ID	B. abortus bv. 1	2	4	3	2	3	1	3	2	3	4
09-032249	B10-0141	cattle	ID	B. abortus bv. 1	2	4	3	2	3	1	3	2	3	4
09-032249	B10-0141	cattle	ID	B. abortus bv. 1	2	4	3	2	3	1	3	2	3	4
09-034536	B10-0407	cattle	ID	B. abortus bv. 1	2	4	3	2	3	1	3	2	3	4
10-011124	B10-0654	cattle	ID	B. abortus bv. 1	2	4	3	2	3	1	3	2	3	4
10-011124	B10-0655	cattle	ID	B. abortus bv. 1	2	4	3	2	3	1	3	2	3	4
10-020661	B10-0948	cattle	ID	B. abortus bv. 1	2	4	3	2	3	1	3	2	3	4
406666	06-0031	cattle	ID	B. abortus bv. 1	3	6	3	2	3	1	3	2	3	3
523179	08-0056	cattle	ID	B. abortus bv. 1	1	6	3	2	3	1	3	2	3	3
11-011567	B11-0268	elk	WY	B. abortus bv. 1	2	6	4	2	3	1	3	2	3	3
11-011567	B11-0269	elk	WY	B. abortus bv. 1	2	6	4	2	3	1	3	2	3	3
406666	06-0027	cattle	ID	B. abortus bv. 1	2	6	3	2	3	1	3	2	3	3
406666	06-0032	cattle	ID	B. abortus bv. 1	2	6	3	2	3	1	3	2	3	3
408269	06-0037	cattle	ID	B. abortus bv. 1	2	6	3	2	3	1	3	2	3	3
433600	06-0407	cattle	ID	B. abortus bv. 1	2	6	3	2	3	1	3	2	3	3
433600	06-0410	cattle	ID	B. abortus bv. 1	2	6	3	2	3	1	3	2	3	3
433600	06-0412	cattle	ID	B. abortus bv. 1	2	6	3	2	3	1	3	2	3	3
434125	06-0423	cattle	ID	B. abortus bv. 1	2	6	3	2	3	1	3	2	3	3
449688	06-0793	cattle	ID	B. abortus bv. 1	2	6	3	2	3	1	3	2	3	3
449688	06-0796	cattle	ID	B. abortus bv. 1	2	6	3	2	3	1	3	2	3	3
449688	06-0798	cattle	ID	B. abortus bv. 1	2	6	3	2	3	1	3	2	3	3
68-3396P				B. abortus bv. 4	6	3	5	2	3	1	3	2	3	2
10-061994	B11-0147	elk	WY	B. abortus bv. 1, bv 4 ?	0	3	5	2	3	1	4	2	3	4
11-011567	B11-0263	elk	WY	B. abortus bv. 1	2	3	6	2	3	1	4	2	3	4
82-029256		cattle	TN	B. abortus bv. 2 atypical	7	3	3	2	3	1	4	2	3	2
560760	08-0870	bison	WY	B. abortus bv. 1	2	5	5	2	3	1	9	2	3	4
10-054053	B11-0015	cattle	WY	B. abortus bv. 1	5	9	4	2	3	1	5	2	3	5
field isolate	B11-0038	cattle	WY	B. abortus bv. 1	5	9	4	2	3	1	5	2	3	5
11-049870	B12-0002	cattle	WY	B. abortus bv. 1	5	15	4	2	3	1	5	2	3	5
11-007611	B11-0208	cattle	WY	B. abortus bv. 1	3	7	4	2	3	1	5	2	3	5
11-008075	B11-0210	cattle	WY	B. abortus bv. 1	3	7	4	2	3	1	5	2	3	5
11-011567	B11-0273	elk	WY	B. abortus bv. 1	4	10	4	2	3	1	5	2	3	4
11-011567	B11-0274	elk	WY	B. abortus bv. 1	4	10	4	2	3	1	5	2	3	4

11-011567	B11-0265	elk	WY	B. abortus bv. 1	4	10	4	2	3	1	5	2	3	5
11-011567	B11-0266	elk	WY	B. abortus bv. 1	4	10	4	2	3	1	5	2	3	5
11-011567	B11-0267	elk	WY	B. abortus bv. 1	4	10	4	2	3	1	5	2	3	5
11-053717	B12-0025	cattle	WY	B. abortus bv. 1	4	16	4	2	3	1	5	2	3	5
10-054515	B11-0037	cattle	WY	B. abortus bv. 1	5	12	4	2	3	1	5	2	4	5
10-001635	B10-0517	elk	MT	B. abortus bv. 1	2	5	4	2	3	1	5	2	3	12
11-011567	B11-0249	bison	WY	B. abortus bv. 1	0	5	4	2	3	1	5	2	3	7
11-011567	B11-0256	bison	WY	B. abortus bv. 1	0	5	4	2	3	1	3	2	3	5
11-011567	B11-0270	elk	WY	B. abortus bv. 1	6	7	4	2	3	1	3	2	3	5
11-011567	B11-0277	elk	WY	B. abortus bv. 1	5	7	4	2	3	1	3	2	3	5
11-011567	B11-0271	elk	WY	B. abortus bv. 1	4	7	5	2	3	1	3	2	3	5
11-011567	B11-0272	elk	WY	B. abortus bv. 1	4	7	5	2	3	1	3	2	3	5
10-057783	B11-0053	bison	WY	B. abortus bv. 1	4	8	4	2	3	1	3	2	3	7
588409	09-0295	elk	MT	B. abortus bv. 1	3	5	4	2	3	1	4	2	3	6
590672	09-0354	elk	MT	B. abortus bv. 1	3	5	4	2	3	1	5	2	4	6
339944	05-0018	bison	WY	B. abortus bv. 1	1	2	4	2	3	1	6	2	3	8
339944	05-0019	bison	WY	B. abortus bv. 1	1	2	4	2	3	1	7	2	3	8
90-15217		cattle	FL	B. abortus bv. 4	5	2	4	2	3	1	6	2	3	2
10-061623	B11-0141	bison	WY	B. abortus bv. 1	0	2	4	2	3	1	8	2	3	6
11-011567	B11-0248	bison	WY	B. abortus bv. 1	0	2	4	2	3	1	8	2	3	6
11-011567	B11-0257	bison	WY	B. abortus bv. 1	0	2	4	2	3	1	9	2	3	6
372442	05-1002	bison	WY	B. abortus bv. 1	8	2	3	2	4	1	4	2	3	5
372442	05-1003	bison	WY	B. abortus bv. 1	8	2	3	2	4	1	4	2	3	5
372442	05-1005	bison	WY	B. abortus bv. 1	8	2	3	2	4	1	4	2	3	5
372442	05-1007	bison	WY	B. abortus bv. 1	6	2	3	2	4	1	4	2	3	5