



MONTANA VETERINARY DIAGNOSTIC LABORATORY

1911 WEST LINCOLN, BOZEMAN, MT 59718
P.O. Box 997, BOZEMAN, MT 59771
WEB: www.liv.mt.gov/lab

PHONE: (406) 994-4885
FAX: (406) 994-6344
EMAIL: livdiagnosticlab@mt.gov



PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 17-10788
Name/ID:
Species: American Bison
Breed: American bison
Sex: Age:
County: Park
Owner: USDA APHIS US GonaCon

FINAL REPORT 01/31/17

Accessioned: 01/12/17
Authorized by: AF

Previous Reports
01/31/17
01/31/17

SEROLOGY

Brucella abortus

Animal	FPA
Green 11	Positive
Green 12	Positive
Green 18	Negative
Green 20	Negative
Green 30	Positive
3 G17	Negative
3G08	Positive
3G14	Positive
3R20	Negative
3R22	Positive
Red33	Positive
Red35	Positive
Red37	Negative
Red40	Positive
Red50	Positive
Red64	Positive
Red67	Positive
Red71	Positive
Red72	Positive
Red73	Positive
Red74	Positive
6320	Negative
6317	Negative
6308	Negative
6R73	Negative
6322	Negative
6R35	Negative
6R71	Negative
6G20	Negative
6G11	Negative

Serum

Verified on: 01/31/17 by: AF

Serum

Verified on 01/24/17 by: AF

007893

Case No: 17-10788 - ,

<u>Animal</u>	<u>B. Abortus</u> <u>BAPA</u>
Green 11	Positive
Green 12	Positive
Green 18	Negative
Green 20	Negative
Green 30	Positive
3 G17	Negative
3G08	Positive
3G14	Positive
3R20	Negative
3R22	Positive
Red33	Positive
Red35	Negative
Red37	Negative
Red40	Positive
Red50	Positive
Red64	Positive
Red67	Positive
Red71	Positive
Red72	Positive
Red73	Positive
Red74	Positive
6320	Negative
6317	Negative
6308	Positive
6R73	Negative
6322	Negative
6R35	Negative
6R71	Negative
6G20	Negative
6G11	Negative

Serum			Verified on: 01/24/17 by: AF
<u>Animal</u>	<u>BRUCF</u>	<u>BRUCARD</u>	
Green 11	3+ 1:160	Positive	
Green 12	4+ 1:640	Positive	
Green 18	Negative @ 1:10	Negative	
Green 20	Negative @ 1:10	Negative	
Green 30	3+ 1:320	Positive	
3 G17	Negative @ 1:10	Negative	
3G08	2+ 1:10	Positive	
3G14	3+ 1:40	Positive	
3R20	1+ 1:10	Negative	
3R22	3+ 1:10	Positive	
Red33	Negative @ 1:10	Positive	
Red35	1+ 1:10	Negative	
Red37	2+ 1:10	Negative	
Red40	3+ 1:10	Positive	
Red50	3+ 1:10	Positive	
Red64	1+ 1:40	Positive	

Red67	1+ 1:80	Positive
Red71	2+ 1:10	Positive
Red72	2+ 1:10	Positive
Red73	2+ 1:80	Positive
Red74	1+ 1:10	Positive
6320	Negative @ 1:10	Negative
6317	Negative @ 1:10	Negative
6308	Negative @ 1:10	Positive
6R73	Negative @ 1:10	Negative
6322	Negative @ 1:10	Negative
6R35	Negative @ 1:10	Negative
6R71	Negative @ 1:10	Negative
6G20	Negative @ 1:10	Negative
6G11	Negative @ 1:10	Negative

007896

Control #2

OWNER	USDA APHISOS Gonalon
SUBMITTED BY	R. Clarke
DATE	1/10/17
PAGE	2 OF 2

STATE OF MONTANA
DEPT. OF LIVESTOCK DIAGNOSTIC LABORATORY DIVISION
 BOX 997 — BOZEMAN, MT 59771 — PHONE (406) 994-4885 — FAX (406) 994-6344

CONTINUATION SEROLOGY REPORT

COMPLETE SHADED AREAS ONLY

CIRCLE TEST REQUIRED — If specific test and/or standard dilution required, so indicate.						BRU	BT	ANA	PTB	IBR	BVD	BLV	LEPTOSPIROSIS - 8 SEROVARS	OTHER
TUBE NO.	IDENTIFICATION	AGE	SEX	BREED	OFF. VAC.	BRU Card	BT BPA	ANA FPA	PTB CF (1:10)	IBR 1:10/17	BVD	BLV	FPA mP values	
✓ 11	Tul 33	AD	F	Brown	U/A	Pos	Pos	Pos	N				FPA = 157.2 mP	
✓ 12	Tul 35					Neg	Neg	Pos	1+10				FPA = 30.6 mP	
✓ 13	Tul 37					Neg	Neg	Neg	2+10				FPA = 7.1 mP	
✓ 14	Tul 40					Pos	Pos	Pos	3+10				FPA = 191.3 mP	
✓ 15	Tul 50					Pos	Pos	Pos	3+10				FPA = 83.8 mP	
✓ 16	Tul 64					Pos	Pos	Pos	1+40				FPA = 151.2 mP	
✓ 17	Tul 67					Pos	Pos	Pos	1+80				FPA = 185.9 mP	
✓ 18	Tul 71					Pos	Pos	Pos	2+10				FPA = 122.5 mP	
✓ 19	Tul 72					Pos	Pos	Pos	2+10				FPA = 184.9 mP	
✓ 20	Tul 73					Pos	Pos	Pos	2+80				FPA = 114.3 mP	
✓ 21	Tul 74					Pos	Pos	Pos	1+10				FPA = 181.1 mP	
22	6320	calb	F			Neg	Neg	Neg	N				FPA = 7.2 mP	
23	6317		M			Neg	Neg	Neg	N				FPA = 0.2 mP	
24	6308		M			Pos	Pos	Neg	N				FPA = 5.2 mP	
25	6R73		F			Neg	Neg	Neg	N				FPA = 2.2 mP	
26	6322		M			Neg	Neg	Neg	N				FPA = 8.7 mP	
27	6R35		M			Neg	Neg	Neg	N				FPA = 3.1 mP	
28	6R71		M			Neg	Neg	Neg	N				FPA = 3.9 mP	
29	6620		M			Neg	Neg	Neg	N				FPA = 6.5 mP	
30	6611		F			Neg	Neg	Neg	N				FPA = 7.8 mP	

SV-2B (Rev. 10/97)

CASE NO.

17-10788

FEES:

B. Abortus Card	48.00
Brucella abortus/suis - Complement Fixation	79.50
Brucella abortus FPA	48.00
B. Abortus Bapa	48.00
Total	223.50

(This is not a bill. Do not make payments from this report.)



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PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 17-10789

Name/ID:

Species: American Bison

Breed: American bison

Sex: Age:

County: Park

Owner: USDA APHIS US GonaCon

FINAL REPORT 01/31/17

Accessioned: 01/12/17

Authorized by: AF

Previous Reports

01/31/17

01/31/17

02/01/17

SEROLOGY

Brucella abortus

Serum

Verified on: 01/31/17 by: AF

Animal

FPA

Green08	Positive
Green14	Positive
Green15	Positive
Red03	Positive
Red06	Positive
Red07	Negative
Red08	Positive
Red09	Positive
Red13	Positive
Red16	Positive
Red18	Positive
Red20	Positive
Red21	Positive
Red22	Positive
Red24	Positive
Red26	Positive
5G08	Positive
5G09	Positive
5G15	Positive
5R22	Positive
6R18	Positive
6R16	Negative
6R22	Negative
6R03	Negative
6R07	Negative
6R06	Positive
6G15	Negative
6R24	Negative
6R9	Negative
6R26	Negative
6R21	Positive

007899

6R8

Negative

Serum

Verified on 01/24/17 by: AF

Animal**B. Abortus**
BAPA

Green08	Positive
Green14	Positive
Green15	Positive
Red03	Positive
Red06	Negative
Red07	Positive
Red08	Positive
Red09	Positive
Red13	Positive
Red16	Positive
Red18	Positive
Red20	Negative
Red21	Positive
Red22	Positive
Red24	Negative
Red26	Positive
5G08	Positive
5G09	Positive
5G15	Positive
5R22	Positive
6R18	Positive
6R16	Negative
6R22	Negative
6R03	Negative
6R07	Negative
6R06	Positive
6G15	Negative
6R24	Positive
6R9	Negative
6R26	Negative
6R21	Positive
6R8	Negative

Serum

Verified on: 01/24/17 by: AF

Animal**BRUCF****BRUCARD**

Green08	1+ 1:10	Positive
Green14	3+ 1:10	Positive
Green15	1+ 1:10	Positive
Red03	2+ 1:40	Positive
Red06	2+ 1:10	Positive
Red07	Negative @ 1:10	Negative
Red08	Negative @ 1:10	Positive
Red09	3+ 1:160	Positive
Red13	Negative @ 1:10	Positive
Red16	1+ 1:320	Positive
Red18	Negative @ 1:10	Positive

007900

Red20	3+ 1:40	Negative
Red21	Negative @ 1:10	Positive
Red22	3+ 1:160	Positive
Red24	1+ 1:10	Positive
Red26	2+ 1:40	Negative
5G08	3+ 1:20	Positive
5G09	2+ 1:80	Positive
5G15	3+ 1:160	Positive
5R22	2+ 1:40	Negative
6R18	2+ 1:80	Positive
6R16	Negative @ 1:10	Negative
6R22	Negative @ 1:10	Negative
6R03	Negative @ 1:10	Negative
6R07	Negative @ 1:10	Negative
6R06	2+ 1:40	Positive
6G15	1+ 1:20	Negative
6R24	Negative @ 1:10	Negative
6R9	1+ 1:10	Negative
6R26	Negative @ 1:10	Negative
6R21	3+ 1:80	Positive
6R8	Negative @ 1:10	Negative

DATE BLED:	1/10/17
REASON FOR TEST	
X	DIAGNOSTIC
	REGULATORY
	QUARANTINE / IMPORTS

STATE OF MONTANA
DEPT. OF LIVESTOCK DIAGNOSTIC LABORATORY DIVISION
 BOX 997 — BOZEMAN, MT 59771 — PHONE (406) 994-4885 — FAX (406) 994-6344

SEROLOGY REPORT
 COMPLETE SHADED AREAS ONLY

DATE RECEIVED:	01-12-17
SPECIES	Bison
COUNTY	Park
PAGE	1
OF PAGES	3

OWNER	USDA APHIS VS Gonadom
ADDRESS	772 Hwy 89 S Gardiner - Crown Spire MT ZIP

SUBMITTED BY	P. Ryan Clarke
ADDRESS	(b) (6)

DESTINATION / QUARANTINE NO. / REMARKS:

[BGS Gonadom - Cattle Health]

Brucella Control 1

 If required, K. Fry, K. Clarke, J. Ryan
 phone/FAX results to

 CIRCLE TEST REQUIRED — If specific test and/or
 standard dilution required, so indicate.

TUBE NO.	IDENTIFICATION	AGE	SEX	BREED	OFF. VAC.	BRU	BT	ANA	PTB	IBR	BD	BLV	LEPTOSPIROSIS - 8 SEROVARS	OTHER
						Card	BPA	BPA	BPA	CF (F10)				
1	Green 08	AD	F	BIS	u/a	Pos	Pos	Pos	1+10				FPA mP values	
2	Green 14					Pos	Pos	Pos	3+10				FPA = 213.7 mP	
3	Green 15					Pos	Pos	Pos	1+10				FPA = 234.9 mP	
4	Red 03					Pos	Pos	Pos	2+40				FPA = 210.2 mP	
5	Red 06					Pos	Neg	Pos	2+10				FPA = 114.8 mP	
6	Red 07					Neg	Pos	Neg	N				FPA = 207.6 mP	
7	Red 08					Pos	Pos	Pos	N				FPA = 4.7 mP	
8	Red 09					Pos	Pos	Pos	3+160				FPA = 193.7 mP	
9	Red 13					Pos	Pos	Pos	N				FPA = 194.3 mP	
10	Red 14					Pos	Pos	Pos	1+320				FPA = 193.8 mP	
													FPA = 273.4 mP	

 Card, BPA, FPA &
 CF

 Released
 1/31/17

No. Samples	32	32	32	32
No. Seropositive	19	22	22	13
No. Suspect	-	-	-	7
No. Seronegative	13	10	10	12
No. Undetermined	-	-	-	-
Comments	Card	BPA		
TESTED BY	ap/24/17	ap/24/17	ap/24/17	1/27/17

* If mP values between 10-20 → SUSPECT
 * If mP values greater than 20 → POSITIVE
 Test interpretation
 ap/31/17


 17-10789
 01/12/17

SV-2A (Rev. 10/02)

SEE REVERSE SIDE FOR KEY

LAB CHARGE

\$

CASE NO

Control #2

STATE OF MONTANA

DEPT. OF LIVESTOCK DIAGNOSTIC LABORATORY DIVISION

BOX 997 — BOZEMAN, MT 59771 — PHONE (406) 994-4885 — FAX (406) 994-6344

CONTINUATION SEROLOGY REPORT

COMPLETE SHADED AREAS ONLY

OWNER	USDA APARSUS, Genacon
SUBMITTED BY	R. Clarke
DATE	1/10/17
PAGE	2 OF 3

CIRCLE TEST REQUIRED — If specific test and/or standard dilution required, so indicate.						BRU	BT	ANA	PTB	IBR	BVD	BLV	LEPTOSPIROSIS - 8 SEROVARS	OTHER
TUBE NO.	IDENTIFICATION	AGE	SEX	BREED	OFF. VAC.	Cancl	Ban BABA	Ban FPA	Ban CF (1:10)				FPA mP values	
✓ 11	Reel 18	AD	F	BIS	N/A	Pos	Pos	Pos	N				FPA = 179.2 mP	
✓ 12	Reel 20					Neg	Pos	Pos	3+40				FPA = 135.3 mP	
✓ 13	Reel 21					Pos	Pos	Pos	N				FPA = 184.0 mP	
✓ 14	Reel 22					Pos	Pos	Pos	3+160				FPA = 159.0 mP	
✓ 15	Reel 24					Pos	Neg	Pos	1+10				FPA = 187.4 mP	
✓ 16	Reel 26					Neg	Pos	Pos	2+40				FPA = 33.2 mP	
✓ 17	5608	1	M			Pos	Pos	Pos	3+20				FPA = 176.9 mP	
✓ 18	5609	1	F			Pos	Pos	Pos	2+80				FPA = 31.1 mP	
✓ 19	5615	1	M			Pos	Pos	Pos	3+160				FPA = 170.7 mP	
✓ 20	5722	1	M			Neg	Pos	Pos	2+40				FPA = 22.7 mP	
✓ 21	6R18	Carl	F			Pos	Pos	Pos	2+80				FPA = 41.9 mP	
✓ 22	6R16		M			Neg	Neg	Neg	N				FPA = 3.3 mP	
✓ 23	6R22		F			Neg	Neg	Neg	N				FPA = 8.3 mP	
✓ 24	6R03		M			Neg	Neg	Neg	N				FPA = 5.5 mP	
✓ 25	6R07		F			Neg	Neg	Neg	N				FPA = 8.3 mP	
✓ 26	6R06		F			Pos	Pos	Pos	2+40				FPA = 206.9 mP	
✓ 27	6G15		M			Neg	Neg	Neg	1+20				FPA = 8.8 mP	
✓ 28	6R24					Neg	Pos	Neg	N				FPA = -6.2 mP	
✓ 29	6R9					Neg	Neg	Neg	1+10				FPA = 9.7 mP	
✓ 30	6R26					Neg	Neg	Neg	N				FPA = 0.7 mP	

SV-2B (Rev. 10/97)

CASE NO.

17-10789

007904

FEES:

B. Abortus Card	51.20
Brucella abortus/suis - Complement Fixation	84.80
Brucella abortus FPA	51.20
B. Abortus Bapa	51.20
Total	238.40

(This is not a bill. Do not make payments from this report.)



MONTANA VETERINARY DIAGNOSTIC LABORATORY

1911 WEST LINCOLN, BOZEMAN, MT 59718
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PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 17-10790
Name/ID:
Species: American Bison
Breed: American bison
Sex: Age:
County: Park
Owner: USDA APHIS US GonaCon

PRELIMINARY REPORT 01/31/17

Accessioned: 01/12/17
Authorized by: AF

Previous Reports
01/31/17
01/31/17

SEROLOGY

Brucella abortus

Serum

Verified on: 01/31/17 by: AF

<u>Animal</u>	<u>FPA</u>
Green01	Negative
Green07	Negative
Green13	Negative
Green21	Negative
Green24	Negative
Green25	Positive
Red32	Positive
Red34	Positive
Red36	Positive
Red38	Negative
Red39	Positive
Red41	Positive
Red42	Positive
Red43	Positive
Red44	Positive
Red45	Positive
Red46	Positive
Red47	Positive
Red48	Positive
Red49	Positive
Red51	Positive
Red53	Positive
Red54	Positive
Red55	Positive
Red56	Positive
6R53	Negative
6G13	Negative
6G01	Negative
6G25	Negative
6R34	Negative
6Gr07	Negative
6R38	Negative

007906

6Gr21

Negative

Serum

Verified on 01/25/17 by: AF

AnimalB. Abortus
BAPA

Green01	Negative
Green07	Negative
Green13	Negative
Green21	Negative
Green24	Negative
Green25	Positive
Red32	Positive
Red34	Positive
Red36	Positive
Red38	Negative
Red39	Positive
Red41	Positive
Red42	Positive
Red43	Positive
Red44	Positive
Red45	Positive
Red46	Negative
Red47	Positive
Red48	Positive
Red49	Positive
Red51	Positive
Red53	Positive
Red54	Positive
Red55	Positive
Red56	Positive
6R53	Negative
6G13	Negative
6G01	Negative
6G25	Negative
6R34	Negative
6R46	Positive
6Gr07	Negative
6R38	Negative
6Gr21	Negative

Serum

Verified on: 01/25/17 by: AF

AnimalBRUCFBRUCARD

Green01	Negative @ 1:10	Negative
Green07	Negative @ 1:10	Negative
Green13	Negative @ 1:10	Negative
Green21	Negative @ 1:10	Negative
Green24	Negative @ 1:10	Negative
Green25	3+ 1:160	Positive
Red32	1+ 1:40	Negative
Red34	1+ 1:40	Negative

007907

Red36	4+ 1:80	Positive
Red38	Negative @ 1:10	Negative
Red39	3+ 1:40	Positive
Red41	Negative @ 1:10	Negative
Red42	3+ 1:20	Negative
Red43	3+ 1:40	Positive
Red44	3+ 1:10	Positive
Red45	2+ 1:40	Positive
Red46	3+ 1:80	Negative
Red47	3+ 1:10	Positive
Red48	3+ 1:80	Positive
Red49	2+ 1:20	Positive
Red51	Negative @ 1:10	Positive
Red53	3+ 1:40	Negative
Red54	3+ 1:10	Positive
Red55	3+ 1:40	Positive
Red56	2+ 1:80	Positive
6R53	Negative @ 1:10	Negative
6G13	Negative @ 1:10	Negative
6G01	Negative @ 1:10	Negative
6G25	Negative @ 1:10	Negative
6R34	Negative @ 1:10	Negative
6R46	Negative @ 1:10	Negative
6Gr07	Negative @ 1:10	Negative
6R38	Negative @ 1:10	Negative
6Gr21	Negative @ 1:10	Negative

DATE BLED:	1/11/17
REASON FOR TEST	
Y	DIAGNOSTIC
	REGULATORY
	QUARANTINE/IMPORTS

STATE OF MONTANA GC # 2
 DEPT. OF LIVESTOCK DIAGNOSTIC LABORATORY DIVISION
 BOX 997 — BOZEMAN, MT 59771 — PHONE (406) 994-4885 — FAX (406) 994-6344

SEROLOGY REPORT
 COMPLETE SHADED AREAS ONLY

DATE RECEIVED:	01-12-17
SPECIES	Bison
COUNTY	Paul
PAGE	1
OF PAGES	3

OWNER	USDA APHS US, Gonacon
ADDRESS	
	Colwin Spring MT ZIP

SUBMITTED BY	P. Ryan Clark
ADDRESS	(b) (6)

DESTINATION / QUARANTINE NO. / REMARKS:

BGFS-Gonacon-Castroville

Brucella

GC2

If required, phone/FAX results to: K. Frey, K. Coker, J. Phyllon

TUBE NO.	IDENTIFICATION	AGE	SEX	BREED	OFF. VAC.	BRU	BT	ANA	RTB	IBP	BVD	BLV	LEPTOSPIROSIS & SEROVARS		OTHER
													FPA	mP	
1	Green 01	AD	F	Bison	NA	Neg	Neg	Neg	N					FPA mP values	
2	Green 07					Neg	Neg	Neg	N					FPA = 2.4 mP	
3	Green 13					Neg	Neg	Neg	N					FPA = 9.6 mP	
4	Green 21					Neg	Neg	Neg	N					FPA = 0.9 mP	
5	Green 24					Neg	Neg	Neg	N					FPA = 8.3 mP	
6	Green 25					Pos	Pos	Pos	3+166					FPA = 9.6 mP	
7	Red 32					Neg	Pos	Pos	1+40					FPA = 196.4 mP	
8	Red 34					Neg	Pos	Pos	1+40					FPA = 35.1 mP	
9	Red 36					Pos	Pos	Pos	4+80					FPA = 73.4 mP	
10	Red 38					Neg	Neg	Neg	N					FPA = 150.3	
						34	34	34	34					FPA test interpretation:	
						13	19	20	14					* If mP values between 10-20 → SUSPECT	
						-	-	-	3					* If mP values greater than 20 → POSITIVE	
						21	15	14	17						
						-									
						Cond	Bapt								
						1/11/17	1/24/17	1/27/17							

Bapt Cond FPA
CF

Released
1/31/17

No. Samples
No. Seropositive
No. Suspect
No. Seronegative
No. Undetermined
Comments
TESTED BY

1/11/17 1/24/17 1/27/17

1/31/17

SV-2A (Rev. 10/02)

SEE REVERSE SIDE FOR KEY

LAB CHARGE \$

CASE NO



17-10790
01/12/17

GC #2

STATE OF MONTANA

DEPT. OF LIVESTOCK DIAGNOSTIC LABORATORY DIVISION

BOX 997 — BOZEMAN, MT 59771 — PHONE (406) 994-4885 — FAX (406) 994-6344

CONTINUATION SEROLOGY REPORT

COMPLETE SHADED AREAS ONLY

OWNER	USDA APISUS, Gonacon
SUBMITTED BY	R. Clarke
DATE	1/11/17
PAGE	2 OF 3

CIRCLE TEST REQUIRED — If specific test and/or standard dilution required, so indicate.						BRU	BT	ANA	PTB	IBR	BYD	BLV	LEPTOSPIROSIS	SEROVARS	OTHER
TUBE NO.	IDENTIFICATION	AGE	SEX	BREED	OFF. VAC.										
11	Reel 39	AD	F	BOS	N/A	Card X	Pos	Pos	Pos	3+40					
12	Reel 41					Neg	Pos	Pos	N						
13	Reel 42					Neg	Pos	Pos	3+20						
14	Reel 43					Pos	Pos	Pos	3+40						
15	Reel 44					Pos	Pos	Pos	3+10						
16	Reel 45					Pos	Pos	Pos	2+40						
17	Reel 46					Neg	Neg	Pos	3+80						
18	Reel 47					Pos	Pos	Pos	3+10						
19	Reel 48					Pos	Pos	Pos	3+80						
20	Reel 49					Pos	Pos	Pos	2+20						
21	Reel 51					Pos	Pos	Pos	N						
22	Reel 53					Neg	Pos	Pos	3+40						
23	Reel 54					Pos	Pos	Pos	3+10						
24	Reel 55					Pos	Pos	Pos	3+40						
25	Reel 56					Pos	Pos	Pos	2+80						
26	6 R 53	Calf				Neg	Neg	Neg	N						
27	6 G 13					Neg	Neg	Neg	N						
28	6 G 01					Neg	Neg	Neg	N						
29	6 G 25					Neg	Neg	Neg	N						
30	6 R 34					Neg	Neg	Neg	N						

SV-2B (Rev. 10/97)

CASE NO.

17-10790

007911



MONTANA VETERINARY DIAGNOSTIC LABORATORY

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PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 17-10790

Name/ID:

Species: American Bison

Breed: American bison

Sex: Age:

County: Park

Owner: USDA APHIS US GonaCon

FINAL REPORT 01/31/17

Accessioned: 01/12/17

Authorized by: AF

Previous Reports

01/31/17

01/31/17

01/31/17

01/31/17

SEROLOGY

Brucella abortus

Animal

Green01

Green07

Green13

Green21

Green24

Green25

Red32

Red34

Red36

Red38

Red39

Red41

Red42

Red43

Red44

Red45

Red46

Red47

Red48

Red49

Red51

Red53

Red54

Red55

Red56

6R53

6G13

6G01

6G25

6R34

FPA

Negative

Negative

Negative

Negative

Negative

Positive

Positive

Positive

Positive

Negative

Positive

Positive

Positive

Positive

Positive

Positive

Positive

Positive

Positive

Positive

Positive

Positive

Positive

Positive

Positive

Negative

Negative

Negative

Negative

Negative

Serum

Verified on: 01/31/17 by: AF

6R46	Negative
6Gr07	Negative
6R38	Negative
6Gr21	Negative

Serum

Verified on 01/25/17 by: AF

Animal

B. Abortus

BAPA

Green01	Negative
Green07	Negative
Green13	Negative
Green21	Negative
Green24	Negative
Green25	Positive
Red32	Positive
Red34	Positive
Red36	Positive
Red38	Negative
Red39	Positive
Red41	Positive
Red42	Positive
Red43	Positive
Red44	Positive
Red45	Positive
Red46	Negative
Red47	Positive
Red48	Positive
Red49	Positive
Red51	Positive
Red53	Positive
Red54	Positive
Red55	Positive
Red56	Positive
6R53	Negative
6G13	Negative
6G01	Negative
6G25	Negative
6R34	Negative
6R46	Positive
6Gr07	Negative
6R38	Negative
6Gr21	Negative

Serum

Verified on: 01/25/17 by: AF

Animal

BRUCF

BRUCARD

Green01	Negative @ 1:10	Negative
Green07	Negative @ 1:10	Negative
Green13	Negative @ 1:10	Negative
Green21	Negative @ 1:10	Negative
Green24	Negative @ 1:10	Negative

Green25	3+ 1:160	Positive
Red32	1+ 1:40	Negative
Red34	1+ 1:40	Negative
Red36	4+ 1:80	Positive
Red38	Negative @ 1:10	Negative
Red39	3+ 1:40	Positive
Red41	Negative @ 1:10	Negative
Red42	3+ 1:20	Negative
Red43	3+ 1:40	Positive
Red44	3+ 1:10	Positive
Red45	2+ 1:40	Positive
Red46	3+ 1:80	Negative
Red47	3+ 1:10	Positive
Red48	3+ 1:80	Positive
Red49	2+ 1:20	Positive
Red51	Negative @ 1:10	Positive
Red53	3+ 1:40	Negative
Red54	3+ 1:10	Positive
Red55	3+ 1:40	Positive
Red56	2+ 1:80	Positive
6R53	Negative @ 1:10	Negative
6G13	Negative @ 1:10	Negative
6G01	Negative @ 1:10	Negative
6G25	Negative @ 1:10	Negative
6R34	Negative @ 1:10	Negative
6R46	Negative @ 1:10	Negative
6Gr07	Negative @ 1:10	Negative
6R38	Negative @ 1:10	Negative
6Gr21	Negative @ 1:10	Negative

DATE BLED:	1/11/17
REASON FOR TEST	
<input checked="" type="checkbox"/> DIAGNOSTIC	
<input type="checkbox"/> REGULATORY	
<input type="checkbox"/> QUARANTINE/IMPORTS	

STATE OF MONTANA GC # 2
DEPT. OF LIVESTOCK DIAGNOSTIC LABORATORY DIVISION
 BOX 997 — BOZEMAN, MT 59771 — PHONE (406) 994-4885 — FAX (406) 994-6344

SEROLOGY REPORT
COMPLETE SHADED AREAS ONLY

DATE RECEIVED:	01-12-17
SPECIES	Bison
COUNTY	Paul
PAGE	1
OF PAGES	3

OWNER	USDA APHS US, Gonzalez
ADDRESS	
	Colwin Spring MT ZIP

SUBMITTED BY	P. R. ...
ADDRESS	(b) (6)

DESTINATION / QUARANTINE NO. / REMARKS:	BQPS-Gonzalez-Castle Rock
---	---------------------------

If required, R. Fray, R. Chubb, J. Rhyan
 phone/FAX results to

TUBE NO.	IDENTIFICATION	AGE	SEX	BREED	OFF. VAC.	BRU	CIRCLE TEST REQUIRED — If specific test and/or standard dilution required, so indicate.				IBT	SVD	BLV	LEPTOSPIROSIS	8 SEROVARS	OTHER
							CF	PTB	ET	ANA						
1	Green 01	AD	F	Bison	N/A	Card	Neg	Neg	Neg	N						
2	Green 01						Neg	Neg	Neg	N						
3	Green 13						Neg	Neg	Neg	N						
4	Green 21						Neg	Neg	Neg	N						
5	Green 24						Neg	Neg	Neg	N						
6	Green 25						Pos	Pos	Pos	3+66						
7	Red 32						Neg	Pos	Pos	1+40						
8	Red 34						Neg	Pos	Pos	1+40						
9	Red 36						Pos	Pos	Pos	4+80						
10	Red 38						Neg	Neg	Neg	N						

CF = 1/12/17

No. Samples: 34
 No. Seropositive: 13
 No. Suspect: -
 No. Seronegative: 21
 No. Undetermined: -

Comments: Card Bape 1/12/17

TESTED BY: 1/24/17

FPA mP values:
 FPA = 2.4 mP
 FPA = 9.6 mP
 FPA = 0.9 mP
 FPA = 8.3 mP
 FPA = 9.6 mP
 FPA = 196.4 mP
 FPA = 35.1 mP
 FPA = 73.4 mP
 FPA = 150.3

FPA test interpretation:
 * If mP values between 10-20 → SUSPECT
 * If mP values greater than 20 → POSITIVE

Correction: FPA 19 Seropositive
 FPA 15 Seronegative

1/31/17

SV-2A (Rev. 10/02)

SEE REVERSE SIDE FOR KEY

LAB CHARGE

\$ 253.30

CASE NO


 17-10790
 01/12/17

GC #2

STATE OF MONTANA

DEPT. OF LIVESTOCK DIAGNOSTIC LABORATORY DIVISION

BOX 997 — BOZEMAN, MT 59771 — PHONE (406) 994-4885 — FAX (406) 994-6344

CONTINUATION SEROLOGY REPORT

COMPLETE SHADED AREAS ONLY

OWNER	USDA APISUS, Gonacon
SUBMITTED BY	R. Clarke
DATE	1/11/17
PAGE	2 OF 3

CIRCLE TEST REQUIRED — If specific test and/or standard dilution required, so indicate.						BRU	BT	ANA	PTB	IBR	BVD	BLV	LEPTOSPIROSIS	SEROVARS	OTHER
TUBE NO.	IDENTIFICATION	AGE	SEX	BREED	OFF. VAC.										
11	Red 39	AD	F	BOS	N/A	Pos	Pos	Pos	3+40						
12	Red 41					Neg	Pos	Pos	N						
13	Red 42					Neg	Pos	Pos	3+20						
14	Red 43					Pos	Pos	Pos	3+40						
15	Red 44					Pos	Pos	Pos	3+10						
16	Red 45					Pos	Pos	Pos	2+40						
17	Red 46					Neg	Neg	Pos	3+80						
18	Red 47					Pos	Pos	Pos	3+10						
19	Red 48					Pos	Pos	Pos	3+80						
20	Red 49					Pos	Pos	Pos	2+20						
21	Red 51					Pos	Pos	Pos	N						
22	Red 53					Neg	Pos	Pos	3+40						
23	Red 54					Pos	Pos	Pos	3+10						
24	Red 55					Pos	Pos	Pos	3+40						
25	Red 56					Pos	Pos	Pos	2+80						
26	6R 53	CalF				Neg	Neg	Neg	N						
27	6G 13					Neg	Neg	Neg	N						
28	6G 01					Neg	Neg	Neg	N						
29	6G 25					Neg	Neg	Neg	N						
30	6R 34					Neg	Neg	Neg	N						

SV-2B (Rev. 10/97)

CASE NO.

17-10790

GC #2

Owner: USDA, APHIS, GonaCon
Submitted By: P.R. Clarke
Collection Date: 1-11-17 Page 3 of 3

MONTANA VETERINARY DIAGNOSTIC LABORATORY

Box 997 - Bozeman, MT 59771

Phone: (406)994-4885

Fax: (406)994-6344

Email: livdiagnosticlab@mt.gov

CONTINUATION SEROLOGY REPORT (SV2B)

Complete light shaded areas only

[illegible]

SV-2B (PRINT VERSION 08/13)

CASE # 17-10790

FEES:

B. Abortus Card	54.40
Brucella abortus/suis - Complement Fixation	90.10
Brucella abortus FPA	54.40
B. Abortus Bapa	54.40
Total	253.30

(This is not a bill. Do not make payments from this report.)



MONTANA VETERINARY DIAGNOSTIC LABORATORY

1911 WEST LINCOLN, BOZEMAN, MT 59718
P.O. Box 997, BOZEMAN, MT 59771
WEB: www.liv.mt.gov/lab

PHONE: (406) 994-4885
FAX: (406) 994-6344
EMAIL: livdiagnosticlab@mt.gov



PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 17-10813
Name/ID:
Species: American Bison

FINAL REPORT 01/31/17

Sex: Age:
County: Park
Owner: USDA,APHIS,VS - Cattle health

Accessioned: 01/12/17
Authorized by: AF

Previous Reports
01/31/17
01/31/17

SEROLOGY

Brucella abortus

Clotted Blood

Verified on: 01/31/17 by: AF

<u>Animal</u>	<u>FPA</u>
Green 02	Negative
Green 03	Negative
Green 04	Negative
Green 06	Negative
Green 17	Negative
Red 01	Positive
Red 02	Negative
Red 04	Positive
Red 05	Negative
Red 11	Suspect
Red 14	Positive
Red 19	Positive
Red 27	Positive
Red 28	Positive
Red 29	Suspect
Red 31	Negative
5 Gr 03	Negative
5 R 02	Negative
6 Gr 02	Negative
6 Gr 04	Negative
6 Gr 17	Negative
6 R 02	Negative

Clotted Blood

Verified on 01/25/17 by: AF

<u>Animal</u>	<u>B. Abortus</u> <u>BAPA</u>
Green 02	Negative
Green 03	Negative
Green 04	Negative
Green 06	Negative
Green 17	Negative
Red 01	Negative

Red 02	Negative
Red 04	Negative
Red 05	Negative
Red 11	Negative
Red 14	Negative
Red 19	Positive
Red 27	Positive
Red 28	Positive
Red 29	Negative
Red 31	Negative
5 Gr 03	Negative
5 R 02	Negative
6 Gr 02	Negative
6 Gr 04	Negative
6 Gr 17	Negative
6 R 02	Negative

Clotted Blood

Verified on: 01/25/17 by: AF

<u>Animal</u>	<u>BRUCF</u>	<u>BRUCARD</u>
Green 02	Negative @ 1:10	Negative
Green 03	Negative @ 1:10	Negative
Green 04	Negative @ 1:10	Negative
Green 06	Negative @ 1:10	Negative
Green 17	Negative @ 1:10	Negative
Red 01	2+ 1:10	Negative
Red 02	Negative @ 1:10	Negative
Red 04	Negative @ 1:10	Negative
Red 05	Negative @ 1:10	Negative
Red 11	Negative @ 1:10	Negative
Red 14	3+ 1:20	Positive
Red 19	Negative @ 1:10	Positive
Red 27	3+ 1:20	Negative
Red 28	2+ 1:40	Negative
Red 29	2+ 1:10	Negative
Red 31	Negative @ 1:10	Negative
5 Gr 03	Negative @ 1:10	Negative
5 R 02	Negative @ 1:10	Negative
6 Gr 02	Negative @ 1:10	Negative
6 Gr 04	Negative @ 1:10	Negative
6 Gr 17	Negative @ 1:10	Negative

DATE BLED:	1/12/17
REASON FOR TEST	
<input checked="" type="checkbox"/> DIAGNOSTIC	
<input type="checkbox"/> REGULATORY	
<input type="checkbox"/> QUARANTINE / IMPORTS	

Gora Con #4

STATE OF MONTANA

DEPT. OF LIVESTOCK DIAGNOSTIC LABORATORY DIVISION
BOX 997 — BOZEMAN, MT 59771 — PHONE (406) 994-4885 — FAX (406) 994-6344

SEROLOGY REPORT

COMPLETE SHADED AREAS ONLY

GC #1

DATE RECEIVED:	1-12-17
SPECIES	Bovine
COUNTY	Pal
PAGE	1
OF PAGES	2

OWNER	USDA ADAMS US
ADDRESS	
City/State/Zip	Corvum Sump MT ZIP

SUBMITTED BY	P. Ryan Clarke
ADDRESS	(b) (6)

DESTINATION / QUARANTINE NO. / REMARKS:

BDFS - Gora Con - Cattle Health

If required, phone/FAX results to: R Frey, R. Clarke, J Rhyman

CIRCLE TEST REQUIRED — If specific test and/or standard dilution required, so indicate.

TUBE NO.	IDENTIFICATION	AGE	SEX	BREED	OFF. VAC.	BRU	BT	ANA	PTB	IB	BVD	BLV	LEPTOSPIROSIS - 8 SEROVARS	OTHER
1	Green 02	AD	F	Bra	up	Neg	Neg	Neg	N				FPA mP values	
2	Green 03								N				FPA = -0.5 mP	
3	Green 04								N				FPA = 3.0 mP	
4	Green 06								N				FPA = 7.0 mP	
5	Green 17								N				FPA = 0.0 mP	
6	Reel 01							Pos	2+10				FPA = 6.0 mP	
7	Reel 02							Neg	N				FPA = 24.2 mP	
8	Reel 04							Pos	N				FPA = 3.6 mP	
9	Reel 05							Neg	N				FPA = 34.6 mP	
10	Reel 11							Neg	N				FPA = 3.5 mP	

Card, BADA, CF
FPA

No. Samples

No. Seropositive

No. Suspect

No. Seronegative

No. Undetermined

Comments

TESTED BY

22 22 22 22

2 3 6 3

- - 2 2

20 19 14 17

- - - -

Card BADA CF

dp 1/24/17 dp 1/24/17 dp 1/24/17

dp 1/24/17

dp 1/24/17

dp 1/24/17

dp 1/24/17

dp 1/24/17

dp 1/24/17

dp 1/24/17

Test interpretation:

* If mP values between 10-20 → SUSPECT

* If mP values greater than 20 → POSITIVE

FPA = 13.6 mP - (SUSPECT) - (Tube No. 10)

FPA = 13.6 mP - (SUSPECT) - (Tube No. 10)

FPA = 13.6 mP - (SUSPECT) - (Tube No. 10)

FPA = 13.6 mP - (SUSPECT) - (Tube No. 10)

FPA = 13.6 mP - (SUSPECT) - (Tube No. 10)

FPA = 13.6 mP - (SUSPECT) - (Tube No. 10)

FPA = 13.6 mP - (SUSPECT) - (Tube No. 10)

SV-2A (Rev. 10/02)

SEE REVERSE SIDE FOR KEY

LAB CHARGE

\$

CASE #



17-10813

01/12/17

STATE OF MONTANA

DEPT. OF LIVESTOCK DIAGNOSTIC LABORATORY DIVISION

BOX 997 — BOZEMAN, MT 59771 — PHONE (406) 994-4885 — FAX (406) 994-6344

CONTINUATION SEROLOGY REPORT

COMPLETE SHADED AREAS ONLY

OWNER	USDA ADIAP OS Conaleen
SUBMITTED BY	R. Clarke
DATE	1/12/17
PAGE	2 OF 2

CIRCLE TEST REQUIRED — If specific test and/or standard dilution required, so indicate.						BRU	BT	ANA	STB	IBR	BVD	BLV	LEPTOSPIROSIS - 8 SEROVARS	OTHER
TUBE NO.	IDENTIFICATION	AGE	SEX	BREED	OFF. VAC.									
						Cond	Bru	B+u	B+u	ap/24/17				
						X	BAPA	FPA	CF(1:10)				FPA mP values	ap/31/17
11	Real 14	AD	F	Bosn	N/A	Pos	Neg	Pos	3+20				FPA = 22.8 mP	
12	Real 19					Pos	Pos	Pos	N				FPA = 149.7 mP	
13	Real 27					Neg	Pos	Pos	3+20				FPA = 135.9 mP	
14	Real 28					Neg	Pos	Pos	2+40				FPA = 116.1 mP	
15	Real 29					Neg	Neg	Susp	2+10				FPA = 16.2 mP (SUSPECT)	
16	Real 31					Neg	Neg	Neg	N				FPA = 5.4 mP	
17	SG03	1	M			Neg	Neg	Neg	N				FPA = 8.7 mP	
	SG04													
	SG17													
18	SG02	1	F			Neg	Neg	Neg	N				FPA = 0.7 mP	ap/24/17
	SG14													
19	6602	carb	F			Neg	Neg	Neg	N				FPA = 1.5 mP	ap/24/17
20	6604		F			Neg	Neg	Neg	N				FPA = -1.1 mP	
21	6617		M			Neg	Neg	Neg	N				FPA = -0.3 mP	
22	6602		M			Neg	Neg	Neg	N				FPA = 3.2 mP	

SV-2B (Rev. 10/97)

CASE NO.

17-10813

FEES:

B. Abortus Card	35.20
Brucella abortus/suis - Complement Fixation	58.30
Brucella abortus FPA	35.20
B. Abortus Bapa	35.20
Total	163.90

(This is not a bill. Do not make payments from this report.)



MONTANA VETERINARY DIAGNOSTIC LABORATORY

1911 WEST LINCOLN, BOZEMAN, MT 59718
P.O. Box 997, BOZEMAN, MT 59771
WEB: www.liv.mt.gov/lab

PHONE: (406) 994-4885
FAX: (406) 994-6344
EMAIL: livdiagnosticlab@mt.gov



PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 17-11013
Name/ID: 6 Red 34
Species: American Bison

Sex: Unknown **Age:** Fetus
County: Park
Owner: USDA, APHIS, VS - GonaCon

PRELIMINARY REPORT 01/26/17

Accessioned: 01/18/17
Authorized by: DJM

Previous Reports
01/26/17

CASE SUMMARY

Verified on: 01/26/17 by: DJM

REASON FOR SUBMISSION:

Abortion of bison fetus.

LABORATORY DIAGNOSIS:

Bison abortion.

COMMENT:

Clinical microbiological investigations are still in progress. Results will be reported as soon as complete.

D. J. Marshall, BVSc, PhD

PATHOLOGY

Verified on: 01/26/17 by: DJM

GROSS DESCRIPTION:

Head and thorax of a bison calf (ID 6 Red 34) with accompanying placenta were submitted for necropsy and subsequent laboratory evaluation. Necropsy was performed between 11 am and 11.15 am on Thursday 19th January 2017. No thoracic organs were present and brain was removed from cranium.

HISTOLOGIC DESCRIPTION:

Sections of placenta, brain and skeletal muscle are examined. Tissues are in an advanced state of autolysis. No significant abnormalities are detected.

HISTOLOGIC DIAGNOSIS:

Autolysis.

CLINICAL MICROBIOLOGY

Aerobic Culture

Verified on: 01/26/17 by: KK

Animal ID	Specimen	Isolate #	Organism	Amount
6 Red 34	Placenta Tissue		Mixed sp.	4+
Mixed population of bacteria including; <i>Escherichia coli</i> , <i>Enterococcus sp.</i> , and <i>Bacillus sp.</i> .				

Results are Pending for [Brucella Culture](#)

Results are Pending for [Campylobacter Culture](#)



MONTANA VETERINARY DIAGNOSTIC LABORATORY

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P.O. Box 997, BOZEMAN, MT 59771
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PHONE: (406) 994-4885
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EMAIL: livdiagnosticlab@mt.gov



PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 17-11013
Name/ID: 6 Red 34
Species: American Bison

FINAL REPORT 02/02/17

Sex: Unknown **Age:** Fetus
County: Park
Owner: USDA, APHIS, VS - GonaCon

Accessioned: 01/18/17
Authorized by: DJM

Previous Reports
01/26/17
02/06/17

CASE SUMMARY

Verified on: 02/02/17 by: DJM

ADDITIONAL INFORMATION:

CLINICAL MICROBIOLOGY:

Investigations are now complete and reported below.

D. J. Marshall, BVSc, PhD

Verified on: 01/26/17 by: DJM

REASON FOR SUBMISSION:

Abortion of bison fetus.

LABORATORY DIAGNOSIS:

Bison abortion.

COMMENT:

Clinical microbiological investigations are still in progress. Results will be reported as soon as complete.

D. J. Marshall, BVSc, PhD

PATHOLOGY

Verified on: 01/26/17 by: DJM

007926

GROSS DESCRIPTION:

Head and thorax of a bison calf (ID 6 Red 34) with accompanying placenta were submitted for necropsy and subsequent laboratory evaluation. Necropsy was performed between 11 am and 11.15 am on Thursday 19th January 2017. No thoracic organs were present and brain was removed from cranium.

HISTOLOGIC DESCRIPTION:

Sections of placenta, brain and skeletal muscle are examined. Tissues are in an advanced state of autolysis. No significant abnormalities are detected.

HISTOLOGIC DIAGNOSIS:

Autolysis.

CLINICAL MICROBIOLOGY

Brucella Culture

Verified on: 01/31/17 by: JR

Animal ID	Specimen	Isolate #	Organism	Amount
6 Red 34	Placenta Tissue		Negative for Brucella sp.	

Campylobacter Culture

Verified on: 01/27/17 by: JR

Animal ID	Specimen	Isolate #	Organism	Amount
6 Red 34	Placenta Tissue		Negative for Campylobacter sp.	

Aerobic Culture

Verified on: 01/26/17 by: KK

Animal ID	Specimen	Isolate #	Organism	Amount
6 Red 34	Placenta Tissue		Mixed sp.	4+

Mixed population of bacteria including; *Escherichia coli*, *Enterococcus sp.*, and *Bacillus sp.*.

FEES:

Case Summary	0.00
Brucella Culture	0.00
Campylobacter Culture	0.00
Aerobic Culture	0.00
Fetal Necropsy	73.50
Hematoxylin & Eosin	0.00
Additional Information	0.00
Total	73.50

(This is not a bill. Do not make payments from this report.)



MONTANA VETERINARY DIAGNOSTIC LABORATORY

1911 WEST LINCOLN, BOZEMAN, MT 59718
P.O. Box 997, BOZEMAN, MT 59771
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PHONE: (406) 994-4885
FAX: (406) 994-6344
EMAIL: livdiagnosticlab@mt.gov



PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 17-11013
Name/ID: 6 Red 34
Species: American Bison

FINAL REPORT 02/02/17

Sex: Unknown **Age:** Fetus
County: Park
Owner: USDA, APHIS, VS - GonaCon

Accessioned: 01/18/17
Authorized by: DJM

Previous Reports
01/26/17
02/06/17
02/06/17

CASE SUMMARY

Verified on: 02/02/17 by: DJM

ADDITIONAL INFORMATION:

CLINICAL MICROBIOLOGY:

Investigations are now complete and reported below.

D. J. Marshall, BVSc, PhD

Verified on: 01/26/17 by: DJM

REASON FOR SUBMISSION:

Abortion of bison fetus.

LABORATORY DIAGNOSIS:

Bison abortion.

COMMENT:

Clinical microbiological investigations are still in progress. Results will be reported as soon as complete.

D. J. Marshall, BVSc, PhD

PATHOLOGY

GROSS DESCRIPTION:

Head and thorax of a bison calf (ID 6 Red 34) with accompanying placenta were submitted for necropsy and subsequent laboratory evaluation. Necropsy was performed between 11 am and 11.15 am on Thursday 19th January 2017. No thoracic organs were present and brain was removed from cranium.

HISTOLOGIC DESCRIPTION:

Sections of placenta, brain and skeletal muscle are examined. Tissues are in an advanced state of autolysis. No significant abnormalities are detected.

HISTOLOGIC DIAGNOSIS:

Autolysis.

CLINICAL MICROBIOLOGY

Brucella Culture Verified on: 01/31/17 by: JR

Animal ID	Specimen	Isolate #	Organism	Amount
6 Red 34	Placenta Tissue		Negative for Brucella sp.	

Campylobacter Culture Verified on: 01/27/17 by: JR

Animal ID	Specimen	Isolate #	Organism	Amount
6 Red 34	Placenta Tissue		Negative for Campylobacter sp.	

Aerobic Culture Verified on: 01/26/17 by: KK

Animal ID	Specimen	Isolate #	Organism	Amount
6 Red 34	Placenta Tissue		Mixed sp.	4+
Mixed population of bacteria including; <i>Escherichia coli</i> , <i>Enterococcus sp.</i> , and <i>Bacillus sp.</i> .				

FEES:

Case Summary	0.00
Brucella Culture	0.00
Campylobacter Culture	0.00
Aerobic Culture	0.00
Fetal Necropsy	73.50
Hematoxylin & Eosin	0.00
Additional Information	0.00
Total	73.50

(This is not a bill. Do not make payments from this report.)



MONTANA VETERINARY DIAGNOSTIC LABORATORY

1911 WEST LINCOLN, BOZEMAN, MT 59718
P.O. Box 997, BOZEMAN, MT 59771
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PHONE: (406) 994-4885
FAX: (406) 994-6344
EMAIL: livdiagnosticlab@mt.gov



PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 17-11116
Name/ID: Red 34
Species: American Bison
Breed: American bison
Sex: Female Age: Adult
Owner: UDSA, APHIS, VS

FINAL REPORT 02/03/17

Accessioned: 01/19/17
Authorized by: AF

Previous Reports
02/03/17

SEROLOGY

Brucella abortus

Animal

Red 34
FPA= 43.2 mP

FPA

Positive

Serum

Verified on: 02/03/17 by: AF

Animal

Red 34

B. Abortus

BAPA

Positive

Serum

Verified on 01/24/17 by: AF

Animal

Red 34

BRUCF

2+ 1:40

BRUCARD

Negative

Serum

Verified on: 01/24/17 by: AF

007933

FEES:

B. Abortus Card	1.60
Brucella abortus/suis - Complement Fixation	2.65
Brucella abortus FPA	1.60
B. Abortus Bapa	1.60
Total	7.45

(This is not a bill. Do not make payments from this report.)



MONTANA VETERINARY DIAGNOSTIC LABORATORY

1911 WEST LINCOLN, BOZEMAN, MT 59718
P.O. Box 997, BOZEMAN, MT 59771
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PHONE: (406) 994-4885
FAX: (406) 994-6344
EMAIL: livdiagnosticlab@mt.gov



PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 17-11116
Name/ID: Red 34
Species: American Bison
Breed: American bison
Sex: Female Age: Adult
Owner: UDSA, APHIS, VS

FINAL REPORT 02/03/17

Accessioned: 01/19/17
Authorized by: AF

Previous Reports
02/03/17
02/03/17

SEROLOGY

Brucella abortus

Animal

Red 34
FPA= 43.2 mP

FPA

Positive

Serum

Verified on: 02/03/17 by: AF

Animal

Red 34

B. Abortus

BAPA

Positive

Serum

Verified on 01/24/17 by: AF

Animal

Red 34

BRUCF

2+ 1:40

BRUCARD

Negative

Serum

Verified on: 01/24/17 by: AF

17-11116
01/19/17

FEES:

B. Abortus Card	1.60
Brucella abortus/suis - Complement Fixation	2.65
Brucella abortus FPA	1.60
B. Abortus Bapa	1.60
Total	7.45

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PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 17-11465
Name/ID: Red 01
Species: American Bison
Breed: American bison
Sex: Female Age: Adult
County: Park
Owner: USDA, APHIS, VS

FINAL REPORT 02/03/17

Accessioned: 01/25/17
Authorized by: AF

Previous Reports
02/03/17

SEROLOGY

Brucella abortus

Animal
Red 01
FPA=0.5mP value.

FPA
Negative

Serum

Verified on: 01/31/17 by: AF

Animal
Red 01

B. Abortus
BAPA
Negative

Serum

Verified on 01/30/17 by: AF

Animal
Red 01
Bru. CR anticomplementary reaction with a 2+(1:20) titer.

BRUCF
Anticomplementa Negative

Serum

Verified on: 01/30/17 by: AF

007939

FEES:

B. Abortus Card	1.60
Brucella abortus/suis - Complement Fixation	2.65
Brucella abortus FPA	1.60
B. Abortus Bapa	1.60
Total	7.45

(This is not a bill. Do not make payments from this report.)



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PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 17-11465
Name/ID: Red 01
Species: American Bison
Breed: American bison
Sex: Female Age: Adult
County: Park
Owner: USDA, APHIS, VS

FINAL REPORT 02/03/17

Accessioned: 01/25/17
Authorized by: AF

Previous Reports
02/03/17
02/03/17

SEROLOGY

Brucella abortus

Animal

Red 01
FPA=0.5mP value.

FPA

Negative

Serum

Verified on: 01/31/17 by: AF

Animal

Red 01

B. Abortus BAPA

Negative

Serum

Verified on 01/30/17 by: AF

Animal

Red 01

BRUCF

Anticomplementa Negative

BRUCARD

Bru. CR anticomplementary reaction with a 2+(1:20) titer.

Serum

Verified on: 01/30/17 by: AF

007942

FEES:

B. Abortus Card	1.60
Brucella abortus/suis - Complement Fixation	2.65
Brucella abortus FPA	1.60
B. Abortus Bapa	1.60
Total	7.45

(This is not a bill. Do not make payments from this report.)



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PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 17-11586
Name/ID: Red 71
Species: American Bison

PRELIMINARY REPORT 02/07/17

Sex: Female **Age:** Adult
County: Park
Owner: USDA, APHIS, VS - Cattle Health

Accessioned: 01/27/17
Authorized by: DJM

Previous Reports
02/07/17

CASE SUMMARY

Verified on: 02/07/17 by: DJM

REASON FOR SUBMISSION:

Bison Mortality.

LABORATORY DIAGNOSIS:

Pericarditis; Suspected hardware disease

COMMENT:

The necropsy findings are suggestive of hardware disease. Cow is not pregnant. No uterine tracking device is detected. Some clinical microbiological investigations are still in progress. Final results will be reported as soon as complete.

D. J. Marshall, BVSc, PhD

PATHOLOGY

Verified on: 02/07/17 by: DJM

GROSS DESCRIPTION:

An adult female bison (tag# red 71) was submitted for necropsy and subsequent laboratory evaluation. Necropsy is performed between 11.30 am and 1.00 pm on 27th January 2017. Significant gross findings include a thickened pericardium. Pericardial sac contains increased amounts of a tan viscous fluid. Pericardium is adhered to the diaphragm wall and abomasum is adhered to the diaphragm. The cow is not pregnant and no uterine tracking device is detected in the reproductive tract.

GROSS DIAGNOSIS

Pericarditis with adhesion to diaphragm; Abomasal adhesion to diaphragm.

CLINICAL MICROBIOLOGY

007944

Aerobic Culture

Verified on: 01/31/17 by: KK

Animal ID	Specimen	Isolate #	Organism	Amount
Red 71	pericardial fluid		Mixed sp.	4+
Mixed population of bacteria including; Trueperella pyogenes, Bacillus sp., and mixed enterics.				

REFERRAL

Results are Pending for [Brucella Culture](#)



MONTANA VETERINARY DIAGNOSTIC LABORATORY

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PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 17-11586
Name/ID: Red 71
Species: American Bison

PRELIMINARY REPORT 02/07/17

Sex: Female **Age:** Adult
County: Park
Owner: USDA, APHIS, VS - Cattle Health

Accessioned: 01/27/17
Authorized by: DJM

Previous Reports
02/07/17
02/07/17

CASE SUMMARY

Verified on: 02/07/17 by: DJM

REASON FOR SUBMISSION:

Bison Mortality.

LABORATORY DIAGNOSIS:

Pericarditis; Suspected hardware disease

COMMENT:

The necropsy findings are suggestive of hardware disease. Cow is not pregnant. No uterine tracking device is detected. Some clinical microbiological investigations are still in progress. Final results will be reported as soon as complete.

D. J. Marshall, BVSc, PhD

PATHOLOGY

Verified on: 02/07/17 by: DJM

GROSS DESCRIPTION:

An adult female bison (tag# red 71) was submitted for necropsy and subsequent laboratory evaluation. Necropsy is performed between 11.30 am and 1.00 pm on 27th January 2017. Significant gross findings include a thickened pericardium. Pericardial sac contains increased amounts of a tan viscous fluid. Pericardium is adhered to the diaphragm wall and abomasum is adhered to the diaphragm. The cow is not pregnant and no uterine tracking device is detected in the reproductive tract.

GROSS DIAGNOSIS

Pericarditis with adhesion to diaphragm; Abomasal adhesion to diaphragm.

CLINICAL MICROBIOLOGY

007946

Aerobic Culture

Verified on: 01/31/17 by: KK

Animal ID	Specimen	Isolate #	Organism	Amount
Red 71	pericardial fluid		Mixed sp.	4+
Mixed population of bacteria including; Trueperella pyogenes, Bacillus sp., and mixed enterics.				

REFERRAL

Results are Pending for [Brucella Culture](#)



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PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 17-11735
Name/ID:
Species: American Bison

Sex: Age:
Owner: USDA, APHIS, VS

PRELIMINARY REPORT 02/02/17

Accessioned: 01/31/17
Authorized by: AF

Previous Reports
02/03/17

SEROLOGY

Brucella abortus

Animal

Gr 11 FPA= 164.5 mP
Gr 30 FPA= 99.9 mP

FPA

Positive

Positive

Clotted Blood

Verified on: 02/02/17 by: AF

Animal

Gr 11
Gr 30

B. Abortus BAPA

Positive
Positive

Clotted Blood

Verified on 02/02/17 by: AF

Animal

Gr 11
Gr 30

BRUCARD

Positive
Positive

Clotted Blood

Verified on: 02/02/17 by: AF

Results are Pending for [Brucella abortus/suis - Complement Fixation](#)

007949



MONTANA VETERINARY DIAGNOSTIC LABORATORY

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PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 17-11735
Name/ID:
Species: American Bison

Sex: Age:
Owner: USDA, APHIS, VS

FINAL REPORT 02/03/17

Accessioned: 01/31/17
Authorized by: AF

Previous Reports
02/03/17
02/03/17
02/03/17
02/03/17

SEROLOGY

Brucella abortus

Animal

Gr 11
FPA= 164.5 mP
Gr 30
FPA= 99.9 mP

FPA

Positive

Positive

Clotted Blood

Verified on: 02/02/17 by: AF

Animal

Gr 11
Gr 30

B. Abortus BAPA

Positive
Positive

Clotted Blood

Verified on 02/02/17 by: AF

Animal

Gr 11
Gr 30

BRUCF

4+ 1:640
4+ 1:640

BRUCARD

Positive
Positive

Clotted Blood

Verified on: 02/02/17 by: AF

007951

FEES:

Brucella abortus/suis - Complement Fixation	5.30
Brucella abortus FPA	3.20
B. Abortus Bapa	3.20
B. Abortus Card	3.20
Total	14.90

(This is not a bill. Do not make payments from this report.)

**National Veterinary Services Laboratories**

PO Box 844

Ames, Iowa 50010

Phone: 515-337-7514 **Fax:** 515-337-7938

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FINAL REPORT

Laboratory Test Report

Sensitive But Unclassified/Sensitive Security Information - Disseminate on a Need-To-Know Basis Only

OwnerUSDA APHIS VS
Cowin Springs, MT**Accession Number:** 17-011844**Animal Location**

Park County MT

Date Collected: 04/03/2017**Date Received:** 04/12/2017**Submitter - 1961**Dr. Patrick Ryan. Clarke
USDA, APHIS, VS
187 E. Tobiano Tr.
Belgrade, MT 59714
FAX #: 406-866-5162
Phone #: 406-866-5162**Date Completed:** 07/20/2017**Collected By:** Clarke, Frey**Purpose:** General Diagnostic**Referral Number:****This is not a billable case.****NOTE: Condition of the sample(s) was adequate unless otherwise noted.****Sample:** Green03 **Animal ID:** Green03 **Brucella Case Number:** B17-0226 **Specimen Type:** Multiple - Specify in Sample **Species:** Bison (Not otherwise specified)

Brucella Isolation Result

No Isolation Made

Individual specimen results are listed below:

Lymph Node / Lymph Node- Mesenteric

Brucella Isolation Result

No Isolation Made

Lymph Node / Lymph Node- Prefemoral

Brucella Isolation Result

No Isolation Made

Lymph Node / Lymph Node- Hepatic

Brucella Isolation Result

No Isolation Made

Lymph Node / Lymph Node- S. Mammary

Brucella Isolation Result

No Isolation Made

Lymph Node / Lymph Node- Retropharyngeal

Brucella Isolation Result

No Isolation Made

Lymph Node / Lymph Node- Mandibular

Brucella Isolation Result

No Isolation Made

Lymph Node / Lymph Node- Prescapular

Brucella Isolation Result

No Isolation Made

Lymph Node / Lymph Node- Internal Iliac

Brucella Isolation Result

No Isolation Made

Lymph Node / Lymph Node- Parotid

Brucella Isolation Result

No Isolation Made

Lymph Node / Lymph Node- Bronchial

Brucella Isolation Result

No Isolation Made

Lymph Node / Lymph Node- Popliteal

Brucella Isolation Result

No Isolation Made

Uterus/Vagina / Uterus

Brucella Isolation Result	No Isolation Made
Ovary/Oviduct / Ovary	
Brucella Isolation Result	No Isolation Made
Mammary Gland / Mammary Gland	
Brucella Isolation Result	No Isolation Made
Spleen / Spleen	
Brucella Isolation Result	No Isolation Made
Kidney / Kidney	
Brucella Isolation Result	No Isolation Made
Liver / Liver	
Brucella Isolation Result	No Isolation Made
Milk / Milk Cream	
Brucella Isolation Result	No Isolation Made
Intestine / Ileum	
Brucella Isolation Result	No Isolation Made
Feces / Feces	
Brucella Isolation Result	No Isolation Made
Milk / Milk Sediment	
Brucella Isolation Result	No Isolation Made

Results authorized by: Dr. Suelee Robbe-Austerman, Section Head, Mycobacteria and Brucella Section
NVSL MB General Phone: 515-337-7388

Help Us Help You

(This new section will be updated periodically with tips for submitters.)

Quality samples yield the most accurate results. Please call if you have questions.



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PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 17-11936
Name/ID: Red 08
Species: American Bison

Sex: Female Age: Adult
County: Park
Owner: USDA, APHIS, VS - BQFS

FINAL REPORT 02/09/17

Accessioned: 02/03/17
Authorized by: AF

Previous Reports
02/09/17
02/09/17

SEROLOGY

Brucella abortus

Animal
Red 08
Bru. FPA= 185.1 mP

FPA
Positive

Clotted Blood

Verified on: 02/09/17 by: AF

Animal
Red 08

Clotted Blood
B. Abortus
BAPA
Positive

Verified on 02/06/17 by: AF

Animal
Red 08

BRUCF
3+ 1:10

Clotted Blood
BRUCARD
Positive

Verified on: 02/06/17 by: AF

FEES:

B. Abortus Card	1.60
Brucella abortus/suis - Complement Fixation	2.65
Brucella abortus FPA	1.60
B. Abortus Bapa	1.60
Total	7.45

(This is not a bill. Do not make payments from this report.)



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PATRICK RYAN CLARKE
PO BOX 202001
HELENA MT 59601

CASE: 17-12001
Name/ID: 7G18
Species: American Bison

Sex: Unknown **Age:** Fetus
Owner: USDA - APHIS - GonaCon

PRELIMINARY REPORT 02/08/17

Accessioned: 02/06/17
Authorized by: DJM

Previous Reports
02/09/17

CASE SUMMARY

Verified on: 02/08/17 by: DJM

REASON FOR SUBMISSION:

Bison fetus abortion from a brucella seropositive cow.

LABORATORY DIAGNOSIS:

Bovine abortion. Cultures pending.

COMMENT:

Clinical microbiological investigations are still in progress and will be reported when complete.

D. J. Marshall, BVSc, PhD

PATHOLOGY

Verified on: 02/08/17 by: DJM

GROSS DESCRIPTION:

A bison fetus is submitted for histological evaluation. Necropsy is performed between 5.00 and 5.30 pm on Monday 6th February 2017. Fetus is submitted in a moderate state of post mortem preservation and has a crown rump measurement of 37 cm. No hair is present on the skin. Red serous fluid is present in thoracic and abdominal cavities. Skeletal muscles are autolysed. Brain is liquid. No other significant gross abnormalities are detected.

HISTOLOGIC DESCRIPTION:

Sections of brain, liver, kidney, heart, lung, spleen, thymus, skeletal muscle, abomasum and small intestine are examined. Extramedullary hematopoiesis is present in the liver. Lung is not aerated and some alveoli contain deposits of squamous epithelial debris. No other significant histological abnormalities are detected.

HISTOLOGIC DIAGNOSIS:

007958

Liver: Extramedullary hematopoiesis.
Lung: Non aeration; Intra-alveolar squamous epithelial debris.

CLINICAL MICROBIOLOGY

Results are Pending for [Tritrichomonas foetus Culture](#)

Results are Pending for [Brucella Culture](#)

Results are Pending for [Campylobacter Culture](#)

Results are Pending for [Aerobic Culture](#)



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PATRICK RYAN CLARKE
PO BOX 202001
HELENA MT 59601

CASE: 17-12001
Name/ID: 7G18
Species: American Bison

Sex: Unknown **Age:** Fetus
Owner: USDA - APHIS - GonaCon

PRELIMINARY REPORT 02/08/17

Accessioned: 02/06/17
Authorized by: DJM

Previous Reports
02/09/17
02/09/17

CASE SUMMARY

Verified on: 02/08/17 by: DJM

REASON FOR SUBMISSION:

Bison fetus abortion from a brucella seropositive cow.

LABORATORY DIAGNOSIS:

Bovine abortion. Cultures pending.

COMMENT:

Clinical microbiological investigations are still in progress and will be reported when complete.

D. J. Marshall, BVSc, PhD

PATHOLOGY

Verified on: 02/08/17 by: DJM

GROSS DESCRIPTION:

A bison fetus is submitted for histological evaluation. Necropsy is performed between 5.00 and 5.30 pm on Monday 6th February 2017. Fetus is submitted in a moderate state of post mortem preservation and has a crown rump measurement of 37 cm. No hair is present on the skin. Red serous fluid is present in thoracic and abdominal cavities. Skeletal muscles are autolysed. Brain is liquid. No other significant gross abnormalities are detected.

HISTOLOGIC DESCRIPTION:

Sections of brain, liver, kidney, heart, lung, spleen, thymus, skeletal muscle, abomasum and small intestine are examined. Extramedullary hematopoiesis is present in the liver. Lung is not aerated and some alveoli contain deposits of squamous epithelial debris. No other significant histological abnormalities are detected.

HISTOLOGIC DIAGNOSIS:

Liver: Extramedullary hematopoiesis.
Lung: Non aeration; Intra-alveolar squamous epithelial debris.

CLINICAL MICROBIOLOGY

Results are Pending for [Tritrichomonas foetus Culture](#)

Results are Pending for [Brucella Culture](#)

Results are Pending for [Campylobacter Culture](#)

Results are Pending for [Aerobic Culture](#)



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PATRICK RYAN CLARKE
PO BOX 202001
HELENA MT 59601

CASE: 17-12001
Name/ID: 7G18
Species: American Bison

Sex: Unknown **Age:** Fetus
Owner: USDA - APHIS - GonaCon

FINAL REPORT 02/17/17

Accessioned: 02/06/17
Authorized by: DJM

Previous Reports
02/09/17
02/09/17
02/17/17

CASE SUMMARY

Verified on: 02/17/17 by: DJM

ADDITIONAL INFORMATION:

CLINICAL MICROBIOLOGY:

Investigations are now complete and reported below.

LABORATORY DIAGNOSIS:

Abortion by B abortus seropositive Bison cow; B abortus not cultured from abomasal fluid of fetus.

D. J. Marshall, BVSc, PhD

Verified on: 02/17/17 by: DJM

REASON FOR SUBMISSION:

Bison fetus abortion from a brucella seropositive cow.

LABORATORY DIAGNOSIS:

Bison abortion. Cultures pending.

COMMENT:

Clinical microbiological investigations are still in progress and will be reported when complete.

D. J. Marshall, BVSc, PhD

Verified on: 02/08/17 by: DJM

GROSS DESCRIPTION:

A bison fetus is submitted for histological evaluation. Necropsy is performed between 5.00 and 5.30 pm on Monday 6th February 2017. Fetus is submitted in a moderate state of post mortem preservation and has a crown rump measurement of 37 cm. No hair is present on the skin. Red serous fluid is present in thoracic and abdominal cavities. Skeletal muscles are autolysed. Brain is liquid. No other significant gross abnormalities are detected.

HISTOLOGIC DESCRIPTION:

Sections of brain, liver, kidney, heart, lung, spleen, thymus, skeletal muscle, abomasum and small intestine are examined. Extramedullary hematopoiesis is present in the liver. Lung is not aerated and some alveoli contain deposits of squamous epithelial debris. No other significant histological abnormalities are detected.

HISTOLOGIC DIAGNOSIS:

Liver: Extramedullary hematopoiesis.
Lung: Non aeration; Intra-alveolar squamous epithelial debris.

CLINICAL MICROBIOLOGY

Tritrichomonas foetus Culture					Verified on: 02/14/17 by: JR
Animal ID	Specimen	Isolate #	Organism	Amount	
7G18	Abomasal Fluid		Negative for Tritrichomonas foetus		
Brucella Culture					Verified on: 02/17/17 by: JR
Animal ID	Specimen	Isolate #	Organism	Amount	
7G18	Abomasal Fluid		Negative for Brucella sp.		
Campylobacter Culture					Verified on: 02/14/17 by: JR
Animal ID	Specimen	Isolate #	Organism	Amount	
7G18	Abomasal Fluid		Negative for Campylobacter sp.		
Aerobic Culture					Verified on: 02/09/17 by: KK
Animal ID	Specimen	Isolate #	Organism	Amount	
7G18	Abomasal Fluid		No Growth		

FEES:

Hematoxylin & Eosin	0.00
Tritrichomonas foetus Culture	0.00
Brucella Culture	0.00
Campylobacter Culture	0.00
Aerobic Culture	0.00
Case Summary	0.00
Fetal Necropsy	73.50
Additional Information	0.00
Total	73.50

(This is not a bill. Do not make payments from this report.)



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PATRICK RYAN CLARKE
PO BOX 202001
HELENA MT 59601

CASE: 17-12001
Name/ID: 7G18
Species: American Bison

Sex: Unknown **Age:** Fetus
Owner: USDA - APHIS - GonaCon

FINAL REPORT 02/17/17

Accessioned: 02/06/17
Authorized by: DJM

Previous Reports
02/09/17
02/09/17
02/17/17
02/17/17

CASE SUMMARY

Verified on: 02/17/17 by: DJM

ADDITIONAL INFORMATION:

CLINICAL MICROBIOLOGY:

Investigations are now complete and reported below.

LABORATORY DIAGNOSIS:

Abortion by B abortus seropositive Bison cow; B abortus not cultured from abomasal fluid of fetus.

D. J. Marshall, BVSc, PhD

Verified on: 02/17/17 by: DJM

REASON FOR SUBMISSION:

Bison fetus abortion from a brucella seropositive cow.

LABORATORY DIAGNOSIS:

Bison abortion. Cultures pending.

COMMENT:

Clinical microbiological investigations are still in progress and will be reported when complete.

D. J. Marshall, BVSc, PhD

Verified on: 02/08/17 by: DJM

GROSS DESCRIPTION:

A bison fetus is submitted for histological evaluation. Necropsy is performed between 5.00 and 5.30 pm on Monday 6th February 2017. Fetus is submitted in a moderate state of post mortem preservation and has a crown rump measurement of 37 cm. No hair is present on the skin. Red serous fluid is present in thoracic and abdominal cavities. Skeletal muscles are autolysed. Brain is liquid. No other significant gross abnormalities are detected.

HISTOLOGIC DESCRIPTION:

Sections of brain, liver, kidney, heart, lung, spleen, thymus, skeletal muscle, abomasum and small intestine are examined. Extramedullary hematopoiesis is present in the liver. Lung is not aerated and some alveoli contain deposits of squamous epithelial debris. No other significant histological abnormalities are detected.

HISTOLOGIC DIAGNOSIS:

Liver: Extramedullary hematopoiesis.
Lung: Non aeration; Intra-alveolar squamous epithelial debris.

CLINICAL MICROBIOLOGY

Tritrichomonas foetus Culture Verified on: 02/14/17 by: JR

Animal ID	Specimen	Isolate #	Organism	Amount
7G18	Abomasal Fluid		Negative for Tritrichomonas foetus	

Brucella Culture Verified on: 02/17/17 by: JR

Animal ID	Specimen	Isolate #	Organism	Amount
7G18	Abomasal Fluid		Negative for Brucella sp.	

Campylobacter Culture Verified on: 02/14/17 by: JR

Animal ID	Specimen	Isolate #	Organism	Amount
7G18	Abomasal Fluid		Negative for Campylobacter sp.	

Aerobic Culture Verified on: 02/09/17 by: KK

Animal ID	Specimen	Isolate #	Organism	Amount
7G18	Abomasal Fluid		No Growth	

FEES:

Hematoxylin & Eosin	0.00
Tritrichomonas foetus Culture	0.00
Brucella Culture	0.00
Campylobacter Culture	0.00
Aerobic Culture	0.00
Case Summary	0.00
Fetal Necropsy	73.50
Additional Information	0.00
Total	73.50

(This is not a bill. Do not make payments from this report.)



MONTANA VETERINARY DIAGNOSTIC LABORATORY

1911 WEST LINCOLN, BOZEMAN, MT 59718
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FAX: (406) 994-6344
EMAIL: livdiagnosticlab@mt.gov



PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 17-15227
Name/ID: Green 03
Species: American Bison

FINAL REPORT 10/07/17

Sex: Female **Age:** 8 Years
County: Park
Owner: USDA,APHIS,VS - GonaCon

Accessioned: 04/03/17
Authorized by: SS

Previous Reports
10/10/17
10/10/17

CASE SUMMARY

Verified on: 10/07/17 by: SS

REASON FOR SUBMISSION:

Dystocia and lymph node collection

LABORATORY DIAGNOSIS:

Fetal pneumonia with bacteria

COMMENT:

Histologic evaluation of tissues from these animals confirms the presence of the fetal pneumonia, with associated bacterial, and culture basal fluid reveals mixed populations of organisms, some of which may have been associated with the observed lesions. No additional changes were noted, and in-house Brucella culture was negative.

Stephen K. Smith, DVM, Diplomate, ACVP

PATHOLOGY

Verified on: 10/07/17 by: SS

GROSS DESCRIPTION:

Examined are the carcasses of an adult female bison and a male bison fetus with a crown rump length of 33 cm, following dystocia and euthanasia. Samples were collected for Brucella culture, but sent to NVSL by the submitter.

HISTOLOGIC DESCRIPTION:

A selection of fetal and material tissues are examined, some of which are characterized by post-mortem autolysis and bacterial overgrowth.

Fetal lung. Scattered throughout alveolar air spaces are occasional aggregates of neutrophils, associated with cell debris, squamous epithelial cells and bacteria.

All of the following tissues are examined histologically, and contain no significant microscopic changes: kidney, skeletal muscle, spleen, tongue, diaphragm, thymus, small intestine, abomasum, colon, uterus, brain, and liver.

HISTOLOGIC DIAGNOSIS:

Fetal pneumonia with bacteria.

CLINICAL MICROBIOLOGY

Tritrichomonas foetus Culture Verified on: 04/10/17 by: JR

Animal ID	Specimen	Isolate #	Organism	Amount
Green 03	Abomasal Fluid		Negative for Tritrichomonas foetus	

Brucella Culture Verified on: 04/14/17 by: JR

Animal ID	Specimen	Isolate #	Organism	Amount
Green 03	Abomasal Fluid		Negative for Brucella sp.	

Campylobacter Culture Verified on: 04/10/17 by: JR

Animal ID	Specimen	Isolate #	Organism	Amount
Green 03	Abomasal Fluid		Negative for Campylobacter sp.	

Aerobic Culture Verified on: 04/05/17 by: KK

Animal ID	Specimen	Isolate #	Organism	Amount
Green 03	Abomasal Fluid	1	Mixed enteric organisms present Mixed enteric organisms including Escherichia coli, and Enterococcus sp.	3+

FEES:

Tritrichomonas foetus Culture	0.00
Case Summary	0.00
Brucella Culture	0.00
Campylobacter Culture	0.00
Aerobic Culture	0.00
Hematoxylin & Eosin	0.00
Necropsy LA >500#	157.50
Incineration per pound	260.00
Total	417.50

(This is not a bill. Do not make payments from this report.)



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PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 17-15390
Name/ID: Green 03
Species: American Bison

Sex: Female Age: Adult
County: Park
Owner: USDA,APHIS,VS - Gona Con

FINAL REPORT 04/07/17

Accessioned: 04/05/17
Authorized by: AF

Previous Reports
04/07/17
04/07/17

SEROLOGY

Brucella abortus

Animal
Green 03
FPA neg (-4.0). DK

FPA
Negative

Clotted Blood

Verified on: 04/07/17 by: DK

Animal

Green 03

B. Abortus
BAPA
Negative

Clotted Blood

Verified on 04/06/17 by: DK

Animal

Green 03

BRUCF
Negative @
1:10

BRUCARD
Negative

Clotted Blood

Verified on: 04/07/17 by: AF

FEES:

B. Abortus Card	1.60
Brucella abortus/suis - Complement Fixation	2.65
Brucella abortus FPA	1.60
B. Abortus Bapa	1.60
Total	7.45

(This is not a bill. Do not make payments from this report.)



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PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 17-15876
Name/ID: 7R18
Species: American Bison

FINAL REPORT 04/21/17

Sex: Unknown **Age:** Fetus
Owner: USDA APHIS US GonaCon Study

Accessioned: 04/10/17
Authorized by: BL

Previous Reports
04/21/17
04/21/17

CASE SUMMARY

Verified on: 04/21/17 by: BL

REASON FOR SUBMISSION: Stillbirth

LABORATORY DIAGNOSIS:
Autolysis
Bacterial colonization, lung, heart

COMMENT: Inflammation was not present and the bacteria identified are considered postmortem invaders. Cultures yield mixed bacterial population including E. coli. Brucella and Campylobacter cultures were negative.

A. W. Layton, DVM, Diplomate, ACVP

PATHOLOGY

Verified on: 04/14/17 by: BL

GROSS DESCRIPTION: Necropsy was performed on 4/10/17 between the hours of 3:45 PM and 4:10 PM. The carcass is of a male bison fetus that has short hair but teeth have erupted. The animal is in poor postmortem and good nutritional state. The animal is partially scavenged and the small intestine and abomasum are not present. Lungs are atelectatic. No significant gross lesions were present.

GROSS DIAGNOSIS:
Scavenged carcass
Atelectasis

HISTOLOGIC DESCRIPTION: Tissue sections of spleen, diaphragm, liver, brain, heart, thymus, forestomach, kidney, and lung are examined. Large bacterial rods, occur within bronchiolar airways and several vessels of the heart. There is not a corresponding inflammatory cell response. Many tissues are autolyzed.

HISTOLOGIC DIAGNOSIS:
Autolysis
Bacterial colonization

CLINICAL MICROBIOLOGY

Brucella Culture

Verified on: 04/21/17 by: JR

Animal ID	Specimen	Isolate #	Organism	Amount
7R18	fetal lung		Negative for Brucella sp.	

Campylobacter Culture

Verified on: 04/17/17 by: JR

Animal ID	Specimen	Isolate #	Organism	Amount
7R18	fetal lung		Negative for Campylobacter sp.	

Aerobic Culture

Verified on: 04/13/17 by: KK

Animal ID	Specimen	Isolate #	Organism	Amount
7R18	fetal lung	1	Mixed sp.	4+
Mixed population of bacteria including; <i>Escherichia coli</i> , and alpha-hemolytic <i>Streptococcus sp.</i>				

FEES:

Hematoxylin & Eosin	0.00
Case Summary	0.00
Brucella Culture	0.00
Campylobacter Culture	0.00
Aerobic Culture	0.00
Fetal Necropsy	73.50
Total	73.50

(This is not a bill. Do not make payments from this report.)



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PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 17-16430
Name/ID:
Species: American Bison

Sex: Age:
Owner: USDA APHIS US GonaCon

FINAL REPORT 04/21/17

Accessioned: 04/14/17
Authorized by: AF

Previous Reports
04/28/17
04/28/17

SEROLOGY

Brucella abortus

Animal FPA
Red 18 Positive
FPA Positive (166.7 @ 20ul) DK

Clotted Blood

Verified on: 04/21/17 by: DK

Animal

Red 18

Clotted Blood
B. Abortus
BAPA
Positive

Verified on 04/19/17 by: SH

Animal

Red 18

BRUCF BRUCARD
Negative @ Positive
1:10

Clotted Blood

Verified on: 04/21/17 by: DK

FEES:

Brucella abortus/suis - Complement Fixation	2.65
Brucella abortus FPA	1.60
B. Abortus Bapa	1.60
B. Abortus Card	1.60
Total	7.45

(This is not a bill. Do not make payments from this report.)

**National Veterinary Services Laboratories**

PO Box 844

Ames, Iowa 50010

Phone: 515-337-7514 **Fax:** 515-337-7938

FEDERAL RELAY SERVICE (Voice/TTY/ASCII/Spanish) 1-800-877-8339

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PARTIAL REPORT

Laboratory Test Report

Sensitive But Unclassified/Sensitive Security Information - Disseminate on a Need-To-Know Basis Only

Owner

USDA, APHIS, VS

Corwin Springs, MT

Animal Location

Park County MT

Submitter - 1961

Dr. Patrick Ryan. Clarke

USDA, APHIS, VS

187 E. Tobiano Tr.

Belgrade, MT 59714

FAX #: 406-866-5162

Phone #: 406-866-5162

Accession Number:**17-016797****Date Collected:****Date Received:**

05/24/2017

Date Completed:**Collected By:**

R. Clarke, et al

Purpose:

General Diagnostic

Referral Number:**This is not a billable case.****NOTE: Condition of the sample(s) was adequate unless otherwise noted.****Sample:** R08 **Animal ID:** R08 **Brucella Case Number:** B17-0259 **Specimen Type:** Multiple - Specify in Sample **Species:** Bison (Not otherwise specified)

Individual specimen results are listed below:

Milk / Milk Cream

Brucella Isolation Result

No Isolation Made

Milk / Milk Sediment

Brucella Isolation Result

No Isolation Made

Swab / Swab- Vaginal

Brucella Isolation Result

No Isolation Made

Placenta / Placenta

Brucella Isolation Result

No Isolation Made

Feces / Feces

Brucella Isolation Result

Contaminated

Sample: R18 **Animal ID:** R18 **Brucella Case Number:** B17-0260 **Specimen Type:** Multiple - Specify in Sample **Species:** Bison (Not otherwise specified)

Individual specimen results are listed below:

Milk / Milk Cream

Brucella Isolation Result No Isolation Made

Milk / Milk Sediment

Brucella Isolation Result No Isolation Made

Swab / Swab- Vaginal

Brucella Isolation Result No Isolation Made

Placenta / Placenta

Brucella Isolation Result No Isolation Made

Feces / Feces

Brucella Isolation Result Contaminated

Sample: 7R03 **Animal ID:** 7R03 **Brucella Case Number:** B17-0261 **Specimen Type:** Multiple - Specify in Sample **Species:** Bison (Not otherwise specified)

Individual specimen results are listed below:

Swab / Swab- Conjunctival

Brucella Isolation Result No Isolation Made

Sample: 7G13 **Animal ID:** 7G13 **Brucella Case Number:** B17-0262 **Specimen Type:** Multiple - Specify in Sample **Species:** Bison (Not otherwise specified)

Individual specimen results are listed below:

Swab / Swab- Conjunctival

Brucella Isolation Result No Isolation Made

Sample: 7R01 **Animal ID:** 7R01 **Brucella Case Number:** B17-0263 **Specimen Type:** Multiple - Specify in Sample **Species:** Bison (Not otherwise specified)

Individual specimen results are listed below:

Swab / Swab- Conjunctival

Brucella Isolation Result No Isolation Made

Sample: R01 **Animal ID:** R01 **Brucella Case Number:** B17-0264 **Specimen Type:** Multiple - Specify in Sample **Species:** Bison (Not otherwise specified)

Individual specimen results are listed below:

Milk / Milk Cream

Brucella Isolation Result No Isolation Made

Milk / Milk Sediment

Brucella Isolation Result No Isolation Made

Swab / Swab- Vaginal

Brucella Isolation Result No Isolation Made

Fluid / Fluid- Amniotic

Brucella Isolation Result No Isolation Made

Feces / Feces

Brucella Isolation Result Contaminated

Sample: G13 Animal ID: G13 Brucella Case Number: B17-0265 Specimen Type: Multiple - Specify in Sample Species: Bison (Not otherwise specified)

Individual specimen results are listed below:

Fluid / Swab- Vaginal

Brucella Isolation Result	No Isolation Made
---------------------------	-------------------

Fluid / Discharge, Vaginal

Brucella Isolation Result	No Isolation Made
---------------------------	-------------------

Milk / Milk

Brucella Isolation Result	No Isolation Made
---------------------------	-------------------

Feces / Feces

Brucella Isolation Result	Contaminated
---------------------------	--------------

Sample: R03 Animal ID: R03 Brucella Case Number: B17-0266 Specimen Type: Multiple - Specify in Sample Species: Bison (Not otherwise specified)

Individual specimen results are listed below:

Fluid / Swab- Vaginal

Brucella Isolation Result	No Isolation Made
---------------------------	-------------------

Fluid / Discharge, Vaginal

Brucella Isolation Result	No Isolation Made
---------------------------	-------------------

Milk / Milk Cream

Brucella Isolation Result	No Isolation Made
---------------------------	-------------------

Milk / Milk Sediment

Brucella Isolation Result	No Isolation Made
---------------------------	-------------------

Feces / Feces

Brucella Isolation Result	No Isolation Made
---------------------------	-------------------

Sample: G14 Animal ID: G14 Brucella Case Number: B17-0267 Specimen Type: Multiple - Specify in Sample Species: Bison (Not otherwise specified)

Brucella Isolation Result	Isolate Determined
Brucella Identification Result	Brucella abortus

Individual specimen results are listed below:

Fluid / Swab- Vaginal

Brucella Isolation Result	Isolate Determined
Brucella Identification Result	Brucella abortus

Fluid / Discharge, Vaginal

Brucella Isolation Result	Suspect
---------------------------	---------

Milk / Milk

Brucella Isolation Result	No Isolation Made
---------------------------	-------------------

Feces / Feces

Brucella Isolation Result	No Isolation Made
---------------------------	-------------------

Quantified results:

Vag Swab ~250 cfu/plate

Vag Exudate >300 cfu/plate

Sample: 7G14 **Animal ID:** 7G14 **Brucella Case Number:** B17-0268 **Specimen Type:** Multiple - Specify in Sample **Species:** Bison (Not otherwise specified)

Individual specimen results are listed below:

Swab / Swab- Conjunctival

Brucella Isolation Result

No Isolation Made

Sample: R20 **Animal ID:** R20 **Brucella Case Number:** B17-0269 **Specimen Type:** Multiple - Specify in Sample **Species:** Bison (Not otherwise specified)

Individual specimen results are listed below:

Milk / Milk Cream

Brucella Isolation Result

No Isolation Made

Milk / Milk Sediment

Brucella Isolation Result

No Isolation Made

Fluid / Fluid- Amniotic

Brucella Isolation Result

No Isolation Made

Swab / Swab- Vaginal

Brucella Isolation Result

No Isolation Made

Feces / Feces

Brucella Isolation Result

No Isolation Made

Sample: 7R20 **Animal ID:** 7R20 **Brucella Case Number:** B17-0270 **Specimen Type:** Multiple - Specify in Sample **Species:** Bison (Not otherwise specified)

Individual specimen results are listed below:

Swab / Swab- Conjunctival

Brucella Isolation Result

No Isolation Made

Sample: R07 **Animal ID:** R07 **Brucella Case Number:** B17-0271 **Specimen Type:** Multiple - Specify in Sample **Species:** Bison (Not otherwise specified)

Individual specimen results are listed below:

Milk / Milk

Brucella Isolation Result

No Isolation Made

Swab / Swab- Vaginal

Brucella Isolation Result

No Isolation Made

Fluid / Fluid- Amniotic

Brucella Isolation Result

No Isolation Made

Feces / Feces

Brucella Isolation Result

No Isolation Made

Sample: 7R07 **Animal ID:** 7R07 **Brucella Case Number:** B17-0272 **Specimen Type:** Multiple - Specify in Sample **Species:** Bison (Not otherwise specified)

Individual specimen results are listed below:

Swab / Swab- Conjunctival

Brucella Isolation Result

No Isolation Made

Sample: G06 **Animal ID:** G06 **Brucella Case Number:** B17-0273 **Specimen Type:** Multiple - Specify in Sample **Species:** Bison (Not otherwise specified)

Individual specimen results are listed below:

Fluid / Swab- Vaginal

Brucella Isolation Result	No Isolation Made
---------------------------	-------------------

Fluid / Discharge, Vaginal

Brucella Isolation Result	No Isolation Made
---------------------------	-------------------

Milk / Milk Cream

Brucella Isolation Result	No Isolation Made
---------------------------	-------------------

Milk / Milk Sediment

Brucella Isolation Result	No Isolation Made
---------------------------	-------------------

Feces / Feces

Brucella Isolation Result	Contaminated
---------------------------	--------------

Sample: 7G06 **Animal ID:** 7G06 **Brucella Case Number:** B17-0274 **Specimen Type:** Multiple - Specify in Sample **Species:** Bison (Not otherwise specified)

Individual specimen results are listed below:

Swab / Swab- Conjunctival

Brucella Isolation Result	No Isolation Made
---------------------------	-------------------

Sample: R14 **Animal ID:** R14 **Brucella Case Number:** B17-0275 **Specimen Type:** Multiple - Specify in Sample **Species:** Bison (Not otherwise specified)

Individual specimen results are listed below:

Fluid / Swab- Vaginal

Brucella Isolation Result	No Isolation Made
---------------------------	-------------------

Fluid / Discharge, Vaginal

Brucella Isolation Result	No Isolation Made
---------------------------	-------------------

Milk / Milk

Brucella Isolation Result	No Isolation Made
---------------------------	-------------------

Feces / Feces

Brucella Isolation Result	No Isolation Made
---------------------------	-------------------

Sample: 7R14 **Animal ID:** 7R14 **Brucella Case Number:** B17-0276 **Specimen Type:** Multiple - Specify in Sample **Species:** Bison (Not otherwise specified)

Individual specimen results are listed below:

Swab / Swab- Conjunctival

Brucella Isolation Result	No Isolation Made
---------------------------	-------------------

Sample: G02 **Animal ID:** G02 **Brucella Case Number:** B17-0277 **Specimen Type:** Multiple - Specify in Sample **Species:** Bison (Not otherwise specified)

Individual specimen results are listed below:

Tissue / Placenta

Brucella Isolation Result No Isolation Made

Fluid / Swab- Vaginal

Brucella Isolation Result No Isolation Made

Milk / Milk

Brucella Isolation Result No Isolation Made

Feces / Feces

Brucella Isolation Result No Isolation Made

Sample: 7G02 **Animal ID:** 7G02 **Brucella Case Number:** B17-0278 **Specimen Type:** Multiple - Specify in Sample **Species:** Bison (Not otherwise specified)

Individual specimen results are listed below:

Swab / Swab- Conjunctival

Brucella Isolation Result No Isolation Made

**This is a Partial report. Some tests that were requested have not been completed.
A Final report will be sent when all testing has been completed.**

Results authorized by: Dr. Suelee Robbe-Austerman, Section Head, Mycobacteria and Brucella Section
NVSL MB General Phone: 515-337-7388

Help Us Help You

(This new section will be updated periodically with tips for submitters.)

Try the new NCAH Portal for VS Form 10-4 submissions to NVSL! For more information, please click or visit:
<https://www.aphis.usda.gov/aphis/ourfocus/animalhealth/lab-info-services/portal>



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PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 17-17245
Name/ID:
Species: American Bison

FINAL REPORT 05/03/17

Sex: Age:
County: Park
Owner: USDA - APHIS - VS

Accessioned: 04/25/17
Authorized by: AF

Previous Reports
05/03/17

SEROLOGY

Brucella abortus

Clotted Blood

Verified on: 04/28/17 by: DK

Animal

FPA

Gr13
7G13
R01
FPA Positive (26.4)
7R01
7R03
FPA Positive (173.3)

Negative
Negative
Positive

Negative
Positive

Clotted Blood

Verified on 04/27/17 by: DK

Animal

B. Abortus

BAPA

Gr13
7G13
R01
7R01
7R03

Negative
Negative
Negative
Negative
Positive

Clotted Blood

Verified on: 05/03/17 by: DK

Animal

BRUCF

BRUCARD

Gr13
7G13
R01
7R01
7R03

Negative @
1:10
3+ 1:10
4+ 1:20
4+ 1:80
4+ 1:640

Negative
Negative
Negative
Negative
Positive

FEES:

B. Abortus Card	8.00
Brucella abortus/suis - Complement Fixation	13.25
Brucella abortus FPA	8.00
B. Abortus Bapa	8.00
Total	37.25

(This is not a bill. Do not make payments from this report.)



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PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 17-17559
Name/ID:
Species: American Bison

FINAL REPORT 05/03/17

Sex: Age:
County: Park
Owner: USDA, APHIS, VS

Accessioned: 04/27/17
Authorized by: AF

Previous Reports
05/03/17
05/03/17

SEROLOGY

Brucella abortus

Animal
Red 03
FPA Positive (59.0)

FPA
Positive

Clotted Blood

Verified on: 04/28/17 by: DK

Animal

Red 03

Clotted Blood
B. Abortus
BAPA
Positive

Verified on 05/01/17 by: AF

Animal

Red 03

BRUCF
4+ 1:160

BRUCARD
Positive

Clotted Blood

Verified on: 05/03/17 by: DK

FEES:

B. Abortus Card	1.60
Brucella abortus/suis - Complement Fixation	2.65
Brucella abortus FPA	1.60
B. Abortus Bapa	1.60
Total	7.45

(This is not a bill. Do not make payments from this report.)



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PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 17-17917
Name/ID:
Species: American Bison

FINAL REPORT 05/16/17

Sex: Age:
County: Park
Owner: USDA, APHIS, VS

Accessioned: 05/02/17
Authorized by: AF

Previous Reports
05/16/17

SEROLOGY

Brucella abortus

Clotted Blood

Verified on: 05/16/17 by: DK

<u>Animal</u>	<u>FPA</u>
Red 7	Negative
7R7	Negative
Red 20	Positive
#3 FPA Pos (42.4)	
7R20	Positive
#4 FPA Pos (108.2)	
Gr14	Positive
#5 FPA Pos (192.2)	
7G14	Positive
#6 FPA Pos (188.1)	
Gr06	Negative
7G6	Negative

Clotted Blood

Verified on 05/12/17 by: AF

<u>Animal</u>	<u>B. Abortus</u> <u>BAPA</u>
Red 7	Negative
7R7	Negative
Red 20	Negative
7R20	Negative
Gr14	Positive
7G14	Positive
Gr06	Negative
7G6	Negative

Clotted Blood

Verified on: 05/03/17 by: DK

<u>Animal</u>	<u>BRUCF</u>	<u>BRUCARD</u>
Red 7	Negative @ 1:10	Negative
7R7	Negative @ 1:10	Negative
Red 20	3+ 1:20	Negative
7R20	3+ 1:320	Negative

007992

Species: Bison
County: Park

MONTANA VETERINARY DIAGNOSTIC LABORATORY

Box 997 - Bozeman, MT 59771
Phone (406) 994 - 4885 Fax (406) 994 - 6344
Email: livdiagnosticlab@mt.gov

Collection Date: 5-1-17
Page 1 of 1

SEROLOGY REPORT (SV2A) - Complete Light Shaded Areas Only (SEE EXAMPLE and KEY on back Page 4)

OWNER: USDA, APHIS, VS
ADDRESS:
CITY/STATE/ZIP: Corwin Springs, MT
REASON FOR TEST - MANDATORY INFORMATION (See Key)
BQFS - Gona Con - Cattle Health

SUBMITTER'S SIGNATURE: [Signature]
SUBMITTER'S NAME (PRINT): P. Ryan Clarke
ADDRESS: (b) (6)
CITY/STATE/ZIP:
RESULT REPORTING OPTIONS: PHONE / FAX / EMAIL
NUMBER OR EMAIL ADDRESS: J. Phye, B. Frey, R. Clarke

CIRCLE DISEASE TEST REQUIRED: If needed, indicate specific test and/or dilution. Example on back.						BRU	BT	ANA	EHF	PTB	BR	BVD	BLV	LEPTOSPIROSIS 8 - SEROVARS	OTHER
TUBE NO.	ANIMAL IDENTIFICATION	AGE	SEX	BREED	OFFICIAL VAC.										
1	Red 7	Ad	Fe	Bron		Neg	N	Neg	N	(4-1)					
2	TR 7	calf				N	N	Neg	N	(-2-3)					
3	Red 20	Ad				N	N	3 ⁺ (1:20)	Pos	(42-4)					
4	TR 20	calf	M			N	N	3 ⁺ (1:20)	Pos	(108-2)					
5	Gr 14	Ad	Fe			Pos	Pos	4 ⁺ (1:16)	Pos	(192-2)					
6	TR 14	calf				Pos	Pos	4 ⁺ (1:16)	Pos	(188-1)					
7	Gr 06	Ad				Neg	N	Neg	N	(10-9)					
8	TR 6	calf				Neg	N	Neg	N	(6-8)					
9															
Laboratory Comments:						Samples	8	8	8	8					
						Seropositive	2	2	4	4					
						Suspect	-	-	-	-					
						Seronegative	6	6	4	4					
						Undetermined	ap	ap	ap	ap					
						Tested By	5/2/17	5/3/17	5/4/17	5/4/17					

Please do FPA, CF
Card - BAPA

DATE RECEIVED: 5-1-2017



17-17917
05/02/17

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Positive
Positive
Negative
Negative
4+ 1:640
4+ 1:640
Negative @
1:10
Negative @
1:10

Gr14
7G14
Gr06
00798
7C8

FEES:

B. Abortus Card	12.80
Brucella abortus/suis - Complement Fixation	21.20
Brucella abortus FPA	12.80
B. Abortus Bapa	12.80
Total	59.60

(This is not a bill. Do not make payments from this report.)



MONTANA VETERINARY DIAGNOSTIC LABORATORY

1911 WEST LINCOLN, BOZEMAN, MT 59718
P.O. Box 997, BOZEMAN, MT 59771
WEB: www.liv.mt.gov/lab

PHONE: (406) 994-4885
FAX: (406) 994-6344
EMAIL: livdiagnosticlab@mt.gov



PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 17-17917
Name/ID:
Species: American Bison

FINAL REPORT 05/16/17

Sex: Age:
County: Park
Owner: USDA, APHIS, VS

Accessioned: 05/02/17
Authorized by: AF

Previous Reports
05/16/17
05/16/17

SEROLOGY

Brucella abortus

Clotted Blood

Verified on: 05/16/17 by: DK

<u>Animal</u>	<u>FPA</u>
Red 7	Negative
7R7	Negative
Red 20	Positive
#3 FPA Pos (42.4)	
7R20	Positive
#4 FPA Pos (108.2)	
Gr14	Positive
#5 FPA Pos (192.2)	
7G14	Positive
#6 FPA Pos (188.1)	
Gr06	Negative
7G6	Negative

Clotted Blood

Verified on 05/12/17 by: AF

<u>Animal</u>	<u>B. Abortus</u> <u>BAPA</u>
Red 7	Negative
7R7	Negative
Red 20	Negative
7R20	Negative
Gr14	Positive
7G14	Positive
Gr06	Negative
7G6	Negative

Clotted Blood

Verified on: 05/03/17 by: DK

<u>Animal</u>	<u>BRUCF</u>	<u>BRUCARD</u>
Red 7	Negative @ 1:10	Negative
7R7	Negative @ 1:10	Negative
Red 20	3+ 1:20	Negative

7R20	3+ 1:320	Negative
Gr14	4+ 1:640	Positive
7G14	4+ 1:640	Positive
Gr06	Negative @ 1:10	Negative
7G6	Negative @ 1:10	Negative

Species: Bison
County: Park

MONTANA VETERINARY DIAGNOSTIC LABORATORY

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Email: livdiagnosticlab@mt.gov

Collection Date: 5-1-17
Page 1 of 1

SEROLOGY REPORT (SV2A) - Complete Light Shaded Areas Only
(SEE EXAMPLE and KEY on back Page 4)

OWNER: USDA, APHIS, VS
ADDRESS:
CITY/STATE/ZIP: Corwin Springs, MT
REASON FOR TEST - MANDATORY INFORMATION (See Key)
BQFS - Gona Con - Cattle Health

SUBMITTER'S SIGNATURE: P. Ryan Clarke
SUBMITTER'S NAME (PRINT): P. Ryan Clarke
ADDRESS: (b) (6)
CITY/STATE/ZIP:
RESULT REPORTING OPTIONS: PHONE / FAX / EMAIL
NUMBER OR EMAIL ADDRESS: J. Phyllis, B. Frey, R. Clarke

CIRCLE DISEASE TEST REQUIRED: If needed, indicate specific test and/or dilution. Example on back.

TUBE NO.	ANIMAL IDENTIFICATION	AGE	SEX	BREED	OFFICIAL VAC.	BRU	BT	ANA	EMB	PTB	IBR	BVD	BLV	LEPTOSPIROSIS B - SEROVARS	OTHER
1	Red 7	Ad	Fe	Bren		Neg	N	Neg	N (4.1)						
2	7R7	cal		1		N	N	Neg	N (-2.3)						
3	Red 20	Ad				N	3 ⁺ (120)	Pos	(42.4)						
4	7R20	cal	M			N	3 ⁺ (1320)	Pos	(108.2)						
5	Gr 14	Ad	Fe			Pos	Pos (1640)	Pos	(192.2)						
6	7G14	cal				Pos	Pos (1640)	Pos	(188.1)						
7	Gr 06	Ad				Neg	N	Neg	N (0.9)						
8	7G6	cal				Neg	N	Neg	N (6.8)						
9															
Laboratory Comments:						Samples	8	8	8	8					
						Seropositive	2	2	4	4					
						Suspect	-	-	-	-					
						Seronegative	6	6	4	4					
						Undetermined	ap	ap	ap	ap					
						Tested By	5/2/17	5/3/17	5/4/17	5/14/17					

Laboratory Comments:

Please do FPA, CF
Card - BAPA

FEE:

DATE RECEIVED: 5-1-2017



17 - 17917

05/02/17

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007997

FEES:

B. Abortus Card	12.80
Brucella abortus/suis - Complement Fixation	21.20
Brucella abortus FPA	12.80
B. Abortus Bapa	12.80
Total	59.60

(This is not a bill. Do not make payments from this report.)



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EMAIL: livdiagnosticlab@mt.gov



PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 17-18070
Name/ID:
Species: American Bison

FINAL REPORT 05/27/17

Sex: Age:
County: Park
Owner: USDA, APHIS, VS

Accessioned: 05/03/17
Authorized by: AF

Previous Reports
05/27/17

SEROLOGY

Brucella abortus

Clotted Blood

Verified on: 05/27/17 by: DK

Animal

FPA

Gr07	Negative
7G07	Negative
Red 64	Positive
7R64	Positive
Red 43	Positive
7R43	Positive
Red 56	Positive
7R56	Positive
Red 14	Positive
7R14	Positive
Gr02	Negative
7G02	Negative
Gr24	Negative
7G24	Negative

Clotted Blood

Verified on 05/04/17 by: AF

Animal

B. Abortus BAPA

Gr07	Negative
7G07	Negative
Red 64	Positive
7R64	Positive
Red 43	Positive
7R43	Positive
Red 56	Positive
7R56	Positive
Red 14	Negative
7R14	Positive
Gr02	Negative
7G02	Negative
Gr24	Negative
7G24	Negative

<u>Animal</u>	<u>BRUCF</u>	<u>BRUCARD</u>
Gr07	Negative @ 1:10	Negative
7G07	Negative @ 1:10	Negative
Red 64	3+ 1:40	Positive
7R64	4+ 1:40	Negative
Red 43	3+ 1:640	Positive
7R43	4+ 1:640	Positive
Red 56	3+ 1:640	Positive
7R56	4+ 1:640	Positive
Red 14	4+ 1:10	Negative
7R14	2+ 1:40	Negative
Gr02	Negative @ 1:10	Negative
7G02	Negative @ 1:10	Negative
Gr24	Negative @ 1:10	Negative
7G24	Negative @ 1:10	Negative

Species: Bison
County: Park

MONTANA VETERINARY DIAGNOSTIC LABORATORY

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Email: livdiagnosticlab@mt.gov

Collection Date: 5-2-17
Page 1 of 2

SEROLOGY REPORT (SV2A) - Complete Light Shaded Areas Only
(SEE EXAMPLE and KEY on back Page 4)

OWNER: USDA, APHIS VS
ADDRESS:
CITY/STATE/ZIP: Corvallis Springs, MT
REASON FOR TEST - MANDATORY INFORMATION (See Key)
BQFS, Gona Con - Cattle Health

SUBMITTER'S SIGNATURE: Phy. Clarke
SUBMITTER'S NAME (PRINT): (b) (6)
ADDRESS:
CITY/STATE/ZIP:
RESULT REPORTING OPTIONS: PHONE / FAX / EMAIL
NUMBER OR EMAIL ADDRESS: R. Clarke, B. Frey, J. Ryan

CIRCLE DISEASE TEST REQUIRED: If needed, indicate specific test and/or dilution. Example on back.

TUBE NO.	ANIMAL IDENTIFICATION	AGE	SEX	BREED	OFFICIAL VAC.	BRU	BT	ANA	END	PTB	IBR	BVD	BLV	LEPTOSPIROSIS 8 - SEROVARS	OTHER
1	G+07	Ad	Fe	Beem		CF (1:10)	Neg	N	N	7.6					
2	7G07	calF	M			Neg	Neg	N	N	4.1					
3	Red64	Ad	Fe			3+(1:40)	Pos	Pos	Pos	144.5, 139.0					
4	7R64	calF	M			4+(1:40)	Pos	N	Pos	127.1, 126.6					
5	Red43	Ad	Fe			3+(1:640)	Pos	Pos	Pos	196.3, 199.5					
6	7R43	calF	M			4+(1:640)	Pos	Pos	Pos	199.6, 198.4					
7	Red56	Ad	Fe			3+(1:640)	Pos	Pos	Pos	188.4, 188.3					
8	7R56	calF	Fe			4+(1:640)	Pos	Pos	Pos	182.4, 183.3					
9	Red14	Ad	Fe			4+(1:10)	Neg	N	Pos	23.8, 26.1					
10	7R14	calF	Fe			2+(1:40)	Pos	N	Pos	52.7, 58.3					
Samples						14	14	14	14						
Seropositive						8	7	5	8						
Suspect						-	-	-	-						
Seronegative						6	7	9	6						
Undetermined															
Tested By						af	af	af	af						
						5/4/17	5/4/17	5/4/17	5/4/17						

Laboratory Comments:

Please do CF, FPA
BAPA, Card.

FEE:

DATE RECEIVED: 5-3-17



17-18070
05/03/17

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008001

FEES:

B. Abortus Card	22.40
Brucella abortus/suis - Complement Fixation	37.10
Brucella abortus FPA	22.40
B. Abortus Bapa	22.40
Total	104.30

(This is not a bill. Do not make payments from this report.)



MONTANA VETERINARY DIAGNOSTIC LABORATORY

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FAX: (406) 994-6344
EMAIL: livdiagnosticlab@mt.gov



PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 17-18070
Name/ID:
Species: American Bison

FINAL REPORT 05/27/17

Sex: Age:
County: Park
Owner: USDA, APHIS, VS

Accessioned: 05/03/17
Authorized by: AF

Previous Reports
05/27/17
05/27/17

SEROLOGY

Brucella abortus

Clotted Blood

Verified on: 05/27/17 by: DK

<u>Animal</u>	<u>FPA</u>
Gr07	Negative
7G07	Negative
Red 64	Positive
7R64	Positive
Red 43	Positive
7R43	Positive
Red 56	Positive
7R56	Positive
Red 14	Positive
7R14	Positive
Gr02	Negative
7G02	Negative
Gr24	Negative
7G24	Negative

Clotted Blood

Verified on 05/04/17 by: AF

<u>Animal</u>	<u>B. Abortus</u>
	<u>BAPA</u>
Gr07	Negative
7G07	Negative
Red 64	Positive
7R64	Positive
Red 43	Positive
7R43	Positive
Red 56	Positive
7R56	Positive
Red 14	Negative
7R14	Positive
Gr02	Negative
7G02	Negative
Gr24	Negative
7G24	Negative

008004

Clotted Blood

Verified on: 05/23/17 by: DK

<u>Animal</u>	<u>BRUCF</u>	<u>BRUCARD</u>
Gr07	Negative @ 1:10	Negative
7G07	Negative @ 1:10	Negative
Red 64	3+ 1:40	Positive
7R64	4+ 1:40	Negative
Red 43	3+ 1:640	Positive
7R43	4+ 1:640	Positive
Red 56	3+ 1:640	Positive
7R56	4+ 1:640	Positive
Red 14	4+ 1:10	Negative
7R14	2+ 1:40	Negative
Gr02	Negative @ 1:10	Negative
7G02	Negative @ 1:10	Negative
Gr24	Negative @ 1:10	Negative
7G24	Negative @ 1:10	Negative

Species: Bison
County: Park

MONTANA VETERINARY DIAGNOSTIC LABORATORY

Box 997 - Bozeman, MT 59771
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Email: livdiagnosticlab@mt.gov

Collection Date: 5-2-17
Page 1 of 2

SEROLOGY REPORT (SV2A) - Complete Light Shaded Areas Only
(SEE EXAMPLE and KEY on back Page 4)

OWNER: USDA, APHIS VS
ADDRESS:
CITY/STATE/ZIP: Corvallis Springs, MT
REASON FOR TEST - MANDATORY INFORMATION (See Key)
BQFS, Gona Con - Cattle Health

SUBMITTER'S SIGNATURE: Phy. Clarke
SUBMITTER'S NAME (PRINT): (b) (6)
ADDRESS:
CITY/STATE/ZIP:
RESULT REPORTING OPTIONS: PHONE / FAX / EMAIL
NUMBER OR EMAIL ADDRESS: R. Clarke, B. Frey, J. Ryan

CIRCLE DISEASE TEST REQUIRED: If needed, indicate specific test and/or dilution. Example on back.

TUBE NO.	ANIMAL IDENTIFICATION	AGE	SEX	BREED	OFFICIAL VAC.	BRU	BT	ANA	END	PTB	IBR	BVD	BLV	LEPTOSPIROSIS 8 - SEROVARS	OTHER
1	G+07	Ad	Fe	Beem		CF (1:10)	Neg	N	N	7.6					
2	7G07	cat	M			Neg	Neg	N	N	4.1					
3	Red64	Ad	Fe			3+(1:40)	Pos	Pos	Pos	144.5, 139.0					
4	7R64	cat	M			4+(1:40)	Pos	N	Pos	127.1, 126.6					
5	Red43	Ad	Fe			3+(1:640)	Pos	Pos	Pos	196.3, 199.5					
6	7R43	cat	M			4+(1:640)	Pos	Pos	Pos	199.6, 198.4					
7	Red56	Ad	Fe			3+(1:640)	Pos	Pos	Pos	188.4, 188.3					
8	7R56	cat	Fe			4+(1:640)	Pos	Pos	Pos	182.4, 183.3					
9	Red14	Ad	Fe			4+(1:10)	Neg	N	Pos	23.8, 26.1					
10	7R14	cat	Fe			2+(1:40)	Pos	N	Pos	52.7, 58.3					
Samples						14	14	14	14						
Seropositive						8	7	5	8						
Suspect						-	-	-	-						
Seronegative						6	7	9	6						
Undetermined															
Tested By						af	af	af	af						
						5/4/17	5/4/17	5/4/17	5/4/17						

Laboratory Comments:

Please do CF, FPA
BAPA, Card.

FEE:

DATE RECEIVED:

5-3-17



17-18070
05/03/17

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008006

FEES:

B. Abortus Card	22.40
Brucella abortus/suis - Complement Fixation	37.10
Brucella abortus FPA	22.40
B. Abortus Bapa	22.40
Total	104.30

(This is not a bill. Do not make payments from this report.)



MONTANA VETERINARY DIAGNOSTIC LABORATORY

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EMAIL: livdiagnosticlab@mt.gov



PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 17-18293
Name/ID: 3G14
Species: American Bison

FINAL REPORT 05/27/17

Sex: Female Age: Adult
County: Park
Owner: USDA, APHIS, VS

Accessioned: 05/05/17
Authorized by: AF

Previous Reports
05/27/17

SEROLOGY

Brucella abortus

Animal
3G14

FPA
Positive

Clotted Blood

Verified on: 05/27/17 by: DK

Animal
3G14

B. Abortus
BAPA
Positive

Clotted Blood

Verified on 05/12/17 by: AF

Animal
3G14

BRUCF
3+ 1:40

BRUCARD
Positive

Clotted Blood

Verified on: 05/23/17 by: DK

FEES:

B. Abortus Card	1.60
Brucella abortus/suis - Complement Fixation	2.65
Brucella abortus FPA	1.60
B. Abortus Bapa	1.60
Total	7.45

(This is not a bill. Do not make payments from this report.)



MONTANA VETERINARY DIAGNOSTIC LABORATORY

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PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 17-18293
Name/ID: 3G14
Species: American Bison

FINAL REPORT 05/27/17

Sex: Female Age: Adult
County: Park
Owner: USDA, APHIS, VS

Accessioned: 05/05/17
Authorized by: AF

Previous Reports
05/27/17
05/27/17

SEROLOGY

Brucella abortus

Animal
3G14

FPA
Positive

Clotted Blood

Verified on: 05/27/17 by: DK

Animal
3G14

B. Abortus
BAPA
Positive

Clotted Blood

Verified on 05/12/17 by: AF

Animal
3G14

BRUCF
3+ 1:40

BRUCARD
Positive

Clotted Blood

Verified on: 05/23/17 by: DK

FEES:

B. Abortus Card	1.60
Brucella abortus/suis - Complement Fixation	2.65
Brucella abortus FPA	1.60
B. Abortus Bapa	1.60
Total	7.45

(This is not a bill. Do not make payments from this report.)



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EMAIL: livdiagnosticlab@mt.gov



PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 17-18422
Name/ID: 7G14
Species: American Bison

Sex: Male **Age:** 6 Days
Owner: USDA - APHIS - VS

PRELIMINARY REPORT 05/12/17

Accessioned: 05/08/17
Authorized by: DJM

Previous Reports
05/15/17

CASE SUMMARY

Verified on: 05/12/17 by: DJM

REASON FOR SUBMISSION:

Bison calf mortality.

LABORATORY DIAGNOSIS:

Bison neonatal mortality; Starvation mis-mothering complex.

COMMENT:

Utilization of perirenal and pericardial fat reserves combined with the lack of ingested milk supports a diagnosis of starvation/mis-mothering. Clinical microbiological investigations for Brucella are still in progress and will be reported as soon as complete.

D. J. Marshall, BVSc, PhD

PATHOLOGY

Verified on: 05/12/17 by: DJM

GROSS DESCRIPTION:

A 6-day-old female Bison calf was submitted for necropsy and subsequent laboratory evaluation. Necropsy was performed between 4.15 and 5.00 pm on Monday 8th May 2017. Calf is in light body condition and a moderate state of post-mortem preservation. Abomasum is empty of contents and filled with gas. Loops of small intestine are also filled with gas. There is utilization of the pericardial and perirenal fat reserves. No other significant gross abnormalities are detected.

HISTOLOGIC DESCRIPTION:

Sections of brain, liver, kidney, heart, lung, spleen, abomasum and small intestine are examined. Ling is congested and edematous. No other significant histological abnormalities are detected.

HISTOLOGIC DIAGNOSIS:

008015

Case No: 17-18422 - ,

Lung: Congestion; Edema.

CLINICAL MICROBIOLOGY

Aerobic Culture

Verified on: 05/11/17 by: KK

Animal ID	Specimen	Isolate #	Organism	Amount
7G14	lung	1	Mixed enteric organisms present	1+

Results are Pending for [Brucella Culture](#)



MONTANA VETERINARY DIAGNOSTIC LABORATORY

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EMAIL: livdiagnosticlab@mt.gov



PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 17-18422
Name/ID: 7G14
Species: American Bison

Sex: Male **Age:** 6 Days
Owner: USDA - APHIS - VS

FINAL REPORT 05/22/17

Accessioned: 05/08/17
Authorized by: DJM

Previous Reports
05/15/17
05/23/17

CASE SUMMARY

Verified on: 05/22/17 by: DJM

ADDITIONAL INFORMATION:

CLINICAL MICROBIOLOGY:

Investigations for this case are now complete and reported below.

D. J. Marshall, BVSc, PhD

Verified on: 05/12/17 by: DJM

REASON FOR SUBMISSION:

Bison calf mortality.

LABORATORY DIAGNOSIS:

Bison neonatal mortality; Starvation mis-mothering complex.

COMMENT:

Utilization of perirenal and pericardial fat reserves combined with the lack of ingested milk supports a diagnosis of starvation/mis-mothering. Clinical microbiological investigations for Brucella are still in progress and will be reported as soon as complete.

D. J. Marshall, BVSc, PhD

PATHOLOGY

Verified on: 05/12/17 by: DJM

008017

GROSS DESCRIPTION:

A 6-day-old female Bison calf was submitted for necropsy and subsequent laboratory evaluation. Necropsy was performed between 4.15 and 5.00 pm on Monday 8th May 2017. Calf is in light body condition and a moderate state of post-mortem preservation. Abomasum is empty of contents and filled with gas. Loops of small intestine are also filled with gas, There is utilization of the pericardial and perirenal fat reserves. No other significant gross abnormalities are detected.

HISTOLOGIC DESCRIPTION:

Sections of brain, liver, kidney, heart, lung, spleen, abomasum and small intestine are examined. Ling is congested and edematous. No other significant histological abnormalities are detected.

HISTOLOGIC DIAGNOSIS:

Lung: Congestion; Edema.

CLINICAL MICROBIOLOGY

Brucella Culture

Verified on: 05/22/17 by: JR

Animal ID	Specimen	Isolate #	Organism	Amount
7G14	lung		Negative for Brucella sp.	

Aerobic Culture

Verified on: 05/11/17 by: KK

Animal ID	Specimen	Isolate #	Organism	Amount
7G14	lung	1	Mixed enteric organisms present	1+

FEES:

Hematoxylin & Eosin	0.00
Brucella Culture	0.00
Aerobic Culture	0.00
Case Summary	0.00
Fetal Necropsy	73.50
Additional Information	0.00
Total	73.50

(This is not a bill. Do not make payments from this report.)



MONTANA VETERINARY DIAGNOSTIC LABORATORY

1911 WEST LINCOLN, BOZEMAN, MT 59718
P.O. Box 997, BOZEMAN, MT 59771
WEB: www.liv.mt.gov/lab

PHONE: (406) 994-4885
FAX: (406) 994-6344
EMAIL: livdiagnosticlab@mt.gov



PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 17-18423
Name/ID:
Species: American Bison

Sex: Age:
Owner: USDA, APHIS, VS

FINAL REPORT 05/28/17

Accessioned: 05/08/17
Authorized by: AF

Previous Reports
05/28/17

SEROLOGY

Brucella abortus

Clotted Blood

Verified on: 05/28/17 by: DK

<u>Animal</u>	<u>FPA</u>
R16	Positive
7R16	Positive
R13	Positive
7R13	Positive
Gr21	Negative
7G21	Negative
R72	Positive
7R72	Positive
R40	Positive
7R40	Positive
R73	Positive
7R73	Positive

Clotted Blood

Verified on 05/23/17 by: DK

<u>Animal</u>	<u>B. Abortus</u>
	<u>BAPA</u>
R16	Positive
7R16	Positive
R13	Positive
7R13	Positive
Gr21	Negative
7G21	Negative
R72	Positive
7R72	Positive
R40	Positive
7R40	Positive
R73	Positive
7R73	Positive

Clotted Blood

Verified on: 05/23/17 by: DK

<u>Animal</u>	<u>BRUCF</u>	<u>BRUCARD</u>
R16	4+ 1:640	Positive
7R16	4+ 1:640	Positive

R13	Negative @ 1:10	Positive
7R13	3+ 1:320	Positive
Gr21	Negative @ 1:10	Negative
7G21	2+ 1:40	Negative
R72	Negative @ 1:10	Positive
7R72	3+ 1:320	Positive
R40	3+ 1:80	Positive
7R40	4+ 1:640	Positive
R73	2+ 1:80	Positive
7R73	4+ 1:80	Positive

Species: Bison
County: Park

MONTANA VETERINARY DIAGNOSTIC LABORATORY

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Email: livdiagnosticlab@mt.gov

Collection Date: 5-8-17
Page 1 of 2

SEROLOGY REPORT (SV2A) - Complete Light Shaded Areas Only (SEE EXAMPLE and KEY on back Page 4)

OWNER: USDA, APHIS, VS
ADDRESS:
CITY/STATE/ZIP: Corwin Springs, MT
REASON FOR TEST - MANDATORY INFORMATION (See Key)
BQFS-GonaCon-Cattle Health

SUBMITTER'S SIGNATURE: P. Ryan Clarke
SUBMITTER'S NAME (PRINT): P. Ryan Clarke
ADDRESS: (b) (6)
CITY/STATE/ZIP:
RESULT REPORTING OPTIONS: PHONE / FAX / EMAIL
NUMBER OR EMAIL ADDRESS: R. Clarke, B. Frey, J. Phyan

CIRCLE DISEASE TEST REQUIRED: If needed, indicate specific test and/or dilution. Example on back.

TUBE NO.	ANIMAL IDENTIFICATION	AGE	SEX	BREED	OFFICIAL VAC.	BRU	BT	ANA	END	PTB	IBR	BVD	BLV	LEPTOSPIROSIS 8 - SEROVARS	OTHER
						CF (1:10)	Bru	Bru	Bru	Bru					
1	R16	Ad	Fe	Bison		4+(1:640)	Pos	Pos	Pos	179.1, 178.2					
2	7R16	calf	M			4+(1:640)	Pos	Pos	Pos	192.0, 189.5					
3	R13	Ad	Fe			Neg (1:10)	Pos	Pos	Pos	189.8, 191.0					
4	7R13	calf	Fe			3+(1:320)	Pos	Pos	Pos	170.2, 170.3					
5	Gr21	Ad	Fe			Neg (1:10)	N	N	N	4.0 -21.4, -20.9 - (sample lysed) (cloudy) 2/27/17					
6	7G21	calf	Fe			2+(1:40)	N	N	N	-21.4, -20.4 -					
7	R72	Ad	Fe			Neg (1:10)	Pos	Pos	Pos	177.6, 180.0					
8	7R72	calf	M			3+(1:320)	Pos	Pos	Pos	135.0, 136.6, 137.7					
9	R40	Ad	Fe			3+(1:80)	Pos	Pos	Pos	205.4, 205.4, 205.4					
10	7R40	calf	Fe			4+(1:640)	Pos	Pos	Pos	184.6, 181.6					
Samples						12	12	12	12						
Seropositive						9	10	10	10						
Suspect						-									
Seronegative						3	2	2	2						
Undetermined															
Tested By						5/11/17	5/23/17	5/23/17	5/23/17						

Laboratory Comments:

Please do FPA, BAPA
CF = card

FEE: DATE RECEIVED: 5-8-17



17-18423

05/08/17

The MVDL is an accredited AAVLD laboratory and a member of the USDA National Animal Health Laboratory Network. Completing and submitting any submission form or a contractual agreement for services requested and the specimens submitted become the property of the MVDL. In addition, at no additional expense to our clients, specimens submitted for additional testing upon the order of the state or federal animal health officials, or whenever a Foreign Animal Disease is suspected, or in support of surveillance for other animal

008022

FEES:

B. Abortus Card	19.20
Brucella abortus/suis - Complement Fixation	31.80
Brucella abortus FPA	19.20
B. Abortus Bapa	19.20
Total	89.40

(This is not a bill. Do not make payments from this report.)



MONTANA VETERINARY DIAGNOSTIC LABORATORY

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PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 17-18423
Name/ID:
Species: American Bison

Sex: Age:
Owner: USDA, APHIS, VS

FINAL REPORT 05/28/17

Accessioned: 05/08/17
Authorized by: AF

Previous Reports
05/28/17
05/28/17

SEROLOGY

Brucella abortus

Clotted Blood

Verified on: 05/28/17 by: DK

Animal

FPA

R16	Positive
7R16	Positive
R13	Positive
7R13	Positive
Gr21	Negative
7G21	Negative
R72	Positive
7R72	Positive
R40	Positive
7R40	Positive
R73	Positive
7R73	Positive

Clotted Blood

Verified on 05/23/17 by: DK

Animal

B. Abortus

BAPA

R16	Positive
7R16	Positive
R13	Positive
7R13	Positive
Gr21	Negative
7G21	Negative
R72	Positive
7R72	Positive
R40	Positive
7R40	Positive
R73	Positive
7R73	Positive

Clotted Blood

Verified on: 05/23/17 by: DK

Animal

BRUCF

BRUCARD

R16	4+ 1:640	Positive
7R16	4+ 1:640	Positive

008025

R13	Negative @ 1:10	Positive
7R13	3+ 1:320	Positive
Gr21	Negative @ 1:10	Negative
7G21	2+ 1:40	Negative
R72	Negative @ 1:10	Positive
7R72	3+ 1:320	Positive
R40	3+ 1:80	Positive
7R40	4+ 1:640	Positive
R73	2+ 1:80	Positive
7R73	4+ 1:80	Positive

Species: Bison
County: Park

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Collection Date: 5-8-17
Page 1 of 2

SEROLOGY REPORT (SV2A) - Complete Light Shaded Areas Only (SEE EXAMPLE and KEY on back Page 4)

OWNER: USDA, APHIS, VS
ADDRESS:
CITY/STATE/ZIP: Corwin Springs, MT
REASON FOR TEST - MANDATORY INFORMATION (See Key)
BQFS-GonaCon-Cattle Health

SUBMITTER'S SIGNATURE: P. Ryan Clarke
SUBMITTER'S NAME (PRINT): P. Ryan Clarke
ADDRESS:
CITY/STATE/ZIP: (b) (6)
RESULT REPORTING OPTIONS: PHONE / FAX / EMAIL
NUMBER OR EMAIL ADDRESS: R. Clarke, B. Frey, J. Phyan

CIRCLE DISEASE TEST REQUIRED: If needed, indicate specific test and/or dilution. Example on back.

TUBE NO.	ANIMAL IDENTIFICATION	AGE	SEX	BREED	OFFICIAL VAC.	BRU	BT	ANA	END	PTB	IBR	BVD	BLV	LEPTOSPIROSIS 8 - SEROVARS	OTHER
1	R16	Ad	Fe	Bison		CF (1:10)	Pos	Pos	Pos	Pos	179.1, 178.2				
2	7R16	calf	M			4+ (1:640)	Pos	Pos	Pos	Pos	192.0, 189.5				
3	R13	Ad	Fe			Neg (1:10)	Pos	Pos	Pos	Pos	189.8, 191.0				
4	7R13	calf	Fe			3+ (1:320)	Pos	Pos	Pos	Pos	170.2, 170.3				
5	Gr 21	Ad	Fe			Neg (1:10)	N	N	N	N	4.0				
6	7G21	calf	Fe			2+ (1:40)	N	N	N	N	-21.4, -20.9				
7	R72	Ad	Fe			Neg (1:10)	Pos	Pos	Pos	Pos	177.6, 180.0				
8	7R72	calf	M			3+ (1:320)	Pos	Pos	Pos	Pos	135.0, 136.6				
9	R40	Ad	Fe			3+ (1:80)	Pos	Pos	Pos	Pos	205.4, 205.4				
10	7R40	calf	Fe			4+ (1:640)	Pos	Pos	Pos	Pos	184.6, 181.6				
Samples						12	12	12	12						
Seropositive						9	10	10	10						
Suspect						-									
Seronegative						3	2	2	2						
Undetermined															
Tested By						5/11/17	5/23/17	5/23/17	5/23/17	5/23/17					

Laboratory Comments:

Please do FPA, BAPA
CF = card

FEE: DATE RECEIVED: 5-8-17



17-18423
05/08/17

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008027

FEES:

B. Abortus Card	19.20
Brucella abortus/suis - Complement Fixation	31.80
Brucella abortus FPA	19.20
B. Abortus Bapa	19.20
Total	89.40

(This is not a bill. Do not make payments from this report.)



MONTANA VETERINARY DIAGNOSTIC LABORATORY

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EMAIL: livdiagnosticlab@mt.gov



PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 17-18635
Name/ID:
Species: American Bison

Sex: Age:
Owner: USDA, APHIS, VS

FINAL REPORT 06/06/17

Accessioned: 05/10/17
Authorized by: AF

Previous Reports
06/06/17
06/06/17

SEROLOGY

Brucella abortus

Clotted Blood

Verified on: 06/06/17 by: DK

Animal

FPA

Red 37	Negative
7R37	Negative
Red 46	Positive
7R46	Positive
3R22	Positive
73R22	Positive
Red 21	Positive
7R21	Positive

Clotted Blood

Verified on 05/23/17 by: DK

Animal

B. Abortus

BAPA

Red 37	Positive
7R37	Negative
Red 46	Negative
7R46	Negative
3R22	Positive
73R22	Positive
Red 21	Positive
7R21	Positive

Clotted Blood

Verified on: 05/23/17 by: DK

Animal

BRUCF

BRUCARD

Red 37	1+ 1:10	Negative
7R37	1+ 1:40	Negative
Red 46	AC	Negative
7R46	AC	Negative
3R22	1+ 1:10	Positive
73R22	4+ 1:320	Positive
Red 21	Negative @ 1:10	Positive
7R21	4+ 1:320	Positive

Species: Bison
County: Park

MONTANA VETERINARY DIAGNOSTIC LABORATORY

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Email: livdiagnosticlab@mt.gov

Collection Date: 5-10-17
Page 1 of 1

SEROLOGY REPORT (SV2A) - Complete Light Shaded Areas Only
(SEE EXAMPLE and KEY on back Page 4)

OWNER: USDA, APHIS, VS
ADDRESS:
CITY/STATE/ZIP: Crown Springs, MT
REASON FOR TEST - MANDATORY INFORMATION (See Key)
BQFS - GonaCon - Cattle Health

SUBMITTER'S SIGNATURE: P. Ryan Clarke
SUBMITTER'S NAME (PRINT): P. Ryan Clarke
ADDRESS: (b) (6)
CITY/STATE/ZIP:
RESULT REPORTING OPTIONS: PHONE / FAX / EMAIL
NUMBER OR EMAIL ADDRESS: B. Frey, R. Clarke, J. Rhyon

CIRCLE DISEASE TEST REQUIRED: If needed, indicate specific test and/or dilution. Example on back.						BRU	BT	ANA	EHD	PTD	IBR	BVD	BLV	LEPTOSPIROSIS 8 - SEROVARs	OTHER
TUBE NO.	ANIMAL IDENTIFICATION	AGE	SEX	BREED	OFFICIAL VAC.	CF (1:10)	Brucella	Bru	Bru	Bru	FPA				
1	Red 37	Ad	Fe	Bison		1:10	Pos	N	N	7.4	9.2				
2	7R 37	calf	M			1:40	N	N	N	5.7	6.3				
3	Red 46	Ad	Fe			AC	N	N	Pos	117.4	118.6				
4	7R 46	calf	Fe			AC	N	N	Pos	121.8	119.3				
5	3R 22	Ad	Fe			1:10	Pos	Pos	Pos	144.9	146.0				
6	7R 22	calf	Fe			4:320	Pos	Pos	Pos	160.8	159.7				
7	Red 21	Ad	Fe			N	Pos	Pos	Pos	183.4	184.8				
8	7R 21	calf	M			4:320	Pos	Pos	Pos	154.0	154.1				
Laboratory Comments: <u>Please do BAPA, CF</u> <u>Card, FPA</u>						Samples	8	8	8	8					
						Seropositive	3	5	4	6					
						Suspect									
						Seronegative	3	3	4	2					
						Undetermined	2								
						Tested By	BR	SA	AL	AL	AL				

released by BR 6/6/17

FEE: _____ DATE RECEIVED: 5-10-17



17 - 18635
05/10/17

The MVDL is an accredited AAEP laboratory and a member of the USDA National Animal Health Laboratory Network. Completing and submitting any submission form or any contractual agreement for services requested and the specimens submitted become the property of the MVDL. In addition, at no additional expense to our clients, specimens submitted for additional testing upon the order of the state or federal animal health officials, or whenever a Foreign Animal Disease is suspected, or in support of surveillance for other animal diseases.

008031

FEES:

B. Abortus Card	12.80
Brucella abortus/suis - Complement Fixation	21.20
Brucella abortus FPA	12.80
B. Abortus Bapa	12.80
Total	59.60

(This is not a bill. Do not make payments from this report.)



MONTANA VETERINARY DIAGNOSTIC LABORATORY

1911 WEST LINCOLN, BOZEMAN, MT 59718
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FAX: (406) 994-6344
EMAIL: livdiagnosticlab@mt.gov



PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 17-18793
Name/ID:
Species: American Bison
Breed: American bison
Sex: Age:
County: Park
Owner: USDA, APHIS, VS, GonaCon

FINAL REPORT 06/06/17

Accessioned: 05/11/17
Authorized by: AF

Previous Reports
06/06/17
06/06/17

SEROLOGY

Brucella abortus

<u>Animal</u>	<u>FPA</u>
Red 26	Positive
7R26	Positive
Red 24	Positive
7R24	Positive
Red 22	Positive
7R22	Positive

Clotted Blood

Verified on: 06/06/17 by: DK

<u>Animal</u>	<u>B. Abortus</u> <u>BAPA</u>
Red 26	Negative
7R26	Positive
Red 24	Positive
7R24	Positive
Red 22	Positive
7R22	Positive

Clotted Blood

Verified on 05/23/17 by: DK

<u>Animal</u>	<u>BRUCF</u>	<u>BRUCARD</u>
Red 26	3+ 1:40	Negative
7R26	2+ 1:160	Negative
Red 24	Negative @ 1:10	Positive
7R24	3+ 1:320	Positive
Red 22	1+ 1:320	Positive
7R22	1+ 1:320	Positive

Clotted Blood

Verified on: 05/23/17 by: DK

FEES:

B. Abortus Card	9.60
Brucella abortus/suis - Complement Fixation	15.90
Brucella abortus FPA	9.60
B. Abortus Bapa	9.60
Total	44.70

(This is not a bill. Do not make payments from this report.)



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PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 17-18879
Name/ID:
Species: American Bison

Sex: Age:
Owner: USDA APHIS GonaCon

FINAL REPORT 06/06/17

Accessioned: 05/12/17
Authorized by: AF

Previous Reports
06/06/17
06/06/17

SEROLOGY

Brucella abortus

Animal

Red 09
Green 15
7G15

FPA

Positive
Positive
Positive

Clotted Blood

Verified on: 06/06/17 by: DK

Animal

Red 09
Green 15
7G15

B. Abortus BAPA

Positive
Positive
Positive

Clotted Blood

Verified on 05/12/17 by: AF

Animal

Red 09
Green 15
7G15

BRUCF

4+ 1:640
Negative @
1:10
4+ 1:640

BRUCARD

Positive
Positive
Positive

Clotted Blood

Verified on: 05/23/17 by: DK

FEES:

B. Abortus Card	4.80
Brucella abortus/suis - Complement Fixation	7.95
Brucella abortus FPA	4.80
B. Abortus Bapa	4.80
Total	22.35

(This is not a bill. Do not make payments from this report.)



MONTANA VETERINARY DIAGNOSTIC LABORATORY

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EMAIL: livdiagnosticlab@mt.gov



PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 17-18880
Name/ID: 7R09
Species: American Bison

FINAL REPORT 06/30/17

Sex: Unknown **Age:** Fetus
Owner: USDA APHIS VS

Accessioned: 05/12/17
Authorized by: DJM

Previous Reports
06/30/17
06/30/17

CASE SUMMARY

Verified on: 06/30/17 by: DJM

REASON FOR SUBMISSION:

Bison stillborn calf from a Brucellosis positive dam.

LABORATORY DIAGNOSIS:

Bison stillbirth; Culture negative for Brucella abortus.

COMMENT:

Tissues were in an advanced state of autolysis. Brucella abortus was not isolated from the lung of this fetus.

D. J. Marshall, BVSc, PhD

PATHOLOGY

Verified on: 06/30/17 by: DJM

GROSS DESCRIPTION:

A stillborn bison calf (Tag# 7R09) was submitted for necropsy and subsequent laboratory evaluation. Necropsy was performed between 1.00 and 11.30 am on 12th May 2017. Crown rump length of the mummified fetus measured 76 cm. hair is absent from the head and from legs. No abomasal fluid is recovered. Internal tissues are in an advanced state of autolysis.

HISTOLOGIC DESCRIPTION:

Sections of liver, lung, spleen, kidney, abomasum, small intestine, heart and skeletal muscle are examined. Tissues are in an advanced state of autolysis.

CLINICAL MICROBIOLOGY

Brucella Culture

Verified on: 05/22/17 by: JR

Animal ID	Specimen	Isolate #	Organism	Amount
7R09	lung		Negative for Brucella sp.	

Campylobacter Culture

Verified on: 05/22/17 by: JR

Animal ID	Specimen	Isolate #	Organism	Amount
7R09	lung		Negative for Campylobacter sp.	

Aerobic Culture

Verified on: 05/16/17 by: KK

Animal ID	Specimen	Isolate #	Organism	Amount
7R09	lung	1	Escherichia coli	4+

FEES:

Case Summary	0.00
Brucella Culture	0.00
Campylobacter Culture	0.00
Aerobic Culture	0.00
Abortion panel	0.00
Hematoxylin & Eosin	0.00
Fetal Necropsy	73.50
Total	73.50

(This is not a bill. Do not make payments from this report.)



MONTANA VETERINARY DIAGNOSTIC LABORATORY

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FAX: (406) 994-6344
EMAIL: livdiagnosticlab@mt.gov



PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 17-18925
Name/ID: Red 24
Species: American Bison

FINAL REPORT 07/03/17

Sex: Female **Age:** Adult
County: Park
Owner: USDA, APHIS, VS- GonaCon

Accessioned: 05/15/17

Authorized by: DJM

Previous Reports
07/03/17
07/03/17

CASE SUMMARY

Verified on: 07/03/17 by: DJM

REASON FOR SUBMISSION:

Harvest lymph node and tissues for Brucella culture from a serologically positive Bison cow.

LABORATORY DIAGNOSIS:

USDA APHIS Brucella in Bison Study; Bison mortality; Bacillus anthracis negative.

COMMENT:

Tissues were sent independently by Dr Clarke to NVSL Ames Iowa.

D. J. Marshall, BVSc, PhD

PATHOLOGY

Verified on: 07/03/17 by: DJM

GROSS DESCRIPTION:

An adult lactating female bison (Tag Red 24) was submitted for necropsy and lymph node harvest for Brucella culture investigation. Necropsy was performed on 15th May 2017. Carcass is moderately fleshed. Spleen is enlarged. Multiple adhesions of lung to thoracic wall are present in the thoracic cavity

HISTOLOGIC DESCRIPTION:

Sections of spleen, liver, kidney, heart, and lung. Tissues are autoysed.

CLINICAL MICROBIOLOGY

Aerobic Culture

Verified on: 05/19/17 by: KK

Animal ID	Specimen	Isolate #	Organism	Amount
Red 24	spleen		Negative for Bacillus anthracis	

FEES:

Aerobic Culture	0.00
Hematoxylin & Eosin	0.00
Case Summary	0.00
Necropsy LA >500#	157.50
Incineration per pound	260.00
Total	417.50

(This is not a bill. Do not make payments from this report.)



MONTANA VETERINARY DIAGNOSTIC LABORATORY

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EMAIL: livdiagnosticlab@mt.gov



PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 17-18925
Name/ID: Red 24
Species: American Bison

AMENDED REPORT 07/21/17

Sex: Female **Age:** Adult
County: Park
Owner: USDA, APHIS, VS- GonaCon

Accessioned: 05/15/17
Authorized by: DJM

Previous Reports
07/03/17
07/03/17
07/21/17

CASE SUMMARY

Verified on: 07/21/17 by: DJM

ADDITIONAL INFORMATION:

BRUCELLA CULTURE (NVSL Ames Iowa):

Brucella abortus was not isolated from the tissues submitted.

D. J. Marshall, BVSc, PhD

Verified on: 07/03/17 by: DJM

REASON FOR SUBMISSION:

Harvest lymph node and tissues for Brucella culture from a serologically positive Bison cow.

LABORATORY DIAGNOSIS:

USDA APHIS Brucella in Bison Study; Bison mortality; Bacillus anthracis negative.

COMMENT:

Tissues were sent independently by Dr Clarke to NVSL Ames Iowa.

D. J. Marshall, BVSc, PhD

PATHOLOGY

Verified on: 07/03/17 by: DJM

GROSS DESCRIPTION:

008045
Case No: 17-18925 - ,

An adult lactating female bison (Tag Red 24) was submitted for necropsy and lymph node harvest for Brucella culture investigation. Necropsy was performed on 15th May 2017. Carcass is moderately fleshed. Spleen is enlarged. Multiple adhesions of lung to thoracic wall are present in the thoracic cavity

HISTOLOGIC DESCRIPTION:

Sections of spleen, liver, kidney, heart, and lung. Tissues are autoysed.

CLINICAL MICROBIOLOGY

Aerobic Culture					Verified on: 05/19/17 by: KK
Animal ID	Specimen	Isolate #	Organism	Amount	
Red 24	spleen		Negative for Bacillus anthracis		



National Veterinary Services Laboratories

PO Box 844

Ames, Iowa 50010

Phone: 515-337-7514 Fax: 515-337-7938

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FINAL REPORT

Laboratory Test Report

Sensitive But Unclassified/Sensitive Security Information - Disseminate on a Need-To-Know Basis Only

Owner

USDA,APHIS,VS

Corwin Springs, MT

Animal Location

Park County MT, US

Submitter - 30025

Montana Veterinary Diagnostic Laboratory

Box 997

Bozeman, MT 59771

FAX #: 406-994-6344

Phone #: 406-994-4885

Accession Number: 17-015981

Date Collected: 05/15/2017

Date Received: 05/17/2017

Date Completed: 07/20/2017

Collected By: D.J. Marshall

Purpose: Surveillance

Referral Number: 17-18925

This is not a billable case.

NOTE: Condition of the sample(s) was adequate unless otherwise noted.

Sample: 17-18925 Animal ID: Red 24 Brucella Case Number: B17-0253 Specimen Type: Multiple - Specify in Sample Species: Bison (Not otherwise specified)

Brucella Isolation Result

No Isolation Made

Individual specimen results are listed below:

Lymph Node / Lymph Node- Retropharyngeal

Brucella Isolation Result

No Isolation Made

Lymph Node / Lymph Node- Parotid

Brucella Isolation Result

No Isolation Made

Lymph Node / Lymph Node- Prescapular

Brucella Isolation Result

No Isolation Made

Lymph Node / Lymph Node- Bronchial

Brucella Isolation Result

No Isolation Made

Lymph Node / Lymph Node- Mesenteric

Brucella Isolation Result

No Isolation Made

Lymph Node / Lymph Node- Internal Iliac

Brucella Isolation Result

No Isolation Made

Lymph Node / Lymph Node- S. Mammary

Brucella Isolation Result

No Isolation Made

Lymph Node / Lymph Node- Popliteal

Brucella Isolation Result

No Isolation Made

Lymph Node / Lymph Node- Prefemoral

Brucella Isolation Result

No Isolation Made

Kidney / Kidney

Brucella Isolation Result

No Isolation Made

Liver / Liver

Brucella Isolation Result

No Isolation Made

Spleen / Spleen



17-18925

05/15/17

Page 1 of 2

Date Generated: 7/20/2017

Accession 17-015981 Owner: USDA,APHIS,VS

Referral Number:

17-18925

Brucella Isolation Result	No Isolation Made
Ovary/Oviduct / Ovary	
Brucella Isolation Result	No Isolation Made
Uterus/Vagina / Uterus	
Brucella Isolation Result	No Isolation Made
Udder/Teat / Udder	
Brucella Isolation Result	No Isolation Made
Intestine / Ileum	
Brucella Isolation Result	No Isolation Made

Results authorized by: Dr. Suelee Robbe-Austerman, Section Head, Mycobacteria and Brucella Section
NVSL MB General Phone: 515-337-7388

Help Us Help You

(This new section will be updated periodically with tips for submitters.)

Quality samples yield the most accurate results. Please call if you have questions.



17-18925

FEES:

Additional Information	0.00
Total	0.00

(This is not a bill. Do not make payments from this report.)



MONTANA VETERINARY DIAGNOSTIC LABORATORY

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EMAIL: livdiagnosticlab@mt.gov



PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 17-18926
Name/ID: Green 15
Species: American Bison

FINAL REPORT 07/03/17

Sex: Female **Age:** Adult
County: Park
Owner: USDA, APHIS, VS- GonaCon

Accessioned: 05/15/17
Authorized by: DJM

Previous Reports
07/03/17
07/03/17

CASE SUMMARY

Verified on: 07/03/17 by: DJM

REASON FOR SUBMISSION:

Harvest lymph node and tissues for Brucella culture from a serologically positive Bison cow.

LABORATORY DIAGNOSIS:

USDA APHIS Brucella in Bison Study; Bison mortality; Bacillus anthracis negative.

COMMENT:

Tissues were sent independently by Dr Clarke to NVSL Ames Iowa.

D. J. Marshall, BVSc, PhD

PATHOLOGY

Verified on: 07/03/17 by: DJM

GROSS DESCRIPTION:

An adult lactating female bison (tag green 15) was submitted for necropsy and lymph node harvest for Brucella investigation. Necropsy was performed on 15th May 2017. Carcass is lightly fleshed. Spleen is enlarged.

HISTOLOGIC DESCRIPTION:

Sections of spleen, liver, kidney, heart, and lung. Tissues are autolyzed.

CLINICAL MICROBIOLOGY

Aerobic Culture

Verified on: 05/19/17 by: KK

Animal ID	Specimen	Isolate #	Organism	Amount
Green 15	spleen		Negative for Bacillus anthracis	

FEES:

Aerobic Culture	0.00
Hematoxylin & Eosin	0.00
Shipping	8.00
Case Summary	0.00
Necropsy LA >500#	157.50
Incineration per pound	260.00
Total	425.50

(This is not a bill. Do not make payments from this report.)



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PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 17-18926
Name/ID: Green 15
Species: American Bison

AMENDED REPORT 07/21/17

Sex: Female **Age:** Adult
County: Park
Owner: USDA, APHIS, VS- GonaCon

Accessioned: 05/15/17
Authorized by: DJM

Previous Reports
07/03/17
07/03/17
07/21/17

CASE SUMMARY

Verified on: 07/21/17 by: DJM

ADDITIONAL INFORMATION:

BRUCELLA CULTURE (NVSL Ames Iowa):

Brucella abortus was not isolated from the tissues submitted (see attached report).

D. J. Marshall, BVSc, PhD

Verified on: 07/03/17 by: DJM

REASON FOR SUBMISSION:

Harvest lymph node and tissues for Brucella culture from a serologically positive Bison cow.

LABORATORY DIAGNOSIS:

USDA APHIS Brucella in Bison Study; Bison mortality; Bacillus anthracis negative.

COMMENT:

Tissues were sent independently by Dr Clarke to NVSL Ames Iowa.

D. J. Marshall, BVSc, PhD

PATHOLOGY

Verified on: 07/03/17 by: DJM

GROSS DESCRIPTION:

An adult lactating female bison (tag green 15) was submitted for necropsy and lymph node harvest fo Brucella investigation. Necropsy was performed on 15th May 2017. Carscase is lightly fleshed. Spleen is enlarged.

HISTOLOGIC DESCRIPTION:

Sections of spleen, liver, kidney, heart, and lung. Tissues are autoysed.

CLINICAL MICROBIOLOGY

Aerobic Culture

Verified on: 05/19/17 by: KK

Animal ID	Specimen	Isolate #	Organism	Amount
Green 15	spleen		Negative for Bacillus anthracis	

**National Veterinary Services Laboratories**

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FINAL REPORT

Laboratory Test Report

Sensitive But Unclassified/Sensitive Security Information - Disseminate on a Need-To-Know Basis Only

OwnerUSDA,APHIS,VS - GonaCon
Corwin Springs, MT**Accession Number:** 17-015980**Animal Location**

Park County MT, US

Date Collected: 05/15/2017**Date Received:** 05/17/2017**Submitter - 30025**Montana Veterinary Diagnostic Laboratory
Box 997
Bozeman, MT 59771
FAX #: 406-994-6344
Phone #: 406-994-4885**Date Completed:** 07/20/2017**Collected By:** D. Jeff Marshall**Purpose:** Surveillance**Referral Number:** 17-18926

This is not a billable case.

NOTE: Condition of the sample(s) was adequate unless otherwise noted.

Sample: 17-18926 Animal ID: Green 15 Brucella Case Number: B17-0252 Specimen Type: Multiple - Specify in Sample Species: Bison (Not otherwise specified)

Brucella Isolation Result

No Isolation Made

Individual specimen results are listed below:

Lymph Node / Lymph Node- Retropharyngeal

Brucella Isolation Result

No Isolation Made

Lymph Node / Lymph Node- Prescapular

Brucella Isolation Result

No Isolation Made

Lymph Node / Lymph Node- Prefemoral

Brucella Isolation Result

No Isolation Made

Lymph Node / Lymph Node- Parotid

Brucella Isolation Result

No Isolation Made

Lymph Node / Lymph Node- S. Mammary

Brucella Isolation Result

No Isolation Made

Lymph Node / Lymph Node- Mandibular

Brucella Isolation Result

No Isolation Made

Mammary Gland / Mammary Gland

Brucella Isolation Result

No Isolation Made

Kidney / Kidney

Brucella Isolation Result

No Isolation Made

Spleen / Spleen

Brucella Isolation Result

No Isolation Made

Liver / Liver

Brucella Isolation Result

No Isolation Made

Uterus/Vagina / Uterus

Brucella Isolation Result

No Isolation Made

Ovary/Oviduct / Ovary

17 - 18926

05/15/17

Page 1 of 2

Date Generated: 7/20/2017

DJM

Accession 17-015980 Owner: USDA,APHIS,VS - GonaCon

Referral Number: 17-18926

Brucella Isolation Result No Isolation Made

Lymph Node / Lymph Node- Internal Iliac

Brucella Isolation Result No Isolation Made

Results authorized by: Dr. Suelee Robbe-Austerman, Section Head, Mycobacteria and Brucella Section
NVSL MB General Phone: 515-337-7388

Help Us Help You

(This new section will be updated periodically with tips for submitters.)

Quality samples yield the most accurate results. Please call if you have questions.



17-18926

FEES:

Additional Information	0.00
Total	0.00

(This is not a bill. Do not make payments from this report.)



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EMAIL: livdiagnosticlab@mt.gov



PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 17-18976
Name/ID:
Species: American Bison

FINAL REPORT 06/06/17

Sex: Age:
County: Park
Owner: USDA, APHIS, VS

Accessioned: 05/16/17
Authorized by: AF

Previous Reports
06/06/17
06/06/17

SEROLOGY

Brucella abortus

Animal

Gr 01	FPA
7G 01	Negative
Red 02	Negative
7R 02	Negative
Gr 17	Negative
7G 17	Negative

Clotted Blood

Verified on: 06/06/17 by: DK

Animal

Gr 01	<u>B. Abortus</u>
7G 01	<u>BAPA</u>
Red 02	Negative
7R 02	Negative
Gr 17	Negative
7G 17	Negative

Clotted Blood

Verified on 05/23/17 by: DK

Animal

Gr 01	<u>BRUCF</u>	<u>BRUCARD</u>
7G 01	Negative @ 1:10	Negative
Red 02	2+ 1:10	Negative
7R 02	Negative @ 1:10	Negative
Gr 17	3+ 1:10	Negative
7G 17	Negative @ 1:10	Negative

Clotted Blood

Verified on: 05/23/17 by: DK

FEES:

B. Abortus Card	9.60
Brucella abortus/suis - Complement Fixation	15.90
Brucella abortus FPA	9.60
B. Abortus Bapa	9.60
Total	44.70

(This is not a bill. Do not make payments from this report.)



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PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 17-19000
Name/ID: 7R 43
Species: American Bison

FINAL REPORT 07/03/17

Sex: Unknown **Age:** 1 Week
County: Park
Owner: USDA-APHIS-VS

Accessioned: 05/16/17
Authorized by: DJM

Previous Reports
07/03/17
07/03/17

CASE SUMMARY

Verified on: 07/03/17 by: DJM

REASON FOR SUBMISSION:

Bison calf mortality.

LABORATORY DIAGNOSIS:

Bison calf mortality; Brucella culture negative.

COMMENT:

Culture of the lung was negative for Brucella abortus.

D. J. Marshall, BVSc, PhD

PATHOLOGY

Verified on: 07/03/17 by: DJM

GROSS DESCRIPTION:

A 1-week-old male bison calf (Tag 7R43) was submitted for necropsy and subsequent laboratory evaluation. Necropsy was performed on 16th May 2017. There is marked predation to tissues of the abdomen and thorax. Only tissues available for evaluation are lung, kidney spleen, brain and intestine.

HISTOLOGIC DESCRIPTION:

Sections of brain, lung, kidney, spleen, abomasum and small intestine are examined. No significant histological abnormalities are detected.

CLINICAL MICROBIOLOGY

008061

Brucella Culture

Verified on: 05/30/17 by: JR

Animal ID	Specimen	Isolate #	Organism	Amount
7R 43	lung		Negative for Brucella sp.	

Campylobacter Culture

Verified on: 05/30/17 by: JR

Animal ID	Specimen	Isolate #	Organism	Amount
7R 43	lung		Overgrowth of Pseudomonas spp.; results inconclusive	

Aerobic Culture

Verified on: 05/18/17 by: KK

Animal ID	Specimen	Isolate #	Organism	Amount
7R 43	lung	1	Mixed sp.	4+

FEES:

Hematoxylin & Eosin	0.00
Case Summary	0.00
Brucella Culture	0.00
Campylobacter Culture	0.00
Aerobic Culture	0.00
Fetal Necropsy	73.50
Total	73.50

(This is not a bill. Do not make payments from this report.)



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PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 17-19198
Name/ID:
Species: American Bison

Sex: Age:
Owner: USDA, APHIS, VS

FINAL REPORT 06/06/17

Accessioned: 05/17/17
Authorized by: AF

Previous Reports
06/06/17
06/06/17

SEROLOGY

Brucella abortus

Clotted Blood

Verified on: 06/06/17 by: DK

<u>Animal</u>	<u>FPA</u>
Gr20	Negative
7Gr20	Negative
Red 50	Positive
7R50	Positive
3G08	Positive
73G08	Positive

Clotted Blood

Verified on 05/23/17 by: DK

<u>Animal</u>	<u>B. Abortus</u> <u>BAPA</u>
Gr20	Negative
7Gr20	Negative
Red 50	Positive
7R50	Positive
3G08	Positive
73G08	Positive

Clotted Blood

Verified on: 05/23/17 by: DK

<u>Animal</u>	<u>BRUCF</u>	<u>BRUCARD</u>
Gr20	2+ 1:10	Negative
7Gr20	2+ 1:20	Negative
Red 50	2+ 1:10	Positive
7R50	3+ 1:80	Negative
3G08	2+ 1:10	Positive
73G08	3+ 1:320	Positive

FEES:

B. Abortus Card	9.60
Brucella abortus/suis - Complement Fixation	15.90
Brucella abortus FPA	9.60
B. Abortus Bapa	9.60
Total	44.70

(This is not a bill. Do not make payments from this report.)



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PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 17-19309
Name/ID:
Species: American Bison

FINAL REPORT 06/06/17

Sex: Age:
County: Park
Owner: USDA, APHIS, VS - Cattle Health

Accessioned: 05/18/17
Authorized by: AF

Previous Reports
06/06/17
06/06/17

SEROLOGY

Brucella abortus

Animal

Gr 08
7G 08
Red 33
7R 33

FPA

Positive
Positive
Positive
Positive

Clotted Blood

Verified on: 06/06/17 by: DK

Animal

Gr 08
7G 08
Red 33
7R 33

B. Abortus BAPA

Positive
Positive
Positive
Positive

Clotted Blood

Verified on 05/23/17 by: DK

Animal

Gr 08
7G 08
Red 33
7R 33

BRUCF

3+ 1:160
4+ 1:640
Negative @
1:10
4+ 1:160

BRUCARD

Positive
Positive
Positive
Positive

Clotted Blood

Verified on: 05/23/17 by: DK

FEES:

B. Abortus Card	6.40
Brucella abortus/suis - Complement Fixation	10.60
Brucella abortus FPA	6.40
B. Abortus Bapa	6.40
Total	29.80

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**National Veterinary Services Laboratories**

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Phone: 515-337-7514 **Fax:** 515-337-7938

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PARTIAL REPORT

Laboratory Test Report

Sensitive But Unclassified/Sensitive Security Information - Disseminate on a Need-To-Know Basis Only

Owner

USDA APHIS VS

Corwin Springs, MT

Animal Location

Park County MT

Submitter - 1961

Dr. Patrick Ryan. Clarke

USDA, APHIS, VS

187 E. Tobiano Tr.

Belgrade, MT 59714

FAX #: 406-866-5162

Phone #: 406-866-5162

Accession Number:**17-019383****Date Collected:****Date Received:**

06/15/2017

Date Completed:**Collected By:**

R. Clarke, et al

Purpose:

General Diagnostic

Referral Number:**This is not a billable case.****NOTE: Condition of the sample(s) was adequate unless otherwise noted.****Sample: 1 Animal ID: Red 40 Brucella Case Number: B17-0295 Specimen Type: Multiple - Specify in Sample Species: Bison (Not otherwise specified)**

Individual specimen results are listed below:

Milk / Milk

Brucella Isolation Result

No Isolation Made

Swab / Swab- Vaginal

Brucella Isolation Result

No Isolation Made

Exudate / Exudate- Vaginal

Brucella Isolation Result

No Isolation Made

Feces / Feces

Brucella Isolation Result

Contaminated

Sample: 2 Animal ID: 7R40 Brucella Case Number: B17-0296 Specimen Type: Swab Species: Bison (Not otherwise specified)

Individual specimen results are listed below:

Swab / Swab- Conjunctival

Brucella Isolation Result

No Isolation Made

Sample: 3 Animal ID: Red 73 Brucella Case Number: B17-0297 Specimen Type: Multiple - Specify in Sample Species: Bison (Not otherwise specified)

Individual specimen results are listed below:

Milk / Milk

Brucella Isolation Result No Isolation Made

Swab / Swab- Vaginal

Brucella Isolation Result No Isolation Made

Exudate / Exudate- Vaginal

Brucella Isolation Result No Isolation Made

Feces / Feces

Brucella Isolation Result No Isolation Made

Sample: 4 Animal ID: 7R73 Brucella Case Number: B17-0298 Specimen Type: Swab Species: Bison (Not otherwise specified)

Individual specimen results are listed below:

Swab / Swab- Conjunctival

Brucella Isolation Result No Isolation Made

Sample: 5 Animal ID: Red 74 Brucella Case Number: B17-0299 Specimen Type: Multiple - Specify in Sample Species: Bison (Not otherwise specified)

Brucella Isolation Result Isolate Determined
Brucella Identification Result Brucella abortus

Individual specimen results are listed below:

Milk / Milk

Brucella Isolation Result Isolate Determined

Brucella Identification Result Brucella abortus

Swab / Swab- Vaginal

Brucella Isolation Result Isolate Determined

Brucella Identification Result Brucella abortus

Feces / Feces

Brucella Isolation Result Isolate Determined

Brucella Identification Result Brucella abortus

Quantified results:

Milk ~12 cfu/plate

Vag Swab >300 cfu/plate

Feces 1 col

Sample: 6 Animal ID: 7R74 Brucella Case Number: B17-0300 Specimen Type: Swab Species: Bison (Not otherwise specified)

Individual specimen results are listed below:

Swab / Swab- Conjunctival

Brucella Isolation Result No Isolation Made

Sample: 7 Animal ID: Gr 07 Brucella Case Number: B17-0301 Specimen Type: Multiple - Specify in Sample Species: Bison (Not otherwise specified)

Individual specimen results are listed below:

Milk / Milk

Brucella Isolation Result No Isolation Made

Swab / Swab- Vaginal

Brucella Isolation Result No Isolation Made

Exudate / Exudate- Vaginal

Brucella Isolation Result No Isolation Made

Feces / Feces

Brucella Isolation Result Contaminated

Sample: 8 Animal ID: 7G07 Brucella Case Number: B17-0302 Specimen Type: Swab Species: Bison (Not otherwise specified)

Individual specimen results are listed below:

Swab / Swab- Conjunctival

Brucella Isolation Result No Isolation Made

Sample: 9 Animal ID: Gr 24 Brucella Case Number: B17-0303 Specimen Type: Multiple - Specify in Sample Species: Bison (Not otherwise specified)

Individual specimen results are listed below:

Milk / Milk

Brucella Isolation Result No Isolation Made

Swab / Swab- Vaginal

Brucella Isolation Result No Isolation Made

Exudate / Exudate- Vaginal

Brucella Isolation Result No Isolation Made

Feces / Feces

Brucella Isolation Result Contaminated

Sample: 10 Animal ID: 7GR 24 Brucella Case Number: B17-0304 Specimen Type: Swab Species: Bison (Not otherwise specified)

Individual specimen results are listed below:

Swab / Swab- Conjunctival

Brucella Isolation Result No Isolation Made

Sample: 11 Animal ID: Red 43 Brucella Case Number: B17-0305 Specimen Type: Multiple - Specify in Sample Species: Bison (Not otherwise specified)

Brucella Isolation Result	Isolate Determined
Brucella Identification Result	Brucella abortus

Individual specimen results are listed below:

Milk / Milk

Brucella Isolation Result	No Isolation Made
---------------------------	-------------------

Swab / Swab- Vaginal

Brucella Isolation Result	Isolate Determined
Brucella Identification Result	Brucella abortus

Exudate / Exudate- Vaginal

Brucella Isolation Result	Suspect
---------------------------	---------

Feces / Feces

Brucella Isolation Result	Contaminated
---------------------------	--------------

Quantified results:**Vag Swab >300 cfu/plate****Vag Exudate >300 cfu/plate****Feces Questionable suspects observed, but mold contamination was present so not confirmed****Sample: 12 Animal ID: 7R43 Brucella Case Number: B17-0306 Specimen Type: Swab Species: Bison (Not otherwise specified)**

Brucella Isolation Result	Isolate Determined
Brucella Identification Result	Brucella abortus

Individual specimen results are listed below:

Swab / Swab- Conjunctival

Brucella Isolation Result	Isolate Determined
Brucella Identification Result	Brucella abortus

Quantified results:**Conj Swab ~8 cfu/plate****Sample: 13 Animal ID: Red 56 Brucella Case Number: B17-0307 Specimen Type: Multiple - Specify in Sample Species: Bison (Not otherwise specified)**

Individual specimen results are listed below:

Milk / Milk

Brucella Isolation Result	No Isolation Made
---------------------------	-------------------

Swab / Swab- Vaginal

Brucella Isolation Result	No Isolation Made
---------------------------	-------------------

Exudate / Exudate- Vaginal

Brucella Isolation Result	No Isolation Made
---------------------------	-------------------

Feces / Feces

Brucella Isolation Result	Contaminated
---------------------------	--------------

Sample: 14 Animal ID: 7R56 Brucella Case Number: B17-0308 Specimen Type: Swab Species: Bison (Not otherwise specified)

Individual specimen results are listed below:

Swab / Swab- Conjunctival

Brucella Isolation Result	No Isolation Made
---------------------------	-------------------

Sample: 15 **Animal ID:** 3G14 **Brucella Case Number:** B17-0309 **Specimen Type:** Multiple - Specify in Sample **Species:** Bison (Not otherwise specified)

Brucella Isolation Result

Isolate Determined

Brucella Identification Result

Brucella abortus

Individual specimen results are listed below:

Milk / Milk

Brucella Isolation Result

Isolate Determined

Brucella Identification Result

Brucella abortus

Swab / Swab- Vaginal

Brucella Isolation Result

Isolate Determined

Brucella Identification Result

Brucella abortus

Placenta / Placenta

Brucella Isolation Result

Suspect

Feces / Feces

Brucella Isolation Result

Suspect

Quantified results:**Milk** ~12 cfu/plate**Vag Swab** >300 cfu/plate**Vag Exudate** Confluent growth**Feces** >300 cfu/plate

Sample: 16 **Animal ID:** Red 16 **Brucella Case Number:** B17-0310 **Specimen Type:** Multiple - Specify in Sample **Species:** Bison (Not otherwise specified)

Individual specimen results are listed below:

Milk / Milk

Brucella Isolation Result

No Isolation Made

Swab / Swab- Vaginal

Brucella Isolation Result

No Isolation Made

Exudate / Exudate- Vaginal

Brucella Isolation Result

No Isolation Made

Feces / Feces

Brucella Isolation Result

No Isolation Made

Sample: 17 **Animal ID:** 7R16 **Brucella Case Number:** B17-0311 **Specimen Type:** Swab **Species:** Bison (Not otherwise specified)

Individual specimen results are listed below:

Swab / Swab- Conjunctival

Brucella Isolation Result

No Isolation Made

Sample: 18 Animal ID: Red 13 Brucella Case Number: B17-0312 Specimen Type: Multiple - Specify in Sample Species: Bison (Not otherwise specified)

Individual specimen results are listed below:

Milk / Milk

Brucella Isolation Result No Isolation Made

Swab / Swab- Vaginal

Brucella Isolation Result No Isolation Made

Exudate / Exudate- Vaginal

Brucella Isolation Result No Isolation Made

Feces / Feces

Brucella Isolation Result No Isolation Made

Sample: 19 Animal ID: 7R13 Brucella Case Number: B17-0313 Specimen Type: Swab Species: Bison (Not otherwise specified)

Individual specimen results are listed below:

Swab / Swab- Conjunctival

Brucella Isolation Result No Isolation Made

Sample: 20 Animal ID: Gr21 Brucella Case Number: B17-0314 Specimen Type: Multiple - Specify in Sample Species: Bison (Not otherwise specified)

Individual specimen results are listed below:

Milk / Milk

Brucella Isolation Result No Isolation Made

Swab / Swab- Vaginal

Brucella Isolation Result No Isolation Made

Exudate / Exudate- Vaginal

Brucella Isolation Result No Isolation Made

Feces / Feces

Brucella Isolation Result No Isolation Made

Sample: 21 Animal ID: 7G21 Brucella Case Number: B17-0315 Specimen Type: Swab Species: Bison (Not otherwise specified)

Individual specimen results are listed below:

Swab / Swab- Conjunctival

Brucella Isolation Result No Isolation Made

Sample: 22 Animal ID: R72 Brucella Case Number: B17-0316 Specimen Type: Multiple - Specify in Sample Species: Bison (Not otherwise specified)

Individual specimen results are listed below:

Milk / Milk

Brucella Isolation Result No Isolation Made

Swab / Swab- Vaginal

Brucella Isolation Result No Isolation Made

Exudate / Exudate- Vaginal

Brucella Isolation Result No Isolation Made

Feces / Feces

Brucella Isolation Result No Isolation Made

Sample: 23 Animal ID: 7R72 Brucella Case Number: B17-0317 Specimen Type: Swab Species: Bison (Not otherwise specified)

Individual specimen results are listed below:

Swab / Swab- Conjunctival

Brucella Isolation Result

No Isolation Made

Sample: 24 Animal ID: Gr04 Brucella Case Number: B17-0318 Specimen Type: Multiple - Specify in Sample Species: Bison (Not otherwise specified)

Individual specimen results are listed below:

Milk / Milk

Brucella Isolation Result

No Isolation Made

Swab / Swab- Vaginal

Brucella Isolation Result

No Isolation Made

Exudate / Exudate- Vaginal

Brucella Isolation Result

No Isolation Made

Feces / Feces

Brucella Isolation Result

Contaminated

Sample: 25 Animal ID: 7G04 Brucella Case Number: B17-0319 Specimen Type: Swab Species: Bison (Not otherwise specified)

Individual specimen results are listed below:

Swab / Swab- Conjunctival

Brucella Isolation Result

No Isolation Made

Sample: 26 Animal ID: Red 48 Brucella Case Number: B17-0320 Specimen Type: Multiple - Specify in Sample Species: Bison (Not otherwise specified)

Individual specimen results are listed below:

Milk / Milk

Brucella Isolation Result

No Isolation Made

Swab / Swab- Vaginal

Brucella Isolation Result

No Isolation Made

Exudate / Exudate- Vaginal

Brucella Isolation Result

No Isolation Made

Feces / Feces

Brucella Isolation Result

No Isolation Made

Sample: 27 Animal ID: 7R48 Brucella Case Number: B17-0321 Specimen Type: Swab Species: Bison (Not otherwise specified)

Individual specimen results are listed below:

Swab / Swab- Conjunctival

Brucella Isolation Result

No Isolation Made

**This is a Partial report. Some tests that were requested have not been completed.
A Final report will be sent when all testing has been completed.**

Results authorized by:

Dr. Suelee Robbe-Austerman, Section Head, Mycobacteria and Brucella Section
NVSL MB General Phone: 515-337-7388

Help Us Help You

(This new section will be updated periodically with tips for submitters.)

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<https://www.aphis.usda.gov/aphis/ourfocus/animalhealth/lab-info-services/portal>



MONTANA VETERINARY DIAGNOSTIC LABORATORY

1911 WEST LINCOLN, BOZEMAN, MT 59718
P.O. Box 997, BOZEMAN, MT 59771
WEB: www.liv.mt.gov/lab

PHONE: (406) 994-4885
FAX: (406) 994-6344
EMAIL: livdiagnosticlab@mt.gov



PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 17-19393
Name/ID: Red 43
Species: American Bison

FINAL REPORT 07/03/17

Sex: Female **Age:** Adult
County: Park
Owner: USDA, APHIS, VS

Accessioned: 05/19/17
Authorized by: DJM

Previous Reports
07/03/17
07/03/17

CASE SUMMARY

Verified on: 07/03/17 by: DJM

REASON FOR SUBMISSION:

Harvest lymph node and tissues for Brucella culture from a serologically positive Bison cow.

LABORATORY DIAGNOSIS:

USDA APHIS Brucella in Bison Study; Acute necrotizing bronchopneumonia; Trueperella pyogenes.

COMMENT:

This cow had a severe necrotizing bronchopneumonia from which Trueperella pyogenes was isolated. Tissues and lymph nodes were sent independently by Dr Clarke to NVSL Ames Iowa for brucella culture.

D. J. Marshall, BVSc, PhD

PATHOLOGY

Verified on: 07/03/17 by: DJM

GROSS DESCRIPTION:

A lactating female bison (tag red 43) was submitted for necropsy and tissue and lymph node harvest for Brucella abortus culture investigations. Necropsy was performed on Monday 22nd May 2017. Cow is in light body condition and has trauma to right eye. Multiple adhesions are present in the thoracic cavity (lung to thoracic wall). Abscessation is present in the left cranial lobe of the lung.

HISTOLOGIC DESCRIPTION:

Sections of lung are examined. Lung is effaced by widespread necrosis and inflammation across multiple lobules.

HISTOLOGIC DIAGNOSIS:

Lung: Bronchopneumonia, acute necrotizing.

CLINICAL MICROBIOLOGY

Mycoplasma Culture

Verified on: 06/05/17 by: JR

Animal ID	Specimen	Isolate #	Organism	Amount
Red 43	lung		Negative for Mycoplasma sp.	

Aerobic Culture

Verified on: 05/26/17 by: KK

Animal ID	Specimen	Isolate #	Organism	Amount
Red 43	lung	1	Trueperella pyogenes (formerly Arcanobacterium pyogenes)	4+
Red 43	lung		Mixed enteric organisms present	1+
Red 43	spleen		Negative for Bacillus anthracis	

FEES:

Shipping	22.00
Hematoxylin & Eosin	0.00
Aerobic Culture	0.00
Mycoplasma Culture	0.00
Case Summary	0.00
Necropsy LA >500#	157.50
Total	179.50

(This is not a bill. Do not make payments from this report.)



MONTANA VETERINARY DIAGNOSTIC LABORATORY

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EMAIL: livdiagnosticlab@mt.gov



PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 17-19393
Name/ID: Red 43
Species: American Bison

AMENDED REPORT 07/26/17

Sex: Female **Age:** Adult
County: Park
Owner: USDA, APHIS, VS

Accessioned: 05/19/17
Authorized by: DJM

Previous Reports
07/03/17
07/03/17
07/26/17

CASE SUMMARY

Verified on: 07/26/17 by: DJM

ADDITIONAL INFORMATION:

BRUCELLA CULTURE (NVSL Ames Iowa):

Brucella abortus was isolated from the tissues submitted

D. J. Marshall, BVSc, PhD

Verified on: 07/03/17 by: DJM

REASON FOR SUBMISSION:

Harvest lymph node and tissues for Brucella culture from a serologically positive Bison cow.

LABORATORY DIAGNOSIS:

USDA APHIS Brucella in Bison Study; Acute necrotizing bronchopneumonia; Trueperella pyogenes.

COMMENT:

This cow had a severe necrotizing bronchopneumonia from which Trueperella pyogenes was isolated. Tissues and lymph nodes were sent independently by Dr Clarke to NVSL Ames Iowa for brucella culture.

D. J. Marshall, BVSc, PhD

PATHOLOGY

Verified on: 07/03/17 by: DJM

GROSS DESCRIPTION:

A lactating female bison (tag red 43) was submitted for necropsy and tissue and lymph node harvest for Brucella abortus culture investigations. Necropsy was performed on Monday 22nd May 2017. Cow is in light body condition and has trauma to right eye. Multiple adhesions are present in the thoracic cavity (lung to thoracic wall). Abscessation is present in the left cranial lobe of the lung.

HISTOLOGIC DESCRIPTION:

Sections of lung are examined. Lung is effaced by widespread necrosis and inflammation across multiple lobules.

HISTOLOGIC DIAGNOSIS:

Lung: Bronchopneumonia, acute necrotizing.

CLINICAL MICROBIOLOGY

Mycoplasma Culture

Verified on: 06/05/17 by: JR

Animal ID	Specimen	Isolate #	Organism	Amount
Red 43	lung		Negative for Mycoplasma sp.	

Aerobic Culture

Verified on: 05/26/17 by: KK

Animal ID	Specimen	Isolate #	Organism	Amount
Red 43	lung	1	Trueperella pyogenes (formerly Arcanobacterium pyogenes)	4+
Red 43	lung		Mixed enteric organisms present	1+
Red 43	spleen		Negative for Bacillus anthracis	

REFERRAL

Results are Pending for [Brucella Culture](#)

FEES:

Additional Information	0.00
Brucella Culture	0.00
Shipping	16.50
Total	16.50

(This is not a bill. Do not make payments from this report.)



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EMAIL: livdiagnosticlab@mt.gov



PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 17-19393
Name/ID: Red 43
Species: American Bison

Sex: Female **Age:** Adult
County: Park
Owner: USDA, APHIS, VS

AMENDED REPORT 11/16/17

Accessioned: 05/19/17
Authorized by: DJM

Previous Reports
07/03/17
07/03/17
07/26/17
11/16/17

CASE SUMMARY

Verified on: 07/26/17 by: DJM

ADDITIONAL INFORMATION:

BRUCELLA CULTURE (NVSL Ames Iowa):

Brucella abortus was isolated from the tissues submitted

D. J. Marshall, BVSc, PhD

Verified on: 07/03/17 by: DJM

REASON FOR SUBMISSION:

Harvest lymph node and tissues for Brucella culture from a serologically positive Bison cow.

LABORATORY DIAGNOSIS:

USDA APHIS Brucella in Bison Study; Acute necrotizing bronchopneumonia; Trueperella pyogenes.

COMMENT:

This cow had a severe necrotizing bronchopneumonia from which Trueperella pyogenes was isolated. Tissues and lymph nodes were sent independently by Dr Clarke to NVSL Ames Iowa for brucella culture.

D. J. Marshall, BVSc, PhD

PATHOLOGY

GROSS DESCRIPTION:

A lactating female bison (tag red 43) was submitted for necropsy and tissue and lymph node harvest for *Brucella abortus* culture investigations. Necropsy was performed on Monday 22nd May 2017. Cow is in light body condition and has trauma to right eye. Multiple adhesions are present in the thoracic cavity (lung to thoracic wall). Abscessation is present in the left cranial lobe of the lung.

HISTOLOGIC DESCRIPTION:

Sections of lung are examined. Lung is effaced by widespread necrosis and inflammation across multiple lobules.

HISTOLOGIC DIAGNOSIS:

Lung: Bronchopneumonia, acute necrotizing.

CLINICAL MICROBIOLOGY**Mycoplasma Culture**

Verified on: 06/05/17 by: JR

Animal ID	Specimen	Isolate #	Organism	Amount
Red 43	lung		Negative for Mycoplasma sp.	

Aerobic Culture

Verified on: 05/26/17 by: KK

Animal ID	Specimen	Isolate #	Organism	Amount
Red 43	lung	1	<i>Trueperella pyogenes</i> (formerly <i>Arcanobacterium pyogenes</i>)	4+
Red 43	lung		Mixed enteric organisms present	1+
Red 43	spleen		Negative for <i>Bacillus anthracis</i>	

REFERRAL**Brucella Culture**

Tissue

Verified on: 11/16/17 by: CO

Animal ID	Test	Result
Red 43		Please see attached

**National Veterinary Services Laboratories**

PO Box 844

Ames, Iowa 50010

Phone: 515-337-7514 Fax: 515-337-7938

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FINAL REPORT

Laboratory Test Report

Sensitive But Unclassified/Sensitive Security Information - Disseminate on a Need-To-Know Basis Only

OwnerUSDA,APHIS,VS
Corwin Springs, MT**Accession Number:** 17-016588**Animal Location**

Park County MT, US

Date Collected: 05/22/2017**Date Received:** 05/23/2017**Submitter - 30025**Montana Veterinary Diagnostic Laboratory
Box 997
Bozeman, MT 59771
FAX #: 406-994-6344
Phone #: 406-994-4885**Date Completed:** 11/16/2017**Collected By:** Stephen K. Smith, et al**Purpose:** Surveillance**Referral Number:** 17-19393**This is not a billable case.****NOTE: Condition of the sample(s) was adequate unless otherwise noted.****Sample:** 17-19393 **Animal ID:** Red43 **Brucella Case Number:** B17-0258 **Specimen Type:** Tissue **Species:** Bison (Not otherwise specified)

Brucella Isolation Result

Isolate Determined

Brucella Identification Result

Brucella abortus

Individual specimen results are listed below:

Lymph Node / Lymph Node- S. Cervical

Brucella Isolation Result Suspect

Lymph Node / Lymph Node- S. Mammary

Brucella Isolation Result Suspect

Lymph Node / Lymph Node- Internal Iliac

Brucella Isolation Result Suspect

Lymph Node / Lymph Node- Retropharyngeal

Brucella Isolation Result Isolate Determined

Brucella Identification Result Brucella abortus

Lymph Node / Lymph Node- Mandibular

Brucella Isolation Result No Isolation Made

Lymph Node / Lymph Node- Popliteal

Brucella Isolation Result No Isolation Made

Lymph Node / Lymph Node- Prefemoral

Brucella Isolation Result Suspect

Lymph Node / Lymph Node- Mesenteric

Brucella Isolation Result Suspect

Lymph Node / Lymph Node- Parotid

Brucella Isolation Result Suspect

Lymph Node / Lymph Node- Bronchial

Brucella Isolation Result Suspect

Lymph Node / Lymph Node- Hepatic

Brucella Isolation Result No Isolation Made



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05/19/17

Page 1 of 2

Date Generated: 11/16/2017

Kidney / Kidney		
Brucella Isolation Result		No Isolation Made
Liver / Liver		
Brucella Isolation Result		Suspect
Spleen / Spleen		
Brucella Isolation Result		Suspect
Uterus/Vagina / Uterus		
Brucella Isolation Result		Isolate Determined
Brucella Identification Result		Brucella abortus
Udder/Teat / Udder		
Brucella Isolation Result		Isolate Determined
Brucella Identification Result		Brucella abortus
Ovary/Oviduct / Ovary		
Brucella Isolation Result		Suspect
Intestine / Ileum		
Brucella Isolation Result		No Isolation Made

Colony estimates from tissues:

Lymph_SCerv: 3
Lymph_SMam: 10
Lymph_Iliac: 5
Lymph_Retro: 1
Lymph_Prefem: 2
Lymph_Mesen: 2
Lymph_Parotid: 2
Lymph_Bronch: 1
Liver: 1
Spleen: 1
Uterus: >300
Udder: >300
Ovary: 10

WGS Genotyping Results:

The isolate, B17-0258_17BA_MT-067_BI-GonaCon-Red43, has the same profile as other isolates from this animal and it's progeny. They all share a common ancestor with other wild bison isolates.

The attached appendix contains a low resolution tree that includes *B. abortus* from the NVSL database, a high resolution tree showing the relationship of this isolate to others within the same group, and a table showing the SNP calls for a portion of the group. The isolate of interest is in red font.

Results authorized by: Dr. Suelee Robbe-Austerman, Section Head, Mycobacteria and Brucella Section
NVSL MB General Phone: 515-337-7388

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(This new section will be updated periodically with tips for submitters.)

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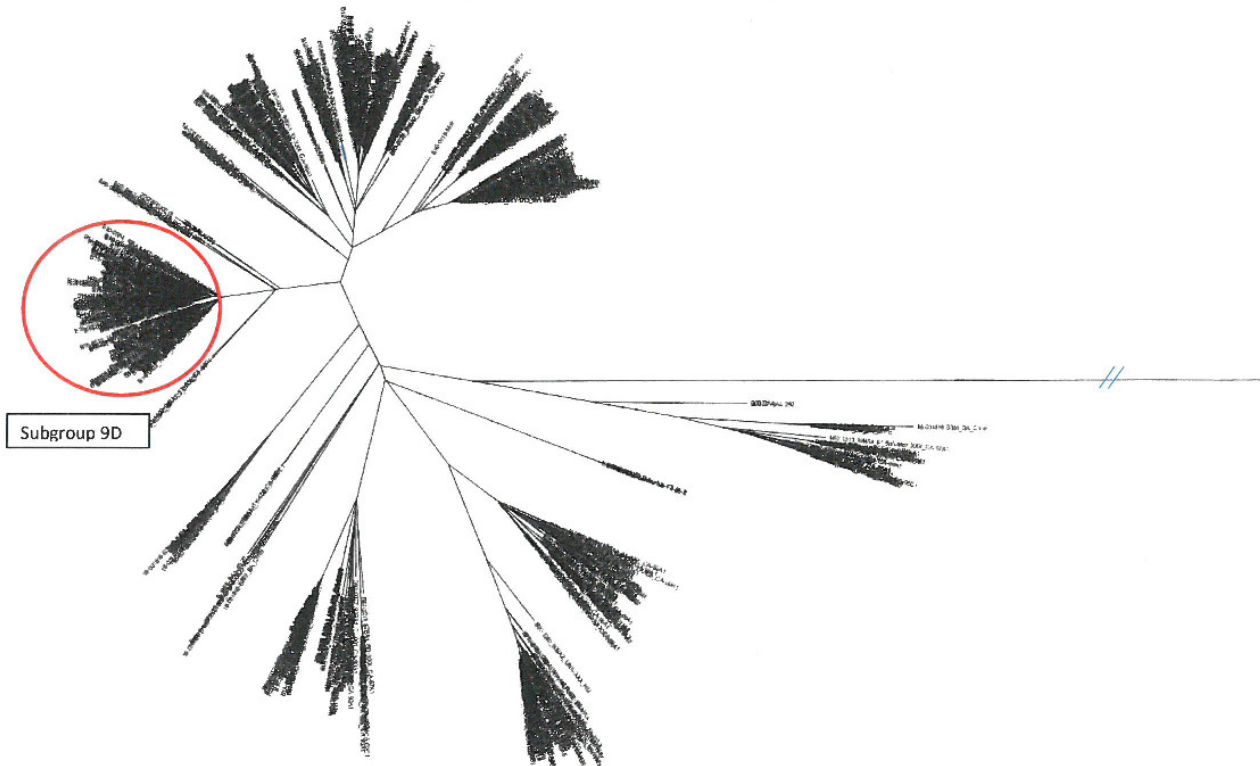
United States Department of Agriculture

National Veterinary Services Laboratories
PO Box 844
Ames, Iowa 50010
Phone: 515-337-7514 Fax: 515-337-7938
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APPENDIX – GENOTYPING REPORT

Date: 11/16/2017

Accession: 17-016588

Figure 1. Low resolution phylogenetic tree detailing the genetic relationship of *Brucella* isolates (n=709) from the NVSL database. The red circle contains the isolates of interest (none are shown at this resolution).



Page | 1A



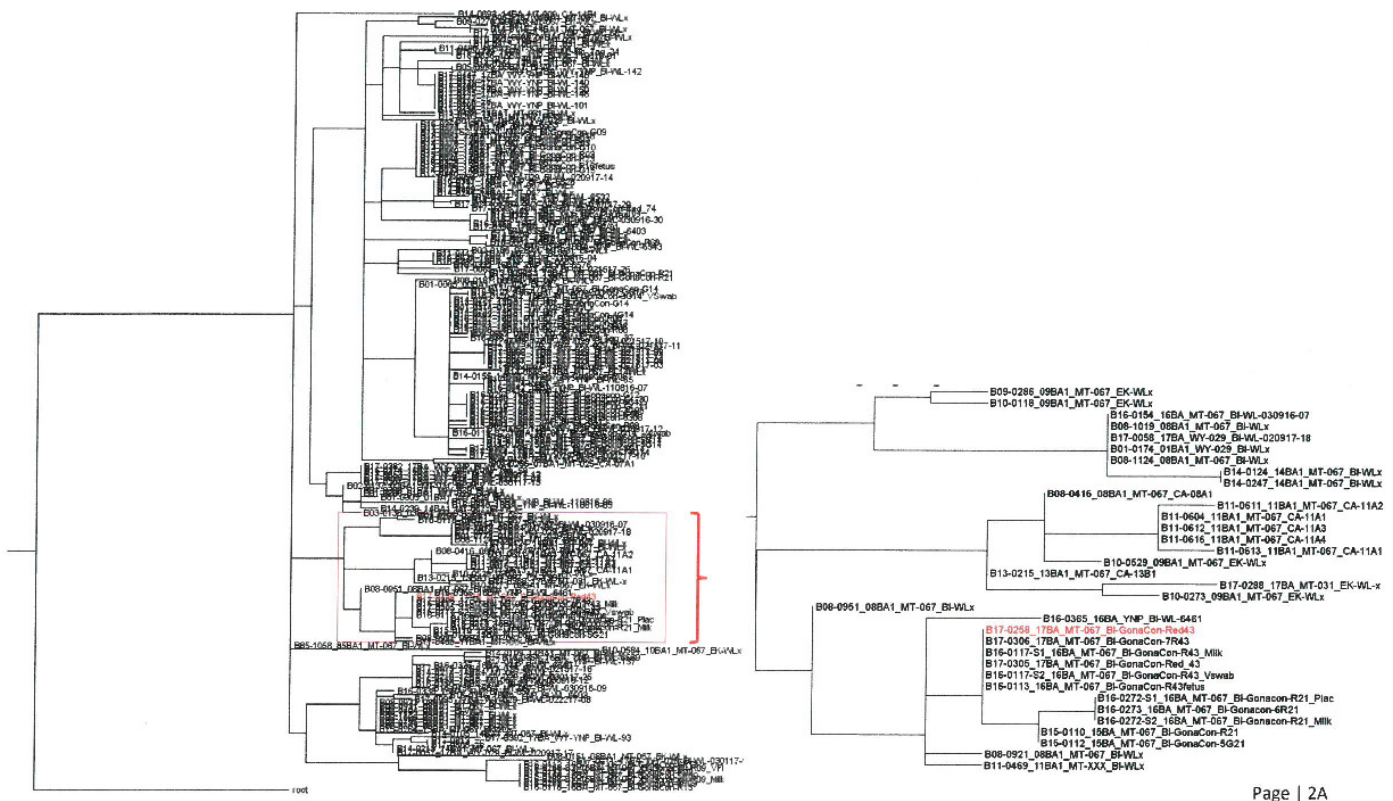
United States Department of Agriculture

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APPENDIX – GENOTYPING REPORT

Date: 11/16/2017

Accession: 17-016588

Figure 2. High resolution phylogenetic tree for the isolates circled in Figure 1. The red font indicates the isolate of interest.



Page | 2A



United States Department of Agriculture

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Accession: 17-016588

APPENDIX – GENOTYPING REPORT

Figure 3. Defining SNP calls for only the most closely related isolates. SNPs are called using stringent criteria, consequently, it is highly unlikely a SNP will change back to the reference call.

reference_pos	reference_call	SNP ID	SNP Call
B09-0286_098A1_MT-067_EK-WLx	G	6162388991	G
B10-0118_098A1_MT-067_EK-WLx	A	6162388991	A
B16-0154_168A1_MT-067_Bi-WL-030916-07	G	6162388991	G
B08-1019_088A1_MT-067_Bi-WLx	G	6162388991	G
B17-0058_178A1_WY-029_Bi-WL-020917-18	G	6162388991	G
B01-0174_018A1_WY-029_Bi-WLx	G	6162388991	G
B08-1124_088A1_MT-067_Bi-WLx	G	6162388991	G
B14-0124_148A1_MT-067_Bi-WLx	G	6162388991	G
B14-0247_148A1_MT-067_Bi-WLx	G	6162388991	G
B13-0215_138A1_MT-067_CA-1381	G	6162388991	G
B10-0273_098A1_MT-067_EK-WLx	G	6162388991	G
B17-0288_178A1_MT-031_EK-WL-x	G	6162388991	G
B08-0415_088A1_MT-067_CA-08A1	G	6162388991	G
B10-0529_098A1_MT-067_EK-WLx	G	6162388991	G
B11-0604_118A1_MT-067_CA-11A1	G	6162388991	G
B11-0612_118A1_MT-067_CA-11A3	G	6162388991	G
B11-0616_118A1_MT-067_CA-11A4	G	6162388991	G
B11-0611_118A1_MT-067_CA-11A2	G	6162388991	G
B11-0613_118A1_MT-067_CA-11A1	G	6162388991	G
B08-0951_088A1_MT-067_Bi-WLx	G	6162388991	G
B08-0921_088A1_MT-067_Bi-WLx	G	6162388991	G
B11-0469_118A1_MT-XXX_Bi-WLx	G	6162388991	G
B16-0365_168A1_YNP_Bi-WL-6461	G	6162388991	G
B16-0113_168A1_MT-067_Bi-GonaCon-R43fetus	G	6162388991	G
B16-0117-51_168A1_MT-067_Bi-GonaCon-R43_Milk	G	6162388991	G
B16-0117-52_168A1_MT-067_Bi-GonaCon-R43_Vswab	G	6162388991	G
B17-0258_178A1_MT-067_Bi-GonaCon-Red43	G	6162388991	G
B17-0305_178A1_MT-067_Bi-GonaCon-Red_43	G	6162388991	G
B17-0306_178A1_MT-067_Bi-GonaCon-7R43	G	6162388991	G
B15-0110_158A1_MT-067_Bi-GonaCon-R21	G	6162388991	G
B15-0112_158A1_MT-067_Bi-GonaCon-SG21	G	6162388991	G
B16-0272-51_168A1_MT-067_Bi-GonaCon-R21_Plac	G	6162388991	G
B16-0272-52_168A1_MT-067_Bi-GonaCon-R21_Milk	G	6162388991	G
B16-0273_168A1_MT-067_Bi-GonaCon-6R21	G	6162388991	G

FEES:

Total 0.00

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FAX: (406) 994-6344
EMAIL: livdiagnosticlab@mt.gov



PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 17-19394
Name/ID: Gr29
Species: American Bison

FINAL REPORT 10/07/17

Sex: Male **Age:** Adult
County: Park
Owner: USDA, APHIS, VS

Accessioned: 05/19/17
Authorized by: SS

Previous Reports
10/10/17

CASE SUMMARY

Verified on: 10/07/17 by: SS

REASON FOR SUBMISSION:

Recumbency and external trauma

LABORATORY DIAGNOSIS:

Multiple rib fractures and lung lacerations

COMMENT:

Gross evaluation of this animal confirms the presence of multiple rib fractures with associated soft tissue damage, including lung lacerations. No other significant gross or microscopic changes are present in the evaluated tissues, and samples collected for Brucella culture are found to be negative.

Stephen K. Smith, DVM, Diplomate, ACVP

PATHOLOGY

Verified on: 10/07/17 by: SS

GROSS DESCRIPTION:

This is the carcass of a six-year-old (per history) adult, male bison, in good body condition, with mild autolysis. Green plastic tag 29 is present in the ear.

There are multiple rib fractures, with extensive underlying hemorrhage and multiple lung lacerations. No other significant gross changes are present.

HISTOLOGIC DESCRIPTION:

All of the following tissues are examined histologically, and contain no significant microscopic changes: Heart, lung, liver, kidney, spleen, small intestine, and colon.

HISTOLOGIC DIAGNOSIS:

No diagnosis

008092

Case No: 17-19394 - ,

REFERRAL

Brucella Culture		Tissue	Verified on: 08/01/17 by: MM
<u>Animal ID</u>	<u>Test</u>		<u>Result</u>
Gr29			Please see attached

**National Veterinary Services Laboratories**

PO Box 844

Ames, Iowa 50010

Phone: 515-337-7514 Fax: 515-337-7938

FEDERAL RELAY SERVICE (Voice/TTY/ASCII/Spanish) 1-800-877-8339

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FINAL REPORT

Laboratory Test Report

Sensitive But Unclassified/Sensitive Security Information - Disseminate on a Need-To-Know Basis Only

Owner

USDA,APHIS,VS

Corwin Springs, MT

Animal Location

Park County MT, US

Submitter - 30025

Montana Veterinary Diagnostic Laboratory

Box 997

Bozeman, MT 59771

FAX #: 406-994-6344

Phone #: 406-994-4885

Accession Number: 17-016587**Date Collected: 05/19/2017****Date Received: 05/23/2017****Date Completed: 08/01/2017****Collected By: Stephen K. Smith****Purpose: Surveillance****Referral Number: 17-19394****This is not a billable case.****NOTE: Condition of the sample(s) was adequate unless otherwise noted.****Sample: 17-19394 Animal ID: Gr29 Brucella Case Number: B17-0257 Specimen Type: Tissue Species: Bison (Not otherwise specified)**

Brucella Isolation Result

No Isolation Made

Individual specimen results are listed below:

Lymph Node / Lymph Node- Parotid

Brucella Isolation Result

No Isolation Made

Lymph Node / Lymph Node- Mandibular

Brucella Isolation Result

No Isolation Made

Lymph Node / Lymph Node- Retropharyngeal

Brucella Isolation Result

No Isolation Made

Lymph Node / Lymph Node- Prescapular

Brucella Isolation Result

No Isolation Made

Lymph Node / Lymph Node- Hepatic

Brucella Isolation Result

No Isolation Made

Lymph Node / Lymph Node- Internal Iliac

Brucella Isolation Result

No Isolation Made

Tissue / Spleen

Brucella Isolation Result

No Isolation Made

Tissue / Epididymis

Brucella Isolation Result

No Isolation Made

Testicle / Testicle

Brucella Isolation Result

No Isolation Made



17 - 19394

05/19/17

Results authorized by:Dr. Suelee Robbe-Austerman, Section Head, Mycobacteria and Brucella Section
NVSL MB General Phone: 515-337-7388

FEES:

Hematoxylin & Eosin	0.00
Brucella Culture	0.00
Shipping	22.00
Incineration per pound	416.00
Case Summary	0.00
Necropsy LA >500#	157.50
Total	595.50

(This is not a bill. Do not make payments from this report.)



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PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 17-19958
Name/ID:
Species: American Bison

Sex: Age:
Owner: USDA, APHIS, VS

FINAL REPORT 06/06/17

Accessioned: 05/25/17
Authorized by: AF

Previous Reports
06/06/17
06/06/17

SEROLOGY

Brucella abortus

Animal

Gr04
7G04

FPA

Negative
Negative

Clotted Blood

Verified on: 06/06/17 by: DK

Animal

Gr04
7G04

B. Abortus

BAPA

Negative
Negative

Clotted Blood

Verified on 06/02/17 by: DK

Animal

Gr04
7G04

BRUCF

1+ 1:10
3+ 1:10

BRUCARD

Negative
Negative

Clotted Blood

Verified on: 05/26/17 by: DK

FEES:

B. Abortus Card	3.20
Brucella abortus/suis - Complement Fixation	5.30
Brucella abortus FPA	3.20
B. Abortus Bapa	3.20
Total	14.90

(This is not a bill. Do not make payments from this report.)



MONTANA VETERINARY DIAGNOSTIC LABORATORY

1911 WEST LINCOLN, BOZEMAN, MT 59718
P.O. Box 997, BOZEMAN, MT 59771
WEB: www.liv.mt.gov/lab

PHONE: (406) 994-4885
FAX: (406) 994-6344
EMAIL: livdiagnosticlab@mt.gov



PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 17-20287

Name/ID:

Species: American Bison

Sex: Age:

County: Park

Owner: USDA, APHIS, VS - GonaCon

FINAL REPORT 06/06/17

Accessioned: 05/31/17

Authorized by: AF

Previous Reports

06/06/17

06/06/17

SEROLOGY

Brucella abortus

Animal

Red 48

7R 48

FPA

Positive

Positive

Clotted Blood

Verified on: 06/06/17 by: DK

Animal

Red 48

7R 48

B. Abortus

BAPA

Positive

Positive

Clotted Blood

Verified on 06/02/17 by: DK

Animal

Red 48

7R 48

BRUCF

3+ 1:160

1+ 1:640

BRUCARD

Positive

Positive

Clotted Blood

Verified on: 06/06/17 by: DK

FEES:

B. Abortus Card	3.20
Brucella abortus/suis - Complement Fixation	5.30
Brucella abortus FPA	3.20
B. Abortus Bapa	3.20
Total	14.90

(This is not a bill. Do not make payments from this report.)

**National Veterinary Services Laboratories**

PO Box 844

Ames, Iowa 50010

Phone: 515-337-7514 **Fax:** 515-337-7938

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FINAL REPORT

Laboratory Test Report

Sensitive But Unclassified/Sensitive Security Information - Disseminate on a Need-To-Know Basis Only

Owner *W i l d l i f e*

USDA, APHIS, VS

Corwin Springs, MT

Animal Location

Park County MT

Submitter - 1961

Dr. Patrick Ryan. Clarke

USDA, APHIS, VS

187 E. Tobiano Tr.

Belgrade, MT 59714

FAX #: 406-866-5162

Phone #: 406-866-5162

Accession Number: **17-021001****Date Collected:****Date Received:** 06/28/2017**Date Completed:****Collected By:** R. Clarke, et al**Purpose:** General Diagnostic**Referral Number:** Cora Con**This is not a billable case.****NOTE: Condition of the sample(s) was adequate unless otherwise noted.****Sample:** Red37 **Animal ID:** Red37 **Brucella Case Number:** B17-0330 **Specimen Type:** Multiple - Specify in Sample **Species:** Bison (Not otherwise specified)

Brucella Isolation Result

No Isolation Made

Individual specimen results are listed below:

Milk / Milk

Brucella Isolation Result

No Isolation Made

Swab / Swab- Vaginal

Brucella Isolation Result

No Isolation Made

Exudate / Exudate- Vaginal

Brucella Isolation Result

No Isolation Made

Feces / Feces

Brucella Isolation Result

No Isolation Made

Sample: 7R37 **Animal ID:** 7R37 **Brucella Case Number:** B17-0331 **Specimen Type:** Swab **Species:** Bison (Not otherwise specified)

Brucella Isolation Result

No Isolation Made

Individual specimen results are listed below:

Swab / Swab- Conjunctival

Brucella Isolation Result

No Isolation Made

Sample: Red46 **Animal ID:** Red46 **Brucella Case Number:** B17-0332 **Specimen Type:** Multiple - Specify in Sample **Species:** Bison (Not otherwise specified)

Brucella Isolation Result

No Isolation Made

Individual specimen results are listed below:

Milk / Milk Cream

Brucella Isolation Result

No Isolation Made

Milk / Milk Sediment

Brucella Isolation Result

No Isolation Made

Swab / Swab- Vaginal

Brucella Isolation Result

No Isolation Made

Fluid / Discharge, Vaginal

Brucella Isolation Result

No Isolation Made

Feces / Feces

Brucella Isolation Result

Contaminated

Sample: 7R46 **Animal ID:** 7R46 **Brucella Case Number:** B17-0333 **Specimen Type:** Swab **Species:** Bison (Not otherwise specified)

Brucella Isolation Result

No Isolation Made

Individual specimen results are listed below:

Swab / Swab- Conjunctival

Brucella Isolation Result

No Isolation Made

Sample: 3R22 **Animal ID:** 3R22 **Brucella Case Number:** B17-0334 **Specimen Type:** Multiple - Specify in Sample **Species:** Bison (Not otherwise specified)

Brucella Isolation Result

No Isolation Made

Individual specimen results are listed below:

Milk / Milk Cream

Brucella Isolation Result

No Isolation Made

Milk / Milk Sediment

Brucella Isolation Result

No Isolation Made

Swab / Swab- Vaginal

Brucella Isolation Result

No Isolation Made

Fluid / Discharge, Vaginal

Brucella Isolation Result

No Isolation Made

Feces / Feces

Brucella Isolation Result

No Isolation Made

Sample: 73R22 **Animal ID:** 73R22 **Brucella Case Number:** B17-0335 **Specimen Type:** Swab **Species:** Bison (Not otherwise specified)

Brucella Isolation Result

No Isolation Made

Individual specimen results are listed below:

Swab / Swab- Conjunctival

Brucella Isolation Result

No Isolation Made

Sample: Red21 **Animal ID:** Red21 **Brucella Case Number:** B17-0336 **Specimen Type:** Multiple - Specify in Sample **Species:** Bison (Not otherwise specified)

Brucella Isolation Result

No Isolation Made

Individual specimen results are listed below:

Milk / Milk Cream

Brucella Isolation Result

No Isolation Made

Milk / Milk Sediment

Brucella Isolation Result

No Isolation Made

Swab / Swab- Vaginal

Brucella Isolation Result

No Isolation Made

Fluid / Discharge, Vaginal

Brucella Isolation Result

No Isolation Made

Feces / Feces

Brucella Isolation Result

Contaminated

Sample: 7R21 **Animal ID:** 7R21 **Brucella Case Number:** B17-0337 **Specimen Type:** Swab **Species:** Bison (Not otherwise specified)

Brucella Isolation Result

No Isolation Made

Individual specimen results are listed below:

Swab / Swab- Conjunctival

Brucella Isolation Result

No Isolation Made

Sample: Red26 **Animal ID:** Red26 **Brucella Case Number:** B17-0338 **Specimen Type:** Multiple - Specify in Sample **Species:** Bison (Not otherwise specified)

Brucella Isolation Result

No Isolation Made

Individual specimen results are listed below:

Milk / Milk Cream

Brucella Isolation Result

No Isolation Made

Milk / Milk Sediment

Brucella Isolation Result

No Isolation Made

Swab / Swab- Vaginal

Brucella Isolation Result

No Isolation Made

Fluid / Discharge, Vaginal

Brucella Isolation Result

No Isolation Made

Feces / Feces

Brucella Isolation Result

Contaminated

Sample: 7R26 **Animal ID:** 7R26 **Brucella Case Number:** B17-0339 **Specimen Type:** Swab **Species:** Bison (Not otherwise specified)

Brucella Isolation Result

No Isolation Made

Individual specimen results are listed below:

Swab / Swab- Conjunctival

Brucella Isolation Result

No Isolation Made

Sample: Red24 **Animal ID:** Red24 **Brucella Case Number:** B17-0340 **Specimen Type:** Multiple - Specify in Sample **Species:** Bison (Not otherwise specified)

Brucella Isolation Result

No Isolation Made

Individual specimen results are listed below:

Milk / Milk

Brucella Isolation Result

No Isolation Made

Swab / Swab- Vaginal

Brucella Isolation Result

No Isolation Made

Exudate / Discharge, Vaginal

Brucella Isolation Result

No Isolation Made

Feces / Feces

Brucella Isolation Result

Contaminated

Sample: 7R24 **Animal ID:** 7R24 **Brucella Case Number:** B17-0341 **Specimen Type:** Swab **Species:** Bison (Not otherwise specified)

Brucella Isolation Result

No Isolation Made

Individual specimen results are listed below:

Swab / Swab- Conjunctival

Brucella Isolation Result

No Isolation Made

Sample: Red22 **Animal ID:** Red22 **Brucella Case Number:** B17-0342 **Specimen Type:** Multiple - Specify in Sample **Species:** Bison (Not otherwise specified)

Brucella Isolation Result

No Isolation Made

Individual specimen results are listed below:

Milk / Milk

Brucella Isolation Result

No Isolation Made

Swab / Swab- Vaginal

Brucella Isolation Result

No Isolation Made

Feces / Feces

Brucella Isolation Result

Contaminated

Sample: 7R22 **Animal ID:** 7R22 **Brucella Case Number:** B17-0343 **Specimen Type:** Swab **Species:** Bison (Not otherwise specified)

Brucella Isolation Result

No Isolation Made

Individual specimen results are listed below:

Swab / Swab- Conjunctival

Brucella Isolation Result

No Isolation Made

Sample: Green15 **Animal ID:** Green15 **Brucella Case Number:** B17-0344 **Specimen Type:** Multiple - Specify in Sample **Species:** Bison (Not otherwise specified)

Brucella Isolation Result

No Isolation Made

Individual specimen results are listed below:

Milk / Milk

Brucella Isolation Result

No Isolation Made

Swab / Swab- Vaginal

Brucella Isolation Result

No Isolation Made

Exudate / Discharge, Vaginal

Brucella Isolation Result

No Isolation Made

Feces / Feces

Brucella Isolation Result

No Isolation Made

Sample: 7G15 **Animal ID:** 7G15 **Brucella Case Number:** B17-0345 **Specimen Type:** Swab **Species:** Bison (Not otherwise specified)

Brucella Isolation Result

No Isolation Made

Individual specimen results are listed below:

Swab / Swab- Conjunctival

Brucella Isolation Result

No Isolation Made

Sample: Red09 **Animal ID:** Red09 **Brucella Case Number:** B17-0346 **Specimen Type:** Multiple - Specify in Sample **Species:** Bison (Not otherwise specified)

Brucella Isolation Result

No Isolation Made

Individual specimen results are listed below:

Milk / Milk

Brucella Isolation Result

No Isolation Made

Swab / Swab- Vaginal

Brucella Isolation Result

No Isolation Made

Exudate / Discharge, Vaginal

Brucella Isolation Result

No Isolation Made

Feces / Feces

Brucella Isolation Result

No Isolation Made

Sample: Gr01 **Animal ID:** Gr01 **Brucella Case Number:** B17-0347 **Specimen Type:** Multiple - Specify in Sample **Species:** Bison (Not otherwise specified)

Brucella Isolation Result

No Isolation Made

Individual specimen results are listed below:

Milk / Milk

Brucella Isolation Result

No Isolation Made

Swab / Swab- Vaginal

Brucella Isolation Result

No Isolation Made

Exudate / Discharge, Vaginal

Brucella Isolation Result

No Isolation Made

Feces / Feces

Brucella Isolation Result

Contaminated

Sample: 7G01 **Animal ID:** 7G01 **Brucella Case Number:** B17-0348 **Specimen Type:** Swab **Species:** Bison (Not otherwise specified)

Brucella Isolation Result

No Isolation Made

Individual specimen results are listed below:

Swab / Swab- Conjunctival

Brucella Isolation Result

No Isolation Made

Sample: Red02 **Animal ID:** Red02 **Brucella Case Number:** B17-0349 **Specimen Type:** Multiple - Specify in Sample **Species:** Bison (Not otherwise specified)

Brucella Isolation Result

No Isolation Made

Individual specimen results are listed below:

Milk / Milk

Brucella Isolation Result

No Isolation Made

Swab / Swab- Vaginal

Brucella Isolation Result

No Isolation Made

Exudate / Discharge, Vaginal

Brucella Isolation Result

No Isolation Made

Feces / Feces

Brucella Isolation Result

No Isolation Made

Sample: 7R02 **Animal ID:** 7R02 **Brucella Case Number:** B17-0350 **Specimen Type:** Swab **Species:** Bison (Not otherwise specified)

Brucella Isolation Result

No Isolation Made

Individual specimen results are listed below:

Swab / Swab- Conjunctival

Brucella Isolation Result

No Isolation Made

Sample: Gr17 **Animal ID:** Gr17 **Brucella Case Number:** B17-0351 **Specimen Type:** Multiple - Specify in Sample **Species:** Bison (Not otherwise specified)

Brucella Isolation Result

No Isolation Made

Individual specimen results are listed below:

Milk / Milk

Brucella Isolation Result

No Isolation Made

Swab / Swab- Vaginal

Brucella Isolation Result

No Isolation Made

Exudate / Discharge, Vaginal

Brucella Isolation Result

No Isolation Made

Feces / Feces

Brucella Isolation Result

No Isolation Made

Sample: 7G17 **Animal ID:** 7G17 **Brucella Case Number:** B17-0352 **Specimen Type:** Swab **Species:** Bison (Not otherwise specified)

Brucella Isolation Result

No Isolation Made

Individual specimen results are listed below:

Swab / Swab- Conjunctival

Brucella Isolation Result

No Isolation Made

Sample: Gr20 **Animal ID:** Gr20 **Brucella Case Number:** B17-0353 **Specimen Type:** Multiple - Specify in Sample **Species:** Bison (Not otherwise specified)

Brucella Isolation Result

No Isolation Made

Individual specimen results are listed below:

Milk / Milk

Brucella Isolation Result

No Isolation Made

Swab / Swab- Vaginal

Brucella Isolation Result

No Isolation Made

Exudate / Discharge, Vaginal

Brucella Isolation Result

No Isolation Made

Feces / Feces

Brucella Isolation Result

No Isolation Made

Sample: 7G20 **Animal ID:** 7G20 **Brucella Case Number:** B17-0354 **Specimen Type:** Swab **Species:** Bison (Not otherwise specified)

Brucella Isolation Result

No Isolation Made

Individual specimen results are listed below:

Swab / Swab- Conjunctival

Brucella Isolation Result

No Isolation Made

Sample: Red50 **Animal ID:** Red50 **Brucella Case Number:** B17-0355 **Specimen Type:** Multiple - Specify in Sample **Species:** Bison (Not otherwise specified)

Brucella Isolation Result

No Isolation Made

Individual specimen results are listed below:

Milk / Milk

Brucella Isolation Result

No Isolation Made

Swab / Swab- Vaginal

Brucella Isolation Result

No Isolation Made

Fluid / Fluid- Vaginal

Brucella Isolation Result

No Isolation Made

Feces / Feces

Brucella Isolation Result

No Isolation Made

Sample: 7R50 **Animal ID:** 7R50 **Brucella Case Number:** B17-0356 **Specimen Type:** Swab **Species:** Bison (Not otherwise specified)

Brucella Isolation Result

No Isolation Made

Individual specimen results are listed below:

Swab / Swab- Conjunctival

Brucella Isolation Result

No Isolation Made

Sample: 3G08 **Animal ID:** 3G08 **Brucella Case Number:** B17-0357 **Specimen Type:** Multiple - Specify in Sample **Species:** Bison (Not otherwise specified)

Brucella Isolation Result

No Isolation Made

Individual specimen results are listed below:

Milk / Milk

Brucella Isolation Result

No Isolation Made

Swab / Swab- Vaginal

Brucella Isolation Result

No Isolation Made

Fluid / Fluid- Vaginal

Brucella Isolation Result

No Isolation Made

Feces / Feces

Brucella Isolation Result

No Isolation Made

Sample: 73G08 **Animal ID:** 73G08 **Brucella Case Number:** B17-0358 **Specimen Type:** Swab **Species:** Bison (Not otherwise specified)

Brucella Isolation Result

No Isolation Made

Individual specimen results are listed below:

Swab / Swab- Conjunctival

Brucella Isolation Result

No Isolation Made

Sample: Red33 **Animal ID:** Red33 **Brucella Case Number:** B17-0359 **Specimen Type:** Multiple - Specify in Sample **Species:** Bison (Not otherwise specified)

Brucella Isolation Result

No Isolation Made

Individual specimen results are listed below:

Milk / Milk

Brucella Isolation Result

No Isolation Made

Swab / Swab- Vaginal

Brucella Isolation Result

No Isolation Made

Fluid / Fluid- Vaginal

Brucella Isolation Result

No Isolation Made

Feces / Feces

Brucella Isolation Result

No Isolation Made

Sample: 7R33 **Animal ID:** 7R33 **Brucella Case Number:** B17-0360 **Specimen Type:** Swab **Species:** Bison (Not otherwise specified)

Brucella Isolation Result

No Isolation Made

Individual specimen results are listed below:

Swab / Swab- Conjunctival

Brucella Isolation Result

No Isolation Made

Sample: Gr08 **Animal ID:** Gr08 **Brucella Case Number:** B17-0361 **Specimen Type:** Multiple - Specify in Sample **Species:** Bison (Not otherwise specified)

Brucella Isolation Result

No Isolation Made

Individual specimen results are listed below:

Milk / Milk

Brucella Isolation Result

No Isolation Made

Swab / Swab- Vaginal

Brucella Isolation Result

No Isolation Made

Fluid / Fluid- Vaginal

Brucella Isolation Result

No Isolation Made

Feces / Feces

Brucella Isolation Result

No Isolation Made

Sample: 7G08 **Animal ID:** 7G08 **Brucella Case Number:** B17-0362 **Specimen Type:** Swab **Species:** Bison (Not otherwise specified)

Brucella Isolation Result

No Isolation Made

Individual specimen results are listed below:

Swab / Swab- Conjunctival

Brucella Isolation Result

No Isolation Made

Results authorized by:

Dr. Suelee Robbe-Austerman, Section Head, Mycobacteria and Brucella Section
NVSL MB General Phone: 515-337-7388

Help Us Help You

(This new section will be updated periodically with tips for submitters.)

Quality samples yield the most accurate results. Please call if you have questions.



MONTANA VETERINARY DIAGNOSTIC LABORATORY

1911 WEST LINCOLN, BOZEMAN, MT 59718
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FAX: (406) 994-6344
EMAIL: livdiagnosticlab@mt.gov



PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 17-21462
Name/ID: 7G 04
Species: American Bison

Sex: Male **Age:** 3 Week
County: Park
Owner: USDA,APHIS-Gona Con

FINAL REPORT 07/26/17

Accessioned: 06/16/17
Authorized by: BL

Previous Reports
07/26/17

CASE SUMMARY

Verified on: 07/26/17 by: BL

REASON FOR SUBMISSION: Death

LABORATORY DIAGNOSIS:

Thin body condition
Dehydration
Tubulointerstitial nephritis
Lymphoid depletion, multiple organs

COMMENT: This animal was in a state of cachexia and was severely dehydrated. The tubulointerstitial nephritis has the appearance of sepsis but bacteria were not identified with either Gram's or silver stains. All lymphoid tissue is depleted of lymphocytes which could be seen with stress or associated with immune suppression. Brucella cultures conducted at NVSL did not isolate Brucella sp.

A. W. Layton, DVM, Diplomate, ACVP

PATHOLOGY

Verified on: 06/26/17 by: BL

GROSS DESCRIPTION: The carcass is of a male, bison calf identified with green ear tag 7G4. The animal is thin and fat stores are absent. Eyes are sunken into the orbits and the tissues are tachy. Forestomachs and abomasum are empty. Formed stools are not present in the colon. Liver, kidney, spleen, lung, heart, brain, forestomachs, abomasum, small and large intestine and musculoskeletal system do not have gross lesions. Thymus is not identified. Multiple lymph nodes are harvested for submission to NVSL for Brucella culture.

GROSS DIAGNOSIS:

Absence of fat store and thin body condition
Dehydration

HISTOLOGIC DESCRIPTION: Tissue sections of liver, lung, spleen, heart, skeletal muscle, urinary bladder, thymic remnant, lymph node, large artery, ganglion, abomasum, colon, small intestine, kidney, and brain are examined. Multifocally in the kidney are neutrophilic infiltrates within tubules and sometimes interstitium. B&B Gram stain and Warthin-Starry silver stains did not reveal bacterial organisms. Thymic, lymph node, splenic and Peyer's Patches lymphocyte population is low.

HISTOLOGIC DIAGNOSIS:

Tubulointerstitial nephritis, suppurative, multifocal, acute, mild to moderate
Lymphoid depletion, thymus, lymph node, spleen and Peyer's Patches, moderate

REFERRAL

Brucella Culture	lymph node & spleen	Verified on: 07/21/17 by: JM
<u>Animal ID</u>	<u>Test</u>	<u>Result</u>
7G 04		Please see attached

**National Veterinary Services Laboratories**

PO Box 844

Ames, Iowa 50010

Phone: 515-337-7514 Fax: 515-337-7938

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FINAL REPORT

Laboratory Test Report

Sensitive But Unclassified/Sensitive Security Information - Disseminate on a Need-To-Know Basis Only

Owner

USDA, APHIS, GonaCon

Corwin Springs, MT

Animal Location

Park County MT, US

Submitter - 2046

MT Department of Livestock

Diagnostic Laboratory Division

1911 W Lincoln St

PO Box 997

Bozeman, MT 59718

FAX #: 406-994-6344

Phone #: 406-994-4885

Accession Number: 17-020032**Date Collected:** 06/16/2017**Date Received:** 06/20/2017**Date Completed:** 07/21/2017**Collected By:** Dr. A.W. Layton**Purpose:** General Diagnostic**Referral Number:** 17-21462**This is not a billable case.****NOTE: Condition of the sample(s) was adequate unless otherwise noted.****Sample:** 17-21462 **Animal ID:** 7G04 **Brucella Case Number:** B17-0322 **Specimen Type:** Multiple - Specify in Sample **Species:** Bison (Not otherwise specified)

Brucella Isolation Result

No Isolation Made

Individual specimen results are listed below:

Lymph Node / Lymph Node- Head

Brucella Isolation Result

No Isolation Made

Lymph Node / Lymph Node- Mesenteric

Brucella Isolation Result

No Isolation Made

Lymph Node / Lymph Node- Hepatic

Brucella Isolation Result

No Isolation Made

Lymph Node / Lymph Node- Prefemoral

Brucella Isolation Result

No Isolation Made

Lymph Node / Lymph Node- Popliteal

Brucella Isolation Result

No Isolation Made

Lymph Node / Lymph Node- Prescapular

Brucella Isolation Result

No Isolation Made

Lymph Node / Lymph Node- Internal Iliac

Brucella Isolation Result

No Isolation Made

Liver / Liver

Brucella Isolation Result

No Isolation Made

Kidney / Kidney

Brucella Isolation Result

No Isolation Made

Spleen / Spleen

Brucella Isolation Result

No Isolation Made

Testicle / Testicle

Brucella Isolation Result

No Isolation Made

Intestine / Ileum

17-21462

06/16/17

Page 1 of 2

Date Generated: 7/21/2017

Brucella Isolation Result

No Isolation Made

Results authorized by: Dr. Suelee Robbe-Austerman, Section Head, Mycobacteria and Brucella Section
NVSL MB General Phone: 515-337-7388

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Quality samples yield the most accurate results. Please call if you have questions.



17-21462

FEES:

Brucella Culture	16.00
Shipping	28.00
Hematoxylin & Eosin	0.00
Necropsy LA <150#	89.25
Case Summary	0.00
Gram's Brown & Brenn HC	8.50
Warthin-Starry HC	8.50
Incineration per pound	6.50
Total	156.75

(This is not a bill. Do not make payments from this report.)



National Veterinary Services Laboratories

PO Box 844

Ames, Iowa 50010

Phone: 515-337-7514 Fax: 515-337-7938

FEDERAL RELAY SERVICE (Voice/TTY/ASCII/Spanish) 1-800-877-8339

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FINAL REPORT

Laboratory Test Report

Sensitive But Unclassified/Sensitive Security Information - Disseminate on a Need-To-Know Basis Only

Owner

USDA, APHIS, VS-GonaCon, BQFS
Corwin Springs, MT

Animal Location

Park County MT, US

Submitter - 30025

Montana Veterinary Diagnostic Laboratory
Box 997
Bozeman, MT 59771
FAX #: 406-994-6344
Phone #: 406-994-4885

Accession Number:

17-023689

Date Collected:

07/19/2017

Date Received:

07/21/2017

Date Completed:

02/02/2018

Collected By:

D. Jeff Marshall, BVSc, PhD

Purpose:

General Diagnostic

Referral Number:

18-1108

This is not a billable case.

NOTE: Condition of the sample(s) was adequate unless otherwise noted.

Sample: 18-1108 Animal ID: 7R46 Brucella Case Number: B17-0532 Specimen Type: Tissue Species: Bison (Not otherwise specified)

Brucella Isolation Result

No Isolation Made

Individual specimen results are listed below:

Tissue / Lymph Node- Mandibular

Brucella Isolation Result

No Isolation Made

Tissue / Lymph Node- Parotid

Brucella Isolation Result

No Isolation Made

Tissue / Lymph Node- Retropharyngeal

Brucella Isolation Result

No Isolation Made

Tissue / Lymph Node- Prescapular

Brucella Isolation Result

No Isolation Made

Tissue / Lymph Node- Mediastinal

Brucella Isolation Result

No Isolation Made

Tissue / Lymph Node- Bronchial

Brucella Isolation Result

No Isolation Made

Tissue / Lymph Node- Prefemoral

Brucella Isolation Result

No Isolation Made

Tissue / Lymph Node- Mesenteric

Brucella Isolation Result

No Isolation Made

Tissue / Lymph Node- Internal Iliac

Brucella Isolation Result

No Isolation Made

Tissue / Lymph Node- S. Mammary

Brucella Isolation Result

No Isolation Made

Tissue / Lymph Node- Popliteal

Brucella Isolation Result

No Isolation Made

Tissue / Kidney

Brucella Isolation Result	No Isolation Made
Tissue / Liver	
Brucella Isolation Result	No Isolation Made
Tissue / Spleen	
Brucella Isolation Result	No Isolation Made
Tissue / Mammary Gland	
Brucella Isolation Result	No Isolation Made
Tissue / Ovary	
Brucella Isolation Result	No Isolation Made
Tissue / Uterus	
Brucella Isolation Result	No Isolation Made
Tissue / Ileum	
Brucella Isolation Result	No Isolation Made

Results authorized by: Dr. Suelee Robbe-Austerman, Section Head, Mycobacteria and Brucella Section
NVSL MB General Phone: 515-337-7388

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<https://www.aphis.usda.gov/aphis/ourfocus/animalhealth/lab-info-services/portal>



MONTANA VETERINARY DIAGNOSTIC LABORATORY

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FAX: (406) 994-6344
EMAIL: livdiagnosticlab@mt.gov



PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 18-557
Name/ID:
Species: American Bison

FINAL REPORT 08/08/17

Sex: Age:
Owner: USDA, APHIS, VS

Accessioned: 07/11/17
Authorized by: AF

Previous Reports
08/08/17
08/08/17

SEROLOGY

Brucella abortus

Clotted Blood

Verified on: 08/08/17 by: DK

<u>Animal</u>	<u>FPA</u>
1	Negative
2	Positive
3	Positive
4	Positive
5	Positive
6	Positive
7	Positive
8	Positive
9	Positive
10	Positive

Clotted Blood

Verified on 07/31/17 by: DK

<u>Animal</u>	<u>B. Abortus</u> <u>BAPA</u>
1	Negative
2	Negative
3	Positive
4	Positive
5	Positive
6	Negative
7	Negative
8	Negative
9	Positive
10	Positive

Clotted Blood

Verified on: 08/01/17 by: DK

<u>Animal</u>	<u>BRUCF</u>	<u>BRUCARD</u>
1	Negative @ 1:10	Negative
2	2+ 1:20	Negative
3	4+ 1:640	Positive
4	2+ 1:10	Positive
5	2+ 1:160	Positive

008118

6	Negative @ 1:10	Negative
7	2+ 1:20	Negative
8	3+ 1:20	Negative
9	3+ 1:320	Positive
10	4+ 1:640	Positive

Collection Date: 7-11-17
Page 1 of

SEROLOGY REPORT (SV2A) - Complete Light Shaded Areas Only
(SEE EXAMPLE and KEY on back Page 4)

OWNER:	USDA, APHIS, VS
ADDRESS:	
CITY/STATE/ZIP:	Corwin Springs MT
REASON FOR TEST - MANDATORY INFORMATION (See Key)	BQFS - Gonadon - Cattle Health

SUBMITTER'S SIGNATURE: *Phyllis Clarke*
SUBMITTER'S NAME (PRINT): *P. Ryan Clarke*
ADDRESS: **(b) (6)**
CITY/STATE/ZIP: **(b) (6)**
RESULT REPORTING OPTIONS: PHONE / FAX / EMAIL
NUMBER OR EMAIL ADDRESS: *B. Frey, P. Clarke, T. Ryan*

CIRCLE CLINICAL TEST REQUIRED: If needed, indicate specific test and/or dilution. Example on back.						BRU	BT	ANA	EHD	PTB	IBR	BVD	BLV	LEPTOSPIROSIS	OTHER
TUBE NO.	ANIMAL IDENTIFICATION	AGE	SEX	BREED	OFFICIAL VAC.	BAPA	BLU Card	ANA CF 1:10	EHD FPA					8 SEROVARs	
1	3617	Ad	Fc	Bison		N	N		N 2.7					Brn CF (1:10)	
2	3R20					N	N		Pos 69.0					2+(1:20)	
3	Gr 12					Pos	Pos		Pos 166.2					4+(1:640)	
4	Red 74					Pos	Pos		Pos 177.6					2+(1:10)	
5	Red 67					Pos	Pos		Pos 188.6					2+(1:160)	
6	Red 35					N	N		Pos 84.6					Neg @ (1:10)	
7	SG 09		F			N	N		Pos 15.1					2+(1:20)	
8	6317	1y	M			N	N		Pos 40.7					3+(1:20)	
9	6R06	1y	F			Pos	Pos		Pos 206.6					3+(1:320)	
10	6G11	1y	M			Pos	Pos		Pos 168.4					4+(1:640)	
Samples						10	10		10					10	
Seropositive						5	5		9						
Suspect															
Seronegative						5	5		1						
Undetermined															
Tested By						AK 7/27/17	AK 7/27/17		AK 8/1/17					AK 7/27/17	

Laboratory Comments:

Please do EPA, CF
Cond, BAPA

Brogan Na S

FEE: _____ DATE RECEIVED: _____



18-557
07/11/17

The MVDL is an accredited AAVID laboratory and a member of the USDA National Animal Health Laboratory Network. Completing and submitting any submission form or any of contractual agreement for services requested and the specimens submitted become the property of the MVDL. In addition, at no additional expense to our clients, specimens submit additional testing upon the order of the state or federal animal health officials, or whenever a Foreign Animal Disease is suspected, or in support of surveillance for other animal disease.

FEES:

B. Abortus Card	16.00
Brucella abortus/suis - Complement Fixation	26.50
Brucella abortus FPA	16.00
B. Abortus Bapa	16.00
Total	74.50

(This is not a bill. Do not make payments from this report.)



MONTANA VETERINARY DIAGNOSTIC LABORATORY

1911 WEST LINCOLN, BOZEMAN, MT 59718
P.O. Box 997, BOZEMAN, MT 59771
WEB: www.liv.mt.gov/lab

PHONE: (406) 994-4885
FAX: (406) 994-6344
EMAIL: livdiagnosticlab@mt.gov



PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 18-558
Name/ID:
Species: American Bison

FINAL REPORT 08/08/17

Sex: Age:
Owner: USDA, APHIS, VS

Accessioned: 07/11/17
Authorized by: AF

Previous Reports
08/08/17
08/08/17

SEROLOGY

Brucella abortus

Clotted Blood

Verified on: 08/08/17 by: DK

<u>Animal</u>	<u>FPA</u>
1	Positive
2	Negative
3	Positive
4	Positive
5	Negative
6	Positive
7	Negative
8	Positive
9	Positive
10	Negative
11	Negative
12	Negative
13	Negative
14	Negative
15	Negative
16	Negative
17	Negative

Clotted Blood

Verified on 07/31/17 by: DK

<u>Animal</u>	<u>B. Abortus</u> <u>BAPA</u>
1	Positive
2	Negative
3	Negative
4	Positive
5	Negative
6	Positive
7	Negative
8	Negative
9	Positive
10	Negative
11	Negative
12	Negative

13	Negative
14	Negative
15	Negative
16	Negative
17	Negative

Clotted Blood

Verified on: 08/01/17 by: DK

<u>Animal</u>	<u>BRUCF</u>	<u>BRUCARD</u>
1	Negative @ 1:10	Positive
2	Negative @ 1:10	Negative
3	Negative @ 1:10	Negative
4	1+ 1:40	Negative
5	Negative @ 1:10	Negative
6	1+ 1:40	Negative
7	Negative @ 1:10	Negative
8	Negative @ 1:10	Negative
9	1+ 1:40	Positive
10	Negative @ 1:10	Negative
11	Negative @ 1:10	Negative
12	Negative @ 1:10	Negative
13	Negative @ 1:10	Negative
14	Negative @ 1:10	Negative
15	Negative @ 1:10	Negative
16	Negative @ 1:10	Negative
17	Negative @ 1:10	Negative

Species: Bison
County: Park

S N S
MONTANA VETERINARY DIAGNOSTIC LABORATORY

Box 997 - Bozeman, MT 59771
Phone (406) 994 - 4885 Fax (406) 994 - 6344
Email: livdiagnosticlab@mt.gov

Collection Date: 7-11-17
Page 1 of 2

SEROLOGY REPORT (SV2A) - Complete Light Shaded Areas Only
(SEE EXAMPLE and KEY on back Page 4)

OWNER: USDA, APHIS, VS
ADDRESS:
CITY/STATE/ZIP: Corwin Springs, MT
REASON FOR TEST - MANDATORY INFORMATION (See Key)
BQFS - Gona Con - Cattle Health

SUBMITTER'S SIGNATURE: P. Ryan Clarke
SUBMITTER'S NAME (PRINT): P. Ryan Clarke
ADDRESS: (b) (6)
CITY/STATE/ZIP:
RESULT REPORTING OPTIONS: PHONE / FAX / EMAIL
NUMBER OR EMAIL ADDRESS: R. Frey, R Clarke, J. Ryan

CIRCLE DISEASE TEST REQUIRED: If needed, indicate specific test and/or dilution. Example on back.						BRU	BT	ANA	END	PTB	IBR	BVD	BLV	LEPTOSPIROSIS	OTHER
TUBE NO.	ANIMAL IDENTIFICATION	AGE	SEX	BREED	OFFICIAL VAC.	BAPA	Bruc Card	Bruc CF	Bruc FPA					2 SEROVARS	
1	Red 19	Ad	Fe	Bison		Pos	Pos		Pos	141.8				Neg @ (1:10)	
2	Red 31					N	N		N	6.3				Neg @ (1:10)	
3	Red 04					N	N		Pos	41.5				Neg @ (1:10)	
4	Red 29					Pos ^W	N		Pos	25.0				1+ (1:40)	
5	5R02					N	N		N	3.3				Neg @ (1:10)	
6	Red 28					Pos ^W	N		Pos	105.1				1+ (1:40)	
7	Red 05					N	N		N	7.1				Neg @ (1:10)	
8	Red 11					N	N		Pos	18.9				Neg @ (1:10)	
9	Red 27					Pos	Pos		Pos	137.2				1+ (1:40)	
10	Red 6320					N	N		N	7.3				Neg @ (1:10)	
Samples						17	17		17					17	
Seropositive						4	2		6						
Suspect															
Seronegative						13	15		11						
Undetermined															
Tested By						<u>7/31/17</u>	<u>8/1/17</u>		<u>8/1/17</u>					<u>8/27/17</u>	

Laboratory Comments:

Please do CF, FPA
BAPA, Card

S N S

FEE: _____ DATE RECEIVED: _____



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Owner: USDA, APHIS, VS
Submitted By: R. Clarke
Collection Date: 7-11-17 Page 2 of 2

Box 997 - Bozeman, MT 59771

Phone: (406)994-4885

Fax: (406)994-6344

Email: livdiagnosticlab@mt.gov

CONTINUATION SEROLOGY REPORT (SV2B)

Complete light shaded areas only

[illegible]

SV-2B (PRINT VERSION 08/13)

008125

SNS

CASE # 18-558

FEES:

B. Abortus Card	27.20
Brucella abortus/suis - Complement Fixation	45.05
Brucella abortus FPA	27.20
B. Abortus Bapa	27.20
Total	126.65

(This is not a bill. Do not make payments from this report.)



MONTANA VETERINARY DIAGNOSTIC LABORATORY

1911 WEST LINCOLN, BOZEMAN, MT 59718
P.O. Box 997, BOZEMAN, MT 59771
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FAX: (406) 994-6344
EMAIL: livdiagnosticlab@mt.gov



PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 18-1108
Name/ID: 7R 46
Species: American Bison

Sex: Female **Age:** 8 Week
County: Park
Owner: USDA, APHIS, VS - Gona Con

FINAL REPORT 02/02/18

Accessioned: 07/19/17
Authorized by: DJM

Previous Reports
07/21/17
07/25/17
02/02/18

CASE SUMMARY

Verified on: 02/02/18 by: DJM

ADDITIONAL INFORMATION:

BRUCELLA CULTURE (NVSL Ames Iowa):

Results are attached.

D. J. Marshall, BVSc, PhD

Verified on: 07/21/17 by: DJM

REASON FOR SUBMISSION:

Lymph node collection for Brucella culture.

LABORATORY DIAGNOSIS:

USDA, APHIS Brucella in Bison project

COMMENT:

Lymph node and tissue collected have been forwarded to the NVSL Brucella Laboratory for culture.

D. J. Marshall, BVSc, PhD

REFERRAL

Brucella Culture

Carcass

Verified on: 02/02/18 by: MM

Animal ID

7R 46

Test**Result**

Please see attached

2/2/2018 8:46 AM USDA Page 3 of 4

**National Veterinary Services Laboratories**

PO Box 844

Ames, Iowa 50010

Phone: 515-337-7514 Fax: 515-337-7938

FEDERAL RELAY SERVICE (Voice/TTY/ASCII/Spanish) 1-800-877-8339

The USDA is an equal opportunity provider and employer.

FINAL REPORT

Laboratory Test Report

Sensitive But Unclassified/Sensitive Security Information - Disseminate on a Need-To-Know Basis Only

Owner

USDA, APHIS, VS-GonaCon, BQFS

Corwin Springs, MT

Animal Location

Park County MT, US

Submitter - 30025

Montana Veterinary Diagnostic Laboratory

Box 997

Bozeman, MT 59771

FAX #: 406-994-6344

Phone #: 406-994-4885

Accession Number: 17-023689**Date Collected: 07/19/2017****Date Received: 07/21/2017****Date Completed: 02/02/2018****Collected By: D. Jeff Marshall, BVSc, PhD****Purpose: General Diagnostic****Referral Number: 18-1108****This is not a billable case.****NOTE: Condition of the sample(s) was adequate unless otherwise noted.****Sample: 18-1108 Animal ID: 7R46 Brucella Case Number: B17-0532 Specimen Type: Tissue Species: Bison (Not otherwise specified)**

Brucella Isolation Result

No Isolation Made

Individual specimen results are listed below:

Tissue / Lymph Node- Mandibular

Brucella Isolation Result

No Isolation Made

Tissue / Lymph Node- Parotid

Brucella Isolation Result

No Isolation Made

Tissue / Lymph Node- Retropharyngeal

Brucella Isolation Result

No Isolation Made

Tissue / Lymph Node- Prescapular

Brucella Isolation Result

No Isolation Made

Tissue / Lymph Node- Mediastinal

Brucella Isolation Result

No Isolation Made

Tissue / Lymph Node- Bronchial

Brucella Isolation Result

No Isolation Made

Tissue / Lymph Node- Prefemoral

Brucella Isolation Result

No Isolation Made

Tissue / Lymph Node- Mesenteric

Brucella Isolation Result

No Isolation Made

Tissue / Lymph Node- Internal Iliac

Brucella Isolation Result

No Isolation Made

Tissue / Lymph Node- S. Mammary

Brucella Isolation Result

No Isolation Made

Tissue / Lymph Node- Popliteal

Brucella Isolation Result

No Isolation Made

Tissue / Kidney

18-1108

07/19/17

Brucella Isolation Result	No Isolation Made
Tissue / Liver	
Brucella Isolation Result	No Isolation Made
Tissue / Spleen	
Brucella Isolation Result	No Isolation Made
Tissue / Mammary Gland	
Brucella Isolation Result	No Isolation Made
Tissue / Ovary	
Brucella Isolation Result	No Isolation Made
Tissue / Uterus	
Brucella Isolation Result	No Isolation Made
Tissue / Ileum	
Brucella Isolation Result	No Isolation Made

Results authorized by: Dr. Suelee Robbe-Austerman, Section Head, Mycobacteria and Brucella Section
NVSL MB General Phone: 515-337-7388

Help Us Help You

(This new section will be updated periodically with tips for submitters.)

Try the new NCAH Portal for VS Form 10-4 submissions to NVSL! For more information, please click or visit:
<https://www.aphis.usda.gov/aphis/ourfocus/animalhealth/lab-info-services/portal>

FEES:

Carcass Disposal (< 100 lbs) [Minimum]	26.25
Brucella Culture	0.00
Shipping	31.70
Case Summary	0.00
Additional Information	0.00
Total	57.95

(This is not a bill. Do not make payments from this report.)



MONTANA VETERINARY DIAGNOSTIC LABORATORY

1911 WEST LINCOLN, BOZEMAN, MT 59718
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FAX: (406) 994-6344
EMAIL: livdiagnosticlab@mt.gov



PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 18-1110
Name/ID:
Species: American Bison

FINAL REPORT 08/08/17

Sex: Age:
County: Park
Owner: USDA, APHIS, VS

Accessioned: 07/19/17
Authorized by: AF

Previous Reports
08/08/17
08/08/17

SEROLOGY

Brucella abortus

Clotted Blood

Verified on: 08/08/17 by: DK

<u>Animal</u>	<u>FPA</u>
Red 38	Positive
Red 54	Positive
Red 39	Positive
Red 55	Positive
Red 41	Positive
Red 53	Positive
Red 41	Positive
6G25	Positive
6R 46	Positive
6R 08	Positive
6G 13	Positive
6R 34	Positive
Red 45	Positive
6G 07	Negative
Red 44	Positive
6R 38	Positive
Red 42	Positive
Red 49	Positive
Gr 25	Positive
Red 51	Positive
Red 32	Positive
Red 36	Positive

Clotted Blood

Verified on 07/31/17 by: DK

<u>Animal</u>	<u>B. Abortus</u> <u>BAPA</u>
Red 38	Negative
Red 54	Positive
Red 39	Positive
Red 55	Positive
Red 41	Negative
Red 53	Positive

Red 41	Positive
6G25	Positive
6R 46	Positive
6R 08	Positive
6G 13	Positive
6R 34	Positive
Red 45	Positive
6G 07	Negative
Red 44	Positive
6R 38	Positive
Red 42	Negative
Red 49	Positive
Gr 25	Positive
Red 51	Positive
Red 32	Positive
Red 36	Positive

Clotted Blood

Verified on: 08/01/17 by: DK

<u>Animal</u>	<u>BRUCF</u>	<u>BRUCARD</u>
Red 38	Negative @ 1:10	Negative
Red 54	2+ 1:10	Positive
Red 39	1+ 1:40	Negative
Red 55	2+ 1:80	Positive
Red 41	Negative @ 1:10	Negative
Red 53	4+ 1:40	Negative
Red 41	2+ 1:20	Positive
6G25	1+ 1:640	Positive
6R 46	1+ 1:640	Positive
6R 08	4+ 1:20	Negative
6G 13	2+ 1:320	Positive
6R 34	3+ 1:320	Positive
Red 45	2+ 1:80	Positive
6G 07	2+ 1:20	Negative
Red 44	2+ 1:10	Positive
6R 38	4+ 1:40	Positive
Red 42	2+ 1:20	Negative
Red 49	2+ 1:10	Positive
Gr 25	Negative @ 1:10	Positive
Red 51	Negative @ 1:10	Positive
Red 32	2+ 1:80	Positive
Red 36	2+ 1:160	Positive

Species: Bison
County: Park

MONTANA VETERINARY DIAGNOSTIC LABORATORY

Box 997 - Bozeman, MT 59771
Phone (406) 994 - 4885 Fax (406) 994 - 6344
Email: livdiagnosticlab@mt.gov

Collection Date: 7-19-17
Page 1 of 2

SEROLOGY REPORT (SV2A) - Complete Light Shaded Areas Only (SEE EXAMPLE and KEY on back Page 4)

OWNER: USDA, APHIS, VS
ADDRESS:
CITY/STATE/ZIP: Corwin Springs, MT
REASON FOR TEST - MANDATORY INFORMATION (See Key)
BQFS - Bone Con - Cattle Health

SUBMITTER'S SIGNATURE: [Signature]
SUBMITTER'S NAME (PRINT): P. Ryan Clarke
ADDRESS: (b) (6)
CITY/STATE/ZIP:
RESULT REPORTING OPTIONS: PHONE / FAX / EMAIL
NUMBER OR EMAIL ADDRESS: B. Frey, R. Clarke, J. Ryan

CIRCLE DISEASE TEST REQUIRED: If needed, indicate specific test and/or dilution. Example on back.						BRU	BT	ANA	END	PTB	IBR	BVD	BLV	LEPTOSPIROSIS	OTHER
TUBE NO.	ANIMAL IDENTIFICATION	AGE	SEX	BREED	OFFICIAL VAC.	BAPA	Brn	Brn	Brn					-8 SEROVARS	
1	Red 38	Ad	Fe	Bison		N	N			Pos	15.6			Neg @ (1:10)	
2	Red 54					Pos	Pos			Pos	254.18			2+ (1:10)	
3	Red 39					Pos	N			Pos	59.9			1+ (1:40)	
4	Red 55					Pos	Pos			Pos	162.8			2+ (1:80)	
5	Red 41					N	N			Pos	108.0			Neg @ (1:10)	
6	Red 53					Pos	N			Pos	62.0			4+ (1:40)	
7	Red 47	*				Pos	Pos			Pos	180.0			2+ (1:20)	
8	GG 25	1yr				Pos	Pos			Pos	135.9			1+ (1:640)	
9	GR 46	1yr				Pos	Pos			Pos	174.3			1+ (1:640)	
10	GR 08	1yr				Pos	N			Pos	50.8			4+ (1:20)	
Samples						22	22			22				22	
Seropositive						18	15			21					
Suspect															
Seronegative						4	7			1					
Undetermined															
Tested By						7/31/17	8/1/17			8/7/17				of 7/27/17	

Laboratory Comments:

Please do BAPA, CF
Card, FPA

FEE: _____ DATE RECEIVED: _____



18-1110
07/19/17

The MVDL is an accredited AAVLD laboratory and a member of the USDA National Animal Health Laboratory Network. Completing and submitting any submission form or any contractual agreement for services requested and the specimens submitted become the property of the MVDL. In addition, at no additional expense to our clients, specimens submit additional testing upon the order of the state or federal animal health officials, or whenever a Foreign Animal Disease is suspected, or in support of surveillance for other animal disease.

FEES:

B. Abortus Card	35.20
Brucella abortus/suis - Complement Fixation	58.30
Brucella abortus FPA	35.20
B. Abortus Bapa	35.20
Total	163.90

(This is not a bill. Do not make payments from this report.)



MONTANA VETERINARY DIAGNOSTIC LABORATORY

1911 WEST LINCOLN, BOZEMAN, MT 59718
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WEB: www.liv.mt.gov/lab

PHONE: (406) 994-4885
FAX: (406) 994-6344
EMAIL: livdiagnosticlab@mt.gov



PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 18-1261
Name/ID:
Species: American Bison

FINAL REPORT 08/08/17

Sex: Age:
County: Park
Owner: USDA,APHIS,VS-GonaCon-Cattle
H

Accessioned: 07/21/17
Authorized by: AF

Previous Reports
08/08/17
08/08/17

SEROLOGY

Brucella abortus

Clotted Blood

Verified on: 08/08/17 by: DK

Animal	FPA
Gr 40	Negative
Gr 34	Negative
Gr 37	Negative
Gr 33	Negative
4R 2	Negative
Gr 19	Negative
Gr 28	Negative
Gr 32	Negative
Gr 31	Negative

Clotted Blood

Verified on 07/31/17 by: DK

Animal	B. Abortus BAPA
Gr 40	Negative
Gr 34	Negative
Gr 37	Negative
Gr 33	Negative
4R 2	Negative
Gr 19	Negative
Gr 28	Negative
Gr 32	Negative
Gr 31	Negative

Clotted Blood

Verified on: 08/01/17 by: DK

Animal	BRUCF	BRUCARD
Gr 40	Negative @ 1:10	Negative
Gr 34	Negative @ 1:10	Negative
Gr 37	3+ 1:20	Negative
Gr 33	Negative @ 1:10	Negative

008136

4R 2	Negative @ 1:10	Negative
Gr 19	Negative @ 1:10	Negative
Gr 28	Negative @ 1:10	Negative
Gr 32	Negative @ 1:10	Negative
Gr 31	Negative @ 1:10	Negative

Species: Bison
County: Park

MONTANA VETERINARY DIAGNOSTIC LABORATORY

Box 997 - Bozeman, MT 59771
Phone (406) 994 - 4885 Fax (406) 994 - 6344
Email: livdiagnosticlab@mt.gov

Collection Date: 7-21-17
Page 1 of 1

SEROLOGY REPORT (SV2A) - Complete Light Shaded Areas Only
(SEE EXAMPLE and KEY on back Page 4)

OWNER: USDA, APHIS, VS
ADDRESS:
CITY/STATE/ZIP: Corwin Springs, MT
REASON FOR TEST - MANDATORY INFORMATION (See Key)
BQFS - Gonadon - Cattle Health

SUBMITTER'S SIGNATURE: P. Ryan Clarke
SUBMITTER'S NAME (PRINT): P. Ryan Clarke
ADDRESS: (b) (6)
CITY/STATE/ZIP:
RESULT REPORTING OPTIONS: PHONE / FAX / EMAIL
NUMBER OR EMAIL ADDRESS: R. Clarke, B. Frey, J. Ryan

CIRCLE DISEASE TEST REQUIRED: If needed, indicate specific test and/or dilution. Example on back.						BRU	BT	ANA	EBD	PTB	IBR	BVD	BLV	LEPTOSPIROSIS	OTHER
TUBE NO.	ANIMAL IDENTIFICATION	AGE	SEX	BREED	OFFICIAL VAC.	BAPA	Card	AE	FPA					SEROVARS	
1	Gr 40	Ad	M	Bison		N	N		N	3-5				Neg @ (1:10)	
2	Gr 34					N	N		N	5-6				Neg @ (1:10)	
3	Gr 37					N	N		N	1-5				Neg @ (1:10)	
4	Gr 33					N	N		N	6-5				Neg @ (1:10)	
5	Gr 2					N	N		N	5-1				Neg @ (1:10)	
6	Gr 19					N	N		N	4-5				Neg @ (1:10)	
7	Gr 28					N	N		N	1-0				Neg @ (1:10)	
8	Gr 32					N	N		N	2-9				Neg @ (1:10)	
9	Gr 31					N	N		N	3-1				Neg @ (1:10)	
Laboratory Comments:						9	9	9	9					9	
Please do FPA, CF															
Card, BAPA															
Samples						9	9	9	9						
Seropositive															
Suspect															
Seronegative						9	9	9	9						
Undetermined															
Tested By						7/31/17	8/1/17	8/1/17	8/1/17					7/27/17	

FEE: DATE RECEIVED: 7-21-17 CA



18-1261
07/21/17

The MVDL is an accredited AAVLD laboratory and a member of the USDA National Animal Health Laboratory Network. Completing and submitting any submission form or any other contractual agreement for services requested and the specimens submitted become the property of the MVDL. In addition, at no additional expense to our clients, specimens submitted to additional testing upon the order of the state or federal animal health officials, or whenever a Foreign Animal Disease is suspected, or in support of surveillance for other animal disease.

FEES:

B. Abortus Card	14.40
Brucella abortus/suis - Complement Fixation	23.85
Brucella abortus FPA	14.40
B. Abortus Bapa	14.40
Total	67.05

(This is not a bill. Do not make payments from this report.)



MONTANA VETERINARY DIAGNOSTIC LABORATORY

1911 WEST LINCOLN, BOZEMAN, MT 59718
P.O. Box 997, BOZEMAN, MT 59771
WEB: www.liv.mt.gov/lab

PHONE: (406) 994-4885
FAX: (406) 994-6344
EMAIL: livdiagnosticlab@mt.gov



PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 18-1928
Name/ID: 5G09
Species: American Bison

Sex: Female **Age:** 26 Months
Owner: USDA APHIS VS GONACON

PRELIMINARY REPORT 11/15/17

Accessioned: 08/04/17
Authorized by: BL

Previous Reports
11/15/17

CASE SUMMARY

Verified on: 11/15/17 by: BL

REASON FOR SUBMISSION: Brucella abortus research animal

LABORATORY DIAGNOSIS:
Serous atrophy of fat
Brucella abortus isolated

COMMENT: Brucella abortus was isolated from tissues submitted to NVSL.

PATHOLOGY

Verified on: 11/15/17 by: BL

GROSS DESCRIPTION: Female bison 5G09 was submitted for lymph node and other tissue harvest for Brucella culture at NVSL. Animal is in thin body condition and the is marked serous atrophy of fat stores. All systems were evaluated and significant lesions were not present.

GROSS DIAGNOSIS: Serous atrophy of fat and thin body condiditon

HISTOLOGIC DESCRIPTION: Not performed

REFERRAL

Results are Pending for [Brucella Culture](#)



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EMAIL: livdiagnosticlab@mt.gov



PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 18-1928
Name/ID: 5G09
Species: American Bison

Sex: Female **Age:** 26 Months
Owner: USDA APHIS VS GONACON

FINAL REPORT 11/15/17

Accessioned: 08/04/17
Authorized by: BL

Previous Reports
11/15/17
12/22/17

CASE SUMMARY

Verified on: 11/15/17 by: BL

REASON FOR SUBMISSION: Brucella abortus research animal

LABORATORY DIAGNOSIS:
Serous atrophy of fat
Brucella abortus isolated

COMMENT: Brucella abortus was isolated from tissues submitted to NVSL.

PATHOLOGY

Verified on: 11/15/17 by: BL

GROSS DESCRIPTION: Female bison 5G09 was submitted for lymph node and other tissue harvest for Brucella culture at NVSL. Animal is in thin body condition and the is marked serous atrophy of fat stores. All systems were evaluated and significant lesions were not present.

GROSS DIAGNOSIS: Serous atrophy of fat and thin body condiditon

HISTOLOGIC DESCRIPTION: Not performed

FEES:

Shipping	37.55
Case Summary	0.00
Necropsy LA >500#	157.50
Incineration per pound	200.00
Total	395.05

(This is not a bill. Do not make payments from this report.)



MONTANA VETERINARY DIAGNOSTIC LABORATORY

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FAX: (406) 994-6344
EMAIL: livdiagnosticlab@mt.gov



PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 18-3553
Name/ID:
Species: American Bison
Breed: American bison
Sex: Age:
County: Park
Owner: USDA, APHIS, VS Gona Con

PRELIMINARY REPORT 09/13/17

Accessioned: 08/31/17
Authorized by: AF

Previous Reports
09/13/17
09/13/17

SEROLOGY

Brucella abortus

Animal	FPA
R06	Positive
6R06	Positive
Gr14	Positive
R18	Positive
R08	Positive
R09	Positive
R22	Positive

Serum

Verified on: 09/13/17 by: DK

Animal	B. Abortus BAPA
R06	Positive
6R06	Positive
Gr14	Positive
R18	Positive
R08	Positive
R09	Positive
R22	Positive

Serum

Verified on 09/06/17 by: DK

Animal	BRUCF	BRUCARD
R06	3+ 1:10	Positive
6R06	4+ 1:640	Positive
Gr14	4+ 1:640	Positive
R18	Negative @ 1:10	Positive
R08	2+ 1:10	Positive
R09	2+ 1:320	Positive
R22	3+ 1:160	Positive

Serum

Verified on: 09/06/17 by: DK



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FAX: (406) 994-6344
EMAIL: livdiagnosticlab@mt.gov



BECKY FREY
PO BOX 202001
HELENA MT 59601

CASE: 18-5060
Name/ID:
Species: American Bison

PRELIMINARY REPORT 10/23/17

Sex: Age:
County: Park
Owner: GonaCon Study

Accessioned: 09/28/17
Authorized by: AF

Previous Reports
10/23/17

SEROLOGY

Brucella abortus

Clotted Blood

Verified on: 10/23/17 by: AF

<u>Animal</u>	<u>FPA</u>
5R02	Negative
6R73	Negative
6G01	Negative
6G02	Negative
6R07	Negative
Red6320	Negative
6R22	Negative
6R2	Negative
6G04	Negative
Green6317	Positive
6G07	Positive

Clotted Blood

Verified on 09/29/17 by: DK

<u>Animal</u>	<u>B. Abortus</u> <u>BAPA</u>
5R02	Negative
6R73	Negative
6G01	Negative
6G02	Negative
6R07	Negative
Red6320	Negative
6R22	Negative
6R2	Negative
6G04	Negative
Green6317	Negative
6G07	Positive

Clotted Blood

Verified on: 10/23/17 by: AF

<u>Animal</u>	<u>BRUCF</u>	<u>BRUCARD</u>
5R02	Negative @ 1:10	Negative
6R73	Negative @ 1:10	Negative

6G01	Negative @ 1:10	Negative
6G02	Negative @ 1:10	Negative
6R07	Negative @ 1:10	Negative
Red6320	Negative @ 1:10	Negative
6R22	Negative @ 1:10	Negative
6R2	Negative @ 1:10	Negative
6G04	Negative @ 1:10	Negative
Green6317	Negative @ 1:10	Negative
6G07	3+ 1:80	Positive

Species: Bison
County: Park

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Email: livdiagnosticlab@mt.gov

Date Bled: Sept 25th
Page 1 of 2

SEROLOGY REPORT (SV2A) - Complete Light Shaded Areas Only
SEE REVERSE SIDE FOR KEY

OWNER: Gonagon Study
ADDRESS:
CITY/STATE/ZIP: Crown Spring
REASON FOR TEST - MANDATORY INFORMATION (See Key)

SUBMITTER'S SIGNATURE: [Signature]
SUBMITTER'S NAME (PRINT): Rebecca Pray
ADDRESS: PO Box 1165
CITY/STATE/ZIP: Emigrant MT 59027
RESULT REPORTING OPTIONS: PHONE / FAX / EMAIL
NUMBER OR EMAIL ADDRESS

CIRCLE DISEASE TEST REQUIRED: If needed, indicate specific test and/or dilution. Example on back.						BRU	BT	ANA	EHD	PTB	IBR	BVD	BLV	LEPTOSPIROSIS	OTHER
Tube NO.	IDENTIFICATION	AGE	SEX	BREED	OFFICIAL VAC.	BAPA	CARD	CF	FPA					8 - SEROVARs	
1	5A02	2	F	BS		Neg	N	N	N	8.4					
2	6B73	1	F	BS					N	3.2					
3	7A6G01	1	F						N	4.1					
4	6G02	1	F						N	2.2					
5	6B07	1	F						N	5.8					
6	Red 6320	1	F						N	2.7					
7	6B22	1	F						N	6.0/2.5					
8	6B2	1	M						N	2.1					
9	6G04	1	F						N	1.6					
10	Green 6317	1	M						N	12.6/10.2					
Laboratory Comments:						Samples	11	11	11	11					
						Seropositive	1	1	1	2					
						Suspect									
						Seronegative	10	10	10	9					
						Undertermined									
						Tested By	<u>DR</u>	<u>10/17/17</u>							

BAPA, Card, CF, FPA

Released [Signature] 10/18/17

FEE: _____

DATE RECEIVED: 9-28-17



18-5060

09/28/17

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Email: livdiagnosticlab@mt.gov

Complete light shaded areas only

OTHER

008148



MONTANA VETERINARY DIAGNOSTIC LABORATORY

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PHONE: (406) 994-4885
FAX: (406) 994-6344
EMAIL: livdiagnosticlab@mt.gov



BECKY FREY
PO BOX 202001
HELENA MT 59601

CASE: 18-5061
Name/ID:
Species: American Bison

Sex: Age:
County: Park
Owner: GonaCon Study

PRELIMINARY REPORT 10/23/17

Accessioned: 09/28/17
Authorized by: AF

Previous Reports
10/23/17
10/23/17

SEROLOGY

Brucella abortus

Animal	FPA
Orange 3G14	Positive
6G11	Positive
Green 11	Positive
Red 35	Positive
Orange 3R20	Positive
Red 74	Positive
Green 12	Positive
6G25	Positive
Red 38	Positive
Green 25	Positive
Red 34	Positive
6R08	Positive
6R34	Positive
6R38	Positive
6R46	Positive
6G13	Positive

Clotted Blood

Verified on: 10/23/17 by: AF

Animal	B. Abortus BAPA
Orange 3G14	Positive
6G11	Positive
Green 11	Positive
Red 35	Positive
Orange 3R20	Negative
Red 74	Positive
Green 12	Positive
6G25	Positive
Red 38	Negative
Green 25	Positive
Red 34	Positive
6R08	Positive

Clotted Blood

Verified on 09/29/17 by: DK

008149

Case No: 18-5061 - ,

6R34	Positive
6R38	Positive
6R46	Positive
6G13	Positive

Clotted Blood

Verified on: 10/23/17 by: AF

<u>Animal</u>	<u>BRUCF</u>	<u>BRUCARD</u>
Orange 3G14	3+ 1:160	Positive
6G11	4+ 1:640	Positive
Green 11	3+ 1:640	Positive
Red 35	4+ 1:10	Positive
Orange 3R20	4+ 1:10	Negative
Red 74	3+ 1:20	Positive
Green 12	4+ 1:640	Positive
6G25	4+ 1:640	Positive
Red 38	4+ 1:10	Negative
Green 25	3+ 1:80	Positive
Red 34	3+ 1:80	Positive
6R08	2+ 1:80	Negative
6R34	2+ 1:160	Positive
6R38	3+ 1:640	Positive
6R46	3+ 1:640	Positive
6G13	3+ 1:40	Positive

Species: Bison
County: Park

MONTANA VETERINARY DIAGNOSTIC LABORATORY

Box 997 - Bozeman, MT 59771
Phone (406) 994 - 4885 Fax (406) 994 - 6344
Email: livdiagnosticlab@mt.gov

Collection Date: 9-25-17
Page 21 of 2

SEROLOGY REPORT (SV2A) - Complete Light Shaded Areas Only (SEE EXAMPLE and KEY on back, Page 4).

OWNER: Gona Con
ADDRESS:
CITY/STATE/ZIP: Conwin Springs MT
REASON FOR TEST - MANDATORY INFORMATION (See Key)

SUBMITTER'S SIGNATURE (Mandatory): [Signature]
SUBMITTER'S NAME (PRINT): Rebecca Frey
ADDRESS: PO Box 1165
CITY/STATE/ZIP: Emigrant MT 59027
RESULT REPORTING OPTIONS: PHONE / FAX / EMAIL
NUMBER OR EMAIL ADDRESS:

CIRCLE DISEASE TEST REQUIRED: If needed, indicate specific test and/or dilution. Example on back.

Tube NO.	ANIMAL IDENTIFICATION	AGE	SEX	BREED	OFFICIAL VAC.	BRU	BT	ANA	EHD	PTB	IBR	BVD	BLV	LEPTOSPIROSIS	OTHER
						BAPA	BT	ANA	EHD	PTB	IBR	BVD	BLV		
1	Orange 3G14	4yr	F			Pos	Pos	3+160	Pos			201.9/205.3			
2	GG11	1yr	F			Pos	Pos	4+40	Pos			178.4/177.6			
3	Green 11	8yr	F			Pos	Pos	3+640	Pos			179.9/179.7			
4	Red 35	5yr	F			Pos	Pos	4+10	Pos			95.3/96.4			
5	Orange 3R20	4yr	F			Neg	N	4+10	Pos			42.1/40.5			
6	Red 74	4yr	F			Pos	Pos	3+20	Pos			179.3/179.7			
7	Green 12	7yr	F			Pos	Pos	4+40	Pos			164.2/165.7			
8	GG25	1yr	M			Pos	Pos	4+40	Pos			166.3/165.5			
9	Red 38	5yr	F			Neg	N	4+10	Pos			14.2/37.7			
10	Green 25	3yr	F			Pos	Pos	3+80	Pos			211.5/210.1			
Samples						16	16	16	16						
Seropositive						13	13	16	16						
Suspect															
Seronegative						3	3								
Undetermined															
Tested By						DL	10/17/17								

Laboratory Comments:

BAPA, Card, CF, FPA

Released by [Signature] Date 10-18-17

FEE:

DATE RECEIVED: 9-28-17



18-5061
09/28/17

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MONTANA VETERINARY DIAGNOSTIC LABORATORY

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PHONE: (406) 994-4885
FAX: (406) 994-6344
EMAIL: livdiagnosticlab@mt.gov



BECKY FREY
PO BOX 202001
HELENA MT 59601

CASE: 18-5062
Name/ID:
Species: American Bison

Sex: Age:
County: Park
Owner: GonaCon Study

FINAL REPORT 10/23/17

Accessioned: 09/28/17
Authorized by: AF

Previous Reports
10/23/17
10/23/17

SEROLOGY

Brucella abortus

<u>Animal</u>	<u>FPA</u>
Green 28	Negative
Green 37	Negative
Green 19	Negative
Green 34	Negative
Green 32	Negative
Green 40	Negative
Purple 4R2	Negative

Clotted Blood

Verified on: 10/23/17 by: AF

<u>Animal</u>	<u>B. Abortus</u> <u>BAPA</u>
Green 28	Negative
Green 37	Negative
Green 19	Negative
Green 34	Negative
Green 32	Negative
Green 40	Negative
Purple 4R2	Negative

Clotted Blood

Verified on 09/29/17 by: DK

<u>Animal</u>	<u>BRUCF</u>	<u>BRUCARD</u>
Green 28	Negative @ 1:10	Negative
Green 37	Negative @ 1:10	Negative
Green 19	Negative @ 1:10	Negative
Green 34	Negative @ 1:10	Negative
Green 32	Negative @ 1:10	Negative
Green 40	Negative @ 1:10	Negative

Clotted Blood

Verified on: 10/23/17 by: AF

Collection Date: 9-25-17
Page 1 of 1

FEES:

Accession Fee	4.00
B. Abortus Card	11.20
Brucella abortus/suis - Complement Fixation	18.55
Brucella abortus FPA	11.20
B. Abortus Bapa	11.20
Total	56.15

(This is not a bill. Do not make payments from this report.)



MONTANA VETERINARY DIAGNOSTIC LABORATORY

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FAX: (406) 994-6344
EMAIL: livdiagnosticlab@mt.gov



BECKY FREY
PO BOX 202001
HELENA MT 59601

CASE: 18-5182
Name/ID:
Species: American Bison
Breed: American bison
Sex: Age:
County: Park
Owner: USDA APHIS - Gona Con

PRELIMINARY REPORT 10/23/17

Accessioned: 09/29/17
Authorized by: AF

Previous Reports
10/23/17

SEROLOGY

Brucella abortus

Animal

Red 46
Red 47
Red 67

FPA

Positive
Positive
Positive

Clotted Blood

Verified on: 10/23/17 by: AF

Animal

Red 46
Red 47
Red 67

B. Abortus BAPA

Negative
Positive
Positive

Clotted Blood

Verified on 10/06/17 by: AF

Animal

Red 46
Red 47
Red 67

BRUCF

2+ 1:80
3+ 1:40
4+ 1:640

BRUCARD

Negative
Positive
Positive

Clotted Blood

Verified on: 10/23/17 by: AF

008157



MONTANA VETERINARY DIAGNOSTIC LABORATORY

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EMAIL: livdiagnosticlab@mt.gov



PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 18-5578
Name/ID:
Species: American Bison

FINAL REPORT 10/25/17

Sex: Age:
Owner: GonaCon Study - USDA APHIS
US

Accessioned: 10/05/17
Authorized by: AF

Previous Reports
10/26/17

SEROLOGY

Brucella abortus

Animal	FPA
Green 31	Negative
Green 33	Negative
Green 30	Positive

Clotted Blood

Verified on: 10/25/17 by: DK

Animal	B. Abortus BAPA
Green 31	Negative
Green 33	Negative
Green 30	Positive

Clotted Blood

Verified on 10/06/17 by: AF

Animal	BRUCF	BRUCARD
Green 31	Negative @ 1:10	Negative
Green 33	Negative @ 1:10	Negative
Green 30	2+ 1:640	Positive

Clotted Blood

Verified on: 10/25/17 by: DK

Species: Bison
County: Park

MONTANA VETERINARY DIAGNOSTIC LABORATORY

Box 997 - Bozeman, MT 59771

Phone (406) 994 - 4885 Fax (406) 994 - 6344

Email: livdiagnosticlab@mt.gov

Collection Date: 10/4/17

Page 1 of 1

SEROLOGY REPORT (SV2A) - Complete Light Shaded Areas Only
(SEE EXAMPLE and KEY on back, Page 4).

OWNER:	Gonakom Study - USDA APHIS US
ADDRESS:	
CITY/STATE/ZIP:	Corwin Spring MT
REASON FOR TEST - MANDATORY INFORMATION (See Key)	DSA/Research

SUBMITTER'S SIGNATURE (Mandatory): *[Signature]*
SUBMITTER'S NAME (PRINT): Rebecca Counts
ADDRESS: PO Box 1165
CITY/STATE/ZIP: Emigrant MT 59027
RESULT REPORTING OPTIONS: PHONE / FAX / EMAIL
NUMBER OR EMAIL ADDRESS: *nr* rclarke fr. Gray

CIRCLE DISEASE TEST REQUIRED: If needed, indicate specific test and/or dilution. Example on back.

CIRCLE DISEASE TEST REQUIRED: If needed, indicate specific test and/or dilution. Example on back.						BRU	BT	ANA	EHD	PTB	IBR	BLVD	BLV	LEPTOSPIROSIS	OTHER
Tube NO.	ANIMAL IDENTIFICATION	AGE	SEX	BREED	OFFICIAL VAC.	BRU X	BT Card	ANA CF @ (1:10)	EHD	PTB FPA (tit value)	IBR	BLVD ap 10/06/12	BLV	LEPTOSPIROSIS	OTHER
1	Green 31	AD	M	Bison	N/A	Neg	N	N		N	7.1	-0.8			
2	Green 33	AD	M	1	1	Neg	N	N		N	6.1	5.9			
3	Green 30	AD	F	1	1	Pos	Pos	2+rb		Pos	112 10/25	99.4, 94.0			

Laboratory Comments:

Card FPA
BADA CF

Released by D12 Date 10/25/17

FEE:

DATE RECEIVED: 10-5-17



18-5578

10/05/17

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FEES:

Accession Fee	4.00
B. Abortus Card	4.80
Brucella abortus/suis - Complement Fixation	7.95
Brucella abortus FPA	4.80
B. Abortus Bapa	4.80
Total	26.35

(This is not a bill. Do not make payments from this report.)



MONTANA VETERINARY DIAGNOSTIC LABORATORY

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EMAIL: livdiagnosticlab@mt.gov



PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 18-5578
Name/ID:
Species: American Bison

FINAL REPORT 10/25/17

Sex: Age:
Owner: GonaCon Study - USDA APHIS
US

Accessioned: 10/05/17
Authorized by: AF

Previous Reports
10/26/17
10/26/17

SEROLOGY

Brucella abortus

Animal

Green 31
Green 33
Green 30

FPA

Negative
Negative
Positive

Clotted Blood

Verified on: 10/25/17 by: DK

Animal

Green 31
Green 33
Green 30

B. Abortus

BAPA

Negative
Negative
Positive

Clotted Blood

Verified on 10/06/17 by: AF

Animal

Green 31
Green 33
Green 30

BRUCF

Negative @
1:10
Negative @
1:10
2+ 1:640

BRUCARD

Negative
Negative
Positive

Clotted Blood

Verified on: 10/25/17 by: DK

Species: Bison
County: Park

MONTANA VETERINARY DIAGNOSTIC LABORATORY

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Email: livdiagnosticlab@mt.gov

Collection Date: 10/4/17

Page 1 of 1

SEROLOGY REPORT (SV2A) - Complete Light Shaded Areas Only
(SEE EXAMPLE and KEY on back, Page 4).

OWNER:	Gonakom Study - USDA APHIS US
ADDRESS:	
CITY/STATE/ZIP:	Corwin Spring MT
REASON FOR TEST - MANDATORY INFORMATION (See Key)	DSA/Research

SUBMITTER'S SIGNATURE (Mandatory): *[Signature]*
SUBMITTER'S NAME (PRINT): Rebecca Counts
ADDRESS: PO Box 1165
CITY/STATE/ZIP: Emigrant MT 59027
RESULT REPORTING OPTIONS: PHONE / FAX ☒ EMAIL
NUMBER OR EMAIL ADDRESS: 1-800-441-1165

CIRCLE DISEASE TEST REQUIRED: If needed, indicate specific test and/or dilution. Example on back.

[illegible]

Laboratory Comments:

Card FPA
BADA CF

Released by 212 Date 10/25/17

FEE:

DATE RECEIVED: 10-5-17



18-5578

10/05/17

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FEES:

Accession Fee	4.00
B. Abortus Card	4.80
Brucella abortus/suis - Complement Fixation	7.95
Brucella abortus FPA	4.80
B. Abortus Bapa	4.80
Total	26.35

(This is not a bill. Do not make payments from this report.)



MONTANA VETERINARY DIAGNOSTIC LABORATORY

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P.O. Box 997, BOZEMAN, MT 59771
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PHONE: (406) 994-4885
FAX: (406) 994-6344
EMAIL: livdiagnosticlab@mt.gov



PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 18-5860
Name/ID:
Species: American Bison

Sex: Age:
County: Park
Owner: USDA APHIS VS/GonaCon

FINAL REPORT 10/25/17

Accessioned: 10/11/17
Authorized by: AF

Previous Reports
10/26/17

SEROLOGY

Brucella abortus

Clotted Blood

Verified on: 10/25/17 by: DK

<u>Animal</u>	<u>FPA</u>
Red 27	Positive
Red 29	Positive
Red 32	Positive
Red 41	Positive
Red 42	Positive
Red 44	Positive
Red 45	Positive
Red 49	Positive
Red 51	Positive
Red 53	Positive
Red 54	Positive
Red 55	Positive

Clotted Blood

Verified on 10/12/17 by: DK

<u>Animal</u>	<u>B. Abortus</u> <u>BAPA</u>
Red 27	Positive
Red 29	Positive
Red 32	Positive
Red 41	Positive
Red 42	Positive
Red 44	Positive
Red 45	Positive
Red 49	Positive
Red 51	Positive
Red 53	Positive
Red 54	Positive
Red 55	Positive

Clotted Blood

Verified on: 10/25/17 by: DK

<u>Animal</u>	<u>BRUCF</u>	<u>BRUCARD</u>
Red 27	3+ 1:40	Positive
Red 29	3+ 1:20	Negative

Red 32	1+ 1:80	Positive
Red 41	Negative @ 1:10	Negative
Red 42	2+ 1:20	Negative
Red 44	3+ 1:10	Positive
Red 45	3+ 1:10	Positive
Red 49	3+ 1:10	Positive
Red 51	Negative @ 1:10	Positive
Red 53	2+ 1:80	Negative
Red 54	Negative @ 1:10	Positive
Red 55	2+ 1:80	Positive

Species: Bison
County: Park



MONTANA VETERINARY DIAGNOSTIC LABORATORY

Box 997 - Bozeman, MT 59771
Phone (406) 994 - 4885 Fax (406) 994 - 6344
Email: livdiagnosticlab@mt.gov

Collection Date: 10/11/17
Page 1 of 2

SEROLOGY REPORT (SV2A) - Complete Light Shaded Areas Only (SEE EXAMPLE and KEY on back, Page 4).

OWNER: USDA ADHS US
ADDRESS: Gona Con Study
CITY/STATE/ZIP: Coxin Springs
REASON FOR TEST - MANDATORY INFORMATION (See Key)
Gona Con Study - Research

SUBMITTER'S SIGNATURE (Mandatory): [Signature]
SUBMITTER'S NAME (PRINT): Rebecca Frey
ADDRESS: 20301165
CITY/STATE/ZIP: Emigrant MT 59027
RESULT REPORTING OPTIONS: PHONE / FAX / EMAIL
NUMBER OR EMAIL ADDRESS: R.Frey & R. Clarke

CIRCLE DISEASE TEST REQUIRED: If needed, indicate specific test and/or dilution. Example on back.						BRU	BT	ANA	EM	PTB	DR	BVD	BLV	LEPTOSPIROSIS	OTHER
Tube NO.	ANIMAL IDENTIFICATION	AGE	SEX	BREED	OFFICIAL VAC.										
						BAPA	BT		EM		DR				
						X	<u>Cal</u>		<u>CF</u>		<u>FPA</u>	<u>mp</u>			
1	Red 27	AD	F	Bison	N/A	P05	P05		3+40		P05	128.2/131.0			
2	Red 29					P05	N		3+20		P05	20.6/20.4			
3	Red 32					P05	P05		1+80		P05	128.4/126.9			
4	Red 41					P05	N		N		P05	78.3/77.1			
5	Red 42					P05	N		2+20		P05	32.8/38.1			
6	Red 44					P05	P05		3+10		P05	158.0/153.2			
7	Red 45					P05	P05		3+10		P05	169.0/169.4			
8	Red 49					P05	P05		3+10		P05	164.7/164.5			
9	Red 51					P05	P05		N		P05	62.1/62.0			
10	Red 53					P05	N		2+80		P05	72.0/79.9			
Samples						12	12		12		12				
Seropositive						12	8		6		12				
Suspect									3						
Seronegative						12	4		3		8				
Undetermined						12	12		12		12				
Tested By						10/11/17	10/11/17		10/11/17		10/11/17				

Laboratory Comments:

X Card, BAPA, FPA, CF

Released by DR Date 10/25/17

FEE:

DATE RECEIVED: 10-11-17



18-5860
10/11/17

Owner: USDA APHIS US
Submitted By: R. Fry
Collection Date: 10/11/17 Page ____ of ____

MONTANA VETERINARY DIAGNOSTIC LABORATORY

Box 997 - Bozeman, MT 59771

Phone: (406)994-4885

Fax: (406)994-6344

Email: livdiagnosticlab@mt.gov

CONTINUATION SEROLOGY REPORT (SV2B)

Complete light shaded areas only

CIRCLE DISEASE TEST REQUIRED: If needed, indicate specific test and/or dilution. Example on back of front page (SV2A).

[illegible]

FEES:

Accession Fee	4.00
B. Abortus Card	19.20
Brucella abortus/suis - Complement Fixation	31.80
Brucella abortus FPA	19.20
B. Abortus Bapa	19.20
Total	93.40

(This is not a bill. Do not make payments from this report.)



MONTANA VETERINARY DIAGNOSTIC LABORATORY

1911 WEST LINCOLN, BOZEMAN, MT 59718
P.O. Box 997, BOZEMAN, MT 59771
WEB: www.liv.mt.gov/lab

PHONE: (406) 994-4885
FAX: (406) 994-6344
EMAIL: livdiagnosticlab@mt.gov



PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 18-5860
Name/ID:
Species: American Bison

Sex: Age:
County: Park
Owner: USDA APHIS VS/GonaCon

FINAL REPORT 10/25/17

Accessioned: 10/11/17
Authorized by: AF

Previous Reports
10/26/17
10/26/17

SEROLOGY

Brucella abortus

Clotted Blood

Verified on: 10/25/17 by: DK

<u>Animal</u>	<u>FPA</u>
Red 27	Positive
Red 29	Positive
Red 32	Positive
Red 41	Positive
Red 42	Positive
Red 44	Positive
Red 45	Positive
Red 49	Positive
Red 51	Positive
Red 53	Positive
Red 54	Positive
Red 55	Positive

Clotted Blood

Verified on 10/12/17 by: DK

<u>Animal</u>	<u>B. Abortus</u> <u>BAPA</u>
Red 27	Positive
Red 29	Positive
Red 32	Positive
Red 41	Positive
Red 42	Positive
Red 44	Positive
Red 45	Positive
Red 49	Positive
Red 51	Positive
Red 53	Positive
Red 54	Positive
Red 55	Positive

Clotted Blood

Verified on: 10/25/17 by: DK

<u>Animal</u>	<u>BRUCF</u>	<u>BRUCARD</u>
Red 27	3+ 1:40	Positive

Red 29	3+ 1:20	Negative
Red 32	1+ 1:80	Positive
Red 41	Negative @ 1:10	Negative
Red 42	2+ 1:20	Negative
Red 44	3+ 1:10	Positive
Red 45	3+ 1:10	Positive
Red 49	3+ 1:10	Positive
Red 51	Negative @ 1:10	Positive
Red 53	2+ 1:80	Negative
Red 54	Negative @ 1:10	Positive
Red 55	2+ 1:80	Positive

Species: Bison
County: Park



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Email: livdiagnosticlab@mt.gov

Collection Date: 10/11/17
Page 1 of 2

SEROLOGY REPORT (SV2A) - Complete Light Shaded Areas Only (SEE EXAMPLE and KEY on back, Page 4).

OWNER: USDA ADHS US
ADDRESS: Gona Con Study
CITY/STATE/ZIP: Coxwin Springs
REASON FOR TEST - MANDATORY INFORMATION (See Key)
Gona Con Study - Research

SUBMITTER'S SIGNATURE (Mandatory): [Signature]
SUBMITTER'S NAME (PRINT): Rebecca Frey
ADDRESS: 2030 11605
CITY/STATE/ZIP: Emigrant MT 59027
RESULT REPORTING OPTIONS: PHONE / FAX / EMAIL
NUMBER OR EMAIL ADDRESS: R.Frey & R. Clarke

CIRCLE DISEASE TEST REQUIRED: If needed, indicate specific test and/or dilution. Example on back.						BRU	BT	ANA	EM	PTB	DR	BVD	BLV	LEPTOSPIROSIS	OTHER
Tube NO.	ANIMAL IDENTIFICATION	AGE	SEX	BREED	OFFICIAL VAC.										
1	Red 27	AD	F	Bison	N/A	BAPA X	BPA		CF 1:10		BPA	MP			
2	Red 29					P05	P05		3+20		P05	128.2/131.0			
3	Red 32					P05	N		3+20		P05	20.6/20.4			
4	Red 41					P05	P05		1+80		P05	128.4/126.9			
5	Red 42					P05	N		N		P05	78.3/77.1			
6	Red 44					P05	N		2+20		P05	32.8/38.1			
7	Red 45					P05	P05		3+10		P05	158.0/153.2			
8	Red 49					P05	P05		3+10		P05	169.0/169.4			
9	Red 51					P05	P05		3+10		P05	164.7/164.5			
10	Red 53					P05	P05		N		P05	62.1/62.0			
						P05	N		2+80		P05	72.0/79.9			
Laboratory Comments:						Samples	12	12	12		12				
						Seropositive	12	8	6		12				
						Suspect			3						
						Seronegative	12	4	3		8				
						Undetermined	12	12	12		12				
						Tested By	10/11/17	10/11/17	10/11/17		10/11/17				

*Card, BAPA, FPA, CF

Released by DR Date 10/25/17

FEE: _____

DATE RECEIVED: 10-11-17



18-5860
10/11/17

Owner: USDA APHIS US
Submitted By: R. Fry
Collection Date: 10/11/17 Page ____ of ____

MONTANA VETERINARY DIAGNOSTIC LABORATORY

Box 997 - Bozeman, MT 59771

Phone: (406)994-4885

Fax: (406)994-6344

Email: livdiagnosticlab@mt.gov

CONTINUATION SEROLOGY REPORT (SV2B)

Complete light shaded areas only

CIRCLE DISEASE TEST REQUIRED: If needed, indicate specific test and/or dilution. Example on back of front page (SV2A).

[illegible]

FEES:

Accession Fee	4.00
B. Abortus Card	19.20
Brucella abortus/suis - Complement Fixation	31.80
Brucella abortus FPA	19.20
B. Abortus Bapa	19.20
Total	93.40

(This is not a bill. Do not make payments from this report.)



MONTANA VETERINARY DIAGNOSTIC LABORATORY

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FAX: (406) 994-6344
EMAIL: livdiagnosticlab@mt.gov



BECKY FREY
PO BOX 202001
HELENA MT 59601

CASE: 18-9639
Name/ID: Red 40
Species: American Bison

FINAL REPORT 12/21/17

Accessioned: 12/19/17

Authorized by: LA

Premise: NA

Sex: Female **Age:** Adult
County: Park
Owner: USDA, APHIS, VS GonaCon Study

Previous Reports
12/21/17

CASE SUMMARY

Verified on: 12/21/17 by: BL

REASON FOR SUBMISSION: Brucella tissue collection

LABORATORY DIAGNOSIS:

Hemorrhage/edema, severe subcutis and muscle of thorax and abdomen
Hernia, right mid abdomen/thorax
Fracture with callous, right rib 5

COMMENT: Per request tissues are saved. Carcass was incinerated 12-21-2017. The animal had adequate fat stores. As noted clinically, feces was not formed. Grossly the gastrointestinal tract is normal but autolysis was significant. Rumen contained large amounts of fibrous roughage.

A. W. Layton, DVM, Diplomate, ACVP

PATHOLOGY

Verified on: 12/21/17 by: BL

GROSS DESCRIPTION: Carcass is of an adult, open, female bison in fair postmortem and nutritional state. Ear tags numbers are: Red 40; RFID 840003003405612; and USDA 81AJW3767. Animal is apart of a research project and was found dead. She is Brucella abortus seropositive. Tissue collection per study protocol was performed. Fat stores are present. Severe subcutaneous and deeper muscle hemorrhage and edema occurs over the abdomen and thorax. Herniation of abdominal fat occurs in the region of right rib 8. 6 cm diameter callous occurs on the right mid rib 5. Feces is tan and watery to pasty. No significant lesions were present in the gastrointestinal tract. Per request of study coordinator, collected tissues are saved for possible future testing.

GROSS DIAGNOSIS:

Hemorrhage/edema, severe subcutis and muscle of thorax and abdomen
Hernia, right mid abdomen/thorax
Fracture with callous, right rib 5

HISTOLOGIC DESCRIPTION: Not done

FEES:

Accession Fee	4.00
Incineration per pound	360.00
Case Summary	0.00
Necropsy LA >500#	173.25
Total	537.25

(This is not a bill. Do not make payments from this report.)



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FAX: (406) 994-6344
EMAIL: livdiagnosticlab@mt.gov



BECKY FREY
PO BOX 202001
HELENA MT 59601

CASE: 18-9639
Name/ID: Red 40
Species: American Bison

FINAL REPORT 12/21/17

Accessioned: 12/19/17

Authorized by: LA

Premise: NA

Sex: Female **Age:** Adult
County: Park
Owner: USDA, APHIS, VS GonaCon Study

Previous Reports
12/21/17
12/21/17

CASE SUMMARY

Verified on: 12/21/17 by: BL

REASON FOR SUBMISSION: Brucella tissue collection

LABORATORY DIAGNOSIS:

Hemorrhage/edema, severe subcutis and muscle of thorax and abdomen
Hernia, right mid abdomen/thorax
Fracture with callous, right rib 5

COMMENT: Per request tissues are saved. Carcass was incinerated 12-21-2017. The animal had adequate fat stores. As noted clinically, feces was not formed. Grossly the gastrointestinal tract is normal but autolysis was significant. Rumen contained large amounts of fibrous roughage.

A. W. Layton, DVM, Diplomate, ACVP

PATHOLOGY

Verified on: 12/21/17 by: BL

GROSS DESCRIPTION: Carcass is of an adult, open, female bison in fair postmortem and nutritional state. Ear tags numbers are: Red 40; RFID 840003003405612; and USDA 81AJW3767. Animal is apart of a research project and was found dead. She is Brucella abortus seropositive. Tissue collection per study protocol was performed. Fat stores are present. Severe subcutaneous and deeper muscle hemorrhage and edema occurs over the abdomen and thorax. Herniation of abdominal fat occurs in the region of right rib 8. 6 cm diameter callous occurs on the right mid rib 5. Feces is tan and watery to pasty. No significant lesions were present in the gastrointestinal tract. Per request of study coordinator, collected tissues are saved for possible future testing.

GROSS DIAGNOSIS:

Hemorrhage/edema, severe subcutis and muscle of thorax and abdomen
Hernia, right mid abdomen/thorax
Fracture with callous, right rib 5

HISTOLOGIC DESCRIPTION: Not done

FEES:

Accession Fee	4.00
Incineration per pound	360.00
Case Summary	0.00
Necropsy LA >500#	173.25
Total	537.25

(This is not a bill. Do not make payments from this report.)



MONTANA VETERINARY DIAGNOSTIC LABORATORY

1911 WEST LINCOLN, BOZEMAN, MT 59718
P.O. BOX 997, BOZEMAN, MT 59771
WEB: www.liv.mt.gov/lab

PHONE: (406) 994-4885
FAX: (406) 994-6344
EMAIL: livdiagnosticlab@mt.gov



PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 18-9640
Name/ID:
Species: American Bison

FINAL REPORT 01/09/18

Accessioned: 12/19/17

Authorized by: AF

Premise: NA

Sex: Age:
County: Park
Owner: BQFS - USDA GonaCon Study

Previous Reports
01/09/18

SEROLOGY

Brucella abortus

Clotted Blood

Verified on: 01/09/18 by: AF

<u>Animal</u>	<u>FPA</u>
Green 08	Positive
Red 01	Positive
Red 02	Negative
Red 03	Positive
Red 04	Positive
Red 05	Negative
Red 07	Negative
Red 11	Positive
Red 14	Positive
Red 16	Positive
Red 19	Positive
Red 20	Positive
Red 21	Positive
Red 26	Positive
Red 28	Positive
Red 31	Negative
Red 33	Positive
Red 36	Positive
Red 37	Negative
Red 39	Positive
Red 40	Positive
Red 48	Positive
Red 50	Positive
Red 56	Positive
Red 64	Positive
Red 72	Positive
Red 73	Positive
3G08	Positive
3R22	Positive
6G07	Positive

Clotted Blood

Verified on 12/29/17 by: DK

Animal

Green 08
 Red 01
 Red 02
 Red 03
 Red 04
 Red 05
 Red 07
 Red 11
 Red 14
 Red 16
 Red 19
 Red 20
 Red 21
 Red 26
 Red 28
 Red 31
 Red 33
 Red 36
 Red 37
 Red 39
 Red 40
 Red 48
 Red 50
 Red 56
 Red 64
 Red 72
 Red 73
 3G08
 3R22
 6G07

B. Abortus**BAPA**

Negative
 Negative
 Negative
Positive
 Negative
 Negative
 Negative
 Negative
 Negative
Positive
Positive
Positive
Positive
 Negative
Positive
 Negative
Positive
Positive
Positive
Positive
Positive
Positive
Positive
Positive
Positive
Positive
Positive
Positive
Positive
Positive

Clotted Blood**Verified on: 01/02/18 by: DK****Animal**

Green 08
 Red 01
 Red 02
 Red 03
 Red 04
 Red 05
 Red 07
 Red 11
 Red 14
 Red 16
 Red 19
 Red 20
 Red 21
 Red 26

BRUCF

3+ 1:320
 4+ 1:20
 Negative @
 1:10
 3+ 1:160
 Negative @
 1:10
 Negative @
 1:10
 Negative @
 1:10
 Negative @
 1:10
 2+ 1:20
 3+ 1:640
 Negative @
 1:10
 3+ 1:80
 Negative @
 1:10
 4+ 1:20

BRUCARD

Positive
 Negative
 Negative
Positive
 Negative
 Negative
 Negative
 Negative
 Negative
Positive
Positive
 Negative
Positive
 Negative
Positive
 Negative

Red 28	1+ 1:80	Negative
Red 31	Negative @ 1:10	Negative
Red 33	Negative @ 1:10	Positive
Red 36	3+ 1:160	Positive
Red 37	Negative @ 1:10	Negative
Red 39	4+ 1:20	Negative
Red 40	4+ 1:80	Positive
Red 48	2+ 1:160	Positive
Red 50	3+ 1:20	Negative
Red 56	4+ 1:640	Positive
Red 64	3+ 1:160	Positive
Red 72	3+ 1:20	Positive
Red 73	2+ 1:80	Positive
3G08	3+ 1:320	Positive
3R22	2+ 1:40	Positive
6G07	3+ 1:40	Negative

Species: Bison
County: Park

MONTANA VETERINARY DIAGNOSTIC LABORATORY

Box 997 - Bozeman, MT 59771
Phone (406) 994 - 4885 Fax (406) 994 - 6344
Email: livdiagnosticlab@mt.gov

Collection Date: 12/10-12/19/17
Page 1 of 2

SEROLOGY REPORT (SV2A) - Complete Light Shaded Areas Only (SEE EXAMPLE and KEY on back, Page 4).

E-MAILED
ap/15/18 Park
@ 706 p

OWNER: BQFS-USDA GonaCon Study
ADDRESS:
CITY/STATE/ZIP: GonaCon Spring
REASON FOR TEST - MANDATORY INFORMATION (See Key)
BQFS - GonaCon - Cattle Health

SUBMITTER'S SIGNATURE (Mandatory): [Signature]
SUBMITTER'S NAME (PRINT): P. Rasmussen
ADDRESS: (b) (6)
CITY/STATE/ZIP: (b) (6)
RESULT REPORTING OPTIONS: PHONE / FAX / EMAIL Rebecca K. Frey @ ap/15/18
NUMBER OR EMAIL ADDRESS: Patrick R. Clarke @ ap/15/18

CIRCLE DISEASE TEST REQUIRED: If needed, indicate specific test and/or dilution. Example on back.						BRU	BT	ANA	EHD	PTB	IBR	BVD	BLV	LEPTOSPIROSIS	OTHER
Tube NO.	ANIMAL IDENTIFICATION	AGE	SEX	BREED	OFFICIAL VAC.	CF (1:10)	Brucella	Brucella	Brucella	(mp values)	Plate test	FPA (Confirmation)	Tube test		
1	Green 08	AD	F	D's	N/A	3+(1:320)	Neg	Pos	Pos @ 194.0 mp						
2	Red 01					4+(1:20)	Neg	Neg	Pos @ 20.1 mp			Pos @ 13.1 mp			
3	Red 02					Neg @ (1:10)	Neg	Neg	Pos @ 10.5 mp			Neg @ 1.3 mp			
4	Red 03					3+(1:160)	Pos	Pos	Pos @ 104.3 mp			Neg @ 1.4 mp			
5	Red 04					Neg @ (1:10)	Neg	Neg	Pos @ 47.4 mp			Pos @ 20.6 mp			
6	Red 05								Neg @ 0.8 mp						
7	Red 07								Neg @ 3.4 mp						
8	Red 11								Pos @ 17.5 mp			Pos @ 10.6 mp			
9	Red 14					2+(1:20)			Pos @ 23.5 mp			Pos @ 16.6 mp			
10	Red 16					3+(1:640)	Pos	Pos	Pos @ 176.7 mp						
Samples						30	30	30	30			8 samples tested			
Seropositive						20	19	15	27			6			
Suspect						-	-	-							
Seronegative						10	11	15	3			2			
Undetermined						-	-	-							
Tested By						<u>ap/12/17</u>	<u>DK</u>	<u>DK</u>	<u>up</u>			<u>ap/15/18</u>			

Laboratory Comments:

BAPA, CARD, FPA, CF

X Seronegative

Released by [Signature] Date 1/9/18

FEE:

DATE RECEIVED: 12-19-17

CASE #



18-9640
12/19/17

The MVDL is an accredited AAVLD laboratory and a member of the USDA National Animal Health Laboratory Network. Completing and submitting any submission form or any other means of requesting services creates a contractual agreement for services requested and the specimens submitted become the property of the MVDL. In addition, at no additional expense to our clients, specimens submitted to the MVDL may be subjected to

Owner: BQFS - USDA Genomic Study
 Submitted By: Ryan Clarke
 Collection Date: 12/18-12/19 Page 2 of 2

MONTANA VETERINARY DIAGNOSTIC LABORATORY

Box 997 - Bozeman, MT 59771

Phone: (406)994-4885

Fax: (406)994-6344

Email: livdiagnosticlab@mt.gov

CONTINUATION SEROLOGY REPORT (SV2B)

Complete light shaded areas only

CIRCLE DISEASE TEST REQUIRED: If needed, indicate specific test and/or dilution. Example on back of SV2A.

Brucella

TUBE NO.	ANIMAL IDENTIFICATION	AGE	SEX	BREED	OFFICIAL VAC.	BRU CF (1:10)	BT Bru Bapa	ANA Bru CARD	EHD Bru FPA	PTB (uP values)	IBR ab 12/18	BVD Peak test	BLV	LEPTOSPIROSIS 8-SEROVARS	OTHER
11	Red 19	AD	F	Bos	U/A	Neg @ (1:10)	Pos	Pos	Pos @ 132.8 uP						
12	Red 20					3+ (1:80)	Pos	Neg	Pos @ 155.1 uP						
13	Red 21					Neg @ (1:10)	Pos	Pos	Pos @ 178.0 uP						
14	Red 24					4+ (1:20)	Neg	Neg	Pos @ 26.1 uP					Pos @ 19.7 uP 18.2 uP	
15	Red 28					1+ (1:80)	Pos	Neg	Pos @ 146.4 uP						
16	Red 31					Neg @ (1:10)	Neg	Neg	Neg @ 3.4 uP						
17	Red 33					Neg @ (1:10)	Pos	Pos	Pos @ 149.0 uP						
18	Red 36					3+ (1:160)	Pos	Pos	Pos @ 157.9 uP						
19	Red 37					Neg @ (1:10)	Neg	Neg	Pos @ 17.9 uP					Neg @ 9.3 uP 9.6 uP	
20	Red 39					4+ (1:20)	Pos	Neg	Pos @ 72.1 uP						
21	Red 40					4+ (1:80)	Pos	Pos	Pos @ 179.9 uP						
22	Red 48					2+ (1:160)	Pos	Pos	Pos @ 179.1 uP						
23	Red 50					3+ (1:20)	Pos	Neg	Pos @ 66.2 uP						
24	Red 56					4+ (1:640)	Pos	Pos	Pos @ 196.2 uP						
25	Red 64					3+ (1:160)	Pos	Pos	Pos @ 164.6 uP						
26	Red 72					3+ (1:20)	Pos	Pos	Pos @ 172.8 uP						
27	Red 73					2+ (1:80)	Pos	Pos	Pos @ 116.2 uP						
28	3608					3+ (1:320)	Pos	Pos	Pos @ 189.9 uP						
29	3622					2+ (1:40)	Pos	Pos	Pos @ 195.0 uP						
30	6607		M			3+ (1:40)	Pos	Neg	Pos @ 36.5 uP					Pos @ 18.3 uP 17.1 uP	

SV-2B (Rev. 12/09)

CASE # 18-9640

FEES:

Accession Fee	4.00
B. Abortus Card	48.00
Brucella abortus/suis - Complement Fixation	79.50
Brucella abortus FPA	48.00
B. Abortus Bapa	48.00
Total	227.50

(This is not a bill. Do not make payments from this report.)



MONTANA VETERINARY DIAGNOSTIC LABORATORY

1911 WEST LINCOLN, BOZEMAN, MT 59718
P.O. Box 997, BOZEMAN, MT 59771
WEB: www.liv.mt.gov/lab

PHONE: (406) 994-4885
FAX: (406) 994-6344
EMAIL: livdiagnosticlab@mt.gov



PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 18-9641
Name/ID:
Species: American Bison

FINAL REPORT 01/09/18

Accessioned: 12/19/17

Authorized by: AF

Premise: NA

Sex: Age:
County: Park
Owner: BQFS - USDA GonaCon Study

Previous Reports
01/09/18
01/09/18

SEROLOGY

Brucella abortus

Clotted Blood

Verified on: 01/09/18 by: AF

<u>Animal</u>	<u>FPA</u>
Green 01	Negative
Green 02	Negative
Green 04	Negative
Green 06	Negative
Green 07	Positive
Green 13	Positive
Green 17	Negative
Green 18	Negative
Green 20	Negative
Green 21	Positive
Green 24	Positive
3G17	Negative
Red 5R2	Negative
Green 32	Negative
Green 40	Negative
Purple 4R2	Negative

Clotted Blood

Verified on 12/29/17 by: DK

<u>Animal</u>	<u>B. Abortus</u> <u>BAPA</u>
Green 01	Negative
Green 02	Negative
Green 04	Negative
Green 06	Negative
Green 07	Positive
Green 13	Positive
Green 17	Negative
Green 18	Negative
Green 20	Negative
Green 21	Positive
Green 24	Negative
3G17	Negative

008184

Case No: 18-9641 - ,

Red 5R2	Negative
Green 32	Negative
Green 40	Negative
Purple 4R2	Negative

Clotted Blood

Verified on: 01/02/18 by: DK

<u>Animal</u>	<u>BRUCF</u>	<u>BRUCARD</u>
Green 01	Negative @ 1:10	Negative
Green 02	Negative @ 1:10	Negative
Green 04	3+ 1:10	Negative
Green 06	2+ 1:10	Negative
Green 07	4+ 1:640	Positive
Green 13	4+ 1:640	Positive
Green 17	Negative @ 1:10	Negative
Green 18	Negative @ 1:10	Negative
Green 20	2+ 1:10	Negative
Green 21	3+ 1:80	Negative
Green 24	2+ 1:160	Negative
3G17	Negative @ 1:10	Negative
Red 5R2	Negative @ 1:10	Negative
Green 32	Negative @ 1:10	Negative
Green 40	Negative @ 1:10	Negative
Purple 4R2	Negative @ 1:10	Negative

Species: Bison
County: Park

MONTANA VETERINARY DIAGNOSTIC LABORATORY

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Email: livdiagnosticlab@mt.gov

Collection Date: 12/19/17
Page 1 of 2

SEROLOGY REPORT (SV2A) - Complete Light Shaded Areas Only (SEE EXAMPLE and KEY on back, Page 4).

E-MAILED
af 1/5/18 Pat 2:00 pm

OWNER: BQFS-USDA GonaCon Study
ADDRESS:
CITY/STATE/ZIP: Crown Springs
REASON FOR TEST - MANDATORY INFORMATION (See Key)
BQFS - GonaCon - Cattle Health

SUBMITTER'S SIGNATURE (Mandatory): [Signature]
SUBMITTER'S NAME (PRINT): Ryan Clarke
ADDRESS: (b) (6)
CITY/STATE/ZIP: (b) (6)
RESULT REPORTING OPTIONS: PHONE / FAX / EMAIL rebecca.k.fray@aphis.usda.gov
NUMBER OR EMAIL ADDRESS: Patricia I. Clarke@aphis.usda.gov

CIRCLE DISEASE TEST REQUIRED: If needed, indicate specific test and/or dilution. Example on back.

Tube NO.	ANIMAL IDENTIFICATION	AGE	SEX	BREED	OFFICIAL VAC.	BRU	BT	ANA	EHD	PTB	IBR	BVD	BLV	LEPTOSPIROSIS	OTHER
						CF (1:10)	Brn Bupa	Brn CARD	Brn FPA	mp (mln) -	af 1/3/18	af 1/3/18		FPA (Conf.) Tube test	
1	Green 01	AD	F	Bis	N/A	Neg @ (1:10)	Neg	Neg	Neg @ 8.5 mp						
2	Green 02					Neg @ (1:10)	Neg		Neg @ 2.0 mp						
3	Green 04					3+ (1:10)	Neg		Neg @ 0.1 mp						
4	Green 06					2+ (1:10)	Neg		Neg @ 0.5 mp						
5	Green 07					4+ (1:640)	Pos	Pos	Pos @ 190.5 mp						
6	Green 13					4+ (1:640)	Pos	Pos	Pos @ 179.8 mp						
7	Green 17					Neg @ (1:10)	Neg	Neg	Neg @ 3.0 mp						
8	Green 18					Neg @ (1:10)	Neg		Neg @ 3.1 mp						
9	Green 20					2+ (1:10)	Neg		Neg @ 6.6 mp						
10	Green 21					3+ (1:80)	Pos		Pos @ 159.2 mp						
Samples						16	16	16	16					1 (Tube #13)	
Seropositive						7	3	2	5						
Suspect						-	-	-							
Seronegative						9	13	14	11						
Undetermined						-	-	-							
Tested By						af 12/28/17	af 12/29/17	af 1/5/18	af 1/5/18					af 1/8/18	

Laboratory Comments:

Please do BAPA, Card
FPA, CF
* Save Serum

Released by [Signature] Date 1/9/2018

FEE:

DATE RECEIVED: 12-19-17

The MVDL is an accredited AAVID laboratory and a member of the USDA National Animal Health Laboratory Network. Completing and submitting any submission form contractual agreement for services requested and the specimens submitted become the property of the MVDL. In addition, at no additional expense to our clients, specimens



18-9641
12/19/17

ates a
may be subjected to

Email: livdiagnosticlab@mt.gov

Complete light shaded areas only

008187

FEES:

Accession Fee	4.00
B. Abortus Card	25.60
Brucella abortus/suis - Complement Fixation	42.40
Brucella abortus FPA	25.60
B. Abortus Bapa	25.60
Total	123.20

(This is not a bill. Do not make payments from this report.)



MONTANA VETERINARY DIAGNOSTIC LABORATORY

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EMAIL: livdiagnosticlab@mt.gov



BECKY FREY
PO BOX 202001
HELENA MT 59601

CASE: 18-9691
Name/ID: Red 50
Species: American Bison

FINAL REPORT 12/21/17

Accessioned: 12/20/17

Authorized by: LA

Premise: NA

Sex: Female **Age:** Adult
County: Park
Owner: USDA, APHIS, VS GonaCon Study

Previous Reports
12/21/17

CASE SUMMARY

Verified on: 12/21/17 by: BL

REASON FOR SUBMISSION: Brucella tissue collection protocol

LABORATORY DIAGNOSIS:

Hemorrhage, subcutis and musculature of the thorax and abdomen
Muscular rent into thoracic cavity, intercostal space 9-10
Fracture, right rib 10

COMMENT: Collected tissues are saved per request. Carcass was incinerated 12/21/2017.

A. W. Layton, DVM, Diplomate, ACVP

PATHOLOGY

Verified on: 12/21/17 by: BL

GROSS DESCRIPTION: Carcass is of an adult, open, female bison in good postmortem and nutritional state. Ear tags numbers are: Red 50; RFID 840003003405611; USDA 81AJW3772. Animal was apart of a research project and was found dead. Animal is Brucella abortus seropositive. Multiple tissues were collected per protocol for Brucella culture. Severe diffuse subcutaneous and muscular hemorrhage occurs over the thorax and abdomen. Dorsal mid right intercostal space 9-10 has a muscular rent that penetrates into the chest cavity and right rib 10 has a mid shaft fracture. No other significant lesions were present. Collected tissues are save, per request by study coordinators' for possible future culture.

GROSS DIAGNOSIS:

Hemorrhage, subcutis and musculature of the thorax and abdomen
Muscular rent into thoracic cavity, intercostal space 9-10
Fracture, right rib 10

HISTOLOGIC DESCRIPTION: not done

FEES:

Accession Fee	4.00
Incineration per pound	360.00
Case Summary	0.00
Necropsy LA >500#	173.25
Total	537.25

(This is not a bill. Do not make payments from this report.)



MONTANA VETERINARY DIAGNOSTIC LABORATORY

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EMAIL: livdiagnosticlab@mt.gov



PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 18-9698
Name/ID:
Species: American Bison

FINAL REPORT 01/08/18

Accessioned: 12/20/17

Authorized by: AF

Premise: NA

Sex: Age:
County: Park
Owner: BQFS-USDA GonaCon Study

Previous Reports
01/09/18
01/09/18

SEROLOGY

Brucella abortus

Clotted Blood

Verified on: 01/08/18 by: AF

<u>Animal</u>	<u>FPA</u>
6G01	Negative
6G02	Negative
6G04	Negative
6R7	Negative
6R22	Negative
6R73	Negative
6320	Negative
6R2	Negative
6317	Negative

Clotted Blood

Verified on 12/29/17 by: DK

<u>Animal</u>	<u>B. Abortus</u> <u>BAPA</u>
6G01	Negative
6G02	Negative
6G04	Negative
6R7	Negative
6R22	Negative
6R73	Negative
6320	Negative
6R2	Negative
6317	Negative

Clotted Blood

Verified on: 01/02/18 by: DK

<u>Animal</u>	<u>BRUCF</u>	<u>BRUCARD</u>
6G01	Negative @ 1:10	Negative
6G02	Negative @ 1:10	Negative
6G04	Negative @ 1:10	Negative
6R7	3+ 1:10	Negative

6R22	Negative @ 1:10	Negative
6R73	Negative @ 1:10	Negative
6320	Negative @ 1:10	Negative
6R2	Negative @ 1:10	Negative
6317	Negative @ 1:10	Negative

Species: Bison
County: Park

MONTANA VETERINARY DIAGNOSTIC LABORATORY

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Email: livdiagnosticlab@mt.gov

Collection Date: 12/18/17
Page 1 of 1

SEROLOGY REPORT (SV2A) - Complete Light Shaded Areas Only (SEE EXAMPLE and KEY on back, Page 4).

E-MAILED
dp 1/5/18 Patrick @ 2:06p

OWNER: BQFS-USDA Gonadotropin Study
ADDRESS:
CITY/STATE/ZIP: Crown Spring MT
REASON FOR TEST - MANDATORY INFORMATION (See Key)

SUBMITTER'S SIGNATURE (Mandatory):
SUBMITTER'S NAME (PRINT): Ryan Clark
ADDRESS: (b) (6)
CITY/STATE/ZIP: (b) (6)
RESULT REPORTING OPTIONS: PHONE / FAX / EMAIL rebecca.k.frey@aphis.usda.gov
NUMBER OR EMAIL ADDRESS: patrick.e.chenka@aphis.usda.gov

CIRCLE DISEASE TEST REQUIRED: If needed, indicate specific test and/or dilution. Example on back.						BRU	BT	ANA	EHD	PTB	IBR	BVD	BLV	LEPTOSPIROSIS	OTHER
Tube NO.	ANIMAL IDENTIFICATION	AGE	SEX	BREED	OFFICIAL VAC.	CF (1:10)	Brn Bapa	Brn CARD	Brn FPA (mp values)						
1	6601	1.5	F	Bis	N/A	Neg @ 1:10	Neg	Neg	Neg @ 5.8 mp						
2	6602						Neg	Neg	Neg @ 1.6 mp						
3	6604						Neg	Neg	Neg @ 5.8 mp						
4	6R7					3+ (1:10)	Neg	Neg	Neg @ 4.4 mp					*	
5	6R22					Neg @ 1:10	Neg	Neg	Neg @ 8.5 mp						Connection: Brn BAPA
6	6RT3						Neg	Neg	Neg @ 6.5 mp						#5 Negative Bapa
7	6320						Neg	Neg	Neg @ 6.7 mp						#6 Negative Bapa
8	6R2		M				Neg	Neg	Neg @ 1.5 mp						dp 1/3/18
9	6317		M				Neg	Neg	Pos @ 11.6 mp					Neg @ 4.2 mp 6.5 mp	
															dp 1/3/18
Laboratory Comments:						Samples	9	9	9	9				1	
						Seropositive	1	-	-	1					
						Suspect	-	-	-	-					
						Seronegative	8	9	9	8				1	
						Undetermined	-								
						Tested By	dp 12/29/17	dk	dk	dk				dp 1/8/18	

Laboratory Comments:

BAPA, CARD, FPA, CF

Results by from 4th COS PLZ

Released by [Signature] Date 1-8-2018

FEE:

DATE RECEIVED: 1-20-17

CASE

The MVDL is an accredited AAVID laboratory and a member of the USDA National Animal Health Laboratory Network. Completing and submitting any submission form or any other contractual agreement for services requested and the specimens submitted become the property of the MVDL. In addition, at no additional expense to our clients, specimens submitted



18 - 9698

12/20/17

FEES:

Accession Fee	4.00
B. Abortus Card	14.40
Brucella abortus/suis - Complement Fixation	23.85
Brucella abortus FPA	14.40
B. Abortus Bapa	14.40
Total	71.05

(This is not a bill. Do not make payments from this report.)



MONTANA VETERINARY DIAGNOSTIC LABORATORY

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EMAIL: livdiagnosticlab@mt.gov



PATRICK RYAN CLARKE D.V.M.
PO BOX 202001
HELENA MT 59601

CASE: 18-9699
Name/ID:
Species: American Bison

FINAL REPORT 01/08/18

Accessioned: 12/20/17

Authorized by: AF

Premise: NA

Sex: Age:
County: Park
Owner: BQFS-USDA Gonacon Study

Previous Reports
01/09/18

SEROLOGY

Brucella abortus

Clotted Blood

Verified on: 01/08/18 by: AF

<u>Animal</u>	<u>FPA</u>
7G01	Negative
7G02	Negative
7G06	Negative
7G07	Negative
7G08	Negative
7G13	Negative
7G17	Negative
7G20	Negative
7G21	Negative
7G24	Negative
73G08	Negative
7R1	Negative
7R02	Negative
7R3	Negative
7R7	Negative
7R14	Negative
7R16	Negative
7R20	Negative
7R21	Negative
7R26	Negative
7R33	Negative
7R37	Negative
7R40	Negative
7R48	Negative
7R50	Negative
7R56	Positive
7R64	Positive
7R72	Negative
7R73	Negative
73R22	Negative

Clotted Blood

Verified on 12/29/17 by: DK

008195

Case No: 18-9699 - ,

B. Abortus

7G01	Negative
7G02	Negative
7G06	Negative
7G07	Negative
7G08	Negative
7G13	Negative
7G17	Negative
7G20	Negative
7G21	Negative
7G24	Negative
73G08	Negative
7R1	Negative
7R02	Negative
7R3	Negative
7R7	Negative
7R14	Negative
7R16	Negative
7R20	Negative
7R21	Negative
7R26	Negative
7R33	Negative
7R37	Negative
7R40	Negative
7R48	Negative
7R50	Negative
7R56	Negative
7R64	Positive
7R72	Negative
7R73	Negative
73R22	Negative

Clotted Blood

Verified on: 01/02/18 by: DK

<u>Animal</u>	<u>BRUCF</u>	<u>BRUCARD</u>
7G01	Negative @ 1:10	Negative
7G02	Negative @ 1:10	Negative
7G06	Negative @ 1:10	Negative
7G07	Negative @ 1:10	Negative
7G08	Negative @ 1:10	Negative
7G13	Negative @ 1:10	Negative
7G17	Negative @ 1:10	Negative
7G20	Negative @ 1:10	Negative
7G21	Negative @ 1:10	Negative
7G24	Negative @ 1:10	Negative

73G08	Negative @ 1:10	Negative
7R1	Negative @ 1:10	Negative
7R02	Negative @ 1:10	Negative
7R3	Negative @ 1:10	Negative
7R7	Negative @ 1:10	Negative
7R14	Negative @ 1:10	Negative
7R16	Negative @ 1:10	Negative
7R20	Negative @ 1:10	Negative
7R21	2+ 1:10	Negative
7R26	Negative @ 1:10	Negative
7R33	Negative @ 1:10	Negative
7R37	Negative @ 1:10	Negative
7R40	Negative @ 1:10	Negative
7R48	Negative @ 1:10	Negative
7R50	Negative @ 1:10	Negative
7R56	3+ 1:10	Negative
7R64	3+ 1:160	Positive
7R72	2+ 1:10	Negative
7R73	Negative @ 1:10	Negative
73R22	3+ 1:10	Negative

Species: Bison
County: Frank

MONTANA VETERINARY DIAGNOSTIC LABORATORY

Box 997 - Bozeman, MT 59771
Phone (406) 994 - 4885 Fax (406) 994 - 6344
Email: livdiagnosticlaboratory@mt.gov

Collection Date: 12/18-12/19/17
Page 1 of 2

SEROLOGY REPORT (SV2A) - Complete Light Shaded Areas Only (SEE EXAMPLE and KEY on back, Page 4).

E-MAILED
ap/15/18 Pah @ 2:06p

OWNER: BQBS-USDA GormaCon
ADDRESS:
CITY/STATE/ZIP: Corwin Springs MT
REASON FOR TEST - MANDATORY INFORMATION (See Key)

SUBMITTER'S SIGNATURE (Mandatory):
SUBMITTER'S NAME (PRINT): Ryan Clarke
ADDRESS: (b) (6)
CITY/STATE/ZIP: (b) (6)
RESULT REPORTING OPTIONS: PHONE / FAX / EMAIL rebecca.k.fry@aphis.usda.gov
NUMBER OR EMAIL ADDRESS: patrick.r.clarke@aphis.usda.gov

CIRCLE DISEASE TEST REQUIRED: If needed, indicate specific test and/or dilution. Example on back.

Tube NO.	ANIMAL IDENTIFICATION	AGE	SEX	BREED	OFFICIAL VAC.	BRU CF (1:10)	BT	ANA	EHD	PTB	IBR	BVD	BLV	LEPTOSPIROSIS	OTHER
1	7601	Calb	M	Bis	N/A	Neg (1:10)	Neg	Neg	Neg	Neg	Neg	13.4 mP - Pos.		Neg @ 0.6 mP	
2	7602		F									7.6 mP		Neg @ 0.9 mP	
3	7606		F									8.8 mP			
4	7607		M									6.2 mP			
5	7608		M									15.0 mP		Neg @ 7.8 mP	
6	7613		M									11.4 mP		Neg @ 7.8 mP	
7	7617		M									6.0 mP		Neg @ 2.2 mP	
8	7620		M									9.5 mP			
9	7621		F									4.8 mP			
10	7624		F									4.3 mP			
Samples						30	30	30	30						
Seropositive						5	1	1	6						
Suspect						-	-	-	-						
Seronegative						25	29	29	24						
Undetermined						-	-	-	-						
Tested By						ap/12/17	DC	DC	ap						

Laboratory Comments:

BADA, CARD, FPA, CF

Results by Jan 4th 2018
Corb
p/z.

Released by: [Signature] Date: 1-8-18
(x 30 samples)

FEE:

DATE RECEIVED:

CASE #



18 - 9699

12/20/17

The MVDL is an accredited AAVID laboratory and a member of the USDA National Animal Health Laboratory Network. Completing and submitting any submission form or any other contractual agreement for services requested and the specimens submitted become the property of the MVDL. In addition, at no additional expense to our clients, specimens submitted to

Owner:	BQFS - Gonaem Skaly
Submitted By:	R. Clarke
Collection Date:	12/18-12/19/17

Page 2 of 2

MONTANA VETERINARY DIAGNOSTIC LABORATORY

Box 997 - Bozeman, MT 59771

Phone: (406)994-4885

Fax: (406)994-6344

Email: livdiagnosticlab@mt.gov

CONTINUATION SEROLOGY REPORT (SV2B)

Complete light shaded areas only

CIRCLE DISEASE TEST REQUIRED: If needed, indicate specific test and/or dilution. Example on back of SV2A.

TUBE NO.	ANIMAL IDENTIFICATION	AGE	SEX	BREED	OFFICIAL VAC.	BRU CF(1:10)	BT Bru	ANA Bru	EHD Bru	PTB mP	IBR values	BYD ap/13/18 (Plate test)	BLV	LEPTOSPIROSIS & SEROVARS FPA (Confirmation) Tube test	OTHER ap/13/18
11	73608	carb	F	B/S	N/A	Neg@ (1:10)	Neg	Neg	Neg	@ 9.9 mP					
12	7R1		M						Neg	@ 8.8 mP					
13	7R02		M						Neg	@ 2.1 mP					
14	7R3		F						Neg	@ 7.7 mP					
15	7R7		F						Neg	@ 5.1 mP					
16	7R14		F						Neg	@ 4.7 mP					
17	7R16		M						Neg	@ 7.2 mP					
18	7R20		M						Neg	@ 6.2 mP					
19	7R21		M			2+(1:10)			Neg	@ 3.5 mP					
20	7R26		M			Neg@ (1:10)			Neg	@ 4.7 mP					
21	7R33		M						Neg	@ 9.6 mP					
22	7R37		M						Pos	@ 10.3 mP				Neg @ 8.7 mP	
23	7R40		F						Neg	@ 8.7 mP					
24	7R48		M						Neg	@ 7.9 mP					
25	7R50		F						Neg	@ 4.0 mP					
26	7R56		F			3+(1:20)			Pos	@ 26.0 mP				Pos @ 22.7 mP	
27	7R64		M			3+(1:160)	Pos	Pos	Pos	@ 196.1 mP				Pos @ 19.5 mP	Entry error ap/18/18
28	7R72		M			2+(1:10)	Neg	Neg	Neg	@ 1.9 mP					
29	7R73		F			Neg@ (1:10)	Neg	Neg	Neg	@ 1.7 mP					
30	73R22		F			3+(1:10)	Neg	Neg	Neg	@ 2.8 mP					

SV-2B (Rev. 12/09)

CASE # 18-9699

FEES:

Accession Fee	4.00
B. Abortus Card	48.00
Brucella abortus/suis - Complement Fixation	79.50
Brucella abortus FPA	48.00
B. Abortus Bapa	48.00
Total	227.50

(This is not a bill. Do not make payments from this report.)

INTERAGENCY AGREEMENT
between the
ANIMAL AND PLANT HEALTH INSPECTION SERVICE
and the
NATIONAL PARK SERVICE

ARTICLE I. BACKGROUND AND OBJECTIVES

To evaluate sterilization by use of GonaCon™, an immunocontraceptive vaccine, and ovariectomy as means of decreasing the potential for transmission of *Brucella abortus* in bison. This agreement is between the U.S. Department of Agriculture, Animal and Plant Health Inspection Service, Veterinary Services and the U.S. Department of Interior, National Park Service, Yellowstone National Park.

ARTICLE II. STATEMENT OF WORK

A. During the period of performance, up to 63 live bison (8-16 seronegative bulls, 32-40 seropositive cows, 5-7 seronegative cows) may be transferred by the National Park Service from the Stephens Creek capture facility in Yellowstone National Park to the Animal and Plant Health Inspection Service for transport to fenced quarantine pastures in Corwin Springs, Montana. The Animal and Plant Health Inspection Service will conduct an experimental research study with these bison to determine whether:

- Immunocontraception and/or ovariectomy procedures can prevent the shedding of *Brucella abortus* bacteria in young, recently infected bison;
- Immunocontraception with GonaCon™ vaccine can prevent shedding of *Brucella abortus* bacteria throughout the infection cycle;
- Recovery from the contraceptive treatment and the brucellosis infection can be completed without any further shedding of the bacteria during subsequent pregnancies; and
- Behavioral changes occur during the breeding season when females are treated with two types of pregnancy prevention procedures.

B. Additional Yellowstone bison may be transferred by the National Park Service to the Animal and Plant Health Inspection Service for this research study in subsequent years based on written bilateral modification of this agreement.

C. All data collected by the Animal and Plant Health Inspection Service during this research study will be provided to the National Park Service in the form of data releases and/or interim and final reports.

D. Changes to this agreement may be affected by issuance of a written modification hereto which both parties execute.

ARTICLE III. TERM OF AGREEMENT

The period of performance of this agreement will be from February 1, 2013, through January 31, 2017 at which time both parties will review and evaluate the agreement for possible extension.

ARTICLE IV. KEY OFFICIALS

National Park Service
Yellowstone Center for Resources
Rick Wallen, Wildlife Biologist

Animal and Plant Health Inspection Service
Veterinary Services
Jack Rhyan, DVM

P.O. Box 168
Yellowstone National Park, WY 82190
307-344-2285
rick_wallen@nps.gov

National Wildlife Research Center
Fort Collins, CO 80521
970-266-6140
Jack.C.Rhyan@aphis.usda.gov

ARTICLE V. PAYMENT

A. The National Park Service will not charge the Animal and Plant Health Inspection Service a fee for the bison that are provided to it. The National Park Service cannot guarantee a specific number of bison to the Animal and Plant Health Inspection Service in any given year.

B. The National Park Service and the Animal and Plant Health Inspection Service will use their own respective funding sources to accomplish their respective tasks. The National Park Service will not pay for or provide equipment, funding, or personnel for bison transport or security to the Animal and Plant Health Inspection Service, or vice versa.

C. This agreement may be renewed yearly if agreeable to both parties. Renewals shall be in the form of a written bilateral modification. It is mutually understood that renewals are subject to the availability of funds for future work; and it is hereby agreed that, if funds are not available, the Animal and Plant Health Inspection Service shall release the National Park Service from any liabilities and future commitment under this agreement.

ARTICLE VI. PROPERTY MANAGEMENT AND DISPOSITION

A. The Animal and Plant Health Inspection Service will assume ownership of the bison in Yellowstone National Park once they are loaded, secured, and manifested into trailers or other vehicles appropriate for transporting bison.

B. When any Yellowstone bison are no longer needed for the purposes of the research experiment described in Article II, Statement of Work, they should be consigned based on their brucellosis status. Bison that test positive for brucellosis exposure should be consigned to a terminal pasture, an educational display, or if no such options are available, then directly to a slaughter facility. Bison that test negative for brucellosis exposure should be consigned to a quarantine location for further diagnostics, directly to a managed for public trust conservation program to supplement population genetic diversity, to an introduction program to establish a new conservation population of wild bison, or if no such opportunities exist, to a private not-for-profit bison conservation program. If none of these opportunities can be accommodated, then a last choice would be to offer brucellosis-free bison to any private party that requests transfer of ownership.

C. Pursuant to 36 CFR part 10, Yellowstone bison transferred to individuals and private institutions cannot be slaughtered or released without adequate protection from premature hunting. If no feasible or suitable parties agree to receive the bison and obtain all the necessary agreements to implement this action, then the bison may be consigned to slaughter facilities (with meat and other body parts distributed to tribes and food banks) or vaccinated and returned to the Yellowstone bison population.

D. The Animal and Plant Health Inspection Service agrees that the live Yellowstone bison in the experimental research study described in this agreement are to be used solely for research purposes, are to be used only at the organization's facilities for this research and only under the direction of their Key Official for this agreement or others working under his supervision, and will not be transferred to anyone else without notification of Yellowstone National Park.

ARTICLE VII. PRIOR APPROVAL

The National Park Service authorities for entering into this agreement are 16 U.S.C. § 1 et seq., 16 U.S.C. § 3, and 16 U.S.C § 36.

During 2011, the National Park Service transferred 52 bison (4 males, 48 females) from the Stephens Creek capture facility in Yellowstone National Park to the Animal and Plant Health Inspection Service for transport to fenced quarantine pastures in Corwin Springs, Montana. The Animal and Plant Health Inspection Service began conducting an experimental research study with these bison as described in Article II, Statement of Work. This agreement allows additional bison to be transferred for use in the same research study at the same location.

ARTICLE VIII. REPORTS AND/OR OTHER DELIVERABLES

The Animal and Plant Health Inspection Service shall provide annual and final reports to the Key Official for the National Park Service on this agreement for all data collected during this study.

ARTICLE IX. TERMINATION

Either party may terminate the agreement by providing 14 days advance written notice to the other party.

ARTICLE X. AUTHORIZING SIGNATURES

IN WITNESS HEREOF, the parties hereto have signed their names and executed this Interagency Agreement.

National Park Service:

Animal and Plant Health Inspection Service:

Signature: _____
Name: Daniel N. Wenk
Title: Superintendent, Yellowstone NP
Date: February ____, 2013

Signature: _____
Name: ??????????
Title: ??????????
Date: February ____, 2013

Signature: _____
Name: Tina Holland
Title: Contracting Officer
Date: February ____, 2013

Signature: _____
Name: ??????????
Title: ??????????
Date: February ____, 2013

GONACON 2 January 15, 2015

BANGLE TAG	EARTAG	Sero-stat	Age/DOB	SEX	Old Eartag	BLED	Vag. Swab	Preg?	Deworm	Implant	Disposition	
Green 01	YNP930740	Neg	4, 2010	F	405608	✓	✓	✓		150.542	Hunter-N	✓ rails 26
Green 07	YNP930638	Neg	4, 2010	F	21	✓	✓	✓		150.592	Hunter-N	27
Green 13	81AJW3732	Neg	3, 2011	F	405608 2842	✓	✓	✓		150.642	Hunter-N; calf of Grn 11	✓ 28
Green 21	YNP930791	Neg	2, 2012	F	976	✓	✓	NO			Hunter-N	
Green 24	81AJW3769	Neg	2, 2012	F	967	✓	✓	NO			Hunter-N	
Green 25	81AJW3755	Neg	2, 2012	F	979	✓	✓	✓		* 151.102	Hunter-N	29
Red 32	YNP110234	POS	2, 2012	F	912 972	✓	✓	NO			Hunter-N	
Red 34	81AJW3759	POS	2, 2012	F	960	✓	✓	NO			Hunter-N	hubsage
Red 36	YNP110269	POS	2, 2011	F	908	✓	✓	NO			Hunter-N	
Red 38	81AJW3763	POS	2, 2012	F	968	✓	✓	NO			Hunter-N	
Red 39	YNP110247	POS	2, 2012	F	909	✓	✓	NO			Hunter-N	
Red 41	81AJW3776	POS	2, 2012	F	971	✓	✓	NO			Hunter-N	
Red 42	YNP110285	POS	2, 2012	F	970	✓	✓	NO			Hunter-N	
Red 43	YNP110268	POS	2, 2012	F	977	✓	✓	NO		2 K del chut	Hunter-N	
Red 44	YNP930800	POS	2, 2012	F	962	✓	✓	NO			Hunter-N	
Red 45	YNP110267	POS	2, 2012	F	961	✓	✓	NO			Hunter-N	
Red 46	81AJW3773	POS	2, 2012	F	964	✓	✓	NO			Hunter-N	
Red 47	YNP110227	POS	2, 2012	F	904 465	✓	✓	NO			Hunter-N	
Red 48	YNP110294	POS	2, 2012	F	979	✓	✓	NO			Hunter-N	
Red 49	YNP930783	POS	2, 2012	F	963	✓	✓	NO			Hunter-N	
Red 51	YNP110287	POS	2, 2012	F	603	✓	✓	NO			Hunter-N	
Red 52	YNP110244	POS	2, 2012	F	81003003405600	✓	✓	✓		151.134	Hunter-N	7CO
Red 53	YNP110239	POS	2, 2012	F	973	✓	✓	NO			Hunter-N	
Red 54	YNP110281	POS	3, 2011	F	405602	✓	✓	NO			Hunter-N	
Red 55	YNP930794	POS	3, 2011	F	405601	✓	✓	NO			Hunter-N	
Red 56	YNP110270	POS	2, 2012	F	978	✓	✓	NO			Hunter-N	

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darker
no stripe

BANGLE TAG	EARTAG	Sero-stat	Age/DOB	SEX	Old Eartag	BLED	Vag. Swab	Preg?	Deworm	Implant	Disposition
Green 01	YNP930740	Neg	4, 2012	F		✓	✓	✓	✓	151.031	Hunter-N
Green 07	YNP930638	Neg	4, 2010	F		✓	✓	✓	✓	150.942	Hunter-N
Green 13	81AJW3732	Neg	3, 2011	F		✓	✓	✓	✓	150.972	Hunter-N; calf
Green 21	YNP930791	Neg	2, 2012	F		✓	✓	✓	✓	150.982	Hunter-N
Green 24	81AJW3769	Neg	2, 2012	F		✓	✓	✓	✓	150.982	Hunter-N
Green 25	81AJW3755	Neg	2, 2012	F		✓	✓	✓	✓	151.151	Hunter-N
Red 32	YNP110234	POS	2, 2012	F	Evil	✓	✓	N	✓	—	Hunter-N
Red 34	81AJW3759	POS	2, 2012	F		✓	✓	✓	✓	150.503	Hunter-N
Red 36	YNP110269	POS	2, 2011	F		✓	✓	N	✓	—	Hunter-N
Red 38	81AJW3763	POS	2, 2012	F		✓	✓	✓	✓	151.092	Hunter-N
Red 39	YNP110247	POS	2, 2012	F		✓	✓	N	✓	—	Hunter-N
Red 41	81AJW3776	POS	2, 2012	F		✓	✓	N	✓	—	Hunter-N
Red 42	YNP110285	POS	2, 2012	F		✓	✓	N	✓	—	Hunter-N
Red 43	YNP110268	POS	2, 2012	F		✓	✓	✓	✓	151.101	Hunter-N
Red 44	YNP930800	POS	2, 2012	F		✓	✓	N	✓	—	Hunter-N
Red 45	YNP110267	POS	2, 2012	F		✓	✓	N	✓	—	Hunter-N
Red 46	81AJW3773	POS	2, 2012	F		✓	✓	✓	✓	150.522	Hunter-N
Red 47	YNP110227	POS	2, 2012	F		✓	✓	N	✓	—	Hunter-N
Red 48	YNP110294	POS	2, 2012	F	Evil	✓	✓	N	✓	—	Hunter-N
Red 49	YNP930783	POS	2, 2012	F		✓	✓	N	✓	—	Hunter-N
Red 51	YNP110287	POS	2, 2012	F		✓	✓	—	✓	—	Hunter-N
Red 52	YNP110244	POS	2, 2012	F				Yes			Colorado
Red 53	YNP110239	POS	2, 2012	F		✓	✓	✓	✓	150.962	Hunter-N
Red 54	YNP110281	POS	3, 2011	F		✓	✓	N	✓	—	Hunter-N
Red 55	YNP930794	POS	3, 2011	F		✓	✓		✓		Hunter-N
Red 56	YNP110270	POS	2, 2012	F		✓	✓	N	✓	—	Hunter-N
5G01			2015	F					712		
5G13			2015	M		✓	840083003405711				CO
5G25			2015	F		✓			710		

Channel

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11

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13 3+80

14 3+20

15 3+20

16 2+20

17 3+32

Gone Con #2

BANGLE TAG	EARTAG	Sero-stat	Age/DOB	SEX	Old Eartag	BLED	Vag. Swab	Preg?	Deworm	Implant	Disposition
✓ Green 01	YNP930740	Neg	4/5/2011	NEG	2, 2010	F	N				Hunter-N
✓ Green 07	YNP930638	Neg	3/8/2011	NEG	2, 2010	F	N				Hunter-N
✓ Green 13	81AJW3732	Neg	4/26/2011	NEG	1, 2011	F	N				Hunter-N; calf of Grn 11
✓ Red 32	YNP110234	81VJ6723	2/26/2014	Pos	2, 2012	F	Y				Hunter-N
✓ Red 34	81AJW3759	81VJ6288	2/15/2014	Pos	2, 2012	F	Y				Hunter-N
✓ Red 36	YNP110269	81VJ6826	3/5/2014	Pos	3, 2011	F	Y				Hunter-N
✓ Red 38	81AJW3763	81VJ6597	2/19/2014	Pos	2, 2012	F	Y				Hunter-N
✓ Red 39	YNP110247	81VJ6785	3/4/2014	Pos	2, 2012	F	Y				Hunter-N
✓ Red 41	81AJW3776	81VJ6635	2/25/2014	Pos	2, 2012	F	Y				Hunter-N
✓ Red 42	YNP110285	81VJ6842	3/5/2014	Pos	2, 2012	F	Y				Hunter-N
✓ Red 43	YNP110268	81VJ6825	3/5/2014	Pos	2, 2012	F	Y				Hunter-N
✓ Red 44	YNP930800	81VJ6674	2/25/2014	Pos	2, 2012	F	Y				Hunter-N
✓ Red 45	YNP110267	81VJ6824	3/5/2014	Pos	2, 2012	F	Y				Hunter-N
✓ Red 46	81AJW3773	81VJ6599	2/19/2014	Pos	2, 2012	F	Y				Hunter-N
✓ Red 47	YNP110227	81VJ6677	2/25/2014	Pos	2, 2012	F	Y				Hunter-N
✓ Red 48	YNP110294	81VJ6857	3/5/2014	Pos	2, 2012	F	Y				Hunter-N
✓ Red 49	YNP930783	81VJ6631	2/25/2014	Pos	2, 2012	F	Y				Hunter-N
✓ Red 51	YNP110287	81VJ6844	3/5/2014	Pos	2, 2012	F	Y				Hunter-N
✓ Red 52	YNP110244	81VJ6782	3/4/2014	Pos	2, 2012	F	Y				Hunter-N
✓ Red 53	YNP110239	81VJ6751	2/26/2014	Pos	2, 2012	F	Y				Hunter-N
✓ Red 54	YNP110281	81VJ6838	3/5/2014	Pos	3, 2011	F	Y				Hunter-N
✓ Red 55	YNP930794	81VJ6654	2/25/2014	Pos	3, 2011	F	Y				Hunter-N
✓ Red 56	YNP110270	81VJ6827	3/5/2014	Pos	2, 2012	F	Y				Hunter-N

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5 Red TABr
3 Green TABr } Extra

10 NoTABr cows

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BANGLE TAG	EARTAG	Sero-sta	Age/DOB	SEX	Old Eartag	BLED	Vag. Swab	Preg?	Deworm	Implant	Disposition	
Green 01	YNP930740	Neg	2012	F							Rigler	Calb
Green 07	YNP930638	Neg	2010	F							Rigler	Calb
Green 13	81AJW3732	Neg	2011	F							Rigler; calf of Grn 11	Calb
Green 21	YNP930791	Neg	2012	F							Rigler	Calb
Green 24	81AJW3769	Neg	2012	F							Rigler	Calb
Green 25	81AJW3755	Pos	2012	F							Rigler	
Red 32	YNP110234	POS	2012	F							Rigler	
Red 34	81AJW3759	POS	2012	F							Rigler	no calb
Red 36	YNP110269	POS	2011	F							Rigler	
Red 38	81AJW3763	POS	2012	F							Rigler	
Red 39	YNP110247	POS	2012	F							Rigler	
Red 41	81AJW3776	POS	2012	F							Rigler	
Red 42	YNP110285	POS	2012	F							Rigler	
Red 43	YNP110268	POS	2012	F							Rigler	Dead 5/03
Red 44	YNP930800	POS	2012	F							Rigler	
Red 45	YNP110267	POS	2012	F							Rigler	
Red 46	81AJW3773	POS	2012	F							Rigler	Calb
Red 47	YNP110227	POS	2012	F							Rigler	Goralin Rf Shable 5/10/07
Red 48	YNP110294	POS	2012	F							Rigler	Calb
Red 49	YNP930783	POS	2012	F							Rigler	
Red 51	YNP110287	POS	2012	F							Rigler	
Red 52	YNP110244	POS	2012	F				Yes			Colorado	
Red 53	YNP110239	POS	2012	F							Rigler	
Red 54	YNP110281	POS	2011	F							Rigler	
Red 55	YNP930794	POS	2011	F							Rigler	
Red 56	YNP110270	POS	2012	F							Rigler	Calb
6R38	840003003405724	Neg	2016	F							Rigler	
6G07	840003003405725	Neg	2016	M							Rigler	
6G25	840003003405726	Neg	2016	M							Rigler	
6R46	840003003405720	Neg	2016	F							Rigler	
6R34	840003003405699	Neg	2016	F							Rigler	
6G13	840003003405723	Neg	2016	F							Rigler	
6R08	840003003405687	Neg	2016	F							Rigler	

10-Bulls

BANGLE TAG	EARTAG	Sero-stat	Age/DOB	SEX	Old Eartag	bled	Vag. Swab	Preg?	Deworm	Implant	Disposition	
Green 01	YNP930740	Neg	2012	F		✓	✓	✓	✓	151.442	Hunter-N	9
Green 07	YNP930638	Neg	2010	F		✓	✓	✓	✓	151.402	Hunter-N	10
Green 13	81AJW3732	Neg	2011	F		✓	✓	✓	✓	151.434	Hunter-N; calf of Grn 11	11
Green 21	YNP930791	Neg	2012	F		✓	✓	✓	✓	151.662	Hunter-N	12
Green 24	81AJW3769	Neg	2012	F		✓	✓	✓	✓	151.402	Hunter-N	13
Green 25	81AJW3755	Neg	2012	F		✓	✓	✓	✓	—	Hunter-N	
Red 32	YNP110234	POS	2012	F		✓	✓	✓	✓	—	Hunter-N	
Red 34	81AJW3759	POS	2012	F		✓	✓	✓	✓	150.593	Hunter-N	14
Red 36	YNP110269	POS	2011	F		✓	✓	✓	✓	—	Hunter-N	
Red 38	81AJW3763	POS	2012	F		✓	✓	✓	✓	—	Hunter-N	
Red 39	YNP110247	POS	2012	F		✓	✓	✓	✓	—	Hunter-N	
Red 41	81AJW3776	POS	2012	F		✓	✓	✓	✓	—	Hunter-N	
Red 42	YNP110285	POS	2012	F		✓	✓	✓	✓	—	Hunter-N	
Red 43	YNP110268	POS	2012	F		✓	✓	✓	✓	151.341	Hunter-N	15
Red 44	YNP930800	POS	2012	F		✓	✓	✓	✓	—	Hunter-N	
Red 45	YNP110267	POS	2012	F		✓	✓	✓	✓	—	Hunter-N	
Red 46	81AJW3773	POS	2012	F		✓	✓	✓	✓	151.693	Hunter-N	16
Red 47	YNP110227	POS	2012	F		✓	✓	✓	✓	—	Hunter-N	
Red 48	YNP110294	POS	2012	F		✓	✓	✓	✓	151.411	Hunter-N	17
Red 49	YNP930783	POS	2012	F		✓	✓	✓	✓	—	Hunter-N	
Red 51	YNP110287	POS	2012	F		✓	✓	✓	✓	—	Hunter-N	
Red 52	YNP110244	POS	2012	F				Yes			Colorado	
Red 53	YNP110239	POS	2012	F		✓	✓	✓	✓	—	Hunter-N	
Red 54	YNP110281	POS	2011	F		✓	✓	✓	✓	—	Hunter-N	
Red 55	YNP930794	POS	2011	F		✓	✓	✓	✓	—	Hunter-N	
Red 56	YNP110270	POS	2012	F		✓	✓	✓	✓	—	Hunter-N	

✓ • 6R34 Female
 ✓ • 6601 Female, 6601
 ✓ • 6R46 F
 ✓ • 6621
 ✓ • 6613
 ✓ • 6R38 F
 ✓ • 6607
 ✓ • 6625 008209
 ✓ • 6R53

699 ✓
 720 ✓
 721 ✓
 722 ✓
 723 ✓
 724 ✓
 725 ✓
 726 ✓
 727 ✓

6624? F
 6638 kept
 6607 kept
 6625 kept
 6R53 on trailer

F
 F
 F
 M
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 M
 M

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 27
 27
 27

Sept

BANGLE TAG	EARTAG	Sero-stat	Age/DOB	SEX	Old Eartag	BLED	Deworm	Disposition	
✓ Green 19	YNP110253	Neg	2011	M				SNS	
✓ Green 28	81AJW3756	Neg	2012	M				SNS	
Green 29	YNP110288	Neg	2011	M				Deal	
✓ Green 31	81AJW3766	Neg	2012	M				N. Brown	
✓ Green 32	81AJW3770	Neg	2012	M				Royle	
✓ Green 33	81AJW3761	Neg	2012	M				N. Brown	
✓ Green 34	81AJW3768	Neg	2013	M				SNS	
✓ Green 37	81AJW3762	Neg	2013	M				N. Brown	
✓ Green 40	YNP930797	Neg	2012	M				Royle	
SN1		Neg	2010	M				Died 11/1/2016...trauma	
✓ Prp 4R2		Neg	2014	M				Royle	→ Bull's

Bulls June 2016

BANGLE TAG	EARTAG	Sero-stat	Age/DOB	SEX	Old Eartag	BLED	Deworm	Disposition
Green 19			2011	M	✓	✓	✓	insect
Green 28			2012	M		✓	✓	insect
Green 29			2011	M		✓	✓	insect
Green 31			2012	M		✓	✓	insect
Green 32			2012	M		✓	✓	insect
Green 33			2012	M		✓	✓	insect
Green 34			2013	M		✓	✓	poor
Green 37			2013	M		✓	✓	poor
Green 40			2012	M		✓	✓	insect - Hernia 1st side
SN1			2010	M		✓	✓	poor
Red 4R2			2014	M		✓	✓	poor - possibly

→ not @ SNS

SN1, G29 + G37 control #2
 G19, G40 + G28 control #1
 G32, G34 ~~G28~~ SNS trt. 1
 G31, G33 + 4R2 trt. #2 Trp

Bulls

BackTag	Bangle Tag	EARTAG	DATE Rec'd	Sero-status	Age/DOB	SEX	Test Date	Card	BAPA	FPA
	81AJW3756	Green 28	✓	Neg		M	7/17/2014	Neg	Neg	Neg
	81AJW3756	Green 28	✓	Neg		M	4/29/2014	Neg	Neg	Neg
	81AJW3756	Green 28	✓	Neg		M	3/18/2014	Neg	Neg	Neg
81VJ6615	81AJW3756	Green 28	2/19/2014	Neg	2, 2012	M	2/19/2014			Neg
	81AJW3761	Green 33		Neg		M	7/17/2014	Neg	Neg	Neg
	81AJW3761	Green 33		Neg		M	4/29/2014	Neg	Neg	Neg
	81AJW3761	Green 33	✓	Neg		M	3/18/2014	Neg	Neg	Neg
81VJ6598	81AJW3761	Green 33	2/19/2014	Neg	2, 2012	M	2/19/2014			Neg
	81AJW3762	Green 37		Neg		M	7/17/2014	Neg	Neg	Neg
	81AJW3762	Green 37	✓	Neg		M	4/29/2014	Neg	Neg	Neg
	81AJW3762	Green 37		Neg		M	3/18/2014	Neg	Neg	Neg
81VJ6290	81AJW3762	Green 37	2/15/2014	Neg	1, 2013	M	2/15/2014			Neg
		Green 31		Neg		M	9/26/2014	n/a	Neg	Neg
	81AJW3766	Green 31		Neg		M	7/17/2014	Neg	Pos	Neg
	81AJW3766	Green 31	✓	Neg		M	4/29/2014	Neg	Neg	Neg
	81AJW3766	Green 31		Neg		M	3/18/2014	Neg	Neg	Neg
81VJ6580	81AJW3766	Green 31	2/19/2014	Neg	2, 2012	M	2/19/2014			Neg
	81AJW3768	Green 34		Neg		M	7/17/2014	Neg	Neg	Neg
	81AJW3768	Green 34	✓	Neg		M	4/29/2014	Neg	Neg	Neg
	81AJW3768	Green 34		Neg		M	3/18/2014	Neg	Neg	Neg
81VJ6737	81AJW3768	Green 34	2/26/2014	Neg	1, 2013	M	2/26/2014	Neg		Neg
		Green 32		Neg		M	9/26/2014	n/a	Neg	Neg
	81AJW3770	Green 32		Neg		M	7/17/2014	Neg	Neg	Neg
	81AJW3770	Green 32	✓	Neg		M	4/29/2014	Neg	Neg	Neg
	81AJW3770	Green 32		Neg		M	3/18/2014	Neg	Neg	Neg
81VJ6570	81AJW3770	Green 32	2/19/2014	Neg	2, 2012	M	2/19/2014			Neg
		Green 19		Neg		M	9/26/2014	n/a	Neg	Neg
	YNP110253	Green 19		Neg		M	7/17/2014	Neg	Neg	Neg
	YNP110253	Green 19	✓	Neg		M	4/29/2014	Neg	Neg	Neg
	YNP110253	Green 19		Neg		M	3/18/2014	Neg	Neg	Neg
81VJ6808	YNP110253	Green 19	3/4/2014	Neg	3, 2011	M	3/4/2014	Neg		Neg
		Green 29		Sus		M	9/26/2014	n/a	Neg	Neg
	YNP110288	Green 29	✓	Neg		M	7/17/2014	Neg	Neg	Neg

	YNP110288	Green 29	Neg					
	YNP110288	Green 29	Neg					
81VJ6845	YNP110288	Green 29	3/5/2014 Neg	3, 2011	M	4/29/2014 Neg	Neg	Neg
	YNP930792	Green 40	Neg		M	3/18/2014 Neg	Neg	Neg
	YNP930792	Green 40	Neg		M	3/5/2014 Neg	Neg	Neg
	YNP930792	Green 40	Neg		M	7/17/2014 Neg	Neg	Neg
81VJ6647	YNP930792	Green 40	2/25/2014 Neg	2, 2012	M	4/29/2014 Neg	Neg	Neg
	81ALC6494	SN2	5/8/2012 Neg	5, 2009	M	3/18/2014 Neg	Neg	Neg
	81APF6494	SN2	Neg	5, 2009	M	2/25/2014 Neg	Neg	Neg
	81ALC6494	SN2	Neg		M	9/26/2014 n/a	Neg	Neg
	81APF6648	SN1	5/8/2012 Neg	2009	M	7/24/2014 N	Neg	Neg
	81APF6648	SN1	Neg	4, 2010	M	10/24/2013 N	Neg	Neg
	81APF6648	SN1	Neg		M	7/24/2014 N	Neg	Neg
	81APF6598	SN2	Neg		M	10/24/2013 N	Neg	Neg
	81APF6494	SN2	Neg		M	7/24/2013 N	Neg	Neg
	81APF6648	SN1	Neg		M	7/24/2013 N	Neg	Neg
			Neg		M	10/11/2012 n/a	Neg	Neg
			Neg		M	10/11/2012 n/a	Neg	Neg

Jan 8, 2013

	A	B	C	D	E	F	G	H	I	J	K	L
	BANGLE TAG	EARTAG	Sero-stat	Age/DOB	SEX	Old Eartag	Bled	Vag. Swab	Preg?	Deworm	Implant	Sniff?
x	2	Green 08	YNP930648	NEG	4, 2009	F	✓	✓	✓		.183✓	✓
x	3	Green 09	YNP930755	NEG	3, 2010	F	✓	✓	✓		.702✓	✓
x	4	Green 10	YNP930626	NEG	4, 2009	F	✓	✓	✓		.542✓	✓
x	5	Green 14	YNP930725	NEG	4, 2009	F	✓	✓	✓	.052✓	.621✓	✓
x	6	Green 15	YNP930634	NEG	3, 2010	F	✓	✓	✓		.132✓	✓
x	7	Red 03	YNP930689	POS	4, 2009	F	✓	✓	✓		.162✓	✓
x	8	Red 06	YNP930287	POS	3, 2010	F	✓	✓	✓		.572✓	✓
x	9	Red 07	YNP930773	POS	4, 2009	F	✓	✓	✓		.193✓	✓
x	10	Red 08	YNP930761	POS	4, 2009	F	✓	✓	✓			✓
x	11	Red 09	YNP930760	POS	2, 2011	F	✓	✓	open			✓
x	12	Red 13	YNP930737	POS	3, 2010	F	✓	✓	✓	Warts	.692✓	✓
x	13	Red 15	YNP930706	POS	3, 2010	F	✓	✓	No : Albin?		.333✓	✓
x	14	Red 16	YNP930684	POS	3, 2010	F	✓	✓	open		.752✓	✓
x	15	Red 17	YNP930588	POS	3, 2010	F	✓	✓	✓		.582✓	✓
x	16	Red 18	YNP930776	POS	4, 2009	F	✓	✓	✓		.301✓	✓
x	17	Red 21	YNP930763	POS	4, 2009	F	✓	✓	✓		.041✓	✓
x	18	Red 22	YNP930673	POS	4, 2009	F	✓	✓	✓		.633✓	✓
x	19	Red 25	YNP930778	POS	4, 2009	F	✓	✓	✓			✓
x	20	Red 30	YNP930568	POS	3, 2010	F	✓	✓	✓			✓
	21											
	22											
	23											
	24											
	25											
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	27											

.621✓

151. ~~853~~

	A	B	C	D	E	F	G	H	I	J	K	L
1	BANGLE TAG	EARTAG	Sero-stat	Age/DOB	SEX	Old Eartag	Bled	Vag. Swab	Preg?	Deworm	Implant	Sniff?
2	Green 08	YNP930648	NEG	5, 2009	F		✓	✓	✓	✓	.833	le -
3	Green 09	YNP930755	POS	4, 2010	F		✓	✓	✓	✓	—	—
4	Green 10	YNP930626	POS	5, 2009	F		✓	✓	✓	✓	.262 ?	7 +
5	Green 14	YNP930725	NEG P	5, 2009	F		✓	✓	✓	✓	.134 .143	9 -
6	Green 15	YNP930634	POS	4, 2010	F		✓	✓	✓	✓	.134	9 -
7	Red 03	YNP930689	POS	5, 2009	F		✓	✓	✓	✓	.243	10 +
8	Red 06	YNP930287	POS	4, 2010	F		✓	✓	✓	✓	.102	11 -
9	Red 07	YNP930773	POS	5, 2009	F		✓	✓	✓	✓	.252	12 -
10	Red 08	YNP930761	POS	5, 2009	F		✓	✓	✓	✓	.152	13 -
11	Red 09	YNP930760	POS	3, 2011	F		✓	✓	✓	✓	—	—
12	Red 13	YNP930737	POS	4, 2010	F		✓	✓	✓	✓	—	14 +
13	Red 15	YNP930706	POS	4, 2010	F		✓	✓	✓	✓	.204	Colontar 14 - Dead
14	Red 16	YNP930684	POS	4, 2010	F		✓	✓	✓	✓	.043	15 -
15	Red 17	YNP930588	POS	4, 2010	F		✓	✓	✓	✓	—	—
16	Red 18	YNP930776	POS	5, 2009	F		✓	✓	✓	✓	—	—
17	Red 20	YNP930678	POS	5, 2009	F		✓	✓	✓	✓	—	—
18	Red 21	YNP930763	POS	5, 2009	F		✓	✓	✓	✓	.213	16 -
19	Red 22	YNP930673	POS	5, 2009	F		✓	✓	✓	✓	.193 (193)	17 -
20	Red 25	YNP930778	POS	5, 2009	F		✓	✓	✓	✓	.053	18 +
21	Red 24	YNP930636	POS	5, 2009	F		✓	✓	✓	✓	.093	19 +
22	Red 26	YNP930202	POS	5, 2009	F		✓	✓	✓	✓	—	—
23	Red 30	YNP930568	POS	4, 2010	F		✓	✓	✓	✓	—	—
24	3748				M	845	✓			✓		CO
25	3748				M	842	✓			✓		
26	3726				M	844	✓			✓		
27	3730				M	843	✓			✓		
28	3721				F	846	✓			✓		
29	3725				M	847	✓			✓		
30	3727				M	849	✓			✓		CO
	3608				F	840	✓			✓		Here
	3722				F	850	✓			✓		Here
	3724				M	858	✓			✓		CO
	3614				F	857	✓			✓		Here
	3720				F	854	✓			✓		Here

-420
3788 F 855

	A	B	C	D	E	F	G	H	I	J	K
1	BANGLE TAG	EARTAG	Sero-stat	Age/DOB	SEX	Old Eartag	Bled	Vag. Swab	Preg?	Deworm	Implant
2	Green 08	YNP930648	NEG	5, 2009	F		X	✓			
3	Green 09	YNP930755	POS	4, 2010	F		X	✓			
4	Green 10	YNP930626	POS	5, 2009	F		X				
5	Green 14	YNP930725	NEG	5, 2009	F		X				
6	Green 15	YNP930634	POS	4, 2010	F		X				
7	Red 03	YNP930689	POS	5, 2009	F		X				
8	Red 06	YNP930287	POS	4, 2010	F		X				
9	Red 07	YNP930773	POS	5, 2009	F		X				
10	Red 08	YNP930761	POS	5, 2009	F		X				
11	Red 09	YNP930760	POS	3, 2011	F		X	✓			
12	Red 13	YNP930737	POS	4, 2010	F		X			Warts	
13	Red 15	YNP930706	POS	4, 2010	F						
14	Red 16	YNP930684	POS	4, 2010	F		X				
15	Red 17	YNP930588	POS	4, 2010	F		X	✓			
16	Red 18	YNP930776	POS	5, 2009	F		X	✓			
17	Red 20	YNP930678	POS	5, 2009	F		X	✓			
18	Red 21	YNP930763	POS	5, 2009	F		X				
19	Red 22	YNP930673	POS	5, 2009	F		X				
20	Red 25	YNP930778	POS	5, 2009	F		X		Yes?		
21	Red 24	YNP930636	POS	5, 2009	F		X				
22	Red 26	YNP930202	POS	5, 2009	F		X	✓			
23	Red 30	YNP930568	POS	4, 2010	F						
24	Orng 3608			1, 2013	F		✓	✓			
25	Orng 3B22			1, 2013	F		✓	✓			
26	Orng 3614			1, 2013	F		✓	✓			
27	Orng 3R20			1, 2013	F		✓	NO, not real	- 4/27 - fecal + vag swab		
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29											
30											

	A	B	C	D	E	F	G	H	I	J	K
1	BANGLE TAG	EARTAG	Sero-stat	Age/DOB	SEX	Old Eartag	Bled	Vag. Swab	Preg?	Deworm	Implant
2	Green 08	YNP930648	NEG	5, 2009	F	EED ✓	✓	✓	✓	*	151.043
3	Green 09	YNP930755	POS	4, 2010	F	EED ✓	✓	✓	✓		151.022
4	Green 10	YNP930626	POS	5, 2009	F	EED ✓	✓	✓	✓		151.073
5	Green 14	YNP930725	NEG	5, 2009	F	EED ✓	✓	✓	✓	*	151.033
6	Green 15	YNP930634	POS	4, 2010	F	EED ✓	✓	✓	✓		151.113
7	Red 03	YNP930689	POS	5, 2009	F	EED ✓	✓	✓	✓	*	151.262
8	Red 06	YNP930287	POS	4, 2010	F	EED ✓	✓	✓	✓	*	151.143
9	Red 07	YNP930773	POS	5, 2009	F	EED ✓	✓	✓	✓		151.123
10	Red 08	YNP930761	POS	5, 2009	F	EED ✓	✓	✓	✓		151.222
11	Red 09	YNP930760	POS	3, 2011	F	EED ✓	✓	✓	✓		151.203
12	Red 13	YNP930737	POS	4, 2010	F	EED ✓	✓	✓	✓	Warts *	151.093
13	Red 15	YNP930706	POS	4, 2010	F						
14	Red 16	YNP930684	POS	4, 2010	F	EED ✓	✓	✓	✓		151.063
15	Red 17	YNP930588	POS	4, 2010	F	EED ✓	✓	✓	NO		
16	Red 18	YNP930776	POS	5, 2009	F	EED ✓	✓	✓	✓		151.163
17	Red 20	YNP930678	POS	5, 2009	F	EED ✓	✓	✓	✓	*	151.252
18	Red 21	YNP930763	POS	5, 2009	F	EED ✓	✓	✓	✓	*	151.152
19	Red 22	YNP930673	POS	5, 2009	F	EED ✓	✓	✓	✓	*	151.233
20	Red 25	YNP930778	POS	5, 2009	F	EED ✓	✓	✓	NO		
21	Red 24	YNP930636	POS	5, 2009	F	EED ✓	✓	✓	✓	*	151.243
22	Red 26	YNP930202	POS	5, 2009	F	EED ✓	✓	✓	✓		151.173
23	Red 30	YNP930568	POS	4, 2010	F						
24	4608	Negative		2014	F	CD New 953	✓				Keep
25	4203				M	CD New 951	✓				Keep (C)
26	4206	not Ag 2013			F	New 955	✓				Keep
27	4207				M	950	✓				Keep (C)
28	4213				F	New CD 958	✓				Keep
29	4216	- Abort 1st 2013			F	957	✓				Keep CO
30	4221				F	952	✓				Keep (C)
31	4222	neg			F	959	✓				Keep
32	4224	GC			F	952	✓				Keep CO

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Paul's 16

get culture results 12

	A	B	C	D	E	F	G	H	I	J	K
1	BANGLE TAG	EARTAG	Sero-stat	Age/DOB	SEX	EID	Bled	Vag. Swab	Preg?	Deworm	Implant
2	Green 08	YNP930648	NEG	5, 2009	F						
3	Green 09	YNP930755	POS	4, 2010	F						
4	Green 10	YNP930626	POS	5, 2009	F						
5	Green 14	YNP930725	POS	6, 2009	F						
6	Green 15	YNP930634	POS	5, 2010	F						
7	Red 03	YNP930689	POS	6, 2009	F						
8	Red 06	YNP930287	POS	5, 2010	F						
9	Red 07	YNP930773	POS	6, 2009	F						
10	Red 08	YNP930761	POS	6, 2009	F						
11	Red 09	YNP930760	POS	4, 2011	F						
12	Red 13	YNP930737	POS	5, 2010	F					Warts	
13	Red 15	YNP930706	POS	5, 2010	F						
14	Red 16	YNP930684	POS	5, 2010	F						
15	Red 17	YNP930588	POS	5, 2010	F						
16	Red 18	YNP930776	POS	6, 2009	F						
17	Red 20	YNP930678	POS	6, 2009	F						
18	Red 21	YNP930763	POS	6, 2009	F						
19	Red 22	YNP930673	POS	6, 2009	F						
20	Red 25	YNP930778	POS	6, 2009	F						
21	Red 24	YNP930636	POS	6, 2009	F						
22	Red 26	YNP930202	POS	6, 2009	F						
23	Red 30	YNP930568	POS	5, 2010	F						
24	Lav 4G8			1, 2014	F	344953					
25	Lav 4R6			1, 2014	F	344955					
26	Lav 4R13			1, 2014	F	344954					
27	Lav 4R22			1, 2014	F	344959					
28	5G9				F						
29	*5G09				F						
30											

DEAD 5/11/15 - Tapic - dead fetus

CPS 17

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	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	BANGLE TAG	EARTAG	Sero-stat	Age/DOB	SEX	Old Eartag	Bled	Vag. Swab	Preg?	Deworm	Implant	Disposition		
2	Green 08	YNP930648	NEG	5, 2009	F		✓	✓	✓	✓	150.562	SNS		18
3	Green 09	YNP930755	POS	4, 2010	F		✓	✓	✓	✓	151.233	SNS		19
4	Green 10	YNP930626	POS	5, 2009	F							SNS	DEAD 5/21/15	
5	Green 14	YNP930725	NEG	5, 2009	F		✓	✓	✓	✓	150.572	SNS		20
6	Green 15	YNP930634	POS	4, 2010	F		✓	✓	✓	✓	150.642	SNS		21
7	Red 03	YNP930689	POS	5, 2009	F		✓	✓	✓	✓	151.281	SNS		22
8	Red 06	YNP930287	POS	4, 2010	F		✓	✓	✓	✓	150.183	SNS	late calving	23
9	Red 07	YNP930773	POS	5, 2009	F		✓	✓	✓	✓	150.621	SNS		24
10	Red 08	YNP930761	POS	5, 2009	F		✓	✓	✓	✓	151.253	SNS		25
11	Red 09	YNP930760	POS	3, 2011	F		✓	✓	✓	✓	151.323	SNS		26
12	Red 13	YNP930737	POS	4, 2010	F		✓	✓	✓	✓	150.802	SNS		27
13	Red 15	YNP930706	POS	4, 2010	F							SNS	DEAD	
14	Red 16	YNP930684	POS	4, 2010	F		✓	✓	✓	✓	151.302	SNS		28
15	Red 17***	YNP930588	POS	4, 2010	F		✓	✓	?	✓		SNS	CO	
16	Red 18	YNP930776	POS	5, 2009	F		✓	✓	✓	✓	150.932	SNS		29
17	Red 20	YNP930678	POS	5, 2009	F		✓	✓	✓	✓	150.552	SNS		30
18	Red 21	YNP930763	POS	5, 2009	F		✓	✓	✓	✓	150.662	SNS		31
19	Red 22	YNP930673	POS	5, 2009	F		✓	✓	✓	✓	151.022	SNS		32
20	Red 24	YNP930636	POS	5, 2009	F		✓	✓	✓	✓	151.314	SNS		33
21	Red 25	YNP930778	POS	5, 2009	F		✓	✓	✓	✓		SNS	abnormal uterus may have aborted	
22	Red 26	YNP930202	POS	5, 2009	F		✓	✓	✓	✓	150.923	SNS		34
23	Red 30	YNP930568	POS	4, 2010	F							SNS	DEAD	
24	5G08			2015	M		✓			✓			709	MT
25	5G09			2015	F		✓			✓			704	MT
26	5G15			2015	M		✓			✓			702	MT
27	5R03			2015	F		✓			✓	840003003405		700	
28	5R07			2015	M		✓			✓			706	
29	5R13			2015	F		✓			✓			703	
30	5R16			2015	F		✓			✓			701	
31	5R18			2015	F		✓			✓			705	
32	5R22			2015	M		✓			✓			707	MT
33	5R26			2015	M		✓			✓			708	

18+

GC Control 1

Jan 2017

Matt

18/15

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	BANGLE TAG	EARTAG	Sero-stat	Age/DOB	SEX	Old Eartag	Bled	Vag. Swab	Preg?	Deworm	Implant	Disposition		
2	Green 08	YNP930648	NEG	5, 2009	F		✓	✓	Y	✓	151.042			
3	Green 09	YNP930755	POS	4, 2010	F							DEAD 6/21/16		
4	Green 10	YNP930626	POS	5, 2009	F							DEAD 5/21/15		
5	Green 14	YNP930725	NEG	5, 2009	F		✓	✓	Y	✓	151.723			
6	Green 15	YNP930634	POS	4, 2010	F		✓	✓	Y	✓	150.912			
7	Red 03	YNP930689	POS	5, 2009	F		✓	✓	Y	✓	150.902			
8	Red 06	YNP930287	POS	4, 2010	F		✓	✓	N	✓				
9	Red 07	YNP930773	POS	5, 2009	F		✓	✓	Y	✓	151.263			
10	Red 08	YNP930761	POS	5, 2009	F		✓	✓	Y	✓	151.762			
11	Red 09	YNP930760	POS	3, 2011	F		✓	✓	Y	✓	151.003			
12	Red 13	YNP930737	POS	4, 2010	F		✓	✓	Y	✓	150.892			
13	Red 15	YNP930706	POS	4, 2010	F							DEAD		
14	Red 16	YNP930684	POS	4, 2010	F		✓	✓	Y	✓	150.682			
15	Red 17	YNP930588	POS	4, 2010	F				NOx4			CO		
16	Red 18	YNP930776	POS	5, 2009	F		✓	✓	Y	✓	150.612			
17	Red 20	YNP930678	POS	5, 2009	F		✓	✓	Y	✓	150.652			
18	Red 21	YNP930763	POS	5, 2009	F		✓	✓	Y	✓	150.602			
19	Red 22	YNP930673	POS	5, 2009	F		✓	✓	Y	✓	150.674			
20	Red 24	YNP930636	POS	5, 2009	F		✓	✓	Y	✓	151.635			
21	Red 25	YNP930778	POS	5, 2009	F							probable early abortion 2015		
22	Red 26	YNP930202	POS	5, 2009	F		✓	✓	Y	✓	150.514			
23	Red 30	YNP930568	POS	4, 2010	F							DEAD		
24	5G08			2015	M		✓				240 003 003405 709			
25	5G09			2015	F		✓	✓						
26	5G15			2015	M		✓				510 003 003405 717			
27	5R22			2015	M		✓							

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1440-686-680 on top

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(12)

Jan 9, 2013

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	BANGLE TAG	EARTAG	Sero-stat	Age/DOB	SEX	Old Eartag	bled	Vag. Swab	Preg?	Disposition	Deworm	Implant	Sniff?
2	Green 02	YNP930702	NEG	3, 2010	F		✓	✓	✓	Frank's	✓	641✓	✓
3	Green 03	YNP930731	NEG	3, 2010	F		✓	✓	✓	Frank's	✓	551✓	✓
4	Green 04	YNP930625	NEG	4, 2009	F		✓	✓	open	Frank's	✓	—	✓
5	Green 06	YNP930754	NEG	3, 2010	F		✓	✓	open	Frank's	✓	—	✓
6	Green 17	YNP930627	NEG	4, 2009	F		✓	✓	✓	Frank's	✓	050✓	✓
7	Red 01	YNP930472	POS	3, 2010	F		✓	✓	—	Frank's	✓	—	✓
8	Red 02	YNP930705	SUS	3, 2010	F		✓	✓	—	Frank's	✓	—	✓
9	Red 04	YNP930759	POS	4, 2009	F		✓	✓	—	Frank's	✓	—	✓
10	Red 05	YNP930697	POS	3, 2010	F		✓	✓	—	Frank's	✓	—	✓
11	Red 11	YNP930777	POS	3, 2010	F		✓	✓	—	Frank's	✓	—	✓
12	Red 14	YNP930150	POS	3, 2010	F		✓	✓	—	Frank's	✓	—	✓
13	Red 19	YNP930762	POS	3, 2010	F		✓	✓	—	Frank's	✓	—	✓
14	Red 20	YNP930678	POS	4, 2009	F		✓	✓	✓	Frank's	✓	720✓	✓
15	Red 23	YNP930667	POS	4, 2009	F		✓	✓	—	Frank's	✓	—	✓
16	Red 24	YNP930636	POS	4, 2009	F		✓	✓	✓	Frank's	✓	801✓	✓
17	Red 26	YNP930202	POS	4, 2009	F		✓	✓	✓	Frank's	✓	662✓	✓
18	Red 27	YNP930454	POS	4, 2009	F		✓	✓	—	Frank's	✓	—	✓
19	Red 28	YNP930575	POS	4, 2009	F		✓	✓	—	Frank's	✓	—	✓
20	Red 29	YNP930406	POS	4, 2009	F		✓	✓	—	Frank's	✓	—	✓
21	Red 31	YNP930696	POS	3, 2010	F	Green 05	✓	✓	—	Frank's	✓	—	✓
22													
23													
24													
25													
26													
27													
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150.

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	BANGLE TAG	EARTAG	Sero-stat	Age/DOB	SEX	Old Eartag	BLED	Vag. Swab	Preg?	Deworm	Implant	Disposition	Sniff?
2	Green 02	YNP930702	NEG	4, 2010	F		✓	✓	Y	✓	1.720	Frank's	7205
3	Green 03	YNP930731	NEG	4, 2010	F		✓	✓	Y	✓	—	Frank's	
4	Green 04	YNP930625	NEG	5, 2009	F		✓	✓	Y	✓	1.033	Frank's	
5	Green 06	YNP930754	NEG	4, 2010	F		✓	✓	Y	✓	.551	Frank's	
6	Green 17	YNP930627	NEG	5, 2009	F		✓	✓	Y	✓	.572	Frank's	5717
7	Red 01	YNP930472	POS	4, 2010	F		✓	✓	Y	✓	—	Frank's	
8	Red 02	YNP930705	SUS	4, 2010	F		✓	✓	Y	✓	.662	Frank's	6617
9	Red 04	YNP930759	POS	5, 2009	F		✓	✓	Y	✓	—	Frank's	
10	Red 05	YNP930697	POS	4, 2010	F		✓	✓	Y	✓	—	Frank's	
11	Red 11	YNP930777	POS	4, 2010	F		✓	✓	Y	✓	—	Frank's	
12	Red 14	YNP930150	POS	4, 2010	F		✓	✓	Y	✓	—	Frank's	
13	Red 19	YNP930762	POS	4, 2010	F		✓	✓	Y	✓	—	Frank's	
14	Red 23	YNP930667	POS	5, 2009	F		✓	✓	Y	✓	—	Frank's	Dead Tissue
15	Red 27	YNP930454	POS	5, 2009	F		✓	✓	Y	✓	—	Frank's	
16	Red 28	YNP930575	POS	5, 2009	F		✓	✓	Y	✓	—	Frank's	
17	Red 29	YNP930406	POS	5, 2009	F		✓	✓	Y	✓	—	Frank's	
18	Red 31	YNP930696	POS	4, 2010	F	Green 05	✓	✓	Y	✓	—	Frank's	—
19	03603			2013	F		✓		Y	✓	—		
20	03602	no eartag		2013	M	418	✓		Y	✓	—		CO
21	03617			2013	F		✓		Y	✓	—		
22													
23													
24													
25													

• Gun 124 Bleed/Deworm

• Gun 014

• Red 10 - CO

• Gun 184

• Red 12 - CO

• Gun 13

• Gun 115

• Gun 07.4

008222

106

21
17
— 38 swabs
13 } Bleed
38
10
— 61
99-8

Rigler

GONACON June 17, 2014

	A	B	C	D	E	F	G	H	I	J	K	L
1	BANGLE TAG	EARTAG	Sero-stat	Age/DOB	SEX	Old Eartag	BLED	Vag. Swab	Preg?	Deworm	Implant	Disposition
2	Green 02	YNP930702	NEG	4, 2010	F		X					Frank's
3	Green 03	YNP930731	NEG	4, 2010	F		✓	✓				Frank's
4	Green 04	YNP930625	NEG	5, 2009	F		X					Frank's
5	Green 06	YNP930754	NEG(sus)	4, 2010	F		X					Frank's
6	Green 17	YNP930627	NEG	5, 2009	F		X					Frank's
7	Red 01	YNP930472	POS	4, 2010	F		✓	✓				Frank's
8	Red 02	YNP930705	SUS	4, 2010	F		X					Frank's
9	Red 04	YNP930759	POS	5, 2009	F		✓	✓				Frank's
10	Red 05	YNP930697	POS	4, 2010	F		X					Frank's
11	Red 11	YNP930777	POS	4, 2010	F		✓	✓				Frank's
12	Red 14	YNP930150	POS	4, 2010	F		✓	✓				Frank's
13	Red 19	YNP930762	POS	4, 2010	F		✓	✓				Frank's
14	Red 23	YNP930667	POS	5, 2009	F							Frank's
15	Red 27	YNP930454	POS	5, 2009	F		✓	✓				Frank's
16	Red 28	YNP930575	POS	5, 2009	F		✓	✓				Frank's
17	Red 29	YNP930406	POS	5, 2009	F		✓	✓				Frank's
18	Red 31	YNP930696	POS	4, 2010	F	Green 05	✓	✓				Frank's
19	Orig 3603			4, 2013	F		✓	✓				
20	Orig 3617			4, 2013	F		✓	✓				
21												
22												
23												
24												
25												

	A	B	C	D	E	F	G	H	I	J	K	L
1	BANGLE TAG	EARTAG	Sero-stat	Age/DOB	SEX	Old Eartag	BLED	Vag. Swab	Preg?	Deworm	Implant	Disposition
2	Green 02	YNP930702	NEG	4, 2010	F		✓	✓	✓		150.043	Frank's
3	Green 03	YNP930731	NEG	4, 2010	F		✓	✓	✓		150.183	Frank's
4	Green 04	YNP930625	NEG	5, 2009	F		✓	✓	✓		150.572	Frank's
5	Green 06	YNP930754	NEG(sus)	4, 2010	F		✓	✓	✓		151.281	Frank's
6	Green 17	YNP930627	NEG	5, 2009	F		✓	✓	✓		151.294	Frank's
7	Red 01	YNP930472	POS	4, 2010	F		✓	✓	✓		—	Frank's
8	Red 02	YNP930705	SUS	4, 2010	F		✓	✓	✓		150.332	Frank's
9	Red 04	YNP930759	POS	5, 2009	F		✓	✓	✓		—	Frank's
10	Red 05	YNP930697	POS	4, 2010	F		✓	✓	✓		—	Frank's
11	Red 11	YNP930777	POS	4, 2010	F		✓	✓	✓		—	Frank's
12	Red 14	YNP930150	POS	4, 2010	F		✓	✓	✓		150.723	Frank's
13	Red 19	YNP930762	POS	4, 2010	F		✓	✓	✓		—	Frank's
14	Red 23	YNP930667	POS	5, 2009	F							Frank's
15	Red 27	YNP930454	POS	5, 2009	F	✓	✓	✓	✓		—	Frank's
16	Red 28	YNP930575	POS	5, 2009	F	✓	✓	✓	✓		—	Frank's
17	Red 29	YNP930406	POS	5, 2009	F	✓	✓	✓	✓		—	Frank's
18	Red 31	YNP930696	POS	4, 2010	F	Green 05	✓	✓	✓		—	Frank's
19	46102			2014	M	620	✓					Keep
20	46106	Orange		2014	M	618/619	✓					CO
21	46117			↓	F	619	✓					CO
22	46102			↓	M	622						Keep
23	36103			2013	F		✓	✓	✓		—	↓
24	36117			2013	F		✓	✓	✓		—	↓
25												

84003003405-618

	A	B	C	D	E	F	G	H	I	J	K	L
1	BANGLE TAG	EARTAG	Sero-stat	Age/DOB	SEX	Old Eartag	BLED	Vag. Swab	Preg?	Deworm	Implant	Disposition
2	Green 02	YNP930702	NEG	4, 2010	F							Frank's
3	Green 03	YNP930731	NEG	4, 2010	F							Frank's
4	Green 04	YNP930625	NEG	5, 2009	F							Frank's
5	Green 06	YNP930754	NEG(sus)	4, 2010	F							Frank's
6	Green 17	YNP930627	NEG	5, 2009	F							Frank's
7	Red 01 ✓	YNP930472	POS	4, 2010	F							Frank's
8	Red 02 ✓	YNP930705	SUS	4, 2010	F							Frank's
9	Red 04 ✓	YNP930759	POS	5, 2009	F							Frank's
10	Red 05 ✓	YNP930697	POS	4, 2010	F							Frank's
11	Red 11 ✓	YNP930777	POS	4, 2010	F							Frank's
12	Red 14 ✓	YNP930150	POS	4, 2010	F							Frank's
13	Red 19 ✓	YNP930762	POS	4, 2010	F							Frank's
14	Red 23 ✓	YNP930667	POS	5, 2009	F							Frank's
15	Red 27 ✓	YNP930454	POS	5, 2009	F							Frank's
16	Red 28 ✓	YNP930575	POS	5, 2009	F							Frank's
17	Red 29 ✓	YNP930406	POS	5, 2009	F							Frank's
18	Red 31 ✓	YNP930696	POS	4, 2010	F	Green 05						Frank's
19	3G03 ✓			2013	F							
20	3G17 ✓			2013	F							
21	4G02 ✓			2014	M							
22	4G06 ✓			2014	M							
23	4G17 ✓			2014	F							
24	4R02 ✓			2014	M							
25												

SG06 - Died - Gored include
lung punctured.

13
32
45

GONACON 1 January 2016

	A	B	C	D	E	F	G	H	I	J	K	L
1	BANGLE TAG	EARTAG	Sero-stat	Age/DOB	SEX	Old Eartag	BLED	Vag. Swab	Preg?	Deworm	Implant	Disposition
2	Green 02	YNP930702	NEG	4, 2010	F		✓	✓	Y	✓	150.052	Frank's
3	Green 03	YNP930731	NEG	4, 2010	F		✓	✓	Y	✓	150.542	Frank's
4	Green 04	YNP930625	NEG	5, 2009	F		✓	✓	Y	✓	150.723	Frank's
5	Green 06	YNP930754	NEG	4, 2010	F		✓	✓	Y	✓	150.082	Frank's
6	Green 17	YNP930627	NEG	5, 2009	F		✓	✓	Y	✓	150.982	Frank's
7	Red 01	YNP930472	POS	4, 2010	F		✓	✓	Z	✓		Frank's
8	Red 02	YNP930705	SUS	4, 2010	F		✓	✓	Z	✓	150.702	Frank's
9	Red 04	YNP930759	POS	5, 2009	F		✓	✓	Z	✓		Frank's
10	Red 05	YNP930697	POS	4, 2010	F		✓	✓	Z	✓		Frank's
11	Red 11	YNP930777	POS	4, 2010	F		✓	✓	Z	✓		Frank's
12	Red 14	YNP930150	POS	4, 2010	F		✓	✓	Z	✓		Frank's
13	Red 19	YNP930762	POS	4, 2010	F		✓	✓	Z	✓		Frank's
14	Red 23	YNP930667	POS	5, 2009	F							Frank's
15	Red 27	YNP930454	POS	5, 2009	F		✓	✓	Z	✓		Frank's
16	Red 28	YNP930575	POS	5, 2009	F		✓	✓	Z	✓		Frank's
17	Red 29	YNP930406	POS	5, 2009	F		✓	✓	Z	✓		Frank's
18	Red 31	YNP930696	POS	4, 2010	F	Green 05	✓	✓		✓		Frank's
19	5G03	was 5R14 x 2 in Red		2015	M		✓	✓		✓		MT
20	5G04		(713)	2015	F		✓	✓		✓		CO
21	5G17		(714)	2015	F		✓	✓		✓		CO
22	5R02			2015	F		✓	✓		✓		MT
23	5R14		(715)	2015	M		✓	✓		✓		CO
24												
25												

Chanel

1
2
3
4
5

6

5G17: Bled only partial lg. tube - no sm tube

	A	B	C	D	E	F	G	H	I	J	K	L
1	BANGLE TAG	EARTAG	Sero-stat	Age/DOB	SEX	Old Eartag	BLED	Vag. Swab	Preg?	Deworm	Implant	Disposition
2	Green 02	YNP930702	NEG	4, 2010	F		✓	✓				Frank's
3	Green 03	YNP930731	NEG	4, 2010	F		✓	✓				Frank's
4	Green 04	YNP930625	NEG	5, 2009	F		✓	✓				Frank's
5	Green 06	YNP930754	NEG	4, 2010	F		✓	✓				Frank's
6	Green 17	YNP930627	NEG	5, 2009	F		✓	✓				Frank's
7	Red 01	YNP930472	POS	4, 2010	F		✓	✓				Frank's
8	Red 02	YNP930705	SUS	4, 2010	F		✓	✓				Frank's
9	Red 04	YNP930759	POS	5, 2009	F		✓	✓				Frank's
10	Red 05	YNP930697	POS	4, 2010	F		✓	✓				Frank's
11	Red 11	YNP930777	POS	4, 2010	F		✓	✓				Frank's
12	Red 14	YNP930150	POS	4, 2010	F		✓	✓				Frank's
13	Red 19	YNP930762	POS	4, 2010	F		✓	✓				Frank's
14	Red 23	YNP930667	POS	5, 2009	F							Frank's
15	Red 27	YNP930454	POS	5, 2009	F		✓	✓				Frank's
16	Red 28	YNP930575	POS	5, 2009	F		✓	✓				Frank's
17	Red 29	YNP930406	POS	5, 2009	F		✓	✓				Frank's
18	Red 31	YNP930696	POS	4, 2010	F	Green 05	✓	✓				Frank's
19	5G03			2015 M		REPLACE TAGS June 2016! Has 2 Red 14 tags.						
20	5G04			2015 F								CO
21	5G17			2015 F								CO
22	5R02			2015 F			✓	✓				
23	5R14			2015 M								CO
24												
25												

S11+12B

11 + 12 = 35

GONACON 1 Jan 2017

all Excel 1/14 old records merged

	A	B	C	D	E	F	G	H	I	J	K	L
1	BANGLE TAG	EARTAG	Sero-stat	Age/DOB	SEX	Old Eartag	BLED	Vag. Swab	Preg?	Deworm	Implant	Disposition
2	Green 02	YNP930702	NEG	4, 2010	F		✓	✓	✓	✓	150.782	Frank's
3	Green 03	YNP930731	NEG	4, 2010	F		✓	✓	✓	✓	150.912	Frank's
4	Green 04	YNP930625	NEG	5, 2009	F		✓	✓	✓	✓	151.323	Frank's
5	Green 06	YNP930754	NEG	4, 2010	F		✓	✓	✓	✓	150.193	Frank's
6	Green 17	YNP930627	NEG	5, 2009	F		✓	✓	✓	✓	150.632	Frank's
7	Red 01	YNP930472	POS	4, 2010	F		✓	✓	✓	✓	151.452	Frank's
8	Red 02	YNP930705	SUS	4, 2010	F		✓	✓	✓	✓	150.723	Frank's
9	Red 04	YNP930759	POS	5, 2009	F		✓	✓	N	✓	—	Frank's
10	Red 05	YNP930697	POS	4, 2010	F		✓	✓	N	✓	—	Frank's
11	Red 11	YNP930777	POS	4, 2010	F		✓	✓	N	✓	—	Frank's
12	Red 14	YNP930150	POS	4, 2010	F		✓	✓	✓	✓	151.314	Frank's
13	Red 19	YNP930762	POS	4, 2010	F		✓	✓	N	✓	—	Frank's
14	Red 23	YNP930667	POS	5, 2009	F							Frank's
15	Red 27	YNP930454	POS	5, 2009	F		✓	✓	N	✓	—	Frank's
16	Red 28	YNP930575	POS	5, 2009	F		✓	✓	N	✓	—	Frank's
17	Red 29	YNP930406	POS	5, 2009	F		✓	✓	N	✓	—	Frank's
18	Red 31	YNP930696	POS	4, 2010	F	Green 05	✓	✓	N	✓	—	Frank's
19	5G03			2015	M	REPLACE TAGS June 2016! Has 2 Red 14 tags.					730	
20	5G04			2015	F							
21	5G17			2015	F							
22	5R02			2015	F		✓	733		✓		
23	5R14			2015	M							
24	6604		Keep		F		✓	728		✓		
25	6602				F		✓	729		✓		

6617
6R2

Keep

M
M✓ 731
✓ 732

(2)

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	BANGLE TAG	EARTAG	Sero-stat	Age/DOB	SEX	Old Eartag	BLED	Vag. Swab	Preg?	Deworm	Implant	Disposition	
2	Green 02	YNP930702	NEG	4, 2010	F							SNS	Calb
3	Green 03	YNP930731	NEG	4, 2010	F							Euthanized 4.2.17	
4	Green 04	YNP930625	NEG	5, 2009	F							SNS	Calb No calf-Dial
5	Green 06	YNP930754	NEG	4, 2010	F							SNS	Calb
6	Green 17	YNP930627	NEG	5, 2009	F							SNS	Calb
7	Red 01	YNP930472	POS	4, 2010	F							SNS	Calb
8	Red 02	YNP930705	SUS	4, 2010	F							SNS	Calb
9	Red 04 ✓	YNP930759	POS	5, 2009	F							SNS	Calb
10	Red 05 ✓	YNP930697	POS	4, 2010	F							SNS	
11	Red 11 ✓	YNP930777	POS	4, 2010	F							SNS	
12	Red 14 ✓	YNP930150	POS	4, 2010	F							SNS	Calb
13	Red 19 ✓	YNP930762	POS	4, 2010	F							SNS	
14	Red 23 ✓	YNP930667	POS	5, 2009	F							DEAD	
15	Red 27 ✓	YNP930454	POS	5, 2009	F							SNS	
16	Red 28 ✓	YNP930575	POS	5, 2009	F							SNS	
17	Red 29 ✓	YNP930406	POS	5, 2009	F							SNS	
18	Red 31 ✓	YNP930696	POS	4, 2010	F	Green 05						SNS	
19	5R02 ✓		Neg	2015	F							SNS	
20	6G04 ✓	840003003405728	NEG	2016	F							SNS	
21	6R2 ✓	840003003405732	NEG	2016	M							SNS	
22	6G02 ✓	840003003405729	NEG	2016	F							SNS	
23	6R22 ✓	840003003405719	NEG	2016	F							SNS	
24	6R07 ✓	840003003405686	NEG	2016	F							SNS	
25	6R320 ✓	840003003405689	NEG	2016	F							SNS	
26	6R73 ✓	840003003405693	NEG	2016	F							SNS	
27	6R01 ✓	840003003405720	Neg	2016	F							SNS	
28	7G02			2017	F								
29	7G04			2017	M								Calb skel 10/30
30	7G06			2017	F								
31	7G17			2017	M								
32	7R02			2017	M								
33	7R01			2017	M								
34	7R14			2017	F								
35													
36	no calf, need post calving sample												
37	Calved during study-can be removed from study, if no calf this year												
38													



MVDL

MONTANA VETERINARY DIAGNOSTIC LABORATORY

PO Box 997 Bozeman, MT 59771
1911 West Lincoln Street Bozeman, MT 59718
Website: www.liv.mt.gov/lab

Phone: (406)994-4883
Fax: (406)994-6344
Email: livdiagnosticlab@mt.gov

Accession # 8-373-15

Owner: USDA APHIS VS

Species: WILD - BISON

Breed: BISON

Name/No. 5R06

Age: 1 DAY Sex:

Date Sent: 04/28/2015

Date Received: 04/13/2015

Submitter: PATRICK RYAN CLARKE D.V.M.

(b) (6)

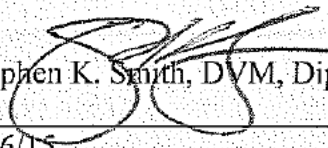
Final Report

Case Coordinator: SKS

CASE SUMMARY

4/28/15

ADDITIONAL INFORMATION: Bacterial cultures have been completed, and these results are attached to this final report. A specific cause of abortion for this animal was not identified. No significant infectious agents are present, and there was no morphologic evidence of pathologic processes.


Stephen K. Smith, DVM, Diplomate, ACVP/cto

4/16/15

REASON FOR SUBMISSION: Abortion

LABORATORY DIAGNOSIS:

Abortion: Undetermined cause

COMMENT: Histologic evaluation of the submitted specimens does not reveal an obvious cause of abortion for this animal. There is evidence of hepatocellular canalicular bile stasis but a specific cause for this change is not histologically apparent. There is no evidence of any specific infectious processes but bacterial cultures may provide additional diagnostic information and are currently pending. These results will be posted when available.

Stephen K. Smith, DVM, Diplomate, ACVP\mmm

Date In 04/15/2015

PATHOLOGY

Date Out: 04/16/2015

Released by: SKS

GROSS DESCRIPTION: This is the carcass of a near term, female, bison calf in good body condition with mild to moderate autolysis. A portion of the placenta is also submitted.

No significant gross changes are noted.

HISTOPATHOLOGY:

Liver: Many bile plugs are present with hepatocellular canaliculi throughout the examined sections (canalicular bile stasis).

Sections of heart, kidney, thymus, lung, spleen, diaphragm, placenta and small intestine are examined histologically and contain no significant microscopic changes.

MORPHOLOGIC DIAGNOSIS:

Liver: Moderate canalicular bile stasis

Date In 04/13/2015

BACTERIOLOGY

Date Out: 04/20/2015 Released by: mh

Brucella culture negative to date; plates will be held 10 days; report will be amended if culture is positive after 10 days.

Placenta Campylobacter culture overgrown with fungus; results inconclusive.

CULTURES

<u>Site</u>	<u>Specimen</u>	<u>Culture Type</u>	<u>Isolate</u>	<u>Growth</u>	<u>Antimicrobial Profile</u>
	lung	Aerobic	A mixed culture of non-pathogenic bacteria	3+	NA
	lung	Brucella	Negative for Brucella sp.		NA
	lung	Campylobacter	Negative for Campylobacter sp.		NA
	spleen	Aerobic	A mixed culture of non-pathogenic bacteria	1+	NA
	spleen	Brucella	Negative for Brucella sp.		NA
	spleen	Campylobacter	Negative for Campylobacter sp.		NA
	heart	Campylobacter	Negative for Campylobacter sp.		NA
	heart	Aerobic	A mixed culture of non-pathogenic bacteria	3+	NA
	heart	Brucella	Negative for Brucella sp.		NA
	thymus	Aerobic	A mixed culture of non-pathogenic bacteria	3+	NA
	thymus	Brucella	Negative for Brucella sp.		NA
	thymus	Campylobacter	Negative for Campylobacter sp.		NA
	placenta	Brucella	Negative for Brucella sp.		NA
	placenta	Aerobic	A mixed culture of non-pathogenic bacteria	4+	NA
	placenta	Campylobacter	Fungal overgrowth		NA
	liver	Aerobic	A mixed culture of non-pathogenic bacteria	2+	NA
	liver	Campylobacter	Negative for Campylobacter sp.		NA
	liver	Brucella	Negative for Brucella sp.		NA
	kidney	Brucella	Negative for Brucella sp.		NA
	kidney	Aerobic	A mixed culture of non-pathogenic bacteria	3+	NA
	kidney	Campylobacter	Negative for Campylobacter sp.		NA

1+ to 4+ = rare colony to confluent growth

P = pure culture, M = mixed or partially contaminated culture

MVDL Accession #
8-373-15

Submitter:
PATRICK RYAN CLARKE D.V.M.

Owner:
USDA APHIS VS

Fees

Bacteriology Fee	\$ 0.00
Pathology/Histology Fee	\$ 73.50
Accession Total Fee	<u>\$ 73.50</u>

(This is not a bill. Do not make payment from this report.)

INTERAGENCY AGREEMENT
between the
ANIMAL AND PLANT HEALTH INSPECTION SERVICE
and the
NATIONAL PARK SERVICE

ARTICLE I. BACKGROUND AND OBJECTIVES

This agreement is between the U.S. Department of Agriculture, Animal and Plant Health Inspection Service, Veterinary Services (APHIS) and the U.S. Department of Interior, National Park Service, Yellowstone National Park.

APHIS will conduct an experimental research study with bison from Yellowstone National Park to evaluate the use of assisted reproduction techniques as means of genetic preservation for bison that are infected with *Brucella abortus*. The rationale for this experiment is proof of the principle that brucellosis-free embryos can be generated using oocytes and semen from infected animals without transmission of disease to embryo recipients or offspring.

ARTICLE II. AUTHORITY FOR ENTERING INTO THIS AGREEMENT

The National Park Service authorities for entering into this agreement are 16 U.S.C. § 1 et seq., 16 U.S.C. § 3, and 16 U.S.C. § 36.

ARTICLE III. STATEMENT OF WORK

A. During the period of performance, up to 15 live bison (12 adult cows and 3 adult bulls) may be transferred by the National Park Service to APHIS from the Stephens Creek capture facility in Yellowstone National Park. The animals will be held by APHIS in fenced quarantine pastures in Corwin Springs, Montana prior to being transferred for use in a reproductive study at an affiliated research location (National Wildlife Research Center in Ft Collins, Colorado). APHIS will conduct an experimental research study with these bison to evaluate embryos, offspring, and recipients for transmission of brucellosis via embryo transfer when in vivo and in vitro produced embryos are generated from cows and bulls with various titers of *Brucella abortus*.

B. Additional Yellowstone bison may be transferred by the National Park Service to APHIS for this research study in subsequent years based on written bilateral modification of this agreement.

ARTICLE IV. TERM OF AGREEMENT

The period of performance of this agreement will be from March 1, 2014 through January 31, 2017 at which time both parties will review and evaluate the agreement for possible extension.

ARTICLE V. KEY OFFICIALS

National Park Service
Yellowstone Center for Resources
Rick Wallen, Wildlife Biologist
P.O. Box 168
Yellowstone National Park, WY 82190
307-344-2285
rick_wallen@nps.gov

Animal and Plant Health Inspection Service
Veterinary Services
Jack Rhyan, DVM
National Wildlife Research Center
Fort Collins, CO 80521
970-266-6140
Jack.C.Rhyan@aphis.usda.gov

ARTICLE VI. PAYMENT

A. The National Park Service will not charge APHIS a fee for the bison that are provided to it. The National Park Service cannot guarantee a specific number of bison to APHIS in any given year.

B. The National Park Service and APHIS will use their own respective funding sources to accomplish their respective tasks. The National Park Service will not pay for or provide equipment, funding, or personnel for bison transport or security to APHIS, or vice versa.

ARTICLE VII. PROPERTY MANAGEMENT AND DISPOSITION

A. APHIS will assume ownership of the bison in Yellowstone National Park once they are loaded, secured, and manifested into trailers or other vehicles appropriate for transporting bison.

ARTICLE VIII. REPORTS AND/OR OTHER DELIVERABLES

APHIS shall provide interim and final reports to the Key Official for the National Park Service on this agreement for all data collected during this study. All data collected by APHIS during this research study will be provided to the National Park Service in these reports or other data releases.

ARTICLE IX. MODIFICATION AND TERMINATION

A. This Agreement may be modified only by a written instrument executed by the parties.

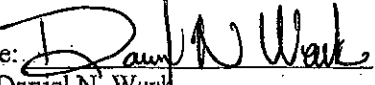
B. Either party may terminate this Agreement by providing the other party with thirty (30) days advance written notice. In the event that one party provides the other party with notice of its intention to terminate, the parties will meet promptly to discuss the reasons for the notice and to try to resolve their differences.


ARTICLE X. AUTHORIZING SIGNATURES

IN WITNESS WHEREOF, the parties hereto have signed their names and executed this Interagency Agreement.

National Park Service:

Animal and Plant Health Inspection Service:

Signature: 

Signature: 

Name: Daniel N. Wenk

Name: Jack Rhyun

Title: Superintendent, Yellowstone NP

Title: APHIS Veterinary Officer

Date: March 7, 2014

Date: March 5, 2014

Signature: _____

Name: Tina Holland

Title: Contracting Officer, Yellowstone NP

Date: March _____, 2014

Seronegative cows:

Removed from research pens to start quarantine process for conservation release. All or a portion may be transferred to the WiLDIT group for this purpose.

Seronegative calves/offspring:

Removed from research pens to start quarantine process for conservation release, all or a portion may be transferred to the WiLDIT group for this purpose for space. Due to accurate data on the sero-status of dam at birth, many female calves can be followed to learn significantly more about latency in bison during this process.

Seropositive Treatment cows:

After final calving year, will be euthanized and tissues collected for final culture data. Carcass will be buried in landfill.

Seropositive non-treatment cows:

Will be shipped to slaughter with tissues collected for final culture data. Carcass will be made available to the MT Food Bank, or if slaughtered in CO, proceeds from the sale to go to bison conservation.

Seropositive calves:

Any calves testing seropositive at 8 months of age can remain in the pens for further study, made available for other research or euthanized and samples collected at slaughter.

Timeline: The **first cohort of control animals** are due to be removed from the study in January 2018. None of the animals were given GonaCon, all are seropositive and will be shipped to slaughter where tissues will be collected. All seronegative offspring will be quarantined for conservation and may be transferred to WiLDIT for that purpose.

The **first cohort of treatment animals** have failed to all become pregnant, meaning that they have yet to complete the study. All negative cows could be removed, all positive cows that have

calved will be euthanized and tissues collected January 2018 and all non-pregnant treatment cows will be added to second treatment cohort until they calve.

The **second cohort of control animals** will calve 3 more years before ending the study in winter of 2020.

The **second cohort of treatment animals** will calve 2 years before ending the study in winter of 2019.

GONACON 1 Jan 2017

	A	B	C	D	E	F	G	H	I
1	BANGLE TAG	EARTAG	GonaCon	Sero-stat	Age/DOB	SEX	Pen/Disp		FINAL DISP
2	Green 02	YNP930702	No	NEG	7, 2010	F	SlipNSlide		Quarantine
3	Green 04	YNP930625	No	NEG	8, 2009	F	SNS		Quarantine
4	Green 06	YNP930754	No	NEG	7, 2010	F	SNS		Quarantine
5	Green 17	YNP930627	No	NEG	8, 2009	F	SNS		Quarantine
6	Red 01	YNP930472	Yes	POS	7, 2010	F	SNS		slaught/render Jan 2
7	Red 02	YNP930705	Yes	NEG**	7, 2010	F	SNS		slaught/render Jan 2
8	Red 04	YNP930759	Yes	POS	8, 2009	F	SNS		slaughter/render
9	Red 05	YNP930697	Yes	NEG**	7, 2010	F	SNS		slaughter/render
10	Red 11	YNP930777	Yes	SUS**	7, 2010	F	SNS		slaughter/render
11	Red 14	YNP930150	Yes	POS	7, 2010	F	SNS		slaught/render Jan 2
12	Red 19	YNP930762	Yes	POS	7, 2010	F	SNS		slaughter/render
13	Red 27	YNP930454	Yes	POS	8, 2009	F	SNS		slaughter Oct 2017
14	Red 28	YNP930575	Yes	POS	8, 2009	F	SNS		slaughter/render
15	Red 29	YNP930406	Yes	POS	8, 2009	F	SNS		slaughter Oct 2017
16	Red 31	YNP930696	Yes	NEG**	7, 2010	F	SNS		slaughter/render
17	5R02	840003003405733	No	Neg	2015	F	SNS		Quarantine
18	6G04	840003003405728	No	NEG	2016	F	SNS		Quarantine
19	6R2	840003003405732	No	NEG	2016	M	SNS		Quarantine
20	6G02	840003003405729	No	NEG	2016	F	SNS		Quarantine
21	6R22	840003003405719	No	NEG	2016	F	SNS		Quarantine
22	6R07	840003003405686	No	NEG	2016	F	SNS		Quarantine
23	R6320	840003003405689	No	NEG	2016	F	SNS		Quarantine
24	6R73	840003003405693	No	NEG	2016	F	SNS		Quarantine
25	6G01	840003003405720	No	Neg	2016	F	SNS		Quarantine
26	7G02		No	Neg	2017	F			Quarantine
27	7G06		No	Neg	2017	F			Quarantine
28	7G17		No	Neg	2017	M			Quarantine
29	7R02		No	Neg	2017	M			Quarantine
30	7R01		No	Neg	2017	M			Quarantine
31	7R14		No	Neg	2017	F			Quarantine

GC Control 1 June 2016

	A	B	C	D	E	F	G	H	I	J
1	BANGLE TAG	EARTAG	GonaCon	Sero-stat	Age/DOB	SEX	Pen/Disp			FINAL DISP
2	Green 08	YNP930648	No	Pos	8, 2009	F	Brogan South			Slaughter-Jan 2018
3	Green 14	YNP930725	No	Pos	8, 2009	F	BrSo			Slaughter-Aug 31, 2017
4	Red 03	YNP930689	No	POS	8, 2009	F	BrSo			Slaughter -Jan 2018
5	Red 06	YNP930287	No	POS	7, 2010	F	BrSo			Slaughter -Aug 31, 2017
6	Red 07	YNP930773	No	NEG**	8, 2009	F	BrSo			Slaughter -Jan 2018
7	Red 08	YNP930761	No	POS	8, 2009	F	BrSo			Slaughter -Aug 31, 2017
8	Red 09	YNP930760	No	POS	6, 2011	F	BrSo			Slaughter -Aug 31, 2017
9	Red 16	YNP930684	No	POS	7, 2010	F	BrSo			Slaughter -Jan 2018
10	Red 18	YNP930776	No	POS	8, 2009	F	BrSo			Slaughter -Aug 31, 2017
11	Red 20	YNP930678	Yes	POS	8, 2009	F	BrSo			Slaughter -Jan 2018
12	Red 21	YNP930763	No	POS	8, 2009	F	BrSo			Slaughter -Jan 2018
13	Red 22	YNP930673	No	POS	8, 2009	F	BrSo			Slaughter -Aug 31, 2017
14	Red 26	YNP930202	Yes	POS	8, 2009	F	BrSo			Slaughter -Jan 2018
15	6R06	840003003405690	No	POS	2016	F	BrSo			Slaughter -Aug 31, 2017
16	7G08		No	Neg	2017	M				Quarantine
17	7R07		No	Neg	2017	F				Quarantine
18	7R16		No	Neg	2017	M				Quarantine
19	7R20		No	Neg	2017	M				Quarantine
20	7R21		No	Neg	2017	M				Quarantine
21	7R26		No	Neg	2017	M				Quarantine
22	7R3		No	Neg	2017	F				Quarantine
23										

GonaCon 2 Jan 2017

BANGLE TAG	EARTAG	GonaCon	Sero-stat	YOB	SEX	Pen/Disp	FINAL DISP
Green 01	YNP930740	No	Neg	2012	F	Rigler	Quarantine
Green 07	YNP930638	No	Neg	2010	F	Rigler	Quarantine
Green 13	81AJW3732	No	Neg	2011	F	Rigler; calf of Grn 11	Quarantine
Green 21	YNP930791	No	Neg	2012	F	Rigler	Quarantine
Green 24	81AJW3769	No	Neg	2012	F	Rigler	Quarantine
Green 25	81AJW3755	No	Pos	2012	F	Rigler	Slaughter-Sept 2017
Red 32	YNP110234	Yes	POS	2012	F	Rigler	slaughter Oct 2017
Red 34	81AJW3759	Yes	POS	2012	F	Rigler	Slaughter-Sept 2017
Red 36	YNP110269	Yes	POS	2011	F	Rigler	slaughter/render
Red 38	81AJW3763	Yes	SUS**	2012	F	Rigler	Slaughter-Sept 2017
Red 39	YNP110247	Yes	POS	2012	F	Rigler	slaughter/render
Red 41	81AJW3776	Yes	POS	2012	F	Rigler	slaughter Oct 2017
Red 42	YNP110285	Yes	POS	2012	F	Rigler	slaughter Oct 2017
Red 43	YNP110268	Yes	POS	2012	F	Rigler	Died May 2017
Red 44	YNP930800	Yes	POS	2012	F	Rigler	slaughter Oct 2017
Red 45	YNP110267	Yes	POS	2012	F	Rigler	slaughter Oct 2017
Red 46	81AJW3773	Yes	POS	2012	F	Rigler	Slaughter-Sept 2017
Red 47	YNP110227	Yes	POS	2012	F	Rigler	Slaughter-Sept 2017
Red 48	YNP110294	Yes	POS	2012	F	Rigler	slaught/render Jan 2018
Red 49	YNP930783	Yes	POS	2012	F	Rigler	slaughter Oct 2017
Red 51	YNP110287	Yes	POS	2012	F	Rigler	slaughter Oct 2017
Red 53	YNP110239	Yes	POS	2012	F	Rigler	slaughter Oct 2017
Red 54	YNP110281	Yes	POS	2011	F	Rigler	slaughter Oct 2017
Red 55	YNP930794	Yes	POS	2011	F	Rigler	slaughter Oct 2017
Red 56	YNP110270	Yes	POS	2012	F	Rigler	slaught/render Jan 2018
6R38	840003003405724	No	Pos	2016	F	Rigler	Slaughter-Sept 2017
6G07	840003003405725	No	Neg	2016	M	Rigler	SLAUGHTER-Jan 2018
6G25	840003003405726	No	Pos	2016	M	Rigler	Slaughter-Sept 2017
6R46	840003003405720	No	Pos	2016	F	Rigler	Slaughter-Sept 2017
6R34	840003003405699	No	Pos	2016	F	Rigler	Slaughter-Sept 2017
6G13	840003003405723	No	Pos	2016	F	Rigler	Slaughter-Sept 2017
6R08	840003003405687	No	Pos	2016	F	Rigler	Slaughter-Sept 2017
7G01		No	Neg	2017	M		Quarantine

GonaCon 2 Jan 2017

7G07	No	Neg	2017 M	Quarantine
7G13	No	Neg	2017 M	Quarantine
7G21	No	Neg	2017 F	Quarantine
7G24	No	Neg	2017 F	Quarantine
7R48	No	Neg	2017 M	Quarantine
7R56	No	Neg	2017 F	Quarantine

Control #2 June 2016

BANGLE TAG	EARTAG	GonaCon	Sero-stat	YOB	SEX	Pen/Disp		Final Disp
Green 11	YNP930675	No	Pos	2009	F	Brogan North		Slaughter-Sept 2017
Green 12	YNP930670	No	Pos	2010	F	BrNo		Slaughter-Sept 2017
Green 18	YNP930631	No	Neg	2010	F	BrNo		Quarantine
Green 20	81AJW3771	No	Neg	2012	F	BrNo		Quarantine
Green 30	YNP930787	No	Pos	2012	F	BrNo		Slaughter-Oct 2017
Green 3G17	840003003344841	No	Neg	2013	F	BrNo		Quarantine
Orange 3G08	840003003405605	No	Pos	2013	F	BrNo		Slaughter-Jan 2018
Orange 3G14	840003003344857	No	Pos	2013	F	BrNo		Slaughter-Sept 2017
Orange 3R20	840003003405604	No	SUS**	2013	F	BrNo		Slaughter-Sept 2017
Orange 3R22	840003003344850	No	Pos	2013	F	BrNo		Slaughter-Jan 2018
Red 33	81AJW3777	No	Pos	2012	F	BrNo		Slaughter-Jan 2018
Red 35	YNP110273	No	Pos	2012	F	BrNo		Slaughter-Sept 2017
Red 37	81AJW3764	No	Neg**	2013	F	BrNo		Slaughter-Jan 2018
Red 40	81AJW3767	No	Pos	2013	F	BrNo		Slaughter-Jan 2018
Red 50	81AJW3772	No	Pos	2013	F	BrNo		Slaughter-Jan 2018
Red 64	81APF6871	No	Pos	2013	F	BrNo		Slaughter-Jan 2018
Red 67	81APF6872	No	Pos	2013	F	BrNo		Slaughter-Sept 2017
Red 72	81APF6876	No	Pos	2013	F	BrNo		Slaughter-Jan 2018
Red 73	81APF6892	No	Pos	2012	F	BrNo		Slaughter-Jan 2018
Red 74	YNP110221	No	Pos	2013	F	BrNo		Slaughter-Sept 2017
G6317	840003003405691	No	Neg	2016	M	BrNo		Quarantine
6G11	840003003405698	No	Pos	2016	F	BrNo		Slaughter-Sept 2017
73G08		No	Neg	2017	F			Quarantine
73R22		No	Neg	2017	F			Quarantine
7G20		No	Neg	2017	M			Quarantine
7R33		No	Neg	2017	M			Quarantine
7R37		No	Neg	2017	M			Quarantine
7R40		No	Neg	2017	F			Quarantine
7R50		No	Neg	2017	F			Quarantine
7R64		No	Neg	2017	M			Quarantine
7R72		No	Neg	2017	M			Quarantine
7R73		No	Neg	2017	F			Quarantine

Bulls June 2016

BANGLE TAG	EARTAG	Sero-stat	YOB	SEX	Pen	Final Disp	Oct 1_2017 Test	
Green 19	YNP110253	Neg	2011	M	Brogan Bulls	Quarantine	Neg	
Green 28	81AJW3756	Neg	2012	M	Brogan Bulls	Quarantine	Neg	
Green 31	81AJW3766	Neg	2012	M	Brogan Bulls	Quarantine	Neg	
Green 32	81AJW3770	Neg	2012	M	Brogan Bulls	Quarantine-Rigler	Neg	
Green 33	81AJW3761	Neg	2012	M	Brogan Bulls	Quarantine	Neg	
Green 34	81AJW3768	Neg	2013	M	Brogan Bulls	Quarantine	Neg	
Green 37	81AJW3762	Neg	2013	M	Brogan Bulls	Quarantine	Neg	
Green 40	YNP930797	Neg	2012	M	Brogan Bulls	Quarantine-Rigler	Neg	
Prp 4R2	840003003405620	Neg	2014	M	Brogan Bulls	Quarantine-Rigler	Neg	

BANGLE T#EARTAG	GonaCon	Sero-stat	Age/DOB	SEX	Pen/Disp
5R02	840003003405733 No	Neg	2015 F		SNS
6G04	840003003405728 No	NEG	2016 F		SNS
6R2	840003003405732 No	NEG	2016 M		SNS
6G02	840003003405729 No	NEG	2016 F		SNS
6R22	840003003405719 No	NEG	2016 F		SNS
6R07	840003003405686 No	NEG	2016 F		SNS
R6320	840003003405689 No	NEG	2016 F		SNS
6R73	840003003405693 No	NEG	2016 F		SNS
6G01	840003003405720 No	Neg	2016 F		SNS
G6317	840003003405691 No	Neg	2016 M		SNS

FINAL DISP	OCT1_2017 Test
Quarantine	Neg
Quarantine	Neg
Quarantine	Neg
Quarantine	Neg
Quarantine	Neg
Quarantine	Neg
Quarantine	Neg
Quarantine	Neg
Quarantine	Neg
Quarantine	Neg***

BANGLE TAG	EARTAG	GonaCon	Sero-stat	YOB	SEX	Pen/Disp		Final Disp	
73G08		No	Neg	2017	F	Brogan S		Quarantine	
73R22		No	Neg	2017	F	Brogan S		Quarantine	
7G20		No	Neg	2017	M	Brogan S		Quarantine	
7R33		No	Neg	2017	M	Brogan S		Quarantine	
7R37		No	Neg	2017	M	Brogan S		Quarantine	
7R40		No	Neg	2017	F	Brogan S		Quarantine	
7R50		No	Neg	2017	F	Brogan S		Quarantine	
7R64		No	Neg	2017	M	Brogan S		Quarantine	
7R72		No	Neg	2017	M	Brogan S		Quarantine	
7R73		No	Neg	2017	F	Brogan S		Quarantine	
7G01		No	Neg	2017	M	Brogan S		Quarantine	
7G07		No	Neg	2017	M	Brogan S		Quarantine	
7G13		No	Neg	2017	M	Brogan S		Quarantine	
7G21		No	Neg	2017	F	Brogan S		Quarantine	
7G24		No	Neg	2017	F	Brogan S		Quarantine	
7R48		No	Neg	2017	M	Brogan S		Quarantine	
7R56		No	Neg	2017	F	Brogan S		Quarantine	
7G08		No	Neg	2017	M	Brogan S		Quarantine	
7R07		No	Neg	2017	F	Brogan S		Quarantine	
7R16		No	Neg	2017	M	Brogan S		Quarantine	
7R20		No	Neg	2017	M	Brogan S		Quarantine	
7R21		No	Neg	2017	M	Brogan S		Quarantine	
7R26		No	Neg	2017	M	Brogan S		Quarantine	
7R3		No	Neg	2017	F	Brogan S		Quarantine	
7G02		No	Neg	2017	F	Brogan S		Quarantine	
7G06		No	Neg	2017	F	Brogan S		Quarantine	
7G17		No	Neg	2017	M	Brogan S		Quarantine	
7R02		No	Neg	2017	M	Brogan S		Quarantine	
7R01		No	Neg	2017	M	Brogan S		Quarantine	
7R14		No	Neg	2017	F	Brogan S		Quarantine	

BANGLE TAG	EARTAG	GonaCon	Sero-stat	YOB	SEX	Pen/Disp
Green 01	YNP930740	No	Neg	2012	F	Rigler
Green 07	YNP930638	No	Neg	2010	F	Rigler
Green 13	81AJW3732	No	Neg	2011	F	Rigler; calf of Grn 11
Green 21	YNP930791	No	Neg	2012	F	Rigler
Green 24	81AJW3769	No	Neg	2012	F	Rigler
Green 18	YNP930631	No	Neg	2010	F	Rigler
Green 20	81AJW3771	No	Neg	2012	F	Rigler
Green 3G17	840003003344841	No	Neg	2013	F	Rigler
Green 02	YNP930702	No	NEG	7, 2010	F	Rigler
Green 04	YNP930625	No	NEG	8, 2009	F	Rigler
Green 06	YNP930754	No	NEG	7, 2010	F	Rigler
Green 17	YNP930627	No	NEG	8, 2009	F	Rigler

FINAL DISP

Quarantine
Quarantine
Quarantine
Quarantine
Quarantine
Quarantine
Quarantine
Quarantine
Quarantine
Quarantine
Quarantine
Quarantine

June 8, 2016

Bison cow, Green 09, was located ~ 8:30 am in the Brogan North pasture separated from the rest of the herd. This cow was attempting to calve and a single hind foot could be seen protruding from its' vagina. We do not know when calving began, but the size and arrangement of the hoof indicated this was a breech presentation and that the cow had been trying to deliver for several hours. The cow had indication of some nerve or musculoskeletal damage to her hind legs as she was not fully ambulatory prior to immobilization.

At 11:20 am the cow was remotely immobilized using 3.0 ml BAM IM via a dart. The cow became lateral at approximately 11:30am. Another 1.5 ml BAM was given IM to deepen the plane of anesthesia at 11:52 followed by another 1.0 ml BAM IV at 12:24. The ambient temperature was 92 degrees F. We repeatedly doused the cow with water to help keep her cool, respiration was within the normal range (40-50 bpm) of bison on this drug.

Once the cow was non-reactive to manipulation, the cow was palpated and OB equipment was used to try and get both hind legs in a position for the calf to be pulled. The calf at this point was non-responsive and deemed to be dead. The fetus was large in size and mildly swollen. The cow's pelvic canal was undersized for her weight/age and attempts at getting the fetus in position failed. A partial fetotomy was performed by removing the lower half of the right hind leg. After the fetotomy, the fetus still could not be manipulated enough to pull the calf through the undersized canal. C-section was not an option due to inability to provide aftercare in a wild animal.

At 1:40 pm, noting the compromised condition of the cow, the only humane option was to euthanize Green 09 and a captive bolt was used to perform this procedure. The cow was then loaded and hauled to the DOL lab in Bozeman for a complete necropsy and initial culture looking for *B. abortus*.

P.R. Clarke

R.K. Frey

Options for disposition of bison in Fort Collins, Colorado, and Corwin Springs, Montana

Introduction: WiLDIT personnel were informed by Beth Lautner in person on June 7 and 8, of the decision by the Office of the Deputy Administrator to close the animal facility in Fort Collins, Colorado, and the pens at Corwin Springs, Montana, and disband the unit. As per conference call on July 11, 2017, WiLDIT and SPRS personnel (Frey and Clarke) were instructed to construct a list of options for disposition of all bison in the quarantine facility in Corwin Springs and the WiLDIT facility in Fort Collins. Additional time would allow VS to explore more options, but under the current time constraints, these are the most appropriate for the Agency to pursue.

Fort Collins bison

Option 1 (preferred option) – We think this option would be best for the Agency allowing the quarantine work to continue under APHIS oversight but managed and funded by Colorado State University. Preliminary discussions with CSU officials have indicated CSU’s willingness to enter into this agreement.

The operation and maintenance of the WiLDIT/CSU animal facility in Fort Collins will be assumed by Colorado State University. The facility consists of USDA equipment installed on CSU ground as per an MOU with CSU. The equipment will be loaned to CSU for a 5 year period during which CSU will conduct quarantine and testing on the seronegative bison, and on completion, place them on tribal and public lands. This will be done under the regulatory oversight of VS personnel. Ownership of the seronegative bison will be immediately transferred to CSU. As per agreements with the National Park Service, the eleven seropositive bison will be consigned to a terminal quarantine location, to an educational display, or if no such options are available go directly to slaughter (as per 2011 and 2012 permits with the National Park Service) where specimens will be collected. If collaborators and cooperating tribes agree to the following, proceeds from the slaughter will go to CSU to help defray expenses of quarantine of seronegative bison. Alternatively, carcasses of seropositive bison will be donated to food banks or tribes. A revised MOU will be drawn up to specify duties and responsibilities of both parties during the five year period. After five years the facility can be closed and USDA equipment excessed.

Option 2 - This option is contingent on agreement by Yellowstone National Park officials and may require extra time of bison in holding for YNP to complete facilities and agreements.

Seropositive bison will be consigned or go to slaughter as in Option 1. Ownership of seronegative bison will be transferred to Yellowstone National Park and animals transported to YNP for quarantine in their facility under the regulatory oversight of VS personnel. Equipment at the WiLDIT facility will be excessed as time allows.

Option 3 – This option is contingent on agreements with one or more tribal, private, or other State or Federal entities and likely will require extra time of bison in holding for entity or entities to complete facilities and agreements.

Seropositive bison will be consigned or go to slaughter as in option 1. Ownership of seronegative bison will be transferred to receiving entity or entities. Animals will be transported to new facilities for completion of quarantine under regulatory oversight of VS personnel. Equipment at the WiLDIT facility will be excessed as time allows.

Reasons euthanasia of seronegative bison is not considered an appropriate option for the Agency

1. This is the single most important reason. Documents signed by Jack Rhyan and Mark Davidson state that seronegative bison will be used for conservation purposes. Specifically, two permits with the National Park Service state, "Disease free bison should not be killed as a convenient method to move animals out of USDA facilities." So as a matter of scientific and personal integrity, for the involved individuals and the Agency, euthanasia should not be an option for VS.
2. These are valuable animals with unique "pure" bison genetics and are in the quarantine process destined for relocation to tribal or public lands. Veterinary Services, the National Park Service, Colorado State University (in the case of the Fort Collins animals), and the Montana Department of Livestock have an investment in these animals.
3. Because of the great public interest in the national mammal, and especially those with Yellowstone ancestry, any move to destroy healthy bison in quarantine would undoubtedly be met with considerable litigious and media attention that would damage the Agency.

Montana Bison

In order to meet the agreements, MOU's and EA's signed by APHIS personnel and to maintain scientific value, options are described below.

Option 1:

Breed GonaCon treatment animals and maintain until 2017 calves may be humanely weaned at which time cows will be euthanized, necropsied and carcasses disposed of in landfill. Seronegative 2017 calves will begin quarantine procedures at only approved facility, Corwin Springs. Seropositive 2017 calves will be euthanized. All seronegative adult bison will be entered into quarantine at Corwin Springs separate from seronegative calves.

Breed control animals and maintain until 2017 calves may be humanely weaned, at which time cows will be euthanized and necropsied, carcasses may be sold through slaughter channels (with approval from collaborators) to fund quarantine of seronegative bison or donated to local food banks.

Three sub options: 1) APHIS uses funds, including through sale of seropositive bison at slaughter to fund quarantine until such time that animals graduate and are eligible to be transferred for conservation purposes to public and tribal lands.

2) APHIS maintains bison at Corwin Springs until such time as an agreement can be made with YNP to takeover quarantine procedures at YNP facility once approved. Bison will be transferred and used for conservation herds. This option will require agreement by Yellowstone National Park officials and approval of YNP quarantine facility.

3) APHIS maintains bison at Corwin Springs until such time as an agreement can be made with any other entity that want to takeover quarantine procedures, either at own facility approved by APHIS or at Corwin Springs. Bison will be transferred and used for conservation herds.

Option 2:

Breed GonaCon treatment and control animals and maintain until 2017 calves may be humanely weaned at which time cows will be euthanized and necropsied, GonaCon carcasses disposed of in landfill and control carcasses donated to local food banks. All other offspring will be distributed to interested state or university research entities that want to continue brucellosis research and have an approved bison quarantine facility.

Option 3:

All seronegative adults are entered into quarantine immediately at Corwin Springs. Any seropositive control animals without calves at side may be slaughtered, tissues collected and carcasses may be sold through slaughter channels to fund quarantine of offspring or donated to local food banks. All other animals are maintained until calves are humanely weaned, at which time GonaCon treated animals will be euthanized, tissues collected and carcasses disposed in landfill. Seropositive controls will be euthanized, tissues collected and carcasses may be sold through slaughter channels to fund quarantine of offspring or donated to local food banks. Calves will be entered into quarantine for conservation purposes. All sub options from Options 1 apply for final disposition.