



# MVDL

## MONTANA VETERINARY DIAGNOSTIC LABORATORY

PO Box 997 Bozeman, MT 59771  
1911 West Lincoln Street Bozeman, MT 59718  
Website: [www.liv.mt.gov/lab](http://www.liv.mt.gov/lab)

Phone: (406) 994-4885  
Fax: (406) 994-6344  
Email: [livdiagnosticlab@mt.gov](mailto:livdiagnosticlab@mt.gov)

Accession # 8-324-14  
Owner: USDA, APHIS, VS

Species: WILD - BISON  
Breed: BISON  
Name/No. 4 GREEN 14  
Age: FETUS Sex:

Date Sent: 03/10/2014  
Date Received: 02/24/2014

Submitter: PATRICK RYAN CLARKE D.V.M.

(b) (6)

### Final Report

Case Coordinator: AWL

### CASE SUMMARY

REASON FOR SUBMISSION: Brucella seropositive cow, abortion

#### LABORATORY DIAGNOSIS:

Bronchopneumonia: Etiology - Brucella abortus biovar 1

A. W. Layton, DVM, DACVP\cto

Date In 02/27/2014

### PATHOLOGY

Date Out: 03/10/2014 Released by: AWL

GROSS: The carcass of a bison fetus that is hairless with approximately 40 cm crown/rump length. The fetus is fair post mortem and nutritional state. The sex was not determined. Lungs are atelectatic. Scant amount of tan fluid occurs in the forestomachs and abomasum. No other significant changes were present.

HISTOPATHOLOGY: Tissue sections of liver, spleen, lung, thymus, abomasum, adrenal gland, lymph node, heart, kidney, skeletal muscle, small intestine and brain are examined. There is a bronchopneumonia, and many large airways contain columnar and squamous epithelial cells. Inflammatory cell component is moderate in number and occurs within alveolar spaces. The infiltrate consists of alveolar macrophages and fewer neutrophils. Fibrin exudation is present in some areas.

#### MORPHOLOGIC DIAGNOSIS:

Bronchopneumonia, with meconium and squamous inhalation

Date In 02/25/2014

### BACTERIOLOGY

Date Out: 03/07/2014 Released by: MH

Isolate sent to NVSL for full identification 2/28/14; results received 3/7/14; identified as Brucella abortus biovar 1.

#### CULTURES

ID/Site	Specimen	Culture Type	Isolate	Antimicrobial	
				Growth	Profile
	fetal liver	Brucella	Brucella abortus	1+ P	NA
	fetal lung	Campylobacter	Negative for Campylobacter sp.		NA
	fetal lung	Aerobic	Brucella abortus	2+ P	NA
	fetal lung	Brucella	Brucella abortus	2+ P	NA

1+ to 4+ = rare colony to confluent growth

P = pure culture, M = mixed or partially contaminated culture



Date In: 02/24/14

**SEROLOGY**

Date Out: 03/03/14

Released by: AF

Testname	# of tests	# Negative	Test Summary		# A	C	# Undetermined	# Insufficient	Tech
B. ABORTUS RIVANOL	1	0	# Positive	# Suspect	0		0	0	AF
B. ABORTUS FP	1	0	1	0	0		0	0	AF
B. ABORTUS CF	1	0	1	0	0		0	0	AF
B. ABORTUS CARD	1	0	1	0	0		0	0	AF
B. ABORTUS BAPA	1	0	1	0	0		0	0	AF

List of Significant result

Animal Id	Testname	Result	Titer
4 GREEN 14	B. ABORTUS CARD	POS	
4 GREEN 14	B. ABORTUS CF	POS	4+ 640
4 GREEN 14	B. ABORTUS RIVANOL	POS	+200
4 GREEN 14	B. ABORTUS FP	POS	202.3

Final Classification

Animal Id	Classification	Comment
4 GREEN 14	REACTOR	

Date In: 02/28/2014

**REFERRAL/OTHER**

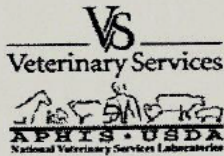
Date Out: 03/07/2014

Released by: AWL

Animal ID	Specimen	Test	Result	Rfri Inst.
4 Green 14	Slant Tube	Brucella Culture	Brucella abortus biovar 1	NVSL

Please see attached report for complete results.





**National Veterinary Services Laboratories**

FINAL REPORT

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.

**Laboratory Test Report**

\*\*\*\*\* This is a confidential report intended for official use only. \*\*\*\*\*

**Owner**  
USDA, APHIS, VS  
Corwin Springs, MT

**Animal Location**  
Park County MT

**Submitter - 2047**  
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:** 14-006821  
**Date Collected:** 02/22/2014  
**Date Received:** 03/03/2014  
**Date Completed:** 03/10/2014  
**Collected By:** P. Ryan Clarke  
**Purpose:** General Diagnostic

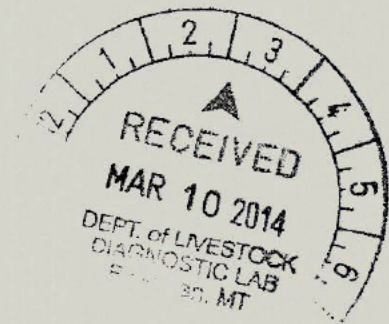
**Referral Number:** 8-324-14  
**This is not a billable case.**

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

Sample: 8-324-14 Animal ID: 4 Green 14 / Bison Brucella Case Number: B14-0102 Specimen Type: Culture Species: Bison

Brucella Final Identification

Brucella abortus biovar 1



Results authorized by:

(b)(3)

*Scanned 3/10/14 / JH*



## Fees

Bacteriology Fee	\$ 0.00
Pathology/Histology Fee	\$ 70.00
Referral Fee	\$ 18.25
Serology Fee	\$ 9.50
Accession Total Fee	\$ 97.75

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

### FEE INCREASE:

Please, note that laboratory fees will increase on October 15, 2013. The Fee Schedule is available on the Laboratory webpage:  
<http://www.liv.mt.gov/lab/default.mcp>

If you have any questions, laboratory personnel may be contacted at 406-994-4885 or LIVDiagnosticLab@mt.gov



GonaCon Study Case# 8-324-14

Green#14 Adult Female Bison

This animal is classified a reactor based on positive serological reactions

*E. H. Hinkle DVM*

Designated Brucellosis Epidemiologist



MT DEPT. OF LIVESTOCK  
DIAG. LAB P.O. BOX 997  
BOZEMAN, MT 59771-0997  
406-994-4885

030514





## National Veterinary Services Laboratories

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Ames, Iowa 50010

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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

**Accession Number:** 15-015494

**Animal Location**

Park County MT

**Date Collected:** 05/02/2015

**Date Received:** 05/13/2015

**Submitter - 2047**

MT Department of Livestock  
Diagnostic Laboratory Division  
1911 W Lincoln St

**Date Completed:** 05/15/2015

**Collected By:** Dr. Patrick Ryan Clarke

PO Box 997

Bozeman, MT 59718

FAX #: 406-994-6344

Phone #: 406-994-4885

**Purpose:** General Diagnostic

**Referral Number:** 8-396-15

**This is not a billable case.**

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

Sample: 8-396-15 Animal ID: 5R09 Brucella Case Number: B15-0160 Specimen Type: Culture Species: Bison

Brucella Final Identification

Brucella abortus

Results authorized by:

(b)(3)



**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  
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:



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

## CLINICAL MICROBIOLOGY

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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 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

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**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:

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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: 16-19788**

**Name/ID:** Green 09 - with fetus

**Species:** American Bison

**Sex:** Female **Age:** Adult

**County:** Park

**Owner:** USDA, APHIS, VS - R. Clarke

**FINAL REPORT 09/02/16**

**Accessioned:** 06/08/16

**Authorized by:** SS

**Previous Reports**

07/08/16

09/02/16

### CASE SUMMARY

Verified on: 09/02/16 by: SS

#### ADDITIONAL INFORMATION:

Referral culture has been completed on this case, and these results are attached to this final report.

Stephen K. Smith, DVM, Diplomate, ACVP

Verified on: 07/07/16 by: SS

#### REASON FOR SUBMISSION:

Brucella culture

#### LABORATORY DIAGNOSIS:

Pending

#### COMMENT:

Despite the reconfirmation of this cow's serologic status, initial, in-house bacterial cultures fail to isolate Brucella from either of these animals, and these results are attached to this preliminary report. Referral culture is still pending, and these results will be posted when available.

Stephen K. Smith, DVM, Diplomate, ACVP

### PATHOLOGY

Verified on: 07/07/16 by: SS

#### GROSS DESCRIPTION:

This is the carcass of an adult, intact female bison (Green tag #09), with a full term calf that is partially protruding from the vagina. Much of the subcutaneous and deeper connective tissue surrounding the vagina and cervix is hemorrhagic and edematous. No

001865



other significant gross changes are present, and representative samples were taken and submitted for referral Brucella culture.

CLINICAL MICROBIOLOGY

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Brucella Culture					Verified on: 06/20/16 by: JR
Animal ID	Specimen	Isolate #	Organism	Amount	
Green 09 - with fetus	lung		Negative for Brucella sp.		
Green 09 - with fetus	liver		Negative for Brucella sp.		
Green 09 - with fetus	spleen		Negative for Brucella sp.		
Green 09 - with fetus	caruncle		Negative for Brucella sp.		
Green 09 - with fetus	Abomasal Contents		Negative for Brucella sp.		

SEROLOGY

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		Carcass	Verified on: 06/09/16 by: AF
Animal	BRUFP		
Green 09 - with fetus	Positive		
Bru. FPA Delta mP value at 89.2 mP. Afs 06/09/2016			

REFERRAL

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Referral Aerobic Culture		lung	Verified on: 08/30/16 by: JM
Animal ID	Test	Result	
Green 09 - with fetus		Negative-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, VS - Ryan Clarke  
, MT**Accession Number:** 16-019153**Animal Location**

Park County MT, US

**Date Collected:** 06/08/2016**Date Received:** 06/10/2016**Submitter - 2047**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**Date Completed:** 08/30/2016**Collected By:** Dr. Stephen K. Smith,**Purpose:** General Diagnostic**Referral Number:** 16-19788

This is not a billable case.

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

Sample: 16-19788,G09 Animal ID: G09 Brucella Case Number: B16-0390 Specimen Type: Tissue Species: Bison

Brucella Isolation Result

No Isolation Made

Individual specimen results are listed below:

**Lymph Node / Lymph Node- S. Mammary**

Brucella Isolation Result

No Isolation Made

**Lymph Node / Lymph Node- Internal Iliac**

Brucella Isolation Result

No Isolation Made

**Lymph Node / Lymph Node- Internal Iliac**

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- 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

No Isolation Made

**Lymph Node / Lymph Node- Mesenteric**

Brucella Isolation Result

No Isolation Made

**Lymph Node / Lymph Node- Parotid**

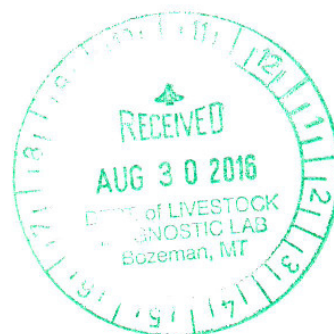
Brucella Isolation Result

No Isolation Made

**Lymph Node / Lymph Node- Bronchial**

Brucella Isolation Result

No Isolation Made

**Lymph Node / Lymph Node- Hepatic**

16 - 19788

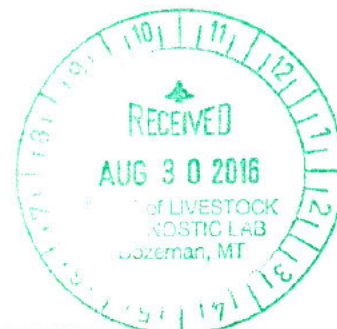
06/08/16

Page 1 of 2

Date Generated: 8/30/2016



Brucella Isolation Result	No Isolation Made
<b>Uterus/Vagina / Uterus</b>	
Brucella Isolation Result	No Isolation Made
<b>Tissue / Cervix</b>	
Brucella Isolation Result	No Isolation Made
<b>Ovary/Oviduct / Ovary</b>	
Brucella Isolation Result	No Isolation Made
<b>Placenta / Placenta</b>	
Brucella Isolation Result	No Isolation Made
<b>Tissue / Placental Cotyledon</b>	
Brucella Isolation Result	No Isolation Made
<b>Tissue / Uterus- Caruncle</b>	
Brucella Isolation Result	No Isolation Made
<b>Mammary Gland / Mammary Gland</b>	
Brucella Isolation Result	No Isolation Made
<b>Spleen / Spleen</b>	
Brucella Isolation Result	No Isolation Made
<b>Kidney / Kidney</b>	
Brucella Isolation Result	No Isolation Made
<b>Liver / Liver</b>	
Brucella Isolation Result	No Isolation Made
<b>Swab / Swab- Uterine</b>	
Brucella Isolation Result	No Isolation Made
<b>Tissue / Ileum</b>	
Brucella Isolation Result	No Isolation Made
<b>Swab / Swab- Rectal</b>	
Brucella Isolation Result	No Isolation Made
<b>Feces / Feces</b>	
Brucella Isolation Result	No Isolation Made



Sample: 16-19788,G09 Fetus Animal ID: G09 fetus Brucella Case Number: B16-0391 Specimen Type: Tissue Species: Bison

Brucella Isolation Result No Isolation Made

Individual specimen results are listed below:

**Fetus / Tissue- Not Identified**

Brucella Isolation Result No Isolation Made

**Fluid / Fluid- Abomasal**

Brucella Isolation Result No Isolation Made

Results authorized by:

(b)(3)

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.

16-19788  
16-19153  
8-30-16

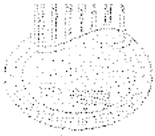


FEES:

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B. Abortus FP	1.60
Brucella Culture	80.00
Shipping	32.20
Referral Culture	0.00
Case Summary	0.00
Necropsy LA >500#	157.50
Incineration per pound	234.00
Additional Information	0.00
Total	505.30

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



# MVDL

## MONTANA VETERINARY DIAGNOSTIC LABORATORY

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Email: [livdiagnosticlab@mt.gov](mailto:livdiagnosticlab@mt.gov)

Accession # 8-336-15

Owner: GONA CON STUDY

Species: WILD - BISON

Breed: NA

Name/No. 5G14

Age: FETUS Sex:

Date Sent: 04/08/2015

Date Received: 03/20/2015

Submitter: PATRICK RYAN CLARKE D.V.M.

(b) (6)

### Final Report

Case Coordinator: JM

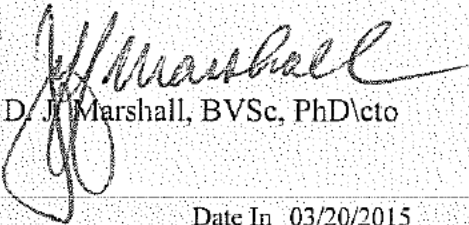
### CASE SUMMARY

REASON FOR SUBMISSION: Bison abortion

#### LABORATORY DIAGNOSIS:

Bison abortion; Placentitis; Brucella abortus culture positive

COMMENT: Brucella abortus was cultured from abomasal contents and placenta. This isolate was forwarded to NVSL and confirmed as being B abortus (see attached report).

  
D. J. Marshall, BVSc, PhD\cto

Date In 03/20/2015

### PATHOLOGY

Date Out: 04/08/2015

Released by: JM

GROSS PATHOLOGY: A bison fetus and piece of placenta were submitted for necropsy and subsequent laboratory evaluation. Necropsy was performed at 12.00 pm on Friday 20th March 2015. Female fetus had a crown rump measurement of 64 cm and was in a good state of post mortem preservation. No significant gross abnormalities are detected.

HISTOPATHOLOGY: Sections of placenta, brain, liver, kidney, heart, lung, spleen abomasum, small intestine and skeletal muscle are examined. Placenta is multifocally inflamed and necrotic. Lung is not aerated and small quantities of squamous epithelial debris and macrophages are present in alveoli. No significant histological abnormalities are present in the remaining tissues.

#### MORPHOLOGIC DIAGNOSIS:

Placenta: Necrotizing placentitis, multifocal

Lung: Non-aeration; Alveolitis with intra-alveolar squamous epithelial debris

Date In 03/20/2015

### BACTERIOLOGY

Date Out: 04/01/2015

Released by: mh

Isolate sent to NVSL 3/25/15 for species ID and genotyping.

#### CULTURES

Antimicrobial

ID/Site	Specimen	Culture Type	Isolate	Growth	Profile
	abomasal contents	Aerobic	Brucella abortus	4+ P	NA
	abomasal contents	Brucella	Brucella abortus	4+ P	NA
	abomasal contents	Campylobacter	Negative for Campylobacter sp.		NA
	placenta	Aerobic	Brucella abortus	4+ M	NA
	placenta	Brucella	Brucella abortus	4+ M	NA

001870



MVDL Accession #  
B-336-15

Submitter:  
PATRICK RYAN CLARKE D.V.M.

Owner:  
GONA CON STUDY

Date In 03/20/2015

Date Out: 04/01/2015 Released by: mh

placenta Campylobacter Negative for Campylobacter sp.

NA

1+ to 4+ = rare colony to confluent growth

P = pure culture, M = mixed or partially contaminated culture

Date In: 03/25/2015

### REFERRAL/OTHER

Date Out: 04/01/2015

Released by: JM

<u>Animal ID</u>	<u>Specimen</u>	<u>Test</u>	<u>Result</u>	<u>Rfrl Inst.</u>
5G14	Slant tube	Brucella Culture	Brucella abortus.	NVSL

Please see attached report for complete results.



## National Veterinary Services Laboratories

FINAL REPORT

PO Box 844

Ames, Iowa 50010

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

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## Laboratory Test Report

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

## Owner

Gona Con Study

Corwin Springs, MT

## Animal Location

Park County MT

## 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:

15-009841

## Date Collected:

03/20/2015

## Date Received:

03/26/2015

## Date Completed:

04/01/2015

## Collected By:

Dr. P. Ryan Clarke

## Purpose:

General Diagnostic

## Referral Number:

8-336-15

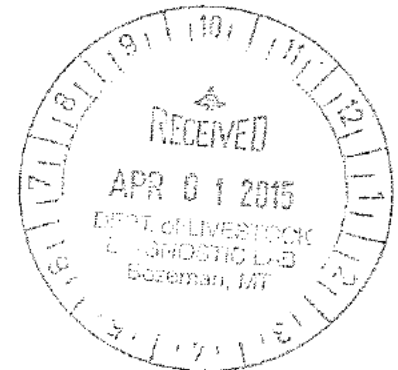
This is not a billable case.

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

Sample: 8-336-15 Animal ID: 5G14 Brucella Case Number: B15-0106 Specimen Type: Culture Species: Bison

Brucella Final Identification

Brucella abortus



Results authorized by:

(b)(3)

Scanned 4-1-15/jm  
cc: Bact. 4-1-15/jm



MVDL Accession #  
8-336-15

Submitter:  
PATRICK RYAN CLARKE D.V.M.

Owner:  
GONA CON STUDY

Fees

Bacteriology Fee	\$ 0.00
Pathology/Histology Fee	\$ 73.50
Referral Fee	\$ 19.10
Accession Total Fee	\$ 92.60

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



# MVDL

## MONTANA VETERINARY DIAGNOSTIC LABORATORY

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Phone: (406)994-4885  
Fax: (406)994-6344  
Email: [livdiagnosticlab@mt.gov](mailto:livdiagnosticlab@mt.gov)

Accession # 8-413-15

Owner: USDA, APHIS, VS

Submitter: PATRICK RYAN CLARKE D.V.M.

Species: WILD - BISON

Breed: BISON

Name/No. G10

Age: ADULT Sex: F

Date Sent:

Date Received 05/18/2015

Preliminary Date 06/02/2015

(b) (6)

### Preliminary Report

Case Coordinator: JM

### CASE SUMMARY

#### 6-02-15 ADDITIONAL INFORMATION:

CLINICAL MICROBIOLOGY: Brucella sp was not isolated from fetal tissue cultures (see attached report).

COMMENT: I will further investigate placenta and the cause of histological changes present.

*D. J. Marshall*  
D. J. Marshall, BVSc, PhD/jmm

#### ADDITIONAL INFORMATION 6/1/15:

NVSL: Attempts to culture Brucella sp from the tissues submitted from the dam were negative. See attached report.

D. J. Marshall, BVSc, PhD/jmm

REASON FOR SUBMISSION: Bison abortion

#### LABORATORY DIAGNOSIS:

Bison abortion; Placentitis

COMMENT: Tissues from the cow were submitted to NVSL for bacteriological investigations. Bacteriological investigations of fetal tissues and placenta have been set up at this laboratory and will be reported as soon as complete.

D. J. Marshall, BVSc, PhD/cto



JL Accession #

8-413-15

Submitter:

PATRICK RYAN CLARKE D.V.M.

Owner:

USDA, APHIS, VS

Date In 05/18/2015

**PATHOLOGY**

Date Out:

Released by: JM

**GROSS PATHOLOGY:** A male bison fetus wrapped in placenta was submitted for necropsy and subsequent laboratory evaluation. The fetus has a crown rump measurement of 94 cm. There is generalized and marked autolysis and emphysema. Brain was not examined.

**HISTOPATHOLOGY:** Sections of placenta, liver, kidney, heart, lung, spleen, thymus, skeletal muscle, abomasum and ileum are examined. Placental surface is inflamed and necrotic with thick colonies of intralesional bacteria. Fetal tissues are moderately autolyzed. No significant histological abnormality is detected in these tissues.

**MORPHOLOGIC DIAGNOSIS:**

Placenta: Placentitis, necrotizing, severe

Date In 05/19/2015

**BACTERIOLOGY**

Date Out: 06/01/2015 Released by: mh

**CULTURES**

<u>ID/Site</u>	<u>Specimen</u>	<u>Culture Type</u>	<u>Isolate</u>	<u>Growth</u>	<u>Antimicrobial Profile</u>
	lung	Brucella	Negative for Brucella sp.		NA
	abomasal swab	Brucella	Negative for Brucella sp.		NA
	placenta	Brucella	Negative for Brucella sp.		NA

Date In: 05/19/2015

**REFERRAL/OTHER**

Date Out: 06/01/2015

Released by: JM

<u>Animal ID</u>	<u>Specimen</u>	<u>Test</u>	<u>Result</u>	<u>Rfrl Inst.</u>
119	Tissue	Brucella Culture	No isolation made.	NVSL

Please see attached report for complete results.



# MVDL

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Phone: (406)994-4885  
Fax: (406)994-6344  
Email: [livdiagnosticlab@mt.gov](mailto:livdiagnosticlab@mt.gov)

Accession #: 8-413-15

Owner: USDA, APHIS, VS

Species: WILD - BISON

Breed: BISON

Name/No. G10

Age: ADULT Sex: F

Date Received: 05/18/2015

Preliminary Date 06/01/2015

Submitter: PATRICK RYAN CLARKE D.V.M.

(b) (6)

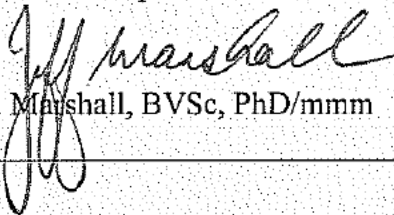
### Preliminary Report

Case Coordinator: JM

### CASE SUMMARY

ADDITIONAL INFORMATION 6/1/15:

NVSL: Attempts to culture *Brucella* sp from the tissues submitted from the dam were negative.  
See attached report.

  
D. J. Marshall, BVSc, PhD/mmm

REASON FOR SUBMISSION: Bison abortion

#### LABORATORY DIAGNOSIS:

Bison abortion; Placentitis

COMMENT: Tissues from the cow were submitted to NVSL for bacteriological investigations. Bacteriological investigations of fetal tissues and placenta have been set up at this laboratory and will be reported as soon as complete.

D. J. Marshall, BVSc, PhD\cto

Date In 05/18/2015

### PATHOLOGY

Date Out: 05/26/2015

Released by: JM

**GROSS PATHOLOGY:** A male bison fetus wrapped in placenta was submitted for necropsy and subsequent laboratory evaluation. The fetus has a crown rump measurement of 94 cm. There is generalized and marked autolysis and emphysema. Brain was not examined.

**HISTOPATHOLOGY:** Sections of placenta, liver, kidney, heart, lung, spleen, thymus, skeletal muscle, abomasum and ileum are examined. Placental surface is inflamed and necrotic with thick colonies of intralésional bacteria. Fetal tissues are moderately autolyzed. No significant histological abnormality is detected in these tissues.

#### MORPHOLOGIC DIAGNOSIS:

Placenta: Placentitis, necrotizing, severe

001876



MVDL Accession #:  
8-413-15

Submitter:  
PATRICK RYAN CLARKE D.V.M.

Owner:  
USDA, APHIS, VS

Date In: 05/19/2015

## BACTERIOLOGY

Date Out:

Released by:

### CULTURES

<u>ID/Site</u>	<u>Specimen</u>	<u>Culture Type</u>	<u>Isolate</u>	<u>Growth</u>	<u>Antimicrobial Profile</u>
	placenta	Brucella	Results Pending		
	lung	Brucella	Results Pending		
	abomasal swab	Brucella	Results Pending		

Date In: 05/19/2015

## REFERRAL/OTHER

Date Out: 06/01/2015

Released by: JM

<u>Animal ID</u>	<u>Specimen</u>	<u>Test</u>	<u>Result</u>	<u>Rfrrl Inst.</u>
G10	Tissue	Brucella Culture	No isolation made	NVSL

Please see attached report for complete results.



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PO Box 844

Ames, Iowa 50010

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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

Accession Number: 15-016456

## Animal Location

Park County MT

Date Collected: 05/18/2015

Date Received: 05/20/2015

## 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

Date Completed: 06/01/2015

Collected By: Dr. P. Ryan Clarke

Purpose: General Diagnostic

Referral Number: 8-413-15

This is not a billable case.

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

Sample: 8-413-15 Animal ID: G10 Brucella Case Number: B15-0162 Specimen Type: Tissue Species: Bison

Brucella Isolation Result

No Isolation Made

Individual specimen results are listed below:

## Tissue / Lymph Node- S. Mammary

Brucella Isolation Result

No Isolation Made

## Tissue / Lymph Node- Retropharyngeal

Brucella Isolation Result

No Isolation Made

## Tissue / Lymph Node- Popliteal

Brucella Isolation Result

No Isolation Made

## Tissue / Lymph Node- Mandibular

Brucella Isolation Result

No Isolation Made

## Tissue / Lymph Node- Parotid

Brucella Isolation Result

No Isolation Made

## Tissue / Spleen

Brucella Isolation Result

No Isolation Made

## Tissue / Mammary Gland

Brucella Isolation Result

No Isolation Made

## Tissue / Kidney

Brucella Isolation Result

No Isolation Made

## Tissue / Lung

Brucella Isolation Result

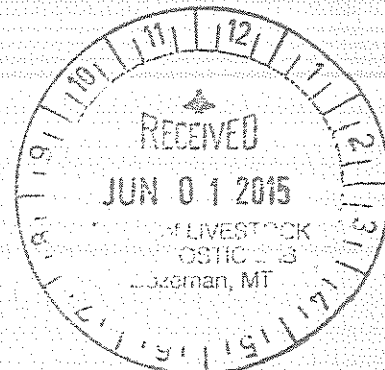
No Isolation Made

## Tissue / Mesentery

Brucella Isolation Result

No Isolation Made

Most samples had heavy contamination.



Scanned 6-1-15/jm



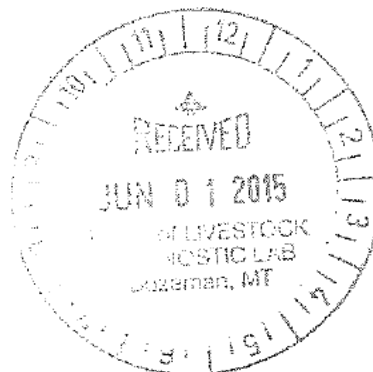
Results authorized by:

(b)(3)

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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Fax: (406) 994-6344  
Email: [livdiagnosticlab@mt.gov](mailto:livdiagnosticlab@mt.gov)

Accession # 8-413-15

Owner: USDA, APHIS, VS

Submitter: PATRICK RYAN CLARKE D.V.M.

Species: WILD - BISON

Breed: BISON

Name/No. G10

Age: ADULT Sex: F

Date Received 05/18/2015

Preliminary Date 05/26/2015

On  
VMD

(b) (6)

### Preliminary Report

Case Coordinator: JM

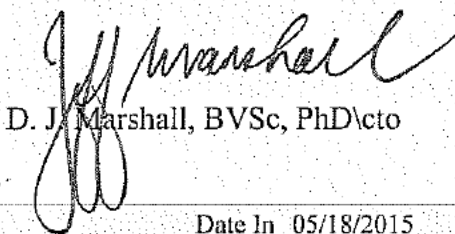
### CASE SUMMARY

REASON FOR SUBMISSION: Bison abortion

#### LABORATORY DIAGNOSIS:

Bison abortion; Placentitis

COMMENT: Tissues from the cow were submitted to NVSL for bacteriological investigations. Bacteriological investigations of fetal tissues and placenta have been set up at this laboratory and will be reported as soon as complete.

  
D. J. Marshall, BVSc, PhD\cto

Date In 05/18/2015

### PATHOLOGY

Date Out: 05/26/2015

Released by: JM

GROSS PATHOLOGY: A male bison fetus wrapped in placenta was submitted for necropsy and subsequent laboratory evaluation. The fetus has a crown rump measurement of 94 cm. There is generalized and marked autolysis and emphysema. Brain was not examined.

HISTOPATHOLOGY: Sections of placenta, liver, kidney, heart, lung, spleen, thymus, skeletal muscle, abomasum and ileum are examined. Placental surface is inflamed and necrotic with thick colonies of intralesional bacteria. Fetal tissues are moderately autolyzed. No significant histological abnormality is detected in these tissues.

#### MORPHOLOGIC DIAGNOSIS:

Placenta: Placentitis, necrotizing, severe

Date In 05/19/2015

### BACTERIOLOGY

Date Out:

Released by:

#### CULTURES

Antimicrobial

ID/Site	Specimen	Culture Type	Isolate	Growth	Profile
	placenta	Brucella	Results Pending		
	lung	Brucella	Results Pending		
	abomasal swab	Brucella	Results Pending		



MVDL Accession #  
8-413-15

Submitter:  
PATRICK RYAN CLARKE D.V.M.

Owner:  
USDA, APHIS, VS

Date In: 05/19/2015		REFERRAL/OTHER		Date Out:	Released by: JM
<u>Animal ID</u>	<u>Specimen</u>	<u>Test</u>	<u>Result</u>	<u>Rfrrl Inst.</u>	
	Tissue	Brucella Culture		NVSL	
Results Pending					



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Fax: (406) 994-6344  
Email: livdiagnosticlab@mt.gov

Accession #: 8-397-15

Owner: USDA/APHIS/VS

Species: WILD - BISON

Breed: BISON

Name/No. 5G07

Age: NEWB(Sex:

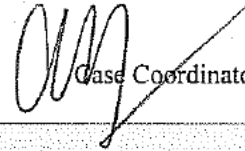
Date Sent: 05/13/2015

Date Received: 05/04/2015

Submitter: PATRICK RYAN CLARKE D.V.M.

(b) (6)

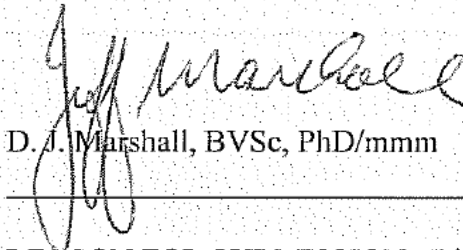
### Final Report

 Case Coordinator: JM

### CASE SUMMARY

CORRECTED REPORT 5/13/15:

BACTERIOLOGY: I commented that tissues from this calf tested positive for Brucella when in fact the bacteriology report stated otherwise. The bacteriology report is correct. Brucella was not isolated from this bison calf.

  
D. J. Marshall, BVSc, PhD/mmm

REASON FOR SUBMISSION: Bison calf abortion

#### LABORATORY DIAGNOSIS:

Bison calf abortion; Brucella abortus

COMMENT: Brucella cultures for this case were inconclusive due to Proteus overgrowth.

D. J. Marshall, BVSc, PhD\cto

Date In: 05/04/2015

### PATHOLOGY

Date Out: 05/11/2015

Released by: JM

GROSS PATHOLOGY: A bison calf (ID 5G07) was submitted for necropsy. Necropsy is performed at 10.30 am 4th May 2015. Calf is autolyzed and predated. Male calf had a crown rump length measurement of 91 cm. Abdominal organs are missing. Brain was not examined.

HISTOPATHOLOGY: Sections of brain, lung, skeletal muscle and thymus. Tissues are moderately autolyzed. Lung is not aerated and alveoli and airways contain quantities of meconium and squamous epithelial debris.

#### MORPHOLOGIC DIAGNOSIS:

Lung: Non-aeration; Intra-alveolar meconium and squamous epithelial debris and meconium

Date In: 05/04/2015

### BACTERIOLOGY

Date Out: 05/11/2015

Released by: mh



MVDL Accession #:  
8-397-15

Submitter:  
PATRICK RYAN CLARKE D.V.M.

Owner:  
USDA/APHIS/VS

Date In: 05/04/2015

Date Out: 05/11/2015 Released by: mh

Brucella culture results inconclusive due to Proteus overgrowth.

**CULTURES**

<u>ID/Site</u>	<u>Specimen</u>	<u>Culture Type</u>	<u>Isolate</u>	<u>Growth</u>	<u>Antimicrobial Profile</u>
	fetal lung	Campylobacter	Negative for Campylobacter sp.		NA
	fetal lung	Aerobic	A mixed culture of non-pathogenic bacteria	3+	NA
	fetal lung	Brucella	Proteus overgrowth		NA

1+ to 4+ = rare colony to confluent growth

P = pure culture, M = mixed or partially contaminated culture

MVDL Accession #:  
8-397-15

Submitter:  
PATRICK RYAN CLARKE D.V.M.

Owner:  
USDA/APHIS/VS

## Fees

Bacteriology Fee	\$ 45.00
Pathology/Histology Fee	\$ 35.75
Accession Total Fee	\$ 80.75

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



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Email: [livdiagnosticlab@mt.gov](mailto:livdiagnosticlab@mt.gov)

Accession # 8-396-15

Owner: USDA/APHIS/VS

Species: WILD - BISON

Breed: BISON

Name/No. 5R09

Age: NEWB(Sex:

Date Sent: 05/15/2015

Date Received: 05/04/2015

Submitter: PATRICK RYAN CLARKE D.V.M.

(b) (6)

### Final Report

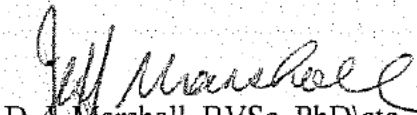
Case Coordinator: JM

### CASE SUMMARY

5/15/15

#### ADDITIONAL INFORMATION:

**BACTERIOLOGY:** The Brucella isolate was confirmed as Brucella abortus by identification testing at NVSL (see attached report).

  
D. J. Marshall, BVSc, PhD\cto

#### ADDITIONAL INFORMATION 5/13/15:

**BACTERIOLOGY:** Brucella sp was isolated from this calf. The isolate has been forwarded to NVSL for further identification procedures. Results will be forwarded as soon as available.

D. J. Marshall, BVSc, PhD/mmm

5/11/15

**REASON FOR SUBMISSION:** Bison calf abortion

#### LABORATORY DIAGNOSIS:

Bison calf abortion

**COMMENT:** Results of bacteriological investigations will be reported as soon as complete.

D. J. Marshall, BVSc, PhD\cto



Date In 05/04/2015

**PATHOLOGY**

Date Out: 05/11/2015

Released by: JM

**GROSS PATHOLOGY:** A bison calf (ID 5R09) was submitted for necropsy. Necropsy is performed at 11 am 4th May 2015. Calf is autolyzed and predated. Sex could not be determined. Crown rump length measured 76 cm. Only a small portion of brain, lung and skeletal muscle was available for examination. Brain was severely autolyzed and not sampled.

**HISTOPATHOLOGY:** Sections of lung and skeletal muscle are examined. Lung is severely autolyzed and not useful for diagnostic purposes. No significant abnormality is detected in skeletal muscle.

**MORPHOLOGIC DIAGNOSIS:**

Lung: Autolysis

Date In 05/04/2015

**BACTERIOLOGY**

Date Out: 05/15/2015

Released by: mh

Isolate to be sent to NVSL for full identification 5/12/15.

**CULTURES**

<u>ID/Site</u>	<u>Specimen</u>	<u>Culture Type</u>	<u>Isolate</u>	<u>Growth</u>	<u>Antimicrobial Profile</u>
	fetal lung	Campylobacter	Negative for Campylobacter sp.		NA
	fetal lung	Aerobic	A mixed culture of non-pathogenic bacteria	2+	NA
	fetal lung	Brucella	Brucella abortus	3+ M	NA

1+ to 4+ = rare colony to confluent growth

1 = pure culture, M = mixed or partially contaminated culture

Date In: 05/11/2015

**REFERRAL/OTHER**

Date Out: 05/15/2015

Released by: JM

<u>Animal ID</u>	<u>Specimen</u>	<u>Test</u>	<u>Result</u>	<u>Rfrrl Inst.</u>
5R09	Slant Tube	Brucella Culture	See attached report	NVSL

Please see attached report for complete results.



**National Veterinary Services Laboratories**

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Ames, Iowa 50010

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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

**Submitter - 2047**

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:**

**15-015494**

**Date Collected:**

05/02/2015

**Date Received:**

05/13/2015

**Date Completed:**

05/15/2015

**Collected By:**

Dr. Patrick Ryan Clarke

**Purpose:**

General Diagnostic

**Referral Number:**

8-396-15

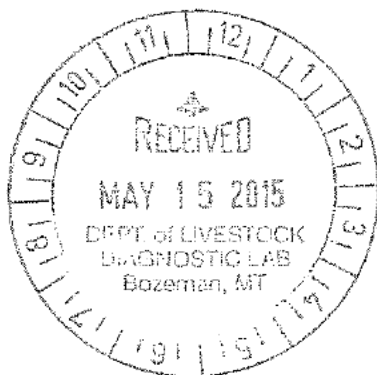
**This is not a billable case.**

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

Sample: 8-396-15 Animal ID: 5R09 Brucella Case Number: B15-0160 Specimen Type: Culture Species: Bison

Brucella Final Identification

Brucella abortus



Results authorized by:

(b)(3)

Scanned 5-15-15

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**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.



## Fees

Bacteriology Fee	\$ 0.00
Pathology/Histology Fee	\$ 73.50
Referral Fee	\$ 19.10
Accession Total Fee	\$ 92.60

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